The NC FIRST Commission was created in March 2019 to evaluate North Carolina's transportation investment needs. Their job is to advise the Secretary of Transportation of new or better ways to ensure that critical financial resources are available in the future. As part of this process, we'll be looking for input from you, the people of North Carolina! This brief reviews the finance tools that states use to deliver transportation infrastructure and offers suggestions for policy changes that could help North Carolina make better use of these options.

Transportation Finance

Overview

A defining characteristic of transportation projects are their large, upfront costs. But motor fuel taxes and other transportation revenues only materialize slowly, over time. Financing tools bridge the gap for public agencies by allowing them to raise money quickly and pay it back gradually, just like a household would use a home mortgage or a car loan.

Finance mechanisms can help deliver projects much sooner, and even help keep costs down by getting ahead of future price increases and inflation. However, because they are always tied to repayment obligations, these tools themselves cannot close the transportation funding gap.

What is the difference between *funding* and *finance*?

There is an important distinction between *funding* and *finance*. Funding refers to the revenue streams, such as taxes or fees, that ultimately pay for infrastructure over the long term. Finance is the leveraging of future revenues to raise upfront capital so infrastructure can be delivered when and where it is needed. Unlike funding, finance must always be paid back in one way or another. Therefore, the availability of financing doesn't eliminate the need for funding; rather, a funding source is always needed to support finance activities.

What kinds of finance tools do states use to deliver transportation projects?

As investment needs continue to outstrip transportation revenues nationwide, states have turned to an array of finance options to stretch public dollars and support infrastructure investments.[1]

State bonds. When a state issues bonds for major capital projects, it sells the bonds to investors and then pays those investors back on a set schedule, including periodic interest payments over the life of the bond. States traditionally issue municipal bonds on which the interest paid to investors is exempt from federal (and usually state) income taxes. Because investors will generally accept lower interest rates in return for the tax advantage, the state ends up paying less in interest costs.

Bonds are one of the most common tools that states use to finance road and bridge projects and that local governments use to finance large public transit projects, representing billions of dollars in outstanding debt nationwide.[2] Bond types include general obligation bonds, which are backed by the full faith and credit of the state, and revenue bonds, which are guaranteed by specific revenue streams, such as tolls. Beginning with a $50 million bond to improve road conditions in 1921,[3] North Carolina has a long history of issuing both kinds of bonds for highway projects.[4] In addition, in 2018 the legislature authorized a type of "special indebtedness" for up to $3 billion in limited obligation Build NC Bonds for essential road projects. These bonds are to be repaid from the Highway Trust Fund.[5] In 2020, to ensure that key projects would continue despite the revenue impacts of the COVID-19 pandemic, the legislature authorized combining two years of Build NC Bond sales into a single $700 million issuance.[6]

[1] For a detailed look at how each state finances its transportation projects, see www.financingtransportation.org/pdf/50_state_review_nov16.pdf.
[2] www.financingtransportation.org/pdf/50_state_review_nov16.pdf
[3] 1921 N.C. Sess. Laws, Chap. 2, §39
[4] Article V of the North Carolina constitution requires voter approval for general obligation bonds, which were last approved for road projects in 1996. State statute, however, generally authorizes state agencies to issue revenue bonds, including for turnpike projects (N.C. Gen. Stat. §136-89.189 and §§159-80 et seq.). Turnpike revenue bonds have been issued more frequently, most recently in 2019 to support the Triangle Expressway.
[5] 2018 N.C. Sess. Laws, Chap. 2018-16; www.ncdot.gov/about-us/how-we-operate/finance-budget/Pages/build-nc.aspx
[6] 2020 N.C. Sess. Laws, Chap. 2020-91, §4.3

Federal debt financing tools. A number of federal programs allow states to borrow against anticipated federal-aid funding for transportation projects.[7]

- Grant Anticipation Revenue Vehicles (GARVEEs). GARVEEs are federal debt financing instruments that allow states to borrow against future federal aid for highway projects, most often by issuing revenue bonds that are secured with a pledge of federal-aid assistance and authorized for federal reimbursement of debt service and related costs. As of July 2020, approximately $24.62 billion in GARVEEs had been issued by state DOTs. Since the North Carolina legislature authorized the use of GARVEE bonds in 2005,[8] NCDOT has completed seven issuances totaling $1.94 billion (**Figure 1**).[9] NCDOT currently has 26 active and proposed GARVEE projects across the state.[10]

