

**Improving Facility Planning
for California Higher Education**

**A Report to the
California State University
Faculty Research Fellows Program**

by

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Executive Summary

As the state faces growing higher education enrollment in an era of fiscal stress and limited resources, an effective capital outlay planning process is needed. In order to help achieve this objective, this report projects future demand for higher education capital facilities, assesses various alternatives intended to maximize efficient use of physical capacity, and evaluates the state's higher education capital outlay decision-making process with the goal of identifying possible improvements to this process.

Higher Education Enrollment Estimates and Facilities Needs

Many factors affect the demand for higher education, including demographic changes occurring in the college-age population. There are substantial disparities across racial/ethnic populations in rates of college participation. If Latinos continue to attend college at much lower rates than whites, the state will see a *decline* in the overall college participation rate as the share of the young adult population that is Latino increases dramatically, while the share that is white declines. Therefore, assumptions about college participation rates greatly influence enrollment projections.

The most recent projections by the state Department of Finance show public higher education enrollment increasing by 31 percent between 2005 and 2014 – an average annual growth rate of 3.1 percent. This rate is about twice the annual rate of growth expected by the DOF in the college-age population over that period, and more than three times the annual rate of growth in the number of high school graduates. DOF projections make no explicit assumptions about increasing Latino college participation rates.

Using the DOF enrollment projections, the three segments reported a combined a capital facilities need of over \$16 billion through 2010-11. In the face of competing demands and limited resources, the Administration proposed \$5.5 billion in state funding for capital facilities for the three segments in its 2006 Five-Year State Infrastructure Plan.

We present an alternate enrollment forecast, extended to 2020, based on the projections produced by the Institute for Higher Education Leadership & Policy in 2005. These estimates show FTE enrollment increasing by about 20 percent between 2005 and 2020 – an average of 1.2 percent per year – and reflect aggressive assumptions about increased college participation rates for Latinos. We used these alternative enrollment forecasts, along with projections of needed facility renovations and upgrades, to develop a rough projection of higher education capital facilities need through 2020.

Several conclusions can be drawn from our projections:

- The state faces significant costs even if enrollment growth is low. All three segments face significant costs to repair and modernize their existing inventories.
- Because the state funds only a portion of the need identified by the segments, it is likely that the segments will be playing “catch up” for a significant period of time.

- The rate of change of construction costs is a major variable in the costs for higher education facilities through 2020. Over the last four years construction costs have increased by 19.7 percent, for an average annual rate of 4.6 percent.
- Our projection likely understates the segments' needs because, by using systemwide averages, we assume that available space on one campus can meet enrollment demand at another, when in fact, there are practical limitations to redirecting students to take advantage of available space.

There are unlikely to be sufficient state and local (in the case of community colleges) bond funds to fully meet facilities needs through 2020. Thus, it is imperative that the state make the most of existing facilities and technologies in order to provide educational opportunity to as many Californians as possible within available resources. Alternatives to capital construction show varying degrees of promise in helping to meet the need:

Alternatives to Building Additional Facilities

Joint-Use Facilities Agreements between Campuses and Systems. Joint use of facilities is a promising strategy but relatively few instances of joint use have been pursued by the segments with the notable exception of CCC facilities leased to K-12 and, to a lesser extent, to CSU. This is because some serious practical barriers make joint use difficult, such as the issue of which entity will control the facility, whether entities participating in a joint use arrangement will be penalized from an operating budget perspective, and the Field Act requirements that govern the community colleges. Absent fiscal incentives for the segments to engage in joint-use agreements, and lessening of regulatory barriers, the segments will likely not undertake the effort and risk involved in this alternative to a significantly greater extent.

Distance Learning. Research shows that participation in distance education tends to come from less traditional students, such as those who are financially independent, older, married, or have dependents. At the same time, opportunities are increasing for using distance education methods to serve younger students, who have grown up using technology and expect or demand convenient delivery of information. However, there are attitudinal and financial barriers to the growth of distance education. Public higher education institutions recognize that the prevalence of the distance education format is one factor attracting students to for-profit institutions. There is probably room for the most growth in distance education within the community colleges, for this segment contains the highest proportion of the kinds of students already known to be more likely to participate. But opportunities for expansion in all segments should be pursued through the use of incentives, as necessary, and by modifying the faculty culture as new faculty are hired.

Year-Round Operations. The state has made efforts to expand enrollment capacity by increasing summer enrollments. UC and CSU explicitly incorporate achievement of specified levels of year-round operations into their long-term capital plans. Recently, the LAO found mixed results from these efforts and recommended the establishment of additional incentives to overcome barriers to the use of year-round operations. Success in achieving the levels of year-round operations incorporated into the segments' capital planning is critical to avoiding

significant additional costs for facilities. Community colleges have achieved the highest summer utilization, even as considerable statewide effort has gone into expanding summer use at UC and CSU. The CCC summer term FTES is about 21 percent that of fall, whereas at UC and CSU summer is only about 6-7 percent of fall. Therefore, there may be a greater potential to expand YRO in the UC and the CSU than at the CCC. There are clear practical barriers to achieving levels of space utilization in the summer comparable to fall and spring, but there are also cultural barriers stemming from lifestyle expectations and traditions on the part of students and faculty, and long-standing patterns of academic governance and faculty work. There are also significant transitional issues to be confronted in anything other than small incremental increases to summer use. For example, students cannot be expected to change their enrollment patterns dramatically until a full complement of courses becomes available in the summer, but colleges will face serious financial barriers to offering a full complement of courses absent strong student demand.

Afternoons, Evenings & Weekends. A certain level of facilities use during the afternoon, evenings, and weekends is built into the standards by which projects are judged to be eligible for state funding. However, there is opportunity for more use of facilities during these times. As with YRO, there are attitudinal barriers as well as physical constraints to the expanded use of off peak hours for classroom instruction. Incentives should be explored to encourage students as well as faculty to expand the hours of classroom use.

The Higher Education Facilities Planning Process

Each segment annually develops a set of projects for consideration by the Administration and the Legislature consistent with internal, institutional priorities. The process provides few tools by which legislators can evaluate projects in a statewide policy context. This is in part because the state lacks a process for defining state priorities for higher education that can guide capital spending.

We do not recommend a project-by-project ranking scheme across all three segments. In developing facilities plans, the segments use various criteria that have developed over time in separate environments with different terminology and methods for measuring need. Any effort to move to a single “grading” system for projects would take substantial time and resources, raising the question of whether the effort would be worth it.

A better approach is to develop statewide priorities for higher education that can become the basis for segmental planning and subsequently for legislative and administration review. Regional planning is another useful approach, under which the segments would jointly develop a plan for meeting regional facility needs based on regional enrollment projections, economic needs, and other factors.

Both of these recommended approaches – statewide planning and regional planning – will require significant effort. The development of statewide higher education priorities to drive capital planning will require the establishment of an effective coordinating function. Implementing regional planning will likely require financial incentives. We suggest that a regional approach be implemented as a small-scale pilot effort so that the necessary mechanics and protocols can be developed.

A critical factor in the success of either approach is the role of a convener. California lacks the kind of entity that has proven useful in many states to convene stakeholder groups to establish and carry out a public agenda for higher education. Such an entity must have the legitimacy and control over sufficient resources to be able to influence institutions to pursue a common agenda around state priorities.

Conclusions and Recommendations

Based on our analysis, the following points must be considered in any effort to improve the capital planning process:

1. With declining enrollment growth rates, there is unlikely to be a crisis of capacity over the next 15 years due solely to enrollment trends.
2. Aggressive action to reduce the number of adults of all ages who lack a high school education could greatly expand community college enrollment and increase facility needs, but no such policy initiatives are under discussion.
3. Factors other than enrollment – renovation, replacement, and seismic safety – are the biggest drivers of the capital outlay needs in higher education. Therefore, despite moderating enrollment growth rates, facility needs will still far outstrip the projected state budget capacity to provide for them.
4. Current planning processes fail to provide the necessary coordination or the incentives to promote the efficient use of facilities and capital outlay dollars.
5. There are un-tapped opportunities to use alternatives to capital construction in accommodating future capacity needs. These vary across segments but are probably greatest in the community colleges, where a diverse clientele offers opportunities to expand distance education and year-round operations further than they have done already, and a broad geographic reach offers opportunities to share facilities with CSU campuses.
6. Weak integration at the state level of programmatic and facility planning for higher education limits the effectiveness of the capital outlay budget.
7. The absence of effective state coordination for higher education is a major hindrance to the development of state priorities that should drive facility planning and to the effective coordination of planning across regions and segments for new construction, renovation, joint use, and distance education.

We offer the following recommendations for improving the process and for maximizing the ability of the state to meet higher education capacity needs over the next 15 years.

1. An effective higher education coordinating function should be established. California is greatly disadvantaged in all aspects of higher education policy development, including

capital outlay, by expecting institutional actions – largely uncoordinated – to produce the best educational outcomes for the state.

2. A set of specific state policy goals for higher education should be established that can be used to drive capital planning, not only for new construction, but for renovation, joint use of facilities, and alternative delivery of instruction such as distance education.
3. A task force, ideally under the direction of an effective higher education coordinating body, should develop *specific* recommendations to:
 - increase the use of distance learning in ways that reduce demands on facilities, with specific attention to the community colleges.

Hybrid courses that merge distance education with a classroom experience are probably more suitable for UC, and to some extent CSU, clientele, that includes younger, technology-oriented students who still prefer a residential experience. There is probably room for the most growth in distance education within the community colleges, for this segment contains the highest proportion of the students already known to be more likely to participate. The community colleges should also view the expansion of distance education as another way to provide the much needed skill set of technological competence to their students, many of whom are trying to improve workforce skills.
 - increase YRO (summer enrollment) while giving proper consideration to the very real practical limitations on summer enrollment growth.

CCC summer enrollment seems to be at a reasonable level (about 21 percent of fall) but UC and CSU summer enrollment is only about 6-7 percent of fall. Therefore, it seems that the most potential at this time is for expansion of summer enrollment at UC and CSU. Differences in accounting for FTES in general, and summer FTES in particular, should be addressed with recommendations for standardization.
 - increase joint use of facilities through the provision of funding incentives.

This would require further investigation into the precise legal or procedural barriers to joint use and accompanying recommendations for removing those barriers. It is possible that community colleges could take on some of the roles and responsibilities of CSU off-campus centers – as a means to minimize establishing new ones in the future. One very promising kind of joint use that would involve all three segments is the offering, by CSU and UC, of high-demand upper division coursework on CCC campuses.
 - revise, if warranted, the space utilization standards to address Friday, evening/weekend, and year-round usage.

