Conclusion

The Brevard County School District follows efficient and effective facility management practices and has implemented innovative programs to increase its effectiveness. Exhibit 10-1 provides MGT’s overall conclusions regarding facilities maintenance in the areas of:

- cost-effective methods;
- legal responsibilities;
- use of qualified staff;
- annual budget;
- maintenance standards;
- health, safety, energy efficient and cost-effective operations; and
- community use of facilities.

Exhibit 10-1

MGT Came to Numerous Positive Conclusions Regarding the District’s Facilities Maintenance

<table>
<thead>
<tr>
<th>Facilities Maintenance Area</th>
<th>MGT’s Conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost-Effective Methods</td>
<td>The district periodically evaluates maintenance and operations activities to determine the most effective means of providing needed services, including consideration of management, outside contracts or privatization, and joining associations of other government agencies. (page 10-9)</td>
</tr>
<tr>
<td>Legal Responsibilities</td>
<td>The board provides procedural guidance in areas such as replacement and selection of equipment, purchasing of supplies and materials, levels of maintenance expectations, and maintenance and operations budget criteria. (page 10-13)</td>
</tr>
</tbody>
</table>
Exhibit 10-1 (Continued)

MGT Came to Numerous Positive Conclusions Regarding the District’s Facilities Maintenance

<table>
<thead>
<tr>
<th>Facilities Maintenance Area</th>
<th>MGT’s Conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of Qualified Staff</td>
<td>The Office of Plant Operations and Maintenance has adequate staff to meet its program goals and objectives. (page 10-16)</td>
</tr>
<tr>
<td></td>
<td>The Office of Plant Operations and Maintenance has written a job description for each position within the department. (page 10-19)</td>
</tr>
<tr>
<td></td>
<td>The district clearly communicates performance standards to maintenance and operations staff. (page 10-19)</td>
</tr>
<tr>
<td></td>
<td>The district provides appropriate supervision of the maintenance and operations staff. (page 10-20)</td>
</tr>
<tr>
<td></td>
<td>The district provides a staff development program that includes appropriate training for maintenance and operations staff to enhance worker job satisfaction, efficiency, and safety. (page 10-22)</td>
</tr>
<tr>
<td>Annual Budget</td>
<td>The administration has not developed budgetary guidelines to provide for funding in each category of facilities maintenance and operations. (page 10-24)</td>
</tr>
<tr>
<td></td>
<td>The board has an established provision for a maintenance reserve fund to handle one-time expenditures necessary to support maintenance and operations. (page 10-28)</td>
</tr>
<tr>
<td>Maintenance Standards</td>
<td>The district has established maintenance standards in its short- and long-term plans for providing adequately maintained facilities. (page 10-29)</td>
</tr>
<tr>
<td></td>
<td>The district uses its maintenance standards to evaluate maintenance needs. (page 10-31)</td>
</tr>
<tr>
<td></td>
<td>The district has a system for prioritizing maintenance needs. (page 10-32)</td>
</tr>
<tr>
<td></td>
<td>The district accurately projects cost estimates of major maintenance projects. (page 10-34)</td>
</tr>
<tr>
<td></td>
<td>The district minimizes equipment costs through purchasing practices and maintenance. (page 10-34)</td>
</tr>
<tr>
<td></td>
<td>The district provides the Maintenance Department staff with tools, training, and instruction to accomplish their assigned tasks. (page 10-36)</td>
</tr>
<tr>
<td></td>
<td>The district has established a computerized control and tracking system to accurately track inventory, parts and materials used, and provides a reordering system. (page 10-37)</td>
</tr>
<tr>
<td></td>
<td>The district ensures that maintenance standards are updated to implement new technology and procedures. (page 10-38)</td>
</tr>
</tbody>
</table>
Exhibit 10-1 (Continued)

MGT Came to Numerous Positive Conclusions Regarding the District’s Facilities Maintenance

<table>
<thead>
<tr>
<th>Facilities Maintenance Area</th>
<th>MGT’s Conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Health, Safety, Energy Efficient, and Cost-Effective Operations</strong></td>
<td>The district has established standards for health and safety. (page 10-40) The district does use external benchmarks to determine a cost-effective manner of meeting its health and safety standards. (page 10-41) The district uses external benchmarks to achieve energy efficiency. (page 10-42) Hazardous materials management complies with federal and state regulations. (page 10-42) The district has a comprehensive and systematic program for dealing with school safety and security. (page 10-43)</td>
</tr>
<tr>
<td><strong>Community Use of Facilities</strong></td>
<td>The district follows established procedures for making school facilities available to the community. (page 10-45) The district meets accessibility requirements for persons with disabilities. (page 10-45)</td>
</tr>
</tbody>
</table>

Source: MGT.

Fiscal Impact of Recommendations

One recommendation in this chapter has a potential fiscal impact – the effect of the development of budget guidelines for maintenance and operations. While the development of maintenance budgeting guidelines can be done with existing resources, implementation of the guidelines could ultimately have a significant fiscal impact on the district. Depending upon the goal of the budget guidelines, we estimate that implementation of the guidelines could result in annual costs of three to four million dollars annually. However, the district may choose a method of developing budget guidelines that will result in lower annual costs. (For further discussion, see page 10-24.)

Background

The facilities maintenance function for the Brevard County School District is the responsibility of the Plant Operations and Maintenance Department. The mission statement for the department is:

To provide a safe, secure, well-maintained, healthful environment to all facility occupants. We will strive to continually improve our service processes and satisfaction levels.

MGT of America, Inc.
Facilities Maintenance

The department has five major functions:

- maintenance of facilities
- work control
- custodial services
- safety and environmental services
- energy management

Exhibit 10-2 presents the organizational chart for the department. The department has a staff of 170 and is responsible for maintaining the district’s 51 elementary schools, 14 middle schools, 10 senior high schools, two junior/senior high schools (grades 7-12), one special school, two alternative schools, and all district facilities. The department is overseen by the Director of Plant Operations and Maintenance and divides the district into five zones. Each zone, representing a geographic area of the district, contains approximately 20 schools, and is overseen by a supervisor.

**Maintenance of Facilities**

In 1995, the department reorganized its maintenance crews to improve its service delivery. The department divided the district into five geographic zones and assigned a crew of maintenance mechanics to each zone. The crew is called a FAST Team, short for Facility Assessment Site Team, and is made up of approximately 15 to 17 mechanics. The team has staff from each trade, such as electrical, carpentry, plumbing, and mechanical. The FAST Team visits each school in its zone on a scheduled basis, (approximately one to two visits every two months) and responds to previously submitted work order requests. The team also responds to any additional maintenance needs assessed during the visit.

School administrators are informed of the scheduled FAST Team visit at least one month in advance. This allows the school administrator time to seek input and work requests from school staff, prepare any needed work orders, and submit them to the Maintenance Department prior to the FAST Team visit. At the same time, the FAST Team supervisor reviews work orders before arriving on-site and pulls together any materials and equipment the crew will need to address the work orders. The team spends one to two days at each school depending on the size of the school and the amount of work to accomplish.

Each FAST Team is responsible for 15 to 21 schools and district facilities. In addition to regularly scheduled visits, emergency or urgent requests are handled by the team mechanics as they arise. Some teams have crews that have districtwide responsibilities in addition to their school-specific responsibilities. These teams include roofing crews and field maintenance crews.
Exhibit 10-2
Organizational Chart for the Plant Operations and Maintenance Department, 1998-99

Source: Brevard County School District.
In addition to the FAST Teams, the department has a planned maintenance crew and a central services crew. The planned maintenance crew provides preventive maintenance services to all district facilities after school is out or during hours of minimal occupancy. The central service crew is largely responsible for HVAC equipment, HVAC computer controls, athletic fields, light equipment, carpentry, locksmith, kitchen equipment, and pool maintenance. Each team/crew supervisor has responsibilities in addition to supervising staff, such as conducting ADA assessments, checking playground equipment safety, and coordinating with the parks.

Major repair and renovation projects and capital projects are overseen by a team composed of the maintenance coordinator, project managers, and inspectors. This team assesses the scope of a project, prepares cost estimates for budgeting, drawings, specifications and requests for bids, oversees the bidding and construction process, and ensures compliance with contract documents. The district has many small-to-medium-sized projects annually, typically ranging from $1,000 to $500,000. To avoid a cumbersome bidding process for each project, the department uses an annual bidding process where it selects three pre-qualified contractors to complete a variety of construction projects. Any project over $5,000 in value is bid out among the three selected contractors.

**Work Control**

The Work Control unit performs the following functions:

- work order control
- budget accounting
- human resources
- payroll

Work order control consists of receiving work order requests from schools and district facilities, establishing work order priority, issuing work orders to the appropriate crew, tracking the progress of the work order, and completing all accounting for the work order. The work control unit has three staff and uses a sophisticated work order tracking software system called The Maintenance Authority (TMA). TMA allows the group to track work orders and produce a variety of weekly and monthly reports to assist in the management of the workload.

In addition to work order control, the group tracks the plant operations and maintenance budget and prepares reports for the Director of Plant Operations and Maintenance. The unit also prepares the payroll for the Maintenance Department and handles all human resource responsibilities for the department. Human resource responsibilities include preparing and reviewing job descriptions, preparing job announcements, initial screening of applicants, maintaining personnel records, and maintaining training records.

**Custodial Services**

The district has adopted a site-based management philosophy, whereby the responsibility for a school facility is with the school site administrator, and consequently the direct responsibility for custodians is with the school site administrator. Custodial Services offers support to the school site administrators by:

- establishing custodial standards;
- developing custodial procedures;
- providing custodial training;
Facilities Maintenance

• conducting site inspections;
• selecting equipment and cleaning materials; and
• overseeing contracted custodial services.

The district has contracted out custodial services for 11 schools to American Building Maintenance (ABM). The original contract, issued in 1995 for eight schools, realized a savings of $789,503 or 47 percent of previous custodial costs. The district projected annual savings of at least $2.9 million if all school custodial services were contracted out. In January 1998, the board authorized district staff to explore the possibility of contracting out the custodial services for all schools. In October 1998, the board rejected a proposal to provide custodial and grounds maintenance, largely due to skepticism regarding the quality of existing privatized services and strong pressure from parents and existing custodial staff. A quality control committee is currently conducting inspections of the schools that continue under the ABM contract to assess the level of service. The district is also conducting a yearlong comparison during the 1998-99 school year between schools using ABM and those without. The results of the evaluation will determine whether the district privatizes all custodial services. There is no further action planned at this time regarding privatized custodial services for the district.

