

EAST CAROLINA UNIVERSITY

MINGES COLISEUM

ASSET CODE: MING

FACILITY CONDITION ANALYSIS

DECEMBER 10, 2009



EAST CAROLINA UNIVERSITY
Facility Condition Analysis

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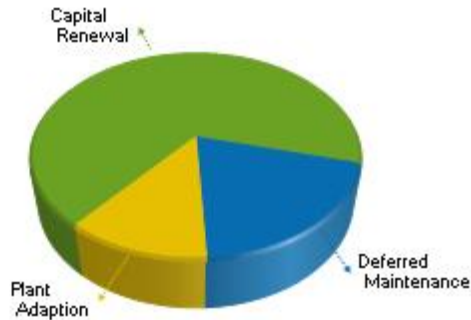
FACILITY CONDITION ANALYSIS

SECTION 1

GENERAL ASSET INFORMATION

EXECUTIVE SUMMARY - MINGES COLISEUM

PROJECT COSTS BY CLASSIFICATION



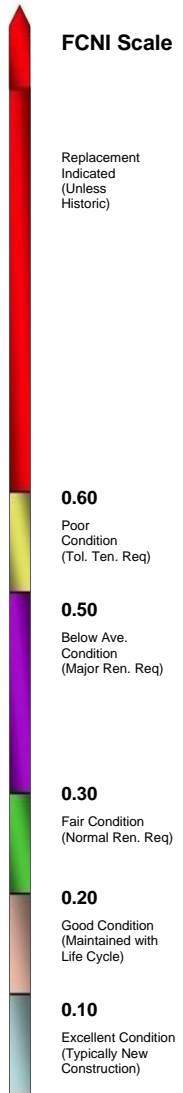
Building Code: MING
Building Name: MINGES COLISEUM
Year Built: 1967
Building Use: Gymnasium / Athletics
Square Feet: 155,598

Project Costs by Priority

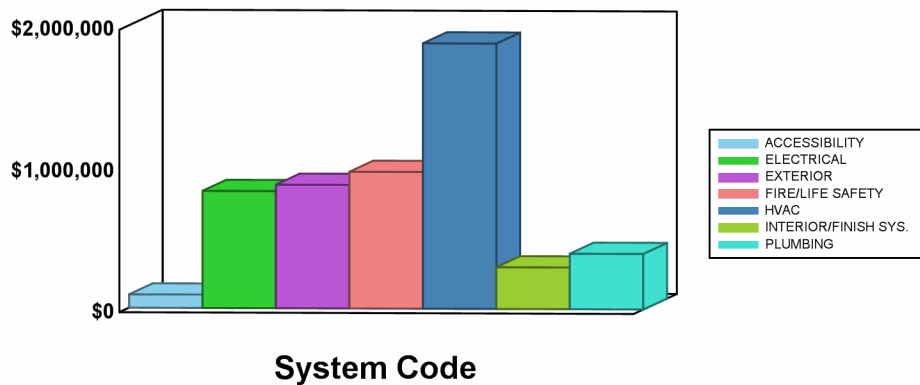
Priority 1: \$0
Priority 2: \$1,012,740
Priority 3: \$1,629,904
Priority 4: \$2,695,004
Total Project Costs: \$5,337,648

Facility Replacement Cost: \$38,489,000

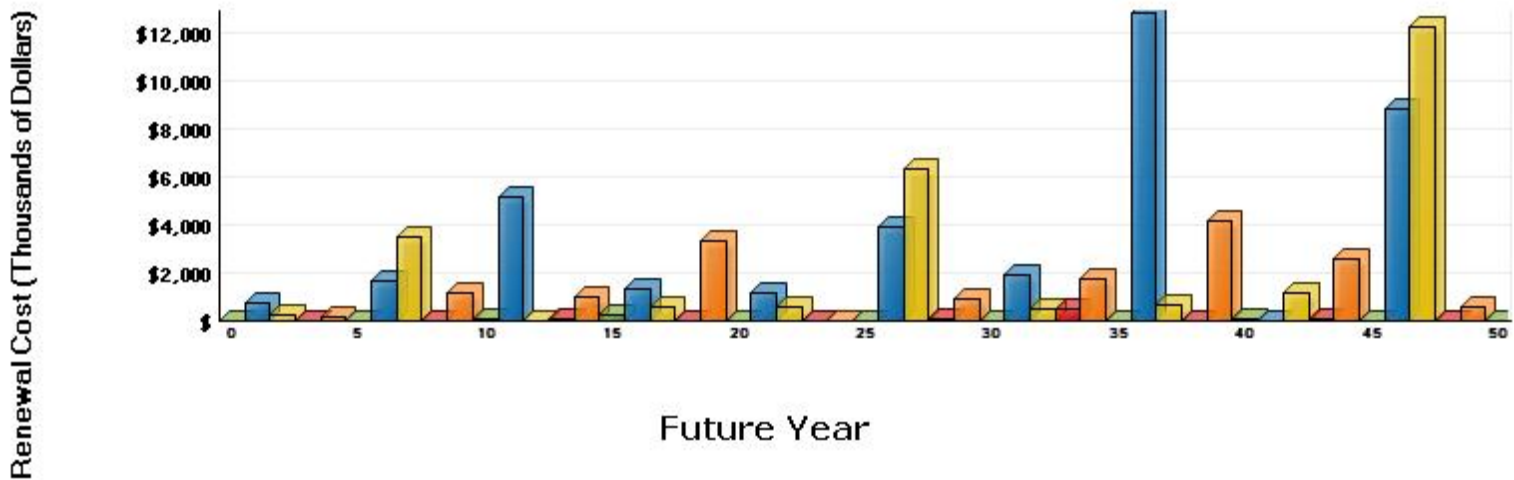
Facility Condition Needs Index (FCNI): 0.14
 (Project Costs / Replacement Cost)



PROJECT COSTS BY SYSTEM CODE



LIFE CYCLE MODEL EXPENDITURE PROJECTIONS



Average Annual Renewal Cost Per SqFt \$4.45

B. ASSET SUMMARY

The Minges Coliseum was originally constructed in 1967 and is located on the southern athletic campus. The eastern half of the facility, the arena, underwent major renovations in 1994 and 1995. The western half of the facility, the pool and middle office area, underwent only minimal, minor cosmetic upgrades. This building contains 155,598 square feet of area. The eastern arena has two levels. The ground floor has locker rooms, concessions, some offices, and storage. The second floor is a concourse level to access the upper seating of the arena and additional concessions. The western pool and office area have only the ground floor. The cast-in-place concrete pier foundation supports a precast concrete and steel frame superstructure. The floor systems are cast-in-place concrete applications.

The exterior facade is a combination of brick masonry, concrete panels, and significant quantities of glazing. The roof has numerous levels, some covered in rolled asphalt built-up applications and other areas having single ply membrane roof systems. Handicapped access is available through all north, south, and east entrances into the eastern arena area, while access into the western pool area is via stepped entrances, making wheelchair access impossible. Handicapped parking is available in the parking lot immediately to the north. Elevators within the eastern arena provide access to the upper seating areas.

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

SITE

The building sits on a flat parcel of land in a suburban campus setting. Landscaping consists of some ornamental planting beds, shrubbery, a few specimen trees, and areas of turf around the facility. Vehicular access is from the north off of Ficklen Drive or from the west off of Charles Boulevard. Large parking lots exist to the north and west of the structure leading to a sidewalk system that serves all entrances. The designated handicapped parking spaces are to the north of the facility, with all entrances being at ground level and wheelchair accessible.

EXTERIOR STRUCTURE

The concrete exterior has become visibly soiled, and in a few areas, the painted finish has deficiencies. Cleaning, surface preparation, selective repairs, and applied finish upgrades are recommended to restore the aesthetics and integrity of the building envelope.

The windows in the eastern arena area of the building were replaced in 1995. It is recommended that the original single pane, metal-framed window applications in the lower central section of the building be upgraded to thermal pane systems. Such double pane systems will reduce the energy required to operate the building. Repair or replacement of the windowsills and trim may also be necessary. Exterior doors are either newer glass entrance doors or older metal secondary doors. Exterior doors are in satisfactory condition and do not require replacement at this time.

The roof is comprised of numerous sections on several different levels. The roof is a combination of single ply membrane applications and rolled asphalt built-up roof applications. The built-up roofing

system over various roof sections is not expected to outlast the scope of this analysis. Future budget modeling should include a provision for the replacement of all failing built-up roofing systems. Replace this roof with a similar application. The single ply membrane roofing system over some of the lower and upper roof areas is also not expected to outlast the scope of this analysis and should be replaced with a similar application.

INTERIOR FINISHES / SYSTEMS

The facility was renovated in 1995 and underwent numerous interior upgrades. New ceramic tile floors were installed in the eastern arena area along with hardwood floor upgrades, carpet, and vinyl tile. The western pool area and middle office area did not receive the extensive renovation that occurred in the eastern arena area. As a result, the interior floor finish applications vary in age, type, and condition. The 9 inch square composite floor tiles in the middle and western areas are original and suspected to contain asbestos. These tiles should be replaced. The carpet applications in the entire facility should also be replaced as part of future cosmetic improvements or major comprehensive renovation efforts.

The gymnasium has a hardwood strip flooring play surface. Presently, the wooden floor is in good condition. It is recommended that the floor surface be sanded and refinished on a periodic basis and at least once within the purview of this report. The play court striping should then be reapplied to meet the needs of the current use of this facility.

The majority of the interior walls are painted masonry block or sheetrock partitions. Interior wall finish applications are generally in good condition. However, wall finish upgrades should be considered as part of any future cosmetic improvements or major comprehensive renovation efforts.

The ceilings in the arena and pool areas are mostly unfinished and exposed to the roof structure. The restrooms and office areas have suspended grid acoustical tile systems that are in good condition and should not require replacement within the next ten years. The interior doors are in satisfactory condition and do not require replacement at this time. However, there are some interior doors that still have knob actuated hardware that has been recommended to be replaced with accessible lever actuated hardware in the Accessibility section of this report.

All of the restrooms and locker rooms in the eastern arena area have been upgraded for accessibility. The restroom / locker room in the pool area has also been modified for accessibility. However, the southwestern public men's and women's restrooms located in the unrenovated area of the facility did not receive upgrades. The restroom fixtures and finishes are mostly original to the year of construction. The fixtures are sound but aged and inefficient. The finishes are outdated. A comprehensive restroom renovation for these two restrooms, including new fixtures, finishes, partitions, and accessories, is recommended.

ACCESSIBILITY

Current accessibility legislation requires that building amenities be generally accessible to all persons. The configurations of the single level drinking fountains in the pool locker rooms and the two public restrooms in the southwestern, unrenovated area of the facility are barriers to accessibility. All single level drinking fountains should be replaced with dual level, refrigerated units.

While the interior doors are suitable for ten future years of service, the knob actuated door hardware in the western, unrenovated section of the building presents a barrier to accessibility. Accessibility legislation requires that door hardware be designed for operation by people with little or no ability to grasp objects with their hands. To comply with the intent of this legislation, it is recommended that lever handle door hardware be installed on all doors that currently still have knobs.

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

HEALTH

Based on the date of the original construction, it is highly possible that lead paint or asbestos containing material (ACM) was used in the construction of this facility. However, only some suspected asbestos floor tile was observed during the inspection of the building. It is recommended that the asbestos floor tile be removed. The floor tile and asbestos removal is contained in the flooring upgrade recommendation. The lead paint and asbestos health risks are minimal, but workers present during any and all remodeling should be made aware of the potential hazards of working with such materials.

FIRE / LIFE SAFETY

The paths of egress in this building are adequate in regard to fire rating. There are no compromises involving doors, partitions, elevators lobbies, or stairs. No fire or life safety issues related to architectural features were observed during the inspection of this facility.

The building is protected by a central fire alarm system. The point addressable panel was manufactured by Notifier and is located on the first floor in room 96A. The devices that serve this system include manual pull stations, audible / visible devices, and smoke detectors. The fire alarm system was installed at various times, with older devices located in the pool area and office areas. Overall, the system is approaching the end of its intended life cycle. It should be anticipated that it will require replacement within the scope of this analysis.

The facility is partially protected by a wet-pipe fire sprinkler system. The system appears to be in good condition, but a recommendation to expand the system to the entire facility is warranted. Light hazard, wet-pipe fire suppression should be installed throughout the structure, including piping, sprinkler heads (as required by code), and pipe bracing. Install flow switches and sensors that interface with the recommended fire alarm system upgrade. This installation will reduce overall liability and risk of loss. Additionally, replace the existing sprinkler heads.

Exit signs in the building are illuminated with LED or fluorescent lamps, and a few non-illuminating exit signs were noted. The units are either connected to the emergency power network or contain battery backup devices. The exit signs are a combination of new and aged equipment. It is recommended that the aged exit signs be replaced and incorporated into the emergency power network.

Emergency lighting is contained either in overhead fixtures in the eastern arena area or produced by twin beam emergency light fixtures with battery backup devices serving the western pool and office areas. Coverage appears to be adequate to mark the path of egress properly. However, it is recommended that the twin beam fixtures be incorporated in the proposed interior lighting upgrade.

HVAC

The facility is connected to the campus steam loop. Steam is supplied to heat exchangers in the main mechanical room that produce heating hot water. The hot water is then circulated throughout the building by pumps to the associated HVAC equipment to heat parts of the facility. The heat exchangers and pumps appear to be original to the construction of the facility and are showing signs of age. Replace the equipment within the next ten years.

