

SCHOOL
Planning & Management

2003 Report
Construction

2003 Report Construction

8th Annual School

by Paul Abramson

More school construction was put in place in the United States in 2002 than in any other year in history. Altogether, projects estimated to have cost \$21.6 billion were completed in 2002. The previous high for a single year occurred in 2000, when \$21.1 billion was completed.

The amount of construction completed in 2002 came as something of a surprise. Earlier indications had been that school construction was on a plateau — albeit a very high plateau — of about \$20 billion annually and that construction might actually decline slightly. Those predictions were proven wrong — at least for the last year.

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Projections of work to be completed in 2003 once again indicate that there may be a slight slowing (to \$20.8 billion), and plans for construction starts in 2003 (just under \$20 billion) appear to confirm that trend, but only time — and another year of surveying — will tell the true story. Meanwhile, school districts, school leaders and those who build and sell supplies and materials can know that the school construction explosion that started in 1996 has continued virtually unabated. Even if the numbers decline slightly during the next few years, they will remain at a very high level.

Construction in 2002 also confirmed another trend, one that is seeing school districts spend the major portion of their construction dollars on new buildings, rather than on adding to or retrofitting existing ones. For most of the past 20 years, more construction dollars were spent on existing buildings than on new ones. But in 2002, there was a sharp upturn in new buildings, with 57 percent of the money spent on them. Projections for completions and starts in 2003 confirm this direction.

These are among key findings from *School Planning & Management's*

2002, construction projected to be completed in 2003 and projects identified as starting in 2003.

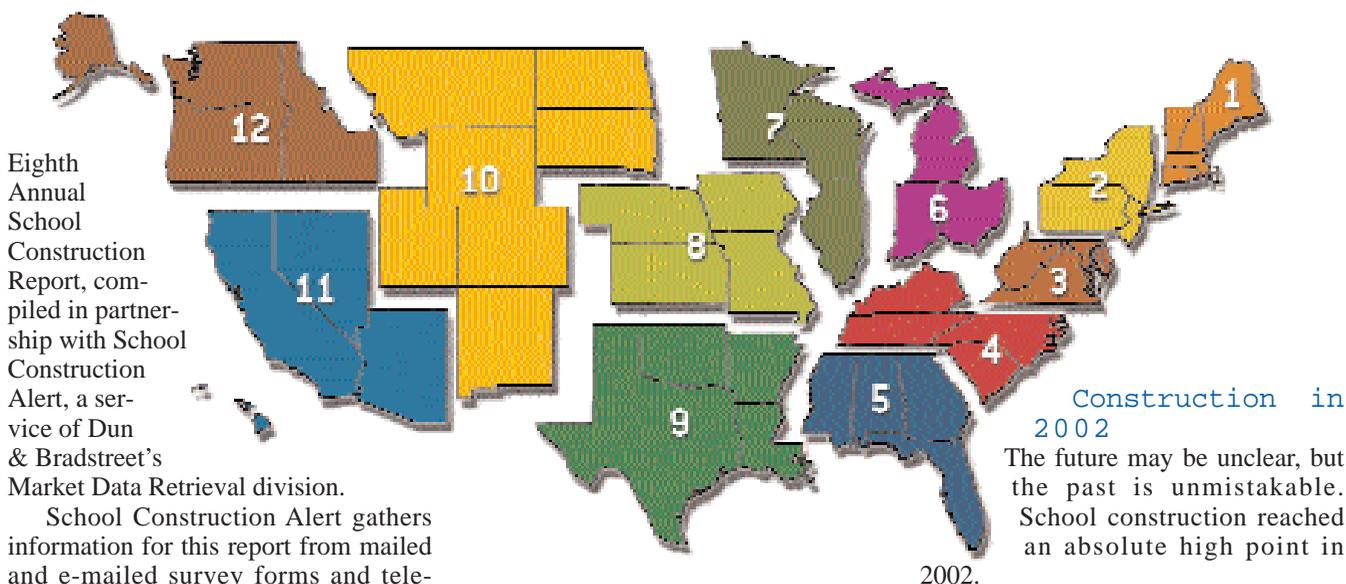
National Scene

Public school districts in the United States (see Table 1) spent \$21,627,618,000 on construction projects completed during the 2002 calendar year. Of this, \$12.4 billion (57.4 percent) went into the design and erection of entirely new schools; the balance was spent on enlarging (\$5.3 billion) and upgrading (\$4 billion) existing buildings.

will not be available for another year.

School construction projected to start in 2003 totals just less than \$20 billion. This could indicate a softening of the school construction market, but that is not necessarily so. Many districts, for example, will not predict when their projects will start (even though they have a date in mind) until they actually have the money approved by the voters and/or the state.

Judging from past history, the projections of starts tend to be lower than the resulting compilation of completed projects.



Eighth Annual School Construction Report, compiled in partnership with School Construction Alert, a service of Dun & Bradstreet's Market Data Retrieval division.

School Construction Alert gathers information for this report from mailed and e-mailed survey forms and telephone calls to every school district in the United States. Information is gathered on individual projects during a three- and four-year period as each project progresses from planned construction to completion. Each follow-up contact is designed to elicit more detailed and refined information on costs, size and facilities.

School Planning & Management takes the raw information from specific years and projects it, based on number of districts responding to the survey and the point in their projects at which the information was collected. Districts are analyzed by region and by size, so that accurate projections can be made.

Based on the School Construction Alert surveys, this year's School Construction Report provides estimates on construction completed in the Year

As previously noted, these findings represent a major shift in school construction spending from a previous emphasis on improving existing schools to an emphasis on building new ones.

This year (2003), school districts project completing \$20.8 billion worth of construction. While the total amount projected is almost \$1 billion less than was completed in 2002, the emphasis remains on new buildings, with 57 percent of the funding being used for that purpose. It should be noted that these are preliminary figures; final estimates of construction in 2003

Construction in 2002
The future may be unclear, but the past is unmistakable. School construction reached an absolute high point in 2002.

As Table 2 shows, \$21.6 billion worth of construction was put in place in 2002. Of that, \$12.4 billion was spent on entirely new school buildings. Another 24.3 percent (\$5.3 billion) went to providing additional space in existing schools. The remaining \$4 bil-

Table 1
School Construction in the U.S.
(\$000s)

	2002 Completions	2003 Projected Completions	2003 Starts
New Schools	\$12,411,565	\$11,834,519	\$11,821,446
Additions	\$5,253,876	\$4,644,325	\$4,328,931
Renovations	\$3,962,177	\$4,282,422	\$3,843,140
Total	\$21,627,618	\$20,761,266	\$19,993,517



lion (just under 18.3 percent) was spent on upgrading existing structures including ADA compliance, new heating and ventilating systems, roofs, windows and the like.

Better than four of every five construction dollars were spent on providing new space (new buildings and additions combined). Increasing numbers of students continues to be the main force behind the construction.

While the demand for new space is obvious and relatively easy to show, schools should not lose sight of their need to upgrade existing space. Little has been done during the last few years to eat into the huge backlog of deferred maintenance, and the drop in retrofit spending in 2002 suggests we are falling further behind.

Table 2 shows the national construction picture. It also shows how much school districts in each of 12 regions of the nation (see definition of regions on page 3) spent on construction and how they spent it.

All but two of the 12 regions put more than \$1 billion in construction in place in 2002, but the manner in which they spent their dollars varies considerably.

Region 9, including Arkansas, Louisiana and Oklahoma but mainly driven by Texas, was by far the highest spending region with \$3.439 billion worth of construction put in place. This region was responsible for almost 16 percent of the nation's school construction spending.

Better than 68 percent of the region's dollars (\$2.3 billion) went into entirely new

buildings, probably a reflection of population growth and movement that makes it necessary to provide new space in new areas. Because the cost of construction in this region is lower than in many other parts of the nation (see regional tables, pages 11-16), it is also likely that more space was put into place in Region 9 than anywhere else.

The three states making up Region 2 (New Jersey, New York and Pennsylvania) spent \$2.48 billion on school construction in 2002. Districts in this region put almost 30 percent of their dollars into upgrading existing buildings, rather than providing more space. Region 2 was responsible for 11.5 percent of the nation's school construction spending.

