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ABSTRACT

This report provides an overview of the difficulties that California faces in determining how much money to invest in school facilities. The text describes the dimensions of the school facility crisis as a whole and looks at the ways in which facilities can affect the quality of education and student performance. It also explores the various options open to both the state and local school districts as they address this challenge. It argues that making a realistic projection about the need is a first step toward a solution. After that, school officials, policymakers, and the public must agree on the minimum quality that they believe is acceptable for school buildings and the optimum quality needed for educational improvements. Decision makers are reminded that schools must meet federal mandates for safety and accessibility. Subsequently, some standards for school facilities are presented. Stakeholders also need to determine the appropriate mix of state and local funding, and one suggestion recommends that the state commit more funds to help schools with maintenance costs. Other possible strategies such as state bonds, local taxes, and developer fees are discussed. (RJM)

California's School Facilities Predicament

April 1998

REPORT

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EdSource®

Clarifying Complex Education Issues

California's School Facilities Predicament

In the spring of 1998, California's state leaders continue to debate how to provide funding to address the state's school facility needs. Meanwhile, many California students go to school in inadequate, overcrowded, and outmoded buildings — with no end in sight.

Californians spent over $20 billion on school facilities from 1986 to 1996. As a result, some children go to school in beautiful new buildings designed around a new vision of education. But the majority of California's public school students are not in such schools. Because as large as the investment might sound, it has been flatly inadequate to the tremendous statewide need.

That need arises from two sources. One is the growth in California's student population, which today exceeds by over one million the peak years of the "baby boom." The other problem is the number of older school buildings in need of repair or renovation.

The majority of California's public schools were built during the post-World War II boom between 1950 and 1965, and many have been poorly maintained. Typically, these aging buildings are costing more and more to keep up, no longer meet educators' ideas of a good learning environment, and usually lack the commonplace amenities found in newer structures, including modern wiring and lighting.

In some places the situation is extreme. Educators struggle to do their jobs and students struggle to concentrate in overcrowded, deteriorating buildings with inadequate heating, undependable plumbing, leaking roofs, and peeling paint.

Both nationally and here in California, government leaders and educators agree that the problem of school facilities has reached crisis proportions. Existing school buildings do not adequately house today's public school students and projected enrollment growth over the next ten years will make a bad situation even worse. Moreover, this circumstance constrains the ability of many schools to improve public education through such measures as class size reduction and greater use of technology. Yet in the 1998 legislative session, California leaders struggled to craft a comprehensive solution.

INSIDE THIS REPORT

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SCHOOL BUILDINGS IN CALIFORNIA COME IN ALL SHAPES AND SIZES

And the Contrasts can be Extreme

In San Francisco, the 550 students at Jean Parker Elementary School go up to the roof of their new 3-story school for recess. The school sits on six-tenths of an acre in this densely-populated city.

In Los Angeles, 2,700 students attend Hoover Street Elementary School where recently-added portables took the place of volleyball and basketball courts on the school's overcrowded playground.

In San Diego County, a teacher at National City Middle School describes crumbling walls and visible termite damage in her classroom.

In Contra Costa County, the main building at El Cerrito High School was built in 1938 and still has the original plumbing and heating systems. The district puts off some needed repairs because of the cost of asbestos abatement.

In Clovis, near Fresno, the beautiful new Floyd B. Buchanan High School — which cost $32 million and was paid for with state bond funds — will house nearly 3,000 students on 47 acres.

Among state leaders, the sometimes paralyzing debate focuses on the extent of the school facilities need and the best ways to fund it. In local communities, people tend to focus on the problems closer to home. This report links the local and state realities. It begins by describing the dimensions of the school facility crisis in California as a whole. It also looks at the ways in which facilities can affect the quality of education and ultimately students' performance. Finally, it explores the various options open to both the state and local school districts as they address this fundamental problem in California's public schools.

THE MANY DIMENSIONS OF THE PROBLEM

California Needs More School Buildings

Educators and political leaders from both parties agree that California must have a steady supply of new school buildings to meet the current and projected need. That need arises both from the growth in student population and changes in educational programs, particularly California's class size reduction program.

Continuing Growth in Student Population Is One Key Factor

In October 1997, the California Department of Finance (CDF) estimated that the state would add over 300,000 new students in the five years from 1997-98 to 2001-02, bringing the total number of K-12 students to nearly six million.

That is a far cry from a student population of just over one million in California in 1945. Since then, the growth curve looks a bit like a roller coaster (see Figure 1). After climbing to what felt like dizzying numbers during the baby boomers' school years, from about 1951 to 1975, student populations fell precipitously, particularly in certain communities. In the 1960s and early 1970s, school districts were building new schools, adopting year-round calendars, and going on double sessions. In 1980, they were closing schools and selling surplus sites, often to raise money for facility improvements. But by 1988 the state's student population had again reached its 1970 peak of 4.5 million, and in 1997-98 it is reaching an all-time high of 5.64 million students.

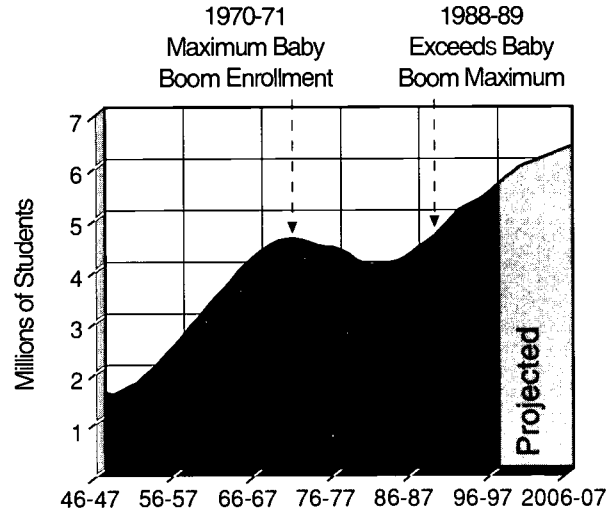
Many California school districts are struggling to catch up with the housing needs caused by this enrollment growth. In particular, high schools are feeling increasing pressure as the students who flooded elementary schools in the late 1980s enter the secondary system. This increase in the sheer number of students is just part of the problem.

