

STIP

Statewide Transportation Improvement Program

2017 - 2022

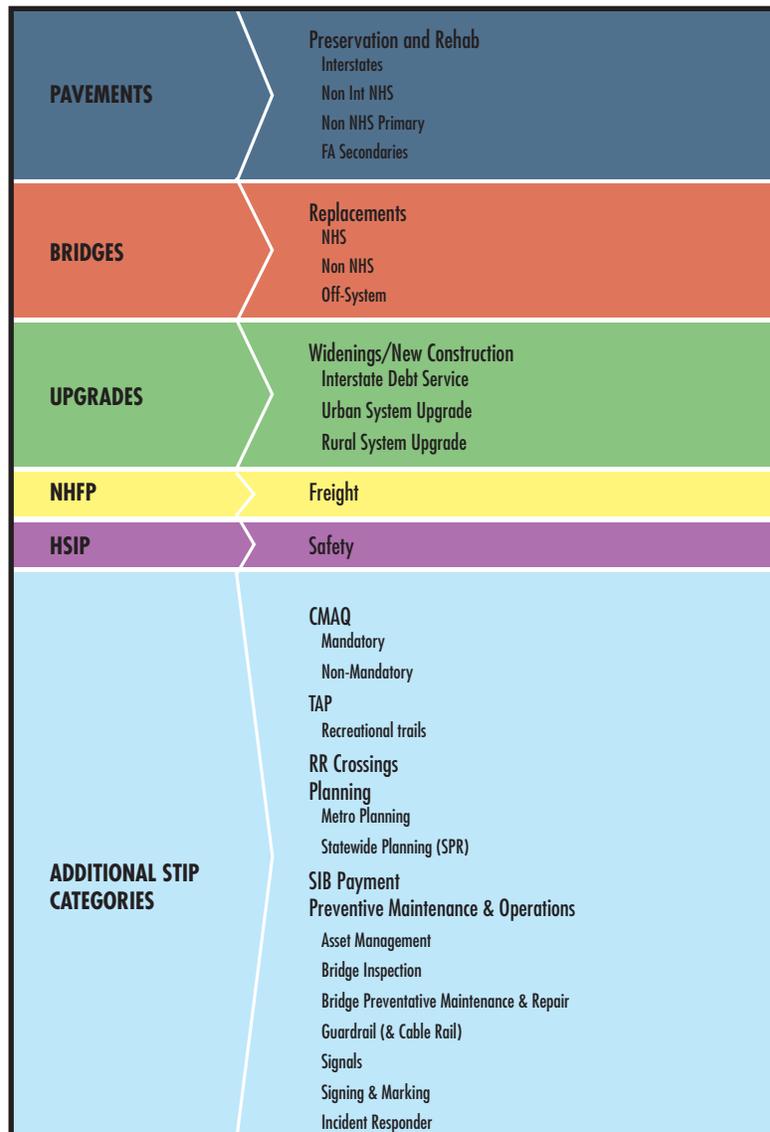


The South Carolina Statewide Transportation Improvement Program (STIP) is the six-year transportation improvement program for all projects and program areas receiving federal funding, including pavements, bridges, upgrades, freight, safety, congestion mitigation and air quality (CMAQ), transportation alternatives program (TAP), railroad crossings, planning, State Infrastructure Bank (SIB) payments, preventative maintenance and operations, and public transportation.

The STIP covers all federally funded improvements for which funding has been approved and that are expected to be undertaken during the upcoming six-year period. The document is generally scheduled for updating every three years and is revised on a continual basis to reflect the latest program and project information. The South Carolina Department of Transportation Commission, as well as the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) approve the STIP.

To provide a document that is user-friendly and streamlined, the STIP is formatted to include summaries of statewide programming, as well as project information by county. In addition, regional project tables are included to account for multi-jurisdictional projects.

PROJECT FUNDING CATEGORIES



SOUTH CAROLINA COUNTY MAP

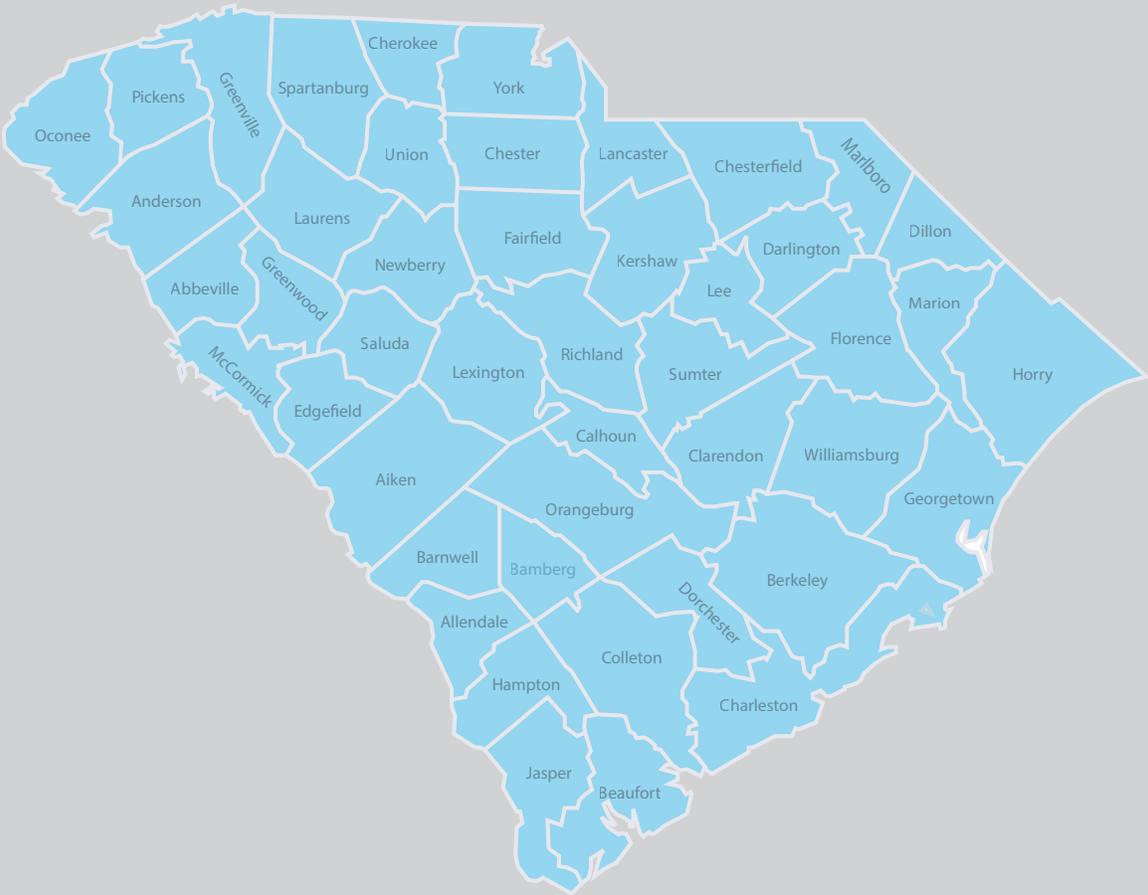


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DEMOGRAPHIC AND TRANSPORTATION TRENDS IN SOUTH CAROLINA

With positive growth trends in population and employment, as well as significant road maintenance requirements there are many challenges

to providing a safe and efficient transportation system in South Carolina. South Carolina as a whole grew by just under 6 percent between 2010 and 2015. By 2040, the State's population is expected to exceed 6 million people, which is a 30% increase from 2010. Vehicle Miles of Travel (VMT) is another indicator of travel demand that considers traffic volume in relation to the miles of the system. Since 2009, VMT on the interstates in South Carolina has increased by 1.85 percent per year on average. Increases in the numbers resident drivers and driving activity, as well as a growing economy are all factors that indicate continued demand on the transportation system in South Carolina.

The state-maintained highway system consists of interstate routes, primary routes (SC and US routes), and secondary routes, totaling approximately 41,400 miles. The state maintains over 8,400 bridges and at any given time approximately 20 percent of the bridges are categorized as substandard. The size of the road system in South Carolina translates into the fourth largest state-maintained system in the country while the state was just 24th largest in terms of population.

Public Transit is an important component of South Carolina's transportation network. Twenty-seven (27) general public transit operations provided transportation services in rural and urbanized communities in the State during SFY 2015. Transit trips address a number of needs for citizens, workers, shoppers, medical patients and tourists in South Carolina. A total of 12.8 million individual transit passenger trips were provided by all general public transit operations during the most recently completed State Fiscal Year.