Chilled water for cooling is provided by three local chillers that supply three facilities. Local cooling towers support the chillers and appear to be in good condition. Pump equipment is present to circulate water between the equipment or to feed air handling equipment within the facility. Overall, the cooling equipment is good condition, with no recommendations for the extent of this report.

The eastern arena area of the facility is served by a forced air HVAC system with multizone air handling units. The air handling units have hot water heating coils and chilled water cooling coils. The air distribution network furnishes variable air volume (VAV) to the occupied spaces. The controls for this system are a hybrid configuration with pneumatic temperature controls and direct digital utility modulation and monitoring. The direct digital controls (DDCs) were manufactured by Johnson Controls. This system appears to be in good condition.

The western pool area has one air handling unit serving the pool. The unit utilizes hot water and chilled water for heating and cooling. This equipment was installed in 1998 and appears to be in good condition. The remaining part of the pool and office areas incorporates split systems that utilize DX refrigerant for cooling and natural gas for heat. These systems are a combination of new and original equipment. The air handling units incorporated in the split systems were noted to be visibly worn. It is recommended that these units be removed and the remainder of the facility be incorporated into the central HVAC system. A project was created representing approximately 33 percent of the facility for this work.

Facility exhaust is accomplished by various fans of different ages. Smoke fans are present on the arena roof, and centrifugal fans serve various areas. Through-the-wall fans and utility set fans are in service for mechanical spaces. Overall, the fans appear to be in good condition, with no projects recommended in this report.

ELECTRICAL

Power is fed to the facility by two oil-filled transformers located on site. The units provide 480/277 volt power through two main switchgear devices. One unit is rated at 2,000 amps, and the second unit is rated at 2,500 amps. The equipment was installed in 1994 and appears to be in good condition. No projects are recommended for the main electrical equipment within the scope of this report.

The secondary electrical system consists of dry type transformers and panelboards located throughout the facility. Power is fed from the panelboards at 480/277 volts or stepped down to 120/208 volts by the transformers that feed other panelboards. The electrical system in the eastern arena area was replaced in 1994 and appears to be in good condition, with panelboards properly encased and labeled. Wiring also appeared to be in good condition. The western pool area appears to contain original equipment that is showing signs of age. It is recommended that the original secondary electrical equipment in the pool and office area be replaced in a project representing approximately 33 percent of the facility.

The interior lighting scheme consists of suspended HID light fixtures in the arena and lay-in fluorescent light fixtures with T8 bulbs in the adjacent areas. The arena lighting was installed in 2002, and the adjacent areas were placed in operation in 1994. These light fixtures appear to be in good condition and should continue to provide adequate service. The lighting scheme in the western pool area and middle office area appears to have been installed at various times, with the majority of the equipment being aged. It is recommended that all interior lighting be replaced in the western pool area and middle office areas. Additionally, incorporate the emergency lighting in this area into the lighting fixtures.

The exterior lighting scheme consists of wall-mounted light fixtures that contain incandescent, compact fluorescent, and HID bulbs. Additional lighting is provided by pole-mounted light fixtures located on the site or light fixtures located on adjacent facilities. The exterior lighting scheme appears to be in good condition and provides adequate coverage. No projects are recommended for the exterior lighting system at this time.

Emergency power for this facility is produced by a diesel-fired emergency generator located on site. The unit was manufactured by Detroit Diesel in 1994. The generator provides 480/277 volt power, has a capacity of 570 kW, and has been in service for 905 hours of operation. The unit is believed to serve three facilities. Overall, the unit appears to be in good condition and properly enclosed. However, in order to provide reliable emergency power to the critical systems in these facilities, it is recommended that the generator be replaced.

PLUMBING

The main incoming domestic water enters the facility on the west exterior. A backflow preventer sized at 8 inches is present to protect the supply. Copper piping is then utilized to distribute water throughout the facility. The system appears to be in average condition, with original piping present in the western pool area and new piping present in the eastern arena area. An upgrade project representing approximately 33 percent of the facility is recommended to replace the original or aged domestic water piping.

The drain piping network consists of cast-iron with bell-and-spigot and no-hub connections. The piping network appears to be a combination of new and aged piping. Original piping remains in the western pool area. Remove the original sanitary and storm drain piping. Install new cast-iron drain piping networks with copper runouts to all fixtures. Install new floor drains, roof drains, and traps as needed.

Domestic hot water is produced by a heat exchanger located in the mechanical room in the western pool area. The unit was installed in 1973. Deterioration was observed at pipe connections to the heat exchanger. The life cycle for this type of equipment is generally twenty-four years. It is recommended that the heat exchanger be replaced to ensure a proper supply of domestic hot water.

The plumbing fixtures consist of ceramic and stainless steel construction. The units utilize hand operation controls and are a combination of new and original equipment. Select restrooms have been recommended for upgrade, which is detailed in the Interior Finishes / Systems section of this report.

The pools in this facility are served by mechanical systems that include filtration, heating, and water treatment systems and associated circulation pumps. These systems are currently operable and in good condition. They will outlast the time frame of this report if they continue to receive diligent maintenance.

VERTICAL TRANSPORTATION

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

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

C. INSPECTION TEAM DATA

DATE OF INSPECTION: September 15, 2009

INSPECTION TEAM PERSONNEL:

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

FACILITY CONTACTS:

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

REPORT DEVELOPMENT:

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

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

D. FACILITY CONDITION ANALYSIS - DEFINITIONS

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

1. REPORT DESCRIPTION

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

Section 2: Detailed Project Summaries and Totals

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

FCNI = Facility Condition Needs Index, Total Cost vs. Replacement Cost. The FCNI provides a life cycle cost comparison. Facility replacement cost is based on replacement with current construction standards for facility use type, and not original design parameters. This index gives the University a comparison within all buildings for identifying worst case / best case building conditions.

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

Section 3: Specific Project Details Illustrating Description / Cost

Section 4: Drawings with Iconography

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

Section 5: Life Cycle Model Summary and Projections

Section 6: Photographic Log

2. PROJECT CLASSIFICATION

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

3. PROJECT SUBCLASS TYPE

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

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

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

Example:

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

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

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

PRIORITY 1 - Currently Critical (Immediate)

Projects in this category require immediate action to:

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

PRIORITY 2 - Potentially Critical (Year One)

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

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

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

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

PRIORITY 4 - Recommended (Years Six to Ten)

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

6. COST SUMMARIES AND TOTALS

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

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

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

Global Markup Percentages

R.S. MEANS

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

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

Example:

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

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

8. PHOTO NUMBER (Shown in Section 6)

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

Example: 0001006e

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

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

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

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

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

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

Refer to the following Category Code Report.

Example: Category Code = EL5A

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

CATEGORY CODE

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

SYSTEM DESCRIPTION

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

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

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

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



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

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

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

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

FACILITY CONDITION ANALYSIS

SECTION 2

**DETAILED PROJECT SUMMARIES
AND TOTALS**

**Detailed Project Totals
 Facility Condition Analysis
 System Code by Priority Class
 MING : MINGES COLISEUM**

System Code	System Description	Priority Classes				Subtotal
		1	2	3	4	
AC	ACCESSIBILITY	0	0	0	94,973	94,973
EL	ELECTRICAL	0	0	626,922	202,794	829,716
ES	EXTERIOR	0	0	307,982	567,272	875,254
FS	FIRE/LIFE SAFETY	0	961,860	6,689	0	968,549
HV	HVAC	0	0	301,882	1,577,680	1,879,562
IS	INTERIOR/FINISH SYS.	0	0	43,706	252,285	295,991
PL	PLUMBING	0	50,880	342,723	0	393,604
	TOTALS	0	1,012,740	1,629,904	2,695,004	5,337,648

Facility Replacement Cost	\$38,489,000
Facility Condition Needs Index	0.14

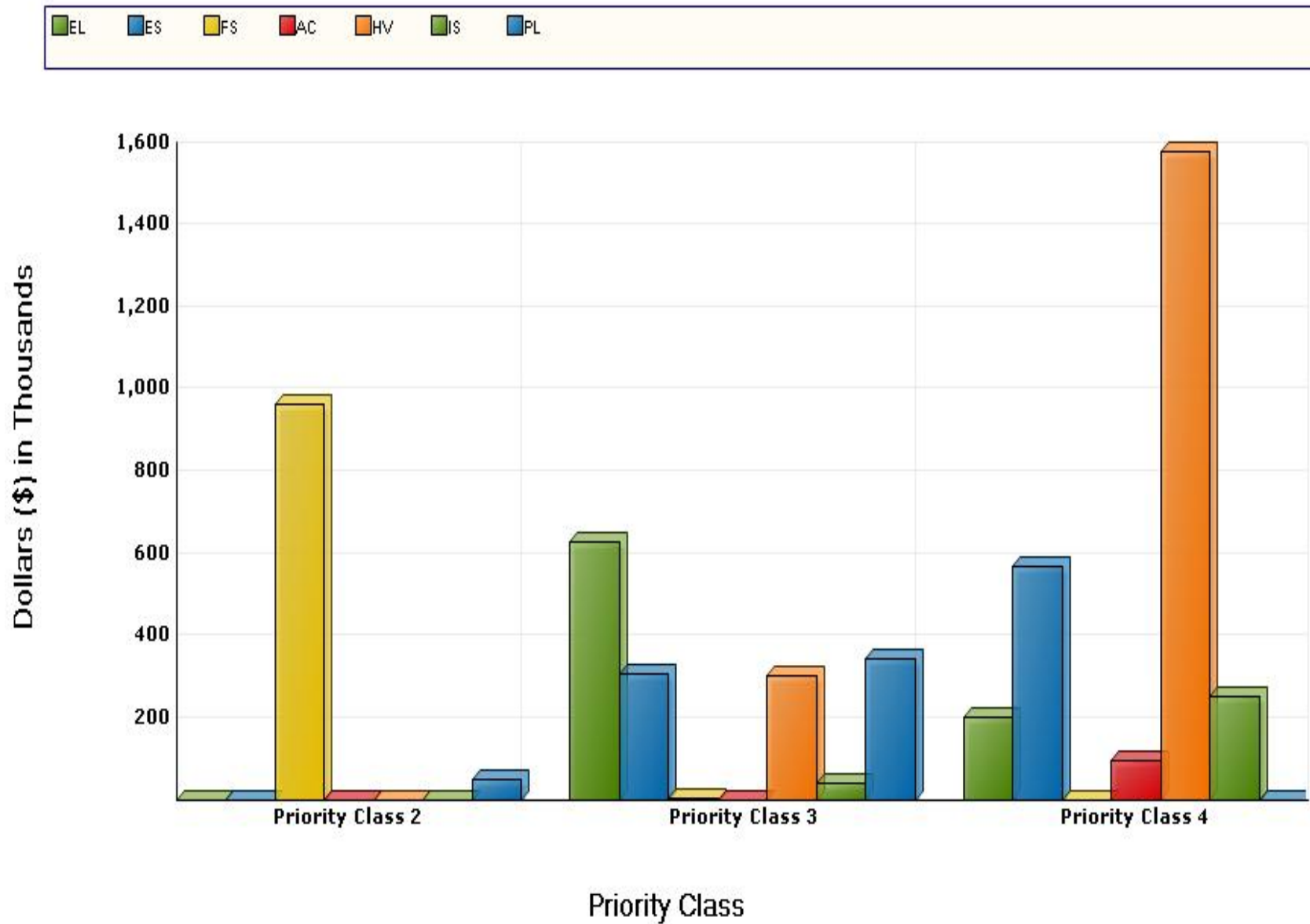
Gross Square Feet	155,598
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Total Cost Per Square Foot	\$34.30
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FACILITY CONDITION ANALYSIS

System Code by Priority Class

MING : MINGES COLISEUM



**Detailed Project Totals
 Facility Condition Analysis
 System Code by Project Class
 MING : MINGES COLISEUM**

System Code	System Description	Project Classes			Subtotal
		Capitla Renewal	Deferred Maintenance	Plant Adaption	
AC	ACCESSIBILITY	0	0	94,973	94,973
EL	ELECTRICAL	202,794	626,922	0	829,716
ES	EXTERIOR	875,254	0	0	875,254
FS	FIRE/LIFE SAFETY	417,328	6,689	544,532	968,549
HV	HVAC	1,879,562	0	0	1,879,562
IS	INTERIOR/FINISH SYS.	252,285	43,706	0	295,991
PL	PLUMBING	0	393,604	0	393,604
	TOTALS	3,627,223	1,070,921	639,504	5,337,648

