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ABSTRACT

This paper asserts that given the net growth in Georgia's student population and the need to house these students, a logical and systematic approach to disburse state funds based upon an assessment of needs is critical. It explains that a local facilities plan encourages the local school system to look into the future and assess their needs and how they will construct, add, renovate, or modify facilities to meet their future needs. This plan is then used as the basis for funding decisions both at the local and state level. The paper presents some background information related to facilities planning. The background section discusses why planning is important and what triggers construction. Additionally, it provides a history of Georgia state facilities planning and explains in detail a typical local facilities plan and the development process. In the "Current Conditions" section, the paper analyzes current planning in relation to the requirements of the law. The next section, "Findings," highlights issues that need further consideration. The final section of the paper poses some alternatives for consideration to further improve the planning process and management of planning. (EV)

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COMPREHENSIVE FACILITY PLANNING

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Education Facilities Committee

November 28, 2000

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EF 006 157

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EXECUTIVE SUMMARY

The Local Facilities Plan (LFP) is the critical ingredient in assessing and funding school facility needs at the state and local level. The LFP causes each school system to look ahead five years and:

1. Identify the total future facility needs in the system,
2. Identify the impact of those needs in every school and building in the system,
3. Decide how to meet future needs with new schools, additions, renovations, or modifications,
4. Prioritize the order of construction activities over the next five years, and
5. Determine how each priority on the list will be funded and where the money will come from.

The LFP drives the Capital Outlay program in the state. The program requires a five-year facilities plan as a prerequisite for receiving Capital Outlay funds from the state. Through the LFP process and review of construction applications the state helps assure that students are housed in safe and well-maintained facilities with adequate instructional space.

The current Capital Outlay program was first funded in FY 1982. The long-range plan is prepared so the local system can make sure adequate facilities are available to meet the local system's instructional program goals and state adopted curriculum. Local boards of education may, of course, offer more programs, space and funds than the state requires.

The long-range facilities plan includes the following items:

- The projected number of full-time-equivalent (FTE) students expected to be served;
- The organizational pattern, school sizes, and permanent school sites selected by the school system;
- The educational programs the system plans to deliver;
- An inventory of the existing schools;
- A comprehensive needs assessment identifying the renovation activities and the modifications needed to bring existing facilities up to building code standards and to meet program requirements;
- An identification of additions to existing schools and/or new schools which may be needed;
- Cost estimates for all identified needs at each school to meet program and space requirements; and
- The eligible projects for new schools, additions, renovations or modifications listed in priority order for funding.

The DOE Local Facilities Plan can be can an effective planning processes for state managers and local school systems. When used as intended and incorporated into other aspects of the local planning process the LFP provides several benefits. The LFP requires all school systems to look ahead five years, identify their needs and then establish and commit to a plan for meeting their specific facilities needs, including renovations, modifications, and additions of existing facilities as well as the construction of new schools when appropriate. The current planning process is effective in encouraging each school system to plan construction and funding in advance.

The limitations of the current planning process include varying end dates, varying computer formats depending on year submitted, and lack of total cost data and standard reporting categories. The LFP contains valuable information and data for facilities planning and management, both at the local and state level. However, the data is not easily accessible or reliable because of a lack of reporting standards and the fact that the data is not maintained in a central database. Because the end dates of the LFP vary, it is very difficult to analyze and determine the impact of proposed changes to state law and policy.

The paper discusses the limitations of the LFP and the process, and includes alternatives that may correct some of these limitations in of the LFP. Several alternatives listed in this paper also apply to design and construction of facilities. These alternatives include:

- Provide technical assistance in the planning, design and construction phases to school systems throughout the state.
- Develop a set of best practices in the planning (LFP), design, and construction phases and make this information available to school systems throughout the state.
- Develop a state computerized database to compile, analyze, and manage the public school construction process in Georgia.
- Develop guidelines, training programs, pre-qualified consultant and contractor lists, and provide information to school districts throughout the state.
- Fund additional staff resources to assist with technical assistance and review.
- Conduct a benchmark study to identify cost drivers and best-cost management practices that could be used in Georgia (see School Design paper).
- Develop design standards and funding based on prototypes.

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I. INTRODUCTION

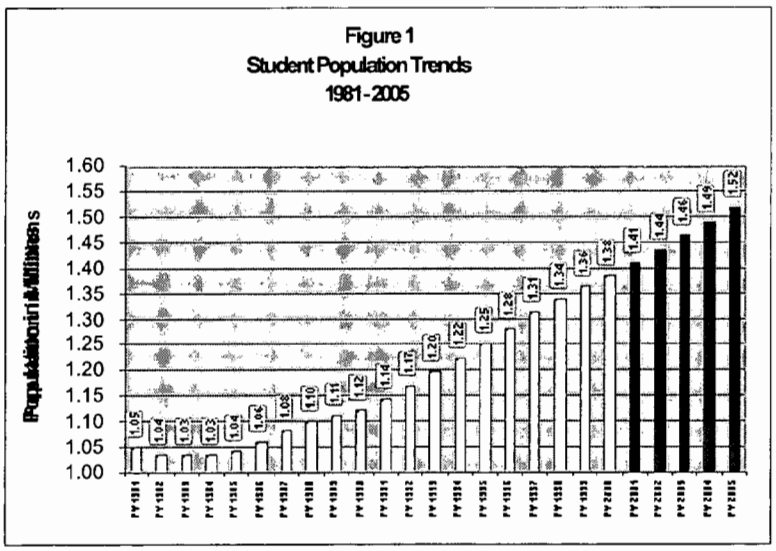
Georgia law 20-2-260 (a) specifically indicates that the policy of the State of Georgia is to appropriately house all students.

> "It is declared to be the policy of the State of Georgia to assure that every public school student shall be housed in a facility which is structurally sound and well maintained and which has adequate space and equipment to meet each student's instructional needs [as defined by law]."

The Local Facilities Plan (LFP) is the critical ingredient in assessing and funding school facility needs at the state and local level. The LFP causes each school system to look ahead five years and:

1. Identify the total future facility needs in the system,
2. Identify the impact of those needs in every school and building in the system,
3. Decide how to meet future needs with new schools, additions, renovations, or modifications,
4. Prioritize the order of construction activities over the next five years, and
5. Determine how each priority on the list will be funded and where the money will come from.

The LFP drives the Capital Outlay program in the state. A school system must prepare a LFP at least once every five years to be eligible for state Capital Outlay funds. Through the LFP process and review of construction applications the state helps assure that students are housed in safe and well-maintained facilities with adequate space.



