EAST CAROLINA UNIVERSITY

JARVIS RESIDENCE HALL

ASSET CODE: JARV

FACILITY CONDITION ANALYSIS

DECEMBER 22, 2009

ISES CORPORATION

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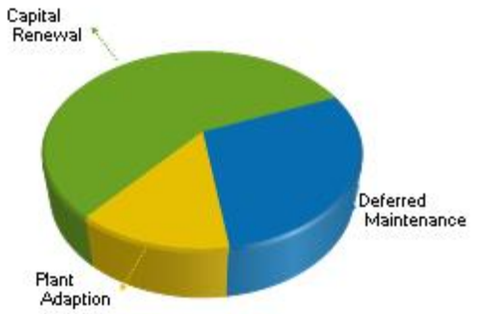
FACILITY CONDITION ANALYSIS

SECTION 1

GENERAL ASSET INFORMATION

EXECUTIVE SUMMARY - JARVIS RESIDENCE HALL

PROJECT COSTS BY CLASSIFICATION



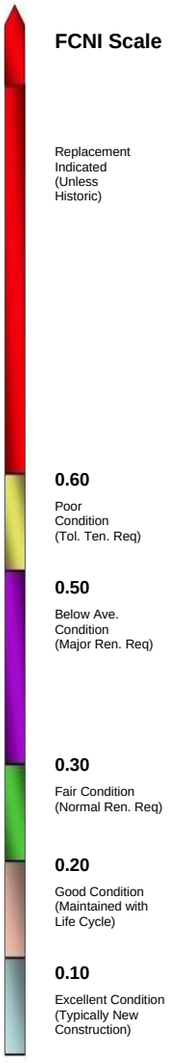
Building Code: JARV
Building Name: JARVIS RESIDENCE HALL
Year Built: 1909
Building Use: Dormitory / Apartments
Square Feet: 34,467

Project Costs by Priority

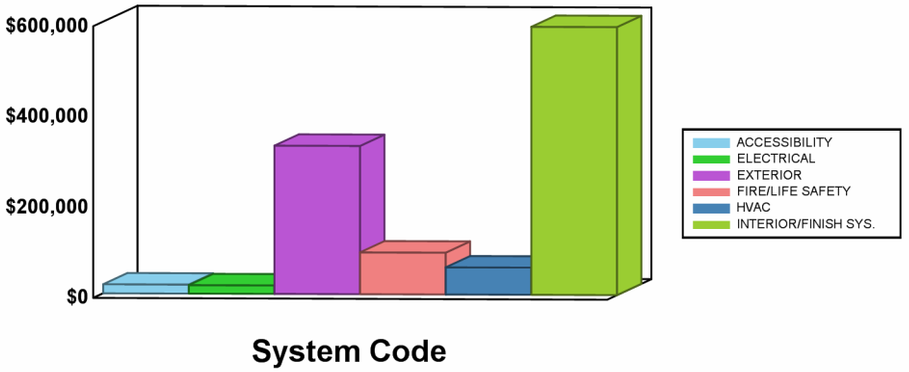
Priority 1:	$0
Priority 2:	$0
Priority 3:	$661,160
Priority 4:	$449,491
Total Project Costs:	**$1,110,652**

Facility Replacement Cost: **$10,706,000**

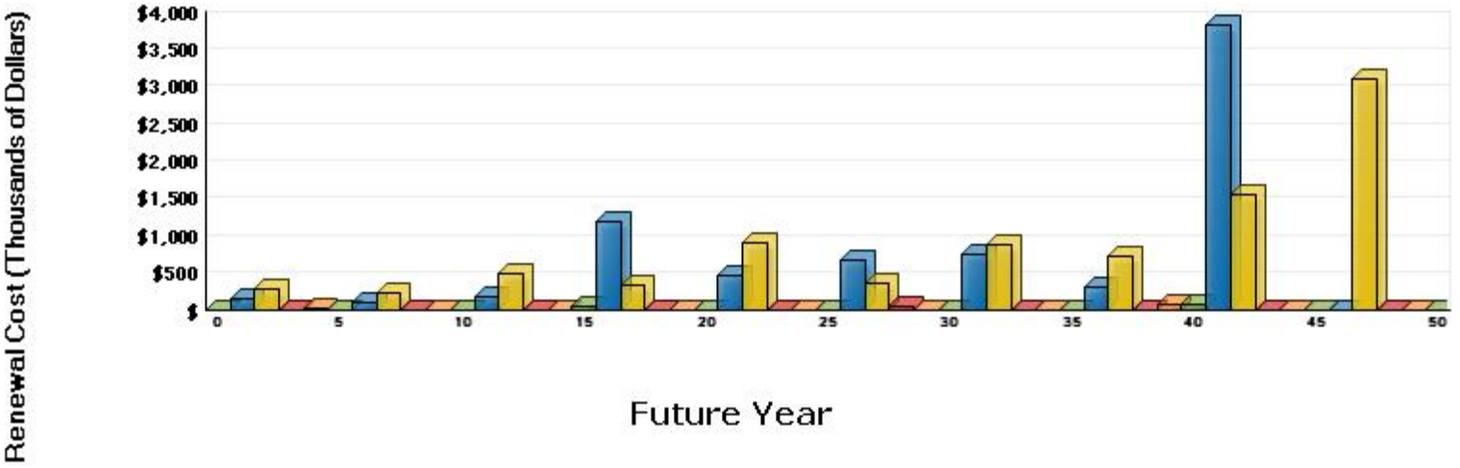
Facility Condition Needs Index (FCNI): **0.10**
(Project Costs / Replacement Cost)



PROJECT COSTS BY SYSTEM CODE



LIFE CYCLE MODEL EXPENDITURE PROJECTIONS



Average Annual Renewal Cost Per SqFt $3.96

B. ASSET SUMMARY

Jarvis Residential Hall, located on the main campus of East Carolina University in Greenville, North Carolina, was reported to have been originally constructed in 1909, with multiple subsequent additions and renovations over the ensuing years. The last major addition / renovation was in 2000 and involved the addition of a large lounge area on the south side of the building. Renovations also included a new tile roofing system, the addition of two egress stair towers, and facade and interior finish upgrades.

The majority of the rooms are double occupancy, with common area shared restrooms and showers on each floor. There are limited areas for common lobbies, shared kitchens and laundry, and administrative offices. This historic, classical design dormitory includes a small low headroom partial basement / crawl space, two above grade floor levels, and a steeply pitched tile roof with an accessible attic. The total area is approximately 34,467 gross square feet.

The information for this report was gathered during a site visit that concluded on September 15, 2009.

SITE

The building is sited on a flat parcel of land in the central campus area adjacent to the open commons. Portions of the general site are reasonably well landscaped and appear to be adequately maintained and in overall good condition. It is predominantly planted with turf grasses, ornamental shrubbery, accent planting beds, and a few mature native trees. Irrigation systems were noted to serve the landscaped areas, and there is evidence that they are operating effectively.

Stormwater drainage systems around the building include graded swales, diversion curbs, underground collection and piping systems, and controlled surface run-off, and appear to adequately divert water away from the structure. No significant stormwater issues that appear to have negatively impacted the building were observed during the on-site review.

There is no on-site vehicular parking at the building other than a limited number of curb-side parking spaces along the adjacent streets. A small designated service vehicle and utility court area is located in the rear of the building at the southeast corner and appears adequate for the service needs of the facility.

Pedestrian access to the facility is supported by concrete sidewalk systems in the immediate area. These provide ADA compliant access to and from adjacent buildings and parking areas. These pedestrian pavements are generally in good condition, with no immediate repairs necessary.

EXTERIOR STRUCTURE

The building structure is apparently supported by soil bearing spread footings that show no visible evidence of displacement or structural distress. The primary building structural frame includes reinforced concrete, wood timber roof framing, structural steel, and load-bearing masonry. Numerous and distinctive architectural features, such as ornamental stone window casements, sills, lintels, quoins, plinths, and other wall features, make up the classical style exterior facade.

Brick masonry is the primary exterior facade finish, with minor areas of natural and cast stone ornamentation. 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. Upgrades have been accomplished in recent renovations, but several areas of deterioration remain and corrective actions are required.

The architectural ornamental concrete and stone exterior, as well as the painted trim and soffits, has become visibly soiled, and the construction joints and painted finishes are failing. Cleaning, surface preparation, selective repairs, and applied finish upgrades are recommended to restore the aesthetics and integrity of the building envelope.

The exterior windows and doors consist of metal-framed, operable, double-hung windows with insulated pane glazing and painted composite fiberglass entry, egress, and service doors. These fenestrations were reportedly upgraded in 2000 and are performing adequately, consistent with their in-place age and service use, with no major signs of deterioration evident. Periodic cleaning, finish renewals, and routine maintenance appropriate to the various components should assure continued life cycle performance throughout the end of the review period.

The steeply pitched roof includes a clay flat tile system that was reportedly installed in 2000. It is currently in good condition and expected to outlast the ten-year purview of this report. Interim inspections and routine maintenance of flashings, parapets, sealants, and other components will be required to achieve the full effective useful life of the system. The associated roofing area drainage inlets and custom copper guttering and downspout systems appear to be adequately channeling rainwater from the pitched roof to ground level stormwater collection systems and isolated grade-level discharge.

The single-ply membrane roofing utilized on the entry porch 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.

INTERIOR FINISHES / SYSTEMS

The ceiling systems include suspended, acoustical tiles, painted drop soffits in corridors, and painted plaster in some service areas, restrooms, and the main lobby. Interior partitions are typically a framed stud and trowel applied cementitious plaster wall assembly with a painted applied finish. The predominant floor finishes include tiled pavers in portions of the public lobby areas, vinyl composition tiles (VCT) in kitchen, laundry, and work areas, carpeting in circulation corridors, dorm rooms, offices, and administrative areas, ceramic tiles in public restrooms and shower rooms, and hardwood flooring in the new lobby lounge area. The back-of-house service areas, mechanical and electrical rooms, and unoccupied storage areas typically have either VCT or natural sealed concrete flooring.