Facility Replacement Cost	\$38,489,000
Facility Condition Needs Index	0.14

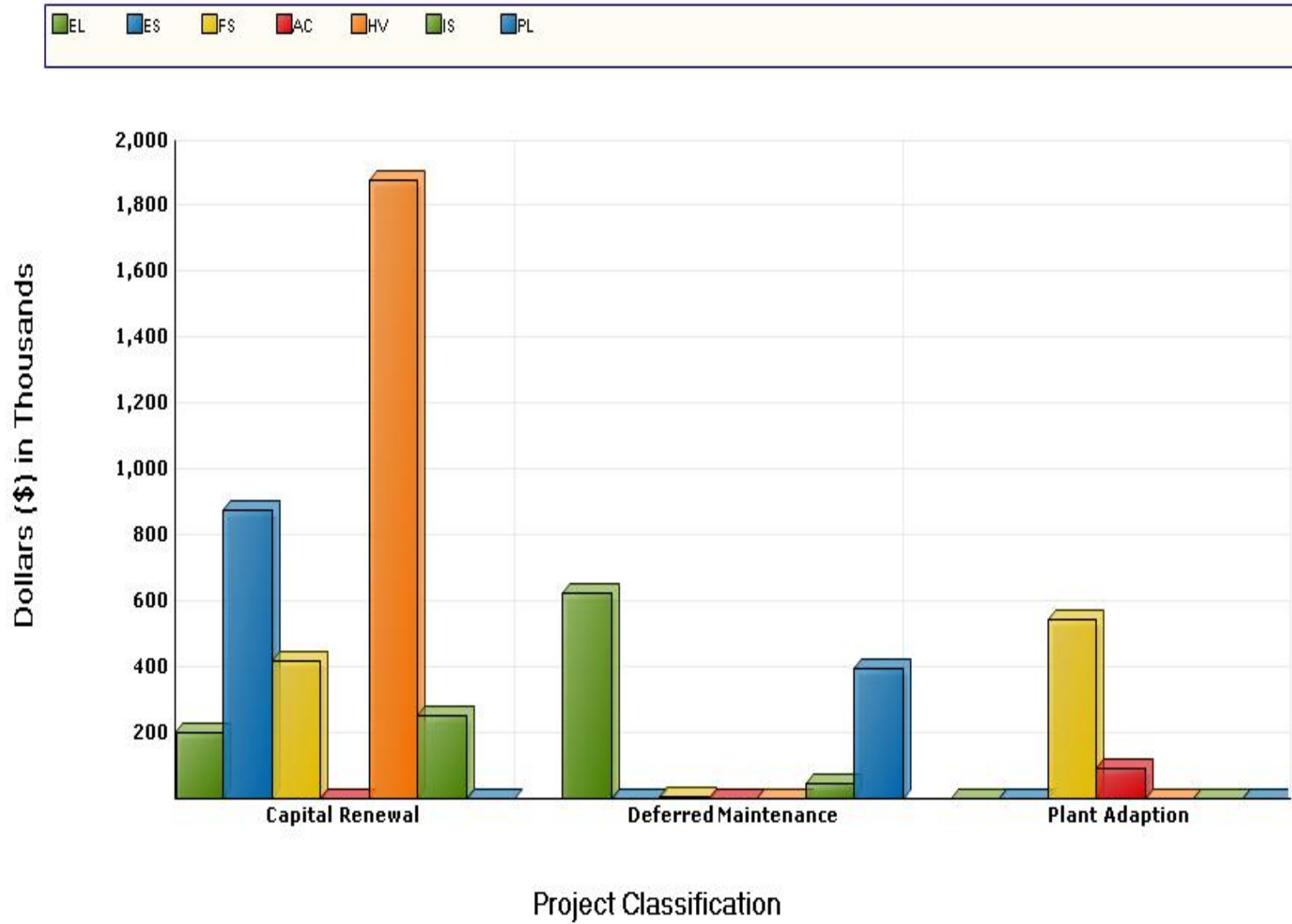
Gross Square Feet	155,598
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Total Cost Per Square Foot	\$34.30
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FACILITY CONDITION ANALYSIS

System Code by Project Class

MING : MINGES COLISEUM



Detailed Project Summary
Facility Condition Analysis
Project Class by Priority Class
MING : MINGES COLISEUM

Project Class	Priority Classes				Subtotal
	1	2	3	4	
Capital Renewal	0	417,328	609,863	2,600,031	3,627,223
Deferred Maintenance	0	50,880	1,020,041	0	1,070,921
Plant Adaption	0	544,532	0	94,973	639,504
TOTALS	0	1,012,740	1,629,904	2,695,004	5,337,648

Facility Replacement Cost	\$38,489,000
Facility Condition Needs Index	0.14

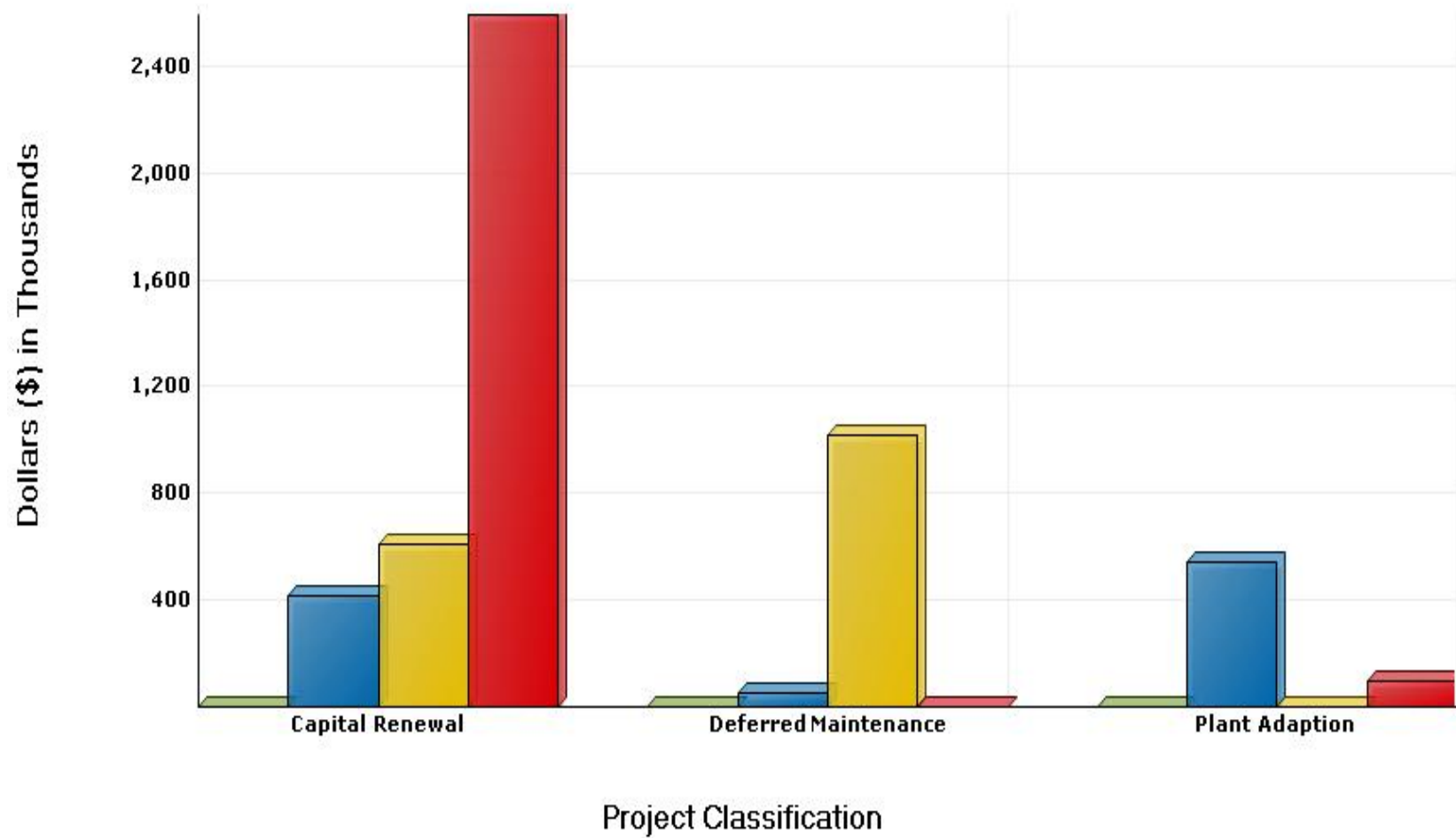
Gross Square Feet	155,598
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Total Cost Per Square Foot	\$34.30
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FACILITY CONDITION ANALYSIS

Project Class by Priority Class

MING : MINGES COLISEUM



Detailed Project Summary
Facility Condition Analysis
Priority Class - Priority Sequence
MING : MINGES COLISEUM

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
FS3A	MINGFS02	2	1	FIRE SPRINKLER SYSTEM EXTENSION	469,424	75,108	544,532
FS2A	MINGFS01	2	2	FIRE ALARM SYSTEM REPLACEMENT	359,766	57,563	417,328
PL1E	MINGPL01	2	3	DOMESTIC HOT WATER HEAT EXCHANGER REPLACEMENT	43,862	7,018	50,880
Totals for Priority Class 2					873,052	139,688	1,012,740
FS1A	MINGFS03	3	4	REPLACE EXIT SIGNS	5,767	923	6,689
ES4B	MINGES04	3	5	MEMBRANE ROOF REPLACEMENT	307,982	0	307,982
HV5A	MINGHV02	3	6	HEAT EXCHANGER REPLACEMENT	213,062	34,090	247,152
HV5B	MINGHV03	3	7	PUMP REPLACEMENT	47,181	7,549	54,729
EL3B	MINGEL03	3	8	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	314,472	50,315	364,787
EL4B	MINGEL02	3	9	INTERIOR LIGHTING UPGRADE	225,979	36,157	262,135
IS6D	MINGIS04	3	10	RESTROOM RENOVATIONS	37,678	6,028	43,706
PL1A	MINGPL02	3	11	WATER SUPPLY PIPING REPLACEMENT	117,561	18,810	136,370
PL2A	MINGPL03	3	12	DRAIN PIPING REPLACEMENT	177,891	28,463	206,353
Totals for Priority Class 3					1,447,570	182,334	1,629,904
AC4A	MINGAC01	4	13	INTERIOR AMENITY ACCESSIBILITY UPGRADES	20,252	0	20,252
AC3B	MINGAC03	4	14	STAIR AND RAILING SAFETY UPGRADES	55,093	8,815	63,908
AC3C	MINGAC02	4	15	INTERIOR DOOR HARDWARE UPGRADES	9,321	1,491	10,812
ES2B	MINGES01	4	16	RESTORE CONCRETE FINISH	33,108	5,297	38,405
ES4B	MINGES03	4	17	BUILT-UP ROOF REPLACEMENT	409,804	0	409,804
ES5B	MINGES02	4	18	WINDOW REPLACEMENT	102,641	16,423	119,063
HV3A	MINGHV01	4	19	HVAC SYSTEM REPLACEMENT	1,360,069	217,611	1,577,680
EL5A	MINGEL01	4	20	REPLACE EMERGENCY GENERATOR	174,822	27,972	202,794
IS1A	MINGIS01	4	21	REFINISH FLOORING	85,089	13,614	98,704
IS2B	MINGIS03	4	22	REFINISH WALLS	84,354	0	84,354
IS1A	MINGIS02	4	23	REFINISH GYMNASIUM HARDWOOD FLOORING	59,679	9,549	69,228
Totals for Priority Class 4					2,394,232	300,772	2,695,004
Grand Total:					4,714,854	622,794	5,337,648

Detailed Project Summary
Facility Condition Analysis
Project Cost Range
 MING : MINGES COLISEUM

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
PL1E	MINGPL01	2	3	DOMESTIC HOT WATER HEAT EXCHANGER REPLACEMENT	43,862	7,018	50,880
Totals for Priority Class 2					43,862	7,018	50,880
IS6D	MINGIS04	3	10	RESTROOM RENOVATIONS	37,678	6,028	43,706
FS1A	MINGFS03	3	4	REPLACE EXIT SIGNS	5,767	923	6,689
HV5B	MINGHV03	3	7	PUMP REPLACEMENT	47,181	7,549	54,729
Totals for Priority Class 3					90,625	14,500	105,125
AC4A	MINGAC01	4	13	INTERIOR AMENITY ACCESSIBILITY UPGRADES	20,252	0	20,252
AC3C	MINGAC02	4	15	INTERIOR DOOR HARDWARE UPGRADES	9,321	1,491	10,812
ES2B	MINGES01	4	16	RESTORE CONCRETE FINISH	33,108	5,297	38,405
AC3B	MINGAC03	4	14	STAIR AND RAILING SAFETY UPGRADES	55,093	8,815	63,908
IS1A	MINGIS01	4	21	REFINISH FLOORING	85,089	13,614	98,704
IS1A	MINGIS02	4	23	REFINISH GYMNASIUM HARDWOOD FLOORING	59,679	9,549	69,228
IS2B	MINGIS03	4	22	REFINISH WALLS	84,354	0	84,354
Totals for Priority Class 4					346,896	38,766	385,663
Grand Totals for Projects < 100,000					481,383	60,284	541,668

Detailed Project Summary
Facility Condition Analysis
Project Cost Range
MING : MINGES COLISEUM

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
FS2A	MINGFS01	2	2	FIRE ALARM SYSTEM REPLACEMENT	359,766	57,563	417,328
Totals for Priority Class 2					359,766	57,563	417,328
ES4B	MINGES04	3	5	MEMBRANE ROOF REPLACEMENT	307,982	0	307,982
HV5A	MINGHV02	3	6	HEAT EXCHANGER REPLACEMENT	213,062	34,090	247,152
EL4B	MINGEL02	3	9	INTERIOR LIGHTING UPGRADE	225,979	36,157	262,135
EL3B	MINGEL03	3	8	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	314,472	50,315	364,787
PL1A	MINGPL02	3	11	WATER SUPPLY PIPING REPLACEMENT	117,561	18,810	136,370
PL2A	MINGPL03	3	12	DRAIN PIPING REPLACEMENT	177,891	28,463	206,353
Totals for Priority Class 3					1,356,945	167,834	1,524,779
ES5B	MINGES02	4	18	WINDOW REPLACEMENT	102,641	16,423	119,063
ES4B	MINGES03	4	17	BUILT-UP ROOF REPLACEMENT	409,804	0	409,804
EL5A	MINGEL01	4	20	REPLACE EMERGENCY GENERATOR	174,822	27,972	202,794
Totals for Priority Class 4					687,267	44,394	731,661
Grand Totals for Projects >= 100,000 and < 500,000					2,403,978	269,791	2,673,769