There are 180 local school systems in Georgia including approximately 1,875 schools in the state. Of the 180 local systems, 21 are independent city systems and 159 are county systems. The student population trend and a five-year forecast is shown in Figure 1. Last year the student full time equivalents for the state of Georgia was 1,383,179 in grades kindergarten through 12th with a projected annual net

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growth of 24,613 FTEs statewide. The present Capital Outlay law was written in 1979 and first funded in 1981. This was a time of declining enrollment, which continued until 1984. Growth began to increase to about 9,000 students per year until the 1990s. Kindergarten was phased in over the three-year period from 1985 to 1988. The addition of kindergarten increased enrollment by approximately 30,000 FTE per year. From 1991 to the present, the growth has fluctuated from 23,000 to 31,651 FTE per year.

Given the net growth in the student population and the need to house these students, a logical and systematic approach to disburse state funds based upon an assessment of needs is critical. The local facilities plan encourages the local school system to look into the future and assess their needs and how they will construct, add, renovate, or modify facilities to meet their future needs. This plan is then used as the basis for funding decisions both at the local and state level.

This paper will present some background information related to facilities planning. The background section will discuss why planning is important and what triggers construction. Additionally, it will provide a history of state facilities planning and then explains in detail a typical local facilities plan and the development process. In the Current Conditions section, the paper will analyze the current planning in relation to the requirements of the law. . The next section, Findings, will highlight issues that need further consideration. The final section of the paper poses some alternatives for consideration to further improve the planning process and management of planning.

II. BACKGROUND

Why Plan?

Ideally, in the business world, the construction of new facilities is timed so the facility comes on-line at the same time the minimum projected need for the facility exists. However, this is not the case with most new school construction. First, school construction is not a centralized activity as it is in business; funding is shared by both the state and the local school system and construction is managed at the local level. Second, the political reality is that public sentiment will not usually support taxation without seeing evidence of the need. A major strength of the LFP is that it can provide a vision to the community of future needs and how the school system specifically plans to meet those needs. School systems must convince the community of the need for more facilities. Planning is needed because of the shared nature of school construction funding and the need to educate the community regarding current and future needs.

Long-range planning facilitates coordination among the local system, the community and the state regarding facility needs and funding. Through the planning process, local and state government planning entities can share information to forecast economic growth, new construction, population changes, and available real estate. Long-range plans may help ensure that adequate funds and an adequate site are available when a facility is needed. Planning can also prepare a school system for the difficult decisions that comes with redistribution or a declining population and the possible need to close a

school or to reorganize or redistrict. In planning the construction, addition, renovation or modification of school facilities, time, money and needs are optimized with advanced planning.

Planning a new school, addition, renovation, or modification of school facilities is usually the result of a definable need. The need for a change to facilities can be categorized into three reasons:

1. A change in system capacity,
2. A need to provide additional services, or
3. A change in the process.[1]

In the case of schools, a change in capacity may be typified by events such as, unhoused FTEs or a decrease in enrollment, or new class size requirements (such as House Bill 1187 prescribes). A second trigger for construction is the addition of a new service such as the need to accommodate new special education programs. A third trigger of construction is a change in instructional process. In education, that could be the need to accommodate more teacher teaming or more use of technology-based instruction. The impact on facilities may be a need for space for teacher planning; in the case of technology, renovations for so rooms have adequate power and Internet access.

As the capacity, services, or process change, the owner must weigh various alternatives to meet their new needs. In private industry, both construction and non-construction solutions are usually considered. The business owner may add a third shift to the production process or expand a portion of the facility to add capacity or provide a new service. The current facility may need to be modified to accommodate a new manufacturing process. Each alternative is usually considered on a cost–benefit basis using a payback period of 5 to 10 years. Similarly, school systems may weigh non-construction and construction alternatives to meet a need for additional capacity, provide a new service, or accommodate new instructional processes (currently in the state the Capital Outlay program offers no incentives other than for construction). Alternatives may include modifying the class schedule or switching to a multi-track year around calendar, leasing additional space, providing temporary classrooms (trailers), adding on to an existing facility, or finally, constructing a new school. Each alternative may be considered based on its short-term and long-term financial and programmatic merits. Issues related to non-construction alternatives were discussed in a prior GERSC Facilities Committee paper entitled, "Utilization and Sharing Of School Facilities."

As future construction needs are recognized, the owner secures adequate property (including utilities) required for the facility. Planning ahead avoids future problems. For example, where future capacity (need to expand the facility) is expected, adequate land should be purchased to avoid the facility becoming land locked. As the owner moves from long-range planning to the planning involved in construction, historical cost data

[1] "The Construction Process." United Parcel Service presentation, September 20, 2000.

and educational and design specifications are helpful in estimating costs. Usually the owner or the owner's representative (a program manager) estimates and controls the cost of construction based on past experience building similar facilities. The 16 CSI (Construction Specifiers Institute) divisions as defined in the RS Means[2] catalog are one type of standard categories used in the construction industry to estimate, track and analyze costs.

Whether a business or a school system, construction planning is essential. Capacity, programs, and process will always be changing. Planning mitigates problems and creates synergies by coordinating with others for funding, anticipating needs, and identifying future needs and documenting how those needs will be met. Georgia recognized the value in long-range facilities planning back in the early 1980s. The next part of this background section provides a brief summary of the history of the Capital Outlay program.

History of Capital Outlay Funding in Georgia

Georgia was one of the first states in the nation to provide funds to assist local school systems in meeting their needs for public school facilities. During the period from the early 1950s to the late 1970s, some state funding was provided to school systems experiencing extraordinary growth in student population, consolidating schools, or adding vocational facilities. Funding was generally based on legislative support for specific capital improvement projects in specific systems. Many smaller systems and/or systems "out of political favor" had no chance to receive any state assistance to support long-range facilities planning.

Then in 1979, legislation was enacted by the General Assembly to create a new Capital Outlay program that would provide funding for construction and renovation to local school systems based on known criteria rather than political debate.

The current Capital Outlay program was first funded in FY 1982. The program requires a five-year facilities plan as a prerequisite for receiving Capital Outlay funds from the state. Under the Capital Outlay program, the State Department of Education is required to assist local school systems in developing a long-range comprehensive facility plan. State funding is based upon the needs identified in the plan. The LFP process is designed to assist all school systems in identifying all needs within the system and developing specific costs estimates for planning purposes. The Capital Outlay program provides some funding for meeting needs through renovations, modifications, and additions of existing facilities as well as the construction of new schools when appropriate. When the needs are defined, a plan for accumulating the financing can be developed.

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[2] RS Means Building Construction Cost Data, 58th Annual Edition, 2000. The sixteen categories are: (1) General Requirements and administration, (2) Site Construction, (3) Concrete, (4) Masonry, (5) Metals, (6) Wood & Plastics, (7) Thermal & Moisture Protection, (8) Doors & Windows, (9) Finishes, (10) Specialties (11) Equipment, (12) Furnishings, (13) Special Construction, (14) Conveying Systems, (15) Mechanical, (16) and Electrical.

