

EAST CAROLINA UNIVERSITY

RAWL BUILDING

ASSET CODE: RAWL

FACILITY CONDITION ANALYSIS

DECEMBER 28, 2009



EAST CAROLINA UNIVERSITY
Facility Condition Analysis

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FACILITY CONDITION ANALYSIS

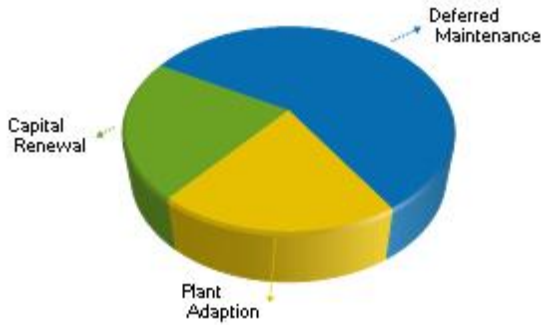
SECTION 1

GENERAL ASSET INFORMATION

EXECUTIVE SUMMARY - RAWL BUILDING

Building Code: RAWL
Building Name: RAWL BUILDING
Year Built: 1959
Building Use: Classroom / Academic
Square Feet: 73,524

PROJECT COSTS BY CLASSIFICATION

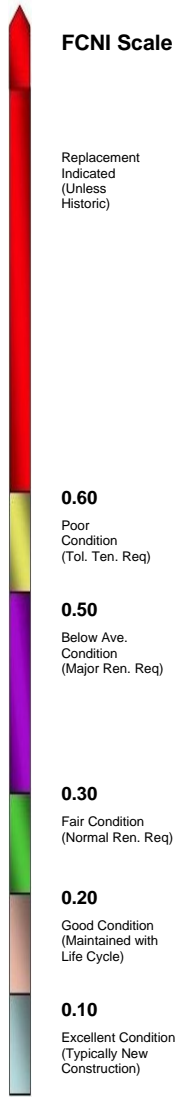


Project Costs by Priority

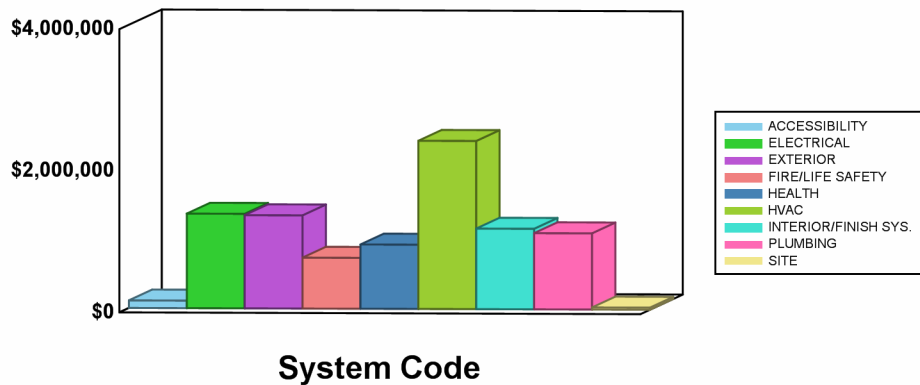
Priority 1: \$7,292
Priority 2: \$805,985
Priority 3: \$7,816,343
Priority 4: \$380,932
Total Project Costs: **\$9,010,552**

Facility Replacement Cost: **\$20,977,000**

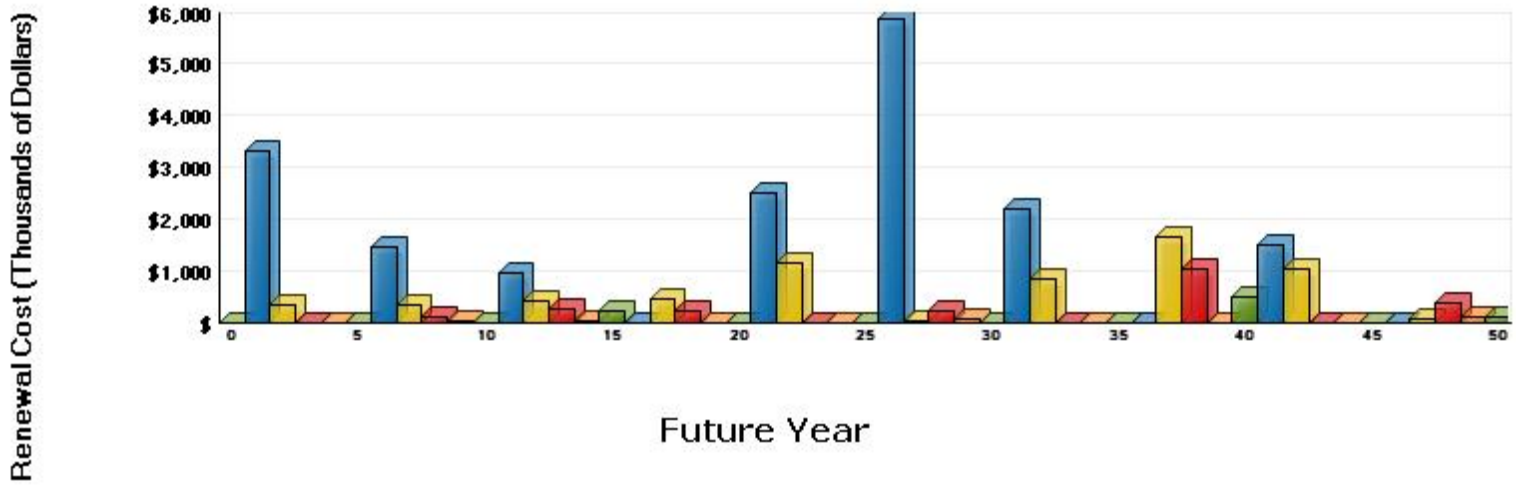
Facility Condition Needs Index (FCNI): **0.43**
 (Project Costs / Replacement Cost)



PROJECT COSTS BY SYSTEM CODE



LIFE CYCLE MODEL EXPENDITURE PROJECTIONS



Average Annual Renewal Cost Per SqFt \$4.09

B. ASSET SUMMARY

Built in 1959, the Rawl Building is a three-story classroom building with a small mechanical basement. The building is constructed of a concrete structure on a slab-on-grade foundation and has a concrete vault for the mechanical space. The exterior finishes consist of brick facades and modified bitumen roof systems. The building houses academic offices and classrooms. The south wing has a two-story annex attached that houses several smaller offices. A small addition was added on the east wing in the early 2000s to add a single passenger elevator. The Rawl Building totals 73,524 square feet and is located at the main campus of East Carolina University in Greenville, North Carolina.

The information in this report was gathered during a site visit that concluded on September 8, 2009.

SITE

Landscaping around the building consists of grassy lawns, ornamental shrubs, and some mature trees. The landscaping is in average condition but should outlast the ten-year scope of this report with routine maintenance.

Pedestrian paving systems are in overall poor condition and represent a liability to the owner. New systems, including excavation, grading, base compaction, and paving, are recommended. Vehicular paving systems are shared with other facilities and not included in this report.

EXTERIOR STRUCTURE

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.

The main roof area was replaced with a modified bitumen system in 2006. The annex roof has an older bitumen system. The built-up roofing system over the annex 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.

It is recommended that the single pane, metal window applications be upgraded to thermal pane systems. Such double pane systems will reduce the energy required to operate the building. Repair or replacement of the windowsills and trim may also be necessary.

Exterior doors consist of metal-framed glass doors at the primary entrances and painted metal doors at secondary and emergency exits. The doors appear to be in good condition and may have been replaced during the addition construction. Exterior door replacements should not be needed within the next ten years.

INTERIOR FINISHES / SYSTEMS

Interior floor finishes include carpet and vinyl tile. Wall finishes consist of painted plaster or concrete walls, and ceiling finishes include lay-in acoustical tile and painted ceilings. These applications vary in age and condition. 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 existing door systems and replacement according to a code compliant plan to protect egress passages properly is recommended. Lever door hardware and signage are included in this effort.

Accessible single user restrooms have been created on each floor. However, remaining older restroom fixtures and finishes are mostly original to the year of construction. The fixtures are sound but aged and inefficient. The finishes are outdated. A comprehensive restroom renovation, including new fixtures, finishes, partitions, and accessories, is recommended.

ACCESSIBILITY

Access to the building is provided by an at-grade entrance on the north facade and ramp systems on the east facades. The entrances have been equipped with power assisted door openers. Once inside, a single passenger elevator provides wheelchair access to each floor. Accessible single user restrooms have been created on each floor to provide adequate amenities for occupants. The renovation of the remaining older restrooms is included as part of an interior upgrade. Doors in the building are equipped with a combination of lever and knob hardware. Braille was found throughout the building. Because the doors are beginning to show significant signs of age, they are recommended for replacement as part of an interior upgrade. Door hardware and newer signage should be included in this project. A few accessibility upgrades are still warranted to bring the classroom building up to full compliance with modern regulations.

Current legislation related to accessibility requires that building entrances be handicapped accessible. To comply with the intent of this legislation, it is recommended that compliant painted metal handrails be installed at all non-compliant entrances as required.

Current accessibility legislation requires that building amenities be generally accessible to all persons. The configuration of select drinking fountains is a barrier to accessibility. All single level drinking fountains should be replaced with dual level, refrigerated units.

Current legislation regarding building accessibility by the handicapped requires that stairs have graspable handrails on both sides, that the rails have a specific end geometry, and that the handrails continue horizontally at the landings. In addition, guardrails must prevent the passage of a 4 inch diameter sphere (6 inches in the triangle formed by the lower rail and tread / riser angle). Although the stairs are compliant with the code enforced at the time of construction until a major renovation occurs, they are deficient in handrail and guardrail design relative to current standards. The finishes on the stairs have also deteriorated or are otherwise unsafe. Future renovation efforts should include comprehensive stair railing and finish upgrades.

HEALTH

Suspected asbestos containing material (ACM) is believed to be present in the facility, including the piping insulation, spray-on fireproofing, and multiple interior finish systems. Future renovation efforts should include provisions to test and abate any and all ACM.

FIRE / LIFE SAFETY

Structural fire separations are not maintained according to code requirements for new construction in select areas of this facility. Primarily, data cabling has been routed with little regard for fire-rated separations. Intumescent passive firestopping and some minor structural separation repairs should be accomplished promptly. Doors have been recommended for replacement with proper rating in mind.

The facility is served by a modern addressable fire alarm system that was manufactured by Notifier Corporation. The fire alarm panel is believed to have been installed in 1998. The system utilizes pull stations, heat detectors, smoke detectors, and duct smoke detectors for activation, and audible / visible strobes are present for notification. The fire alarm system appears to be in good condition and provides adequate coverage. However, an upgrade should be considered within the next ten years. Design and install the system in accordance with current NFPA and ADA requirements.

This facility incorporates manual chemical type fire extinguishers and standpipe cabinets for fire suppression. It is recommended by the NFPA that buildings contain fire sprinkler systems. Light hazard, wet-pipe fire suppression should be installed throughout the structure, including piping, sprinkler heads (as required by code), and pipe bracing. Install flow switches and sensors that interface with the current (or recommended) fire alarm system. This installation will reduce overall liability and the risk of loss.

The path of egress is marked with LED exit signs that provide adequate coverage. The units contain backup batteries in the event of a power failure. The exit signs appear to be in good condition, and no recommendations are warranted for the extent of this report.

Emergency lighting consists of individual twin beam, battery backup light fixtures located in corridors. The units appear to be in good condition and provide adequate coverage. No emergency lighting recommendations are necessary for the extent of this report.

HVAC

The facility is connected to the campus steam loop. Steam is supplied to a heat exchanger in the main mechanical room that produces heating hot water. The hot water is then circulated throughout the building by pumps to the associated HVAC equipment to heat the facility. The heat exchanger is original to the construction of the facility.

A local water-cooled chiller generates chilled water for building cooling. This unit has a 250 ton capacity and was manufactured by Trane. This chiller is in good condition and, with proper maintenance, will outlast the purview of this analysis. A cooling tower facilitates heat rejection for the chiller. This unit has a 275 ton capacity and was manufactured by Marley. The cooling tower is approaching the end of its expected life cycle and is recommended for replacement.

This facility is served by a forced air HVAC system with multizone air handling units manufactured by McQuay that were installed when the facility was constructed. The air handling units have hot water heating coils and chilled water cooling coils. The equipment supplies tempered air to the common and circulatory areas. Fan coil units support the HVAC system by serving functional 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 (DDCs) were manufactured by Johnson Controls. Additional cooling in this facility is provided by window air conditioning units that serve the annex. The units appear to be in good condition. Overall, the components of the HVAC system have aged beyond their statistical life cycles, and the system is inefficient compared to modern standards. It is recommended that the existing HVAC system be renovated.

ELECTRICAL

Power is fed to the facility through an oil-filled transformer located on site. The unit is rated at 500 kVA and was installed in 2000. The transformer supplies power at 120/208 for distribution through a main switchboard in the basement. The switchboard was manufactured by Square D and installed when the facility was constructed. An electrical service of 1,600 amps is provided by the unit. Overall, the switchboard is showing signs of age and should be replaced.

The secondary electrical consists of panelboards that supply power at a rate of 480/277 to mechanical, lighting, and general purpose loads. The secondary electrical system was manufactured by Square D and installed when the facility was constructed. The system is mostly showing signs of age, with some new panelboards present from renovation work. Overall, the secondary electrical system has served past its intended life cycle. Replace the system within the scope of this report.

Interior lighting consists of lay-in and surface-mounted fixtures that contain T8 or T12 fluorescent fixtures, with some ceiling-mounted compact fluorescent lamps. Updates to the interior lighting have taken place over the last five years. However, aged lighting still exists. It is recommended that all aged lighting be replaced in a project representing approximately 40 percent of the facility. Install occupancy sensors in appropriate areas as needed to conserve energy.

The exterior areas adjacent to the building are illuminated by compact fluorescent fixtures. These exterior lighting systems are aged and weathered. It is recommended that they be replaced within the scope of this analysis. Install new energy-efficient fixtures, and place them on photocell activation.

