

Building Tennessee's Tomorrow:

Anticipating the State's Infrastructure Needs

July 2013 through June 2018

FUNDING THE STATE'S INFRASTRUCTURE NEEDS

Nearly two thirds of infrastructure needs in the current inventory are not fully funded.

Information about the availability of funding to meet Tennessee's public infrastructure needs indicates that 65% of the funding needed was not available at the time the inventory was taken, an increase from last year's 62%. The inventory does not include information about the availability of funds to meet needs at existing schools or those drawn from the capital budget requests submitted by state agencies. Excluding those needs from the total \$42.3 billion estimated cost reported for the period covered by the inventory leaves \$33.9 billion for which funding information is available. Of this remaining amount, \$11.0 billion is fully funded, slightly under the \$11.3 billion that was fully funded in the previous inventory. Another \$852 million is available for improvements that are partially funded, bringing the total available to \$11.8 billion or about 1.4% more than the \$11.7 billion that was available for the infrastructure reported in last year's inventory. That leaves a need for another \$22.1 billion, about 17.9% more than last year's need for \$18.7 billion. See table 12.

Local officials reported that \$11.8 billion is available to fund public infrastructure; of that amount, \$11.0 billion is for infrastructure that is fully funded.

Table 12. Summary of Funding Availability*
Five-year Period July 2013 through June 2018

	Funding Available [in billions]	Funding Needed [in billions]	Total Needs [in billions]
Fully Funded Improvements	\$ 11.0	\$ 0	\$ 11.0
Partially Funded Improvements	0.9	4.6	5.5
Unfunded Improvements	0	17.4	17.4
Total	\$ 11.8	\$ 22.1	\$ 33.9

*Excludes infrastructure improvements for which funding availability is not known.

Note: Totals may not equal 100% because of rounding.

Improvements that were entirely unfunded in July 2013 comprise slightly more than half of the total funding needed, about the same proportion as last year. As always, more of the funding needed will become available as projects move from the conceptual stage to the planning and design stage. The percentage of available funding for needs that progressed from the conceptual stage in 2012 to the planning and design stage in 2013 increased from 13% to 50%. Needs must be fully funded to move from the planning and design stage to the construction stage.

Who owns the infrastructure plays a role in whether a project is fully funded, in part because different types of governments have different sources of funding available to them. Cities and counties raise the lion's share of their funds by collecting property and sales tax. A few also have user fees, as do utility districts. The state collects taxes as well and appropriates those funds to their own projects and provides grants to the local level via programs at various agencies. The federal government owns very few of the infrastructure needs in the inventory, but they do provide a significant level of funding. Of the infrastructure that was needed in 2008 and completed by 2013, 46% is owned by the state, 31% by counties, and 18% by cities. Special districts own 4%, and the remaining 2% is jointly owned.

Governments build infrastructure for many different reasons, including enhancing communities, accommodating population growth, improving public health and safety, supporting economic development, and meeting government mandates. The purpose of the infrastructure also can play a role in determining funding sources and availability. See appendix G for more information about the reasons given by state and local officials for needing different types of infrastructure.

The percentage of available funding varies greatly across types of infrastructure.

Table 13 breaks down the \$11.0 billion available for fully funded needs by type of infrastructure, and then compares it with the total needed for each type. Although transportation and water and wastewater represent the largest portion of needs, neither is the type most fully funded. That would be business district development at 86.1% fully funded and this isn't a surprise because of the nature of these types of projects. Business district development can have complex negotiations between partners, both private and public, and in many cases, partners have reached some level of agreement about the level of funding before the project is announced.

Next after business district development is public health facilities at 55.3% and community development at 52.0%. Public health facilities are funded by many federal sources, for example Houston County is using the Rural Development Fund of the US Department of Agriculture (USDA) for purchasing and rehabilitating a rural hospital. Most community development infrastructure is lumped into a couple of large projects, and in some cases is similar to business district development because partners need to be in agreement before announcing the project. The two largest fully funded community development projects were

the \$44.5 million LeConte Pigeon Forge Civic Center (Sevier County) and the \$35 million Beale Street Landing project in Memphis (Shelby County), both under construction.