While some interior finishes, particularly in recently renovated areas, are well maintained and acceptable in appearance, routine and periodic refinishing and selective replacements are required to maintain quality institutional appearances. There are other areas in the building where the finish systems have exceeded their effective useful life cycles and are in poor condition. Near-term upgrades, repairs, and renovations should be undertaken to maintain a quality institutional appearance.

Interior doors are typically solid core painted wood in painted hollow metal frames and are equipped with upgraded ADA compliant lever action locksets that are in good working order. However, the condition of most of the basement service area interior door systems is such that door system replacements are recommended as part of a comprehensive renovation effort. Complete demolition of the basement level door systems and replacement according to a code compliant plan to properly protect egress passages is recommended.

The shared restrooms on each floor have fixtures and finishes that are mostly original to the year of construction and some partial subsequent renovations. The fixtures are sound but aged and inefficient, and the finishes are outdated and deteriorating in some areas. A comprehensive restroom renovation, including new fixtures, finishes, partitions, accessories, and associated common corridor dual level drinking fountains, is recommended. All future renovations should provide full compliance with ADA guidelines.

ACCESSIBILITY

The south lobby entrance provides compliant ramped access to the main floor lobby and elevator landing. One passenger elevator provides access to the various levels. Entry door hardware provides suitable access to the main internal circulation lobby. Interior accessible routes generally have ADA compliant wall-mounted informational and directional signage. Interior doors and associated operable hardware are also ADA compliant.

The antiquated, single level drinking fountains throughout the building are generally not ADA compliant. These older drinking fountains should be replaced with dual height units as part of recommended restroom upgrades. The adjacent corridor walls may require new alcove construction to provide adequate floor area access.

Current accessibility legislation 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. 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. Also, the finishes on the stairs have deteriorated or are otherwise unsafe. Future renovation efforts should include comprehensive stair railing and finish upgrades.

HEALTH

Based on the availability of construction materials at the time the building was erected, it is possible that asbestos-containing materials (ACM) and lead based paint may have been used in the original construction. It is recommended that suspect items be tested and, if found to contain asbestos, be abated and disposed of according to all applicable national, state, and local regulations. Based on the lack of reliable data provided by the University, any prior completed or future abatement projects are not included in the scope of this report.

FIRE / LIFE SAFETY

The facility appears to have adequate and reasonable egress paths consistent with its age and compliance with building codes at the time of construction / renovation. No apparent egress deficiencies, obstructed egress pathways, or visible compromises to fire-rated assemblies in the egress corridors were observed during the limited on-site review of the building.

This facility is protected by a central fire alarm system. The point addressable panel is a Simplex 4020 and is located in mechanical room B1. A graphic display in the first floor lobby provides alarm information. The devices that serve this system include manual pull stations, audible / visible devices, and smoke detectors. Although the system is in good condition, based on typical service lives, the major components are expected to require replacement within the scope of this analysis.

This facility is protected by an automatic fire sprinkler system with a mix of ceiling and wall-mounted sprinkler heads. The system has wet-pipe and dry-pipe components, with the latter serving attic sprinkler heads. This system is adequate and in good condition. With proper testing and maintenance, the fire suppression system will outlast the scope of this report.

Exit signs are LED illuminated and connected to the emergency power network. Emergency lighting is available through standard interior light fixtures that are connected to the emergency power network. All egress lighting systems are adequate and in good condition. These systems are not expected to require upgrades within the next ten years.

HVAC

This facility is served by a forced-air HVAC system with multiple air handling units equipped with hot water heating coils, chilled water cooling coils, variable frequency drives, and Siebe direct digital controls (DDCs). The air distribution network furnishes variable air volume to the occupied spaces, with thermostatic controls available to occupants.

Heating hot water is produced using campus steam and a shell-and-tube heat exchanger. With normal maintenance, these systems and the related duplex condensate pump are expected to provide satisfactory service last throughout the purview of this report.

Chilled water serves as the cooing medium. Two air-cooled liquid chillers supply cooling water for Jarvis, Fleming, and Cotten residence halls. Outdoor enclosures between the buildings contain transformers, chillers, generators, and backflow preventers for the three buildings. As with utilities infrastructure in general, these equipment locations are not generally reliable indicators of the building or buildings to which they connect. The Jarvis Residence Hall provides power to the 110 ton chiller located within the Fleming Residence Hall enclosure. As a simplifying measure best supported by physical observations, proposed projects for equipment within the enclosures are addressed in the report for the building at which they are located. Replacement of the chiller just mentioned is addressed in the Fleming Residence Hall report.

The HVAC system is an adequate application for this facility. However, it should be expected that some of the associated components will require normal life cycle replacement within the purview of this analysis. Among them, select pumps are recommended for replacement.

ELECTRICAL

An oil-filled 500 kVA transformer supplies incoming feeders at 120/208 volts. The 1,600 amp main distribution panel was manufactured by Square D. The distribution network supplies 120/208 volt power using panels manufactured predominantly by Square D.

It should be anticipated that the distribution network will require minor but significant life cycle repairs and replacements within the purview of this report. Such remedies include, but are not limited to, installing additional circuits, replacing worn switches and receptacles, replacing circuit breakers, and updating panel directories. A proposed project addresses these items.

The interior spaces of this facility are illuminated by a number of modern fixture types that add greatly to functional and aesthetic values. Hallways, for example, use recessed valence type lighting along with decorative surface-mounted fixtures equipped with energy-efficient lamps. Recessed fixtures equipped with CFLs are found in many areas. Decorative pendent canister styles are very effectively used in the main lobby. Porches are equipped with small, overhead HID fixtures in good condition. No lighting upgrades are deemed necessary at this time.

Emergency power is produced by a 40 kW Olympian Power Systems generator. This unit is equipped with a Caterpillar diesel engine and supplies 120/208 volt power to the automatic transfer switch in the basement mechanical area. This generator is currently adequate and should remain a reliable source of power throughout the purview of this analysis.

PLUMBING

Potable water is distributed throughout this facility through a copper piping network. Sanitary waste piping is of cast-iron, no-hub construction. The supply and drain piping networks are adequate and in good condition. They should provide reliable service throughout the scope of this analysis. The plumbing fixtures are recommended for replacement as part of an interior finish upgrade. Domestic hot water is produced using steam and a shell-and-tube heat exchanger. This unit is adequate and in good condition. With proper maintenance, it will outlast the purview of this analysis.

VERTICAL TRANSPORTATION

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

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

C. INSPECTION TEAM DATA

DATE OF INSPECTION: September 15, 2009

INSPECTION TEAM PERSONNEL:

NAME	POSITION	SPECIALTY
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:

NAME	POSITION
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.

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

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:

PRIORITY CLASS 1

CODE	PROJECT NO.	PRIORITY SEQUENCE
HV2C	0001HV04	01
PL1D	0001PL02	02

PRIORITY CLASS 2

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

Building Number	Photo Sequence	Arch / Eng / VT
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			SYSTEM DESCRIPTION
AC1A	-	AC4B	ACCESSIBILITY
EL1A	-	EL8A	ELECTRICAL
ES1A	-	ES6E	EXTERIOR STRUCTURE
FS1A	-	FS6A	FIRE / LIFE SAFETY
HE1A	-	HE7A	HEALTH
HV1A	-	HV8B	HVAC
IS1A	-	IS6D	INTERIOR FINISHES / SYSTEMS
PL1A	-	PL5A	PLUMBING
SI1A	-	SI4A	SITE
SS1A	-	SS7A	SECURITY SYSTEMS
VT1A	-	VT7A	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	CABINETRY	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

JARV : JARVIS RESIDENCE HALL

System Code	System Description	Priority Classes 1	2	3	4	Subtotal
AC	ACCESSIBILITY	0	0	0	19,984	19,984
EL	ELECTRICAL	0	0	0	18,751	18,751
ES	EXTERIOR	0	0	322,585	4,911	327,496
FS	FIRE/LIFE SAFETY	0	0	0	92,444	92,444
HV	HVAC	0	0	0	60,021	60,021
IS	INTERIOR/FINISH SYS.	0	0	338,575	253,381	591,955
	TOTALS	0	0	661,160	449,491	1,110,652