Emergency power is provided by battery backup devices that serve life safety needs in the facility. It is recommended that an appropriately sized diesel emergency generator be installed. The work includes the installation of a diesel generator set, fuel tank, battery, charger, exhaust, and automatic transfer switches.

PLUMBING

The main incoming domestic water enters the facility on the basement floor. Backflow preventers sized at 2 inches each protect the supply. Copper piping is then utilized to distribute water throughout the facility. The system appears to mostly be original to the construction of the facility. An upgrade project is recommended to replace the original or aged domestic water piping.

The drain piping network consists of cast-iron piping with bell-and-spigot and no-hub connections. The piping network appears to be a combination of aged piping and new piping where repairs have taken place, indicating that the older piping is starting to fail. Remove the existing sanitary and storm drain piping. Install new cast-iron drain piping networks with copper runouts to all fixtures. Install new floor drains, roof drains, and traps as needed.

The plumbing fixtures consist of ceramic and stainless steel construction and utilize hands-free devices on restroom flush valves. Aging fixtures are recommended for replacement as part of recommended restroom renovations.

Domestic hot water is produced by an electric water heater with a capacity of 120 gallons. The equipment was manufactured by AO Smith Corporation and installed in 1997. The water heater appears to be showing signs of age, with deterioration observed on the tank. To ensure a proper flow of domestic hot water, it is recommended that the water heater be replaced. Install a similar unit of the latest technology. A sump pump system facilitates the drainage of stormwater from the basement of this facility. This system is in good working order. With proper maintenance, it will outlast the purview of this report.

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 8, 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
SYSTEM DESCRIPTION: ACCESSIBILITY			
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.
SYSTEM DESCRIPTION: ELECTRICAL			
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.
SYSTEM DESCRIPTION: EXTERIOR			
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	DAMPPROOFING/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.
SYSTEM DESCRIPTION: FIRE / LIFE SAFETY			
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.
SYSTEM DESCRIPTION: HEALTH			
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.
SYSTEM DESCRIPTION: HVAC			
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.
SYSTEM DESCRIPTION: INTERIOR FINISHES / SYSTEMS			
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.
SYSTEM DESCRIPTION: PLUMBING			

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.
SYSTEM DESCRIPTION: SITE			
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.
SYSTEM DESCRIPTION: SECURITY SYSTEMS			
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.
SYSTEM DESCRIPTION: VERTICAL TRANSPORTATION			
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
 RAWL : RAWL BUILDING**

System Code	System Description	Priority Classes				Subtotal
		1	2	3	4	
AC	ACCESSIBILITY	0	0	0	107,207	107,207
EL	ELECTRICAL	0	93,420	1,242,226	0	1,335,646
ES	EXTERIOR	0	0	1,291,772	25,193	1,316,964
FS	FIRE/LIFE SAFETY	7,292	712,566	0	0	719,857
HE	HEALTH	0	0	908,296	0	908,296
HV	HVAC	0	0	2,304,346	71,756	2,376,102
IS	INTERIOR/FINISH SYS.	0	0	962,017	176,776	1,138,793
PL	PLUMBING	0	0	1,077,255	0	1,077,255
SI	SITE	0	0	30,431	0	30,431
	TOTALS	7,292	805,985	7,816,343	380,932	9,010,552

Facility Replacement Cost	\$20,977,000
Facility Condition Needs Index	0.43

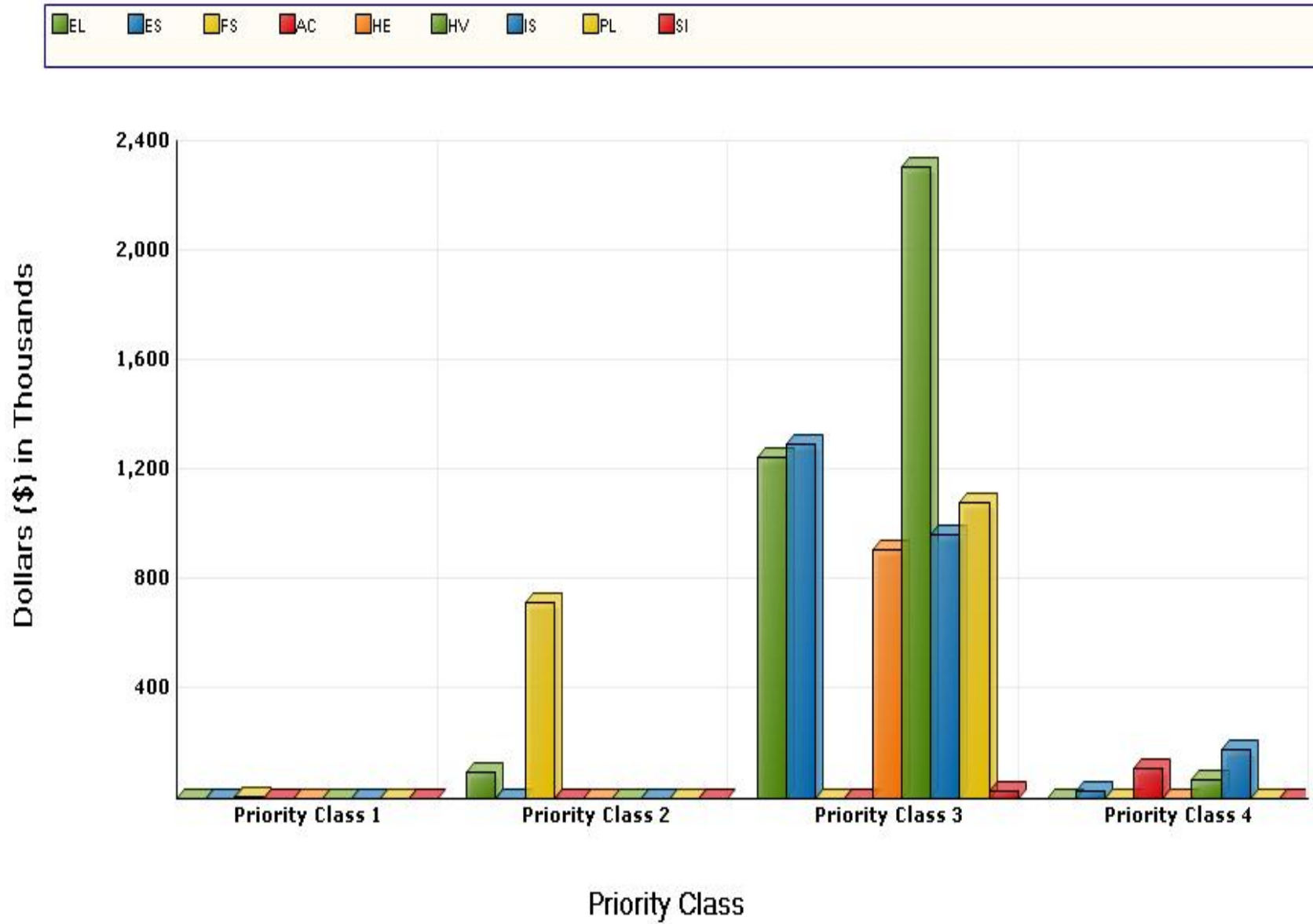
Gross Square Feet	73,524
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Total Cost Per Square Foot	\$122.55
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FACILITY CONDITION ANALYSIS

System Code by Priority Class

RAWL : RAWL BUILDING



**Detailed Project Totals
 Facility Condition Analysis
 System Code by Project Class
 RAWL : RAWL BUILDING**

System Code	System Description	Project Classes			Subtotal
		Capital Renewal	Deferred Maintenance	Plant Adaption	
AC	ACCESSIBILITY	0	0	107,207	107,207
EL	ELECTRICAL	0	1,242,226	93,420	1,335,646
ES	EXTERIOR	1,275,359	41,605	0	1,316,964
FS	FIRE/LIFE SAFETY	0	0	719,857	719,857
HE	HEALTH	0	0	908,296	908,296
HV	HVAC	71,756	2,304,346	0	2,376,102
IS	INTERIOR/FINISH SYS.	642,101	496,692	0	1,138,793
PL	PLUMBING	0	1,077,255	0	1,077,255
SI	SITE	0	30,431	0	30,431
	TOTALS	1,989,216	5,192,556	1,828,781	9,010,552

Facility Replacement Cost	\$20,977,000
Facility Condition Needs Index	0.43

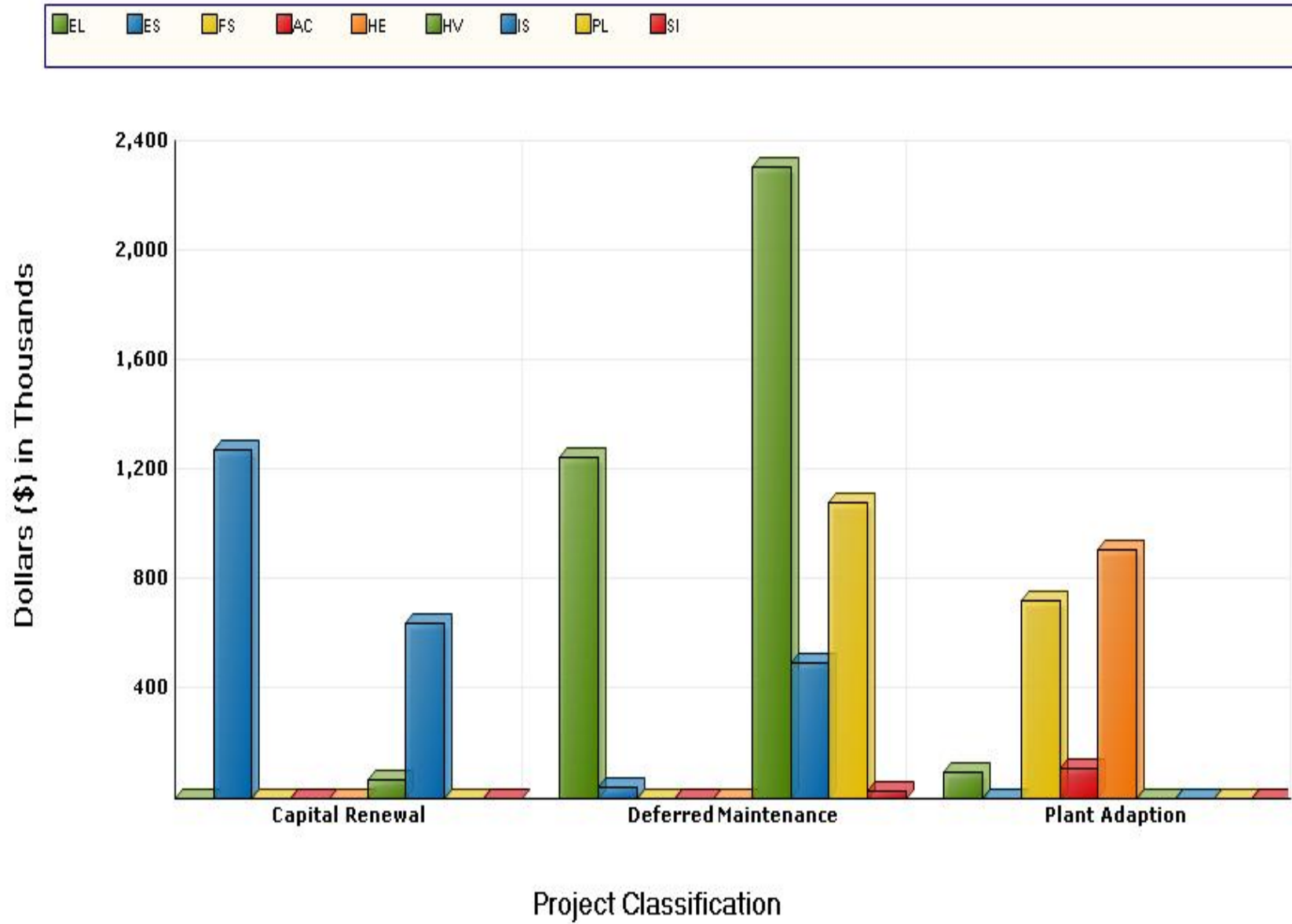
Gross Square Feet	73,524
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Total Cost Per Square Foot	\$122.55
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FACILITY CONDITION ANALYSIS

System Code by Project Class

RAWL : RAWL BUILDING



Detailed Project Summary
Facility Condition Analysis
Project Class by Priority Class
RAWL : RAWL BUILDING

Project Class	Priority Classes				Subtotal
	1	2	3	4	
Capital Renewal	0	0	1,715,491	273,724	1,989,216
Deferred Maintenance	0	0	5,192,556	0	5,192,556
Plant Adaption	7,292	805,985	908,296	107,207	1,828,781
TOTALS	7,292	805,985	7,816,343	380,932	9,010,552