Table 13. Percent of Needs Fully Funded by Type of Infrastructure
Five-year Period July 2013 through June 2018

Category and Type of Infrastructure	Total Needs [in millions]	Fully Funded Needs [in millions]	Percent of Total Needs
Transportation and Utilities	\$ 25,821.8	\$ 8,136.0	31.5%
Transportation	25,599.2	8,070.0	31.5%
Other Utilities	222.5	66.0	29.7%
Health, Safety, and Welfare	\$ 4,170.4	\$ 1,678.2	40.2%
Water and Wastewater	3,415.2	1,477.6	43.3%
Law Enforcement	422.4	118.0	27.9%
Fire Protection	163.2	15.8	9.7%
Storm Water	109.0	43.9	40.3%
Solid Waste	34.8	11.1	32.0%
Public Health Facilities	21.2	11.8	55.3%
Housing	4.6	0.0	0.0%
Education	\$ 1,765.1	\$ 292.7	16.6%
New Public Schools	1,730.5	280.2	16.2%
School-System-wide	24.3	11.7	47.9%
Post-secondary Education	10.3	0.8	8.0%
Recreation and Culture	\$ 1,237.4	\$ 464.1	37.5%
Recreation	828.6	272.5	32.9%
Community Development	272.7	141.8	52.0%
Libraries, Museums, and Historic Sites	136.0	49.8	36.6%
Economic Development	\$ 508.4	\$ 290.1	57.1%
Business District Development	275.5	237.3	86.1%
Industrial Sites and Parks	232.9	52.8	22.7%
General Government	\$ 402.3	\$ 130.2	32.4%
Public Buildings	286.3	90.4	31.6%
Other Facilities	116.0	39.9	34.4%
Grand Total	33,905.4	10,991.3	32.4%

* Includes replacements of existing schools.

School system-wide is 47.9% funded, making it the fourth most fully funded type, and is needed for a variety of reasons. It is needed to support K-12 education and includes central offices, support buildings, and maintenance and transportation facilities.

Water and wastewater and storm water come next with 43.3% and 40.3% of their needs fully funded. Two fully funded sewer projects in Davidson account for 12.9% of water and wastewater needs. Without these two projects, the percentage of water and wastewater fully funded needs would be 30.4%. Water and wastewater infrastructure, needed to ensure clean drinking water and protect water supply sources, is completed at a greater rate than other types of infrastructure, likely because it has a reliable funding source—the revenue collected

from its customers. Many of those customers are in sparsely populated areas that are expensive to reach with new water and sewer lines.

More densely populated areas have a larger percentage of the surface area that is impervious to rain water (e.g., buildings, roads and streets, and parking lots), increasing the risk of flooding and contamination of drinking water. Two-fifths (40.3%) of new storm water infrastructure needs are fully funded and nearly all of it is needed to meet increasing environmental standards meant to encourage low-impact development. A new permit for cities and counties issued by the US Environmental Protection Agency will require developments to reduce runoff by landscaping or collecting rainwater.¹ Additionally, the massive flood of 2010 brought greater awareness to the importance of maintaining, improving, and building storm water infrastructure. The city of Greeneville needs \$20 million for city-wide storm water controls, representing 18.3% of total storm water needs, but the project is not funded. If that project were to receive funding, the percentage of storm water needs that are fully funded would increase to 58.6%.

Libraries, museums, and historic sites and other facilities are next in percent of needs fully funded at 36.6% and 34.4% respectively. More than three-fourths (77%) of the state-owned libraries, museums, and historic sites are fully funded compared with only 35.1% of needs that will be locally owned. All of the needs for other facilities will be owned locally. One \$46.2 million project in Shelby makes up most (60.7%) of the other facilities that are not fully funded. It is to move the main vehicle maintenance shop for Memphis to allow for expansion of St Jude Children's Hospital.

Recreation has an average amount of projects that are fully funded (32.9%). Nearly one-third (30.2%) of the recreation total is for an \$82 million project in Davidson County that includes facility improvements currently under construction at parks and greenways throughout the county. Besides parks and greenways, recreation needs include hiking trails, public swimming pools, public marinas, ballparks, soccer fields, tennis courts, basketball courts, playgrounds, and auditoriums.

The remaining project types—solid waste, transportation, public buildings, other utilities, law enforcement, industrial sites and parks, new public schools, fire protection, post-secondary education, and housing—all have less than the average amount of fully funded projects. Solid waste ranks 10th in percent of needs fully funded (32.0%), though total needs for this type of infrastructure is just \$34.8 million. Three landfills, one each in Anderson, Lawrence, and Smith counties, account for four-fifths (79.1%) of fully funded solid waste needs.

