8. Our Financial Plan

Federal regulations require the 2045 MTP to have a financial plan. This requirement means that the cost of the roadway, transit and other transportation facilities and services 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 costs from 2015 through 2045 – the 30-year period of this plan.

All financial data in this section is presented in Year 2016 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. Appendix 11 provides additional data using the year-of-expenditure value that takes this inflationary effect into consideration.

The 2045 MTP divides projects into three time periods:

- Near-term: 2018 to 2025;
- Mid-term: 2026 to 2035; and
- Long-term: 2036 to 2045.

These periods are used not only as a matter of good planning practice that more evenly matches and distributes 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.

8.1 Costs

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

- 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 2018-2027 Transportation Improvement Program (TIP);
    - 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 two financial models with similar methodologies. One model is based on the Durham County and Orange County transit plans and the other is the model used by the Wake County transit plan.
- Travel Demand Management (TDM): Used costs estimates from the regional plan administered by the Triangle J Council of Governments.
- Intelligent Transportation Systems (ITS): Used cost estimates from the Triangle Region Intelligent Transportation Systems – Project Evaluation and Prioritization Report. (March 2010).

8.2 Revenues

Roadway Revenues

The MPOs made an assumption that future Strategic Transportation Investment (STI) revenues beyond the year 2027 would continue to grow at the same linear rate that they are projected to grow within the 2018-2027 State Transportation Improvement Program (STIP) period. 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, and that CAMPO and DCHC would receive 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).

A similar approach based on the 2018-2027 STIP annual growth trend 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 expected to grow faster than the state as a whole, this results in a growing percentage of funds for this region over time—in 2018, CAMPO contains 13% of the state population and DCHC contains 5% of the state population, but by 2045 these grow to 16% and 6% respectively.

Congestion Mitigation and Air Quality (CMAQ) funds are exempt from STI, so they were calculated separately. The amount of funding for CMAQ was assumed to grow in the future at a rate consistent with the trendline growth rate of North Carolina Surface Transportation Block Grant (STBG) funds in the current federal transportation funding bill, the FAST Act.

The financial model assumes a 3.5% annual discount to adjust for inflation in the transportation sector. All revenues are reported in year 2016 dollars. It is important to note that some of the funds included in this statewide model, such as federal Surface Transportation Program (STP) do not have to be used for highways. Some of the funds can be "flexed," or transferred, to programs for other transportation modes such as transit, pedestrian and bicycles.

The method used the fiscal year 2018-2027 State Transportation Improvement Program (STIP) for the years 2018 through 2027. 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.

The NCDOT financial model and STIP do not represent all of the available highway revenue. 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.
- Private Funding –Sections of some of the roads in the 2040 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.

Figure 8.1 identifies the highway revenue sources and calculation assumptions.

Figure 8.1: Roadway Revenue Assumptions

Item	CAMPO Assumptions	DCHC Assumptions
Capital - Federal / State (STI)	Continuation of linear revenue trend from 2018-2027 STIP period. Division Needs and Regional Impact category amounts based on MPO population within Division/Region. Statewide Mobility category amount based on average performance from previous two STI cycles.	Continuation of linear revenue trend from 2018-2027 STIP period. Division Needs and Regional Impact category amounts based on MPO population within Division/Region. Statewide Mobility category amount based on average performance from previous two STI cycles.
Maintenance -- Federal/State/Other	Portion of anticipated NCDOT Highway Fund revenues relative to MPO population. Future revenue growth based on linear revenue trend from 2018-2027 STIP period.	Portion of anticipated NCDOT Highway Fund revenues relative to MPO population. Future revenue growth based on linear revenue trend from 2018-2027 STIP period.
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 FAST act.	Amount of CMAQ funding suballocated to MPO is grown at an annual rate consistent with the annual growth rate authorized in the FAST act.
Toll roadway	Staff forecast.	Staff forecast.
Local (Capital Improvement Program)	Staff forecast.	Staff forecast.
Private	Staff forecast.	Staff forecast.
Annual Inflation Rate	Assumes 3.5% annual inflation rate.	Assumes 3.5% annual inflation rate.