Facility Replacement Cost	\$20,977,000
Facility Condition Needs Index	0.43

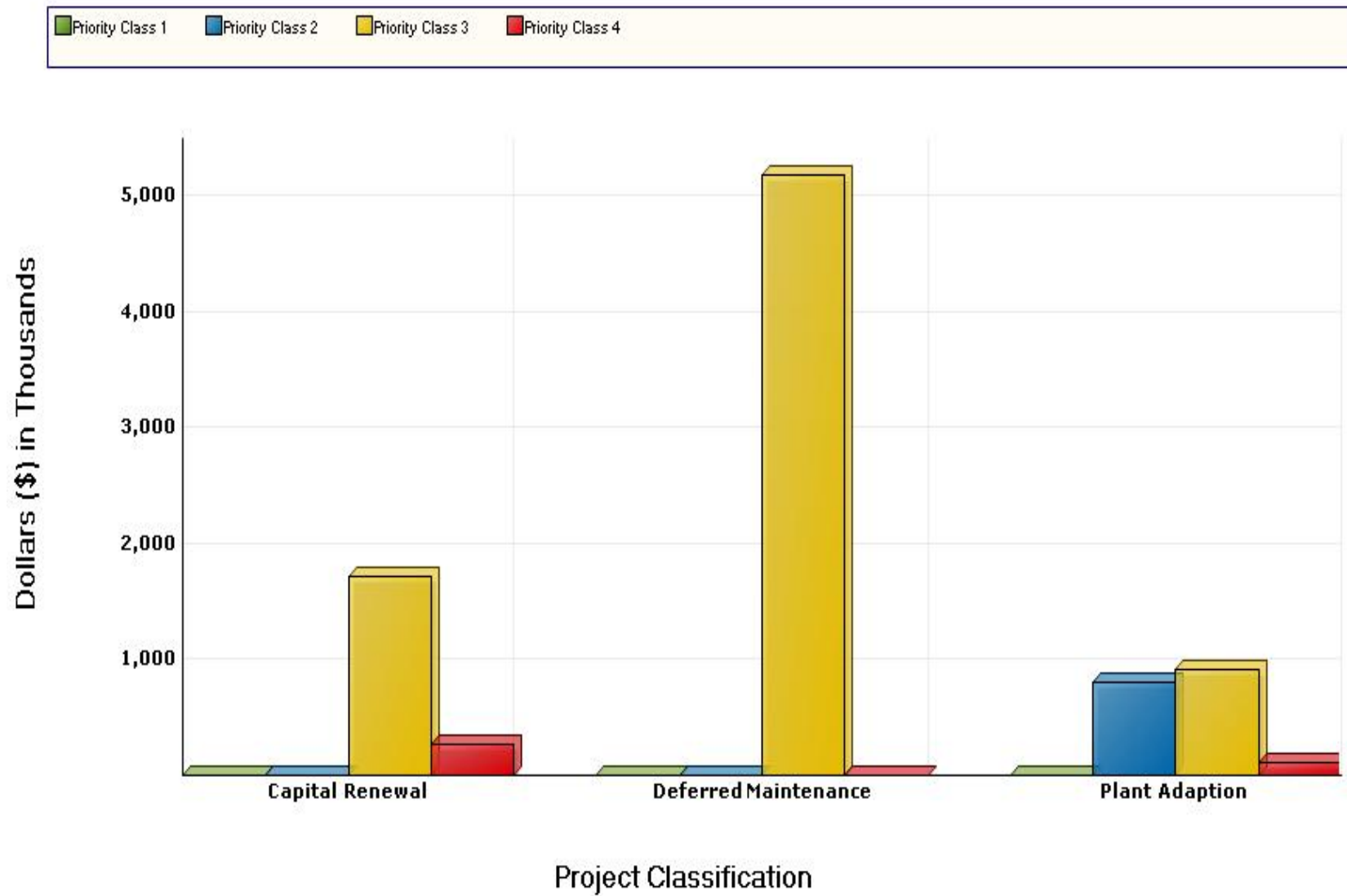
Gross Square Feet	73,524
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Total Cost Per Square Foot	\$122.55
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FACILITY CONDITION ANALYSIS

Project Class by Priority Class

RAWL : RAWL BUILDING



Detailed Project Summary
Facility Condition Analysis
Priority Class - Priority Sequence
RAWL : RAWL BUILDING

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
FS5C	RAWLFS03	1	1	ELIMINATE FIRE RATING COMPROMISES	6,286	1,006	7,292
Totals for Priority Class 1					6,286	1,006	7,292
FS2A	RAWLFS01	2	2	FIRE ALARM SYSTEM REPLACEMENT	169,998	27,200	197,198
FS3A	RAWLFS02	2	3	FIRE SPRINKLER SYSTEM INSTALLATION	444,282	71,085	515,367
EL5A	RAWLEL01	2	4	INSTALL EMERGENCY GENERATOR AND POWER NETWORK	80,534	12,886	93,420
Totals for Priority Class 2					694,815	111,170	805,985
HE6F	RAWLHE01	3	5	INTERIOR ASBESTOS ABATEMENT	783,014	125,282	908,296
ES2B	RAWLES01	3	6	RESTORE BRICK VENEER	35,866	5,739	41,605
ES5B	RAWLES02	3	7	WINDOW REPLACEMENT	1,077,730	172,437	1,250,167
HV3A	RAWLHV01	3	8	HVAC SYSTEM REPLACEMENT	1,986,505	317,841	2,304,346
EL2A	RAWLEL02	3	9	REPLACE SWITCHGEAR DEVICE	42,821	6,851	49,673
EL3B	RAWLEL04	3	10	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	864,744	138,359	1,003,103
EL4B	RAWLEL03	3	11	INTERIOR LIGHTING UPGRADE	162,140	25,942	188,082
EL4A	RAWLEL05	3	12	EXTERIOR LIGHTING UPGRADE	1,180	189	1,369
IS4A	RAWLIS04	3	13	REPLACE INTERIOR DOORS	308,299	49,328	357,627
IS6D	RAWLIS05	3	14	RESTROOM RENOVATION	119,884	19,181	139,065
IS1A	RAWLIS01	3	15	REFINISH FLOORING	332,813	53,250	386,063
IS2B	RAWLIS02	3	16	REFINISH WALLS	68,329	10,933	79,262
PL1A	RAWLPL02	3	17	WATER SUPPLY PIPING REPLACEMENT	366,299	58,608	424,906
PL2A	RAWLPL03	3	18	DRAIN PIPING REPLACEMENT	557,302	89,168	646,470
PL1E	RAWLPL01	3	19	DOMESTIC WATER HEATER REPLACEMENT	5,068	811	5,879
SI4A	RAWLSI01	3	20	SITE PAVING UPGRADES	26,234	4,197	30,431
Totals for Priority Class 3					6,738,227	1,078,116	7,816,343
AC2A	RAWLAC01	4	21	BUILDING ENTRY ACCESSIBILITY UPGRADES	8,328	1,332	9,660
AC3F	RAWLAC02	4	22	INTERIOR AMENITY ACCESSIBILITY UPGRADES	20,252	3,240	23,492
AC3B	RAWLAC03	4	23	STAIR SAFETY UPGRADES	63,841	10,215	74,055
ES4B	RAWLES03	4	24	BUILT-UP ROOF REPLACEMENT	21,718	3,475	25,193
HV2B	RAWLHV02	4	25	COOLING TOWER REPLACEMENT	61,859	9,897	71,756

Detailed Project Summary
Facility Condition Analysis
Priority Class - Priority Sequence
 RAWL : RAWL BUILDING

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
IS3B	RAWLIS03	4	26	REFINISH CEILINGS	152,393	24,383	176,776
Totals for Priority Class 4					328,389	52,542	380,932
Grand Total:					7,767,717	1,242,835	9,010,552

Detailed Project Summary
Facility Condition Analysis
Project Cost Range
RAWL : RAWL BUILDING

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
FS5C	RAWLFS03	1	1	ELIMINATE FIRE RATING COMPROMISES	6,286	1,006	7,292
Totals for Priority Class 1					6,286	1,006	7,292
EL5A	RAWLEL01	2	4	INSTALL EMERGENCY GENERATOR AND POWER NETWORK	80,534	12,886	93,420
Totals for Priority Class 2					80,534	12,886	93,420
EL2A	RAWLEL02	3	9	REPLACE SWITCHGEAR DEVICE	42,821	6,851	49,673
EL4A	RAWLEL05	3	12	EXTERIOR LIGHTING UPGRADE	1,180	189	1,369
PL1E	RAWLPL01	3	19	DOMESTIC WATER HEATER REPLACEMENT	5,068	811	5,879
ES2B	RAWLES01	3	6	RESTORE BRICK VENEER	35,866	5,739	41,605
IS2B	RAWLIS02	3	16	REFINISH WALLS	68,329	10,933	79,262
SI4A	RAWLSI01	3	20	SITE PAVING UPGRADES	26,234	4,197	30,431
Totals for Priority Class 3					179,499	28,720	208,219
HV2B	RAWLHV02	4	25	COOLING TOWER REPLACEMENT	61,859	9,897	71,756
AC2A	RAWLAC01	4	21	BUILDING ENTRY ACCESSIBILITY UPGRADES	8,328	1,332	9,660
AC3F	RAWLAC02	4	22	INTERIOR AMENITY ACCESSIBILITY UPGRADES	20,252	3,240	23,492
ES4B	RAWLES03	4	24	BUILT-UP ROOF REPLACEMENT	21,718	3,475	25,193
AC3B	RAWLAC03	4	23	STAIR SAFETY UPGRADES	63,841	10,215	74,055
Totals for Priority Class 4					175,996	28,159	204,156
Grand Totals for Projects < 100,000					442,316	70,771	513,086

Detailed Project Summary
Facility Condition Analysis
Project Cost Range
 RAWL : RAWL BUILDING

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
FS2A	RAWLFS01	2	2	FIRE ALARM SYSTEM REPLACEMENT	169,998	27,200	197,198
Totals for Priority Class 2					169,998	27,200	197,198
EL4B	RAWLEL03	3	11	INTERIOR LIGHTING UPGRADE	162,140	25,942	188,082
PL1A	RAWLPL02	3	17	WATER SUPPLY PIPING REPLACEMENT	366,299	58,608	424,906
IS1A	RAWLIS01	3	15	REFINISH FLOORING	332,813	53,250	386,063
IS4A	RAWLIS04	3	13	REPLACE INTERIOR DOORS	308,299	49,328	357,627
IS6D	RAWLIS05	3	14	RESTROOM RENOVATION	119,884	19,181	139,065
Totals for Priority Class 3					1,289,434	206,309	1,495,743
IS3B	RAWLIS03	4	26	REFINISH CEILINGS	152,393	24,383	176,776
Totals for Priority Class 4					152,393	24,383	176,776
Grand Totals for Projects >= 100,000 and < 500,000					1,611,825	257,892	1,869,717

Detailed Project Summary
Facility Condition Analysis
Project Cost Range
 RAWL : RAWL BUILDING

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
FS3A	RAWLFS02	2	3	FIRE SPRINKLER SYSTEM INSTALLATION	444,282	71,085	515,367
Totals for Priority Class 2					444,282	71,085	515,367
HV3A	RAWLHV01	3	8	HVAC SYSTEM REPLACEMENT	1,986,505	317,841	2,304,346
EL3B	RAWLEL04	3	10	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	864,744	138,359	1,003,103
PL2A	RAWLPL03	3	18	DRAIN PIPING REPLACEMENT	557,302	89,168	646,470
ES5B	RAWLES02	3	7	WINDOW REPLACEMENT	1,077,730	172,437	1,250,167
HE6F	RAWLHE01	3	5	INTERIOR ASBESTOS ABATEMENT	783,014	125,282	908,296
Totals for Priority Class 3					5,269,294	843,087	6,112,381
Grand Totals for Projects >= 500,000					5,713,576	914,172	6,627,749
Grand Totals For All Projects:					7,767,717	1,242,835	9,010,552

Detailed Project Summary
Facility Condition Analysis
Project Classification
RAWL : RAWL BUILDING

Cat Code	Project Number	Pri. Seq.	Project Classification	Pri. Cls	Project Title	Total Cost
ES5B	RAWLES02	7	Capital Renewal	3	WINDOW REPLACEMENT	1,250,167
IS1A	RAWLIS01	15	Capital Renewal	3	REFINISH FLOORING	386,063
IS2B	RAWLIS02	16	Capital Renewal	3	REFINISH WALLS	79,262
ES4B	RAWLES03	24	Capital Renewal	4	BUILT-UP ROOF REPLACEMENT	25,193
HV2B	RAWLHV02	25	Capital Renewal	4	COOLING TOWER REPLACEMENT	71,756
IS3B	RAWLIS03	26	Capital Renewal	4	REFINISH CEILINGS	176,776
Totals for Capital Renewal						1,989,216
ES2B	RAWLES01	6	Deferred Maintenance	3	RESTORE BRICK VENEER	41,605
HV3A	RAWLHV01	8	Deferred Maintenance	3	HVAC SYSTEM REPLACEMENT	2,304,346
EL2A	RAWLEL02	9	Deferred Maintenance	3	REPLACE SWITCHGEAR DEVICE	49,673
EL3B	RAWLEL04	10	Deferred Maintenance	3	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	1,003,103
EL4B	RAWLEL03	11	Deferred Maintenance	3	INTERIOR LIGHTING UPGRADE	188,082
EL4A	RAWLEL05	12	Deferred Maintenance	3	EXTERIOR LIGHTING UPGRADE	1,369
IS4A	RAWLIS04	13	Deferred Maintenance	3	REPLACE INTERIOR DOORS	357,627
IS6D	RAWLIS05	14	Deferred Maintenance	3	RESTROOM RENOVATION	139,065
PL1A	RAWLPL02	17	Deferred Maintenance	3	WATER SUPPLY PIPING REPLACEMENT	424,906
PL2A	RAWLPL03	18	Deferred Maintenance	3	DRAIN PIPING REPLACEMENT	646,470
PL1E	RAWLPL01	19	Deferred Maintenance	3	DOMESTIC WATER HEATER REPLACEMENT	5,879
SI4A	RAWLSI01	20	Deferred Maintenance	3	SITE PAVING UPGRADES	30,431
Totals for Deferred Maintenance						5,192,556
FS5C	RAWLFS03	1	Plant Adaption	1	ELIMINATE FIRE RATING COMPROMISES	7,292
FS2A	RAWLFS01	2	Plant Adaption	2	FIRE ALARM SYSTEM REPLACEMENT	197,198
FS3A	RAWLFS02	3	Plant Adaption	2	FIRE SPRINKLER SYSTEM INSTALLATION	515,367
EL5A	RAWLEL01	4	Plant Adaption	2	INSTALL EMERGENCY GENERATOR AND POWER NETWORK	93,420
HE6F	RAWLHE01	5	Plant Adaption	3	INTERIOR ASBESTOS ABATEMENT	908,296
AC2A	RAWLAC01	21	Plant Adaption	4	BUILDING ENTRY ACCESSIBILITY UPGRADES	9,660
AC3F	RAWLAC02	22	Plant Adaption	4	INTERIOR AMENITY ACCESSIBILITY UPGRADES	23,492

Detailed Project Summary
Facility Condition Analysis
Project Classification
RAWL : RAWL BUILDING

