

**Accountability Report Transmittal Form**

Agency Name South Carolina Department of Transportation

Date of Submission August 31, 2001

Agency Director Elizabeth S. Mabry

Agency Contact Person Carl Chase Jr.

Agency Contact's Telephone Number 737-1960

**South Carolina Department of Transportation  
Annual Accountability Report  
Fiscal Year 2000-2001**

**Section I- EXECUTIVE SUMMARY**

---

**Description of the Department of Transportation:**

The South Carolina Department of Transportation (SCDOT) is charged with the responsibility of systematic planning, construction, maintenance, and operation of the state highway system and providing mass transit services. SCDOT is responsible for managing the fourth largest highway system in the nation.

**Mission and Values**

The mission of the SCDOT is to provide a safe and efficient transportation system for the state of South Carolina.

We build and maintain roads and bridges as well as provide mass transit services to the citizens of the state.

The values subscribed to all members of the Department are described using the acronym RIGHT Team. As a member of the SCDOT, I do things the RIGHT way!

Respectful and supportive of others  
Integrity at all times  
Good at what I do, because I am competent and knowledgeable  
Honest and fair in all my actions  
Teamwork through communication

**Key Strategic Goals For Present And Future Years**

- Increase safety on South Carolina's transportation systems and within SCDOT.
- Improve the quality, efficiency and appearance of the State Highway System.
- Improve and expand the multi-modal Transportation System in South Carolina.
- Enhance and implement integrated financial and project management systems.
- Improve employee skills, their work environment, and provide opportunities.
- Improve management of our property, equipment and technology.
- Provide highest level of customer service

## **Opportunities and Barriers**

Two areas that provide opportunity for improvement are the maintenance of our state highways and reduction in the death rate attributed to highway crashes. The Department is seeking adequate funding to maintain the fourth largest state maintained road system in the country. Funding for South Carolina's transportation needs have not kept pace with inflation or the state's booming growth. The state highway system contains approximately 42,000 miles of roads and 8205 bridges. There are 820 miles of interstate, 9,400 miles are primary roads, and 31,000 miles of secondary roads.

## **Funding**

SCDOT continues to pursue additional state revenue to provide matching dollars and to address maintenance and safety needs. We will continue to inform the Legislature and key stakeholders of South Carolina highway infrastructure needs.

We will focus on these facts:

- Highway funding in South Carolina is the lowest, per mile, in the nation.
- SCDOT now has no program for resurfacing state secondary roads
- Deferred maintenance is resulting in deterioration of the roads.
- Road conditions are directly related highway safety.
- The highway fatality rate in South Carolina is second highest in the nation.
- The state fuel tax is 4.5 cents below the national average.
- Non-fuel tax revenues such as license/registration fees and sales taxes on automobiles are dedicated to highways at less than 5% of the regional average.
- Unlike most states, South Carolina maintains the majority of road miles in the state highway system rather than under local government systems.
- Federal dollars may not be used for most secondary roads that represent 60% of the state system.
- Traffic volume is growing faster than the population. It is expected to grow 60% in the next 25 years.
- Growth in fuel tax revenues is slower than growth in traffic volume due to improved fuel efficiency. The growth rate for state fuel tax revenues will average 1.7% per year between FY '98 and FY '02, compared to a growth rate of more than 8% in General Fund revenues for the last five years.
- South Carolina's over-dependence on a regressive fuel tax formula for highway purposes, combined with a 100% increase in federal matching requirements has led to a rapid decline in SCDOT's ability to maintain and improve the state's secondary (non-federal) roads.

SCDOT is hopeful that the General Assembly will recognize the need and respond accordingly.

## **Lowering death rate due to Highway Crashes**

South Carolina's highway death rate is the second worst in the nation. The top goal of the Department's Strategic Plan is to increase safety on South Carolina's transportation systems and within SCDOT. We plan to do this by reducing the number of highway crashes, injuries, and fatalities in South Carolina by 5% in a 2 year period through the development and implementation of a variety of statewide safety initiatives.

### **Major Achievements From the Past Year**

Major achievements will be described in the Business Results Section of this report. Some of the major achievements of the Department during FY 01 include the following:

- Installation of median barriers.
- Opening of the Conway Bypass ahead of schedule and under budget.
- Opening of the Southern Connector ahead of schedule.
- Accumulation of 2,069,762 million safe work hours by Headquarters Employees.
- ADDY awards for the “Highway or Dieways” Safety Campaign.
- Approval of the Transportation Infrastructure Financing and Innovation Act (TIFIA) Loan to supplement funding for the Cooper River Bridges replacement project.
- Kickoff of a new “Work Zone Safety Program.”
- Increased coverage by the State Highway Emergency Program (SHEP).
- Awarding 171 Construction Contracts.

### **Section II - Business Overview**

The SCDOT is one of the largest state agencies and has a staff of approximately 5,000 men and women who are employed in all of the state’s 46 counties and the central Headquarters located in Columbia.

A 7-member Transportation Commission is the policy making body for SCDOT. The members, each representing a Congressional District, are appointed by the legislative delegations, with the Governor appointing the Commission Chairman. The Commission appoints the Executive Director who carries out the daily operation of the Department and the direction of the staff.

The State Highway Engineer and three Deputy Directors who each manage a major division of the Department assist the Executive Director. The divisions are Engineering; Strategic Planning, Finance and Administration; Mass Transit; and Executive Support Services.

## **Business Requirements**

In order to carry out the mission of SCDOT, the Department has established the following business requirements

- Wise and efficient management and use of resources.
- Quality Customer Service.
- Trained and motivated workforce.
- Improved safety.
- Quality work performed in a timely manner.

**Expenditures/Appropriations Chart**

Major Budget Categories	FY 99-00 Actual Expenditures		FY 00-01 Actual Expenditures		FY 01-02 Appropriation		
	State Highway Fund	General Funds	State Highway Fund (1)	General Funds (1)	State Highway Fund	General Funds	New Agency U20 (2)
Personal Service	142,971,577		153,403,869		171,805,000		
Other Operating	268,608,922		258,355,265		177,615,000		2,000,000
Misc Operating	200,000		842,032		-		
Permanent Improvements	423,558,117		449,683,895		445,493,500		15,000,000
Debt Service	3,200		4,800		-		
Distributions to Subdivisions	24,909,749		34,773,865		12,966,024		58,800,000
Employer Contributions	41,146,052		43,601,212		51,541,500		
Mass Transit – Aid to Entities	-	782,539	-	578,055		578,976	
Message Boards & advisory radios				642,032			
Base Reduction						(54,561)	
<b>Total</b>	<b>901,397,617</b>	<b>782,539</b>	<b>940,664,758</b>	<b>1,220,087</b>	<b>859,945,439</b>	<b>524,415</b>	<b>75,800,000</b>

Notes:

- (1) In FY 02, the County Transportation Funds were removed from U12 and a new agency was created to handle the County transportation Funding. The new agency number is U20. The new agency will remain part of SCDOT.

**Key Customers**

The key customers of SCDOT are the motoring public of South Carolina and those citizens who use public transportation. The Department stays connected with its customers by frequent interactions in public meetings, timely response to correspondence, and personal interaction by the Commission and staff.

**Key Suppliers**

When viewed from an economic perspective, SCDOT is among the largest businesses in South Carolina. There are approximately 17,000 suppliers in the Department’s Automated Procurement System that provide goods and services to the agency. There are approximately 77 key suppliers to the Department.

## **CATEGORY 1: LEADERSHIP**

---

### **Short and Long Term Direction**

The Executive and Senior Staff meet periodically to review and renew the goals and objectives in the agency's Strategic Plan. Both short and long-term directions are identified in the plan.

The Department's Executive staff includes the Executive Director; the State Highway Engineer; Deputy Director for Strategic Planning, Finance and Administration; Deputy Director for Executive Support; and the Deputy Director for Mass Transit. The Senior Staff includes the Executive Director, the four Deputies, division heads within Headquarters, and the 7 engineering administrators within the Districts. The Executive Staff meets weekly and the Senior Staff monthly.

### **Performance Expectations**

The Executive Director reviews "dashboard gauges" that contain essential information related to her role in managing the agency. Those measures include:

- Safety (SC Traffic Fatalities)
- Employee Vacancies
- Status of major projects.
- Miles of Cable Guardrail installed
- Cash Balance
- Revenue
- Expenditures
- Federal Aid Obligations
- Debt Status
- Legal/Claims
- Mass Transit (Statewide Boardings for RTAs only)
- Construction Contracts awarded.
- Quality of Construction Work.

Each objective that supports a goal in the SCDOT Strategic Plan has a performance measure. The Employee Performance Management System (EPMS) has been modified to connect the agency's values and goals with each department employee. Additionally, some organizational elements are using a 360° assessment.

### **Organizational Values**

The organizational values are a part of the development and deployment of the Strategic Plan. When the plan was developed, a cross-section of employees representing every facet of the Department participated in the development of the values for SCDOT. Every member of the Department acknowledges the values of the plan and receives a special embossed lapel pin to reflect that they are a member of the RIGHT Team. As a whole, we are working towards the SCDOT Vision of "Public Trust: Earn it, Keep it!"

## **Empowerment and Innovation**

SCDOT employees are rewarded for their creativity and innovative ideas. SCDOT rewards innovation with three types of recognition. The On the DOT Award is a certificate given for on the spot recognition of a noteworthy accomplishment or improvement in a work process or working condition. Any SCDOT employee can initiate this award. Another award is the On the DOT Extra for performance or performance improvements that are especially noteworthy. The On the DOT Extra is a cash award ranging from \$100 to \$250. Each year 8 employees are recognized as the SCDOT Employees of the Year. One employee from the Headquarters and one from each of the seven Engineering districts are selected.

SCDOT seeks ideas from its employees through a departmental suggestion program called *Idea Express!* This program encourages employees to submit recommendations for innovation or suggestions that can improve Department operations, resulting in a savings of time and/or money. This past fiscal year there were 23 submittals for *Idea Express!*

## **Ethical Behavior**

“Public Trust: Earn it, Keep it” is the vision of SCDOT. All of our employees are informed of the State’s Ethics Law. We have established policies and procedures to prevent unethical behavior. We have begun a briefing on ethics at Senior Staff meetings and intend to have annual updates on this topic.

## **Leadership Development**

The Department takes seriously the responsibility to develop competent leaders within the organization. We have developed and pursued continuous developmental programs for those presently charged with leading and managing. This year, one Deputy Director completed the Executive Institute and 45 staff members attended the Strategic Leadership for State Executives Program, conducted by the John F. Kennedy School for Government. The Senior Leadership also attended a one-day session on Strategic Leadership for Transportation Leaders, conducted by the Federal Highway Administration.

As part of succession planning, two leader development programs have been developed. The Strategic Training for Transportation Agency Representatives (STTAR) is a ten-month development program for agency employees who exhibit potential for promotion to Senior Leadership positions in the Department. The STTAR Program has been in effect for four years. The Strategic Training and Education Program for the 21<sup>st</sup> Century (STEP-21) is a leader development program that assists in the preparation of those employees exhibiting potential for mid –level management duties in the SCDOT. Four employees completed the Associate Public Manager Program during the year and one member of the Senior Staff completed the Governor’s EXCEL Program.

## **CATEGORY 2: STRATEGIC PLANNING**

---

Strategic Planning and implementation in SCDOT is paramount to the operations of one of South Carolina's largest state agencies. The Deputy Director for Strategic Planning, Finance and Administration is the agency official charged with the development, deployment, and tracking of agreed to goals and objectives found in the Strategic Plan. This plan is the foundational document that guides daily and long term operations.

The SCDOT Strategic Plan is a living document updated annually and involves all of the Department's employees and partners. The Strategic Plan was initially developed when the Executive Director met with a cross-section of SCDOT employees in October 1997 at Wampee, South Carolina. The members of the South Carolina Adjutant General's Office who facilitated the session assisted this group in the development of the initial plan. RDA Consultants assisted in subsequent updates to the plan.

As the plan matured, the Executive Director met with employees from across the state met at a Retreat Center near Aiken, South Carolina to formulate five-year organizational goals and objectives. The Strategic Plan was then deployed to the headquarters elements and across the state to all District and County Offices by the Senior Staff member responsible for the organizational element.

The Strategic Plan is updated annually, with the most recent iteration developed and disseminated in the spring of 2001. Once the Strategic Plan was deployed to the organization, Business Plans were developed to support the Strategic Plan. These Business Plans are the foundation of the Department's Budget.

Each Goal and Objective in the Strategic Plan has a Senior Staff employee as the Process Owner. A performance measure has been developed for each objective. The Process Owner gives a quarterly update to his/her Deputy Director, as well as to the Office of Strategic Planning. A consolidated automated tracking document is accessible to all employees and gives agency decision-makers real time information on the status of the Goal or supporting objective. A monthly "dashboard report" is given to the Executive Director that allows her to track the measures important for her to make informed decisions. These measures include:

- South Carolina Traffic Fatalities
- Employee Vacancies
- SHEP Responses
- Miles of Cable Guard Rail Installed and People saved by Cables
- Cash Balance
- Revenues (Operating Budget vs. Actual Expenditures)
- Legal / Claims
- Federal-Aid Obligations
- Construction Contracts Let
- Statewide Passenger Boardings (RTA Providers only)

### **State Transportation Improvement Program**

As part of the Department's Strategic Planning process, the State Transportation Improvement Program (STIP) is a comprehensive document report listing various types of projects in which work is planned in the next five years. The STIP reflects the collaborative efforts of the Metropolitan Planning Organizations and the Councils of Government and Rural Transit Agencies.

### **Statewide Multi-Modal Long Range Transportation Plan**

The Department is working with the 10 Councils of Government (COG) in developing a Statewide Multi-Modal Long Range Transportation Plan. Because of the rapid population growth in South Carolina we are looking to develop a system that will satisfy the needs of both residents and visitors. Each COG will work with the Regional Transportation Authority, ports, Metropolitan Planning Organizations (MPO) and other interests to develop their regional plan.

The Executive Director has assigned the Deputy Director for Strategic Planning, Finance and Administration the lead in this effort. Department staff from Mass Transit, Pre-Construction, Rail, Multi-Modal and the FHWA will work with Regional Planning Staffs to develop the recommended "regional plan." The plan is expected to be completed in approximately one year.

SCDOT is partnering with the Strom Thurmond Institute at Clemson University to develop alternative funding options for the statewide Multi-Modal Plan.