Several transit operations include commuter transit services that transport workers to designated work centers. Commuter transit services may include public transportation within an urbanized area, between different urbanized areas, or from rural communities to urbanized areas. Most commuter services operate in conjunction with designated pick-up points, and many commuter users don't drive their automobiles, which aids in VMT and congestion reduction goals of the State. Most counties have general public transit services in at least a portion of each respective county's boundaries.

It is projected that the amount of time lost due to congestion is expected to increase. While South Carolina is fortunate to not have the extreme congestion problems of more populated states, delay is becoming more prevalent in metropolitan areas. Based on the annual hours of delay and the average hourly rates of individuals and commercial operators, it was estimated that in 2015 the economic impact or cost of delay on the interstate system was over \$114 million and the magnitude of this economic impact is occurring every year.

Finally, South Carolina has one of the highest mileage death rates in the country, relies extensively on the highway system to move the majority of freight, and has emerging air quality concerns as a result of more stringent federal standards, and it becomes clear the funding objectives and projects identified in the STIP are critical to providing mobility and accessibility for people, goods, and services.

TRANSPORTATION PARTNERS

Federal transportation laws require the establishment of a Metropolitan Planning

Organization (MPO) in every urbanized area of the United States with a population over 50,000. In South Carolina, there are eleven Metropolitan Planning Organizations that were created in order to ensure that existing and future expenditures for transportation projects and programs were based on a comprehensive, cooperative, and continuing (3-C) planning process. The role of the MPO includes: establishing a local forum for transportation decision making; evaluating transportation alternatives; developing and updating a Transportation Improvement Program (TIP); and getting the public involved as early as possible.

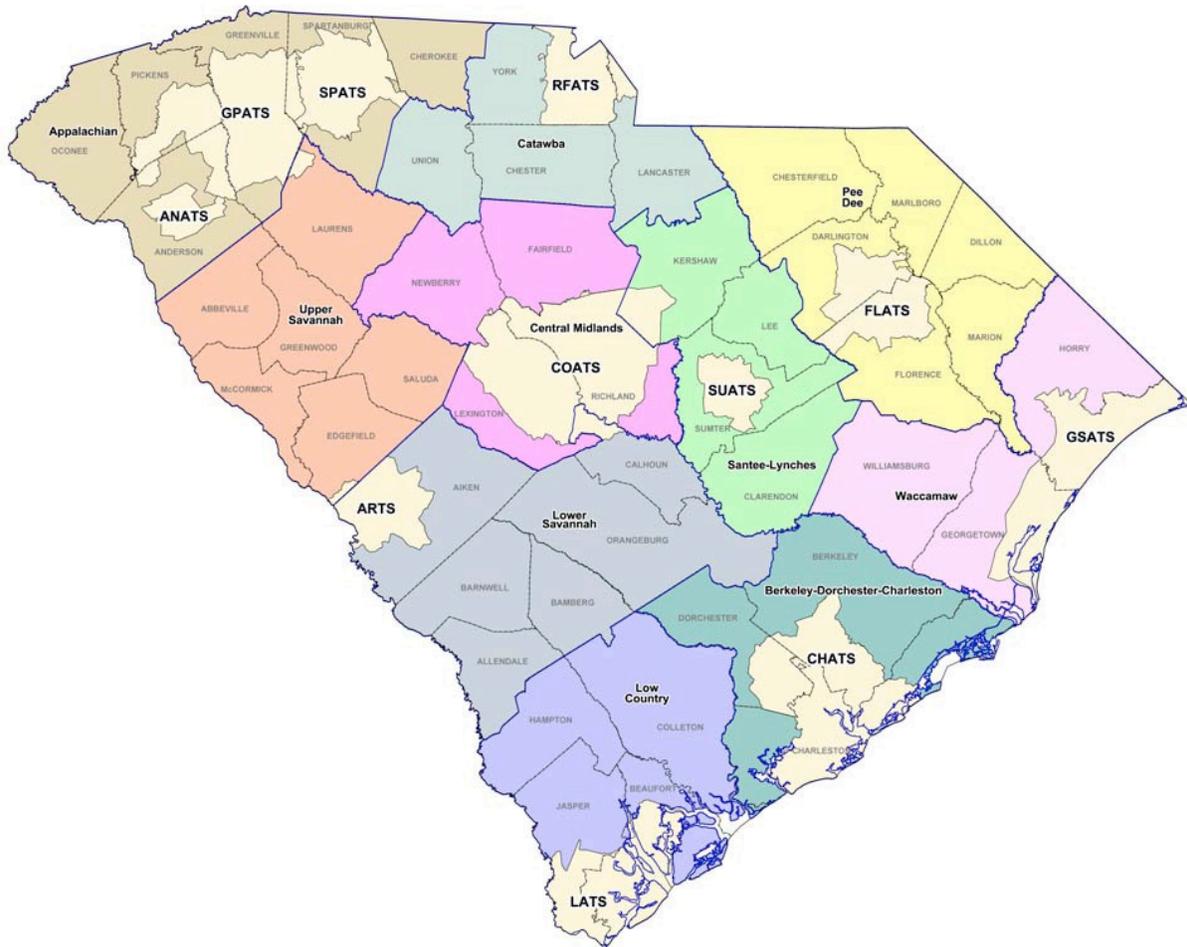
There are ten Councils of Governments (COGs) in South Carolina that assist SCDOT in transportation planning for areas outside of designated MPOs. COGs serve county and municipal governments from a regional perspective and offer a wide variety of planning, economic development and social service coordination. Each COG produces a regional long-range transportation plan and a rural Transportation Improvement Program (TIP).

The SCDOT coordinates with each MPO and COG to facilitate an ongoing transportation planning process that defines both urban and regional transportation priorities as required by 23 CFR 450.218 (a) and (b). Projects that originate from the MPO and COG Transportation Improvement Programs (TIPs) are reflected in the county and region tables. TIP projects from categories, such as Transportation Alternatives Program (TAP) are reflected in the STIP as consolidated/lump sum entries. Projects must also be consistent with the State's long range transportation plan as reflected in 23 CFR 450.218 (k). Special coordination for conformity with capacity improvements in the RFATS MPO is also required as it is the states only non-attainment/maintenance area. Consistency with federal lands projects, interested party comments, and Tribal Governments is also required by 23 CFR 450.218 (d), (e), and (f).

A summary of the STIP Public Participation Process can be found here:
http://www.scdot.org/inside/pdfs/Public_Participation_Plan.pdf

Each MPO must have an adopted public involvement plan that specifies the method and process to receive public comment on TIPs, Unified Planning Work Program, and long-range plans. COGS conduct public involvement on behalf of the SCDOT for the STIP. For this 2017–2022 STIP, SCDOT has held seven regional public meetings across the state to receive public comments. The public comment period for the STIP is 21 days from the opening of the comment period.

MPO TIPs can be viewed at:
http://www.scdot.org/inside/mpo_tips.aspx



Metropolitan Planning Organizations (MPO) and Councils of Government (COG) in South Carolina

LOCAL GOVERNMENT COORDINATION

Municipal, county, and other local units of government should discuss development of projects for consideration on state roads with the regional planning staff associated with their MPO or COG partner agency.

STIP FACTS

The STIP identifies all transportation programs and projects that are funded with federal funding, as well as other significant projects funded by the state or local governments, including the State Transportation Infrastructure Bank and local option sales tax programs. The STIP is a project scheduling and funding program document; it is not a plan. The federally funded projects listed in the STIP evolve from SCDOT planning processes, the Statewide Multimodal Transportation Plan, and MPO and COG long-range plans. All projects listed in the STIP have been evaluated for consistency with state and federal law. The STIP must be consistent with projects listed in the MPO and COG TIPs.

The STIP only includes projects for which there is committed funding available, and therefore, is fiscally constrained. Projects listed in the STIP may include highway and bridge construction or repairs, transit service improvements and capital purchases, safety projects, and operational improvements, such as Intelligent Traffic Systems (ITS), incident management, or traffic signal system projects. The funding for these projects is primarily federal funding, with the required state matching funds and in many cases the federal funding is only eligible for specific categories of improvements. For example, National Highway Performance Program (NHPP) funds are designated for the National Highway System (NHS) or Federal Safety Funds can only be used for eligible safety activities. The various Federal programs and State categories of projects are the building blocks of the STIP.