Detailed Project Summary
Facility Condition Analysis
Project Cost Range
 MING : MINGES COLISEUM

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
FS3A	MINGFS02	2	1	FIRE SPRINKLER SYSTEM EXTENSION	469,424	75,108	544,532
				Totals for Priority Class 2	469,424	75,108	544,532
HV3A	MINGHV01	4	19	HVAC SYSTEM REPLACEMENT	1,360,069	217,611	1,577,680
				Totals for Priority Class 4	1,360,069	217,611	1,577,680
				Grand Totals for Projects >= 500,000	1,829,493	292,719	2,122,212
				Grand Totals For All Projects:	4,714,854	622,794	5,337,648

Detailed Project Summary
Facility Condition Analysis
Project Classification
MING : MINGES COLISEUM

Cat Code	Project Number	Pri. Seq.	Project Classification	Pri. Cls	Project Title	Total Cost
FS2A	MINGFS01	2	Capital Renewal	2	FIRE ALARM SYSTEM REPLACEMENT	417,328
ES4B	MINGES04	5	Capital Renewal	3	MEMBRANE ROOF REPLACEMENT	307,982
HV5A	MINGHV02	6	Capital Renewal	3	HEAT EXCHANGER REPLACEMENT	247,152
HV5B	MINGHV03	7	Capital Renewal	3	PUMP REPLACEMENT	54,729
ES2B	MINGES01	16	Capital Renewal	4	RESTORE CONCRETE FINISH	38,405
ES4B	MINGES03	17	Capital Renewal	4	BUILT-UP ROOF REPLACEMENT	409,804
ES5B	MINGES02	18	Capital Renewal	4	WINDOW REPLACEMENT	119,063
HV3A	MINGHV01	19	Capital Renewal	4	HVAC SYSTEM REPLACEMENT	1,577,680
EL5A	MINGEL01	20	Capital Renewal	4	REPLACE EMERGENCY GENERATOR	202,794
IS1A	MINGIS01	21	Capital Renewal	4	REFINISH FLOORING	98,704
IS2B	MINGIS03	22	Capital Renewal	4	REFINISH WALLS	84,354
IS1A	MINGIS02	23	Capital Renewal	4	REFINISH GYMNASIUM HARDWOOD FLOORING	69,228
Totals for Capital Renewal						3,627,223
PL1E	MINGPL01	3	Deferred Maintenance	2	DOMESTIC HOT WATER HEAT EXCHANGER REPLACEMENT	50,880
FS1A	MINGFS03	4	Deferred Maintenance	3	REPLACE EXIT SIGNS	6,689
EL3B	MINGEL03	8	Deferred Maintenance	3	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	364,787
EL4B	MINGEL02	9	Deferred Maintenance	3	INTERIOR LIGHTING UPGRADE	262,135
IS6D	MINGIS04	10	Deferred Maintenance	3	RESTROOM RENOVATIONS	43,706
PL1A	MINGPL02	11	Deferred Maintenance	3	WATER SUPPLY PIPING REPLACEMENT	136,370
PL2A	MINGPL03	12	Deferred Maintenance	3	DRAIN PIPING REPLACEMENT	206,353
Totals for Deferred Maintenance						1,070,921
FS3A	MINGFS02	1	Plant Adaption	2	FIRE SPRINKLER SYSTEM EXTENSION	544,532
AC4A	MINGAC01	13	Plant Adaption	4	INTERIOR AMENITY ACCESSIBILITY UPGRADES	20,252
AC3B	MINGAC03	14	Plant Adaption	4	STAIR AND RAILING SAFETY UPGRADES	63,908
AC3C	MINGAC02	15	Plant Adaption	4	INTERIOR DOOR HARDWARE UPGRADES	10,812
Totals for Plant Adaption						639,504
Grand Total:						5,337,648

Detailed Project Summary
Facility Condition Analysis
Energy Conservation
 MING : MINGES COLISEUM

Cat Code	Project Number	Pri Cls	Pri Seq	Project Title	Total Cost	Annual Savings	Simple Payback
FS1A	MINGFS03	3	4	REPLACE EXIT SIGNS	6,689	670	9.98
ES4B	MINGES04	3	5	MEMBRANE ROOF REPLACEMENT	307,982	4,800	64.16
EL4B	MINGEL02	3	9	INTERIOR LIGHTING UPGRADE	262,135	10,790	24.29
Totals for Priority Class 3					576,806	16,260	35.47
ES4B	MINGES03	4	17	BUILT-UP ROOF REPLACEMENT	409,804	6,000	68.3
ES5B	MINGES02	4	18	WINDOW REPLACEMENT	119,063	500	238.13
HV3A	MINGHV01	4	19	HVAC SYSTEM REPLACEMENT	1,577,680	28,670	55.03
Totals for Priority Class 4					2,106,547	35,170	59.9
Grand Total:					2,683,354	51,430	52.17

Detailed Project Summary
Facility Condition Analysis
Category/System Code
MING : MINGES COLISEUM

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
AC4A	MINGAC01	4	13	INTERIOR AMENITY ACCESSIBILITY UPGRADES	20,252	0	20,252
AC3B	MINGAC03	4	14	STAIR AND RAILING SAFETY UPGRADES	55,093	8,815	63,908
AC3C	MINGAC02	4	15	INTERIOR DOOR HARDWARE UPGRADES	9,321	1,491	10,812
Totals for System Code: ACCESSIBILITY					84,666	10,306	94,973
EL3B	MINGEL03	3	8	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	314,472	50,315	364,787
EL4B	MINGEL02	3	9	INTERIOR LIGHTING UPGRADE	225,979	36,157	262,135
EL5A	MINGEL01	4	20	REPLACE EMERGENCY GENERATOR	174,822	27,972	202,794
Totals for System Code: ELECTRICAL					715,273	114,444	829,716
ES4B	MINGES04	3	5	MEMBRANE ROOF REPLACEMENT	307,982	0	307,982
ES2B	MINGES01	4	16	RESTORE CONCRETE FINISH	33,108	5,297	38,405
ES4B	MINGES03	4	17	BUILT-UP ROOF REPLACEMENT	409,804	0	409,804
ES5B	MINGES02	4	18	WINDOW REPLACEMENT	102,641	16,423	119,063
Totals for System Code: EXTERIOR					853,534	21,720	875,254
FS3A	MINGFS02	2	1	FIRE SPRINKLER SYSTEM EXTENSION	469,424	75,108	544,532
FS2A	MINGFS01	2	2	FIRE ALARM SYSTEM REPLACEMENT	359,766	57,563	417,328
FS1A	MINGFS03	3	4	REPLACE EXIT SIGNS	5,767	923	6,689
Totals for System Code: FIRE/LIFE SAFETY					834,956	133,593	968,549
HV5A	MINGHV02	3	6	HEAT EXCHANGER REPLACEMENT	213,062	34,090	247,152
HV5B	MINGHV03	3	7	PUMP REPLACEMENT	47,181	7,549	54,729
HV3A	MINGHV01	4	19	HVAC SYSTEM REPLACEMENT	1,360,069	217,611	1,577,680
Totals for System Code: HVAC					1,620,312	259,250	1,879,562
IS6D	MINGIS04	3	10	RESTROOM RENOVATIONS	37,678	6,028	43,706
IS1A	MINGIS01	4	21	REFINISH FLOORING	85,089	13,614	98,704
IS2B	MINGIS03	4	22	REFINISH WALLS	84,354	0	84,354
IS1A	MINGIS02	4	23	REFINISH GYMNASIUM HARDWOOD FLOORING	59,679	9,549	69,228
Totals for System Code: INTERIOR/FINISH SYS.					266,800	29,191	295,991
PL1E	MINGPL01	2	3	DOMESTIC HOT WATER HEAT EXCHANGER REPLACEMENT	43,862	7,018	50,880
PL1A	MINGPL02	3	11	WATER SUPPLY PIPING REPLACEMENT	117,561	18,810	136,370
PL2A	MINGPL03	3	12	DRAIN PIPING REPLACEMENT	177,891	28,463	206,353
Totals for System Code: PLUMBING					339,314	54,290	393,604
Grand Total:					4,714,854	622,794	5,337,648

FACILITY CONDITION ANALYSIS

SECTION 3

SPECIFIC PROJECT DETAILS
ILLUSTRATING DESCRIPTION / COST

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Description

Project Number:	MINGFS02	Title:	FIRE SPRINKLER SYSTEM EXTENSION
Priority Sequence:	1		
Priority Class:	2		
Category Code:	FS3A	System:	FIRE/LIFE SAFETY
		Component:	SUPPRESSION
		Element:	SPRINKLERS
Building Code:	MING		
Building Name:	MINGES COLISEUM		
Subclass/Savings:	Not Applicable		
Code Application:	NFPA	1, 13, 13R, 101	
Project Class:	Plant Adaption		
Project Date:	10/28/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, C		

Project Description

Install an automatic fire sprinkler system in unprotected areas throughout the facility. This includes piping, valves, sprinkler heads, and piping supports. Install flow switches and sensors to interface with the fire alarm system. Cost has been included in this project for the installation of a fire pump if necessary. Additionally, replace the sprinkler heads on the existing system.

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Cost

Project Number: MINGFS02

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Install wet-pipe sprinkler system, including valves, piping, sprinkler heads, piping supports, etc.	SF	52,900	\$3.08	\$162,932	\$3.77	\$199,433	\$362,365
Fire pump, controls, piping, valves, and connections	GPM	1,500	\$62.34	\$93,510	\$3.76	\$5,640	\$99,150
Fire sprinkler head replacement	SF	102,698	\$0.09	\$9,243	\$0.35	\$35,944	\$45,187
Project Totals:				\$265,685		\$241,017	\$506,702

Material/Labor Cost		\$506,702
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$391,186
General Contractor Mark Up at 20.0%	+	\$78,237
Construction Cost		\$469,424
Professional Fees at 16.0%	+	\$75,108
Total Project Cost		\$544,532

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Description

Project Number:	MINGFS01	Title:	FIRE ALARM SYSTEM REPLACEMENT
Priority Sequence:	2		
Priority Class:	2		
Category Code:	FS2A	System:	FIRE/LIFE SAFETY
		Component:	DETECTION ALARM
		Element:	GENERAL
Building Code:	MING		
Building Name:	MINGES COLISEUM		
Subclass/Savings:	Not Applicable		
Code Application:	ADAAG	702.1	
	NFPA	1, 101	
Project Class:	Capital Renewal		
Project Date:	10/28/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, C		

Project Description

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

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Cost

Project Number: MINGFS01

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Fire alarm control panel(s), annunciator, smoke and heat detectors, manual pull stations, audible and visual alarms, wiring, raceways, and cut and patching materials	SF	155,598	\$1.46	\$227,173	\$0.89	\$138,482	\$365,655
Project Totals:				\$227,173		\$138,482	\$365,655

Material/Labor Cost		\$365,655
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$299,805
General Contractor Mark Up at 20.0%	+	\$59,961
Construction Cost		\$359,766
Professional Fees at 16.0%	+	\$57,563
Total Project Cost		\$417,328

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Description

Project Number:	MINGPL01	Title:	DOMESTIC HOT WATER HEAT EXCHANGER REPLACEMENT
Priority Sequence:	3		
Priority Class:	2		
Category Code:	PL1E	System:	PLUMBING
		Component:	DOMESTIC WATER
		Element:	HEATING
Building Code:	MING		
Building Name:	MINGES COLISEUM		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Deferred Maintenance		
Project Date:	10/28/2009		
Project Location:	Item Only: Floor(s) 1		

Project Description

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

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Cost

Project Number: MINGPL01

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Heat exchanger, pumps, piping, valves, controls, insulation, and demolition	GPM	140	\$183	\$25,634	\$150	\$20,933	\$46,567
Project Totals:				\$25,634		\$20,933	\$46,567

Material/Labor Cost		\$46,567
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		<u>\$36,552</u>
General Contractor Mark Up at 20.0%	+	<u>\$7,310</u>
Construction Cost		<u>\$43,862</u>
Professional Fees at 16.0%	+	<u>\$7,018</u>
Total Project Cost		<u>\$50,880</u>

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Description

Project Number:	MINGFS03	Title:	REPLACE EXIT SIGNS
Priority Sequence:	4		
Priority Class:	3		
Category Code:	FS1A	System:	FIRE/LIFE SAFETY
		Component:	LIGHTING
		Element:	EGRESS LTG./EXIT SIGNAGE
Building Code:	MING		
Building Name:	MINGES COLISEUM		
Subclass/Savings:	Energy Conservation	\$670	
Code Application:	NFPA	101-47	
	IBC	1011	
Project Class:	Deferred Maintenance		
Project Date:	10/28/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, C		

Project Description

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

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Cost

Project Number: MINGFS03

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Replacement of existing exit signs with LED units	EA	40	\$76.00	\$3,040	\$85.00	\$3,400	\$6,440
Project Totals:				\$3,040		\$3,400	\$6,440

Material/Labor Cost		\$6,440
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$4,805
General Contractor Mark Up at 20.0%	+	\$961
Construction Cost		\$5,767
Professional Fees at 16.0%	+	\$923
Total Project Cost		\$6,689

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Description

Project Number:	MINGES04	Title:	MEMBRANE ROOF REPLACEMENT
Priority Sequence:	5		
Priority Class:	3		
Category Code:	ES4B	System:	EXTERIOR
		Component:	ROOF
		Element:	REPLACEMENT
Building Code:	MING		
Building Name:	MINGES COLISEUM		
Subclass/Savings:	Energy Conservation	\$4,800	
Code Application:	Not Applicable		
Project Class:	Capital Renewal		
Project Date:	10/26/2009		
Project Location:	Floor-wide: Floor(s) R		

Project Description

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

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Cost

Project Number: MINGES04

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Membrane roof	SF	54,560	\$3.79	\$206,782	\$1.73	\$94,389	\$301,171
Project Totals:				\$206,782		\$94,389	\$301,171

Material/Labor Cost		\$301,171
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$256,651
General Contractor Mark Up at 20.0%	+	\$51,330
Construction Cost		\$307,982
No Professional Fees Required		
Total Project Cost		\$307,982

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Description

Project Number:	MINGHV02	Title:	HEAT EXCHANGER REPLACEMENT
Priority Sequence:	6		
Priority Class:	3		
Category Code:	HV5A	System:	HVAC
		Component:	STEAM/HYDRONIC DISTRIB.
		Element:	PIPING NETWORK
Building Code:	MING		
Building Name:	MINGES COLISEUM		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Capital Renewal		
Project Date:	10/28/2009		
Project Location:	Room Only: Floor(s) 1		

Project Description

The hot water heating system is served by heat exchangers that are approaching the end of their expected life cycle. Such systems become increasingly maintenance intensive and problematic after twenty years of service. Scheduled replacement of these critical systems is recommended.

