Chestnut Hall was constructed in 1984. The building is the largest of three dormitories that are part of the North Halls on Rowan’s campus. The building is a 3-story “C” shaped structure, with a posted wooden portico at the main entrance, and two covered service areas. The main section of building is comprised of exterior masonry walls, varying framed windows, a mix of wood and metal doors, and a shingled roof. The two service areas have wood frame walls and windows with a mixed roof comprised of sloped shingles and flat bituminous membrane.

**Building Description:**

Architecturally, the exterior requires masonry cleaning and painting of exterior components. The flat bituminous roofs are worn and require replacement. A majority of the interior wall, ceiling, and floor finishes require restoration and/or replacement. Interior dormitory room doors also require replacement as they are aged and worn.

Mechanically, the building is heated with a 2-pipe hot water system supplied from Magnolia via leaking underground piping. Heating of hot water is to air handling units, fan coil units, cabinet heaters or baseboard radiation. All the fan coil units are beyond their useful service life and some cabinets are damaged. Thermostat controls are also old and damaged. This building has no cooling capacity and appears to suffer from the lack of humidity control. There is a study suggested for heating all three buildings (Magnolia, Willow, and Chestnut) independently. There is also a study for air conditioning all three buildings. There is a chilled water loop extended into the building but is not yet in service, it is suggested a filter system be employed for keeping the lines clean. There are exhaust fans, pumps, air handling units, and radiator projects.

The domestic water distribution capacity appears to be satisfactory and most fixtures have been updated, but shower/tub faucets seem to show signs of early deterioration. Currently, the plumbing fixtures do not incorporate any water conservation measures. The domestic hot water is heated by a 30 year old (water to water) heat exchanger type water heater located in the basement which is overdue for replacement. Hot water for the domestic water heater is supplied from Magnolia.

Electrically, the electrical service, panel board/receptacle, exit sign, and lighting are areas of deficiency and opportunities for improvements. There is no emergency generator for this building. The existing data equipment located in closets lack any cooling or exhaust which will shorten their respective life spans. The security of this building is not adequate and lacks video monitoring. This building is protected by an automatic wet pipe fire protection system but most of the sprinkler heads are not FM approved, and the fire pump and controls (located in the basement) are in poor condition. The building also has a fire alarm system that could use an upgrade.

Rowan University’s estimated replacement value of $129.17/SF is based on a FM Global value assuming standard construction with generalized additional factors (e.g. brick façade, casement windows). This estimation method does not account for differences in building design, construction methods and/or materials utilized. Entech Engineering, Inc.’s estimated replacement value is based off
Facility Profile (FP-1)

of 2014 RS Means Square Foot Cost Data with modifications as applicable to account for variances of construction and materials for similarly classified buildings. Entech Engineering, Inc. recommends that Rowan University utilize the estimated replacement value of $208.00/SF in lieu of its listed FM global replacement value of $129.17/SF for the Chestnut Hall.
Term | Meaning
--- | ---
Deficiency Cost Per Square Foot | The Deficiency Cost per Square Foot value provides an indication of the relative magnitude of the deficiencies in relation to the size of the building. This value, expressed in dollars per square foot, can be used to compare the cost of repairing a building to the cost of replacing or renovating it. It can also be used to benchmark the condition of one building against another. This value is calculated by dividing the total deferred maintenance cost of a building’s proposed projects by the building’s square footage.
Deferred Maintenance | Work items in need of repair due to postponed, or past due, maintenance, the result of which is physical depreciation or loss in the value of a building. These items can address Curable Physical Deterioration or Operational Repairs.
Curable Physical Deterioration | Items in need of repair in which the cost of repair is reasonable and economically feasible, compared to the cost to restore the item to new or reasonably new condition.
Operational Repairs | These are projects that correct damage to a building. Example: Correction of conditions caused by the failure of a building’s component such as the patching of a leaky roof, or replacing broken items such as door hardware. These projects usually fall under the category of Deferred Maintenance and for the purposes of this report are designated as such.
Capital Renewal | These are projects which correct unacceptable conditions caused by worn-out building components - building components that have exceeded their useful life cycle or will exceed their useful lifecycle in the foreseeable future. Example: Finish repair/replacement such as painting or floor tile replacement; roof replacement where the new roof material is the same as the existing; or replacement of old equipment with new equipment of equal quality or function, such as a water heater replacement.
If execution of Capital Renewal projects is deferred for an inordinate amount of time, they may instead be categorized as Deferred Maintenance.
Capital Improvement | This includes work done to a building that improves, enhances, or updates a building. Example: Work done to bring a building into compliance with current codes such as the addition of a handicapped accessible ramp, or work which improves a building’s performance such as replacing an existing roof with a superior roof system. Plant Adaptation is included in this category.
Capital Construction | New construction or the addition of building area or volume. Example: Renovations which allow the occupancy of previously unoccupied space, the construction of new facilities such as substantial additions to existing buildings, entire new buildings, or civil amenities such as roadways or water towers.
Facilities Condition Index or FCI | The FCI represents the ratio of identified Deferred Maintenance costs to estimated building Replacement Cost. This value is typically expressed as a three-digit decimal value with lower numbers representing better conditions. This value can be used to compare a building’s condition to that of others, or to other average values. The National Association of College and University Business Officers (NACUBO) and the Association of Higher Education Facilities Officers (APPA) have outlined a scale for FCI ratios which offers some indication of the relative condition of a facility. They state that a building with an FCI greater than 0.100 is in poor condition and a building with an FCI less than 0.050 is in good condition. APPA and NACUBO also dictate in certain cases buildings should be maintained so that the FCI is less than 0.020. Entech considers buildings with an FCI less than 0.020 to be in excellent condition. Given this outline the condition of individual buildings can be rated according to FCI as follows:

<table>
<thead>
<tr>
<th>FCI</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over 0.10</td>
<td>Poor</td>
</tr>
<tr>
<td>0.05 to 0.10</td>
<td>Fair</td>
</tr>
<tr>
<td>0.02 to 0.05</td>
<td>Good</td>
</tr>
<tr>
<td>Less than 0.02</td>
<td>Excellent</td>
</tr>
</tbody>
</table>

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