Another dilemma is where these students live. Much of the growth in student population since 1980 has not been in the same areas where the "baby boom" generation grew up. So while a school district in Silicon Valley might have old school sites that are leased out, another district

Figure 1

STUDENT POPULATION GROWTH SINCE 1945 HAS BEEN ERRATIC

California history in the last 50 years shows the dynamics of population increases and decreases. Predicting future growth in student population is guesswork at best. For facility planning purposes, when it often takes four years to get a school built, a longer-term projection would hold great value. However, it is risky business to make enrollment projections about children who are not even born yet, to say nothing of predicting immigration patterns in a volatile political and economic climate. Even shorter-term projections are an inexact science. This is particularly true for individual schools or school districts where a new housing development, a military base closing, or a surge in real estate prices can dramatically affect school enrollments.



Data: California Department of Finance EdSource 4/98

in Riverside County has seen its student population grow from 17,000 to 31,000 since 1987.

Smaller Class Sizes Have Reduced School Capacities

California's Class Size Reduction Program (CSR) provides funds to reduce K-3 class sizes from about 30 students to a maximum of 20. If a school district previously planned that a school had room for 600 K-3 students in 20 classrooms, under class size reduction it now has the capacity for only 400 students in the same space. In the short term, the district has to come up with ten additional classroom spaces for the remaining 200 students. In the long term, it has to reassess all its assumptions and projections regarding school capacities and facility funding needs.

In the first two years of CSR implementation — 1996-97 and 1997-98 — California's elementary schools added about 28,000 new classroom spaces through a variety of strategies, including a heavy reliance on portable classrooms. They were thus able to reduce class sizes for an estimated 85% of the state's kindergarten through third grade students. If schools throughout the state had reached full implementation in 1997-98, it could have required from 2,000 to 4,000 more classroom spaces.

Even More Strain on California's School Facilities Could be in the Offing

Causing concern for many school districts is the on-going dialogue — among state leaders and the public — regarding the expansion of CSR beyond the third grade. In addition, both Superintendent of Public Instruction Delaine Eastin and Governor Pete Wilson presented legislative proposals in 1998 to expand pre-school services through the public school system. While these proposals call for a mixture of existing private and new public programs, and would be phased in over several years, they would undoubtedly put a greater strain on school districts' ability to provide facilities.

Existing Schools Urgently Need Maintenance and Modernization

California had a total of 7,872 public schools and 60,000 public school buildings in 1995-96. The California Department of Education (CDE) reports that 55% of those buildings are over 30 years old. Others look at the year that the main

Figure 2

BUILDING FEATURES AND ENVIRONMENTAL FACTORS PROVIDE MEASURES OF FACILITY QUALITY

In a national survey completed in 1995, California ranked among the worst states in most of the building features listed below. Seven out of ten school districts reported at least one inadequate building feature and four out of ten reported at least one inadequate building. The state's schools ranked a little better on some environmental factors, most notably ventilation and indoor air quality.

Percent of California Schools Reporting "Inadequate" Building Features in 1994-95 (rated as fair, poor, or need to replace)

Features	CA Respondents	National Survey
Roofs	41%	27%
Framing, floors, foundations	28	18
Exterior walls, finishes, windows, doors	42	27
Interior finishes	47	24
Plumbing	41	30
Heating, ventilation, air conditioning	41	36
Electrical power	32	26
Electrical lighting	43	25
Life safety codes (such as fire and earthquake)	21	19

Percent of California Schools Reporting "Unsatisfactory" Environmental Factors

Factors	CA Respondents	National Survey
Lighting	31%	16%
Heating	25	19
Ventilation	29	27
Indoor air quality	22	19
Acoustics	34	28
Space flexibility	70	54
Energy efficiency	60	41
Physical security	41	24
Schools w/ air-conditioned classrooms	67	51

Data: US General Accounting Office, 1996 EdSource 4/98

school was built to arrive at a statistic that 60% of California's schools are over 30 years old.

California faces the prospect of investing billions of dollars to repair, maintain, and modernize these aging schools. Due simply to their age, many schools are in need of the same kind of basic repairs home owners face, such as roof replacements, updated plumbing, and new heating systems. This is in addition to such routine maintenance expenses as paint, flooring, and normal wear and tear. In addition, a major investment in modernization is essential to enable schools to use computers and other technology as part of their instructional program.

California's Schools are in Serious Disrepair

Unfortunately, the state is paying a price for past decisions. Not only are school buildings aging, they have also often been poorly maintained. Declines in general school funding over the last 20 years led many districts to defer preventive maintenance expenses in order to maintain education programs. As a result, some school facilities are now in a state of serious physical disrepair.

"We're seeing, time and time again, that facilities and sites are being neglected," says Tom Henry, chief administrative officer for the state's Fiscal Crisis and Management Assistance Team (FCMAT). His office provides technical assistance and oversight to districts which are confronting serious financial problems, and thus visits districts throughout the state. He stresses the seriousness of the situation as it relates to student and staff welfare. "We're seeing unsafe and unhealthy conditions."

Data from a survey by the U.S. General Accounting Office (GAO) backs up these observations. In a nation where the condition of school facilities has been labeled a crisis, California school districts report their schools to be in some of the worst condition in the country.

Figure 3

PERCENT OF CALIFORNIA SCHOOLS REPORTING INSUFFICIENT INFRASTRUCTURE FOR TECHNOLOGY IN 1994-95

In a national survey, California schools reported that facilities were ill-equipped to make use of technology. Of particular note, about two-thirds reported not having phone lines in instructional areas or for modems.

Technology	CA Respondents	National Survey
Phone lines for modems	68%	56%
Phone lines in instructional areas	65	61
Cable TV	50	32
Conduits	80	61
Fiber-optic cable	93	87
Wiring	69	46
Power	56	35

Data: US General Accounting Office, 1995 EdSource 4/98

Many School Districts Need to Invest in Modernization

The lion's share of modernization involves improving school buildings, especially classrooms, to support technology. Many older classrooms have one or two electrical outlets, and no telephone connections.

