# EAST CAROLINA UNIVERSITY

# HARDY BUILDING

ASSET CODE: B098

FACILITY CONDITION ANALYSIS

**NOVEMBER 2, 2009** 





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FACILITY CONDITION ANALYSIS



# **GENERAL ASSET INFORMATION**

# **EXECUTIVE SUMMARY - HARDY BUILDING**



**Future Year** 

35

40

20

15

Average Annual Renewal Cost Per SqFt \$4.38



#### **B. ASSET SUMMARY**

Built in 1967, the Hardy Building is a one-story medical clinic office. The building has a concrete structure on a slab-on-grade foundation. The exterior finishes consist of brick facades and a single-ply membrane roof. The Hardy Building totals 4,220 square feet and is located at the Health Science Campus of East Carolina University in Greenville, North Carolina.

The information in this report was gathered during a site visit that concluded on September 2, 2009.

#### SITE

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

Pedestrian paving systems are in overall average condition, but will need replacement in the next ten years. New systems, including excavation, grading, base compaction, and paving, are recommended. Design the new paving to include wheelchair access to the south facade entrance.

#### 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.

Replacement of the primary entrance doors is recommended. The replacement units should maintain the architectural design aspects of this facility and be modern, energy-efficient applications. Also, the building has single-pane, metal windows that should be upgraded to thermal-pane systems, which will reduce the energy required to operate the building. Repair or replacement of the windowsills and trim may also be necessary.

The single-ply membrane roofing 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

Floors in this building are carpeted in most areas, with ceramic tile in restrooms. Walls are painted plaster, brick, and ceramic tile, and ceilings are lay-in, acoustical tile. The interior finish applications vary in age and condition from area to area. Carpet, wall, and ceiling finish upgrades should be considered as part of any future cosmetic improvements or major comprehensive renovation efforts. The ceramic tile walls and floors are recommended for replacement as part of general restroom renovations, and the brick walls will not require upgrades within the next ten years.



The condition of the interior door systems is such that door system replacements are recommended as part of a comprehensive renovation effort. Complete demolition of the door systems and replacement according to a code compliant plan to properly protect egress passages is recommended. Lever door hardware and Braille signage should be included in this effort.

#### ACCESSIBILITY

The west main entrance is accessed by a small set of steps that prevent wheelchair access. The south entry door is at grade and should provide wheelchair access. Currently, there is no wheelchair access to the pedestrian paving leading to the south facade. Paving upgrades recommended in the Site section of this report include providing wheelchair access to this entry point. Once inside, there are no transitions in floor level to prevent access throughout the building. Doors are equipped with knob hardware and non-compliant signage. Hardware and signage are being upgraded as part of a building-wide interior door upgrade. Several amenities are also recommended for upgrade to comply with modern accessibility legislation.

The configurations of the break room kitchenette and the drinking fountain are barriers to accessibility. The installation of wheelchair accessible kitchenette cabinetry and a dual level, refrigerated drinking fountain is recommended.

The restroom fixtures and finishes are mostly original to the year of construction or latest major renovation. The fixtures are sound but dated and are spaced such that clearances are not ADA compliant. A comprehensive restroom renovation, including new fixtures, finishes, partitions, and accessories, is recommended. Restroom expansion may be necessary in order to meet modern minimum fixture counts and accessibility legislation.

#### HEALTH

There were no reports or evidence of any asbestos-containing material or lead based paint. No other health related issues were noted during the inspection.

#### FIRE / LIFE SAFETY

The paths of egress in this building are adequate with regard to fire rating. The recommended interior door replacement should include the installation of properly rated doors. Fire / life safety protection within the structure is limited. A zoned fire alarm system equipped with outdated combination opaque strobes and audible annunciator units was observed. There are two combination smoke / heat detectors in the east corridor and lobby areas. The fire alarm system is at the end of its useful service life, and renewal is recommended within the next year.

This facility is not protected by any form of automatic fire suppression. Manual, dry chemical fire extinguishers are available for immediate use. Due to the small building footprint, the installation of an automatic fire suppression system is not required or recommended.

Emergency exits are identified by a few outdated fluorescent exit signs. Additional exit signs should be installed in the northeast, northwest, and south corridor areas. Emergency egress lighting is not available



in this building. To improve occupant safety, install battery pack emergency egress lighting units and replace the original exit signs with battery backup LED signs. Install additional exit signs as recommended.

#### HVAC

Heating and cooling for this medical clinic is provided by two Carrier rooftop package units. Corrosion was observed on the condensing fins and exterior casings. Desired heating and cooling set points are manipulated by digital thermostats. The rooftop package units are at the end of their useful service life and anticipated to become maintenance intensive with age. Budgetary consideration is allocated for their replacement within the next five years.

#### ELECTRICAL

High voltage from the utility company is reduced to 120/240 volt, two-phase power via a service entrance transformer located on-site. The related 220 amp General Electric main electrical panel has been in service for over forty years. Additionally, the electrical distribution network supplies 120/240 volt power throughout the building. Aging components, such as the circuit breakers, serve as potential 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. Budgetary consideration is allocated for the renewal of the building electrical system within the next five years.

The current lighting configuration consists of lay-in and surface-mounted, T12 fluorescent fixtures and aging incandescent fixtures. Based on life cycle depletion, the replacement of all interior fixtures is recommended. Select lamps with the same color temperature and rendering index for lighting uniformity. Install occupancy sensors in select areas for additional energy conservation.

Nighttime illumination is provided by two HID exterior fixtures with visible corrosion. Due to the daytime inspection, the illumination level was not easily verified. Based on their present location, there appears to be a sufficient quantity of fixtures. A formal project was created to replace the timeworn HID exterior fixtures.

#### PLUMBING

Potable water is distributed throughout this facility via a copper piping network. Sanitary waste and stormwater is conveyed by cast-iron, bell-and-spigot piping with copper runouts. The supply and drain piping networks are aged and should be replaced. Failure to undertake such upgrades will likely lead to leaks, drainage issues, and other problems that will require costly maintenance. The plumbing fixtures are also recommended for replacement. This action is detailed in the proposed restroom accessibility renovation.



Domestic hot water is served by a 2002 vintage, electric domestic water heater. Although the unit is in good condition, it will reach the end of its useful service life within the ten-year scope of this report and will require an upgrade.

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 2, 2009

### INSPECTION TEAM PERSONNEL:

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

#### FACILITY CONTACTS:

| NAME                   | POSITION  |
|------------------------|---|
| William Bagwell        | Associate Vice Chancellor, Campus Operations                                    |
| REPORT DEVELOPMENT:    |   |
| Report Development by: | ISES Corporation<br>2165 West Park Court<br>Suite N<br>Stone Mountain, GA 30087 |
| Contact:               | Kyle Thompson, Project Manager<br>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 [ $\geq$  \$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 = Deferred Maintenance / Modernization + <u>Capital Renewal + Plant Adaption</u> 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. <u>Plant / Program Adaption</u>: 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. <u>Deferred Maintenance:</u> 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. <u>Capital Renewal:</u> 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. <u>Energy Conservation</u>: 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 CLAS   | <u>S 1</u>                                  |
|----------------------|---|---|
| CODE                 | PROJECT NO.   | PRIORITY SEQUENCE                           |
| HV2C                 | 0001HV04  | 01  |
| PL1D                 | 0001PL02  | 02  |
| CODE<br>IS1E<br>EL4C | PRIORITY CLASS<br>PROJECT NO.<br>0001IS06<br>0001EL03 | <u>S 2</u><br>PRIORITY SEQUENCE<br>03<br>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                        |                   | <u>R.S. MEANS</u>  |
|--|-------------------|--|
| Local Labor Index:<br>Local Materials Index:     | 51.3 %<br>100.7 % | of National Average<br>of National average   |
| General Contractor Markup:<br>Professional Fees: | 20.0 %<br>16.0 %  | Contractor profit & overhead, bonds & insurance<br>Arch. / Eng. Firm design fees and in-house design<br>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

| <b>Building Number</b> | 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 <u>not</u> 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
- = Component Description = Element Description 5
- А

#### **CATEGORY CODE**

| - | AC4B |
|---|------|
| - | EL8A |
| - | ES6E |
| - | FS6A |
| - | HE7A |
| - | HV8B |
| - | IS6D |
| - | PL5A |
| - | SI4A |
| - | SS7A |
| - | 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 ELEMENT<br>DESCRIPTION DESCRIPTION |                           |                                   | DEFINITION   |  |  |
| SYSTEM D  | ESCRIPTION: 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/<br>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/<br>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<br>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 D  | ESCRIPTION: 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<br>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<br>DESCRIPTION                        | ELEMENT<br>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/<br>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<br>TRANSMISSION     | Includes poles, towers, conductors, insulators, fuses, disconnects, etc.   |  |  |
| EL7B                 | INFRASTRUCTURE                                  | UNDERGROUND<br>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<br>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 D             | ESCRIPTION: 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/<br>DEWATERING      | Foundation/footing waterproofing work including, damp proofing, dewatering, insulation, etc.   |  |  |
| ES2A                 | COLUMNS/BEAMS/<br>WALLS                         | STRUCTURE                        | Structural work to primary load-bearing structural components aside from floors including columns, bearns, bearing walls, lintels, arches, etc.  |  |  |
| ES2B                 | COLUMNS/BEAMS/<br>WALLS                         | FINISH                           | Work involving restoration of the appearance and weatherproof integrity of exterior wall/structural<br>envelope components including masonry/pointing, expansion joints, efflorescence & stain removal,<br>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)<br>including membrane patching, flashing repair, coping caulk/resetting, PPT wall parging/coating, walkpad<br>installation, skylight and roof hatch R&R, etc.   |  |  |
|                      |   |                                  |  |  |  |
| ES4B                 | ROOF  | REPLACEMENT                      | Work involving total refurbishment of roofing system including related component rehab.  |  |  |
| ES4B<br>ES5A         | ROOF<br>FENESTRATIONS                           | DOORS                            | Work involving total refurbishment of roofing system including related component rehab.<br>Work on exterior exit/access door including storefronts, airlocks, air curtains, vinyl slat doors, all power/manual operating hardware (except handicapped), etc.   |  |  |
|                      |   |                                  | Work on exterior exit/access door including storefronts, airlocks, air curtains, vinyl slat doors, all   |  |  |
| 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.<br>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,   |  |  |
| ES5A<br>ES5B         | FENESTRATIONS                                   | DOORS                            | Work on exterior exit/access door including storefronts, airlocks, air curtains, vinyl slat doors, all power/manual operating hardware (except handicapped), etc.<br>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.<br>Work on attached exterior structure components not normally considered in above categories including  |  |  |
| ES5A<br>ES5B<br>ES6A | FENESTRATIONS       FENESTRATIONS       GENERAL | DOORS WINDOWS ATTACHED STRUCTURE | Work on exterior exit/access door including storefronts, airlocks, air curtains, vinyl slat doors, all power/manual operating hardware (except handicapped), etc.         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.         Work on attached exterior structure components not normally considered in above categories including porches, stoops, decks, monumental entrance stairs, cupolas, tower, etc.         Work on attached grade level or below structural features including subterranean light wells, areaways, |  |  |



|          | CATEGORY CODE REPORT         |                                 |   |  |  |  |
|----------|------------------------------|---------------------------------|---|--|--|--|
| CODE     | COMPONENT<br>DESCRIPTION     | ELEMENT<br>DESCRIPTION          | DEFINITION  |  |  |  |
| ES6E     | GENERAL                      | OTHER                           | Any exterior work not specifically categorized elsewhere including finish and structural work on freestanding boiler stacks.  |  |  |  |
| SYSTEM D | ESCRIPTION: FIRE / LIFE SAFE | ТҮ                              |   |  |  |  |
| FS1A     | LIGHTING                     | EGRESS LIGHTING/EXIT<br>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,<br>smoke/heat detectors, annunciator panels, central fire control stations, remote dialers, fire station<br>communications, etc.                    |  |  |  |
| FS3A     | SUPPRESSION                  | SPRINKLERS                      | Repair or installation of water sprinklers type automatic fire suppressions including wet pipe & dry pipe<br>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/<br>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/<br>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 D | ESCRIPTION: HEALTH           | •                               |   |  |  |  |
| HE1A     | ENVIRONMENTAL CONTROL        | EQUIPMENT AND<br>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.  |  |  |  |
|          | 1                            | 1                               | 1   |  |  |  |



