

8. Our Financial Plan

There is an axiom that “if you don’t have a plan to pay for it, you don’t have a plan.” Federal law requires that Metropolitan Transportation Plans include a financial plan; this means that the cost of the transportation facilities and services in the plan must be covered by state, federal, local, private and other transportation revenues that can be reasonably expected to be available. The Financial Plan provides a comparison of expected revenues and project costs from 2021 through 2050 – the 30-year period of this plan.

All financial data in this section is presented in Year 2020 “Constant Dollars,” meaning the values indicate what it would cost to build the system if we paid for and built all the projects today. In reality, projects will be built over a 30-year time frame and inflation will affect costs. The example on this page shows how dollar figures would change over time between Year 2020 Constant Dollars and the “Current Dollars” of future years, often termed “Year of Expenditure” dollars, or YOE dollars, based on a long-term annual discount rate (or inflation rate) of 2% used in this plan. The example illustrates that it would take \$106 in 2023 to pay for a project that would cost us \$100 if we built it in 2020. During the life of the plan, inflation will be higher in some years and lower in other years, but 2% annual inflation has been a typical long-term pattern.

Time Value of Money @ 2% annual inflation rate	2020	2021	2022	2023
Constant 2020 \$	\$100	\$100	\$100	\$100
Current \$ for Year Shown	\$100	\$102	\$104	\$106

Appendix 11 provides additional information on both revenue and cost assumptions and translations between constant dollar values and year-of-expenditure values that takes inflationary effects into account. Aggregate categories of costs and revenues are rounded, but individual project costs are reported precisely in the appendix to aid in the review and subsequent update of estimates.

The 2050 MTP assigns projects to one of three time periods, based on when a project would first be open to being used (projects may be under construction in the prior time period):

- Near-term: 2021 to 2030;
- Mid-term: 2031 to 2040; and
- Long-term: 2031 to 2050.

These periods are used not only to distribute the total costs and revenues over the 30-year planning period, but also so we can analyze the impacts of our investments against air quality benchmarks.

Although this financial plan addresses revenues and costs as if they were independent of one another, in North Carolina’s transportation prioritization process they are tightly linked – many revenues are *only* available if corresponding costs are associated with narrowly-defined project types. The revenues section below discusses how this inflexibility affects the financial plan.

8.1 Revenues

Revenues fall into one of two broad categories: “traditional” revenues from long-standing state and federal sources, and “special” revenues from locally controlled sources or projected new state or local revenue streams. This section also highlights where “discretionary” or grant revenue sources are assumed, typically as federal shares of rail or bus rapid transit infrastructure projects.

For the near-term period of the plan, covering the 2021-30 ten year period, costs and revenues are based on the current 2020-29 TIP, on county-based transit tax revenue spreadsheets maintained by GoTriangle and on local government Capital Improvement Programs. Where projects from these sources begin between 2021-30 but continue to rely on revenues post-2030, the amount of revenues needed to complete the projects are deducted from the available amount in the 2031-40 period.

Traditional State and Federal Transportation Revenues

To calculate a reasonable share of traditional state and federal revenues for complete corridors and roadways, which largely flow through the NCDOT's Strategic Transportation Investment (STI) process, this Plan uses two primary sources:

1. actual 2020-2029 State Transportation Improvement Program (STIP) estimates for the 2021-30 near-term period.
2. NC Moves 2050 revenue projections for the 2031-2050 mid-term and long-term periods.

STI represents the majority of state and federal funding available for capital projects. STI revenues are divided into three categories of funding: Statewide Mobility, Regional Impact, and Division Needs. The method assumed that CAMPO and DCHC would receive a portion of the Regional Impact and Division Needs revenues commensurate with the MPOs' portion of the population within their respective regions and divisions (based on the most recent 2020 Census Data), and that CAMPO and DCHC could assume up to a portion of the Statewide Mobility revenues commensurate with the average proportion of this funding that has gone to each MPO in previous cycles under the STI policy (34% for CAMPO and 10% for DCHC). Since statewide tier revenues can only be expended on statewide tier projects, the actual amounts of statewide tier revenues in each revenue was then adjusted to match total statewide tier project costs in the adopted plan.

A similar approach was used for projecting growth of the Highway Fund, which is used for maintenance and operations projects. For the Highway Fund, each MPO was assumed to receive an amount proportional to its population within the state. Because the population of the area is projected to grow faster than the state as a whole, this results in a growing percentage of funds for the MPO areas over time—this plan used 2040 population forecasts to calculate the percentage for each MPO: CAMPO at 16.7% of the state population and DCHC MPO at 5.5% of the state population.