Figure 1: NCDOT GARVEE Issuances

Date of Issue	Issues (Millions)	Bond Type	Final Maturity	Rating Moody's/ S&P/Fitch	Projects
Oct. 2007	$287.57	New Money	2019	Aa3/AA-/AA-	38 Construction Projects
Jul. 2009	$242.50	New Money	2021	Aa3/AA-/AA-	44 Construction Projects
Dec. 2011	$145.54	New Money	2023	Aa2/AA/AA-	Monroe Connector System
Jan. 2012	$179.54	New Money	2019	Aa2/AA/AA-	49 Construction Projects
May 2015	$264.93	New Money	2030	A2/AA/A+	60 Construction Projects
Aug. 2017	$224.64	Refunding	2023	A2/AA/A+	Advance Refunded Series 2007, 2009, and 2011
Jun. 2019	$600.00	New Money	2034	A2/AA/A+	Number of Projects Not Specified

- Private Activity Bonds (PABs). PABs allow a state to issue tax-exempt municipal bonds on behalf of a private entity that is developing a public-private project, so the private sponsor can benefit from lower financing costs. Like other municipal bonds issued by public agencies, these tools generate up-front capital for projects at generally tax-exempt interest rates. The use of PABs expands beyond transportation projects, enabling tax-exempt bonds to be issued on 27 eligible private activities, such as water, sewer, and hazardous waste.[11] Since highway and freight transfer facilities were added to the list of qualified activities in 2005, $12.27 billion in PABs have been issued for such projects nationwide.[12] NCDOT issued $100 million in PABs in 2015 to help finance the department's first public-private partnership toll project, the I-77 Express Lanes.

[7] For more about federal debt financing tools, see www.fhwa.dot.gov/ipd/finance/tools_programs/federal_debt_financing/ and www.financingtransportation.org/funding_financing/financing/bonding_debt_instruments/municipal_public_bond_issues/.

[8] 2005 N.C. Sess. Laws, Chap. 2005-403, as codified at N.C. Gen. Stat. §136-18(12b)

[9] www.fhwa.dot.gov/ipd/finance/tools_programs/federal_debt_financing/garvees/garvee_state_by_state.aspx#northcarolina

[10] www.moodys.com/research/Moodys-assigns-A2-to-North-Carolinas-Series-2019-GARVEE-bonds--PR_905823881

[11] fas.org/sgp/crs/misc/RL31457.pdf

[12] www.fhwa.dot.gov/ipd/finance/tools_programs/federal_debt_financing/garvees/garvee_state_by_state.aspx; www.transportation.gov/buildamerica/financing/private-activity-bonds-pabs/private-activity-bonds

Federal credit assistance. The federal Transportation Infrastructure Finance and Innovation Act (TIFIA) program offers long-term, low-interest loans and other types of credit assistance to public or private sponsors of major surface transportation projects, often on better terms than in the financial market.[13] According to the U.S. Department of Transportation, TIFIA was created "because state and local governments that sought to finance large-scale transportation projects with tolls and other forms of user-backed revenue often had difficulty obtaining financing at reasonable rates due to the uncertainties associated with these revenue streams."[14]

TIFIA assistance cannot exceed 33 percent of anticipated project costs and must be repaid, in whole or in part, with dedicated revenue sources such as tolls, user fees, or special assessment taxes. Repayment can be deferred up to five years after substantial project completion, allowing projects time to ramp up and start generating stable revenue streams—especially toll projects, where traffic and revenues are typically expected to grow over time.

To date, the TIFIA credit program has financed 87 loans totaling $33.3 billion for highway, rail, and transit projects in at least 21 states, the District of Columbia, and Puerto Rico.[15] North Carolina has borrowed $1.24 billion in TIFIA loans for four toll projects: the Triangle Expressway, the I-77 Express Lanes, the Monroe Expressway, and Complete 540—Phase 1 (**Figure 2**).