## **CATEGORY 3: CUSTOMER FOCUS**

---

The key customers of SCDOT are the citizens of South Carolina, as well as those people who visit our state for business or pleasure and use the Transportation System in the state. Our customer's concerns are addressed through a variety of methods. Those methods include representation by the Metropolitan Planning Organizations (MPO) and Councils of Government (COG). The County Transportation Committees and other constituency organizations also address their concerns and needs. The state is divided into 10 MPO's and 10 COG's. Rural transportation needs are addressed through 18 Rural Transportation Authorities. Key stakeholders in the delivery of services include the Federal Highway Administration (FHWA) and the Federal Transportation Administration (FTA).

In a recent Customer Survey conducted by the University of South Carolina Moore School of Business, the Department identified some concerns of our customers. Over 2,000 telephone interviews and 5 focus group sessions were conducted statewide to determine if our customers understand the role of the Department. We found that there is some confusion about the roles and mission of the Department. This confusion is a vestige of the restructuring of South Carolina state government. Many people view the Department's role as enforcing the speed regulations and issuing drivers licenses. In addition, many of those surveyed did not understand how the Department is funded.

This survey, as well as a second study underway by Clemson University, will allow us to develop a campaign to educate our customers as to the mission of the Department and how the maintenance of roads are funded. Several new initiatives have enabled us to improve our contact with the public. The methods in use include customer service training, Internet site, State Highway Emergency Patrol (SHEP), public meetings, Transportation Summit, Customer Service Center, and a reduction in the condemnation rate.

### **Customer Service Training**

The Department initiated a training program in January 2000 to address the needs of our customers. In a one-day training event conducted by Midlands Technical College, our employees were taught how to serve the public in a courteous and responsive manner. Since the inception of the program, 4,825 employees have attended the training.

### **Internet Site**

The SCDOT Internet site ([www.dot.state.sc.us](http://www.dot.state.sc.us)) contains a wealth of information about the agency. The site was totally revamped and published on July 1, 2000. The new site received the 2000-2001 Golden Web Award from the International Association of Web Masters and Designers on August 15, 2000 for excellence achieved in web design, content and creativity

Almost 90,000 unique visitors looked at the Internet site 383,938 times during fiscal year 2001. This represents an average of 1,052 electronic visits per day. The total number of pages viewed was 1,837,439 or an average of 5,034 per day. The number of hits on the Home Page was 170,888. After the Home Page, the most popular sections of the site were Getting Around SC (105,891 visits) and Doing Business with SCDOT (95,992 visits). After the links to Construction Status were relocated to the Home Page in March, this section has generated a high level of interest, especially the Accelerated Construction pages.

During fiscal year 2001, the Web team added many pages to the Internet site, including.

#### **Construction Status Additions:**

- Accelerated Construction Projects (a new interface was built)
- Carolina Bays Parkway

- SC 170 in Beaufort County
- I-85 Widening in Anderson County
- Jim Clyburn Connector
- John Hardee Airport Connector
- I-385 Widening information
- Maybank Bridge

Other Additions:

- Median Barriers
- Crash Statistics
- Recent Presentations

Getting Around in SC Additions:

- Travel Advisories
  - Bridge Load Restrictions
  - Snow/Ice Road Conditions
- Highways or Dieways Section:
  - Take the Pledge
  - Top 10 Reasons
  - Highway Statistics
  - Work Zone Safety

Inside SCDOT Additions:

- 2000 Accountability Report

Doing Business with SCDOT Additions:

- Pre-Qualified Contractors
- Consultant Audit Guide
- Cooper River Bridge Replacement
- Numerous Publications and Manuals
- Public/Private Fiber Optic Network

The Traffic Cameras have been added to the Internet web site in the Travel Advisories section. The site shows still-frame images from 6 cameras located in the Columbia area along I-26, I-20, and I-77. Images from the cameras located in Charleston, Greenville, Spartanburg, and Rock Hill will be included at a future date.

The still-frame images are taken by remote cameras that link to the Department's Traffic Management Center at Headquarters on Park Street in Columbia. Traffic engineers monitor a bank of video screens to help traffic flow and assist when incidents occur. These images are now captured and condensed on a web server and refreshed every 5 minutes for users of the SCDOT Internet site.

The SCDOT Safety Office and Web Development Team published a new web site about Highways or Dieways, coincidental with the campaign kickoff in July. The site is registered under the address [www.highwaysordieways.org](http://www.highwaysordieways.org). The new web site provides information about speed-related crashes in South Carolina. It allows visitors to view statistical information along with testimonials from crash victims and television ads. The Web Development Team developed an interactive CD for highway safety promotional campaigns and was recently introduced at the "Back to School Bash" conducted at the State Fairgrounds in Columbia.

**State Highway Emergency Patrol Responses (SHEP).** Motorist Assistance Teams referred to as the State Highway Emergency Patrol are located in heavily congested areas of the state to provide assistance to stranded motorists. SHEP vehicles are equipped with fuel, water, and tools to enable quick repairs for disabled motor vehicles. SHEP has contact with the Highway Patrol and other Emergency Responders.

<b>SHEP Areas</b>	<b>FY97</b>	<b>FY98</b>	<b>FY99</b>	<b>FY00</b>	<b>FY01 (1)</b>
Columbia	6,556	5,993	6,835	6,703	6,438
Greenville	0	1,634	3,823	4,102	21,598
Spartanburg	2,948	5,361	4,205	3,300	**
I-85 construction	0	0	0	3,904	**
Rock Hill	0	0	0	5,193	4,701
Charleston	0	0	2,198	10,246	10,370
Anderson	0	0	0	0	1,163
<b>Total</b>	<b>9,504</b>	<b>12,988</b>	<b>17,061</b>	<b>33,448</b>	<b>44,270</b>

Note (1) From 7/1/00 through 5/31/01.

### **Public Meetings**

SCDOT invites the public to information meetings on all major highway projects. The designated Program Manager is present to answer all questions regarding the project. The projects are graphically displayed and color-coded for easy recognition. A recent addition has been a 3D visualization that gives property owners a perspective on how the project will affect their property and the community. During the past fiscal year, 72 public meetings were held and 160 presentations were made to various governmental and constituency organizations regarding road and highway improvements.

### **Transportation Summit**

The SCDOT recently held a Transportation Summit in Columbia to address citizens' concerns about the use of public transportation in South Carolina. Attendees at the Summit were representatives of the rural and metropolitan transit authorities, concerned citizens, other state agencies, and the Federal Transit Administration.

### **Customer Service Center**

As a result of a Process Improvement Team recommendation, the Department opened its Customer Service Center in January 2001. This center serves as a "One Stop Shop" for engineering publications produced by SCDOT. Prior to the opening of this center, our customers had to go to at least six different offices in the Headquarters building to obtain publications. During the first six months of operation, 1,311 orders were processed by this center. Customers can come to the center in person or they can make requests by using electronic mail or fax. Credit cards are accepted for purchases.

### **Reduction of the Condemnation Rate**

In the quest to provide the highest level of customer service, the Department has set an objective of reducing the condemnation rate by 1% annually. We made significant strides in improving public satisfaction in the rights-of-way acquisition process. The condemnation rate is an indication of customer satisfaction with the right of way appraisal and acquisition process. We recognize that sensitivity is also required when landowners and/or businesses must be relocated. We have implemented a "Displaced Persons Opinion Survey."

## **CATEGORY 4: INFORMATION AND ANALYSIS**

---

### **Mission critical information**

In order to be able to conduct the Department's mission we must have a continuous flow of essential information from various sources. We determined in our Strategic Planning Process the information required to determine statewide transportation needs, performance measures, and the resources required to perform the mission.

### **Leveraging Technology**

The Department is continuously improving its Information Technology. We continue to make strides in the development of systems that can give real time performance data on our core business processes. We have a state-of-the-art Bridge Maintenance System and a maturing Pavement Management System. Under development is an Executive Reporting System that can be accessed by the Department's executive staff. Our Project Web Site allows program managers to obtain real time data regarding the various stages of road and bridge construction projects.

### **Development of Performance Measures**

During the Department's Strategic Planning development process, we developed a set of key measures as indicators on how well we were achieving the agreed upon objectives. Each objective has a measure and progress is reported quarterly to the Division of Strategic Planning, Finance and Administration. The data is reviewed by the Executive Director and the Deputy Directors, as required.

The Department provides data related to the 12 performance measures of highway expenditure and system performance to the Federal Highway Administration (FHWA). This data is used for a variety of reports such as the Annual Comparative Performance of State Highway Systems. We also review data developed by the Federal Transportation Administration for comparison of Mass Transit Operations. The Department is a member of several professional organizations, including the American Association of State Highway and Transportation Officials (AASHTO) and the Transportation Research Board (TRB), that provide comparative data.

Additionally, every goal in the Strategic Plan and the supporting objectives contain a measure. These goals, objectives, and performance measures are depicted in Appendix 1.

### **General Ledger Accounting and Reporting System**

Our General Ledger Accounting and Reporting System has been customized incorporating technological advances to meet the needs of business enterprise. We must have timely data to be able to draw Federal Funding, pay contractors, and the salaries of our employees. The system is designed around the unique needs of Project Cost Accounting and the interaction with the Federal Highway Administration reimbursement systems. Modifications to incorporate the requirements of GASB 34 including reporting the cost and depreciation of infrastructure are being implemented. In addition monthly management reports, full financial statements in compliance with general accepted accounting principles are prepared for external reporting and audit annually.

**CATEGORY 5: HUMAN RESOURCE FOCUS**

The management of Human Resources begins with the effort placed in classification and compensation, and recruiting, assimilation into the RIGHT Team, training and development, timely feedback, mixed with excellent supervision and management. This management process is on a continuum from recruiting until separation from service. SCDOT is a caring organization and it begins by caring for our own employees.

**Recruiting**

The employees of SCDOT are our most precious resource. We begin with the best possible candidates for a particular task, making great efforts to have a diverse workforce. SCDOT is deeply committed to Equal Employment Opportunity and has long held that “a diverse work force represents a higher value than one which is homogeneous”. Therefore, we endeavor to attract, recruit, retain, respect, and provide equal opportunities to a diversified workforce. This is accomplished by utilizing a “Recruitment Team”, comprised of a diversified group of individuals from various job categories within the Department. These efforts are focused on minorities and females when necessary. Currently, minorities and females represent 49 percent of the Department’s total work force. According to the Annual Report to the General Assembly by the South Carolina Human Affairs Commission, the Department ranked 8<sup>th</sup> out of the 30 state agencies having over 500 employees in their workforce for achieving Affirmative Action Goals. Figure 5-1 represents our consistent efforts in maintaining a diversified workforce.

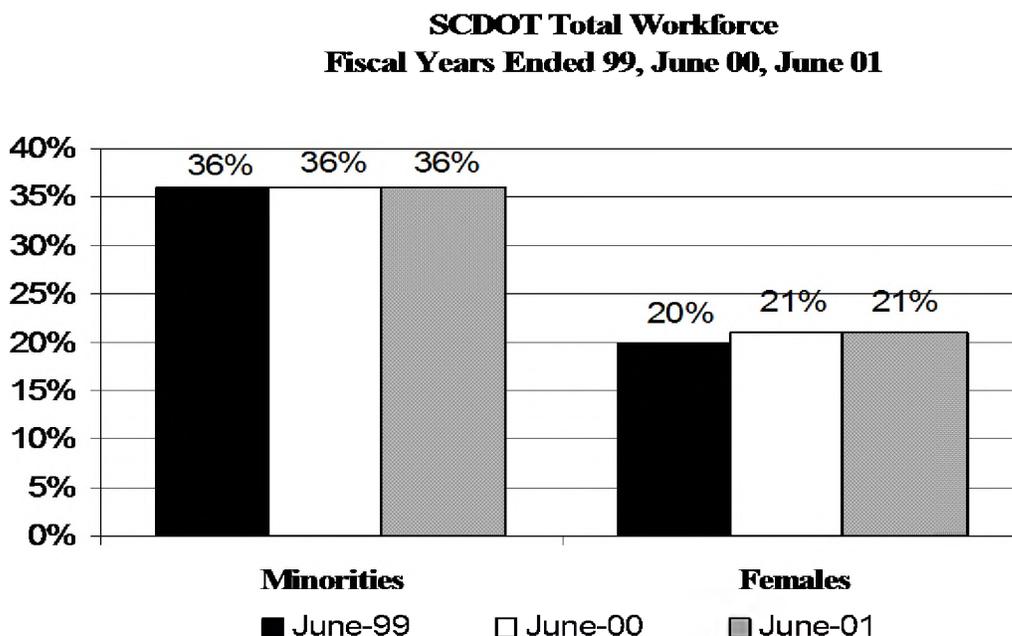


Figure 5-1

**Developmental and Training Needs**

Once a new employee is appointed, we begin with an “orientation session” and do what is necessary to assimilate the person into the RIGHT Team. As our employees progress in their service we afford training and development opportunities to allow them to maximize their potential. Figure 5-2 depicts the number of employees trained during the past three fiscal years.

### Training Status

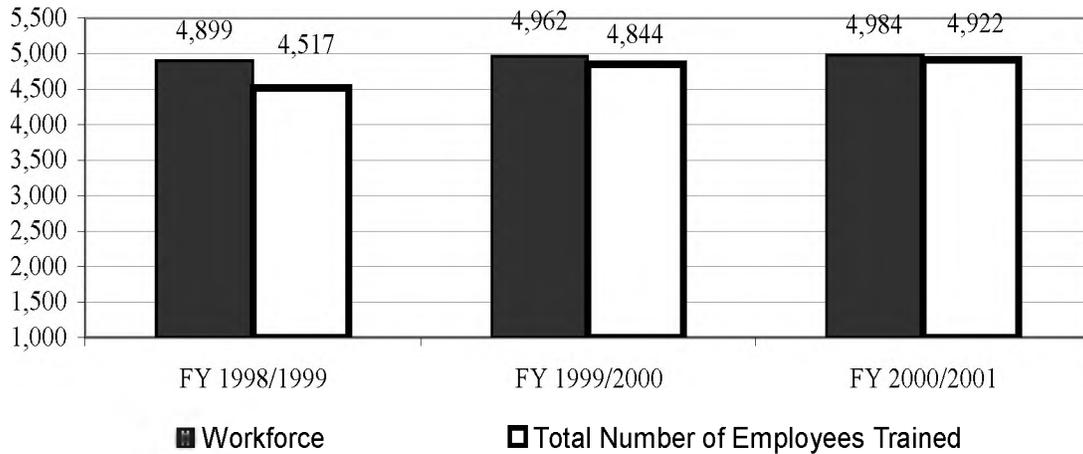


Figure 5-2

An extract of the types of training opportunities afforded as well as a brief description of the course and its purpose is as follows:

#### **New Employee Orientation**

This orientation is an opportunity to learn about the Department early in the career of a new employee. This session is conducted soon after an employee begins their service with SCDOT. The Executive Director and the Deputy Directors speak at each session. An organizational overview is presented explaining the Department's Mission, Vision and Values. An explanation of programs and benefits available to a new employee is presented during the one-day orientation. During FY 01, 71 employees attended the New Employee Orientation.