In 1994-95 the U.S. GAO surveyed school officials regarding, among other things, the extent to which America's school buildings can support new technologies. They asked a sample of school officials to evaluate whether their school had sufficient infrastructure for data, voice, and video systems. They included the conduits, fiber optic cables, wiring, and power that need to be built into a facility to make technology operate effectively, and the modem lines, both to schools and classrooms, that make telecommunications possible. In every category, California schools were more likely to be rated as "insufficient" than schools in the U.S. as a whole.

In the three years since this GAO survey was completed, California schools have certainly made additional investments in technology infrastructure. Some of this has been through private effort. For example, Californians have succeeded in providing Internet access to many more public schools through activities such as NetDay — a school, community, and corporate activity that used volunteers to perform much of the labor.

In addition, a new federal program called E-Rate may provide substantive help with technology infrastructure to qualifying school districts. The program will put $2.2 billion

annually into a national effort to support both the installation and on-going costs of bringing technology into U.S. schools. School districts apply directly to the program, which will begin allocating funds in 1998.

Schools Must Meet Federal Mandates for Safety and Accessibility

School districts are required to comply with a variety of federal mandates. These include removing safety hazards such as asbestos and radon, and making sure school programs are accessible to people with disabilities. In general, these mandates become a consideration when schools undertake renovation, repair, or construction projects.

Accessibility issues are expected to be the most costly of these federal mandates in coming years. Since 1973, federal law has required that school facilities be accessible to people with disabilities. The Americans with Disabilities Act (ADA), passed in 1992, highlighted the need to improve accessibility and added some additional requirements. According to the GAO, about 78% of the California schools surveyed in 1995 reported that they expected to need to spend additional funds on accessibility from 1996 to 1999.

Facilities Play a Part in Educational Quality and School Improvement

While many aspects of school effectiveness have been studied extensively, researchers are just beginning to develop data regarding the relationship between school facilities and students' academic performance. Perhaps because leaders are recognizing the need to invest more resources into the nation's aging and inadequate school buildings, research interest in the subject is growing.

In particular, researchers are asking two important questions. First, in what ways does a school facility either enhance or inhibit student performance? And second, what implications do new educational strategies related to education reform have on how schools should be designed?

STATE MAY COMMIT MORE FUNDS TO HELP SCHOOLS WITH MAINTENANCE

In an effort to encourage schools to invest in regular maintenance, California for many years operated a voluntary deferred maintenance program. The state would match a local district's investment to catch up on facility maintenance that had been put off, up to one-half of 1% of its budget. From the mid-1980s on, this program was increasingly under-funded. In his 1998-99 budget, Governor Wilson proposed additional funding for the program of $135 million.

At the same time, state guidelines required districts receiving funds from the state building program to put aside 2% for general maintenance. In his 1998-99 budget proposal, Governor Wilson recommended increasing this local obligation for on-going funding by 1%. His plan would require participating school districts to set aside 3% of their budget for building maintenance.

The Condition of School Facilities Directly Affects Student Achievement

Recent studies throughout the U.S. were cited by the Clinton Administration in 1996 in its initiative to increase federal support for school facility construction. "Good school facilities are an important precondition for student learning," the initiative stated. "A growing body of research has linked student achievement and behavior to the physical building conditions and overcrowding."

Students learn less in noisy, overcrowded, unsafe school buildings. Research evidence and common sense both indicate that there is a minimum level of quality for a school facility, below which student and teacher effectiveness can be seriously compromised. A variety of studies conducted since 1982 throughout the United States indicate that students achieve less in school buildings which are situated on noisy streets, have too many students for their capacity, or cannot be adequately and safely maintained.

In general, older buildings are more likely to have these basic problems, and many are in central urban areas where space and land are at a premium.

Smaller is better. A large body of research has convinced many educators and policymakers that smaller classes and smaller schools can lead to improved student achievement.

Certainly Californians appear to have decided that reducing class sizes (at least in the early grades)

"We [need to] visualize a schoolhouse that is not just a place to sit but a place capable of educating students to compete in the twenty-first century's global society, a place of pride for the community, and a place in which our young people know that our society values education. Our schools should not be a trip back in a time machine but rather a window to the future."

Delaine Eastin, State Superintendent of Public Instruction
From the introduction to
The Form of Reform, School Facility Design Implications for California Educational Reform

CALIFORNIA'S SITUATION IS PART OF A NATIONAL PROBLEM

Certainly California is not alone in its need to invest more in the school infrastructure. In 1995 the U.S. General Accounting Office estimated that $112 billion should be spent over three years to upgrade and repair schools nationwide, to which $60 billion should be added to accommodate growth. Yet in 1994, state legislatures appropriated a combined total of $3.5 billion for school construction.

In its February 1998 school construction report, School Planning and Management magazine estimated total 1997 school construction at $12.7 billion nationally, with about a quarter of that amount going toward renovations of existing buildings. By their calculations, about three quarters of the investment was devoted to new schools and additions to existing schools — growth in other words.

will improve the quality of education, as evidenced by the rapid adoption of the state's voluntary class size reduction program. A survey conducted in 1997 by School Services of California, Inc., indicated that the lack of school facilities, or funds to expand them, represented the single biggest obstacle to reducing class sizes in California. Their research also indicated that schools are so eager to have smaller classes that they have taken space from other parts of the educational program, including libraries, science labs, teacher planning areas, and day care programs.

Nationally, research is convincing many experts of the educational advantages of smaller schools. In the June 1996, edition of *School Business Affairs*, Ken Stevenson and Leonard Pellicer cite several studies they find convincing. These, they say, indicate that schools with "fewer students provide a more personalized educational climate, reduce misconduct and violence, enhance student involvement, and encourage greater parent and community participation in governance . . . larger schools, even if they are more efficient to operate up front, are in fact more costly in human terms."

While there is no universal agreement about the optimum size for a school, one scholar's summary of the existing research indicates that an effective size for an elementary school is 300 to 400 students and for a secondary school it is 400 to 800 students.