At 31.5%, transportation is somewhat below average in the amount of projects that are fully funded. Although there are several dedicated funding mechanisms, such as federal and state fuel taxes and local wheel taxes, to help pay for transportation infrastructure, those sources have been coming up short in recent years. Fuel is taxed by the number of gallons consumed,

¹ <https://www.nashville.gov/Water-Services/Developers/Low-Impact-Development.aspx>.

and according to a 2015 report by the Tennessee Comptroller, fuel consumption in 2012 remained below its peak in 2007 and is expected to continue to decline as a result of several factors, including increased fuel efficiency of vehicles, reduced growth in vehicle miles traveled because of higher fuel prices, and increased use of alternative fuel vehicles, such as electric vehicles, which are not currently subject to highway fuel taxes. Because of the decline in fuel revenue, in recent years, federal fuel tax revenue has been insufficient to pay Highway Trust Fund commitments to states. Congress has transferred money into the federal Highway Trust Fund for eight years—the latest transfer was \$9.7 billion in October, 2014²—to avoid reducing funding to all states, but the resulting uncertainty in funding makes it difficult for states to plan.

Coming next at 31.6% of projects fully funded, public buildings include mainly county courthouses, county offices, city halls, and public works offices, and are funded mostly with general tax revenue. Other utility infrastructure—infrastructure owned by public gas and electric utilities—follows with 29.7% of its projects fully funded. These projects rely on customers to fund infrastructure. Electric and gas utilities charge a fixed fee per customer and a fee that varies with the number of kilowatt hours or cubic feet of gas used. Industrial and commercial electric customers are also charged for their maximum electricity usage (demand). Overall demand determines how much infrastructure is needed to ensure reliable electricity and gas service.

At 27.9% fully funded, law enforcement infrastructure is funded with general tax revenue, though in some cases federal loans and grants may be used. For example, the US Department of Agriculture has the Community Facilities Direct Loan and Grant Program for rural police stations. Industrial sites and parks, at 22.7% fully funded, can be complex with multiple components, such as roads, rail spurs, ports, and utilities that are classified as other types of infrastructure (e.g., transportation and water and wastewater) and have different funding sources.

While new public school construction is third in total infrastructure needs, it ranks 16th of the 19 project types in percent fully funded at 16.3%. School systems in Tennessee are not fiscally independent, which may hamper school officials' abilities to project funding and may at least partially account for the small percentages in table 13. Although the Education Improvement Act of 1992 mandates a maximum class size of 25 to 35, depending on grade level, only two new schools in Rutherford County, at a total cost of \$32 million, are needed to meet that state mandate. The other \$1.7 billion in new schools needed across the state are not considered state mandates but would likely help keep class sizes down as well. The ability of local government to pay for that varies greatly. Because different local governments cannot raise the same amount of revenue per student with the same tax rates, the state provides considerable funding for school capital outlay, though it does not earmark those funds for that

² United States Department of Transportation, Highway Trust Fund Ticker: <http://www.dot.gov/highway-trust-fund-ticker>

specific purpose. School systems have the flexibility to use those funds to meet various school needs and generally report using them for operating costs.

Public school construction is one type of infrastructure that is greatly affected by mandates—schools are needed to meet Tennessee’s constitutional requirement to provide a system of free public schools to all students.³ That mandate requires the state to fund schools, which it does through the Basic Education Program (BEP) funding formula. The formula includes money for capital outlay—an amount that tops \$700 million this year, of which the state pays around half. Although the state makes a substantial contribution to funding public schools, they are owned by local governments.

Although most fire departments are primarily funded by taxes, many rely on donations, subscription fees, or other funding sources, and only 9.7% of fire protection needs are fully funded. Most of the funds available for fire protection needs are concentrated in large cities like Nashville, Chattanooga, and Memphis but the fire stations that have recently been completed are in smaller cities like Bristol, Jamestown, Clarksville, and Mount Juliet.

The only type of infrastructure with a percentage of fully funded projects less than fire protection is housing. All of the fully funded housing needs from the 2012 inventory were completed, and all of the needs in the 2013 inventory are unfunded. The current inventory includes nine housing projects at \$4.6 million; six are in Claiborne County.

Overall, nearly \$22 billion of infrastructure needs are not yet funded.