|          | CATEGORY CODE REPORT           |                                 |   |  |  |  |
|----------|--------------------------------|---------------------------------|---|--|--|--|
| CODE     | COMPONENT<br>DESCRIPTION       | ELEMENT<br>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 D | ESCRIPTION: HVAC               |                                 |   |  |  |  |
| HV1A     | HEATING                        | BOILERS/STACKS/<br>CONTROLS     | Boilers for heating purposes including their related stacks, flues, and controls.   |  |  |  |
| HV1B     | HEATING                        | RADIATORS/<br>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/<br>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/<br>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<br>UNITS | Repair/replacement of self-contained/package type units including stand up units, rooftop units, window<br>units, etc; both air conditioners and heat pumps.  |  |  |  |
| HV3D     | HEATING/COOLING                | CONVENTIONAL SPLIT<br>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/<br>VENTILATION     | AIR HANDLERS/<br>FAN UNITS      | Includes air handlers & coils, fan coil units, unit ventilators, filtration upgrades, etc., not including<br>package/self-contained units, split systems or other specifically categorized systems. |  |  |  |
| HV4B     | AIR MOVING/<br>VENTILATION     | EXHAUST FANS                    | Exhaust fan systems including fans, range and fume hoods, controls, and related ductwork.   |  |  |  |
| HV4C     | AIR MOVING/<br>VENTILATION     | OTHER FANS                      | Supply, return, or any other fans not incorporated into a component categorized elsewhere.  |  |  |  |
| HV4D     | AIR MOVING/<br>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<br>DISTRIBUTION | PIPING NETWORK                  | Repair/replacement of piping networks for heating and cooling systems including pipe, fittings, insulation, related components, etc.  |  |  |  |
| HV5B     | STEAM/HYDRONIC<br>DISTRIBUTION | PUMPS                           | Repair or replacement of pumps used in heating and cooling systems, related control components, etc.  |  |  |  |
| HV5C     | STEAM/HYDRONIC<br>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<br>DESCRIPTION | ELEMENT<br>DESCRIPTION<br>UPGRADE | DEFINITION   |  |  |
| HV6B                 | CONTROLS                 | MODIFICATIONS/ REPAIRS            | Repair or modification of HVAC control system.   |  |  |
| HV6C                 | CONTROLS                 | AIR COMPRESSORS/<br>DRYERS        | Repair or modification of control air compressors and dryers.  |  |  |
| HV7A                 | INFRASTRUCTURE           | STEAM/HOT WATER<br>GENERATION     | Generation of central steam and/or hot water including boilers and related components.   |  |  |
| HV7B                 | INFRASTRUCTURE           | STEAM/HOT WATER<br>DISTRIBUTION   | Distribution system for central hot water and/or steam.  |  |  |
| HV7C                 | INFRASTRUCTURE           | CHILLED WATER<br>GENERATION       | Generation of central chilled water including chillers and related components.   |  |  |
| HV7D                 | INFRASTRUCTURE           | CHILLED WATER<br>DISTRIBUTION     | Distribution system for central chilled water.   |  |  |
| HV7E                 | INFRASTRUCTURE           | TUNNELS/<br>MANHOLES/<br>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 D             | ESCRIPTION: INTERIOR FIN | ISHES / 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 D             | ESCRIPTION: PLUMBING     |                                   |  |  |  |



|           | CATEGORY CODE REPORT      |  |   |  |  |
|-----------|---------------------------|--|---|--|--|
| CODE      | COMPONENT<br>DESCRIPTION  | ELEMENT<br>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/<br>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/<br>TREATMENT            | Storage and treatment of potable water for distribution.  |  |  |
| PL4B      | INFRASTRUCTURE            | INDUSTRIAL WATER<br>DISTRIBUTION/<br>TREATMENT | Storage and treatment of industrial water for distribution.   |  |  |
| PL4C      | INFRASTRUCTURE            | SANITARY WATER<br>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<br>DISTRIBUTION                  | Potable water distribution network.   |  |  |
| PL4F      | INFRASTRUCTURE            | WASTEWATER TREATMENT                           | Wastewater treatment plants, associated equipment, etc.   |  |  |
| PL5A      | GENERAL                   | OTHER  | Plumbing issues not categorized elsewhere.  |  |  |
| SYSTEM D  | ESCRIPTION: 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 DI | ESCRIPTION: SECURITY SYST | EMS  |   |  |  |
| SS1A      | LIGHTING                  | EXTERIOR                                       | Fixtures, stanchions, foliage interference, cleanliness, locations, etc.  |  |  |



|          | CATEGORY CODE REPORT       |                        |   |  |  |
|----------|----------------------------|------------------------|---|--|--|
| CODE     | COMPONENT<br>DESCRIPTION   | ELEMENT<br>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 D | ESCRIPTION: VERTICAL TRANS | SPORTATION             | •   |  |  |
| 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



# DETAILED PROJECT SUMMARIES AND TOTALS

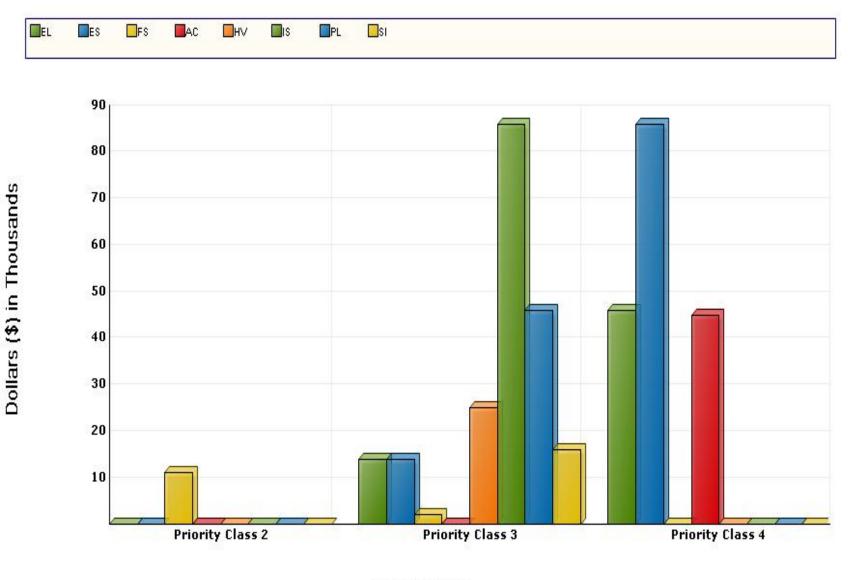
## Detailed Project Totals Facility Condition Analysis System Code by Priority Class B098 : HARDY BUILDING

| Sustam         | Priority Classes     |   |        |         |         |          |  |
|----------------|----------------------|---|--------|---------|---------|----------|--|
| System<br>Code | System Description   | 1 | 2      | 3       | 4       | Subtotal |  |
| AC             | ACCESSIBILITY        | 0 | 0      | 0       | 45,947  | 45,947   |  |
| EL             | ELECTRICAL           | 0 | 0      | 14,964  | 46,871  | 61,834   |  |
| ES             | EXTERIOR             | 0 | 0      | 14,287  | 86,101  | 100,388  |  |
| FS             | FIRE/LIFE SAFETY     | 0 | 11,318 | 2,696   | 0       | 14,014   |  |
| HV             | HVAC                 | 0 | 0      | 25,941  | 0       | 25,941   |  |
| IS             | INTERIOR/FINISH SYS. | 0 | 0      | 86,673  | 0       | 86,673   |  |
| PL             | PLUMBING             | 0 | 0      | 46,355  | 0       | 46,355   |  |
| SI             | SITE                 | 0 | 0      | 16,906  | 0       | 16,906   |  |
|                | TOTALS               | 0 | 11,318 | 207,821 | 178,919 | 398,058  |  |

| Facility Replacement Cost      | \$1,109,000 |
|--------------------------------|-------------|
| Facility Condition Needs Index | 0.36        |

| Gross Square Feet 4,220 | Total Cost Per Square Foot \$94.33 |
|-------------------------|------------------------------------|
|-------------------------|------------------------------------|

# FACILITY CONDITION ANALYSIS System Code by Priority Class B098 : HARDY BUILDING



**Priority Class** 

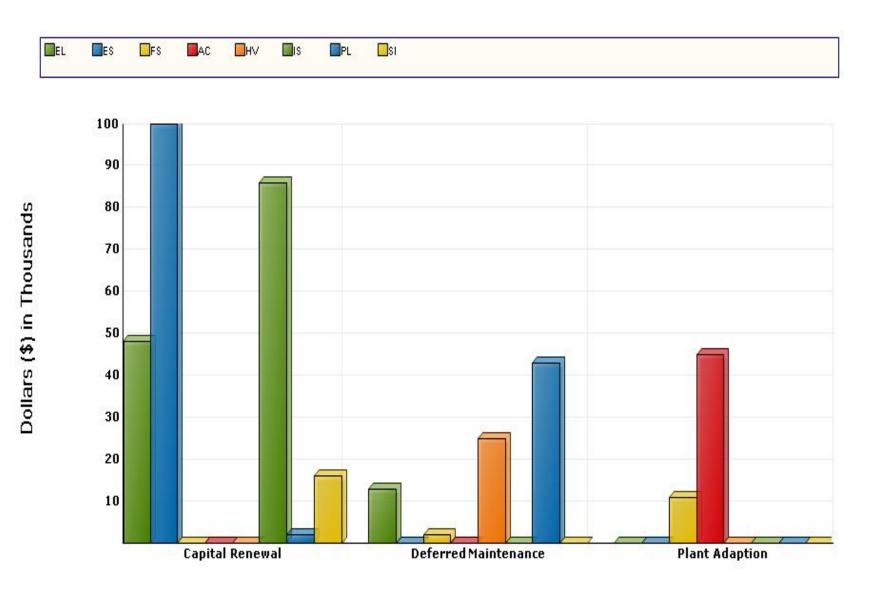
## Detailed Project Totals Facility Condition Analysis System Code by Project Class B098 : HARDY BUILDING

|                |                      |                 |                         | Project Classes |                |          |
|----------------|----------------------|-----------------|-------------------------|-----------------|----------------|----------|
| System<br>Code | System Description   | Captial Renewal | Deferred<br>Maintenance | FCAP            | Plant Adaption | Subtotal |
| AC             | ACCESSIBILITY        | 0               | 0                       | 0               | 45,947         | 45,947   |
| EL             | ELECTRICAL           | 48,280          | 13,554                  | 0               | 0              | 61,834   |
| ES             | EXTERIOR             | 100,388         | 0                       | 0               | 0              | 100,388  |
| FS             | FIRE/LIFE SAFETY     | 0               | 2,696                   | 0               | 11,318         | 14,014   |
| нv             | HVAC                 | 0               | 25,941                  | 0               | 0              | 25,941   |
| ıs             | INTERIOR/FINISH SYS. | 86,673          | 0                       | 0               | 0              | 86,673   |
| PL             | PLUMBING             | 2,939           | 43,415                  | 0               | 0              | 46,355   |
| sı             | SITE                 | 16,906          | 0                       | 0               | 0              | 16,906   |
|                | TOTALS               | 255,187         | 85,606                  | 0               | 57,265         | 398,058  |

| Facility Replacement Cost      | \$1,109,000 |
|--------------------------------|-------------|
| Facility Condition Needs Index | 0.36        |

| Gross Square Feet | 4,220 | Total Cost Per Square Foot | \$94.33 |
|-------------------|-------|----------------------------|---------|
|                   |       |                            |         |

# FACILITY CONDITION ANALYSIS System Code by Project Class B098 : HARDY BUILDING



**Project Classification** 

## Detailed Project Summary Facility Condition Analysis Project Class by Priority Class B098 : HARDY BUILDING

|                      |   | Prie   | ority Classes |         |          |
|----------------------|---|--------|---------------|---------|----------|
| Project Class        | 1 | 2      | 3             | 4       | Subtotal |
| Capital Renewal      | 0 | 0      | 122,215       | 132,972 | 255,187  |
| Deferred Maintenance | 0 | 0      | 85,606        | 0       | 85,606   |
| Plant Adaption       | 0 | 11,318 | 0             | 45,947  | 57,265   |
| TOTALS               | 0 | 11,318 | 207,821       | 178,919 | 398,058  |

| Facility Replacement Cost      | \$1,109,000 |
|--------------------------------|-------------|
| Facility Condition Needs Index | 0.36        |