Incentives such as lower fees or priority registration could be used to encourage student interest in afternoon, evening and weekend classes. Incentives may be needed as well to spur institutions to accomplish the kinds of programmatic changes in faculty work patterns that can increase year round and evening/weekend use within the very real physical and practical constraints that exist.

4. This task force should also determine whether consistent standards are being used by the segments to determine priorities for rehabilitation and modernization of existing facilities and whether efficiencies in the use of funds for this purpose can be achieved.
5. A pilot project should be developed to model a coordinated regional capital planning effort by the segments.

Introduction

As the state faces demand from growing higher education enrollment in an era of fiscal stress and limited resources, an effective capital outlay planning process is needed. Enrollment in California's higher education system is expected to grow over the next two decades as the end of the baby-boom echo attains college age and as efforts are made to increase college participation rates of the rapidly growing Latino population. As a result, pressures will be placed on all three of the state's higher education segments. One of the critical components of responding to this enrollment growth is ensuring the physical capacity to house these new students.

There has been debate over the extent of the need for additional facilities to accommodate projected enrollment growth. In its most recent review of capital needs, conducted in 1999, the California Postsecondary Education Commission (CPEC) concluded that each segment had some excess physical capacity but that the surplus would disappear in only a year or two and substantial investment in new facilities would be needed. By contrast, the Legislative Analyst has argued since the late 1990s that instructional facilities in all three segments are underutilized, and that year-round operation of all campuses and increased operations on Fridays, weekends, and evenings, could accommodate substantial enrollment growth, reducing the need for new facilities. Distance learning and joint use of facilities are also frequently advanced as ways to accommodate more students without building new facilities. While all three segments have substantially increased their use of summer session in the last several years, summer enrollment remains far lower than enrollment in other terms. Similarly, distance learning offerings have expanded at most campuses seemingly without having much impact on the need for facilities.

Whatever the true need for new facilities to accommodate growth, the segments have substantial needs for capital outlay associated with facility replacement, upgrades to existing classrooms and laboratories as they become functionally obsolete, and facility upgrades to accommodate modern safety, health and accessibility standards.

In order to help the State of California improve the planning process for higher education capital outlay, this report projects future demand for higher education capital facilities, assesses various alternatives intended to maximize efficient use of physical capacity, and evaluates the state's higher education capital outlay decision-making process with the goal of identifying possible improvements to this process.

Organization of the Report

The first section of the report discusses projections of enrollment through 2020 for each public higher education segment in the context of enrollment projections produced by the segments, the Department of Finance, the Legislative Analyst's Office and others. Using these enrollment projections, the second section lays out a projection of higher education capital need in light of the segments' existing capital capacity. The third section assesses some of the major approaches that have been advanced to maximize the efficient use of the state's capital facilities, such as joint use of facilities and year-round enrollment. The last section discusses the existing higher education capital planning process and potential improvements.

Demand for Higher Education

Many factors affect the demand for higher education, including underlying demographic trends, individual factors such as academic preparation levels and educational aspirations, economic conditions affecting the value of pursuing a college education compared to workforce participation, and policies relating to state appropriation levels, tuition and fee charges, admissions, and financial aid availability. Enrollment in public colleges and universities in California surged in the late 1990s and early in the current decade, with total enrollment across the system increasing by about 30 percent between 1995 and 2002, for an annual growth rate of nearly 4 percent. Between 2002 and 2005, however, total enrollment declined by 6 percent in spite of steady growth in the college-age population and the number of high school graduates over that period.¹ The largest reduction occurred in the community colleges, which saw a 9 percent decline in enrollment in the past three years. A combination of state budget cuts for higher education and substantial fee increases are believed to have accounted for the decline in enrollment.

Demographic changes occurring in the college-age population may also influence future demand for higher education in California. There are substantial disparities across racial/ethnic populations in rates of college participation, as shown in Table 1, with participation rates being highest among Asians and lowest among Latinos. If these rates by subgroup remain constant, the state will see a *decline* in the overall college participation rate as the share of the young adult population that is Latino increases dramatically, while the share that is white declines.²

Table 1
Undergraduate Participation Rates for the College-Age Population
(Fall 2002)

	White	Asian	Black	Hispanic/Latino
Men				
UC	3.6%	10.9%	1.2%	0.9%
CSU	5.8%	9.9%	3.5%	2.2%
CCC	20.8%	29.0%	18.7%	13.5%
Women				
UC	4.2%	13.2%	2.1%	1.4%
CSU	8.1%	11.6%	6.2%	4.2%
CCC	25.8%	27.0%	23.6%	18.7%

Source: Shulock, N., Moore, C. & Gill, M. (2005). *Shared Solutions: A Framework for Discussing California Higher Education Finance*. Sacramento, CA: Institute for Higher Education Leadership & Policy.

¹ According to estimates of the California Department of Finance, the population ages 18 to 24 increased by about 7% between 2002 and 2005 (as reported in DOF data file *Race/Ethnic Population with Age and Sex Detail, 2000-2050*). Department of Education figures indicate that the annual number of high school graduates increased by 9% over the same period (see CDE Dataquest at <http://data1.cde.ca.gov/dataquest/>).

² DOF population estimates indicate that the white population ages 18-24 is expected to decline by 18% between 2005 and 2020, while the Latino population of the same age will increase by 23%. As a result, the Latino share of this age group will increase from 43% to 49%, while the white share will decline from 35% to 26%.

A number of recent reports have sounded a warning about the potential impact of declining educational attainment related to the state's changing demographics,³ with concerns ranging from declines in personal income and tax receipts to increases in a variety of social problems. On the other hand, demographers at the University of Southern California have projected substantial increases in Latino educational attainment over the longer term as the share of the Latino population that is made up of recent immigrants declines, and the share that is second generation increases. These demographic changes within the Latino population indicate "a readiness for educational upward mobility. This readiness lays the basis for even stronger gains if stimulated by proactive educational policies."⁴ Policies are being implemented in high schools across the state in the attempt to avoid the declining educational attainment scenario. These policies are aimed at reducing high school dropout rates, increasing the share of students taking college preparatory coursework, and increasing the availability of Advanced Placement (AP) and other challenging courses. It is far too soon to judge which of the scenarios will prevail in California. What is clear is that aggressive policy action is needed if higher education enrollments are to continue to grow beyond the end of the "baby boom echo" effect.

Enrollment Estimates to 2020

With a complex set of factors influencing college attendance patterns, projecting future enrollment in California's public colleges and universities is difficult. The California Department of Finance (DOF) produces bi-annual enrollment projections, based on the rate of freshman enrollment from among high school graduates, the number of transfers across institutions, and historical patterns of student retention and completion.⁵ The most recent projections suggest that public higher education enrollment will increase by 31 percent between 2005 and 2014, for an average annual growth rate of 3.1 percent, close to the annual increase seen during the surge of enrollment during the late 1990s. This would represent approximately twice the annual rate of growth expected by the DOF in the college-age population over the same period, and more than three times the annual rate of growth in the number of high school graduates.⁶ The DOF methods for projecting postsecondary enrollment do not incorporate differences in enrollment and retention rates by racial/ethnic group.⁷ Given the historically lower

³ See Fountain, R. & Cosgrove, M. (2006). *Keeping California's edge: The growing demand for highly education workers*. Sacramento, CA: CSU Sacramento Applied Research Center.; Baldassare, M. & Hanak, E. (2005). *California 2025: It's your choice*. San Francisco: Public Policy Institute of California.; Shulock, N., Moore, C. & Gill, M. (2005). *Shared solutions: A framework for discussing California higher education finance*. Sacramento, CA: Institute for Higher Education Leadership & Policy; National Center for Higher Education Management Systems (2005). *As America becomes more diverse: The impact of state higher education inequality: California state profile*. Boulder, CO: Author.

⁴ Myers, D., Pitkin, J. & Park, J. (2005). *California demographic futures: Projections to 2030, by immigrant generations, nativity, and time of arrival in U.S* (2005 Summary Report). Los Angeles: University of Southern California School of Policy, Planning, and Development, p. 7.

⁵ See *California Public Postsecondary Enrollment Projections, 2005 Series* at <http://www.dof.ca.gov/HTML/DEMOGRAP/ReportsPapers/Projections/Enrollment/Postsecondary/PostSecondaryProjections2005.asp>. It should be noted that other state agencies have also produced higher education enrollment figures, including the California Postsecondary Education Commission and the Legislative Analyst's Office, but the most recent available estimates from those agencies were produced in 2004, and do not fully account for recent enrollment declines. In addition, they only extend to 2010 (LAO) or 2013 (CPEC).

⁶ See *Race/Ethnic Population with Age and Sex Detail, 2000-2050* and *California Public K-12 Enrollment and High School Graduate Projections by County, 2005 Series* at <http://www.dof.ca.gov/HTML/DEMOGRAP/Druhpar.asp>

⁷ Personal communication with Linda Von Rotz, DOF Demographic Research Unit, March 2006.

participation and retention rates among Latinos (e.g., see Table 1), the DOF projections may represent an upper range of enrollment estimates as the Latino share of the college-age population increases.