Cat Code	Project Number	Pri. Seq.	Project Classification	Pri. Cls	Project Title	Total Cost
AC3B	RAWLAC03	23	Plant Adaption	4	STAIR SAFETY UPGRADES	74,055
					Totals for Plant Adaption	1,828,781
					Grand Total:	9,010,552

Detailed Project Summary
Facility Condition Analysis
Energy Conservation
 RAWL : RAWL BUILDING

Cat Code	Project Number	Pri Cls	Pri Seq	Project Title	Total Cost	Annual Savings	Simple Payback
ES5B	RAWLES02	3	7	WINDOW REPLACEMENT	1,250,167	2,500	500.07
HV3A	RAWLHV01	3	8	HVAC SYSTEM REPLACEMENT	2,304,346	41,620	55.37
EL4B	RAWLEL03	3	11	INTERIOR LIGHTING UPGRADE	188,082	9,000	20.9
Totals for Priority Class 3					3,742,594	53,120	70.46
ES4B	RAWLES03	4	24	BUILT-UP ROOF REPLACEMENT	25,193	2,100	12
Totals for Priority Class 4					25,193	2,100	12
Grand Total:					3,767,787	55,220	68.23

Detailed Project Summary
Facility Condition Analysis
Category/System Code
RAWL : RAWL BUILDING

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
AC2A	RAWLAC01	4	21	BUILDING ENTRY ACCESSIBILITY UPGRADES	8,328	1,332	9,660
AC3F	RAWLAC02	4	22	INTERIOR AMENITY ACCESSIBILITY UPGRADES	20,252	3,240	23,492
AC3B	RAWLAC03	4	23	STAIR SAFETY UPGRADES	63,841	10,215	74,055
Totals for System Code: ACCESSIBILITY					92,420	14,787	107,207
EL5A	RAWLEL01	2	4	INSTALL EMERGENCY GENERATOR AND POWER NETWORK	80,534	12,886	93,420
EL2A	RAWLEL02	3	9	REPLACE SWITCHGEAR DEVICE	42,821	6,851	49,673
EL3B	RAWLEL04	3	10	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	864,744	138,359	1,003,103
EL4B	RAWLEL03	3	11	INTERIOR LIGHTING UPGRADE	162,140	25,942	188,082
EL4A	RAWLEL05	3	12	EXTERIOR LIGHTING UPGRADE	1,180	189	1,369
Totals for System Code: ELECTRICAL					1,151,419	184,227	1,335,646
ES2B	RAWLES01	3	6	RESTORE BRICK VENEER	35,866	5,739	41,605
ES5B	RAWLES02	3	7	WINDOW REPLACEMENT	1,077,730	172,437	1,250,167
ES4B	RAWLES03	4	24	BUILT-UP ROOF REPLACEMENT	21,718	3,475	25,193
Totals for System Code: EXTERIOR					1,135,314	181,650	1,316,964
FS5C	RAWLFS03	1	1	ELIMINATE FIRE RATING COMPROMISES	6,286	1,006	7,292
FS2A	RAWLFS01	2	2	FIRE ALARM SYSTEM REPLACEMENT	169,998	27,200	197,198
FS3A	RAWLFS02	2	3	FIRE SPRINKLER SYSTEM INSTALLATION	444,282	71,085	515,367
Totals for System Code: FIRE/LIFE SAFETY					620,567	99,291	719,857
HE6F	RAWLHE01	3	5	INTERIOR ASBESTOS ABATEMENT	783,014	125,282	908,296
Totals for System Code: HEALTH					783,014	125,282	908,296
HV3A	RAWLHV01	3	8	HVAC SYSTEM REPLACEMENT	1,986,505	317,841	2,304,346
HV2B	RAWLHV02	4	25	COOLING TOWER REPLACEMENT	61,859	9,897	71,756
Totals for System Code: HVAC					2,048,363	327,738	2,376,102
IS4A	RAWLIS04	3	13	REPLACE INTERIOR DOORS	308,299	49,328	357,627
IS6D	RAWLIS05	3	14	RESTROOM RENOVATION	119,884	19,181	139,065
IS1A	RAWLIS01	3	15	REFINISH FLOORING	332,813	53,250	386,063
IS2B	RAWLIS02	3	16	REFINISH WALLS	68,329	10,933	79,262
IS3B	RAWLIS03	4	26	REFINISH CEILINGS	152,393	24,383	176,776
Totals for System Code: INTERIOR/FINISH SYS.					981,718	157,075	1,138,793
PL1A	RAWLPL02	3	17	WATER SUPPLY PIPING REPLACEMENT	366,299	58,608	424,906
PL2A	RAWLPL03	3	18	DRAIN PIPING REPLACEMENT	557,302	89,168	646,470

Detailed Project Summary
Facility Condition Analysis
Category/System Code
 RAWL : RAWL BUILDING

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
PL1E	RAWLPL01	3	19	DOMESTIC WATER HEATER REPLACEMENT	5,068	811	5,879
Totals for System Code: PLUMBING					928,668	148,587	1,077,255
SI4A	RAWLSI01	3	20	SITE PAVING UPGRADES	26,234	4,197	30,431
Totals for System Code: SITE					26,234	4,197	30,431
Grand Total:					7,767,717	1,242,835	9,010,552

FACILITY CONDITION ANALYSIS

SECTION 3

SPECIFIC PROJECT DETAILS
ILLUSTRATING DESCRIPTION / COST

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Description

Project Number:	RAWLFS03	Title:	ELIMINATE FIRE RATING COMPROMISES
Priority Sequence:	1		
Priority Class:	1		
Category Code:	FS5C	System:	FIRE/LIFE SAFETY
		Component:	EGRESS PATH
		Element:	SEPARATION RATING
Building Code:	RAWL		
Building Name:	RAWL BUILDING		
Subclass/Savings:	Not Applicable		
Code Application:	IBC	711.3	
Project Class:	Plant Adaption		
Project Date:	10/16/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, 3		

Project Description

Structural fire separations are not maintained according to code requirements for new construction in select areas of this facility. Primarily, data cabling has been routed with little regard for fire-rated separations. Intumescent passive firestopping and some minor structural separation repairs should be accomplished promptly.

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Cost

Project Number: RAWLFS03

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Minor passive firestopping efforts	SF	73,520	\$0.03	\$2,206	\$0.08	\$5,882	\$8,087
Project Totals:				\$2,206		\$5,882	\$8,087

Material/Labor Cost		\$8,087
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		<u>\$5,238</u>
General Contractor Mark Up at 20.0%	+	<u>\$1,048</u>
Construction Cost		<u>\$6,286</u>
Professional Fees at 16.0%	+	<u>\$1,006</u>
Total Project Cost		<u>\$7,292</u>

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Description

Project Number:	RAWLFS01	Title:	FIRE ALARM SYSTEM REPLACEMENT
Priority Sequence:	2		
Priority Class:	2		
Category Code:	FS2A	System:	FIRE/LIFE SAFETY
		Component:	DETECTION ALARM
		Element:	GENERAL
Building Code:	RAWL		
Building Name:	RAWL BUILDING		
Subclass/Savings:	Not Applicable		
Code Application:	ADAAG	702.1	
	NFPA	1, 101	
Project Class:	Plant Adaption		
Project Date:	10/5/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, 3, B		

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
RAWL : RAWL BUILDING

Project Cost

Project Number: RAWLFS01

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Fire alarm control panel(s), annunciator, smoke and heat detectors, manual pull stations, audible and visual alarms, wiring, raceways, and cut and patching materials	SF	73,524	\$1.46	\$107,345	\$0.89	\$65,436	\$172,781
Project Totals:				\$107,345		\$65,436	\$172,781

Material/Labor Cost		\$172,781
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$141,665
General Contractor Mark Up at 20.0%	+	\$28,333
Construction Cost		\$169,998
Professional Fees at 16.0%	+	\$27,200
Total Project Cost		\$197,198

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Description

Project Number:	RAWLFS02	Title:	FIRE SPRINKLER SYSTEM INSTALLATION
Priority Sequence:	3		
Priority Class:	2		
Category Code:	FS3A	System:	FIRE/LIFE SAFETY
		Component:	SUPPRESSION
		Element:	SPRINKLERS
Building Code:	RAWL		
Building Name:	RAWL BUILDING		
Subclass/Savings:	Not Applicable		
Code Application:	NFPA	1, 13, 13R, 101	
Project Class:	Plant Adaption		
Project Date:	10/5/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, 3, B		

Project Description

Install an automatic fire sprinkler system in unprotected areas throughout the facility. This includes piping, valves, sprinkler heads, and piping supports. Install flow switches and sensors to interface with the fire alarm system.

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Cost

Project Number: RAWLFS02

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Install wet-pipe sprinkler system, including valves, piping, sprinkler heads, piping supports, etc.	SF	73,524	\$3.08	\$226,454	\$3.77	\$277,185	\$503,639
Project Totals:				\$226,454		\$277,185	\$503,639

Material/Labor Cost		\$503,639
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$370,235
General Contractor Mark Up at 20.0%	+	\$74,047
Construction Cost		\$444,282
Professional Fees at 16.0%	+	\$71,085
Total Project Cost		\$515,367

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Description

Project Number:	RAWLEL01	Title:	INSTALL EMERGENCY GENERATOR AND POWER NETWORK
Priority Sequence:	4		
Priority Class:	2		
Category Code:	EL5A	System:	ELECTRICAL
		Component:	EMERGENCY POWER SYSTEM
		Element:	GENERATION/DISTRIBUTION
Building Code:	RAWL		
Building Name:	RAWL BUILDING		
Subclass/Savings:	Not Applicable		
Code Application:	NEC	700, 701, 702	
Project Class:	Plant Adaption		
Project Date:	10/5/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, 3, B		

Project Description

The installation of an appropriately sized emergency diesel-fired generator, associated automatic transfer switches (ATS), and an emergency distribution network is recommended in order to provide emergency power for the life safety and specific non-essential loads. Loads considered to be life safety include egress lighting, exit signs, elevators, and fire alarm systems. Non-essential loads include HVAC equipment, refrigeration equipment, computer equipment, etc.

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Cost

Project Number: RAWLEL01

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Diesel generator set, including fuel tank, battery, charger, exhaust, and automatic transfer switches	KW	75	\$463	\$34,725	\$118	\$8,850	\$43,575
Emergency power network, including power panels, raceways, all connections, and terminations	SF	73,524	\$0.22	\$16,175	\$0.30	\$22,057	\$38,232
Project Totals:				\$50,900		\$30,907	\$81,807

Material/Labor Cost		\$81,807
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$67,112
General Contractor Mark Up at 20.0%	+	\$13,422
Construction Cost		\$80,534
Professional Fees at 16.0%	+	\$12,886
Total Project Cost		\$93,420

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Description

Project Number:	RAWLHE01	Title:	INTERIOR ASBESTOS ABATEMENT
Priority Sequence:	5		
Priority Class:	3		
Category Code:	HE6F	System:	HEALTH
		Component:	HAZARDOUS MATERIAL
		Element:	OTHER
Building Code:	RAWL		
Building Name:	RAWL BUILDING		
Subclass/Savings:	Not Applicable		
Code Application:	EPA	40 CFR 61.M, 763	
	OSHA	29 CFR 1910.1001, 1926.1101	
Project Class:	Plant Adaption		
Project Date:	10/16/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, 3		

Project Description

Suspected asbestos containing material (ACM) is believed to be present in the facility, including the piping insulation, spray-on fireproofing, and multiple interior finish systems. Future renovation efforts should include provisions to test and abate any and all ACM.

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Cost

Project Number: RAWLHE01

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Extensive asbestos remediation, including above-ceiling fireproofing, floor and wall mastic, and utility insulation	SF	44,110	\$8.75	\$385,963	\$11.66	\$514,323	\$900,285
Project Totals:				\$385,963		\$514,323	\$900,285

Material/Labor Cost		\$900,285
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$652,512
General Contractor Mark Up at 20.0%	+	\$130,502
Construction Cost		\$783,014
Professional Fees at 16.0%	+	\$125,282
Total Project Cost		\$908,296

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Description

Project Number:	RAWLES01	Title:	RESTORE BRICK VENEER
Priority Sequence:	6		
Priority Class:	3		
Category Code:	ES2B	System:	EXTERIOR
		Component:	COLUMNS/BEAMS/WALLS
		Element:	FINISH
Building Code:	RAWL		
Building Name:	RAWL BUILDING		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Deferred Maintenance		
Project Date:	10/16/2009		
Project Location:	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
RAWL : RAWL BUILDING

Project Cost

Project Number: RAWLES01

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Cleaning and surface preparation	SF	21,840	\$0.11	\$2,402	\$0.22	\$4,805	\$7,207
Selective mortar and / or sealant repairs (assumes 10 linear feet for every 100 square feet of envelope)	LF	2,184	\$2.45	\$5,351	\$4.99	\$10,898	\$16,249
Applied finish or sealant	SF	21,840	\$0.22	\$4,805	\$0.82	\$17,909	\$22,714
Project Totals:				\$12,558		\$33,612	\$46,170

Material/Labor Cost		\$46,170
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$29,889
General Contractor Mark Up at 20.0%	+	\$5,978
Construction Cost		\$35,866
Professional Fees at 16.0%	+	\$5,739
Total Project Cost		\$41,605

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Description

Project Number:	RAWLES02	Title:	WINDOW REPLACEMENT
Priority Sequence:	7		
Priority Class:	3		
Category Code:	ES5B	System:	EXTERIOR
		Component:	FENESTRATIONS
		Element:	WINDOWS
Building Code:	RAWL		
Building Name:	RAWL BUILDING		
Subclass/Savings:	Energy Conservation	\$2,500	
Code Application:	Not Applicable		
Project Class:	Capital Renewal		
Project Date:	10/16/2009		
Project Location:	Building-wide: Floor(s) 1		

Project Description

It is recommended that the single pane, metal window applications be upgraded to thermal pane systems. Such double pane systems will reduce the energy required to operate the building. Repair or replacement of the windowsills and trim may also be necessary.