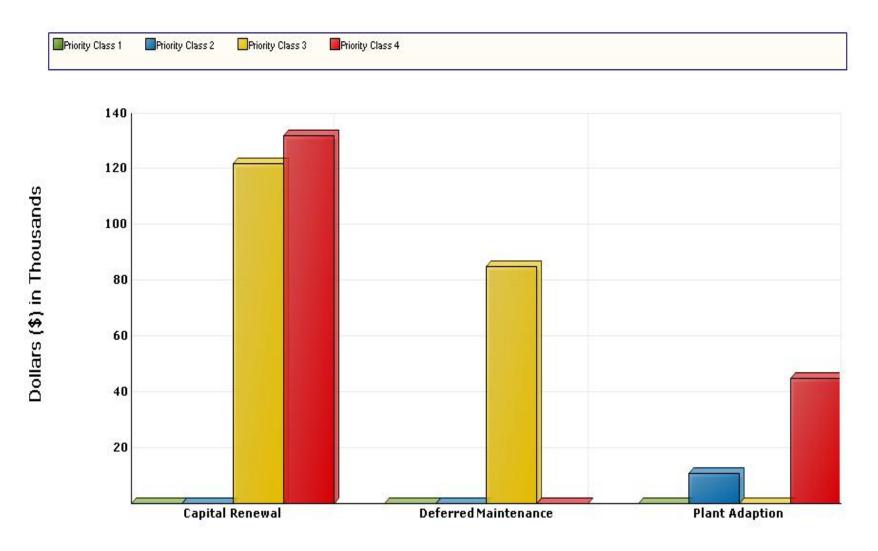
| Gross Square Feet |  |
|-------------------|--|
|-------------------|--|

4,220

Total Cost Per Square Foot

\$94.33

# FACILITY CONDITION ANALYSIS Project Class by Priority Class B098 : HARDY BUILDING



**Project Classification** 

#### Detailed Project Summary Facility Condition Analysis Priority Class - Priority Sequence B098 : HARDY BUILDING

| Cat.<br>Code | Project<br>Number | Pri<br>Cls | Pri<br>Seq | Project Title                               | Construction<br>Cost | Professional<br>Fee | Total<br>Cost |
|--------------|-------------------|------------|------------|---|----------------------|---------------------|---------------|
| FS2A         | B098FS01          | 2          | 1          | FIRE ALARM SYSTEM REPLACEMENT               | 9,757                | 1,561               | 11,318        |
|              |                   |            |            | Totals for Priority Class 2                 | 9,757                | 1,561               | 11,318        |
| FS1A         | B098FS02          | 3          | 2          | RECONFIGURE EXIT SIGNS AND EMERGENCY LIGHTS | 2,324                | 372                 | 2,696         |
| ES5A         | B098ES02          | 3          | 3          | EXTERIOR DOOR REPLACEMENT                   | 7,242                | 1,159               | 8,400         |
| ES2B         | B098ES01          | 3          | 4          | RESTORE BRICK VENEER                        | 5,075                | 812                 | 5,886         |
| HV3A         | B098HV01          | 3          | 5          | REPLACE PACKAGED HVAC UNITS                 | 22,363               | 3,578               | 25,941        |
| EL4B         | B098EL01          | 3          | 6          | INTERIOR LIGHTING UPGRADE                   | 11,684               | 1,870               | 13,554        |
| EL4A         | B098EL02          | 3          | 7          | EXTERIOR LIGHTING REPLACEMENT               | 1,215                | 194                 | 1,410         |
| IS1A         | B098IS01          | 3          | 8          | REFINISH FLOORING                           | 24,743               | 3,959               | 28,702        |
| IS2B         | B098IS02          | 3          | 9          | REFINISH WALLS                              | 9,625                | 1,540               | 11,164        |
| IS3B         | B098IS03          | 3          | 10         | REFINISH CEILINGS                           | 14,112               | 2,258               | 16,370        |
| IS4A         | B098IS04          | 3          | 11         | REPLACE INTERIOR DOORS                      | 26,238               | 4,198               | 30,436        |
| PL1A         | B098PL02          | 3          | 12         | WATER SUPPLY PIPING REPLACEMENT             | 14,840               | 2,374               | 17,215        |
| PL2A         | B098PL03          | 3          | 13         | DRAIN PIPING REPLACEMENT                    | 22,587               | 3,614               | 26,201        |
| PL1E         | B098PL01          | 3          | 14         | DOMESTIC WATER HEATER REPLACEMENT           | 2,534                | 405                 | 2,939         |
| SI4A         | B098SI01          | 3          | 15         | SITE PAVING UPGRADES                        | 14,574               | 2,332               | 16,906        |
|              |                   |            |            | Totals for Priority Class 3                 | 179,156              | 28,665              | 207,821       |
| AC4A         | B098AC01          | 4          | 16         | INTERIOR AMENITY ACCESSIBILITY UPGRADES     | 12,207               | 1,953               | 14,161        |
| AC3E         | B098AC02          | 4          | 17         | RESTROOM RENOVATION                         | 27,402               | 4,384               | 31,786        |
| ES4B         | B098ES04          | 4          | 18         | MEMBRANE ROOF REPLACEMENT                   | 23,821               | 3,811               | 27,633        |
| ES5B         | B098ES03          | 4          | 19         | WINDOW REPLACEMENT                          | 50,404               | 8,065               | 58,469        |
| EL3B         | B098EL03          | 4          | 20         | UPGRADE BUILDING ELECTRICAL SYSTEM          | 40,406               | 6,465               | 46,871        |
|              |                   |            |            | Totals for Priority Class 4                 | 154,241              | 24,678              | 178,919       |
|              |                   |            |            | Grand Total:                                | 343,154              | 54,905              | 398,058       |

#### Detailed Project Summary Facility Condition Analysis Project Cost Range B098 : HARDY BUILDING

| Cat.<br>Code | Project<br>Number | Pri<br>Cls | Pri<br>Seq | Project<br>Title                            | Construction<br>Cost | Professional<br>Fee | Total<br>Cost |
|--------------|-------------------|------------|------------|---|----------------------|---------------------|---------------|
| FS2A         | B098FS01          | 2          | 1          | FIRE ALARM SYSTEM REPLACEMENT               | 9,757                | 1,561               | 11,318        |
|              |                   |            |            | Totals for Priority Class 2                 | 9,757                | 1,561               | 11,318        |
| ES2B         | B098ES01          | 3          | 4          | RESTORE BRICK VENEER                        | 5,075                | 812                 | 5,886         |
| ES5A         | B098ES02          | 3          | 3          | EXTERIOR DOOR REPLACEMENT                   | 7,242                | 1,159               | 8,400         |
| IS1A         | B098IS01          | 3          | 8          | REFINISH FLOORING                           | 24,743               | 3,959               | 28,702        |
| IS2B         | B098IS02          | 3          | 9          | REFINISH WALLS                              | 9,625                | 1,540               | 11,164        |
| IS3B         | B098IS03          | 3          | 10         | REFINISH CEILINGS                           | 14,112               | 2,258               | 16,370        |
| IS4A         | B098IS04          | 3          | 11         | REPLACE INTERIOR DOORS                      | 26,238               | 4,198               | 30,436        |
| SI4A         | B098SI01          | 3          | 15         | SITE PAVING UPGRADES                        | 14,574               | 2,332               | 16,906        |
| FS1A         | B098FS02          | 3          | 2          | RECONFIGURE EXIT SIGNS AND EMERGENCY LIGHTS | 2,324                | 372                 | 2,696         |
| HV3A         | B098HV01          | 3          | 5          | REPLACE PACKAGED HVAC UNITS                 | 22,363               | 3,578               | 25,941        |
| EL4B         | B098EL01          | 3          | 6          | INTERIOR LIGHTING UPGRADE                   | 11,684               | 1,870               | 13,554        |
| EL4A         | B098EL02          | 3          | 7          | EXTERIOR LIGHTING REPLACEMENT               | 1,215                | 194                 | 1,410         |
| PL1E         | B098PL01          | 3          | 14         | DOMESTIC WATER HEATER REPLACEMENT           | 2,534                | 405                 | 2,939         |
| PL1A         | B098PL02          | 3          | 12         | WATER SUPPLY PIPING REPLACEMENT             | 14,840               | 2,374               | 17,215        |
| PL2A         | B098PL03          | 3          | 13         | DRAIN PIPING REPLACEMENT                    | 22,587               | 3,614               | 26,201        |
|              |                   |            |            | Totals for Priority Class 3                 | 179,156              | 28,665              | 207,821       |
| AC4A         | B098AC01          | 4          | 16         | INTERIOR AMENITY ACCESSIBILITY UPGRADES     | 12,207               | 1,953               | 14,161        |
| AC3E         | B098AC02          | 4          | 17         | RESTROOM RENOVATION                         | 27,402               | 4,384               | 31,786        |
| ES5B         | B098ES03          | 4          | 19         | WINDOW REPLACEMENT                          | 50,404               | 8,065               | 58,469        |
| ES4B         | B098ES04          | 4          | 18         | MEMBRANE ROOF REPLACEMENT                   | 23,821               | 3,811               | 27,633        |
| EL3B         | B098EL03          | 4          | 20         | UPGRADE BUILDING ELECTRICAL SYSTEM          | 40,406               | 6,465               | 46,871        |
|              |                   |            |            | Totals for Priority Class 4                 | 154,241              | 24,678              | 178,919       |
|              |                   |            |            | Grand Totals for Projects < 100,000         | 343,154              | 54,905              | 398,058       |
|              |                   |            |            | Grand Totals For All Projects:              | 343,154              | 54,905              | 398,058       |

#### Detailed Project Summary Facility Condition Analysis Project Classification B098 : HARDY BUILDING

| Cat<br>Code | Project<br>Number | Pri.<br>Seq. | Project<br>Classification | Pri.<br>Cls | Project<br>Title                            | Total<br>Cost |
|-------------|-------------------|--------------|---------------------------|-------------|---|---------------|
| ES5A        | B098ES02          | 3            | Capital Renewal           | 3           | EXTERIOR DOOR REPLACEMENT                   | 8,400         |
| ES2B        | B098ES01          | 4            | Capital Renewal           | 3           | RESTORE BRICK VENEER                        | 5,886         |
| EL4A        | B098EL02          | 7            | Capital Renewal           | 3           | EXTERIOR LIGHTING REPLACEMENT               | 1,410         |
| IS1A        | B098IS01          | 8            | Capital Renewal           | 3           | REFINISH FLOORING                           | 28,702        |
| IS2B        | B098IS02          | 9            | Capital Renewal           | 3           | REFINISH WALLS                              | 11,164        |
| IS3B        | B098IS03          | 10           | Capital Renewal           | 3           | REFINISH CEILINGS                           | 16,370        |
| IS4A        | B098IS04          | 11           | Capital Renewal           | 3           | REPLACE INTERIOR DOORS                      | 30,436        |
| PL1E        | B098PL01          | 14           | Capital Renewal           | 3           | DOMESTIC WATER HEATER REPLACEMENT           | 2,939         |
| SI4A        | B098SI01          | 15           | Capital Renewal           | 3           | SITE PAVING UPGRADES                        | 16,906        |
| ES4B        | B098ES04          | 18           | Capital Renewal           | 4           | MEMBRANE ROOF REPLACEMENT                   | 27,633        |
| ES5B        | B098ES03          | 19           | Capital Renewal           | 4           | WINDOW REPLACEMENT                          | 58,469        |
| EL3B        | B098EL03          | 20           | Capital Renewal           | 4           | UPGRADE BUILDING ELECTRICAL SYSTEM          | 46,871        |
|             |                   |              |                           |             | Totals for Capital Renewal                  | 255,187       |
| FS1A        | B098FS02          | 2            | Deferred Maintenance      | 3           | RECONFIGURE EXIT SIGNS AND EMERGENCY LIGHTS | 2,696         |
| HV3A        | B098HV01          | 5            | Deferred Maintenance      | 3           | REPLACE PACKAGED HVAC UNITS                 | 25,941        |
| EL4B        | B098EL01          | 6            | Deferred Maintenance      | 3           | INTERIOR LIGHTING UPGRADE                   | 13,554        |
| PL1A        | B098PL02          | 12           | Deferred Maintenance      | 3           | WATER SUPPLY PIPING REPLACEMENT             | 17,215        |
| PL2A        | B098PL03          | 13           | Deferred Maintenance      | 3           | DRAIN PIPING REPLACEMENT                    | 26,201        |
|             |                   |              |                           |             | Totals for Deferred Maintenance             | 85,606        |
| FS2A        | B098FS01          | 1            | Plant Adaption            | 2           | FIRE ALARM SYSTEM REPLACEMENT               | 11,318        |
| AC4A        | B098AC01          | 16           | Plant Adaption            | 4           | INTERIOR AMENITY ACCESSIBILITY UPGRADES     | 14,161        |
| AC3E        | B098AC02          | 17           | Plant Adaption            | 4           | RESTROOM RENOVATION                         | 31,786        |
|             |                   |              |                           |             | Totals for Plant Adaption                   | 57,265        |
|             |                   |              |                           |             | Grand Total:                                | 398 058       |