Region 5, encompassing Alabama, Florida, Georgia and Mississippi, was the number three region in terms of total spending at \$2.348 billion. Its emphasis is obviously on providing new schools with almost three out of every four construction dollars spent for that purpose. With just 10.1 percent of its dollars spent on retrofit of existing buildings, Region 5 falls near the bottom in terms of bringing existing

schools up to modern standards. It may be that states in that region are choosing to replace, rather than repair.

Two other regions spent more than \$2 billion in 2002. Region 11 (Arizona, Hawaii, California and Nevada) put \$2.1 billion in place, with the emphasis on new buildings. Region 4 (Kentucky, North Carolina, South Carolina and Tennessee) spent almost as much and divided its dollars in a similar manner.

Regions 6 and 7, essentially the Great Lakes States, reversed position this year, with Region 6 (Indiana, Michigan and Ohio) spending just under \$1.6 billion (compared to \$2.2 billion the year before), while Region 7 (Illinois, Minnesota and Wisconsin) increased its spending from \$1.6 billion in 2001 to \$1.9 billion last year. Region 7 is another of the regions that puts the major portion of its construction dollars into expanding and retrofitting existing buildings.

The six New England states (Region 1) continue spending at a relatively high level and on a relatively even keel (\$1.7 billion each of the last two years), but there has been a shift to putting more than half their dollars into new buildings this year.

TABLE 2
School Construction Completed in 2002

Region	New	Addition	Renovation	Total	% of Spending For			% Reg 1 Of Nation
					New	Addition	Renovation	
1	\$962,517,958	\$381,419,390	\$324,003,302	\$1,667,940,650	57.7%	22.9%	19.4%	7.7%
2	\$1,082,093,144	\$661,636,573	\$735,580,761	\$2,479,310,478	43.6%	26.7%	29.7%	11.5%
3	\$602,239,148	\$267,126,230	\$219,430,494	\$1,088,795,872	55.3%	24.5%	20.2%	5.0%
4	\$1,264,486,982	\$478,447,898	\$324,049,430	\$2,066,984,310	61.2%	23.1%	15.7%	9.6%
5	\$1,722,329,828	\$387,851,637	\$237,532,920	\$2,347,714,385	73.4%	16.5%	10.1%	10.9%
6	\$934,515,209	\$396,320,462	\$357,051,413	\$1,687,887,084	55.4%	23.4%	21.2%	7.8%
7	\$848,278,899	\$672,111,391	\$404,148,057	\$1,924,538,347	44.1%	34.9%	21.0%	8.9%
8	\$501,085,584	\$340,735,356	\$239,872,303	\$1,081,693,243	46.3%	31.5%	22.2%	5.0%
9	\$2,340,722,834	\$729,537,269	\$368,734,787	\$3,438,994,890	68.1%	21.2%	10.7%	15.9%
10	\$337,813,360	\$283,797,559	\$225,912,870	\$847,523,789	39.8%	33.5%	26.7%	3.9%
11	\$1,352,755,237	\$425,149,842	\$371,114,284	\$2,149,019,363	62.9%	19.8%	17.3%	9.9%
12	\$462,727,072	\$229,742,708	\$154,746,793	\$847,216,573	54.6%	27.1%	18.3%	3.9%
Nat'l	\$12,411,565,255	\$5,253,876,315	\$3,962,177,414	\$21,627,618,984	57.4%	24.3%	18.3%	100.0%

To Read This Table: Public schools in Region 1 (New England) completed new buildings worth more than \$962 million in 2002. They also put in place \$381 million in additions to existing buildings and spent \$324 million on renovations. School districts in Region 1 completed more than \$1.6 billion of school construction in 2002 with 57.7 percent of those dollars spent on new buildings, the balance on adding to and upgrading existing buildings. Region 1 accounted for 7.7 percent of all school construction dollars spent in the United States in 2002.

Region 3 (Delaware, District of Columbia, Maryland, Virginia and West Virginia) and Region 8 (Iowa, Kansas, Missouri and Nebraska) both spent more than \$1 billion in 2002, the first time either region reached or breached that spending barrier. Only Region 10 (Colorado, Montana, New Mexico, North Dakota, South Dakota, Utah and Wyoming) and Region 12 (Alaska, Idaho, Oregon and Washington) spent less than \$1 billion in 2002, both putting about \$850 billion of construction in place.

What's Underway Now

Table 3 looks at construction projected to be completed during the current calendar year. The total is almost \$1 billion less than in 2002, but the patterns are similar. Just more than 57 percent (\$11.8 billion) is destined for new buildings, the balance is on existing ones. Retrofit is getting more attention this year than last, perhaps a reaction to soaring

Table 3
School Construction Expected to be Completed in 2003

Region	New	Addition	Renovation	Total	% of Spending For			% Reg I Of Nation
					New	Addition	Renovation	
1	\$889,964,320	\$304,855,718	\$350,169,380	\$1,544,989,418	57.6%	19.7%	22.7%	7.4%
2	\$799,483,526	\$819,110,203	\$829,502,408	\$2,448,096,137	32.6%	33.5%	33.9%	11.8%
3	\$607,779,409	\$232,676,660	\$215,700,571	\$1,056,156,640	57.5%	22.0%	20.5%	5.1%
4	\$1,433,215,621	\$423,599,795	\$425,547,457	\$2,282,362,873	62.8%	18.6%	18.6%	11.0%
5	\$1,438,495,124	\$447,078,549	\$325,304,872	\$2,210,878,545	65.1%	20.2%	14.7%	10.6%
6	\$1,191,095,849	\$316,837,076	\$334,922,523	\$1,842,855,448	64.6%	17.2%	18.2%	8.9%
7	\$1,143,602,221	\$334,090,037	\$258,380,466	\$1,736,072,724	65.9%	19.2%	14.9%	8.4%
8	\$595,435,463	\$222,014,672	\$263,111,964	\$1,080,562,099	55.2%	20.5%	24.3%	5.2%
9	\$1,619,981,200	\$777,608,042	\$410,389,592	\$2,807,978,834	57.7%	27.7%	14.6%	13.5%
10	\$604,421,777	\$185,470,996	\$169,719,312	\$959,612,085	63.0%	19.3%	17.7%	4.7%
11	\$1,164,573,721	\$433,378,883	\$463,780,296	\$2,061,732,900	56.5%	21.0%	22.5%	9.9%
12	\$346,471,184	\$147,604,841	\$235,893,365	\$729,969,390	47.5%	20.2%	32.3%	3.5%
Nat'l	\$11,834,519,415	\$4,644,325,472	\$4,282,422,206	\$20,761,267,093	57.0%	22.4%	20.6%	100.0%

To Read This Table: In 2003, public schools in Region 1 (New England) are expecting to complete new buildings worth almost \$890 million. They also expect to complete additions worth \$305 million and renovations valued at \$350 million. Total spending in Region 1 is projected at \$1.545 billion, with 57.6 percent of the dollars for new buildings, the balance for additions and renovations. New England is projected to account for 7.4 percent of all school construction dollars spent in the nation.

energy costs.

Region 9 will remain the largest spender, though at a level somewhat below what was reported as completed in 2002. Regions 2, 4 and 5 are next, in

that order, each with more than 10 percent of total national spending. Region 11 expects to be responsible for slightly less than 10 percent of the national total. Work to be completed in 2003

Table 4
School Construction Projected to Start in 2003

Region	New	Addition	Renovation	Total	% of Spending For			% Reg I Of Nation
					New	Addition	Renovation	
1	\$642,157,305	\$397,296,915	\$209,945,843	\$1,249,400,063	51.4%	31.8%	16.8%	6.2%
2	\$870,817,096	\$652,432,595	\$547,814,301	\$2,071,063,992	42.0%	31.5%	26.5%	10.4%
3	\$443,094,745	\$197,562,089	\$221,888,900	\$862,545,734	51.4%	22.9%	25.7%	4.3%
4	\$1,100,388,719	\$336,579,527	\$430,043,669	\$1,867,011,915	58.9%	18.0%	23.1%	9.3%
5	\$1,327,894,328	\$428,084,858	\$449,337,959	\$2,205,317,145	60.2%	19.4%	20.4%	11.0%
6	\$791,130,515	\$263,752,633	\$288,898,378	\$1,343,781,526	58.9%	19.6%	21.5%	6.7%
7	\$722,113,584	\$300,630,675	\$374,579,529	\$1,397,323,788	51.7%	21.5%	26.8%	7.0%
8	\$414,109,823	\$271,226,593	\$303,884,802	\$989,221,218	41.9%	27.4%	30.7%	4.9%
9	\$1,788,943,536	\$687,892,467	\$342,811,326	\$2,819,647,329	63.4%	24.4%	12.2%	14.2%
10	\$341,246,154	\$215,561,082	\$147,323,243	\$704,130,479	48.5%	30.6%	20.9%	3.5%
11	\$2,812,152,211	\$449,378,355	\$228,138,097	\$3,489,668,663	80.6%	12.9%	6.5%	17.5%
12	\$567,397,889	\$128,533,612	\$298,474,435	\$994,405,936	57.1%	12.9%	30.0%	5.0%
Nat'l	\$11,821,445,905	\$4,328,931,401	\$3,843,140,482	\$19,993,517,788	59.1%	21.7%	19.2%	100.0%

