Facilities Construction

Although the district effectively planned and built facilities that met its needs, this success was due more to district management’s experience than to its system of management practices. The district needs to formalize and document its procedures to ensure continued success in the facilities construction area.

Conclusion

The Facilities Construction area has been effective in planning and building facilities that meet the needs of the school district. However, many of the district’s planning and management practices are informally applied, and although they may be effective, they may not be meeting all the best practice standards of excellence. The department’s success has been due more to the experience of management rather than an effective and structured system of management practices that are independent of individuals. Because the Supervisor of Construction is retiring in December 1999, these management practices need to become institutionalized so they are not dependent on the performance of an individual. The new Director of Facilities is already working to formalize and document many of these procedures in the facilities construction area.

The state of Florida has a very structured facilities program that guides much of the decision-making for school facilities. Through state required reports, prescribed building specifications and approvals of individual projects, this program helps the district be more effective in all its facilities management functions.

The district needs to improve its documentation of procedures, criteria and standards with respect to planning construction projects, site selection and evaluation, contractor evaluation, verifying legal compliance, and development of educational specifications. The role of the Long-Range Planning Committee needs to be expanded to include all facilities planning responsibilities. The district also needs to incorporate available demographic data into the enrollment projections used for facilities planning.

The most critical issue facing the district is the assessment of facility capacity. Because of adequate capital outlay funds, the district has not been forced to pursue more aggressive options to increase capacity, such as the change of attendance zones and alternative grade configurations. The district is effective in using portable buildings to meet short-term facility needs.

Over the next five years, the district is planning to spend $125 million for new construction, major renovations and repairs and other capital projects. Included in this amount are three new schools. Based on the school district’s own data, it is not clear whether all of these schools need to be built in the next five years. If other options to increase capacity were used, the district could defer millions of dollars in capital expenditures or allocate them for other purposes.
**Fiscal Impact of Recommendations**

Most of the recommendations in the construction management section will improve district performance. Exhibit 9-1 shows the fiscal impact of the recommendations.

**Exhibit 9-1**

**Implementing the Recommendations for Construction Management Will Have the Following Fiscal Impact**

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Fiscal Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Conduct facilities audit</td>
<td>• ($100,000)</td>
</tr>
<tr>
<td>• Pay for all architect copying costs directly</td>
<td>• $2,500</td>
</tr>
</tbody>
</table>

(Parenthesis indicates an investment by the school district.)

**Background**

The mission of a construction management department is to plan and construct adequate facilities that meet academic needs and legal requirements in a cost efficient manner. This mission is consistent with that of the Construction Management Department of the Martin County School District.

The Martin County School District has 2 high schools, 4 middle schools, 11 elementary schools, other special purpose schools and administrative and maintenance facilities. Of the facilities used today, the oldest was constructed in 1919 and the newest, Bessey Creek Elementary, was finished in 1996. The district’s schools contain approximately 2.4 million net square feet of space and serve a population of 16,331 students, or approximately 147 square feet per student. The district’s square feet per student ratio is slightly higher than the 143.5 average square feet per student ratio in peer districts. (Exhibit 9-3).

**Exhibit 9-2**

**Notable Accomplishments in Facilities Construction**

- The district has a track record for completing approved construction projects on time and within budget.
- The district has been successful in acquiring sites at less than market value.
- The reuse of existing plans has lowered architect costs for the school district.
- The district has been able to construct new facilities without incurring significant debt.
Exhibit 9-3

Martin County’s Facilities’ Square Feet Per Student Compares Favorably With Other School Districts with Peer School Districts


Martin County School District’s Schools Have Slightly More Square Feet Per Student Than the Average Square Feet Per Student Ratio in the Schools of its Peer Counties

The construction management function of the district falls under the Director of Facilities and is managed by the Supervisor of Construction. Two other employees are also in this department - a Supervisor of Facilities and a secretary.

The Supervisor of Construction is primarily responsible for all facilities planning and construction activities and is also responsible for monitoring the work of architects, contractors and other third parties. Separate committees exist to support long-range facilities planning, the development of educational specifications, and the selection of building sites and architects.

The remainder of this chapter is organized into nine sections. While the sections are evaluated separately, it is important to note that they are highly interrelated and to some degree overlap.

- Long-Range Facilities Planning
- Facilities Needs, Costs and Financial Methods
- Selection and Acquisition of School Sites
Facilities planning responsibilities are divided among the Long-Range Planning Committee (LRPC) and the Facilities Department. The district works closely with Office of Educational Facilities, Martin County and other entities to plan and coordinate the construction of facilities. Long-range planning responsibilities of the LRPC need to be expanded and more members of the Martin County community should be involved in the planning process.

The district has established authority and assigned responsibility for facilities planning.

Although Not in Writing, the District has Established Responsibilities for Facilities Planning

It is important to clearly establish roles and responsibilities for facilities planning since so many people are involved and a significant amount of district resources are at stake. Clearly defined responsibilities also support accountability to the board and to the public.

The district’s policy manual makes no reference to facilities planning. The policy manual contains a Facilities and Operations section; however, this section only addresses use of school facilities by third parties and professional services. The district has not developed documented procedures relating to facilities planning. However, facilities planning is addressed in the district’s written job descriptions. The job description for the Director of Facilities includes a responsibility to “develop and coordinate short- and long-term plans for School Board facility needs.” The Director of Facilities confirmed that he is primarily responsible for this function.

Facilities planning responsibilities are also included in the job description for the Supervisor of Construction. The Supervisor of Construction confirmed that he is responsible for the following activities.

- Coordination of all short- and long-range facilities planning for the district’s construction activities
- Coordination of the development and implementation of the district’s master plan for site acquisition, facilities design, construction and improvements, including forecasting population growth
• Supervision of the development of the district’s long-range plan for major and minor renovation, remodeling, new construction, and equipment replacement

• Coordination of the planning of educational facilities, including the annual review of school plant and facility needs and the recommendation of priorities

Board responsibilities for facilities planning are not documented in board policy. Chapter 230 of the Florida School Laws includes general facilities management responsibilities for school boards, but states that “the board may adopt policies providing for the management of the physical campus.” Despite the lack of policies, board minutes demonstrate that the board approves the Education Plant Survey and the Five-year Facilities Work Program. The board is also provided minutes from the Long-Range Planning Committee. This committee is discussed on page 9-11.

Recommendations

• The board should adopt a policy outlining authority and responsibility for facilities planning and the Long-Range Planning Committee, and outline specific reporting responsibilities to the board.

Action Plan 9-1

<table>
<thead>
<tr>
<th>Recommendation 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strategy</strong></td>
</tr>
<tr>
<td><strong>Action Needed</strong></td>
</tr>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Who Is Responsible</th>
<th>General Counsel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time Frame</td>
<td>October 1999</td>
</tr>
<tr>
<td>Fiscal Impact</td>
<td>This recommendation can be accomplished with existing resources.</td>
</tr>
</tbody>
</table>
The district has allocated adequate resources to develop and implement a realistic long-range master plan for educational facilities.

The District Has Established a Long-Range Master Plan in an Appropriate Manner

State law requires school districts to prepare an Educational Plant Survey at least every five years. This survey represents the district’s master plan, and it is the primary facilities planning document for Florida public schools. The Martin County School District prepared its most recent survey in 1995. This survey was approved by the Florida Department of Education, indicating compliance with the State Requirements for Educational Facilities (SREF).

While meeting legal requirements, the facilities plans for the district do not meet all the indicators of a best practice. Exhibit 9-4 presents an assessment of the district’s facilities planning. Many of these items are discussed in further detail later in this chapter.

Exhibit 9-4
Assessment of Facilities Planning

<table>
<thead>
<tr>
<th>Attributes of Effective Facilities Planning</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The district’s data in the Florida Inventory of School Houses (FISH) are accurate and up-to-date.</td>
<td>1. The district has an electronic link with the state of Florida to update its FISH data. However, there is no independent verification of this data. (see page 9-27)</td>
</tr>
<tr>
<td>2. The district is using all available building capacity to the fullest extent.</td>
<td>2. The district is not maximizing capacity. (see item 3 below and page 9-24)</td>
</tr>
<tr>
<td>3. Attendance boundaries have been changed to achieve full utilization of existing school plant capacity.</td>
<td>3. Attendance boundaries are only changed with the addition of a new school to the district. (see page 9-30)</td>
</tr>
<tr>
<td>4. The long-range plan addresses projected “peaks” and “valleys” in school enrollment.</td>
<td>4. Although the enrollment projections in the Educational Plant Survey have “peaks” and “valleys,” the document does not discuss the implications for these enrollment fluctuations.</td>
</tr>
<tr>
<td>5. The facilities lists use square footage allocations identified in the “State Requirement of Educational Facilities” where required by the Legislature.</td>
<td>5. The Educational Plant Survey of 1995 complies with the State Requirements for Educational Facilities.</td>
</tr>
<tr>
<td>6. Projects that include student instructional capacity are given higher priorities than administrative or support projects.</td>
<td>6. The state approves the Project Priority List, which must give priority to instructional related needs.</td>
</tr>
<tr>
<td>7. All projects are given estimated budgets and the items within each program’s budget are prioritized in the event that the estimated budget will not be adequate for the stated program.</td>
<td>7. The Project Priority List includes the estimated cost of the project.</td>
</tr>
<tr>
<td>8. The plan has been reviewed with local government relevant to proposed new sites.</td>
<td>8. As part of the County Planning Committee, the Supervisor of Construction briefs the...</td>
</tr>
<tr>
<td>Attributes of Effective Facilities Planning</td>
<td>Assessment</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>new schools, projected growth, land use, projected infrastructure requirements, etc.</td>
<td>county on district growth, facilities plans, and construction projects on a regular basis.</td>
</tr>
<tr>
<td>9. The renovation and repair needs of aging facilities have been identified in the plan.</td>
<td>9. The Educational Plant Survey describes the general condition of each school in the district and includes remodeling and renovation recommendations for each school.</td>
</tr>
<tr>
<td>10. The district can demonstrate that new school campuses and proposed sites have been planned by an architect and the district’s facilities planner to accommodate siting of portables or expansion of permanent facilities.</td>
<td>10. The district has used the same model school design for the last three school construction projects. Based on site visits, the district appears to have planned for the siting of portables and expansion of permanent facilities. In fact, two of the three new schools have unfinished classrooms in anticipation of future growth.</td>
</tr>
</tbody>
</table>

The Educational Plant Survey presents an assessment of school facilities, identifying needed major repairs and renovations, major equipment replacements, and the need for additional space or schools based on SREF guidelines. The survey incorporates enrollment projections made by the state, as required, to determine needs for additional space and/or schools.

The survey results include a cost estimate of facility needs and a description of specific needs by school or location. Most of the items on the 1995 survey will be completed by the end of 1998-99. Any facility improvements not specifically listed or prescribed in the 1995 survey require a “spot” survey justifying the need for the improvement or addition. This provides the district with sufficient flexibility to make, or at least propose, needed changes to the five-year plan based on changing circumstances.

For example, the district uses spot surveys to amend facilities needs based on different enrollment projections. In the Education Plant Survey, the district must use state enrollment projections; however, the district also maintains its own enrollment projections, which have historically been more accurate. Spot surveys have been used to obtain waivers from using the state enrollment projections—the state has approved this practice on specific projects through the approval of spot surveys.

The Education Plant Survey items are used to develop a Five-Year Facilities Work Program, which shows more specific estimates of costs of individual projects, and identifies sources of funding. This report is required annually by state law but does not have to be approved by the state. The first year in the Facilities Work Program becomes the capital budget for the school district’s applicable budget year.

The 1998-99 Facilities Work Program reflects $125 million of capital projects over the next five years (Exhibit 9-5). These projects have not been approved by the state, and are based on the district’s own assessment of its needs. Upon completion of the Education Plant Survey later this year, the Facilities Work Program will be amended to reflect needs identified in the survey.
Exhibit 9-5

Five-Year Facilities Work Program 1998-99 through 2002-03

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional Student Stations (new schools)</td>
<td>$61,618,108</td>
</tr>
<tr>
<td>Major Maintenance/Renovation</td>
<td>$11,272,300</td>
</tr>
<tr>
<td>Technology</td>
<td>$7,137,000</td>
</tr>
<tr>
<td>Other Capital Projects</td>
<td>$45,077,824</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$125,105,232</strong></td>
</tr>
</tbody>
</table>


The district is required by law to give priority to instructional facilities. The state requires a Project Priority List identifying priority projects by school. This report identifies those projects that support instructional programs, and includes the estimated cost of each project. The state approved Martin County’s priority list for 1998-99.

The Plan Is Reasonable and Addresses the Requirements of Florida Law

The 1995 Education Plant Survey specifically states that the plan meets “the State Requirements for Educational Facilities (SREF), 1995, Florida Department of Education, Office of Educational Facilities and the requirement in Chapter 235, and Section 236.25(2), Florida Statutes” that define the eligibility for the expenditures of funds. This survey was approved by the Department of Education, as evidenced by a letter from the department, and was developed with the department’s assistance.

The Five-Year Facilities Work Program shows the source of funds assigned to each project, and this document serves as the basis for the capital budget. (Also see related chapter regarding use of state construction funds.)

State law also requires districts to develop 10-year and 20-year Facility Work Programs, but has not held them accountable for these work programs. The district has not prepared, and the board has not adopted 10-year or 20-year programs.

Ten- and twenty-year work programs do not require the level of effort involved in the five-year plan, but are important in long-range facilities planning. A five-year horizon is insufficient given that most facilities are used for more than 30 years. These longer-range facilities plans can establish baseline scenarios for facilities needs under alternative growth assumptions, and help local government authorities in their long-range planning efforts.

In calculating estimated costs for new facilities, the district uses the inflation-adjusted cost per student station amounts as prescribed by HB 17A. The district has included the construction of three new schools between 1999-2000 and 2002-03 in its Five-Year Facilities Work Program. Renovation and major repair projects are not inflation adjusted; these expenditures are merely spread out evenly over multiple years. Major equipment replacements, however, are inflation adjusted. During this study, the district updated all estimates to be inflation adjusted.
All Available Capital Sources Are Being Applied Towards Achievement of the Long-Range Plan

The Five-Year Facilities Work Program is approved by the board annually and is linked to the capital budget (See page 9-14). The Director of Facilities does not provide the board a full, detailed accounting of the use of all capital funds each year; however, this information is available if requested by the board. The board also approves all change orders on construction projects, regardless of the size of the change order; however, this practice is not documented in board policy.

The 1998-99 budget shows a transfer of $1.5 million from the capital projects fund to the Maintenance Department—this transfer supports capital projects performed by the Maintenance Department as allowed under Florida law. The Maintenance Department is spending the majority of its time on capital projects such as roof replacements and small renovations, not routine maintenance. While the transfer of funds to maintenance is legal, it does not represent the best use of capital funds, and it provides a disincentive to perform needed routine maintenance. (See separate chapter on Facilities Maintenance.) The board should establish target levels for ongoing maintenance needs and support these needs with operating funds. Maintenance resources dedicated to capital projects should be reimbursed. However this should not exceed 25% of the maintenance budget. The long-range plan has realistic time frames for implementation.