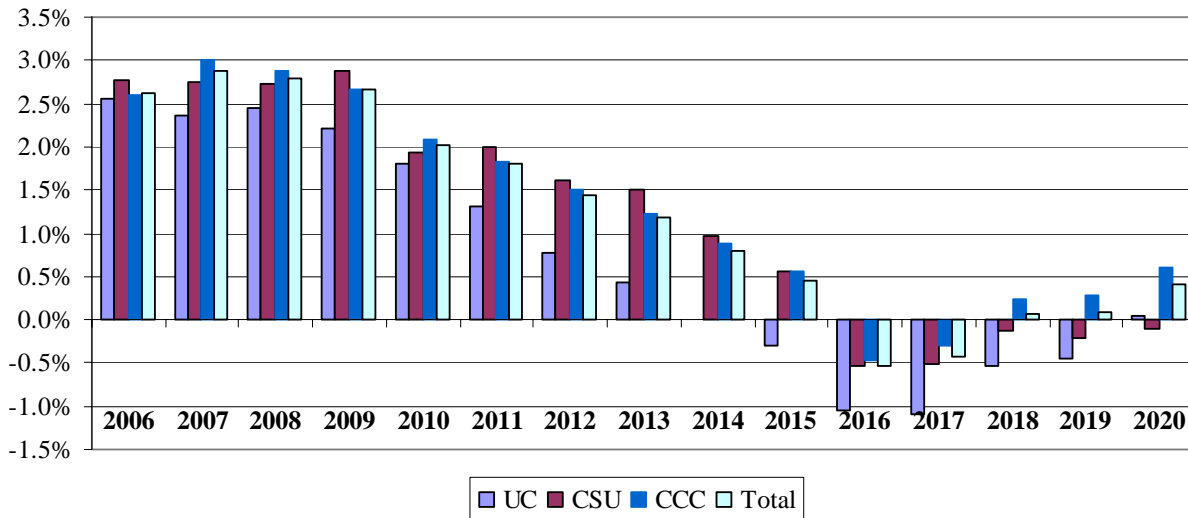
Because official state projections may be somewhat high, and because they only extend to 2014, we present below an alternate set of estimates based on those produced by the Institute for Higher Education Leadership & Policy in 2005.⁸ These estimates show FTES enrollment increasing by approximately 20 percent between 2005 and 2020, or an average of 1.2 percent per year. As shown in Table 2, the growth rate would vary by segment, and would be higher in the early years of the period when the college-age population experiences higher growth.

Table 2
Estimate of Average Annual Growth in FTES Enrollment, 2005-2020

	Total	UC	CSU	CCC
Time Period:				
2005 - 2010	2.6%	2.3%	2.6%	2.6%
2010 - 2015	1.1%	0.4%	1.3%	1.2%
2015 - 2020	-0.1%	-0.6%	-0.3%	0.1%
2005 - 2020	1.2%	0.7%	1.2%	1.3%

Figure 1 shows the annual percent changes in FTES enrollment in each segment over the fifteen years that are summarized in Table 2. FTES enrollment in the community colleges declines in

Figure 1: Annual Change in FTES Enrollment through 2020

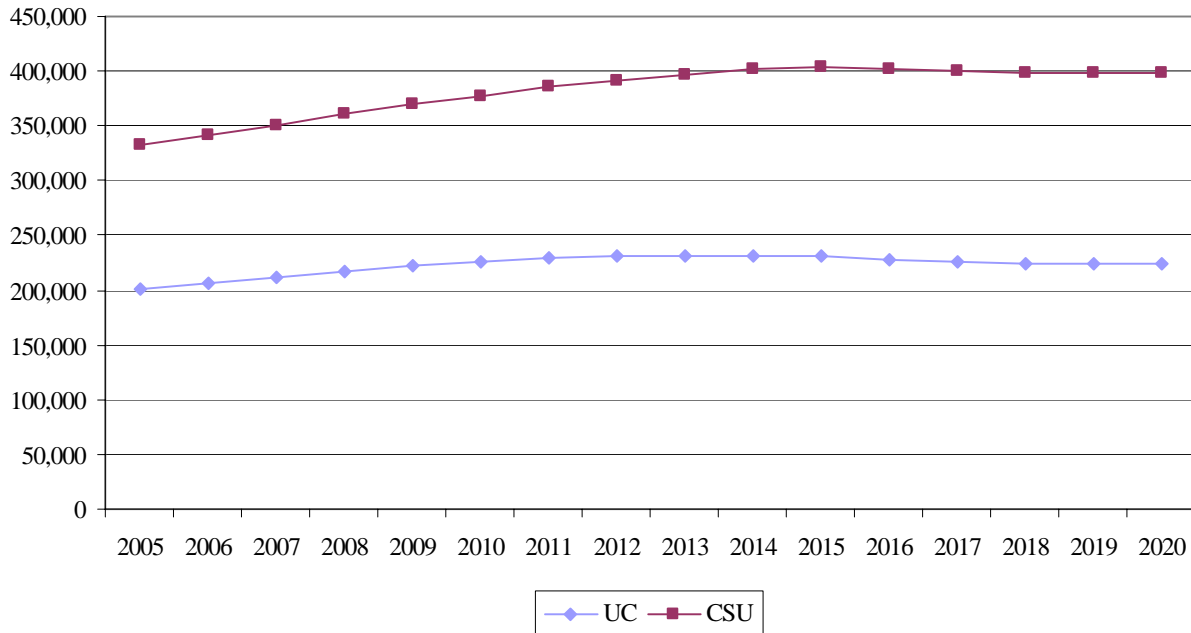


⁸ For a complete description of the methodology, see Shulock, N., Moore, C. & Gill, M. (2005). *Shared solutions: A framework for discussing California higher education finance*. Sacramento, CA: Institute for Higher Education Leadership & Policy. For the current report, actual 2005 enrollment figures for UC, CSU and CCC were used as the base, and growth rates generated through the methodology in *Shared Solutions* were applied to this base. The estimates build in population changes as well as some assumptions about increasing participation rates for underrepresented minority groups. The estimates assume that undergraduate participation rates will gradually increase over the period by 20% for the black population age 18-24 and by 30% for the Latino population of the same age (e.g., referencing Table 1, the Latino male participation rate at CSU would rise from 2.2% to 2.9%).

2016 and 2017 (as does total enrollment), with enrollment declining from 2014 through 2019 for UC, and from 2016 through 2020 for CSU. The distribution of total enrollment across segments would change slightly, with an increasing share in community colleges (from 72 percent in 2005 to 73 percent in 2020) and a decreasing share in UC (from 9.5 percent in 2005 to 8.7 percent in 2020).

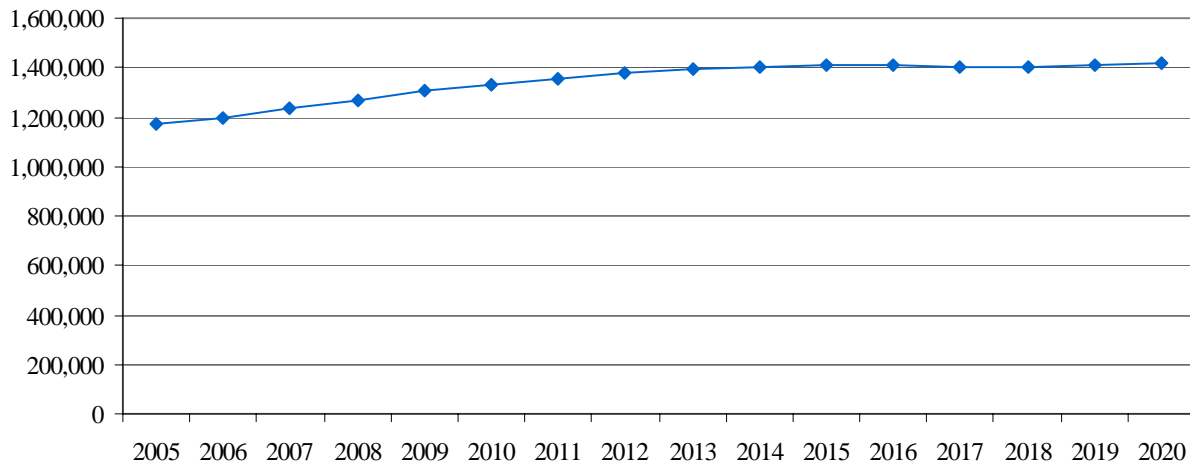
Figure 2 shows our estimate of total FTES enrollment by year in UC and CSU. UC enrollment increases from under 202,000 in 2005 to 224,000 in 2020. CSU enrollment increases from about 332,000 in 2005 to 398,000 in 2020. Figure 3 (next page) shows the same for the community colleges, with enrollment growing from 1.17 million in 2005 to 1.42 million in 2020. These enrollment projections incorporate assumptions about increasing participation rates for sub-populations of college-aged students (i.e., ages 18-24), but no assumptions are made about higher rates of undergraduate enrollment for older adults.⁹

Figure 2: Estimated FTES Enrollment in UC and CSU, 2005 - 2020



⁹ Assumptions are made about increasing graduate enrollment of older black and Latino students – see the *Shared Solutions* report for detailed descriptions of the assumptions and methodology.

**Figure 3: Estimated FTES Enrollment in the Community Colleges,
2005 - 2020**



Serving Nontraditional Populations in the Community Colleges

There is considerably more uncertainty in enrollment projections for the community colleges than for the UC and CSU because the community college mission is much more expansive. The community colleges could see enrollments rise above those depicted in Figure 3 if a targeted effort were made to address low educational attainment among working-age adults.

There are two very different prospective community college populations among working-age adults – those lacking even a high school education and those seeking retraining for workplace survival or advancement. Twenty percent of the state’s population age 25 and older lacks a high school diploma, a higher percentage than in 41 other states.¹⁰ This population segment has been called the “silent tidal wave” because it is larger than the incoming group of traditional-aged students that has been getting most of the attention in discussions of college access.¹¹ If California were to undertake aggressive policies to improve the educational attainment of this group, there would be a significant impact on capital as well as operating budgets, as these students would likely need an intensive campus-based education complete with remedial courses and concentrated student support services. So far, there has been no indication that this is a priority for the state, but any effort to improve capital outlay planning should consider the needs of this group.

By contrast, it is likely that the enrollment of adult students for workforce retraining is adequately accounted for in the above projections. The projections are based on college participation rates in Fall 2002 (computed as the percent of each age/gender/race segment of the

¹⁰ US Census Bureau, American Community Survey, Table R1401, *Percent of People 25 Years and Over Who Have Completed High School (Including Equivalency): 2004*

¹¹ Hayward, et. al. *Ensuring Access with Quality to California’s Community Colleges*. National Center for Public Policy and Higher Education, 2004.

California population enrolled in college), which were among the highest in recent years. The community colleges already serve this group to a significant extent and it is unlikely that participation rates would grow well beyond what is already reflected in the projections. Moreover, this population largely needs college *courses* – not an entire college career, so any unanticipated growth in this sector would have only a moderate impact on enrollment projections. Finally, some portion of the retraining needs of this sector could likely be met via distance education because mediated instruction has proven both effective and attractive to these kinds of students, as we note below in the section on distance education.

Higher Education Facilities Need

Background

Each of the three public higher education segments in California develops detailed forecasts of the need for additional facilities or renovation of existing facilities for the upcoming five-year period. These forecasts serve two major purposes: they provide the context and framework for the segments' annual capital budget requests and they respond to the requirement imposed by Chapter 606 (Statutes of 1999, Assembly Bill 1473). This measure requires the Governor annually to submit a proposed five-year infrastructure plan to the Legislature, including "instructional and instructional support facilities needs for the University of California, the California State University, and the California Community Colleges."