Safety and Environmental

This unit of eight staff members is responsible for providing safety and environmental programs for all district facilities. Responsibilities include:

• providing safety and environmental training for all maintenance staff;
• conducting safety and environmental inspections;
• reviewing all capital projects for safety and environmental issues;
• correcting all safety inspection deficiencies;
• responding to and evaluating all indoor air quality programs;
• managing the Integrated Pest Control Program;
• managing the districtwide Asbestos in Buildings Program;
• managing the Hazardous Materials & Underground Storage Tank Program; and
• managing the district-owned wastewater treatment plants.

The unit has developed a structured training program to ensure all maintenance employees receive the appropriate safety and environmental training. Each maintenance employee’s training record is tracked. Supervisors can schedule training sessions for their staff by logging into the district’s intranet, where course and training schedule data are posted.

The unit contracts for some inspections and services when it does not have the expertise or the required number of staff, or it is more cost effective. Contracted services include asbestos monitoring, asbestos removal, underground tank removal, pest control, and fire extinguisher maintenance. In 2001, the state requirements for Fire Safety Inspectors increase dramatically. The unit is currently investigating methods for the district to meet these new requirements in a cost-effective manner.
Energy Management

The district’s energy management program is administered by the staff engineer. The major thrust of the program is a performance contracting effort, which is currently in Phase II. Phase I, completed in 1998-99, included 10 schools, receiving lighting retrofits, new LED exit signs, chiller replacements, and trash compactors. When compared to the district’s average energy cost of $0.91 per square foot per year, the Phase I schools have seen an average reduction in energy costs of $0.10 per square foot per year. The district has been recognized by the Federal Energy Star Program for its accomplishments in Phase I.

Phase II of the Energy Management Program will include more schools and expanding the program. Forty-six (46) schools will receive lighting retrofits, 48 schools will enact water conservation measures, 55 schools will receive trash compactors, and 55 schools will receive air conditioning system renovations, new chillers, and thermal storage units. This program is required, by contract, to have a payback period of 10 years, whereby the cost of the improvements will equal the savings produced in 10 years.

In addition to the performance contracting program, the district has installed computer controls for the HVAC systems in 51 of its 80 schools. The systems are monitored centrally by an energy control manager, who identifies and corrects any inefficiently or inappropriately operating systems. Field problems, which cannot be handled by the central computer system, are handled by two technicians. Central accounting staff monitors the energy bills and reports irregularities to the program manager.

The Office of Plant Operations and Maintenance has achieved some notable accomplishments and achievements in the last three years. These accomplishments and achievements are illustrated in Exhibit 10-3.

Exhibit 10-3

The District Has Had a Number of Notable Accomplishments in Facilities Maintenance in the Last Three Years

- The department has created FAST Teams to increase department efficiency, which has resulted in a work order backlog reduction of over 50 percent due to improved planning and scheduling. This backlog reduction has occurred despite a 40 percent increase of preventive maintenance work.
- The department has implemented a proactive approach to maintenance management. Today, over 50 percent of all work accomplished is a result of self-generated inspections and PM programs.
- Work order response times have improved from a 90-day cycle to a less than 30-day cycle.
- The Energy Management Program will result in guaranteed utility cost savings in excess of $20 million over 10 years.
- The district has been recognized as an EPA Energy Star Partner as a result of the Energy Management Program.
- The department has high customer satisfaction ratings – over 93 percent of principals indicated they were satisfied with maintenance services.
- The department has created a planned (preventive) maintenance team that uses predictive maintenance techniques to minimize maintenance problems.
- The department has implemented an annual assessment of each school to determine maintenance needs and develop a long-range plan.
- The department has implemented the FMT (facilities maintenance technician) program, which places a mechanic at a school site to increase efficiency.

Source: Brevard County School District.
Are the Best Practices for Maintenance and Operations Services Being Observed?

Goal: The district uses cost-effective methods of providing maintenance and operations services.

1 The district periodically evaluates maintenance and operations activities to determine the most cost-effective means of providing needed services, including consideration of management, outside contracts or privatization, and joining associations of other government agencies.

The district evaluates its services for cost effectiveness, and compares the cost of performing maintenance services in-house with private contractors. The district is clearly identifying cost-effective measures for each support activity. The district evaluates ways it can provide maintenance services and reduce costs. The district considers outsourcing and the privatization of services in an effort to minimize costs and evaluates bids established by other government agencies to see if utilizing these bids will save funds.

The District Has Established Cost Effectiveness Measures

The district has identified the costs of maintenance and operations in several performance measures. They have then compared these performance measures against various state, national, and international averages and standards in order to assess their performance financially. While the district refers to these comparison measures as "benchmarks," they are really comparison measures since the district has not established performance targets. Exhibit 10-4 presents these benchmarks.

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1 The district’s usage of the term ‘benchmark’ differs from OPPAGA’s usage, as defined in Chapter 4.0 of this report (page 4-29).
## Exhibit 10-4

### Maintenance and Operations Has Established Performance Measures and Compares Them to Benchmarks 1998-99

<table>
<thead>
<tr>
<th>Performance Measure</th>
<th>Brevard</th>
<th>District’s Benchmarks</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintenance Cost/SF</td>
<td>$0.88</td>
<td>Whitestone Bldg. Maintenance and Repair -- $1.49</td>
<td>Includes PECO charge back.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The DOE Florida Average -- $1.33</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>International Facilities Management Association (IFMA) -- $2.09</td>
<td></td>
</tr>
<tr>
<td>Maintenance Cost/Student FTE</td>
<td>$132.00</td>
<td>The DOE Florida Average -- $181.75</td>
<td></td>
</tr>
<tr>
<td>Maintenance Cost as % of Replacement Cost</td>
<td>0.8%</td>
<td>Building Research Board of National Research Council -- 2-4%</td>
<td>1. Assumes $85/SF replacement cost of 9.7 million SF.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>KPMG Orange County Audit -- 71%</td>
<td>2. Uses 98/99 budget for Facilities and Maintenance.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>American Society of Testing and Measurement (ASTM)/IFMA -- 66%</td>
<td></td>
</tr>
<tr>
<td>Overall Customer Satisfaction</td>
<td>96%</td>
<td>KPMG Orange County Audit -- 71%</td>
<td>1998 customer satisfaction survey report is source -- 0 percent of customers were dissatisfied. [n=713]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>American Society of Testing and Measurement (ASTM)/IFMA -- 66%</td>
<td></td>
</tr>
<tr>
<td>Maintenance and Operations Cost/SF</td>
<td>$3.51</td>
<td>The DOE Florida Average -- $4.32</td>
<td>Region 4 is the southeast region of the United States.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The IFMA Southeast -- $5.52</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>American School &amp; University (AS&amp;U) Region 4 -- $2.89</td>
<td></td>
</tr>
<tr>
<td>Custodial Cost/SF</td>
<td>$1.53</td>
<td>Cleaning and Maintenance Institution (CMI) (K-12) -- $1.98</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>American Building Maintenance -- $1.18</td>
<td></td>
</tr>
<tr>
<td>Building Space/Custodian FTE</td>
<td>18,410 SF</td>
<td>CMI -- 25,000 SF</td>
<td>Assumed 440 FTEs and subtracted 1.6 million SF of contracted space.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AS&amp;U Region 4 -- 24,678 SF</td>
<td></td>
</tr>
</tbody>
</table>

Source: Brevard County School District.

### The District Evaluates Cost Savings of Contractors

The district currently has 11 schools with contracted custodial services. The cost effectiveness of this service has been evaluated several times by comparing the costs of the contractual services with the cost of providing them in-house. The source of the in-house costs used as a basis for comparison came from the “Analysis of Custodial Labor and Non-Labor” report prepared by the district’s Office of Budget. The comparison shows a saving of $2 million since the inception of privatized custodial services. The district continues to monitor the cost effectiveness of this arrangement by comparing costs of outsourced custodial services at the 11 schools with a comparable set of 11 district schools with in-house custodial services.
The district has also issued a performance contract for energy management. The contractor reported first year savings of $127,260, which was more than the $86,154 guaranteed savings. This program will be expanded in the second year of the program.

The District Evaluates Effectiveness of Contractors

The district issues an Outsourcing Assessment Report on a bi-monthly basis. The February 1998 report included the results of a survey of the 11 schools that currently have outsourced custodial services. The principals were asked to rate the custodial service on 19 performance measures. The performance measures generally included the level of cleanliness and whether proper procedures were being followed. The overall average score was 3.04 out of a possible 4.00, which indicated the custodial service provided by the vendor was performing per the requirements of the contract. This was an improvement over the survey conducted the previous year, which revealed some dissatisfaction with the services in the level of cleanliness. The district required changes in the performance on the part of the contractors and custodial services have improved to a point where most of the customers rate the service as good or better than the previous in-house service.

The Facilities Office of Plant Operations and Maintenance also has standard evaluation forms that asks school administrators to rate the work of private firms under contract with the district for various projects. The administrator certifies that the work has been completed in full by signing the forms. In addition, the administrator is asked to rate the overall project process by answering the following questions:

1. Were you informed in advance as to plans for this project?
2. Was there adequate communication as to project progress during construction?
3. Were problems resolved in a timely manner?
4. Were you given an opportunity to review the completed project prior to acceptance?

The district has also evaluated materials bought through the competitive bid process and does not always accept the lowest bid if the materials are not acceptable. This was the case for painting equipment where the low bid was rejected because the materials were inferior as determined by previous district experience.

The District Evaluates Existing Services

The Plant Operations and Maintenance Department has evaluated expanding the privatized custodial services from the current 11 schools to the whole district. The grounds maintenance function was also included in this evaluation. Proposals were received from three contractors and a proposal was submitted to the board. The proposal called for the gradual implementation of privatized services, using attrition to replace district employees with contracted employees so no district employees would lose their jobs. Privatization was one of the district’s Strategic Plan objectives under the facilities priority area for the year. The board did not vote on the proposals, for fear that privatized services would not be of the same quality as in-house services, and decided to only approve the current contract for 15 schools.

The department conducts an annual survey of principals, to assess its performance and identify possible areas of improvement. In 1997, the department distributed 735 surveys and had 669 returned, for a response rate of 91 percent. Of the survey respondents, 93 percent rated Maintenance Department operations and services as good or better, with 61 percent of the responses being excellent or outstanding.
In addition, the department asks customers to complete an evaluation form at the conclusion of each Planned Maintenance Teams visit. The evaluation form rates the crew on:

1. quality of work
2. time used productively
3. personnel courtesy
4. job site cleaned up
5. custodial support
6. overall rating

The form also allows the evaluator to make any additional comments.