#### **Civil Engineering Training Program**

The Civil Engineering Training Program is designed to create highly trained transportation engineers. Early in their career with the Department, new engineers are oriented in the major functions of the Engineering Division. In this way, engineers receive a broad background in transportation engineering in the shortest possible time. Ten engineers participated in the Civil Engineering Training program this year.

#### **Maintenance Foreman Training**

The Maintenance Foreman Training Course is a Supervisory Skills Course designed for either new or experienced maintenance foremen. The course is designed to teach Human Resource Supervisory Skills such as team building, counseling, and discipline. It is adapted from material developed by the Office of Human Resources Supervisor Skills Workshop and is tailored for those supervising SCDOT Maintenance Employees. This training is based on selected portions of Supervisory Skills. Sixteen supervisors attended maintenance foreman training this year.

### **Strategic Training and Education Program for the 21<sup>st</sup> Century (STEP 21)**

The STEP21 program piloted the first class in January 2000, and is presented twice a year. This program is geared toward employees with potential of achieving mid-level management positions in the agency. Participants enter an intensive 6-month training program embracing all of the key functional areas of the Department. These functions include a good working knowledge and understanding of the Department's Strategic Plan, Mission, Policies, Procedures, Philosophy, Budget, Administration, and Engineering operations. There were 20 participants in STEP21 this year.

### **Tuition Assistance Program**

SCDOT has a Tuition Assistance Program available for permanent full time employees who wish to obtain college credit. This program is designed to motivate an employee to complete a degree in a subject area related to the needs of the Department. Thirty-three employees received Tuition Assistance in FY 01.

### **Adult Education**

The Adult Education Program is designed to assist employees in obtaining the General Equivalency Development Certificate for High School. In FY01, four employees participated in this program.

### **Strategic Training for Transportation Agency Representatives (STTAR)**

The purpose of the STTAR program is to identify and train selected SCDOT personnel who exhibit potential for positions of authority and responsibility. The Program also seeks to cultivate reliable, knowledgeable spokespersons that can interact positively and confidently with the public, members of the legislature, the Federal Highway Administration and members of the SCDOT Commission. Participants enter a rigorous, intensive ten-month training program embracing all of the key functional areas of the Department. Eighteen employees completed the STTAR Program this year.

### **Strategic Leadership for State Executives**

This program is sponsored by the John F. Kennedy School of Government at Harvard University. It is designed to teach participants how to implement the strategic thinking and practices in government organizations. The primary method of instruction is the use of the case study. This method of instruction requires strong student participation and interaction. Forty-five members of the Senior Staff and STTAR Students attended this on-site program.

### **Quality Customer Service**

SCDOT initiated a customer service program in January 2000 to address customer complaints and to prepare our employees for dealing with the public. Midlands Technical College is providing a one-day Quality Customer Service Training Program tailored for the Department. The course uses SCDOT examples that our employees can relate to in their work. Customer Service training will continue as part of the Training curriculum. During FY 01, 3,868 employees attended Quality Customer Service Training.

### Training Needs Assessment Survey

The Staff Development and Training Office recently completed a needs assessment survey to identify critical management skills for supervisors and managers. The skills include Human Resources Management, Performance Management, Budgeting and Planning, Interpersonal Skills, Discipline, Communication and Leadership. Based on the results of this assessment, the Department will develop a Training and Development Plan.

### Safe and Healthy Work Environment

We strive to provide a healthy and safe work environment for our employees. The majority of our employees are exposed to hazards in their daily work environment. Goal 1 of the Strategic Plan is to *increase safety on South Carolina's Transportation System and within SCDOT.*

The Department was recently recognized by the South Carolina Department of Labor, Licensing, and Regulation for achieving over 2 million safe work hours without a lost time injury and several of the Department's Maintenance complexes were cited during the year for accumulating safe work hours.

Four County Maintenance Offices received a South Carolina Safety Certificate by the Director of the Department of Labor, Licensing, and Regulation on behalf of the South Carolina Occupational Safety Council. The Maintenance Offices are located in Greenwood, Chesterfield, Bamberg, and Calhoun Counties.

However, during calendar year 1999, 633 SCDOT employees were injured and 2 were killed in occupational related accidents. During calendar year 2000, 652 employees were injured and 1 was killed. This represents an increase of 19 employee injuries (+3%).

OSHA incidence rates indicate the number of OSHA recordable injury cases per 100 employees during the year. In 2000, the Department's OSHA Incidence Rate increased slightly from 8.92 to 9.58 (+7%). The Lost Workday Rate increased from 4,712 days in 1999 to 5,537 in 2000 (+17.5%). In 2001-2002, the Department is committed to reducing occupational accidents by 5% and is focusing on implementing new employee safety programs as well as expanding existing programs to accomplish this goal. Figure 5-3 depicts the OSHA Incidence Rates.

### OSHA Incidence Rates

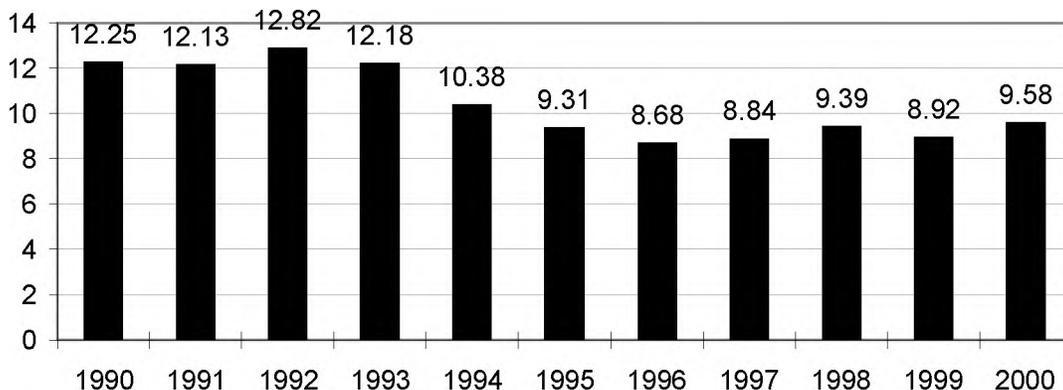


Figure 5-3

## **Employee Wellness**

The Department has an array of preventative medicine and health promotion programs for its employees. A total of 2,689 employees received Health Screenings this year – 1,759 received annual flu shots, 597 received the pneumonia vaccine, 213 received the hepatitis B series, and 227 were given a tetanus shot. A total of 4,182 visits were made to the Department's Health Clinic operated by a Staff Registered Nurse. In addition, 71 SCDOT employees volunteer as "Wellness Coordinators" at 49 work locations around the state.

## **Involvement in the Community**

SCDOT is totally committed to being a good corporate citizen. Throughout the year, employees participate in several volunteer programs such as "Families Helping Families" and Habitat for Humanity. The STTAR Class and employee volunteers participated in the "Habitat Blitz" in early 2001.

## **SCDOT C.A.R.E.S.**

SCDOT C.A.R.E.S. is an acronym for the South Carolina Department of Transportation Cares About Roads, Environment and Safety. This is a program that involves employees teaching students in grades K-5 about the importance of highways, protecting the environment and safety. In the fall of 1999, approximately 180 employees statewide were trained for this program. The employees were given detailed lesson plans and instructions on giving classroom presentations. The lesson plans cover a variety of issues such as work zone safety, litter abatement, safety at rail crossings and the hazards of discarding cigarettes out of vehicles. A website was developed for teachers to view the current activity book and request visits from SCDOT employees. To date, the employees have visited over 60 classrooms across the state. We have received excellent feedback from the students and faculty as well as the SCDOT employees, who volunteered to participate in this program.

A committee was formed in February 2001 to update the CARES lesson plans, develop a plan to recruit new employees and market the CARES program to the public. Some of the updated information includes road costs, toll roads, road widths, SHEP, child passenger safety, air and water quality and enhancement programs. This information is intended to help young students become aware of important issues that will enable them to become conscientious drivers in the future. Through this program, students are able to communicate the lessons learned through the CARES program to their parents. This program also gives students a better understanding of the functions and responsibilities of the SCDOT.

## **First Steps**

*"South Carolina First Steps to School Readiness is a comprehensive, results oriented statewide education initiative to help prepare our children to reach first grade healthy and ready to succeed. Signed into law in June 1999 by Governor Hodges, First Steps is for children, pre-first grade, and their families. Public and private support are combined through county partnerships to enable individual communities to address the unmet needs of young children and their families."*

The Executive Director is a member of the State Board for First Steps. In an effort to support the First Steps program, the Executive Director's designee began attending DOT safety meetings for the purpose of sharing information with SCDOT employees about First Steps. Information concerning proper nutrition, childcare and school readiness is given to employees with children and grandchildren 0-5 years of age. The presentations also include other helpful tips, which related to children who were in grades K-12 and keeping a positive balance between work and home.

### **K-12 Parenting Workshop**

A parenting workshop was held to provide parents of children in grades K-12 with information that included effective parent-teacher conferences, organizational tips, homework, home-school communications and testing. This workshop also allowed employees to ask specific questions and share ideas with one another concerning their school-aged children.

### **Summer Transportation Institute**

The Summer Transportation Institute (STI) Program was established in 1993, as a partnership between SCDOT, the Federal Highway Administration (FHWA), South Carolina Department of Public Safety (SCDPS), and South Carolina State University (SCSU). The program was expanded in 1996 to include Benedict College and, in 2001, Denmark Technical College.

The purpose of the STI is to create awareness and stimulate interest in secondary school students to take maximum advantage of the career opportunities that exist in the transportation industry. The goals of the Institute are to expose secondary school students to and allow them to participate in a series of academic experiences designed to motivate them toward professions in the transportation industry and to provide them with mathematics, science and technological enrichment which will enable them to pursue a career in transportation. The STI is a four-week program, which includes room and board on college campuses for 9<sup>th</sup> and 10<sup>th</sup> grade students. The national curriculum includes academic, engineering, career speakers, field trips and SAT preparation. Fifty students attended STI in Fiscal Year 01.

### **Urban Youth Corps**

SCDOT partners with the Federal Highway Administration (FHWA) Division Office to administer the Urban Youth Corps Program. A provision of the National and Community Service Trust Act of 1993, Section 106(d), established the Urban Youth Corps Program in the U. S. Department of Transportation (USDOT). The Urban Youth Corps Program is a youth employment and training program established in partnership with local municipalities, Indian tribes or nonprofit organizations to:

1. offer meaningful full-time or productive summer work, for individuals between the ages of 16 and 25, in urban public works or transportation settings;
2. give the participants a mix of work experience and on-the-job training;
3. include a minimum of 10% of the participants' time for basic life skills education and training designed to enhance the youths' skills in communication, leadership development, positive work ethics and improve awareness of the environment; and
4. provide the youths with an opportunity to develop citizenship values and skills through service to their communities and the State of South Carolina.

A major goal of the program is to expose young people to career opportunities in transportation. The project's activities may include but are not limited to:

1. providing facilities for pedestrians and bicycles,
2. landscaping and scenic beautification within highway rights-of-way or in proximity to transportation facilities,
3. preservation or rehabilitation of historical markers, buildings, structures or facilities having significance to transportation; and
4. preservation or restoration of abandoned railway corridors. The project must focus on all aspects of safety including orientation on the safe use of appropriate tools and equipment necessary for the implementation of the project.

## CATEGORY 6: PROCESS MANAGEMENT

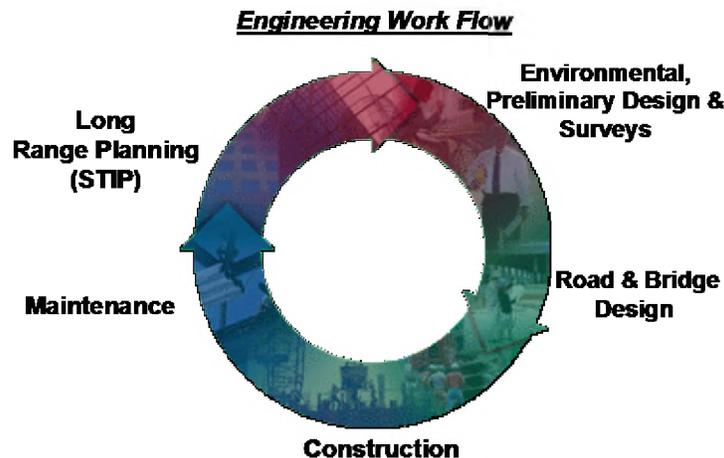
---

### Key design and delivery processes for services

All SCDOT design and delivery processes relate to the mission of building and maintaining roads and bridges and providing mass transit services. Therefore, the key processes are as follows:

- Planning
- Pre-Construction activities
- Construction
- Maintenance
- Coordination of public transit activities

We incorporate new technology into the processes by developing more efficient systems and leveraging technology. During FY 01, we developed a Project Web where information is exchanged relating to all phases of road project development using real time information. In addition, we acquired CPC Software that allows us to simplify the effort required to retrieve archived road plans and modify road plans at a computer workstation. The graphic at 4-1 depicts the engineering work flow for road construction projects.



Graphic 4-1

During the construction of projects, we are using Site Manager™ software to monitor and make essential changes during the various phases of a project.

In FY 01-02, SCDOT will implement a Maintenance Management System (MMS). MMS will provide a systematic approach to managing road and bridge maintenance. It is designed to help plan, budget and schedule maintenance work. During the past year, Maintenance staff researched the MMS used in nearby states and have developed a set of specifications for a MMS tailored to SCDOT's needs. Requests for Proposal from software consultants resulted in three proposals and a vendor was recently selected. Negotiations with a selected consultant are underway and a contract is expected in August 2001. The MMS is expected to be operational statewide by the beginning of FY 02-03.

The Maintenance Office uses a Bridge Management System (BMS) that provides a detailed analysis of bridge conditions and needs. BMS allows SCDOT to make informed decisions on how best to utilize its

limited bridge funding by setting bridge maintenance, improvement and replacement priorities. In the near future BMS will be linked with the Maintenance Management System (MMS), Pavement Management System (PMS) and Road Inventory Management System (RIMS).

The Traffic Engineering Office uses PMS to identify the quality of pavement on the state's highway network. Prior to 2001 the Department was inspecting the Interstate Highway System for pavement quality. The road data collected by Pavement Management consists essentially of detailed information on pavement surface distress and roughness. These data are analyzed and translated into a single standard measure of pavement condition called the Pavement Quality Index, or PQI. This measure ranges from zero to 5.0. Beginning in FY 01, PMS was expanded to inspect the state's primary and secondary road networks.