To Read This Table: In the year 2003, school districts in Region 1 (New England) expect to start construction on new buildings worth more than \$642 million. They will also start work on \$397 million in additions to existing buildings and renovations valued at \$210 million. Altogether, school districts in Region 1 predict they will start \$1.2 billion worth of school construction in 2003, with 51.4 percent of the dollars devoted to new schools, the balance to additions and renovations. Region 1's spending is about 6.2 percent of all school construction spending projected to start in 2003.

should be well underway by now, but there are always slips and changes — projects that get put on a faster schedule to meet growing demand; others that slow down. It will be interesting to see how those changes affect final figures on construction taking place this year, but unless there are a lot of as yet unreported projects, it appears that 2003 will not quite reach last year's peak spending.

Table 4 looks at construction projected to start this year. The total, \$19.994 billion, is somewhat lower than the construction starts that were predicted a year ago for 2002. This marks the third consecutive year that projections of work to start the next year have fallen off, possibly, as noted earlier, because districts do not want to call attention to their plans until the money is available. It may also be the beginning of a trend. It is certainly something that will have to be watched closely, especially as the economy continues to have difficulties and so many other state and local agencies raise taxes and fees.

When examining the type of projects that will be undertaken, the national picture does not change particularly. A slightly larger percentage of the construction dollars (59 percent) go to new construction and the total, \$11.8 billion is almost identical to the amount expected to be spent this year. The fall-off is mainly in dollars to be spent on additions and retrofits, projects that may yet get underway as districts examine heating bills and other problems after the winter and plan their summer work.

It is when one looks at the regional responses that differences begin to appear. Eight regions predict they will start less construction this year than they will complete. Two others (Regions 5 and 9) expect to start about the same amount of work as

they complete. Only the two west coast regions (Regions 11 and 12) indicate that they will truly start more work in 2003 than they will complete this year.

Region 12 will still be spending less than \$1 billion on work commencing this year, but the \$994 million projected would make this the busiest year ever for school construction in the Pacific Northwest.

As for Region 11, dominated by California, its districts are predicting a veritable boom in construction starts, based largely, one suspects, on the successful passage of that state's \$13.5-billion bond issue, along with the passage of several other smaller local issues. Region 11 school districts expect to spend more than \$2.8 billion on new schools alone starting this year. Need we repeat Horace Greeley's words: "Go west young man, go west"!

What Goes Into a School?

Table 5 provides a profile on a national basis of new schools currently being built and expected to be completed during the current calendar year. The figures shown in Table 5 are medians. That means, for example, that of the elementary schools being built in the nation today, half of them will cost \$118.06 per sq. ft. or more and the other half will be less. By using medians rather than averages, we are able to minimize the influence of special case schools that may be extremely expensive or extremely inexpensive, or cases where reporting is faulty.

Table 5 shows that the median elementary school in the United States cost \$118.06 per sq. ft. to build. Median spending was \$13,600 per pupil and the median school provided 114.4 sq. ft. for each student.

Table 5
Profile of New Schools Currently Underway

National Medians	\$/Sq. Ft.	\$/Student	Sq. Ft./Student	No. Of Students	Building Size (Sq. Ft.)	Building Cost (\$000's)
Elementary	\$118.06	\$13,600	114.4	625	70,400	\$8,500
Middle	\$121.05	\$16,250	136.7	800	110,000	\$13,600
High	\$122.16	\$19,438	154.2	1,200	200,000	\$25,000
Low Quartile	\$/Sq. Ft.	\$/Student	Sq. Ft./Student	No. Of Students	Building Size (Sq. Ft.)	Building Cost (\$000's)
Elementary	\$96.49	\$10,769	103.6	500	60,000	\$6,500
Middle	\$102.94	\$12,500	118.2	680	86,000	\$10,000
High	\$103.45	\$14,886	131.3	900	138,000	\$18,000
High Quartile	\$/Sq. Ft.	\$/Student	Sq. Ft./Student	No. Of Students	Building Size (Sq. Ft.)	Building Cost (\$000's)
Elementary	\$144.00	\$17,778	133.3	788	90,000	\$11,293
Middle	\$130.00	\$18,333	143.3	900	120,000	\$15,460
High	\$148.02	\$25,000	180.0	1,800	278,246	\$38,858
Top 10 Percent	\$/Sq. Ft.	\$/Student	Sq. Ft./Student	No. Of Students	Building Size (Sq. Ft.)	Building Cost (\$000's)
Elementary	\$185.64	\$36,000	150.0	900	103,241	\$15,100
Middle	\$184.75	\$28,142	176.3	1,200	180,596	\$25,000
High	\$174.36	\$29,412	215.6	2,400	340,000	\$46,500

To Read This Table: The national median cost per sq. ft. for construction of an elementary school currently underway is \$118.06. Cost per student is \$13,600, and the median school provides 114.4 sq. ft. per student. One quarter of all school districts (the Low 25%) is spending \$96.49 per sq. ft. or less for its elementary school construction, while one quarter of all districts spends \$144 per sq. ft. or more. One in 10 school districts estimated their cost per sq. ft. for a new elementary school at more than \$185.

Base: 279 Elementary Schools; 122 Middle Schools; 110 High Schools.

Looking at middle schools, the cost was \$121.05 per sq. ft. and \$16,250 per student. The median middle school provides almost 137 sq. ft. for each of the 800 students it houses. Note that in finding medians, each variable is looked at separately so that the school that cost \$121 per sq. ft. is not necessarily the same one that spends \$16,250 per student.

Moving on to the high schools, the cost of the median high school is \$122.16 per sq. ft. and \$19,438 is being spent per pupil. The median high school provides 154 sq. ft. for each of its students. This is slightly more space per student than was reported during the last few years.

Finding Your Fit

Your district may not be a median district in terms of aspirations, local costs or in terms of what it puts into a building. The low quartile shown in Table 5 is the point at which 75 percent of the reporting schools are higher and 25 percent are lower. Thus, 25 percent of elementary schools being completed this year will cost \$96.49 per sq. ft. or less. One quarter of the elementary schools will provide just 103.6 sq. ft. per student or less.

If your district is in a high spending area or feels that it is a high-quality district in terms of how it spends its money and how it builds its buildings, you may want to look at the high quartile numbers. They show, that 25 percent of the new elementary schools being built cost \$144 per sq. ft.; 75 percent cost less. One quarter of the elementary schools are providing

more than 133 sq. ft. per student. At the high school level, 25 percent of the new buildings will provide 180 sq. ft. per student or more.

Is your district in the top 10 percent of the nation? If so, you may be spending \$185 for each sq. ft. of your elementary schools and providing 150 sq. ft. per student. Table 5 gives you an opportunity to compare your district with other districts around the country that you think have your aspirations and/or your ability to pay. It is meant as an indicator, not an arbitrator.

Where the Pressure Is Greatest

School districts — especially those that are growing rapidly — face multiple

pressures for spending construction dollars. Which is more important, to build a new elementary school to relieve overcrowding, to remodel an existing junior high school so that a middle school program can be installed or to add to the high school to meet the crush of larger incoming classes? Can we afford to do everything at once? These are the questions school boards must answer as they plan their building programs.

Table 6 takes a look, in dollar terms, at how some of those questions were answered. It shows the school level at which construction took place and the type of construction that was undertaken.