The preventive maintenance program is also evaluated on a regular basis. The department’s maintenance engineer prepares a monthly quality control report on the HVAC preventive maintenance program. The report includes the following items:

- Database corrections – these are corrections to the HVAC database that catalogs the equipment types and sizes;
- Program scope – outlines the current scope of the preventive maintenance program;
- Task completion – identifies the amount of work assigned and completed;
- Task quality – assesses how well the tasks were completed;
- Task list report – addresses improvements in the work procedures recommended by mechanics, supervisors, and the engineer; and
- ID tag report – addresses the progress of tagging all the equipment.

The maintenance engineer has issued RFPs to establish approximate prices for the maintenance of HVAC equipment. The results were evaluated to determine if it was less expensive for the district to outsource the work or keep it in-house. It was determined that it was less expensive to perform recurring services with in-house staff and to perform specialized services with private contractors.

**The District Consolidates Efforts with Other Agencies**

The district has formed partnerships with a variety of government agencies to achieve cost savings.

- The Maintenance Department has discussed with Brevard County, the City of Titusville, the City of Cocoa, and the City of Melbourne the potential for joint inspection of back-flow prevention valves.
- The district has an agreement with Brevard County for joint use of the district’s swimming pools and for sharing the costs of pool maintenance and capital improvements. These costs are divided equally between the district and the county.
Facilities Maintenance

Are the Best Practices for Performing Maintenance and Operations Functions Being Observed?

Goal: The district ensures that maintenance and operations functions are performed in accordance with legal responsibilities.

1 The board provides procedural guidance in areas such as replacement and selection of equipment, purchasing of supplies and materials, level of maintenance expectations, and maintenance and operations budget criteria.

The board provides procedural guidance for the majority of maintenance operations. The Maintenance Department does not have a board-approved mission statement but does have board-approved procedures.

The Board Has Not Formally Approved the Mission Statement

The Maintenance Department has a written mission statement that the board has reviewed, but not formally approved. The mission statement identifies all facility occupants as the priority customer. The statement was developed with the help of the Maintenance Improvement Team, which only included supervisory staff. The Employee Involvement Team will review the mission statement this year [1999] in order to provide their input.

The mission statement is posted throughout the maintenance facility and printed on the front of every issue of the department's monthly newsletter. Employees are aware of the mission statement and know that it is published in the monthly newsletter. The mission statement is;

To provide a safe, secure, well-maintained, healthful environment to all facility occupants. We will strive to continually improve our service processes and satisfaction levels.

The mission statement should be approved by the board to ensure it is consistent with district’s mission statement and board policy.

The District Has Board-Approved Maintenance Procedures

The district has board-approved written procedures that provide for the replacement and selection of equipment; purchasing of supplies and materials; level of maintenance expectations and maintenance standards; maintenance and operations budget criteria; management of facilities; facilities standards; personnel staffing policies; and use of facilities and equipment. The policies are briefly described below.

Replacement and Selection of Equipment – These procedures describe the appropriate approvals necessary for replacing equipment.

Purchasing of Supplies and Materials – These procedures outline the steps that must be followed to purchase supplies and materials.
Level of Maintenance Expectations and Maintenance Standards – The Organizational Standards and Procedures for Operations and Maintenance details the expectations and standards for each supervisor and each trade in the following areas:

- FAST Teams
- Planned Maintenance
- Work Control
- Central Services
- Safety and Environmental
- Capital Projects
- Engineering Support
- Information and Communication

Maintenance and Operations Budget Criteria – All supervisors and technical staff are required to submit budget request forms during the budget preparation process. The forms identify the following budget areas:

- personnel
- contract services
- training
- equipment less than $750
- equipment greater than $750
- equipment greater than $3,000
- miscellaneous
- computer hardware greater than $750

The forms require a description of the request, the dollar amount, the justification, and the impact on the district if not approved.

Management of Facilities – places day-to-day facility management responsibilities with the school administrator under the site-based management policy.

Facility Standards – are established for several areas; custodial standards, health and safety standards, fire inspection standards and indoor air quality standards.

Personnel Staffing Policies – the board has a personnel staffing plan that includes a staffing formula for custodial staffing levels but not for maintenance workers. Divisional staffing, which includes the maintenance workers, is covered by the following statement:

The level of staffing for divisions is controlled through the budgeting process and is based upon the level of desired services. Allocations may be periodically adjusted by the Superintendent, based upon need and financial resources.
Use of Facilities and Equipment – The board policy on the use of facilities and equipment by district employees describes the reasons district property cannot be used. These reasons include:

- for commercial or personal gain;
- for programs involving any form of gambling or any illegal activity;
- for private teaching;
- for activities in violation of any Board regulation; and
- by any organization that believes in or teaches the overthrow of the government.

The Maintenance Department has developed plans and procedures to ensure it is complying with district policies. These plans and procedures cover maintenance procedures and organization, pest management, hazardous waste, pollution control, and personnel.

Operating Procedures Are Up-to-Date and Available to Personnel

The Employee Handbook for the Office of Plant Operations and Maintenance contains procedures for maintenance employees. The Handbook includes:

- Mission Statement
- Organizational Structure
- Operations
- Administrative Procedures
- Advantages and Benefits
- FAST Team Organization
- Planned Maintenance
- Work Control
- Central Services
- Safety and Environmental
- Capital Projects
- Custodial Services
- Engineering Support
- Information and Communication
- Acknowledgement Signature Sheet
- Reorganization Chart

The Handbook was last revised and published in August 1998. All employees are given a copy of this manual and a copy of The Organizational Standards and Procedures for Operations and Maintenance, last updated in August 1999. Procedures developed in between revisions of these handbooks are placed in an interim procedures file. These procedures are reviewed when the publications are revised, as needed. All employees receive training in these procedures and in job safety.
**Recommendation**

- The Director of Maintenance should submit the mission statement to the Superintendent and the School Board for review and formal approval.

**Are the Best Practices for Operations and Maintenance Personnel Being Observed?**

**Goal:** The district accomplishes maintenance program goals and objectives through the use of qualified maintenance and operations personnel or contracting for services.

1. **The Office of Plant Operations and Maintenance has adequate staff to meet its program goals and objectives.**

   Though the Maintenance Department has adequate staff to meet its goals, it does not have a staffing formula. Custodial staff however, have a staffing formula that is appropriate and at a best practice level. The Maintenance Department is following appropriate procedures in recruiting and screening new staff.

**The District Has a Staffing Formula for Custodians, but Not Maintenance**

There is a staffing formula for operations, or the custodial function. As shown in Exhibit 10-5, the formula considers five factors -- number of teachers, number of students, numbers of rooms, total area of the building, and the number of acres. The formula weights each factor by establishing a ratio for the factor. The district allocates custodians to schools based on this formula. It considers all factors affecting needed custodial staffing. The staffing level that the formula produces is equivalent to best practice levels of one custodian per 19,000 square feet.
### Exhibit 10-5

**The District Has a Custodial Staffing Formula**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher Factor</td>
<td>number of teachers [= \frac{8}{1} ]</td>
</tr>
<tr>
<td>Student Factor</td>
<td>number of students [= \frac{225}{1} ]</td>
</tr>
<tr>
<td>Room Factor</td>
<td>number of rooms [= \frac{11}{1} ]</td>
</tr>
<tr>
<td>Area Factor</td>
<td>total area of building [= \frac{15,000}{1} ]</td>
</tr>
<tr>
<td>Site Factor</td>
<td>number of acres [= \frac{2}{1} ]</td>
</tr>
</tbody>
</table>

\[ \text{TOTAL} = \frac{\left( \frac{8}{1} + \frac{225}{1} + \frac{11}{1} + \frac{15,000}{1} + \frac{2}{1} \right)}{5} \times (0.85 \text{ or } 0.90)^2 \div 5 \]

\[ \text{TOTAL} = \frac{\left( \frac{8}{1} + \frac{225}{1} + \frac{11}{1} + \frac{15,000}{1} + \frac{2}{1} \right)}{5} \times (0.85 \text{ or } 0.90)^2 \div 5 \]

Source: Brevard County School District.

There is no staffing formula for maintenance personnel. The district staffing policy for support divisions is:

> The level of staffing for divisions is controlled through the budgeting process and is based upon the level of desired services. Allocations may be periodically adjusted by the superintendent, based upon need and financial resources.

Over the last seven years, from 1989 to 1997, the total square footage of facilities in the district has increased, while the number of maintenance staff has decreased. In that period, square footage rose 30 percent from 7.6 million to 9.7 million. At the same time, the number of maintenance staff decreased by one percent. The department adjusted to this by creating "FAST Teams" that visit each school on a regular schedule to perform non-emergency work orders and preventive maintenance tasks. Team members also respond to emergency and high priority work orders as needed. Through this innovation, from 1989 to 1997, the department has been able to decrease the backlog of work orders by 40 percent. The department has also been given high marks for customer satisfaction, as documented in customer surveys.

**Position Vacancy Notices Are Adequate**

The Maintenance Services section in the Maintenance Department prepares job vacancy notices and distributes them to be posted throughout the district and on the internet web page. The notices adequately describe the particulars of the position by detailing the following:

- qualifications
- knowledge, skills, and abilities
- to whom the position reports
- the goals of the position

\[ ^2 \text{In schools with more than 400 students, the district multiplies by 0.85; in schools with less than 400 the district multiplies by 0.90.} \]
- any supervisory responsibilities of the position
- performance responsibilities
- physical requirements
- terms of employment

Federal Guidelines for Hiring Procedures Are Followed

Although the Maintenance Department screens candidates to determine whether they meet the position qualifications, the employee selection process is overseen by the Human Resources Services Department. The Human Resources Department ensures that all selection processes meet with state and federal guidelines related to equal employment opportunities by reviewing all appointment forms and hiring documentation. This process is further detailed in Chapter 11.0 of this report. (See page 11-8)

Applicant Qualifications Are Evaluated

All applications are first screened by the appropriate supervisor to determine if the individual is qualified for the position based on the candidates' employment application, resume, and letters of verification. Qualified applicants are then invited for testing. Trade supervisors are responsible for preparing standardized tests and proctoring the testing session. All applicants who pass the test are scheduled for an interview. The supervisor conducts the interviews and fills out an interview evaluation sheet for each interviewee. Applicants with the best evaluation and testing scores are offered positions by the Director of Maintenance.