Overall, unfunded needs comprise about half (51.4%) of total estimated costs. At least half of the needs in eight types of infrastructure have no funding—housing (100%), new public schools (72.8%), industrial sites and parks (66.0%), other facilities (63.9%), post-secondary education (62.9%), other utilities (59.1%), transportation (52.7%), and solid waste (50.3%). See table 14.

³ Article 11, Section 12 of the Tennessee State Constitution, recognizing the inherent value of education and encouraging its support, directs the General Assembly to provide for the maintenance, support, and eligibility standards of a system of free public schools.

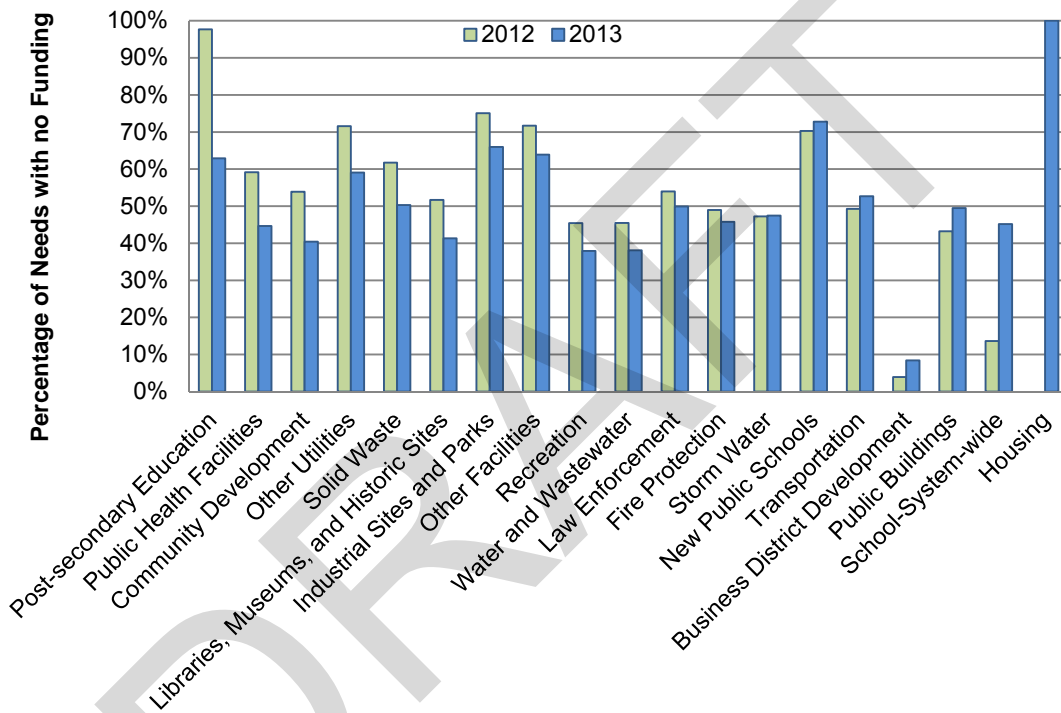
Table 14. Percent of Needs with no Funding by Type of Need
Five-year Period July 2013 through June 2018

Category and Type of Infrastructure	Total Needs [in millions]	Needs with No Funding [in millions]	Percent of Total Needs
Transportation and Utilities	\$ 25,821.8	\$ 13,620.7	52.7%
Transportation	25,599.2	13,489.2	52.7%
Other Utilities	222.5	131.5	59.1%
Health, Safety, and Welfare	\$ 4,170.4	\$ 1,670.3	40.1%
Water and Wastewater	3,415.2	1,301.4	38.1%
Law Enforcement	422.4	210.9	49.9%
Fire Protection	163.2	74.7	45.8%
Storm Water	109.0	51.7	47.4%
Solid Waste	34.8	17.5	50.3%
Public Health Facilities	21.2	9.5	44.7%
Housing	4.6	4.6	100.0%
Education	\$ 1,765.1	\$ 1,276.7	72.3%
New Public Schools	1,730.5	1,259.2	72.8%
School-System-wide	24.3	11.0	45.2%
Post-secondary Education	10.3	6.5	62.9%
Recreation and Culture	\$ 1,237.4	\$ 480.7	38.9%
Recreation	828.6	314.3	37.9%
Community Development	272.7	110.2	40.4%
Libraries, Museums, and Historic Sites	136.0	56.2	41.3%
Economic Development	\$ 508.4	\$ 176.8	34.8%
Business District Development	275.5	23.2	8.4%
Industrial Sites and Parks	232.9	153.6	66.0%
General Government	\$ 402.3	\$ 215.8	53.6%
Public Buildings	286.3	141.6	49.5%
Other Facilities	116.0	74.1	63.9%
Grand Total	\$ 33,905.4	\$ 17,441.0	51.4%

