State of Hawaii

Department of Accounting and General Services

# A Comprehensive Six-Year Plan to Repair and Maintain Public School Facilities in the State of Hawaii

Pursuant to Act 316, SLH 2001

Submitted to the
Twenty-First Legislature

A Comprehensive Six-Year Plan to Repair and Maintain
Public School Facilities in the State of Hawaii

## I. Introduction

In an effort to address the $640 million repair and maintenance backlog in school facilities, Act 316, SLH 2001 created a comprehensive new system to manage the repair and maintenance process. A key component of the new system requires the School Repair and Maintenance Program to develop a 6-year plan that coordinates the efforts of both the Department of Education (DOE) and the Department of Accounting and General Services (DAGS), and the various funding sources that target school facilities. Contained in this Act, is a State Educational Facilities Repairs and Maintenance Fund to handle repairs identified as of June 30, 2001. Thereafter, a School Physical Plant Operations and Maintenance Fund was created to complete repairs identified after June 30, 2001.

The Act allows appropriations to be placed into either fund, according to need. For Fiscal Year 2002, $56.8 million, i.e., $50 million in CIP R&M funds and $6.8 million in general funds has been infused. Also, $75 million in CIP R&M funds appropriated through Act 3, 2001 Third Special Session has recently been added. For the supplemental budget year (Fiscal Year 2003), the Executive Budget Request reflects a total of $255 million in CIP R&M funds and $6.5 million in general funds for major repairs.

## II. The Plan's Goal

To supplement the aforementioned funding, an infusion of $70 million per year in CIP R&M funds and $6.5 in general funds for Fiscal Years 2004-2007 will:

a. Completely renovate classrooms buildings at 229 schools statewide. This reflects all schools that will be 25 years or older by Fiscal Year 2007 and 87% of the total inventory of 263 schools. In fact, funds to accomplish all work could be fully encumbered as early as mid-Fiscal Year 2005.

b. Bring the backlog of $640 million in school repairs down to a manageable level, as well as addresses the anticipated growth of those repairs identified as part of the new repair backlog.

Projected Backlog as of Fiscal Year 2007

* $159 million – State Educational Facilities Repair and Maintenance Account
* $167.2 million – School Physical Plant Operations and Maintenance Account

The desired outcomes which support this plan include:

- Visual Impact

  Visual impact on school facilities will be maximized by grouping repairs as total renovations, as opposed to being initiated as individual projects.

- Cost Effectiveness

  Overall program costs for renovations are reduced through economies-of-scale, e.g., bulk purchases and reduction of travel time between jobs.

- Responsiveness

  The 6-year plan will identify school repair priorities and construction schedules. Schools can anticipate construction and plan accordingly. Uncertainty and perceived inequity over scheduling is diminished.

- Scalability

  The plan is scalable, which means that decision-makers will be able to see the impact of funding at various levels, and the corresponding inventory of projects by school district. Projects are sequenced to assure that the most needy schools are addressed first.

- Partnering with the Private Sector to Get the Job Done

  The infusion of an additional $75 million in CIP R&M funds for Fiscal Year 2002 and proposed $255 million for Fiscal Year 2003 will help stimulate the State's recovering economy. It will also offer opportunities for the private sector to partner with DAGS trade staff statewide, to accomplish classroom renovation projects as well as other R&M. Approximately 90% of all CIP R&M funds will be channeled through the private sector.

- Minor and Emergency Repairs – As a preventative measure, renovations will eliminate much of the minor and emergency repair requests. Although difficult to predict, definite savings in terms of manhours, travel time and material costs are assured.

