



BEYOND THE STATUS QUO:

CREATING A SCHOOL MAINTENANCE PROGRAM

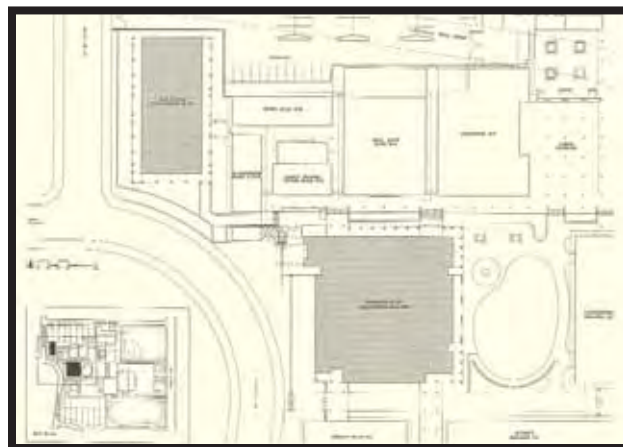
As the school administrator, a principal is responsible for ensuring a safe, healthy, attractive place to teach and learn. A comprehensive school maintenance program will help principals care for their school buildings.

After a school building is constructed and turned over to a school district for educational use, it is imperative for the school district to initiate a comprehensive school maintenance program. New buildings begin to deteriorate because of inclement weather and routine wear and tear almost immediately, and lack of or deferred maintenance can lead to damages that require substantial repairs. The U.S. General Accounting Office indicates that \$112 billion is needed to complete all the repairs, renovations, modernizations, and deferred maintenance that are required to bring U.S. schools up to good overall condition (Lewis 1995). The deplorable conditions of our school buildings were further reported by Ennis (1998) and a special facility team formed by the Association of School Business Officials (Honeyman 1999).

A well-planned maintenance program that starts with the birth of a new school building will prolong the life expectancy of the building and save the school district a tremendous amount of money. Good school building maintenance encourages good community relations. Therefore, it is essential that school districts develop effective maintenance programs for new school buildings and that school principals play a leading role.

The Principal and the School Maintenance Program

After a school is built, the general contractor grants the school district a one-year warranty. During the warranty period, school district maintenance staff members usually refrain from performing any repair work to the school building



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because they assume that repairs are the contractor's responsibility. But this does not mean that school maintenance work should be put off for a year. In fact, maintenance should start the day a new school building is opened. As the saying goes, Everything that starts well ends well.

Although school maintenance is basically the work of the school district's maintenance department as the business administrator of a school, a principal ensures that the school provides a safe, healthy physical environment conducive to teaching and learning. In addition, he or she establishes the goals of school maintenance to reflect the vision statement.

To establish realistic goals for a new school maintenance program, the principal needs to acquaint him- or herself with the physical environment and the emotional effects of the school building and be familiar with the following:

Original Plan: The designers can inform the principal of their original planning ideas. Such knowledge will give the principal a better understanding of the building's functionality.

Operating Systems: The basic components of a school building are its architectural, electrical, plumbing, and mechanical systems. Basic knowledge of these systems includes identifying the mains, the controls, the overrides, the emergency shutoffs, and the programming options of the operating systems (Chan 1998).

Strengths and weaknesses: The principal will be able to best use the school's facilities if he or she understands the strengths and weaknesses of the building's design and functional capacity.

School image: A new school building represents an image of the school district and the educational services it offers to the community. Principals who maintain clean and

attractive school buildings project positive images of their school districts (Chan and Pool 1999).

Principal's role: Understanding his or her role as building administrator and the school district's planning and maintenance chains of command will help the principal work with the architect, the engineers, the contractor, and the subcontractors, particularly during the building warranty period.

Occupant-oriented maintenance: Teachers, staff members, students, and parents are partners in maintaining a new school building.

Maintenance Goals

The goals of maintaining a new school building are legion. From ensuring building safety to maintaining a clean and attractive environment, school maintenance should support learning. Other goals include energy conservation and prolonging the life expectancy of the school. It is important to set realistic maintenance goals for a new school building because these goals become the pioneering footprints for future maintenance efforts. Principals might consider setting the following goals:

1. Maintain a physically safe environment. Safety is the number one concern of most principals. All operational systems of a new school building have to be completely checked to ensure the safety of its occupants.
2. Maintain a clean and healthy environment. Keeping a school building neat and clean ensures not only an attractive building but also the health of the teachers and the students.
3. Maintain an attractive environment. An attractive ➤



environment stimulates teachers' and students' positive attitude toward the school. This positive attitude will translate into positive behaviors.

4. Maintain an energy conservation plan for the new school building. Any amount of money saved from an energy conservation effort means more money that the staff can spend on classroom use.
5. Prolong the life expectancy of the new school building. A well-maintained school building will last longer than a poorly maintained one because potential problems can be detected and addressed before they become calamities.

After a principal identifies the maintenance goals, they will serve as guidelines in developing an outline of the maintenance program. Many new ideas can be included as part of the program to maintain a new school building.