During the same time the Capital Outlay program began, DOE also had a routine facilities inspection program. DOE field consultants conducted regular inspections on every part of the facility and assigned scores based on defined criteria. The inspection generated an overall operations and maintenance score. This program helped DOE verify the condition of facilities and the effectiveness of each school system's maintenance program. The current planning process, the content of the LFP, and the relationship between maintenance and renovations are explained next.

Development and Content of the Local Facility Plan

Purpose

Each school system is required by law to develop a Local Facilities Plan (LFP) if they are to participate in the state Capital Outlay annual appropriations and earn entitlement. Entitlement is similar to a savings account the local system has with the state for capital facilities funds. A sample entitlement earning sheet in Appendix A illustrates the entitlement program. The entitlement a local school system receives in a given year is a function of the total state school construction needs, the level of funding appropriated by the General Assembly, and the system's share of the total need. Each year the local system can decide to use the entitlement funds they have earned or continue to save the money for a future project. The issues related to entitlement funds and funding formulas for facilities will be discussed in detail a companion GERSC Facilities Committee paper entitled, "Financing School Facilities."

Local Facilities Plan

Section I – System Overview

A. Student Population Trends

B. Current Organization

C. Proposed Organization

D. Explanation and Justification of Proposed School Organization and Distribution

Section II – By school

A. Curriculum and Space Needs

B. Summary of Renovations

C. Summary of Modifications

D. Space Construction Budget or New Construction (Addition)

E. Facility Needs Summary

Section III - Summary

A. History of Facilities Improvements

B. Tabulation of Priorities

C. Improvement Needs Certification

If the local system chooses to use their entitlement funds, the system submits an application to the state by August, explaining the project or projects for which they plan to use the entitlement funds. DOE then compiles the applications from all the school systems and comes up with a total construction need for the state. A ratio based on the total state construction need and the individual system's need is equated. The local system then receives entitlement funds based on their share of the total state need and a ratio of the total amount appropriated by the General Assembly in that fiscal year. This determines the actual amount to be funded for the first priorities identified in the LFP.

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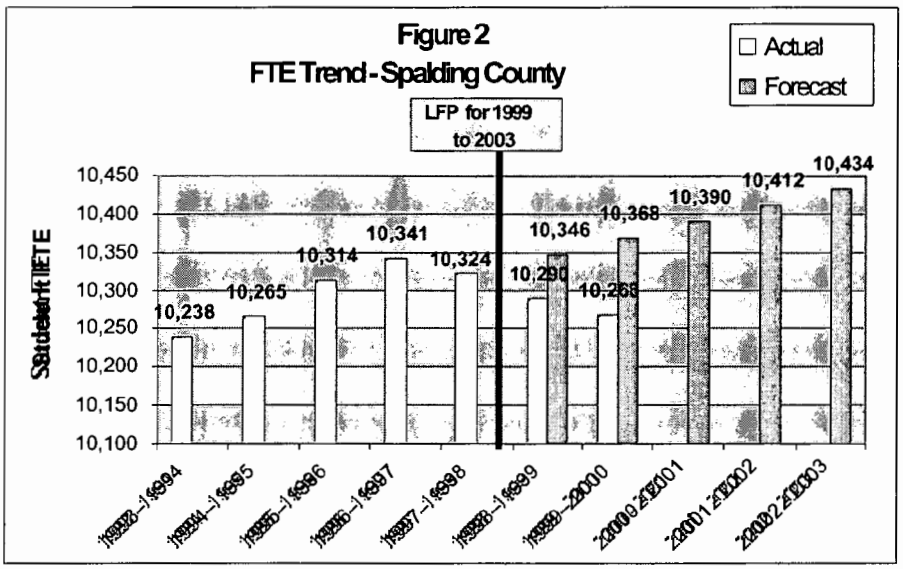
In short, the LFP, the priorities listed in the plan, and yearly applications for state funds drive the Capital Outlay program. DOE annually updates each school system's entitlement account based on the annual appropriation approved by the General Assembly. The LFP is also used by the local system to educate its constituents regarding the need to acquire local funds to meet future needs. The LFP is designed to fulfill the intent of the law that all K-12 students in Georgia public schools be housed in a structurally sound and well maintained school which has adequate space and equipment to meet each student's instructional needs.

To understand fully the planning process in Georgia, the following section explains the content of the LFP and the development process.

LFP Contents

For purposes of illustration, included in Appendix B are selected pages from a generic sample plan identified as "Georgia County." To begin the planning process, the local board of education must pass a resolution indicating the system's intention to develop a LFP. Once a resolution is passed, DOE facilities personnel meet with the local system and orientate the local staff on the process. Typically, over the next four weeks a DOE field consultant meets with the local system and documents the current organization of the system, including the actual schools presently in the system, the actual enrollment from the last full school year, and the existing instructional units. This summary data is displayed on the *"Current Organization"* page (see Appendix B page 3).

The next step in the process is to determine the future needs and organization of the local system. The DOE consultant provides the system with DOE's forecast of the student population for the next five years for that school system. The state's forecast is based on the average growth over the past five years (limitations of this method are



discussed later in the paper). The average growth is then projected forward five years. Population data is shown on the *"Student Population Trends"* page (see Appendix B

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page 1 and 2). To illustrate a population forecast, Figure 2 shows the FTE trend and projection for Spalding County. DOE projected an average growth of 22 FTEs, however in the case of Spalding County, the population has continued to decline.

Once the population estimate is complete, the DOE consultant helps the system (typically over the course of three months) prepare the details of the plan. The school system, working with the DOE consultant, prepares three or four alternatives for how the system will provide a sufficient number of instructional units for the future population. Alternatives may include building new schools, constructing additions on to existing schools, consolidating schools, closing a school, or reorganizing the programs in a given school. When three or four scenarios or alternatives are developed, the school system requests a cost estimate for each scenario from an architect. Architects commonly provide this service at no charge in hopes of securing business in the future. Once costs estimates are prepared, the Local Board of Education (LBOE) decides what alternative is best. The scenario selected by the LBOE is shown on the *"Proposed Organization"* page (see Appendix B page 4).

At the same time the alternatives are being evaluated, the DOE consultant works with the school system to modify, if necessary, the local system's preferred school size (range of FTEs in elementary, middle, and high schools) and current and proposed organization or configuration (e.g. if the system wants K-2 and 3-5 in separate schools). This information is shown on the *"Explanation and Justification of Proposed School Organization and Distribution"* page (see Appendix B page 5). The population estimate, current organization, proposed organization and explanation of school organization comprise the first section of the LFP.