The South Carolina Department of Transportation is governed by the SCDOT Commission, which is comprised of eight members and serves as a general policy-making body for the various functions and purposes as prescribed by law. The Governor is given the authority to make all 8 appointments to the SCDOT Commission. The appointments must then be screened by legislative delegations based on Congressional Districts and then go before the Joint Transportation Review Committee. In addition, the legislation gives the commission the authority to hire the SCDOT Secretary. By approving the STIP, the SCDOT Commission allocates appropriated federal funding to various state categories and specific projects. When preparing the STIP, SCDOT consults and coordinates with MPOs and COGs, transportation interest groups, other affected local jurisdictions, and all of the consultation parties listed in the public participation plan. Projects are approved and scheduled in consideration of their purpose and need, Act 114 priority ranking, available funding, and status.

Projects are initially placed in the STIP with cost and scheduling information based on planning level analysis. As the project is developed, the project scope, termini, cost estimate, and schedule may be modified as the project matures, or the project may be removed completely if it is no longer deemed feasible. Depending on the project sponsor and location, these changes may be subject to approval of the MPO, COG, SCDOT Commission, FHWA, and FTA. Projects may also be modified as a result of input received during the public review process. Transit funding that appears in the 2017–2022 Statewide Transportation Improvement Program (STIP) represents a projection of anticipated funding from the various Federal Transit Administration (FTA) transit funding programs. In South Carolina, those funding programs include FTA Section 5307, 5310, 5311, and Section 5339. Total funding for transit projects appear in lump sum form with the anticipation that specific budget activities would be made through subsequent corrections or amendments to approved STIP projects and are made in cooperation with the MPO, local transit operator and SCDOT Office of Public Transit.

This document is the 2017–2022 STIP. The document and process of developing the STIP is intended to meet the requirements established by the Moving Ahead for Progress in the 21st Century (MAP–21) and furthered by the Fixing America’s Surface Transportation Act (FAST Act). MAP–21 was enacted July 6, 2012, and the FAST Act was enacted December 4, 2015. Both provide federal funds for transportation projects. The STIP was developed in accordance with the current rules and regulations outlined in 23 CFR Part 450, Subpart B – Statewide Transportation Planning and Programming. In addition, the project selection and prioritization process used to develop the STIP was completed in accordance with South Carolina General Assembly Act 114 enacted on June 2007.

SCDOT STRATEGIC DIRECTION

The SCDOT strategic plan serves as a roadmap to making efficient resource allocation decisions that lead to delivering a world-class 21st-century transportation system through a collaborative effort engaging department employees and public and private stakeholders. The 2018–2020 strategic plan is guided by the Department’s vision, mission, values, and goals. The Department’s strategic goals facilitate the transformation of the stated mission into achieved vision. The strategic goals serve as the basis for the investment strategies considered in the performance and asset management decision-analysis process. “SCDOT shall have as its functions and purposes the systematic planning, construction, maintenance, and operation of the state highway system and the development of a statewide intermodal and freight system ... the goal of the Department is to provide adequate, safe, and efficient transportation services for the movement of people and goods.” (SC Code Section 57–1–30) The Agency’s Strategic Plan can be found here: <http://www.scdot.org/performance/strategic-plan.aspx>

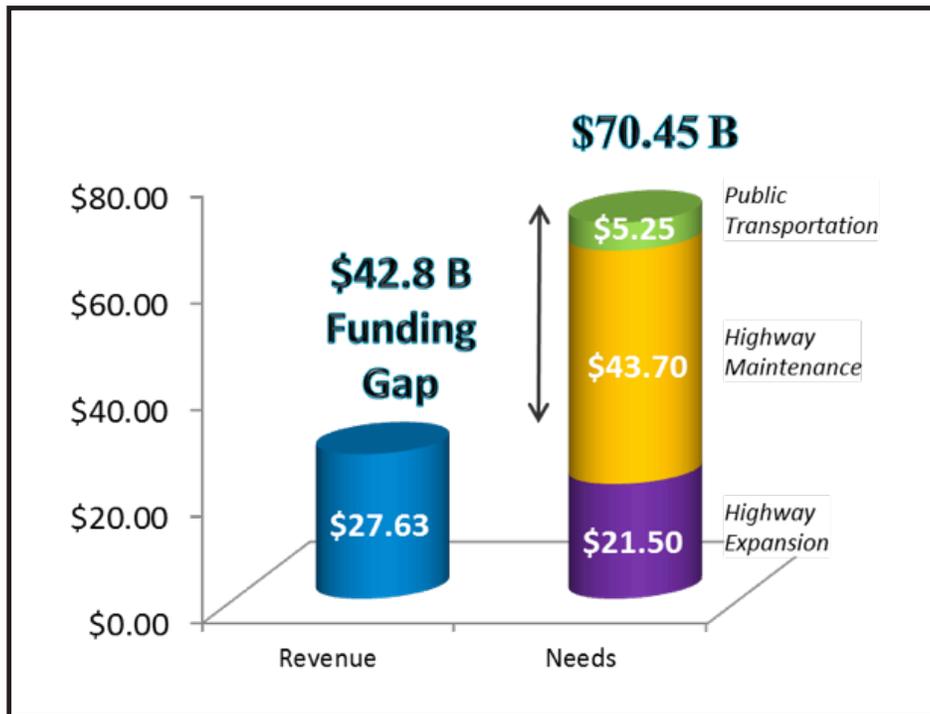
MULTIMODAL PLAN

SCDOT in partnership with the SC Department of Commerce, SC State Ports Authority, Federal Highway Administration, Federal Transit Administration, and other key stakeholders produced the current Statewide Multimodal Transportation Plan (SMTP) entitled “Charting a Course to 2040”.

The SMTP was updated in 2014 to reflect the latest information on travel and growth trends, goals and objectives, infrastructure conditions, future deficiencies, estimated funding, and long-term strategies for managing the transportation system in South Carolina.

The SMTP represents an aspirational vision of providing a well maintained, efficient, safe, and enhanced multimodal transportation system for the future. Total needs through 2040 are estimated at \$70.45 billion, while the total revenue is estimated at \$27.63 billion representing a \$42.8 billion dollar shortfall over the life of the plan. The breakdown of needs reflects an emphasis for continued investment in maintenance of the existing system (62%), capacity improvements on the interstate system and key primary routes to support economic competitiveness (31%), and support for transit (7%) and alternative modes of travel to enhance mobility options for all users.

2040 Multimodal Transportation Plan Funding Gap



ASSET MANAGEMENT

Following the provisions in the United States 2012 and 2015 surface transportation bills – MAP-21 and Fixing America’s Surface Transport (FAST) Act, respectively – the SCDOT has developed a risk-based Transportation Asset Management Plan (TAMP) to guide highway transportation investment decision making. The TAMP serves as a tactical blueprint that supports the Department’s efforts to meet infrastructure condition goals as well as to achieve national performance targets stipulated by the transportation bills. In addition the SCDOT is moving toward adopting federally mandated performance management targets for safety, infrastructure, condition congestion reduction, system reliability, freight movement and economic vitality, environmental sustainability, reduced project delivery delays, and transit. It is anticipated that this journey of employing performance and asset management to support investment decisions will serve as the beginning of a long-lasting collaborative effort with key stakeholders to deliver sustainable investment options and achieve desired system performance. The STIP is the project planning budget document that unifies and reflects the SCDOT’s strategic plan with state legislative requirements of Act 114 and the performance and asset management based decision-making federally mandated by MAP-21 and the FAST Act.

