LEGISLATIVE REPORT
Annual report to the Legislature

SUBJECT: Annual Report for Repair and Maintenance

REFERENCE: Section 36-35, HRS; and Section 302A-1312, HRS

ACTION REQUESTED: Annual report to the Legislature

DOE REPORT: Introduction: Section 36-35, HRS, requires the DOE to annually report account finances of the state educational facilities repair and maintenance account and the status of repair and maintenance (R&M) projects undertaken. Section 302A-1312, HRS, requires the DOE to annually report on the DOE's six-year program and financial plan for school R&M including annual funding requirements. Refer to the attachment entitled "Annual Report for the Repair and Maintenance of Public School Facilities in the State of Hawaii".

Findings: See attached

RECOMMENDATIONS: See attached

Kathryn S. Matayoshi
Superintendent
Department of Education

DEC - 4 2013
Date
Annual Report for the Repair and Maintenance of Public School Facilities in the State of Hawaii

I. Introduction

183,000 is the number of students in the State of Hawaii that enter, use, and depend on a public school building for their education.

As the 7th largest school district in the nation (based on current enrollment numbers), the effort and attention required to maintain the state’s inventory of buildings and campuses is formidable.

How many school buildings are there?

There are 4,424 buildings. Contained within is 46 million square feet of building space, set on 4,127 acres of land, spread over 261 school campuses, statewide. The current inventory of buildings represents a gradual accumulation since the first Hawaii public school (i.e. Lahainaluna High School), was established in 1831.

School facilities are key components to support and enhance the academic experience and programs for students. Schools need to be able to foster student achievement by having innovative, flexible, and secure learning environments. The challenge is to accommodate school needs in a fiscally responsible and sustainable manner.

The repair and maintenance of these 4,424 buildings and the appurtenant site infrastructure - such as utilities and parking, is critical to maintaining the operational effectiveness of our schools. Provided herein, is a description of the current financial needs, progress made to date, program management, and future financial needs of the repair and maintenance of public school facilities in the State of Hawaii.

II. Current Financial Needs

A. To accurately assess the current financial needs, facility deficiencies are identified and the cost of repairs estimated to establish required funding levels and project priorities. The deficiencies commonly relate to the following facility components or systems:

- The roof (roofing, gutters, fascia)
- The structure (foundations, floors, pavements, walls, columns, roofs)
- Exterior finishes (walls, windows, doors)
- Interior finishes (flooring, walls, ceilings, doors, stairs, counters, cabinets)
- Electrical (power service and distribution, lighting, fire alarm systems, program bell systems, telecommunication systems)
- HVAC (existing air conditioning, ventilation, ceiling fans)
- Plumbing (water, sewer, fire protection, septic systems)
- Conveyance (elevators, wheelchair lifts)
- Site (driveways, parking lots, walkways, drainage systems, retaining walls, playcourts, athletic fields)

Projects to address major deficiencies, which are not fully funded, are placed on the deferred maintenance backlog (more commonly known as the “R&M Backlog”). These projects remain on the backlog until funds are appropriated, released, and budgeted for work to be done.

The R&M backlog does not include minor repair and maintenance projects (i.e., work orders), service maintenance work, emergency repairs, and classroom furniture and equipment.

B. Status of R&M Backlog and Recent Legislation

**R&M Backlog Totals - Trend**

The overall state of the condition of schools statewide can be measured by the total backlog amount. A decreased backlog amount indicates a better state of condition.

In 2013, the 28th Hawaii State Legislature appropriated $72,826,000 to fund major repair and maintenance projects. These funds enable the DOE to continue to perform R&M work. This amount, however, is only what is needed to offset the amount of projects that were added to the backlog over the same one-year period. As a result, the backlog remains nearly the same as it was this time last year (i.e., $265 million in September 2012 vs. $266 million a year earlier).
The chart below shows the overall downward trend of the backlog since 2001:

**Geographic Breakdown**

Further details of R&M Backlog, based on geographic areas, are as follows:

(Note: CPCS = Conversion Public Charter School)