While the processes by which the segments develop their five-year plans vary somewhat, they all include the same essential elements:

- A forecast of future enrollment growth, adjusted to account for how much enrollment will be addressed through alternative delivery methods such as summer enrollment
- Conversion of adjusted enrollment growth into facilities needs based on utilization standards, which are indicators of the amount of space needed for different types of activities, or uses, such as classrooms, laboratories, faculty offices, etc.
- A determination of net facilities need based on a comparison to existing available space
- Conversion of net need into financial need based on a cost allowance per square foot, according to the different facility types
- An estimate of additional capital costs needed for rehabilitation of existing facilities, critical fire and life safety improvements, seismic upgrade, etc. The estimate of need for modernization of existing facilities is based in each case on models that each segment has developed to track and age their inventory of existing facilities by campus, in some instances to the level of tracking the life cycle of different building "systems" (roofs, heating and cooling systems, etc.)

In each case, this process is guided by the state's Master Plan for Higher Education in the sense that the forecasts of enrollment demand and the type of facilities planned reflect the mission of each segment. Thus, for example, the University of California plans for more research space to meet student and faculty needs owing to its role as the state's primary research institution.

Each year, each of the segments engages in a detailed process of developing specific capital projects for possible inclusion in the budget. The campus-by-campus capital planning and budgeting effort that the segments undertake each year informs the development of their systemwide five-year plans. Over the last ten years, the Community College Chancellor's Office and community college districts have made significant improvements in their capital planning process, bringing it to a level of sophistication comparable to UC and CSU.

Facilities Need through 2010-11

For purposes of the state's 2006 Five-Year Infrastructure Plan, UC reported a total five-year capital funding need through 2010-11 of almost \$3.7 billion, including \$477 million for critical infrastructure deficiencies (primarily seismic safety upgrades), \$2.2 billion for enrollment-driven facilities (including instructional, research, administrative, and support facilities), and \$974 million for modernization of existing facilities. Funding for enrollment-driven facilities includes funding for development of the Merced campus.

CSU reported a total five-year funding need through 2010-11 of nearly \$6 billion, including \$418 million for critical infrastructure deficiencies, \$2.2 billion for enrollment-driven facilities, and almost \$3.4 billion for modernization of existing facilities.

The Community Colleges reported a five-year total funding need through 2010-11 of \$15.4 billion, but the request submitted to Finance in connection with the Infrastructure Plan was just over \$6.6 billion. This included \$210 million for critical infrastructure deficiencies, \$3 billion for enrollment-driven facilities, and nearly \$4 billion for modernization of existing facilities. The Community Colleges presented this lower level of request in recognition of the limited resources at the state level for facilities.

In its Five-Year Infrastructure Plan, the Administration proposed a level of funding to address facilities needs at all three segments at levels significantly lower in the aggregate than the need identified by the segments. (In some instances, the amount proposed in the plan is actually higher than the requested amount due to updated information or reclassification of projects.) Table 3 (next page) displays the projection of facilities need submitted by each segment (or requested funding in the case of the Community Colleges) and the amount proposed by the Administration in the Infrastructure Plan.

In part, the lower funding level proposed in the Infrastructure Plan reflects the influence of the Higher Education Compact with UC and CSU. This agreement, which was signed by the Governor in May 2004, commits the Administration to specified funding levels in exchange for certain actions on the part of UC and CSU. In the case of facilities funding, the Administration agreed to provide UC and CSU each \$345 million per year from bond funds (roughly \$1,725 million over five years). UC received an additional \$50 million per year for medical education facility purposes. The Community Colleges will receive roughly half of the state bond funds that will be available if the voters approve Proposition 1D on the November 2006 ballot.

The lower funding level proposed in the Infrastructure Plan also reflects the fact that all three segments rely on other funding sources in order to address their facilities needs. UC, and to a lesser extent CSU, have non-state funds that can be used. The Community Colleges use local voter-approved general obligation bond funds to help finance projects. Ultimately, however, the difference between what was requested and the funding level proposed in the plan reflects the reality of finite state resources to pay for facilities.

Table 3
Comparison of the Segments' Five-Year Facilities Funding Requests
and Proposed Funding Level in the Governor's 2006 Five-Year Infrastructure Plan
(in millions of dollars)

	Funding Requested by Segment	Funding Proposed in the Governor's Five-Year Plan
UC		
Critical Infrastructure Deficiencies	477	461
Enrollment-Driven Facilities	2,208	1,099
Facility/Infrastructure Modernization	<u>975</u>	<u>390</u>
Subtotal	3,660	1,950
CSU		
Critical Infrastructure Deficiencies	419	668
Enrollment-Driven Facilities	2,210	477
Facility/Infrastructure Modernization	<u>3,351</u>	<u>579</u>
Subtotal	5,980	1,724
CCC		
Critical Infrastructure Deficiencies	211	336
Enrollment-Driven Facilities	3,034	980
Facility/Infrastructure Modernization	<u>3,391</u>	<u>505</u>
Subtotal	6,636	1,821

Building Standards Issues

Over the years the Legislative Analyst has raised concerns with all three of the higher education segments concerning several facilities planning and budgeting issues. In its January 2002 report, *Building Standards in Higher Education*, the LAO concluded that three types of building standards – construction cost guidelines, space standards and utilization standards – were not being used uniformly by the segments, resulting in higher construction costs than necessary and possible overstatement of facilities needs.

In regards to construction cost guidelines, the LAO concluded that CSU and Community Colleges were using reasonable guidelines in relation to construction costs per square foot for similar types of buildings. However, they argued that most of UC's research facilities were more expensive than similar facilities built throughout the country and recommended that the Legislature fund these facilities at 75th percentile of the cost of comparable buildings, as determined using a database they had developed.

The second issue the LAO addressed in its 2002 report related to space standards used by the segments to determine the amount of space needed per student by different building type. In 1990, CPEC proposed updated space standards for use by the segments. At that time the LAO raised concerns that the revised standards would result in significant additional facilities costs. CPEC's proposed standards were not adopted for use by the Legislature, and generally are not

used by the segments, except that UC uses CPEC's proposed standards (adjusted for changes made to certain utilization standards made by the Legislature in the 1970s) to determine its space needs. In its 2002 report, the LAO again recommended that the CPEC standards for research laboratory space not be used by the Legislature in determining UC's need for research space because the standards had not been independently verified and the CPEC-proposed standards provided additional space for post-doctoral fellows, which the LAO did not think had been justified.

The third issue the LAO addressed – utilization standards – relates to the amount of time rooms and “stations,” such as desks are used. The standard addresses the amount of time a room is available and average percentage occupancy during that time. The LAO noted that CSU and the Community Colleges did not report actual utilization of their facilities and that, with respect to UC, actual utilization fell below the standard. In 2002 all three segments were directed in supplemental budget language to report biennially on the utilization of classrooms and teaching laboratories, including the total number of rooms, number of stations, weekly student contact hours, and weekly station hours for each campus.

In a September 2004 report, CPEC recommended that the Legislature adopt the space standards it recommended in 1990, arguing that the current standards “are no longer appropriate or realistic for determining the need for academic space in public colleges and universities.” CPEC argued that the 1990 standards were still among the most rigorous in the nation, and that flexible guidelines, where institutions would be permitted to propose configurations that best meet programmatic needs, represented the most effective approach for meeting the needs of academic programs.

To date, the Legislature has chosen not to adopt the more recent CPEC standards generally, but it has not embraced the LAO's recommendation that UC not use those standards for purposes of determining its research space need. This may be due in part to the fact that the practical effect of using the CPEC standards more generally would likely widen the gap between the segments' calculated need and the resources available to meet this need.

Projection of Facilities Need Through 2020

Using an approach generally similar to that used by the segments, we have developed a model designed to project higher education facilities need through 2020. Given the constraints of time and resources, however, our approach uses systemwide aggregated, rather than campus-by-campus, data and averages rather than data by facility type. Nevertheless, we follow the same basic approach:

- A forecast of future enrollment growth discussed in the first section of this report, adjusted to account for how much enrollment could be addressed through alternative delivery methods such as summer enrollment
- Conversion of adjusted enrollment growth into facilities needs based on utilization standards currently in use

- A determination of net facilities need based on a comparison to existing available space
- Conversion of net need into financial need based on a cost allowance per square foot
- An estimate of additional facilities needs for rehabilitation of existing facilities, critical fire and life safety improvements, seismic upgrade based on trends identified by the segments

Several conclusions can be drawn from our projections:

First, while higher or lower enrollment growth rates affect the magnitude of the total higher education facilities need, the state faces significant costs even if enrollment growth is very low. This is because enrollment-driven costs represent only a portion of projected total higher education facilities needs over the next 14 years. All three segments face significant costs to repair and modernize their existing inventories of facilities as they continue to age, though the methods used by the segments to estimate modernization costs deserves additional scrutiny.

Second, because the state provides funding for only a portion of the projected need the segments identify and because non-enrollment-driven costs represent a significant portion of the need, it is likely that the segments will be playing “catch up” for a significant period, even though we project that undergraduate enrollment at UC and CSU will actually decline from 2015 to 2020. As discussed earlier in this report, the segments address this funding gap by using a combination of other funding sources and “making do.” This complicates somewhat the effort to define the state spending “need” for higher education facilities through 2020.

Third, the rate of change of construction costs is a major variable in projecting the cost pressure the state will face for higher education facilities through 2020. Over the last four years construction costs have increased by 19.7 percent, or at an average annual rate of 4.6 percent, based on the California Construction Cost Index compiled by the Department of General Services. This index is used by the state to estimate increases in construction costs for state-funded capital outlay projects. From January 2005 to January 2006 construction costs increased by nearly 6.5 percent.

Fourth, our projections rely significantly on the assumption that the segments are able to achieve their targets with respect to year-round enrollment. The failure to use summer session to serve significant numbers of students, as contemplated in their long-term plans, would result in well over \$1 billion in new facilities costs.

Lastly, the projections that follow should be regarded as rough approximations of the facilities needs that the segments will face through 2020. Because of limitations of time and resources, we have calculated the segments’ needs based on systemwide averages rather than on the basis of discipline-by-discipline and campus-by-campus estimates. This approach may have caused our projections of enrollment-based need to be understated because space available on another campus or in another discipline’s facility would be treated as available to meet enrollment demand in our model. Notwithstanding the ability of UC and CSU generally to direct students to

campuses that are not as “impacted,” there are practical limitations on their ability to take advantage of available space to meet enrollment-driven facility needs.