The Department is in the process of obtaining consulting services to develop a Road Inventory Management System (RIMS). RIMS will allow SCDOT decision-makers to know the features of all state roads. The data available will include traffic density and pavement quality. A contract will be awarded in September 2001 for RIMS development.

In the area of public transit, we have fielded a Request for Proposal for Virtual Enterprise Technology that allows for better management of buses and vans used by the Rural Transit Authorities.

### **Meeting Key Performance Requirements**

The Department ensures key performance requirements are met by the development of performance measures that are incorporated in the SCDOT Strategic Plan. Additionally, process owners are held accountable and are assessed in the Annual EPMS.

During FY 02, the Office of Construction has established Quality Assurance Teams to ensure that Roads and Bridges are constructed to specification and that quality materials are used throughout the project. The Research and Materials Laboratory support the Quality Assurance Teams. The staff of the Research and Materials Laboratory, including district laboratories in Charleston, Greenville, and Florence, provide technical assistance to District and Construction Resource Management (CRM) personnel on materials matters statewide. Field technicians and materials engineers from the Central and District Laboratories routinely visit projects statewide in order to assure that proper sampling and testing procedures are being followed and all field testing equipment is calibrated and in proper working order.

### **Supplier/Consultant Support**

The Research and Materials Laboratory provides customer service to Design/Build contractors by providing oversight and technical services on these projects. On the Conway Bypass project, an inspector from the Research and Materials Laboratory, trained and certified in all areas of sampling and testing, was assigned to the daily monitoring of the construction activities. By being temporarily assigned to the quality assurance monitoring of this large project, he was able to provide technical assistance for any materials issue that developed. Likewise, a Research and Materials Laboratory inspector is currently assigned to the Carolina Bays Parkway project to provide these same quality assurance services.

### **QC/QA Technician Certification**

In order to accommodate the increasing number of Department, consultant, contractor, and CRM personnel requiring inspection and testing certification, the Research and Materials Laboratory has successfully found new ways to meet these demands. Asphalt technician certification has been administered through Clemson University's Civil Engineering Department for several years; concrete and earthwork inspector certification will be administered through the University of South Carolina and

Clemson University, respectively. By moving the administration of these programs from the Research and Materials Laboratory to the universities, the Department has been able to offer additional classes to meet the increased demand. The movement provides a means for keeping the Research and Materials Laboratory engineers and technicians involved in the course instruction, while keeping from having to increase the number of Department personnel to provide this increased certification need. The following chart indicates the number of technicians trained during the last four fiscal years.

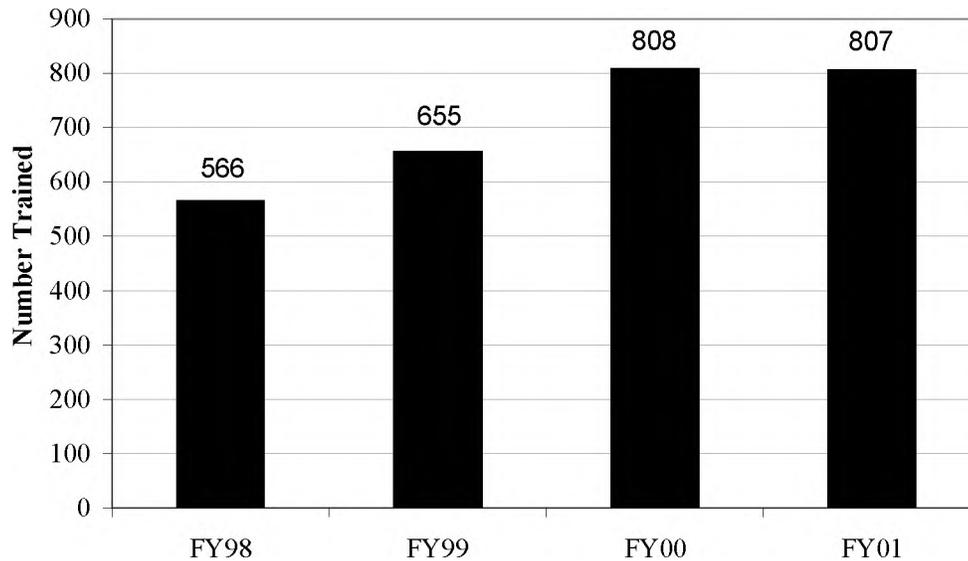


Figure 6-1

## Research

The Department's Research Program budget for FY 01 was approximately the same as the previous year's budget of \$2,826,000. The amount includes Federal funds provided through the State Planning and Research (SPR) Program and the required 20% state matching funds. This level of funding has allowed the research program to continue to expand and broaden its scope to include areas of the Department not previously included in the program, as well as to emphasize goals and objectives contained in the Strategic Plan.

Increasing safety on South Carolina's transportation system is a goal of the Department and an emphasis area for research. Five studies were in progress or initiated during FY 01 relating to improving highway safety, including two concerning work zone safety. Improving the environment through the use of waste materials in highway applications is also a focus area for the research program. Studies included investigating the use of shredded tires in landscaping applications, use of waste roofing shingles in asphalt pavement, and use of asphalt mixes modified with ground tire rubber and a polymer produced from recycled plastic. Also in FY 01, research was initiated in areas not previously addressed by the program, including assessing public opinion of the SCDOT and identifying funding options for meeting transportation infrastructure needs in South Carolina. Finally, two research projects were initiated in technologically advanced areas, one to develop rideability specifications based on laser profiling and the other to investigate temperature differentials in hot mix asphalt using an infrared camera.

## Material Source Monitoring

A key service provided by the Research and Materials Laboratory is the consistent review and monitoring of the materials sources for construction projects. To accomplish this monitoring, the Research and Materials Laboratory maintains 48 product listings for a host of products ranging from aggregate sources

to pipe gaskets to adhesives for raised pavement markers. This product information has recently been made available to Department and CRM personnel on the Department's intranet site, however the continued demand for this information from outside sources has prompted the Research and Materials Laboratory to begin transitioning this data onto the Department's internet web site.

Supplier approval typically requires each source to submit a detailed quality control plan for the testing of their product, as well as submittal of quality control test results and product certifications. Whenever possible, supplier products are tested by the Research and Materials Laboratory in order to verify the material properties. Whenever the Research and Materials Laboratory encounters a failing sample, a copy of the test report is provided to the supplier in order for them to examine their own quality control data and look for ways to avoid supplying material that does not meet specifications. Research and Materials Laboratory materials engineers monitor trends in supplier quality control testing and investigate any problem areas.

An important development in the area of improving supplier quality is the newly implemented coarse aggregate supplier quality control program. Coarse aggregate is the key structural component of asphalt mixtures, concrete mixtures, and base courses used on construction projects statewide. This program requires each coarse aggregate supplier to have fully trained, Department-certified technicians on-site performing routine quality control testing in a certified laboratory, and to submit monthly test reports to the Research and Materials Laboratory for monitoring. The Research and Materials Laboratory monitors the supplier's test results and compares the information to results from samples obtained directly from Department projects. This increased supplier training, which is provided by the Research and Materials Laboratory and the University of South Carolina Civil Engineering Department, coupled with the increased product certification and monitoring, is believed to be a significant step on the path to improved material quality.

### **Key Support Processes**

The key support processes of the Department include those activities that provide administrative and logistical support. These processes include Administration, Information Technology Services, Supply and Equipment, Facilities Engineering, Finance and Accounting, Legal, Human Resources, Employee Support Services, Staff Development and Training.

The people that perform the support processes are focused on the mission of the Department. They are part of a larger process of building and maintaining roads and providing mass transit services. Their activities are governed by the 5 Business Requirements of the Department. Examples of the activities of each of these organizations during FY 2001 are explained in depth in other parts of this report.

- Human Resources – Development of a new Employment Management Performance System that is connected to the Department's Strategic Plan.
- Supply and Equipment – Reduction of supply inventory by approximately 900 line items and a reduction of the office supply inventory by approximately 700 line items. Most of the items deleted from the inventory can be purchased using the State's procurement card. The Department has transitioned to a "just in time" supply system.
- Facilities Engineering – Completed an assessment of all SCDOT Facilities and now has a baseline to develop a five-year capital improvement plan. Along with the Right-of-Way Office, they are identifying and disposing of surplus real property.

- Information Technology Services – IT Services installed technology enabling SCDOT to establish Traffic Management Centers in Columbia, Charleston, Greenville, and Rock Hill and are currently working on projects in Anderson and Myrtle Beach. IT Services provides telephone and computer support to the “Customer Call Center” established during times of crisis. The Web team developed an Interactive Highway Safety CD for the “Back to School Bash.”
- Employee Support Services – 4,922 employees attended a training event during FY 01 and 2,689 employees participated in health screenings.
- Procurement Services – The Procurement Office administers 933 contracts that have been awarded by the Agency or State Contracts awarded by the Materials Management Office. The Procurement Office is actively involved in reviewing contractor quality. The SCDOT Procurement Office recently received a Certificate of Achievement for Excellence in Public Procurement by the National Institute of Governmental Purchasing.

### **Management of Key Suppliers/Contractors/Partner Interactions and Processes to Improve Performance**

We use a variety of methods to improve performance of SCDOT key suppliers, contractors, and partners. We have a well-established Quality Assurance Program supported by the Research and Materials Laboratory, Contract Audit Services, and a Procurement monitoring process. SCDOT Program Managers are involved in construction projects from the beginning until project completion. The Director of CRM Operations monitors the work product and costs of the Construction Resource Manager Program.

Specifically, the Research and Materials Laboratory plays an important role in testing highway maintenance materials that are received by the field for use in highway maintenance activities. All materials received must meet stringent department requirements prior to being used in maintaining the highways, roads and bridges.

All quality requirements are communicated to vendors and suppliers through bid specifications and drawings, pre-approved product lists established by the Research and Materials Laboratory, and through product demonstration and testing with the New Products Evaluation Committee. The Procurement Office is a participant on the New Products Evaluation Committee.

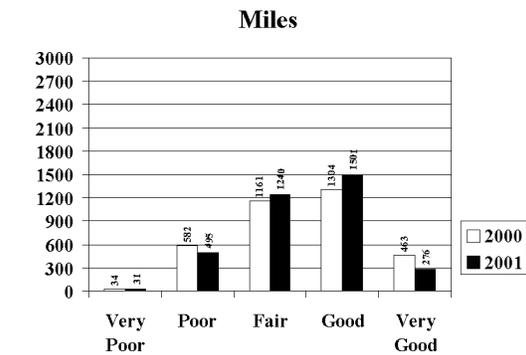
Our Procurement Office provides business assistance and training to suppliers regarding their work processes and improvement through pre-bid, pre-award, and post-award contract meetings. We also meet with vendors that want to be added to our vendor/bidder database to discuss the applicability of the products and services they offer and the SCDOT’s needs. The Procurement Office also schedules meetings with vendors to improve contractual relationships and to better understand the vendor’s needs as well as relaying SCDOT’s needs. We have built strong partnering relationships through doing this.

Personnel from the Research and Materials Laboratory assist CRM engineers and the Department’s Quality Management Team in auditing construction projects. These audits include in-depth analysis of staff qualifications, construction practices, construction materials quality, and record keeping. During this fiscal year, Research and Materials Laboratory engineers, along with engineers from the Director of Construction’s office and Federal Highway Administration, have actively participated in two quality control audits of the design/build contractor’s testing records for the Carolina Bays Parkway.

**Pavement Condition**

SCDOT has an active Pavement Management Program. The Department collects pavement condition data (pavement distress and roughness) on the three major road systems. The Pavement Quality Index (PQI) uses a metric scale from zero to 5.0 and a verbal scale from Very Poor to Very Good. The PQI is determined by using sophisticated equipment including a Mobile Data Recorder and a forward mounted video camera. Looking at the PQI category distributions for the SC and the US highway systems provides a concise picture of the overall condition of these roads. Figure 6-2 and 6-3 depicts 2000 and 2001 condition distributions for SC and US routes. Both charts show that SCDOT has focused limited funds on the most needy roads in those systems; on a network level, roads have shifted out of the worst and best condition categories into the “Good” and “Fair” categories. Chart 6-4 tells a similar story for the 1,658 directional miles in the Interstate System from 1999 through 2001. These shifts in condition categories have caused the average PQI of these systems to trend downward. The average PQI for the SC highway network fell from 3.03 in 2000 to 2.93 in 2001. The average PQI for the US highway network showed an almost identical decline over the same period, falling from 3.03 in 2000 to 2.92 in 2001. The average PQI for the Interstate System has also exhibited a downward trend in the past few years. In 1999, the average PQI for the Interstate System stood at 3.62. By 2000, the average had fallen to 3.57. A very small rise the next year left the average at 3.58. This data is in an indication of deterioration in the system that must be corrected through an emphasis on maintenance. Additional state funds are needed to increase the level of maintenance for the state highway system.