<table>
<thead>
<tr>
<th>DISTRICT</th>
<th># OF SCHOOLS</th>
<th>TOTAL BACKLOG</th>
<th>AVERAGE BACKLOG PER SCHOOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>WINDWARD</td>
<td>31 (incl. 1 CPCS)</td>
<td>$29,248,000</td>
<td>$943,000</td>
</tr>
<tr>
<td>LEEWARD</td>
<td>43 (incl. 1 CPCS)</td>
<td>$32,381,000</td>
<td>$753,000</td>
</tr>
<tr>
<td>CENTRAL</td>
<td>42</td>
<td>$36,530,000</td>
<td>$870,000</td>
</tr>
<tr>
<td>HONOLULU</td>
<td>54 (incl. 1 CPCS)</td>
<td>$60,668,000</td>
<td>$1,123,000</td>
</tr>
<tr>
<td>HAWAII</td>
<td>43 (incl. 2 CPCS)</td>
<td>$49,410,000</td>
<td>$1,149,000</td>
</tr>
<tr>
<td>MAUI</td>
<td>32 (incl. 1 CPCS)</td>
<td>$39,863,000</td>
<td>$1,246,000</td>
</tr>
<tr>
<td>KAUAI</td>
<td>16</td>
<td>$16,447,000</td>
<td>$1,028,000</td>
</tr>
<tr>
<td>TOTAL</td>
<td>261 (incl 6 CPCS)</td>
<td>$264,547,000</td>
<td>$1,014,000</td>
</tr>
</tbody>
</table>
III. Program Management

Conditions are assessed on the various facility components and systems to determine if repairs are needed. The facility repairs can be categorized as follows:

- **Component repairs/replacements** – to address deficiencies for the repair and maintenance of the existing physical plant;
- **Structural improvements** – to address structural deficiencies that may impact the service life of an existing building;
- **Health and safety type improvements** – to address code or regulation deficiencies that may affect the use and/or occupancy of the existing building;
- **Classroom refurbishment** – to sustain the interior and exterior finishes for an existing school;
- **Electrical/Infrastructure improvements** – to sustain the electrical and telecommunication infrastructure for an existing school on a campus-wide basis based on current program requirements; and
- **Hazardous material removal** – to remediate hazardous material that may pose an immediate risk to use of the existing physical plant.
Each category identifies types of projects which must be addressed through repair, replacement, and/or renovation of existing buildings and site components. The intent of regular R&M is to extend the useful life of the existing buildings and infrastructure at our schools until it is deemed necessary to recapitalize or rebuild a building, a set of buildings, or an entire school.

Together, these major categories facilitate the management of current and future R&M needs. Individually, the short-term and long-term planning, estimated costs, and the anticipated campus impact are factors in the coordination, prioritization, and decision-making within each of these major categories.

There are currently two projects at the forefront of updating the existing buildings and infrastructure, (i.e., the Converged Network Infrastructure Project and the Whole School Classroom Renovation Program).

The Converged Network Infrastructure Project will establish a unified infrastructure combining enhanced program bell, public address, mass messaging, and digital building controls. This, in turn will enable the DOE to improve and upgrade nearly all school networks and manage capital improvements in order to add wireless networks. This project is also laying the groundwork for voice communication systems and the capability to add new digital building control systems to the network.

The Whole School Classroom Renovation Program was launched in 2001 in an effort to renovate nearly 200 schools that were at least 25 years old at that time. The work generally consists of the replacement of windows, flooring, tack boards, whiteboards, light fixtures, doors and door frames, finish hardware, termite-damage repair, sinks and cabinets, security screens, re-keying of locks, interior and exterior painting, minor concrete repairs, room signage and other minor repairs. These renovations help create a positive and more comfortable environment in which to learn, in addition to renewing the overall condition (i.e., state of repair) of the school. Going forward the DOE plans to continue the Program to renovate those schools that have not been renovated but have now reached the 25 year mark.

IV. Future Financial Needs

A. Total Projected R&M

The overall state of repair of schools can be measured in part by the total backlog of R&M projects and their associated costs. In order to put this amount into better perspective, it is important to understand what represents a steady state condition and how the associated costs are derived relative to DOE's inventory of facilities.
Steady state is defined as a stable condition that does not change over time or in which change in one direction is continually balanced by change in another. The American Public Works Association (APWA) estimates that facilities will naturally degrade over time at an approximate annual rate of 2% to 4% of the current replacement value of the physical assets (not land). For the DOE's physical assets the current replacement cost of $6.9 billion would translate to an annual funding requirement of between $138 million (i.e. 2%) to $276 million (i.e. 4%) per year to keep up with facility repairs. However, based on past history, $138 million is closer to the amount of funding needed for ongoing repair and maintenance to keep facilities in a steady state and thus not add to the R&M backlog.