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Cost

Project Number: RAWLES02

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Typical standard glazing applications	SF	11,760	\$57.27	\$673,495	\$36.45	\$428,652	\$1,102,147
Project Totals:				\$673,495		\$428,652	\$1,102,147

Material/Labor Cost		\$1,102,147
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		<u>\$898,108</u>
General Contractor Mark Up at 20.0%	+	<u>\$179,622</u>
Construction Cost		<u>\$1,077,730</u>
Professional Fees at 16.0%	+	<u>\$172,437</u>
Total Project Cost		<u>\$1,250,167</u>

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Description

Project Number:	RAWLHV01	Title:	HVAC SYSTEM REPLACEMENT
Priority Sequence:	8		
Priority Class:	3		
Category Code:	HV3A	System:	HVAC
		Component:	HEATING/COOLING
		Element:	SYSTEM RETROFIT/REPLACE
Building Code:	RAWL		
Building Name:	RAWL BUILDING		
Subclass/Savings:	Energy Conservation	\$41,620	
Code Application:	ASHRAE	62-2004	
Project Class:	Deferred Maintenance		
Project Date:	10/5/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, 3, B, R		

Project Description

A complete redesign and replacement of the HVAC system is recommended. Demolish and dispose of existing equipment. Install a new modern HVAC system with four-pipe fan coil units in the private spaces and air handling systems for the corridors and common areas. Outside air should also be delivered to the functional spaces in accordance with ASHRAE ventilation standards. This work includes new fan coil units, air handlers, exhaust fans, ductwork, terminal units, heat exchangers, pumps, piping, controls, and related electrical components. Specify DDCs for the new equipment.

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Cost

Project Number: RAWLHV01

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Fan coil units, air handlers, exhaust fans, ductwork, piping, pumps, heat exchangers, controls, terminal units, and demolition, and disposal fees	SF	73,524	\$13.78	\$1,013,161	\$16.84	\$1,238,144	\$2,251,305
Project Totals:				\$1,013,161		\$1,238,144	\$2,251,305

Material/Labor Cost		\$2,251,305
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$1,655,421
General Contractor Mark Up at 20.0%	+	\$331,084
Construction Cost		\$1,986,505
Professional Fees at 16.0%	+	\$317,841
Total Project Cost		\$2,304,346

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Description

Project Number:	RAWLEL02	Title:	REPLACE SWITCHGEAR DEVICE
Priority Sequence:	9		
Priority Class:	3		
Category Code:	EL2A	System:	ELECTRICAL
		Component:	MAIN DISTRIBUTION PANELS
		Element:	CONDITION UPGRADE
Building Code:	RAWL		
Building Name:	RAWL BUILDING		
Subclass/Savings:	Not Applicable		
Code Application:	NEC	Article 230	
Project Class:	Deferred Maintenance		
Project Date:	10/5/2009		
Project Location:	Item Only: Floor(s) B		

Project Description

The 120/208 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 existing 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
RAWL : RAWL BUILDING

Project Cost

Project Number: RAWLEL02

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
120/208 volt switchgear, including switchboard, circuit breakers, feeders, digital metering, transient surge protector, and demolition of existing equipment	AMP	1,600	\$15.52	\$24,832	\$13.01	\$20,816	\$45,648
Project Totals:				\$24,832		\$20,816	\$45,648

Material/Labor Cost		\$45,648
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$35,684
General Contractor Mark Up at 20.0%	+	\$7,137
Construction Cost		\$42,821
Professional Fees at 16.0%	+	\$6,851
Total Project Cost		\$49,673

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Description

Project Number:	RAWLEL04	Title:	UPGRADE ELECTRICAL DISTRIBUTION NETWORK
Priority Sequence:	10		
Priority Class:	3		
Category Code:	EL3B	System:	ELECTRICAL
		Component:	SECONDARY DISTRIBUTION
		Element:	DISTRIBUTION NETWORK
Building Code:	RAWL		
Building Name:	RAWL BUILDING		
Subclass/Savings:	Not Applicable		
Code Application:	NEC	Articles 110, 210, 220, 230	
Project Class:	Deferred Maintenance		
Project Date:	10/5/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, 3, B		

Project Description

An upgrade of the building electrical system is recommended. Aging components, such as the circuit breakers, could serve as fire hazards if they fail to open a circuit in an overload or short circuit condition. Remove existing aged electrical components and branch circuitry. Install new power panels, switches, raceways, conductors, and devices. Provide molded case thermal magnetic circuit breakers and HACR circuit breakers for HVAC equipment. Redistribute the electrical loads to the appropriate areas to ensure safe and reliable power to building occupants. Provide ground fault circuit interrupter (GFCI) protection where required, and clearly label all panels for circuit identification.

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Cost

Project Number: RAWLEL04

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Power panels, conductors, raceways, devices, demolition, and cut and patching materials	SF	73,524	\$5.52	\$405,852	\$8.27	\$608,043	\$1,013,896
Project Totals:				\$405,852		\$608,043	\$1,013,896

Material/Labor Cost		\$1,013,896
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$720,620
General Contractor Mark Up at 20.0%	+	\$144,124
Construction Cost		\$864,744
Professional Fees at 16.0%	+	\$138,359
Total Project Cost		\$1,003,103

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Description

Project Number:	RAWLEL03	Title:	INTERIOR LIGHTING UPGRADE
Priority Sequence:	11		
Priority Class:	3		
Category Code:	EL4B	System:	ELECTRICAL
		Component:	DEVICES AND FIXTURES
		Element:	INTERIOR LIGHTING
Building Code:	RAWL		
Building Name:	RAWL BUILDING		
Subclass/Savings:	Energy Conservation	\$9,000	
Code Application:	NEC	Articles 210, 410	
Project Class:	Deferred Maintenance		
Project Date:	10/5/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, 3, B		

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
RAWL : RAWL BUILDING

Project Cost

Project Number: RAWLEL03

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
High efficiency fluorescent fixtures, occupancy sensors, and demolition of existing lighting	SF	29,409	\$2.81	\$82,639	\$3.44	\$101,167	\$183,806
Project Totals:				\$82,639		\$101,167	\$183,806

Material/Labor Cost		\$183,806
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$135,116
General Contractor Mark Up at 20.0%	+	\$27,023
Construction Cost		\$162,140
Professional Fees at 16.0%	+	\$25,942
Total Project Cost		\$188,082

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Description

Project Number:	RAWLEL05	Title:	EXTERIOR LIGHTING UPGRADE
Priority Sequence:	12		
Priority Class:	3		
Category Code:	EL4A	System:	ELECTRICAL
		Component:	DEVICES AND FIXTURES
		Element:	EXTERIOR LIGHTING
Building Code:	RAWL		
Building Name:	RAWL BUILDING		
Subclass/Savings:	Not Applicable		
Code Application:	NEC	410	
Project Class:	Deferred Maintenance		
Project Date:	10/5/2009		
Project Location:	Building-wide: Floor(s) 1, 2, 3, B, R		

Project Description

Exterior lighting upgrades are recommended. Replace exterior light fixtures as needed. Specify high efficiency fixtures with photocells for lighting control.

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Cost

Project Number: RAWLEL05

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Compact fluorescent, recessed exterior light and demolition of existing light	EA	4	\$143	\$572	\$100	\$400	\$972
Compact fluorescent, wall-mount exterior light and demolition of existing light	EA	1	\$131	\$131	\$137	\$137	\$268
Project Totals:				\$703		\$537	\$1,240

Material/Labor Cost		\$1,240
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$983
General Contractor Mark Up at 20.0%	+	\$197
Construction Cost		\$1,180
Professional Fees at 16.0%	+	\$189
Total Project Cost		\$1,369

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Description

Project Number:	RAWLIS04	Title:	REPLACE INTERIOR DOORS
Priority Sequence:	13		
Priority Class:	3		
Category Code:	IS4A	System:	INTERIOR/FINISH SYS.
		Component:	DOORS
		Element:	GENERAL
Building Code:	RAWL		
Building Name:	RAWL BUILDING		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Deferred Maintenance		
Project Date:	10/16/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, 3		

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 existing door systems and replacement according to a code compliant plan to protect egress passages properly is recommended. Lever door hardware and signage are included in this effort.

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Cost

Project Number: RAWLIS04

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Rated door and rated metal frame, including all hardware and accessible signage	EA	235	\$672	\$157,920	\$812	\$190,820	\$348,740
Project Totals:				\$157,920		\$190,820	\$348,740

Material/Labor Cost		\$348,740
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$256,916
General Contractor Mark Up at 20.0%	+	\$51,383
Construction Cost		\$308,299
Professional Fees at 16.0%	+	\$49,328
Total Project Cost		\$357,627

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Description

Project Number:	RAWLIS05	Title:	RESTROOM RENOVATION
Priority Sequence:	14		
Priority Class:	3		
Category Code:	IS6D	System:	INTERIOR/FINISH SYS.
		Component:	GENERAL
		Element:	OTHER
Building Code:	RAWL		
Building Name:	RAWL BUILDING		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Deferred Maintenance		
Project Date:	10/16/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, 3		

Project Description

Accessible single user restrooms have been created on each floor. However, the older restroom fixtures and finishes are mostly original to the year of construction. The fixtures are sound but aged and inefficient. The finishes are outdated. A comprehensive restroom renovation, including new fixtures, finishes, partitions, and accessories, is recommended.

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Cost

Project Number: RAWLIS05

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Major restroom renovation, including fixtures, finishes, partitions, accessories, and expansion if necessary (assumes 55 square feet of restroom area per fixture)	FIXT	35	\$1,969	\$68,915	\$1,699	\$59,465	\$128,380
Project Totals:				\$68,915		\$59,465	\$128,380

Material/Labor Cost		\$128,380
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$99,903
General Contractor Mark Up at 20.0%	+	\$19,981
Construction Cost		\$119,884
Professional Fees at 16.0%	+	\$19,181
Total Project Cost		\$139,065

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Description

Project Number:	RAWLIS01	Title:	REFINISH FLOORING
Priority Sequence:	15		
Priority Class:	3		
Category Code:	IS1A	System:	INTERIOR/FINISH SYS.
		Component:	FLOOR
		Element:	FINISHES-DRY
Building Code:	RAWL		
Building Name:	RAWL BUILDING		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Capital Renewal		
Project Date:	10/16/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, 3		

Project Description

Interior floor finishes include carpet and vinyl tile. The applications vary in age and condition from area to area. 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
RAWL : RAWL BUILDING

Project Cost

Project Number: RAWLIS01

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Carpet	SF	15,660	\$5.36	\$83,938	\$2.00	\$31,320	\$115,258
Vinyl floor tile	SF	36,540	\$3.53	\$128,986	\$2.50	\$91,350	\$220,336
Project Totals:				\$212,924		\$122,670	\$335,594

Material/Labor Cost		\$335,594
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$277,344
General Contractor Mark Up at 20.0%	+	\$55,469
Construction Cost		\$332,813
Professional Fees at 16.0%	+	\$53,250
Total Project Cost		\$386,063

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Description

Project Number:	RAWLIS02	Title:	REFINISH WALLS
Priority Sequence:	16		
Priority Class:	3		
Category Code:	IS2B	System:	INTERIOR/FINISH SYS.
		Component:	PARTITIONS
		Element:	FINISHES
Building Code:	RAWL		
Building Name:	RAWL BUILDING		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Capital Renewal		
Project Date:	10/16/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, 3		

Project Description

Interior wall finishes consist of painted plaster or concrete walls. The applications vary in age and condition from area to area. 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
RAWL : RAWL BUILDING

Project Cost

Project Number: RAWLIS02

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Standard wall finish (paint, wall covering, etc.)	SF	97,050	\$0.17	\$16,499	\$0.81	\$78,611	\$95,109
Project Totals:				\$16,499		\$78,611	\$95,109

Material/Labor Cost		\$95,109
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		<u>\$56,941</u>
General Contractor Mark Up at 20.0%	+	<u>\$11,388</u>
Construction Cost		<u>\$68,329</u>
Professional Fees at 16.0%	+	<u>\$10,933</u>
Total Project Cost		<u>\$79,262</u>

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Description

Project Number:	RAWLPL02	Title:	WATER SUPPLY PIPING REPLACEMENT
Priority Sequence:	17		
Priority Class:	3		
Category Code:	PL1A	System:	PLUMBING
		Component:	DOMESTIC WATER
		Element:	PIPING NETWORK
Building Code:	RAWL		
Building Name:	RAWL BUILDING		
Subclass/Savings:	Not Applicable		
Code Application:	IPC	Chapter 6	
Project Class:	Deferred Maintenance		
Project Date:	10/5/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, 3, B		

Project Description

Replacement of the aging water piping network is recommended. Failure to replace the water piping will result in frequent leaks and escalating maintenance costs. Remove the existing water supply network. Install new copper water supply piping with fiberglass insulation. Install isolation valves, pressure regulators, shock absorbers, backflow preventers, and vacuum breakers as needed.

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Cost

Project Number: RAWLPL02

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Copper pipe and fittings, valves, backflow prevention devices, insulation, hangers, demolition, and cut and patching materials	SF	73,524	\$1.81	\$133,078	\$4.54	\$333,799	\$466,877
Project Totals:				\$133,078		\$333,799	\$466,877

Material/Labor Cost		\$466,877
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$305,249
General Contractor Mark Up at 20.0%	+	\$61,050
Construction Cost		\$366,299
Professional Fees at 16.0%	+	\$58,608
Total Project Cost		\$424,906

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Description

Project Number:	RAWLPL03	Title:	DRAIN PIPING REPLACEMENT
Priority Sequence:	18		
Priority Class:	3		
Category Code:	PL2A	System:	PLUMBING
		Component:	WASTEWATER
		Element:	PIPING NETWORK
Building Code:	RAWL		
Building Name:	RAWL BUILDING		
Subclass/Savings:	Not Applicable		
Code Application:	IPC	Chapters 7-11	
Project Class:	Deferred Maintenance		
Project Date:	10/5/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, 3, B		

Project Description

Replacement of the aging drain piping is recommended throughout the facility. Failure to replace the old piping 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 runouts to the fixtures. Install new floor drains, roof drains, and traps.

