Building Tennessee's Tomorrow:

Anticipating the State's Infrastructure Needs

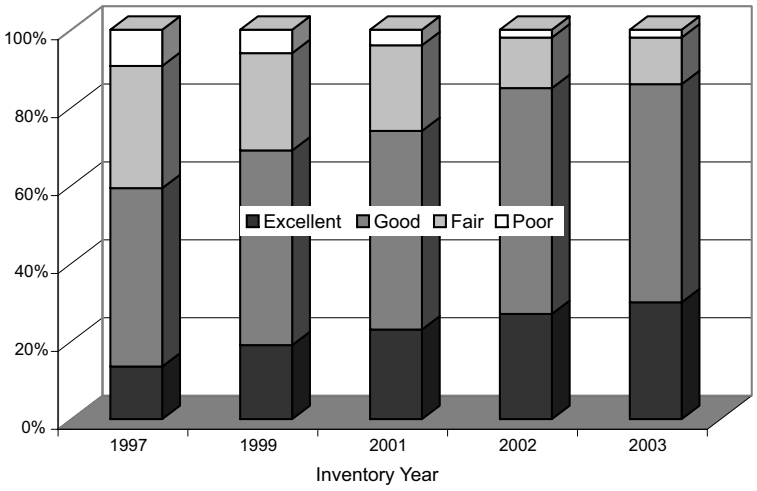
July 2003 through June 2008

Reported Public School Facility Conditions and Needs[35]

The overall condition of Tennessee's public school buildings has improved dramatically since the first report in this series, but it appears to have leveled out. According to local officials, around 86% of their schools are in good or better condition—about the same as last year, but considerably better than the 59% reported in 1999. Both the General Assembly, which substantially improved state funding for schools' capital needs with adoption of the Basic Education Program in 1992, and local officials are to be commended for this progress.

Infrastructure improvements, including new schools as well as improvements and additions to existing schools, that need to be in some phase of development during the five-year period of July 2003 though June 2008 are estimated to cost slightly more than $3.7 billion (see Table 18). This total is $112 million more than the estimate in last year's report—a 3% increase—and $1.2 billion more than the estimate reported in 1999. This year's increase is considerably larger than the one-year increase reported last year. Last year's increase was comparatively lower at $55 million, which was less than 2%.

Figure 6. Overall Condition of Public School Buildings
1997 through 2003



New school building needs level out; primary reason shifts from EIA to other factors.

New school construction needs reported by local officials have leveled out, actually declining slightly since TACIR'S second infrastructure report, and the primary reason for the need has shifted away from the

[35] This section of the report covers only local public school systems. It does not include the state's special schools, and therefore, totals presented here will not match totals elsewhere in the report.

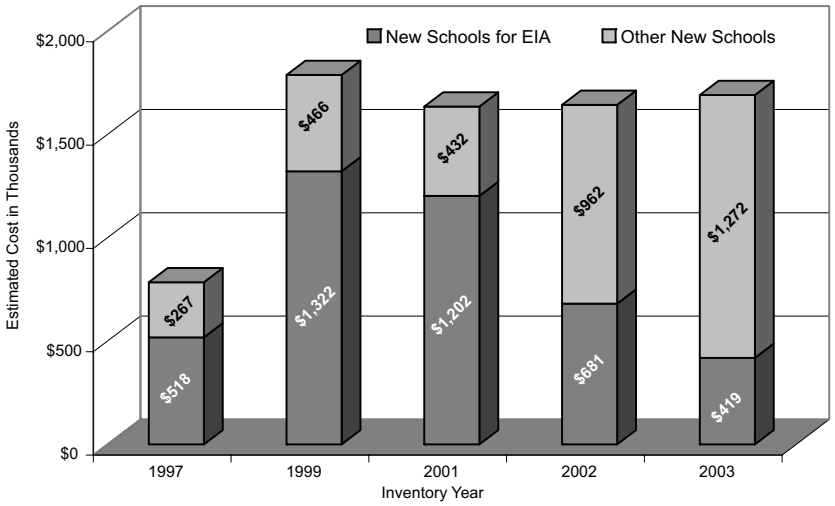
Table 18. Reported Cost of Public School Infrastructure Needs by Type of Need