The second section of the LFP contains the detailed implementation information and is organized by school. The DOE consultant assists the local system in developing the details of how the proposed organization will be implemented. The local system makes detailed decisions regarding each school in the system and how it will need to change over the next five years to meet changes in capacity, new programs and instructional processes. The second section, as illustrated in Figure 3, contains five different pages for each school being changed as part of the plan.

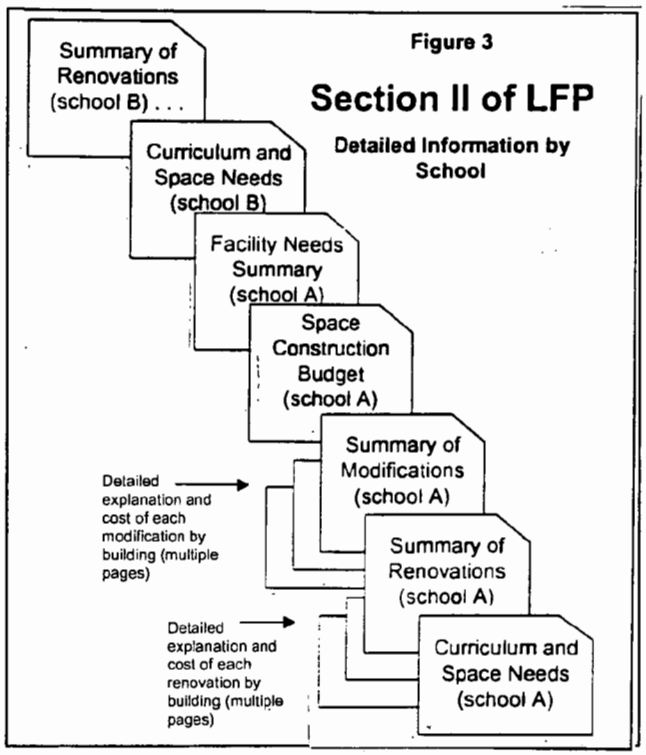
The first page, by school, is the *"Curriculum and Space Needs"* page (see Appendix B page 6). To complete this page some questions the school system may need to answer include:

1. What activities occur both internally and externally at the school?
2. What will be taught?
3. What are the characteristics of the learners?
4. How are all the spaces related?
5. How will the facility be used after normal school hours?

The *"Curriculum and Space Needs"* page specifically indicates the name, the grades served, the projected FTE, the instructional units available, the state earned

instructional units, and any additional local instructional units the local system intends to construct. The instructional units (IU) earned are defined by the "*Instructional Unit Allocations*" table (see Appendix C pages 11 and 12). The IU Allocation table drives facilities planning in the state. The State Board of Education makes changes to the IU Allocation chart to reflect current law and DOE policy regarding class size. The number of state-earned IUs is based on the number of FTE to be housed in the facility and the school organization and type of programs in the school (i.e. K-3 or K-5 etc.)

The intent of the Curriculum and Space Need page is to identify the basic curriculum, how many of each type of IU will be needed to house the projected enrollment, and to identify any present spaces that require modification to change the purpose for which they are to be used. As noted in the School Design paper, the Curriculum and Space Needs page along with the State Square Footage Requirements comprise the minimum educational specifications used in Georgia for the design of a school.



The renovation and modification pages follow the Curriculum and Space Needs page.

- ∑ A renovation is defined as the process of updating an instructional unit without changing the purpose or instructional intent for which the IU is used.

The "*Summary of Renovations*" page (see Appendix B page 7) is the second page (or pages) and identifies the school and each building within the school that the system plans to renovate. The summary page shows the construction date of each building, the number of instructional units in each building, the number of IUs earned according to the state instructional unit chart and any funds each space is eligible to earn for entitlement purpose. Following the summary page, a detailed page for each building to be renovated lists the individual renovations, the architect's cost estimate, the amount eligible for earning entitlement, and the local funds needed. (The detailed renovation budget pages are shown in Appendix B pages 8 to 12.)

The third page required for each school in the system is a *"Summary of Modifications"* page (see Appendix B page 13).

- ∑ A modification is defined as changing the intent and use of the instructional unit.

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An example of a modification is changing an old industrial arts education space into a technology education space. The Summary of Modifications page summarizes the planned modifications for each building within a school. Similar to the renovations section, the modifications summary page is followed by detailed pages that explain each modification by building within the school complex and includes the architect's cost estimate, the amount eligible for earning state entitlement, and the local share (see the detailed pages in Appendix B pages 14 to 18). Of course, if the plan calls for a new school to be constructed the renovations and modifications section is not needed. For additions, renovations, and modifications in the plan, a sketch is included to illustrate the change.

Procedures For Developing a Local Facilities Plan

1. The local board of education passes the required resolution to develop a LFP.
2. DOE staff has an orientation meeting with the local system.
3. DOE consultant helps develop three to four scenarios or alternatives.
4. Each alternative is costed out by an architect.
5. LBOE selects by official board action an alternative and approves the proposed organization .
   - School organization
   - School Sizes
   - Any school closings, phased -out facilities, or new schools constructed.
6. Program pages are developed.
7. Facility inventory is done for each building.
8. Required renovations and modifications are costed out by architect. Calculations for renovations and modifications are "capped" at maximum state participation .
9. LFP is checked by staff in Atlanta to ensure quality.
10. Comprehensive Facilities Survey Team visit is completed .
11. LBOE approves LFP based on Survey Team report, or rejects Survey Team recommendations.
12. State Board of Education approves plan, or considers LBOE waiver.
13. Local Plan is filed with the State (DOE Facilities Section).

The detail for what is to be newly constructed in every school is shown on the fourth page in the section. If it is an addition it is shown on the "New Construction (Addition)" page (see Appendix B page 19). If it is a new school, the detail costs are shown on the *"Space Construction Budget"* page (see Appendix B page 22). This page contains the basic curriculum areas, the number of spaces, the minimum square feet required for each space and the totals. These minimum requirements are identified in the state "Square Footage Requirements" bulletin (see Appendix C). Depending on the system, this page may show just the state eligible costs for earning entitlement or they may show both the total cost and the state share of the total.

The fifth and final page required for each new school and schools adding, renovating or modifying space for the next five years is the *"Facility Needs Summary"* page (see Appendix B page 20 or 24). This page shows the total estimates for renovations, modifications, and new construction by school. Also shown are the costs that are eligible for earning entitlement, and the costs that must be allocated locally. Costs are usually based on the state square footage requirements, which may or may not be the total square footage of the proposed facility. This page usually only shows state funding based on state specified square footage and the minimum local share, the total of which

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may only be a portion of the actual total cost. As part of the summary, the plan requires a schematic of the current facility and a schematic of the proposed facility that highlights what will change. The schematic is a general layout of the building and instructional spaces. It shows the educational program for each instructional unit, the square footage, the age of each building, and the size of the school site.