ACT 114

In June 2007, state legislation was passed in South Carolina to restructure and reform SCDOT. Among the numerous provisions, Section 57-1-370 addresses the STIP development in an effort to establish a consistent process for identifying highway improvement projects. Subsection (B) (8) of this section states, “the commission shall establish a priority list of projects to the extent permitted by federal laws or regulations, taking into consideration at least the following criteria: (1) financial viability including a life cycle analysis of estimated maintenance and repair costs over the expected life of the project; (2) public safety; (3) potential for economic development; (4) traffic volume and congestion; (5) truck traffic; (6) the pavement quality index; (7) environmental impact; (8) alternative transportation solutions; and (9) consistency with local land use plans.” The SCDOT

Commission ensures that priorities from each plan consider the nine criteria prior to solicitation for public comment. Information on the Act 114 priority project ranking process can be found here: <http://www.dot.state.sc.us/inside/act114.aspx>

PERFORMANCE MANAGEMENT

In July of 2012, Moving Ahead for Progress in the 21st Century Act (MAP-21), was passed. The purpose of this transportation bill was to create a streamlined, performance-based multi-modal program to address the many challenges facing the nation's transportation system. MAP-21 identified seven specific goal areas to track performance on the National Highway System; Safety, Infrastructure Condition, System Reliability, Freight Movement and Economic Vitality, Environmental Sustainability and Project Delivery. For each of these goal areas, States are required to set performance targets and report their progress toward national performance goals. SCDOT is working to meet these federal requirements and incorporate performance management into the agency's business practices. To view the most current snapshot of SCDOT's performance, please visit this link: <http://www.dot.state.sc.us/SMPlan/index.shtml>

STIP DEVELOPMENT PROCESS

The STIP is a financially constrained program. A financially constrained program indicates the total cost of the projects cannot exceed available funds. Establishing a budget is the first step in achieving a financially constrained STIP. The budget is based on the annual appropriations approved by Congress. Federal appropriation amounts are provided for the following categories – National Highway Performance Program (NHPP), Surface Transportation Program Block Grant (STPBG), Safety (HSIP), Railway-Highway Crossing Program, Congestion Mitigation/Air Quality (CMAQ), Transportation Alternatives Program (TAP), Federal Transit Administration (FTA) programs, and Planning (SPR/PL). Additional federal funding may also be received through discretionary programs, or other programs not included in the core federal-aid appropriation, such as the Federal Lands Access Program and Appalachian Regional Commission (ARC).

After receiving the federal appropriations and based on eligibility, the federal programs are translated into state defined categories to emphasize system priorities, such as Bridge Replacement, Pavement and Reconstruction, and System Upgrade. The federal mass transit appropriations are administered as defined by FTA. The Program Development Office, Division of Intermodal and Freight Program, Finance Office, and Planning Office at SCDOT work together to evaluate existing programs and project status. During this time, SCDOT is also coordinating with MPOs and COGs to evaluate their programs. Existing projects, schedules and budgets are updated to determine the level of funding necessary to complete the projects. SCDOT complies with federal year of expenditure requirements for project estimates by including contingency costs that account for inflationary changes, as well as completing routine review and updates of anticipated costs. Based on available funding, new projects are also programmed in the STIP. Candidate projects originate from planning processes and long-range plans and are prioritized consistent with Act 114 criteria. MPO and COG projects originate this way. Statewide projects originate from Act 114 priority lists generated by the department on a routine basis. These projects are "consistent" with the statewide plan and are evaluated against performance targets prior to programming. Projects are also selected based upon their ability to satisfy performance and asset management targets consistent with Map-21 and the FAST Act.

PERFORMANCE MANAGEMENT & BUDGETING

Performance-based investment decision making is a strategic

approach SCDOT uses to link department goals, objectives, and risks in allocating resources effectively. Performance-based resource allocation is effective with the use of well-defined performance measures and the establishment of practical and achievable performance targets. Performance targets are vital elements in the SCDOT's performance and risk-based asset management program. SCDOT uses 10-year projected performance condition targets as benchmarks in evaluating progress made from baseline performance after the implementation of an investment strategy. These targets are used to assess the effectiveness of selected investment strategies. The use of targets in performance management allows for accountability to decision makers and the general public by communicating the effectiveness of investment actions.

SCDOT's goal in allocating asset management resources is to develop investment strategies that optimize system performance with the existing and future budget allocations. Achieving this goal requires SCDOT to investigate different investment scenarios and recommend target-achieving strategies or options that minimize the Department's risks at the lowest practical cost. The Department develops potential investment scenarios for a ten-year projected performance condition (aspirational), and reports on shortfalls between current and aspirational performance goals.

SCDOT considers tradeoff analysis as an important component in selecting investment strategies. The tradeoff analysis component enables SCDOT to evaluate the effectiveness of each strategy on the performance of the system and the cost involved in foregoing other investment strategies. This is done by presenting various alternative funding scenarios for consideration. These strategies are further shaped by performance targets, which consider national and agency goals, funding constraints, and risk profile.

MAP-21 has given State Departments of Transportation (DOTs) the flexibility to establish their own targets in collaboration with local transportation planning agencies. Based on this flexibility, SCDOT has established two types of performance targets to guide asset management programs: aspirational scenarios and fiscally constrained targets based on SCDOT's current resources. These targets are established to assess system performance over a selected time frame defined by the asset management plan. Consequently, the targets remain dynamic and may evolve in-between reporting or reviewing time horizons. The Department establishes these performance targets considering both long- and short-term goals administered under the transportation asset management plan.

The SCDOT's performance targets are currently based on department-specific traditional performance measures that may not align with national metrics. For instance, pavements performance targets are based on Pavement Quality Index (PQI), and bridges are based on the NBI scale. SCDOT will continue to utilize these measures and targets to track system performance until the NPRM's promulgated measures are finalized.

Factors like functionality, traffic and connectivity lead to evaluation criteria, such as Vehicle Miles Traveled (VMT), lane miles, significance to the freight network, priority in the Multi-Modal Plan. These factors coupled with performance targets for percent good and percent poor of the system drive investment decisions. Budget constraints for each system are derived from performance targets for percent good and percent poor within the 10-year projected performance condition. These budget constraints help define the budget targets for the program categories of the fiscally-constrained STIP.

The asset management process has highlighted the Agency's priority to invest in systems that move the most traffic as well as pose the greatest risk to the traveling public. Investment strategies target pavement condition on the interstate and primary systems, as well as structurally deficient bridges, which are essential to the movement of people and goods.

