Facility Condition Analysis

The University of Iowa initiated a Facility Condition Analysis program in February, 2004. ISES Corporation, of Stone Mountain, GA, was selected to identify the conditions of our facilities, quantify the deficiencies, and provide a database of the information. Over the past 2-1/2 years, teams of ISES personnel have inspected all major GEF buildings, as well as many of the buildings maintained by Athletics, University Housing, and other auxiliaries.

The following 10 systems/components were evaluated:
Accessibility (ADA)
Electrical Systems
Exterior Structure/Roof Systems
Fire/Life Safety
Health/Food Service/Hazardous Materials
Heating, Ventilating, and Air Conditioning Systems
Interior/Finish Systems
Plumbing Systems
Site-immediately surrounding the building
Vertical Transportation (elevators, chair lifts)

Each deficiency was identified as a project within one of these types of systems. In addition, each project was given a classification and a priority class.

The project classifications are:
Capital Renewal – 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.)
Deferred Maintenance – Repairs that were not accomplished as a part of normal maintenance or capital repair that have accumulated to the point that facility deterioration has or soon will impair the proper functioning of the facility.
Plant Adaption – Work that is required to adapt the facility to the evolving needs of the institution and/or to changing standards. These are expenses in addition to normal maintenance. Examples include improvements due to adoption of modern technology and compliance with changing building, life safety, or accessibility codes.

There are five priority classifications:
Priority 1: currently critical (year 1)
Priority 2: potentially critical (year 2)
Priority 3: necessary, not yet critical (years 3 – 5)
Priority 4: recommended (years 6 – 10)
Priority 5: does not meet current codes/standards, but is exempt because it met the codes at the time of construction. If substantial work is undertaken, some existing conditions may need to be corrected.
Based on a visual inspection, repair costs were developed for each deficiency. The cost of replacing each facility was also estimated. Using this data, a Facility Condition Needs Index (FCNI) can be computed.

\[
\text{FCNI} = \frac{\text{Deferred Maintenance} + \text{Capital Renewal} + \text{Plant Adaption}}{\text{Facility Replacement Cost}}
\]

The index, which can also be calculated for groups of buildings or entire campuses, allows for relative comparisons of conditions between different buildings or groups.
**Detailed Project Totals**  
**Facility Condition Analysis**  
**GEF**  

<table>
<thead>
<tr>
<th>System Code</th>
<th>System Description</th>
<th>Capital Renewal</th>
<th>Deferred Maintenance</th>
<th>Plant Adaption</th>
<th>Subtotal</th>
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<tbody>
<tr>
<td>AC</td>
<td>ACCESSIBILITY</td>
<td>0</td>
<td>0</td>
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<td>16,587,829</td>
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<tr>
<td>EL</td>
<td>ELECTRICAL</td>
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<td>82,152,362</td>
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<td>FS</td>
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<td>2,183,942</td>
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<td>HE</td>
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<td>80,091</td>
<td>2,551,840</td>
<td>2,796,760</td>
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<td>HV</td>
<td>HVAC</td>
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<td>IS</td>
<td>INTERIOR/FINISH SYS.</td>
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<td>PL</td>
<td>PLUMBING</td>
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</table>

**Facility Replacement Cost**  
$2,145,791,166

**Facility Condition Needs Index**  
0.22

**Gross Square Feet**  
6,816,243

**Total Cost Per Square Foot**  
$70.65