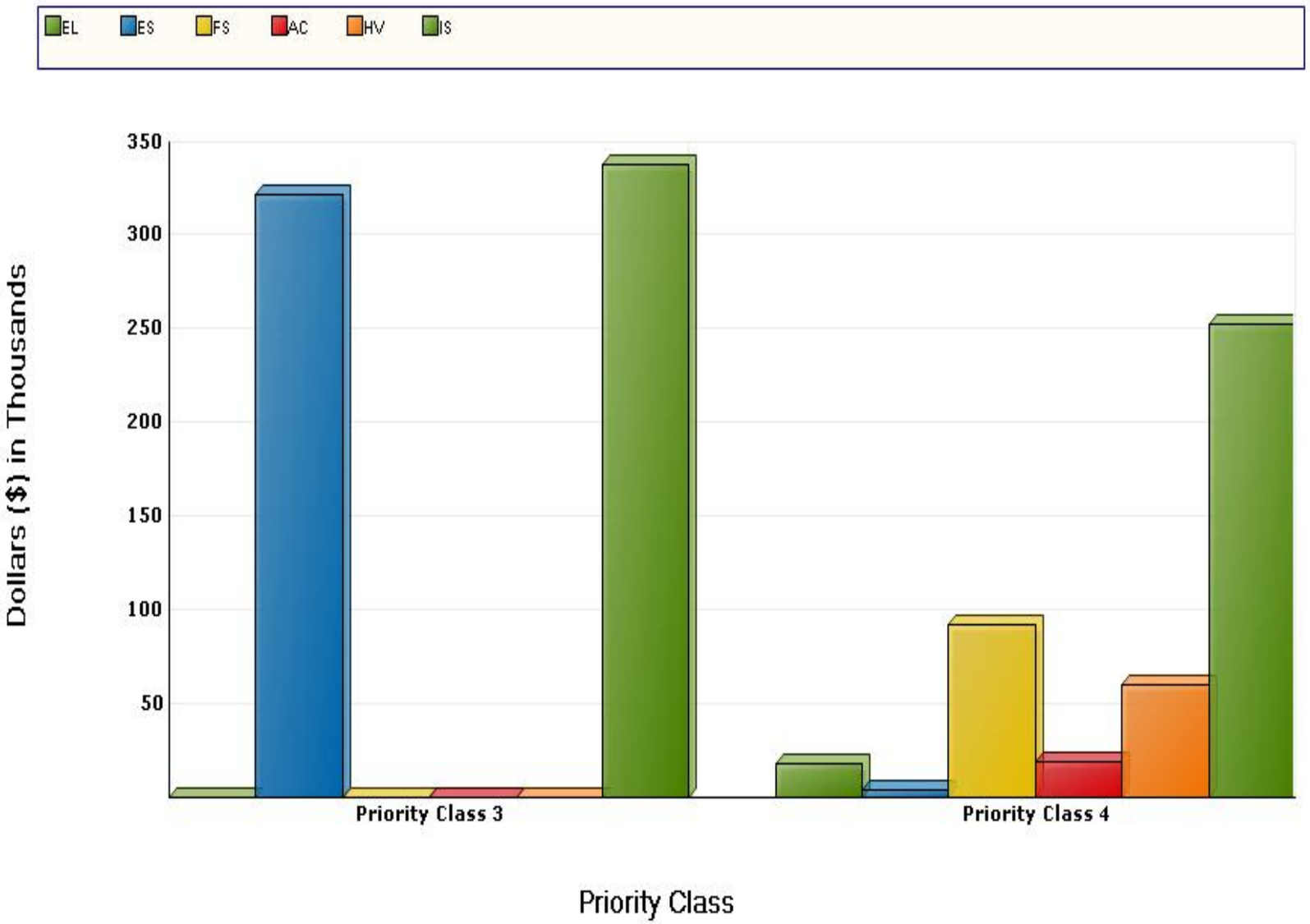
Facility Replacement Cost	$10,706,000
Facility Condition Needs Index	0.10

Gross Square Feet	34,467	**Total Cost Per Square Foot**	$32.22

FACILITY CONDITION ANALYSIS

System Code by Priority Class

JARV : JARVIS RESIDENCE HALL



Detailed Project Totals

Facility Condition Analysis

System Code by Project Class

JARV : JARVIS RESIDENCE HALL

System Code	System Description	Project Classes: Captial Renewal	Deferred Maintenance	Plant Adaption	Subtotal
AC	ACCESSIBILITY	0	0	19,984	19,984
EL	ELECTRICAL	18,751	0	0	18,751
ES	EXTERIOR	4,911	322,585	0	327,496
FS	FIRE/LIFE SAFETY	92,444	0	0	92,444
HV	HVAC	60,021	0	0	60,021
IS	INTERIOR/FINISH SYS.	463,589	0	128,367	591,955
	TOTALS	639,715	322,585	148,351	1,110,652

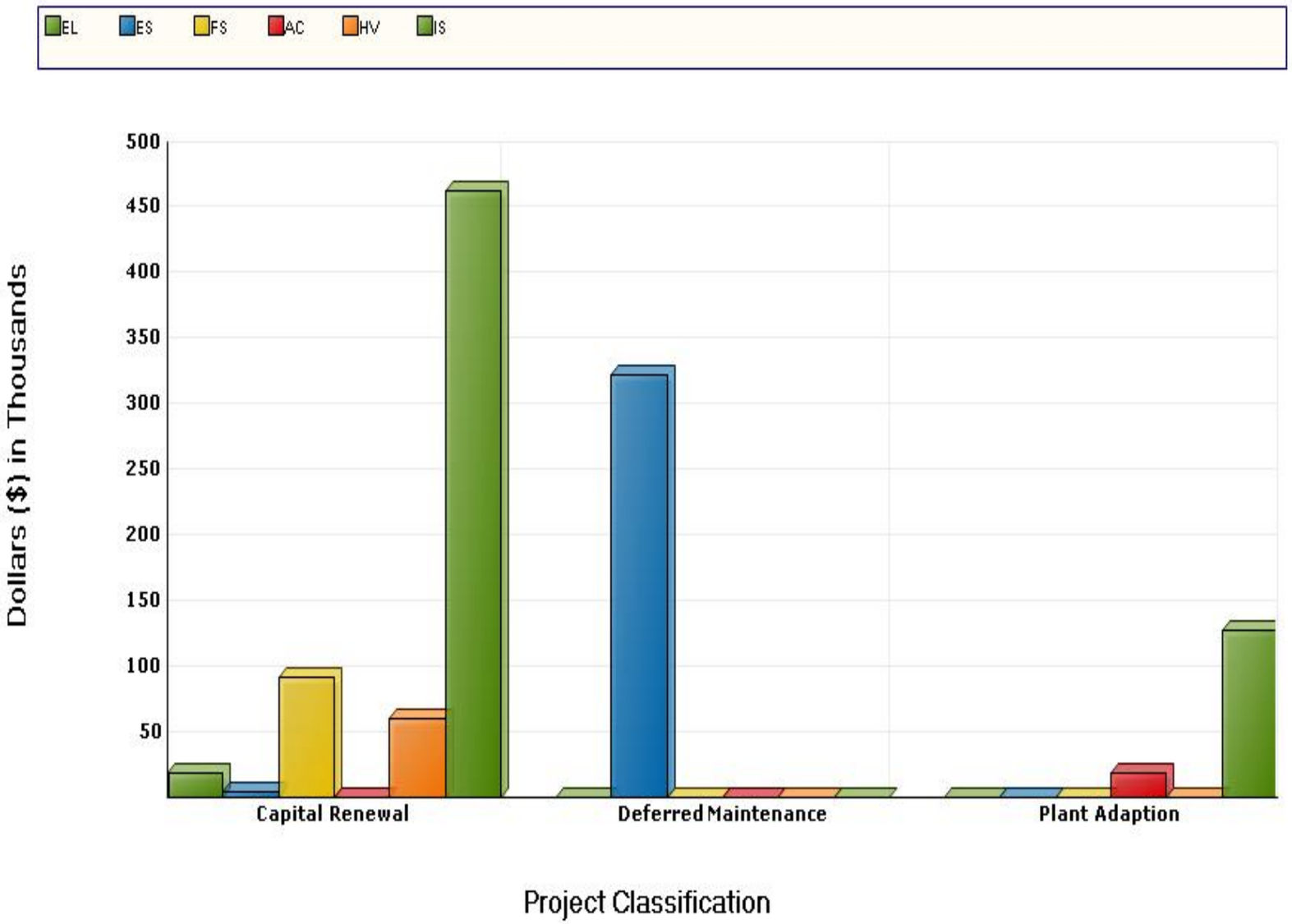
Facility Replacement Cost	$10,706,000
Facility Condition Needs Index	0.10

Gross Square Feet	34,467	**Total Cost Per Square Foot**	$32.22

FACILITY CONDITION ANALYSIS

System Code by Project Class

JARV : JARVIS RESIDENCE HALL



Detailed Project Summary
Facility Condition Analysis
Project Class by Priority Class
JARV : JARVIS RESIDENCE HALL

	Priority Classes				
Project Class	**1**	**2**	**3**	**4**	**Subtotal**
Capital Renewal	0	0	338,575	301,141	639,715
Deferred Maintenance	0	0	322,585	0	322,585
Plant Adaption	0	0	0	148,351	148,351
TOTALS	0	0	661,160	449,491	1,110,652

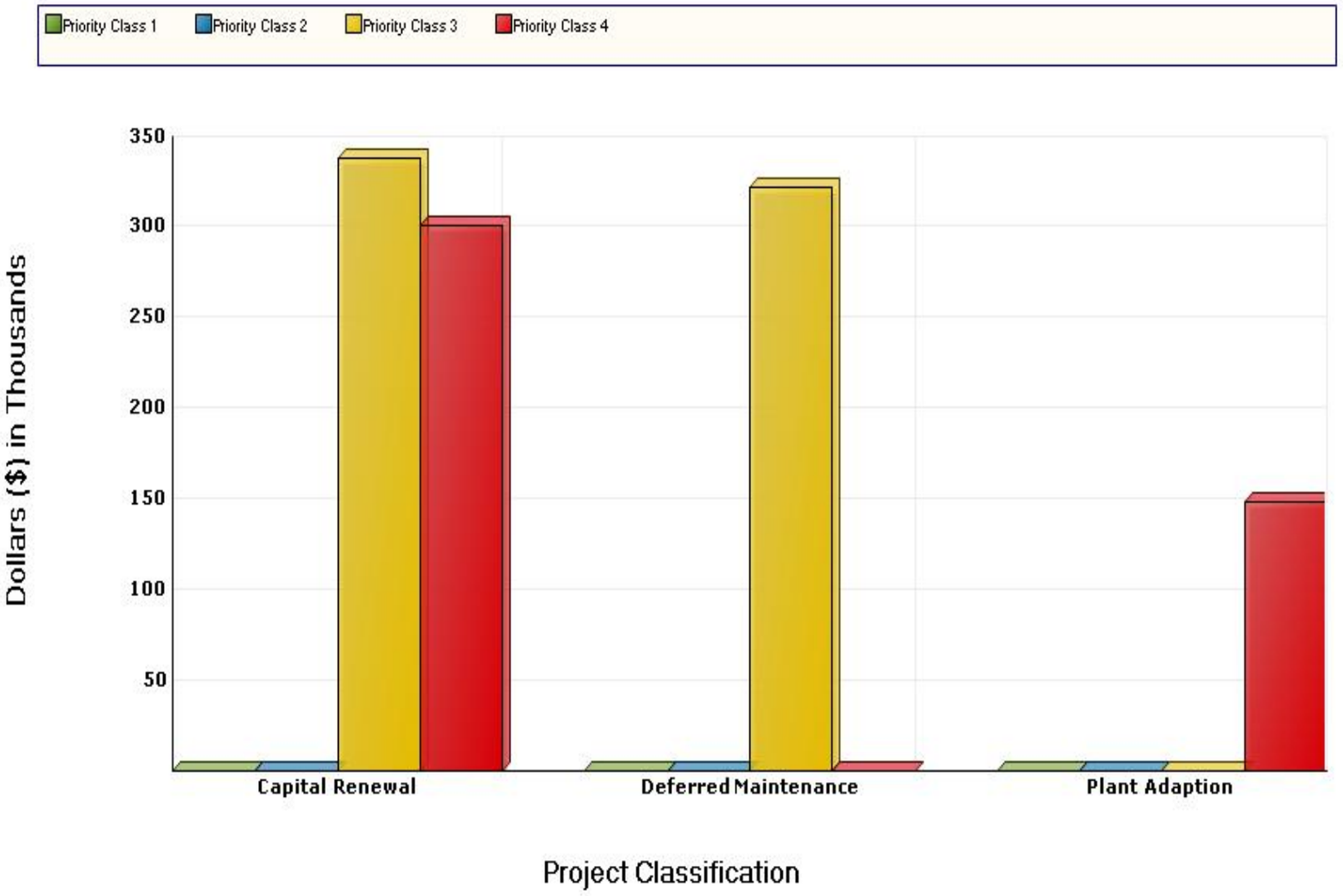
Facility Replacement Cost	$10,706,000
Facility Condition Needs Index	0.10