Among school construction projects completed in 2002, 36.9 percent of the

TABLE 6
School Construction: Where the Money Goes, by Building Type

2002 Completions	Elementary	Middle	High	District	Total
New	\$4,958,813,861	\$2,765,814,227	\$4,596,467,789	\$90,469,377	\$12,411,565,254
Additions	\$1,610,420,989	\$885,453,341	\$2,561,130,718	\$196,871,266	\$5,253,876,314
Renovation	\$1,422,008,260	\$724,755,341	\$1,636,894,319	\$178,519,495	\$3,962,177,415
Total	\$7,991,243,110	\$4,376,022,909	\$8,794,492,826	\$465,860,138	\$21,627,618,983
% of Year's Dollars	36.9%	20.2%	40.7%	2.2%	100.0%
2003 Expected Completions	Elementary	Middle	High	District	Total
New	\$4,951,410,071	\$2,657,654,673	\$4,116,576,221	\$108,878,449	\$11,834,519,414
Additions	\$1,575,463,604	\$887,268,958	\$2,062,078,000	\$119,514,909	\$4,644,325,471
Renovation	\$1,393,509,118	\$648,786,996	\$2,026,888,469	\$213,237,623	\$4,282,422,206
Total	\$7,920,382,793	\$4,193,710,627	\$8,205,542,690	\$441,630,981	\$20,761,267,091
% of Year's Dollars	38.1%	20.2%	39.5%	2.1%	99.9%
2003 Projected Starts	Elementary	Middle	High	District	Total
New	\$4,161,923,537	\$2,645,730,065	\$4,938,526,469	\$75,265,833	\$11,821,445,904
Additions	\$1,413,142,793	\$1,063,742,841	\$1,669,265,847	\$182,779,920	\$4,328,931,401
Renovation	\$1,213,409,661	\$805,026,464	\$1,417,193,330	\$407,511,027	\$3,843,140,482
Total	\$6,788,475,991	\$4,514,499,370	\$8,024,985,646	\$665,556,780	\$19,993,517,787
% of Year's Dollars	34.0%	22.6%	40.1%	3.3%	100.0%
Total	Elementary	Middle	High	District	Total
New	\$14,072,147,470	\$8,069,198,964	\$13,651,570,479	\$274,613,659	\$36,067,530,572
Additions	\$4,599,027,386	\$2,836,465,140	\$6,292,474,565	\$499,166,096	\$14,227,133,187
Renovation	\$4,028,927,039	\$2,178,568,801	\$5,080,976,118	\$799,268,145	\$12,087,740,103
Total	\$22,700,101,895	\$13,084,232,905	\$25,025,021,162	\$1,573,047,900	\$62,382,403,862
% of Identified Dollars	36.4%	21.0%	40.1%	2.5%	100.0%

To Read This Table: Of the \$12.412 billion spent on new buildings in 2002, \$4.959 billion went into elementary schools, \$2.766 billion was spent on middle schools and \$4.596 billion on high schools. Another \$90 million was spent on district buildings encompassing multiple grades, special programs or administrative functions.

total dollars went into elementary schools, 40.7 percent into high schools and just 20.2 percent into middle schools. A little more than two percent was for projects at the district level, including administrative quarters, bus garages, maintenance centers, etc.

Table 6 not only shows the level at which construction dollars are spent, but the purpose. For example, of the \$8 billion spent last year on elementary schools, almost \$5 billion was for new buildings. That's about 62 percent.

A slightly higher percentage of dollars spent on middle schools also went to new buildings. At the high school level, however, just more than 50 percent of construction dollars were spent on new buildings, the balance on additions (29 percent) and retrofits.

While elementary schools continue to take slightly more than a third of the construction dollars, high schools now consistently take more — about 40 percent. Apparently, with the population boom now in the secondary grades, the need for more space at that level is tipping the spending balance.

Does Size Matter?

There is increasing evidence, from an educational point of view, that students do better in smaller schools, particularly in urban areas. A book published within the last few months, "Dollars and Sense: The Cost Effectiveness of Small Schools," recommends that elementary schools have 25 students per grade (K-6 schools would enroll 175), that middle schools enroll 50 students per grade (a grades 6-8 building would be built for 150 students) and that high schools be limited to 75 per grade making the



typical four-year high school a 300-student building.

There are many people who would question having schools that small for a variety of reasons (breadth of program, cost of operation, etc.) but one of the issues that comes up is whether it is economical to build small schools.

Table 7 makes an effort to look at that question. In this case, all of the new school buildings on which information was available were lined up by size. Then they were divided into four even groups so that median costs and other information could be found among the smaller and larger buildings.

Looking at elementary schools, one quarter were designed to house 500 or fewer students. Among that group, the median school will house 450. It will

Table 7
Does School Size Matter?

	Median Number of Students	Median Size of Building	Median Project Cost	Median Cost per sq foot	Median Cost per Student	Median Space per student (SF)
Elementary schools smallest quarter (less than 500)	450	53,667	\$6,000,000	\$111.60	\$13,547	120.5
National Median	625	70,400	\$8,500,000	\$118.06	\$13,600	114.4
Largest quarter (790 to 1500 students)	900	98,000	\$10,000,000	\$106.95	\$11,765	107.6
Middle Schools smallest quarter (less than 680)	593	80,000	\$10,000,000	\$138.32	\$17,647	136.7
National Median	800	110,000	\$13,600,000	\$121.05	\$16,250	136.7
Largest quarter (1,000 to 1,800 students)	1,200	150,000	\$18,250,000	\$113.59	\$13,333	134.7
High Schools smallest quarter (less than 850)	650	100,000	\$12,000,000	\$108.70	\$18,824	166.5
National Median	1,200	200,000	\$25,000,000	\$122.16	\$19,438	154.2
Largest quarter (1,800 to 3,200 students)	2,125	304,000	\$42,254,000	\$131.18	\$18,625	142.5

contain just less than 54,000 sq. ft. and cost \$6 million. The median cost per sq. ft. among the smaller elementary schools was \$111.60. The median cost per student was \$13,547 and the median amount of space provided for each student was 120.5 sq. ft.

By contrast, the largest quarter of the elementary schools housed anywhere from 790 to 1,500 students, certainly large schools by any measure. The median was 900 students and the median cost was \$10 million. In terms of cost per student, the median among larger schools was \$106.95 per sq. ft., indicating that they were slightly less expensive to build, but these schools provided considerably less space per student, just 107.6 sq. ft.

When middle schools are considered, smaller schools appear to be somewhat more expensive than larger ones without providing more space per student, but advocates of small schools might well argue that buildings with a median size of 593 students really do not qualify as small.



At the high school level, some interesting changes occur. The smaller schools (and again, they are not truly small with the median size 650) appear to be less expensive per sq. ft. and more spacious. On a per-student basis, the costs are about the same. The explanation, in this case, may have something to do with the facilities provided — do smaller high schools avoid expensive shops or auditoriums? There is no way to answer these questions based on information available in this survey, but they are intriguing questions that will be examined as the concept of building for smaller student populations grows.

Providing Facilities

New school buildings have great similarities. All have classrooms and offices. Virtually all have facilities for physical education. Some kind of infirmary or nurse's station is a regular feature of all school buildings. Table 8 records the percentage of new schools planned to start in 2003 that will have specific facilities.

Table 9 details information collected on additions to existing schools. Classrooms are involved in a majority of elementary and middle school additions and in 40 percent of the high schools. Physical education facilities get attention at all levels.

In elementary schools, there is a significant move to create cafeterias, probably to turn existing multipurpose rooms (often dubbed "multiuseless") into either a gymnasium or a cafeteria, but not both. A number of middle schools are adding science rooms, office space and music facilities, while high schools seem to be interested in science and performance space when they add to existing structures.