Type of Need	Estimated Cost (in millions)	Percent of Total
New School Construction	**$ 1,690.5**	**45.3%**
EIA-related Needs	418.6	11.2%
Enrollment Growth & Other New School Needs	1,271.9	34.1%
Existing Schools	**$ 2,014.7**	**54.0%**
Facility Component Upgrades	1,178.8	31.6%
Technology	712.4	19.1%
EIA Mandate	60.7	1.6%
Federal Mandates	34.5	0.9%
Other State Mandates	28.3	0.8%
System-wide Needs	**$ 26.8**	**0.7%**
Statewide Total	**$ 3,732.0**	**100.0%**

Education Improvement Act (EIA) toward enrollment growth and other factors (see Figure 7).

The EIA mandated a reduction in class sizes at public schools of about 4 ½ students on average. This 1992 law required school systems to hire many new teachers and provide classrooms for them and their students, but gave them until fall 2001 to do it. All school systems hired enough teachers to meet the new standard on time, but many still did not have enough permanent classrooms to house them properly.

Figure 7. Estimated Cost of Needed New Schools *1997 through 2003*



Infrastructure needs driven by the EIA, including those at existing schools, were 36% of the total in 1997 when the Basic Education Program (BEP) formula established by the EIA was first fully funded. They peaked in 1999 at $1.6 billion (44% of the total for all public school infrastructure needs) and have since fallen to $479 million (13% of the total).[36] This seems reasonable given that the deadline for meeting the EIA's class-size reduction mandate was fall 2001.

[36] TACIR staff analyzed patterns of growth in student counts to develop estimates of the percentage of new school construction attributable to the lower class sizes required by the Education Improvement Act of 1992 rather than to enrollment growth. For a description of the TACIR methodology, see Appendix F.

Based on these figures, ***most of the current EIA-driven need has been met, and the estimated cost of meeting the continuing mandate is declining,*** both in total cost and as a percent of the grand total needed for all facility improvements. Sixty-four percent of Tennessee's public school systems have no EIA-related needs, and thirty-two of the remaining forty-nine systems can meet their needs for less than $1,000 per student. Only seventeen systems need more than that amount per student to meet their EIA-related needs (see Table 19).[37]

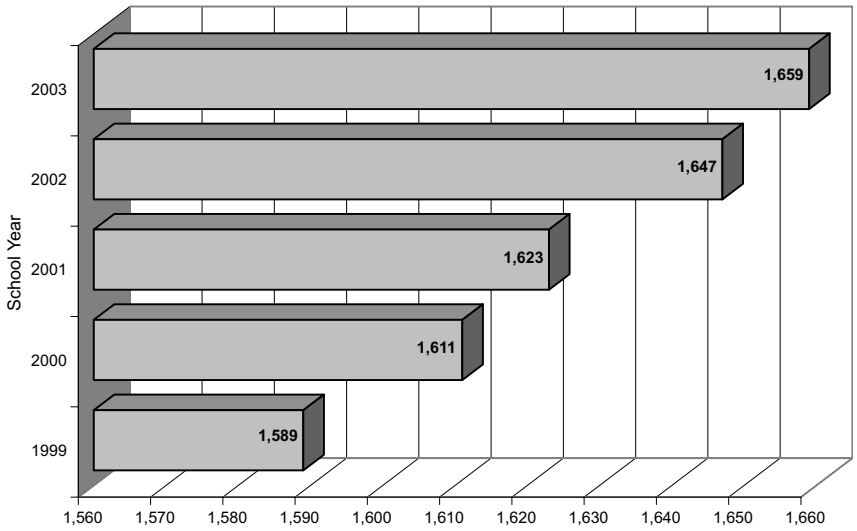
Table 19. Number of School Systems by Range of EIA-Related Infrastructure Costs per Student
Five-year Period July 2003 through June 2008

Reported EIA Cost per Student	Number of School Systems	Percent of School Systems
None	88	64.2%
Less than $1000	32	23.4%
$1000 to $2000	12	8.8%
$2000 to $3000	2	1.5%
$3000 to $4000	2	1.5%
More than $4000	1	0.7%
Total	**137***	**100.0%**

**There are 138 public school systems in Tennessee. The Carroll County system was removed from all statistical analyses because it does not serve elementary school students and therefore is not comparable to the other 137 systems.*