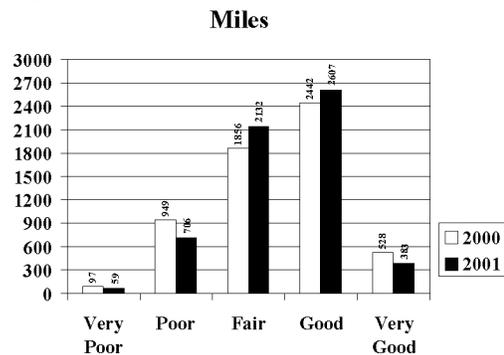
**Condition of US Routes**



Total US miles in 2001 = 3,543

Figure 6-2

**Condition of SC Routes**

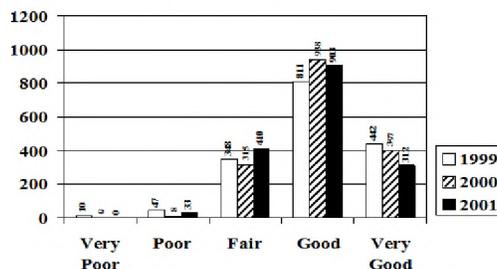


Total SC miles in 2001 = 5,887

Figure 6-3

**Condition of Interstate System**

Directional Miles



Total Miles = 1,658

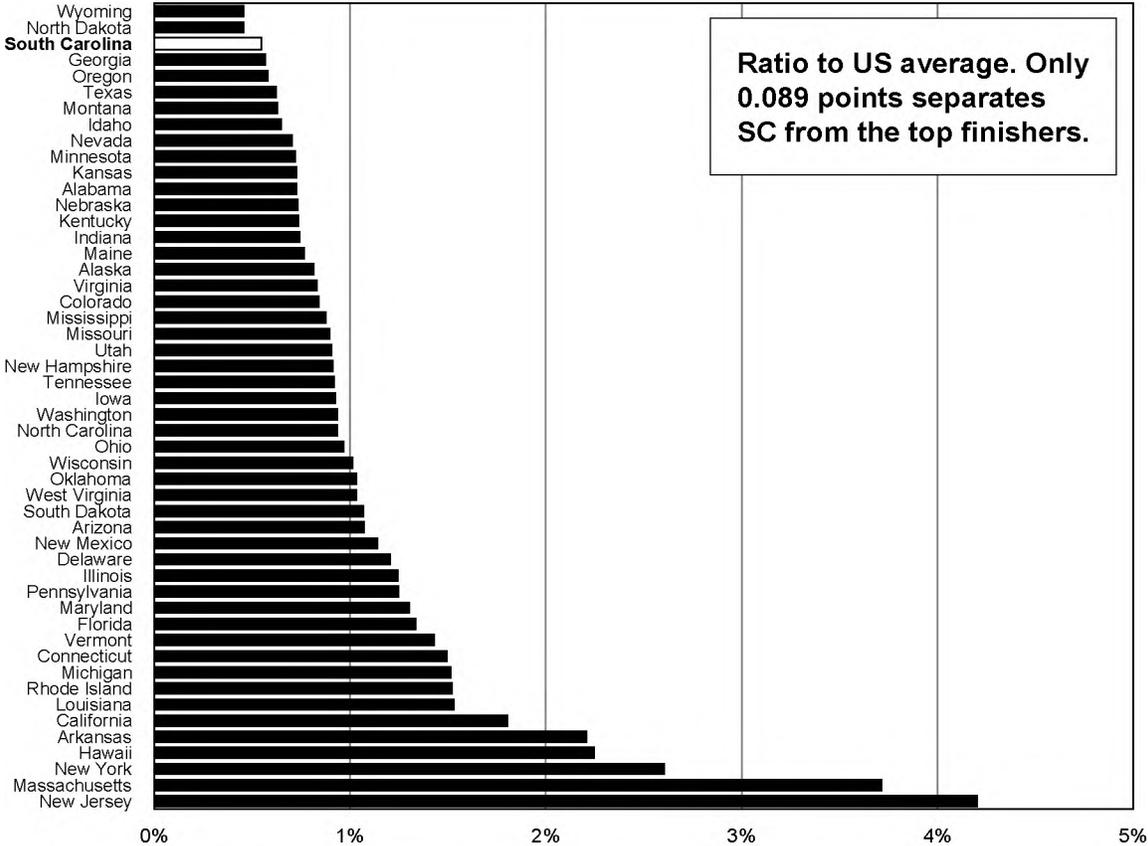
Figure 6-4

**CATEGORY 7 – BUSINESS RESULTS**

**Performance Levels and Trends**

The Performance Levels and Trends that serve as a gauge for the operations of the SCDOT include 12 Performance Measures (5 for resources, 7 for results) as well as the Performance Measures in the SCDOT Strategic Plan. In the most recent Comparative Performance of State Highway Systems published by the Center for Interdisciplinary Transportation Studies at the University of North Carolina at Charlotte, South Carolina is rated third in overall performance and first in its peer group. Figure 7-1 presents the Overall Performance by State.

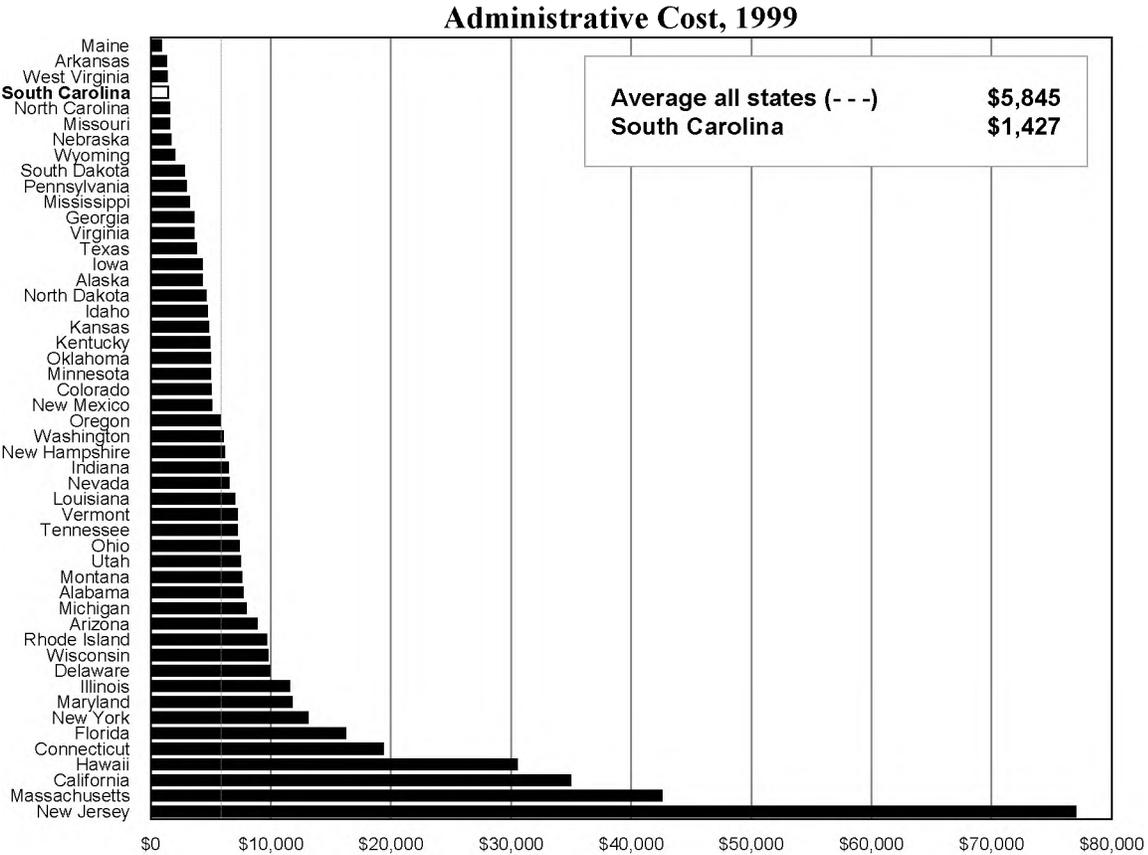
**Overall Performance, 1999**



Source: TEA-21's Initial Impact: Comparative Performance of State Highway Systems, UNC-C Study, 3/15/01

Figure 7-1

This has been an active year for SCDOT. SCDOT continues to be rated as one of the most efficiently operated Department's in the nation according to the Comparative Performance of State Highway Systems, Ninth Annual Report, published by the Center for Interdisciplinary Transportation Studies, University of North Carolina at Charlotte. Figure 7-2 depicts that South Carolina spends less than other states, with the exception of Maine, Arkansas and West Virginia, on administration of its highway programs.



Source: TEA-21's Initial Impact: Comparative Performance of State Highway Systems, UNC-C Study, 3/15/01

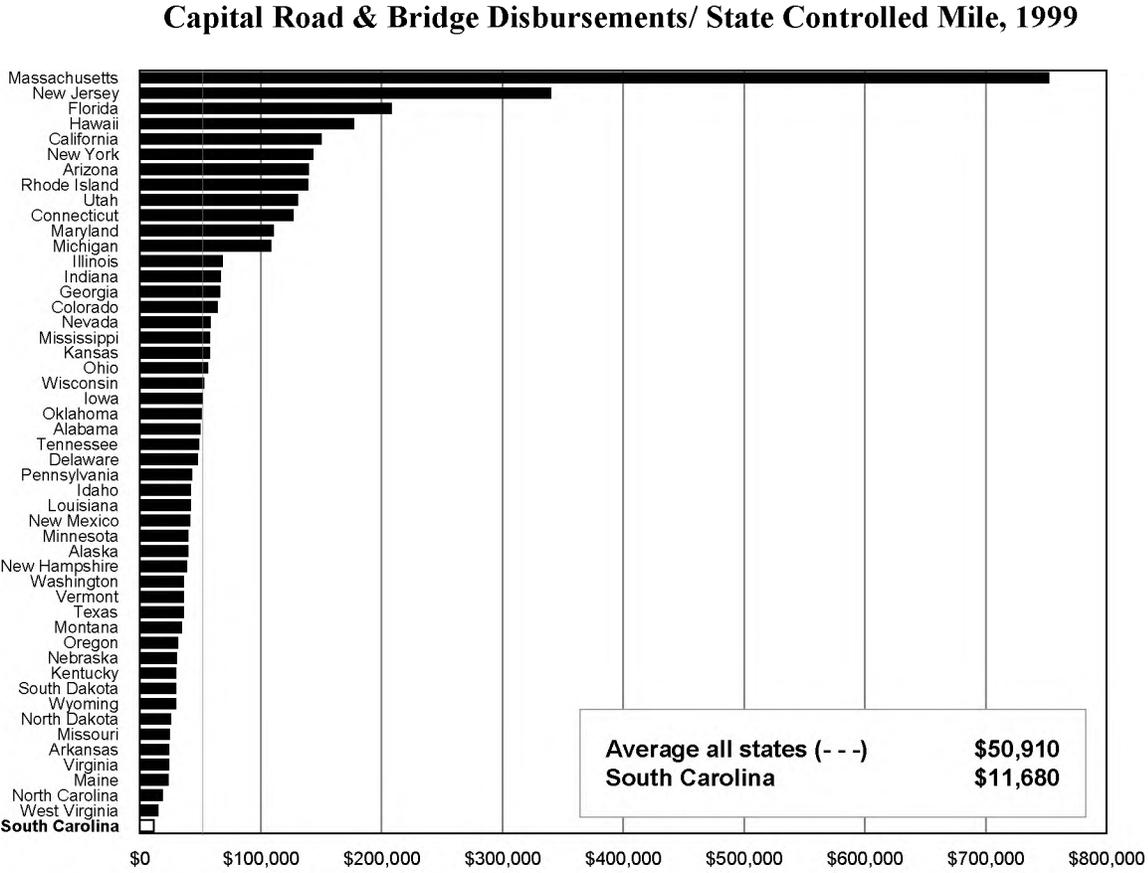
Figure 7-2

**Construction**

South Carolina is beginning to reap the benefits of the “27 in 7 Peak Performance” highway and bridge construction program. This program, initiated in 1999, uses a combination of innovative financing and contracting programs to complete in just seven years work that would take 27 years using traditional methods. The SCDOT Construction Program is about 3 times greater than the usual program during the seven year period. SCDOT uses Construction Resource Managers from private contracting firms to assist the Department in completing approximately 200 road and bridge projects under the “27 in 7 program. This enables SCDOT to complete the work without hiring additional staff.

SCDOT spends the least of all states because it receives the least amount of funds of all the states.

Figure 7-3 depicts the Capital Road and Bridge Disbursements from the most recent UNCC Study.



Source: TEA-21's Initial Impact: Comparative Performance of State Highway Systems, UNC-C Study, 3/15/01

Figure 7-3

Some of the more notable projects completed in Fiscal Year 01 include:

- The Conway Bypass, a 28.5-mile controlled-access highway connecting US 17 in Myrtle Beach near Colonial Mall with US 501 east of Aynor, was completed in May 2001. This was six months ahead of schedule and was built under budget. This was a design-build project.
- The Southern Connector was completed in February 2001, nine months ahead of schedule. The Southern Connector is a 16-mile four lane toll road that links Interstates 85 and 385 as a southern loop around Greenville County. The Southern Connector was financed by the Connector 2000 Association, a local not-for-profit corporation set up to finance and operate the facility.

**1998-1999**

During the fiscal year 1998-1999, the Department accepted 136 road and bridge projects totaling \$179.74 million for upkeep and repair by state maintenance forces. This included 11 state-bonded bridge projects for 1.98 miles totaling \$5.69 million; 18 federal/state bridge projects for 5.77 miles totaling \$44.81 million; 34 state secondary projects for 127 miles totaling \$14.87 million; 24 special resurfacing projects for 471.06 miles totaling \$19.90 million; 14 interstate projects for 83.68 miles totaling \$34.28 million; 21 primary/urban projects for 74.82 miles totaling \$53.71 million, and 14 other (pavement marking, landscaping, resigning, etc.) for 4,597.02 miles totaling \$6.49 million.

**1999-2000**

During the fiscal year 1999-2000, the Department accepted 180 road and bridge projects totaling \$294.55 million for state maintenance. This included 8 state-bonded bridge projects for 1.83 miles totaling \$6.02 million; 27 federal/state bridge projects for 9.15 miles totaling \$39.8 million; 45 state secondary projects for 160.2 miles totaling \$17.01 million; no special resurfacing projects accepted; 16 interstate projects for 138.49 miles totaling \$113.19 million; 50 primary/urban projects for 527.82 miles totaling \$107.86 million, and 34 other (pavement marking, landscaping, resigning, etc.) for 4106.59 miles totaling \$10.2 million.

**2000-2001**

During the fiscal year 2000-2001, the Department accepted 213 road and bridge projects totaling \$378.27 million for state maintenance. This included 24 federal/state bridge projects for 7.62 miles totaling \$39.68 million; 74 state secondary projects for 1,408.74 miles totaling \$49.36 million; 17 interstate projects for 96.19 miles totaling \$149.75 million; 52 primary/urban projects for 375.38 miles totaling \$123.01 million, and 46 other (pavement marking, landscaping, resigning, etc.) for 5,566.01 miles totaling \$16.48 million. When construction projects are completed the repair and upkeep is performed under the guidance of the Director of Maintenance and the SCDOT County Maintenance Units.