According to the Five-Year Facilities Work Program, the district is planning to build three new schools over the next five years. The district has not developed documented milestones regarding how long a project should take: instead, it has relied on the past experience of individuals to establish time frames for planning purposes. The district applies a checklist and other informal procedures to ensure that the timeframes are reasonable and that all steps are considered in the process. The last three elementary schools were built in less than a year (250 calendar days), which is consistent with industry standards.

Most tasks for achievement of the phases of each project have been incorporated into a district checklist, which has recently been updated. This checklist includes the 20 major categories.

1. Project listed in Education Plant Survey
2. Project listed on Project Priority List
3. Permission to start is received
4. Selection of architect / civil engineers
5. Spot survey is performed and approved, if necessary
6. Education Specifications are developed and approved
7. Phase I Plans and approval by school board
8. Professional advertisement for soil tests, engineering
9. Fleet Report, Soil Test – performed and approved by state
10. Phase 2/3 Plans and approval by school board and state
11. Advertising for contractor bid
12. Bid opening and acceptance
13. Site preparation
14. Space facility chart given to Purchasing for furnishings order
15. Order to proceed
16. Close out unsuccessful bidders
17. Construction period, contract management  
18. Carpet, signs, landscaping, lamps, change orders and fire extinguishers  
19. Substantial completion  
20. Contractor’s final package

The current checklist does not include a timetable for performing these activities. Instead, the Supervisor of Construction relies on his experience to begin project activities in time to meet projected timeframes. A timetable is key to sequentially ordering the required steps and ensuring that deadlines are reasonable. Timetables for facilities planning are particularly important since it is highly preferable for schools to open at the beginning of the school year. Even though current checklists do not have timetables, Martin County has consistently finished new school construction before the school year begins.

The checklist also does not cover other important aspects of construction management. For example, it does not address site purchase procedures or interfaces with local and state entities. Thus, although the checklist is a useful tool for the district, it does not provide a guide to ensure that all tasks will be performed on schedule and within a reasonable time period. The new Director of Facilities is improving this checklist to include more events and a timetable. In addition, the district is requiring the architects to submit their timetable for projects to the Director of Facilities on the same project management software the district uses.

The 1995 Educational Plant Survey does not specifically provide assurances to the board or to the public that the projects addressed in the plan will be implemented at the proposed budget levels within the time frame prescribed. Accountability is achieved through a Schedule of Capital Outlay Project Expenditures (SCOPE) report. This report is prepared every three months for each construction project and presented to the board. The report contains information on project budget status, schedule, and any issues that need to be addressed. Specifically, the SCOPE report compares scheduled completion date with actual completion date. The status column on SCOPE indicates the reasons for any project delays. The SCOPE reports for the last three schools constructed show that these schools were built within planned timeframes.

The board has delegated adequate decision-making authority to the Director of Facilities and the Supervisor of Construction, and uses the SCOPE reports to hold them accountable for achieving the goals outlined in the Facilities Work Program on time and within budget.

**Recommendations**

- The district should develop 10-year and 20-year Education Plant Surveys as required by law.
- The district should include an accountability component in Education Plant Survey that presents a summary of completed work in previous survey.
**Recommendation 1**

**Strategy**
Develop 10-year and 20-year Education Plant Surveys as required by law.

**Action Needed**
- Step 1: Obtain copies of other districts’ 10-year and 20-year plant surveys from the Office of Educational Facilities.
- Step 2: Develop 10-year and 20-year enrollment projections based on alternate growth scenarios.
- Step 3: Develop baseline facility needs for major repair, renovation and new construction for a 20-year period.
- Step 4: Request assistance from the Office of Educational Facilities in completing the 10-year and 20-year plant surveys.
- Step 5: Submit plant surveys to board for approval.
- Step 6: Obtain approvals from the State Office of Educational Facilities.
- Step 7: Make updates to 10-year and 20-year surveys as required by law.

**Who Is Responsible**
LRPC, Executive Director for Operations, and Director of Facilities, with assistance from the Supervisor of Construction

**Time Frame**
July 2000

**Fiscal Impact**
This recommendation can be accomplished with existing resources.

**Recommendation 2**

**Strategy**
Include accountability component in Education Plant Survey that presents summary of completed work in previous survey.

**Action Needed**
- Step 1: Collect SCOPE reports for all projects performed during the last five years.
- Step 2: Compare previous plant survey to actual construction, renovation and repair projects completed.
- Step 3: Identify and explain variances from survey.
- Step 4: Include results in next plant survey.

**Who Is Responsible**
Supervisor of Construction

**Time Frame**
January 2000

**Fiscal Impact**
This recommendation can be accomplished with existing resources.

### 3

The board has established a facilities planning committee, but the committee should include a broad base of community stakeholders.

**The Facilities Planning Committee Should be More Reflective of the Community**

The district has established the Long-Range Planning Committee, which is responsible for the site location and size of new schools. This committee comprises 12 members, including parents, teachers, a representative from the county, the Director of Facilities, the
Supervisor of Construction, and two board members. The general counsel is currently
drafting a new policy statement refining the make-up of the committee and its'
responsibilities.

Although the committee does include some representatives of the community, it does not
include members of the civic or business community. Involvement of these representatives
on the committee would help ensure that community needs are being addressed. Both
business and community members represent voting constituencies, and they represent key
stakeholder interests in the facilities planning process. Business representatives also tend
to provide input on economic development issues.

**The Committee’s Role Has Been Adequately Defined in Writing**

The following responsibilities of the Long-Range Planning Committee (LRPC) were approved
by the board and are documented in the LRPC meeting minutes on March 13, 1989.

1. Formulate and develop a sound demographic data base from which needs can
   be identified and development plans to meet those needs;
2. Function as a liaison between the school system and the community;
3. Determine current status regarding land acquisition, donated land, etc., that
   may be useful as school sites;
4. Assist in selection of site property and implementation of new school

The role of the LRPC is too narrow, and should be expanded to include all facility planning
activities. Currently the LRPC does not review or approve Education Plant Surveys, Five-
Year Facilities Work Programs, Project Priorities Lists and Capital Budgets. Expanding the
LRPC’s role to include these activities would allow the board to hold this committee
accountable for all aspects of facilities planning. District staff provides information and
support for the planning effort but are not independently responsible for the facilities
planning.

The district is currently working to expand the scope of this committee. A draft policy will
make the long-range planning committee responsible for:

- Reviewing of student population
- Reviewing countywide population trends and growth patterns
- Providing recommendations regarding new school facilities
- Recommending appropriate school site boundaries

The draft policy takes the site selection responsibility from the Long-Range Planning
Committee and gives it to a new site selection committee created in the draft policy.

The board has established the committee’s project goals but should also establish its
broader goals and interim reporting targets. As indicated by board meeting minutes, the
board has established project goals for the Long-Range Planning Committee. However, the
board has not established broader goals, objectives, and procedures for the Long-Range
Planning Committee’s facilities planning function. This is contributing to the narrow focus
of the LRPC. In addition, the Board has not established interim reporting targets for when
the committee is to complete project-specific goals.

Once the board approves policies and procedures governing the Long-Range Planning
Committee, the district will have an official mechanism or schedule for reconvening the
committee to address the long-range plan. The LRPC should be charged with ensuring that
all school facilities have acceptable utilization rates and the district’s average utilization rates meet established standards. This goal would require the committee to be more actively involved in activities that support this goal.

The primary means the Long-Range Planning Committee has for documenting its decisions is the committee’s meeting minutes. However, these minutes do not clearly document the choices, criteria, or facts that led to committee decisions.

**Recommendations**

- The district should add business and civic community members to the Long-Range Planning Committee.

**Action Plan 9-3**

<table>
<thead>
<tr>
<th>Recommendation 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strategy</strong></td>
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<tr>
<td><strong>Action Needed</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Who Is Responsible</strong></td>
</tr>
<tr>
<td><strong>Time Frame</strong></td>
</tr>
<tr>
<td><strong>Fiscal Impact</strong></td>
</tr>
</tbody>
</table>

4 The district has assigned one person with the authority to keep facilities construction projects within budget.

**The District Has Assigned Responsibility for Keeping Projects Within Budget to the Supervisor of Construction and Has Established Credentials for This Position**

The Supervisor for Construction is primarily responsible for the completion of all construction projects. In the job description of the Supervisor of Construction, the district has established the educational and professional qualifications for this position.

- Bachelor of science degree from an accredited educational institution.
- Five years experience in the building trades field with at least two years of supervisory work.
- Knowledge of state, federal and local rules and regulations relating to construction and land use.

Each construction project also has an architect who reports to the Supervisor of Construction for that project.
The Current Supervisor of Construction Has the Required Credentials

The current Supervisor of Construction has a background in the construction industry and has worked at the district for 20 years. The Supervisor of Construction plans to retire at the end of 1999. With his retirement, the district will experience loss of critical information and experience that are used in the management of district construction projects. To ensure a smooth transition the district will need to upgrade the position requirements to require more years of experience. This will be especially important in Martin County as management information systems are under development. (See page 30).

The District Has a Mechanism for Holding the Supervisor of Construction Accountable for Keeping Facilities Construction Projects Within Budget

The SCOPE reports are the primary mechanism through which the Supervisor of Construction is held accountable for completing construction projects on time and within budget.

Recommendations

- The district should upgrade credentials and qualifications for the position of Supervisor of Construction to ensure continued program success.

Action Plan 9-4

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Update credentials and qualifications for position of Supervisor of Construction to ensure that replacement carries on successful program.</th>
</tr>
</thead>
</table>
| Action Needed | Step 1: Review existing requirements and credentials on job description.  
| | Step 2: Develop and/or upgrade requirements.  
| | Step 3: Modify job description. |
| Who Is Responsible | Director of Facilities |
| Time Frame | September 1999 |
| Fiscal Impact | This recommendation can be accomplished with existing resources. |

5 The district has assigned budget oversight of each project or group of projects to a single project manager.

The district has assigned the Supervisor of Construction with the responsibility to oversee the budget of each construction project. For more information on the required credentials and experience see page 9-13.
The district’s capital budget is linked with the five-year facilities work program and the Educational Plant Survey. With more than adequate capital project funds, the district has not been required to pursue aggressive efforts to improve capacity.

1 The district uses a capital planning budget based on comprehensive data collected in the early stages of the Education Plant Survey.

The district prepares a Five-Year Facilities Work Program, which is updated annually, and serves as its capital planning budget. This program is required by Chapter 235.185 of the Education Code, but does not need state approval. The current work program shows all capital projects from 1998-99 through 2002-03. It groups these projects into several categories: student station needs; major repair and renovations (primarily includes major renovations); and other capital projects (primarily includes major repairs and other capital projects). The work program identifies a total of $122 million in capital improvement projects over the next five years, $90 million of which will be funded by local millage, and $11 million by PECO funds. Another major source of funds is state bond proceeds ($15 million).

The first year of the Five-Year Facilities Work Program is used as the capital budget for the following school year. As a part of the budget preparation process, the Finance Department conducts workshops for the board, including a workshop on capital outlay. As a part of this workshop, the board is presented with and reviews all funds related to debt service, and all items in the capital projects fund, including items contained in the district Facilities Work Program. The Director of Finance stated that funds cannot be budgeted or requisitioned without an active project number, and projects are not assigned a number until the board has approved them.

The Preparation of the Capital Planning Budget Needs to be Based on a Critical Assessment of All Factors

Separate sections in this chapter discuss the individual factors that are applied in the development of the capital budget. These factors are summarized below.

Demographics / enrollment. The district uses its own projection of enrollment to evaluate future capacity of schools and determine whether new student stations are needed. The enrollment projections are not based on a thorough demographic analysis. (See separate section on enrollment projections, page 9-23.)

Capacity. Through its FISH records, the district tracks capacity by school and identifies the need for additional student stations based on State Requirements for Educational Facilities (SREF). This analysis resulted in the need for three new schools over the next five years. If the district were able to redraw attendance boundaries to maximize school utilization, the construction of these schools would not be needed. The district has not aggressively sought to change attendance boundaries unless a new school is being
constructed. (See separate section capacity analysis regarding the district’s assessment in this regard on page 9-24.)

**Alternatives.** Over the past five years, the district has renovated space and finished out existing space to defer construction of new facilities. The district uses an innovative practice of leaving empty shell space at a new school until it is needed. This reduces maintenance and operations cost. The district is also considering a joint use facility with Indian River Community College if legislative funding is granted. As indicated above, the changing of attendance boundaries has not been pursued to maximize utilization. (See separate section on capacity and alternatives analysis on page 9-30.)

**Educational requirements.** For each new school, an Educational Specifications Committee is established and a set of educational specifications is developed. However, in cases where plans are reused, a new set of educational specifications is not developed. Further, the architect is not involved in the development of educational specifications. (See separate section on educational specifications on page 9-38.)

**Yearly projection of needs.** State law requires the five-year plan to be updated annually and adopted by the board. The district complies with this requirement.

**Cost projection.** According to the Supervisor of Construction, the district converts facility needs into preliminary cost estimates by using a rule of thumb cost-per-square-foot estimate. The district compares this amount to the inflation-adjusted cost-per-student-station guidelines for reasonableness.

**Sources of funds.** The sources of funds for all capital projects in the Facilities Work Program are estimated for a prospective five-year period.

The district has been able to fund construction programs on a pay-as-you-go basis. The district has not used bond referendums to finance construction projects in over 20 years, and is not planning on using this financing alternative in the future. As shown in Exhibit 9-6, approximately 73% of capital project funding is from local millage. The district has not used local sales-surtax to finance construction projects in recent years and is not planning on using this financing alternative in the future.

**Exhibit 9-6**

**A Large Majority of Capital Project Funding Is From Local Millage 1998-99 through 2002-03**

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Millage</td>
<td>$ 89,916,612</td>
</tr>
<tr>
<td>PECO</td>
<td>10,992,140</td>
</tr>
<tr>
<td>Other recurring revenues</td>
<td>6,716,096</td>
</tr>
<tr>
<td>Non-recurring sources (state bonds)</td>
<td>14,812,545</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$122,437,393</strong></td>
</tr>
</tbody>
</table>

The district considers innovative methods for funding and financing construction projects.

The District Considers Innovative, Non-Traditional Methods for Funding Construction Projects

The district makes some effort to identify innovative financing and funding opportunities, but has not been compelled to do so because of an abundance of capital outlay funds.

For example, the district has achieved cost savings through a lease-purchase arrangement. The district executed a lease purchase agreement with the Wedham Foundation, which allows the school district to obtain a piece of property for future use at about one-half of fair market value. This resulted in savings of over $300,000.