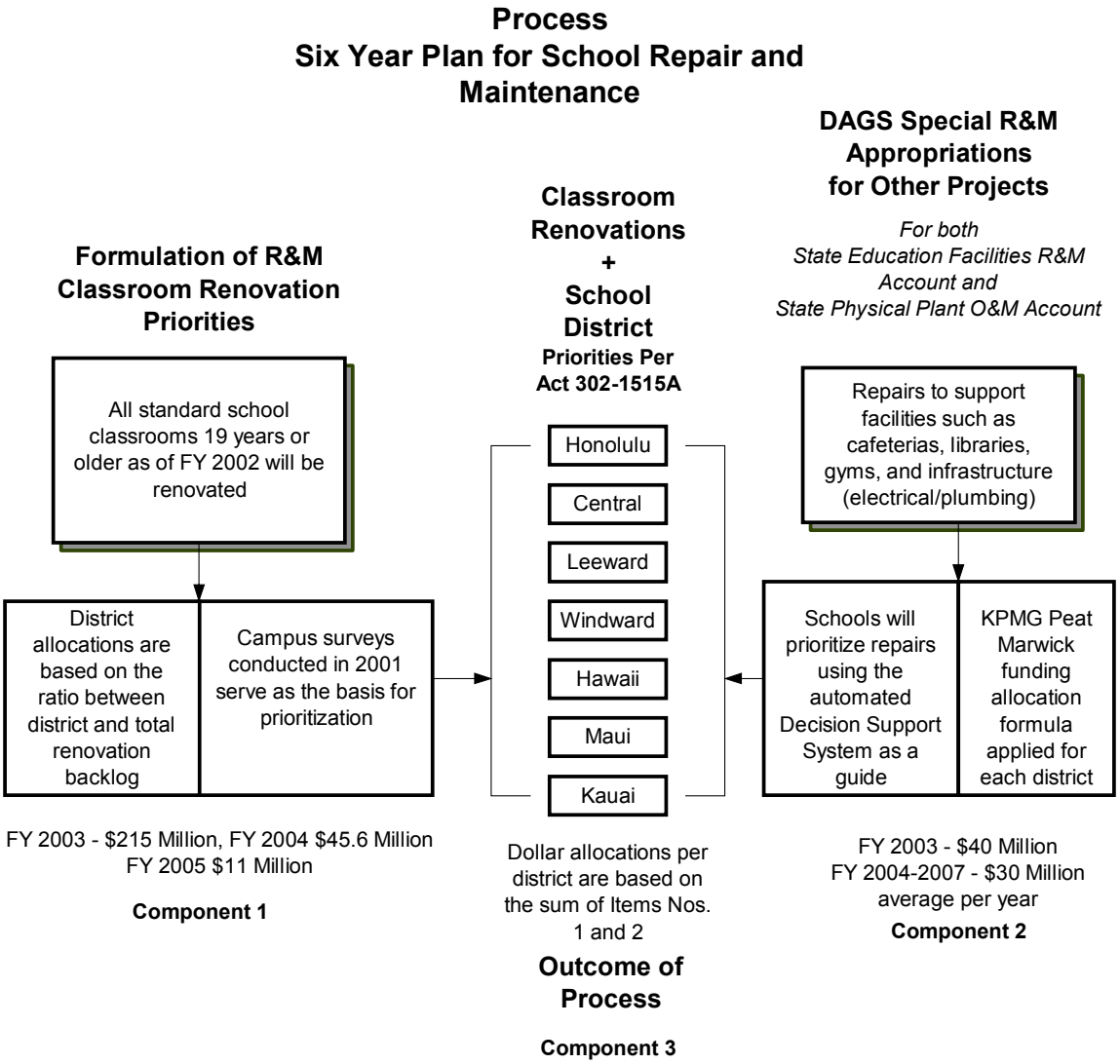
## III. Plan Components

The plan has two major components and a third summary component. They are:

- Classroom Renovations (standard 30' by 30' classroom)
- Special R&M for Other Projects
- Outcome Component

A flowchart of how repairs are prioritized, and how funding is allocated for each school and district is described below. Subsequently, a detailed description of each component follows.

**Exhibit I**



Explanation of flowchart:

**Component 1: Formulation and Purpose of R&M Classroom Renovation Priorities**

How School Allocations were Formulated

The total dollar amount of each district's renovation costs is divided by $333 million, which reflects the total cost for eligible schools statewide. The derived percentage is multiplied against an identified allocation for classroom renovations. This percentage will remain constant to allocate major classroom renovation projects for 229 schools planned by mid-Fiscal Year 2005.

Subsequent to the allocation of funds, the numerical rating obtained through on-site surveys of each school will determine priority.