<b>PROJECTS ACCEPTED FOR STATE MAINTENANCE</b>									
TYPE PROJECT	98-99			99-2000			2000-2001		
	MONEY (M)	LENGTH	NUMBER OF PROJS	MONEY (M)	LENGTH	NUMBER OF PROJS	MONEY (M)	LENGTH	NUMBER OF PROJS
<b>BRIDGE BOND</b>	\$ 5.69	1.98	11	\$6.02	1.83	8			
<b>FEDERAL BRIDGE</b>	\$ 44.81	5.77	18	\$39.80	9.15	27	\$39.68	7.62	24
<b>SECONDARY</b>	\$ 14.87	127	34	\$17.01	160.2	45	\$49.36	1408.74	74
<b>SPECIAL RESURFACING</b>	\$ 19.90	471.06	24	\$0.00	0	0			
<b>INTERSTATE</b>	\$ 34.28	83.68	14	\$113.19	138.49	16	\$149.75	96.19	17
<b>PRIMARY</b>	\$ 53.71	74.82	21	\$107.86	527.82	50	\$123.01	375.38	52
<b>OTHER</b>	\$ 6.49	4597.02	14	\$10.20	4106.59	34	\$16.48	5566.01	46
<b>YEARS TOTALS</b>	\$ 179.74	5361.33	136	\$294.08	4944.08	180	\$378.27	7453.94	213

Figure 7-4

**Construction Resource Managers**

Because of our accelerated project program, SCDOT had to be innovative to meet increased construction demands. FY 99-00 saw the addition of an essential part of the “27 in 7 Peak Performance” construction program with the addition of the Construction and Resource Managers (CRM). Two CRM firms are under contract to SCDOT to manage a good portion of the 200 construction projects that will be built in seven years. The SCDOT accelerated bonded construction program increased the agency’s workload by a factor of 2.5 for several years. Without the assistance of the CRMs, SCDOT would have to employ approximately 500 additional employees to meet the demand of the accelerated construction program. The two CRMs act as an extension of SCDOT and report to Department Program Managers. Some of the accomplishments during the past year include:

- Mobilization of over 260 employees working in the areas of project management, engineering, design, construction, inspection, and testing.
- As of June 2001, over 200 lane-miles of construction, managed by the CRMs were underway throughout the state. One project, US-29 in Anderson County, is complete.
- Developed and implemented a Financial Management System for the tracking and financial analysis of all SCDOT projects/progress.
- Acquired over 900 right of way parcels, while maintaining a condemnation rate of less than 10%.

There are currently 93 projects in progress, including 9 in preliminary design, 30 projects in the right-of-way stage, 24 in final plans, and 30 under construction.

**Status of CRM-Managed Projects**

Since the notice-to-proceed on July 22, 1999, the CRMs have begun work on 90 projects. The current status of these projects as of June, 2001 are listed in the following table:

Phase of Project	CRM East	CRM West	Total
Preliminary Design (0-25%)	6	3	9
ROW Plans (26%-75%)	18	12	30
Final Plans (76%-95%)	5	19	24
Construction	13	17	30
<b>Total</b>	<b>42</b>	<b>51</b>	<b>93</b>

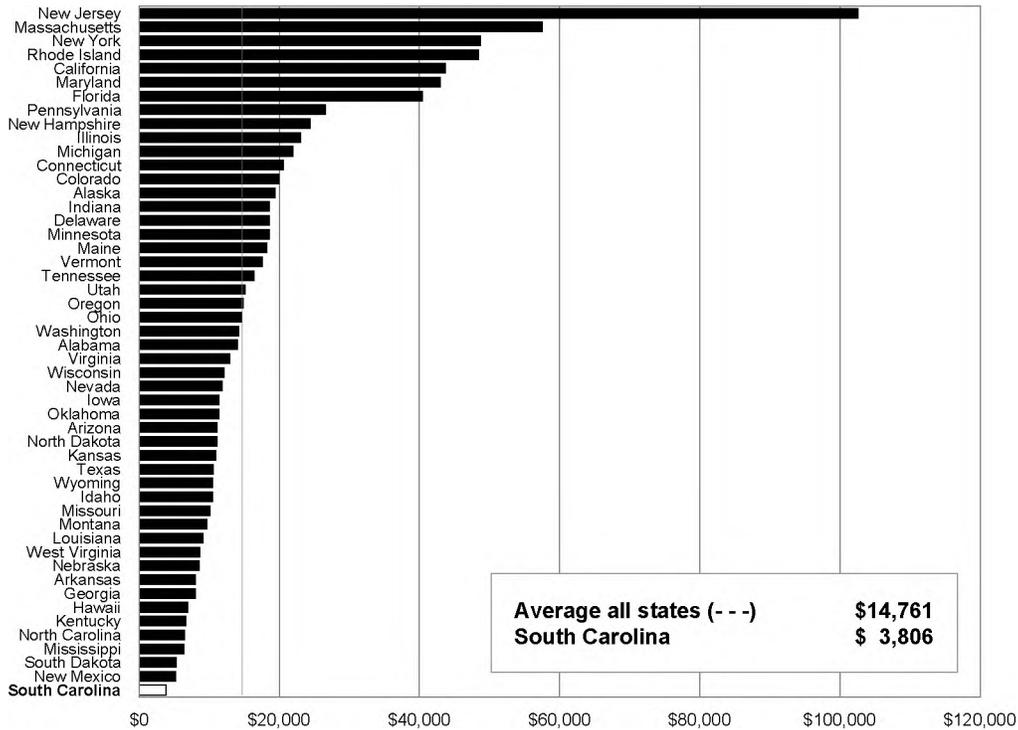
Figure 7-5

**Road and Highway Maintenance**

No State funds were available for resurfacing during FY 00-01. We worked toward completion of contracts from FY 99-00. Contracted custodial services for the State’s 10 welcome centers and 24 rest areas was awarded separate from the landscaping services in FY 00-01. The combined cost of these contracted services was \$3,034,145 and is expected to increase to more than \$5,000,000 for FY 01-02. Thus far, the separate contracts have proven to be beneficial in receiving a higher quality of service from the vendors. We have significantly reduced the amount of privatized mowing due to budget cuts, and there were no contracts for pavement markings during the last fiscal year. SCDOT continues to review activities to determine the most effective use of in-house maintenance forces as well as services from the private sector, to accomplish maintenance programs. In an effort to alleviate the shortages in funding

caused by budget cuts in recent years, SCDOT is working with the FWHA to find ways to use federal funds for maintenance. The table below reflects the expenditures for contract maintenance for three fiscal years based upon data available at this time. According to the UNCC Report, South Carolina continues to spend less on Maintenance than any other state, as previously noted. SCDOT compared to all states has the least amount of money to spend on South Carolina Highways. Figure 7-6 depicts Maintenance Disbursements/State Controlled Mile.

**Maintenance Disbursements/State Controlled Mile, 1999**



Source: TEA-21's Initial Impact: Comparative Performance of State Highway Systems, UNC-C Study, 3/15/01

Figure 7-6

Figure 7-7 depicts expenditures by Engineering Districts for Privatized Maintenance.

<b>Expenditures as Reported by Districts for Privatized Maintenance</b>			
<b>Description</b>	<b>1997-98</b>	<b>1998-1999</b>	<b>1999-2000</b>
Surface Maintenance	27,763,822.81	36,040,205.19	33,875,119.08
Shoulders and Slopes	6,060.88	430,909.53	30,406.45
Drainage	500,274.04	699,138.07	870,611.73
Right of Way	1,798,471.91	3,192,061.79	5,085,168.63
Roadside Appurtenances	355,125.64	3,286,820.17	2,142,042.25
Rest Areas	4,233,535.35	2,568,545.90	2,850,779.44
Traffic Control and Safety	3,805,612.17	6,299,576.06	4,963,692.89
Emergency Maintenance		5,395.54	1,899,597.03
Bridges and Ferries	486,012.13	1,288,203.23	227,866.03
Overhead Operations	771,346.11	3,160,682.89	2,009,951.04
<b>Total Contracted</b>	<b>39,720,261.04</b>	<b>56,971,538.37</b>	<b>53,955,234.57</b>
<b>* 00-01 figures are not available at this time</b>			

Figure 7-7

SCDOT maintenance has begun development of a 6-year program to chip seal all secondary routes with less than 500 vehicle average daily traffic. Chip Seal is a process where we use an emulsion substance and small rocks to create a smoother riding surface. In FY 01-02, SCDOT maintenance will begin the first year of a 5-year program to inspect all ditches and shoulders for required maintenance. Correction of deficiencies will commence once they have been identified.

During this new fiscal year, SCDOT will concentrate on two areas of maintenance to be privatized. FY 01-02 also begins the 12-year program to replace all traffic signals. All signals will be inspected annually and will be replaced on a 12-year cycle. The replacement of signals will be accomplished through privatization. The other area of concentration for privatization will be guardrail replacement. With approximately 1,200 miles of guardrail to maintain and replace, privatization will provide an efficient and timely means for replacement of this asset.

### **Bridge Maintenance**

The Bridge Maintenance Office continues to lead a statewide comprehensive bridge program to help manage and improve infrastructure assets. The office uses a Bridge Management System (BMS) that provides a detailed analysis of bridge conditions and needs. BMS allows the Department to make informed decisions on how best to utilize its' limited bridge funding by setting bridge maintenance, improvement and replacement priorities. In the near future, BMS will be linked with the Maintenance Management System (MMS), Pavement Management System (PMS) and Road Inventory Management System (RIMS). The Department inspects approximately 6,500 bridges per year. Approximately 60 underwater bridge inspections are conducted annually. Data collected during these inspections are part of BMS. Of the 8,205 state owned bridges, 993 are considered to be structurally deficient as compared to 878 last year. Another 802 are considered to be functionally obsolete as compared to 823 last year. This brings the net total of "substandard" bridges to 1,795 in FY 00-01 as compared to 1,701 in FY 99-00. This is an increase of 94 bridges (5.5% increase). South Carolina's bridge conditions indicate a trend as shown in Fig. No. 7-8 as to the number of substandard bridges in South Carolina.

### Substandard Bridges

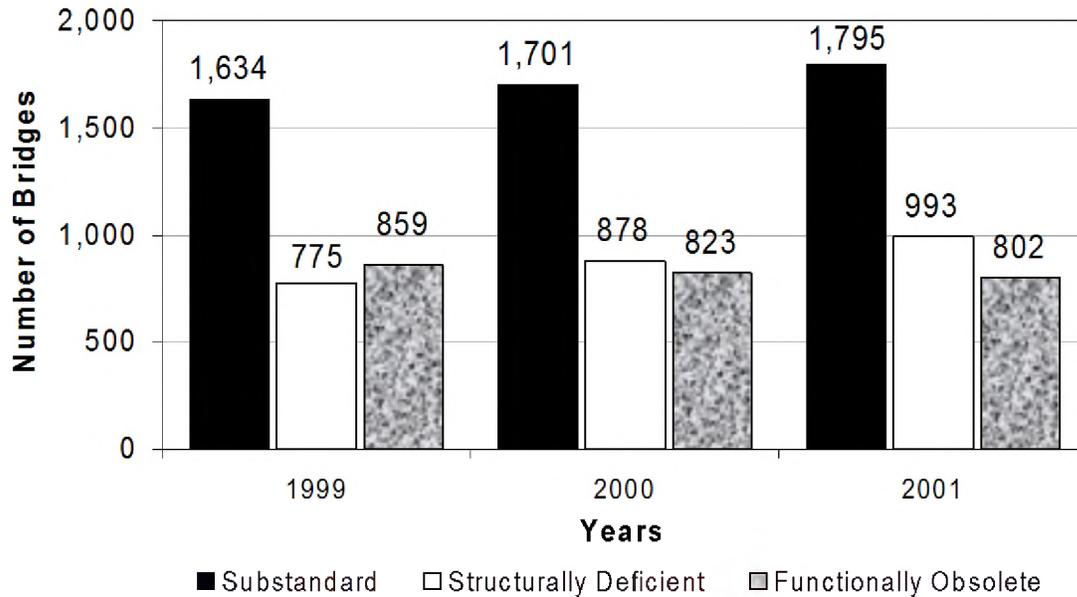


Figure 7-8

#### Implement the Maintenance Management System Statewide

In FY 01-02, SCDOT will implement a Maintenance Management System (MMS). MMS will provide a systematic approach to managing road and bridge maintenance. It is designed to help plan, budget and schedule maintenance work. During the past year, Maintenance staff have been researching the MMS used in nearby states and have developed a set of specifications for an MMS tailored to SCDOT's needs. Requests for Proposal from software consultants resulted in three proposals and a vendor was recently selected. Negotiations with a selected consultant are underway and a contract is expected in August 2001. The MMS is expected to be operational statewide by the beginning of FY 02-03.

#### Guardrail Replacement

The other area of concentration for privatization will be guardrail replacement. With approximately 1,200 miles of guardrail to maintain and replace, privatization will provide an efficient and timely means for replacement of this asset.

#### Risk Management

The Department created a Risk Management Unit in 1998 in an effort to be proactive in reducing the Department's losses and to make sure we are properly insured. The unit has made significant strides in reducing the General Liability Insurance Premium. Insurance premiums have been reduced substantially from those paid in 1998. As of June 2001, three-year cumulative savings are estimated to be approximately \$6,201,768. This does not include an additional annual savings of \$1,673,223 from workers compensation beginning in FY 01.

During FY 01, the Risk Management Unit conducted an analysis of Building and Personal Property losses and made a recommendation that the insurance policy deductible be increased from \$250 to \$1000 in exchange for an eight percent reduction in premium. This recommendation was implemented and is

projected to save approximately \$10,000-\$15,000 per year. Major elements of the Risk Management Unit are to assist in the:

1. Development of a Risk Management System to identify losses and target countermeasures at concentrated locations.
2. Creation of a Hydroplaning Task Force to identify high incidence locations and develop and implement appropriate countermeasures.
3. Development of a Run-Off-The-Road program to identify high incidence locations in five counties and develop and implement appropriate countermeasures.
4. Statistical analysis of crash data to be used in making recommendations to agency management on highway safety issues.

### Wildflower Program

The SCDOT Maintenance Office, in a cooperative effort with Clemson University Extension Services, administers the Wildflower Program as part of the Vegetation Management Program. To transform roadsides into wildflower gardens, SCDOT Maintenance employees select and order seeds, develop planting schedules, prepare the plots, plant the seeds and monitor the plots. Some of the wildflowers brightening the State highways have been cosmos, oxeyed daisy, cornflower, Plains Coreopsis, purple cornflower and bides. In 2000, maintenance crews planted 1,100 acres of flowers. The program is funded by money allocated for highway enhancements and beautification. This funding can only be used for this purpose.

### Interstate Median Barriers

#### MILES OF CABLE GUARDRAIL INSTALLED

Total Miles Planned: approximately 270 miles (of cable or rigid rail)

<u>Location</u>	<u>Miles</u>	<u>Cable Installed</u>	<u>Start Date</u>	<u>Estimated Cost</u>	<u>June Saves</u>	<u>YTD Saves</u>
I-77 (Richland)	8.5	8.5	Oct. 2000	\$533,548.00	8	24
I-385 (Greenville-Laurin)	9.3	7.471	Feb. 2001	\$477,122.00	6	11
I-26 and 526 (Charleston)	6.4	6.4	Mar. 2001	\$342,424.00	6	9
I-85 (Cherokee-Spartanburg)	21.18	18	May 2001	\$1,019,619.00	0	0
I-85 (Anderson-Oconee)	19.3	0	Aug. 2001	\$599,672.00	0	0
I-26 (Calhoun, Lex., Richland)	46.4	0	July 2001	\$1,964,136.00	0	0
I-20 (Kershaw, Lex., Richland)	13.04	0	Aug. 2001	\$538,436.00	0	0
I-26 (Lex., Newberry, Laurens)	40.5	0	**	\$1,453,837.00	0	0
I-385 (Laurens)	20.9	0	**	\$1,807,854.00	0	0
I-26 (Spartanburg)	51.5	0	**	\$2,060,000.00	0	0
I-85 Bus. (Spartanburg)	7.2	0	**	\$288,000.00	0	0
<b>TOTAL:</b>	<b>40.371</b>				<b>TOTAL:</b>	<b>44</b>

\*includes 1.8 miles of concrete barrier

\*\* Bids to be received

The highest priority of SCDOT was to install median barriers to prevent cross over median crashes.