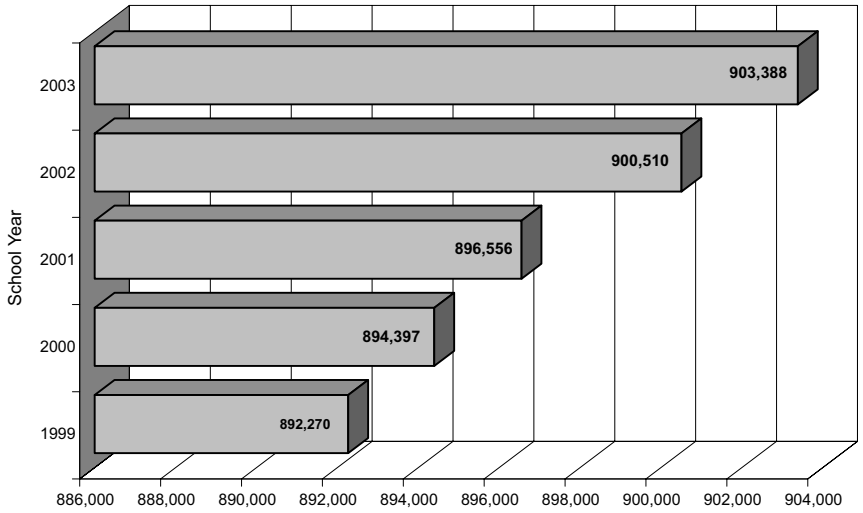
Other needs for new schools are continuing to increase, but have been largely offset by the decline in EIA-driven needs so that the total need for new schools has remained relatively flat. The number of schools increased by seventy between 1999 and 2003 (see Figure 8), but the net increase does not, of course, indicate how many replacement schools were built during that period. At the same time, the number of students increased by more than 11,000 (see Figure 9). With an average school size of around 550 students, that growth would require twenty new schools.

Figure 8. Number of Public Schools
1999 through 2003



[37] Appendix E includes the cost per student for each school system.

Figure 9. Number of Students in Public Schools
1999 through 2003

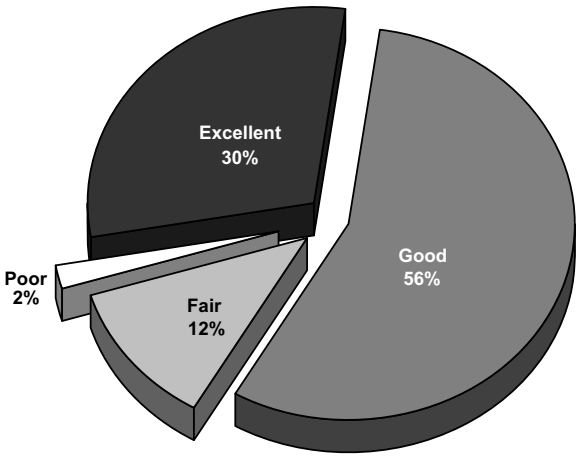


Most of Tennessee's public schools are in good or excellent condition, but substantial upgrade needs remain.

Estimated costs to upgrade all facilities at existing schools to good or better condition peaked in the 2001 inventory at almost $1.5 billion (41% of the total) and now stand at just under $1.2 billion (32% of the total) in the current inventory. The percent of schools in good or better condition reached a new high of 85% the following year and remained at about the same level in 2003 (see Figures 6 and 10).

Defining what constitutes a high-quality learning environment is both subjective and difficult. The rating scale used in this inventory is carefully defined, but rating individual schools and school components is left to the judgment of local officials.[38] While the ideal standard is a qualitative rating of "excellent", as a practical matter, the inventory captures the cost of getting schools into "good" condition—both overall and for each facility component. Schools in good or even excellent condition overall can have individual classrooms, libraries or other components that are in need of upgrading or replacement. Upgrade needs reported in the inventory include estimated costs to put individual components as well as entire schools in good condition.