Gross Square Feet	34,467	**Total Cost Per Square Foot**	$32.22

FACILITY CONDITION ANALYSIS

Project Class by Priority Class

JARV : JARVIS RESIDENCE HALL



Detailed Project Summary

Facility Condition Analysis

Priority Class - Priority Sequence

JARV : JARVIS RESIDENCE HALL

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
ES2B	JARVES01	3	1	RESTORE BRICK MASONRY	43,984	7,037	51,021
ES2B	JARVES02	3	2	RESTORE ARCHITECTURAL ORNAMENTAL ELEMENTS	234,107	37,457	271,564
IS1A	JARVIS01	3	3	REFINISH FLOORING	222,926	35,668	258,594
IS2B	JARVIS02	3	4	REFINISH WALLS	68,949	11,032	79,981
				Totals for Priority Class 3	**569,966**	**91,195**	**661,160**
FS2A	JARVFS01	4	5	FIRE ALARM SYSTEM REPLACEMENT	79,693	12,751	92,444
AC3B	JARVAC01	4	6	STAIR SAFETY UPGRADES	17,228	2,756	19,984
ES4B	JARVES03	4	7	MEMBRANE ROOF REPLACEMENT	4,234	677	4,911
HV5B	JARVHV01	4	8	PUMP REPLACEMENT	51,742	8,279	60,021
EL3B	JARVEL01	4	9	ELECTRICAL SYSTEM REPAIRS	16,165	2,586	18,751
IS6D	JARVIS05	4	10	RESTROOM REFURBISHMENTS	110,661	17,706	128,367
IS3B	JARVIS03	4	11	REFINISH CEILINGS	100,862	16,138	117,000
IS4A	JARVIS04	4	12	PARTIAL INTERIOR DOOR REPLACEMENTS	6,909	1,105	8,014
				Totals for Priority Class 4	**387,493**	**61,999**	**449,491**
				Grand Total:	**957,458**	**153,193**	**1,110,652**

Detailed Project Summary

Facility Condition Analysis

Project Cost Range

JARV : JARVIS RESIDENCE HALL

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
ES2B	JARVES01	3	1	RESTORE BRICK MASONRY	43,984	7,037	51,021
IS2B	JARVIS02	3	4	REFINISH WALLS	68,949	11,032	79,981
				Totals for Priority Class 3	**112,933**	**18,069**	**131,002**
ES4B	JARVES03	4	7	MEMBRANE ROOF REPLACEMENT	4,234	677	4,911
AC3B	JARVAC01	4	6	STAIR SAFETY UPGRADES	17,228	2,756	19,984
IS4A	JARVIS04	4	12	PARTIAL INTERIOR DOOR REPLACEMENTS	6,909	1,105	8,014
FS2A	JARVFS01	4	5	FIRE ALARM SYSTEM REPLACEMENT	79,693	12,751	92,444
HV5B	JARVHV01	4	8	PUMP REPLACEMENT	51,742	8,279	60,021
EL3B	JARVEL01	4	9	ELECTRICAL SYSTEM REPAIRS	16,165	2,586	18,751
				Totals for Priority Class 4	**175,970**	**28,155**	**204,125**
				Grand Totals for Projects < 100,000	**288,903**	**46,224**	**335,127**

Detailed Project Summary

Facility Condition Analysis

Project Cost Range

JARV : JARVIS RESIDENCE HALL

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
ES2B	JARVES02	3	2	RESTORE ARCHITECTURAL ORNAMENTAL ELEMENTS	234,107	37,457	271,564
IS1A	JARVIS01	3	3	REFINISH FLOORING	222,926	35,668	258,594
				Totals for Priority Class 3	**457,033**	**73,125**	**530,158**
IS3B	JARVIS03	4	11	REFINISH CEILINGS	100,862	16,138	117,000
IS6D	JARVIS05	4	10	RESTROOM REFURBISHMENTS	110,661	17,706	128,367
				Totals for Priority Class 4	**211,523**	**33,844**	**245,366**
				Grand Totals for Projects >= 100,000 and < 500,000	**668,556**	**106,969**	**775,525**
				Grand Totals For All Projects:	**957,458**	**153,193**	**1,110,652**

Detailed Project Summary

Facility Condition Analysis

Project Classification

JARV : JARVIS RESIDENCE HALL

Cat Code	Project Number	Pri. Seq.	Project Classification	Pri. Cls	Project Title	Total Cost
IS1A	JARVIS01	3	Capital Renewal	3	REFINISH FLOORING	258,594
IS2B	JARVIS02	4	Capital Renewal	3	REFINISH WALLS	79,981
FS2A	JARVFS01	5	Capital Renewal	4	FIRE ALARM SYSTEM REPLACEMENT	92,444
ES4B	JARVES03	7	Capital Renewal	4	MEMBRANE ROOF REPLACEMENT	4,911
HV5B	JARVHV01	8	Capital Renewal	4	PUMP REPLACEMENT	60,021
EL3B	JARVEL01	9	Capital Renewal	4	ELECTRICAL SYSTEM REPAIRS	18,751
IS3B	JARVIS03	11	Capital Renewal	4	REFINISH CEILINGS	117,000
IS4A	JARVIS04	12	Capital Renewal	4	PARTIAL INTERIOR DOOR REPLACEMENTS	8,014
					Totals for Capital Renewal	**639,715**
ES2B	JARVES01	1	Deferred Maintenance	3	RESTORE BRICK MASONRY	51,021
ES2B	JARVES02	2	Deferred Maintenance	3	RESTORE ARCHITECTURAL ORNAMENTAL ELEMENTS	271,564
					Totals for Deferred Maintenance	**322,585**
AC3B	JARVAC01	6	Plant Adaption	4	STAIR SAFETY UPGRADES	19,984
IS6D	JARVIS05	10	Plant Adaption	4	RESTROOM REFURBISHMENTS	128,367
					Totals for Plant Adaption	**148,351**
					Grand Total:	**1,110,652**

Detailed Project Summary

Facility Condition Analysis

Energy Conservation

JARV : JARVIS RESIDENCE HALL

Cat Code	Project Number	Pri Cls	Pri Seq	Project Title	Total Cost	Annual Savings	Simple Payback
ES4B	JARVES03	4	7	MEMBRANE ROOF REPLACEMENT	4,911	100	49.11
				Totals for Priority Class 4	**4,911**	**100**	**49.11**
				Grand Total:	**4,911**	**100**	**49.11**

Detailed Project Summary

Facility Condition Analysis

Category/System Code

JARV : JARVIS RESIDENCE HALL

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
AC3B	JARVAC01	4	6	STAIR SAFETY UPGRADES	17,228	2,756	19,984
				Totals for System Code: ACCESSIBILITY	**17,228**	**2,756**	**19,984**
EL3B	JARVEL01	4	9	ELECTRICAL SYSTEM REPAIRS	16,165	2,586	18,751
				Totals for System Code: ELECTRICAL	**16,165**	**2,586**	**18,751**
ES2B	JARVES01	3	1	RESTORE BRICK MASONRY	43,984	7,037	51,021
ES2B	JARVES02	3	2	RESTORE ARCHITECTURAL ORNAMENTAL ELEMENTS	234,107	37,457	271,564
ES4B	JARVES03	4	7	MEMBRANE ROOF REPLACEMENT	4,234	677	4,911
				Totals for System Code: EXTERIOR	**282,324**	**45,172**	**327,496**
FS2A	JARVFS01	4	5	FIRE ALARM SYSTEM REPLACEMENT	79,693	12,751	92,444
				Totals for System Code: FIRE/LIFE SAFETY	**79,693**	**12,751**	**92,444**
HV5B	JARVHV01	4	8	PUMP REPLACEMENT	51,742	8,279	60,021
				Totals for System Code: HVAC	**51,742**	**8,279**	**60,021**
IS1A	JARVIS01	3	3	REFINISH FLOORING	222,926	35,668	258,594
IS2B	JARVIS02	3	4	REFINISH WALLS	68,949	11,032	79,981
IS6D	JARVIS05	4	10	RESTROOM REFURBISHMENTS	110,661	17,706	128,367
IS3B	JARVIS03	4	11	REFINISH CEILINGS	100,862	16,138	117,000
IS4A	JARVIS04	4	12	PARTIAL INTERIOR DOOR REPLACEMENTS	6,909	1,105	8,014
				Totals for System Code: INTERIOR/FINISH SYS.	**510,306**	**81,649**	**591,955**
				Grand Total:	**957,458**	**153,193**	**1,110,652**

FACILITY CONDITION ANALYSIS

SECTION 3

SPECIFIC PROJECT DETAILS ILLUSTRATING DESCRIPTION / COST

Specific Project Details

Facility Condition Analysis
Section Three
JARV : JARVIS RESIDENCE HALL

Project Description

Project Number:	JARVES01	**Title:**	RESTORE BRICK MASONRY
Priority Sequence:	1		
Priority Class:	3		
Category Code:	ES2B	**System:**	EXTERIOR
		Component:	COLUMNS/BEAMS/WALLS
		Element:	FINISH
Building Code:	JARV		
Building Name:	JARVIS RESIDENCE HALL		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Deferred Maintenance		
Project Date:	10/9/2009		
Project Location:	Building-wide: Floor(s) 1		

Project Description

Brick masonry is the primary exterior facade finish, with minor areas of natural and cast stone ornamentation. 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. Upgrades have been accomplished in recent renovations, but several areas of deterioration remain and corrective actions are required.