State infrastructure banks. A state infrastructure bank (SIB) is a state-administered revolving fund that offers low-interest loans and other types of financial assistance to public and private sponsors of federal-aid highway, transit, or rail projects. State infrastructure banks, as authorized in federal law,[16] are capitalized with federal-aid surface transportation funds and matching state funds. Several states have also established SIBs or separate SIB accounts capitalized solely with state funds. As loans or other forms of credit assistance are repaid, the initial capital is replenished and can be used to support a new cycle of projects.[17]

According to the U.S. Department of Transportation, as of September 2016, 33 states and territories had entered into an estimated 834 SIB loan agreements for a total of $5.9 billion.[18] NCDOT has operated three SIBs: a federal SIB, a state SIB, and an aviation SIB. North Carolina's federal SIB was established in 1997[19] and capitalized with a one-time authorization of $1,260,000 in federal funds and a state match of $255,000. Since then, it has loaned nearly $2 million to local governments for capital transit projects, often serving as local matching funds,[20] and rail depot improvements. In 2004, a one-time appropriation of $750,000 in state revenues established a state SIB to assist municipalities and local governments with transportation facilities and projects.[21] Then in 2014, NCDOT created an aviation SIB for airport-related projects using $240,000 from airport development appropriations.[22] The 2017 budget directed NCDOT to close the state SIB.[23]

Figure 2: NCDOT TIFIA Loans

Date of Credit Agreement	Loan (Millions)	% of Total Project Cost	Original Final Maturity Date	Projects
Jul. 2009	$386.7	34.1%	2043	Triangle Expressway
May 2015	$189.0	29.7%	2053	I-77 Express Lanes
Jan. 2017	$166.5	20.8%	2053	Monroe Expressway
Dec. 2019	$501.5	33.0%	2058	Complete 540—Phase 1

[13] For more about TIFIA, see www.transportation.gov/buildamerica/financing/tifia/tifia-credit-program-overview, www.fhwa.dot.gov/ipd/finance/tools_programs/federal_credit_assistance/tifia/, crsreports.congress.gov/product/pdf/R/R45516, and www.financingtransportation.org/funding_financing/financing/credit_assistance/tifia.aspx.

[14] www.transportation.gov/buildamerica/financing/tifia/frequently-asked-questions

[15] www.transportation.gov/buildamerica/projects; crsreports.congress.gov/product/pdf/R/R45516

[16] Congress authorized two pilot state infrastructure bank programs: one in 1995 under the National Highway System Designation Act of 1995 (NHS Act), §350, and the other in 1998 under the Transportation Equity Act for the 21st Century (TEA-21), §1511. North Carolina's federal SIB was created under the NHS Act. In 2005, Congress also authorized a permanent SIB program that is codified in 23 U.S. Code §610, but no states have created SIBs under that program. See www.fhwa.dot.gov/ipd/finance/tools_programs/federal_credit_assistance/sibs/.

[17] For more about SIBs, see www.fhwa.dot.gov/ipd/finance/resources/federal_credit/ and www.financingtransportation.org/funding_financing/financing/credit_assistance/state_infrastructure_banks.aspx.

[18] www.fhwa.dot.gov/policy/23cpr/

[19] 1997 N.C. Sess. Laws, Chap. 1997-428; N.C. Gen. Stat. §136-18(12a)

[20] www.transit.dot.gov/sites/fta.dot.gov/files/2005_SIB_Report_Final.pdf

[21] 2004 N.C. Sess. Laws, Chap. 2004-124

[22] www.ncleg.gov/documentsites/committees/house2015-172/11-14-16_Meeting/6.SIB_GARVEES.pdf

[23] 2017 N.C. Sess. Laws, Chap. 2017-57, §34.16A

Public-private partnerships. As public revenues for transportation investment continue to fall short, interest has grown in turning to the private sector to help deliver needed infrastructure improvements. Public-private partnerships (PPPs or P3s) are contractual agreements between public and private sector partners that allow more private participation in transportation projects than is traditional. PPPs vary widely and include more than a dozen types of arrangements in which the private partner designs, builds, finances, operates, or maintains a facility in return for facility-generated revenues (such as tolls) or other compensation.[24] In many PPPs, the private role has included project financing.[25]

However, this is not free money. Any upfront capital provided by the private sector to get a project off the ground, or any other private investment in a project—plus a return on that investment—must ultimately be paid back from facility-generated revenues or other public revenue streams. As a result of this repayment obligation, as with other finance mechanisms, PPPs cannot add new revenues or fix funding shortfalls in the long run.