Example:

Honolulu School District - $69.3 million in identified renovations
Total cost for eligible schools - $333.7 million

a. $69.3 divided by $333.7 = 20.8%

b. The 20.8% is multiplied against the total year's allocation.

c. For example, 20.8% x $63 million = $13.1 million allotted for the Honolulu School District.

d. Note that the $63 million is hypothetical. The actual number is derived based on the fiscal year appropriation amount, less funding for Special R&M projects identified as in Component 2 of Exhibit I.

e. A complete breakdown of school renovations by fiscal year is provided in **Attachment I and Attachment II.** The information contained is based on $255 million in CIP R&M funds for Fiscal Year 2003, and $70 million in CIP R&M from Fiscal Year 2004 through mid-Fiscal Year 2005.

f. Included in the above attachments, are numerical rating for inspection surveys used to prioritize schools.

Purpose of Classroom Renovations

Aside from erecting a new school facility, the renovation of classrooms is the most efficient way to affect dramatic, direct and functional changes to the learning environment. Since Fiscal Year 1996, the School R&M program has been accomplishing "whole campus" classroom renovations.

The Plan considers all schools that are currently over 19 years of age, since they will be at least 25-years in age by the end of Fiscal Year 2007. The 25-year milestone has been selected for two reasons. First, from experience, this is the upper limit for significant interior classroom deterioration. Second, the timeframe assures that the repair will qualify for CIP R&M funds.

Repairs will visually enhance the standard 30 feet by 30 feet classroom, while eliminating many major, minor and emergency repairs from the backlog. A typical renovation includes complete interior/exterior painting, overlaying floor tile, the change-out of shelving, new lighting, new windows, and new chalk or white boards. Restrooms renovations in classroom buildings are also completed at the same time.

A portion of classroom furniture that requires refurbishing will be handled by the Department of Public Safety. Through its Correctional Industries Program, this effort translates to approximately 8,000 pieces of student desks and chairs annually. However, the majority of furniture beyond repair, will be purchased as new. This support function will allow all classrooms to have a completely remodeled look and feel. Contingent upon the number of renovations, a ratio of $30,000 for each $1 million in school repairs may be required.

**Component 2: DAGS-R&M Appropriations for Individual Projects**

Formulation, Purpose and Outcome

Primarily, support facilities such as cafeterias, libraries, gyms, parking lots and athletic complexes must be repaired. Cyclical requirements such as the replacement of air conditioning units, reroofing and school furniture, which are not covered by renovations must also be done.

For Fiscal Years 2002-2005, projects will be funded at adequate levels, i.e., approximately $20 million annually. The KPMG Peat Marwick formulation to allocate funds based on age, size and student population will be utilized to identify funding levels for each district.

Subsequently, schools are required though HRS§ 302A-1515 to prioritize repair projects. The Decision Support System Model developed by Arizona State University is available to schools to assist in prioritizing repair work. It should also be noted that $40 million for this activity is being proposed for Fiscal Year 2003, based on a $255 million appropriation.

From mid-Fiscal Year 2005 through Fiscal Year 2007, necessary classroom renovations will be fully initiated and funding priorities will be reversed. Attention will turn to address a significant portion of other types of Special R&M projects in both Funds. As previously mentioned, approval of the $255 million proposed appropriation for CIP R&M in Fiscal Year 2003, coupled with the infusion of $70 million in CIP R&M annually for major repairs through Fiscal Year 2007 will bring backlogs within manageable levels.

**Component 3: Outcome of Process – Funding for classroom renovations and other types of facility repairs.**

The Department of Education will allocate funds to each school district and school. After prioritization is complete, DAGS-Central Services Division will determine the best method to complete repairs. Generally, work addresses health and safety issues first, and complement classroom renovation. For example, refurbishing of a classroom building also includes a thorough assessment of its roof system, to prevent water leaks and damage of newly renovated areas. However, consideration is also given to those schools that will not be renovated during the next 6 years.

## IV. Impact of the Six Year Plan on Backlog

**Background**

By infusing funds for classroom renovations, a dollar for dollar ratio cannot be achieved. This is due to the fact, that not every component of a renovation repair has been captured on the existing backlog list. However, a 75% reduction rate is realistic, based on samplings.

For other types of Special R&M repairs, a direct one-to-one correspondence is achieved in reducing the backlog for both repairs identified in both the Educational Facilities Repairs and Maintenance Fund and Physical Plant Operations and Maintenance Fund.