Specific Project Details

Facility Condition Analysis
Section Three
JARV : JARVIS RESIDENCE HALL

Project Cost

Project Number: JARVES01

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Cleaning and surface preparation	SF	23,350	$0.11	$2,569	$0.22	$5,137	$7,706
Selective mortar and / or sealant repairs (assumes 10 linear feet for every 100 square feet of envelope)	LF	2,335	$2.45	$5,721	$4.99	$11,652	$17,372
Applied finish or sealant	SF	23,350	$0.22	$5,137	$0.82	$19,147	$24,284
Masonry crack repairs and restorative structural tuck-pointing	LOT	1	$2,500	$2,500	$4,250	$4,250	$6,750
Project Totals:				**$15,926**		**$40,186**	**$56,112**

Material/Labor Cost		$56,112
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$36,653
General Contractor Mark Up at 20.0%	+	$7,331
Construction Cost		$43,984
Professional Fees at 16.0%	+	$7,037
Total Project Cost		**$51,021**

Specific Project Details

Facility Condition Analysis
Section Three
JARV : JARVIS RESIDENCE HALL

Project Description

Project Number:	JARVES02	**Title:**	RESTORE ARCHITECTURAL ORNAMENTAL ELEMENTS
Priority Sequence:	2		
Priority Class:	3		
Category Code:	ES2B	**System:**	EXTERIOR
		Component:	COLUMNS/BEAMS/WALLS
		Element:	FINISH
Building Code:	JARV		
Building Name:	JARVIS RESIDENCE HALL		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Deferred Maintenance		
Project Date:	10/9/2009		
Project Location:	Building-wide: Floor(s) 1		

Project Description

The architectural ornamental concrete and stone exterior, as well as the painted trim and soffits, has become visibly soiled, and the construction joints and painted finishes are failing. Cleaning, surface preparation, selective repairs, and applied finish upgrades are recommended to restore the aesthetics and integrity of the building envelope.

Project Cost

Project Number: JARVES02

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Cleaning and surface preparation	SF	1,230	$0.11	$135	$0.22	$271	$406
Selective mortar and / or sealant repairs (assumes 10 linear feet for every 100 square feet of envelope)	LF	123	$2.45	$301	$4.99	$614	$915
Wood surface cleaning, repairs, and paint finish application	SF	3,420	$0.35	$1,197	$110	$376,200	$377,397
Project Totals:				**$1,634**		**$377,084**	**$378,718**

Material/Labor Cost		$378,718
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$195,089
General Contractor Mark Up at 20.0%	+	$39,018
Construction Cost		$234,107
Professional Fees at 16.0%	+	$37,457
Total Project Cost		**$271,564**

Specific Project Details

Facility Condition Analysis
Section Three
JARV : JARVIS RESIDENCE HALL

Project Description

Project Number:	JARVIS01	**Title:**	REFINISH FLOORING
Priority Sequence:	3		
Priority Class:	3		
Category Code:	IS1A	**System:**	INTERIOR/FINISH SYS.
		Component:	FLOOR
		Element:	FINISHES-DRY
Building Code:	JARV		
Building Name:	JARVIS RESIDENCE HALL		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Capital Renewal		
Project Date:	10/9/2009		
Project Location:	Floor-wide: Floor(s) 1, 2		

Project Description

The predominant floor finishes include tiled pavers in portions of the public lobby areas, vinyl composition tiles (VCT) in kitchen, laundry, and work areas, carpeting in circulation corridors, dorm rooms, offices, and administrative areas, ceramic tiles in public restrooms and shower rooms, and hardwood flooring in the new lobby lounge area. The back-of-house service areas, mechanical and electrical rooms, and unoccupied storage areas typically have either VCT or natural sealed concrete flooring. Interior floor finish applications vary in age, type, and condition. 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
JARV : JARVIS RESIDENCE HALL

Project Cost

Project Number: JARVIS01

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Carpet	SF	20,960	$5.36	$112,346	$2.00	$41,920	$154,266
Vinyl floor tile	SF	2,760	$3.53	$9,743	$2.50	$6,900	$16,643
Ceramic tile	SF	2,760	$7.24	$19,982	$10.63	$29,339	$49,321
Sand and finish hardwood flooring	SF	1,100	$0.36	$396	$3.92	$4,312	$4,708
Project Totals:				**$142,467**		**$82,471**	**$224,938**

Material/Labor Cost		$224,938
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$185,772
General Contractor Mark Up at 20.0%	+	$37,154
Construction Cost		$222,926
Professional Fees at 16.0%	+	$35,668
Total Project Cost		**$258,594**

Specific Project Details

Facility Condition Analysis
Section Three
JARV : JARVIS RESIDENCE HALL

Project Description

Project Number:	JARVIS02	**Title:**	REFINISH WALLS
Priority Sequence:	4		
Priority Class:	3		
Category Code:	IS2B	**System:**	INTERIOR/FINISH SYS.
		Component:	PARTITIONS
		Element:	FINISHES
Building Code:	JARV		
Building Name:	JARVIS RESIDENCE HALL		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Capital Renewal		
Project Date:	10/9/2009		
Project Location:	Floor-wide: Floor(s) 1, 2		

Project Description

Interior partitions are typically a framed stud and trowel applied cementitious plaster wall assembly with a painted applied finish. Interior wall finish applications vary in age, type, and condition. 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
JARV : JARVIS RESIDENCE HALL

Project Cost

Project Number: JARVIS02

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Standard wall finish (paint, wall covering, etc.)	SF	97,930	$0.17	$16,648	$0.81	$79,323	$95,971
Project Totals:				**$16,648**		**$79,323**	**$95,971**

Material/Labor Cost		$95,971
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$57,457
General Contractor Mark Up at 20.0%	+	$11,492
Construction Cost		$68,949
Professional Fees at 16.0%	+	$11,032
Total Project Cost		**$79,981**

Specific Project Details

Facility Condition Analysis
Section Three
JARV : JARVIS RESIDENCE HALL

Project Description

Project Number:	JARVFS01	**Title:**	FIRE ALARM SYSTEM REPLACEMENT
Priority Sequence:	5		
Priority Class:	4		
Category Code:	FS2A	**System:**	FIRE/LIFE SAFETY
		Component:	DETECTION ALARM
		Element:	GENERAL

Building Code:	JARV
Building Name:	JARVIS RESIDENCE HALL
Subclass/Savings:	Not Applicable

Code Application:	ADAAG	702.1
	NFPA	1, 101

Project Class:	Capital Renewal
Project Date:	10/12/2009
Project Location:	Floor-wide: Floor(s) 1, 2, B

Project Description

Provide life cycle replacement and appropriate upgrade of existing fire alarm system components. 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.

Project Cost

Project Number: JARVFS01

Task Cost Estimate

Task Description	Unit	Qnty	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, cut and patching materials	SF	34,467	$1.46	$50,322	$0.89	$30,676	$80,997
Project Totals:				**$50,322**		**$30,676**	**$80,997**

Material/Labor Cost		$80,997
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$66,411
General Contractor Mark Up at 20.0%	+	$13,282
Construction Cost		$79,693
Professional Fees at 16.0%	+	$12,751
Total Project Cost		**$92,444**

Specific Project Details

Facility Condition Analysis
Section Three
JARV : JARVIS RESIDENCE HALL

Project Description

Project Number:	JARVAC01	**Title:**	STAIR SAFETY UPGRADES
Priority Sequence:	6		
Priority Class:	4		
Category Code:	AC3B	**System:**	ACCESSIBILITY
		Component:	INTERIOR PATH OF TRAVEL
		Element:	STAIRS AND RAILINGS
Building Code:	JARV		
Building Name:	JARVIS RESIDENCE HALL		
Subclass/Savings:	Not Applicable		

Code Application:	IBC	1003.3
	ADAAG	505

Project Class:	Plant Adaption
Project Date:	10/9/2009
Project Location:	Floor-wide: Floor(s) 1, 2

Project Description

Current accessibility legislation 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. 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. Also, the finishes on the stairs have deteriorated or are otherwise unsafe. Future renovation efforts should include comprehensive stair railing and finish upgrades.