Figure 10. Overall Condition of Public School Buildings as Reported by Local Officials for 2003



As shown in Table 20, the overwhelming majority of Tennessee's public school systems rate the condition of three-fourths or more of their buildings good or excellent. Eleven more systems than last year fall into this category, which has been split into two groups this year because so many school systems fall into this range. The cost per student to upgrade all components to good condition at all schools in both groups of systems combined is only slightly higher than last year's figure of $443. This

[38] See the Existing School Facility Needs Inventory Form, Section B-9, in Appendix C for more specific information about the facility rating scale.

is still lower than the corresponding figure of $627 per student for the 108 systems that fell in this category two years ago. The total cost per student for all 138 school systems is about 12% greater than it was in the previous year's inventory. Last year's figure was lower than in either of the two previous years; this year's figure is the highest of the four annual inventories.

Table 20. Cost per Student to Put All School Building Components in Good Condition
by Percent of Schools Currently in Good or Excellent Condition

Percent of Schools In Good or Excellent Condition	Number of School Systems	Percent of School Systems	Cost Per Student to Put All School Components in Good Condition
None	1	0.7%	$ 6,161
25% to 50%	5	3.6%	$ 1,919
50% to 75%	12	8.7%	$ 5,563
75% to 100%	34	24.6%	$ 399
100%	86	62.3%	$ 618
Total	**138**	**100.0%**	**$ 1,305**

Again as in the last inventory, Athens City is the only system that rated all of its school buildings less than good overall. The cost per student of upgrading all school buildings to good condition decreases as the percent of schools in good or excellent condition increases. With all five of its schools in fair or poor condition, the Athens school system estimates that it needs about $6,161 per student, nearly five times the statewide average cost, to put all of its schools in good or better condition.[39]

Two very large systems—Shelby County and Davidson County—reported several large, system-wide upgrades that skew the figures for systems with 50% to 75% of their schools in good or excellent condition, making the figures for that group of school systems much higher than would otherwise be expected. Without those two, the cost per student for systems in that range would be $1,362. Similarly, two small systems—Lake County and Manchester City with three schools each—rate all of their schools in good condition overall, but report upgrade needs in excess of $15 million. Without those two systems, the figure in Table 20 for the group of systems with all of their school buildings rated good or better overall would be $429 per student.[40]

Mandate costs continue to decline; EIA still dominates.

Mandate costs have declined in each inventory since 1999 and now total $542 million—less than one-third of the cost reported for 1999 (Figure 11 and Table 21). Mandate costs, including the cost of

[39] The Athens City school system is relatively small, with an average of 1,680 students for the 2003-04 school year.

[40] Appendix E includes the number of school buildings rated less than good by each school system and the reported cost per student to upgrade them to good condition, as well as the estimated cost of upgrade needs reported for specific facility components at other schools.

Figure 11. Estimated Costs of Facilities Mandates at Existing Public Schools
1999 through 2003

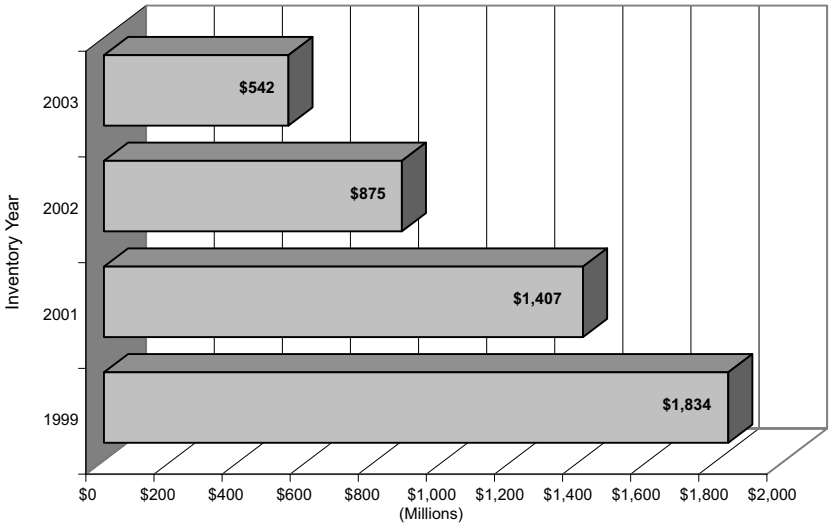


Table 21. Total Reported Cost of Facilities Mandates at Public Schools
Five-year Period July 2003 through June 2008