STIP DEVELOPMENT PROCESS

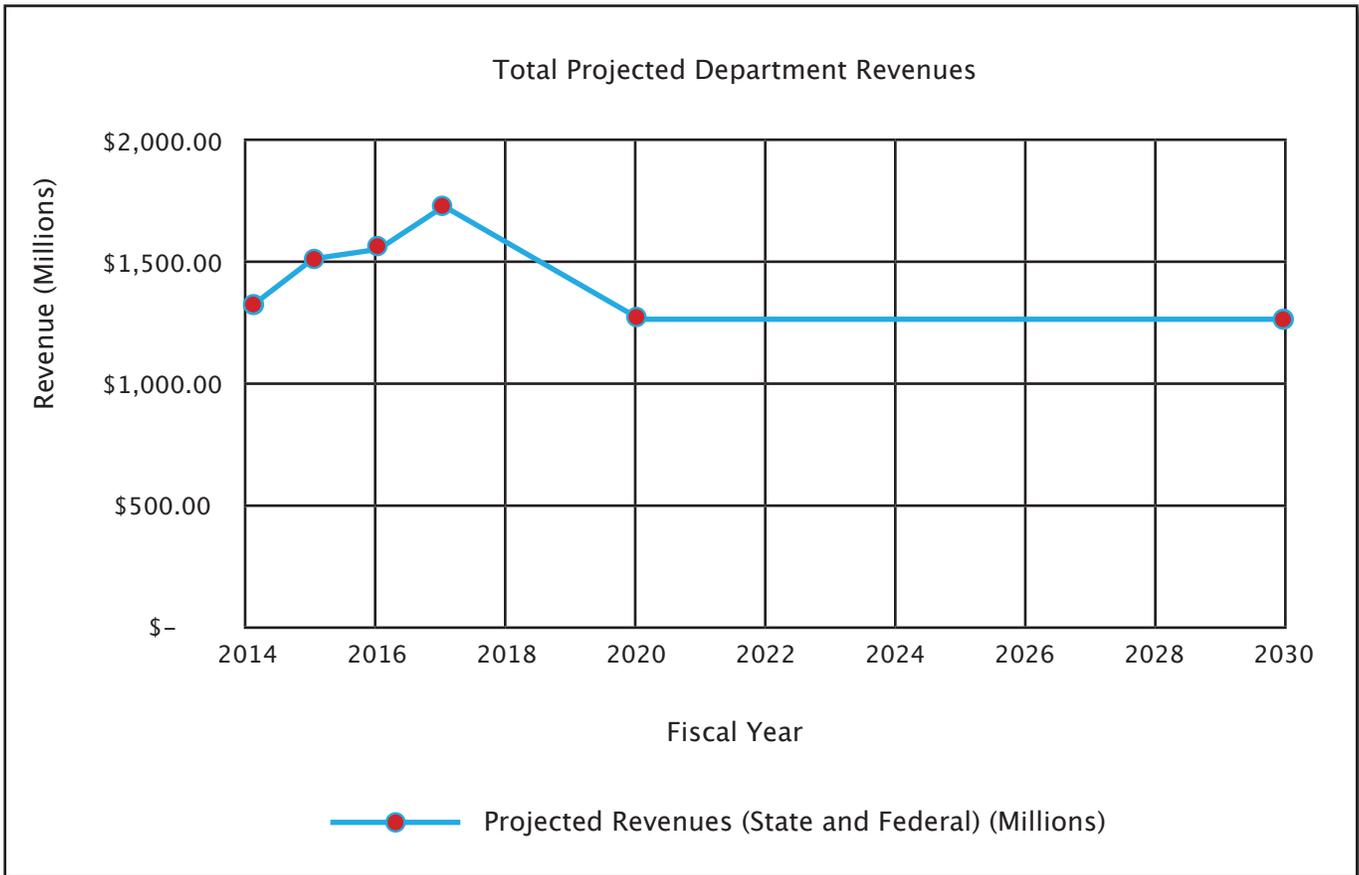
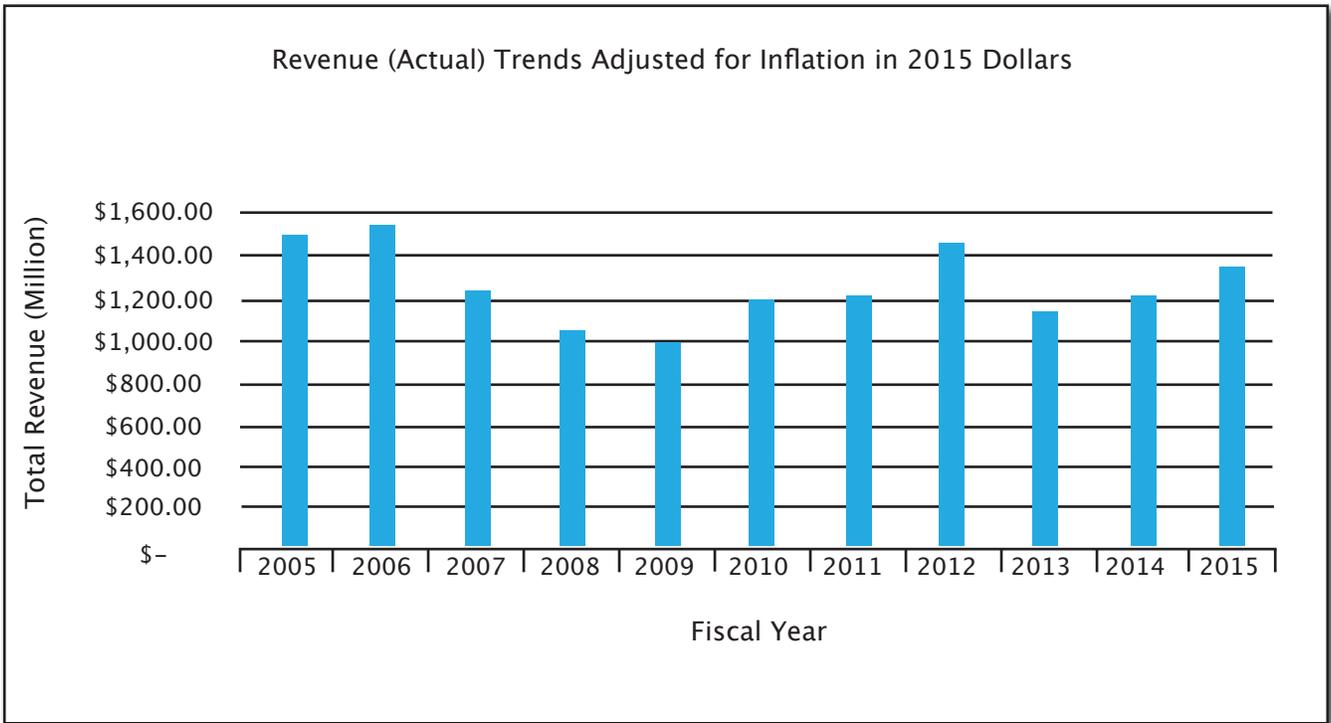
SCDOT receives funding from both the Federal Government and the State in financing eligible transportation programs. Each fund category has restrictions, and the governing authority of the Department over these funds varies accordingly. There is a total of six fund buckets with various revenue sources that serve as the financial backbone of the Department. The table below shows the categories of funding buckets with the respective revenue sources, governing body, and associated restrictions.

Similar to all state departments, agencies, and organizations, SCDOT is required by law to prepare and submit an appropriations budget to the South Carolina Department of Administration (SCDoA), by October of each year, for it to be included in the governor's executive budget. The purpose of the yearly budget is to estimate the Department's expected expenditures and revenues for the subsequent SFY. The SCDOT Commission is responsible for approving the appropriation budget before its submission to the SCDoA. The SFY 2015–2016 budget breakdown shows \$1.6 billion as estimated total department revenues (from all sources: federal, general, and other funds).

Consequent to the legislature's approval of the executive budget, it becomes the appropriation act for the given SFY. Accordingly, SCDOT cannot expend more than the specified amounts in the statute. Hence, the Department's appropriation and operating budgets must balance. The operating budget includes two forecast years of operating budgetary requirements that inform the development of the appropriation budget. The operating budget is the blueprint for the Department's resource allocation process for the forthcoming SFY, and it is developed using estimated federal and state revenue for the next SFY. The STIP includes information about federally-funded projects, including projects of regional significance regardless of funding source, for the 2017–2022 time frame. A full blown discussion of Performance Management and the SCDOT's budget process is contained in the SCDOT's Transportation Asset Management Plan.

Funds and Corresponding Revenue Sources

Fund	Revenue Source	Governing Body
Federal Highway Fund	Motor fuel tax (gasoline, gasohol, diesel, and other) and other highway-related taxes	SCDOT Commission and Secretary of Transportation
State Highway Fund	Gasoline user fee, diesel user fee, tolls, interest, and	SCDOT Commission and Secretary of Transportation
South Carolina Transportation Infrastructure Bank*	Truck registration, auto registration fees, electric power tax, gasoline user fee, diesel user fee, ACT 98 and interest	SCTIB Board
Non-federal Aid Highway Fund	Drivers' License fees and penalties, electric power tax, gasoline user fee, diesel user fee, ACT 98 and inspection fee on petroleum products	SCDOT Commission and Secretary of Transportation
State Portion of C-fund	Gasoline user fee and transfers from the STIP	County Transportation Commission (CTC, SCDOT (Custodial authority))
General Fund	Port Access roads, ACT 98-State Infrastructure Bank	
Federal Transit Fund	Motor fuel tax and other general funds	SCDOT Commission and Secretary of Transportation
State Mass Transit Fund	Gasoline user fee	SCDOT Commission and Secretary of Transportation



ROAD & BRIDGE SYSTEM CLASSIFICATIONS

SCDOT’s current efforts focus on highway infrastructure

assets, with emphasis on the NHS pavements, NHS bridges, and other supporting assets within the right-of-way (ROW). South Carolina’s transportation system includes the NHS and other important roadways that are not necessarily a part of the NHS. It is also important to note that SCDOT may not have the responsibility of managing certain sections of the non-Interstate NHS (0.2 percent) within the State. Therefore, ensuring the smooth operation and better preservation of the NHS requires effective coordination and efficient collaboration with Metropolitan Planning Organizations (MPOs) and the Council of Governments (COGs).

SCDOT owns and maintains 41,414 centerline miles encompassing over 90,000 lane-miles of roadway. This inventory of roadway mileage makes SCDOT’s highway system the fourth largest state-owned system in the United States. Over half of the state-maintained system is not eligible for federal funds. For the purpose of efficient asset management, SCDOT categorizes the State’s highway system into five different tiers: Interstate, Non-Interstate NHS, Non-NHS Primary (U.S. highways and SC designated routes), Federal-aid, and Non-Federal-aid Secondary highways. Additionally there is an Off-system category which SCDOT does not maintain.

Road Inventory System Classification

Pavements

Asset Categories	Centerline Miles	%VMT
Interstate	851	30%
Primary System	9,517	46%
Non-Interstate NHS	2,752	26%
Non-NHS Primaries	6,765	20%
FA Secondaries	10,370	17%
Non FA Secondaries	20,657	7%

Bridge Inventory System Classification

Bridges

Asset Categories	Structures	% VMT
NHS	1,747	56%
Non-NHS	3,881	37%
Off-System	2,798	7%

STIP FUNDING PROGRAMS

Pavements Program – Funding is divided between three categories of improvements including reconstruction, rehabilitation and preservation. Funding for resurfacing of Primary Routes (US and SC) and state secondary routes eligible for federal funding. Pavement and Reconstruction funds typically require a 10% or 20% match depending on the project type.