Specific Project Details

Facility Condition Analysis
Section Three
JARV : JARVIS RESIDENCE HALL

Project Cost

Project Number: JARVAC01

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Center handrail / guardrail system per floor	FLR	4	$1,297	$5,188	$833	$3,332	$8,520
Stair tread and landing finish upgrades per floor	FLR	4	$1,449	$5,796	$773	$3,092	$8,888
Project Totals:				**$10,984**		**$6,424**	**$17,408**

Material/Labor Cost		$17,408
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$14,356
General Contractor Mark Up at 20.0%	+	$2,871
Construction Cost		$17,228
Professional Fees at 16.0%	+	$2,756
Total Project Cost		**$19,984**

Specific Project Details

Facility Condition Analysis
Section Three
JARV : JARVIS RESIDENCE HALL

Project Description

Project Number:	JARVES03	**Title:**	MEMBRANE ROOF REPLACEMENT
Priority Sequence:	7		
Priority Class:	4		
Category Code:	ES4B	**System:**	EXTERIOR
		Component:	ROOF
		Element:	REPLACEMENT
Building Code:	JARV		
Building Name:	JARVIS RESIDENCE HALL		
Subclass/Savings:	Energy Conservation $100		
Code Application:	Not Applicable		
Project Class:	Capital Renewal		
Project Date:	10/9/2009		
Project Location:	Floor-wide: Floor(s) R		

Project Description

The single-ply membrane roofing utilized on the entry porch 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
JARV : JARVIS RESIDENCE HALL

Project Cost

Project Number: JARVES03

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Membrane roof	SF	750	$3.79	$2,843	$1.73	$1,298	$4,140
Project Totals:				**$2,843**		**$1,298**	**$4,140**

Material/Labor Cost		$4,140
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$3,528
General Contractor Mark Up at 20.0%	+	$706
Construction Cost		$4,234
Professional Fees at 16.0%	+	$677
Total Project Cost		**$4,911**

Specific Project Details

Facility Condition Analysis
Section Three
JARV : JARVIS RESIDENCE HALL

Project Description

Project Number:	JARVHV01	**Title:**	PUMP REPLACEMENT
Priority Sequence:	8		
Priority Class:	4		
Category Code:	HV5B	**System:**	HVAC
		Component:	STEAM/HYDRONIC DISTRIB.
		Element:	PUMPS
Building Code:	JARV		
Building Name:	JARVIS RESIDENCE HALL		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Capital Renewal		
Project Date:	10/12/2009		
Project Location:	Item Only: Floor(s) B		

Project Description

Replace pumps that have reached or are approaching the end of their expected life cycle. Remove the existing pumps. Install new pump assemblies, including pump and motor, piping and electrical connections, strainer, valves, expansion joints, mounting, and hardware.

Specific Project Details

Facility Condition Analysis
Section Three
JARV : JARVIS RESIDENCE HALL

Project Cost

Project Number: JARVHV01

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Replace base-mounted pump assembly (<15 hp)	HP	14	$1,779	$24,906	$1,052	$14,728	$39,634
Variable frequency drives (<10 hp)	HP	14	$624	$8,739	$234	$3,280	$12,019
Project Totals:				**$33,645**		**$18,008**	**$51,653**

Material/Labor Cost		$51,653
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$43,118
General Contractor Mark Up at 20.0%	+	$8,624
Construction Cost		$51,742
Professional Fees at 16.0%	+	$8,279
Total Project Cost		**$60,021**

Specific Project Details

Facility Condition Analysis
Section Three
JARV : JARVIS RESIDENCE HALL

Project Description

Project Number:	JARVEL01	**Title:**	ELECTRICAL SYSTEM REPAIRS
Priority Sequence:	9		
Priority Class:	4		
Category Code:	EL3B	**System:**	ELECTRICAL
		Component:	SECONDARY DISTRIBUTION
		Element:	DISTRIBUTION NETWORK
Building Code:	JARV		
Building Name:	JARVIS RESIDENCE HALL		
Subclass/Savings:	Not Applicable		

Code Application: NEC Articles 100, 210, 410

Project Class: Capital Renewal

Project Date: 10/12/2009

Project Location: Floor-wide: Floor(s) 1, 2, B

Project Description

Aging devices, including wall switches and receptacles, are potential shock and fire hazards. Replace all worn or damaged switches, receptacles, and cover plates. Install GFCI receptacles where required by code. Test power panels for proper operation, replacing faulty breakers as needed. Update power panel directories for circuit identification.

Specific Project Details

Facility Condition Analysis
Section Three
JARV : JARVIS RESIDENCE HALL

Project Cost

Project Number: JARVEL01

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Switches, receptacles, cover plates, breakers, miscellaneous materials	SF	34,467	$0.22	$7,583	$0.33	$11,374	$18,957
Project Totals:				**$7,583**		**$11,374**	**$18,957**

Material/Labor Cost		$18,957
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$13,471
General Contractor Mark Up at 20.0%	+	$2,694
Construction Cost		$16,165
Professional Fees at 16.0%	+	$2,586
Total Project Cost		**$18,751**

Specific Project Details

Facility Condition Analysis
Section Three
JARV : JARVIS RESIDENCE HALL

Project Description

Project Number:	JARVIS05	**Title:**	RESTROOM REFURBISHMENTS
Priority Sequence:	10		
Priority Class:	4		
Category Code:	IS6D	**System:**	INTERIOR/FINISH SYS.
		Component:	GENERAL
		Element:	OTHER
Building Code:	JARV		
Building Name:	JARVIS RESIDENCE HALL		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Plant Adaption		
Project Date:	10/9/2009		
Project Location:	Floor-wide: Floor(s) 1, 2		

Project Description

The shared restrooms on each floor have fixtures and finishes that are mostly original to the year of construction and some partial subsequent renovations. The fixtures are sound but aged and inefficient, and the finishes are outdated and deteriorating in some areas. A comprehensive restroom renovation, including new fixtures, finishes, partitions, accessories, and associated common corridor dual level drinking fountains, is recommended. All future renovations should provide full compliance with ADA guidelines.

Specific Project Details

Facility Condition Analysis
Section Three
JARV : JARVIS RESIDENCE HALL

Project Cost

Project Number: JARVIS05

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Restroom refurbishment, including selective fixtures, finishes, partitions, accessories.	FIXT	67	$689	$46,163	$594	$39,798	$85,961
Dual level drinking fountain replacements	EA	6	$1,216	$7,296	$374	$2,244	$9,540
Alcove construction	EA	6	$877	$5,262	$3,742	$22,452	$27,714
Project Totals:				**$58,721**		**$64,494**	**$123,215**

Material/Labor Cost		$123,215
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$92,217
General Contractor Mark Up at 20.0%	+	$18,443
Construction Cost		$110,661
Professional Fees at 16.0%	+	$17,706
Total Project Cost		**$128,367**

Specific Project Details

Facility Condition Analysis
Section Three
JARV : JARVIS RESIDENCE HALL

Project Description

Project Number:	JARVIS03	**Title:**	REFINISH CEILINGS
Priority Sequence:	11		
Priority Class:	4		
Category Code:	IS3B	**System:**	INTERIOR/FINISH SYS.
		Component:	CEILINGS
		Element:	REPLACEMENT
Building Code:	JARV		
Building Name:	JARVIS RESIDENCE HALL		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Capital Renewal		
Project Date:	10/9/2009		
Project Location:	Floor-wide: Floor(s) 1, 2		

Project Description

The ceiling systems include suspended, acoustical tiles, painted drop soffits in corridors, and painted plaster in some service areas, restrooms, and the main lobby. Ceiling finish applications vary in age, type, 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
JARV : JARVIS RESIDENCE HALL

Project Cost

Project Number: JARVIS03

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Acoustical tile ceiling system	SF	22,060	$2.12	$46,767	$2.98	$65,739	$112,506
Painted ceiling finish application	SF	5,510	$0.17	$937	$0.81	$4,463	$5,400
Project Totals:				**$47,704**		**$70,202**	**$117,906**

Material/Labor Cost		$117,906
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$84,051
General Contractor Mark Up at 20.0%	+	$16,810
Construction Cost		$100,862
Professional Fees at 16.0%	+	$16,138
Total Project Cost		**$117,000**

Specific Project Details

Facility Condition Analysis
Section Three
JARV : JARVIS RESIDENCE HALL

Project Description

Project Number:	JARVIS04	**Title:**	PARTIAL INTERIOR DOOR REPLACEMENTS
Priority Sequence:	12		
Priority Class:	4		
Category Code:	IS4A	**System:**	INTERIOR/FINISH SYS.
		Component:	DOORS
		Element:	GENERAL
Building Code:	JARV		
Building Name:	JARVIS RESIDENCE HALL		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Capital Renewal		
Project Date:	10/9/2009		
Project Location:	Floor-wide: Floor(s) B		

Project Description

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

Specific Project Details

Facility Condition Analysis
Section Three
JARV : JARVIS RESIDENCE HALL

Project Cost

Project Number: JARVIS04

Task Cost Estimate

Task Description	Unit	Qnty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Interior door and frame installation with all hardware and accessible signage	EA	10	$370	$3,700	$396	$3,960	$7,660
Project Totals:				**$3,700**		**$3,960**	**$7,660**