Figure 7-9

**Mass Transit**

The Mass Transit Office has continued to pursue creative solutions to the various challenges associated with promoting and providing public transportation services in the State. A number of objectives were pursued during FY 00-01 which focused on improving and expanding transit services. State funding amounts for Mass Transit programs for past and present fiscal years are included in Figure 7-10.

Mass Transit Areas	FY 99-00	FY 00-01	FY 01-02
<b>Large Urban Match</b>	0.7	1.5	1.4
Small Urban	0.6	0.6	0.6
Rural	2.1	2.1	2.2
Planning	0.1	.02	0.02
Human Services	0.0	0.0	0.0
State Mass Transit Programs	2.2	1.5	1.8
Virtual Transit Enterprise	0.3	0.3	0.0
Operations & Administration	0.2	.24	0.2
<b>Total</b>	<b>6.2</b>	<b>6.2</b>	<b>6.22</b>

Figure 7-10

Note: The above fiscal year comparisons are advanced by one year due to the difference between the state and federal fiscal years and because SCDOT uses current year state dollars to match previous year federal dollars. Approximately \$5.5M comes from the state gasoline tax and .5M from the state general fund.

**Statewide Transportation Coordination Plan**

The existence of multiple agencies operating transportation services within many of the same communities in the State has prompted the need for a comprehensive evaluation and coordinated plan for service delivery. Accordingly, SCDOT has been communicating with representatives of other state agencies that are involved in client transportation services or the funding of such services.

**Increasing Transit Availability**

Major initiatives were promoted during FY 00-01 to increase transit services to potential customers in counties that are currently without public transportation services. The Lower Savannah Council of Governments has taken the leadership role in establishing a Rural Transportation Management Association to serve Aiken, Allendale, Bamberg, Barnwell, Calhoun, and Orangeburg counties with public transportation.

The Upper Savannah COG is also leading efforts in that planning region to establish transit services in Greenwood and Laurens counties. SCDOT has supported the efforts in Upper and Lower Savannah COGS with planning funds and technical assistance. The overall goal is to increase the availability of transit services in more South Carolina communities. The statewide boarding data is reflected in Figure 7-

### Passenger Boardings

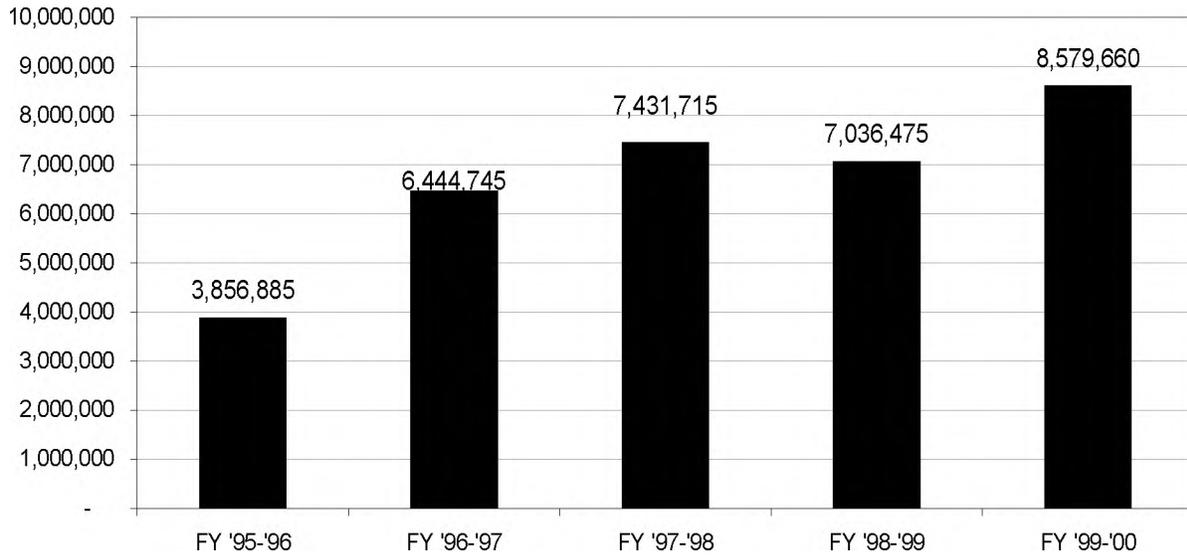


Figure 7-11

### Tracking Maintenance Costs

Obtaining accurate and timely information can make the difference in assessing transit operations issues. The Mass Transit Office has evaluated and selected software to assist general public transportation providers with tracking and analyzing various aspects of vehicle maintenance costs. Used effectively, the information provided by the Omni Fleet Pro vehicle maintenance software could aid transit operations with identifying recurring maintenance and targeting vehicles for replacement due to rising maintenance costs. SCDOT has made this software and the needed training available to the general public transportation grantees. On-going technical support through SCDOT is also available to the participating transit agencies.

### Enhancing Transit Effectiveness with Technology

As part of on-going support with the Statewide Mass Transit Technology, SCDOT staff upgraded computer hardware and software systems at the general public transportation agencies. The computer units delivered are capable of handling the on-line communications and document transfer features that are part of the technology project. In cooperation with the SCDOT ITS Office, training in the accompanying software has been conducted for grantees in various parts of the State to ensure that agency staff is equipped with both hardware and the necessary knowledge to apply the newly acquired tools in their everyday transit operation.

### Improving Opportunities to Participate Through the Disadvantaged Business Enterprise Program

Through various outreach efforts, SCDOT seeks to increase the number of certified DBEs participating in mass transit activities. The Department also seeks to increase DBE participation in pre-construction and construction projects in the State. Early reports show some success in recruiting certified DBEs in Mass Transit and with road/bridge projects. Several outreach sessions are planned to assist in this effort.

### **Developing A Long-Range Multi-Modal Transportation Plan**

The development of stronger links between the various individual modes of transportation operating in the State (such as automobiles, buses, passenger and freight rail modes, water-based ferry operations, and air travel modes) could potentially improve overall connections and services in all arenas of transportation. The efforts to complete the Long Range Multi-Modal Transportation Plan for South Carolina continued throughout FY 00-01. The partnership between the ten regional Councils of Governments and the Department has been strengthened through this progressive experience of developing the framework for the plan and actually putting the details in writing. This was a massive joint project, requiring the input of many agencies and stakeholders around the State. At the end of the fiscal year, the first combined draft of the plan was nearly completed. The Long Range Multi-Modal Plan is expected to be submitted to the SCDOT Commission for approval in the fall of 2001.

### **Expanding Training Opportunities**

Training efforts have been on going in the Mass Transit Office. During the past fiscal year, mass transit grantees have benefited from both computer and maintenance software training arranged by SCDOT. Efforts to identify staff training needs and develop an overall training plan for the office have been initiated. A grantee-focused training workshop has been planned for later in the 2001 calendar year, with additional training opportunities to follow. SCDOT is also developing an "on-call" agreement to make specific training available to transit agencies on an "as-needed" basis.

### **Marketing Mass Transit Services And Benefits**

Transit service improvements will not necessarily increase the performance of the agency without an effective method of disseminating pertinent information about the available services. The Mass Transit Office, in cooperation with the Communications Office of SCDOT, and the transit providers, will develop a video and brochures to promote mass transit services in the State. This is a long-range objective, where the expected future effects would be manifested in greater local community understanding and support for transit activities.

### **Transportation Enhancements**

The SCDOT's enhancement accomplishments during FY 2000-2001 include:

- The Office of Beautification Programs developed a Five-Year Highway Beautification Plan that involves enhancing interstate gateways to South Carolina along with other strategically located interchanges. The goal of the plan is to provide a lasting impression on South Carolina's travelers as they enter our state and to provide color every 15 minutes or approximately every 22 miles.

- The SCDOT continued to partner with local governments through the Transportation Enhancement Program to pursue a broad range of non-traditional transportation related activities such as landscaping and scenic programs; bicycle and pedestrian facilities; and historic preservation. Figure 7-12 reflects the number of applications submitted, number of projects funded and SCDOT's financial contribution to these projects.

<b>SCDOT Transportation Enhancement Program – MPO &amp; Non-MPO</b>			
	<b>Applications Submitted</b>	<b>Applications Funded</b>	<b>\$ Contributed by SCDOT</b>
<b>1999</b>			
<b>MPO</b>	21	21	\$1,484,734
<b>Non-MPO</b>	66	34	\$4,128,841
<b>2000</b>			
<b>MPO</b>	8	8	\$1,257,881
<b>Non-MPO</b>	69	25	\$2,905,220
<b>2001</b>			
<b>MPO</b>	11	11	\$1,786,375
<b>Non-MPO</b>	85	30	\$4,351,110

Figure 7-12

- SCDOT also worked with local governments to provide a higher level of beautification at key interchanges along interstates and controlled access highways through the Adopt-An-Interchange program.
- During the second year of the Colorful Spaces Program, more than 550 employees increased plantings at 45 existing locations and planted 23 new sites while maintaining their original sites. This program involves the planting of landscaped plots along highway rights of way by SCDOT employees in the districts.
- The SCDOT's Wildflower Program produced a great deal of color along South Carolina's highways last year as well. In the summer of 2000, Department maintenance crews planted almost 10 times the acreage planted in 1999.
- On June 20, 2001, the Department, in conjunction with Palmetto Pride, the Governor's Council for Beautification and Litter, launched the new litter removal program, Palmetto Prideways. Palmetto Prideways targets the interstates and provides an avenue for businesses and organizations to sponsor litter removal for designated highways.

### **Adopt a Highway**

For more than a decade, the Adopt-A-Highway program has worked to improve the quality of life in South Carolina by removing litter from our primary and secondary highways. Educating the public about Adopt-A-Highway and the litter problem in South Carolina is a top priority of the program as well. As indicated in the chart below, volunteers in the Adopt-A-Highway Program have done a tremendous job in cleaning our highways, and public participation in the program continues to strengthen. Figure 7-13 depicts statistics for the "Adopt a Highway Program."

<b>SCDOT Adopt-A-Highway Statistics</b>				
	<b>Pounds</b>	<b>Miles</b>	<b>Groups</b>	<b>Volunteers</b>
<b>1996</b>	2,288,161	6,026	2,003	30,656
<b>1997</b>	2,324,559	6,249	1,968	31,591
<b>1998</b>	1,378,688	6,150	1,990	31,224
<b>1999</b>	2,480,128	6,742	2,052	34,318
<b>2000</b>	1,955,077	7,169	2,357	36,540
<b>TOTALS</b>	<b>10,426,613</b>	<b>32,336</b>	<b>10,370</b>	<b>164,329</b>

Figure 7-13

**Funding for Highway Enhancements**

Funding for highway enhancements does not take away from road and bridge construction, maintenance nor mass transit programs. Federal regulations require that a certain portion of highway dollars be used annually for beautification and enhancement purposes. As a way to maximize the results of our beautification projects, the SCDOT aggressively pursues partnerships with local governments, businesses and communities.

## Appendix 1 to the 2000-2001 Annual Accountability Report

The Department's Strategic Plan contains our Goals, Objectives, and Performance Measures. Progress is measured by the review of data submitted by the Process Owner. The Executive Director reviews Dashboard Indicators essential for her to make informed timely decisions. This data is provided monthly by the Process Owners. Quarterly Reports are submitted by the Process Owners on each objective and the data is analyzed during In Progress Reviews.

### STRATEGIC PLAN UPDATE 2001

#### GOAL 1 (Goal Owners: Terecia Wilson and Rick Werts)

##### **Increase safety on South Carolina's transportation systems and within SCDOT.**

- 1. Reduce the number of highway crashes, injuries, and fatalities in South Carolina by 5% by 2003 through the development and implementation of a variety of statewide safety initiatives.**  
Beginning date: 01-01-2001 Completion date: 12-31-2003  
Performance Measure: Annual number of crashes, injuries and fatalities
- 2. Reduce the number of lost workdays involving SCDOT employees due to occupational accidents by 5% by 2003 through the continued implementation and expansion of various employee safety programs and the establishment of a SCDOT Safety Committee.**  
Beginning Date: 01-01-2001 Completion Date: 12-31-2003  
Performance Measure: Annual number of lost workdays
- 3. Reduce work zone-related crashes, injuries, and fatalities by 10% by 2003 through the development and implementation of a comprehensive work zone safety program.**  
Completion Date: 12-31-2003  
Performance Measure: Annual number of work-zone crashes, injuries and fatalities
- 4. Reduce speed-related crashes, injuries, and fatalities by 5% by 2003 through the continued implementation and expansion of a comprehensive speed management program.**  
Beginning date: 01-01-2001 Completion Date: 12-31-2003  
Performance Measure: Annual number of speed-related crashes, injuries and fatalities
- 5. Reduce red light running crashes, injuries, and fatalities by 5% by 2003 through the development and implementation of a comprehensive red light running program in several South Carolina cities.**  
Beginning Date: 03-1-2002  
Performance Measure: Annual number red light running crashes, injuries and fatalities in targeted cities
- 6. Begin implementation of the Corridor Safety initiative in at least two districts.**  
Beginning Date: 10-01-2001  
Performance Measure: Number of Corridor Safety initiatives underway
- 7. Reduce losses to agency through the implementation of a Risk Management System to identify losses and target countermeasures at specified locations.**  
Beginning Date: 03-01-2002  
Performance Measure: A) Number of sites identified and/or corrected  
B) Dollar amount of claim payouts
- 8. Develop a program to reduce traffic crashes where hydroplaning is a significant factor.**

Completion Date: 09-30-2001  
Performance Measure: Number of hydroplaning crashes

9. **Complete the installation of interstate median barriers on approximately 284 miles of highway.**  
Completion Date: 07-31-2002  
Performance Measure: A) Number of saves B) Number of miles of barriers installed and accepted.
10. **Reduce the number of run-off-the-road crashes, injuries and fatalities by 5% by 2003 in the five counties with the highest frequency of such crashes.**  
Beginning Date: 04-01-2002  
Performance Measure: Annual number of run-off-the-road crashes, injuries and fatalities
11. **Reduce the number of pedestrian and bicycle crashes, injuries and fatalities by 5% by 2003 in the three counties with the highest frequency of such incidents through the implementation of pedestrian assessments and supporting programs.**  
Beginning Date: 07-01-2001  
Performance Measure: Annual number of pedestrian and bicycle crashes, injuries and fatalities