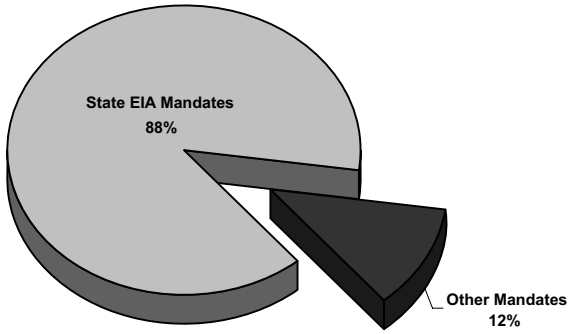
Mandates	Mandate Cost [in millions]	Percent of Total Mandate Cost
State-Mandate Total	**$ 507.6**	**93.6%**
State-EIA (New & Existing Schools)	479.3	88.4%
State-Fire Codes	20.5	3.8%
State-Other	7.8	1.4%
Federal Mandate Total	**$ 34.5**	**6.4%**
Asbestos	20.5	3.8%
Americans with Disabilities Act	12.1	2.2%
Special Education	1.2	0.2%
Title 1	0.5	0.1%
Underground Storage Tanks	0.2	0.0%
Lead	0.1	0.0%
Mandate Total	**$ 542.1**	**100.0%**

classrooms to meet the EIA mandate for smaller classes, comprised 49% of total infrastructure needs for public schools in the 1999 inventory, but account for only 14% of the current inventory of school building needs (see Table 18 on page 32).

The bulk of the decline was in EIA-driven needs, but other mandate needs have declined as well, most notably federal mandates for asbestos containment or removal and the Americans with Disabilities Act. The cost reported for these two federal mandates combined in 1999 was $191 million; the cost reported in the current inventory is $33 million. Because the decline in estimated spending needs for all mandates has declined proportionally, EIA needs remain at about the same percent of total mandate needs (see Figure 12) as in the 1999 inventory.

The estimated cost of improvements needed to meet the state fire codes has continually increased since the 1999 inventory. These costs do not include the cost of meeting fire codes for new schools, which are not separated out of the total cost of the school. Estimated cost to meet codes at existing schools rose from $9.3 million in 1999 (0.5% of total mandate costs reported that year) to $20.5 million (3.8% of the total for mandates) in the current inventory.

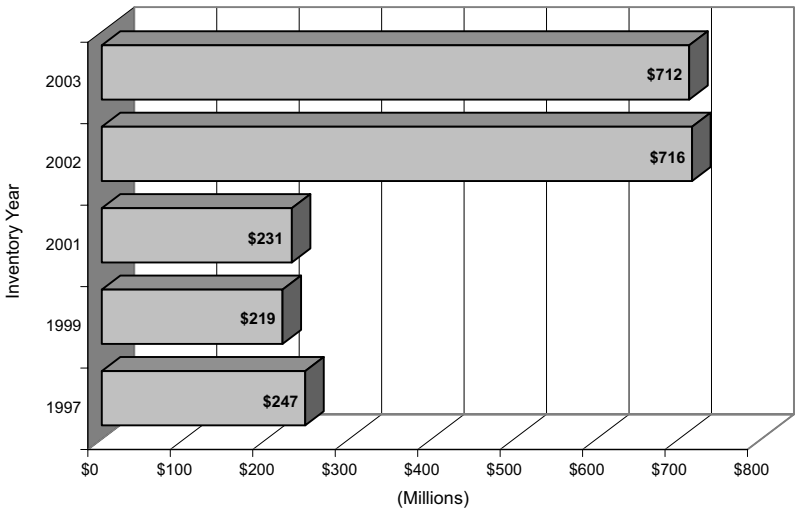
Figure 12. Reported Cost of EIA Mandate as a Percent of All Facilities Mandates at Public Schools
July 2003 Inventory



Far more school systems report no technology needs, but total technology infrastructure needs more than triple earlier inventories.

The total need for new technology infrastructure more than tripled between the 2001 and the 2002 inventories and changed little before or after (see Figure 13). Most of that dramatic increase is attributable to a new technology initiative in the Memphis school system, an initiative estimated to cost $485 million.