2.4.1

398,058

# Detailed Project Summary Facility Condition Analysis Energy Conservation B098 : HARDY BUILDING

| Cat<br>Code | Project<br>Number | Pri<br>Cls | Pri<br>Seq | Project<br>Title                            | Total<br>Cost | Annual<br>Savings | Simple<br>Payback |
|-------------|-------------------|------------|------------|---|---------------|-------------------|-------------------|
| FS1A        | B098FS02          | 3          | 2          | RECONFIGURE EXIT SIGNS AND EMERGENCY LIGHTS | 2,696         | 20                | 134.78            |
| EL4B        | B098EL01          | 3          | 6          | INTERIOR LIGHTING UPGRADE                   | 13,554        | 1,080             | 12.55             |
| EL4A        | B098EL02          | 3          | 7          | EXTERIOR LIGHTING REPLACEMENT               | 1,410         | 130               | 10.84             |
|             |                   |            |            | Totals for Priority Class 3                 | 17,659        | 1,230             | 14.36             |
| ES4B        | B098ES04          | 4          | 18         | MEMBRANE ROOF REPLACEMENT                   | 27,633        | 400               | 69.08             |
| ES5B        | B098ES03          | 4          | 19         | WINDOW REPLACEMENT                          | 58,469        | 100               | 584.69            |
|             |                   |            |            | Totals for Priority Class 4                 | 86,101        | 500               | 172.2             |
|             |                   |            |            | Grand Total:                                | 103,760       | 1,730             | 59.98             |

# Detailed Project Summary Facility Condition Analysis Category/System Code B098 : HARDY BUILDING

| Cat.<br>Code | Project<br>Number |   | Pri<br>Seq | Project Title                                | Construction<br>Cost | Professional<br>Fee | Total<br>Cost |
|--------------|-------------------|---|------------|--|----------------------|---------------------|---------------|
| AC4A         | B098AC01          | 4 | 16         | INTERIOR AMENITY ACCESSIBILITY UPGRADES      | 12,207               | 1,953               | 14,161        |
| AC3E         | B098AC02          | 4 | 17         | RESTROOM RENOVATION                          | 27,402               | 4,384               | 31,786        |
|              |                   |   |            | Totals for System Code: ACCESSIBILITY        | 39,609               | 6,338               | 45,947        |
| EL4B         | B098EL01          | 3 | 6          | INTERIOR LIGHTING UPGRADE                    | 11,684               | 1,870               | 13,554        |
| EL4A         | B098EL02          | 3 | 7          | EXTERIOR LIGHTING REPLACEMENT                | 1,215                | 194                 | 1,410         |
| EL3B         | B098EL03          | 4 | 20         | UPGRADE BUILDING ELECTRICAL SYSTEM           | 40,406               | 6,465               | 46,871        |
|              |                   |   |            | Totals for System Code: ELECTRICAL           | 53,306               | 8,529               | 61,834        |
| ES5A         | B098ES02          | 3 | 3          | EXTERIOR DOOR REPLACEMENT                    | 7,242                | 1,159               | 8,400         |
| ES2B         | B098ES01          | 3 | 4          | RESTORE BRICK VENEER                         | 5,075                | 812                 | 5,886         |
| ES4B         | B098ES04          | 4 | 18         | MEMBRANE ROOF REPLACEMENT                    | 23,821               | 3,811               | 27,633        |
| ES5B         | B098ES03          | 4 | 19         | WINDOW REPLACEMENT                           | 50,404               | 8,065               | 58,469        |
|              |                   |   |            | Totals for System Code: EXTERIOR             | 86,541               | 13,847              | 100,388       |
| FS2A         | B098FS01          | 2 | 1          | FIRE ALARM SYSTEM REPLACEMENT                | 9,757                | 1,561               | 11,318        |
| FS1A         | B098FS02          | 3 | 2          | RECONFIGURE EXIT SIGNS AND EMERGENCY LIGHTS  | 2,324                | 372                 | 2,696         |
|              |                   |   |            | Totals for System Code: FIRE/LIFE SAFETY     | 12,081               | 1,933               | 14,014        |
| HV3A         | B098HV01          | 3 | 5          | REPLACE PACKAGED HVAC UNITS                  | 22,363               | 3,578               | 25,941        |
|              |                   |   |            | Totals for System Code: HVAC                 | 22,363               | 3,578               | 25,941        |
| IS1A         | B098IS01          | 3 | 8          | REFINISH FLOORING                            | 24,743               | 3,959               | 28,702        |
| IS2B         | B098IS02          | 3 | 9          | REFINISH WALLS                               | 9,625                | 1,540               | 11,164        |
| IS3B         | B098IS03          | 3 | 10         | REFINISH CEILINGS                            | 14,112               | 2,258               | 16,370        |
| IS4A         | B098IS04          | 3 | 11         | REPLACE INTERIOR DOORS                       | 26,238               | 4,198               | 30,436        |
|              |                   |   |            | Totals for System Code: INTERIOR/FINISH SYS. | 74,718               | 11,955              | 86,673        |
| PL1A         | B098PL02          | 3 | 12         | WATER SUPPLY PIPING REPLACEMENT              | 14,840               | 2,374               | 17,215        |
| PL2A         | B098PL03          | 3 | 13         | DRAIN PIPING REPLACEMENT                     | 22,587               | 3,614               | 26,201        |
| PL1E         | B098PL01          | 3 | 14         | DOMESTIC WATER HEATER REPLACEMENT            | 2,534                | 405                 | 2,939         |
|              |                   |   |            | Totals for System Code: PLUMBING             | 39,961               | 6,394               | 46,355        |
| SI4A         | B098SI01          | 3 | 15         | SITE PAVING UPGRADES                         | 14,574               | 2,332               | 16,906        |
|              |                   |   |            | Totals for System Code: SITE                 | 14,574               | 2,332               | 16,906        |
|              |                   |   |            | Grand Total:                                 | 343,154              | 54,905              | 398,058       |

FACILITY CONDITION ANALYSIS



# SPECIFIC PROJECT DETAILS ILLUSTRATING DESCRIPTION / COST

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

#### **Project Description**

| Project Number:      | B098FS01             |                 | Title:     | FIRE ALARM SYSTEM REPLACEMENT |
|----------------------|----------------------|-----------------|------------|-------------------------------|
| Priority Sequence:   | 1                    |                 |            |                               |
| Priority Class:      | 2                    |                 |            |                               |
| Category Code:       | FS2A                 |                 | System:    | FIRE/LIFE SAFETY              |
|                      |                      |                 | Component: | DETECTION ALARM               |
|                      |                      |                 | Element:   | GENERAL                       |
| Building Code:       | B098                 |                 |            |                               |
| Building Name:       | HARDY BUILDING       |                 |            |                               |
| Subclass/Savings:    | Not Applicable       |                 |            |                               |
| Code Application:    | ADAAG<br>NFPA        | 702.1<br>1, 101 |            |                               |
| Project Class:       | Plant Adaption       |                 |            |                               |
| Project Date:        | 10/14/2009           |                 |            |                               |
| Project<br>Location: | Floor-wide: Floor(s) | 1               |            |                               |

# **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.

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

Project Cost

Project Number: B098FS01

| Task Description  | Unit | Qnty  | Material<br>Unit<br>Cost | Total<br>Material<br>Cost | Labor<br>Unit<br>Cost | Total<br>Labor<br>Cost | Total<br>Cost |
|---|------|-------|--------------------------|---------------------------|-----------------------|------------------------|---------------|
| Fire alarm control panel(s), annunciator,<br>smoke and heat detectors, manual pull<br>stations, audible and visual alarms,<br>wiring, raceways, cut and patching<br>materials | SF   | 4,220 | \$1.46                   | \$6,161                   | \$0.89                | \$3,756                | \$9,917       |
| Project Totals  | :    |       |                          | \$6,161                   |                       | \$3,756                | \$9,917       |

| Material/Labor Cost                 |   | \$9,917  |
|-------------------------------------|---|----------|
| Material Index                      |   | 100.7%   |
| Labor Index                         |   | 51.3%    |
| Material/Labor Indexed Cost         |   | \$8,131  |
| General Contractor Mark Up at 20.0% | + | \$1,626  |
| Construction Cost                   |   | \$9,757  |
| Professional Fees at 16.0%          | + | \$1,561  |
| Total Project Cost                  |   | \$11,318 |

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

## **Project Description**

| Project Number:      | B098FS02             |                |      | Title:     | RECONFIGURE EXIT SIGNS AND<br>EMERGENCY LIGHTS |
|----------------------|----------------------|----------------|------|------------|--|
| Priority Sequence:   | 2                    |                |      |            |  |
| Priority Class:      | 3                    |                |      |            |  |
| Category Code:       | FS1A                 |                |      | System:    | FIRE/LIFE SAFETY                               |
|                      |                      |                |      | Component: | LIGHTING                                       |
|                      |                      |                |      | Element:   | EGRESS LTG./EXIT SIGNAGE                       |
| Building Code:       | B098                 |                |      |            |  |
| Building Name:       | HARDY BUILDING       |                |      |            |  |
| Subclass/Savings:    | Energy Conservation  | n              | \$20 |            |  |
| Code Annliestion.    |                      | 404 47         |      |            |  |
| Code Application:    | NFPA<br>IBC          | 101-47<br>1011 |      |            |  |
|                      | IBC                  | 1011           |      |            |  |
|                      |                      |                |      |            |  |
| Project Class:       | Deferred Maintenan   | се             |      |            |  |
| Project Date:        | 10/14/2009           |                |      |            |  |
| Project<br>Location: | Floor-wide: Floor(s) | 1              |      |            |  |

## **Project Description**

Replace the existing exit signage and emergency lighting throughout the building. Install new exit signs and emergency lights as needed. The new units should have individual battery packs for backup power. LED type exit signs are recommended, because they are energy efficient and require minimal maintenance.

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

# Project Cost

Project Number: B098FS02

| Task Description   | Unit | Qnty | Material<br>Unit<br>Cost | Total<br>Material<br>Cost | Labor<br>Unit<br>Cost | Total<br>Labor<br>Cost | Total<br>Cost |
|--|------|------|--------------------------|---------------------------|-----------------------|------------------------|---------------|
| Replacement of existing exit signs with new battery pack LED exit signs            | EA   | 2    | \$132                    | \$264                     | \$142                 | \$284                  | \$548         |
| Installation of new battery pack LED exit signs, including all connections         | EA   | 2    | \$184                    | \$368                     | \$231                 | \$462                  | \$830         |
| Installation of new battery pack<br>emergency lights, including all<br>connections | EA   | 3    | \$186                    | \$558                     | \$231                 | \$693                  | \$1,251       |
| Project Totals   | :    |      |                          | \$1,190                   |                       | \$1,439                | \$2,629       |

| Material/Labor Cost                 |   | \$2,629 |
|-------------------------------------|---|---------|
| Material Index                      |   | 100.7%  |
| Labor Index                         |   | 51.3%   |
| Material/Labor Indexed Cost         |   | \$1,937 |
| General Contractor Mark Up at 20.0% | + | \$387   |
| Construction Cost                   |   | \$2,324 |
| Professional Fees at 16.0%          | + | \$372   |
| Total Project Cost                  |   | \$2,696 |

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

## **Project Description**

| Project Number:      | B098ES02                  | Title:     | EXTERIOR DOOR REPLACEMENT |
|----------------------|---------------------------|------------|---------------------------|
| Priority Sequence:   | 3                         |            |                           |
| Priority Class:      | 3                         |            |                           |
| Category Code:       | ES5A                      | System:    | EXTERIOR                  |
|                      |                           | Component: | FENESTRATIONS             |
|                      |                           | Element:   | DOORS                     |
| Building Code:       | B098                      |            |                           |
| Building Name:       | HARDY BUILDING            |            |                           |
| Subclass/Savings:    | Not Applicable            |            |                           |
| Code Application:    | Not Applicable            |            |                           |
| Project Class:       | Capital Renewal           |            |                           |
| Project Date:        | 10/5/2009                 |            |                           |
| Project<br>Location: | Building-wide: Floor(s) 1 |            |                           |

# **Project Description**

Replacement of the primary entrance doors is recommended. The replacement units should maintain the architectural design aspects of this facility and be modern, energy-efficient applications.