Community College Facilities Need

Table 4 shows that, based on our projection, the Community Colleges face a more than \$23 billion facilities need through 2020, in 2006 dollars. If construction costs grow at an average annual rate of 5 percent, the total cost would rise to nearly \$31.6 billion, assuming that these costs are evenly spread over the next 13 years.

Table 4
Projected Community College Facilities Need through 2020
(2006 dollars in millions)

Enrollment-Driven Need	\$ 8,510
Critical Life Safety Renovations	\$ 809
Modernization	\$12,842
Temporary Building Replacement	<u>\$ 1,269</u>
Total	\$23,430

Our projected need for the Community Colleges is significantly lower than an estimate of need through 2020 extrapolated from the \$15.4 billion five-year need identified by the Chancellor’s Office. The Chancellor’s office uses a higher enrollment growth projection (2.6 percent) than the one used in our model. If we double the average annual growth rate in enrollment in our model to 2.6 percent, enrollment-driven need would increase to about \$17.2 billion in 2006 dollars compared to the \$8.5 billion figure in the Table 4. This would increase the estimate of total need to \$32.2 billion. Thus, while doubling the rate of enrollment growth would significantly increase the estimated facilities needs of the Community Colleges, it does not double the projected total cost. In making our estimate we used a cost-per-square-foot amount that reflects the average cost that local districts are actually facing to complete projects (\$863) rather than the state construction cost guideline. Districts use local bond funding to make up the difference.

It is less likely that our projection understates the Community Colleges need than for UC and CSU as a result of the use of systemwide averages as discussed above. This is because we exclude, as does the Chancellor’s Office, total systemwide excess capacity from the calculation of space available to meet enrollment-driven need at the system level. (In determining the need for projects at the campus level, excess space at each campus is taken into account.) This recognizes that community colleges have little formal ability to redirect students to campuses with “excess” capacity.

In terms of the other categories of facilities need for the Community Colleges, funding for Critical Life Safety Renovations simply reflects the average annual level of spending proposed in

the Administration’s 2006 Infrastructure Plan carried forward. The Modernization projection is based on data regarding the way in which the system’s inventory of existing facilities will age over time provided by the Chancellor’s Office. Lastly, Temporary Building Replacement reflects the cost to replace these buildings with permanent facilities, a cost which occurs primarily during the first five years of the forecast period.

California State University Facilities Need

For CSU, we project a more than \$12 billion facilities need through 2020, in 2006 dollars, as shown in Table 5. If construction costs grow at an average annual rate of 5 percent, the total cost would rise to \$16.5 billion, assuming that these costs are evenly spread over the next 13 years.

Table 5
Projected California State University Facilities Need through 2020
(2006 dollars in millions)

Enrollment-Driven Need	See discussion below
Critical Life Safety Renovations	\$ 1,068
Modernization	<u>\$11,047</u>
Total	\$12,115

Our model does not project a need for facilities to address additional enrollment during the forecast period. However, it is likely that the CSU will face a cost for this purpose of at least several hundred million dollars. Our model likely understates this cost for two reasons. First, as discussed above, we use systemwide rather than discipline and campus-based data, which assumes that excess capacity at one campus is available to accommodate unmet need at another. Second, even though we project a decline in total FTES at CSU from 2015 through 2020, we project a small amount of growth in graduate student FTES during the same period. Graduate student enrollment tends to generate somewhat higher space needs than undergraduates, particularly for research facilities. Because our model does not distinguish facility types, it is likely that we have understated this need. However, because growth in the graduate student population during this period is small, the facilities need generated is likely relatively modest as well.

If we increase the average annual growth rate in enrollment at CSU in our model from 1.2 to 2 percent, the gross enrollment-driven need would increase by about \$900 million. Because a portion of this need would be met by excess capacity the estimate of total need would increase to between \$12.5 and \$13 billion (2006 dollars).

The projection of the cost of Critical Life Safety Renovations uses the spending level proposed in the Administration’s 2006 Infrastructure Plan for the first five years and then a lower level of spending for the remainder of the forecast period, based on the assumption that the system’s

seismic upgrade needs will by then have largely been addressed. The Modernization need is based on the average of the system’s estimate of need for the first five years of the forecast period, increased modestly after that to reflect continued aging of CSU’s existing inventory of facilities.

University of California Facilities Need

For the University of California, Table 6 shows a projected total facilities need of \$6.4 billion through 2020, in 2006 dollars. Again, if construction costs increase at 5 percent per year over this period, this cost would rise to nearly \$8.8 billion.

Table 6
Projected University of California Facilities Need through 2020
(2006 dollars in millions)

Enrollment-Driven Need	\$ 573
Other Instructional & Non-instructional Space	\$ 1,157
Seismic Upgrade	\$ 1,975
Facility Infrastructure Modernization	<u>\$ 2,730</u>
Total	\$ 6,435

This projection likely understates UC’s need by a modest amount for the same reasons as with the CSU projection, that is, the limitations of our model and growth in graduate student FTES. In UC’s case, however, we project even more modest growth in the graduate student population. (It is important to note, however, that graduate enrollment can be managed, and therefore increased, more proactively than can undergraduate enrollment, since it is not subject to a restriction like the top one-eighth of high school graduates admissible as undergraduates). If we increase the average annual growth rate in enrollment at UC in our model from 0.7 to 1.5 percent, enrollment-driven need would increase by about \$1.2 billion. This would increase the estimate of total need to nearly \$7.7 billion (2006 dollars) compared to \$6.4 billion in Table 6.

The projection for Other Instructional and Non-instructional Space, which is included in the Enrollment-Driven Facilities category for purposes of UC’s five-year plan, reflects estimates of future need based on discussions with the UC Office of the President for various categories of facilities such as libraries, administrative offices, and utility systems. Our projection includes only \$200 million for future health sciences facilities that UC anticipates in addition to the \$200 million included as part of the 2006 higher education bond. UC is currently engaged in an internal discussion of anticipated enrollment in the health-related fields for consideration by the Administration and the Legislature next year. On the basis of this effort, it is likely that UC will face several hundred million dollars, or potentially significantly more, of health facilities costs over the forecast period.

The forecast for Seismic Upgrade reflects substantial additional costs for seismic rehabilitation, primarily at the Berkeley and UCLA campuses. Finally, the projection for Facility Infrastructure Modernization is based on UC's estimate of ongoing need for rehabilitation of the system's existing inventory of facilities at a cost of \$210 million per year.

Because of limitations of time and resources, we did not compare the methods used by the segments to estimate the cost of modernizing and rehabilitating their existing facilities. However, it is worth noting that the estimate of these costs for CSU and the Community Colleges are significantly higher even though the square footage of facilities for UC and the Community Colleges appears to be roughly similar and CSU's total square footage is about 70 percent of UC's total. Because these costs will become a more important driver of demand for state resources, this is an area that deserves further evaluation.

State's Capacity to Fund the Projected Facilities Need

Even with the recognition that our projection of higher education facilities need through 2020 is approximate, the aggregate price tag is substantial at \$42 billion. Moreover, the total is likely to be significantly higher as a result of increases in the cost of construction over the period. For example if construction costs increase by an average annual rate of 3 percent over the forecast period, the total cost would rise to \$50.3 billion. Similarly, as noted in the previous section, enrollment could be higher than the projections used in our model, resulting in higher costs, particularly for the Community Colleges if aggressive steps are taken to address the under-educated adult population.

If we assume that the state's voters will approve higher education general obligation bond measures of \$3 billion (constant dollars) for each of the next seven election cycles through 2018, that would generate \$21 billion. In terms of the potential contribution from local voters, the Community College Chancellor's Office reports that \$14.3 billion of local community college bonds have been approved since the voter-approval requirement was lowered to 55 percent in 2000. Of this amount, they estimate that roughly \$4.3 billion will be used over the next ten years to pay for "non-state supportable" projects, such as parking lots and cafeterias, and that roughly \$10 billion is available to fund "state supportable" facilities. This amount will be lower by the amount of these bond funds that are already committed to projects and higher by the amount of additional local bonds approved by the voters going forward (though it is likely that the pace of approvals will slow somewhat in light of the fact that many districts went to the ballot with substantial requests in the wake of the voter-approval requirement change). On this basis, roughly \$30 billion plus the amount of new local bond funds approved through 2020 would be available to meet this need.

However, there is no guarantee that either state or local voters will be willing to continue to approve higher education bond measures at these rates in the future. Moreover, given the state's other infrastructure needs, there will be significant competition for state general obligation bond funds. And even if bond funds are available at these levels, the total resources available from these sources comes up short. Thus, there will be continued pressure to "make do" with a lesser level of funding. In addition, the state will need to continue to explore alternatives to building to meet the demand for higher education services.

Potential Alternatives to Building More Facilities

Access to higher education remains one of the primary goals of California education policy. With enrollments increasing, albeit at a slowing rate, and the time lag and great expense involved to plan, construct, and finance new facilities, it is necessary to explore alternatives to “building our way out of the problem”. The discussion of alternatives to new construction is in no way meant to diminish the importance of having sufficient, high quality facilities for California’s colleges and universities. Even absent growth pressures there is an ongoing need to restore and upgrade facilities and respond to emerging programmatic needs. But it is imperative that we make the most of our existing facilities and technologies in order to provide educational opportunity to as many Californians as possible within available resources. To that end, this section discusses the extent to which California may be able to find additional capacity in selected alternatives to capital construction. A full analysis of the comparative costs and benefits of various alternatives is beyond the scope of this project.

1. Joint-Use Facilities Agreements between Campuses and Systems

Current Status

On the surface, combined or shared use of a facility between segments seems to be an excellent strategy to employ. In fact the Community Colleges identify over 30 separate joint use arrangements in place in the state, of which about one-third involve a cooperative arrangement with either a CSU or UC campus. The shared use of facilities with CSU often involves use of a Community College campus as an off-campus center for the CSU. The balance of the Community College joint use projects generally involve arrangements with K-12 school districts or other, specialized academic programs.