TABLE 8
What New Schools Starting in 2003 Will Provide

(% of new schools that contain facility, by grade level)

Core Facilities	Elementary	Middle/JHS	High School
Classrooms	100.0%	100.0%	100.0%
Library	90.8%	81.8%	95.6%
Media Center	38.2%	89.4%	88.2%
Computer Lab	51.4%	95.3%	92.6%
Science Lab	4.4%	90.9%	91.2%
Music	71.9%	95.3%	91.2%
Arts/Crafts	93.2%	84.8%	76.5%
Gymnasium	85.5%	93.9%	94.1%
Multipurpose Room	28.9%	18.2%	39.7%
Stage	17.3%	36.4%	76.5%
Auditorium/Theater	10.0%	25.8%	66.2%
Special Ed/Resource	58.2%	77.3%	51.5%
Home Arts	1.6%	36.4%	51.5%
Industrial Tech.	0.0%	10.6%	39.7%
Vocational Shops	0.0%	3.0%	29.4%
Photo Lab	0.0%	0.0%	8.9%
TV/Radio Studio	0.0%	1.5%	2.9%
Support Facilities			
Offices	100.0%	100.0%	100.0%
Infirmary/Clinic	98.4%	100.0%	97.1%
Cafeteria	91.2%	98.5%	97.1%
Kitchen	90.0%	97.0%	94.1%
Lockers	8.0%	83.3%	92.6%
Technology Support			
LANs	94.4%	97.0%	98.5%
Fiber Optics/Cable	95.2%	98.5%	98.5%
Phone Lines in Class	20.1%	22.7%	41.2%
Technology Lab	0.0%	9.1%	29.4%
Language Lab	0.4%	3.0%	11.8%
Televised PA	0.0%	0.0%	1.5%
WANs	72.7%	80.3%	85.3%
Athletic Support			
Locker Rooms	3.2%	80.3%	92.6%
Bleachers	17.3%	78.8%	85.3%
Track	0.0%	4.5%	16.2%
Field House	0.0%	0.0%	7.4%
Fitness Center	1.2%	1.5%	19.1%
Tennis	0.0%	1.5%	8.8%
Pool	0.0%	0.0%	4.4%
Stadium	0.0%	0.0%	10.3%
Athletic Fields/Playground	97.6%	92.4%	91.2%
Other Facilities			
Day Care/Nursery	12.9%	1.5%	0.0%
Elevators	6.4%	1.5%	19.1%
Portables	0.0%	0.0%	0.0%
Security Equipment	100.0%	100.0%	100.0%

TABLE 9
What Additions Starting in 2003 Will Provide
 (% of school additions that contain facility, by grade level)

Core Facilities	Elementary	Middle/JHS	High School
Classrooms	58.8%	55.3%	40.0%
Library	6.1%	4.3%	5.3%
Media Center	6.9%	4.3%	8.0%
Computer Lab	2.0%	2.1%	6.7%
Science Lab	4.5%	14.9%	17.3%
Music	3.3%	10.6%	6.7%
Arts/Crafts	2.0%	2.1%	4.0%
Gymnasium	10.2%	21.3%	16.0%
Multipurpose Room	5.7%	2.1%	2.7%
Stage	0.8%	4.3%	13.3%
Auditorium/Theater	0.4%	4.3%	14.7%
Special Ed/Resource	4.1%	6.4%	2.7%
Home Arts	0.4%	0.0%	0.0%
Industrial Tech.	0.0%	0.0%	0.0%
Vocational Shops	0.0%	0.0%	1.3%
Support Facilities			
Offices	8.2%	17.0%	5.3%
Infirmery/Clinic	1.6%	2.1%	2.7%
Cafeteria	14.3%	6.4%	10.7%
Kitchen	4.9%	6.4%	6.7%
Lockers	0.4%	4.3%	8.0%
Technology Support			
LANs	15.9%	19.1%	18.7%
Fiber Optics/Cable	30.2%	46.8%	40.0%
Technology Lab	0.0%	4.3%	2.7%
Language Lab	0.0%	0.0%	0.0%
WANs	6.1%	12.8%	12.0%
Athletic Support			
Locker Rooms	0.0%	4.3%	6.7%
Bleachers	1.2%	17.0%	8.0%
Track	0.0%	4.3%	4.0%
Field House	0.0%	0.0%	0.0%
Fitness Center	0.0%	2.1%	6.7%
Pool	0.0%	0.0%	2.7%
Athletic Fields/Playground	2.8%	12.8%	6.7%
Building Upgrades			
ADA Compliance	84.5%	76.6%	81.3%
Alarm Systems	84.5%	76.6%	81.3%
Bathrooms	26.9%	38.3%	30.7%
Controls	58.4%	68.1%	64.0%
Electric Overhaul	96.3%	95.7%	89.3%
HVAC	96.3%	89.4%	88.0%
Lighting	95.5%	97.9%	88.0%
Plumbing	42.0%	53.2%	56.0%
Security Equipment	79.2%	74.5%	81.3%
Windows	84.9%	76.6%	81.3%

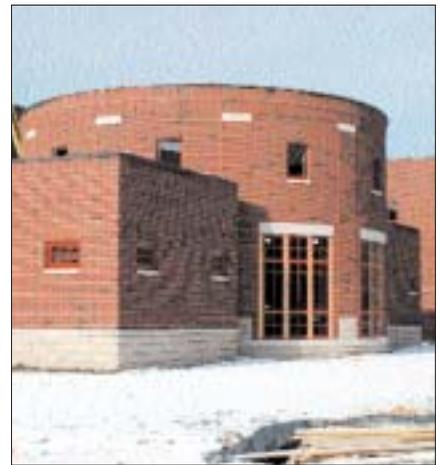
A Closer Look at Regions

National figures are always instructive, but from the point of view of the local school administrator or school board, it may be more important to know what your neighbors are doing. *School Planning & Management's* regional figures are designed to help you do that.

On the following pages, figures are given for each of the 12 regions of the United States. They show the total amount of construction activity by year and how that money was spent, on new schools, additions or renovations. They also show by year what percentage of money in your region goes into elementary schools, middle schools, high schools and district projects.

Finally, for new schools only, you can see the median cost per sq. ft., cost per student and sq. ft. per student for elementary schools, middle schools and high schools in your region. Also shown is the median project size including overall cost, number of students accommodated and size of the building.

The purpose of this report is to provide you with data that can help you understand not only what your own district needs, but also what others are doing and how



much their projects cost. The regional tables allow you to measure yourself against your neighbors. The national tables, particularly Table 5, allow you to compare with districts with similar aspirations. Thus, if districts in your region on average tend to provide minimal space per student, but your district aspires to a variety of programs that need space, you may want to look at the amount of space per pupil provided in the high quarter or 10 percent of the nation's schools.

With this information, you will have the data necessary to make your own plans and, in many cases, to help the public understand what you are building, why you are doing it and what it is likely to cost. Remember, there is no right or wrong. These are guidelines that need to be applied to your own local needs.

Region 1 CT, ME, MA, NH, RI, VT

Construction Activity (\$000s)

HOW MUCH IS BEING SPENT?

	New Schools	Additions	Renovations	Total
Completions in 2002	\$962,518	\$381,419	\$324,003	\$1,667,940
Completions in 2003	\$889,964	\$304,856	\$350,169	\$1,544,989
Starting in 2003	\$642,157	\$397,297	\$209,946	\$1,249,400
Total Activity	\$2,494,639	\$1,083,572	\$884,118	\$4,462,329
% of Total	55.9%	24.3%	19.8%	

WHERE IS THE MONEY GOING?

	Total	Elementary	Middle	High	District
Completions in 2002	\$1,667,940	41.6%	13.7%	44.2%	0.5%
Completions in 2003	\$1,544,989	36.8%	31.6%	30.0%	1.6%
Starting in 2003	\$1,249,400	34.4%	26.0%	39.1%	0.5%
Total Activity	\$4,462,329	37.8%	23.4%	37.9%	0.9%

NEW SCHOOLS ONLY

	Cost/ sq. ft.	Cost/ student	Sq. ft./ student	Median Cost (\$000's)	Median # Students	Median Size (Sq. ft.)
Elementary	\$162.34	\$24,762	130.8	\$12,100	520	66,720
Middle/JHS	\$181.82	\$28,142	169.2	\$20,000	700	118,600
High School	\$142.97	\$27,393	185.9	\$33,600	950	195,950

Region 1 completed almost \$1.7 billion worth of construction in 2002, just slightly more than was completed the year before. Predictions are that it will complete slightly less this year. Interestingly, one year ago, the same prediction was made, but construction actually rose slightly. There is a difference this time, however, one year ago, districts projected starting more work than ever in 2002. Now, proposed starts and completions are down.