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

# Project Cost

Project Number: B098ES02

| Task Description         | Unit       | Qnty | Material<br>Unit<br>Cost | Total<br>Material<br>Cost | Labor<br>Unit<br>Cost | Total<br>Labor<br>Cost | Total<br>Cost |
|--------------------------|------------|------|--------------------------|---------------------------|-----------------------|------------------------|---------------|
| High traffic door system | LEAF       | 2    | \$1,978                  | \$3,956                   | \$1,999               | \$3,998                | \$7,954       |
| Proje                    | ct Totals: |      |                          | \$3,956                   |                       | \$3,998                | \$7,954       |

| Material/Labor Cost                 |   | \$7,954 |
|-------------------------------------|---|---------|
| Material Index                      |   | 100.7%  |
| Labor Index                         |   | 51.3%   |
| Material/Labor Indexed Cost         |   | \$6,035 |
| General Contractor Mark Up at 20.0% | + | \$1,207 |
| Construction Cost                   |   | \$7,242 |
| Professional Fees at 16.0%          | + | \$1,159 |
| Total Project Cost                  |   | \$8,400 |

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

## **Project Description**

| Project Number:      | B098ES01                  | Title:     | RESTORE BRICK VENEER |
|----------------------|---------------------------|------------|----------------------|
| Priority Sequence:   | 4                         |            |                      |
| Priority Class:      | 3                         |            |                      |
| Category Code:       | ES2B                      | System:    | EXTERIOR             |
|                      |                           | Component: | COLUMNS/BEAMS/WALLS  |
|                      |                           | Element:   | FINISH               |
| Building Code:       | B098                      |            |                      |
| Building Name:       | HARDY BUILDING            |            |                      |
| Subclass/Savings:    | Not Applicable            |            |                      |
| Code Application:    | Not Applicable            |            |                      |
| Project Class:       | Capital Renewal           |            |                      |
| Project Date:        | 10/5/2009                 |            |                      |
| Project<br>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.

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

# Project Cost

Project Number: B098ES01

| Task Description   | Unit | Qnty  | Material<br>Unit<br>Cost | Total<br>Material<br>Cost | Labor<br>Unit<br>Cost | Total<br>Labor<br>Cost | Total<br>Cost |
|--|------|-------|--------------------------|---------------------------|-----------------------|------------------------|---------------|
| Cleaning and surface preparation   | SF   | 3,090 | \$0.11                   | \$340                     | \$0.22                | \$680                  | \$1,020       |
| Selective mortar and / or sealant repairs<br>(assumes 10 linear feet for every 100<br>square feet of envelope) | LF   | 309   | \$2.45                   | \$757                     | \$4.99                | \$1,542                | \$2,299       |
| Applied finish or sealant  | SF   | 3,090 | \$0.22                   | \$680                     | \$0.82                | \$2,534                | \$3,214       |
| Project Totals   | :    |       |                          | \$1,777                   |                       | \$4,756                | \$6,532       |

| Material/Labor Cost                 |   | \$6,532 |
|-------------------------------------|---|---------|
| Material Index                      |   | 100.7%  |
| Labor Index                         |   | 51.3%   |
| Material/Labor Indexed Cost         |   | \$4,229 |
| General Contractor Mark Up at 20.0% | + | \$846   |
| Construction Cost                   |   | \$5,075 |
| Professional Fees at 16.0%          | + | \$812   |
| Total Project Cost                  |   | \$5,886 |

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

## **Project Description**

| Project Number:      | B098HV01              |         | Title:     | REPLACE PACKAGED HVAC UNITS |
|----------------------|-----------------------|---------|------------|-----------------------------|
| Priority Sequence:   | 5                     |         |            |                             |
| Priority Class:      | 3                     |         |            |                             |
| Category Code:       | HV3A                  |         | System:    | HVAC                        |
|                      |                       |         | Component: | HEATING/COOLING             |
|                      |                       |         | Element:   | SYSTEM RETROFIT/REPLACE     |
| Building Code:       | B098                  |         |            |                             |
| Building Name:       | HARDY BUILDING        |         |            |                             |
| Subclass/Savings:    | Not Applicable        |         |            |                             |
| Code Application:    | ASHRAE                | 62-2004 |            |                             |
| Project Class:       | Deferred Maintenand   | ce      |            |                             |
| Project Date:        | 10/14/2009            |         |            |                             |
| Project<br>Location: | Item Only: Floor(s) R | R       |            |                             |

# **Project Description**

Remove the existing packaged HVAC systems. Install new units of the latest energy-efficient design. The project cost includes controls, related ductwork, and electrical connections. Test and balance the downstream air distribution system upon completion.

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

Project Cost

Project Number: B098HV01

| Task Description   | Unit | Qnty  | Material<br>Unit<br>Cost | Total<br>Material<br>Cost | Labor<br>Unit<br>Cost | Total<br>Labor<br>Cost | Total<br>Cost |
|--|------|-------|--------------------------|---------------------------|-----------------------|------------------------|---------------|
| Rooftop package unit, controls, all connections, demolition of existing unit | TON  | 10    | \$1,200                  | \$12,000                  | \$1,090               | \$10,900               | \$22,900      |
| Air distribution system test and balance                                     | SF   | 4,000 | \$0.06                   | \$240                     | \$0.35                | \$1,400                | \$1,640       |
| Project Totals   | 5:   |       |                          | \$12,240                  |                       | \$12,300               | \$24,540      |

| Material/Labor Cost                 |   | \$24,540 |
|-------------------------------------|---|----------|
| Material Index                      |   | 100.7%   |
| Labor Index                         |   | 51.3%    |
| Material/Labor Indexed Cost         |   | \$18,636 |
| General Contractor Mark Up at 20.0% | + | \$3,727  |
| Construction Cost                   |   | \$22,363 |
| Professional Fees at 16.0%          | + | \$3,578  |
| Total Project Cost                  |   | \$25,941 |

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

## **Project Description**

| Project Number:      | B098EL01               |                   |     | Title:     | INTERIOR LIGHTING UPGRADE |
|----------------------|------------------------|-------------------|-----|------------|---------------------------|
| Priority Sequence:   | 6                      |                   |     |            |                           |
| Priority Class:      | 3                      |                   |     |            |                           |
| Category Code:       | EL4B                   |                   |     | System:    | ELECTRICAL                |
|                      |                        |                   |     | Component: | DEVICES AND FIXTURES      |
|                      |                        |                   |     | Element:   | INTERIOR LIGHTING         |
| Building Code:       | B098                   |                   |     |            |                           |
| Building Name:       | HARDY BUILDING         |                   |     |            |                           |
| Subclass/Savings:    | Energy Conservation    | \$1,              | 080 |            |                           |
|                      |                        |                   |     |            |                           |
| Code Application:    | NEC                    | Articles 210, 410 | )   |            |                           |
|                      |                        |                   |     |            |                           |
|                      |                        |                   |     |            |                           |
| Project Class:       | Deferred Maintenanc    | e                 |     |            |                           |
| Project Date:        | 10/14/2009             |                   |     |            |                           |
| Project<br>Location: | Floor-wide: Floor(s) 1 |                   |     |            |                           |

# **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.

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

Project Cost

Project Number: B098EL01

| Task Description   | Unit | Qnty  | Material<br>Unit<br>Cost | Total<br>Material<br>Cost | Labor<br>Unit<br>Cost | Total<br>Labor<br>Cost | Total<br>Cost |
|--|------|-------|--------------------------|---------------------------|-----------------------|------------------------|---------------|
| High efficiency fluorescent fixtures,<br>occupancy sensors, and demolition of<br>existing lighting | SF   | 4,220 | \$1.41                   | \$5,950                   | \$1.73                | \$7,301                | \$13,251      |
| Project Total  | s:   |       |                          | \$5,950                   |                       | \$7,301                | \$13,251      |

| Material/Labor Cost                 |   | \$13,251 |
|-------------------------------------|---|----------|
| Material Index                      |   | 100.7%   |
| Labor Index                         |   | 51.3%    |
| Material/Labor Indexed Cost         |   | \$9,737  |
| General Contractor Mark Up at 20.0% | + | \$1,947  |
| Construction Cost                   |   | \$11,684 |
| Professional Fees at 16.0%          | + | \$1,870  |
| Total Project Cost                  |   | \$13,554 |

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

# **Project Description**

| Project Number:      | B098EL02              |          |       | Title:     | EXTERIOR LIGHTING REPLACEMENT |
|----------------------|-----------------------|----------|-------|------------|-------------------------------|
| Priority Sequence:   | 7                     |          |       |            |                               |
| Priority Class:      | 3                     |          |       |            |                               |
| Category Code:       | EL4A                  |          |       | System:    | ELECTRICAL                    |
|                      |                       |          |       | Component: | DEVICES AND FIXTURES          |
|                      |                       |          |       | Element:   | EXTERIOR LIGHTING             |
| Building Code:       | B098                  |          |       |            |                               |
| Building Name:       | HARDY BUILDING        |          |       |            |                               |
| Subclass/Savings:    | Energy Conservation   | า        | \$130 |            |                               |
|                      |                       |          |       |            |                               |
| Code Application:    | NEC                   | 410      |       |            |                               |
|                      |                       |          |       |            |                               |
|                      |                       |          |       |            |                               |
| Project Class:       | Capital Renewal       |          |       |            |                               |
| Project Date:        | 10/14/2009            |          |       |            |                               |
| Project<br>Location: | Building-wide: Floor( | (s) 1, R |       |            |                               |

# **Project Description**

Exterior lighting upgrades are recommended. Specify high efficiency fixtures with photocells for lighting control.

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

Project Cost

Project Number: B098EL02

| Task Description  | Unit | Qnty | Material<br>Unit<br>Cost | Total<br>Material<br>Cost | Labor<br>Unit<br>Cost | Total<br>Labor<br>Cost | Total<br>Cost |
|---|------|------|--------------------------|---------------------------|-----------------------|------------------------|---------------|
| HID wall-mount fixture and demolition of existing fixture | EA   | 2    | \$406                    | \$812                     | \$190                 | \$380                  | \$1,192       |
| Project Totals  | :    |      |                          | \$812                     |                       | \$380                  | \$1,192       |

| Material/Labor Cost                 |   | \$1,192 |
|-------------------------------------|---|---------|
| Material Index                      |   | 100.7%  |
| Labor Index                         |   | 51.3%   |
| Material/Labor Indexed Cost         |   | \$1,013 |
| General Contractor Mark Up at 20.0% | + | \$203   |
| Construction Cost                   |   | \$1,215 |
| Professional Fees at 16.0%          | + | \$194   |
| Total Project Cost                  |   | \$1,410 |

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

## **Project Description**

| Project Number:      | B098IS01               | Title:     | REFINISH FLOORING    |
|----------------------|------------------------|------------|----------------------|
| Priority Sequence:   | 8                      |            |                      |
| Priority Class:      | 3                      |            |                      |
| Category Code:       | IS1A                   | System:    | INTERIOR/FINISH SYS. |
|                      |                        | Component: | FLOOR                |
|                      |                        | Element:   | FINISHES-DRY         |
| Building Code:       | B098                   |            |                      |
| Building Name:       | HARDY BUILDING         |            |                      |
| Subclass/Savings:    | Not Applicable         |            |                      |
| Code Application:    | Not Applicable         |            |                      |
| Project Class:       | Capital Renewal        |            |                      |
| Project Date:        | 10/5/2009              |            |                      |
| Project<br>Location: | Floor-wide: Floor(s) 1 |            |                      |

# **Project Description**

The carpeted flooring varies in age and condition from area to area. Carpet upgrades should be considered as part of any future cosmetic improvements or major comprehensive renovation efforts.