This research flies in the face of a continuing state and national trend toward bigger schools. At the high school level in particular, there is strong opinion that a student population of

STANDARDS FOR SCHOOL FACILITIES

In its work overseeing the recovery of Compton Unified School District, California's Fiscal Crisis Management and Assistance Team (FCMAT) has developed a list of 26 professional and 27 legal standards for facilities. Following are some of those standards.

Sample Professional Standards

- The district has an updated, long-range facilities master plan, including a demographic study, a five-year capital facilities plan, and cost estimates.
- The district has developed and implemented an energy conservation program.
- Procedures are in place for evaluating the work quality of maintenance and operations staff.

Sample Legal Standards

- The governing board shall keep the school buildings in repair and supervised.
- Building examinations are performed and required actions are taken by the governing board upon report of unsafe conditions.
- Sanitary, neat, and clean conditions of the school premises exist and the premises are free from conditions that would create a fire hazard.

1,400 or more is desirable in order to provide a rich academic program.

Schools come in every imaginable size and shape in California. Statewide average school sizes — 595 for elementary, 880 for middle schools, and 1,655 for high schools — mask some dramatically small and large schools. Examples include Dunsmuir High School with 160 students and Independence High in San Jose, which has an enrollment of 4,000. Nonetheless, the averages indicate that California schools are larger than those in most other states. Some schools, trying to gain the advantages of a smaller school in their existing large-scale facilities, use "school within a school" programs and also adapt their buildings to try to create "neighborhoods" or clusters.

Figure 4

PERCENT OF CALIFORNIA SCHOOLS REPORTING THEY MEET THE FUNCTIONAL REQUIREMENTS OF EDUCATION REFORM "NOT WELL AT ALL"

California schools appear to have more facilities that are inadequate in accommodating activities often considered necessary for education reform.

Activity	CA Respondents	National Survey
Small group instruction	15%	10%
Large group (50 or more) instruction	51	38
Store student assessment materials	48	31
Display student assessment materials	40	28
Parent support	39	24
Social/health services	41	27
Teacher planning	21	13
Private areas for counseling/testing	46	26
Laboratory science	58	42
Library/media center	19	13
Day care	76	78
Before/after school care	64	59

Data: U.S. General Accounting Office, 1995 EdSource 4/98

The move to smaller classes and smaller schools presents both opportunities and challenges for local school communities. On one hand, many experts are convinced that this is an important and effective lever for improving student performance. On the other hand, "smaller" is more expensive and many school communities are already hard pressed to provide adequate school facilities. When school districts — or state leaders for that matter — decide that small is essential, school communities have to take a fresh look at how they think about school capacities and facility use.

School Reform Calls for New School Designs

Many experts on school reform and school facilities see a fundamental mismatch between how schools need to operate and the buildings most schools occupy. In one publication after another, both state and national experts characterize existing school facilities as obstacles to educational improvement.

Ideally, school design needs to start with a careful look at education goals and practices. The objective, when a school has the chance to create new or remodeled facilities, is to accommodate desired education reforms. This approach is strongly advocated by the California Department of Education, which outlined many design parameters in *The Form of Reform*, a 1997 publication for school districts embarking on building projects.

GAO research identified several "functional requirements" related to school reform which closely echo the California recommendations. The same basic principles are also found in a 1997 publication, *Probe: Designing School Facilities for Learning*, by the National Education Knowledge Industry Association.

One important tenet of education reform is that students engage in active learning. This includes conducting experiments themselves, doing research, and completing projects that demonstrate their knowledge and abilities. All of this takes more and different space than desks in a row. Schools need enough room to

"Most schools are not inhospitable places for either children or teachers. The buildings are clean, safe, and drug free. The buildings are just old. As such, they have their limitations. There are some things they just can't do. Unfortunately, one of those things is nurturing reforms that ensure all students acquire high-level knowledge and skills."

Metro Educator, July 1993. Southwest Regional Laboratory (now WestEd)

CAN PAINT COLORS BE USED TO HELP STUDENTS LEARN BETTER?

Color theory — a growing area of expertise among architects — provides recommendations for using color to make school facilities more hospitable to learning. These include the following.

- Elementary schools should use warm, luminous colors — such as light salmon, warm yellow, pale yellow-orange, coral, and peach — which direct students' attention out toward the environment and are conducive to cheerfulness and activity.
- In the upper grades, softer, cooler colors — such as beige, pale or light green, and blue-green — are appropriate because they foster an inward orientation and the ability to concentrate.
- Libraries should be pale or light green.
- Paint the front wall of a classroom a different color than the side and back walls to draw students' attention to the front of the room.

Excerpted from *Probe: Designing School Facilities For Learning*, National Education Knowledge Industries Association, 1997.

allow students to move around; areas designed for these activities, such as science labs and library/media centers; and space in which to display and store student projects. Such space is woefully missing in many California schools.

In addition, schools appear to have few spaces available for various other activities reformers say are essential supports for quality instruction. In very short supply are areas dedicated to teacher planning and staff development; small private rooms for counseling individual students; and areas open for parent/community use. This is particularly true in California since the implementation of class size reduction.

Neither do most of the state's public schools have room for school-based community programs such as health services and child care. Many communities support these programs as an effective and efficient way to assure that families have adequate support systems. They see this as important for helping make sure students come to school ready to learn, particularly students in low-income families.

When school districts build new facilities designed around the needs of their current educational programs, the buildings look dramatically different from the majority of schools in California. One of the strongest guiding principles is flexibility, so that the use of space can be maximized and so facilities built today will be adaptable as educational practices and community needs change.

CONTINUING DEBATES ABOUT THE SOLUTIONS

What Will Adequate School Facilities in California Cost?

California's leaders — from the Governor's office to local school boards — generally agree that the state needs to invest in school facilities. The precise amount is a matter of lively discussion. And that conversation tends to focus on the minimum required, and the sources of the funds, rather than on a vision of what type of school facilities California's students ought to have.

