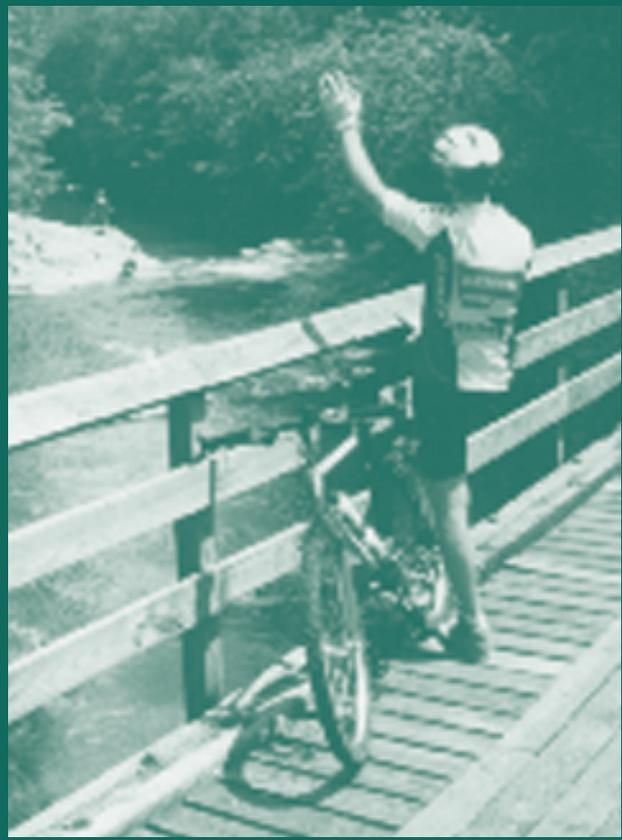


MOVING AHEAD to promote the
quality of life for all Virginians.

BIENNIAL
REPORT

FISCAL 1998-1999
AND 1999-2000



VIRGINIA DEPARTMENT OF TRANSPORTATION

AWARDS and other distinctions

From VDOT's Commissioner:

Reshaping VDOT to meet the challenge of a new age

The year 2000 has given the Virginia Department of Transportation our greatest challenge ever as we embark upon the largest highway construction program in the history of our Commonwealth.

Under the leadership of Governor Jim Gilmore and the General Assembly, the Virginia Transportation Act of 2000 was enacted, providing a record \$3.2 billion budget for fiscal year 2000-01. The act also ensured a \$10 billion-plus investment for highways, public transportation, airports, and ports during the next six years.

Further, VTA 2000 created new revenue sources and accelerated financing for transportation, particularly through a new Priority Transportation Fund for projects that legislators deemed most urgently needed.

To expedite the many important construction projects specified by the VTA, we have instituted a number of changes in the way we do business with contractors, the public, and other government agencies. We also are shifting and supplementing our staff to speed up construction. I am happy to report that we are off to a very good start in advancing critical and complex projects across the state.

While we meet the challenge of this tremendous VTA building program, we will hold to important priorities, which have been given new support in the past year. For example, we will make sound fiscal management an overriding policy. To this end, we have established an assistant commissioner's position to take oversight of audits, investigations, and compliance. To maintain and enhance the environmental quality of our Commonwealth where transportation projects have impact, I have established another assistant commissioner. This executive is responsible for environment, transportation planning, and regulatory affairs.

More than ever before, Virginians are looking to VDOT to help make travel safer and more convenient, and VDOT's employees are committed to fulfilling that expectation. This report summarizes their efforts and accomplishments.