However, local millage and PECO funds provide a substantial amount of funding for the district. Thus the district has not been pressed to develop more innovative approaches to funding capital projects. The district’s strategy has been to fund facilities on a “pay-as-you-go” basis, which is desirable from a financial management standpoint. Millions of dollars in interest expense are saved by using this approach. This has been a simple yet effective strategy in meeting long-term facility needs. As of June 30, 1998, the district had only $7.5 million in bonds payable.

The District Has Assessed Each Proposed Project, Evaluated the Size of Spaces, and Building Proposals for Frugal Construction. However, the Most Recent Educational Specifications Did Not Contain Evidence That the District Eliminated Non-Essential Programs

The Facilities Department establishes parameters for gross square feet and cost per square foot, and lets the Educational Specifications committees establish priorities. However, the most recent Educational Specifications contained no evidence of any pruning of non-essential programs. The Educational Specifications for the last three schools constructed were all versions of the same boilerplate document used for a prior school. Modifications of district-wide programs and sizes of space were not factored into the educational specifications. (Also see separate section in this chapter on educational specifications, page 9-38.)

The district uses size parameters established by the SREF, and identifies the space needed by type of classroom, by grade level.

In the past, the district has not used the state’s prototype designs, which are significantly less expensive than the designs used by the district. However, the Supervisor of Construction stated that the prototypes available from the state 10 years ago, when the district began its last construction phase, were not flexible enough to meet the needs of the district. For example, a prototype for a high school for 4,000 students was not easily adapted to one for 2,000 students.

The district also strives to construct cost-efficient facilities. In the architect contract, Article 15 obligates the architect to pursue costs savings through value engineering. (See separate section regarding architectural services on page 9-32.) The district expects to be eligible for awards for frugal construction during its next building program. The state’s
frugal construction program was initiated since the last school was built. This program provides financial incentives for school districts for frugal construction on new schools.

3 The capital planning budget accurately lists facilities needs.

The Capital Budget Lists Reasonable Facility Needs

The Five-Year Facilities Work Program provides cost estimates for individual projects, and has separate sections for additional student stations, major renovation and repair, and other capital projects, which includes site improvements, technology, ADA compliance and major equipment purchases or replacements.

The Budget Itemizes the Cost of Needed Facilities

New school cost estimates are prepared based on prior experience (cost per square foot) and compared to the cost per student station based on state standards for reasonableness. The lower of the two amounts is applied. This ensures that cost estimates are consistent with state standards and support an accurate capital budget.

The School Board Needs to Establish “Not-to-Exceed” Project Amounts for Capital Projects

The board does not formally establish a “not to exceed” figure for capital projects. According to the Supervisor of Construction, the Facilities Department tells the board the anticipated spending levels, based on historical cost and cost per square foot information. However, the board does not formally adopt this figure.

The Budget Sets Project Priorities in Accordance With the Master Plan

The budget document reflects priorities for capital projects based on the Project Priority List. The district is also required a Request for Approval of Priorities of Expenditure of State Capital Outlay Funds to the Department of Education. This form identifies those projects with the highest (A rating) priority for educational programs.

The district has not developed procedures regarding the funding of projects in the Five-Year Facilities Work Program; however, the district has funded the projects on a “pay-as-you-go” basis. Thus the district relies primarily on recurring local tax revenue to fund facility needs.

Recommendations

- The district should provide more itemization for new school construction on the Five-Year Facilities Work Program.
- The board should establish not-to-exceed spending levels that are consistent with state standards for construction.
**Action Plan 9-5**

<table>
<thead>
<tr>
<th>Recommendation 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strategy</strong></td>
</tr>
<tr>
<td><strong>Action Needed</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Who Is Responsible</strong></td>
</tr>
<tr>
<td><strong>Time Frame</strong></td>
</tr>
<tr>
<td><strong>Fiscal Impact</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Recommendation 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strategy</strong></td>
</tr>
<tr>
<td><strong>Action Needed</strong></td>
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<td></td>
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<tr>
<td></td>
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<tr>
<td><strong>Who Is Responsible</strong></td>
</tr>
<tr>
<td><strong>Time Frame</strong></td>
</tr>
<tr>
<td><strong>Fiscal Impact</strong></td>
</tr>
</tbody>
</table>

**Selection and Acquisition of School Sites**

1. **The district uses a site selection committee to identify and recommend sites in a timely manner.**

Although Not a District Procedure, the District Has Used a Site Selection Committee

The district does not have documented policies or procedures requiring the establishment of a site selection committee. However, in practice, the site selection committee is the Long-Range Planning Committee. Minutes of the LRPC meetings for the Bessey Creek Elementary school show that the committee evaluated sites in 1994, approximately 14 months before construction began on the school. The committee evaluated several sites and recommended the specific site for board approval on February 1, 1995. A draft policy has created a separate site selection committee.
The District Can Demonstrate That it Meets Legal Requirements for Site Selection

Until 1997, state law required that all site purchases be approved by the state. The state no longer has this requirement, but the district is still responsible for meeting legal requirements with respect to site purchases.

Since site purchases represent major financial and long-term planning commitments for a school district, it is important that their evaluation and selection meet all legal requirements. The legal requirements are defined in statute and in Section 1.4 of the State Requirements for Educational Facilities. Section 235.054, F.S., requires that all sites with an estimated value of $100,000 to $500,000 have one independent appraisal, and that sites with an estimated value exceeding $500,000 have two independent appraisals. The district provided two appraisals of the Sea Wind Elementary School site that demonstrate its compliance with this statute.

Sections 235.19 and 235.193, F.S., define requirements for coordination with local governing bodies in site selection and require school districts to select sites that meet the education need parameters established by the state. These requirements are specifically defined in Section 1.4 of the SREF. The district provided copies of notification letters to the six local governing bodies and other entities to support compliance with this requirement with respect to the Bessey Creek Elementary site.

- Martin County Board of County Commissioners
- Martin County Sheriff's Department
- Martin County Fire Prevention
- Department of Public Safety
- South Florida Water Management
- Florida Power and Light

The final site inspection form for the Bessey Creek Elementary site verifies that written agreements were obtained from the above entities. These agreements verify that adequate services can be provided to the site, and/or that the intended use meets other prescribed conditions.

Section 1.4(4)(a) of the SREF establishes minimum acreage for elementary school sites. A minimum of four acres is required for the first 200 students, and one acre for each additional 100 students. Bessey Creek Elementary school's ultimate capacity based on the Education Plant Survey was 770 students. Based on the formula, this would require a minimum of 10 acres. The actual number of acres on the site is 17.1, which provides adequate land for facility growth.

The District Can Demonstrate That a Planner From Local Government Was Involved in Site Selection

The district provided correspondence between Martin County's County Engineer and the school district during the evaluation of the Bessey Creek Elementary site. In an April 27, 1995, letter to the district, the county expressed an intent to coordinate discussion of several issues relating to the site, including traffic, drainage, pedestrian movement, landscaping and coordination with neighboring park site.
Recommendations

• The district should adopt board policy requiring establishment of a site selection committee at least 12 months prior to planned construction. This committee should be separate from the Long-Range Planning Committee.

**Action Plan 9-6**

<table>
<thead>
<tr>
<th>Recommendation 1</th>
</tr>
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<tbody>
<tr>
<td><strong>Strategy</strong></td>
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<tr>
<td><strong>Action Needed</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Who Is Responsible</strong></td>
</tr>
<tr>
<td><strong>Time Frame</strong></td>
</tr>
<tr>
<td><strong>Fiscal Impact</strong></td>
</tr>
</tbody>
</table>

2. The district needs to expand and document its site selection criteria.

**The District Needs to Establish Formal School Site Selection Criteria**

According to the supervisor of Construction, the district has no formal site selection criteria other than those defined by law and the SREF. However, the draft policy lists three main criteria for site selection: acreage, cost considerations, and governmental coordination. The policy also lists 31 miscellaneous criteria to be considered. The coordination with local governing bodies indicates the district considers many criteria related to this best practice indicator.

- General safety – coordination and written agreement with the Martin County Sheriff’s Department, Martin County Fire Prevention and the Department of Public Safety.
- Location – Form 350 completed for the Bessey Creek Elementary site shows the district considered location criteria including proximity to flight patterns, neighboring noise or odor interference, and proximity to railroad and highway right of way.
- Utilities – Form 350 completed for the Bessey Creek Elementary site shows the district made sure utilities were readily available.
- Environmental impact requirements – the district maintains a parcel evaluation checklist that includes the assessment of environmental concerns, including wetlands evaluation, soil study, soil borings and existing elevations for fill dirt study. Evidence of these studies for the Bessey Creek Elementary site, conducted between June and September 1995, were provided as support.
• Size and shape – Form 350 completed for the Bessey Creek Elementary site reflects that the district assessed the size and shape of the site for educational purposes. The form also includes an assessment of whether the site can be expanded or not.

The Bessey Creek Elementary site met all of the site selection criteria prescribed on Form 350. However, the district’s process does not address other site selection criteria such as, current and future zoning requirements, student transportation assessments, and cost of services provided to the site.

The District Can Demonstrate That Preliminary Reviews and Tests Were Conducted Prior to Final Selection

The district provided evidence of soil studies conducted four months prior to final site selection. Fraser Engineering and Testing conducted a preliminary subsurface investigation for the Bessey Creek site on June 5, 1995, three months prior to the site purchase on September 14, 1995. The conclusion of this study was that the site was suitable for construction of a new school. The district relied on a local governing body (South Florida Water Management District) to evaluate drainage. The district obtained a written agreement from South Florida Water Management District that flood control and drainage conditions were adequate for the site.

Recommendations

• The district should develop formal site selection criteria and checklist for site evaluation that go beyond state requirements.

Action Plan 9-7

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Develop formal site selection criteria and checklist for site evaluation.</th>
</tr>
</thead>
</table>
| Action Needed | Step 1: Using Form 350 and more current applicable state laws, define and document all criteria for site selection.  
Step 2: Identify other site selection criteria based on district needs.  
Step 3: Finalize site selection criteria and submit to board for approval. |
| Who Is Responsible | Director of Facilities |
| Time Frame | October 1999 |
| Fiscal Impact | This recommendation can be accomplished with existing resources. |
3 The board needs to improve its evaluation of other factors in site selection.

The district does not have any documented criteria that address condemnation, neighborhood concerns, future zoning, or future transportation plans. The Supervisor of Construction stated that these topics are discussed by the LRPC, and analysis of LRPC meeting minutes supported this statement. It is important, however, for the district to document these criteria so that they are considered in all site evaluations. The district’s draft policy, if implemented, should address these issues.

4 The district has a system to assess sites to ensure prices paid reflect fair market value.

The District Conducts Independent Appraisals of Sites to Reflect Fair Market Value

The district provided two appraisal reports of vacant land located off SE Seabranche Blvd. (the present site of the Sea Wind Elementary School). The appraisal reports provide information on factors such as location, site size, land use, flood zone, and land value comparisons, they do not provide a comparison of “the most economical and practical locations for current and anticipated needs” with respect to a potential school site, as required by sections 235.054 and 235.19, F.S.

The district has paid below fair market value for two sites by using sites that were offered at substantially reduced prices. Williams Elementary school was built on land being purchased through a lease purchase agreement. The district paid an initial $250,000 for the first year of using the land. Each year after the district’s lease amount is abated as long as at least one of 11 lease criterion is met. After 10 years the district has the option to purchase the land for one dollar ($1.00). An appraisal of the 26 acres site indicates the land is worth $1,011,000. The district will recognize a savings of $750,000 if the option is executed.

Sea Wind Elementary was built on land sold by a developer at a reduced rate. The district paid $240,000 for a site appraised at $480,000. By using sites that are offered at lower costs and still meet site selection criteria the district has been able to recognize a substantial savings on land acquisition costs.

5 For each project, the architect and facilities planner develop a plan to serve as a decision-making tool for future facilities needs.


The plans for new schools include the construction of shell space that can be used to meet future facility needs. The schools are designed for an ultimate enrollment, but some
classrooms are left unfinished until enrollment needs warrant the completion of the space at a lower cost than constructing new buildings. The district has applied this concept on all new schools including the recently constructed Bessey Creek Elementary school.

**Enrollment Projections**

1. The district prepares enrollment projections; however, available demographic data is not always incorporated into the enrollment projections used for facilities planning.

**The District Has Not Conducted a District-Wide Demographic Study Over the Past Five Years, but Uses Available Demographic Data From the County Database**

The Educational Plant Survey is the primary facilities planning document prepared by the school district. The state requires that a survey be conducted at least once every five years. Martin County’s most recent Educational Plant Survey was developed in 1995 with the assistance of the Florida Department of Education. According to the Supervisor of Construction, the district is in the process of developing another survey this year.

The 1995 survey includes enrollment projections that were used as the basis for facility needs between 1995-96 and 1999-2000. The enrollment projection was developed by the Florida Department of Education, and applied a cohort survival method, which is the method used by the U.S. Census Bureau. This technique incorporates the number of live births, and uses historical trends to project enrollment by grade, or cohort, for Pre-K through Grade 12.

These state projections are not based on a thorough demographic study, or on city/county comprehensive plans. For instance, migration is not factored into the enrollment projections, nor are demographic characteristics such as ethnicity or economic status.

Martin County conducted a countywide population projection in February 1994. The study examined the following:

- Persons per household
- Permanent versus seasonal populations
- Municipal and regional growth
- Growth by planning area

The county study did consider build-out assumptions, but did not address local ordinances, a forecast of economic conditions, vocational opportunities, availability of community services or road systems. Based on these factors, the study projected population until 2005 by municipality, planning area, and permanent versus temporary population. This study was not incorporated or referenced by the 1995 enrollment projection in the district’s Education Plant Survey.
The 1995 Education Plant Survey projected 14,923 students for 1998-99. Actual enrollment in 1998-99 is 16,331. Since this survey was completed, the state enrollment projections have been updated. The Department of Education prepared its most recent enrollment projection for Martin County School District in June 1998.

The district also develops its own enrollment projections, by grade, and compares its projections to state projections. These projections have been extremely accurate in recent years, and the state of Florida has allowed the district to base facility needs on its own projections. The district’s methodology is not based on a formal demographic study, but demographic data is available from the county database. The Supervisor of Construction, in coordination with the Martin County planning office and the Long-Range Planning Committee, develops the district’s enrollment projections.

The district’s projection of enrollment submitted to the LRPC includes projected numbers of students by grade, by school. These projections should also include available demographic information, such as ethnicity and income status. This demographic information is useful in program planning. For example, if the Hispanic population is expected to increase, bilingual education programs may need to be expanded, and this may have facility consequences beyond those of regular program students. Further, and projected increases or decreases in family incomes will directly affect the district’s eligibility for federal funding programs and the size of Title I programs in particular. Since Title I schools receive additional funds for educational enhancement, a need for more classrooms could result from the use of this information in facilities planning.