Projections of the need for school facilities funding are based on assumptions about various intangibles. These include future growth in student population, the condition of existing buildings, and anticipated changes in school programs that affect facilities, to name a few. This ambiguity makes vast differences in projections possible and plausible.

For example, in early 1998, Governor Wilson put the 10-year need for 1996-2006 at about $17.6 billion, excluding class size reduction and deferred maintenance. He proposed a series of four state bond elections of $2 billion each over the next eight years, with an equal local match.

The Democrat-led Legislature, meanwhile, wanted to see a single bond measure of $9.2

billion ($6 billion of which would be for K-12 schools) with half the funds available in 1998, and half in 2000. This reflected the CDE's December 1997 estimate that over $20 billion was needed over the next five years. Six months earlier, in July of 1997, the state's major education organizations were quoting the CDE's ten-year estimate of $42.5 billion.

Even without agreeing on the exact price tag, most observers acknowledge that the state's school facility needs are monumental and call for a serious funding effort. A comprehensive, responsible, and broadly accepted estimate that reflects the full need for many years to come might, however, facilitate constructive discussion on this complicated issue.

How Should School Facilities Be Paid for?

Debate among state leaders has raged for several years over the question of where the money for school facilities should come from. Californians have allowed differences in perspective on this issue to get in the way of taking any action at all. And in the meantime, students continue to attend school in inadequate, overcrowded, outmoded buildings.

The most significant sources for facilities funding include:

- bond proceeds from the state;
- local school district general obligation bonds, which require two-thirds voter approval;
- and assessments on real estate developers and homeowners.

The balance between these sources — and the political tradeoffs involved in arriving at that balance — prevented state leaders from agreeing on a school facilities recommendation to put before voters on the June 1998 ballot. Debate is expected to continue as California's leaders attempt to arrive at some consensus before the November 1998 election.

Proceeds From State Bonds Have Been the Single Largest Source

State school bonds have covered about half of school facility expenditures since 1986. Can and should the state use its bonding capacity to

Figure 5

ESTIMATES FOR CALIFORNIA SCHOOL FACILITY NEEDS FOR FIVE YEARS, 1997-98 TO 2001-2002

Projected Growth

- Estimated Student Population Growth — 315,000 new students
- New Classrooms to Accommodate Student Population Growth — 12,611 (7 per day) (based on 25 pupils per class)
- New Schools Needed — 378 (K-8) + 78 (9-12) = 456 new schools

Cost of New Facilities

■ Funding Needed to Accommodate Student Population Growth (based on $10,000 per new student, plus land costs of 25% of new construction costs)	$ 3.94 billion
■ Class Size Reduction	$ 1.25 billion

Cost of Facility Improvements

■ Deferred Maintenance	$ 3.00 billion
■ Modernization — including technology upgrades & retrofits	$11.66 billion
■ Child Care	$ 0.25 billion
Total Estimated Cost	$20.10 billion

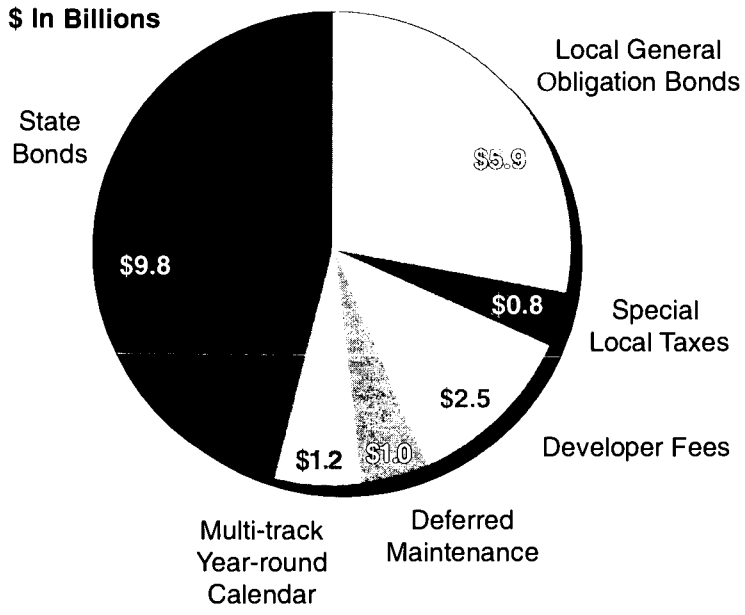
Data: California Department of Education

EdSource 4/98

Figure 6

STATE PROVIDED NEARLY HALF OF SCHOOL FACILITIES FUNDS FROM 1986 TO 1996

From 1986 to 1996, Californians approved $9.8 billion in state bonds for school construction. State funds were part of the estimated $21.2 billion spent on school facilities during those years. This pie shows where the funds came from.



Data: California Dept. of Education, School Facilities Planning Division EdSource 4/98

"A major factor in the declining condition of the nation's schools has been decisions by school districts to defer vital maintenance from year to year due to lack of funds."

U.S. General Accounting Office

continue to provide that level of support over the next decade?

Those who answer yes say that public education is the state's responsibility. They also point out that state bond measures, which require only a simple majority vote for approval, do not increase taxes and are relatively easy to pass. They say that the current school facilities crisis must be addressed as quickly as possible and that state bond money is vital for doing so.

Others argue that the state has many infrastructure needs besides public schools, but only a limited bonding capacity. In the October 1997 issue of *Cal Tax Digest*, the California Taxpayers Association says local school districts have an untapped bonding capacity of nearly $41 billion. For that reason, they argue, a larger share of the responsibility for school facilities must be borne by local taxpayers. Many say that is a reasonable expectation only if local general obligation bonds can be passed by a simple majority of voters.

Could Local Communities Contribute More Through Bonds?

From 1986 to 1996, proceeds from local general obligation bonds paid for nearly $6 billion in school facility improvements. This was under the current requirement for two-thirds voter approval, which makes these measures quite difficult to pass. Proponents of the two-thirds threshold say that is as it should be.