Congestion Mitigation and Air Quality (CMAQ) funds are exempt from STI, so they were calculated separately. The amount of funding for CMAQ is based on the amounts in the current federal transportation funding bill, the Infrastructure Investment and Jobs Act, and grow at an annual rate derived from that law.

The financial model assumes a long-term 2% annual discount rate (or inflation rate) to translate between 2020 constant dollars and future current year or Year of Expenditure (YOE) dollars, since different data sources use different reporting methods. All revenues in this chapter are reported in year 2020 constant dollars. Although revenues are generally considered either "roadway" or "transit" revenues, some funds, such as in the federal Surface Transportation Program (STP), are not restricted to highways and can be "flexed," or transferred, to programs for other transportation modes such as transit, pedestrian and bicycles.

The method used the fiscal year 2020-2029 State Transportation Improvement Program (STIP) for the years 2021 through 2030, adjusting for the one-year difference. The STIP identifies the budgeted state and federal funding source for transportation projects and therefore is the best available source for near term revenue forecasts.

Funding vs. Financing *an important distinction*

Funding is the actual revenue source used to pay for transportation facilities or services. **Financing** is a way to move future revenues through time to pay for facilities or services sooner. But financing doesn't "fund" these facilities or services; it is the underlying revenue source that does.

As an example from this plan, the regional passenger rail line that could link Durham, Wake and Johnston Counties is expected to be funded mostly by a combination of federal "New Starts" competitive grant funding and local transit taxes. But in order to pay for the construction and open the project by 2030, borrowing will be used for both the portion that will be reimbursed by federal grants and the portion that will be repaid by local transit taxes.

Similarly, the first section of the NC540 toll road in western Wake County was completed in 2012 using bond financing. The funding sources to repay the bonds include both toll revenues from users and an annual \$25 million payment from NCDOT.

The NCDOT financial model and STIP do not represent all of the available complete corridor and roadway revenues. The MPOs expect to have additional funding available from the following sources:

- Toll Revenues – A portion of revenues for managed lane and toll road projects are assumed to come from toll revenue bonds, which are paid back over time by users.
- Local Funding – Local governments often issue bonds to finance specific projects such as roadways, intersection improvements, street paving, bicycle facilities and sidewalks; the revenue to repay these bonds is typically the property or sales tax revenues received by the local government over time. These amount are often shown in a local government’s Capital Improvement Program (CIP).
- Private Funding –Sections of some of the roads in the 2050 MTP, or widenings of existing roads, will be paid for by private developers as they develop adjacent property. Additionally, some of the rail crossing related projects include private funding from railroad partners.

Appendix 11 provides additional detail on the revenue source assumptions and calculations. Figure 8.1 summarizes the complete corridor/roadway revenue sources and calculation assumptions.

Figure 8.1: Roadway Revenue Assumptions

Item	CAMPO Assumptions	DCHC Assumptions
Capital - Federal / State (STI)	2020-2029 STIP for near-term period. May 2020 NC MOVES 2050 Revenue Forecast for 2031-50. Division Needs and Regional Impact category amounts based on MPO population within Division or Region. Statewide Mobility category amount based on average performance from previous STI cycles.	2020-2029 STIP for near-term period. May 2020 NC MOVES 2050 Revenue Forecast for 2031-50. . Division Needs and Regional Impact category amounts based on MPO population within Division/Region. Statewide Mobility category amount based on average performance from previous STI cycles.
Maintenance -- Federal/State/Other	Portion of anticipated NCDOT Highway Fund revenues relative to MPO population. Future revenue based on May 2020 NC MOVES 2050 revenue forecast.	Portion of anticipated NCDOT Highway Fund revenues relative to MPO population. Future revenue based on May 2020 NC MOVES 2050 revenue forecast.
Congestion Mitigation and Air Quality	Amount of CMAQ funding suballocated to MPO is grown at an annual rate consistent with the annual growth rate authorized in the 2021 IJJA act.	Amount of CMAQ funding suballocated to MPO is grown at an annual rate consistent with the annual growth rate authorized in the 2021 IJJA act.
Toll roadway	MPO Staff forecast.	MPO Staff forecast.
Local (Capital Improvement Program)	MPO Staff forecast.	MPO Staff forecast.
Private	MPO Staff forecast.	MPO Staff forecast.
Translation between \$2020 Constant and \$YOE	2% annual discount (inflation) rate.	2% annual discount (inflation) rate.