**School Capacity Should be Based on Full Utilization for all Schools**

The district’s most recent enrollment projection is dated August 19, 1998, and projects enrollment in 2002-03 to be 18,722, reflecting 10.5% growth over the next four years. This estimate is considerably higher than the state’s estimate made two months earlier showing projected enrollment of 16,935 by 2002-03. (See Exhibit 9-7) Historically, while the state’s approach has been more sophisticated, the district’s projections have been more accurate. The state’s numbers exclude the district’s Head Start student population, which is more than 350 students. The state’s projections also apply end of year enrollment data. The district believes that they must have adequate facilities to house the number of students at the beginning of the school year.

**Exhibit 9-7**

**District Enrollment Projections Reflect Higher Growth Rates than the State**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td>15,623</td>
<td>16,095</td>
<td>16,376</td>
<td>16,679</td>
<td>16,935</td>
</tr>
<tr>
<td>District</td>
<td>16,091</td>
<td>16,961</td>
<td>17,636</td>
<td>18,144</td>
<td>18,722</td>
</tr>
</tbody>
</table>

The district breaks down its enrollment projections by school. Its school enrollment projections incorporate anticipated boundary changes caused by the addition of new schools. The district has not changed attendance boundaries to increase district-wide facility utilization.

The 1995 Education Plant Survey contains capacity utilization factors for schools. The high school utilization rate varies with the number of student stations in the school. Both of Martin County’s high schools have more than 1,500 student stations.
Elementary schools 100%
Middle/Junior High Schools 90%
Senior High Schools (over 1,500 students) 95%

Based on these targets, most schools are currently under capacity. See Exhibit 9-8 for information on the schools that have extra capacity. Some students that start out in a regular school at the beginning of the year are transferred to special school during the year. This can affect a school's ability to maintain full capacity throughout the year. The district is also considering limiting class sizes at J.D. Parker Elementary and Port Salerno Elementary to 20 students per teacher. If the district follows through with this, the capacities of these schools will be altered.

**Exhibit 9-8**
**Most Martin County Schools Are Under Capacity, 1998-99**

<table>
<thead>
<tr>
<th>Campus</th>
<th>100% Capacity (Permanent Facilities)</th>
<th>Target Capacity %</th>
<th>Target Capacity</th>
<th>Enrollment</th>
<th>Percentage Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High School</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Martin Senior High</td>
<td>2,177</td>
<td>95%</td>
<td>2,068</td>
<td>1,971</td>
<td>95.3%</td>
</tr>
<tr>
<td>South Fork Senior High</td>
<td>2,197</td>
<td>95%</td>
<td>2,087</td>
<td>1,623</td>
<td>77.8%</td>
</tr>
<tr>
<td>Total – High Schools</td>
<td>4,374</td>
<td></td>
<td>4,155</td>
<td>3,594</td>
<td>86.5%</td>
</tr>
<tr>
<td><strong>Middle Schools</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hidden Oaks Middle School</td>
<td>1,432</td>
<td>90%</td>
<td>1,289</td>
<td>1,278</td>
<td>99.2%</td>
</tr>
<tr>
<td>Stuart Middle School</td>
<td>1,515</td>
<td>90%</td>
<td>1,364</td>
<td>1,064</td>
<td>78.0%</td>
</tr>
<tr>
<td>Murray Middle School</td>
<td>1,297</td>
<td>90%</td>
<td>1,167</td>
<td>877</td>
<td>75.1%</td>
</tr>
<tr>
<td>Indiantown Middle School</td>
<td>663</td>
<td>90%</td>
<td>597</td>
<td>349</td>
<td>58.5%</td>
</tr>
<tr>
<td>Total – Middle Schools</td>
<td>4,907</td>
<td></td>
<td>4,416</td>
<td>3,568</td>
<td>80.8%</td>
</tr>
<tr>
<td><strong>Elementary Schools</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bessey Creek Elementary</td>
<td>560</td>
<td>100%</td>
<td>560</td>
<td>560</td>
<td>100.0%</td>
</tr>
<tr>
<td>Crystal Lake Elementary</td>
<td>820</td>
<td>100%</td>
<td>820</td>
<td>750</td>
<td>91.5%</td>
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<tr>
<td>Felix A. Williams Elementary</td>
<td>623</td>
<td>100%</td>
<td>623</td>
<td>709</td>
<td>113.8%</td>
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<tr>
<td>Hobe Sound Elementary</td>
<td>912</td>
<td>100%</td>
<td>912</td>
<td>654</td>
<td>71.7%</td>
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<td>Jensen Beach Elementary</td>
<td>955</td>
<td>100%</td>
<td>955</td>
<td>653</td>
<td>68.4%</td>
</tr>
<tr>
<td>J.D. Parker Elementary</td>
<td>761</td>
<td>100%</td>
<td>761</td>
<td>686</td>
<td>90.1%</td>
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<tr>
<td>Palm City Elementary</td>
<td>899</td>
<td>100%</td>
<td>899</td>
<td>793</td>
<td>88.2%</td>
</tr>
<tr>
<td>Pinewood Elementary</td>
<td>826</td>
<td>100%</td>
<td>826</td>
<td>739</td>
<td>89.5%</td>
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<tr>
<td>Port Salerno Elementary</td>
<td>831</td>
<td>100%</td>
<td>831</td>
<td>621</td>
<td>74.7%</td>
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<tr>
<td>Sea Wind Elementary</td>
<td>700</td>
<td>100%</td>
<td>700</td>
<td>670</td>
<td>95.7%</td>
</tr>
<tr>
<td>Warfield Elementary</td>
<td>703</td>
<td>100%</td>
<td>703</td>
<td>792</td>
<td>112.7%</td>
</tr>
<tr>
<td>Total – Elementary Schools</td>
<td>8,590</td>
<td></td>
<td>8,590</td>
<td>7,627</td>
<td>88.8%</td>
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<tr>
<td><strong>Total – Schools</strong></td>
<td>18,740</td>
<td>17,871</td>
<td>14,789</td>
<td></td>
<td>86.2%</td>
</tr>
</tbody>
</table>

Sources: Martin County School District, Enrollment Demographic Progression Analysis, dated 6/16/99, revised 7/26/99; Florida Inventory of School Houses, 2/10/99.
The district has planned for the construction of three new schools by 2003-04 – one elementary school, one middle school and one high school – based on its most recent enrollment projections. While these projections have not manifested themselves in an Educational Plant Survey, they have been used to develop the district’s Five-Year Work Program, a long-term budget for capital projects that is required by the state to be updated annually.

**Recommendation**

- The district should include available demographic data in enrollment projections submitted to the LRPC.

**Action Plan 9-8**

<table>
<thead>
<tr>
<th>Recommendation 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strategy</strong></td>
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<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td><strong>Who Is Responsible</strong></td>
</tr>
<tr>
<td><strong>Time Frame</strong></td>
</tr>
<tr>
<td><strong>Fiscal Impact</strong></td>
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</table>

**Existing Facilities – Alternatives to New Construction**

1. The district uses the Florida Inventory of School Houses inventory to analyze student capacity and classroom utilization.

The District Identifies all Buildings and/or Spaces as “Satisfactory Area” in the FISH Inventory; Because Information is not Available to Identify all Facility Needs

A facilities inventory is maintained on a state computer system called the Florida Inventory of School Houses (FISH). All buildings and spaces on this inventory are ranked satisfactory. The district has not conducted any facility audits that evaluate each component and classroom to provide information that would change existing satisfactory rankings. (See discussion of facilities page 9-29.) A facilities audit would also provide the
data to complete the ranking information on the FISH records, and allow these records to serve a more useful purpose.

**The District can Demonstrate That it Uses the FISH Inventory to Analyze and Identify Instructional Areas or Student Stations**

The FISH inventory is used to determine current capacity and needs for additional schools or student stations. Supporting schedules for the Five-Year Facilities Work Program includes FISH data relating to the number of student stations. Actual, planned and target capacities are compared to identify needs for additional student stations.

The district analyzes capacity on a school-by-school basis, not on a district or school type level. During the February 10, 1999, meeting of the Long-Range Planning Committee, the Director of Facilities and the Supervisor of Construction stated that “statistics show the need for another middle school to be open by Fall 2001. Hidden Oaks Middle School is over capacity.” This statement is true, but does not recognize that overall middle school capacity is 848 students under capacity. There was no mention in the minutes of overall capacity or the impact of projected enrollment on capacity.

**The District Maintains the Data Needed to Identify Instructional Areas and Teaching Stations in Accordance With the Requirements of Current Laws of Florida. However, This Information is not Verified for Accuracy**

Plant operators at each school confirm changes to the data in the FISH records annually. However, without a formal facilities audit/appraisal, data is confirmed only through confirmation of changes. The Facilities Department “informally” confirms compliance with state laws, according to the Supervisor of Construction.

**The District Can Demonstrate That the Number of Students Assigned to Each Teaching Station is in Accordance With the Requirements of the Current Laws of Florida**

The district provided FISH records for all schools, showing total net square feet per school. Five classrooms were randomly sampled from Bessey Creek Elementary FISH records to determine whether the individual class configuration fell within SREF parameters. (Exhibit 9-9)

*Exhibit 9-9*

**District Student Stations Fall within State Prescribed Ranges**

<table>
<thead>
<tr>
<th>Building</th>
<th>Class #</th>
<th>Type</th>
<th>Net Square Feet/Student</th>
<th>SREF Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>02</td>
<td>201</td>
<td>Kindergarten</td>
<td>38.9</td>
<td>36-40</td>
</tr>
<tr>
<td>02</td>
<td>203</td>
<td>Intermediate (4-6)</td>
<td>32.2</td>
<td>30-34</td>
</tr>
<tr>
<td>03</td>
<td>302</td>
<td>ESE Resource</td>
<td>99.8</td>
<td>91-101</td>
</tr>
<tr>
<td>05</td>
<td>501</td>
<td>Primary (1-3)</td>
<td>38.0</td>
<td>36-40</td>
</tr>
<tr>
<td>03</td>
<td>304</td>
<td>Elem. Resource</td>
<td>33.6</td>
<td>30-34</td>
</tr>
</tbody>
</table>

*Florida Inventory of School Houses, 1999*
Recommendations

- The district should include FISH inventory verification in the district’s internal audit program.

**Action Plan 9-9**

<table>
<thead>
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<th>Recommendation 1</th>
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<td><strong>Strategy</strong></td>
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</table>
| **Action Needed**| Step 1: Develop an audit program to verify the accuracy of FISH data for specific facilities on a rotating basis.  
Step 2: Conduct audit and report results to the board audit committee. This audit could be performed while the internal auditor is on site performing the audit of school activity funds. The internal auditor should perform the audit of FISH data with assistance from the Plant Operator or the Supervisor of Construction. |
| **Who Is Responsible** | Internal Audit |
| **Time Frame**   | October 1999 – develop program  
December 2000 – conduct audit (after facilities audit is complete) |
| **Fiscal Impact**| This recommendation can be accomplished with existing resources. |

2 The district needs to periodically conduct an evaluation of the physical condition and educational adequacy of existing facilities.

**Current Facility Evaluations Include the Education Plant Survey, Conducted Every Five Years, and Annual Safety Inspections**

The district conducts a 5-year plant survey and annual safety inspections. However, these processes do not collect the types of information that would be available through a formal evaluation of existing facilities (also referred to as facility audits or facility appraisals). A facilities audit applies a formal methodology in evaluating and grading all aspects of facilities, including the school site, structural and mechanical features, plant maintainability, school building safety and security, educational adequacy and a proper environment for education. An evaluation commonly used is the *Guide for School Facility Appraisal*, adopted by the Council of Educational Facility Planners, International. This evaluation instrument assigns a score of 1 to 100 to each facility based on detailed analyses of the five categories mentioned above.

These audits are useful in identifying facility needs that are not defined through current inspection and survey programs. A facilities evaluation would provide district staff with more specific information on facility needs for each school in the district, and would provide better information to use in planning future maintenance projects.
The District’s FISH Data is Current, But its Accuracy Should be Verified

The district has an electronic link with the state of Florida to update its FISH data. The inventory is updated throughout the year by the Supervisor of Construction, even though the state requires updates annually. However, according to its internal audit procedures, the district does not conduct internal audits to independently verify the accuracy of the FISH data.

The FISH data lists every building and every component of every building, and provides a condition assessment for each. These assessments indicate that all building components are ranked as satisfactory. In addition, a random sample of 250 line items in the district’s FISH records indicates that all spaces are ranked as satisfactory. These satisfactory rankings indicate that the district does not need to make capital expenditures for major repair or renovations.

The district conducts annual safety inspections to identify needed repairs and renovations. However, according to the Supervisor of Construction, the district has not performed a facilities audit in recent years but instead relied on the 1995 Education Plant Survey, which provides a general condition assessment of all buildings. More frequent facility audits or assessments based on formal evaluation criteria would provide the district with a more comprehensive list of its facility needs.

Recommendations

• The district should conduct a comprehensive facilities audit to identify all needs of existing facilities. This audit should be conducted by an independent contractor, and should be based on a generally accepted evaluation methodology commonly applied in the construction industry.

Action Plan 9-10

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<td><strong>Who Is Responsible</strong></td>
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<td><strong>Time Frame</strong></td>
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<td><strong>Fiscal Impact</strong></td>
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3 The district should give serious consideration to more aggressive alternatives to improve facility utilization.

The District Needs to Analyze Alternatives to New Construction

The district does a good job of using portable buildings to accommodate short-term facility needs at certain schools. However, other alternatives, such as year-round education, extended day schools, alternate grade configurations and changing of attendance zones have not been evaluated in recent years. The FISH inventory tracks capacity assuming year-round education, as required by law, but the district has not used this information to propose or conduct a feasibility analysis of this alternative. In addition, the district has a school choice plan where parents can choose which school their child will attend with specific parameters. This may cause already crowded schools to become overcrowded if parents perceive the school as desirable. This complicates the district’s analysis of alternatives to new construction and must be considered. As a result, the district builds new schools when one gets overcrowded, without evaluating alternatives that could delay spending tax dollars for new schools.

**Recommendations**

- The district should conduct feasibility studies of alternative grade configurations and attendance zones to increase overall district capacity.

**Action Plan 9-11**

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Who Is Responsible LRPC, with assistance from Director of Facilities and Supervisor of Construction
Architectural Services for Facility Planning and Construction

1. The district uses an architect selection committee to screen applicants and evaluate finalists.

The District Appoints a Selection Committee for Each Construction Project

Board policy 6Gx43-8.01 sets forth requirements for contracting with architects on construction projects. Part 1c of this policy requires that an architect selection committee be established for each construction project of $120,000 or greater. This threshold is established by section 287.017, F.S. The district provided recent evidence that their policy is being followed by providing a November 2, 1998, architect evaluation form listing the names of the members of the selection committee.

The committee comprises a board member representative and four representatives from the Facilities Department, including the Director of Facilities and the Supervisor of Construction. It does not include educational program representatives. Including educators on the architect selection committee lends weight to the evaluation of architects in meeting educational, not just technical, specifications.