Construction in New England costs more than in most other parts of the nation, and the schools not only spend more per sq. ft. and per student, they provide more space than many others. It's no surprise, then, that the median school in New England costs more than its counterpart elsewhere. However, it is interesting to note the size of schools in this region. They tend to be small by national standards, with elementary schools for 520, middle schools for 700 and high schools for 950.

Based on total dollars spent on new schools and average cost, indications are that about 40 new schools were completed in 2002. More than half, it appears, were elementary buildings, with about an equal number of middle and high schools. The future is less clear, but with overall spending, perhaps, trending down, it is likely that fewer schools will be completed or started in 2003.

Region 2 NJ, NY, PA

Construction Activity (\$000s)

HOW MUCH IS BEING SPENT?

	New Schools	Additions	Renovations	Total
Completions in 2002	\$1,082,093	\$661,636	\$735,581	\$2,479,310
Completions in 2003	\$799,484	\$819,110	\$829,502	\$2,448,096
Starting in 2003	\$870,817	\$652,433	\$547,814	\$2,071,064
Total Activity	\$2,752,394	\$2,133,179	\$2,112,897	\$6,998,470
% of Total	39.33%	30.48%	30.19%	

WHERE IS THE MONEY GOING?

	Total	Elementary	Middle	High	District
Completions in 2002	\$2,479,310	30.0%	13.9%	52.8%	3.3%
Completions in 2003	\$2,448,096	45.9%	13.9%	36.2%	4.0%
Starting in 2003	\$2,071,064	30.5%	26.1%	43.1%	0.3%
Total Activity	\$6,998,470	35.7%	17.5%	44.1%	2.7%

NEW SCHOOLS ONLY

	Cost/ sq. ft.	Cost/ student	Sq. ft./ student	Median Cost (\$000's)	Median # Students	Median Size (Sq. ft.)
Elementary	\$179.37	\$26,600	133.3	\$15,550	650	85,000
Middle/JHS	\$152.44	\$23,193	149.1	\$23,000	850	134,000
High School	\$147.06	\$25,000	170.0	\$40,000	1,700	296,000

Region 2 consists of three large states dominated by large cities and their suburbs. Not surprisingly, costs in these three industrialized states are higher than in most other parts of the nation.

In 2002, school districts in Region 2 put almost \$2.5 billion worth of construction in place. While this left the region as one of the highest spending in the nation, it did not match the \$2.8 billion spent a year ago. Projections for completions this year indicate that construction will stay in the same range as 2002. Predicted starts also are lower than in the past. Some of this may be attributable to a New York State program that, during the past two years, encouraged districts to get construction underway to take advantage of a 10-percent bonus in state aid. The impetus may be running down.

Region 2 puts more money into existing buildings than new ones, but when it does build a new school, it tends to exceed the national medians in terms of size as well as space and cost.

Based on total dollars spent on new schools and average cost, indications are that about 40 new schools were completed in 2002. Half, it appears, were elementary buildings, but with almost as many high schools. The future is less clear, but districts in the region seem to be reducing their spending on new construction.

In 2002, for the first time ever, school districts in this region put more than \$1 billion worth of construction in place. They project spending about the same amount this year, but appear less certain about their ability to sustain that amount of construction in terms of expected starts in 2003.

Districts in this region continue to stress new buildings and have shifted the bulk of their spending into middle schools and high schools, apparently reacting to the movement of large classes through their systems.

Although costs in the region exceed national medians, in most other ways — size of buildings, number of students and space per student — Region 3 schools are close to the national medians.

Based on total dollars spent on new schools and average cost, indications are that about 37 new schools were completed in 2002. The emphasis seems to have been on secondary schools and especially on providing middle schools. It would appear that the pattern in 2003 will be pretty much the same.

Region 4 consists of four states that have been very active in terms of school construction through at least a decade and that continue active today.

In 2001, school districts in this region completed almost \$1.9 billion worth of construction, and they predicted they would complete \$2.3 billion this year. They came close, breaking the \$2 billion mark for the first time with almost \$2.1 billion put in place. More than 60 percent of those dollars went into new schools, a pattern that is expected to continue.

Districts in the region once again project that more than \$2 billion will be put in place this year. Projected starts fell slightly, but some large bond issues have recently passed, which may push starts up to higher levels.

This is an area where costs tend to be below national medians. Many districts seem willing to put a little more space into their buildings.

Based on total dollars spent on new schools and average cost, indications are that about 115 new schools were completed in 2002 with more than half of them for elementary school students. Construction of new middle schools is also high. High schools command 40 percent of the spending, but it appears that, in this case, most of the money is spent on the existing buildings, rather than new ones.

Region 3 DC, DE, MD, VA, WV

Construction Activity (\$000s)

HOW MUCH IS BEING SPENT?

	New Schools	Additions	Renovations	Total
Completions in 2002	\$602,239	\$267,126	\$219,430	\$1,088,795
Completions in 2003	\$607,779	\$232,677	\$215,701	\$1,056,157
Starting in 2003	\$443,095	\$197,562	\$221,889	\$862,546
Total Activity	\$1,653,113	\$697,365	\$657,020	\$3,007,498
% of Total	55.0%	23.2%	21.8%	

WHERE IS THE MONEY GOING?

	Total	Elementary	Middle	High	District
Completions in 2002	\$1,088,795	34.6%	23.5%	40.9%	1.0%
Completions in 2003	\$1,056,157	38.3%	23.2%	38.5%	0.0%
Starting in 2003	\$862,546	29.9%	24.1%	41.2%	4.8%
Total Activity	\$3,007,498	34.6%	23.6%	40.1%	1.7%

NEW SCHOOLS ONLY

	Cost/ sq. ft.	Cost/ student	Sq. ft./ student	Median Cost (\$000's)	Median # Students	Median Size (Sq. ft.)
Elementary	\$155.45	\$17,126	113.2	\$13,530	795	84,142
Middle/JHS	\$138.32	\$18,705	118.2	\$12,300	700	86,000
High School	\$143.76	\$21,538	157.1	\$28,000	1,368	210,000

Region 4 KY, NC, SC, TN

Construction Activity (\$000s)

HOW MUCH IS BEING SPENT?

	New Schools	Additions	Renovations	Total
Completions in 2002	\$1,264,487	\$478,448	\$324,049	\$2,066,984
Completions in 2003	\$1,433,216	\$423,599	\$425,547	\$2,282,362
Starting in 2003	\$1,100,389	\$336,579	\$430,044	\$1,867,012
Total Activity	\$3,798,092	\$1,238,626	\$1,179,640	\$6,216,358
% of Total	61.1%	19.9%	19.0%	

WHERE IS THE MONEY GOING?

	Total	Elementary	Middle	High	District
Completions in 2002	\$2,066,984	42.6%	18.0%	38.1%	1.3%
Completions in 2003	\$2,282,362	43.6%	12.4%	43.8%	0.2%
Starting in 2003	\$1,867,012	34.2%	22.5%	38.8%	4.5%
Total Activity	\$6,216,358	40.5%	17.2%	40.4%	1.9%

NEW SCHOOLS ONLY

	Cost/ sq. ft.	Cost/ student	Sq. ft./ student	Median Cost (\$000's)	Median # Students	Median Size (Sq. ft.)
Elementary	\$101.43	\$11,994	115.9	\$7,950	625	75,100
Middle/JHS	\$98.97	\$13,211	143.7	\$10,544	750	118,000
High School	\$108.70	\$18,824	175.0	\$24,000	1,200	210,000

Region 5 AL, FL, GA, MS

Construction Activity (\$000s)

HOW MUCH IS BEING SPENT?

	New Schools	Additions	Renovations	Total
Completions in 2002	\$1,722,329	\$387,852	\$237,533	\$2,347,714
Completions in 2003	\$1,438,495	\$447,079	\$325,305	\$2,210,879
Starting in 2003	\$1,327,894	\$428,085	\$449,338	\$2,205,317
Total Activity	\$4,488,718	\$1,263,016	\$1,012,176	\$6,763,910
% of Total	66.4%	18.6%	15.0%	

WHERE IS THE MONEY GOING?