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Cost

Project Number: MINGHV02

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Heating water converter (60 gpm for each HP of circulating pump capacity)	GPM	2,640	\$60.74	\$160,354	\$11.87	\$31,337	\$191,690
Project Totals:				\$160,354		\$31,337	\$191,690

Material/Labor Cost		\$191,690
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		<u>\$177,552</u>
General Contractor Mark Up at 20.0%	+	<u>\$35,510</u>
Construction Cost		<u>\$213,062</u>
Professional Fees at 16.0%	+	<u>\$34,090</u>
Total Project Cost		<u>\$247,152</u>

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Description

Project Number:	MINGHV03	Title:	PUMP REPLACEMENT
Priority Sequence:	7		
Priority Class:	3		
Category Code:	HV5B	System:	HVAC
		Component:	STEAM/HYDRONIC DISTRIB.
		Element:	PUMPS
Building Code:	MING		
Building Name:	MINGES COLISEUM		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Capital Renewal		
Project Date:	10/27/2009		
Project Location:	Item Only: Floor(s) 1		

Project Description

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

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Cost

Project Number: MINGHV03

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Replace base-mounted pump assembly (50-150 HP)	HP	60	\$454	\$27,240	\$230	\$13,800	\$41,040
Variable frequency drives (>50 HP)	HP	60	\$43.90	\$2,634	\$70.00	\$4,200	\$6,834
Project Totals:				\$29,874		\$18,000	\$47,874

Material/Labor Cost		\$47,874
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		<u>\$39,317</u>
General Contractor Mark Up at 20.0%	+	<u>\$7,863</u>
Construction Cost		<u>\$47,181</u>
Professional Fees at 16.0%	+	<u>\$7,549</u>
Total Project Cost		<u>\$54,729</u>

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Description

Project Number:	MINGEL03	Title:	UPGRADE ELECTRICAL DISTRIBUTION NETWORK
Priority Sequence:	8		
Priority Class:	3		
Category Code:	EL3B	System:	ELECTRICAL
		Component:	SECONDARY DISTRIBUTION
		Element:	DISTRIBUTION NETWORK
Building Code:	MING		
Building Name:	MINGES COLISEUM		
Subclass/Savings:	Not Applicable		
Code Application:	NEC	Articles 110, 210, 220, 230	
Project Class:	Deferred Maintenance		
Project Date:	10/27/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, C		

Project Description

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

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Cost

Project Number: MINGEL03

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Power panels, conductors, raceways, devices, demolition, and cut and patching materials	SF	52,900	\$2.79	\$147,591	\$4.18	\$221,122	\$368,713
Project Totals:				\$147,591		\$221,122	\$368,713

Material/Labor Cost		\$368,713
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$262,060
General Contractor Mark Up at 20.0%	+	\$52,412
Construction Cost		\$314,472
Professional Fees at 16.0%	+	\$50,315
Total Project Cost		\$364,787

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Description

Project Number:	MINGEL02	Title:	INTERIOR LIGHTING UPGRADE
Priority Sequence:	9		
Priority Class:	3		
Category Code:	EL4B	System:	ELECTRICAL
		Component:	DEVICES AND FIXTURES
		Element:	INTERIOR LIGHTING
Building Code:	MING		
Building Name:	MINGES COLISEUM		
Subclass/Savings:	Energy Conservation	\$10,790	
Code Application:	NEC	Articles 210, 410	
Project Class:	Deferred Maintenance		
Project Date:	10/28/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, C		

Project Description

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

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Cost

Project Number: MINGEL02

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
High efficiency fluorescent fixtures, occupancy sensors, and demolition of existing lighting	SF	52,900	\$2.18	\$115,322	\$2.66	\$140,714	\$256,036
Project Totals:				\$115,322		\$140,714	\$256,036

Material/Labor Cost		\$256,036
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$188,316
General Contractor Mark Up at 20.0%	+	\$37,663
Construction Cost		\$225,979
Professional Fees at 16.0%	+	\$36,157
Total Project Cost		\$262,135

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Description

Project Number:	MINGIS04	Title:	RESTROOM RENOVATIONS
Priority Sequence:	10		
Priority Class:	3		
Category Code:	IS6D	System:	INTERIOR/FINISH SYS.
		Component:	GENERAL
		Element:	OTHER
Building Code:	MING		
Building Name:	MINGES COLISEUM		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Deferred Maintenance		
Project Date:	10/26/2009		
Project Location:	Room Only: Floor(s) 1		

Project Description

The southwestern public men's and women's restrooms located in the unrenovated area of the facility have not received upgrades. The restroom fixtures and finishes are mostly original to the year of construction. The fixtures are sound but aged and inefficient. The finishes are outdated. A comprehensive restroom renovation for these two restrooms, including new fixtures, finishes, partitions, and accessories, is recommended.

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Cost

Project Number: MINGIS04

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Major restroom renovation, including fixtures, finishes, partitions, accessories, and expansion if necessary (assumes 55 square feet of restroom area per fixture)	FIXT	11	\$1,969	\$21,659	\$1,699	\$18,689	\$40,348
Project Totals:				\$21,659		\$18,689	\$40,348

Material/Labor Cost		\$40,348
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$31,398
General Contractor Mark Up at 20.0%	+	\$6,280
Construction Cost		\$37,678
Professional Fees at 16.0%	+	\$6,028
Total Project Cost		\$43,706

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Description

Project Number:	MINGPL02	Title:	WATER SUPPLY PIPING REPLACEMENT
Priority Sequence:	11		
Priority Class:	3		
Category Code:	PL1A	System:	PLUMBING
		Component:	DOMESTIC WATER
		Element:	PIPING NETWORK
Building Code:	MING		
Building Name:	MINGES COLISEUM		
Subclass/Savings:	Not Applicable		
Code Application:	IPC	Chapter 6	
Project Class:	Deferred Maintenance		
Project Date:	10/28/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, C		

Project Description

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

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Cost

Project Number: MINGPL02

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Copper pipe and fittings, valves, backflow prevention devices, insulation, hangers, demolition, and cut and patching materials	SF	52,900	\$0.81	\$42,849	\$2.02	\$106,858	\$149,707
Project Totals:				\$42,849		\$106,858	\$149,707

Material/Labor Cost		\$149,707
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$97,967
General Contractor Mark Up at 20.0%	+	\$19,593
Construction Cost		\$117,561
Professional Fees at 16.0%	+	\$18,810
Total Project Cost		\$136,370

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Description

Project Number:	MINGPL03	Title:	DRAIN PIPING REPLACEMENT
Priority Sequence:	12		
Priority Class:	3		
Category Code:	PL2A	System:	PLUMBING
		Component:	WASTEWATER
		Element:	PIPING NETWORK
Building Code:	MING		
Building Name:	MINGES COLISEUM		
Subclass/Savings:	Not Applicable		
Code Application:	IPC	Chapters 7-11	
Project Class:	Deferred Maintenance		
Project Date:	10/28/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, C		

Project Description

The replacement of the original drain piping is recommended. Failure to replace the old piping will result in frequent leaks and escalating maintenance costs. Remove sanitary and storm drain piping as needed. Install new cast-iron drain piping networks with copper runouts to the fixtures. Install new floor drains, roof drains, and traps.

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Cost

Project Number: MINGPL03

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Cast-iron drain piping and fittings, copper pipe and fittings, floor / roof drains, traps, hangers, demolition, and cut and patching materials	SF	52,900	\$1.28	\$67,712	\$2.95	\$156,055	\$223,767
Project Totals:				\$67,712		\$156,055	\$223,767

Material/Labor Cost		\$223,767
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$148,242
General Contractor Mark Up at 20.0%	+	\$29,648
Construction Cost		\$177,891
Professional Fees at 16.0%	+	\$28,463
Total Project Cost		\$206,353

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Description

Project Number:	MINGAC01	Title:	INTERIOR AMENITY ACCESSIBILITY UPGRADES
Priority Sequence:	13		
Priority Class:	4		
Category Code:	AC4A	System:	ACCESSIBILITY
		Component:	GENERAL
		Element:	FUNCTIONAL SPACE MOD.
Building Code:	MING		
Building Name:	MINGES COLISEUM		
Subclass/Savings:	Not Applicable		
Code Application:	ADAAG	211, 602	
Project Class:	Plant Adaption		
Project Date:	10/25/2009		
Project 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 single level drinking fountains in the pool locker rooms and the two public restrooms in the unrenovated area of the facility are barriers to accessibility. All single level drinking fountains should be replaced with dual level, refrigerated units.

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Cost

Project Number: MINGAC01

Task Cost Estimate

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

Material/Labor Cost		\$24,836
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$16,877
General Contractor Mark Up at 20.0%	+	\$3,375
Construction Cost		\$20,252
No Professional Fees Required		
Total Project Cost		\$20,252

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Description

Project Number:	MINGAC03	Title:	STAIR AND RAILING SAFETY UPGRADES
Priority Sequence:	14		
Priority Class:	4		
Category Code:	AC3B	System:	ACCESSIBILITY
		Component:	INTERIOR PATH OF TRAVEL
		Element:	STAIRS AND RAILINGS
Building Code:	MING		
Building Name:	MINGES COLISEUM		
Subclass/Savings:	Not Applicable		
Code Application:	IBC	1003.3	
	ADAAG	505	
Project Class:	Plant Adaption		
Project Date:	10/26/2009		
Project Location:	Item Only: Floor(s) 1		

Project Description

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

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Cost

Project Number: MINGAC03

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Wall-mounted handrail system per floor	FLR	8	\$573	\$4,584	\$521	\$4,168	\$8,752
Center handrail / guardrail system per floor	FLR	8	\$1,297	\$10,376	\$833	\$6,664	\$17,040
Railing system up to 42 inches high with pickets at 4-1/2 inches on center	LF	200	\$107	\$21,400	\$36.45	\$7,290	\$28,690
Project Totals:				\$36,360		\$18,122	\$54,482

Material/Labor Cost		\$54,482
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$45,911
General Contractor Mark Up at 20.0%	+	\$9,182
Construction Cost		\$55,093
Professional Fees at 16.0%	+	\$8,815
Total Project Cost		\$63,908

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Description

Project Number:	MINGAC02	Title:	INTERIOR DOOR HARDWARE UPGRADES
Priority Sequence:	15		
Priority Class:	4		
Category Code:	AC3C	System:	ACCESSIBILITY
		Component:	INTERIOR PATH OF TRAVEL
		Element:	DOORS AND HARDWARE
Building Code:	MING		
Building Name:	MINGES COLISEUM		
Subclass/Savings:	Not Applicable		
Code Application:	ADAAG	309.4	
Project Class:	Plant Adaption		
Project Date:	10/26/2009		
Project Location:	Area Wide: Floor(s) 1		

Project Description

While the interior doors are suitable for ten future years of service, the knob actuated door hardware in the western, unrenovated section of the building presents a barrier to accessibility. Accessibility legislation requires that door hardware be designed for operation by people with little or no ability to grasp objects with their hands. To comply with the intent of this legislation, it is recommended that lever handle door hardware be installed on all doors that currently still have knobs.