The District Can Demonstrate That Procedures for Selection Were in Legal Compliance

Section 287.055, F.S., provides guidance on the acquisition of architectural and engineering services. It defines the public announcement and qualifications procedures, and requires school districts to select no fewer than three qualified bidders for competitive negotiation. Part 11 of this statute also allows the selection process to be avoided if the district is reusing existing plans.

Board policy 6Gx43-8.01 references compliance with section 287.055, F.S., and the district uses a form for its own use in evaluating architects during interviews. This evaluation form includes five rating categories.

- Rating based on evaluation of standard form 254 (questionnaire) or form 255 (specific project) provided by each architect
- Past performance
The district demonstrated its use of these forms by providing Form 17A for an architect evaluation on November 2, 1998.

Forms 254 and 255 are standard forms prescribed by the state – bidding firms must submit one of these applicable forms to be considered. This application requires disclosure of the number of employees by discipline, resumes of key personnel, and a five-year history of work experience. The district provided examples of completed forms demonstrating that this evaluation procedure was performed.

**The District’s Evaluation Criteria Should Include Additional Elements**

The district evaluation criteria exclude many of the characteristics required to effectively screen and evaluate architects. Specific elements of the architect evaluation form and forms 254/255 were compared to the essential elements of a best practice indicator.

- Experience – Yes
- Adequacy of technical personnel – Yes
- Availability of individuals – Yes
- Proximity to site – No
- Creativity - No
- Adequacy of Supervision - No
- Recordkeeping – No
- Financial Stability - No
- Flexibility - Yes
- References contacted - No
- Protect district’s interests - No

Evaluation of these elements is important to protect the district’s interest. While the district does not want to exclude qualified vendors, particularly small businesses, it is important that all of the above criteria be formally incorporated into the evaluation process. The Supervisor of Construction, who has been with the district over 20 years, stated that he is familiar with most of the local architect’s capabilities, and that this knowledge is instrumental in the evaluation process. With his retirement later this year, the district will not be able to rely on this knowledge base and will need to apply additional evaluation criteria.

The district can demonstrate that finalists were evaluated based on personal interviews, but should improve its evaluation process to include other activities.

The district uses a formal process to select architects. The district used the same architect for the last three new schools built because existing plans were used for all three schools. However, the district demonstrated its use of a formal selection process for architects for renovation projects.

However, the district’s selection process relies primarily on interviews with architects. These interviews are documented by Form 17A, the form completed during the personal interview with each selected architect. The district could not provide any evidence of
interviewing an architect’s previous clients, examining his or her other plans, or visiting his or her office. According to the Supervisor of Construction, these activities sometimes take place but are not required.

- Personal interviews – Yes
- Visits to examples of their work – No
- Interviews with previous clients – No
- Examination of plans/specs / change orders – No
- Visits to architect’s offices - No

**The District Should Require its General Counsel to Review all Architect Contracts Before Signature**

The district uses a standard architect contract. It is not the standard contract recommended by the American Institute of Architects (AIA), but incorporates language from the AIA standard contract. The contract includes the following elements:

- Article 1 – Scope of work
- Article 2 - Fees
- Article 3 – Basic services, including phase deliverables
- Article 4 – Additional services required outside the control of Architect
- Article 5 – Owner responsibilities
- Article 6 – Direct and reimbursable expense
- Article 7 – Project construction cost
- Article 8 – Statements (estimates) of project cost
- Article 9 – Period of service
- Article 10 – Payment plan
- Article 11 – Accounting records
- Article 12 – Termination of agreement
- Article 13 – Successors and assigns
- Article 14 – Special provisions
- Article 15 – Value engineering

Article 2 of the contract establishes a percentage cap for the architect fees based on the size of the contract. This price schedule is attached to the contract and incorporated by reference.

The architect contract has several weaknesses.

- The contract should reference all items referenced in the construction contract, since the architect is responsible for construction supervision. The contract package for the architect and the contractor should be consistent in content and terminology since they are so closely related.
- The provision for consultant fees in Article 2 could be interpreted as an open-ended provision allowing the architect to bill additional fees. The contract language does not clearly state that the architect’s fees are subject to the percent cap and could expose the district to additional fees, depending on the available technical resources in the architectural and engineering firm.
The reimbursement rates for copies are outdated and reflect prices before commercial copy centers became common. The district should select a photocopy provider for drawings and plans and be billed directly for these services.

The general counsel is not currently required to review all architect contracts before signature. Responsibility for compliance rests primarily with the Director of Facilities. Some architect contracts are sent to the general counsel at the discretion of the Department of Facilities. While a standard form contract is used, it is not the standard AIA contract. Consequently, the lack of a formal legal review creates an unnecessary risk for the district.

**Recommendations**

- The district should adopt the AIA standard contract for architects as a base contract and make only minor modifications. The architect contract should have consistent contents and terms as the construction contract. The terms of the AIA contract have been tested in the courts, and using these terms significantly reduces litigation risk due to disputes among the architect, the contractor and the school district.
- Pricing of additional professional services in the standard contract should be incorporated into the percentage cap, and the cap schedule should be amended as necessary. The current approach is an open-ended agreement that does not limit the district’s financial exposure.
- The district should negotiate an arrangement with a local copy service to provide copies of construction drawings and specifications and should pay these costs directly.
- The board should require legal counsel to review all architect contracts before approval and periodically for long-term contracts.

**Action Plan 9-12**

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<th>Recommendation 1</th>
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<td><strong>Strategy</strong></td>
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<td><strong>Action Needed</strong></td>
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<td><strong>Who Is Responsible</strong></td>
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<td><strong>Time Frame</strong></td>
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<td><strong>Fiscal Impact</strong></td>
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<th>Recommendation 2</th>
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<tbody>
<tr>
<td><strong>Strategy</strong></td>
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</table>
### Recommendation 3

**Strategy**
The district should negotiate an arrangement with a local copy service to provide copies of construction drawings and specifications and should pay these costs directly.

**Action Needed**
- Step 1: Contact three local copy vendors to obtain per page quotes on construction drawings and other copies.
- Step 2: Select lowest bidder.
- Step 3: Implement on trial basis with one contract to evaluate feasibility.
- Step 4: Remove language in architect contract regarding copy costs.

**Who Is Responsible**
Director of Facilities, with assistance from General Counsel and Purchasing

**Time Frame**
January 2000

**Fiscal Impact**
It is estimated that by paying for copy costs directly on all architect contracts, the district will save approximately $2,500 per year.

### Recommendation 4

**Strategy**
The board should require legal counsel to review all architect contracts before approval.

**Action Needed**
- Step 1: Adopt policy requiring the general counsel to formally review and sign off on all architect contracts before approval.
- Step 2: Establish a policy for the periodic review of long-term contracts.

**Who Is Responsible**
General Counsel, School Board

**Time Frame**
September 1999

**Fiscal Impact**
This recommendation can be accomplished with existing resources.

### 2 The district involves architects in all phases of the planning process.

**The District Can Demonstrate That Architects Were Selected Early in the Planning Process**

The Supervisor of Construction stated that the architect is involved early in the construction planning process, but this involvement is not documented. Based on discussions with one of the district’s architect and engineering firms, BRPH, the architect is involved early in the project. This firm has been involved in several recent projects (Martin County High School Auditorium, South Fork High School Phase 5, and Martin County High
Facilities Construction

School Classroom Renovation), as well as being the architect of the three most recent schools built.

The construction checklist reviewed during initial field work showed the selection of the architect after the approval of educational specifications. However, the checklist has been updated to reflect the selection of the architect prior to approval of the education specifications. Based on discussions with BRPH, this chronology of events was confirmed for the recent renovation projects. The architect was not involved in the development of educational specifications for these projects, but did receive this document. The architect did not change or have input into the educational specifications or program goals, but did clarify requirements through meetings with educational specification committee members and other district staff. The architect stated that there were several meetings with Maintenance Department personnel clarifying their requirements and equipment specifications.

The architect stated that the educational specifications are useful, but sometimes are not clear. This is common to many school districts that do not involve an architect in the development of educational specifications. Some school districts hire an architect to lead this process. Involvement of the architect earlier on reduces the extent of clarification required after the educational specifications are completed. For a majority of projects, the district hires the architect early in the planning phase. The modification of the construction checklist and the establishment of timeframes will ensure that this is done on all construction projects.

The District Has Demonstrated That Frugal Costs and Life Cycle Cost Analyses are Incorporated Into the Architect’s Contract

Chapter 235.2197, F.S., defines the elements of the Florida Frugal Schools Program, which provides incentive funds for school districts that achieve frugal construction standards based on state criteria. This program applies only to new schools, and has been enacted since the construction of Martin County’s most recent school, Bessey Creek Elementary.

However, the district’s standard architect contract includes a provision (Article 15) for value engineering. This provision requires the architect to pursue in good faith savings opportunities that do not affect the quality of the project. Although the contract does not currently provide a financial incentive for architects to pursue such savings, both the architect and the Supervisor of Construction confirmed that savings have been achieved.

3 The architect selection committee conducts formal post-evaluations of architect performance.

A Representative of the Architect Selection Committee Reviews and Evaluates Architects’ Performance at the Completion of a Project

The Supervisor of Construction stated that he conducts post-evaluations of architect performance, although not in writing. The architect and engineering firm of BRPH confirmed this practice and was appreciative of the process. The findings of these reviews are not formally communicated to the architect, but have been considered by the selection committee in subsequent architect selections. An architect post-evaluation form should be developed to assist the district in documenting performance of architects. This form should include:
• Comparison of contract due dates to actual due dates for each deliverable.

• Assessed quality of each deliverable made by district based on a grade of 1 to 10.

• Listing of innovative ideas brought forth by the architect that improved the design or saved money.

• Listing of design issues encountered by architect that will benefit future projects.

• Assessed quality of teamwork exhibited by architect in working with district staff.

• Instances of any performance problems noted by school district, and how architect resolved those problems to the district’s satisfaction.

• Summary assessment indicating whether district recommends this architect for future work.

Recommendations

• Develop architect post-evaluation form.

Action Plan 9-13

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Develop architect post-evaluation form.</th>
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<tbody>
<tr>
<td>Action Needed</td>
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<tr>
<td>Step 1: Develop forms to be used in conducting architect post-evaluations.</td>
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<tr>
<td>Step 2: Identify and evaluate architect’s ability to meet deadlines, work with school district, and other performance indicators listed above and complete form for each architect contract.</td>
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<tr>
<td>Step 3: Use completed forms in subsequent evaluations of architects.</td>
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<tr>
<td>Who Is Responsible</td>
<td>Director of Facilities</td>
</tr>
<tr>
<td>Time Frame</td>
<td>December 1999</td>
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<tr>
<td>Fiscal Impact</td>
<td>This recommendation can be accomplished with existing resources.</td>
</tr>
</tbody>
</table>
1. **The district should improve its general project descriptions for major construction projects.**

### The District’s Project Descriptions and Educational Specifications Need to be Improved to Meet Best Practice Standards

The educational specifications document prepared for each school meets the state requirements for education specifications. However, they do not sufficiently meet best practice standards of excellence. Below is an assessment of the educational specifications document prepared for Sea Wind Elementary School compared to best practice indicators.

1. The document did not specifically state the rationale for another school in the district.
2. The document provided a general description of the district’s purpose, program goals, and program activities.
3. Although the district has developed and used enrollment projections, this particular document did not provide a discussion of the historical growth in the district.
4. The educational specifications document provides a detailed description of the net square feet of each program area; however, it does not provide a comparison of the proposed size of the school facility with state requirements.
5. The document classifies the center for grades K-5.
6. The document does not provide a map indicating community location and attendance zone boundaries. However, the meeting minutes of the Long-Range Planning Committee meeting indicates that extensive discussion take place about attendance zone boundaries for new schools.
7. The construction budget is not discussed in the educational specifications document.
8. The source of funding is not specified in the document.
9. A planning and construction timeline is not provided in the document.

In addition, the educational specifications do not discuss whether the new facility will serve all parts of the district on an open enrollment basis. According to the Supervisor of Construction, the educational specifications is a boilerplate document that has been used for the last three schools since the district decided to reuse the plans. The document was not modified for each school.

Even though plans are reused, it is important for each school to have its own identity and purpose. The educational specifications document provides the district with an opportunity to customize the specifications for the school’s particular purpose, within constraints prescribed by the State Requirements for Educational Facilities.
**Recommendation**

- The district’s educational specifications have been approved by the DOE. However, the district could improve their educational specifications and develop a customized educational specifications document for each school, even if plans are reused. The educational specifications should be expanded to include:
  - the rationale for building another school,
  - projected timeline and budget,
  - listing of participants included in the design of the educational specifications,
  - description of the school-community relationships,
  - defined program objectives customized for each school,
  - description of traffic flow to and from the school for students, staff and visitors.
  - plans for future expansion or increased community use.

**Action Plan 9-14**

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<td><strong>Strategy</strong></td>
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| **Action Needed** | Step 1: Develop a framework for educational specifications to include:  
  - Purpose of document  
  - Project description and justification  
  - Discussion of educational trends and future programs  
  - Discussion of educational facility trends  
  - List and description of specific programs to be provided at the school  
  - Projected timeline and budget,  
  - Listing of participants in the process.  
  - Description of the school-community relationships,  
  - Defined program objectives customized for each school,  
  - Description of traffic flow to and from the school for students, staff and visitors.  
  - Plans for future expansion or increased community use  
Step 2: Incorporate steps into development of educational specifications document. Prepare a cost comparison for alternative designs. |

| **Who Is Responsible** | Director of Facilities |
| **Time Frame** | December 1999 |
| **Fiscal Impact** | This recommendation can be accomplished with existing resources. |
2 Educational planners, instructional staff and the architect develop a set of educational specifications.

The District can Demonstrate That Preliminary Educational Specifications Were Developed, When Applicable, Prior to Actual Design Implementation

The district provided copies of the educational specifications for Sea Wind Elementary and Bessey Creek Elementary. Both of these documents were prepared prior to the construction of the schools. For example, the educational specifications for Bessey Creek were developed in 1993, two years before the construction contract was signed by the district. The architect and engineering firm of BRPH confirmed that educational specifications on renovation projects were completed prior to the development of plans.

The educational specifications for Bessey Creek were almost identical to those used for Sea Wind. According to the Supervisor of Construction, both of these schools used a boilerplate document based on the reuse of plans of a prior school, which was originally obtained from another school district. The Educational Specifications Committee for the original school toured several schools in other districts and developed an original set of specifications. With the reuse of the plans, the educational specifications have remained virtually unchanged. The Supervisor of Construction stated that an informal group of school teachers and administrators toured Sea Wind before Bessey Creek plans were finalized. This process provided them the opportunity to recommend changes that did not materially affect the design of the school or the ability to meet SREF guidelines. The educational specifications document was not amended or updated as a result of this activity.

The educational specifications document includes the board philosophy, district goals, an overall facilities list, building considerations and specifications for specific subject areas and instructional arrangements. The specifications also include requirements for food service and custodial operations. Square footage parameters are provided, and fall within constraints prescribed by the SREF.