Bridge Program – Funding for projects that address structurally deficient or functionally obsolete bridges on the federal-aid system, with a portion of the funding required for use on bridges typically not eligible for federal funding (off-system). Bridge Program funds typically require a 20% match.

Upgrades Program – This program consists of the Interstate Upgrade Program, which is a state managed program for the Interstate System, and Rural and Urban System Upgrade Program (Guideshare), which is funding made available by the SCDOT Commission to address MPO and COG priorities, such as intersections, road widening, and new road construction. System Upgrade funding typically require a 20% match.

Freight Program – The National Highway Freight Program (NHFP) provides funding to improve the efficient movement of freight on the National Highway Freight Network (NHFN). Funds must be identified in a freight investment plan included in the Statewide Freight Plan, and SCDOT may use not more than 10% of the total NHFP apportionment each year for freight intermodal or freight rail projects.

Safety Program – Funding for projects in locations that have a statistically higher than average collision rate and/or severity rate that considers fatalities, injuries, and property damage. The Safety Program is comprised of the following categories:

- Intersection Improvements – Realignments, turn lanes, signalization
- Corridor Improvements – Spot improvements along segments of roadway
- Low Cost Intersection Improvements – Fluorescent signing, reflective sign post panels, additional signage, oversize stop signs, and remarking/restriping
- Railroad Improvements – Safety enhancements to rail crossings
- Interstate Safety Improvements – Resurfacing (open-graded friction course), extending an acceleration/deceleration lanes, clearing, and signing and marking improvements

Congestion Mitigation and Air Quality (CMAQ) – Funding for projects that demonstrate reductions in ozone and particulate matter pollutants. Funding is used for projects within EPA designated non-attainment areas, as well as incident response services in Beaufort, Charleston, Columbia, Florence, Grand Strand/ Myrtle Beach, Rock Hill, and Greenville/Spartanburg urban areas. Incident responders make minor repairs to disabled vehicles, assist with traffic control and incident management, and provide first aid until emergency medical service arrives. CMAQ funds typically require a 20% match.

Transportation Alternatives Program (TAP) – Funding for bike and pedestrian projects selected by Transportation Management Areas (TMAs) in the urbanized areas over 200,000 in population and by the SCDOT Commission for non-TMA areas. Transportation Alternatives funds typically require a 20% match. The Recreational Trails Program (RTP) funding is also included. It is used to develop and maintain recreational trails and trail-related facilities for both non-motorized and motorized recreational trail uses. The RTP funds come from the Federal Highway Trust Fund, and represent a portion of the motor fuel excise tax collected from non-highway recreational fuel use. The RTP is administered by the South Carolina Parks Recreation and Tourism.

RR Crossings – Designed to identify deficient rail–highway grade crossings and upgrade warning devices when warranted. In order to maximize benefits the Department places all the public crossings in the state on a priority list for upgrades. Various factors are considered in this process such as train speed, train and traffic volumes, existing warning at the crossing, number of tracks, crossing alignment, sight distance, and school bus activity and accident history.

Planning Program – Funding for Metropolitan Planning Organizations (MPOs) and SCDOT for eligible planning related projects and activities.

State Infrastructure Bank (SIB) Payment – Provides state funding for significant transportation projects. The State Infrastructure Bank was established by the South Carolina General Assembly in 1997 to select and assist in financing major qualified projects by providing loans and other financial assistance.

Preventative Maintenance & Operations – Consists of asset management contracts, bridge inspections, bridge preventative maintenance and repair, guardrail and cable rail, signals, signing and marking, and the incident responder program.

The following Federal Transit Administration (FTA) Mass Transit funding program references are identified in the STIP for each project:

Section 5305(d): Metropolitan Planning Program
Flexed to combine with FHWA/PL program – planning

Section 5305(e): State Planning and Research Program
(20% match planning)

Section 5307: Urbanized Area Formula Program
(20% match capital, 50% match operating)

Section 5310: Enhanced Mobility of Seniors and Individuals with Disabilities Program
(20% match – capital, 50% match operating)

Section 5311: Formula Grants for Rural Areas Program
(20% match administrative & capital, 50% match operating)

Section 5311(b)(3): Rural Transit Assistance Program
(no match required, statewide training & technical assistance only)

Section 5311(c)(2): Appalachian Development Public Transportation Assistance Program
(20% match administrative & capital, 50% match operating for FTA-identified Appalachian Regions)

Section 5339: Bus and Bus Facilities Formula Program
(20% match – capital only)

STIP TERMS**3-C Planning Process (continuing, comprehensive, and cooperative)**

A transportation planning process, which makes the area eligible to receive federal highway and transit funding, includes two major required products – a regional transportation plan, with at least a 20-year planning horizon, and a transportation improvement program, a shorter-term schedule of active projects.

Federal Highway Administration (FHWA)

The agency of the USDOT that administers the federal program of financial assistance to state departments of transportation. The Eastern Federal Lands Division (EFLHD) develops transportation projects within Federal Lands. The website, <https://flh.fhwa.dot.gov/programs/flpp/tip/efl.htm>, references projects that have been identified by the EFLHD.

Federal Transit Administration (FTA)

The agency of the USDOT that administers financial assistance to public transit.

Intelligent Transportation Systems (ITS)

Technology to better manage traffic and transit resources, increase the capacity capabilities of existing highways and enhance safety.

Lump sum

A STIP format used to reflect the budget and planned value of projects as an aggregate. This format is generally used for STIP categories that are comprised primarily of small or low cost projects, including projects defined as preventative maintenance. Examples of STIP categories that use the lump sum format, in place of individual project descriptions with budgets and schedules, include the Transportation Alternatives Program, Railroad Crossing Program, and the Preventative Maintenance and Operations category.

Moving Ahead for Progress in the 21st Century (MAP-21)

Provides federal funds for surface transportation programs nationally at over \$105 billion for fiscal years (FY) 2013 and 2014. MAP-21 is the first long-term highway authorization enacted since 2005.

Fixing America's Surface Transportation Act (FAST Act)

Provides federal funds for surface transportation programs nationally at over \$305 Billion for fiscal years (FY) 2016 through 2020. The FAST Act is the first federal law in over a decade to provide long-term funding certainty for surface transportation infrastructure planning and investment.

National Highway System (NHS)

Created by federal transportation legislation in 1991 (ISTEA) the “National Highway System” consisting of the interstate highway system and other primary highways. The NHS funding category has been established to support improvement projects on the network.

State Implementation Program (SIP)

A plan produced by the state environmental agency and mandated by the Clean Air Act to monitor, control, maintain, and enforce compliance with the national air quality standards. The SIP provide air quality thresholds that must be considered during the long-range transportation planning process for non-attainment areas.

Transportation Improvement Program (TIP)

A document prepared by a metropolitan planning organization that lists federally funded projects and other projects of regional significance within their planning area over a minimum of four years.

Transportation Management Areas (TMA)

Urbanized areas with a population over 200,000 (as determined by the latest decennial census)

Metropolitan Planning Organizations

- *Anderson Area Transportation Study (ANATS)* – Representing portions of Anderson County
- *Augusta Regional Transportation Study (ARTS-TMA)* – Representing portions of Aiken County (multi-state including Augusta, GA)
- *Charleston Area Transportation Study (CHATS-TMA)* – Representing portions of Berkeley, Charleston, and Dorchester Counties
- *Columbia Area Transportation Study (COATS-TMA)* – Representing portions of Calhoun, Lexington, Richland, and Kershaw Counties
- *Florence Area Transportation Study (FLATS)* – Representing portions of Darlington and Florence Counties
- *Greenville-Pickens Area Transportation Study (GPATS-TMA)* – Representing portions of Anderson, Greenville, Pickens, and Spartanburg Counties
- *Grand Strand Area Transportation Study (GSATS-TMA)* – Representing portions of Georgetown and Horry Counties (multi-state including Brunswick County, NC)
- *Low-Country Area Transportation Study (LATS)* – Representing portions of Beaufort and Jasper Counties
- *Rock Hill-Fort Mill Area Transportation Study (RFATS-TMA)* – Representing portions of Lancaster and York Counties
- *Spartanburg Area Transportation Study (SPATS)* – Representing portions of Spartanburg County
- *Sumter Area Transportation Study (SUATS)* – Representing portions of Sumter County