The current backlog amount is $265 million, to reduce this would require additional funding. For example, if we were to consider eliminating the existing R&M backlog over the next six years, an additional $44.2 million per year would be required, in addition to the steady state funding of $138 million to manage repairs that are needed annually.

B. School Prioritization of Upgrades

The amount of funds appropriated by the Legislature over the last few years has greatly helped to bring down the R&M backlog, but as our schools get older it is expected to become more difficult to keep up with the major repair projects needed on school campuses. To prioritize the work needed, the DOE uses criteria established under H.R.S. Chapter 302A-1505. The number of prioritized projects that are funded is dependent on the amount appropriated by the Legislature and subsequently released by the Governor.

C. Aging of Schools

As our schools age, their condition becomes a greater issue. A breakdown of the percentage of schools by age is as follows:

- 100 years and older: 16%
- 75 to 99 years: 20%
- 50 to 74 years: 18%
- 25 to 49 years: 34%
- 10 to 24 years: 8%
- Less than 9 years: 4%

This breakdown can be summarized in two points. First, more than half of the schools are over 50 years old. Second, 88% of them are more than 25 years old.

Buildings are normally estimated to have a useful service life of 25 to 50 years depending on the type of construction. Many of our schools are well
beyond their service life. Industry standards normally depreciate building value based on a 50 year service life. This depreciation rate means that these physical assets should be recapitalized (rebuilt or made new) every 50 years. Thus, an additional 2% (i.e. 1/50th or $138,000,000) of the total current replacement value of physical assets (not land value), should be budgeted each year for the purpose of recapitalizing facilities through restoration, modernization, or total replacement. This 2% for recapitalization is in addition to the 2% needed to support a steady state of repair & maintenance. Given that more than half of the schools are already over 50 years old, more aggressive funding levels are required. For this budget year the DOE would ask that an additional $138,000,000 be budgeted to begin the process of recapitalizing our inventory of facilities.

In summary, annual future budget needs for sustainment (R&M) and recapitalization of the existing physical plant for the following six years are as follows:

**Repair & Maintenance**

| Repair/replace components/systems (reduce exist R&M backlog): | $44.2 million/year for 6 years |
| Repair/replace components/systems (annual degradation): | $138 million |
| Subtotal: | $182.2 million |

Needed annually for six years for sustainment (R&M)

**Recapitalization**

| Restore/replace existing buildings/campuses that reach 50 year in service: | $138 million |
| Restore/replace existing buildings/campuses that currently have more than 50 years in service: | $138 million minimum |
| Subtotal: | $276 million minimum |

Needed annually for recapitalization

**Total:** $458.2 million minimum

Needed annually for six years for sustainment (R&M) and recapitalization inventory of facilities
Please note: This is a summary of budget needs related specifically to the sustaineit and recapitalization of existing school buildings and campuses. This amount does not include new schools needed for additional capacity, new buildings needed for program support, or other facilities needed to improve equity in learning environments across the state. Capacity, Program Support, and Equity are traditionally managed through Capital Improvement Projects.

V. Summary

Since 2001 there has been significant progress in reducing the R&M backlog of repairs that had accumulated, as well as needed repairs that have come up annually since that time. The financial support of the Hawaii State Legislature has been essential to this effort.

Because of the continued costs associated with keeping the existing physical plant in working order, and for sustainment, continued financial support will be needed annually. In addition, the backlog of repairs needs to be reduced rather than be allowed to increase. It is estimated that at least $182 million is needed annually, for the next six years, to maintain a steady state of repairs and to effectively reduce the existing R&M backlog.

An equally important issue to be considered is the aging of our schools. While proper repair and maintenance can extend the useful life of existing buildings and infrastructure, there is a point where it makes better financial sense to recapitalize or rebuild a building, a set of buildings, or an entire school rather than continue to maintain an outdated and worn facility. It is estimated that at least $272 million is needed annually for effective recapitalization of the current inventory of structures. This amount represents $138 million/year to bring our aging inventory up to modern standards and $138 million needed to continue working forward so that DOE schools do not fall behind once again.

Greater efforts by the DOE will focus on plans for recapitalization and continuing to leverage the funds allotted to provide safe, sustainable, and secure learning environments that support the nearly 183,000 students who currently attend our public schools.