The District Should Involve the Architect in Developing the Educational Specifications on all Major Construction Projects

According to the Supervisor of Construction, the district selects an architect before it develops educational specifications and the architect is involved in developing the specifications. However, the district recently updated its construction checklist to indicate that the district’s standard procedure is to select the architect before the board approves the education specifications. This apparent contradiction may be explained by the district’s reuse of plans for the last three elementary schools constructed. Due to this reuse, the same architect was used for Bessey Creek, Sea Wind and Williams elementary schools. This was the same architect who was used by the other school district whose plans were used. Consequently, the architect had been involved in the development of the educational specifications before the district began using the plans.

For other projects, however, the architect is not always involved in the development of educational specifications. According to one of the district’s architects, architects receive the document after it is complete, but are not involved in its development.
As stated in the previous section, the architect said that the educational specifications are useful, but sometimes are not clear. This is common to many school districts that do not involve an architect in the development of educational specifications. Some school districts hire an architect to lead this process. Involvement of the architect earlier on reduces the extent of clarification required after the educational specifications are completed.

**The District can Demonstrate That Educational Specifications Were Developed With Input From Instructional Staff**

Since the district is reusing plans of previous schools, it has not established separate committees for the recent elementary schools constructed. The Supervisor of Construction stated that teachers and administrators had input in the design of Bessey Creek, even though plans were reused. For one of the more recent renovation projects, the educational specifications committee consisted of the school principal and five other instructional staff. The district’s architect confirmed that instructional staff were very involved in the development and refinement of plans, even though the educational specifications were not amended after the architect was hired.

**Recommendation**

- The district should require the architect to verify that the educational specifications have been met, and should ensure that the architect is involved in their development.

**Action Plan 9-15**

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<td><strong>Time Frame</strong></td>
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<tr>
<td><strong>Fiscal Impact</strong></td>
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3 The educational specifications include an educational program component, but need to be customized for each school.

The District’s Educational Specifications Identify the School’s Administrative Leader Unless the Specifications Are for a School That Will be Built With Reused Plans

The educational specifications for Bessey Creek and Sea Wind do not identify the school’s administrative leader, nor any other members of the committee involved in the development of specifications. In the educational specifications for renovation/remodeling of J.D. Parker Elementary, the school’s principal is listed as a member of the committee, in addition to six other instructional staff.

The Educational Specifications Contain a Statement of the Goals and Educational Philosophy for Both the District and the Specific School Being Planned

The educational specifications for Bessey Creek and Sea Wind contain identical statements of the district’s program philosophy and goals, as well as the philosophy, goals, and activities for each program at the new school. The district’s philosophy and long-range goals are presented on page one of the educational specifications.

**Philosophy**

The Martin County School System believes in the worth, dignity and individuality of every human being. We believe that our schools must serve society by providing opportunities for all individuals to succeed in our democracy and in our changing world. The School Board subscribes to and will seek to comply with the Florida Education Equity Act.

**Long-Range Goals**

1. To motivate students in seeking knowledge, accepting challenge and excelling to the best of their abilities.
2. To foster the development of positive self-concepts, self discipline, good citizenship, good health habits and realistic career goals.
3. To promote continued cooperation among all citizens in achieving the maximum development in our children.
4. To provide an educational setting that reflects a continuous effort to maintain and build facilities conducive to a pleasing learning environment.
5. To encourage cooperative endeavors which promote professional growth and respect for educational community.

The program philosophy and goals are also identical for Bessey Creek and Sea Wind.

**Program Philosophy**

The Martin County Elementary School Program provides the opportunity to help students live better, communicate with greater clarity, enhance their thirst for knowledge, stimulate dreams and hopes and develop qualities that will insure democratic living in a well-ordered society.

The first priority of the public schools of Florida shall be to assure that all
Floridians, to the extent their individual physical, mental and emotional capacities permit, shall achieve mastery of the basic skills in reading, writing, and arithmetic, and mastery of these skills shall be developed through basic programs in the following areas of learning: language arts, measurement, problem solving, art, music, physical education, science, and social studies. (Florida Statutes 230.2311)

Program Goals

1. A school should be inviting, attractive and stimulating – a place where children like to be, a place where each can find himself.
2. A school should be staffed with adults who care. The school needs people who are open, responsive, imaginative and sensitive to the young and to their parents.
3. A school should have a storehouse of raw materials to be used for creating and communicating ideas.
4. A school should recognize that it exists in today’s world and should analyze, study, refine and understand today’s people, resources and problems.
5. A school should be cognizant of its community, which should be a library and a storehouse of problems, cultural heritage and vast interrelationships and interdependencies.
6. A school’s faculty should recognize that knowledge is unfolding daily, to be understood, to be interpreted, to be used. The newspaper, the news broadcast, the events of the day, the movies should all find their place in the modern school.
7. A school should provide its students with opportunities to share their talents and to provide social service to others: The aged, the young, the sick, etc. These experiences should begin at an early age.
8. A school should make it possible for students to discover latent competencies, to find out “what I can do.” To paint a picture, to participate in a dance or to create a new set of relationships provides security and maturity. Each day should contribute to the student’s stockpile of competencies and to his own feelings of adequacy.
9. A school should make it possible for students to be responsible for their activities. Assuming responsibility contributes to personality development, to citizenship practices and to value education.
10. A school shall implement a program of minimum basic skills for all students.
11. A school should provide opportunities for each child to realize his own power; to identify progress; to verbalize his limitations without fear; to accept his status as a benchmark of adequacy, a basis for continued learning, and an element of positive mental health.
12. A school should be led by an administrator who is sensitive to people, sensitive to learning, skilled in leadership and comfortable with change.

The educational specifications for the renovation project are more specific to the school, and do not represent a boilerplate document. The program philosophy and program goals presented in the educational specifications for J.D. Parker are presented below.
Program Philosophy

J.D. Parker Elementary School believes our educational program must prepare each child to cope with life successfully, and to function emotionally, physically, socially, and mentally within a changing world. Our school strives to accomplish this by providing living and learning experiences that will enable the child to behave as a responsible, contributing and considerate citizen in a democratic society.

Program Goals

The school endeavors to develop within each child an appreciation for aesthetic and moral values and to help develop creative potential.

The academic program provides each child an opportunity to master the basic skills, and recognizes individual differences by extending the curriculum to meet the needs of the academically talented.

The learning environment reflects educational technology and telecommunications used with current trends in best instructional practices.

Educational specifications for new schools should be tailored, like renovation projects, to meet the needs of that particular school, even if previous plans are reused. With the passage of time, the changing of laws, and the development of technology, the environment for new schools will require different educational specifications.

The Educational Specifications Do Not Address School-Community Relationships

The educational specifications for Bessey Creek and Sea Wind list the following as one of its program goals:

A school should be cognizant of its community, (and should include) a library, (and reflect a) cultural heritage and vast interrelationships and interdependencies.

There is no other mention of school-community relationships or coordination with other public agencies. This is an important issue to address in educational specifications, particularly with the participation of parents in site-based decision making and other school events. Some schools allocate space for volunteers, community health clinics or other community based activity. The educational specifications document represents the ideal place for these opportunities or needs to be addressed.

The Educational Specifications Define Program Objectives and Activities and Teaching Strategies and Instructional Methods, But Are Not Customized for Each School

The educational specifications for Bessey Creek and Sea Wind contain the same program objectives and activities. Sections in the educational specifications document for each area include pupil teacher ratios, total number of teachers and aides, grade levels taught and hours per day space will be used for that purpose. There are also sections for innovations and special considerations; however, these are the same for both schools. The only major difference between Bessey Creek and Sea Wind specifications are written notes indicating changes in the number of classrooms or use for specific areas.
The educational specifications for the renovation/remodeling project at J.D. Parker include program activities that are customized for that particular school.

**Program Activities**

- Large and small group instruction, cooperative learning, team-teaching
- Computer assisted instruction, publishing and production
- Lessons via instructional TV
- Art, music, and motor activities
- Testing, one-on-one tutoring
- Learning centers/stations
- Research and projects including multimedia presentations
- Lecture/discussion
- Hands-on, manipulative activities
- Display of student projects

The educational specifications for Bessey Creek and Sea Wind address curriculum with respect to program goals and activities requirements for specific subject areas such as exceptional education, art, music, and skill development. The staffing and support services are addressed in sections on teaching personnel, food service, and custodial.

The only mention of advanced technology in the educational specifications for Bessey Creek and Sea Wind is in the section entitled Innovations, Experimental Ideas, Other Planned Uses. For example, one of the innovations listed under the kindergarten program is as follows:

Separate area to house microcomputers for student use.

The description of the skills development lab program also provides a diagram of the computer lab.

The lack of complete technology requirements provide a good example supporting the need to refine educational specifications for each new school. Even though classroom wiring for technology was not included in the educational specifications, Bessey Creek Elementary was constructed with this feature.

**The Architect and Project Leader Maintain Educational Specifications Requirements Within Budget Limitations**

The Supervisor of Construction and the architect are responsible for ensuring that educational specifications are within the parameters of the State Requirements for Educational Facilities (SREF). These responsibilities are defined in the job description of the Supervisor of Construction and Section 3.1.1 of the architect’s contract. Compliance with the SREF ensures that schools are built on a cost per square foot and on a number of square feet basis that fall within state limits. All classroom student stations must fall within the minimum and maximum ranges defined by the SREF.
4 The specifications include detailed descriptions that, when combined with the SREF, are sufficient for the architect to develop plans.

The same plans have been used for the last three elementary schools. These plans were originally used by another school district. The district selected these plans and the architect who developed these plans for each of the three elementary schools.

Exhibit 9-10 provides a comparison of best practice indicators for construction plans to the educational specifications of Bessey Creek Elementary. It shows that the district meets or partially meets most of these indicators.

Exhibit 9-10

Construction Plans Generally Contain Essential Elements

<table>
<thead>
<tr>
<th>Required Elements for Construction Plans</th>
<th>Did the Ed Specs for Bessey Creek Meet the Required Elements?</th>
</tr>
</thead>
<tbody>
<tr>
<td>The number and size of areas required for each purpose has been derived as the result of an analysis of current space requirements, master schedule, planned course offerings, staffing patterns, and planned student groupings.</td>
<td>Partial</td>
</tr>
<tr>
<td>The number of teachers, paraprofessionals, and administrative and classified personnel using specific areas have been identified.</td>
<td>Partial</td>
</tr>
<tr>
<td>The spatial relationship of one activity area to another has been described.</td>
<td>Yes</td>
</tr>
<tr>
<td>There is a description of space relationship requirements for the separation of large- and small-group areas and for convenient student and staff circulation.</td>
<td>No</td>
</tr>
<tr>
<td>Instructional support and co-curricular facilities, (i.e., areas for small- and large-group instruction, conferences, media centers, storage and teacher preparation) have been addressed.</td>
<td>Yes</td>
</tr>
<tr>
<td>Specific space for instructional support and pupil services programs, general support services, and special programs such as exceptional and vocational education have been identified and meet legal requirements.</td>
<td>Yes</td>
</tr>
<tr>
<td>Environmental variables such as acoustical needs, visual needs, thermal requirements, and special aesthetic concerns have been identified and described.</td>
<td>Yes</td>
</tr>
<tr>
<td>All utility needs, including water, sewer, drainage, electrical, gas,</td>
<td>Partial</td>
</tr>
</tbody>
</table>
compressed air, telephone, fire alarm, conduit cable for advanced technology, and satellite dish, have been identified.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>An energy management system has been provided.</td>
<td>Yes</td>
</tr>
<tr>
<td>Storage requirements for individual activity areas and teaching stations have been identified.</td>
<td>Yes</td>
</tr>
<tr>
<td>Extra storage space has been considered for year-round educational programs.</td>
<td>No</td>
</tr>
<tr>
<td>Display areas for chalkboards, tackboards, and display cases have been identified.</td>
<td>Yes</td>
</tr>
<tr>
<td>The number, kind, and size of furniture and equipment items have been identified for each activity area.</td>
<td>Yes</td>
</tr>
<tr>
<td>Emergency shelter accommodations have been included where required.</td>
<td>Partial</td>
</tr>
<tr>
<td>Planned expansion strategy has been included.</td>
<td>Yes</td>
</tr>
</tbody>
</table>

The SREF dictates space requirements for each type of class by grade level. The educational specifications for Bessey Creek and Sea Wind detail the capacity required for some but not all programs. Primary (grades 1-3) and intermediate (grades 4-6) programs contain pupil-teacher ratios and total pupil capacity per period. Other program units, such as resource rooms, art, and music, do not provide pupil-teacher ratios or total pupil capacity. This notwithstanding, the FISH records for Bessey Creek Elementary reflect space utilization that falls within the limits of the SREF. (See discussion earlier in this chapter on FISH records and compliance with SREF.)

The educational specifications also include a line item for grade level groupings by class. Course offerings were not customized for Bessey Creek or Sea Wind. It was assumed that the same course offerings, staffing patterns and student groupings would be the same as the earlier school constructed with the same plans.

The lack of customization in the educational specifications prevents these new schools from meeting new requirements, and considering alternative staffing approaches and student groupings.

For each classroom type, the educational specifications for Bessey Creek and Sea Wind include a schematic drawing showing the spatial relationships between various activities. An example of a schematic for an art classroom is presented below.
These diagrams help identify solutions for convenient student and staff circulation within types of classrooms; however, there is not an overall schematic that presents a conceptual framework for the entire school.

Instructional support and co-curricular facilities (i.e., areas for small-and large-group instruction, conferences, media centers, storage, and teacher preparation) are addressed in the educational specifications for Bessey Creek and Sea Wind. Specifically, the specification document contains separate sections for a media center, textbook storage, and multi-purpose/stage space. Further, all classroom space requirements include consideration of storage requirements and teacher planning activities. However, the specifications do not specifically address storage for year-round education.

**Environmental Variables Such as Acoustical Needs, Visual Needs, Thermal Requirements, and Special Aesthetic Concerns Have Been Identified and Described**

Section II of the educational specifications for Bessey Creek and Sea Wind contain 18 overall building considerations.

1. Heating/cooling/ventilation – energy management systems
2. Acoustical
3. Floor/carpet
4. Walls
5. Ceiling and ceiling lights
6. Lighting
7. Windows
8. Doors
9. Water and water supply
10. Communications
11. Electrical
12. Gas and air
13. Safety
14. Fencing
15. Service drives
16. Parking
17. Built-ins
18. Other (clocks, compliance with state and federal guidelines)

Additional special considerations may be included for specific educational programs or spaces. As mentioned earlier in this chapter, there is no mention of the need for classroom computer wiring. The only general classroom wiring included in the educational specifications is for cable television. Fire alarms, emergency shelter and safety considerations are not specifically discussed, but a reference is made to the applicable building codes.

The educational specifications for Bessey Creek and Sea Wind specify the furniture and equipment needed for each room in the school. Item 17 under Overall Building Considerations discusses built-ins, including chalkboards, tackboards, wall-mounted projection screens and map rails.