	Total	Elementary	Middle	High	District
Completions in 2002	\$2,347,714	37.9%	21.0%	39.2%	1.9%
Completions in 2003	\$2,210,879	47.4%	19.3%	33.2%	0.1%
Starting in 2003	\$2,205,317	24.3%	23.3%	50.4%	2.0%
Total Activity	\$6,763,910	36.6%	21.2%	40.9%	1.3%

NEW SCHOOLS ONLY

	Cost/ sq. ft.	Cost/ student	Sq. ft./ student	Median Cost (\$000's)	Median # Students	Median Size (Sq. ft.)
Elementary	\$88.33	\$10,333	113.6	\$8,322	787	90,000
Middle/JHS	\$97.50	\$12,955	153.2	\$10,168	900	148,000
High School	\$111.74	\$17,668	152.3	\$24,415	1,316	205,000

All four states in Region 5 apparently have active school construction programs, though the bulk of the spending still comes from Florida and Georgia.

Region 5 has been a major builder for at least three decades. Its construction costs are relatively low, so the dollars spent buys a lot of school space. With a total of \$2.3 billion put in place in 2002 and almost as much expected to be completed and started in 2003, this region is obviously responsible for a great many construction projects, most of them new schools.

With two out of three dollars going into new construction and with all the evidence pointing to the advantage of small schools over large, it is somewhat surprising to see that Region 5 districts continue to build very large buildings. The median elementary school, for example, is for almost 800 students compared to a national median of 625, and its middle and high schools also tend to be large.

Based on total dollars spent on new schools and average cost, indications are that about 145 new schools were completed in 2002, with slightly more than half for the elementary grades. There is nothing in the material gathered to indicate that anything will change in 2003.

Region 6 IN, OH, MI

Construction Activity (\$000s)

HOW MUCH IS BEING SPENT?

	New Schools	Additions	Renovations	Total
Completions in 2002	\$934,515	\$396,320	\$357,051	\$1,687,886
Completions in 2003	\$1,191,096	\$316,837	\$334,922	\$1,842,855
Starting in 2003	\$791,131	\$263,753	\$288,898	\$1,343,782
Total Activity	\$2,916,742	\$976,910	\$980,871	\$4,874,523
% of Total	59.8%	20.1%	20.1%	

WHERE IS THE MONEY GOING?

	Total	Elementary	Middle	High	District
Completions in 2002	\$1,687,886	39.1%	28.2%	30.3%	2.4%
Completions in 2003	\$1,842,855	32.4%	22.9%	40.8%	3.9%
Starting in 2003	\$1,343,782	26.7%	23.8%	46.0%	3.5%
Total Activity	\$4,874,523	33.1%	25.0%	38.6%	3.3%

NEW SCHOOLS ONLY

	Cost/ sq. ft.	Cost/ student	Sq. ft./ student	Median Cost (\$000's)	Median # Students	Median Size (Sq. ft.)
Elementary	\$118.28	\$15,345	133.3	\$9,000	600	70,621
Middle/JHS	\$137.40	\$21,189	143.1	\$17,780	750	121,180
High School	\$134.53	\$22,500	160.4	\$22,800	1,000	162,500

The three states that make up Region 6 have not been gaining population, but they have invested in their schools. There may, however, be a slight slowing in that process.

One year ago, Region 6 districts put more than \$2 billion worth of construction in place. Predictions were that completions in 2002 would be in the \$1.8 billion range. Actually, construction activity was a little lower than that at \$1.7 billion. For 2003, the projections show construction expected to stay at about that level.

Projected starts in 2003 are a little lower. That may be in part because of the battles between a court that has ordered Ohio to provide more construction funds and a state legislature that appears reluctant to comply.

Most of the spending in Region 6 is for new buildings. Median costs in these states are above the national median, but not significantly so.

Based on total dollars spent on new schools and average cost, indications are that about 70 new schools were completed in 2002. The emphasis seems to have been on elementary schools. It would appear that the pattern in 2003 will be pretty much the same.

In 2002, school districts in Region 7 combined to complete almost \$2 billion worth of construction, the highest total ever recorded and considerably more than had been projected. The expectation is that that level will not be reached again, at least in the foreseeable future. That could change, however, because districts in this area are expecting to spend more than \$1 billion on new buildings alone this year. If more additions and retrofit projects than expected are completed, the \$2 billion mark is not that far away.

There is less optimism for the future. Projections of starts in 2003 fall below \$1.5 billion. The question is whether that is because of reluctance to report or reluctance to spend.

Based on total dollars spent on new schools and average cost, indications are that about 60 new schools were completed in 2002. Based on the projections, it would appear that in 2003 the number of new schools opened could be somewhat higher. This may be offset, however, by a seeming shift from elementary to secondary schools, which could mean that there will be more dollars spent and more space built, but actually few new buildings.

In 2002, school districts in Region 8 combined to put more than \$1 billion worth of construction in place, the first time that barrier has been broken. Together, districts in those states predict they will do it again in 2003. As for construction to start in 2003, it apparently will stay very close to that level.

Region 8 districts report that they spend more money on their existing buildings than on new ones. When they build new, their costs are below the national median pretty much across the board. They tend to build small elementary schools.

Based on total dollars spent on new schools and average cost, indications are that about 55 new schools were completed in 2002, the great bulk of them (40) being elementary schools. It appears that the pattern will continue in 2003, although there appears to be a one-year shift of funds towards new schools. Perhaps that is an indication that some more expensive secondary schools are on line.

Region 7 IL, MN, WI

Construction Activity (\$000s)

HOW MUCH IS BEING SPENT?

	New Schools	Additions	Renovations	Total
Completions in 2002	\$848,279	\$672,111	\$404,148	\$1,924,538
Completions in 2003	\$1,143,602	\$334,090	\$258,380	\$1,736,072
Starting in 2003	\$722,113	\$300,631	\$374,580	\$1,397,324
Total Activity	\$2,713,994	\$1,306,832	\$1,037,108	\$5,057,934
% of Total	53.7%	25.8%	20.5%	

WHERE IS THE MONEY GOING?

	Total	Elementary	Middle	High	District
Completions in 2002	\$1,924,538	33.9%	26.6%	35.9%	3.6%
Completions in 2003	\$1,736,072	23.0%	28.2%	44.1%	4.7%
Starting in 2003	\$1,397,324	37.1%	23.2%	39.5%	0.2%
Total Activity	\$5,057,934	31.0%	26.2%	39.8%	3.0%

NEW SCHOOLS ONLY

	Cost/ sq. ft.	Cost/ student	Sq. ft./ student	Median Cost (\$000's)	Median # Students	Median Size (Sq. ft.)
Elementary	\$120.37	\$14,444	115.6	\$9,950	700	76,500
Middle/JHS	\$150.00	\$22,222	155.6	\$18,000	900	120,000
High School	\$138.89	\$20,000	144.0	\$21,680	1,200	150,350

Region 8 IA, KS, MO, NE

Construction Activity (\$000s)

HOW MUCH IS BEING SPENT?

	New Schools	Additions	Renovations	Total
Completions in 2002	\$501,086	\$340,735	\$239,872	\$1,081,693
Completions in 2003	\$595,435	\$222,015	\$263,112	\$1,080,562
Starting in 2003	\$414,009	\$271,227	\$303,885	\$989,121
Total Activity	\$1,510,530	\$833,977	\$806,869	\$3,151,376
% of Total	47.9%	26.5%	25.6%	

WHERE IS THE MONEY GOING?

	Total	Elementary	Middle	High	District
Completions in 2002	\$1,081,693	41.3%	19.5%	33.8%	5.4%
Completions in 2003	\$1,080,562	39.9%	15.5%	42.7%	1.9%
Starting in 2003	\$989,121	29.1%	23.9%	33.1%	13.9%
Total Activity	\$3,151,376	37.0%	19.5%	36.6%	6.9%

NEW SCHOOLS ONLY

	Cost/ sq. ft.	Cost/ student	Sq. ft./ student	Median Cost (\$000's)	Median # Students	Median Size (Sq. ft.)
Elementary	\$104.74	\$11,255	108.2	\$6,000	490	55,000
Middle/JHS	\$109.21	\$17,222	136.7	\$15,667	833	116,333
High School	\$96.80	\$13,828	164.2	\$18,300	1,200	197,000

Region 9 AR, LA, OK, TX

Construction Activity (\$000s)

HOW MUCH IS BEING SPENT?