The overall percentage of infrastructure needs that are not fully funded increased from 48.8% to 51.4% since 2012, mainly because of a \$3.0 billion increase in unfunded transportation needs. Four other types had large increases in the percentage of needs that are unfunded; housing, school system-wide, public buildings, and business district development. As discussed above, all of the housing need from 2012 (\$14.0 million) was fully funded and completed by 2013, leaving \$4.6 million needed for housing rehabilitation that has no funding. The percentage of school system-wide needs that are unfunded increased from 13.6% to 45.2% because only half of newly identified needs are funded. Most of the additional funding needed is \$4 million needed for a new schools technology center in Washington County and \$2 million needed for energy improvements for DeKalb County Schools. All but \$903,000 of the \$8.5 million in public building needs identified in 2013 needed additional funding, increasing

the percentage of unfunded needs from 43.2% to 49.5%. After the completion of a fully funded \$624 million convention center in Nashville, the percentage of business district development needs with no funding increased from 3.9% to 8.4%. This is despite the decrease of unfunded needs from \$38.5 million to \$23.2 million, mostly \$12 million of unfunded aesthetic improvements at Rivergate Mall in Nashville postponed to 2020. Transportation, new public schools, and storm water are the other types of needs whose percentage of unfunded needs increased. See figure 6.

Figure 6. Percentage of Needs with No Funding by Type of Infrastructure
Comparison of July 2012 and July 2013 Inventories



State funding and local funding declined and federal funding increased from last year.

While state and local revenue sources for fully funded infrastructure decreased since last year, an increase in federal sources offset most of the decline, though the state remains the principal funding source for fully funded projects (see table 15). All of the decrease in local funding sources is attributable to the completion of the \$624 million convention center in Nashville. The decrease was only somewhat offset by a \$55.8 million increase in funding by cities. Funding from federal sources, increased by \$745 million, almost half of that increase came from the \$324 million increase for the repair and expansion of the Chickamauga dam lock, attributable to barge fuel tax revenue set aside through the Inland Waterways Trust Fund.

Funding sources for fully funded needs vary by type of infrastructure.

The government that owns infrastructure typically funds the bulk of its cost. For example, local officials reported that 85% of the funding for county-owned projects will come from county sources. The same is true of improvements reported in the 2008 inventory that have since been completed—counties paid 86% of the cost of meeting their infrastructure needs. Cities provided 68% of the funds necessary for improvements they needed in 2008 and have completed since then, and they expect to provide 61% of the funds for current and future improvements. Special districts paid 81% of the cost of meeting their 2008 infrastructure needs and expect to fund 63% of their current and future costs.

Table 15. Funding Sources for Fully Funded Public Infrastructure Needs
Comparison of July 2012 and July 2013 Inventories

Funding Source	July 2012 Inventory		July 2013 Inventory		Difference
	Amount [billions]	Percent	Amount [billions]	Percent	Amount [billions]
Local	\$ 3.4	30.1%	\$ 2.9	26.5%	\$ (0.480)
State	4.9	43.6%	4.4	39.8%	(0.500)
Federal	2.7	24.2%	3.5	31.5%	0.700
Other	0.2	2.2%	0.2	2.2%	0.001
Total	\$ 11.3	100.0%	\$ 11.0	100.0%	\$ (0.27)

As shown in table 16, local government sources—mainly counties and cities—provide the majority of funding for all needs except transportation and public health facilities, which are primarily funded by the state. Overall, counties provide funds for 15.8% of fully funded needs. School-system wide needs depend on counties for funding (81.5%) more than any other type. Counties are also the principal source of funding for five other types of infrastructure needs: new public school construction (77.5%); law enforcement (70.8%); business district development (70.2%); solid waste (69.9%); and industrial sites and parks (51.4%).

Although cities fund just 10.7% of all fully funded infrastructure needs, they contribute heavily to six types of infrastructure: other facilities (92.4%), storm water (87.3%), other utilities (82.4%), fire protection (57.9%), community development (52.5%), and post-secondary education (51.8%). And more than 25% of fully funded public buildings, recreation, business district development, water and wastewater, and solid waste infrastructure are funded by cities. For public buildings and recreation, this constitutes the largest portion of the funding.