Local general obligation bonds place an extra tax burden on property owners. So says Larry McCarthy, president of the California Taxpayers Association, a non-profit organization dedicated to advancing economy and efficiency in government. In a December 1997 commentary McCarthy said, "Because not all voters are property owners, a two-thirds vote gives more assurance that perhaps a majority of property owners who pay the tax are represented in vote results."

This argument apparently resonated with Republicans in the State Assembly who took a hard stand in early 1998 against reducing the vote requirement. Both the Governor and Democratic legislators had proposed going to the voters with a constitutional amendment to reduce the 66.7% approval requirement. A similar ballot item was overwhelmingly voted down by Californians in 1993.

The success of a growing proportion of local bond measures in recent years — even with the two-thirds requirement — also provides an argument for the status quo. Indeed, of the bond elections held in 1996 and 1997, 65% passed, including an historic $2.4 billion measure in Los Angeles Unified. This brought the total for approved bonds from 1986 through 1997 to nearly $11 billion, with many projects in the planning phase. Most observers believe the recent successes reflect a combination of the school facilities situation becoming so critical and the upturn in California's economy. Some also credit the improving passage rate to more sophisticated campaigns and to advance polling which causes some school districts to decide against even attempting a bond without a fairly good chance for success.

The task of mounting these campaigns successfully is monumental, placing a variety of extra pressures and expenses on school districts.

It often takes two or more attempts before 66.7% of the local voting public is convinced of the need. While state law prohibits the expenditure of public moneys for the campaign itself, school districts do have an obligation to analyze the need for an election, provide information to voters who have questions, and pay for the election itself.

District officials, school board members, parents, and community representatives all report that the stress and expense of these elections can negatively effect other facets of a district's operation. In addition, districts often defer maintenance until they have bond proceeds, which can mean that the eventual cost of repairs becomes even larger. To add insult to injury, districts might ask for higher bond amounts to more adequately meet their needs if they were required to secure only a majority vote.

Another concern about increased reliance on local funding is possible inequities. School districts set the amount of bond they ask for based on more than just their legal bonding capacity and their identified facility needs. They also use their best judgment about what level of increased taxation two-thirds of local voters can and will tolerate.

In some communities, the political climate may dictate that no additional levies for school facilities are possible. In conservative Orange County, for example, no school district even attempted to hold a bond campaign from 1986 through 1997. Other communities are also more willing or able to tax themselves or to do so at a higher rate. A large commercial tax base, a high proportion of young families in a community, the school district's identification with a single city, and the relative affluence of the community can all help with a bond measure's passage.

The political and economic differences among communities can lead to serious inequities between school districts' ability to meet their school facility needs. When Campbell Union Elementary School District passed a $42 million bond to serve nearly 8,000 students, and two years later neighboring and more affluent Saratoga Elementary School District secured the same amount of bond revenue to serve 2,200, the inequities were obvious.

Developer Fees Raise Funds and Controversy

To what extent should those who create the need for additional schools be responsible for helping to provide them? It is not surprising that real estate developers and educators often differ in their answer to this question. At the heart of it are developer fees, which have provided a state total of about $2.5 billion to fund new school facilities since 1986.

These fees, charged both to developers of new properties and to property owners who remodel, are predicated on the concept that new construction will lead to additional students. Individual school districts decide whether or not to levy the fees and at what rate up to the allowed maximum. Districts are required to substantiate the financial impact of the new development and show that they have used the revenues to address that impact. In 1998, the maximum fee was $1.93 per square foot of new residential construction and $.31 for commercial construction.

"School buildings are a tool in the enterprise called learning, and, like any tool, they can help or hurt the enterprise. We can't control all the influences that affect a child's learning. We must take each child as he or she comes to us. But we can control the kinds of learning facilities to which we send our young."

Dena G. Stoner, President, National Education Knowledge Industry Association

HOW SHOULD STATE FACILITY FUNDS BE ALLOCATED?

A first consideration for state funds is what mixture of new construction, class size reduction, and repairs/upgrades should the state money be spent on?

More political is the issue of which districts get what share of the funds. Many observers express concern about rigid state funding formulas that do not take into account the sometimes dramatic differences in land and construction costs in various regions of the state.

Governor Wilson believes local communities should make some contribution of their own, rather than depending solely on the state, and so would like to require school districts to match the state funds they receive. Opponents of this idea cite concerns about "the rich getting richer" while some school districts could end up with no facility funding at all.

Proposed solutions to California's school facility crisis begin with the recommendation to invest additional money, with the accompanying arguments regarding where that money should come from. But few observers say that more money can or should be the whole solution.

Some of the arguments about developer fees focus on the amount of the levy and various attempts have been made to either raise or lower it.

A more contentious battle raged in the State Legislature in 1997-98 regarding a trio of state court decisions known as *Mira*, *Hart*, and *Murrieta*. These decisions allow cities and counties to turn down development proposals based on a lack of adequate school facilities.

The building industry, among others, are supporting legislation to get these court cases repealed. In a report to Governor Wilson, industry representatives claimed school districts have used these laws to impose fees "as high as four times the statutory limit . . . Ultimately, this approach has caused an unnecessarily adversarial relationship between the building industry and school districts while pricing thousand of families out of home ownership opportunities."

Supporters of the *Mira* line of court cases say such protection is vital and justified. In a December 1997 edition of *California Schools*, the California School Boards Association (CSBA) states "cities and counties can consider the impact of a development project on schools, roads, sewers, drainage, water supply, and much more when considering whether to approve or deny a project. The developer would allow them to proceed with a housing project even when the fee paid by the developer is totally inadequate and has no relationship whatsoever to addressing the school impacts."

The *Mira* situation has been one of the most volatile and intransigent issues for state leaders and the education community. Many observers believe that it will have to be settled in order for policymakers to craft a comprehensive solution to the school facilities situation.

Could the Money Be Better Spent?

Proposed solutions to California's school facility crisis begin with the recommendation to invest additional money, with the accompanying arguments regarding where that money should come from. But few observers say that more money can or should be the whole solution.

WILL THE FEDERAL GOVERNMENT TAKE A LARGER ROLE?