Councils of Governments

- *Appalachian Council of Governments* – Representing Anderson, Cherokee, Greenville, Pickens, Oconee, and Spartanburg Counties
- *BCD Council of Governments* – Representing Berkeley, Charleston, and Dorchester Counties
- *Catawba Council of Governments* – Representing Chester, Lancaster, Union, and York Counties
- *Central Midlands Council of Governments* – Representing Fairfield, Lexington, Newberry, and Richland Counties
- *Lowcountry Council of Governments* – Representing Beaufort, Colleton, Hampton, Jasper Counties
- *Lower Savannah Council of Governments* – Representing Aiken, Allendale, Bamberg, Barnwell, Calhoun, and Orangeburg Counties
- *Pee Dee Council of Governments* – Representing Chesterfield, Darlington, Dillon, Florence, Marion, and Marlboro Counties
- *Upper Savannah Council of Governments* – Representing Abbeville, Edgefield, Greenwood, Laurens, McCormick, and Saluda Counties
- *Santee-Lynches Council of Governments* – Representing Clarendon, Kershaw, Lee, and Sumter Counties
- *Waccamaw Regional Planning and Development Council* – Representing Georgetown, Horry, and Williamsburg Counties

DOCUMENT OVERVIEW

The STIP includes information about federally-funded projects, including projects of regional significance regardless of funding source, for the 2017–2022 time frame. The program covers the six-year period beginning October 1, 2016, which is the beginning of the 2017 federal fiscal year, and ends September 30, 2022 which is the end of the 2022 federal fiscal year. Amendments to this document may occur that alter the scope, schedule, and number of approved projects in the STIP. To see the latest version of the STIP, go to: <http://www.scdot.org/inside/stip.aspx>

USE OF ADVANCED CONSTRUCTION (AC)

SCDOT uses AC as a highway financing tool that allows projects to be built earlier than they would under normal federal funding constraints. The SCDOT has developed two methods for utilization of AC in the STIP: Financial AC and Project AC.

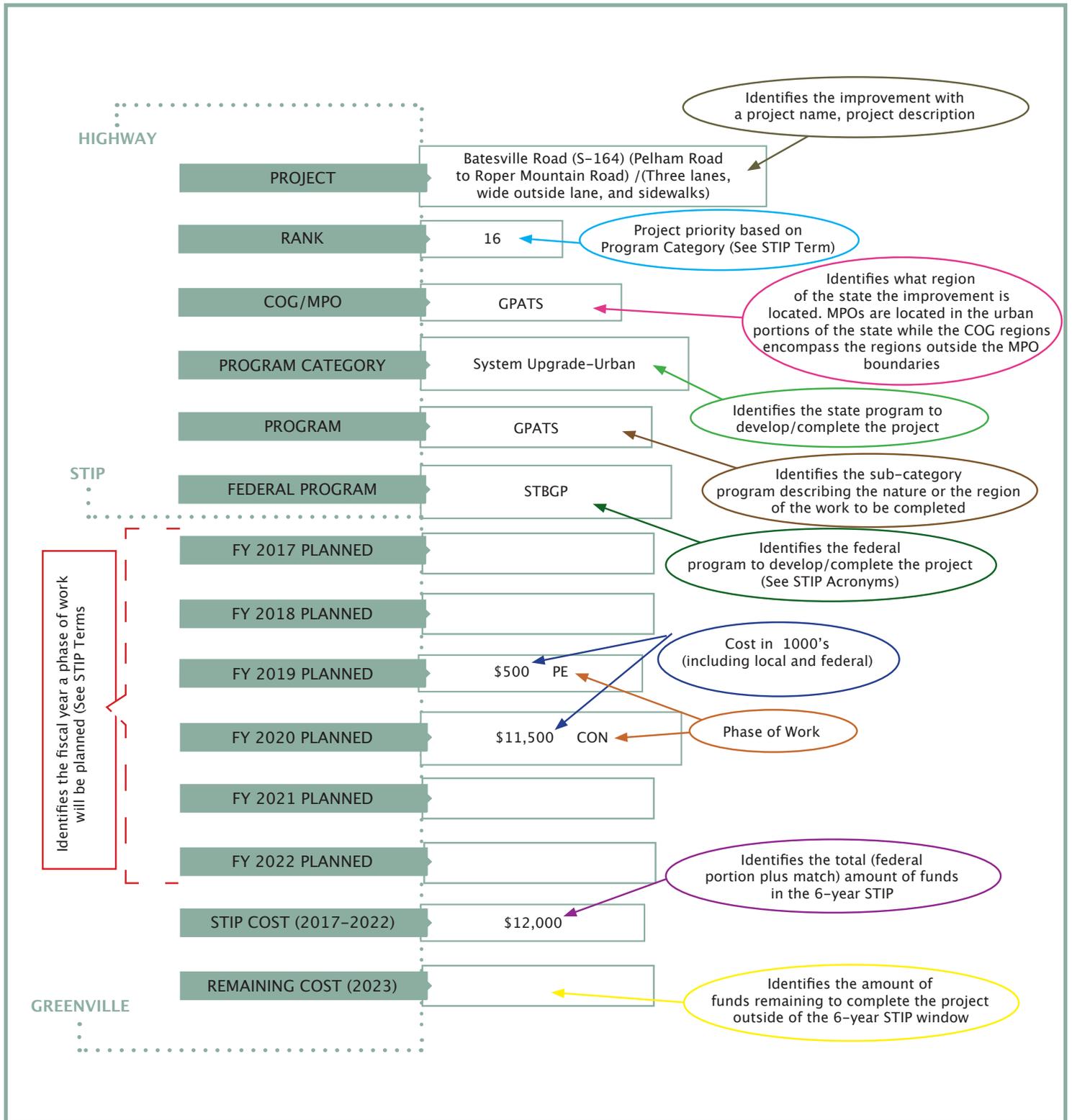
Financial AC is used as a highway financing tool enabling programming levels to exceed the federal apportionment budget. The additional programming capacity is important to balance the variability in project delivery that can routinely occur during all phases of project development, with a sufficient number and value of projects to efficiently meet the federal obligation limitation requirements on an annual basis. Financial AC represents the commitment of state funds to satisfy the programming levels exceeding available federal funding in a given year. An authorization as AC allows for a project to be undertaken with state or local funds, while maintaining eligibility to convert the project to federal aid in the future. In addition, Financial AC is used to demonstrate fiscal constraint, which reflects the ability to adequately fund and deliver the Federal-Aid Program in South Carolina. Financial AC represents a large group of projects with many variables and for this reason they are shown as an aggregate estimate of both the AC incurred and converted for each fiscal year.

Project AC is used for larger projects and is typically associated with the construction phase. Project AC is shown in the STIP for individual projects with phases of work equal to or greater than \$50 million. Project AC allows for an efficient use of federal obligation limitation on larger projects by metering the use of federal funds as the project incurs expenditures. A summary of all Project AC and Project AC Conversions is also shown in conjunction with the STIP Highway Summary Table. A more in depth discussion of AC, where someone can find the AC values in the STIP and how to interpret them, and its implications to the STIP can be found in **Appendix A** of this document.

PROJECT INTERPRETATION

Readers will note that project information is shown by county location. To assist readers with interpreting the project information tables, a key is provided below. The key defines several terms used frequently throughout the STIP. It should also be noted that the amounts shown in this document represent funding in thousands. A tutorial video on navigating the E-STIP is available on the STIP home page.

County Projects Summary Report



Rank – Project rankings are based on the respective program/category. The following abbreviations are used to distinguish project priorities by program/category:

Phase of Work Definitions:

PE: Engineering design and environmental analysis
 RW: Right-of-Way acquisition
 CON: Construction
 AD: Administration
 CA: Capital
 FC: Transit Facility Construction
 VA: Transit Vehicle Acquisition
 PS: Transit Purchase of Service
 OP: Operations

STIP Acronyms

COGs
 Appalachian
 Berkeley Charleston Dorchester
 Catawba
 Central Midlands
 Lowcountry
 Lower Savannah
 Pee Dee
 Santee Lynches
 Upper Savannah

MPOs

ANATS: Anderson County Planning and Development
 ARTS: Aiken County Planning and Development
 CHATS: Charleston Council of Governments
 COATS: Central Midlands Council of Governments
 FLATS: Florence County Planning Department
 GPATS: Greenville County Planning Commission
 GSATS: Waccamaw Planning and Development Council
 LATS: Lowcountry Planning Department
 RFATS: Rock Hill Planning Department
 SPATS: Spartanburg County Planning Department
 SUATS: Sumter County Planning Department

Program Category:

Bridge
 CMAQ
 Interstate
 Debt Service
 Pavement & Reconstruction
 Planning
 RR Crossing
 Safety
 System Upgrade
 SIB
 TAP

Federal Program:

NHPP – National Highway Performance Program
 STBGP – Surface Transportation Block grant Program
 CMAQ – Congestion Mitigation and Air Quality Program
 Statewide-SPR – State Planning and Research Program
 MPO-PL – Metropolitan Planning Program
 RR Crossing – Railroad Crossing Program
 Safety – Safety Program
 TAP – Transportation Alternatives Program

STIP AMENDMENTS AND CORRECTIONS

The STIP is a living document and requires modifications as project information changes. Modifications are defined as Amendments and Corrections:

Amendments

STIP amendments are major updates that require public participation, SCDOT Commission approval, re-demonstration of fiscal constraint or conformity determination (for non exempt projects in non-attainment or maintenance areas).