Once all the changes are described in detail for each school, the school system then must decide how to prioritize all the projects. The priorities, funding, and history of improvement make up the third major section of the LFP. The first of the four pages in this section is the *"History of Facilities Improvements"* (see Appendix B page 25) that indicates the previous projects completed on the facilities affected by the new plan, the specific activities funded, and the amount and source of funding. The second page is the *"Tabulation of Priorities"* page (see Appendix B page 26). The priority page is reviewed and approved by the local school board and becomes the order in which projects will be initiated and funded. The third page is the *"Improvement Needs Certification"* (see Appendix B page 27). At a minimum, this page summarizes the total estimated costs eligible for state entitlement plus the local share required by the state to fund the projects proposed for the next five years. Some systems provide a greater level of detail and show the total local share for all proposed projects.

When the priorities and funding decisions are decided, DOE assembles a survey team comprised of experts, as specified by law, from outside the school system to validate the information in the LFP. Members of the team include an expert on (1) curriculum/instruction/programs, (2) facilities, and (3) general administration. The team hears the plan presented, and visits selected schools. The team verifies that all state rules, regulations, and building codes are met. If the survey team does not approve the plan, then the local system must make the plan compliant or petition the State Board of Education for a waiver.

With the plan verified and approved by the survey team, the next step is for the Local Board of Education (LBOE) to approve the plan. After the LBOE has approved the plan, it is sent to the State Board of Education for approval. Once approved by the state board, the plan and the priorities indicated become the basis for state Capital Outlay planning.

As required by law, an annual update is done so the plan reflects any changes that occurred during the year. These changes are shown on the fourth page in the third section of the LFP, the *"Adjusted Construction Needs"* page. Here the summary data from the approved local facilities plan is recorded along with any adjustments due to the student population changes. All state funded projects and all local projects that were funded during the previous year are removed along with any debt service credit that was used in an application.

DOE conducts three types of updates on the LFPs. (See DOE Facilities Section Schedule of Activities Calendar in Appendix E.)

1. Annual Updates. DOE's annual update is completed during June each planning cycle. The purpose of the annual update is to ensure the total state facilities need is as accurate and current as possible. The actual process involves all systems even those systems that have just completed a LFP during that year. DOE adjusts each plan for the following:

- Adjustments for population changes
- Adjustments for completed projects. All funded applications are removed from the need and entered on the history and no longer earn entitlement.
- Re-calculation of additions or reductions in needs. This produces the updated total system facilities need for each system in the state. These 180 system needs are summed to produce a total state construction need.
- Bond debt service totals are updated.

2. Administrative Updates are done when the student population changes are significantly greater or less than planned and the time to complete a new LFP is not available. The DOE Facilities Services Director is involved in making each decision about an administrative update. The administrative update includes developing new proposed organization pages and all new program pages for schools to be included in an application for funding along with detail to be included in the budget request for the next year.

3. Project Application Updates. Applications for projects using Capital Outlay funds are updated when necessary because of changes in the Instructional Unit Allocation Chart or slight student population changes. The Facilities Services Director is involved in making each of these decisions. Prior to the legislative session, DOE that ensures all LFPs are completed and updated before calculations are done to determine the entitlement. This ensures that the needs prioritized in the LFP are funded as fairly as possible. The calculations on the school system's entitlement sheet are used in developing the final budget for Capital Outlay that is prepared prior to each legislative session.

Renovations and Maintenance

In developing the LFP, the local system has the option to use some of their entitlement funds for renovations if the particular instructional unit (IU) has not been previously renovated with state funds and is older than 1985, the facility is eligible for a fixed dollar amount for renovations based on the age and condition of the IU. HB 1187 allows for a second round of renovation funding, however, this program has yet to be funded and rules have yet to be developed. Renovations and facilities maintenance are not linked financially or programmatically, yet they have a direct relationship with each other. The better the regular and preventive maintenance program, the less the need for major renovations. Therefore, the level of maintenance a facility receives impacts the need for future construction funds.

As consumers we understand that it is better to maintain the brakes on our car rather than risk a future car accident when the brakes fail and the car runs a stop sign. Though the initial cost is often higher, materials with a longer usable life and durability may cost less over time. Using materials that have a longer usable life and are easier to maintain can reduce the need for extensive maintenance or a total renovation being needed. Regardless of the materials or age of a facility, regular maintenance can reduce the need for costly renovations and/or extend the useable life.

The condition of facilities has also been linked to student performance and morale. In its report on the condition of urban schools, the Carnegie Foundation for the Advancement of Teaching found that in those schools that are under-funded, morale is low, facilities are decaying, and the dropout rate remains high year after year.[3] Focusing on new construction without maintaining the current facilities can result in poor learning environments. One study noted,

> "In many American schools, students and teachers find themselves in a physical environment that adversely affects their morale, and, in some cases, their health. Although hard evidence is scanty, a few studies also indicate that when a school building is in disrepair, student achievement suffers . . . Deferred maintenance can create an environment of peeling paint, crumbling plaster, nonfunctioning toilets, poor lighting, inadequate ventilation, and inoperative heating and cooling systems. This, of course, affects both the health and the morale of staff and students."[4]

An annual national survey by American School and University on maintenance and operations found that that "M&O traditionally has been shortchanged, resulting in some school facilities that have a deferred maintenance backlog dating back 10 years or more and deficiencies that are growing exponentially."[5] In a recent survey by American School and University, the study finds that schools are allocating a smaller percentage of their budgets to maintenance and operations for the third consecutive year.

III. CURRENT CONDITIONS

The Facilities Section of the Department of Education carries out the duties of the board related to facilities. Georgia law 20-2-260 subsection (c) outlines the power of the State Board of Education related to planning and management of physical facilities. This code section was included in HB 1187, but only modified slightly. The law provides an outline for assessing the current condition of the planning process.

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[3] Quoted in Frazier, Linda M. Source: ERIC Clearinghouse on Educational Management Eugene OR. "Deteriorating School Facilities and Student Learning." ERIC Digest, Number 82, May 1993.
[4] Ibid.
[5] Agron, Joe. "28th Annual Maintenance and Operations Cost Study: School Administrators," American School and University, June 1999.

- ***Set policies, guidelines, and standards for an annual physical facility and real property inventory required of each local school system.***

As noted previously in the paper, the annual facilities survey is usually not done annually. Rather, it is done every four to five years during the development of the LFP. The inventory data specified in the law is not collected or housed in a centralized database.

- ***Set policies, guidelines, and standards for an educational facilities survey required of local school systems.***

The survey is done as part of the LFP process.