**Expected Results**

If the proposed plan is funded, the impacts will be as follows:

***State Education Facilities Repairs and Maintenance Fund***

***Projected for Fiscal Year 2007, the backlog will be approximately $167 million.***

***State School Physical Plant Operations and Maintenance Fund***

***Projected for Fiscal Year 2007, there will be an approximate $159 million backlog. Presently, the backlog is $36 million. Based on projected growth of $51 million annually, a cumulative total of $306 million is anticipated. This total will be drawn down by about $147 million in allotment during the 6-year period.***

**Areas of Concern**

- Funding – the most obvious obstacle to attaining the expected results is lower than projected funding levels.

- Upgrades – electrical and plumbing upgrades to are necessary, and funding may be required to accomplish this work. Consequently, balances may be higher if such upgrades are initiated in lieu of drawing down projects already appearing on backlog.

- Availability of Contractors – may require the reordering of priorities to match industry capability. Consequently, the rate of reduction in either fund could be affected. For example, if the amount of reroofing projects in the Educational Facilities Repair and Maintenance Fund exceeds industry capability, a portion of such projects could be deferred in favor of other repairs appearing in the School Physical Plant Operations and Maintenance Fund. Consequently, the backlog in the former fund would decrease at a slower rate, while the later would show an increase.

A summary of the expected results are provided in the table provided in Exhibit II on the following page.

# EXHIBIT II

## Impact on Backlog:

**State Educational Facilities Repair and Maintenance Account (Old Backlog as of 6/30/01)**

**School Physical Plant Operations and Maintenance Account (New Backlog after 6/30/01)**

| | Estimated Allocation | Percentage Reduction From Backlog | Dollar Amount Reduced From Backlog | Old Backlog Balance | Funding Applied to Reduce New Backlog |
|---|---|---|---|---|---|
| Backlog of Old Projects | | | | 612,000,000 | |
| Estimated New Backlog @$51 million x 6 years | | | | | 306,000,000 |
| **Fiscal Year 2002** | | | | | |
| Classroom Renov. | 63,000,000 | 0.75 | 47,250,000 | 564,750,000 | |
| Other R&M (Old) | 7,000,000 | 1.00 | 7,000,000 | 557,750,000 | |
| Other R&M (New) | 5,000,000 | 1.00 | | | 5,000,000 |
| **Fiscal Year 2003** | | | - | | |
| Classroom Renov. | 213,370,000 | 0.75 | 160,027,500 | 397,722,500 | |
| Other R&M (Old) | 28,430,000 | 1.00 | 28,430,000 | 369,292,500 | |
| Other R&M (New) | 20,000,000 | 1.00 | | | 20,000,000 |
| **Fiscal Year 2004** | | | - | | |
| Classroom Renov. | 45,542,000 | 0.75 | 34,156,500 | 335,136,000 | |
| Other R&M (Old) | 17,858,000 | 1.00 | 17,858,000 | 317,278,000 | |
| Other R&M (New) | 13,400,000 | 1.00 | | | 13,400,000 |
| **Fiscal Year 2005** | | | - | | |
| Classroom Renov. | 11,040,000 | 0.75 | 8,280,000 | 308,998,000 | |
| Other R&M (Old) | 64,960,000 | 1.00 | 64,960,000 | 244,038,000 | |
| Other R&M (New) | 31,400,000 | 1.00 | | | 31,400,000 |
| **Fiscal Year 2006** | | | - | | |
| Classroom Renov. | - | | - | | |
| Other R&M (Old) | 38,400,000 | 1.00 | 38,400,000 | 205,638,000 | |
| Other R&M (New) | 38,400,000 | 1.00 | | | 38,400,000 |
| **Fiscal Year 2007** | | | - | | |
| Classroom Renov. | - | | - | | |
| Other R&M (Old) | 38,400,000 | 1.00 | 38,400,000 | 167,238,000 | |
| Other R&M (New) | 38,400,000 | 1.00 | | | 38,400,000 |
| Balance of Old Backlog | | | | 167,238,000 | |
| Funds Expended Towards New Backlog | | | | | 146,600,000 |
| Estimated Balance for New Backlog | | | | | 159,400,000 |

# V. Budget Requirements

## Short and Long Term Trends

After the infusion of funds in Fiscal Year 2003, the program is projecting a $70 million annual CIP R&M need. In addition, $6.5 million in general funds is budgeted to handle non-CIP eligible projects. Ideally, the later funding should be doubled to approximately $13 million to realistically handle non-CIP eligible projects.