As of February 2019, at least 38 states including North Carolina had enabling statutes for transportation PPPs.[26] North Carolina's statute allows NCDOT to enter into up to three agreements with private entities to "finance, … plan, design, develop, acquire, construct, equip, maintain, and operate transportation infrastructure in this state."[27] The state's first agreement under this law authorized a private partner to design, build, finance, operate, and maintain the I-77 Express Lanes. The finance component includes $248 million in private equity, which along with other project costs is to be paid back from toll revenues.[28]

Value capture. When a public agency invests in new infrastructure, nearby residents, landowners, and commercial businesses benefit. Value capture refers to a range of approaches that aim to recover some of the value that is created as a result of infrastructure investment—including increases in property values, economic activity, and growth—to help fund current or future improvements. The value capture techniques most commonly used in the U.S. include impact fees, negotiated exactions, transportation utility fees, special assessments, land value taxes, sales tax districts, tax increment financing, joint development, and air rights (**Figure 3**).[29]

Figure 3: Overview of Value Capture Categories, Techniques, and Definitions

Category	Technique	Definition
Developer Contributions	Impact Fees	Fees imposed on developers to help fund additional public services, infrastructure, or transportation facilities required due to the new development.
	Negotiated Exactions	Negotiated charges imposed on developers to mitigate the cost of public services or infrastructure required as a result of the new development.
Transportation Utility Fees	Transportation Utility Fees	Fees paid by property owners or building occupants to a municipality based on estimated use of the transportation system.
Special Taxes and Fees	Special Assessment Districts	Fees charged on property owners within a designated district whose properties are the primary beneficiaries of an infrastructure improvement.
	Business Improvement Districts	Fees or levies charged on businesses within a designated district to fund or finance projects or services within the district's boundaries.
	Land Value Taxes	Split tax rates, where a higher tax rate is imposed on land than on buildings.
	Sales Tax Districts	Additional sales taxes levied on all transactions or purchases in a designated area that benefits from an infrastructure improvement.
Tax Increment Financing	Tax Increment Financing	Charges that capture incremental property tax value increases from an investment in a designated district to fund or finance the investment.
Joint Development	At-Grade Joint Development	Projects that occur within the existing development rights of a transportation project.
	Above-Grade Joint Development	Projects that involve the transfer of air rights, which are development rights above or below transportation infrastructure.
	Utility Joint Development	Projects that take advantage of the synergies of broadband and other utilities with highway right-of-way.
Naming Rights	Naming Rights	A transaction that involves an agency selling the rights to name infrastructure to a private company.

[24] For more about PPPs, see www.transportation.gov/buildamerica/project-development/public-private-partnerships-p3/public-private-partnerships-p3, www.fhwa.dot.gov/ipd/p3/, and www.ncsl.org/research/transportation/ncsl-p3-update.aspx.

[25] www.cbo.gov/publication/56044; www.nap.edu/catalog/25561

[26] www.ncsl.org/research/transportation/ncsl-p3-update.aspx

[27] N.C. Gen. Stat. §§136-18(39) et seq.

[28] www.ncdot.gov/projects/i-77-express-lanes

[29] www.fhwa.dot.gov/ipd/value_capture/resources/value_capture_resources/value_capture_implementation_manual/

Because the resulting revenues do not need to be repaid, value capture represents a form of funding, not finance. However, some of the options—such as special assessment districts and sales tax districts—can raise substantial and reliable revenues that may be pledged toward the repayment of bonds. Therefore, value capture can be an important component of a broader innovative finance approach, especially for local governments.

Both local and state agencies across the country have used various value capture techniques for transportation projects, but these approaches have only rarely been used in North Carolina. Among the special levies authorized in North Carolina, the value capture techniques include:

- Project development financing (commonly called tax increment financing or TIF). A 2004 constitutional amendment authorized local governments and special districts to use project development financing to leverage new growth to pay for the capital cost of public infrastructure improvements.[30] TIF can be used for broad purposes, such as airports, event centers, hospitals, and utilities. TIF projects are backed by general obligation bonds, TIF Revenue Notes, and special assessments for up to 30 years and are approved by the Local Government Commission (LGC). The LGC has approved two TIF districts: $21.5 million in TIF bonds for the Carolina Crossroads Music and Entertainment District in Roanoke Rapids in March 2006, and $12.9 million in TIF bonds for public improvements in the town of Woodfin in August 2008.