- ***Set policies, guidelines, and standards for a five-year educational facilities construction plan that includes:***
  - ***A list of construction projects currently eligible for state Capital Outlay funds,***
  - ***Educational facilities projected for abandonment,***
  - ***Educational facilities projected as needed five years hence;***
  - ***Proposed construction projects for modernization, renovation, and energy retrofitting;***
  - ***Proposed construction projects for the purpose of consolidating small, inefficient educational facilities which are less than the minimum size specified; and***
  - ***Other construction projects needed to house the instructional programs authorized by provisions of this article.***

The current LFP procedure seems to fulfill the intent of the law. The goal of the Capital Outlay Program is the successful development and implementation of facilities plans by all of Georgia's 180 local school systems. When all local systems have completed their long-range facilities plans and are making satisfactory progress toward implementing their plan to provide adequate school facilities for all of their students, the goals of the Capital Outlay Program are being met. At this time, all 180 school systems have a long-range facilities plan and are making satisfactory progress toward implementing their plans. The LFP helps the system plan for population changes, funding, land needs, and how to accommodate program needs and make a commitment on how it will meet those needs. They way the LFP ties the implementation plan to funding makes the LFP an effective planning processes. However, the level of detail included in the plan and how it is used varies by school system. For some local systems five years out is not sufficient. For example, Forsyth County plans out seven years to effectively prepare for the growth they are experiencing. Clayton County sees the LFP as a contract with the community and documents all costs and the financing options that will be used to fund every segment of the plan. If the LFP is seen only as forms that need to be filled out to qualify for state funding, the local system misses many of the benefits.

Though all 180 local systems are developing and using their plans, there are still areas for improvement in the collection of data and management of the process. The sum of the 180 facilities plans, which are housed at the Department of Education, represents a collection of "snapshots" of the needs of Georgia's school systems at a given point in time. The end dates for the local facilities plans vary depending on the beginning and end date of the five-year planning cycle. The varying end dates cause a five-year spread in the data. The number of LFP by end date is as follows:

- ∑ 3 plans are extended beyond June 30, 2000,
- ∑ 31 plans will expire June 30, 2001,
- ∑ 52 plans will expire June 30, 2002,
- ∑ 49 plans will expire June 30, 2003, and
- ∑ 45 plans will expire June 30, 2004.

These plans are all submitted on paper and electronic form. However, the plans are all in different computer formats depending on the year submitted. Varying end dates and computer formats makes it very difficult to analyze and update the data. Additionally, DOE updates are often only done on the paper copies, making the more cumbersome paper copies more reliable than the electronic version.

Data contained in the LFP is valuable for planning and managing school facilities. However, for the data to be truly useful and reliable, it must be consistent. The data is not currently consistent. Though an architect provides a cost estimate for each aspect of the LFP, cost estimate numbers used in the plan vary. Some systems like Clayton County report the total estimated cost of all projects. Other local systems only include the minimum local funds needed for each project and the state eligible reimbursed costs. Lack of consistency in reported cost estimations and the five year spread makes estimating the total need and cost of facilities statewide very difficult.

- ***Develop a state-wide needs assessment process for purposes of planning and developing policies, anticipating state-wide needs for educational facilities, and providing assistance to local school systems in developing educational facilities plans . . . Additionally, the state board is authorized to develop a consistent, systematic research approach projecting the number of full-time equivalent (FTE) students that are used in the development of needs within each local unit. These projections are then used to determine the improvements needed for the five-year planning period.***

The LFP is a formal needs assessment process. The development of the five-year facilities plan typically takes about eight to ten months. Once the plan is complete, DOE organizes a survey team to review the plan, verify the accuracy of the plan, and inspect select facilities in the school system. The survey team is required by law to insure that the plan is developed to conform with applicable rules and existing state law.

Each school system's facilities plan and the subsequent applications required to implement the plan are developed in a collaborative effort. The Facilities Services

Section staff provides technical assistance and consulting services to the school system throughout the planning and implementation process. The Facilities Services staff is responsible for providing technical assistance and support services in the areas of planning, budgeting, financing, operations, safety, and maintenance of educational facilities. At present, staffing limitations are such that the majority of the assistance is limited to developing the local facilities plan and implementing that plan. Generally speaking, once the application for a project has been funded the Facilities Services Unit assumes no day-to-day responsibility for management of construction. DOE releases funds for reimbursement if state requirements (square footage) are met up to the approved application amount. Once the project is complete, DOE requires a copy of the architect's certificate of completion.

The long-range facilities plans developed by school systems and the subsequent project applications only include construction costs for the building itself. The local system is responsible for providing the required local matching funds (at least 10% to 25%) to qualify for state funds. In addition, the local system pays for site purchase, site development, furniture and loose equipment that are not permanently affixed to the building, paving and parking lots, etc. Despite the joint nature of facilities funding, the total estimated costs are often not reported in the LFP.

Additionally, assessing the statewide need using the LFP is possible, but fraught with data limitations and estimations. The Tabulation of Priorities page in the LFP lists all the projects anticipated by the local system so the system can earn as much entitlement as possible, even though some projects will be completely paid for with local funds. Projects listed on the priority page are considered eligible for earning entitlement up to the time the building is occupied. Only the smallest systems, with one or two projects, would funds be available to meet all of the needs contained in the typical plan. Additionally, construction costs are not reported to DOE in standardized categories and little follow-up is done once a project is completed to compare estimated cost in the LFP, bid cost and actual cost.

The Curriculum and Space Needs page along with the state square footage requirements are the minimal educational specification (ed spec) in Georgia. The ed spec should ensure that the facility meets state standards, guidelines, specialized curriculum needs, and needs of the stakeholders. As noted in an earlier paper entitled "School Design" the current ed spec used in Georgia may not be adequate. Needs of all the stakeholders should be considered.

Population projections are done using an average of the past five years; however, the accuracy of the method may need improvement. The detail of the law provides a list of sources to be used to assess the population, but few are actually used. In the earlier years of the program all sources were used but the modified cohort survival technique proved to be as correct as using all the previous sources. More sophisticated forecasting methods may be possible with the use of computer databases and software.

- ***Provide means for local school systems to revise their educational facilities plans or the priority order of construction projects requested to reflect unforeseen changes in locally identifiable needs. The State Board of Education must approve any changes to the five-year plan and revisions must meet state and local building codes, fire marshal certification, architectural requirements, and minimum size and square foot requirements.***

DOE does have a procedure in place to allow priorities and plans to be adjusted. To ensure that each school system's plan is accurate and current, DOE evaluates the plans annually as noted earlier. Every school system must complete a new needs assessment and develop a new plan at least once every five years. However, a system may need to develop a new plan prior to the end of its five-year planning period if significant, unforeseen changes occur, and the development of a new plan is necessary to accurately reflect the system's facility needs. Conversely, if no Capital Outlay funds are needed, some systems may stop facilities planning regardless of future renovation, modification, or maintenance needs. Statewide aggregate data is only possible if every system completes a plan.