Existing Transit Revenues

The transit financial models discussed in an earlier part of this section are used to forecast transit costs and revenues. In April 2009, the North Carolina House passed the Congestion Relief and Intermodal 21st Century Transportation Fund (House Bill 148). The legislation permits a local voter referendum to increase the sales tax to raise revenues for transit systems. The half-cent sales tax increase has been approved in Durham, Wake and Orange Counties. There are several major transit revenue assumptions in Figure 8.2 that forecast the implementation of new revenue sources permitted by House Bill 148, including the ½ cent sales tax for transit services. In addition to these major assumptions, there are many detailed bus and rail transit revenue

assumptions that are important enough to be identified in this report, including municipal set-asides for transit and/or “non-supplementation” amounts required as a part of the conditions for county transit taxes.

Figure 8.2 summarizes the major assumptions used for calculating the bus and rail transit revenues from existing sources at existing rates. Additional detail is in Appendix 11.

Figure 8.2: Major Transit Revenue Assumptions

Item	CAMPO Assumptions	DCHC Assumptions
Year ½ cent sales tax began	Wake County: 2016	Durham County: 2013 Orange County: 2013
Transit sales tax revenues (after 2021)	Wake County: 4% and 5% (FY23)	Durham County: 2.8-6.1% annual growth rate (see Appendix 11) Orange County: 2.8-4.5% annual growth rate (see Appendix 11)
GoTriangle Vehicle Registration Fee	Wake County: \$8, grows at 2% annual rate.	Durham County: \$8, grows at 1.5% annual rate. Orange County: \$10, grows at 1.5% annual rate.
County Vehicle Registration Fee	Wake County: \$7; grows at 2% annual rate.	Durham County: \$7; grows at 1.5% annual rate. Orange County: \$7; grows at 1.5% annual rate.
Rental Car Tax (5%)	Wake County: 2.5% annual growth rate.	Durham County: 2.5% annual growth rate. Orange County: 2.5% annual growth rate.
Local Property Tax for Transit	Continued “non-supplementation” required by HB148	Continued “non-supplementation” required by HB148
University-Based Systems	Continued Wolfline services at current levels, paid from university resources.	Continued Duke Transit and NCCU Eagle Shuttle services, paid from university resources; continued UNC-CH contribution to Chapel Hill Transit System.
Projects that include Federal Capital Investment Grant \$	All CRT and BRT projects (50% federal funding assumed)	All CRT and BRT projects (50% federal funding assumed)

Additional/New Revenue Sources

The current transportation revenue sources will not produce enough revenue to finance the multimodal transportation projects that are considered essential in the Triangle, and that are included in this plan.

Therefore, the MPOs have assumed Additional/New Revenue Sources to address this funding gap. The MPOs have a reasonable expectation to realize these new revenue sources based on the many local and statewide commissions that have studied transportation financing and recommended new funding sources.

It is important to note the following background information on the Additional/New Revenue Sources proposed in the 2050 MTP:

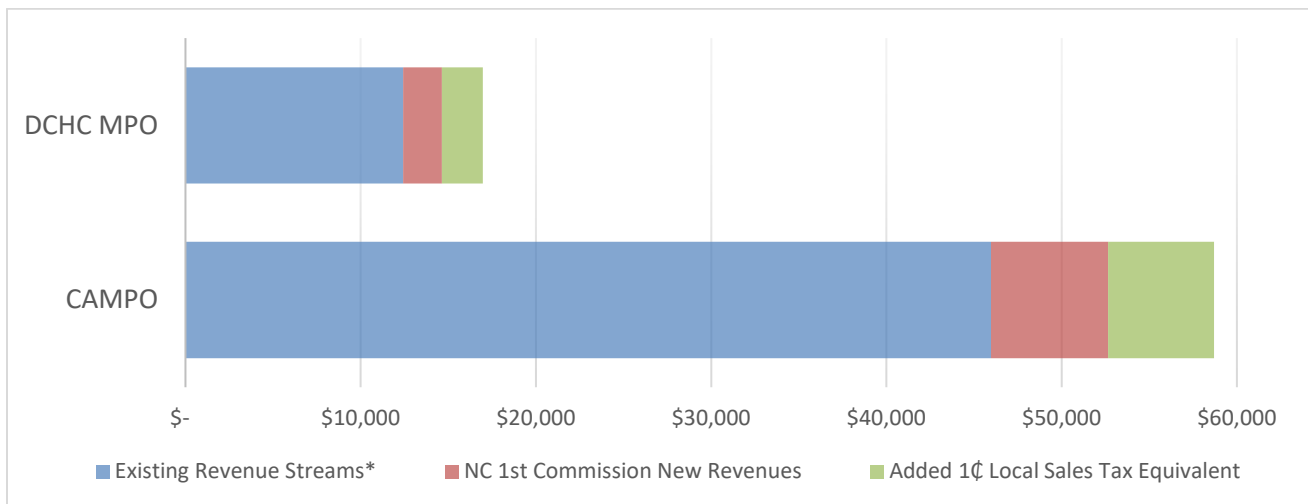
- These new revenue options would require legislation from the North Carolina General Assembly. The MPOs are not currently authorized to make these tax and revenue program changes.
- The plan assumes these new or additional revenue sources would only be available in the mid-term and long-term time periods, so would not start yielding revenue until 2031.
- The exact type and mechanism for increasing these revenues, e.g., sales tax, property tax, VMT fees, is not specified.
- New or additional revenues are assumed to be put in place without the constraints of existing revenues; i.e., the MPOs could program them to any transportation projects in this plan. Figure 8.3 presents the assumptions for Additional New Revenue Sources.