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

# Project Cost

Project Number: B098IS01

| Task Description | Unit            | Qnty  | Material<br>Unit<br>Cost | Total<br>Material<br>Cost | Labor<br>Unit<br>Cost | Total<br>Labor<br>Cost | Total<br>Cost |
|------------------|-----------------|-------|--------------------------|---------------------------|-----------------------|------------------------|---------------|
| Carpet           | SF              | 3,210 | \$5.36                   | \$17,206                  | \$2.00                | \$6,420                | \$23,626      |
|                  | Project Totals: |       |                          | \$17,206                  |                       | \$6,420                | \$23,626      |

| Material/Labor Cost                 |   | \$23,626 |
|-------------------------------------|---|----------|
| Material Index                      |   | 100.7%   |
| Labor Index                         |   | 51.3%    |
| Material/Labor Indexed Cost         |   | \$20,620 |
| General Contractor Mark Up at 20.0% | + | \$4,124  |
| Construction Cost                   |   | \$24,743 |
| Professional Fees at 16.0%          | + | \$3,959  |
| Total Project Cost                  |   | \$28,702 |

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

## **Project Description**

| Project Number:      | B098IS02               | Title:     | REFINISH WALLS       |
|----------------------|------------------------|------------|----------------------|
| Priority Sequence:   | 9                      |            |                      |
| Priority Class:      | 3                      |            |                      |
| Category Code:       | IS2B                   | System:    | INTERIOR/FINISH SYS. |
|                      |                        | Component: | PARTITIONS           |
|                      |                        | Element:   | FINISHES             |
| Building Code:       | B098                   |            |                      |
| Building Name:       | HARDY BUILDING         |            |                      |
| Subclass/Savings:    | Not Applicable         |            |                      |
| Code Application:    | Not Applicable         |            |                      |
| Project Class:       | Capital Renewal        |            |                      |
| Project Date:        | 10/5/2009              |            |                      |
| Project<br>Location: | Floor-wide: Floor(s) 1 |            |                      |

# **Project Description**

Interior walls are painted plaster and vary in age and condition. Wall finish upgrades should be considered as part of any future cosmetic improvements or major comprehensive renovation efforts.

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

Project Cost

Project Number: B098IS02

| Task Description                                  | Unit | Qnty   | Material<br>Unit<br>Cost | Total<br>Material<br>Cost | Labor<br>Unit<br>Cost | Total<br>Labor<br>Cost | Total<br>Cost |
|---|------|--------|--------------------------|---------------------------|-----------------------|------------------------|---------------|
| Standard wall finish (paint, wall covering, etc.) | SF   | 13,670 | \$0.17                   | \$2,324                   | \$0.81                | \$11,073               | \$13,397      |
| Project Totals                                    |      |        |                          | \$2,324                   |                       | \$11,073               | \$13,397      |

| Material/Labor Cost                 |   | \$13,397 |
|-------------------------------------|---|----------|
| Material Index                      |   | 100.7%   |
| Labor Index                         |   | 51.3%    |
| Material/Labor Indexed Cost         |   | \$8,020  |
| General Contractor Mark Up at 20.0% | + | \$1,604  |
| Construction Cost                   |   | \$9,625  |
| Professional Fees at 16.0%          | + | \$1,540  |
| Total Project Cost                  |   | \$11,164 |

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

## **Project Description**

| Project Number:    | B098IS03        | Title:     | <b>REFINISH CEILINGS</b> |
|--------------------|-----------------|------------|--------------------------|
| Priority Sequence: | 10              |            |                          |
| Priority Class:    | 3               |            |                          |
| Category Code:     | IS3B            | System:    | INTERIOR/FINISH SYS.     |
|                    |                 | Component: | CEILINGS                 |
|                    |                 | Element:   | REPLACEMENT              |
| Building Code:     | B098            |            |                          |
| Building Name:     | HARDY BUILDING  |            |                          |
| Subclass/Savings:  | Not Applicable  |            |                          |
| Code Application:  | Not Applicable  |            |                          |
| Project Class:     | Capital Renewal |            |                          |
| Project Date:      | 10/5/2009       |            |                          |
| Project            |                 |            |                          |

Location: Floor-wide: Floor(s) 1

# **Project Description**

Ceiling finishes are lay-in, acoustical tile. These applications vary in age and condition from area to area. Ceiling finish upgrades should be considered as part of any future cosmetic improvements or major comprehensive renovation efforts.

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

Project Cost

Project Number: B098IS03

| Task Description               | Unit    | Qnty  | Material<br>Unit<br>Cost | Total<br>Material<br>Cost | Labor<br>Unit<br>Cost | Total<br>Labor<br>Cost | Total<br>Cost |
|--------------------------------|---------|-------|--------------------------|---------------------------|-----------------------|------------------------|---------------|
| Acoustical tile ceiling system | SF      | 3,210 | \$2.12                   | \$6,805                   | \$2.98                | \$9,566                | \$16,371      |
| Project                        | Fotals: |       |                          | \$6,805                   |                       | \$9,566                | \$16,371      |

| Material/Labor Cost                 |   | \$16,371 |
|-------------------------------------|---|----------|
| Material Index                      |   | 100.7%   |
| Labor Index                         |   | 51.3%    |
| Material/Labor Indexed Cost         |   | \$11,760 |
| General Contractor Mark Up at 20.0% | + | \$2,352  |
| Construction Cost                   |   | \$14,112 |
| Professional Fees at 16.0%          | + | \$2,258  |
| Total Project Cost                  |   | \$16,370 |

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

#### **Project Description**

| Project Number:      | B098IS04               | Title:     | REPLACE INTERIOR DOORS |
|----------------------|------------------------|------------|------------------------|
| Priority Sequence:   | 11                     |            |                        |
| Priority Class:      | 3                      |            |                        |
| Category Code:       | IS4A                   | System:    | INTERIOR/FINISH SYS.   |
|                      |                        | Component: | DOORS                  |
|                      |                        | Element:   | GENERAL                |
| Building Code:       | B098                   |            |                        |
| Building Name:       | HARDY BUILDING         |            |                        |
| Subclass/Savings:    | Not Applicable         |            |                        |
| Code Application:    | Not Applicable         |            |                        |
| Project Class:       | Capital Renewal        |            |                        |
| Project Date:        | 10/5/2009              |            |                        |
| Project<br>Location: | Floor-wide: Floor(s) 1 |            |                        |

# **Project Description**

The condition of the interior door systems is such that door system replacements are recommended as part of a comprehensive renovation effort. Complete demolition of the door systems and replacement according to a code compliant plan to properly protect egress passages is recommended. Lever door hardware and Braille signage should be included in this effort.

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

Project Cost

Project Number: B098IS04

| Task Description  | Unit | Qnty | Material<br>Unit<br>Cost | Total<br>Material<br>Cost | Labor<br>Unit<br>Cost | Total<br>Labor<br>Cost | Total<br>Cost |
|---|------|------|--------------------------|---------------------------|-----------------------|------------------------|---------------|
| Rated door and rated metal frame,<br>including all hardware and accessible<br>signage | EA   | 20   | \$672                    | \$13,440                  | \$812                 | \$16,240               | \$29,680      |
| Project Tota  | ls:  |      |                          | \$13,440                  |                       | \$16,240               | \$29,680      |

| Material/Labor Cost                 |   | \$29,680 |
|-------------------------------------|---|----------|
| Material Index                      |   | 100.7%   |
| Labor Index                         |   | 51.3%    |
| Material/Labor Indexed Cost         |   | \$21,865 |
| General Contractor Mark Up at 20.0% | + | \$4,373  |
| Construction Cost                   |   | \$26,238 |
| Professional Fees at 16.0%          | + | \$4,198  |
| Total Project Cost                  |   | \$30,436 |

## Facility Condition Analysis Section Three B098 : HARDY BUILDING

#### **Project Description**

| Project Number:      | B098PL02             |           | Title:     | WATER SUPPLY PIPING REPLACEMENT |
|----------------------|----------------------|-----------|------------|---------------------------------|
| Priority Sequence:   | 12                   |           |            |                                 |
| Priority Class:      | 3                    |           |            |                                 |
| Category Code:       | PL1A                 |           | System:    | PLUMBING                        |
|                      |                      |           | Component: | DOMESTIC WATER                  |
|                      |                      |           | Element:   | PIPING NETWORK                  |
| Building Code:       | B098                 |           |            |                                 |
| Building Name:       | HARDY BUILDING       |           |            |                                 |
| Subclass/Savings:    | Not Applicable       |           |            |                                 |
| Code Application:    | IPC                  | Chapter 6 |            |                                 |
| Project Class        | Deferred Maintenand  |           |            |                                 |
| Project Class:       |                      | e.        |            |                                 |
| Project Date:        | 10/14/2009           |           |            |                                 |
| Project<br>Location: | Floor-wide: Floor(s) | 1         |            |                                 |

## **Project Description**

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

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

Project Cost

Project Number: B098PL02

| Task Description   | Unit | Qnty  | Material<br>Unit<br>Cost | Total<br>Material<br>Cost | Labor<br>Unit<br>Cost | Total<br>Labor<br>Cost | Total<br>Cost |
|--|------|-------|--------------------------|---------------------------|-----------------------|------------------------|---------------|
| Water and specialty pipe and fittings,<br>valves, backflow prevention devices,<br>insulation, hangers, labels, demolition,<br>and cut and patching materials | SF   | 4,220 | \$1.28                   | \$5,402                   | \$3.20                | \$13,504               | \$18,906      |
| Project Tota   | ls:  |       |                          | \$5,402                   |                       | \$13,504               | \$18,906      |

| Material/Labor Cost                 |   | \$18,906 |
|-------------------------------------|---|----------|
| Material Index                      |   | 100.7%   |
| Labor Index                         |   | 51.3%    |
| Material/Labor Indexed Cost         |   | \$12,367 |
| General Contractor Mark Up at 20.0% | + | \$2,473  |
| Construction Cost                   |   | \$14,840 |
| Professional Fees at 16.0%          | + | \$2,374  |
| Total Project Cost                  |   | \$17,215 |

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

#### **Project Description**

| Project Number:      | B098PL03             |               | Title:     | DRAIN PIPING REPLACEMENT |
|----------------------|----------------------|---------------|------------|--------------------------|
| Priority Sequence:   | 13                   |               |            |                          |
| Priority Class:      | 3                    |               |            |                          |
| Category Code:       | PL2A                 |               | System:    | PLUMBING                 |
|                      |                      |               | Component: | WASTEWATER               |
|                      |                      |               | Element:   | PIPING NETWORK           |
| Building Code:       | B098                 |               |            |                          |
| Building Name:       | HARDY BUILDING       |               |            |                          |
| Subclass/Savings:    | Not Applicable       |               |            |                          |
|                      |                      |               |            |                          |
| Code Application:    | IPC                  | Chapters 7-12 |            |                          |
|                      |                      |               |            |                          |
|                      |                      |               |            |                          |
| Project Class:       | Deferred Maintenand  | ce            |            |                          |
| Project Date:        | 10/14/2009           |               |            |                          |
| Desised              |                      |               |            |                          |
| Project<br>Location: | Floor-wide: Floor(s) | 1             |            |                          |

# **Project Description**

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

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

Project Cost

Project Number: B098PL03

| Task Description   | Unit | Qnty  | Material<br>Unit<br>Cost | Total<br>Material<br>Cost | Labor<br>Unit<br>Cost | Total<br>Labor<br>Cost | Total<br>Cost |
|--|------|-------|--------------------------|---------------------------|-----------------------|------------------------|---------------|
| Cast-iron, copper, and corrosion resistant<br>pipe and fittings, hangers, floor / roof<br>drains, traps, demolition, and cut and<br>patching materials | SF   | 4,220 | \$2.04                   | \$8,609                   | \$4.69                | \$19,792               | \$28,401      |
| Project Totals:  |      |       |                          | \$8,609                   |                       | \$19,792               | \$28,401      |

| Material/Labor Cost                 |   | \$28,401 |
|-------------------------------------|---|----------|
| Material Index                      |   | 100.7%   |
| Labor Index                         |   | 51.3%    |
| Material/Labor Indexed Cost         |   | \$18,822 |
| General Contractor Mark Up at 20.0% | + | \$3,764  |
| Construction Cost                   |   | \$22,587 |
| Professional Fees at 16.0%          | + | \$3,614  |
| Total Project Cost                  |   | \$26,201 |

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

## **Project Description**

| Project Number:      | B098PL01              |                 | Title:     | DOMESTIC WATER HEATER REPLACEMENT |
|----------------------|-----------------------|-----------------|------------|-----------------------------------|
| Priority Sequence:   | 14                    |                 |            |                                   |
| Priority Class:      | 3                     |                 |            |                                   |
| Category Code:       | PL1E                  |                 | System:    | PLUMBING                          |
|                      |                       |                 | Component: | DOMESTIC WATER                    |
|                      |                       |                 | Element:   | HEATING                           |
| Building Code:       | B098                  |                 |            |                                   |
| Building Name:       | HARDY BUILDING        |                 |            |                                   |
| Subclass/Savings:    | Not Applicable        |                 |            |                                   |
| Code Application:    | IPC                   | Chapters 5, 607 |            |                                   |
|                      |                       |                 |            |                                   |
| Project Class:       | Capital Renewal       |                 |            |                                   |
| Project Date:        | 10/14/2009            |                 |            |                                   |
| Project<br>Location: | Item Only: Floor(s) 1 |                 |            |                                   |