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. *Figure 8.3 and Figure 8.4* present the detailed assumptions used for calculating the bus transit and rail transit revenues.

Figure 8.2: Major Transit Revenue Assumptions

Item	CAMPO Assumptions	DCHC Assumptions
Year begin ½ cent sales tax	Wake County: 2016	Durham County: 2013. Orange County: 2013.
Growth in sales tax	Wake County: 4% and 5%	Durham County: 4.33% Orange County: 3.71%
Increase in Vehicle Registration Fee	Wake County: currently $5, increased to $8, at 2% growth rate.	Durham County: currently $5, increased to $8, at 2.7% growth rate. Orange County: currently $7, increased to $10, at 3.3% growth rate.
New Vehicle Registration Fee	Wake County: new $7 at 2% growth rate.	Durham County: new $7 at 2.7% growth rate. Orange County: new $7 at 3.3% growth rate.
Rental Car Tax	Wake County: 2.5% growth rate.	Durham County: 4.8% growth rate. Orange County: 4.8% growth rate.
Local Property Tax for Transit	None.	Durham County: 1 cent for 2 years to cover 30% of CRT extension local share. Orange County: 1 cent for 9 years to cover 70% of CRT extension local share. Chapel Hill/Carrboro: 1 cent for 13 years to cover LRT extension local share.

Figure 8.3: Detailed Transit Revenue Assumptions

Item	CAMPO Assumptions	DCHC Assumptions
Capital -- Federal & State	For existing services, assumes an amount of future federal/state funding that is consistent with current funding, keeping pace with inflation. For future CRT and BRT, assumes 50% of total cost is Federal. Uses 3.5% inflation factor.	For existing services, assumes an amount of future federal/state funding that is consistent with current funding, keeping pace with inflation. For Durham-Orange LRT, assumes 50% of total cost is Federal and 10% is State. For CRT, assumes 50% of total cost is Federal. For CRT extension to Hillsborough, assumes 62.5% Federal and 25% State. For LRT extension to Carrboro, assumes 65% Federal and 25% State. Assumes that STI regulations could be relaxed by final decade of plan to allow higher state contribution to projects. Uses 3.5% inflation factor.
Operations, Maintenance, Planning -- Federal & State	For existing services, assumes an amount of future federal/state funding that is consistent with current funding, keeping pace with inflation. For CRT, assumes 10% State funding and 28% Federal funding at start (Federal percentage decreasing over time after 2033). For BRT, assumes 10% State funding and $1.8 million per year in Federal funding. For future local bus service, assumes 5% Federal funding at start (decreasing in percentage over time).	For existing services, assumes an amount of future federal/state funding that is consistent with current funding, keeping pace with inflation.
Local	For existing services, assumes an amount of future local funding that is consistent with current funding, keeping pace with inflation. For new services, assumes portion of local sales tax and vehicle registration fees and portion of GoTriangle revenues (see Figure 8.2). 68% of GoTriangle revenues used in CAMPO area.	For existing services, assumes an amount of future local funding that is consistent with current funding, keeping pace with inflation. For new services reflected in the Durham County and Orange County Transit Plans, assumes portion of local sales tax and vehicle registration fees and portion of GoTriangle revenues (see Figure 8.2). 32% of GoTriangle revenues used in DCHC area. For new services not reflected in the county transit plans, assumes additional funding from local sources ($32 million).
Fares	For existing services, assumes future farebox revenues consistent with current levels, keeping pace with inflation. For CRT, assumes 20% of operating costs covered by fares. For BRT, assumes 24% of operating costs covered by fares. For local bus service, assumes increasing percentage over time for first decade, leveling out around 12% of operating expenses in 2026 and beyond.	For existing services, assumes future farebox revenues consistent with current levels, keeping pace with inflation. No assumption regarding farebox revenue for future services.
Bond Proceeds	Issue bonds for revenue to support system construction and capitalization.	Issue bonds for revenue to support system construction and capitalization.
Private (University Systems)	Private systems will cover own costs, thus revenues equal costs.	Private systems will cover own costs, thus revenues equal costs.