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Cost

Project Number: RAWLPL03

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Cast-iron drain piping and fittings, copper pipe and fittings, floor / roof drains, traps, hangers, demolition, and cut and patching materials	SF	73,524	\$2.89	\$212,484	\$6.64	\$488,199	\$700,684
Project Totals:				\$212,484		\$488,199	\$700,684

Material/Labor Cost		\$700,684
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$464,418
General Contractor Mark Up at 20.0%	+	\$92,884
Construction Cost		\$557,302
Professional Fees at 16.0%	+	\$89,168
Total Project Cost		\$646,470

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Description

Project Number:	RAWLPL01	Title:	DOMESTIC WATER HEATER REPLACEMENT
Priority Sequence:	19		
Priority Class:	3		
Category Code:	PL1E	System:	PLUMBING
		Component:	DOMESTIC WATER
		Element:	HEATING
Building Code:	RAWL		
Building Name:	RAWL BUILDING		
Subclass/Savings:	Not Applicable		
Code Application:	IPC	Chapters 5, 607	
Project Class:	Deferred Maintenance		
Project Date:	10/5/2009		
Project Location:	Item Only: Floor(s) B		

Project Description

Replacement of the domestic water heating equipment is recommended to maintain a reliable supply of domestic hot water. Remove old water heating equipment and related piping. Install new water heating equipment to meet the current needs of this facility.

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Cost

Project Number: RAWLPL01

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Electric, residential-grade water heater replacement, including demolition	GAL	120	\$22.87	\$2,744	\$23.71	\$2,845	\$5,590
Project Totals:				\$2,744		\$2,845	\$5,590

Material/Labor Cost		\$5,590
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$4,223
General Contractor Mark Up at 20.0%	+	\$845
Construction Cost		\$5,068
Professional Fees at 16.0%	+	\$811
Total Project Cost		\$5,879

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Description

Project Number:	RAWLSI01	Title:	SITE PAVING UPGRADES
Priority Sequence:	20		
Priority Class:	3		
Category Code:	SI4A	System:	SITE
		Component:	GENERAL
		Element:	OTHER
Building Code:	RAWL		
Building Name:	RAWL BUILDING		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Deferred Maintenance		
Project Date:	10/16/2009		
Project Location:	Undefined: Floor(s) 1		

Project Description

Pedestrian paving systems are in overall poor condition and represent a liability to the owner. New systems, including excavation, grading, base compaction, and paving, are recommended.

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Cost

Project Number: RAWLSI01

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Concrete pedestrian paving (1000 sf minimum)	SF	4,500	\$2.97	\$13,365	\$3.64	\$16,380	\$29,745
Project Totals:				\$13,365		\$16,380	\$29,745

Material/Labor Cost		\$29,745
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		<u>\$21,862</u>
General Contractor Mark Up at 20.0%	+	<u>\$4,372</u>
Construction Cost		<u>\$26,234</u>
Professional Fees at 16.0%	+	<u>\$4,197</u>
Total Project Cost		<u>\$30,431</u>

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Description

Project Number:	RAWLAC01	Title:	BUILDING ENTRY ACCESSIBILITY UPGRADES
Priority Sequence:	21		
Priority Class:	4		
Category Code:	AC2A	System:	ACCESSIBILITY
		Component:	BUILDING ENTRY
		Element:	GENERAL
Building Code:	RAWL		
Building Name:	RAWL BUILDING		
Subclass/Savings:	Not Applicable		
Code Application:	ADAAG	403.6, 505	
Project Class:	Plant Adaption		
Project Date:	10/16/2009		
Project Location:	Undefined: Floor(s) 1		

Project Description

Current legislation related to accessibility requires that building entrances be handicapped accessible. To comply with the intent of this legislation, it is recommended that compliant painted metal handrails be installed at all non-compliant entrances as required.

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Cost

Project Number: RAWLAC01

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Freestanding handrail system, painted (15 feet minimum)	LF	35	\$91.11	\$3,189	\$150	\$5,250	\$8,439
Wall-mounted handrail system, painted (15 feet minimum)	LF	15	\$50.50	\$758	\$35.40	\$531	\$1,289
Project Totals:				\$3,946		\$5,781	\$9,727

Material/Labor Cost		\$9,727
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$6,940
General Contractor Mark Up at 20.0%	+	\$1,388
Construction Cost		\$8,328
Professional Fees at 16.0%	+	\$1,332
Total Project Cost		\$9,660

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Description

Project Number:	RAWLAC02	Title:	INTERIOR AMENITY ACCESSIBILITY UPGRADES
Priority Sequence:	22		
Priority Class:	4		
Category Code:	AC3F	System:	ACCESSIBILITY
		Component:	INTERIOR PATH OF TRAVEL
		Element:	DRINKING FOUNTAINS
Building Code:	RAWL		
Building Name:	RAWL BUILDING		
Subclass/Savings:	Not Applicable		
Code Application:	ADAAG	211, 602	
Project Class:	Plant Adaption		
Project Date:	10/16/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, 3		

Project Description

Current accessibility legislation requires that building amenities be generally accessible to all persons. The configuration of select drinking fountains is a barrier to accessibility. All single level drinking fountains should be replaced with dual level, refrigerated units.

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Cost

Project Number: RAWLAC02

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Dual level drinking fountain	EA	4	\$1,216	\$4,864	\$374	\$1,496	\$6,360
Alcove construction, including finishes	EA	4	\$877	\$3,508	\$3,742	\$14,968	\$18,476
Project Totals:				\$8,372		\$16,464	\$24,836

Material/Labor Cost		\$24,836
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$16,877
General Contractor Mark Up at 20.0%	+	\$3,375
Construction Cost		\$20,252
Professional Fees at 16.0%	+	\$3,240
Total Project Cost		\$23,492

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Description

Project Number:	RAWLAC03	Title:	STAIR SAFETY UPGRADES
Priority Sequence:	23		
Priority Class:	4		
Category Code:	AC3B	System:	ACCESSIBILITY
		Component:	INTERIOR PATH OF TRAVEL
		Element:	STAIRS AND RAILINGS
Building Code:	RAWL		
Building Name:	RAWL BUILDING		
Subclass/Savings:	Not Applicable		
Code Application:	IBC	1003.3	
	ADAAG	505	
Project Class:	Plant Adaption		
Project Date:	10/16/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, 3		

Project Description

Current legislation regarding building accessibility by the handicapped requires that stairs have graspable handrails on both sides, that the rails have a specific end geometry, and that the handrails continue horizontally at the landings. In addition, guardrails must prevent the passage of a 4 inch diameter sphere (6 inches in the triangle formed by the lower rail and tread / riser angle). Although the stairs are compliant with the code enforced at the time of construction until a major renovation occurs, they are deficient in handrail and guardrail design relative to current standards. The finishes on the stairs have also deteriorated or are otherwise unsafe. Future renovation efforts should include comprehensive stair railing and finish upgrades.

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Cost

Project Number: RAWLAC03

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Wall-mounted handrail system per floor	FLR	12	\$573	\$6,876	\$521	\$6,252	\$13,128
Center handrail / guardrail system per floor	FLR	12	\$1,297	\$15,564	\$833	\$9,996	\$25,560
Stair tread and landing finish upgrades per floor	FLR	12	\$1,449	\$17,388	\$773	\$9,276	\$26,664
Project Totals:				\$39,828		\$25,524	\$65,352

Material/Labor Cost		\$65,352
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$53,201
General Contractor Mark Up at 20.0%	+	\$10,640
Construction Cost		\$63,841
Professional Fees at 16.0%	+	\$10,215
Total Project Cost		\$74,055

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Description

Project Number:	RAWLES03	Title:	BUILT-UP ROOF REPLACEMENT
Priority Sequence:	24		
Priority Class:	4		
Category Code:	ES4B	System:	EXTERIOR
		Component:	ROOF
		Element:	REPLACEMENT
Building Code:	RAWL		
Building Name:	RAWL BUILDING		
Subclass/Savings:	Energy Conservation	\$2,100	
Code Application:	Not Applicable		
Project Class:	Capital Renewal		
Project Date:	10/16/2009		
Project Location:	Floor-wide: Floor(s) R		

Project Description

The main roof area was replaced with a modified bitumen system in 2006. The annex roof has an older bitumen system. The built-up roofing system over the annex 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
RAWL : RAWL BUILDING

Project Cost

Project Number: RAWLES03

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Built-up roof	SF	3,680	\$3.06	\$11,261	\$3.58	\$13,174	\$24,435
Project Totals:				\$11,261		\$13,174	\$24,435

Material/Labor Cost		\$24,435
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		<u>\$18,098</u>
General Contractor Mark Up at 20.0%	+	<u>\$3,620</u>
Construction Cost		<u>\$21,718</u>
Professional Fees at 16.0%	+	<u>\$3,475</u>
Total Project Cost		<u>\$25,193</u>

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Description

Project Number:	RAWLHV02	Title:	COOLING TOWER REPLACEMENT
Priority Sequence:	25		
Priority Class:	4		
Category Code:	HV2B	System:	HVAC
		Component:	COOLING
		Element:	HEAT REJECTION
Building Code:	RAWL		
Building Name:	RAWL BUILDING		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Capital Renewal		
Project Date:	10/5/2009		
Project Location:	Item Only: Floor(s) 1		

Project Description

The existing cooling tower is recommended for replacement. Remove the existing cooling tower. Install a new cooling tower, including piping, balancing valves, controls, programming, and start-up.

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Cost

Project Number: RAWLHV02

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Replace cooling tower, including demolition of existing unit	TON	380	\$104	\$39,459	\$60.60	\$23,028	\$62,487
Project Totals:				\$39,459		\$23,028	\$62,487

Material/Labor Cost		\$62,487
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$51,549
General Contractor Mark Up at 20.0%	+	\$10,310
Construction Cost		\$61,859
Professional Fees at 16.0%	+	\$9,897
Total Project Cost		\$71,756

Specific Project Details
Facility Condition Analysis
Section Three
RAWL : RAWL BUILDING

Project Description

Project Number:	RAWLIS03	Title:	REFINISH CEILINGS
Priority Sequence:	26		
Priority Class:	4		
Category Code:	IS3B	System:	INTERIOR/FINISH SYS.
		Component:	CEILINGS
		Element:	REPLACEMENT
Building Code:	RAWL		
Building Name:	RAWL BUILDING		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Capital Renewal		
Project Date:	10/16/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, 3		

Project Description

Ceiling finishes include lay-in acoustical tile and painted ceilings. The applications vary in age and condition. 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
RAWL : RAWL BUILDING

Project Cost

Project Number: RAWLIS03

Task Cost Estimate

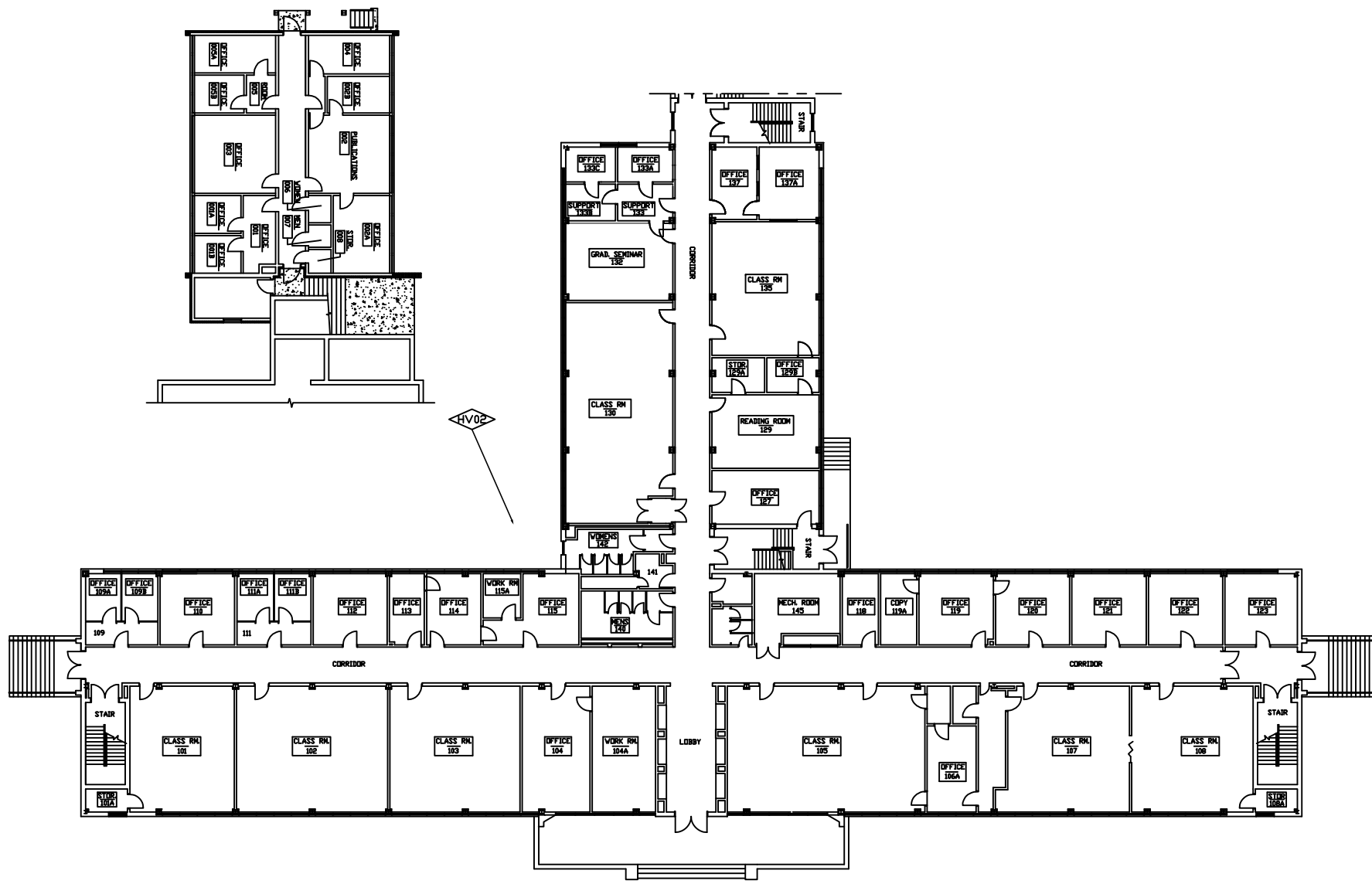
Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Acoustical tile ceiling system	SF	31,320	\$2.12	\$66,398	\$2.98	\$93,334	\$159,732
Painted ceiling finish application	SF	20,880	\$0.17	\$3,550	\$0.81	\$16,913	\$20,462
Project Totals:				\$69,948		\$110,246	\$180,194