- Impact fees (also known as system development fees or SDFs). Impact fees are commonly imposed by local governments for utility services. In 2006, the N.C. Supreme Court invalidated the use of upfront charges that were established without legislative authority.[31] While the General Assembly has since authorized system development fees for water and sewer service on new developments, other types of capacity-related development fees on new or existing developments are not permitted. At least 81 local government utilities charged an SDF fee in FY 2019.[32]

- Special assessment districts (SADs). The General Assembly authorizes the use of traditional SADs and special assessments for critical infrastructure needs.[33] Traditional special assessments are used for a specific public benefit for that piece of property, such as streets or sidewalks, but not on broader public benefits like fire service or for recreational facilities or maintenance activities. Critical infrastructure special assessments leverage new developments to pay for public infrastructure improvements and may be used for more expansive purposes, like community development projects. The critical infrastructure SAD sunsets on July 1, 2025.

[30] N.C. Sess. Law 2003-403, approved by voters in November 2004 as Amendment 1; codified as N.C. Const. art. V, §14, and N.C. Gen. Stat. §§159-101 et seq. State law uses the term "project development financing."

[31] *Quality Built Homes Inc. v. Town of Carthage*, No. 315PA15 (Aug. 19, 2016)

[32] efc.sog.unc.edu/sites/default/files/2019/SDF%20Survey%20Report%20Final.pdf

[33] N.C. Gen. Stat. Chap. 153A, Art. 9 and 9A, and Chap. 160A, Art. 10 and 10A

What changes would be needed for North Carolina to make better use of transportation finance options?

Numerous case studies confirm the economic benefit of using financing tools to responsibly pay for growing infrastructure needs. The use of financing techniques depends on the unique circumstance of the project and the opportunities for growth in the region. To maximize benefit, North Carolina needs a broader financing portfolio for state and local projects. The legislature could consider authorizing a blue-ribbon committee to comprehensively study state and local government financing authority, including the use of public-private partnerships and value capture techniques. Additional considerations are as follows:

Increase debt capacity. The Debt Affordability Advisory Committee in the Department of the State Treasurer is required by law to establish annual debt guidelines for the Highway Fund and the Highway Trust Fund.[34] Since 2016, the committee's guideline has limited total transportation-related debt service to 6 percent of total state transportation revenues. In addition, state statute caps GARVEE debt service at 20 percent of expected average annual federal revenue.[35] Increasing debt capacity would enable NCDOT to leverage low interest rates.

Expand local authority to use value capture techniques. Special assessment districts are authorized in all 50 states and tax increment financing is authorized in every state but Arizona. At least 29 states, but not North Carolina, have enabling legislation for impact fees that extend beyond water and wastewater service.[36] Localities in four states are authorized to levy a transportation utility fee. The legislature could consider expanding the use of existing techniques, like impact fees and special assessment districts, and authorize new financing options like land value taxes and transportation utility fees.

Expand tolling authority. Some critical financing opportunities, such as certain kinds of public-private partnerships and federal credit assistance, rely on projects that generate toll revenue. NCDOT's use of tolling is limited in several ways.[37] In addition to the types of projects that may be pursued, legislation caps the number of toll roads at 11 projects[38] and the number of PPP projects at three.[39] Expanding the use of tolling may enable NCDOT to leverage more private and federal financing, thereby increasing the state's capacity to fund more projects.

Re-authorize the state-funded SIB. Revolving loan programs provide needed financial assistance to local transportation projects. SIBs may also be structured to cover cost overruns and funding gaps in both state and local projects. To help meet the state's transportation goals, options could include re-establishing the state-funded SIB and identifying funding sources for both the state SIB and the aviation SIB. Even a small non-recurring capital investment of $5 million, with stringent repayment schedules, borrowing caps, and legislative oversight, could enable needed projects to move forward.

[34] N.C. Gen. Stat. §142-101

[35] N.C. Gen. Stat. §136-18. In 2020, House Bill 77 raised this cap from 15 percent to 20 percent (2020 N.C. Sess. Laws, Chap. 2020-91).

[36] www.fhwa.dot.gov/ipd/value_capture/resources/value_capture_resources/value_capture_implementation_manual/

[37] For more information, see the NC FIRST Commission Brief 10: The Future of Tolling in North Carolina at www.ncdot.gov/about-us/how-we-operate/finance-budget/nc-first/Documents/nc-first-brief-edition-10.pdf.

[38] N.C. Gen. Stat. §136-89.183(a)(2)

[39] N.C. Gen. Stat. §136-18(39a)(a)