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Cost

Project Number: MINGAC02

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Lever actuated door hardware	EA	25	\$273	\$6,825	\$69.77	\$1,744	\$8,569
Project Totals:				\$6,825		\$1,744	\$8,569

Material/Labor Cost		\$8,569
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		<u>\$7,768</u>
General Contractor Mark Up at 20.0%	+	<u>\$1,554</u>
Construction Cost		<u>\$9,321</u>
Professional Fees at 16.0%	+	<u>\$1,491</u>
Total Project Cost		<u>\$10,812</u>

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Description

Project Number:	MINGES01	Title:	RESTORE CONCRETE FINISH
Priority Sequence:	16		
Priority Class:	4		
Category Code:	ES2B	System:	EXTERIOR
		Component:	COLUMNS/BEAMS/WALLS
		Element:	FINISH
Building Code:	MING		
Building Name:	MINGES COLISEUM		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Capital Renewal		
Project Date:	10/26/2009		
Project Location:	Building-wide: Floor(s) 1		

Project Description

The concrete exterior has become visibly soiled, and in a few areas, the painted finish has deficiencies. Cleaning, surface preparation, selective repairs, and applied finish upgrades are recommended to restore the aesthetics and integrity of the building envelope.

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Cost

Project Number: MINGES01

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Cleaning and surface preparation	SF	20,160	\$0.11	\$2,218	\$0.22	\$4,435	\$6,653
Selective mortar and / or sealant repairs (assumes 10 linear feet for every 100 square feet of envelope)	LF	2,016	\$2.45	\$4,939	\$4.99	\$10,060	\$14,999
Applied finish or sealant	SF	20,160	\$0.22	\$4,435	\$0.82	\$16,531	\$20,966
Project Totals:				\$11,592		\$31,026	\$42,618

Material/Labor Cost		\$42,618
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$27,590
General Contractor Mark Up at 20.0%	+	\$5,518
Construction Cost		\$33,108
Professional Fees at 16.0%	+	\$5,297
Total Project Cost		\$38,405

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Description

Project Number:	MINGES03	Title:	BUILT-UP ROOF REPLACEMENT
Priority Sequence:	17		
Priority Class:	4		
Category Code:	ES4B	System:	EXTERIOR
		Component:	ROOF
		Element:	REPLACEMENT
Building Code:	MING		
Building Name:	MINGES COLISEUM		
Subclass/Savings:	Energy Conservation	\$6,000	
Code Application:	Not Applicable		
Project Class:	Capital Renewal		
Project Date:	10/26/2009		
Project Location:	Floor-wide: Floor(s) R		

Project Description

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

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Cost

Project Number: MINGES03

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Built-up roof	SF	69,440	\$3.06	\$212,486	\$3.58	\$248,595	\$461,082
Project Totals:				\$212,486		\$248,595	\$461,082

Material/Labor Cost		\$461,082
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$341,503
General Contractor Mark Up at 20.0%	+	\$68,301
Construction Cost		\$409,804
No Professional Fees Required		
Total Project Cost		\$409,804

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Description

Project Number:	MINGES02	Title:	WINDOW REPLACEMENT
Priority Sequence:	18		
Priority Class:	4		
Category Code:	ES5B	System:	EXTERIOR
		Component:	FENESTRATIONS
		Element:	WINDOWS
Building Code:	MING		
Building Name:	MINGES COLISEUM		
Subclass/Savings:	Energy Conservation	\$500	
Code Application:	Not Applicable		
Project Class:	Capital Renewal		
Project Date:	10/26/2009		
Project Location:	Area Wide: Floor(s) 1		

Project Description

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

Specific Project Details
Facility Condition Analysis
Section Three
 MING : MINGES COLISEUM

Project Cost

Project Number: MINGES02

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Typical standard glazing applications	SF	1,120	\$57.27	\$64,142	\$36.45	\$40,824	\$104,966
Project Totals:				\$64,142		\$40,824	\$104,966

Material/Labor Cost		\$104,966
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		<u>\$85,534</u>
General Contractor Mark Up at 20.0%	+	<u>\$17,107</u>
Construction Cost		<u>\$102,641</u>
Professional Fees at 16.0%	+	<u>\$16,423</u>
Total Project Cost		<u>\$119,063</u>

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Description

Project Number:	MINGHV01	Title:	HVAC SYSTEM REPLACEMENT
Priority Sequence:	19		
Priority Class:	4		
Category Code:	HV3A	System:	HVAC
		Component:	HEATING/COOLING
		Element:	SYSTEM RETROFIT/REPLACE
Building Code:	MING		
Building Name:	MINGES COLISEUM		
Subclass/Savings:	Energy Conservation	\$28,670	
Code Application:	ASHRAE	62-2004	
Project Class:	Capital Renewal		
Project Date:	10/28/2009		
Project Location:	Floor-wide: Floor(s) 1, 2, C, R		

Project Description

A complete redesign and replacement of the HVAC system serving parts of the facility is recommended. Demolish and dispose of existing equipment. Install a new modern HVAC system with VAV and constant volume air distribution as needed. This includes new air handlers, exhaust fans, ductwork, terminal units, piping, controls, and related electrical components. Specify DDCs for the new equipment. Incorporate variable frequency drives (VFDs) into the new HVAC design as applicable.

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Cost

Project Number: MINGHV01

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Air handlers, exhaust fans, ductwork, VAVs, VFDs, DDCs, piping, electrical connections, and demolition of existing equipment	SF	52,900	\$13.11	\$693,519	\$16.03	\$847,987	\$1,541,506
Project Totals:				\$693,519		\$847,987	\$1,541,506

Material/Labor Cost		\$1,541,506
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$1,133,391
General Contractor Mark Up at 20.0%	+	\$226,678
Construction Cost		\$1,360,069
Professional Fees at 16.0%	+	\$217,611
Total Project Cost		\$1,577,680

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Description

Project Number:	MINGEL01	Title:	REPLACE EMERGENCY GENERATOR
Priority Sequence:	20		
Priority Class:	4		
Category Code:	EL5A	System:	ELECTRICAL
		Component:	EMERGENCY POWER SYSTEM
		Element:	GENERATION/DISTRIBUTION
Building Code:	MING		
Building Name:	MINGES COLISEUM		
Subclass/Savings:	Not Applicable		
Code Application:	NEC	Article 700	
Project Class:	Capital Renewal		
Project Date:	10/28/2009		
Project Location:	Item Only: Floor(s) 1		

Project Description

Replace the existing emergency generator set with an appropriately sized unit based on current facility requirements. Replacement costs include the demolition of existing equipment and installation a new generator, automatic transfer switches (ATS), diesel fuel tank, battery and charger, exhaust system, and necessary electrical connections. Specify a diesel-fired unit unless otherwise directed by local standards.

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Cost

Project Number: MINGEL01

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Diesel generator set, including fuel tank, battery, charger, exhaust, and automatic transfer switches	KW	570	\$237	\$135,090	\$33.00	\$18,810	\$153,900
Project Totals:				\$135,090		\$18,810	\$153,900

Material/Labor Cost		\$153,900
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$145,685
General Contractor Mark Up at 20.0%	+	\$29,137
Construction Cost		\$174,822
Professional Fees at 16.0%	+	\$27,972
Total Project Cost		\$202,794

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Description

Project Number:	MINGIS01	Title:	REFINISH FLOORING
Priority Sequence:	21		
Priority Class:	4		
Category Code:	IS1A	System:	INTERIOR/FINISH SYS.
		Component:	FLOOR
		Element:	FINISHES-DRY

Building Code:	MING
Building Name:	MINGES COLISEUM
Subclass/Savings:	Not Applicable

Code Application:	EPA	40 CFR 61.M, 763
	OSHA	29 CFR 1910.1001, 1926.1101

Project Class:	Capital Renewal
Project Date:	10/26/2009

Project Location:	Floor-wide: Floor(s) 1, C
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Project Description

The 9 inch square composite floor tiles in the middle and western areas are original and suspected to contain asbestos. These tiles should be replaced. The carpet applications in the entire facility should also be replaced as part of future cosmetic improvements or major comprehensive renovation efforts.

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Cost

Project Number: MINGIS01

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Carpet	SF	5,910	\$5.36	\$31,678	\$2.00	\$11,820	\$43,498
Vinyl floor tile	SF	5,910	\$3.53	\$20,862	\$2.50	\$14,775	\$35,637
Allowance for abatement of suspected ACM	SF	5,910	\$0.35	\$2,069	\$0.75	\$4,433	\$6,501
Project Totals:				\$54,608		\$31,028	\$85,636

Material/Labor Cost		\$85,636
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$70,908
General Contractor Mark Up at 20.0%	+	\$14,182
Construction Cost		\$85,089
Professional Fees at 16.0%	+	\$13,614
Total Project Cost		\$98,704

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Description

Project Number:	MINGIS03	Title:	REFINISH WALLS
Priority Sequence:	22		
Priority Class:	4		
Category Code:	IS2B	System:	INTERIOR/FINISH SYS.
		Component:	PARTITIONS
		Element:	FINISHES
Building Code:	MING		
Building Name:	MINGES COLISEUM		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Capital Renewal		
Project Date:	10/26/2009		
Project Location:	Floor-wide: Floor(s) 1, C		

Project Description

The majority of the interior walls are painted masonry block or sheetrock partitions. Interior wall finish applications are generally in good condition. However, wall finish upgrades should be considered as part of any future cosmetic improvements or major comprehensive renovation efforts.

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Cost

Project Number: MINGIS03

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Standard wall finish (paint, wall covering, etc.)	SF	119,810	\$0.17	\$20,368	\$0.81	\$97,046	\$117,414
Project Totals:				\$20,368		\$97,046	\$117,414

Material/Labor Cost		\$117,414
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		<u>\$70,295</u>
General Contractor Mark Up at 20.0%	+	<u>\$14,059</u>
Construction Cost		<u>\$84,354</u>
No Professional Fees Required		
Total Project Cost		<u>\$84,354</u>

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Description

Project Number:	MINGIS02	Title:	REFINISH GYMNASIUM HARDWOOD FLOORING
Priority Sequence:	23		
Priority Class:	4		
Category Code:	IS1A	System:	INTERIOR/FINISH SYS.
		Component:	FLOOR
		Element:	FINISHES-DRY
Building Code:	MING		
Building Name:	MINGES COLISEUM		
Subclass/Savings:	Not Applicable		
Code Application:	Not Applicable		
Project Class:	Capital Renewal		
Project Date:	10/25/2009		
Project Location:	Area Wide: Floor(s) 1		

Project Description

The gymnasium has a hardwood strip flooring play surface. Presently, the wooden floor is in good condition. It is recommended that the floor surface be sanded and refinished on a periodic basis and at least once within the purview of this report. The play court striping should then be reapplied to meet the needs of the current use of this facility.

Specific Project Details
Facility Condition Analysis
Section Three
MING : MINGES COLISEUM

Project Cost

Project Number: MINGIS02

Task Cost Estimate

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Sand, refinish, and paint stripes	SF	11,830	\$2.84	\$33,597	\$2.62	\$30,995	\$64,592
Project Totals:				\$33,597		\$30,995	\$64,592

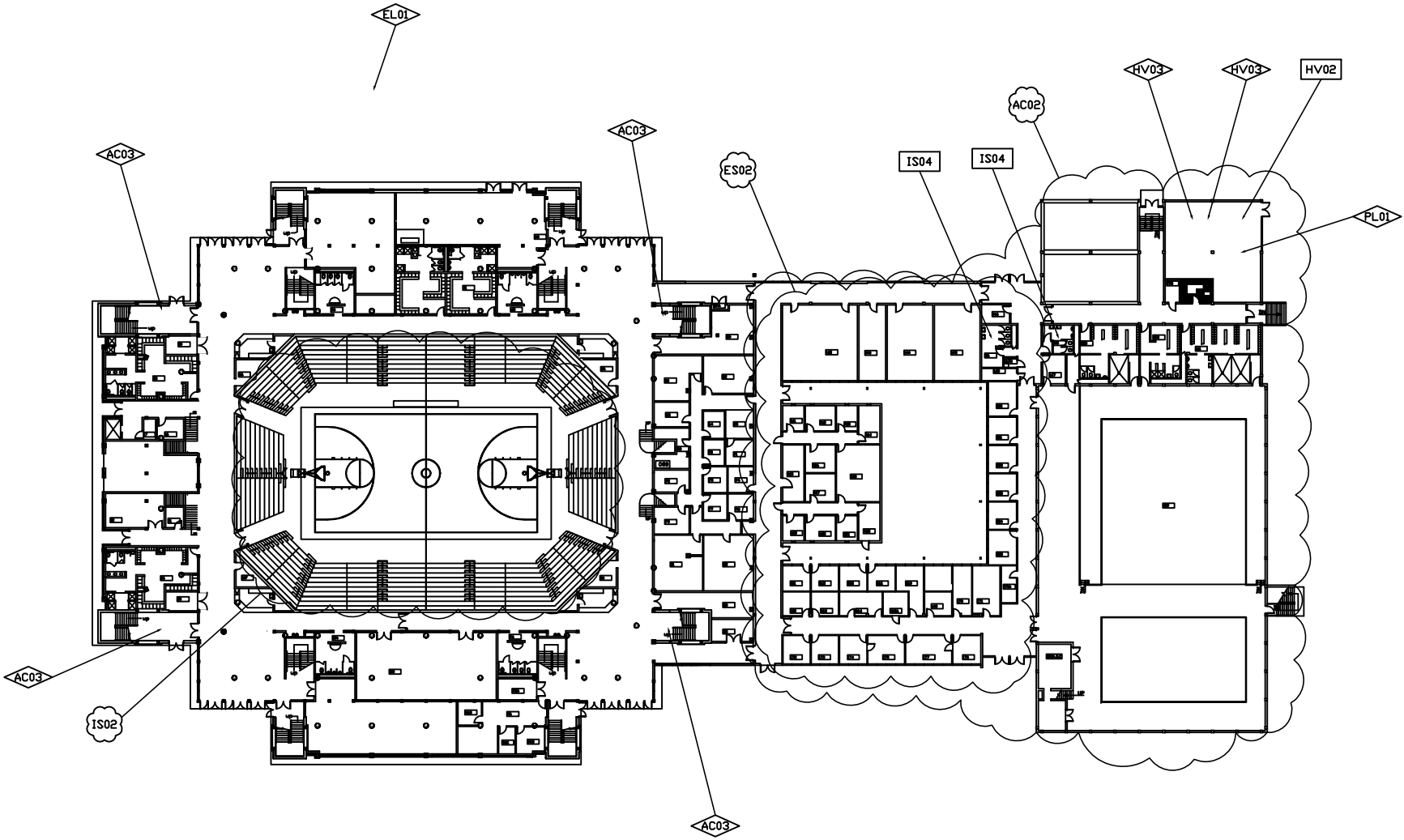
Material/Labor Cost		\$64,592
Material Index		100.7%
Labor Index		51.3%
Material/Labor Indexed Cost		\$49,733
General Contractor Mark Up at 20.0%	+	\$9,947
Construction Cost		\$59,679
Professional Fees at 16.0%	+	\$9,549
Total Project Cost		\$69,228