In both 1997 and 1998, the Clinton administration proposed making substantial federal funding available to help address a school facilities crisis it described as national in scope. Under these proposals, the federal role would be focused on helping the most disadvantaged communities and the hardest-pressed school districts. The Republican Congress has so far failed to support these proposals.

A variety of other issues quickly comes to the fore as various groups consider the best way to invest in school facilities. Some critics believe the money can be spent more efficiently, while others focus on the need to spend it more equitably. Another perspective is that school facilities, once built, should be used to better advantage by schools and their communities. Others advocate creative new ways to run schools that could reduce the need for traditional classrooms and school buildings.

Could We Make Better, More Efficient Use of Capital Funds?

School and state leaders continue to ponder the question of how to control facility costs and still deliver the best possible school buildings for the dollars spent. By a variety of different measures, the cost of school construction in California is higher than elsewhere in the U.S. Explanations for that vary. Nearly everyone agrees that California's high cost of living — reflected in astronomical property values and relatively expensive labor rates — is a major cause. They probably do not account, however, for all the differences.

Criticism is often directed at California's system for approving and overseeing school construction projects. In a 1992 Little Hoover Commission report, the independent state watchdog agency said, "The state has created a cumbersome program that micro-manages school construction projects, delaying the completion of and driving up the cost of school facilities."

This critique, with which many observers agree, applies especially but not exclusively to projects that receive funding through the State Lease/Purchase program. The multitude of agencies involved in the approval process (see box), the level of inspection required throughout the construction process, and the complex formulas for allowable costs all have been criticized. Some changes in the process have been made since 1992, but the basic system remains in place. The Governor and Legislature both had changes to the program on their agendas for 1998, but their proposals differed significantly.

At the heart of some of this complexity is California's Field Act. This law — passed in 1933 after a strong earthquake destroyed school buildings in Southern California — gives the state the authority to determine structural safety standards, review plans, and oversee the construction process for all public school buildings. Field Act standards, particularly those regarding construction inspections, have always exceeded those of the Uniform Building Code (UBC) which governs most other types of construction. Effectively, the law prohibits public schools from teaching students in any permanent building not constructed specifically for school use.

Earthquake safety remains the strongest justification for the Field Act. In the words of California's Auditor General, "School buildings . . . should be designed to resist forces generated by major earthquakes of the intensity and severity of the strongest experienced in California without catastrophic collapse but only some reparable architectural or structural damage."

No one argues with this basic precept, and the Field Act is close to sacred in many circles. However, over the years the UBC for commercial buildings has become nearly identical to the Field Act in its construction standards, although the plan checking, inspection, and reporting processes are still not as rigorous. It is also pointed out that buildings constructed under new UBC regulations are often safer than those built under old Field Act certification. A first "chink in the armor" of the Field Act occurred with the 1997 passage of AB 865, which allows school districts to lease certain types of non-Field Act buildings constructed after 1990.

FACILITY APPROVAL PROCESS INVOLVES MULTIPLE AGENCIES

When school districts want to build a new facility, remodel, or add additional space they do not deal with local building departments or building codes. They are instead required to get approvals through state agencies, based on the special structural requirements for school buildings spelled out in California's Field Act. They pay fees, sometimes substantial ones, for these services.

Two agencies share responsibility for certifying the quality of school structures and district compliance with state regulations:

- DSA, the Division of State Architect (formerly known as OSA, Office of State Architect), reviews plans and monitors the actual construction of a school. It has three separate review boards on Structural Safety, Access Compliance, and Fire and Life Safety, all of which must approve the school design. It is also responsible for overseeing the work of construction inspectors who must be present throughout the project, whether buildings are pre-fabricated in a factory or built on-site.
- CDE, the California Department of Education, sees that school designs and new school sites are in accordance with state standards, and helps districts complete the documents they need to participate in the State Lease/Purchase program.

When school districts apply to participate in the program for state construction funds, they must be approved through other agencies.

- OPSC, the Office of Public School Construction (formerly the OLA, Office of Local Assistance), administers the application process for the State Lease/Purchase program and advises the State Allocation Board regarding the proposed projects.
- SAB, the State Allocation Board, approves funding for each project.

Building costs are also a target for criticism. The construction industry is among many groups that say state laws get in the way of cost efficiency when schools are built. State policymakers have attempted to respond. In 1997, Governor Wilson revised state regulations regarding "prevailing wage" laws, one of the most commonly cited cost inflators. Industry representatives also recommended to the Governor that "Money can be saved by greater use of standardized construction methods and by giving local districts more control over school construction decisions."

Some types of relocatable or portable classrooms provide space less expensively. The least expensive portable units cost around $33 per square foot — or $32,000 for a 960-square-foot classroom — exclusive of site costs and financing. School district officials characterize this as a minimum standard unit with few aesthetics and low durability. A more typical price would be $41,000 to $55,000 for a unit with upgraded siding, roofing, electrical, and heating/ventilation systems. Installation can run as high as $20,000 per unit. Some relocatables are neither less expensive nor lower in quality than permanent construction. Classroom units can be priced as high as $100,000. This is in contrast to permanent construction costs which can range anywhere from $120 to $180 per square foot.

"Money can be saved by greater use of standardized construction methods and by giving local districts more control over school construction decisions."

A major advantage of using relocatable structures is the speed with which they can be installed. Bidding processes and the state-required inspection procedures are well established with the manufacturers. This makes it possible to have a new structure in place within a few months — if a district is using local funds. If a district is dependent on state funding, the approval process can make the wait considerably longer, depending on the availability of funds and the district's place on the state's priority list.

The question is whether relocatables can provide a durable, high quality facility that represents a "good investment" for school districts and creates a positive school environment. The consensus among most school facility experts is that they can, in the right circumstances, and thus need to remain a major component in the school facility mix. (See the April 1998 EdFact, *Portable School Buildings*, for a more thorough discussion.)

Can schools make better use of facilities? Many people believe communities need to rethink the way school buildings are used. The classic model is a public building used only for school purposes and programs. The children who live in the surrounding community attend their neighborhood school. The building is open six to eight hours a day, five days a week, from late August until June. And all students are physically present at the school. This paradigm has already changed in many schools in California and most observers believe more of those changes are necessary.