Additional/New Revenue Sources

The current transportation funding programs will not produce enough revenue to finance the multimodal transportation needs in the Triangle. Therefore, the MPOs have assumed Additional/New Revenue Sources to close this funding gap and presented this information in a separate table. 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. In fact, many solid steps have already been taken:

- 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 permitted in Wake, Durham and Orange counties by this legislation is used to calculate new revenue sources in the 2045 MTP. Since that time Durham, Orange, and Wake counties have enacted half-cent sales tax increases as well as increases in vehicle registration fees after successful local voter referenda. In Wake County these two revenue streams, along with the existing rental car tax, are on track to generate over $90 million in FY 18 and are forecasted to exceed $100 million by FY 2021.
- The Triangle Region has a rental car tax that produces approximately $7 million annually to fund Triangle Transit services and studies;
- Several municipalities, such as the City of Durham and Town of Chapel Hill, have pushed for and received increases in the vehicle registration fee;
- The North Carolina Turnpike Authority (NCTA) was created in 2004 and is currently working to build the extension of NC 540; and,
- The Charlotte area has a sales tax in place, and the North Carolina Board of Transportation and General Assembly have ensured that the required state match has kept pace with this large revenue source.
- The US Department of Transportation (USDOT) as well as several states (most notably Oregon and California) have begun pilot projects for mileage based user fees (VMT) that could be used in conjunction with or to replace and expand the existing motor fuels tax funded revenue system. In 2016 the USDOT announced a $95 million, five year grant program to test alternative revenue mechanisms including VMT based systems.

It is important to note the following background information on the Additional/New Revenue Sources proposed in the 2045 MTP:

- Many of these new revenue options would require legislation from the North Carolina General Assembly and/or the U.S. Congress. The MPOs are not empowered to invoke these tax and revenue program changes.
- The 2045 MTP envisions a level of effort to increase revenue for highways and transit that is similar to that depicted in the Plan. The exact type and mechanism for increasing these revenues, e.g., sales tax, property tax, VMT fees, is not a certainty.

8.3 Balancing Costs and Revenues

DCHC MPO – Roadways – $7.5 Billion Roadway/Bike/Pedestrian Plan

Figure 8.5 shows the roadway related costs and revenues in separate sections and provides subtotals for the three horizon periods. The cost and revenue comparison shows a positive balance of $212 million. There are relatively small differences in the 2018-2025 and 2026-2035 time periods but these amounts are due to timing differences between the revenues that are reported in the decade revenue becomes available (including some revenues that are paying off expenses from prior projects) and the costs that are reported in the decade a project opens, and therefore will be balanced as projects move through the Transportation Improvement Program process. One noticeable difference from past MTPs is the larger amount of funding shown for maintenance and operations, which is likely to make up a larger portion of overall spending in the region over time.