According to the American Public Works Association, a 2%-4% repair and maintenance budget based on total replacement value of the physical plant is recommended. In today's terms, this places Special R&M funding requirements after Fiscal Year 2007 at $51 million annually, at the 2% level.

## Staffing Needs

a. Trade Staff

Although 90%+ of appropriated funds are channeled towards the private sector, DAGS believes that an additional 70+ trade staff provides the flexibility to do a portion of the work more economically, and with the same quality. As envisioned, the positions would be temporary in nature, with an evaluation made during Fiscal Year 2005 to extend longevity.

This proposal is based on the success of trade crews in accomplishing whole classroom renovations. Through Fiscal Year 2005, each DAGS district will devote adequate resources to accomplish an average of 163 classroom renovations annually per district. In order to successfully conduct whole campus classroom renovations, the DOE and schools must be receptive to construction, other than during summer months. Recent experiences at Dole and Kalakaua Middle Schools substantiates that work during the school year is possible.

As a means of comparison, Exhibit III shows costs for three different types of budget options are provided for $36 million in classroom renovations. This sum represents the maximum amount of renovations that could be handled by an augmented trade crew.

# Exhibit III

Summary of R&M Alternatives for "Whole Campus" Classroom Renovations (163 classrooms annually)

| Repair and Maintenance Alternatives | | Annual Cost |
|---|---|---|
| | | |
| Alternative I | | |
| Existing DAGS Personnel + 10 Temporary Positions per District | | $20.5 Million |
| | | |
| Alternative II | | |
| Partnership between Public and Private Sector | | $28 Million |
| (Private sector paints, DAGS performs interior renovations) | | |
| | | |
| Alternative III | | |
| Exclusively Contract R&M through the Private Sector | | $36 Million |

- Alternative I ($20.5 million annually) appears most economical and logical, since trade staff can be directed where needed. These positions would work full-time on weekends, which maximizes productivity. In order to achieve this goal, it is necessary to fund 10 temporary Building Maintenance Workers per district or 70 total, at an annual salary of $29,736. If these positions are project funded, an additional 40% is required for fringe benefits. Current expenses are also included for materials and supplies.

- Alternative II ($28 million annually) will require coordination between the private and public sector to accomplish repairs. As envisioned, painting would be the demarcation line for this effort. However, in geographically remote areas, additional or full private sector support may be required.

- Alternative III ($36 million annually) basically delegates the entire renovation process to the private sector. Under this scenario, an additional $15.5 million, which is 75% more than Alternative I is required. If adopted, DAGS trade staff would concentrate on completing major repairs other than classroom renovations.

b. Other Clerical and Professional Staffing

Primarily, Engineers, Building Inspectors and clerical support are required to expedite work requirements. However, without establishing a firm funding level, it is difficult to identify actual need. If funding exceeds $56.8 million as established by Act 259 SLH 2001, the program would request to create additional project funded positions though the budget process.

## VI. Hawaii 3Rs Program, Federal Grants and Federal Funds

The productivity of the 6-year year plan is enhanced by the infusion of outside resources. Through Act 309 SLH 2001, the Legislature appropriated $500,000 annually for Fiscal Year 2002 and 2003, to perform school repairs through the formation of community-private sector partnerships. Leveraged, this investment has the potential to yield more than a million dollars in equity. Similarly, the Department of Education has applied and received a federal grant totaling $4.2 million to perform school repairs in areas which have a student population in which 40% of families qualify as "low income."

For Fiscal Year 2001 and 2002, the program has also utilized $5 million annually, in Federal funds allocated for State schools with a high percentage of children of military dependents. These funds were channeled through the Federal Department of Defense by Senator Daniel Inouye's Office to help repair Hawaii's schools. Specific work was done through the Army Corp of Engineers, and did not involve the transfer of Federal funds to the State. For Fiscal Year 2003, Federal legislation has been passed to again utilize Federal funds and projects through both the Corp of Engineers and Hawaii 3Rs Program.

Through complementary initiatives, it will be possible to accelerate the pace of school repairs. "The sky is the limit," and these fledging self-help programs hold great promise to increase their future outputs. As such, the program will testify during the 2002 legislative session for continuation of the Hawaii 3Rs program beyond Fiscal Year 2003, and consider action to make the program's coordinator an exempt appointment at an annual salary of $52,000. It will also look in conjunction with the DOE for continued sources of Federal funds to target certain types of repairs and groups. However, the long term emphasis will continue to be on implementation of the 6-year plan discussed in this report.