	New Schools	Additions	Renovations	Total
Completions in 2002	\$2,340,723	\$729,537	\$368,735	\$3,438,995
Completions in 2003	\$1,619,981	\$777,608	\$410,390	\$2,807,979
Starting in 2003	\$1,788,944	\$687,892	\$342,811	\$2,819,647
Total Activity	\$5,749,648	\$2,195,037	\$1,121,936	\$9,066,621
% of Total	63.4%	24.2%	12.4%	

WHERE IS THE MONEY GOING?

	Total	Elementary	Middle	High	District
Completions in 2002	\$3,438,995	37.5%	21.7%	39.4%	1.4%
Completions in 2003	\$2,807,979	38.3%	22.9%	37.6%	1.2%
Starting in 2003	\$2,819,647	36.9%	22.3%	33.5%	7.3%
Total Activity	\$9,066,621	37.5%	22.3%	37.0%	3.2%

NEW SCHOOLS ONLY

	Cost/ sq. ft.	Cost/ student	Sq. ft./ student	Median Cost (\$000's)	Median # Students	Median Size (Sq. ft.)
Elementary	\$103.83	\$11,111	107.6	\$7,500	650	70,000
Middle/JHS	\$110.09	\$14,800	136.0	\$14,000	900	130,000
High School	\$107.34	\$15,833	147.5	\$22,800	1,000	136,000

All of the states in Region 9 are active in school construction, but there is no question that the regional numbers basically reflect activity in Texas.

Region 9 school districts report putting more than \$3 billion worth of school construction in place in 2002. They spent \$2.3 billion on new schools alone, more than all but two regions spent on all school construction, including additions and renovation of existing buildings. One might speculate that some of this activity was the result of class size limits imposed by the Texas legislature.

Based on projections, completions in 2003 will not be quite as high, nor will the number of projects started this year, but in both cases, the amount of activity expected remains close to \$3 billion, with more than 63 percent of the dollars going into new school buildings.

Based on total dollars spent on new schools and average cost, indications are that about 210 new schools were completed in Region 9 in 2002, with about 135 of them elementary buildings. The projections would seem to indicate that fewer new schools will be completed or started this year.

Region 10 CO, MT, ND, NM, SD, UT, WY

Construction Activity (\$000s)

HOW MUCH IS BEING SPENT?

	New Schools	Additions	Renovations	Total
Completions in 2002	\$337,813	\$283,798	\$225,913	\$847,524
Completions in 2003	\$604,422	\$185,471	\$169,719	\$959,612
Starting in 2003	\$341,246	\$215,561	\$147,323	\$704,130
Total Activity	\$1,283,481	\$684,830	\$542,955	\$2,511,266
% of Total	51.1%	27.3%	21.6%	

WHERE IS THE MONEY GOING?

	Total	Elementary	Middle	High	District
Completions in 2002	\$847,524	26.9%	27.7%	39.5%	5.9%
Completions in 2003	\$959,612	37.6%	16.4%	43.5%	2.5%
Starting in 2003	\$704,130	32.5%	32.5%	33.8%	1.2%
Total Activity	\$2,511,266	32.6%	24.7%	39.4%	3.3%

NEW SCHOOLS ONLY

	Cost/ sq. ft.	Cost/ student	Sq. ft./ student	Median Cost (\$000's)	Median # Students	Median Size (Sq. ft.)
Elementary	\$113.36	\$12,367	117.8	\$7,000	500	55,830
Middle/JHS	\$113.19	\$15,000	130.9	\$12,980	850	113,380
High School*	\$107.07	\$22,566	207.5	\$23,333	1,740	221,667

Region 10 is one of just two regions that has never spent as much as \$1 billion on school construction, but that could change this year. Just under \$850 million was spent on construction in 2002, relatively evenly distributed among new schools, additions and retrofits. High schools received almost 40 percent of the funding.

For 2003, districts in this region appear to be shifting their emphasis to new buildings and expect to complete almost \$960 million. Construction starts may be down, but this is another area where school districts are waiting for legislatures to loosen up the purse strings — the need has been identified.

Based on total dollars spent on new schools and average cost, indications are that about 25 new schools were completed in 2002. In 2003, it appears that as many as 40 new school projects could be completed in this sprawling region.

Three of the states that make up Region 11 have been growing at a rapid pace and trying hard to provide the schools they need to house the growing populations. As a result, Region 11 schools spend more than \$2 billion a year on school construction and expect to continue to do that this year. But the big news is that the State of California passed a huge school construction bond issue in November, and several other smaller issues were also approved. California's districts have been waiting for the money. Now that it is here, they're ready to build. As a result, school districts in Region 11 report they expect to start almost \$3.5 billion worth of school construction this year. They may not make it, but there is no question that through the next few years there is going to be significant construction activity in the region.

Construction costs in the area are higher than national averages (cost per sq. ft.), but because in many areas schools are built without corridors (students walk outside between classes), the amount of space provided per student tends to be low, holding total down.

Based on total dollars spent on new schools and average cost, indications are that about 120 new schools were completed in 2002, with the emphasis on elementary schools. Significantly more, apparently, will be started this year.

Region 12 is made up of four relatively sparsely populated states. In 2002, districts there put almost \$850 million worth of construction in place, very close to what was projected. There may be a slight fall-off in completions this year, but starts are expected to accelerate.

This is a region that is spending a lot of money on its high schools and that also puts a good portion of its funding into renovating existing buildings. Construction costs in the region tend to exceed national medians.

Based on total dollars spent on new schools and average cost, indications are that about 30 new schools were completed in 2002. Less will be spent on new schools in the current year, but it appears that more new school activity will be starting.

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Region 11 AZ, CA, HI, NV

Construction Activity (\$000s)

HOW MUCH IS BEING SPENT?

	New Schools	Additions	Renovations	Total
Completions in 2002	\$1,352,755	\$425,150	\$371,114	\$2,149,019
Completions in 2003	\$1,164,574	\$433,379	\$463,780	\$2,061,733
Starting in 2003	\$2,812,152	\$449,378	\$228,138	\$3,489,668
Total Activity	\$5,329,481	\$1,307,907	\$1,063,032	\$7,700,420
% of Total	69.2%	17.0%	13.8%	

WHERE IS THE MONEY GOING?

	Total	Elementary	Middle	High	District
Completions in 2002	\$2,149,019	40.2%	16.9%	42.3%	0.6%
Completions in 2003	\$2,061,733	33.8%	18.9%	46.0%	1.3%
Starting in 2003	\$3,489,668	40.2%	17.7%	42.1%	0.0%
Total Activity	\$7,700,420	38.4%	17.8%	43.3%	0.5%

NEW SCHOOLS ONLY

	Cost/ sq. ft.	Cost/ student	Sq. ft./ student	Median Cost (\$000's)	Median # Students	Median Size (Sq. ft.)
Elementary	\$125.00	\$12,000	89.6	\$7,750	650	59,700
Middle/JHS	\$130.00	\$12,321	111.4	\$11,000	850	89,723
High School	\$122.33	\$15,068	123.6	\$29,000	1,800	225,000

Region 12 AK, ID, OR, WA

Construction Activity (\$000s)

HOW MUCH IS BEING SPENT?

	New Schools	Additions	Renovations	Total
Completions in 2002	\$462,727	\$229,742	\$154,747	\$847,216
Completions in 2003	\$346,471	\$147,605	\$235,893	\$729,969
Starting in 2003	\$567,398	\$128,534	\$298,474	\$994,406
Total Activity	\$1,376,596	\$505,881	\$689,114	\$2,571,591
% of Total	53.5%	19.7%	26.8%	

WHERE IS THE MONEY GOING?

	Total	Elementary	Middle	High	District
Completions in 2002	\$847,216	31.4%	16.2%	50.5%	1.9%
Completions in 2003	\$729,969	30.1%	19.6%	43.3%	7.0%
Starting in 2003	\$994,406	46.2%	15.2%	30.5%	8.1%
Total Activity	\$2,571,591	36.8%	16.8%	40.7%	5.7%

NEW SCHOOLS ONLY

	Cost/ sq. ft.	Cost/ student	Sq. ft./ student	Median Cost (\$000's)	Median # Students	Median Size (Sq. ft.)
Elementary	\$129.59	\$16,923	111.8	\$8,000	525	53,000
Middle/JHS	\$114.55	\$13,788	114.0	\$8,000	575	69,000
High School*	\$174.42	\$25,717	146.4	\$40,780	1,500	224,800