Figure 8.5: DCHC Roadway Funding

Cost Category (millions $)	DCHC Total	TIP/'18 to '25	'26 to '35	'36 to '45
Roadways & Alternative Transportation				
Roadways (STI Statewide)	$ 2,618	$ 480	$ 1,048	$ 1,090
Roadways (STI Regional)	$ 390	$ 24	$ 190	$ 176
Roadways (STI Division)	$ 443	$ 53	$ 167	$ 223
Maintenance & Operations (Highway Fund)	$ 3,525	$ 874	$ 1,242	$ 1,409
Bicycle & Pedestrian (STI Division)	$ 292	$ 62	$ 130	$ 100
Transportation Demand Management (STI Division)	$ 44	$ 9	$ 20	$ 15
Intelligent Transportation Systems (STI Statewide)	$ 74	$ 14	$ 35	$ 25
Transportation System Management (All Categories)	$ 131	$ 27	$ 60	$ 45
Roadways & Alternative Transportation Cost Total	**$ 7,518**	**$ 1,542**	**$ 2,892**	**$ 3,083**
Revenue Category (millions $)	**DCHC Total**	**TIP/'18 to '25**	**'26 to '35**	**'36 to '45**
Roadways & Alternative Transportation				
STI Statewide Funds	$ 2,421	$ 542	$ 898	$ 981
STI Regional Funds	$ 667	$ 37	$ 277	$ 353
STI Division Funds	$ 606	$ 122	$ 228	$ 256
STI Transition Project Funds	$ 36	$ 36	$ -	$ -
Highway Fund (Maintenance & Operations)	$ 3,525	$ 874	$ 1,242	$ 1,409
Toll Revenue Bonds	$ 196	$ 0.1	$ 196	$ -
Local Funding - Bicycle & Pedestrian	$ 75	$ 35	$ 20	$ 20
Local Funding - Roadways	$ 75	$ 25	$ 25	$ 25
Private Funds	$ 81	$ 27	$ 30	$ 24
CMAQ Funding	$ 49	$ 17	$ 18	$ 15
Roadways & Alternative Transportation Revenue Total	**$ 7,730**	**$ 1,714**	**$ 2,933**	**$ 3,083**
Difference	**$ 213**	**$ 171**	**$ 41**	**$ 0**

DCHC MPO – Transit – $4.7 Billion Transit Plan

The values shown in Figure 8.6 represent both the costs and revenues for DCHC MPO transit services. The Existing Services section represents a continuation of the current transit services and program funding. The New Services section represents the additional funding made available by the transit sales tax and increased vehicle registration fees enabled by House Bill 148 and the subsequent county sales tax referendums, and the additional support from state and federal sources for improved bus transit services and new rail transit. The New Services are 70 percent of the total transit funding and include additional transit projects beyond those included in the Durham County and Orange County transit plans, indicating the MPO's increasing commitment to transit.

Figure 8.6: DCHC Transit Funding

Cost Category (millions $)	DCHC Total	TIP/'18 to '25	'26 to '35	'36 to '45
Transit				
Continued Funding for Existing Services	$ 1,350	$ 386	$ 482	$ 482
Funding for New/Expanded Services in County Plans	$ 3,130	$ 1,356	$ 1,303	$ 471
CRT Extension from West Durham to Hillsborough	$ 160	$ -	$ -	$ 160
LRT Extension from Chapel Hill to Carrboro	$ 120	$ -	$ -	$ 120
Transit Cost Total	**$ 4,760**	**$ 1,742**	**$ 1,785**	**$ 1,233**

Revenue Category (millions $)	DCHC Total	TIP/'18 to '25	'26 to '35	'36 to '45
Transit				
State/Federal - to support existing service	$ 259	$ 74	$ 93	$ 93
Local - to support existing service	$ 682	$ 195	$ 244	$ 244
Fares - existing service	$ 137	$ 39	$ 49	$ 49
Other Sources - to support existing service	$ 272	$ 78	$ 97	$ 97
Local - new/expanded service (from county plans)	$ 1,171	$ 320	$ 412	$ 439
Federal New Starts/Small Starts	$ 1,165	$ 481	$ 480	$ 205
Joint Development	$ 44	$ 0.4	$ 43	$ -
Borrowing/Debt	$ 736	$ 460	$ 272	$ 4
Additional local for CRT/LRT extensions	$ 32	$ -	$ -	$ 32
STI Regional Funds	$ 261	$ 95	$ 96	$ 70
Transit Revenue Total	**$ 4,760**	**$ 1,742**	**$ 1,785**	**$ 1,233**
Difference	**$ 0**	**$ -**	**$ 0**	**$ -**

CAMPO – Roadways – $27.7 Billion Roadway/Bike/Pedestrian/Other Projects

Figure 8.7 shows the roadway related costs and revenues in separate sections and provides subtotals for the three decades of the plan. The cost and revenue comparison shows fiscal constraint across all horizon years in the plan. One noticeable difference from past MTPs is the larger amount of funding shown for maintenance and operations, which is likely to make up a larger portion of overall spending in the region over time.