Figure 8.3: Assumptions for Additional/New Revenue Sources

Item	Revenue Assumptions	CAMPO Amount (\$ millions)	DCHC MPO Amount (\$ millions)
Sales Tax (or equivalent) in MPO Counties	Level of effort equivalent to an additional one cent sales tax increase in 2031 for transportation improvements. Revenue increases commensurate with projections for existing sales taxes. Requires NC General Assembly action.	\$ 6,040	\$ 2,340
NC First Commission Revenues	New funding for transportation improvements based on 2040 population-based share of NC First Commission-recommended levels of additional funding. Available for 2031-2050 time periods. Requires NC General Assembly action.	\$ 6,690	\$ 2,200
Total		\$ 12,730	\$ 4,540

The result of adding First Commission proportionate-share revenues and additional county-based sales-tax equivalent revenues would be an increase of \$17 billion in revenues to the region over the 30-year horizon, an increase of 30% over the revenues that would be available without these sources.

Figure 8.5 Revenues by Category by MPO (\$millions)



*existing revenue streams include revenues from discretionary federal grants

Airport Revenues and Costs

The Vision 2040 Master Plan for Raleigh-Durham International Airport (RDU) projected revenues to 2040 and defined a list of projects to be constructed with those revenues. Through 2040, the Airport forecast \$2.7 billion in revenue (in year of expenditure dollars), from the following sources:

- \$1.57 billion from RDU funds
- \$659 million from RDU debt
- \$182 million from federal funds
- \$281 million from customer facility charges
- \$10 million from NCDOT

The Vision 2040 Master Plan showed the following expenditures through the year 2040, using the revenues identified above:

- \$905 million in critical infrastructure preservation projects
- \$1.8 billion in discretionary infrastructure projects

The Master Plan also identifies additional projects that could be constructed if demand warrants and additional funding can be secured:

- \$677 million in private equity projects
- \$2.04 billion in deferred projects

2021 Federal Infrastructure Investment and Jobs Act (IIJA)

The Infrastructure Investment and Jobs Act (IIJA), also called the Bipartisan Infrastructure Law, was signed on November 15, 2021. The bill provides for substantial increases in transportation funding over five federal fiscal years, starting October 1, 2021 and running through September 30, 2026, which is within the first 10-year period of this plan. Federal transportation revenues will be provided both through increases in traditional “formula” funds (revenues that flow automatically to eligible recipients based on criteria) and through existing and new “competitive” grant programs, such as the RAISE, INFRA, Bus & Bus Facility, and Capital Investment Grant (CIG) programs; the latter program is the source for federal shares of the rail and Bus Rapid Transit investments in this plan.

A large portion of these funds are guaranteed, although some will still be subject to annual appropriation by Congress. Of the \$661 billion allotted to US DOT agencies, \$567 billion (85%) is in guaranteed funding.

Estimates are that North Carolina will receive about \$7.7 billion over the five years in formula funding for highways and bridges, and close to a billion dollars in formula funding for transit – a 32% increase over FAST-Act formula transit funding levels.