**GOAL 2 (Goal Owners: Robert Pratt, Tony Chapman, Rick Werts and Danny Shealy)**

**Improve the quality, efficiency, and appearance of the State Highway System.**

1. **Complete the construction of all bonded and non-bonded Interstate interchange improvement projects.**  
Completion date: 07-01-2005  
Performance Measure: A) Percent of bonded Interchange Projects completed  
B) Percent of non- bonded Interchange Projects completed
2. **Expand the Pavement Management system to cover all paved roads in the State System.**  
Completion date: 01-01-2004  
Performance Measure: Percent of state roads added to the pavement management system
3. **Implement the Maintenance Management System statewide.**  
Completion date: 07-01-2002  
Performance Measure: Percent complete based on milestones
4. **Maintain paint system on statewide bridge system.**  
Completion Date: 06-30-2002  
Performance Measure: A) Reduce percentage of tons of steel needing painting  
B) Tons of steel painted
5. **Develop and implement a plan to decrease the number of deficient bridges in the state.**  
Completion date: 06-30-2002  
Performance Measure: Reduce percentage of square footage of bridge decks that are deficient
6. **Carolina Bays Parkway design-build project to be completed.**  
Completion date: 10-01-2002  
Performance Measure: Project accepted by SCDOT
7. **SC 170 design-build project to be completed.**  
Completion date: 05-01-2004

Performance Measure: Project accepted by SCDOT

- 8. Begin construction for the Design/Build project on the Cooper River Bridges in Charleston.**  
Completion date: 07-31-2001 This has been completed.  
Performance Measure: Design/Build contract signed by SCDOT
- 9. Implement the SIB projects according to the schedules and budgets in the intergovernmental agreements and STIP**  
Completion date: 06-01-2008  
Performance Measure: A) Percent of projects on or ahead of schedule  
B) Percent of projects on or below budget
- 10. Implement the MPO projects according to the schedules and budgets in each of the bonding agreements and STIP.**  
Completion date: 06-01-2006  
Performance Measure: A) Percent of projects on or ahead of schedule  
B) Percent of projects on or below budget
- 11. Implement the COG projects according to the schedules and budgets in each of the bonding agreements and STIP.**  
Completion date: 06-01-2008  
Performance Measure: A) Percent of projects on or ahead of schedule  
B) Percent of projects on or below budget
- 12. Implement System and Intermodal Connectivity projects according to the schedules and budgets in STIP.**  
Completion date: 06-01-2011  
**Performance Measure: A) Percent of projects on or ahead of schedule  
B) Percent of projects on or below budget**
- 13. Implement enhancement projects to improve the appearance of SC highways and other transportation facilities.**  
Completion Date: 12-31-2001  
Performance Measure: Number of enhancement projects completed and expenditures
- 14. Develop a Long-Range Plan for the Intelligent Transportation System.**  
Completion date: 09-30-2001  
Performance Measure: Plan approved by SCDOT  
Completion date: 12-31-2001  
Performance Measure: Number of team reviews complete
- 15. Quality Management Teams to review construction project sites and records to ensure conformity with plans and specifications.**  
Completion date: 12-21-2001  
Performance Measure: number of team reviews completed.
- 16. Develop and implement the first year of a six-(6) year program to maintain all rural roads with less than 500 ADT with chip seal treatment.**  
Completion date: 06-30-2002  
Performance Measure: Percent of miles resurfaced with chip seal as compared with miles yet to seal
- 17. Develop and implement the first year of a five-(5) year program to inspect all the shoulders and ditches for deficiencies that require maintenance.**  
Completion date: 06-30-2002  
Performance Measure: Number of miles of ditches inspected

18. **Develop and implement a comprehensive wildflower/roadside beautification program.**  
Completion date: 10-15-2001  
Performance Measure: Program implementation complete
19. **Develop and implement a traffic signal maintenance program, which includes annual inspections and the replacement and upgrade of equipment on a 12-year cycle.**  
Completion date: 06-30-2002  
Performance Measure: A) Annual inspections  
B) Number of traffic signals upgraded as compared the number to be upgraded
20. **Ensure all MPO's, designated as non-attainment areas, develop transportation plans and programs to conform to Clean Air Act requirements.**  
Completion date: 06-30-2002  
Performance Measure: Approved Air Quality Plans
21. **Ensure that all MPO's have a current certified Long Range Transportation Plan.**  
Completion date: 06-30-2002  
Performance Measure: Plans accepted by FHWA
22. **Reduce the time required to receive individual environmental permits by 30%.**  
Completion date: 10-01-2004  
Performance Measure: Average time to obtain 404/401/OCRM permits.
23. **Improve the adequacy of erosion and sediment control measures in construction projects.**  
Completion date: 07-01-2003  
Performance Measure: Training for all inspectors to insure appropriate measure is installed to control sediment from leaving the construction site.

**GOAL 3** (Goal Owner: Arlene Prince and Benjamin Byrd)

**Improve and expand the multi-modal Transportation System in South Carolina.**

1. **Develop a comprehensive coordination plan with input from other state agencies involved in delivery of public transportation services.**  
Completion date: 06-30-2002  
Performance Measure: Plan approved by SCDOT and state agencies.
2. **Increase public transportation coverage in un-served counties by 10%.**  
Completion date: 06-31-2003  
Performance Measure: Percentage of un-served counties providing public transportation
3. **Increase maintenance savings of public transit providers by 5%.**  
Beginning date: 01-01-2001 Completion date: 12-31-2002  
Performance Measure: Dollar savings due to maintenance costs
4. **Increase transit technology statewide.**  
Completion date: 04-30-2002  
Performance Measure: Number of new applications available for use by transit agencies
5. **Increase the number of DBEs certified in highways and mass transit by 10%.**  
Beginning date: 01-01-2001 Completion date: 05-30-2002  
Performance Measure: Number of certified DBE's

**6. Meet or exceed the goals set for the DBE Program in preconstruction and construction.**

Completion date: 09-30-2001 and 09-30-2002

Performance Measure: A) Dollars committed to preconstruction  
B) Dollars committed to construction

**7. Develop a long-range, intermodal plan for South Carolina.**

Completion Date: 07-30-2001

Performance Measures: Plan approved by SCDOT Commission

**GOAL 4 (Goal Owners: Robin Wilkes & John Walsh)**

**Enhance and implement integrated financial and project management systems.**

**1. Implement modified General Ledger Accounting System.**

Completion date: 07-01-2001

Performance Measure: A) System fully operational  
B) Monthly reconciliation of General Ledger System to the Comptroller General System

**2. Implement an updated accounts receivable system, which includes participation agreements and notes receivable.**

Completion date: 03-01-2001

Performance Measure: A) System fully operational  
B) Monthly reports prepared  
C) Percentages of Invoices collected within 30/60/90 days

**3. Define plan for continued enhancement of the Accounting System.**

Completion date: 12-31-2001

Performance Measure: Plan submitted to senior management

**4. Use Electronic Fund Transfer for contract payments.**

Completion date: A) 06-30-2002 and B) 06-30-2003

Performance Measure: A) Electronic funds transfer used for 50% of contracts  
B) Electronic funds transfer used for 100% of remainder

**5. Pay 95% of construction contract pay requests estimates within 90 days of final acceptance of the project..**

Completion date: 12-31-2001

Performance Measure: Percent invoices paid in 90 days

**6. Close 95% of projects within 90 days of payment of final construction pay requests.**

Completion date: 12-31-2001

Performance Measure: Percent of invoices paid in 90 days

**7. Implement at least semi-monthly federal aid billing to increase cash reserves.**

Completion Date: 07-01-2001

Performance Measure: At least semi-monthly bills submitted to FHWA

**8. Develop a comprehensive SCDOT Construction Resource Manager Planning and Reporting System to track schedules and financial requirements.**

Completion date: 09-30-2001

Performance Measure: System fully operational

**9. Implement AASHTO software programs, including Letting and Award System (LAS) and Proposal and Estimate System (PES), to assist with project management.**

Completion Date: 12-31-2001  
Performance Measure: Program implementation complete

**GOAL 5** (Goal Owners: Tom Fincher & Jack Swails)

**Improve employee skills, their work environment and provide opportunities.**

1. **Increase donations to the Employee Leave Pool by 20%.**  
Beginning date: 01-01-2001 Completion date: 12-31-2001  
Performance Measure: Number of increases in donations
2. **Recruit and attract quality employees and ensure a diverse workforce.**  
Completion date: 12-31-2001  
Performance Measure: Percent of minorities and women in work force
3. **Provide Human Resource Training programs to include EEO and Diversity training.**  
Completion date: 12-31-2001  
Performance Measure: Reduce EEO and Sexual Harassment cases.
4. **Provide leadership skill training for managers and supervisors.**  
Completion date: 6-1-2001  
Performance Measure: Number of managers and supervisors trained
5. **Increase usage of the SCDOT library by promoting available materials and services.**  
Completion date: 12-31-2001  
Performance Measure: Increase in usage
6. **Provide employee special needs assistance through the Chaplaincy Assistance or a similar type Program.**  
Completion date: 12-31-2001  
Performance Measure: Number of employees assisted

**GOAL 6** (Goal Owners: Carl Chase, Tony Chapman, Eddie Parker, & Dan Sherrill)

**Improve management of our property, equipment, and technology.**

1. **Upgrade PC's and install Windows 2000.**  
Completion Date: 06-30-2004  
Performance Measure: A) Percent of computers with new systems  
B) Replace 1/3 of computers yearly
2. **Develop and adopt a Phase I and Phase II comprehensive Total Asset Management Program.**  
Completion date: 06-30-2002  
Performance Measure: Plan accepted by Comptroller General and SCDOT
3. **Update Capital Improvement Plan to Include Year 2007.**  
Completion date: 06-30-2002  
Performance Measure: Plan approved by SCDOT Executive Committee
4. **Complete Phase I of shared resource fiber optic network on the Interstate System.**  
Completion date: 06-30-2003  
Performance Measure: Phase I (construction & routes) complete

5. **Develop and Implement Phase I of an Electronic Document Management System.**  
Completion date: 06-30-2002  
Performance Measure: EDMS system in place
6. **Develop Phase I GIS to provide graphical reference to data and documents.**  
Completion date: 06-30-2003  
Performance Measure: A) Implementation of system  
B) Percent of miles complete
7. **Review all facilities including rest areas annually to determine the needs of the facility to be both physically and environmentally clean. Provide an assessment report and implement improvements as budget restraints allow.**  
Performance Measure: A) Assessment report completion date: 11-15-2001  
B) Implement improvements by: 06-30-2002
8. **95% of all maintenance equipment listed on the present utilization chart will meet minimum usage standards.**  
Completion date: 06-30-2003  
Performance Measure: Percent of equipment meeting minimum usage standards

**GOAL 7** (Goal Owners: Tony Chapman, Eddie Parker, Pete Poore, & Rick Werts)

**Provide highest level of customer service.**

1. **Survey the public every three years to determine their perception of SCDOT strengths and weaknesses. Determine how the public measures DOT and what the public expects.**  
Completion date: 03-01-2001  
Performance Measure: A) Final report received  
B) Number of initiatives resulting from report
2. **Include customer input in project and program activities and in business plans.**  
Completion date: 12-31-2001  
Performance Measure: Customer satisfaction measurements included in annual business plan
3. **Improve customer service & responsiveness of oversize/overweight permit process.**  
Completion date: 12-01-2002  
Performance Measure: New system operational and faster issuance of permits.
4. **Report to public on success of the 27-in-7 program and the impact on SC.**  
Completion Date: 12-31-2001  
Performance Measure: Begin semi-annual reports in the July & December issues of the "Connector" and updates on the SCDOT web site.
5. **95% of all requests and complaints received by the maintenance units will be completed within sixty (60) calendar days.**  
Completion date: 06-30-2002  
Performance Measure: Percent of requests/complaints completed
6. **Reduce delays due to incidents on urban freeways through the expansion of SHEP, and ITS, and increased interagency coordination on Incident Management.**  
Completion Date: 12-31-2003  
Performance Measures: A) Number of hours of SHEP operation, miles covered, &

responses

B) Number of miles under video surveillance

C) Number of Incident Management Teams Established

7. **Reduce condemnation rate by 1% annually.**  
Completion date: 06-30-2002  
Performance Measure: Annual condemnation rate
  
8. **Expand customer/public opportunities to participate in identification of project and program activities.**  
Completion date: 01-01-2002 Performance Measure: Update SCDOT Public Participation Program

## Summary

This report reflects the collective efforts of the over 5000 men and women of the South Carolina Department of Transportation under the able leadership of the Transportation Commission. Along with the Federal Highway Administration, the Councils of Government and Metropolitan Planning Organizations, we are making significant strides in improving our highway system. The improvement in this system will continue to have a favorable impact on the lives of the citizens of South Carolina.

By using the Malcolm Baldrige Performance Management System and the SCDOT Strategic Plan, the Department is working parallel with the Governor's Business Plan, *EnVision South Carolina*. The South Carolina Department of Transportation is working to improve the infrastructure of the state for the benefit of its citizens.

By careful Strategic Planning and forging partnerships with key stakeholders across South Carolina we be able to continue to operate an efficient multi-modal system, but additional funds state and federal funds are required to improve or expand that system.

Our Strategic Plan was deployed in such a way that all employees from the Headquarters Staff to the Front Line Maintenance Workers understand their part in accomplishing the vital mission of SCDOT.

This effort and the commitment of the part of SCDOT people allows the Department to continue its status as one of the most efficient State Transportation Agencies in the nation. However, the shortfall in the funding of the state's highway maintenance program is beginning to affect our transportation network and has a direct correlation to highway safety. South Carolina has the second highest traffic fatality rate in the nation and the least amount of infrastructure funding in the nation.

Our *27 in 7 Peak Performance* program implemented in 1999 is showing results with the early opening of the Conway Bypass and numerous highway widening projects.

Through the efforts of the South Carolina Congressional Delegation, South Carolina Transportation Infrastructure Bank, and local and county government, we were able to obtain funding for the Cooper River Bridge replacement project.

We will continue to seek the assistance of the General Assembly in identifying ways to improve the funding of highway maintenance.

Highway safety education is important in reducing crashes. We recently instituted a series of "Work Zone Safety" Public Service Announcements that are broadcast on local television networks across South Carolina, and in early July 2001 introduced a new series of "Highways or Dieways" commercials targeted a teen drivers and fathers.

We will continue to earn and keep the public trust as SCDOT works to get you there on our highway and mass transit systems.