However, joint use of facilities has not been pursued by the segments as a means of addressing a significant share of their facilities needs. Just as our operating policies on higher education are too segmented and may impede the efficient movement of students across segmental boundaries, so are our capital planning and budgeting processes carried out on a segment-by-segment basis with relatively little effort to share facilities. There are some serious practical barriers, or disincentives, that make joint use difficult. For example, the use of bond financing complicates joint use of facilities because of issues related to ownership and control of the facility, which are critical to bondholders. Seismic safety requirements in the so-called Field Act restrict the attendance of community college students at UC or CSU facilities that are not Field Act compliant. In addition, space utilization formulas that determine a segment’s eligibility for new space are not designed to accommodate joint use. Segments may hesitate to lease space to another entity because it signals that they are not fully utilizing their available space and disadvantages them in capacity calculations. We were told in our interviews that lack of clear responsibility for funding operating costs and facilities maintenance is another potential barrier, although it seems like this could be negotiated between the users if the space truly met both of their needs. It appears that absent fiscal incentives for the segments to engage in joint-use agreements, their willingness (except the community colleges to a degree) to undertake the effort and the risk involved in this alternative is limited. It was clear from our interviews that the segments have not aggressively pursued joint use as a means of meeting their capacity or their programmatic needs.

Possibilities

This is an area ripe for consideration, but would require a directive for the segments to consider how joint use of facilities could increase capacity, foster more efficient use of space, and fill programmatic needs. It would require further investigation into the precise legal or procedural barriers to joint use and accompanying recommendations for removing those barriers. With UC having relatively few campuses and so much specialized research space, the possibilities are likely greater for joint use between the community colleges and CSU. Due to sheer geographic coverage, there are many more instances of a community college being located near a CSU campus. Possible shared uses would include libraries, laboratories, and public facilities, such as theaters, galleries, auditoriums, and gymnasiums.

It is also possible that community colleges could take on some of the roles and responsibilities of CSU off-campus centers to a greater extent than currently the case, as a means to minimize facility expansion on existing off-campus centers and to minimize the need to build additional ones. In 2005 these nine off-campus centers served 7,688 FTE students. It is possible that this clientele could be served at community colleges – either by the community colleges themselves, to the extent that course offerings are lower division, or by CSU campuses using community college facilities. This option should be explored before construction of a new off-campus center.

One very promising kind of joint use that would involve all three segments is the offering, by CSU and UC, of high-demand upper division coursework on CCC campuses. This would address statewide capacity issues, since UC and CSU have both faced recent pressures in accommodating eligible transfers, and, equally important, would improve access to the baccalaureate degree for place-bound students and others who, for various reasons, are reluctant to relocate to attend a university. Many students become “transfer-ready” but do not actually transfer. Increasing geographic access to upper division coursework could help increase the transfer rate.

2. *Expanded Use of Distance Learning*

Current Status

Innovations in technology have provided an opportunity to test new strategies in information delivery, challenging traditional models and structures within higher education. Online and distance education have opened the floodgates to a new “tidal wave” of students who may not have been able to access higher education previously. Though it has expanded significantly in the past decade, distance learning remains an area with room for growth, and has the potential to mitigate capacity pressures by placing the classroom in a technological, rather than spatial, setting. The cost of distance education, while previously prohibitive, is likely declining because much of the necessary infrastructure is already in place to support basic institutional operations.

Distance education has had some impact within the segments. The community colleges report that distance education generated 39,230 FTES in 2004-05, accounting for approximately 3 percent of the yearly enrollment. For the most recent year included in CSU public data (2002-

03), this segment reports less than 1 percent use of distance education (2,057 FTES out of a total 325,981). UC does not track or report distance education FTES on any systemwide basis and its use of distance education within its regular academic programs is minimal.

Research has shown that participation in distance education tends to come from less traditional students, such as those who are financially independent, older, married, or have dependents. Women have been found to participate at higher levels. Those who work full-time, are attending part-time, and have higher incomes have also been more likely to pursue distance education.¹² The prevalence of distance education in public two-year institutions tends to be higher than in four-year institutions on a national level.¹³ Additionally, undergraduates majoring in education have been shown to participate in distance education at a higher rate than those majoring in most other fields of study.¹⁴

In addition to research documenting differences in participation, studies have attempted to identify patterns of student success in distance education courses. Some studies have documented that older students and those who have previously completed sixty credit units of instruction performed better than other students in distance education courses.¹⁵ One of these studies also found that women completed these courses at higher rates.¹⁶

There are some barriers to the growth of distance education that have been experienced by higher education institutions. First, there can often be a tension between faculty-centered (traditional) versus learner-centered (distance) teaching. The reluctance that comes with this potential shift is reflected by faculty and students who believe strongly in the classroom setting as the best way to teach and learn. There are also issues of compensation to instructors for the time it takes to convert their courses to a distance education format. Although usually some compensation is offered, the choice to convert one's courses has been voluntary, so the courses offered in a distance education format do not reflect the variety of traditional classroom courses and might not meet students' educational needs.

Possibilities

Many higher education institutions have grown to realize that they must be innovative in order to remain competitive, and acceptance of distance education as a viable method for growth appears to have gained traction. Private industry has become involved in the business of education, with the emergence of several for-profit educational entities arising in the past decade. Higher

¹² U.S. Department of Education, Office of Postsecondary Education, Office of Policy, Planning and Innovation, *Third Report to Congress on the Distance Education Demonstration Program, February 2005*, Washington, DC, 2006; *Growth in Distance Education Programs and Implications for Federal Education Policy* Statement of Cornelia M. Ashby, Director, Education, Workforce, and Income Security Issues, September 26, 2002; Anna Sikora, *A Profile of Participation in Distance Education: 1999-2000*, Institute of Education Sciences, Department of Education-National Center for Education Statistics.

¹³ Sikora; United States Department of Education, *The Condition of Education*, 2006.

¹⁴ *Ibid.*

¹⁵ U. S. Department of Education, 2006; Jeff E. Hoyt, *Does the Delivery Method Matter?: Comparing Technologically Delivered Distance Education With On-Campus Instruction*, Utah Valley State College, Department of Institutional Research July 1999; Amy Wojciechowski and Louann Bierlein Palmer, *Individual Student Characteristics: Can Any Be Predictors Of Success In Online Classes?* Online Journal of Distance Learning Administration, Volume VIII, Number II, Summer 2005.

¹⁶ U.S. Department of Education, 2006.

education institutions have been forced to acknowledge this “invasion” into their realm, and now recognize that the prevalence of the distance education format in for-profit institutions is one factor that is attracting students who in the past would have attended a public institution. Private industry is typically better suited to respond to changing societal needs than a public counterpart, because it is comparatively unrestrained by regulations and restrictions. Nevertheless, public higher education institutions in California are aware that select student populations are highly attracted to distance education not only for its flexibility, but because the format of technology is quickly becoming the language of the business world, and students desire and need a competency in technology that distance education helps to provide.

In the early days of distance education, non-traditional, older students was the demographic that was drawn to distance education in larger numbers. Now, however, one of the best opportunities for a potential growth market may be the expansion of distance education into the ranks of more traditional students right out of high school. These students possess more technological savvy than their earlier counterparts, and are often just as or more comfortable interacting via computer. Distance education can be offered either as an “add-on” to a classroom course to minimize the use of a classroom, allowing the space to be shared with another course, or as a stand-alone course that requires no classroom facility. The flexibility that distance education allows is attractive even to students on a residential campus (who could elect to take the distance course from their residential room and still maintain a residential experience), and could be marketed as such. The prospect of hybrid courses that merge distance education with a classroom experience are probably more suitable for UC, and to some extent CSU, clientele, that includes younger, technology-oriented students who still prefer a residential experience. Distance education as a complete substitute for classroom instruction is probably a more suitable direction for the community colleges to pursue. One thing is certain: higher education should no longer assume that a student’s interest to be at a residential campus means that they have no interest in distance education.

It seems likely that the constraints on the expansion of distance education come primarily from supply limitations – stemming from faculty resistance or lack of appropriate compensation for the attendant workload – rather than from a shortage of student demand. Participation in distance education will likely increase as the options available to students increase. Colleges could help minimize these barriers by incorporating expectations about distance education into recruitment, hiring, and retention practices. More directly, faculty could receive incentives for participating in distance education.

There is probably room for the most growth in distance education within the community colleges, for this segment contains the highest proportion of the students already known to be more likely to participate. The community colleges can also look at the expansion of distance education as another way to provide the much needed skill set of technological competence to their students, many of whom are trying to improve workforce skills.

According to data from 2004-05, approximately 36 percent of all enrolled community college students were over the age of 30. Since older students tend to be the heaviest users of distance education, there appears to be a significant opportunity to market distance education as an option within the community colleges. If the community colleges could stimulate a 5 percentage point

increase in the number of students over the age of 30 who are served through distance education, this would account for an additional 30,000 students per term, or about 6,000 FTES if these students took half of their coursework via distance education. This would be more than a 25 percent increase in total systemwide distance education FTES, and does not take into account the opportunity presented by students below the age of 30 who may have an interest in distance education. Such an increase would equate to about one-fourth of projected annual enrollment growth within the community college system (expected to be approximately 23,000 for 2006-07), which could slow the need for increased physical capacity.

Efforts to advance distance education as a true alternative to building facilities would, of course, warrant careful study from a cost-benefit perspective that is beyond the scope of this report. There are significant operational costs involved in converting courses to distance education formats as well as ongoing equipment and delivery costs. Experience has shown that using distance education as an “add-on” to regular courses is not necessarily less costly, although it can be educationally beneficial. For purposes of this study, the principal cost issue is the extent to which distance education as an alternative to regular classes can produce sufficient capital savings to offset increases in the cost of operations.

3. *Expand summer enrollments/YRO*

Current Status

The LAO recently released an analysis of the results of efforts to increase enrollment capacity by increasing summer enrollments and creating more Year-Round Operations (YRO). The analysis focused on efforts within the UC and CSU systems, and found mixed results. Past efforts to increase summer enrollments have included:

- (1) Establishing consistent funding policy for enrollment growth
 - In 1999-00, the Legislature and Governor agreed to provide “marginal cost” funding for *all* additional FTE students enrolled in *all* programs at UC and CSU regardless of whether they enrolled in fall, winter, spring, or summer.
- (2) Establishing consistent fee policy and “buying down” summer fees
 - Chapter 383, Statutes of 2000 (AB 2409, Migden), prohibited UC and CSU from charging students more in summer than in other terms.
 - The 2000-01 Budget Act provided UC and CSU with General Fund support to make up for the reduced summer fee revenue.
- (3) providing supplemental funding to “fully convert” summer programs
 - In 2001-02 and 2002-03, the state provided supplemental funding to enhance summer operations at specific UC and CSU campuses. (This action is typically referred to as “fully converting” a campus to year-round operations.)
 - This supplemental funding was separate from funding for enrollment growth to serve additional students at all campuses in all terms.
 - The state made the funding contingent on UC and CSU meeting minimum levels of growth in summer enrollment growth.