Procedure Does Not Specifically Require Reference Checks

The procedures in the maintenance employee handbook stipulate that the supervisor will determine if the applicant is qualified by reviewing the materials submitted by the applicant. The procedure does not specifically say that references have to be contacted. Not reviewing references could result in the hiring of an unsatisfactory employee. Procedure should require that a specific number (two or three) of references should be contacted. An explicit procedure will help ensure that this important step is not omitted or overlooked.

Qualified Applicants Are Recruited

The district attracts qualified applicants by posting job vacancy notices around the district and on the web page, advertising in the newspaper, and contacting employment agencies. These procedures are sufficient based on district size, location, and needs.

Recommendation

- The Maintenance Department should revise the procedures in its employee handbook to specifically require reference checks for job applicants.
The Office of Plant Operations and Maintenance has written job descriptions for each position.

The Maintenance Services section has current job descriptions for each position. The Maintenance Department has job description for all positions that are reviewed by the supervisory staff periodically. These job descriptions are kept in the central maintenance office and are available to the staff.

The Maintenance Department Has Job Descriptions

Job descriptions have been developed for all positions and include the following elements:

- basic data including title, pay grade and revision date of description
- job goal
- qualifications
- knowledge, skills, and abilities
- performance responsibilities
- physical demands
- work environment
- terms of employment
- evaluation
- machines, tools, equipment
- physical requirements
- physical activity
- working conditions

These job descriptions properly reflect the needs of the department and are reviewed and updated on a regular basis by the Maintenance Department and human resources. Though not reviewed on a formal schedule, the job descriptions were last reviewed in April 1998. The Human Resources section of the Maintenance Department is currently reviewing and updating them again.

Supervisory staff is given the opportunity to provide input in the development and revision of job descriptions. Job descriptions are kept in a binder in the front office of the Maintenance Department and are available for staff to review.

The district clearly communicates performance standards to maintenance and operations staff.

The Maintenance Department has established work standards and some performance standards and clearly communicates these to staff. Employees are regularly evaluated and are given the opportunity to review their evaluation. Additionally, staff members are provided opportunities for training in their skill area.
There Are Work Standards

Work standards are established for each trade in the *Organizational Standards and Procedures for Operations and Maintenance* manual. The manual establishes standards for all maintenance functions including administrative, engineering, work control, safety and environmental, custodial, and all the maintenance trades.

Work standards have also been established for the HVAC preventive maintenance program. The maintenance engineer prepares monthly progress reports for the director based on these standards.

Performance Standards for Planned or Preventive Maintenance Tasks Have Been Developed

The district has performance standards for commonly repeated tasks based on measures developed by R.S. Means, the national cost estimating publication, and is in the process of adapting these to the district’s circumstances. These measures are generally for planned or preventive maintenance tasks and are used to determine the amount of time a FAST Team will need to spend at each school. The department will expand the performance standards to include repair tasks once this first set of performance standards is fully implemented.

Employees Can Review Performance Appraisals

The department uses standard district forms to evaluate employees on an annual basis. These forms provide an appropriate format for conducting employee evaluations. These forms all have a space for the employee to sign acknowledging they have reviewed the evaluation and allow the employee to write in any additional comments.

Performance Training Is Provided

The district provides training opportunities in four major areas: trades enhancement, cross-trades, customer service and interpersonal, and safety training. Employees with potential exposure to certain circumstances are provided training in confined space entry, lock out/tag out, and hazardous materials response. Some training is required; some is optional. Environmental health and safety training is required. As part of this environmental health and safety training, all employees in the department attend Hazard Communication training. Other health and safety course requirements vary depending on job requirements. The Maintenance Department also requires that all its employees complete annual interpersonal skill training each year.

The district provides appropriate supervision of maintenance and operations staff.

The district provides adequate supervision but supervisor/employee ratios have not been established. The levels of authority and areas of responsibility however, are clearly indicated for the maintenance function. The district has a work order tracking system that is an effective management tool.

Board Procedures Are Followed in Staff Evaluations

Evaluations are performed using board-approved evaluation forms. The Human Resources Department maintains records of all evaluations. The evaluations address the following categories:
Facilities Maintenance

- Quality of Work
- Cooperation
- Tardiness
- Absence
- Overall Evaluation

For each of these areas, the supervisor must rate the employee in one of three categories -- below expectations, meeting expectations, or exceeding expectations. The form provides space for the supervisor to add comments for each area. These forms provide an appropriate format for evaluating the maintenance employees.

No Supervisor/Employee Ratios Established

There are no established supervisor/employee ratios in the district. Without established ratios, supervisors may be required to supervise more employees than they can effectively monitor. Based on MGT analysis, ratios in the industry typically range between 25:1 and 15:1, employees to supervisor. The actual ratio found in Brevard County School District fall within this range. Moreover, Maintenance Department staff is satisfied that this ratio is appropriate and functional.

Levels of Authority Are Clear

Levels of authority are clearly indicated by the organizational chart. Areas of responsibility are identified in the job descriptions and the Organizational Standards and Procedures for Operations and Maintenance. This manual identifies the specific responsibilities of each staff position and every employee receives a copy.

The Work Order Tracking System Is an Effective Management Tool

The district uses a work tracking software system called “The Maintenance Authority” or TMA. Weekly and monthly reports are prepared by the work load management section to increase the management capability. Reports include:

- backlog by type of work order
- backlog by repair center
- work order activity by repair center
- work order activity by type
- work activity by type and zone

The district has managed to reduce its backlog of work order by 40 percent from 1989 to 1997, in part due to the management capabilities of its work order tracking system, and to its reorganization into FAST Teams.

The system is capable of producing many more reports, as required by staff. These might include work order history of a school, hours worked by a trade, parts usage analysis, and many more.
Recommendation

- The district should establish written supervisor/employee ratios for the maintenance staff to ensure appropriate oversight of employees and work quality.

The district provides a staff development program that includes appropriate training for maintenance and operations staff to enhance job satisfaction, efficiency, and safety.

The district provides an appropriate staff development program. The district provides training in four major areas but there are no written training goals. The director of maintenance works with the Human Resources Department to ensure that training meets both technical and interpersonal needs. The staff development program utilizes professional trainers and solicits feedback from the staff. The district does not have an apprenticeship program.

There Is an Active Training Program

The district provides training opportunities in four major areas: trades enhancement, cross-trades, customer service and interpersonal, and safety training. Training in the first three areas is provided through professional and vendor-sponsored seminars, mentoring, and the Facilities Maintenance Technician Training Program. Training in the area of safety is provided by the health and safety staff. Training courses are provided for all types of staff -- engineering, environmental, maintenance, office support, and supervisors.

All employees receive annual safety training on hazardous communication (Right-to-Know) and bloodborne pathogens. Employees with potential exposure to certain circumstance are provided training in confined space entry, lock out/tag out, and hazardous materials response.

There Are No Written Training Goals

There are no written training goals for the maintenance and operations staff. Written training goals are important in establishing the purpose for the training program. Without goals, the training received by the staff may not serve the district’s needs. Training goals should identify how the training will benefit the district’s operation and effectiveness and be communicated to staff and administrators.

Maintenance Director Works with Human Resources

The Maintenance Director requests that the Human Resources Department provide training in areas difficult for the Maintenance Department to acquire due to budget constraints. For example, the director requested assistance in establishing training in interpersonal skills. This training was provided to all the maintenance staff.

Training Meets both Technical and Interpersonal Needs

The training program provides training in technical areas as well as interpersonal skills. Voluntary technical training sessions are offered in all trade areas. Some technical courses offered this year include:
• Variable Air Volume Class
• Fire Alarm Course
• Fire Safety Inspector Course
• Lawn and Ornamental Pest control
• Trane AC Clinic
• Roofing Class
• Centrifugal Pumps
• Electrical Code

Some of interpersonal/management courses offered this year include:

• Project Management Seminar
• Basic Supervisor Seminar
• How to Build a Better Team
• How to be a Better Trainer
• Orlando Women’s Conference

**Appropriate Trainers Are Used**

The department uses qualified instructors to conduct the training programs. These instructors include staff from the Human Resources Department, outside vendors, and professional trainers. The Maintenance Department handles the contracting of trainers. Trainers for courses taken this year have come from a variety of appropriate trade and instructional areas, including:

• Johnson Controls
• SRS Systems
• University of Tulsa
• National Fire Protection Association
• Fred Pryor Seminars
• Fire College Trust Fund
• Clemson University

**Staff Feedback is Obtained on Training**

The Facility Maintenance Technician (FMT)/cross trades program and the safety-training program have standard evaluation forms and procedures. The FMT/cross-trades evaluation asks the following types of questions:

• What aspect of the program did you like best and why?
• What specific topic was the most and least informative?
• What needs to be done or changed to make a better program?
This feedback is used to improve the effectiveness of the training programs. This process is a good way to ensure that training programs meet staff needs.

**An Apprenticeship Program Is Not Offered**

The district does not have an apprenticeship program. The Maintenance Department is pursuing establishment of an apprenticeship program through the Brevard Community College training program. This program will be used to establish an HVAC apprenticeship position.

**Recommendation**

- *The department should establish written training goals for each of the four areas for which training is offered to ensure that the training meets district and staff needs.*

**Are the Best Practices for Maintenance and Operations Budgets Being Observed?**

**Goal:** The district has an annual budget for facilities maintenance and operations to support annual ongoing maintenance and deferred maintenance requirements to control and track maintenance and operations costs.

1. **The administration has not developed budgetary guidelines to provide for funding in each category of facilities maintenance and operations.**

While the district does have a long-term plan, there are no written budget guidelines used in establishing appropriate funding levels for recurring or routine maintenance, major maintenance, preventive maintenance, staffing levels, and training. Instead, the operating budget is based on previous funding levels, which are far below industry standards. The budget addresses short-term and long-term goals and provides funds for preventive maintenance and recurring maintenance tasks.

**The Budget Addresses Short- and Long-Term Goals**

The Maintenance Department Budget addresses both short- and long-term goals. Short-term goals are addressed through the “Recurring Maintenance Program” and are paid for through the operating budget. Routine maintenance, preventive maintenance, predictive maintenance, and emergency maintenance services and strategies are integrated into the Recurring Maintenance Program. Recurring maintenance is the department’s “core mission” and is defined as “Routine, short-term tasks executed on an as-needed basis or preventive basis to maintain/extend the useful life of the facility asset.”