Section VIII of each program space requirement section presents a listing of required furniture and equipment. The listing includes the space where the equipment or furniture will be located, the number of items and a description of each item.

**Planned Expansion Strategy Has Been Included in the Educational Specifications**

The district has applied an innovative expansion strategy in its construction of new schools. The Education Plant Survey identifies initial and ultimate figures for student capacity. The district constructs the entire facility, but does not complete all the classroom space since that space is rarely needed when the school opens. As enrollment grows the district completes the remaining classrooms. This improves school utilization in the short term and reduces the need for portables.

The educational specifications for Bessey Creek and Sea Wind do not specifically discuss this strategy, but it is implicit in the capacity statistics.

There is no mention of portables in the educational specifications. An analysis of portables is important so that the architect can be sure that as the student population increases, common areas (hall space, cafeterias) are sufficient size.
5 The district communicates general building considerations to the architect.

The District Can Demonstrate That the Architect Has Drawn a Schematic Layout of Buildings, Parking, Roads, and Physical Education Playground Areas

The district provided a copy of the architectural drawings for Bessey Creek Elementary. These drawings show the layout of the buildings, parking, roads, and playground areas. The drawings also include detailed specifications for key infrastructure components, such as lighting, utilities and fire alarm systems.

The minimum site size for a school is specified in the Education Plant Survey that is approved by the state. This page of the Education Plant Survey is included as part of the educational specifications. The educational specifications also present net square feet of covered playground areas and road access issues.

This information is of sufficient detail to compare plans to the educational specifications; however, there is no documented evidence that this procedure is performed. All specifications must be in compliance with SREF before approved by the state. The Supervisor of Construction stated that since these plans have been reused, there is no need to formally verify compliance with educational specifications. (See related discussion in this section regarding the customization of educational specifications.)

Because the District Has Reused the Same Building Plans for the Three Most Recent Schools, it Has Not Formally Compared Costs of Alternative Designs

Alternate designs have not been considered in recent years due to the district’s reuse of plans. Based on discussions with teachers at the new schools, they meet or exceed expectations in virtually all respects. Since the costs of these schools fall within the parameters of the state requirements, no other cost analysis has been performed comparing current plans to alternative designs.

Article 15 of the architect’s contract includes a provision for value engineering, which requires the architect to pursue in good faith cost savings without impairing the quality of the final product. Other district employees, such as the Supervisor of Maintenance, review plans to ensure that current, efficient equipment is used and that the layout supports efficient upkeep. This procedure is not documented, but was confirmed by the Supervisor of Maintenance.

The Total Building Area Conforms to the State’s Standards Specified in Current Laws of Florida

The district provided FISH records for all schools, showing total net square feet per school. The total square footage for Bessey Creek Elementary, excluding covered walkways was 72,893. The total square footage listed in the educational specifications was 70,744, or approximately 3.5% less than actual square feet. The educational specifications for Bessey Creek had hand written modifications for storage space and handicap access. Five classrooms were randomly sampled from Bessey Creek Elementary FISH records to
determine whether the individual class configuration fell within SREF parameters. All five fell within these parameters. (See Exhibit 9-9 on page 9-28.)

To ensure that all educational specifications are met, the educational specifications document should be accurate and reflect the actual intentions of the district, even if plans are reused. This practice will help hold the architect accountable for meeting all educational specifications.

The Educational Specifications Should Include a Description of How Students, Staff, and Visitors Will Arrive and Depart From the School

The educational specifications do not specifically address the flow of students, staff and visitors to and from school. Section II of the educational specifications includes line items for service drives and parking. The description under service drives states “shall be paved to all delivery areas.” There is no mention of traffic flow or configuration. Parking requirements are defined as “Handicapped and regular parking shall be based on standard number reference needed adjacent to main entries.” The flow of students, staff and visitors to and from school is particularly important from a logistical standpoint so that congestion is minimized at the beginning and end of the school day. Visitor flow is also important from a safety perspective, and the layout should ensure that all visitors can easily locate and be directed toward the main office.

Flow or circulation patterns within classrooms are addressed in the educational specifications through the use of diagrams showing the relationship of activities. A sample diagram was presented earlier in this section. There is no schoolwide flow diagram in the educational specifications. This diagram would help evaluate flow between areas, such as classrooms and the cafeteria, to ensure convenience and safety.

The Architect’s Final Drawings Include Plans to Accommodate Future Expansion and Community Use, But These Plans are not Always Addressed in Educational Specifications

The architect’s final drawings for schools include plans for use of temporary buildings, the construction of shell space for future use, and the construction of athletic and food facilities so they are accessible to the public without requiring entry into the main part of the school. With the exception of the uncompleted classroom shell space, these elements are not part of the educational specifications document. These elements should be incorporated into the educational specifications. (See related section in this chapter on site selection and evaluation on page 9-19.)

The Plans Describe Mechanical and Electrical Systems, With the Exception of Telephone and Computer Networking Systems

The architectural drawings for Bessey Creek Elementary detail the mechanical and electrical systems for the building, including fire alarm, intercommunication, and television systems. Specifications for the telephone and computer networking systems were also included in the architectural drawings. Specific safe school design concepts and security considerations are required through SREF and are incorporated into building and communications systems by the architect.
Recommendation

- A cost comparison of alternative designs needs to be prepared for each project in conjunction with the education specifications planning. (See action plan 9-14)
- See Recommendation page 9-39 for customizing educational specifications and expanding their coverage.

6 The district needs to use the educational specifications to evaluate the architect’s final product.

The District Should Devote More Time to the Development of Educational Specifications for Each New School, Even if Plans are Reused

Since the educational specifications used on recent schools represent a boilerplate document, they are not effective in holding the architect accountable for needs unique to the particular school.

The district has reused plans and educational specifications and has not formally compared the two documents. Since the educational specifications have not been customized to reflect current needs and plans include specifications not mentioned in the educational specifications document, matching specifications against plans would not currently yield a significant benefit. Assuming the district customizes its educational specifications for each school, this matching procedure would be helpful in holding the architect accountable.

Recommendation

- See Recommendation on page 9-39 for customizing educational specifications and expanding their coverage.

7 Program requirements are communicated to the architect through the educational specifications.

The District Can Demonstrate That all Program Requirements Were Communicated to the Architect Before the Commencement of Final Drawings

The educational specifications for renovation/remodeling at J. D. Parker Elementary provides program philosophy, goals, activities, key organizational characteristics, innovations, square footage changes, conceptual spatial designs, and furniture and fixture needs.
The District Should Provide the Educational Specifications Committee an Opportunity to Reassess Goals and Objectives

For the three most recent schools, a boilerplate document was used for educational specifications. The only changes apparent in the document were hand written notes changing the number of certain classrooms, the size of storage space, and the requirements for handicap access. Other than these changes, the district adopted the educational specifications for all three schools without revisiting goals and objectives.

Each school educational specifications committee should have the opportunity to amend or improve the educational specifications, even if a prior design is being used. There is evidence that some modified goals and objectives are being met, even though not documented in the specifications. Each classroom at Bessey Creek Elementary was wired for technology even though the educational specifications did not require it.

It is also important to note that Bessey Creek Elementary meets or exceeds the expectations of teachers in that school. Based on interviews with Bessey Creek teachers, they are very pleased with the overall design and layout, the configuration of planning areas, the special purpose rooms and the media center. The only complaint was that storage areas in classrooms were different sizes, and some were too small. Storage areas have restrictions in the SREF that are smaller than what is considered adequate by some teachers.

The District Should Evaluate Existing Facilities in Terms of Educational Adequacy in Support of Current and Planned Programs and Activities

When designing Williams Elementary, the educational planning committee toured schools in other Florida school districts. As a result of their evaluation, plans from another school were adopted for use in Martin County. Since 1993, the district has not conducted any post-occupancy surveys (see separate section in this chapter regarding these surveys).

While teachers appear to be satisfied that educational programs needs are being met at the new schools, the district should take steps to ensure that requirements of all current and planned programs are addressed in new or modified facilities.

Recommendation

- The education specifications need to be customized for each school as indicated in recommendation page 9-39.
8 The board minimizes changes to facilities plans after final drawings.

Changes to Facilities Plans After Final Working Drawings are Initiated Require Board Approval

Although not documented in board policy, board approval is required for all change orders. This is evidenced in board meeting minutes approving change orders for as low as $409. Board approval of all change orders in necessary to adequately control construction project costs.

The District’s Reuse of Plans Minimizes the Number and Size of Change Orders.

Based on a review of two of the three most recent schools built, only a few change orders were executed, and none added significant costs to the project. In fact, a majority of the change orders for two of the most recent schools built reduced the cost of the projects by significant amounts. Exhibit 9-11 presents a listing of change orders for Bessey Creek and SeaWind Elementary.

Exhibit 9-11
Few Change Orders, Lower Cost

<table>
<thead>
<tr>
<th>School – Change Order #</th>
<th>Change Order Amount Increase (Decrease)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bessey Creek</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>($1,441,013)</td>
</tr>
<tr>
<td>2</td>
<td>(1,176)</td>
</tr>
<tr>
<td>3</td>
<td>($26,000)</td>
</tr>
<tr>
<td>4</td>
<td>($4,500)</td>
</tr>
<tr>
<td>SeaWind</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>($828,735)</td>
</tr>
<tr>
<td>2</td>
<td>431,150</td>
</tr>
<tr>
<td>3</td>
<td>(1,179,380)</td>
</tr>
<tr>
<td>4</td>
<td>(33,833)</td>
</tr>
<tr>
<td>5</td>
<td>(38,922)</td>
</tr>
<tr>
<td>6</td>
<td>(2,159)</td>
</tr>
<tr>
<td>7</td>
<td>9,687</td>
</tr>
</tbody>
</table>
The board needs to formally evaluate alternatives to construction management.

For Each New Facility Built in the Past Three Years, the Director of Facilities Selected the Type of Construction System to Use; However, the Board Has Not Formally Approved Each Selection

Chapter 235.211, F.S., presents construction management options available to Florida public school systems. Section 4.1 of the State Requirements for Educational Facilities (SREF) describes these options in further detail including the four major options listed below.

- **Competitive Bids** – under this method, the architect/engineering services and the construction contract are separately and competitively bid by the district.

- **Design-Build** – this is a turnkey arrangement whereby the architect works for the contractor, not the school district. The district evaluates and selects a design-build contractor who must be certified by the state to manage all aspects of design and construction.

- **Construction Manager** – a construction manager generally takes the place of the contractor; holds each contract; and manages, coordinates and monitors the progress of construction. A Construction Manager at Risk approach passes the risk of cost to the construction manager. The main advantage of this approach is a guaranteed maximum price provision which limits the district’s financial exposure. Under a Construction Manager-Agency approach, the construction manager does not assume the financial risk, but performs all the duties of construction manager.

- **Total Program Manager** – a total construction program manager acts as an agent of the board and has broader responsibilities including land acquisition, selection of design and construction professionals, planning, coordination and monitoring of the total building program. A guaranteed maximum price provision may be incorporated into this option.

The district has employed the competitive bid option for the past 20 years, and has used its own staff to supervise construction projects. The Supervisor of Construction stated the district saves money by using in-house construction management versus an outside contractor. The district has not conducted any formal analysis, however, of the costs and benefits of considering alternative construction management techniques.

The district’s use of other school districts’ building plans and reuse of those plans has affected its ability to entertain alternative construction management options. Through a letter to school districts, the Department of Education communicated a ruling to public school districts that “boards may only purchase architectural services from an existing contract by another board.” They may not purchase design-build services. The district
cited this as one example of why the current construction management approach is applied.

The board does not formally approve the construction management option to be applied for each school. According to the Supervisor of Construction, he assumes that the approach used on prior projects will continue unless changed by the board.

The board should approve the construction management approach for each school so that the decision is justified from a cost-benefit standpoint. Different management techniques work better for different school systems depending on the availability of contractors and the quality of in-house staff. The board’s decision to formally approve specific options will require the district to prepare an analysis of alternatives and justify a recommended option. This exercise will ensure that the district is using the management approach that is the most effective and efficient alternative.

The District Has Not Formally Evaluated the Advantages and Disadvantages, of Alternative Construction Management Approaches

According to the Supervisor of Construction, the district has not performed a formal analysis of construction management alternatives that identify advantages and disadvantages of each option. He stated that performing construction management in-house saves the district 3% or more on each construction project, but there have been no formal analyses to substantiate this. Even if the district’s current approach is the most effective and efficient, a periodic review of alternatives would provide a substantive basis for continuing with this option.

Recommendations

- The district should establish a committee to evaluate alternative construction management techniques to improve management and control over construction projects while minimizing costs. The departure of the Supervisor of Construction later this year should prompt the district to evaluate all options, not just the replacement of this position.

Action Plan 9-16

<table>
<thead>
<tr>
<th>Recommendation 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategy</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Action Needed</th>
<th>Step 1: The board should establish a committee that includes key members such as:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• A board member</td>
</tr>
<tr>
<td></td>
<td>• Executive Director of Operations</td>
</tr>
<tr>
<td></td>
<td>• Director of Facilities</td>
</tr>
<tr>
<td></td>
<td>• General Counsel</td>
</tr>
<tr>
<td>Step 2:</td>
<td>The committee should consider construction management options available under the law.</td>
</tr>
<tr>
<td>Step 3:</td>
<td>The committee should evaluate the advantages and</td>
</tr>
</tbody>
</table>
disadvantages of alternative approaches to contract management available.

Step 4: The committee should recommend an approach to the board.

<table>
<thead>
<tr>
<th>Who Is Responsible</th>
<th>School Board</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time Frame</td>
<td>Prior to the retirement of the current supervisor of construction need date.</td>
</tr>
<tr>
<td>Fiscal Impact</td>
<td>This recommendation can be accomplished with existing resources.</td>
</tr>
</tbody>
</table>

2 The architect prepares the building specifications document.

The District Can Demonstrate That the Architect Prepared a Construction Contract and General Conditions in Coordination With the District’s Legal Counsel

The district uses a standard construction contract agreement that incorporates general provisions adopted by the American Institute of Architects (AIA). Before a construction contract is signed, it is reviewed by the district’s general counsel. There are no procedures documenting this practice, but the general counsel stated that before signing he reviews all construction contracts. The general counsel is responsible for ensuring that all contract provisions are in compliance with applicable laws.

The General Conditions of Construction Contracts Specify All Needed Requirements

The district uses a standard construction contract that is not the AIA standard, but uses several AIA provisions. The contract also incorporates AIA general provisions. Section 4.2 of the SREF outlines construction contract guidelines for bonds and insurance, and other contract provisions. All the best practice indicators are generally included in the contract. Exhibit 9-12 presents a comparison of contract provisions associated with best practice to the school district’s standard contract agreement.