FACILITY CONDITION ANALYSIS

SECTION 4

**DRAWINGS
AND PROJECT LOCATIONS**

ROOF
 ES03 ES04 HV01



ES01

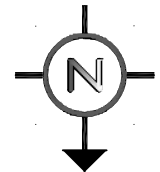
AC01 EL02 EL03 FS01 FS02 FS03
 HV01 IS01 IS03 PL02 PL03

SECOND

EL02 EL03 FS01 FS02 FS03
 HV01 PL02 PL03

CONCOURSE

EL02 EL03 FS01 FS02 FS03
 HV01 IS01 IS03 PL02 PL03



MINGES
 COLISEUM

BLDG NO. MING



FACILITY
 CONDITION
 ANALYSIS

2165 West Park Court
 Suite N
 Stone Mountain GA 30087
 770.879.7376

PROJECT NUMBER
 APPLIES TO
 ONE ROOM ONLY

PROJECT NUMBER
 APPLIES TO
 ONE ITEM ONLY

PROJECT NUMBER
 APPLIES TO
 ENTIRE BUILDING

PROJECT NUMBER
 APPLIES TO
 ENTIRE FLOOR

PROJECT NUMBER
 APPLIES TO A SITUATION
 OF UNDEFINED EXTENTS

PROJECT NUMBER
 APPLIES TO AREA
 AS NOTED

Date: 12/11/09

Drawn by: J.T.V.

Project No. 09-041

FIRST
 FLOOR
 PLAN

Sheet No.

1 of 1

FACILITY CONDITION ANALYSIS

SECTION 5

LIFE CYCLE MODEL SUMMARY
AND PROJECTIONS

Life Cycle Model
Building Component Summary
MING : MINGES COLISEUM

Unifomat Code	Component Description	Qty	Units	Unit Cost	Complex Adj	Total Cost	Install Date	Life Exp
B2010	EXTERIOR FINISH RENEWAL	20,160	SF	\$1.30		\$26,280	1995	10
B2010	EXTERIOR FINISH RENEWAL	20,160	SF	\$1.30	.31	\$8,147	1967	10
B2020	STANDARD GLAZING AND CURTAIN WALL	2,240	SF	\$104.04		\$233,042	1967	55
B2020	CUSTOM AND HISTORICAL GLAZING	2,240	SF	\$143.39		\$321,198	1995	55
B2030	HIGH TRAFFIC EXTERIOR DOOR SYSTEM	46	LEAF	\$4,311.24		\$198,317	1995	20
B2030	LOW TRAFFIC EXTERIOR DOOR SYSTEM	15	LEAF	\$2,863.29		\$42,949	1967	40
B3010	BUILT-UP ROOF	69,440	SF	\$6.70		\$465,431	1994	20
B3010	MEMBRANE ROOF	54,560	SF	\$6.41		\$349,555	1994	15
C1020	STANDARD DOOR AND FRAME INCLUDING HARDWARE	25	LEAF	\$783.68		\$19,592	1995	35
C1020	STANDARD DOOR AND FRAME INCLUDING HARDWARE	25	LEAF	\$783.68		\$19,592	1967	35
C1020	RATED DOOR AND FRAME INCLUDING HARDWARE	175	LEAF	\$1,489.06		\$260,585	1995	35
C1020	RATED DOOR AND FRAME INCLUDING HARDWARE	25	LEAF	\$1,489.06		\$37,226	1967	35
C1020	INTERIOR DOOR HARDWARE	175	EA	\$423.04		\$74,032	1995	15
C1020	INTERIOR DOOR HARDWARE	25	EA	\$423.04		\$10,576	1967	15
C1020	INTERIOR DOOR HARDWARE	25	EA	\$423.04		\$10,576	1995	15
C1020	INTERIOR DOOR HARDWARE	25	EA	\$423.04		\$10,576	1967	15
C3010	STANDARD WALL FINISH (PAINT, WALL COVERING, ETC.)	119,810	SF	\$0.80		\$95,973	1995	10
C3020	CARPET	5,910	SF	\$8.75		\$51,692	1995	10
C3020	VINYL FLOOR TILE	5,910	SF	\$6.59		\$38,934	1967	15
C3020	VINYL FLOOR TILE	5,000	SF	\$6.59		\$32,939	1995	15
C3020	CERAMIC FLOOR TILE	44,348	SF	\$17.36		\$769,987	1967	20
C3020	CERAMIC FLOOR TILE	14,782	SF	\$17.36		\$256,651	1995	20
C3020	RESURFACE AND SEAL CONCRETE OR TERRAZZO	35,480	SF	\$5.85		\$207,440	1967	50
C3020	HARDWOOD REPLACEMENT	11,830	SF	\$23.94	.93	\$263,350	1967	50
C3020	SAND AND FINISH HARDWOOD FLOORING	11,830	SF	\$3.24	1.28	\$49,028	1967	15
C3030	ACOUSTICAL TILE CEILING SYSTEM	17,740	SF	\$4.99		\$88,576	1995	15
C3030	PAINTED CEILING FINISH APPLICATION	11,830	SF	\$0.80		\$9,476	1967	15
D1010	ELEVATOR MODERNIZATION - HYDRAULIC	1	EA	\$158,628.64		\$158,629	1994	25
D1010	ELEVATOR CAB RENOVATION - PASSENGER	1	EA	\$26,616.80		\$26,617	1994	12

**Life Cycle Model
Building Component Summary
MING : MINGES COLISEUM**

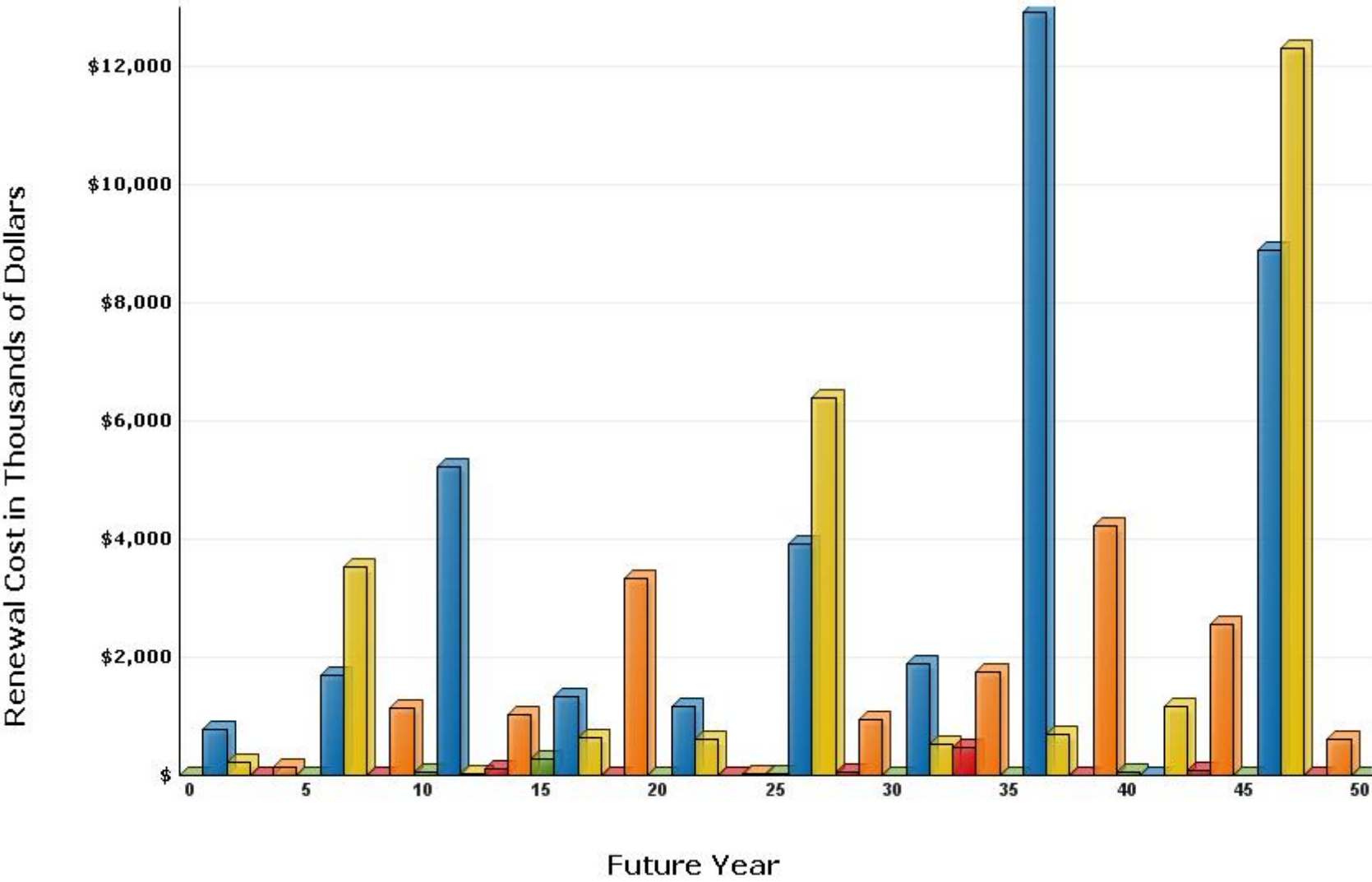
Unifomat Code	Component Description	Qty	Units	Unit Cost	Complex Adj	Total Cost	Install Date	Life Exp
D2010	PLUMBING FIXTURES - GYMNASIUM / ATHLETICS	52,900	SF	\$3.53		\$186,878	1967	35
D2010	PLUMBING FIXTURES - GYMNASIUM / ATHLETICS	102,698	SF	\$3.53		\$362,798	1994	35
D2020	WATER PIPING - GYMNASIUM / ATHLETICS	52,900	SF	\$2.52		\$133,226	1967	35
D2020	WATER PIPING - GYMNASIUM / ATHLETICS	102,698	SF	\$2.52		\$258,640	1994	35
D2020	WATER HEATER, SHELL AND TUBE HEAT EXCHANGER	140	GPM	\$355.69		\$49,797	1973	24
D2030	DRAIN PIPING - GYMNASIUM / ATHLETICS	52,900	SF	\$3.83		\$202,588	1967	40
D2030	DRAIN PIPING - GYMNASIUM / ATHLETICS	102,698	SF	\$3.83		\$393,296	1994	40
D2050	AIR COMPRESSOR PACKAGE (AVERAGE SIZE)	1	SYS	\$6,456.49		\$6,456	1994	25
D2050	AIR COMPRESSOR PACKAGE (AVERAGE SIZE)	1	SYS	\$6,456.49		\$6,456	1998	25
D2090	POOL FILTRATION, TREATMENT, PUMPING, HEATING SYSTEMS	6,455	SF	\$27.28		\$176,110	2005	18
D3030	CHILLER - WATER COOLED (200-1000 TONS)	1,000	TON	\$686.38		\$686,382	2002	25
D3030	CHILLER - WATER COOLED (200-1000 TONS)	215	TON	\$686.38		\$147,572	1994	25
D3030	COOLING TOWER (OVER 300 TONS)	2,400	TON	\$184.81		\$443,553	2002	20
D3040	CONDENSATE RECEIVER	1	SYS	\$9,504.01		\$9,504	1967	15
D3040	EXHAUST FAN - CENTRIFUGAL ROOF EXHAUSTER OR SIMILAR	9	EA	\$2,768.62		\$24,918	1994	20
D3040	EXHAUST FAN - CENTRIFUGAL ROOF EXHAUSTER OR SIMILAR	1	EA	\$2,768.62		\$2,769	1967	20
D3040	EXHAUST FAN - UTILITY SET OR SIMILAR	4	EA	\$3,660.81	2	\$29,286	1994	20
D3040	EXHAUST FAN - UTILITY SET OR SIMILAR	5	EA	\$3,660.81		\$18,304	1994	20
D3040	EXHAUST FAN - PROPELLER TYPE OR SIMILAR	1	EA	\$1,357.34		\$1,357	1998	20
D3040	EXHAUST FAN - PROPELLER TYPE OR SIMILAR	1	EA	\$1,357.34		\$1,357	1967	20
D3040	ELECTRIC UNIT HEATER (10 KW)	2	EA	\$1,255.64		\$2,511	1998	22
D3040	HVAC SYSTEM - GYMNASIUM / ATHLETICS	102,698	SF	\$29.18		\$2,997,119	1994	25
D3040	BASE MTD. PUMP - UP TO 15 HP	8	HP	\$3,175.77		\$25,406	1994	20
D3040	BASE MTD. PUMP - UP TO 15 HP	4	HP	\$3,175.77		\$12,703	1967	20
D3040	BASE MTD. PUMP - 15 HP TO 50 HP	120	HP	\$1,142.19		\$137,063	1994	20
D3040	BASE MTD. PUMP - 50 HP TO 150 HP	120	HP	\$782.99		\$93,958	1994	25
D3040	BASE MTD. PUMP - 50 HP TO 150 HP	40	HP	\$782.99		\$31,319	1967	25
D3050	SPLIT DX SYSTEM	8	TON	\$2,143.89		\$17,151	2005	15