A common if sometimes controversial alternative is year-round education (YRE). As of July 1997, about 22% of California's students attended schools with year-round calendars. Multi-track YRE can increase school facility capacity by as much as 25%, although it does add some operational costs. The state has provided financial incentives to schools that choose this option.

Many school staffs and communities oppose YRE, especially initially. School districts that have adopted it report that it takes careful planning and a high level of local dialogue and support to be successful.

Some school districts share facilities with other public entities. This is a way to maximize the taxpayers' infrastructure investment. A common arrangement for decades has been the use of school grounds as community parks, with the city typically taking responsibility for maintenance. This kind of agreement gives cities additional park land or playing fields, and also helps school districts. Absent formal arrangements, communities with inadequate

open space routinely use school grounds like parks anyway. School districts often end up paying for the increased maintenance costs that result from heavy community use.

Many communities are beginning to explore similar arrangements in regard to buildings. Day care facilities, libraries, and community health clinics are some of the most common examples. In Bakersfield, a unique partnership between the Bakersfield City School District and the County Office of Education resulted in the construction of a new downtown elementary school that provides both a school and day care facility for area employees.

Long term, new educational approaches may also relieve some of the pressure on facilities. Advances in telecommunications hold the possibility that more students will participate in "distance learning." And the increasing focus on school-to-career linkages may create more opportunities for students to go to school at job sites instead of in conventional classrooms. With rare exceptions, however, any significant impact of such programs on school facility needs seems a long way off.

Local communities have a great deal of discretion over these types of changes in how school facilities are used. Sometimes, they require a change in attitude or practice on the part of schools and other local agencies. Nonetheless, they represent valuable options for addressing some school as well as community facility needs.

School Facility Needs Vary Dramatically

It is beyond dispute that school facility conditions vary dramatically from one community to another. Some of this is the result of simple demographics, where population growth has occurred over time. And much of it is the long-term impact of differential financial resources and facilities investment.

Even within school districts, great inequities exist in regard to school facilities. Some are the result of development patterns in local neighborhoods. Some are legacies from facility decisions made decades or even a century ago. As school districts struggle to address their unique facility issues, they have to work with what they have. They can also, however, stretch their thinking to consider new alternatives for maximizing the use of their facilities.

An underlying and potentially explosive question regards facility conditions that are already profoundly unequal. What inequities are Californians prepared to tolerate, and what level would the courts find tolerable?

TAKING STOCK OF EXISTING SCHOOL FACILITIES

When school districts are confronted with a facility problem, a careful analysis of existing school facilities, short- and long-term educational goals, and their spending priorities can help make rational decisions possible. Various models exist to help with this process.

In mostly urban San Diego Unified School District, for example, planners developed a matrix which allowed them to evaluate and prioritize the facility needs of the district's 119 elementary schools as it implemented class size reduction. Their focus was overcrowding in terms of school site size. They developed the following optimum school numbers:

■ Enrollment	700 students
■ Students per acre	100
■ Percentage of portable classrooms	30% or less
■ Amount of library/media space per student	3.45 square feet

Some Concluding Thoughts

The task of determining how much California needs to invest in school facilities is complex and the answers are far from obvious. Making a realistic projection about the need is a first step. Beyond that, state policymakers, local school officials, and the general public need to agree on the minimum quality of school buildings they believe is acceptable and the optimum quality they believe is necessary and desirable for educational improvement. They need to determine the appropriate mix of state and local funding. And they need to make sure every dollar is well spent.

In the spring of 1998, local school communities continue to wait. Time will tell if the Governor and Legislature give Californians

an opportunity to vote in November of 1998 on a new state school facilities bond and on whether or not local bond elections should require a two-thirds approval. Until these state level decisions are made, the options for local school districts remain constrained.

Yet ultimately — whatever state leaders decide about funding, standards, equity, and approval processes — the actual construction and management of school facilities remain profoundly local endeavors. Throughout California, school districts and communities must decide how they are going to provide schools for the children they have the responsibility to educate. Hopefully, they will find the funding and resolve necessary to make those schools safe, well-maintained places which help both students and teachers do their best work.

TO LEARN MORE

See these EdSource publications

Portable School Buildings: Scourge, Saving Grace, or Just Part of the Solution? for a more thorough look at this issue.

Smaller Classes for the Youngest Students to see how the first year of class size reduction has impacted school facilities.

California's K-12 School Finance System for background information on school facilities funding.

Get copies of related reports

Contact the Little Hoover Commission, 1303 J Street, Suite 270, Sacramento, CA 95814-2935 (phone 916/445-2125, fax 916/322-7709) for their June 1992 report, *No Room for Johnny: A New Approach to the School Facilities Crisis*, and for information about a report expected in mid-1998.

Order *The Form of Reform: School Facility Design Implications for California Educational Reform* from the Publications Division, Sales Office, California Department of Education, P.O. Box 271, Sacramento, CA 95812-0271 (fax 916/323-0823).

For a national perspective, see the spring 1997 issue of *PROBE, Designing School Facilities for Learning*. Copies are available through WestEd, Attn: Publications Dept., 730 Harrison Street, San Francisco, CA 94107-1242 (phone 415/565-3044; fax 415/565-3012).

Read the report *California K-12 School Facilities and the Implementation of Class-Size Reduction* published by School Services of California, 1121 L Street, Suite 1060, Sacramento, CA 95814 (phone 916/446-7517; fax 916/446-2011).

Contact these organizations

Contact the California Taxpayers Association, 921 11th Street, Suite 800, Sacramento, CA 95814 (phone 916/441-0490) for a copy of their article *"Informing the Local Bonds Debate"* in the December 1997 issue of *Cal-Tax Digest*.

For data about school construction, contact the Coalition for Adequate School Housing (C.A.S.H.), 1130 K Street, Suite 210, Sacramento, CA 95814; (phone 916/488-8577).

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REPORT

California's School Facilities Predicament

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EdSource is an independent, impartial, statewide not-for-profit 501(c)(3) organization established in California in 1977.

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