Long-term goals are addressed through the “Major Maintenance and Repair/Capital Renewal Program” and are paid for through the capital budget. The district maintains a five-year work plan of needed capital
Facilities Maintenance

improvements with cost estimates, which includes these major maintenance activities. The Executive Summary of the plan provides a breakdown of the current year budget by programs such as “Deferred Maintenance,” “Maintenance Projects,” “Portable Leases/Repairs/Moves,” and “New Construction.” This plan is negotiated with the board on a continuing basis and the current year capital budget is derived from this document.

The Budget Provides for Preventive Maintenance

The district funds annual ongoing maintenance programs, or preventive maintenance, through the operating maintenance budget. This budget is for routine, preventive, predictive, and emergency maintenance services. The operating budget is not divided between “ongoing maintenance” and “recurring maintenance” tasks. To the contrary, with their FAST Team approach, both ongoing and recurring maintenance issues are addressed together to the degree possible. Through implementation of the zone approach and the use of FAST Teams, the department has been able to actually increase service levels, the number of closed work orders, and customer satisfaction. The department’s annual customer satisfaction survey shows a strong increase in customer satisfaction with 93 percent of survey responses rating service as “good” or better.

According to all industry standard benchmarks, such as those included in Exhibit 10-4 (page 10-10), the overall preventive maintenance budget is inadequate. The gross square footage of the district increased by 25 percent over the last five-year period. The portion of the budget funded by regular operating funds is approximately one percent lower in 1998-99 than 1997-98 and the FTE staff has been reduced from 176 to 170.

Recurring Maintenance Tasks Are Not Adequately Funded

The department’s operating budget is for recurring maintenance activities. As with ongoing maintenance, department surveys and the relatively small number of work order backlogs indicate that the department is well managed. However, the industry standard benchmarks provided in Exhibit 10-4 (page 10-10) indicates that recurring maintenance is not adequately funded.

The district budgeted approximately $35 million for maintenance, operations, and utilities in 1997-98. Exhibit 10-6 compares this expenditure to national averages as reported in an annual survey by the American School and University magazine. As the exhibit shows, the district’s expenditures per student and per square foot are greater than the National Region 4 median. The district’s expenditures per student are also greater than the national median, but the district’s expenditures per square foot are just slightly lower.

The average cost for maintenance and operations for all districts in the State of Florida, as reported by the Florida Department of Education, was $4.36 per gross square foot for 1997-98. Brevard County spent $3.63 per gross square foot, which is $0.70 lower than the state’s average. Exhibit 10-7 (page 10-27) list the amounts spent by each of Brevard’s peer districts and the average for the state. These data indicate that the district is funding maintenance and operations at a level below its peers and the state average.


**Exhibit 10-6**

The District’s Maintenance and Operations Expenditures Are Close to the National Median, 1997-98

<table>
<thead>
<tr>
<th>District</th>
<th>Dollars Per Student</th>
<th>Dollars Per Square Foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Median</td>
<td>$523.30</td>
<td>$3.64</td>
</tr>
<tr>
<td>Region 4 Median</td>
<td>376.62</td>
<td>2.89</td>
</tr>
<tr>
<td>Brevard County School District</td>
<td>529.56</td>
<td>3.63</td>
</tr>
</tbody>
</table>

Note: Region 4 includes Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee.

Source: American School and University Magazine.

The District Funds Deferred Maintenance Projects at a Low Level

The department performs an annual assessment of maintenance needs, which is incorporated into a five-year capital improvement plan that is presented to the board. The 1998-99 approved budget for deferred maintenance is $4.7 million, while the needs identified through 2002-2003 were estimated at $68.2 million. Thus, 6.9 percent of the next three year’s needs are being addressed in 1998-99. Other categories in the five-year plan along with the percent of five-year needs being addressed in 1998-99 include:

- Maintenance Projects – 21.1 percent;
- Portable Leases/Repairs/Moves – 43.7 percent;
- Roof Replacement – zero percent;
- Safety to Life Projects – 24.9 percent;
- Health and Safety Projects – 13.9 percent;
- HVAC System Upgrades/Replacements – 1.5 percent; and
- New Construction (further subdivided) – N/A.

The Budget Is Below Industry Standards

The Brevard County School District compares maintenance costs per square foot and maintenance costs per student FTE against the DOE Florida Average and several industry standards. Exhibit 10-4 (page 10-10) illustrates these ratings. District expenditures are far below the Florida average, with the State average being $1.33 and the district’s $0.88. The Florida average cost for student FTE is $181.75, while the district’s is $132.00. The exhibit also illustrates that Brevard is spending below comparisons with:

- Whitestone Building Maintenance and Repair Cost Reference -- $1.49 per square foot; and
- International Facilities Management Association -- $2.09 per square foot.

The 1997-98 annual Maintenance and Operations cost information (the latest data available), published by the Florida Department of Education, indicates that the Brevard County School District spent below the state average and below peer district averages. The state average was $4.36 per G.S.F. and $601.39 per FTE. In contrast, the district spent $3.63 per G.S.F. and $529.56 per FTE. Exhibit 10-7 presents peer district comparisons.
Exhibit 10-7

The District’s Maintenance and Operations Expenditures Were Lower than Peers, 1996-97

<table>
<thead>
<tr>
<th>District</th>
<th>F.I.S.H. GSF</th>
<th>COFTE</th>
<th>Maintenance and Operations Cost</th>
<th>Cost Per GSF</th>
<th>Cost Per COFTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brevard</td>
<td>9,628,750</td>
<td>65,934</td>
<td>$34,916,135</td>
<td>$3.63</td>
<td>$529.56</td>
</tr>
<tr>
<td>Lee</td>
<td>8,168,229</td>
<td>52,539</td>
<td>$35,035,120</td>
<td>$4.29</td>
<td>$666.84</td>
</tr>
<tr>
<td>Orange</td>
<td>19,281,372</td>
<td>136,343</td>
<td>$73,728,482</td>
<td>$3.82</td>
<td>$540.76</td>
</tr>
<tr>
<td>Seminole</td>
<td>7,452,248</td>
<td>55,447</td>
<td>$32,393,265</td>
<td>$4.35</td>
<td>$584.22</td>
</tr>
<tr>
<td>Volusia</td>
<td>7,743,464</td>
<td>57,709</td>
<td>$30,653,582</td>
<td>$3.96</td>
<td>$531.18</td>
</tr>
<tr>
<td>Polk</td>
<td>12,044,533</td>
<td>76,206</td>
<td>$46,142,815</td>
<td>$3.83</td>
<td>$605.50</td>
</tr>
<tr>
<td>Peer District Average</td>
<td></td>
<td></td>
<td>$4.05</td>
<td>$585.70</td>
<td></td>
</tr>
<tr>
<td>State Average</td>
<td></td>
<td></td>
<td>$4.36</td>
<td>$601.39</td>
<td></td>
</tr>
</tbody>
</table>


The District Has a Budget Evaluation Process

The district’s budget process allows for periodic evaluation of actual versus planned expenditures. The district produces and distributes to the Maintenance Department hard copy monthly budget reports at both the line item and summary levels of detail. In addition, the department can view online budget information at the line item level of detail. These reports enable the department to compare actual versus planned expenditures for all areas except salaries. The Maintenance Department produces monthly actual versus planned expenditure reports on both the operations and capital budgets for internal use.

The district assumes all responsibility for managing salary costs. Any unspent salary budget is recaptured by the district rather than being available for department expenditures. Furthermore, the annual budget book, which establishes the annual labor budget, contains a listing of positions by FTE but does not include salary dollars at the position level.

The department’s annual salary budget level is determined by totaling the individual salaries and then reducing the total by a lapse factor. The lapse factor is a districtwide factor based on the expected recapture of funds by the district through vacant or under-filled positions. In that the budget is reduced by a lapse factor and the department can not recapture unused funds, the department is not held accountable for the salary portion of the budget.

Recommendation

- The Director should develop guidelines for maintenance budgeting which identify funding levels for recurring or routine maintenance, major maintenance, preventive maintenance,

3 Florida Inventory of School Houses (F.I.S.H.)
4 Capital Outlay Full Time Equivalent Student (COFTE)
staffing levels, and training. These guidelines should reflect industry standards, comparisons with peer districts, and historical district data.

- Action Plan 10-1 provides steps to implement these recommendations.

**Action Plan 10-1**

**Develop Budget Guidelines for Maintenance and Operations**

| Recommendation 1 |
|------------------|-------------------------------------------------|
| Strategy         | Develop guidelines for budgeting in each budget category for maintenance and operations. |
| Action Needed    | Step 1: The Director of Maintenance shall develop guidelines for budgeting which can be used to establish appropriate funding levels for recurring or routine maintenance, major maintenance, preventive maintenance, staffing levels, and training. Step 2: The Director shall present the guidelines to the Superintendent and board for approval. Step 3: The Director of Maintenance shall use the guidelines in developing the next budget. |
| Who Is Responsible| Director of Maintenance. |
| Time Frame       | May 2000 |
| Fiscal Impact    | The fiscal impact of developing the guidelines is negligible and can be accomplished with existing resources. However, implementing the guidelines could result a substantial fiscal impact. ⑤ |

② The board has established a maintenance reserve fund to handle one-time expenditures to support maintenance and operations.

While there is not a maintenance-specific reserve in the operating budget, there is a districtwide reserve fund to address unique situations. In this way, the Maintenance Department does have access to a reserve fund for emergencies and the budgetary policy is flexible enough to handle unexpected expenses.

**A Reserve Fund Is Available to Maintenance**

The district maintains a reserve fund to assist all areas of the district in meeting unforeseen expenditures. This reserve is budgeted at three percent of the annual budget, or $12,000,000. In addition, the budget office maintains a small reserve of about $1,000,000 for districtwide use. These monies are restricted and access to the funds must be approved by the school board.

⑤ If the resulting guidelines bring the district’s allocation for maintenance in line with the state’s average maintenance cost per square foot, the annual cost will be approximately $4.3 million. ($1.33 - $0.88 = $0.45 x 9.6 million SF = $4,320,000). If the resulting guidelines bring the district’s allocation for maintenance in line with the state’s average maintenance cost per student FTE, the annual cost will be approximately $3.4 million ($181.75 - $132.00 = $49.75 x 68,638 students = $3,414,740). However, the district may choose another method of developing guidelines that will cost less.
The Budgetary Policy Is Flexible

The department does not have access to reserve funds in the operating budget for unforeseen maintenance needs. A small reserve in the capital fund provides some flexibility in meeting unforeseen maintenance requirements. This budgeting practice provides the necessary flexibility to meet unforeseen needs.