## VII. Execution of Plan

The following outlines the proposed annual execution process for the 6-Year Plan. It logically starts with the conclusion of the Legislative session in the month of May.

a. May-June:

DAGS will allocate funding by school district, based appropriations received during the legislative session completed in May of each year. This funding will be accomplished according to the intent of the 6-Year Plan. Release of funding will be solicited through the Governor's Office.

b. July:

DAGS will initiate and phase-in classroom renovation and Special R&M projects based on district funding levels and school priorities identified during annual project prioritization visits that occur during the previous Fall. This process is on-going through out the fiscal year. A combination of DAGS trade staff, and where needed, private sector assistance will be utilized. To the greatest extent possible, projects are to be accomplished through 3-informal bids of up to $100,000 allowed by Act 316 SLH 2001.

c. September-November

DAGS/DOE staff will conduct on-site campus visitations statewide to identify and prioritize classroom renovation and Special R&M projects for the coming fiscal year. As part of this process, the Decision Support System Model developed by Arizona State University can be utilized as a guideline in prioritizing projects.

d. January:

In order to demonstrate accountability, a progress report on the 6-year plan will be provided to the Legislature. However, interim reports will be available through the DAGS Internet website. This capability will in part, be contingent upon the development of an integrated database which is discussed in the following Section XI, Item No. b.

e. Year-round:

First, inspections accomplished by DAGS Building Inspectors and DOE Business Specialist of school facilities will continue to identify new projects and reconfirm the scope for a select number of existing projects. Second, the Hawaii 3Rs Program will remain on-going through Fiscal Year 2003 to assist in reducing the backlog of repairs at selected schools, who are interested in implementing such a project.

## VIII. Summary of Requirements

The development of this 6-year plan is only the beginning of a continued systematic approach towards school repairs. Along the way, there will be many milestones, or key events, that must occur. As such, the following summarizes key needs:

a. First, there must be a commitment from the Administration and Legislature to fund R&M programs at consistent levels. This translates to $70 million annually for DOE CIP R&M and at least $6.5 million in general funds. Ideally, at least $13 million in general funds would be required to adequately handle non-CIP eligible projects such as painting, recarpeting and termite treatment. Without proper funding, it is difficult to implement a planned approach, since a significant portion of construction activity is deferred to meet immediate needs, i.e., health and safety repairs.

b. Second, work is presently underway to integrate the CIP and R&M databases for three key organizations, i.e., DAGS-Central Services Division, DAGS-Public Works Division, and the DOE-Division of Administrative Services/Facilities Branch.

A consultant, Total Resources Management, Inc. has been retained to spearhead this effort. With the first phase targeted for completion in the Fall of 2002, a new integrated database will replace the need for the aforementioned organizations to keep multiple, independently functioning databases.

Specifically, this capability will allow for:

1. Tracking of repair projects from "cradle to grave," and the identification of responsibilities, and progress during each major work phase.

2. Automatic compilation of project costs from financial databases existing in the State FAMIS accounting system.

3. Ability for the public, schools and Legislators to view project status via the Internet and download information to create ad hoc reports.

4. A historical inventory of work accomplished at any given facility and timeframes for preventative or cyclic maintenance work.

5. A more precise means of estimating project cost, which takes into account, the use of national standards.

6. A master inventory listing of both CIP and R&M projects that are funded, planned, scheduled and an unfunded backlog list.

7. An on-line customer survey that incorporates user (school) comments on completed work, as a means for self-improvement in the delivery of R&M services.

c. Third, as an outcome of implementing an integrated database and accelerating the pace of school CIP and R&M, there must be a commitment to provide the necessary staffing resources. The program believes that placing 10-temporary Building Maintenance Workers in each school district (70 total) will be the most flexible and cost effective solution. These workers would work regular time on weekends and after school hours, perform repetitive tasks to build competency and speed, in performing classroom renovations. Along with this effort, there is a need to phase in additional staff. This resource is needed to support both added clerical as well as engineering assignments related to accomplishing a greater number of major repair projects. As previously cited, additional staffing will only be requested after a thorough assessment of both existing and projected workload.