The LAO found that these changes substantially increased summer enrollments for both fully and partially converted UC campuses between the years 2000 and 2005. Although summer enrollment is still only a fraction of full-time enrollment in the fall semesters, in most cases the increases were very significant, averaging a 103 percent increase for fully converted UC campuses and a 71 percent increase for partially converted UC Campuses.

However, the LAO found that while summer enrollments at the UC campuses increased, summer enrollments actually fell at CSU campuses. CSU argues that this is at least partly due to the funding reductions experienced during the state's most recent budget shortfall. Interestingly, however, the campuses receiving only partial "buy down" funding performed better than did those receiving full "buy down". Total FTES in the summer term for the CSU system is approximately 14 percent of the total FTES for the fall term (most recent data from 2003-04). Total FTES in the summer term for the community colleges is approximately 8 percent of the total FTES for the fall term (most recent data 2004-05). Total FTES for the UC system for the summer term is approximately 21 percent of fall term FTES.

Reporting summer term FTES as a percent of "regular" term FTES for the three segments is not without ambiguity. Summer is usually offered in several smaller, sometimes overlapping terms but the number of terms and their length varies both across and within segments. Each segment has its own way of "annualizing" FTES for individual terms, including summer term, and for reporting FTES by term and/or annually, accounting as well for winter term. Further complicating matters, CCC computes FTES in a totally different way than does UC and CSU – because of Title 5 regulations stemming from CCC's history as part of K-12. With respect to summer FTES, an informal agreement has evidently been reached with the Department of Finance to use a multiplier to account for the fact that summer is shorter than fall or spring. The multiplier, in effect, allows the segments to report what summer term would be if summer term were as long as fall. We believe that the means of reporting and accounting for summer FTES is ripe for review so that the state can make an unambiguous and careful assessment of the potential to expand summer utilization.

In Table 7 we report actual summer FTES as a percentage of regular term FTES without any multiplier. We believe that, rather than create a value for summer as if it were not summer, it makes more sense to report actual summer FTES and then assess this situation by appropriate standards for what can reasonably be expected in a summer term. Not only does the length of summer prevent colleges from serving the same number of FTES as they can in the fall, but the compressed course delivery also constrains FTES generation. In the Fall, for example, courses typically run for 1-2 hours each day, allowing many courses to be scheduled in the same room on the same day. Summer classes may meet for 4-5 hours each day over a few week period. This can make it difficult to schedule a room for as many hours a day, because, for example, it may be impractical for one course to run from 10-3 and another from 4-9.

Keeping in mind the practical limitations on matching fall FTES in the summer then, we report the most recent available data for each segment on summer FTES as a percentage of fall. Note that summer term serves a much higher percentage of fall headcount (number of students) than of fall FTES, because students are typically not able or willing to take as many units in the summer as they do in the fall term. Also notable is the fact that the levels of summer enrollment

for UC and CSU are below the projected levels of YRO activity in their long-term facilities planning processes.

Table 7
Summer Enrollment and FTES as Percent of Fall Enrollment

	Headcount			FTES		
	<u>Summer</u>	<u>Fall</u>	<u>Summer as % of Fall</u>	<u>Summer</u>	<u>Fall</u>	<u>Summer as % of Fall</u>
CCC	721,166	1,606,100	44.9%	103,974	482,768	21.5%
CSU	102,526	406,297	25.2%	19,024	321,607	5.9%
UC	65,307	192,448	33.9%	13,055	186,592	7.0%

Data notes: CCC data are for Summer 2004 and Fall 2004. CSU data are for Summer 2003 and Fall 2003; UC data are for Summer 2005 and Fall 2005 with Fall FTES computed based on annual average ratio of headcount-to-FTES because Fall FTES is not reported.

The barriers to a shift to YRO are similar to those for distance education. Faculty has grown accustomed to a schedule and a lifestyle that includes a drop in workload in the summer. In many cases, faculty engage in research over the summer that they need in order to advance their careers. In fact, in a 2000 resolution, the CSU Academic Senate stated that faculty shall not be required to teach year-round, (i.e., for any consecutive 12-month period). A companion resolution also supported increases in salary/benefits for those who do work year-round. There are many implications for collective bargaining, which in the CCC is handled separately by each of 72 districts. In any contract negotiations concerning YRO, issues of uneven workload between fall/spring and summer terms, due to the absence of much committee and departmental work, would have to be dealt with. Another issue is that not all types of courses currently receive the same demand in the summer months, with students tending to gravitate toward general education courses. With summer enrollment likely to be lower than other terms, the segments would have to plan carefully, department by department, and course by course, to determine what kinds of summer offerings are financially feasible. There are also significant transitional issues to be confronted in anything other than small incremental increases to summer use. For example, students cannot be expected to change their enrollment patterns dramatically until a full complement of courses becomes available in the summer, but colleges will face serious financial barriers to offering a full complement of courses absent strong student demand.

Possibilities

It appears that achieving the level of YRO activity that UC and CSU assume in their long-term capital planning processes will require renewed and creative efforts to expand summer term enrollment. This contrasts somewhat with the CCC, where YRO activity is already fairly substantial.

The LAO offers several recommendations for increasing campus use during the summer term:

- (1) Financial Incentives for students
 - Charging lower fees for the summer term, offsetting the cost in the other terms
 - Establishing a per-unit fee structure rather than the traditional two-tiered fee structure (in CSU)
 - Pro-rating or eliminating campus-based student fees (like health care, student union, etc.) to reduce total summer term fees
- (2) Priority Housing and Registration
 - Offering non-financial incentives to motivate students; for example, earlier registration in particular helps those who wish to move through at a quicker pace do so by eliminating the challenge of not being able to find open sections for courses needed.
- (3) Campus mandates or incentives
 - Requiring some level of summer enrollment at high-demand campuses to free up admission at some of the more competitive campuses.
 - Encouraging or mandating campuses to use the summer term to provide additional access to high-demand courses, thereby helping reduce students' time-to-degree

The LAO acknowledges that increased funding is a good incentive to motivate schools to increase summer enrollments. The LAO report does not estimate the impact strategies such as the ones used within the UC/CSU systems would have on Community Colleges. Some of the strategies employed for students in the UC/CSU populations might not be as useful for the Community Colleges. For example, fees are already very low and probably don't need to be "bought down" to encourage summer attendance.

One strategy that could provide a strong incentive to students in all segments would be priority registration. Offering priority registration during the summer session would likely attract motivated students who are seeking to achieve their educational objectives at a quick pace and improve their chances of success, with the result being increased access for new students to take their place. A student who attended in the summer could also be given priority registration for the following fall term.

There is also a unique opportunity to offer more high-demand courses (such as basic skills, math, and English) during the summer months in order to dampen the high demand in the fall and spring semesters for these courses. This would reduce the number of students unable to take these crucial, building-block courses until later in their academic careers. A major effort to shift a large portion of basic skills work to the summer seems warranted and could be coordinated with the ongoing implementation of the CCC strategic plan goals regarding basic skills.

(4) *Afternoons, evenings, weekends*

Current Status

According to discussions with staff from the three segments, it appears that use of facilities during the afternoon, evenings, and weekends is already built into the utilization formulas for current facility space. (The standards that apply to the Community Colleges are slightly more demanding in this regard than those for UC and CSU.) Specifically, utilization guidelines state that a proposed project will only be considered for scope approval and state funding after it has been shown that there is no viable alternative to construction or reconstruction (from capital outlay priorities criteria). The Community Colleges report that, systemwide, classes were offered for 293 days per year on average in 2005-06, up from 271 in 1996-97. In contrast, on a different measure of non-prime time space utilization, CSU reports that the use of classrooms after 4:00 pm consistently stayed at just over 25 percent of their annual FTE for the five year period from 1998-2003. There is probably room for expansion during these times (with the highest potential being weekends), but historically there has been less interest in scheduling classes during these times from both faculty and students. Traditional student populations are less likely to take advantage of classes at these times than older students with family and work obligations. Another barrier is a reluctance of many faculty to teach regularly on nights and weekends. In view of cultural and historical resistance, incentives would be needed to change behaviors for both students and faculty.

Possibilities

Many of the same incentives proposed to expand summer enrollment, such as lower fees or priority registration, could be used as incentives to encourage afternoon, evening and weekend facility use. Incentives for faculty would need to be more creative. It might be possible to include some requirements for “off peak” teaching in faculty contracts, subject to collective bargaining. Incentives might include higher pay for off peak teaching, reduced course-loads, or expedited timelines for receiving sabbaticals to pursue research.

There are very real physical constraints to the expanded use of off peak hours for classroom instruction. General purpose classrooms, such as lecture halls and seminar rooms can readily be used by multiple departments at varied times. But specialized classrooms, such as laboratories, theaters, studios, practice rooms, etc., are very limited in their versatility and may need to go unused much of the time in order to support the programs that do use them. The space utilization formulas have been criticized, justifiably, in the past for the assumption that instructional space is more “fungible” than it often is.

The State's Higher Education Facilities Planning Process

The Legislature is presented with several hundred million dollars of capital outlay projects for approval in the budget each year. Yet the current process provides few tools by which members of budget subcommittees can evaluate those projects in a policy context. Do the projects presented reflect the state's priorities for investment in higher education capital facilities? Has the appropriate balance been struck among the segments' requests? Is the state taking maximum advantage of opportunities to use scarce funds as effectively as possible? This section of the report explores whether improvements can be made in the current higher education facilities approval process.

The Process

As discussed in a previous section, each of the higher education segments develops a set of projects for consideration by the Administration and the Legislature each year in the budget. These projects are set in the context of the segments' five-year facilities plans. This means that each project addresses a need identified in the plan, such as meeting enrollment demand in a particular discipline on a campus, rehabilitation of an existing facility that has reached a point in its useful life where upgrade is needed, or dealing with a critical life safety issue.

Each of the segments employs a set of more or less formal decision rules regarding which projects will move forward in any given year. Given the relatively smaller number of campuses, UC, and to a certain extent CSU, engage in a process that evaluates building proposals in the context of the long-term plan for each campus. The Community Colleges employ a system of funding allocation priorities and project rankings that enables the Chancellor's Office to exercise a degree of objectivity across a large number of campuses. In addition, higher scores are awarded based on the extent of the local district financial contribution.