Are the Best Practices for Maintenance Standards Being Observed?

Goal: The district has established maintenance standards to be used in planning and managing the maintenance program and in evaluating whether the department is achieving its program goals and objectives.

The district has established maintenance standards in its short- and long-term plans to provide adequately maintained facilities.

The district has established appropriate standards to provide adequately maintained facilities. The district has developed goals and strategies for the Maintenance Department. The district regularly surveys its customers and responds to the survey results. The Maintenance Department analyses its work order completion times and effective hours worked, and produces weekly and monthly work order reports.

Maintenance Has Established Goals and Strategies

The district has established short- and long-range maintenance goals that are consistent with the department’s mission statement. Short-range goals are identified in the “Proposed 1998-99 Management Plan Objectives” document and include, the following maintenance goals:

- Continue to manage all New Construction and Capital Renewal Projects within budgets/schedules.
- Plan and implement a districtwide Deferred Maintenance Program for school year 1998-99.
- Contract for and implement the Phase II Performance Contracting initiative that will fund at least $10 million in facility improvements from energy savings. This initiative includes Behavioral Modification and Supply/Demand side Energy Management initiatives.
- Identify and advertise for sale districtwide surplus property. Receipts from property sales could be used to fund additional Capital Renewal Projects and/or purchase of additional sites.
Complete a new Five-Year Capital Improvement Plan, update our 1994 Educational Plant Survey and create a new Five-Year Work Plan for Board/State review/approval.

Create a districtwide plan for the reduction of custodial services costs by at least $1 million per year while maintaining/improving the level of present services.

These goals are aggressive and appropriate for the department’s present situation. They address continuing issues and new initiatives, which will promote improvement within the department.

The long-range maintenance goals are imbedded in the Condition Assessment Process. This process involves conducting annual assessments of each facility to determine the maintenance needs, prioritizing the needs, and developing a five-year plan to meet the needs. The purposes of the condition assessment process are listed below:

- Define capital renewal and replacement projects and priorities in order to reduce and eventually eliminate our deferred maintenance conditions.
- Develop cost estimates to correct deficiencies identified.
- Eliminate potential hazardous situations to persons and property.
- Gather systems and equipment data to enable improvements to current maintenance processes.

The condition assessment process is a logical vehicle to develop long-range goals. The process identifies needs at the school level and needs at the district level, which helps the department maintain a balanced approach to keeping the school safe.

There Are Appropriate Facility Maintenance Standards

The district has established appropriate facility maintenance standards in its short- and long-term plans. The preventive maintenance program includes detailed standards for the assessment of specific items at the schools and ancillary facilities. Custodial standards addressing specific maintenance requirements have been established for custodians. Long-term plans are based on the annual condition assessment. The annual assessment looks at repair/replacement needs by broad categories (exterior, interior, HVAC and roofing) and sub-categories, such as windows, electric panels, painting and site drains. Conditions are then assessed by urgency or needed repair/renewal.

The District Analyzes its Performance

The district analyzes its performance through several processes. The district assesses the physical condition and the repair/replacement needs of the district’s facilities as part of the annual assessment program and through the preventive maintenance program. Feedback is part of this process and is also accomplished through the annual Maintenance Department Customer Satisfaction Survey and Contract Job Completion Forms. The 1998 Customer Satisfaction Survey requested feedback from school principals and had the following results:

- 713 total responses were received, for a response rate of 97 percent;
- 96 percent of respondents rated maintenance services as “good” or better;
- 75 percent of respondents rated maintenance services as “excellent” or “outstanding;”
- four percent of respondents rated maintenance services as “average;”
zero percent of respondents rated maintenance services as “poor;” and

100 percent of the principals felt the overall performance of the Maintenance Department was “good” or better.

The district’s work order software system implemented in May 1998 allows for extensive analysis of work order data. A weekly report of departmental performance is distributed to supervisors and corrective actions are taken as needed. These reports include:

- backlog by type of work order;
- backlog by repair center;
- work order activity by repair center;
- work order activity by type; and
- work activity by type and zone.

2 The district uses its maintenance standards to evaluate maintenance needs.

The standards used to conduct annual inspections are the basis for identifying maintenance needs. The district has identified needs based on standards and solicits input from school administrators in this process. Maintenance staff prioritizes facility needs, with input from the school staff, to develop a capital improvements plan. The district evaluates facility designs for the most cost-effective solutions.

The District Identifies Needs Based on Standards

The district has identified and evaluated maintenance needs based on maintenance standards. This is done through the annual assessment and preparation of the five-year capital plan. The annual facilities assessment examines each facility system and rates the condition of that system, and identifies the maintenance needs of that system. The major systems evaluated in the annual assessment include:

- Roofs;
- HVAC;
- Grounds and Exterior;
  - paving, sidewalks, and fencing
  - exterior painting
  - exterior water intrusion (walls)
  - swimming pools
  - doors, windows
  - exterior lighting systems
  - site drainage
- Interior Systems;
  - interior painting
  - flooring
Facilities Maintenance

- lighting, ceilings
- plumbing fixtures
- electrical panels and switchgear
- lockers
- fire alarm and intercom systems.

The assessment rates each system according to the following condition codes:

- Condition code 1 – Urgent. Should be corrected within one-year.
- Condition code 2 – Potentially urgent. Should be corrected within two years.
- Condition code 3 – Not potentially urgent. Should be addressed within three to five years to avoid potential damage.
- Condition code 4 – Good condition.

This assessment and rating system is an effective tool for the district because it ensures the district is identifying needs based on established standards.

The District Solicits Input From School Administrators

The annual maintenance and repair condition assessment program includes feedback from school principals and School Advisory Councils through the annual Facilities Needs Questionnaire. Feedback from site-based personnel is used as an element in establishing priorities for the five-year plan. Citizens are also able to provide feedback through Public Forum Input Sheets.

The District Evaluates Facility Designs and Costs

Prototype designs are used for all new buildings. The district evaluates new applications of a prototype design using a process called the “Ready Check” program. Through the “Ready Check” program, all maintenance trades review the construction plans for new schools and projects prior to bidding. Results of these reviews include the off-peak production of ice for HVAC cooling to save on energy costs, and the standardization of HVAC controls. This process is an effective way to minimize future maintenance problems and related costs.

The district has a system for prioritizing maintenance needs.

All maintenance needs are prioritized using the work order prioritization system and the input of school administrators. The district does have guidelines for prioritizing maintenance needs and does follow these guidelines. The guidelines recognize emergency needs and educational program needs. The district completes maintenance repairs according to the prioritized needs.

The District Has Guidelines for Prioritizing Maintenance Needs

Work Order requests are classified by the work load manager as emergency, urgent, routine or desirable. Criteria for each category are defined and procedures for obtaining service and response times for each priority are established and published in “Schools and BCPS Facilities Procedures for Obtaining Maintenance Services”. Work order priorities are defined as follows:
Facilities Maintenance

Emergency (Priority 1) – Work requiring immediate action to prevent or correct loss or damage to property; to restore essential services disrupted by an interruption or breakdown of utilities; or to eliminate imminent hazards to persons or property.

Urgent (Priority 2) – Work required to prevent interruption of the educational process or work required to prevent breakdown of essential operations or housekeeping functions. Urgent work requests should be addressed within five working days.

Routine (Priority 3) – The day-to-day work required to maintain or repair the building, grounds, and equipment at their original conditions. This type of work will be scheduled for completion during the next FAST Team visit to your school.

Desirable (Priority 4) – This would be convenience items not qualifying for a higher priority. These will be reviewed periodically for priority upgrades, funding availability, or return and cancellation.

The District Follows a Work Order Guidelines Process

All work order requests go through a central work order management office. Emergency orders are called into a 24-hour customer dispatch while others are submitted via the intranet. Work order backlogs are examined by the supervisors and director on a monthly basis. Establishment of the work order guidelines has enabled the Maintenance Department to respond to most work orders on planned site visits rather than on emergency calls, leading to improved efficiencies and more rapid emergency response.

The District’s Procedures Recognize Emergencies

The department has four clearly defined categories of work order requests and established time frames for response. Based on survey responses, customer satisfaction is very high. The backlog on Priority One, or Emergency Repairs, is very low, approximately 70 work orders as of June 1999.

Educational Program Needs Are Considered

The Five-year Capital Improvements Plan identifies projects that are needed to meet programmatic or enrollment needs and is updated annually. The Maintenance Coordinator, using guidance and input from the area and school administrators, prioritizes these projects. The Five-Year Capital Improvements Plan contains a category for projects that are necessary to ensure the availability of satisfactory student stations for the projected student enrollment in K-12 programs.

District Prioritizes Maintenance Needs

The condition assessment process and the Five-Year Capital Improvements Plans are the basis for scheduling major maintenance and capital improvement needs. This plan is developed by the Maintenance Coordinator, based on the prioritization process of the district. Routine maintenance needs are prioritized according to the work order prioritization procedures.
4  The district accurately projects cost estimates of major maintenance projects.

The district estimates all project costs and monitors the budget to ensure the estimates are accurate. Cost estimates are based on past experience. The district projects maintenance costs for five years and uses an inflation factor. The accuracy of cost estimates is evaluated.

Cost Estimates Are Based on Past Experience

The Maintenance Department prepares cost estimates for all projects identified by the annual facilities assessment. The estimates are based on past experience, the use of professional cost estimating manuals such as R.S. Means and Whitestone, and market conditions. Estimates are refined when projects are funded. Final costs are compared to the budgeted amount to determine the accuracy of the original estimate.

Inflation is Figured into Cost Estimates

The Five-Year Capital Improvements Plan includes an inflation factor for the projects projected in years two through five. The district uses an inflation factor of one percent per quarter which is appropriate, based on historical trends.

The District Evaluates Accuracy of Cost Estimates

The Five-Year Capital Improvements Plan estimates are revised annually by the Maintenance Coordinator, based on market conditions and experience gained from past projects. The coordinator changes the unit prices used for estimating to reflect changes in the bids received by the district.

5  The district minimizes equipment costs through purchasing practices and maintenance.

The district minimizes equipment costs through purchasing practices and maintenance. The district does not calculate a five-year inflationary cost for equipment purchases. The Purchasing Department buys in volume and uses competitive bidding procedures. The district has a preventive maintenance program in place and projects the need for equipment replacements. The district follows board policy when disposing of surplus materials and tries to repair equipment. The district considers the operating cost of new equipment purchases but does not conduct cost comparison studies.