# **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.

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

Project Cost

Project Number: B098PL01

| Task Description   | Unit | Qnty | Material<br>Unit<br>Cost | Total<br>Material<br>Cost | Labor<br>Unit<br>Cost | Total<br>Labor<br>Cost | Total<br>Cost |
|--|------|------|--------------------------|---------------------------|-----------------------|------------------------|---------------|
| Electric, residential-grade water heater replacement, including demolition | GAL  | 60   | \$22.87                  | \$1,372                   | \$23.71               | \$1,423                | \$2,795       |
| Project Totals   | s:   |      |                          | \$1,372                   |                       | \$1,423                | \$2,795       |

| Material/Labor Cost                 |   | \$2,795 |
|-------------------------------------|---|---------|
| Material Index                      |   | 100.7%  |
| Labor Index                         |   | 51.3%   |
| Material/Labor Indexed Cost         |   | \$2,112 |
| General Contractor Mark Up at 20.0% | + | \$422   |
| Construction Cost                   |   | \$2,534 |
| Professional Fees at 16.0%          | + | \$405   |
| Total Project Cost                  |   | \$2,939 |

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

## **Project Description**

| Project Number:      | B098SI01              | Title:     | SITE PAVING UPGRADES |
|----------------------|-----------------------|------------|----------------------|
| Priority Sequence:   | 15                    |            |                      |
| Priority Class:      | 3                     |            |                      |
| Category Code:       | SI4A                  | System:    | SITE                 |
|                      |                       | Component: | GENERAL              |
|                      |                       | Element:   | OTHER                |
| Building Code:       | B098                  |            |                      |
| Building Name:       | HARDY BUILDING        |            |                      |
| Subclass/Savings:    | Not Applicable        |            |                      |
| Code Application:    | Not Applicable        |            |                      |
| Project Class:       | Capital Renewal       |            |                      |
| Project Date:        | 10/5/2009             |            |                      |
| Project<br>Location: | Undefined: Floor(s) 1 |            |                      |

# **Project Description**

Pedestrian paving systems are in overall average condition, but will need replacement in the next ten years. New systems, including excavation, grading, base compaction, and paving, are recommended. Design the new paving to include wheelchair access to the south facade entrance.

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

# Project Cost

Project Number: B098SI01

| Task Description           | Unit | Qnty  | Material<br>Unit<br>Cost | Total<br>Material<br>Cost | Labor<br>Unit<br>Cost | Total<br>Labor<br>Cost | Total<br>Cost |
|----------------------------|------|-------|--------------------------|---------------------------|-----------------------|------------------------|---------------|
| Concrete pedestrian paving | SF   | 2,500 | \$2.97                   | \$7,425                   | \$3.64                | \$9,100                | \$16,525      |
| Project Totals:            |      |       |                          | \$7,425                   |                       | \$9,100                | \$16,525      |

| Material/Labor Cost                 |   | \$16,525 |
|-------------------------------------|---|----------|
| Material Index                      |   | 100.7%   |
| Labor Index                         |   | 51.3%    |
| Material/Labor Indexed Cost         |   | \$12,145 |
| General Contractor Mark Up at 20.0% | + | \$2,429  |
| Construction Cost                   |   | \$14,574 |
| Professional Fees at 16.0%          | + | \$2,332  |
| Total Project Cost                  |   | \$16,906 |

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

## **Project Description**

| Project Number:      | B098AC01             |               | Title:     | INTERIOR AMENITY ACCESSIBILITY<br>UPGRADES |
|----------------------|----------------------|---------------|------------|--|
| Priority Sequence:   | 16                   |               |            |  |
| Priority Class:      | 4                    |               |            |  |
| Category Code:       | AC4A                 |               | System:    | ACCESSIBILITY                              |
|                      |                      |               | Component: | GENERAL                                    |
|                      |                      |               | Element:   | FUNCTIONAL SPACE MOD.                      |
| Building Code:       | B098                 |               |            |  |
| Building Code.       | D090                 |               |            |  |
| Building Name:       | HARDY BUILDING       |               |            |  |
| Subclass/Savings:    | Not Applicable       |               |            |  |
|                      |                      |               |            |  |
| Code Application:    | ADAAG                | 211, 602, 804 |            |  |
|                      |                      |               |            |  |
|                      |                      |               |            |  |
| Project Class:       | Plant Adaption       |               |            |  |
| Project Date:        | 10/5/2009            |               |            |  |
|                      |                      |               |            |  |
| Project<br>Location: | Floor-wide: Floor(s) | 1             |            |  |

## **Project Description**

Current accessibility legislation requires that building amenities be generally accessible to all persons. The configurations of the break room kitchenette and the drinking fountain are barriers to accessibility. The installation of wheelchair accessible kitchenette cabinetry and a dual level, refrigerated drinking fountain is recommended.

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

# Project Cost

Project Number: B098AC01

| Task Description  | Unit | Qnty | Material<br>Unit<br>Cost | Total<br>Material<br>Cost | Labor<br>Unit<br>Cost | Total<br>Labor<br>Cost | Total<br>Cost |
|---|------|------|--------------------------|---------------------------|-----------------------|------------------------|---------------|
| ADA compliant kitchenette unit with base cabinetry, overhead cabinetry, and amenities | SYS  | 1    | \$4,894                  | \$4,894                   | \$1,999               | \$1,999                | \$6,893       |
| Dual level drinking fountain  | EA   | 1    | \$1,216                  | \$1,216                   | \$374                 | \$374                  | \$1,590       |
| Alcove construction including finishes  | EA   | 1    | \$877                    | \$877                     | \$3,742               | \$3,742                | \$4,619       |
| Project Totals:   |      |      |                          | \$6,987                   |                       | \$6,115                | \$13,102      |

| Material/Labor Cost                 |   | \$13,102 |
|-------------------------------------|---|----------|
| Material Index                      |   | 100.7%   |
| Labor Index                         |   | 51.3%    |
| Material/Labor Indexed Cost         |   | \$10,173 |
| General Contractor Mark Up at 20.0% | + | \$2,035  |
| Construction Cost                   |   | \$12,207 |
| Professional Fees at 16.0%          | + | \$1,953  |
| Total Project Cost                  |   | \$14,161 |

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

#### **Project Description**

| Project Number:      | B098AC02               |                     | Title:     | RESTROOM RENOVATION     |
|----------------------|------------------------|---------------------|------------|-------------------------|
| Priority Sequence:   | 17                     |                     |            |                         |
| Priority Class:      | 4                      |                     |            |                         |
| Category Code:       | AC3E                   |                     | System:    | ACCESSIBILITY           |
|                      |                        |                     | Component: | INTERIOR PATH OF TRAVEL |
|                      |                        |                     | Element:   | RESTROOMS/BATHROOMS     |
| Building Code:       | B098                   |                     |            |                         |
| Building Name:       | HARDY BUILDING         |                     |            |                         |
| Subclass/Savings:    | Not Applicable         |                     |            |                         |
|                      |                        |                     |            |                         |
| Code Application:    | ADAAG                  | 604, 605, 606, 607, | 608        |                         |
|                      |                        |                     |            |                         |
|                      |                        |                     |            |                         |
| Project Class:       | Plant Adaption         |                     |            |                         |
| Project Date:        | 10/5/2009              |                     |            |                         |
| Project<br>Location: | Floor-wide: Floor(s) 1 | 1                   |            |                         |

# **Project Description**

The restroom fixtures and finishes are mostly original to the year of construction or latest major renovation. The fixtures are sound but dated and are spaced such that clearances are not ADA compliant. A comprehensive restroom renovation, including new fixtures, finishes, partitions, and accessories is recommended. Restroom expansion may be necessary in order to meet modern minimum fixture counts and accessibility legislation.

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

Project Cost

Project Number: B098AC02

| Task Description  | Unit | Qnty | Material<br>Unit<br>Cost | Total<br>Material<br>Cost | Labor<br>Unit<br>Cost | Total<br>Labor<br>Cost | Total<br>Cost |
|---|------|------|--------------------------|---------------------------|-----------------------|------------------------|---------------|
| Major restroom renovation, including<br>fixtures, finishes, partitions, accessories,<br>and expansion if necessary (assumes 55<br>square feet of restroom area per fixture) | FIXT | 8    | \$1,969                  | \$15,752                  | \$1,699               | \$13,592               | \$29,344      |
| Project Totals  | :    |      |                          | \$15,752                  |                       | \$13,592               | \$29,344      |

| Material/Labor Cost                 |   | \$29,344 |
|-------------------------------------|---|----------|
| Material Index                      |   | 100.7%   |
| Labor Index                         |   | 51.3%    |
| Material/Labor Indexed Cost         |   | \$22,835 |
| General Contractor Mark Up at 20.0% | + | \$4,567  |
| Construction Cost                   |   | \$27,402 |
| Professional Fees at 16.0%          | + | \$4,384  |
| Total Project Cost                  |   | \$31,786 |

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

#### **Project Description**

| Project Number:      | B098ES04               |       | Title:     | MEMBRANE ROOF REPLACEMENT |
|----------------------|------------------------|-------|------------|---------------------------|
| Priority Sequence:   | 18                     |       |            |                           |
| Priority Class:      | 4                      |       |            |                           |
| Category Code:       | ES4B                   |       | System:    | EXTERIOR                  |
|                      |                        |       | Component: | ROOF                      |
|                      |                        |       | Element:   | REPLACEMENT               |
| Building Code:       | B098                   |       |            |                           |
| Building Name:       | HARDY BUILDING         |       |            |                           |
| Subclass/Savings:    | Energy Conservation    | \$400 |            |                           |
| Code Application:    | Not Applicable         |       |            |                           |
| Project Class:       | Capital Renewal        |       |            |                           |
| Project Date:        | 10/5/2009              |       |            |                           |
| Project<br>Location: | Floor-wide: Floor(s) R |       |            |                           |

# **Project Description**

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

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

# Project Cost

Project Number: B098ES04

| Task Description | Unit           | Qnty  | Material<br>Unit<br>Cost | Total<br>Material<br>Cost | Labor<br>Unit<br>Cost | Total<br>Labor<br>Cost | Total<br>Cost |
|------------------|----------------|-------|--------------------------|---------------------------|-----------------------|------------------------|---------------|
| Membrane roof    | SF             | 4,220 | \$3.79                   | \$15,994                  | \$1.73                | \$7,301                | \$23,294      |
| Pi               | roject Totals: |       |                          | \$15,994                  |                       | \$7,301                | \$23,294      |

| Material/Labor Cost                 |   | \$23,294 |
|-------------------------------------|---|----------|
| Material Index                      |   | 100.7%   |
| Labor Index                         |   | 51.3%    |
| Material/Labor Indexed Cost         |   | \$19,851 |
| General Contractor Mark Up at 20.0% | + | \$3,970  |
| Construction Cost                   |   | \$23,821 |
| Professional Fees at 16.0%          | + | \$3,811  |
| Total Project Cost                  |   | \$27,633 |

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

#### **Project Description**

| Project Number:      | B098ES03                  |       | Title:     | WINDOW REPLACEMENT |
|----------------------|---------------------------|-------|------------|--------------------|
| Priority Sequence:   | 19                        |       |            |                    |
| Priority Class:      | 4                         |       |            |                    |
| Category Code:       | ES5B                      |       | System:    | EXTERIOR           |
|                      |                           |       | Component: | FENESTRATIONS      |
|                      |                           |       | Element:   | WINDOWS            |
| Building Code:       | B098                      |       |            |                    |
| Building Name:       | HARDY BUILDING            |       |            |                    |
| Subclass/Savings:    | Energy Conservation       | \$100 |            |                    |
| Code Application:    | Not Applicable            |       |            |                    |
|                      |                           |       |            |                    |
| Project Class:       | Capital Renewal           |       |            |                    |
| Project Date:        | 10/5/2009                 |       |            |                    |
| Project<br>Location: | Building-wide: Floor(s) 1 |       |            |                    |

# **Project Description**

The building has single-pane, metal windows that should be upgraded to thermal-pane systems, which will reduce the energy required to operate the building. Repair or replacement of the windowsills and trim may also be necessary

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

Project Cost

Project Number: B098ES03

| Task Description                      | Unit | Qnty     | Material<br>Unit<br>Cost | Total<br>Material<br>Cost | Labor<br>Unit<br>Cost | Total<br>Labor<br>Cost | Total<br>Cost |
|---------------------------------------|------|----------|--------------------------|---------------------------|-----------------------|------------------------|---------------|
| Typical standard glazing applications | SF   | 550      | \$57.27                  | \$31,499                  | \$36.45               | \$20,048               | \$51,546      |
| Project Tota                          |      | \$31,499 |                          | \$20,048                  | \$51,546              |                        |               |

| Material/Labor Cost                 |   | \$51,546 |
|-------------------------------------|---|----------|
| Material Index                      |   | 100.7%   |
| Labor Index                         |   | 51.3%    |
| Material/Labor Indexed Cost         |   | \$42,003 |
| General Contractor Mark Up at 20.0% | + | \$8,401  |
| Construction Cost                   |   | \$50,404 |
| Professional Fees at 16.0%          | + | \$8,065  |
| Total Project Cost                  |   | \$58,469 |