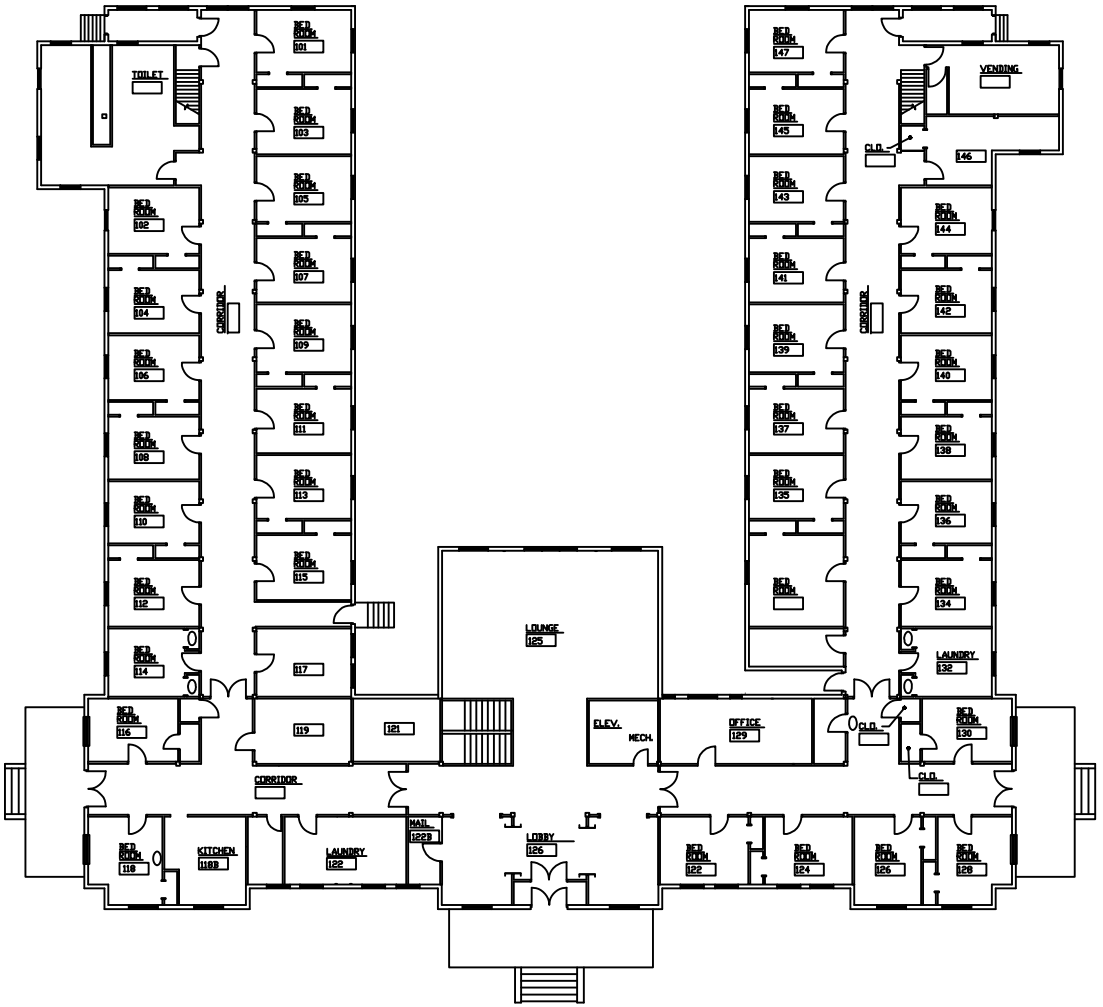
Material/Labor Cost		$7,660
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		$5,757
General Contractor Mark Up at 20.0%	+	$1,151
Construction Cost		$6,909
Professional Fees at 16.0%	+	$1,105
Total Project Cost		**$8,014**

FACILITY CONDITION ANALYSIS

SECTION 4

DRAWINGS AND PROJECT LOCATIONS

EAST CAROLINA UNIVERSITY



ES01 ES02

AC01 EL01 FS01 IS01 IS02 IS03 IS05

BASEMENT

EL01 FS01 IS04

HV01 HV01 HV01 HV01 HV01

JARVIS
RESIDENCE HALL

BLDG NO. JARV

ISES CORPORATION

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

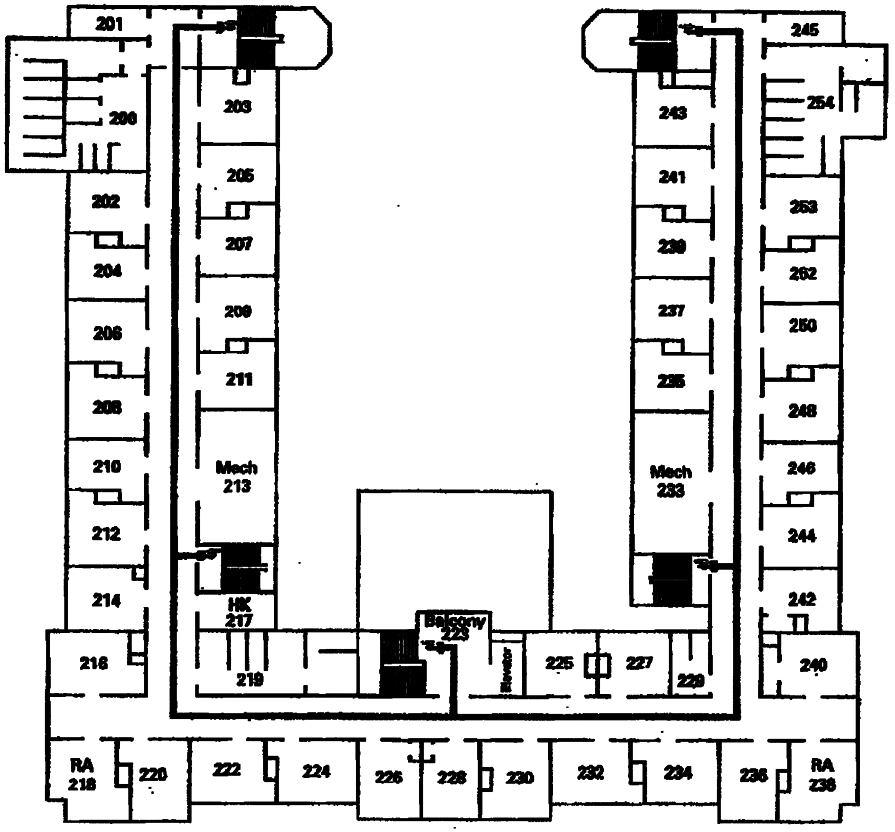
Date: 12/17/09
Drawn by: J.T.V.
Project No. 09-041