**Life Cycle Model
Building Component Summary
MING : MINGES COLISEUM**

Unifomat Code	Component Description	Qty	Units	Unit Cost	Complex Adj	Total Cost	Install Date	Life Exp
D3050	SPLIT DX SYSTEM	2	TON	\$2,143.89		\$4,288	1967	15
D3050	SPLIT DX SYSTEM	10	TON	\$2,143.89		\$21,439	1991	15
D3050	SPLIT DX SYSTEM	6	TON	\$2,143.89		\$12,863	2002	15
D3050	SPLIT DX SYSTEM	5	TON	\$2,143.89		\$10,719	2000	15
D3050	SPLIT DX SYSTEM	5	TON	\$2,143.89		\$10,719	2007	15
D3050	SPLIT DX SYSTEM	5	TON	\$2,143.89		\$10,719	2003	15
D4010	FIRE SPRINKLER SYSTEM	102,698	SF	\$6.86		\$704,620	1994	80
D4010	FIRE SPRINKLER HEADS	102,698	SF	\$0.38		\$38,733	1994	20
D4010	FIRE PUMP - DIESEL (UP TO 1500 GPM)	1,000	GPM	\$162.80		\$162,799	1994	25
D5010	ELECTRICAL SYSTEM - GYMNASIUM / ATHLETICS	102,698	SF	\$6.75		\$693,283	1994	50
D5010	ELECTRICAL SYSTEM - GYMNASIUM / ATHLETICS	52,900	SF	\$6.75		\$357,112	1967	50
D5010	ELECTRICAL SWITCHGEAR 277/480V	2,000	AMP	\$39.56		\$79,127	1994	20
D5010	ELECTRICAL SWITCHGEAR 277/480V	2,500	AMP	\$39.56		\$98,909	1994	20
D5010	TRANSFORMER, DRY, 480-208V (30-150 KVA)	788	KVA	\$96.00		\$75,644	1994	30
D5020	EMERGENCY LIGHT (BATTERY)	64	EA	\$283.62		\$18,152	1967	20
D5020	EXIT SIGNS (CENTRAL POWER)	30	EA	\$163.78		\$4,913	1967	20
D5020	EXIT SIGNS (CENTRAL POWER)	50	EA	\$163.78		\$8,189	1994	20
D5020	EXTERIOR LIGHT (HID)	4	EA	\$689.58		\$2,758	1994	20
D5020	LIGHTING - GYMNASIUM / ATHLETICS	102,698	SF	\$4.85		\$498,391	1994	20
D5020	LIGHTING - GYMNASIUM / ATHLETICS	52,900	SF	\$4.85		\$256,723	1967	20
D5030	FIRE ALARM SYSTEM, POINT ADDRESSABLE	155,598	SF	\$2.61		\$406,825	1994	15
D5040	GENERATOR, DIESEL (OVER 500KW)	570	KW	\$348.71		\$198,763	1994	25
E2010	BASIC FOLDING FIXED SEATING	8,000	EA	\$278.95		\$2,231,585	1995	20
						\$16,502,722		

Life Cycle Model Expenditure Projections

MING : MINGES COLISEUM



Average Annual Renewal Cost Per SqFt \$4.45

FACILITY CONDITION ANALYSIS

SECTION 6

PHOTOGRAPHIC LOG

**Photo Log - Facility Condition
Analysis**

MING : MINGES COLISEUM

Photo ID No	Description	Location	Date
MING001a	Rolled asphalt built-up roof application with bubbling	Roof	9/15/2009
MING001e	Fire alarm devices	Penthouse	9/15/2009
MING002a	Rolled asphalt built-up roof application with bubbling	Roof	9/15/2009
MING002e	Air handling equipment	Penthouse	9/15/2009
MING003a	Single ply membrane roof application	Roof	9/15/2009
MING003e	Compressor	Penthouse	9/15/2009
MING004a	Single ply membrane roof application	Roof	9/15/2009
MING004e	Exhaust fans	Roof	9/15/2009
MING005a	Manufacturer's roof stamp on membrane roof	Lower roof	9/15/2009
MING005e	Exhaust fans	Roof	9/15/2009
MING006a	Manufacturer's roof stamp on membrane roof	Upper roof	9/15/2009
MING006e	Lavatories	Second floor, restroom	9/15/2009
MING007a	Non-accessible handrails lacking proper geometry and extensions	Eastern arena stairwells	9/15/2009
MING007e	Water closet	Second floor, restroom	9/15/2009
MING008a	Stairwells lacking adequate guardrail protection	Eastern arena stairwells	9/15/2009
MING008e	Air handling equipment	Second floor, mechanical room	9/15/2009
MING009a	Interior deterioration over windows over concessions	Northern concourse level, arena	9/15/2009
MING009e	Interior lighting	Arena	9/15/2009
MING010a	Interior deterioration over windows over concessions	Northern concourse level, arena	9/15/2009
MING010e	Exit signage	Second floor, corridor	9/15/2009
MING011a	Hardwood arena floor with steel structural roof supports	Eastern arena	9/15/2009
MING011e	Elevator machine and controller	First floor, elevator machine room	9/15/2009
MING012a	Past evidence of water intrusion through exterior facade	Southwest corner of arena	9/15/2009
MING012e	Fire alarm panels and transformers	First floor, electrical closet	9/15/2009
MING013a	Tiled floors with painted masonry block walls	Concourse level, arena	9/15/2009
MING013e	Fire sprinkler controller	First floor, sprinkler room	9/15/2009
MING014a	Tiled floors with painted masonry block walls	Lower arena level	9/15/2009
MING014e	Fire pump	First floor, sprinkler room	9/15/2009
MING015a	Building dedication markers	Lobby of arena	9/15/2009
MING015e	Unit heater	First floor, sprinkler room	9/15/2009
MING016a	Non-accessible sink and countertop	Room 65A	9/15/2009

**Photo Log - Facility Condition
Analysis**

MING : MINGES COLISEUM

Photo ID No	Description	Location	Date
MING016e	Pump equipment	First floor, sprinkler room	9/15/2009
MING017a	Single pane, metal-framed original windows	Section between pool and arena	9/15/2009
MING017e	Electrical distribution equipment	Site, mechanical enclosure	9/15/2009
MING018a	Single pane, metal-framed original windows	Section between pool and arena	9/15/2009
MING018e	Chiller	Site, mechanical enclosure	9/15/2009
MING019a	Carpeted floors and suspended ceilings	Section between pool and arena	9/15/2009
MING019e	Chiller	Site, mechanical enclosure	9/15/2009
MING020a	9 inch square asbestos floor tile	Room 170	9/15/2009
MING020e	Compressor	Site, mechanical enclosure	9/15/2009
MING021a	Single level water fountain	Northern corridor between arena and pool	9/15/2009
MING021e	Transformer	Site	9/15/2009
MING022a	Ceramic tile pools and decking	Western pool area	9/15/2009
MING022e	Pump equipment	Site, mechanical enclosure	9/15/2009
MING023a	Cracked ceramic tile around pool	Western pool area	9/15/2009
MING023e	Air handling equipment	First floor, mechanical room	9/15/2009
MING024a	Ceramic tile shower	Western pool locker room	9/15/2009
MING024e	Interior lighting	First floor, pool area	9/15/2009
MING025a	Single level water fountain	Western pool locker room	9/15/2009
MING025e	Gang shower components	First floor, locker room	9/15/2009
MING026a	Exterior brick masonry facade	South side of western pool area	9/15/2009
MING026e	Urinals	First floor, locker room	9/15/2009
MING027a	Renovated concrete panel exterior	Southwestern corner of eastern arena area	9/15/2009
MING027e	Lavatories	First floor, locker room	9/15/2009
MING028a	Exterior brick masonry facade with original single pane windows	Southern middle section	9/15/2009
MING028e	Air handling equipment	First floor, mechanical room	9/15/2009
MING029a	Deteriorated and bubbling finish	Southeastern corner of eastern arena	9/15/2009
MING029e	Pool sand filter system	Basement, mechanical room	9/15/2009
MING030a	One of four main entrances to arena	Southeastern arena	9/15/2009
MING030e	Emergency eyewash / shower station	Basement, mechanical room	9/15/2009

**Photo Log - Facility Condition
Analysis**

MING : MINGES COLISEUM

Photo ID No	Description	Location	Date
MING031a	Stained exterior concrete	Eastern side of arena	9/15/2009
MING031e	Heat exchanger	Basement, mechanical room	9/15/2009
MING032a	Deteriorated and bubbling finish	Northeastern corner of arena	9/15/2009
MING032e	Drain piping	Basement, mechanical room	9/15/2009
MING033a	Deteriorated and bubbling finish	Northeastern corner of arena	9/15/2009
MING033e	Drain piping	Basement, mechanical room	9/15/2009
MING034a	Stained exterior concrete	Northern side of arena	9/15/2009
MING034e	Heat exchangers	First floor, main mechanical room	9/15/2009
MING035a	Glass and concrete exterior	Northern side of arena	9/15/2009
MING035e	Water holding tank	First floor, main mechanical room	9/15/2009
MING036a	Exterior brick masonry facade	Northeastern corner of pool	9/15/2009
MING036e	Exhaust fan	First floor, main mechanical room	9/15/2009
MING037a	Exterior stairs needing handrails	Northeastern corner of pool	9/15/2009
MING037e	Exterior lighting	Exterior	9/15/2009
MING038a	Exterior brick masonry facade	Western side of pool	9/15/2009
MING038e	Exterior lighting	Site	9/15/2009
MING039e	Exterior lighting	Exterior	9/15/2009
MING040e	Backflow preventer	Site	9/15/2009

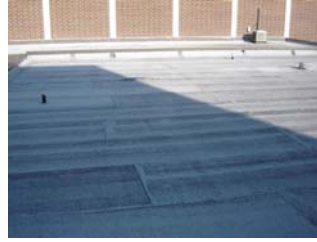
Facility Condition Analysis - Photo Log



MING001A.jpg



MING001E.jpg



MING002A.jpg



MING002E.jpg



MING003A.jpg



MING003E.jpg



MING004A.jpg



MING004E.jpg



MING005A.jpg



MING005E.jpg



MING006A.jpg



MING006E.jpg



MING007A.jpg



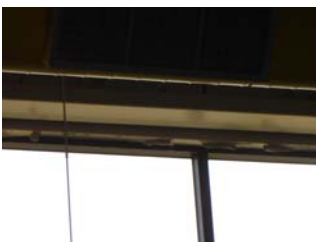
MING007E.jpg



MING008A.jpg



MING008E.jpg



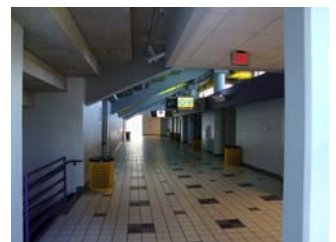
MING009A.jpg



MING009E.jpg



MING010A.jpg



MING010E.jpg

Facility Condition Analysis - Photo Log



MING011A.jpg



MING011E.jpg



MING012A.jpg



MING012E.jpg



MING013A.jpg



MING013E.jpg



MING014A.jpg



MING014E.jpg



MING015A.jpg



MING015E.jpg



MING016A.jpg



MING016E.jpg



MING017A.jpg



MING017E.jpg



MING018A.jpg



MING018E.jpg



MING019A.jpg



MING019E.jpg



MING020A.jpg



MING020E.jpg

Facility Condition Analysis - Photo Log



MING021A.jpg



MING021E.jpg



MING022A.jpg



MING022E.jpg



MING023A.jpg



MING023E.jpg



MING024A.jpg



MING024E.jpg



MING025A.jpg



MING025E.jpg



MING026A.jpg



MING026E.jpg



MING027A.jpg



MING027E.jpg



MING028A.jpg



MING028E.jpg



MING029A.jpg



MING029E.jpg



MING030A.jpg



MING030E.jpg

Facility Condition Analysis - Photo Log



MING031A.jpg



MING031E.jpg



MING032A.jpg



MING032E.jpg



MING033A.jpg



MING033E.jpg



MING034A.jpg



MING034E.jpg



MING035A.jpg



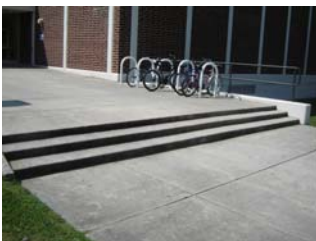
MING035E.jpg



MING036A.jpg



MING036E.jpg



MING037A.jpg



MING037E.jpg



MING038A.jpg



MING038E.jpg



MING039E.jpg



MING040E.jpg