- Addition or deletion of a project;
- Major change in project cost, shifting a phase of work, design concept, or scope

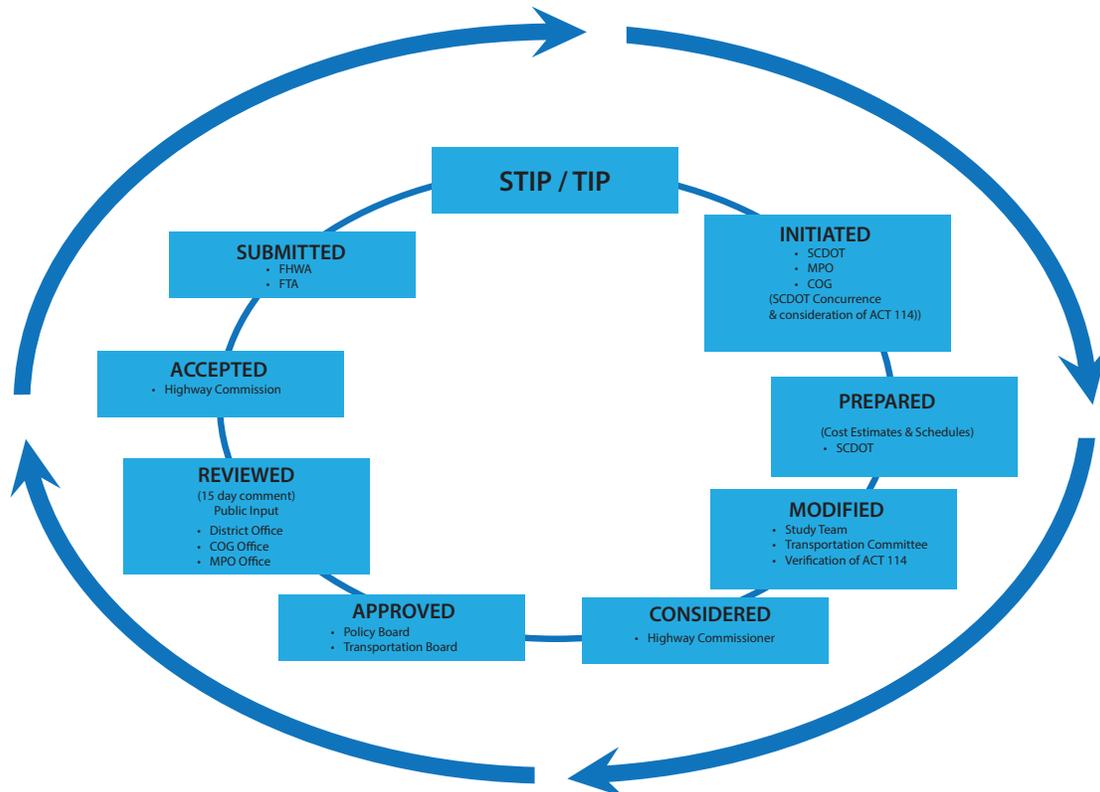
Corrections

STIP corrections are administrative modifications that do not require public participation or SCDOT Commission approval, does not require re-demonstration of fiscal constraint, or conformity determination (in non-attainment or maintenance areas).

- Minor changes to project phase or cost;
- Minor changes to funding sources of previously included projects

The coordination process provides details categorizing project modification and changes to the STIP. The administrative and coordination process is described in the STIP Process Directive.

STIP Approvals & Amendments



APPENDIX A Use of Advance Construction (AC) for Administering the SCDOT STIP
 SCDOT uses AC as a highway financing tool that allows projects to be built earlier than they would under normal federal funding constraints. The appendix defines the two types of AC utilized by SCDOT and how this usage is connected to the STIP.

The SCDOT has developed two methods for utilization of AC in the STIP: Financial AC and Project AC. Financial AC is used as a highway financing tool enabling programming levels to exceed the federal apportionment budget. The additional programming capacity is important to balance the variability in project delivery that can routinely occur during all phases of project development, with a sufficient number and value of projects to efficiently meet the federal obligation limitation requirements on an annual basis. Financial AC represents the commitment of state funds to satisfy the programming levels exceeding available federal funding in a given year. An authorization as AC allows for a project to be undertaken with state or local funds, while maintaining eligibility to convert the project to federal aid in the future. In addition, Financial AC is used to demonstrate fiscal constraint, which reflects the ability to adequately fund and deliver the Federal-Aid Program in South Carolina.

Financial AC represents a large group of projects with many variables and for this reason they are shown as an aggregate estimate of both the AC incurred and converted for each fiscal year. Financial AC is shown in conjunction with the STIP Highway Summary Table (page 17). As an example in the table below, in the fiscal years that the total planned value of projects exceeds the total apportioned budget, Financial AC is used as the delta. A subsequent AC Conversion reflects the conversion of state funds to federal funds over a three year schedule. The converted AC and the total planned value are considered the total financial commitment for the fiscal year. The use of Financial AC translates to a zero balance and overall fiscal constraint of the STIP.

Total Apportioned	\$764,843	\$761,200	\$764,743	\$764,743	\$764,743	\$764,743
Total Planned	\$869,326	\$919,043	\$1,028,623	\$828,906	\$782,797	\$785,503
Advanced Construction Conversion				\$8,069	\$32,147	\$48,880
Advanced Construction			\$24,208	\$72,232	\$50,201	\$69,640
Balance	\$250,417	\$180,776	\$0	\$0	\$0	\$0

Project AC is used for larger projects and is typically associated with the construction phase. Project AC is shown in the STIP for individual projects with phases of work equal to or greater than \$50 million. Project AC allows for an efficient use of federal obligation limitation on larger projects by metering the use of federal funds as the project incurs expenditures.

As an example in the tables below, a STIP entry for Project AC references the source of budget for the phase of work as AC, in addition to a nominal federal obligation in the first year to correspond with anticipated expenditures as the project begins. [The conversion of Project AC to federal funds is done equally over three years to again correspond with a schedule of anticipated expenditures.](#) Project AC is noted on and individual project basis within the STIP. The converted Project AC amounts are included in the sum of the planned value to capture the cost of the project. A summary of all Project AC and Project AC Conversions is also shown in conjunction with the STIP Highway Summary Table.

Bridge Program

Project	Rank	Location	County	District	FY 2014 Planned	FY 2015 Planned	FY 2016 Planned	FY 2017 Planned	FY 2018 Planned	FY 2019 Planned	STIP Cost 2014-2019	Remaining Cost
US21	BRP-23	Harbor River	Beaufort	6								
		Bridge			4,340 P			10,000 C				
		AC						46,134 C				
		AC conversion							15,378 C			15,378 C

	FY 2014 Planned	FY 2015 Planned	FY 2016 Planned	FY 2017 Planned	FY 2018 Planned	FY 2019 Planned	STIP Cost 2014-2019	Remaining Cost
Total Apportioned	\$125,000	\$121,200	\$125,000	\$125,000	\$125,000	\$125,000	\$746,200	
Total Planned	\$142,988	\$186,338	\$129,286	\$76,662	\$171,757	\$128,503	\$835,535	
Planned Project AC Conversion					\$15,378	\$15,378	\$30,756	\$15,378
Total Planned + AC Conversion	\$142,988	\$186,338	\$129,286	\$76,662	\$187,135	\$143,881	\$866,291	\$15,378
Difference	\$17,988	\$65,138	\$4,286	\$48,338	\$62,135	\$18,881	\$120,091	
Planned Project AC				\$46,134			\$46,134	