Here is a section of the law that allows the State Board to adopt whatever in their judgment is necessary to provide adequate facilities.

- ***Adopt uniform rules, regulations, policies, standards, and criteria respecting all location, construction, equipping, operating, maintenance, and use of educational facilities as may be reasonably necessary to assure effective, efficient, and economical operation of the schools and all phases of the public education program provided for under the provisions of this article . . . .The state board shall adopt policies or standards which shall allow renovation costs up to the amount of new construction of a replacement facility, provided that the renovated facility provides comparable instructional and supportive space and has an extended life comparable to that of a new facility.***

Renovations and modifications are included as part of the state's capital outlay program. DOE defines renovations as cosmetic changes to existing space. A renovation does not change the purpose of the space. New paint, new carpet, new lighting and other fixtures are typical renovations. Modifications are defined by DOE as changes to the purpose of the space or changing the space. For purposes of funding, new roofs and HVAC are also considered modifications.

The choices of materials, equipment, and systems selected during the design phase have a significant impact on level and cost of maintenance and renovations needed over the life of the facility. However, the current Capital Outlay program offers no benefit to school systems that conduct regular maintenance or construct facilities using materials that have a longer usable life or are easier to maintain. Because funds are

provided based on square footage only, each system must work with their architect in determining the materials that are best, using cost as the only or primary criteria. Usually this means the school system tries to maximize the amount of space they can get for the money. Often better quality materials with a higher initial cost are sacrificed to get one more classroom included in the project. As noted earlier, the cost of renovations and modifications may be reduced with selection of better materials on the front end and regular maintenance and preventive maintenance once the facility is occupied.

Because the condition of facilities impacts student and teacher performance and morale and can reduce the need for major renovations, DOE conducted a regular maintenance review program to check the condition of facilities during the 1980s. This program was discontinued and no statewide program exists to assess the condition facilities.

Renovation funding is not linked to maintenance records or programs. Where renovations are part of the Capital Outlay program, maintenance and operations funds are allocated as part of the annual budget and a school system receives $295 per FTE. Unlike renovation funds, school systems are not accountable to the state for how maintenance funds are used. Though renovation funds are part of the Capital Outlay program, school systems tend to use their capital outlay funds for new school construction, so major maintenance or renovations are deferred to a later time.

The law states that renovation costs can be "up to the amount of new construction of a replacement facility, provided that the renovated facility provides comparable instructional and supportive space and has an extended life comparable to that of a new facility." However, the amount for new construction allowed is what DOE sets as the cost per square foot for new construction ($49 for elementary schools, $51 for middle schools, and $53 for high schools). In the construction industry, most developers use a rule of thumb of around 60 percent when deciding whether to renovate or build new. This means if a renovation project exceeds 60 percent of the cost of new construction, the developer will not renovate, but build new. The typical oversight provided by an elected board of education may not, from a political standpoint, be able to use the same criteria as in the business arena. Historical considerations are also critical in deciding whether to renovate.

Other States

One of the most important factors in capital budgeting is setting priorities within the large number of proposed projects. Over one-third of the states set priorities on a based on needs in conjunction with some type of long-range plan, usually five to ten years. Others use criteria including emergency, legal and health reasons. In states such as Montana, New Hampshire, Ohio and Virginia projects are ranked by categories like health and safety, critical maintenance, improvements, or new construction. Arizona uses a formal ranking system in addition to viewing the projects within the

political and economic context. Likewise, Minnesota reviews projects in the context of review guidelines and a capital scoring system.

In the Southeast, the same diversity exists among the prioritization process. In Georgia, Florida, and Mississippi priorities are set based on local needs. South Carolina and Tennessee both prioritize project by project, where Alabama uses an overall state needs assessment. Similarly, in North Carolina, projects are prioritized based on budget analyst review.

IV. FINDINGS

The Process

- DOE Local Facilities Plan is perceived as an effective local planning document. When used as intended and incorporated into other local planning process can be an effective planning tool. If the LFP is seen only as forms that need to be filled out to qualify for state funding, the local system misses many of the benefits.
- A major strength of the LFP, if used properly and integrated into the local decision process, is that it provides a vision to the community of future needs and how the school system specifically plans to meet those needs.
- The current LFP planning process is based on objective criteria and is viewed as fair because it is drives funding based on each system's need.
- The LFP requires all school systems to look ahead five years, identify their needs and then establish and commit to a plan for meeting their specific facilities needs, including renovations, modifications, and additions of existing facilities as well as the construction of new schools when appropriate. The current planning process is effective in encouraging each school system to plan construction and funding in advance. However, the basis for decisions is not clear. No clear guidelines, other than building codes, are available to clearly determine when it is appropriate to close a school and build a new one. It is not clear if life cycle costing is involved or if purely political or community opinion determines the preferred alternative.
- No motivation exists in the current Capital Facilities program for planning a non-construction alternative. Currently, local school systems only consider construction alternatives to meet a change in capacity, new services, or new process because the state only provides funding for construction. No incentive is in place for a school system to consider options such as a modifying the calendar or schedule, leasing or using excess capacity at another educational facility such as a Department of Technical and Adult Education (DTAE) facility.
- It is not clear if consideration of alternative scenarios is done systematically. Cost is considered, but consideration of non-construction alternatives is not apparent. Guidelines for the comparative evaluation of alternative based on other factors in addition to cost may be needed for the process to be objective.

- Currently, the annual DOE updates of the five-year plans consist of revising FTE projections, removing schools that have been constructed – including both facilities built with some state funds and facilities built with local funds exclusively.
- DOE provides population forecasts for each school system to assist them in assessing their needs and determining the improvements needed for the five-year planning period. Population estimates are based on an average of the past five years. Local systems with exponential growth expected in the next five years may not qualify for sufficient funding to meet their needs using the present forecasting method. DOE annual updates for population changes keep funding decision in step with population fluctuations, but better forecasting methods may need to be considered.
- Forecasts based on birthrate, building permits, and changes in attendance data were done in the 1980s. DOE has found these sophisticated forecasting techniques open to more debate by local systems. Computer programs may now make more sophisticated forecasting models more feasible.
- As noted in the "School Design Paper", the Curriculum and Space Needs page may not be a sufficient ed spec. Local systems should also consider the needs of the community and other potential users. How can the facility be adapted to meet future needs, should also be considered
- When cost estimates are prepared, the Local Board of Education (LBOE) decides what alternative is best. It is not clear what the basis is for the LBOE's decision. The only criterion mentioned is cost. It is not known to what extent non-construction alternatives, such as alternative scheduling are considered.
- The LBOE reviews and approves the priority page in the LFP. It is not clear what the basis is for the order of prioritization. One might assume that local decisions are based on local perception of what is best for children in light of funds available. The board's action takes place in a public meeting, which may offer opportunities for public input on the priorities.
- When all the plans are pooled together to get aggregate data for statewide analysis the effectiveness of the plans is limited (limitations are discussed in more detail later in this section).