The District Does Not Figure Five-Year Inflationary Factor for Equipment

Equipment costs are not projected for a five-year period, therefore inflationary costs are not projected. The projection of equipment costs should be part of the Five-Year Capital Improvements Plan so this plan will accurately reflect future needs. Equipment projections can be made as part of a preventive maintenance program, which annually assesses the condition and projected life of equipment. Equipment projections should include an inflation factor.
There Are Preventive Maintenance Programs for Equipment

The department has instituted preventive maintenance programs for:

- HVAC equipment
- electrical panels and switchgear
- fire alarm and intercom systems
- roofs
- lift stations
- bleachers
- plumbing
- kitchen equipment
- custodial and grounds equipment

Under the Quality Control Program, over 15,000 pieces of HVAC equipment have been inventoried in the TMA system. This equipment is scheduled for preventive maintenance tasks in the automated system and monthly reports on the status of the process and the condition of the equipment are produced and provided to maintenance supervisory staff. The responsibility for carrying out these preventive maintenance tasks rests with the chiller mechanics, the area teams, and the planned maintenance team.

The Custodial Standards Handbook identifies the preventive maintenance tasks that are the responsibility of the custodians. The Monthly Custodial Preventive Maintenance Sheet identifies 25 tasks to be accomplished at each school each month.

Equipment Replacement Projections Have Been Developed

The department has completed inventories of HVAC and custodial equipment and has completed replacement projections. The projection of equipment costs are a part of the Five-Year Capital Improvements Plan so this plan will accurately reflect future needs. Equipment projections are a part of the preventive maintenance program, which annually assesses the condition and projected life of equipment.

Disposal of Surplus Equipment Is Covered by Board Policy

Procedures for the disposal and replacement of equipment are detailed in the department’s employee handbook. The division head responsible for the equipment fills out a Distribution Center Request (DCR) identifying the piece of equipment to be shipped to the warehouse and declared surplus. The Director of the Warehouse signs the form authorizing the action, and a warehouse worker signs the form when the equipment is received. The equipment is then sold at a public auction.

Equipment is Repaired When Feasible

The department maintains a small engine repair function specifically for the purpose of repairing equipment used by mechanics and custodians. The Financial Services Division has implemented a districtwide initiative to utilize reconditioned furniture. The Maintenance Department participates in this initiative.
The District Considers Operating Costs of Equipment

The department considers operating and maintenance costs when purchasing new equipment. This has led to the standardization of some equipment because the department has learned from experience the value of certain types of equipment. Two examples of this standardization are gym lighting and direct digital controls (DDC controls) for HVAC equipment.

The District Conducts Cost Comparisons to Ensure it Obtained Best Prices

The district periodically evaluates the price it pays for goods and services and considers other alternatives to reduce costs. Based on these evaluations, the district has opted to outsource a number of functions. In cases where the district did not find it to be cost effective to outsource, it has not.

Each outsourced service contract is reviewed for effectiveness and cost savings before it is renewed or rebid. The district altered its contract with a private custodial maintenance company after finding that the contractor was using unsatisfactory labor. Currently, the district is conducting a comparative evaluation of privatized custodial services versus services in 11 schools with district custodial staff. The evaluation compares cost and quality of services. If the results reveal that privatizing is favorable, the district will consider expanding outsourced custodial services.

The district has verified the dollar savings from other contracts and can show that they save funds. This was dramatically shown in the savings resulting from the energy management contract. In this contract, the district guaranteed savings of $41,106 in the first year. Actual savings exceeded that and totaled $127,260.

The district has formed partnerships with a variety of outside government agencies to perform functions at cost savings. The Facilities Department has discussed with Brevard County, the City of Titusville, City of Cocoa, and the City of Melbourne the potential for joint inspection of back-flow prevention valves. The district has an agreement with the county for joint use of the district’s swimming pools and for sharing the costs of pool maintenance and capital improvements. These costs are divided equally between the district and the county.

The district provides maintenance staff with the tools, training, and instructions to accomplish their assigned tasks.

The district provides tools, training, and the appropriate level of supervision to maintenance staff to accomplish their responsibilities. Maintenance staff are provided appropriate tools and the district rents tools that are infrequently needed. Staff receive sufficient technical training to complete their tasks. The maintenance managers communicate with the staff and the customers to manage the work.

Necessary Tools Are Provided to Maintenance Staff

Maintenance Department staff are provided the tools necessary to accomplish assigned duties. Trades workers report that they have the appropriate tools to accomplish their tasks. Mechanics are expected to supply their hand tools while the district supplies all power tools and large equipment. This practice is typical of Maintenance Departments and the construction industry.
Seldom-Used Tools Are Rented

Tools and equipment that are seldom needed are readily available through other sources. Tools that are not regularly needed are rented from equipment rental agencies. The maintenance budget contains an amount for tool and equipment rentals ($56,527 in 1998-99, or 0.77% of the maintenance budget). The Maintenance Department has open purchase orders with the equipment rental vendors to meet these occasional equipment needs.

Technical Training, Supervision, and Instruction Are Sufficient

The district provides training opportunities in four major areas: trades enhancement, cross-trades, customer service and interpersonal, and safety training. Training in the first three areas is provided through professional and vendor-sponsored seminars, mentoring, and the Facilities Maintenance Technician Training Program. Training courses are provided for all types of staff -- engineering, environmental, maintenance, office support, and supervisors.

All employees receive annual safety training on hazardous communication (Right-to-Know) and bloodborne pathogens. Employees with potential exposure to certain circumstance are provided training in confined space entry, lock out/tag out, and hazardous materials response.

Area Supervisors Communicate with Personnel and Customers

The department has implemented the FAST Team approach to increase work order completion. Routine work orders are completed on a scheduled date for a specific school. School administrators know in advance when the FAST Team will be at their school and can submit work orders as appropriate or talk with the area supervisor about any concerns. All work orders are submitted to the work control center where they are accepted or rejected. Work control staff notify the school via e-mail of the work order number, priority, and the reason if rejected.

The district has established a computerized control and tracking system to accurately track inventory and parts and materials used and provide a reordering system.

The district has a software system to track parts and materials used by the Maintenance Department. The district does not have a sophisticated software program to track its inventory. The inventory system tracks commonly used parts and there are procedures for staff to acquire parts not in stock. The Purchasing Department has a system to indicate when it is time to reorder parts.

The District Has Sophisticated Maintenance Software

The Maintenance Authority (TMA) software system, which is used to track work orders, is capable of tracking and controlling inventory. Parts and materials are assigned to work orders in the system. However, the warehouse inventory is currently maintained in another software system, which is used districtwide but is not as effective a management tool for the Maintenance Department, and is the responsibility of the Financial Services Division. Presently, inventory data must be input into both systems, resulting in a duplication of effort.
Maintenance has proposed purchasing an interface between the two software programs so data entered into one system can be automatically recorded in the other system. This will allow each department to keep the software system most appropriate for their operation while at the same time able to interface with each other. At the time of publication, this system interfacing was still in the proposal stage, without a targeted completion date.

The Inventory System Tracks Warehouse Parts

The main warehouse inventory system is not compatible with the system used by the Maintenance Department. Parts stocked in the warehouse are inventoried by the warehouse. Parts kept in the maintenance shops and on trucks are not inventoried. By not inventorying the parts kept in maintenance shops and on trucks, the district leaves open the possibility that theft will go unnoticed. This could be corrected by the application of an interface of software programs as described above.

Procedures Exist for Staff to Acquire Parts Not Stocked on Trucks

A procedure for acquiring parts/materials not stocked in the warehouse is outlined in the employee handbook. The district is currently implementing a new system, which will use “purchase cards”, which are similar in function to credit cards, for small purchases directly from suppliers. This will greatly simplify the process and eliminate some inefficiencies.

There Is a Reorder System

The Maintenance warehouse inventory control system includes automatic re-order procedures. The re-order set points are triggered by the inventory software and have been established by historical usage and input from the maintenance mechanics.

Recommendation

- The district should establish a date to purchase an interface between the software programs used by purchasing and maintenance.

8 The district ensures that maintenance standards are updated to implement new technology and procedures.

The district reviews and updates its practices and the types of materials it uses. The Maintenance Department participates in professional organizations and receives trade magazines and shares this information with staff. Maintenance standards are updated to reflect new technologies.

The District Participates in Professional Organizations

Maintenance staff, including managers and some staff, is involved as appropriate in the following organizations:

- International Facility Management Association
- Construction Specifications Institute
• National Industrial Hygiene Association
• Cleaning Management Institute
• American Academy of Industrial Hygiene
• American Public Health Association
• American Society of Safety Engineers
• National Recreation and Parks Association
• Association of Physical Plant Administrators (APPA)
• National Safety Council
• National School Plant Management Association (NSPMA)
• Florida School Plant Management Association

Maintenance Department Receives Trade Publications

The department subscribes to and distributes the following publications:

• Maintenance Solutions
• The Facility Manager
• Cleaning Management Institute
• Buildings
• Building Operations Systems
• Engineered Systems
• The Construction Specifier

Information Is Shared With Employees

Organizational information is provided to staff through memos and the monthly newsletter. The monthly newsletter is distributed to every department employee, as well as board members, the Superintendent, and other district administrators. Technical information is provided through training opportunities.

Maintenance Standards Are Updated for New Technology

The Maintenance Department updates its standards to reflect new technologies and procedures when the technology or procedure is implemented. Standards have been updated for bathroom partitions, portable ramps, ceiling tiles, door closers, light fixtures, and building envelope repair materials.
Are the Best Practices for Operating Facilities in a Healthy, Safe, Cost-Effective Manner Being Observed?

Goal: The district operates facilities in a healthy, safe, energy-efficient, and cost-effective manner.

1 The district has policies and procedures to ensure its facilities are operated in a healthy and safe manner.

The district has established policies and procedures to ensure healthy and safe facilities. The district follows procedures that comply with EPA guidelines. The district conducts evaluations of its buildings’ conditions. Custodians have a current manual of operations and receive training. The district has developed cleanliness standards.

The District Has Established Health and Safety Standards

Various health and safety programs have been established through board policy including the management and disposal of hazardous materials, procedures for safe science classes in the schools, an integrated pest management program, an indoor air quality management plan, and a comprehensive safety and health plan. Also, the Maintenance Department has developed its own employee handbook, which contains sections on departmental procedures, communications, training, health and safety, and board policy awareness.