Figure 13. Estimated Cost of Technology Infrastructure Needs at Existing Public Schools
1997 through 2003



Thirty-five systems now report no need to upgrade technology in their schools, which is eight more than in the previous inventory. The number of systems that need more than $100 per student to meet their technology infrastructure needs is about the same as in the last inventory (forty-nine for 2003 compared with fifty-one one year earlier), but there were some shifts within that group. Two moved out of the highest need group (more than $400 per student) into the next group, but two others moved up, leaving the total of nine the same. The biggest change was in the Maryville school system, which reported a need for $72 per student in the 2002 inventory and $832 per student in the 2003 inventory.

Total capital outlays by public school systems peaked in 2001 and returned to their 1999 level in 2003.

Table 22. Number of School Systems by Range of Technology Infrastructure Needs per Student
Five-year Period July 2003 through June 2008

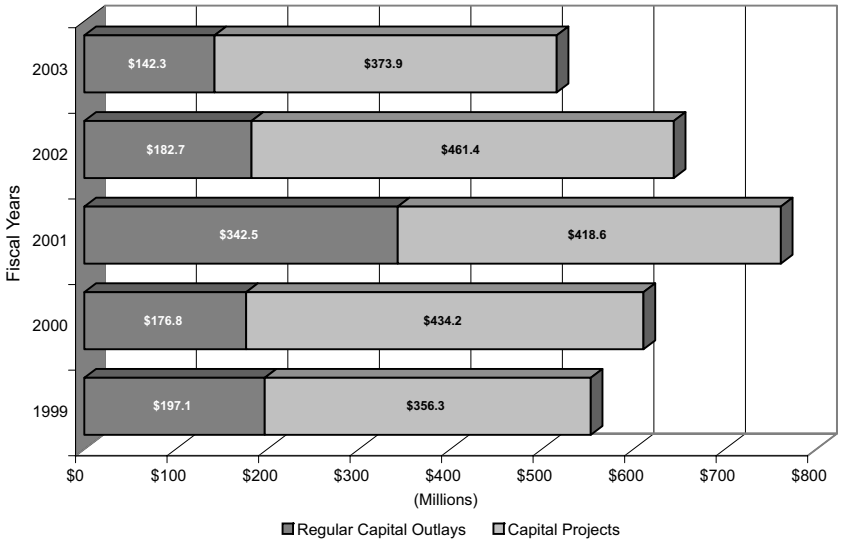
Technology Infrastructure Needs per Student	Number of School Systems	Percent of School Systems
None	35	25.5%
Less than $100	53	38.7%
$100 to $200	25	18.2%
$200 to $300	8	5.8%
$300 to $400	7	5.1%
More than $400	9	6.6%
Total	**137***	**100.0%**

* There are 138 public school systems in Tennessee. The Carroll County system was removed from all statistical analyses because it does not serve elementary school students and therefore is not comparable to the other 137 systems.

Based on reports filed with the Department of Education, capital outlays by public school systems in Tennessee reached nearly $750 million in fiscal year 2001 (see Figure 14). These reports understate total capital outlays for schools to the extent that they do not include spending by cities and counties accounted for outside of their school funds. Nevertheless, they reflect the effort to meet the EIA class-size reduction mandate, an effort made possible in part by the increase in state funding for schools' capital outlay and debt service provided through the BEP formula.

As indicated by Figure 14 and similar charts throughout this chapter, the General Assembly and local school boards—as well as the city councils and county commissions that support them—deserve a great deal of credit for making such impressive progress in meeting Tennessee's school infrastructure needs. Challenges remain. Some high-growth counties continue to struggle with escalating enrollments. Three counties—Bedford, Rutherford and Williamson—grew at a rate of more than two percent per year from 1999 to 2004. More than 10% of classrooms are portables in ten systems, and as shown in Table 18, total school infrastructure needs top $3.7 billion. Some of this need will be met, and some will not, but the effort continues.

Figure 14. Capital Outlays by Public School Systems
1999 through 2003



One of the real benefits of the Public Infrastructure Needs Inventory is that, over time, it provides data to enable policy makers to measure progress made in pursuit of legislative initiatives. Quality improvements in the inventory mean that caution should be exercised in interpreting trends based on the earliest inventories, but even so, progress is more visible and impressive in the field of public education.