Special districts, another local government source, do not provide the majority of funding for any type of infrastructure. Although almost all (94.7%) special district funding is for water and wastewater needs, that funding makes up only 12.2% of the total needed for that type. Most of the rest of special district funding is for other utilities (4.7%), making up 13.5% of that type.

Table 16. Funding Source by Category and Type of Infrastructure for Fully Funded Needs [in millions]

Five-year Period July 2013 through June 2018

Category and Project Type	State		Federal		Other		City		County		Special District		Total
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent	Amount
Transportation and Utilities	\$4,285.1	52.7%	\$3,174.0	39.0%	\$ 11.5	0.1%	\$ 308.6	3.8%	\$ 347.9	4.3%	\$ 8.9	0.1%	\$ 8,136.0
Transportation	4,285.1	53.1%	3,172.1	39.3%	11.4	0.1%	254.1	3.1%	347.2	4.3%	0.0	0.0%	8,070.0
Other Utilities	0.0	0.0%	1.9	2.9%	0.1	0.2%	54.4	82.4%	0.7	1.1%	8.9	13.5%	66.0
Health, Safety and Welfare	\$ 59.7	3.6%	\$ 182.2	10.9%	\$ 15.1	0.9%	\$ 451.1	26.9%	\$ 790.3	47.1%	\$ 179.9	10.7%	\$ 1,678.3
Water and Wastewater	59.1	4.0%	154.8	10.5%	15.1	1.0%	375.8	25.4%	693.3	46.9%	179.6	12.2%	1,477.7
Law Enforcement	0.0	0.0%	9.8	8.3%	0.1	0.0%	24.5	20.8%	83.6	70.8%	0.0	0.0%	118.0
Storm Water	0.3	0.7%	4.5	10.2%	0.0	0.0%	38.3	87.3%	0.8	1.8%	0.0	0.0%	43.9
Fire Protection	0.0	0.0%	2.8	17.4%	0.0	0.0%	9.2	57.9%	3.9	24.6%	0.0	0.0%	15.8
Public Health Facilities	0.0	0.0%	10.3	87.6%	0.0	0.0%	0.5	4.3%	1.0	8.1%	0.0	0.0%	11.8
Solid Waste	0.3	2.2%	0.0	0.0%	0.0	0.0%	2.8	25.2%	7.8	69.9%	0.3	2.7%	11.1
Housing	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0
Education	\$ 0.8	0.3%	\$ 0.4	0.1%	\$ 0.0	0.0%	\$ 64.8	22.1%	\$ 226.8	77.5%	\$ 0.0	0.0%	292.7
New Public Schools	0.0	0.0%	0.0	0.0%	0.0	0.0%	63.0	22.5%	217.3	77.5%	0.0	0.0%	280.2
School-System-wide	0.8	6.4%	0.0	0.0%	0.0	0.0%	1.4	12.1%	9.5	81.5%	0.0	0.0%	11.7
Post-secondary Education	0.0	0.0%	0.4	48.2%	0.0	0.0%	0.4	51.8%	0.0	0.0%	0.0	0.0%	0.8
Recreation and Culture	\$ 15.6	3.4%	\$ 94.1	20.3%	\$ 25.9	5.6%	\$ 192.7	41.5%	\$ 135.8	29.3%	\$ 0.0	0.0%	464.1
Recreation	6.2	2.3%	53.0	19.5%	12.7	4.6%	106.1	38.9%	94.5	34.7%	0.0	0.0%	272.5
Community Development	7.1	5.0%	32.4	22.9%	3.0	2.1%	74.4	52.5%	24.9	17.6%	0.0	0.0%	141.8
Historic Sites	2.3	4.5%	8.7	17.5%	10.2	20.5%	12.2	24.6%	16.4	32.9%	0.0	0.0%	49.8
Economic Development	\$ 8.2	2.8%	\$ 12.5	4.3%	\$ 3.3	1.1%	\$ 71.6	24.7%	\$ 193.7	66.8%	\$ 0.8	0.3%	290.1
Business District Development	3.1	1.3%	1.8	0.8%	0.0	0.0%	65.8	27.7%	166.6	70.2%	0.0	0.0%	237.3
Industrial Sites and Parks	5.1	9.7%	10.7	20.3%	3.3	6.2%	5.8	11.0%	27.1	51.4%	0.8	1.4%	52.8
General Government	\$ 0.5	0.4%	\$ 4.2	3.2%	\$ 0.3	0.3%	\$ 81.7	62.8%	\$ 43.5	33.4%	\$ 0.0	0.0%	130.2
Public Buildings	0.5	0.6%	2.2	2.5%	0.3	0.4%	44.9	49.7%	42.4	46.9%	0.0	0.0%	90.4
Other Facilities	0.0	0.0%	1.9	4.9%	0.0	0.0%	36.8	92.4%	1.1	2.8%	0.0	0.0%	39.9
Grand Total	\$4,369.8	39.8%	\$3,467.3	31.5%	\$ 56.2	0.5%	\$1,170.6	10.7%	\$1,737.9	15.8%	\$ 189.6	1.7%	\$10,991.4