Material/Labor Cost		\$180,194
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$126,994
General Contractor Mark Up at 20.0%	+	\$25,399
Construction Cost		\$152,393
Professional Fees at 16.0%	+	\$24,383
Total Project Cost		\$176,776

FACILITY CONDITION ANALYSIS

SECTION 4

**DRAWINGS
AND PROJECT LOCATIONS**



HV02

- AC01 S101 EL05 ES01 ES02
- AC02 AC03 EL01 EL03 EL04 FS01
- FS02 FS03 HE01 HV01 IS01 IS02
- IS03 IS04 IS05 PL02 PL03

BASEMENT

- EL01 EL03 EL04 FS01
- FS02 HV01 PL02 PL03
- EL02 PL01



RAWL BUILDING

BLDG NO. RAWL



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: 11/05/09

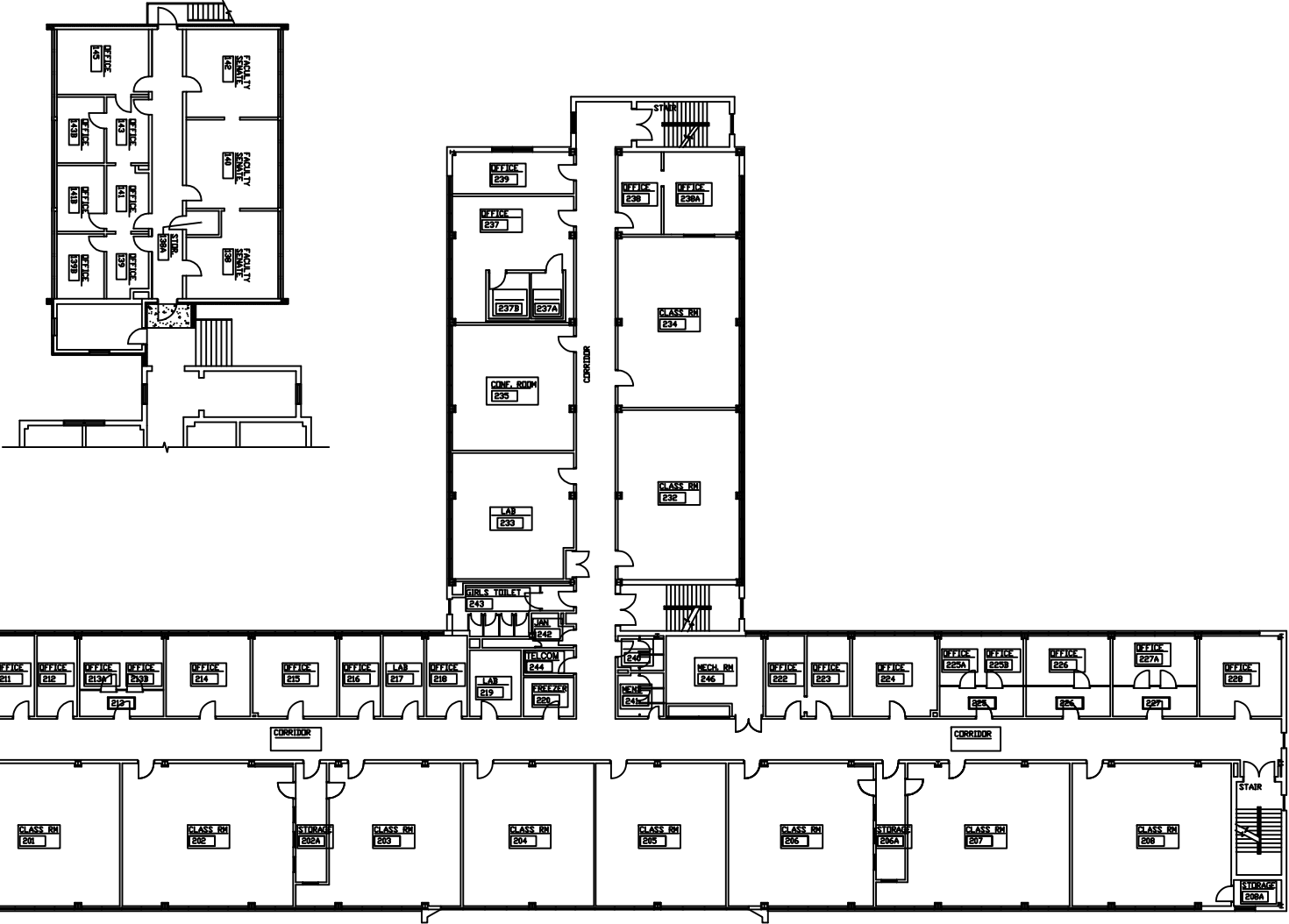
Drawn by: J.T.V.

Project No. 09-041

FIRST
FLOOR
PLAN

Sheet No.

1 of 3



- AC02
- AC03
- EL01
- EL03
- EL04
- FS01
- FS02
- FS03
- HE01
- HV01
- IS01
- IS02
- IS03
- IS04
- IS05
- PL02
- PL03



RAWL BUILDING

BLDG NO. RAWL



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: 11/05/09
Drawn by: J.T.V.
Project No. 09-041

SECOND
FLOOR
PLAN

Sheet No.
2 of 3

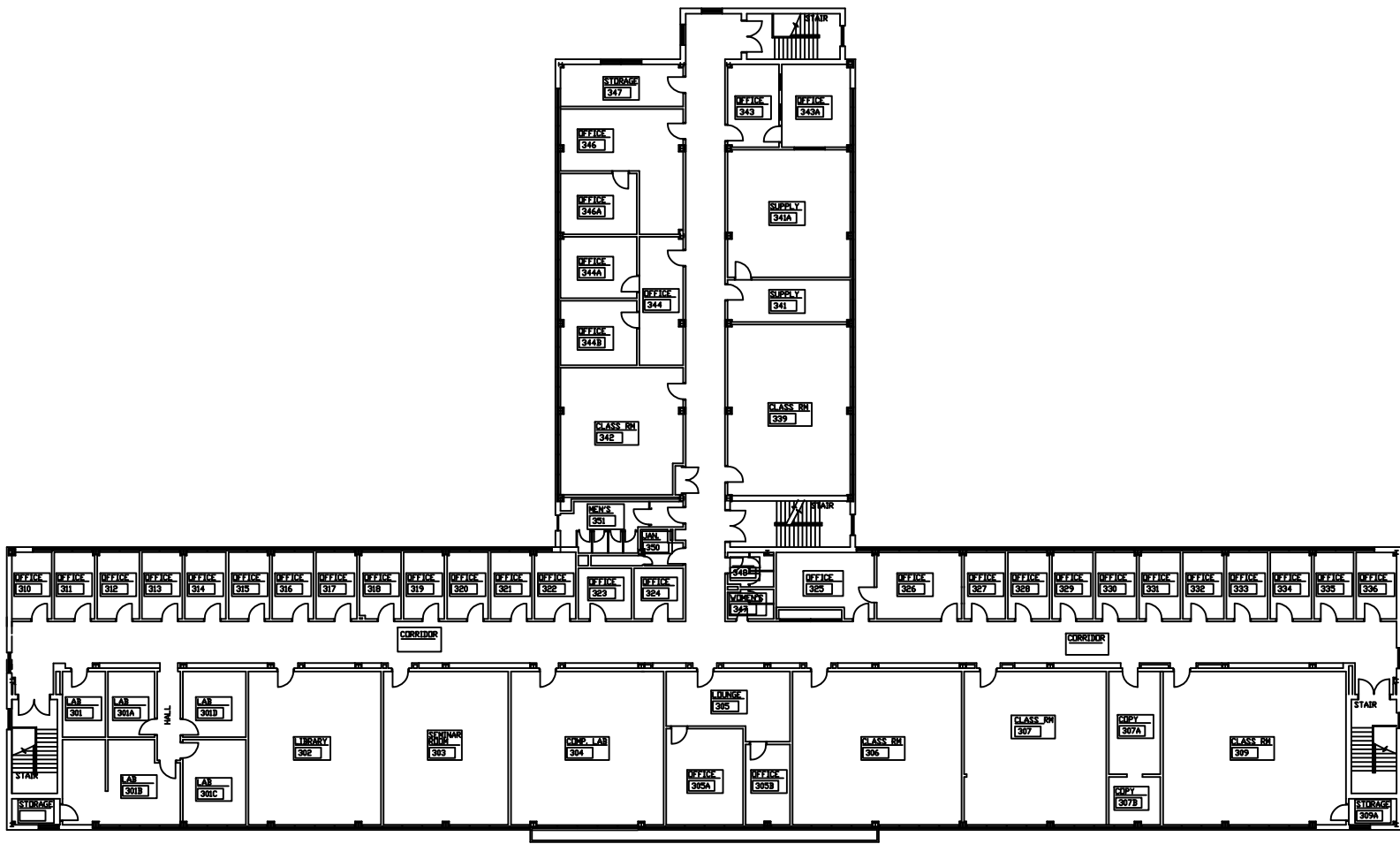
ROOF
ES03 HV01

RAWL BUILDING

BLDG NO. RAWL



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

- AC02 AC03 EL01 EL03 EL04 FS01
- FS02 FS03 HE01 HV01 IS01 IS02
- IS03 IS04 IS05 PL02 PL03



Date: 11/05/09
Drawn by: J.T.V.
Project No. 09-041

THIRD
FLOOR
PLAN

Sheet No.
3 of 3

FACILITY CONDITION ANALYSIS

SECTION 5

LIFE CYCLE MODEL SUMMARY
AND PROJECTIONS

Life Cycle Model
Building Component Summary
RAWL : RAWL BUILDING

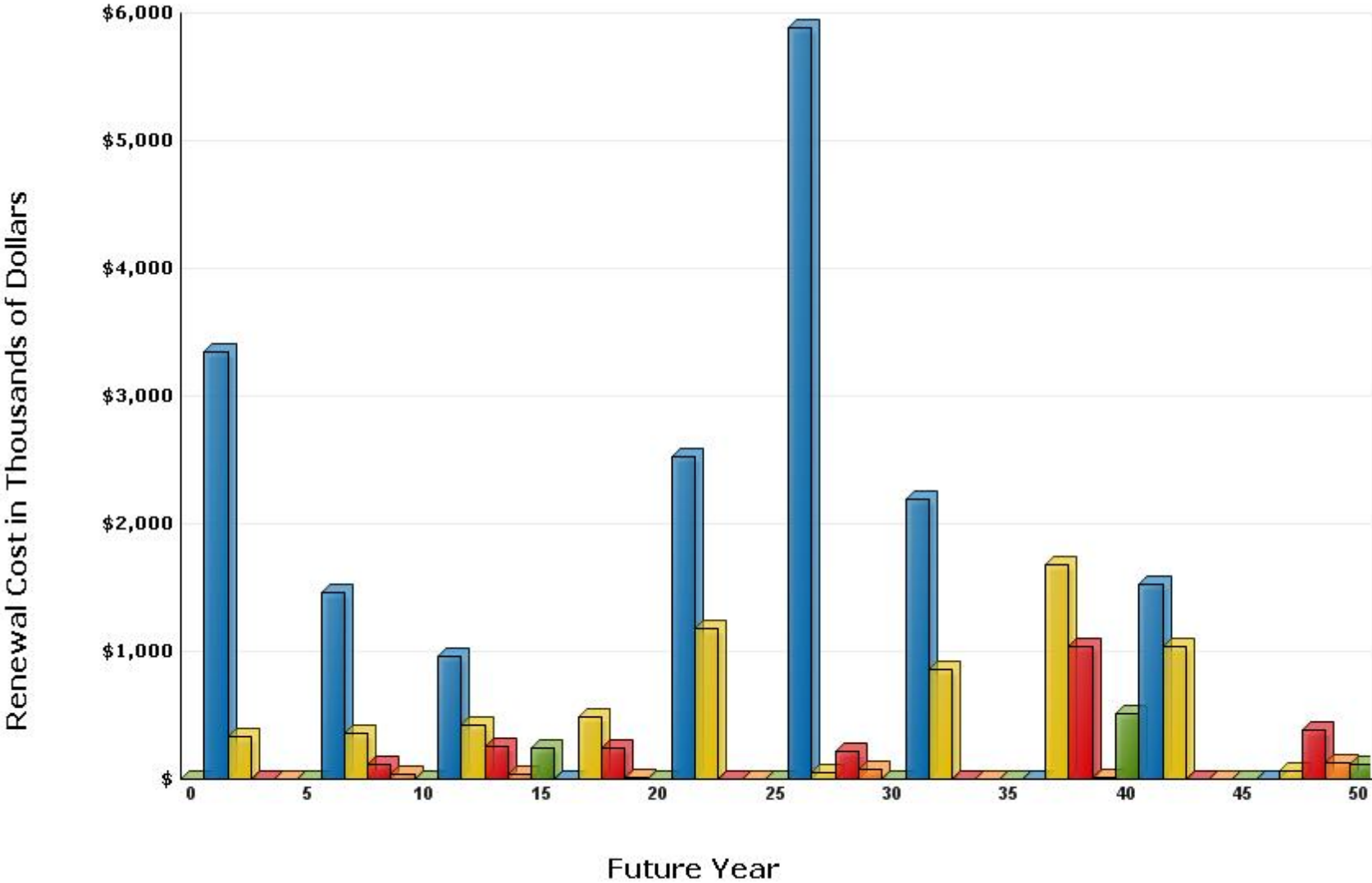
Unifomat Code	Component Description	Qty	Units	Unit Cost	Complex Adj	Total Cost	Install Date	Life Exp
B2010	EXTERIOR FINISH RENEWAL	21,840	SF	\$1.30	.31	\$8,826	1959	10
B2020	STANDARD GLAZING AND CURTAIN WALL	11,760	SF	\$104.04		\$1,223,470	1959	55
B2030	HIGH TRAFFIC EXTERIOR DOOR SYSTEM	4	LEAF	\$4,311.24		\$17,245	2000	20
B2030	LOW TRAFFIC EXTERIOR DOOR SYSTEM	13	LEAF	\$2,863.29		\$37,223	2000	40
B3010	BUILT-UP ROOF	20,830	SF	\$6.70		\$139,616	2006	20
B3010	BUILT-UP ROOF	3,680	SF	\$6.70		\$24,666	1997	20
C1020	RATED DOOR AND FRAME INCLUDING HARDWARE	235	LEAF	\$1,489.06		\$349,929	1959	35
C1020	INTERIOR DOOR HARDWARE	235	EA	\$423.04		\$99,415	1959	15
C3010	STANDARD WALL FINISH (PAINT, WALL COVERING, ETC.)	97,050	SF	\$0.80		\$77,741	2000	10
C3020	CARPET	15,660	SF	\$8.75		\$136,970	2000	10
C3020	VINYL FLOOR TILE	14,616	SF	\$6.59		\$96,288	2000	15
C3020	VINYL FLOOR TILE	21,924	SF	\$6.59		\$144,432	1959	15
C3030	ACOUSTICAL TILE CEILING SYSTEM	31,320	SF	\$4.99		\$156,381	2000	15
C3030	PAINTED CEILING FINISH APPLICATION	20,880	SF	\$0.80		\$16,726	2000	15
D1010	ELEVATOR MODERNIZATION - HYDRAULIC	1	EA	\$158,628.64		\$158,629	1998	25
D1010	ELEVATOR CAB RENOVATION - PASSENGER	1	EA	\$26,616.80		\$26,617	1998	12
D2010	PLUMBING FIXTURES - CLASSROOM / ACADEMIC	73,524	SF	\$7.96		\$585,059	1959	35
D2020	WATER PIPING - CLASSROOM / ACADEMIC	73,524	SF	\$5.66		\$416,349	1959	35
D2020	WATER HEATER (RES., ELEC.)	120	GAL	\$47.95		\$5,754	1997	10
D2030	DRAIN PIPING - CLASSROOM / ACADEMIC	73,524	SF	\$8.60		\$631,941	1959	40
D2030	SUMP PUMP SYS (2 PUMPS, CONTROLS)	1	SYS	\$8,276.49		\$8,276	2000	20
D2050	AIR COMPRESSOR PACKAGE (AVERAGE SIZE)	1	SYS	\$6,456.49		\$6,456	1990	25
D3030	CHILLER - WATER COOLED (200-1000 TONS)	250	TON	\$686.38		\$171,596	1996	25
D3030	COOLING TOWER (UP TO 300 TONS)	275	TON	\$342.33		\$94,139	1996	20
D3040	CONDENSATE RECEIVER	1	SYS	\$9,504.01		\$9,504	1959	15
D3040	CONDENSATE RECEIVER	1	SYS	\$9,504.01		\$9,504	1990	15
D3040	EXHAUST FAN - CENTRIFUGAL ROOF EXHAUSTER OR SIMILAR	2	EA	\$2,768.62		\$5,537	1980	20
D3040	EXHAUST FAN - PROPELLER TYPE OR SIMILAR	1	EA	\$1,357.34		\$1,357	1959	20
D3040	HVAC SYSTEM - CLASSROOM / ACADEMIC	73,524	SF	\$30.67		\$2,254,952	1959	25
D3040	BASE MTD. PUMP - UP TO 15 HP	6	HP	\$3,175.77		\$19,055	1990	20