All of the segments permit a certain degree of political reality to enter into decisions about which projects to take forward to the state, in that they seek a balance across campuses in the number of projects proposed, notwithstanding the priority ranking of projects themselves. This is an acknowledgement of the need to keep peace across campuses as well as the reality of legislative oversight. Lastly, each segment's proposal is constrained by the amount of state funding available for that year based on the allocation of bond funds and other financing such as lease-revenue bonds.

Once the segments put together their proposals, they are submitted to the Department of Finance for review as part of the capital outlay budgeting process. Finance evaluates the proposals for consistency with the segments' five-year plans, but generally does not second-guess the segments in terms of the specific projects and priorities proposed. Finance staff generally seeks to assure itself that "program is driving capital," rather than the other way around.

After the budget is submitted, the LAO reviews the capital outlay proposals in the budget and makes recommendations to legislative budget subcommittees. Historically, the LAO's assessment of projects has ranged from advancing policy concerns about the segments' facilities proposals, such as whether they fit with the segments' Master Plan goals, to raising cost

considerations in relation to various standards as discussed in the prior section of this report, to a detailed review of the scope and specifications of individual projects.

Are the State's Higher Education Facilities Priorities Being Addressed?

In the course of the budget process, the members of the budget subcommittees are presented with lists of projects from each of the segments that the Administration has approved and concerning which the LAO provides its recommendations. In developing their sets of projects, the segments have gone through a fairly elaborate process of setting priorities consistent with internal, institutional goals, including political goals, as noted. However, currently no attempt is made to rank projects across segments. There is no effort to determine whether, for example, all of the proposed Community College projects in a given year, plus additional Community College projects in the pipeline, should move ahead of some of the UC or CSU projects proposed in the budget.

More fundamentally, when presented with a list of projects for which the segments are seeking legislative approval, how do budget subcommittee members know that the state's priorities are being addressed or that scarce state financial resources will be used in the most cost effective manner possible?

In part, this concern reflects the somewhat indistinct connection between the specific projects proposed for adoption in the budget each year and the state's higher education priorities. Capital outlay decisions are to a substantial extent divorced from programmatic issues in legislative deliberations. (Recognizing the importance of integrating programmatic priorities and capital planning, the Legislative Analyst has recently modified the organization of its higher education program and capital outlay staff.) This is partly due to the long lead time associated with any capital spending project. Needs are identified, but it is years before plans are developed and buildings are built to address those needs, potentially leading to a sense of inaction or disconnection.

But most importantly, it reflects the absence of a process for (1) defining state priorities for higher education, (2) translating those priorities into priorities for capital spending, and (3) using the priorities to drive campus planning. Unlike many other states, California does not have a statewide plan or a set of specific goals for its higher education system collectively. While other states have taken aggressive steps to analyze the increasingly available data on statewide performance and set forth a direction for the future, California proceeds along a segment-by-segment pathway to develop higher education policy and budgets. This can be seen most directly in the Governor's partnerships, which deal separately with UC and CSU and do not address the largest sector – the Community Colleges. While the partnerships may signal the Governor's intention to provide budgetary stability for the four-year segments, they do not constitute the kind of statewide plan with broad stakeholder support that could become the driver of capital outlay priorities.

Capital spending priorities are set on a de facto basis by the Legislature and the Administration when bond funding shares are allocated in the course of negotiations over the placement of bond measures on the ballot. However, these allocations do not follow from a detailed public

discussion over the state's higher education priorities. Moreover, the allocation of bond funds leaves the segments with a significant degree of discretion as to which specific projects to advance within their allocated share. Since projects are advanced by the segments based on a process that starts with each campus identifying its needs based on its enrollment projections and other circumstances, it is important that this "bottom up" process be effectively informed by clear state priorities.

So, the issue remains whether changes could be made to the planning and approval process that would help to ensure that the state's priorities are being met.

Could a Cross-Segmental Project Ranking Scheme be Devised?

One way to address the concern about whether the projects proposed by the segments in the budget process each year reflect the state's priorities might be to attempt to devise a mechanism by which all projects that come before the Legislature would be ranked in terms of priority. Such an effort would require, first, that there be a set of agreed-upon state priorities, and would then involve developing a set of criteria by which projects would be evaluated, such as responsiveness to regional enrollment demand, meeting a specific workforce need (such as nursing education), accommodating under-served populations, and addressing urgent needs for rehabilitation based on building age or physical condition.

To a significant extent, the segments use these or similar criteria to develop their facilities plans. However, because these criteria have developed over time in separate environments, there are significant differences across the segments in terms of levels of specificity, terminology, specific methods for measuring needs and so forth that would make conversion to a single, unified system challenging. Any effort to move to a single "grading" system for projects would take substantial time and resources raising the question of whether the effort would be worth it.

Moreover, there is the question of where responsibility for such an effort would be lodged. The LAO is a logical choice, but given the relatively small size of the office, it is likely that such an effort would consume a disproportionate share of its staff. CPEC is another possibility, but its diminished staffing and policy capacity make this an impractical option.

Assuming the issues of who would be responsible for setting priorities and ranking projects could be resolved, the question remains whether such information would be useful to the Legislature or would yield an appreciably different outcome than the current process. Given the extent of the unmet need identified by the segments (even if one argues that it is somewhat overstated based on the LAO's analysis), it seems unlikely that low priority projects are being advanced by the segments. While the practice of not advancing multiple projects from a single campus ahead of projects from other campuses may result in some skewing of priorities, it is unlikely that that practice would be eliminated even in the face of a cross-segmental ranking system.

Rather than attempt to devise a process for determining how the segments' projects rank in relation to each other, it would make more sense to better inform the segmental planning process as to state priorities at the front end of that process, as discussed above.

For these reasons, we do not recommend the development of a cross-segmental project ranking scheme.

Would a Regional Collaborative Process Improve Outcomes?

Another approach to helping to ensure that the state's priorities are being met and that resources are being used efficiently is to encourage the development of a collaborative regional planning process. This already happens to a limited extent on an ad hoc basis.

Under this approach, the segments would identify one or more regions of the state, possibly where significant enrollment growth is occurring, for the purpose of developing a regional plan for meeting that growth. Regional enrollment demand projections for all three segments of the sort produced occasionally by CPEC would be used to develop the plan. This would enable the segments to compare demand projections and coordinate strategies, which could lead to a better understanding of the dynamics of enrollment demand in the region and regional economic needs. This approach could also encourage more creative and extensive joint use of facilities.

Because the segments have tended to plan in isolation from each other, it likely will take some encouragement for this approach to take hold. One possible approach would be to develop some incentives to encourage the segments to engage in collaborative planning efforts. A small amount of funding set aside specifically for this purpose may be necessary to make the effort work. In addition, we suggest that this approach be implemented as a pilot in order to enable the effort to begin on a small scale so that the necessary mechanics and protocols can be developed.

Probably the most important factor in making this approach a success is the role of a convener to oversee the development of statewide priorities as well as a regional approach for addressing them. California lacks the kind of entity that has proven useful in so many states recently to convene stakeholder groups in order to establish and carry out a public agenda for higher education. Such an entity needs to have the legitimacy and control over sufficient resources to be able to influence institutions to pursue a common agenda around state priorities. In order for a regional facilities planning effort to succeed, even as a pilot, some entity needs to take responsibility for pulling together the different participants – the segments, the Department of Finance, the LAO and CPEC – so that the implementation details can be worked through. In addition, any convener needs to have the ability to secure the cooperation of the participants. For this reason, the Governor's Office is probably best positioned to take this on. For that to happen, however, it must be a priority for the Administration.

Conclusions and Recommendations

Based on our analysis, the following points must be considered in any effort to improve the capital planning process:

1. Enrollment growth rates are declining. Overall projected annual growth for the period of 2005-2020 is just over 1 percent. There is unlikely to be a crisis of capacity over the next 15 years due solely to enrollment trends.
2. Enrollment in the community colleges is much less a function of the change in high school population (a population segment whose growth rate is slowing). Aggressive action to reduce the number of adults of all ages who lack a high school education could greatly expand community college enrollment and increase facility needs, but no such policy initiatives are under discussion.
3. Factors other than enrollment – renovation, replacement, and seismic safety – are the biggest drivers of the capital outlay needs in higher education.
4. Therefore, despite moderating enrollment growth rates, facility needs will still far outstrip the projected state budget capacity to provide for them.
5. Current planning processes fail to provide the coordination or the necessary incentives to promote the most efficient use of facilities and capital outlay dollars across segments.
6. There are un-tapped opportunities to make use of alternatives to capital construction in accommodating future capacity needs. These vary across segment but are probably greatest in the community colleges for distance education and joint facility use, because of the diverse clientele and broad geographic reach, and greatest in the UC and CSU for year-round operations, where despite concerted efforts, only a small fraction of FTES occurs in the summer, leaving room for improvement despite the very real practical limitations to expand summer enrollment.
7. Weak integration at the state level of programmatic and facility planning for higher education limits the effectiveness of the capital outlay budget.
8. The absence of an effective state coordinating body for higher education is a major hindrance to the development of state priorities that should drive facility planning and to the effective coordination of planning across regions and segments.

We offer the following recommendations for improving the process and for maximizing the ability of the state to meet higher education capacity needs over the next 15 years.

1. An effective higher education coordinating function should be established. California labors under considerable disadvantages in all aspects of higher education policy development, including capital outlay policies, by expecting the sum of institutional actions – largely uncoordinated – to produce the best educational outcomes for the state.
2. A set of specific state policy goals for higher education should be established that can be used to drive capital planning.
3. A task force, ideally under the direction of an effective higher education coordinating body, should develop *specific* recommendations to:
 - increase the use of distance learning in ways that reduce demands on facilities, with specific attention to the community colleges;

- continue to increase summer enrollment, with specific attention to UC and CSU, develop consistent methods across the segments to account for summer FTES, and evaluate whether the current legislatively mandated level of YRO activity is appropriate;
 - increase joint use of facilities through the provision of funding incentives; and
 - revise, if warranted, the space utilization standards to address Friday, evening/weekend, and year-round usage.
4. This task force should also determine whether consistent standards are being used by the segments to estimate the cost of and set priorities for rehabilitation and modernization of existing facilities and whether efficiencies in the use of funds for this purpose can be achieved.
 5. A pilot project should be developed to model a coordinated regional capital planning effort by the segments.