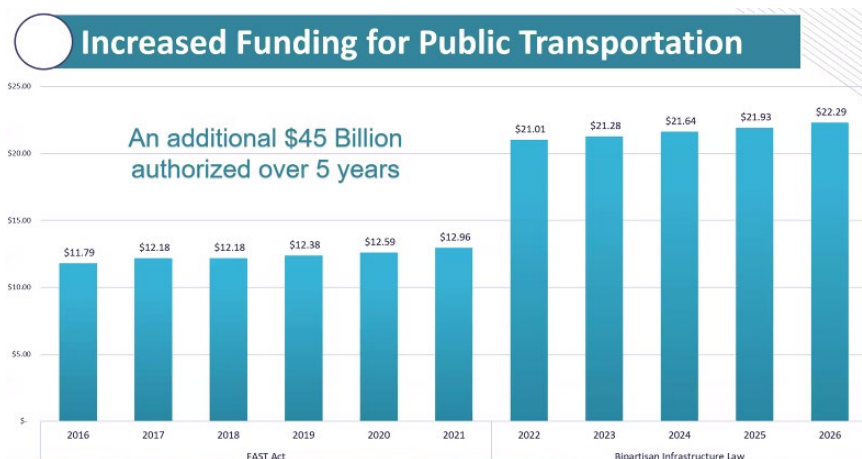


Figure 8.6 Federal FAST Act and IIJA Transit Funding Levels

The increased highway and bridge funding comes at a critical time, as NCDOT has indicated that the current STIP, covering FY20-29 – and which represents the first 10 years of this MTP, can’t be achieved with the funding originally assumed, and that the next version of the STIP, covering FY24-33, will show large increases in current project costs and the delay of many currently programmed projects.

For this reason, the MPOs have decided that for the purpose of this version of the 2050 MTP, the new IIJA highway and bridge funding will be reserved to address higher costs of projects already in the current STIP and the first decade of this plan. If the cost picture improves, then these added IIJA revenues can be used to advance projects already in this plan, and will be addressed through an MTP amendment at the time the FY24-33 TIP is adopted.

The increased transit funding and any competitive grant revenues make it more likely that the ambitious transit projects in this MTP can be funded, and possibly advanced as well, and potentially lessen the need for borrowing to implement transit infrastructure projects on the schedules anticipated in this MTP.

In summary, *Connect2050* revenues:

1. include existing revenue sources, rates and proportionate shares as reflected in the current TIP and the NC MOVES 2050 forecasts
2. reflect current local transit tax revenue calculations from county-based fiscal spreadsheets, plus additional municipal transit revenues, as available. University-operated services are assumed to be continued, but their revenues and equivalent costs are not included in summary totals.
3. include toll funding directly tied to toll road projects
4. include municipal and private roadway funding based on local CIPs and past trends
5. include airport-based revenues in RDU's Vision2040 plan plus NCDOT STI programming for airports, directly tied to airport costs
6. add a new NC First Commission-based revenue source for 2031-50, based on population shares
7. add a new county-based sales-tax equivalent revenue source for 2031-50
8. treat new federal Infrastructure Investment and Jobs Act (IIJA) revenues over and above baseline FAST-Act levels as a "reserve" for expected higher project costs in the 2024-33 STIP – neither these reserve revenues nor an estimate of higher costs are reflected in this plan's spreadsheets, but are expected to be added when this MTP is amended as part of the 2024-33 TIP process.

8.2 Costs

The two MPOs used the same cost assumptions for the major parts of the plan, including:

- Complete Corridor and Roadway: The plan used the following hierarchy for highway costs. For example, the TIP cost was used for projects in the TIP, but if none is available (i.e., the project is not yet in the TIP), then the SPOT cost was used, and so on:
 - FY 2020-2029 Transportation Improvement Program (TIP);
 - Available feasibility studies
 - Strategic Planning Office of Transportation (NCDOT SPOT) data from the prioritization process.
 - 2015 highway cost estimate spreadsheet from NCDOT.
- Bus Transit and Rail Transit: Used GoTriangle-maintained financial models used for the Durham County, Orange County and Wake County transit plans and annual work plans. Commuter Rail costs from the Phase I Commuter Rail Study (West Durham to Clayton segments).
- Travel Demand Management (TDM): Used cost estimates from the regional plan administered by the Triangle J Council of Governments.
- Intelligent Transportation Systems (ITS): Used cost categories from the project list in the Triangle Region ITS Strategic Deployment Plan Update. (June 2020). For projects with a TIP number or where a feasibility study had been prepared, the most recent TIP or feasibility study costs were used. For other projects, the mid-point of the cost range was used as a first-pass estimate. Time periods used in the MTP may differ from the time periods in the ITS plan update.
- Airports: costs match revenues from the RDU Vision2040 Plan and STI airport projects.

Lists of projects and associated costs are shown in Appendices 2, 3 and 4, categorized by mode.

8.3 Balancing Costs and Revenues

DCHC MPO

Figure 8.7 summarizes the sources and uses of revenues for each MPO, demonstrating that projects can be delivered based on revenues that can be reasonably expected during the time frame of this plan.

Figure 8.7: Transportation Investment by Category by MPO (\$millions)