Completed infrastructure improvements relied more on local funding than current needs; more populous counties got more of their funding from local sources.

Compared with infrastructure needed on July 1, 2008, and completed by June 30, 2013, current needs rely less on local funding sources. Local officials name the state and federal governments as the source of a greater proportion of funding for current needs than those governments actually provided in the past. Although the state government funded 38% of 2008 needs completed by the 2013 inventory, the state is named as the source of 49% of the funding available for needs in the 2013 inventory. Similarly, the federal government funded 14% of infrastructure needed in 2008 and completed by 2013, but is reported as the source of 23% of funds for current needs. This may be because state and federal funding must be identified years in advance while local funding decisions are often made from year to year.

Besides varying across type of infrastructure, federal, state, and local shares of funding also vary significantly by county, with the eight most populous counties, home to about half of the state's population, receiving a smaller percentage of their infrastructure funding from the state (25.0%) than the other 87 counties (42.2%) for infrastructure needed in 2008 and completed by 2013. The eight most populous counties—Shelby, Davidson, Knox, Hamilton, Rutherford, Williamson, Montgomery, and Sumner—make up the difference with local funds, funding 61.4% with local sources compared to 34.6% for the least populous counties. Federal funding is spread out more evenly with a somewhat larger share going to the least populous counties—19.1% compared with 12.9% for the most populated counties.⁴

Unfunded needs are much less likely to be completed.

Needs that were not fully funded on July 1, 2008 were much less likely to be completed than needs that were, in part, because unfunded needs usually remain unfunded. Less than one-quarter of the needs that were not fully funded on July 1, 2008, were completed by July 1, 2013, much less than the 41.7% completion rate of those that were fully funded. The difference is even greater for some project types. Industrial sites and parks, new public schools, fire protection, and law enforcement needs get completed at rates of 88.5%, 89.2%, 92.6%, and 95.7%, respectively, when they are fully funded but only 15.6%, 31.3%, 15.7%, and 18.7% get completed when they are not.

Nearly three-fourths of the unfunded needs from the 2008 inventory remain unfunded in the 2013 inventory. For inventory year 2013, \$17.4 billion in needs were unfunded compared with \$13.9 billion in 2008. Of the \$13.9 billion of additional funding that was needed in 2008, \$3.7 billion of additional funding was identified as of July 2013. And most of the needs that did get funded got funded sooner rather than later. Two-thirds (\$2.4 billion) of those needs got

⁴ These numbers understate how much the state offsets local funding of infrastructure. Funding of new public schools is considered local even though much of that "local" funding comes from the state according to its Basic Education Program funding formula.

funded from the 2009 through the 2010 inventory years, while the other one-third (\$1.3 billion) was funded in the following three inventory years (2011-2013).

Because some money must be spent for needs in the planning and design stage, only conceptual needs can be completely unfunded,⁵ and needs that spend many years in the conceptual stage become less and less likely to ever become funded and completed. Needs that have been in the conceptual stage for three years are 50% funded, and those that remain conceptual for six years or more are 3% funded. Four-fifths (79.0%) of that 3% is transportation, and one such need is the \$256 million widening of I-26 in Washington County, which has been conceptual since 2007 and remains unfunded. Besides transportation, storm water, public health facilities, fire protection, community development, solid waste, and post-secondary education have the most needs in the conceptual stage for six years or more when compared with their share of overall need.

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⁵ Some planning and design expenses are “in house” and cannot be attributed to a single project.