Procedures Comply with EPA Guidelines

School Board Rules, as described above, establish the elements of the comprehensive Safety, Health and Environmental Policy for the district. One of the stated goals of the Hazardous Materials, Waste Management and Pollution Control Plan is to comply with State and Federal regulations. The Executive Safety and Security Committee was established by the Office of the Superintendent to ensure that work sites meet the highest standards with regard to safety and security. The maintenance budget allocates funds for two Building Safety Inspectors, one Wastewater Treatment Technician, three Environmental Specialists, one Industrial Hygienist and one Environmental Engineer. District administrative staff reported that regulatory laws and district policies and procedures are all done, at a minimum, to address EPA compliance issues.

Building Condition Are Evaluated

The environmental health and safety office performs or contracts for the documentation of safety conditions at schools. The frequency of these assessments is as follows:

- fire safety and sanitation – annually;
- kitchen hood fire suppression systems – quarterly;
- fire extinguisher maintenance – quarterly;
- fire suppression and stand-pipe systems – quarterly;
- fire alarm systems – annually;
Facilities Maintenance

- heating fuel tanks – annually; and
- asbestos inspections – periodically.

The office responds to complaints, makes health and safety recommendations, and implements corrective actions. The Maintenance Department conducts preventive maintenance tests and documents results. Other evaluations include monthly clean campus inspections, Environmental Health and Safety self-assessments, the annual condition assessment of building, custodial evaluations, and the FAST Team walkthrough.

Custodians Have Current Manual of Operations

There is a detailed Custodial Standards Manual, which was updated in 1995, that serves as a manual of operations for custodial services. This manual is available in every school and district offices. There are also various training manuals that provide additional guidance on such issues as sanitation and school housekeeping, floor and carpet care, electrical maintenance, and furniture repair. These manuals are accessible to appropriate staff.

Training Is Provided to Operations Personnel

As noted previously, the district provides training opportunities in four major areas: trades enhancement, cross-trades, customer service and interpersonal, and safety training. Employees with potential exposure to certain circumstance are provided training in confined space entry, lock out/tag out, and hazardous materials response.

Custodians Complete Some Maintenance Work

The job description for Head Custodian 1 lists knowledge of maintenance procedures essential to the upkeep of buildings and of minor and routine maintenance and repair of building systems under “Performance Responsibilities.” Custodians are also responsible for accomplishing approximately 25 preventive maintenance tasks at their assigned school.

The District Has Written Cleanliness Standards

The Custodial Standards contains recommended cleaning frequencies, processes, and standards of required cleanliness. Most custodial work is done in-house. The custodial work at 11 schools is contracted out to American Building Maintenance. American Building Maintenance has a questionnaire for the services they provide. There is also an extensive assessment tool for in-house custodians. In addition, there is the Monthly Clean Campus Inspection that has instructions indicating the composition of inspection teams. The result of the monthly campus inspection is sent directly to the superintendent for review.

2 The district uses external benchmarks to determine a cost-effective manner of meeting its health and safety standards.

The district does use external benchmarks to evaluate the cost effectiveness of its health and safety standards and procedures. The district is staffing its custodial operations at a best practice level.
External Benchmarks Are Used to Evaluate Custodial Services

Custodial services are the primary means by which a district meets health and safety standards. The district outsources a portion of the custodial services and is able to contrast the costs of these services with in-house service costs and external benchmarks. Exhibit 10-4 (page 10-10) identifies these benchmarks for custodial costs per square foot.

3 The district uses external benchmarks to achieve energy efficiency.

The district has an energy management program. The district collaborates with other agencies to identify and implement energy efficient programs.

The District Collaborates With the EPA

The District works with the EPA through the Energy Star Buildings Program to upgrade buildings for energy savings and other environmental benefits. The district has recently been recognized as an EPA “Energy Star” partner and received an award for Phase I of the program in March, 1998. The department also initiated a comprehensive performance-contracting program that emphasizes energy management and cost efficiency. The department has also pursued energy rebates resulting from energy efficient renovation and construction practices resulting in $600,000 returned to the district.

4 The district's hazardous materials management complies with Federal and State regulations.

The district has a hazardous materials business plan that conforms with State and Federal regulations. The district maintains current Materials Safety Data Sheets (MSDS) and they are available to staff. The district is in compliance with the Asbestos Hazard Response Act, OSHA, and state rules. The district has a hazardous materials plan and makes MSDS reports available to the staff.

The District Is in Compliance With Asbestos Hazard Emergency Response Act

The environmental engineer in the district’s Local Education Agency is responsible for handling all district asbestos issues that fall under the Asbestos Hazardous Emergency Response Act (AHERA). The Maintenance Department has documented its compliance with all components of AHERA, including areas such as inspections, sampling, analysis, response actions, operation and maintenance, training and periodic surveillance, record keeping, warning labels, and enforcement.

The district’s Hazardous Materials Waste Management and Pollution Control Plan addresses asbestos abatement. The district contracts with private contractors to do project monitoring and write facility re-inspection reports.
The District Is In Compliance With OSHA and State Rules

The district has a Hazardous Materials, Waste Management and Pollution Control Plan. The district has a web site that focuses on Material Safety Data Sheets (MSDS) including a US Department of Commerce searchable database as well as MSDS collections from several universities and other locations. The Hazardous Communications Right-to-Know program is also addressed on the web site. The School Board of Brevard County initiated a Written Hazard Communication (Right-to-Know) Program in August 1994. A July 1997 board memorandum explains the OSHA Hazard Communication Standards and the Florida Right-To-Know Law, and the districts responsibilities regarding these programs.

MSDS Reports Are Available to Staff

Materials Safety Data Sheets (MSDS) reports are available at each school in hard copy and are available via the internet. They are also accessible on the environmental services web page. Site safety committees review reports quarterly to make ensure that the most current ones are available.

5 The district has a comprehensive and systematic program of dealing with school safety and security.

The district has a comprehensive and systematic program for dealing with school safety and security. The district has a disaster preparedness plan. The district’s safety committees have input in developing the district’s safety and security program. The district has a system for physical plant security. Vandalism is not always tracked but there are procedures for reporting vandalism. The Safety Manager provides input into the design of new schools.

The District Has a Disaster Preparedness Plan

The district’s disaster preparedness plan is primarily the responsibility of the Office of Public Safety and part of the School Critical Incident Response Manual. This manual outlines the steps that should be taken by school employees in the event of an incident that can be defined as “traumatic” and “beyond the range of experiences that a person usually encounters.” This detailed manual provides step-by-step emergency procedures. (see Chapter 15.0, page 15-12 for more information).

Every school and district office is required to have a copy of the School Critical Incident Response Manual and each school is required to have at least 10 people trained in the use of the manual. In addition, principals are required to review the manual with all teachers and support staff in their schools. The Maintenance Department assists in the development of the manual and associated procedures. At a minimum, the plan is reviewed and updated annually.

Safety Committee Has Input

The Executive Safety and Security Committee has established a subcommittee to identify and consolidate health, safety and security manuals, plans, and programs. The director states that they have input into the comprehensive safety and security program.
**There is No Districtwide Security Alarm System**

There is no districtwide security alarm system. Each principal is responsible for physical plant security and is required to have a key-control plan. The plan must be approved by the Director of Public Safety. Twenty-one (21) schools have security alarm systems and 76 schools have live-in security personnel. Each school has a *School Critical Incident Response Manual* that outlines responses for all emergency situations. Further detail on these security measures is provided in Chapter 15.0 (page 15-12). All new schools have a review committee for security issues and new alarm systems must have video and be approved by the Director of Public Safety.

**Vandalism is Not Always Identified**

The maintenance budget for dealing with vandalism is not separate from the regular operations budget, leaving open the possibility that some vandalism expenses may be inadvertently missed. However, vandalism costs can be tracked through the district’s project cost accounting capability and reimbursement is attempted. Creating a budget line item for vandalism would ensure that all vandalism expenses are properly accounted for.

**Procedures Exist for Reporting Vandalism**

The Office of Public Safety collects all vandalism reports and ensures a police report is filed. The procedure for reporting vandalism is to call the police and file a report. The school administrator then fills out an Incident Report and submits it to Public Safety, Risk Management, and Facilities Maintenance.

**Feedback is Provided to Facility Planners**

Safety and Environmental personnel provide feedback to the Project Management department during the pre-design, design, construction, and maintenance phase of projects. They also review the specifications for all-new schools and prototypes and make recommendations for improvements.

**Recommendation**

- *The district should track all acts of vandalism by identifying all work order requests that result from acts of vandalism and creating a maintenance budget line item for vandalism.*

**Are the Best Practices for Making Facilities Available to the Community Being Observed?**

*Goal:* The district makes facilities available to the entire community, to allow all taxpayers to benefit from the investment.
1 The district follows established procedures for making school facilities available to the community.

The district has clearly stated guidelines for the use of school facilities by community groups. The district has established procedures for the community use of its facilities and these procedures are comprehensive.

Comprehensive Procedures Exist for Community Use of Facilities

The School Board rule “Use of Facilities and Equipment” establishes the rules and procedures for community use of school facilities and includes the following sections:

- purpose;
- use by school-oriented organizations and groups;
- use by non-school oriented organizations and groups;
- policy concerning the use of equipment and facilities; and
- temporary facilities.

Under the “Purpose” section, the policy states that, “The Board shall adopt a fee schedule for use of facilities.”

2 The district meets requirements for persons with disabilities.

The district is in compliance with the ADA laws. The ADA laws are available to Facility Planners and the district complies with these requirements when designing new facilities. The district provides training to facility designers and maintains a library of ADA resources.

ADA Laws Are Available

The facilities department maintains the appropriate books and manuals regarding ADA laws. These regulations are also available on the internet.

The District Complies With ADA Requirements on Facilities

The district has an ADA team, comprised of two supervisors from the Maintenance Department, a maintenance project manager, and two representatives from the Division of School Operations, that conducted inspections of the district’s facilities (including new facilities) and found that the district is in compliance with ADA laws. Most inspections are initiated as a result of requests from school staff. In August 1998, the team coordinated a districtwide survey on ADA and school facilities to ensure continuing compliance. In July 1999, the team conducted an assessment of playground facilities for compliance. At the time of publication the results of the playground review were not complete.
ADA Training is Provided

Training regarding accessibility issues is provided to administrators by the Director of Maintenance. All construction inspectors must have training in ADA laws in order to become certified.

Code Books Are Available to Planners and Staff

The ADA team is available for information regarding ADA requirements. Other information is available on the internet. The staff is aware of the ADA team and the availability of information on the internet.