The Law and Organization

- All 180 local school systems develop a five-year plan to qualify for state Capital Outlay funds. As needs are met, some systems may choose not to continue doing long-range planning. The planning process is valuable, not just for capital facilities reasons, but for maintenance and state facility management reasons. Historical data on facilities can help DOE staff manage the relationship between maintenance funding and renovations and new construction. Data from the facilities plans provides the state the ability to test and analyze the impact of proposed changes in rules and law.
- The annual facilities inventory required by law is usually only done every five years as part of the development of a new five-year facilities plan. However, the

level of detail of the inventory varies and not all categories required by law are included in the plan.

- Despite possible renovation, modification, and maintenance costs, some local systems with limited construction needs may not renew their facilities plan every five years. A plan for every system is needed to maintain the integrity of a statewide database.
- Capital outlay dollars and state-provided operations and maintenance dollars are not related.
- State law allows renovation costs up to the cost of new construction for a comparable facility. The industry rule of thumb is renovations are cost effective up to about 60 percent of the cost of new construction.

Data Collection

- LFP data is not updated or maintained in central database. Plans are all in different computer formats depending on the year submitted making it very difficult to analyze and update the data. No real-time data is available.
- Only DOE does annual updates. The lack of automation and state resources makes on-going updates by each school system prohibitive.
- DOE annual updates are adequate to keep the Capital Outlay program functioning, but this process could be enhanced with greater local input. Annual updates by the local systems would facilitate rolling end dates and make the process more transparent.
- Data receptacles (e.g. formats, templates, software) are not standardized. Varying computer formats makes analyzing data complicated and difficult. Plans from past years may need to be migrated to a standardized database.
- The LFP's of the 180 school systems have varying end dates. On one hand this makes it easier for DOE to assist each school system in developing their LFP because it is not happening all at once. However, the disadvantage is that it makes analysis based on real-time data and current condition very difficult.
- Using standardized construction cost categories (such as the 16 CSI divisions) in the LFP and construction phase may facilitate standardized data and construction cost estimates.

V. ALTERNATIVES

1. **Require all local systems to develop and submit an LFP to receive not only Capital Outlay funds, but also other state funding components such as maintenance and operation funds. This** is important so the state has an up to date inventory and can maintain an up to date database for statewide facilities management and planning. State educational policy is dynamic. When a new rule, policy or law is considered, a centralized and standardized database would allow analysts to assess the impact of the change on the state and local systems before a rule and law is passed. Local systems will benefit by using the planning

process to continually plan for changes to not only facilities but also school programs and instructional process.

2. **Establish standards for reporting total cost data.**

   a. **Establish standards for reporting cost data from the long-range planning stage through the completion of a project.** Require the use of the uniformat CSI categories for all applications. Cost should be comparable based on square footage and instructional unit. Change funding applications and LFP forms so the estimated total cost of each construction, addition, renovation, and modification project is reported as well as the state's share of the total cost. The LFP should show all cost whether eligible for state funding or not. This alternative would require a change in DOE forms and DOE rules.

   b. **Develop a standardized web-based computer database system to facilitate annual updates of the LFP and rolling end dates.** This would facilitate statewide analysis of planning and construction data, based on real-time data. An on-line database could also capture end of project data including final cost and maintenance inspection scores of current facilities. The estimated cost of this alternative is unknown at this time. Having personnel at some of the local systems updating the LFP directly may reduce DOE staff time.

   c. **Once a mechanism is in place for annual update by local systems, bring all LFPs up to date.**

   d. **Change LFP rules and guidelines so total cost of each project is report in current dollars and also in future dollars for each year of the plan.** For example, if the plan calls for a new elementary school at the current cost of $6 million dollars, the plan would require an estimate of building the school one year from now, two years from now, and so on up to year five. The current cost could be factored by the construction cost index or other standard inflation factor. Better financial planning and needs analysis at both the local and state level is possible with better-cost data.

3. **Provide incentives (possibly in maintenance and operations funds) to encourage non-construction solutions to meet changes in capacity, programs or instructional process.** Options such as leasing, multi-track calendar (year around school), and using other educational facilities, such as DTAE facilities, may become serious alternatives to local systems if the state provided an incentive. Some examples of possible alternatives with associated costs include:

- Lease-Purchase/COP = On $15 million project with a 20 year pay back period, a lease purchase/COP may cost approximately $15,000 to $20,000 more per year over a GO bond. [6]
- Operational Lease = Cost depends on location and facility
- Year around school = Cost unknown. Would increase maintenance costs, but capacity can be increased 20 to 30 percent.
- Using DTAE facilities = cost not known at this time.

4. **Develop and implement a more sophisticated system/procedure for projecting growth in student population and FTEs.** Forecasting population and other factors affecting schools is something the state may need to do more comprehensively for all agencies. Year 2000 census data may provide timely data by county that could help the state more accurately project future population trends.

5. **Conduct a benchmarking study of best practices and uses of the LFP by local school systems.** This study would help the state and other local system understand the benefits of the LFP and who to use the document most effectively. Cost: Approximately $30,000.

MAINTENANCE AND RENOVATIONS

6. **Link renovation and modification funds to evidence of an adequate maintenance and operations program.** This alternative would probably require additional state resources to administer the program.

7. **Develop a maintenance and operations inspection process to ensure we are fixing problems and reducing the need for costly renovations and new construction. Reward good maintenance programs. If this were a car, the state needs to make sure we are maintaining the brakes rather than letting the brakes go and then have to end up fixing the whole car because of a car accident.**
   This may cost the state approximately $200,000 to $250,000 annually for three additional FTE to help monitor construction and maintenance programs depending on how the program is implemented. It is not known at this time if the facility database is currently proposed in the FY 2002 budget at the cost of $1.7 million includes a module for maintenance reporting. Ongoing cost of a database administrator may require a salary of $55,000 to $90,000.

   a. A private contractor could do maintenance inspections.

   b. Maintenance inspections could be done every four years as part of the LFP process rather than annually.

[6] Holcomb, Bryce. Robertson and Humphrey. Lease purchase v. GO bond analysis. September 1, 2000.

8. **Change the law related to renovate vs. new construction so the complete cost of renovations and complete cost of new construction are considered.** DOE rules related to site development could also be qualified to allow demolition of an old facility if renovation cost exceed new construction cost for a new facility.

9. **Develop list of best practices related to regular and preventive maintenance.** Best practices would be used as a basis for state guidance and technical assistance and/or a state maintenance assessment.

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