Figure 8.7: CAMPO Roadway Funding

Cost Category (millions $)		**CAMPO Total**	**TIP/'18 to '25**	**'26 to '35**	**'36 to '45**
Roadways & Alternative Transportation					
	Roadways (Statewide)	$ 5,891	$ 2,383	$ 2,929	$ 579
	Roadways (Regional)	$ 3,101	$ 804	$ 1,125	$ 1,172
	Roadways (Division)	$ 5,266	$ 371	$ 2,030	$ 2,864
	Maintenance & Operations (Highway Fund)	$ 9,342	$ 2,252	$ 3,284	$ 3,806
	Bicycle & Pedestrian	$ 925	$ 174	$ 347	$ 404
	System Optimization (TDM/TSM/CSM/ITS) All Categorie	$ 337	$ 63	$ 126	$ 147
Roadways & Alternative Transportation Cost Total		**$ 24,862**	**$ 6,046**	**$ 9,842**	**$ 8,973**
Revenue Category (millions $)		**CAMPO Total**	**TIP/'18 to '25**	**'26 to '35**	**'36 to '45**
Roadways & Alternative Transportation					
	STI Statewide Funds	$ 8,020	$ 1,749	$ 2,936	$ 3,336
	STI Regional Funds	$ 3,101	$ 804	$ 1,125	$ 1,172
	STI Division Funds (Includes Additional Revenue)	$ 4,738	$ 371	$ 1,746	$ 2,620
	STI Transition Project Funds	$ 35	$ 35	$ -	$ -
	Highway Fund (Maintenance & Operations)	$ 9,342	$ 2,252	$ 3,284	$ 3,806
	Toll Revenue Bonds	$ 1,165	$ 579	$ 587	$ -
	Local/Development Funding	$ 1,213	$ 515	$ 442	$ 256
	CMAQ Funding	$ 131	$ 44	$ 47	$ 39
Roadways & Alternative Transportation Revenue Total		**$ 27,744**	**$ 6,348**	**$ 10,167**	**$ 11,229**
Difference		**$ 2,882**	**$ 302**	**$ 324**	**$ 2,256**

CAMPO – Transit – $6.6 Billion Transit Plan

The values shown in Figure 8.8 represent both the costs and revenues for CAMPO transit services. The Existing Services section represents a continuation of the current transit services and program funding. The New Services section represents the additional funding made available by the transit sales tax and increased vehicle registration fees enabled by House Bill 148 and the subsequent county sales tax referendums, and the additional support from state and federal sources for improved bus transit services and new rail transit. The New Services are approximately 70 percent of the total transit funding. This is consistent with the proportion of additional transit service identified in the 2040 MTP.

Figure 8.8: CAMPO Transit Funding

Cost Category (millions $)	**CAMPO Total**	**TIP/'18 to '25**	**'26 to '35**	**'36 to '45**
Transit				
Continued Funding for Existing Services	$ 1,522	$ 435	$ 544	$ 544
Funding for New/Expanded Services	$ 5,061	$ 1,664	$ 1,181	$ 2,216
Transit Cost Total	**$ 6,583**	**$ 2,099**	**$ 1,725**	**$ 2,760**
Revenue Category (millions $)	**CAMPO Total**	**TIP/'18 to '25**	**'26 to '35**	**'36 to '45**
Transit				
State/Federal - to support existing service	$ 262	$ 75	$ 94	$ 94
Local - to support existing service	$ 854	$ 244	$ 305	$ 305
Fares - existing service	$ 233	$ 67	$ 83	$ 83
Other Sources - to support existing service	$ 172	$ 49	$ 61	$ 61
Local - new/expanded service	$ 2,459	$ 683	$ 875	$ 902
Federal New Starts/Small Starts	$ 1,347	$ 509	$ 36	$ 802
Fares, State/Federal Operating Grants for new service	$ 422	$ 40	$ 195	$ 186
Borrowing/Debt	$ 834	$ 432	$ 76	$ 327
Transit Revenue Total	**$ 6,583**	**$ 2,099**	**$ 1,725**	**$ 2,760**
Difference	**$ 0**	**$ -**	**$ 0**	**$ 0**