Outlining a Maintenance Program

It is a mistake to think that a new building won't require maintenance. A new school building that is well maintained from its inception will remain a valuable educational resource of the school district for many years. The principal could consider the following creative ideas for developing an effective maintenance program for a new school building:

Facility inventory: An inventory of a new school building includes basic information about it: square footage; property acreage; number of classrooms; special facilities; building capacity; roofing, mechanical, electrical, security, and fire safety systems; plumbing; flooring; and color scheme. The purpose of this facility inventory is to construct a database for quick references, especially in case of emergency. Information in this database can be edited in different formats to suit particular uses.

School building archive: A school building archive is the collection of materials that relates to the history of the building. The archive is a record of the existing physical settings and all subsequent changes. These documents could include educational specifications, technical specifications, construction drawings, meeting records, bidding package, construction contracts, sample materials, names of architects, engineers, contractors, subcontractors, change orders, contract closeout documents, punch list, warranty items, and records of construction disputes. School building evaluations can also be included. Any information about repairs or improvements to school facilities in the future can also be added.

Management of punch list and warranty items: Punch list items are items on a list of work yet to be performed by the building contractor to complete a school construction contract. Warranty items are items that malfunction during the first year of building operation. The contractor is responsible for addressing all the punch list and warranty items. The school district planning staff expects school principals to document and verify any building problems, and the attempted repairs, that occur during the warranty period. Completion of all punch list and warranty items marks the final completion of a school construction project. Any outstanding item that is not properly addressed during the warranty period will become the school district's problem (Chan and Ledbetter 1999).

Custodial service: During a school day, the principal depends on reliable custodial service. Staffing, scheduling, and job responsibilities are some of the basic considerations of custodial service. A detailed schedule and an outline of job responsibilities will ensure efficiency and effectiveness. The number of custodians allotted to a school is based on the pupil enrollment, the square footage of the school building, or a combination of both. When the pupil enrollment is under building capacity, the school is sometimes short-changed and receives less custodial help. Custodians—like other school staff members—should attend district workshops to further their knowledge and skills.

Proactive maintenance: A proactive school building maintenance program will detect problems at an early stage, when they are still controllable. Proactive maintenance starts with developing a checklist of functions essential to operating a school building. The head custodian could be assigned the responsibility of periodically inspecting all the items on the checklist. The principal and the head custodian will need

the faculty, the staff, the students, and the parents to keep them updated of the problems and difficulties they detect in the daily operation of the school building. The advantage of the proactive maintenance approach is to create a routine pattern of inspection so administrators can locate potential problems instead of waiting for problems to emerge.

Projected maintenance schedule: A projected maintenance schedule is developed based on the specifications of building materials and the experience of the architects, the engineers, and the school district maintenance staff. Principals can use the schedule to budget appropriate funds for projected maintenance needs. Another advantage of the projected maintenance schedule is to forecast the rundown time of the building component systems before the entire system fails. Reroofing, repainting, and carpet and equipment replacement are typical examples of items on the projected maintenance schedule.

Energy conservation: Energy conservation is a big money saving item for a school district. The energy costs for a typical 100,000-square-foot school building amount to \$90,000 annually.

If all U.S. public schools upgraded their space to meet energy-conservation standards, they would save nearly \$733 million a year” (Harrigan 1999). Some energy conservation features have been built into the components of the school building design, such as insulation, thermal paint windows, weather stripping, energy efficient light fixtures, and energy efficient HVAC systems. The principal can work with the school district to establish the time and temperature range of the heating and air-conditioning units. He or she could also encourage faculty and staff members to turn off lights when rooms are not in use. Some school districts even financially award the schools with energy saving effort.

School Building Appreciation Campaign: An aesthetically and functionally designed school building is the pride of the community and the building occupants. A campaign could be organized to promote pride in a school building. Faculty and staff members could help advertise the campaign by highlighting the special features of the building and how the community and the students benefit from them. Appreciation of a school building tends to lower the likelihood of its being vandalized. Some schools even develop activities to involve students in school maintenance to increase their sense of building appreciation.

Evaluation of School Building Maintenance

School buildings are generally designed with ease of maintenance in mind. However, some of the easy maintenance ideas may not work the way they are designed. Custodial staff members, who have hands-on experience of school

maintenance, can inform administrators and designers of the practicalities of the maintenance ideas. An evaluation of the maintainability of the school building will examine the time, the effort, and the costs of maintaining it. The results of the evaluation could include a list of maintenance ideas that work and those ideas that don't. This list will help school designers' efforts in the future. The designers could also use the list to suggest alternative methods to overcome maintenance difficulties.

The school maintenance program, once developed, should be evaluated annually. Emphasis should be placed on identifying the needs, the resources, the effort, and the achievement of the maintenance program. This is the time to explore alternative maintenance methods to achieve better efficiency.

A new school building deteriorates rapidly unless it is supported by an effective maintenance program. To develop an effective maintenance program, principals need to understand the systems that operate the school building. It is essential that principals develop a realistic school maintenance program that outlines the activities that will maintain a safe and healthy school. Finally, an evaluation of a maintenance program examines how well the program fulfills its intended purpose. As the building administrator, the school principal leads the way to maintaining a school building.

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