Exhibit 9-12

Contract Provisions Contain Essential Elements

<table>
<thead>
<tr>
<th>Contract Provision (Best Practice Indicator)</th>
<th>Location/Description in Martin County Architect Contract</th>
</tr>
</thead>
<tbody>
<tr>
<td>Details of construction and materials</td>
<td>Project is described in Article 1 of the contract, and reference is made to building specifications and drawings</td>
</tr>
<tr>
<td>Starting time</td>
<td>Article 2 specifies that the start date will be three calendar days following the Official Notice to Proceed from the Superintendent of Schools.</td>
</tr>
<tr>
<td>Number of days allowed for construction</td>
<td>Article 2(B) establishes the maximum number of days for substantial completion. For Bessey Creek Elementary, substantial completion must not exceed 250 calendar days.</td>
</tr>
<tr>
<td>Contract Provision (Best Practice Indicator)</td>
<td>Location/Description in Martin County Architect Contract</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>--------------------------------------------------------</td>
</tr>
<tr>
<td>Expected completion time</td>
<td>Expected final completion is expressed as the number of calendar days past substantial completion in Article 2(A) of the contract. For Bessey Creek Elementary, 70 days is the limit. Liquidating damages are provided for the district if the contractor exceeds the date of substantial completion or final completion.</td>
</tr>
<tr>
<td>Terms of payment bond</td>
<td>A payment bond is attached to the contract. Terms are described on the bond.</td>
</tr>
<tr>
<td>Terms of bid bond</td>
<td>Included as part of the contract.</td>
</tr>
<tr>
<td>Terms of performance bond</td>
<td>A performance bond is attached to the contract. Terms are described on the bond.</td>
</tr>
<tr>
<td>Workers’ compensation</td>
<td>Terms of workers’ compensation insurance are set forth in Article 10, and a certificate of insurance is attached to the contract.</td>
</tr>
<tr>
<td>Terms of liability insurance</td>
<td>Terms of general and automobile liability are set forth in Article 10, and a certificate of insurance is attached to the contract.</td>
</tr>
<tr>
<td>Prevailing wages to be paid</td>
<td>Unit prices are presented on a schedule and are incorporated into the contract agreement in Article 8.</td>
</tr>
<tr>
<td>Subcontractors to be used</td>
<td>Included as part of general provisions</td>
</tr>
<tr>
<td>Non-collusion affidavit</td>
<td>Included as part of general provisions</td>
</tr>
<tr>
<td>Change orders</td>
<td>Included as part of general provisions</td>
</tr>
<tr>
<td>Arbitration provision</td>
<td>Included in some contracts, but the district prefers to omit this provision whenever possible.</td>
</tr>
</tbody>
</table>

### 3 The architect coordinates plans, specifications and questions concerning the project.

**The District Can Demonstrate That all Plans and Specifications Were Coordinated Through the School District’s Planner and Project Leader**

The job description of the Supervisor of Construction includes responsibilities for coordinating with the architect on plans and specifications. The Supervisor of Construction confirmed that all architect deliverables and issues go through him. All plans and specifications are developed by the architect and forwarded to the Supervisor of Construction for review and approval. This single point of communication for the district helps establish accountability for architect performance and ensures that all communications are centered on a single district employee.

**Although There is no Documented Evidence, all Plans and Specifications are Reviewed by Those District Personnel Involved in Earlier Phases (Instructional, Administrative, Maintenance, and Safety Persons)**

According to the Supervisor of Construction, once plans and specifications are received from the architect, they are reviewed with the Director of Maintenance, the school district
safety officer, and the Director of Facilities. This involvement of all necessary district staff in the process was confirmed by the district architect.

For the most recent school, Bessey Creek Elementary, plans from a previous school were reused. Since these plans had been approved by the state, no changes could be made that would affect meeting the State Requirements for Educational Facilities. The reuse of plans is an efficient method which minimizes architect costs, but reinforces the need for post-occupancy evaluations to determine if these plans are efficient and effective from an operations and educational standpoint. Post-occupancy reviews are discussed later in this chapter.

4 After bids are opened and tabulated, they are submitted to the board for awarding the contract.

The District Can Demonstrate That it Uses Standard Bid Awarding Practices

Section 4.2(2)(e) of the SREF requires that an employee of the board or other appointed individual publicly open bids and read and tabulate the bids at a designated time and place. This ensures that the competitive bid process is fair and open to public scrutiny, and that no individual bidder has any advantage other than what is contained in their respective bid.

Based on inspection of the advertisement and the bid tabulation form for six new classrooms at Bessey Creek Elementary, the district opened the bids as required. The bid tabulation form specifies the bid opening date and the name of the project and designates who opened the bids, who tabulated the bids, and who verified these actions. These three individuals sign the bid tabulation form attesting to its accuracy.

The bid tabulation form lists each bidder and the base bid. Incremental costs for accepted alternate work requested beyond the base bid, if applicable, are tabulated in separate columns on the bid tabulation form. For Bessey Creek Elementary, the district requested a base bid and four alternative pricing items.

The District Can Demonstrate That the Contract Was Awarded to the Lowest Responsible Bidder

Section 4.2(2)(h) requires the school district to select the lowest bidder, considering base bid and accepted alternates, and award a contract for a fixed fee. Based on a review of two contract awards, the district recommended the lowest bidder on both projects, and the board voted to accept the recommendation. This was verified by comparing the board minutes to the bid tabulation forms for the six new classrooms at Bessey Creek Elementary (bids opened November 24, 1998) and the classroom renovations at Martin County High School (bids opened May 28, 1998).

Before a recommendation of low bidder is made to the board, the lowest bid is subject to review by the district’s general counsel. This ensures that the lowest bidder fulfills all legal requirements of the bid. Once compliance has been verified, a recommendation to the board is made to accept the lowest bidder. These procedures are not documented, but are followed without exception according to the district’s legal counsel.
5 The district requires each contractor to submit required forms and certifications to the contract.

The District Can Demonstrate That Each Contractor Awarded a Contract Has Required Documents, but the Liquidated Damage Requirements Should be Increased

Certain documentation from contractors is required by law. This is intended to protect the district from certain risks associated with construction contracts. Based on inspection of two recent construction contracts (six new classrooms at Bessey Creek Elementary and classroom renovations at Martin County High School), the following are included as part of the contract:

- A signed owner-contractor agreement. The agreement is signed by the contractor, a witness to the contractor’s signature, the board chairman, and the board secretary, who is also the superintendent.
- Workers compensation insurance certificate – this form is attached to the contract.
- Payment bond – this form is attached to the contract.
- Performance bond – this form is attached to the contract.
- Guarantee of completion – this date is defined in Article 2 of the contract. Dates for substantial completion and final completion are established, and liquidating damages are provided on a daily basis for each day that (1) the actual date of substantial completion exceeds the scheduled date of substantial completion - $425 per day - and (2) the actual date of final completion exceeds the scheduled date of final completion - $75 per day.

These liquidating damage provisions are lower than industry standards and are not commensurate with the risk a school district faces if a school is not ready to open. The penalty levels are the same for renovations or new construction. An approach that is more commensurate with the risk is a minimum of $1,000 per day for substantial completion for projects less than or equal to $10 million, and $2,000 per day for projects greater than $10 million. Higher levels could be established if the district is willing to consider financial incentives for finishing the project early.

The contract also includes a certificate of insurance for: (1) builder’s risk insurance in the amount of the contract value; (2) commercial general liability; (3) automobile liability; and (4) owner’s protective liability (umbrella policy). These are required by Section 4.2.4(b) of the SREF.
6 The architect recommends payment based on the percent of work completed.

The District can Demonstrate That Payments Made to Contractors are Reviewed by the Architect

The architect uses a prescribed form (AIA document G702) for approving payments on construction projects. These forms set forth the percentage of work completed and must be signed and notarized by the contractor and certified by the architect. The contracts allow for progress payments up to 90% of the contract amount. To achieve this, 10% is withheld from each invoice.

The District Has a System of Internal Controls to Ensure That Timely Payments are Made Only After the Architect’s Approval of the Work Completed, and With the Concurrence of the District’s Project Manager in Charge of the Project

All construction invoices are sent from the Accounting Office to the Facilities Department to be reviewed by the Supervisor of Construction. Both the Supervisor of Construction and the Accounts Payable specialist confirmed this practice. The Supervisor of Construction is responsible for concurring with the architect that progress has reached a point to support payment. The Supervisor of Construction is a certified building inspector and visits the site throughout the project to ensure that progress is sufficient to support payment to the contractor. This procedure provides adequate internal controls over the architect’s assessment of work completed and places ultimate responsibility for completion of work with the Supervisor of Construction.

7 The district requires continuous inspection of all school construction projects.

The District Can Demonstrate That it Provides and Requires Competent Continuous Inspection for all New School Construction and all Renovation, Remodeling, or Alteration Projects

The Supervisor of Construction is a certified building inspector and performs interim and final inspections of all school construction projects. The district uses Form OEF 209, Certificate of Final Inspection, to certify that the district, the architect, and the building inspector consider the building complete and in compliance with applicable building codes.

The Supervisor of Construction performs many of the interim inspections, according to the district architect. The results of some inspections, such as the pouring of concrete, are not required to be in writing. The architect also receives interim or threshold inspections from third parties in writing. According to the architect, this practice occurs on renovation projects, as well as new construction.
8 Buildings are not occupied prior to the notice of completion.

The district has procedures to ensure that buildings are not occupied prior to the notice of completion. For example, Sea Wind Elementary was completed in August 1995. During the August board meeting, the board approved occupancy based on approval of inspection by the Department of Education and the provision of a certificate of occupancy. These were achieved before the building was occupied in late August.

Facilities Use

1 The district conducts orientations of new facilities prior to their opening so users better understand the building design and function.

There is an Orientation Program for Staff That is Done Prior to the Facility Opening. Facility Orientation Programs for Parents and Students are Conducted Annually at all Schools

Although no formal, documented program exists, the district conducts orientation programs, or walk-throughs, with district staff. The architect and the Supervisor of Construction stated that the plant operator, the school principal, and other school staff participate in the orientation program, which is conducted prior to the school opening. Students and parents participate in an annual orientation of the school facilities prior to school starting. Generally, the district holds orientations for new students entering the school, but for new facilities, all students and parents are invited.

The district does not have facility user manuals; however, it provides operating manuals on the operation of equipment, such as the alarm systems and operation of utilities, to the plant operator. A shorter manual should be provided to facility users, including teachers, administrators and support staff. The manual should include a map of the facility, identifying exits, location of fire extinguishers telephones and other important features and equipment. The manual should also provide information regarding the energy management system, and the user’s ability/restrictions in using it. This manual should be no more than 5 to 10 pages long, and should be written in non-technical terms.

Recommendations

- The district should formalize and document a facility orientation program that is modified for each new school built.
The district previously conducted comprehensive evaluations of new facilities at the end of the first year of operation, but has discontinued this practice.

The District Has Discontinued Its Comprehensive Post-Occupancy Evaluation Program That Examined Building Operation and Performance

The district provided evidence of a post-occupation assessment dated March 1994, for Hidden Oaks Middle School. This report was prepared by the state Office of Educational Facilities, (OEF) and Martin County School District. Building occupancy occurred on August 10, 1992, and the post-occupancy report was dated 19 months later.

The Post-Occupancy Evaluation Team included five OEF representatives: the Director of Education Facilities Planning and Evaluation, two architects, an electrical and mechanical engineer, and an educational facilities specialist. The district’s Supervisor of Construction and the school principal also participated in the evaluation.

The evaluation applied the state Post-occupation Evaluation (POE) guidelines. The post-occupancy evaluation report for Hidden Oaks Middle School was comprehensive in scope and included three major areas of evaluation.

- Economy – is the facility economical to operate and maintain?
- Functionality – does the facility function as intended and does it help or hinder the educational program?
- Performance – Does the facility perform adequately and does it provide appropriate shelter?

The evaluation of economy did not analyze operating cost per square foot to determine if the school was operating efficiently. The evaluation of economy focused on ease of repair, quality of building materials and the efficient layout of rooms and buildings. None of the three evaluation areas referenced the educational specifications developed for the school.
The school was generally given good marks in each of these categories, but the report noted minor problems relating to far areas.

- The orientation of buildings creating some confusion among users
- The lack of fiber optics to be prepared for future technology and communications developments
- Inadequate storage in classrooms
- Awkward design of Administration Building

No other post-occupancy evaluations were conducted for Hidden Oaks, and the Supervisor of Construction stated that these reviews have been discontinued since the Office of Educational Facilities no longer initiates and manages this process. The three most recent schools constructed, Bessey Creek, Sea Wind and Williams, were not subject to a post-occupancy evaluation.

Post-occupancy evaluations are instrumental in identifying improvements to future schools. Until the facility is in use, the effectiveness and efficiency of the design, the equipment and other building features are not known. This knowledge provides opportunities to make future schools more efficient and effective.

**Recommendations**

- The district should reinstate and expand post-occupancy evaluations to include analysis of maintenance and operating costs per square foot and an assessment of whether the educational specification were met.

**Action Plan 9-18**

<table>
<thead>
<tr>
<th><strong>Recommendation 1</strong></th>
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<tr>
<td><strong>Strategy</strong></td>
</tr>
</tbody>
</table>
| **Action Needed** | Step 1: Develop and adopt board policy requiring post-occupancy evaluations 12 months and 48 months after occupancy.  
Step 2: Adopt state post-occupancy evaluation (POE) model as a base model for such evaluations.  
Step 3: Identify additional evaluation elements to be incorporated into the evaluation, such as utilities cost, custodial cost, and student cost-per-square foot. |
| **Who Is Responsible** | Supervisor of Construction |
| **Time Frame** | August 1999 – May 2000 |
| **Fiscal Impact** | This recommendation can be accomplished with existing resources. |
3 The district should analyze post-occupancy evaluations to determine whether facilities are fully used, operating costs are minimized, and changes in the district’s construction planning process are needed.

Previously, the post-occupancy evaluations were provided to architects on future school construction projects to incorporate recommendations into building specifications. However, since these post-occupancy evaluations were discontinued in 1994, no formal analysis is done. The Supervisor of Construction stated that problems and recommendations are informally communicated to him by the users, and this information is passed along to the architect.

4 The district should improve its analysis of facility maintenance and operating costs to identify improvements in construction.

The District Does Not Analyze Efficiency Measures for Maintenance and Operations Costs

The district does not analyze performance measures concerning maintenance and operating costs (also see Facilities Maintenance chapter). The district does not analyze cost per square foot or energy usage per square foot for any schools or buildings. Tracking and analyzing these measures are important from a maintenance and operations standpoint, but also important from a construction standpoint. If custodial costs per square foot are higher at one school, this may be attributable to a school design issue rather than a productivity issue. Analyzing these performance measures and determining the reason for unusual variances is needed to identify areas for improvement from a construction standpoint.

The district is beginning to analyze energy costs. These costs are usually attributable to design issues (excessive large, open areas) or construction materials (insulation) that can be remedied on future projects. This information should be used to evaluate the impact of alternative designs on energy costs.

While maintenance staff is consulted on school designs, there is no evidence that any changes identified have resulted in cost savings.

See Recommendation on page 10-5.