#### Facility Condition Analysis Section Three B098 : HARDY BUILDING

#### **Project Description**

| Project Number:    | B098EL03               |                       | Title:     | UPGRADE BUILDING ELECTRICAL SYSTEM |
|--------------------|------------------------|-----------------------|------------|------------------------------------|
| Priority Sequence: | 20                     |                       |            |                                    |
| Priority Class:    | 4                      |                       |            |                                    |
| Category Code:     | EL3B                   |                       | System:    | ELECTRICAL                         |
|                    |                        |                       | Component: | SECONDARY DISTRIBUTION             |
|                    |                        |                       | Element:   | DISTRIBUTION NETWORK               |
| Building Code:     | B098                   |                       |            |                                    |
| Building Name:     | HARDY BUILDING         |                       |            |                                    |
| Subclass/Savings:  | Not Applicable         |                       |            |                                    |
|                    |                        |                       |            |                                    |
| Code Application:  | NEC                    | Articles 110, 210, 22 | 0, 230     |                                    |
|                    |                        |                       |            |                                    |
|                    |                        |                       |            |                                    |
| Project Class:     | Capital Renewal        |                       |            |                                    |
| Project Date:      | 10/14/2009             |                       |            |                                    |
| Project            |                        |                       |            |                                    |
| Location:          | Floor-wide: Floor(s) 1 |                       |            |                                    |

#### **Project Description**

The building receives 120/240 volt, two-phase, three-wire power from the local utility company. The main 220 amp GE electrical panel and electrical distribution network have been in service for over forty years. 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.

# Facility Condition Analysis Section Three B098 : HARDY BUILDING

Project Cost

Project Number: B098EL03

| Task Description   | Unit    | Qnty  | Material<br>Unit<br>Cost | Total<br>Material<br>Cost | Labor<br>Unit<br>Cost | Total<br>Labor<br>Cost | Total<br>Cost |
|--|---------|-------|--------------------------|---------------------------|-----------------------|------------------------|---------------|
| Power panels, conductors, raceways, devices, demolition, and cut and patchin materials | SF<br>g | 4,220 | \$4.49                   | \$18,948                  | \$6.74                | \$28,443               | \$47,391      |
| Project Total  | s:      |       |                          | \$18,948                  |                       | \$28,443               | \$47,391      |

| Material/Labor Cost                 |   | \$47,391 |
|-------------------------------------|---|----------|
| Material Index                      |   | 100.7%   |
| Labor Index                         |   | 51.3%    |
| Material/Labor Indexed Cost         |   | \$33,672 |
| General Contractor Mark Up at 20.0% | + | \$6,734  |
| Construction Cost                   |   | \$40,406 |
| Professional Fees at 16.0%          | + | \$6,465  |
| Total Project Cost                  |   | \$46,871 |

# DRAWINGS AND PROJECT LOCATIONS

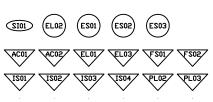


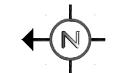
FACILITY CONDITION ANALYSIS



ROOF

ES04 







1 of 1

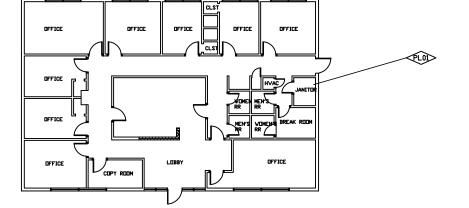
Sheet No.

Date: 10/30/09 Drawn by: J.T.V. Project No. 09-041



PROJECT NUMBER

APPLIES TO AREA AS NOTED



770.879.7376

PROJECT NUMBER APPLIES TO ONE ROOM ONLY

 $\bigcirc$ 

PROJECT NUMBER APPLIES TO ONE ITEM ONLY

PROJECT NUMBER

APPLIES TO

ENTIRE BUILDING

PROJECT NUMBER APPLIES TO ENTIRE FLOOR  $\bigcirc$ 



ANALYSIS ٠ 2165 West Park Court Suite N Stone Mountain GA 30087



BLDG NO. B098

HARDY BUILDING

# LIFE CYCLE MODEL SUMMARY AND PROJECTIONS



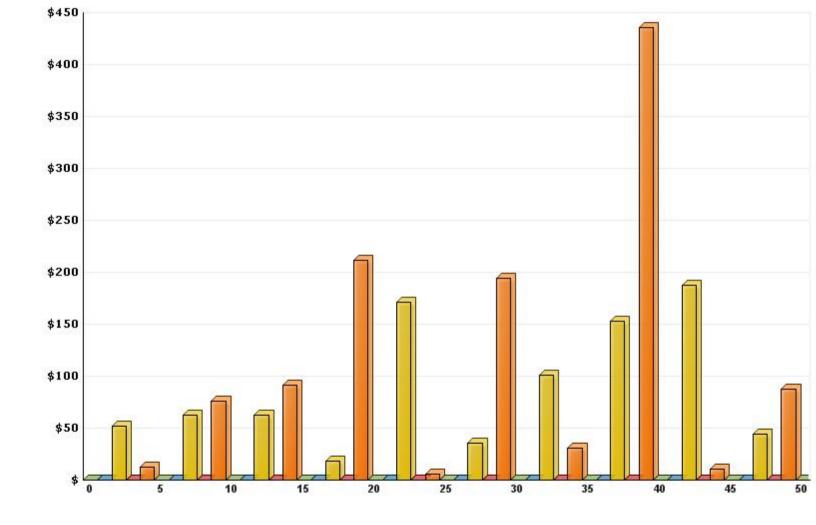
FACILITY CONDITION ANALYSIS

# Life Cycle Model Building Component Summary B098 : HARDY BUILDING

| Uniformat<br>Code | Component Description                             | Qty    | Units | Unit<br>Cost | Complx<br>Adj | Total<br>Cost | Install<br>Date | Life<br>Exp |
|-------------------|---|--------|-------|--------------|---------------|---------------|-----------------|-------------|
| B2010             | EXTERIOR FINISH RENEWAL                           | 3,090  | SF    | \$1.30       | .31           | \$1,249       | 1967            | 10          |
| B2020             | STANDARD GLAZING AND CURTAIN WALL                 | 550    | SF    | \$104.04     |               | \$57,220      | 1967            | 55          |
| B2030             | HIGH TRAFFIC EXTERIOR DOOR SYSTEM                 | 2      | LEAF  | \$4,311.24   |               | \$8,622       | 1990            | 20          |
| B3010             | MEMBRANE ROOF                                     | 4,220  | SF    | \$6.41       |               | \$27,037      | 2000            | 15          |
| C1020             | RATED DOOR AND FRAME INCLUDING HARDWARE           | 20     | LEAF  | \$1,489.06   |               | \$29,781      | 1967            | 35          |
| C1020             | INTERIOR DOOR HARDWARE                            | 20     | EA    | \$423.04     |               | \$8,461       | 1967            | 15          |
| C3010             | STANDARD WALL FINISH (PAINT, WALL COVERING, ETC.) | 13,670 | SF    | \$0.80       |               | \$10,950      | 1967            | 10          |
| C3020             | CARPET  | 3,210  | SF    | \$8.75       |               | \$28,076      | 1990            | 10          |
| C3030             | ACOUSTICAL TILE CEILING SYSTEM                    | 3,210  | SF    | \$4.99       |               | \$16,028      | 1990            | 15          |
| D2010             | PLUMBING FIXTURES - MEDICAL / CLINIC              | 4,220  | SF    | \$5.61       |               | \$23,677      | 1967            | 35          |
| D2020             | WATER / PROCESS PIPING - MEDICAL / CLINIC         | 4,220  | SF    | \$3.99       |               | \$16,833      | 1967            | 35          |
| D2020             | WATER HEATER (RES., ELEC.)                        | 60     | GAL   | \$47.95      |               | \$2,877       | 2002            | 10          |
| D2030             | DRAIN PIPING - MEDICAL / CLINIC                   | 4,220  | SF    | \$6.06       |               | \$25,583      | 1967            | 40          |
| D3030             | ROOFTOP HVAC UNIT                                 | 10     | TON   | \$2,415.23   |               | \$24,152      | 1985            | 15          |
| D5010             | ELECTRICAL SYSTEM - MEDICAL / CLINIC              | 4,220  | SF    | \$10.88      |               | \$45,902      | 1967            | 50          |
| D5010             | ELECTRICAL SWITCHGEAR 120/208V                    | 200    | AMP   | \$32.96      |               | \$6,593       | 1967            | 20          |
| D5020             | EXIT SIGNS (BATTERY)                              | 2      | EA    | \$280.76     |               | \$562         | 1967            | 20          |
| D5020             | EXTERIOR LIGHT (HID)                              | 2      | EA    | \$689.58     |               | \$1,379       | 1990            | 20          |
| D5020             | LIGHTING - MEDICAL / CLINIC                       | 4,220  | SF    | \$20.54      |               | \$86,679      | 1967            | 20          |
| D5030             | FIRE ALARM SYSTEM, POINT ADDRESSABLE              | 4,220  | SF    | \$2.61       |               | \$11,034      | 1980            | 15          |
| E2010             | KITCHENETTE UNIT WITH CABINETRY AND AMENITIES     | 1      | LOT   | \$5,940.22   |               | \$5.940       | 1967            | 20          |
|                   |   |        |       |              |               | \$438,634     |                 |             |

# Life Cycle Model Expenditure Projections

**B098 : HARDY BUILDING** 



**Renewal Cost in Thousands of Dollars** 

**Future Year** 

# Average Annual Renewal Cost Per SqFt \$4.38

# FACILITY CONDITION ANALYSIS



# PHOTOGRAPHIC LOG

# Photo Log - Facility Condition Analysis B098 : HARDY BUILDING

| Photo ID No | Description                                    | Location           | Date     |
|-------------|--|--------------------|----------|
| B098001a    | Interior finishes in lobby                     | First floor        | 9/2/2009 |
| B098001e    | HID exterior fixture                           | South facade       | 9/2/2009 |
| B098002a    | Interior finishes in conference room           | First floor        | 9/2/2009 |
| B098002e    | Timeworn Carrier package unit                  | Roof               | 9/2/2009 |
| B098003a    | Restroom fixtures                              | First floor        | 9/2/2009 |
| B098003e    | Outdated fluorescent exit sign                 | Entrance           | 9/2/2009 |
| B098004a    | Single level drinking fountain                 | First floor        | 9/2/2009 |
| B098004e    | Outdated combination smoke and heat detector   | Corridor           | 9/2/2009 |
| B098005a    | Break room sink                                | First floor        | 9/2/2009 |
| B098005e    | Outdated opaque strobe and audible annunciator | Lobby              | 9/2/2009 |
| B098006a    | Interior finishes in corridor                  | First floor        | 9/2/2009 |
| B098006e    | Digital thermostat                             | Corridor           | 9/2/2009 |
| B098007a    | Interior finishes in corridor                  | First floor        | 9/2/2009 |
| B098007e    | Electric domestic water heater                 | Janitor closet     | 9/2/2009 |
| B098008a    | West facade                                    | Exterior elevation | 9/2/2009 |
| B098008e    | Original GE main 200 amp electrical panel      | Janitor closet     | 9/2/2009 |
| B098009a    | West facade                                    | Exterior elevation | 9/2/2009 |
| B098010a    | West facade                                    | Exterior elevation | 9/2/2009 |
| B098011a    | North facade                                   | Exterior elevation | 9/2/2009 |
| B098012a    | East facade                                    | Exterior elevation | 9/2/2009 |
| B098013a    | South facade                                   | Exterior elevation | 9/2/2009 |
| B098014a    | Roof detail                                    | Roof               | 9/2/2009 |
| B098015a    | Roof detail                                    | Roof               | 9/2/2009 |
|             |  |                    |          |

# Facility Condition Analysis - Photo Log



B098001A.jpg



B098001E.jpg



B098002A.jpg



B098002E.jpg



B098003A.jpg



B098003E.jpg



B098004A.jpg

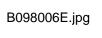














B098005A.jpg

B098007A.jpg



B098005E.jpg

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B098009A.jpg



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