FIRST FLOOR PLAN

Sheet No.
1 of 2

EAST CAROLINA UNIVERSITY

ROOF
ES03



AC01 EL01 FS01 IS01 IS02 IS03 IS05

JARVIS
RESIDENCE HALL

BLDG NO. JARV

ISES CORPORATION

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PROJECT NUMBER APPLIES TO A SITUATION OF UNDEFINED EXTENTS

PROJECT NUMBER APPLIES TO AREA AS NOTED

Date: 12/17/09
Drawn by: J.T.V.
Project No. 09-041

SECOND
FLOOR
PLAN

Sheet No.
2 of 2

FACILITY CONDITION ANALYSIS

SECTION 5

LIFE CYCLE MODEL SUMMARY AND PROJECTIONS

Life Cycle Model

Building Component Summary

JARV : JARVIS RESIDENCE HALL

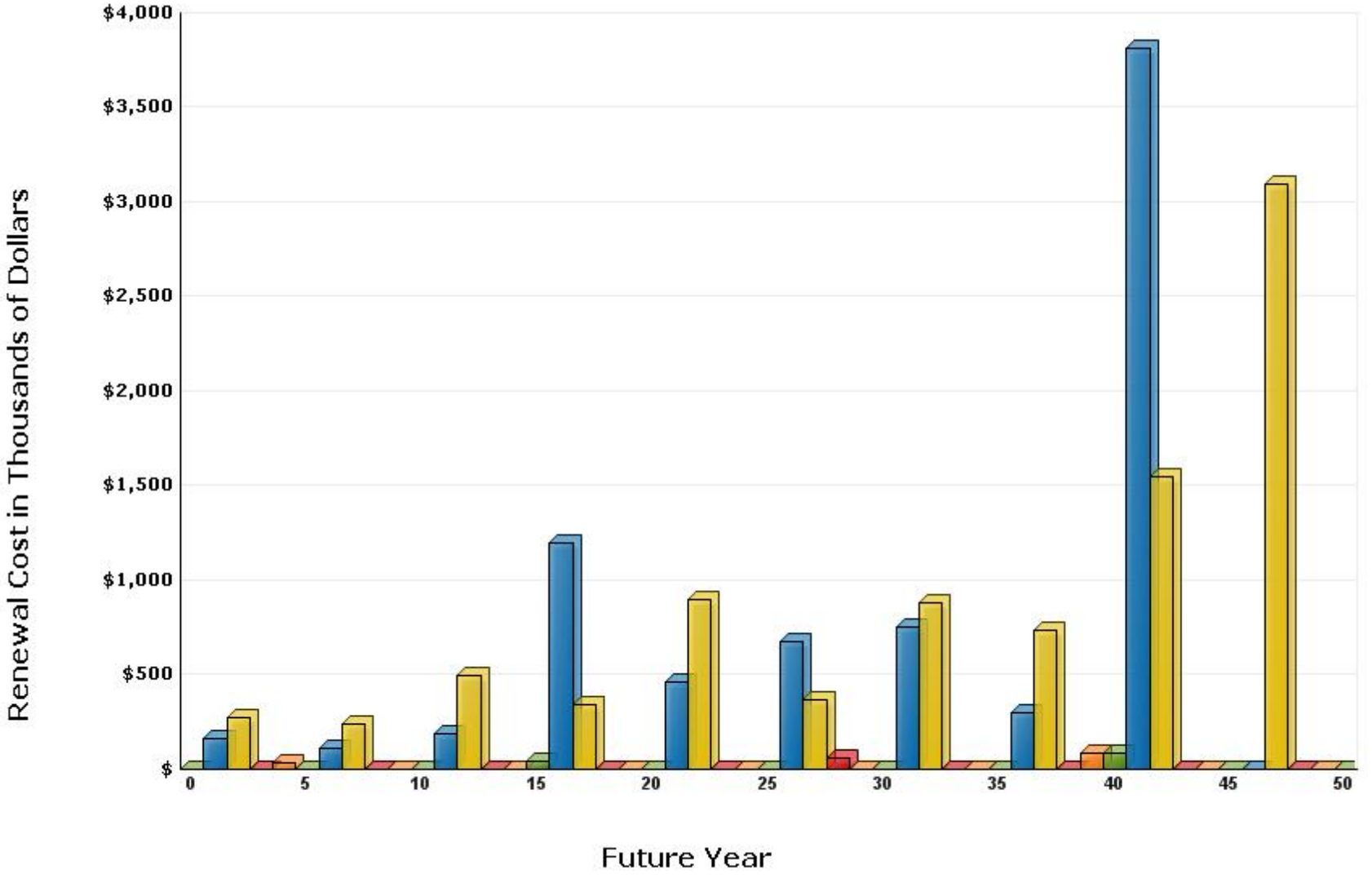
Uniformat Code	Component Description	Qty	Units	Unit Cost	Complx Adj	Total Cost	Install Date	Life Exp
B2010	EXTERIOR FINISH RENEWAL	740	SF	$1.30		$965	1909	10
B2010	EXTERIOR FINISH RENEWAL	490	SF	$1.30		$639	1909	10
B2010	EXTERIOR FINISH RENEWAL	23,350	SF	$1.30	.31	$9,436	1909	10
B2020	STANDARD GLAZING AND CURTAIN WALL	7,340	SF	$104.04		$763,629	2000	55
B2030	HIGH TRAFFIC EXTERIOR DOOR SYSTEM	17	LEAF	$4,311.24		$73,291	2000	20
B2030	LOW TRAFFIC EXTERIOR DOOR SYSTEM	1	LEAF	$2,863.29		$2,863	1985	40
B3010	MEMBRANE ROOF	750	SF	$6.41		$4,805	2000	15
B3010	TILE ROOF	24,150	SF	$19.15		$462,383	2000	70
B3010	STANDARD METAL GUTTER SYSTEM	790	LF	$9.80		$7,742	2000	30
C1020	STANDARD DOOR AND FRAME INCLUDING HARDWARE	25	LEAF	$783.68		$19,592	2000	35
C1020	STANDARD DOOR AND FRAME INCLUDING HARDWARE	10	LEAF	$783.68		$7,837	1985	35
C1020	RATED DOOR AND FRAME INCLUDING HARDWARE	98	LEAF	$1,489.06		$145,928	2000	35
C1020	INTERIOR DOOR HARDWARE	98	EA	$423.04		$41,458	2000	15
C1020	INTERIOR DOOR HARDWARE	25	EA	$423.04		$10,576	2000	15
C1020	INTERIOR DOOR HARDWARE	10	EA	$423.04		$4,230	1985	15
C3010	STANDARD WALL FINISH (PAINT, WALL COVERING, ETC.)	97,930	SF	$0.80		$78,446	2000	10
C3020	CARPET	20,960	SF	$8.75		$183,326	2000	10
C3020	VINYL FLOOR TILE	2,760	SF	$6.59		$18,183	2000	15
C3020	CERAMIC FLOOR TILE	2,760	SF	$17.36		$47,920	1985	20
C3020	HARDWOOD REPLACEMENT	1,100	SF	$23.94		$26,330	2000	50
C3020	SAND AND FINISH HARDWOOD FLOORING	1,100	SF	$3.24		$3,562	2000	15
C3030	ACOUSTICAL TILE CEILING SYSTEM	22,060	SF	$4.99		$110,146	2000	15
C3030	PAINTED CEILING FINISH APPLICATION	5,510	SF	$0.80		$4,414	2000	15
D1010	ELEVATOR MODERNIZATION - HYDRAULIC	1	EA	$158,628.64		$158,629	2000	25
D1010	ELEVATOR CAB RENOVATION - PASSENGER	1	EA	$26,616.80		$26,617	2000	12
D2010	PLUMBING FIXTURES - DORMITORY / APARTMENTS	34,467	SF	$4.99		$171,898	1999	35
D2020	WATER PIPING - DORMITORY / APARTMENTS	34,467	SF	$3.55		$122,402	1999	35
D2020	WATER HEATER, SHELL AND TUBE HEAT EXCHANGER	77	GPM	$355.69		$27,388	1999	24
D2030	DRAIN PIPING - DORMITORY / APARTMENTS	34,467	SF	$5.40		$186,161	1999	40

Life Cycle Model
Building Component Summary
JARV : JARVIS RESIDENCE HALL

Uniformat Code	Component Description	Qty	Units	Unit Cost	Complx Adj	Total Cost	Install Date	Life Exp
D3040	CONDENSATE RECEIVER	2	SYS	$9,504.01		$19,008	1999	15
D3040	HVAC SYSTEM - DORMITORY / APARTMENTS	34,467	SF	$19.20		$661,730	1999	25
D3040	BASE MTD. PUMP - UP TO 15 HP	11	HP	$3,175.77		$34,933	1999	20
D3040	BASE MTD. PUMP - UP TO 15 HP	3	HP	$3,175.77		$9,527	1999	20
D4010	FIRE SPRINKLER SYSTEM	24,130	SF	$6.86		$165,558	1999	80
D4010	FIRE SPRINKLER SYSTEM	10,340	SF	$6.86		$70,944	1999	80
D4010	FIRE SPRINKLER HEADS	24,130	SF	$0.38		$9,101	1999	20
D4010	FIRE SPRINKLER HEADS	10,340	SF	$0.38		$3,900	1999	20
D5010	ELECTRICAL SYSTEM - DORMITORY / APARTMENTS	34,467	SF	$7.21		$248,420	1999	50
D5010	ELECTRICAL SWITCHGEAR 120/208V	1,600	AMP	$32.96		$52,742	1999	20
D5020	EXIT SIGNS (CENTRAL POWER)	38	EA	$163.78		$6,224	1999	20
D5020	LIGHTING - DORMITORY / APARTMENTS	34,467	SF	$4.30		$148,217	1909	20
D5030	FIRE ALARM SYSTEM, POINT ADDRESSABLE	34,467	SF	$2.61		$90,117	1999	15
D5040	GENERATOR, DIESEL (UP TO 50 KW)	40	KW	$1,123.84		$44,953	1999	25
E2010	KITCHENETTE UNIT WITH CABINETRY AND AMENITIES	1	LOT	$5,940.22		$5,940	2000	20
						$4,292,108		

Life Cycle Model Expenditure Projections

JARV : JARVIS RESIDENCE HALL



Average Annual Renewal Cost Per SqFt $3.96

FACILITY CONDITION ANALYSIS

SECTION 6

PHOTOGRAPHIC LOG

Photo Log - Facility Condition Analysis

JARV : JARVIS RESIDENCE HALL

Photo ID No	Description	Location	Date
JARV001a	Main entrance	North elevation	9/15/2009
JARV001e	Corridor lighting	Second floor, north hallway, looking west	9/16/2009
JARV002a	Secondary entry	Northeast building corner	9/15/2009
JARV002e	Corridor lighting, side-mounted sprinkler heads, typical exit signs, and fire extinguisher cabinet	Second floor, east hallway, looking south	9/15/2009
JARV003a	Courtyard and secondary lobby entry	South elevation	9/15/2009
JARV003e	Simplex fire alarm system display	First floor, front entrance	9/15/2009
JARV004a	Egress stairway addition	East wing, southwest corner	9/15/2009
JARV004e	Simplex fire alarm system display	First floor, front entrance	9/15/2009
JARV005a	Egress stairway addition	West wing, southeast corner	9/15/2009
JARV006a	Building facade	West wing, south elevation	9/15/2009
JARV007a	Building facade	West elevation	9/15/2009
JARV008a	Building facade	West elevation	9/15/2009
JARV009a	Building facade	North elevation	9/15/2009
JARV010a	Building facade	North elevation	9/15/2009
JARV011a	Building facade	East wing, south elevation	9/15/2009
JARV012a	Secondary entry	Northwest building corner	9/15/2009
JARV013a	Building facade	East elevation	9/15/2009
JARV014a	Building facade	East elevation	9/15/2009
JARV015a	Failing paint finishes on wood fascia trim	Roof vent cupola	9/15/2009
JARV016a	Failing paint finishes on wood soffit	Roof soffit at overhang	9/15/2009
JARV017a	Failing paint finishes on wood soffit	Roof soffit at overhang	9/15/2009
JARV018a	Typical window unit	Building exterior	9/15/2009
JARV019a	Typical window unit	Building exterior	9/15/2009
JARV020a	Single riser at secondary entry	Northwest building corner	9/15/2009
JARV021a	Single riser at secondary entry	Northeast building corner	9/15/2009
JARV022a	Crack in masonry wall at window	East wing, south elevation	9/15/2009
JARV023a	Egress doors from lounge	First floor, south	9/15/2009
JARV024a	Clerestory windows in lounge	First floor, south	9/15/2009
JARV025a	Overview of lounge	First floor, south	9/15/2009
JARV026a	Balcony railings above lounge	Second floor, south	9/15/2009
JARV027a	Typical main corridor	Second floor	9/15/2009
JARV028a	Typical main corridor	First floor	9/15/2009

Photo Log - Facility Condition Analysis

JARV : JARVIS RESIDENCE HALL

Photo ID No	Description	Location	Date
JARV029a	Typical main corridor	Second floor	9/15/2009
JARV030a	Mail boxes and lobby	First floor	9/15/2009
JARV031a	Upgraded restroom finishes	Second floor, restroom	9/15/2009
JARV032a	Non-compliant center railings	Typical egress stairway	9/15/2009
JARV033a	Non-compliant center railings	Typical egress stairway	9/15/2009
JARV034a	Typical elevator entrance door	Elevator lobby	9/15/2009
JARV035a	Non-compliant shared kitchen	Kitchen 118B	9/15/2009
JARV036a	Single level drinking fountain	First floor, main corridor	9/15/2009
JARV037a	Single occupancy ADA compliant restroom	First floor, main corridor	9/15/2009
JARV038a	Paint finish and rust at wheelchair ramp railings	South facade	9/15/2009
JARV039a	Paint finish and rust at railings	Steps at south facade	9/15/2009

JARV001A.jpg

JARV001E.jpg

JARV002A.jpg

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