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A Review of Facilities Planning at Four University Systems

August 25, 1999

Members of the Legislative Audit Committee:

Our review of facilities planning at four university systems indicates that overall these systems are doing a good job. This achievement is important because Texas will spend \$3.6 billion on facilities construction at public universities in the next five years. Good facilities planning keeps construction costs under control.

Systems Reviewed

Texas A&M University System
Texas State University System
University of Houston System
The University of Texas System

We did note opportunities for enhancement, which are identified in the attachment. Some enhancements we identified may point to opportunities for improvement at the Higher Education Coordinating Board, which we plan to address more fully in our project schedule for next year.

We gave detailed recommendations to the four university systems. Their responses indicated that they generally concurred with the recommendations and will take action on them.

We would like to thank the university systems for their cooperation during this audit. If you have any questions, please call Carol A. Smith, CPA, Audit Manager, at 479-4700.

Sincerely,

Lawrence F. Alwin, CPA
State Auditor

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Attachment

cc: Members of the Boards of Regents, Chancellors, Internal Auditors, and Facilities Planning Directors of the Texas A&M University System, the Texas State University System, the University of Houston System, and The University of Texas System.

SAO Report No. 99-048

Overall Conclusion

Overall, the four systems we reviewed (see text box) have developed effective facilities planning processes. However, enhancements to these processes would give Texas more assurance that university facilities are constructed to help achieve state leaders' vision for higher education. Their vision includes educating more Texans with diverse needs to build a strong future economy.

Systems Reviewed

Texas A&M University System
Texas State University System
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Why is facilities planning important?

Good facilities planning is critical to ensure that the State's universities use funds wisely to build the facilities their present and future students need. In addition, decisions to build and remodel university facilities commit the State to large expenditures. Between fiscal years 1999 and 2003, Texas plans to spend almost \$3.6 billion to construct, renovate, and maintain the buildings on its public university campuses.

What would enhance the facilities planning process for the State?

The four systems could benefit from a formal performance measurement process to measure cost, timeliness, and quality. This process could help further increase efficiency, keep costs down, and ensure consistent construction quality.

Our analysis of cost variances in facilities planning across systems indicates that average variances ranged from 5 to 23 percent over original estimates, which places the systems within the typical range of variance observed by construction industry researchers. However, estimated costs for 15 percent (21) of the 143 projects that were in design or construction at the four systems during the audit changed more than 50 percent from the initial board-approved estimate to the estimate at contract award. The absolute value of the variances on these 21 projects totaled nearly \$200 million. Most of this amount is an increase in estimated costs. Such an increase may adversely affect subsequent projects, which may be of even higher priority than the projects currently in development.

To further enhance their facilities planning processes, the systems could also:

- Document major construction and renovation alternatives in campus master plans, which are long-range development plans submitted to the Texas Higher Education Coordinating Board (Coordinating Board).

This information would provide the Coordinating Board with more assurance that cost, timeliness, and quality alternatives were appropriately considered

ATTACHMENT

during pre-project planning, and it would keep system boards, as well as the Coordinating Board, from having to raise questions that have already been resolved. To further improve campus master plans, space use data could be used to document how much need would remain unmet in the future. Currently, this information is used only to show that new construction will not create excess space capacity.

- Work with the Coordinating Board to: (1) develop consistent standards for assessing and reporting the physical condition of facilities, and (2) ensure that components follow the standards.

State leaders risk using inaccurate information to determine whether campuses are within an acceptable range of deferred maintenance costs. Decisionmakers use this information to gauge whether future budgets can continue to support the maintenance needed to keep up the facilities. Because standard criteria for assessing the physical condition of a facility do not exist, campuses report deferred maintenance according to their own interpretations. The Coordinating Board uses the campuses' information without auditing it for accuracy or requiring that it be verified.

- Use the same deferred maintenance and space use criteria as the Coordinating Board.

Not considering Coordinating Board criteria in decisions concerning major facilities construction or renovation is inefficient and could ultimately keep a campus from carrying out its long-term development plan. Component universities submit projects to the Coordinating Board that do not always meet space use and deferred maintenance criteria. In these cases, the Coordinating Board staff requests further work or explanation. In other cases, systems do not consider Coordinating Board criteria because the project is not subject to Coordinating Board approval. However, even without Coordinating Board approval, these projects affect space use and deferred maintenance thresholds for campuses and may negatively affect future projects that require formal Coordinating Board approval.

- Consider consolidating cost estimation information in an electronic database that can be accessed by all systems and the Coordinating Board.

Preliminary cost estimates for facility proposals need to be as accurate as possible so that stakeholders can be reasonably assured that a facility will be built within budget and that future projects will not suffer because of depleted resources. Currently, the various university systems and the Coordinating Board do not have access to the same quality of cost estimate information. It is generally believed that the most accurate and reliable data for predesign and early design cost estimating is historical data covering projects that are similar in design and construction, in similar geographical areas, and subject to the same market and regional or local economic conditions. The larger systems have best access to this information because they have developed it from their own historical data.

Objective, Scope, and Methodology

This report is the second of two reports on four major system administrative offices. The first report, State Auditor's Office (SAO) Report No. 99-022, was published in hard copy and on the SAO web site, www.sao.state.tx.us, in January 1999. It offered profile data on centralized services of the system administrative offices.

The project team analyzed facility planning processes at the four systems to see how these processes link to state-level facilities planning in higher education. Because what happens in facility planning has such a strong influence on the ultimate success of construction projects, we focused specifically on the facilities planning process.

Fieldwork was performed from January through May 1999 and was conducted according to *Government Auditing Standards*.