**Life Cycle Model
Building Component Summary
RAWL : RAWL BUILDING**

Unifomat Code	Component Description	Qty	Units	Unit Cost	Complex Adj	Total Cost	Install Date	Life Exp
D3040	BASE MTD. PUMP - 15 HP TO 50 HP	50	HP	\$1,142.19		\$57,110	1990	20
D3050	THRU-WALL AC UNIT	10	TON	\$1,528.27		\$15,283	1995	10
D5010	ELECTRICAL SYSTEM - CLASSROOM / ACADEMIC	73,524	SF	\$13.35		\$981,487	1959	50
D5010	ELECTRICAL SWITCHGEAR 120/208V	1,600	AMP	\$32.96		\$52,742	1959	20
D5010	TRANSFORMER, DRY, 15KV (500 TO 1500 KVA)	500	KVA	\$107.58		\$53,792	2000	30
D5020	EMERGENCY LIGHT (BATTERY)	24	EA	\$283.62		\$6,807	2000	20
D5020	EXIT SIGNS (BATTERY)	30	EA	\$280.76		\$8,423	2000	20
D5020	LIGHTING - CLASSROOM / ACADEMIC	29,409	SF	\$6.26		\$184,031	1959	20
D5020	LIGHTING - CLASSROOM / ACADEMIC	44,115	SF	\$6.26		\$276,056	2005	20
D5030	FIRE ALARM SYSTEM, POINT ADDRESSABLE	73,524	SF	\$2.61		\$192,235	1959	15
E2010	BASIC FOLDING FIXED SEATING	95	EA	\$278.95		<u>\$26,500</u>	2000	20
						\$8,788,119		

Life Cycle Model Expenditure Projections

RAWL : RAWL BUILDING



Average Annual Renewal Cost Per SqFt \$4.09

FACILITY CONDITION ANALYSIS

SECTION 6

PHOTOGRAPHIC LOG

**Photo Log - Facility Condition
Analysis**

RAWL : RAWL BUILDING

Photo ID No	Description	Location	Date
RAWL001a	Stairwell design	Third floor	9/8/2009
RAWL001e	Car operating panel	Elevator car	9/8/2009
RAWL002a	Stairwell design	Third floor	9/8/2009
RAWL002e	Exit signage and fire alarm devices	Third floor, corridor	9/8/2009
RAWL003a	Interior corridor finishes	Third floor	9/8/2009
RAWL003e	Lavatory, water closet, and urinal	Third floor, restroom	9/8/2009
RAWL004a	Door hardware and signage	Third floor	9/8/2009
RAWL004e	Exhaust fan	Roof	9/8/2009
RAWL005a	Library interior finishes	Third floor	9/8/2009
RAWL005e	Secondary electrical panels	Third floor, electrical closet	9/8/2009
RAWL006a	Window detail	Third floor	9/8/2009
RAWL006e	Lavatories	Third floor, restroom	9/8/2009
RAWL007a	Roof detail	Roof	9/8/2009
RAWL007e	Water closet	Third floor, restroom	9/8/2009
RAWL008a	Roof detail	Roof	9/8/2009
RAWL008e	Urinals	Third floor, restroom	9/8/2009
RAWL009a	Roof detail	Roof	9/8/2009
RAWL009e	Electrical receptacle	Third floor, room 306	9/8/2009
RAWL010a	Roof detail over annex	Roof	9/8/2009
RAWL010e	Exit signage and fire alarm devices	Third floor, corridor	9/8/2009
RAWL011a	Classroom finishes	Third floor	9/8/2009
RAWL011e	Air handling equipment	Second floor, mechanical room 246	9/8/2009
RAWL012a	Interior corridor finishes	Third floor	9/8/2009
RAWL012e	Service sink	Second floor, janitor's closet	9/8/2009
RAWL013a	Stairwell design	Third floor	9/8/2009
RAWL013e	Drain piping	Second floor, janitor's closet	9/8/2009
RAWL014a	Single level drinking fountain	Third floor	9/8/2009
RAWL014e	Air handling equipment	First floor, mechanical room 145	9/8/2009
RAWL015a	Interior corridor finishes	Third floor	9/8/2009
RAWL015e	Interior lighting	First floor, corridor	9/8/2009
RAWL016a	Door hardware and signage	Second floor	9/8/2009
RAWL016e	Condensate return system	Basement, mechanical room	9/8/2009

**Photo Log - Facility Condition
Analysis**

RAWL : RAWL BUILDING

Photo ID No	Description	Location	Date
RAWL017a	Classroom finishes	Second floor	9/8/2009
RAWL017e	Chiller	Basement, mechanical room	9/8/2009
RAWL018a	Interior corridor finishes	Second floor	9/8/2009
RAWL018e	Pump equipment	Basement, mechanical room	9/8/2009
RAWL019a	Fire penetrations in telecom closet	Second floor	9/8/2009
RAWL019e	Chiller	Basement, mechanical room	9/8/2009
RAWL020a	Drinking fountain	First floor	9/8/2009
RAWL020e	HVAC controls	Basement, mechanical room	9/8/2009
RAWL021a	Interior corridor finishes	First floor	9/8/2009
RAWL021e	Backflow preventer	Basement, mechanical room	9/8/2009
RAWL022a	Interior corridor finishes	First floor	9/8/2009
RAWL022e	Water heater	Basement, mechanical room	9/8/2009
RAWL023a	Classroom finishes	First floor	9/8/2009
RAWL023e	Sump pump	Basement, corridor	9/8/2009
RAWL024a	Stage in classroom	First floor	9/8/2009
RAWL024e	Pump equipment and compressor	Basement, mechanical room	9/8/2009
RAWL025a	Interior corridor finishes	First floor	9/8/2009
RAWL025e	Exhaust fan	Basement, mechanical room	9/8/2009
RAWL026a	Interior corridor finishes	Second floor, annex	9/8/2009
RAWL026e	Condensate return system	Basement, mechanical room	9/8/2009
RAWL027a	West facade	Exterior elevation	9/8/2009
RAWL027e	Heat exchanger	Basement, mechanical room	9/8/2009
RAWL028a	South facade	Exterior elevation	9/8/2009
RAWL028e	Compressor	Basement, mechanical room	9/8/2009
RAWL029a	West facade	Exterior elevation	9/8/2009
RAWL029e	Fire alarm panel	Basement, mechanical room	9/8/2009
RAWL030a	West facade	Exterior elevation	9/8/2009
RAWL030e	Main incoming electrical equipment	Basement, electrical room	9/8/2009
RAWL031a	North facade	Exterior elevation	9/8/2009
RAWL031e	Transformer	Site	9/8/2009
RAWL032a	North facade	Exterior elevation	9/8/2009
RAWL032e	Exterior lighting	Exterior	9/8/2009
RAWL033a	East facade addition	Exterior elevation	9/8/2009

**Photo Log - Facility Condition
Analysis**

RAWL : RAWL BUILDING

Photo ID No	Description	Location	Date
RAWL033e	Air conditioning units	Exterior	9/8/2009
RAWL034a	East facade addition	Exterior elevation	9/8/2009
RAWL034e	Exterior lighting	Exterior	9/8/2009
RAWL035a	South facade	Exterior elevation	9/8/2009
RAWL036a	East facade	Exterior elevation	9/8/2009
RAWL037a	East facade of annex	Exterior elevation	9/8/2009
RAWL038a	South facade of annex	Exterior elevation	9/8/2009
RAWL039a	West facade of annex	Exterior elevation	9/8/2009
RAWL040a	West facade	Exterior elevation	9/8/2009
RAWL041a	West facade	Exterior elevation	9/8/2009

Facility Condition Analysis - Photo Log



RAWL001A.jpg



RAWL001E.jpg



RAWL002A.jpg



RAWL002E.jpg



RAWL003A.jpg



RAWL003E.jpg



RAWL004A.jpg



RAWL004E.jpg



RAWL005A.jpg



RAWL005E.jpg



RAWL006A.jpg



RAWL006E.jpg



RAWL007A.jpg



RAWL007E.jpg



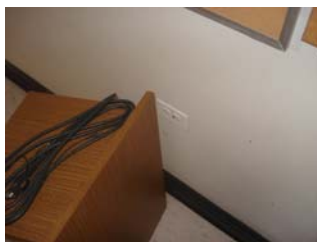
RAWL008A.jpg



RAWL008E.jpg



RAWL009A.jpg



RAWL009E.jpg



RAWL010A.jpg



RAWL010E.jpg

Facility Condition Analysis - Photo Log



RAWL011A.jpg



RAWL011E.jpg



RAWL012A.jpg



RAWL012E.jpg



RAWL013A.jpg



RAWL013E.jpg



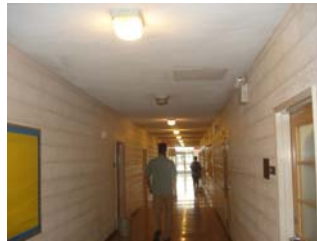
RAWL014A.jpg



RAWL014E.jpg



RAWL015A.jpg



RAWL015E.jpg



RAWL016A.jpg



RAWL016E.jpg



RAWL017A.jpg



RAWL017E.jpg



RAWL018A.jpg



RAWL018E.jpg



RAWL019A.jpg



RAWL019E.jpg



RAWL020A.jpg



RAWL020E.jpg

Facility Condition Analysis - Photo Log



RAWL021A.jpg



RAWL021E.jpg



RAWL022A.jpg



RAWL022E.jpg



RAWL023A.jpg



RAWL023E.jpg



RAWL024A.jpg



RAWL024E.jpg



RAWL025A.jpg



RAWL025E.jpg



RAWL026A.jpg



RAWL026E.jpg



RAWL027A.jpg



RAWL027E.jpg



RAWL028A.jpg



RAWL028E.jpg



RAWL029A.jpg



RAWL029E.jpg



RAWL030A.jpg



RAWL030E.jpg

Facility Condition Analysis - Photo Log



RAWL031A.jpg



RAWL031E.jpg



RAWL032A.jpg



RAWL032E.jpg



RAWL033A.jpg



RAWL033E.jpg



RAWL034A.jpg



RAWL034E.jpg



RAWL035A.jpg



RAWL036A.jpg



RAWL037A.jpg



RAWL038A.jpg



RAWL039A.jpg



RAWL040A.jpg



RAWL041A.jpg