Very truly yours,



Charles D. Nottingham
Commonwealth Transportation Commissioner

Cover photo: Bicyclist enjoys Creeper Trail with improvements made possible by one of many transportation enhancement grants administered by VDOT.

for savings—VDOT's Value Engineering Program received the "Outstanding Accomplishment in Government Award" from the Society of American Value Engineers in 1999. The VE staff has turned up \$275 million in cost savings since 1990.

for quality improvement—the American Association of State Highway and Transportation Officials (AASHTO) recognized VDOT's Construction Quality Improvement Program as a "Trailblazer for Quality Achievement."

for planning—VDOT's Staunton District was awarded the Exemplary Partner Award for 1998 from AASHTO, which recognized the district's strategic plan to deliver exceptional customer service.

for a major study—A Pathfinder for Quality Team Achievement designation was made to an I-81 VDOT study team by AASHTO. The team, which comprised many VDOT units and outside agencies, completed a comprehensive study of the widening of I-81 in Virginia.

for safety—Work Zone Safety Coordinator David Rush was awarded the annual National Safety Award by the American Traffic Safety Services Association for his tireless promotion of a national Work Zone Safety Awareness Week.

for outreach to minorities—The Federal Highway Administration has presented VDOT a national award for excellence for the management of its Disadvantaged Business Enterprise (DBE) Program.

for paving—VDOT and its partner contractors earned four Quality in Construction awards from the National Asphalt Pavement Association in 1999. Also captured was a finalist award in the Tenth Annual National Awards Program for Excellence in Concrete Pavement.

for public awareness—VDOT won an ITS America award in the category of "best public awareness program" for Intelligent Transportation Systems.

for communications—National awards went to VDOT's Public Affairs Office for the Bulletin, VDOT's employee newspaper, and a video of the Coleman Bridge widening project took first place in the in-house documentary category.

MOVING AHEAD with BIG CHANGES THIS BIENNIUM

The Virginia Transportation Act of 2000 is unprecedented!

The Virginia Transportation Act of 2000 (VTA) adds \$3 billion in funding for transportation projects over the next six years, and Virginia's investment in various transportation modes will reach \$10 billion during the same period—an investment unprecedented in the Commonwealth's history.

To fulfill the General Assembly's mandate under the VTA to move expeditiously on a record number of projects, VDOT has taken numerous actions, including:

- **scheduling public hearings earlier in the project development process;**
- **adding new employees to "jump start" projects;**
- **installing a new computer system for engineers in different disciplines to work on the same project simultaneously;**
- **initiating closer cooperation with other agencies to expedite environmental protection and permitting of construction;**
- **including more incentives in construction contracts for early project completion.**



Public hearings will be held earlier in the project development process.

'Six-Year Program' becomes two-phased document

Preliminary work by VDOT planners has resulted in the traditional Six-Year Improvement Program being replaced with the Virginia Transportation Development Plan (VTDP), which features a major change from the former document.

The VTDP will contain two distinct parts or phases: the "Feasibility Phase" and the "Six-Year Capital Improvement Program Phase." Projects in the Feasibility Phase would be in some form of study. Projects in the Capital Improvement Phase would be in final design, right of way acquisition, or construction. The change prevents confusion about the status or progress of projects.

Executive-level changes enhance VDOT management

New senior positions have been added to VDOT's Executive Team to increase the team's breadth for addressing complex management, environmental, and technological issues of the new century.

Responsible for the day-to-day operations of the department, and reporting to the commissioner, is the Deputy Commissioner, a post reestablished during the biennium.

Another new executive directs the department's implementation of the best environmental practices and oversees transportation planning in accordance with these objectives. This team member has the title of Assistant Commissioner for Environmental, Transportation Planning, and Regulatory Affairs.

Another new assistant commissioner, informally called the "inspector general," oversees audits, investigations, and compliance. This position is similar to those in many large businesses and government agencies that have elevated

audit functions to the highest management level.

Two new divisions were established late in the last biennium— Intelligent Transportation Systems (ITS) and Data Management. ITS supports the Assistant Commissioner for Operations with latest technologies in traffic management and motorist communications. Data management staff improve the department's use of data and spearhead initiatives for geographic information and data warehouse systems.



Engineer Raymond Hunter uses VDOT's CADD system, which enables engineers in different disciplines to work on the same roadway plans simultaneously.

Federal transportation funding way up for Virginia

A large increase in federal transportation funding for Virginia enabled the Commonwealth Transportation Board to revise the transportation budget upward in 1998. The additional funds are received via the Transportation Equity Act of the 21st Century (TEA-21).

Virginia receives about 62 percent more in federal transportation funds annually, compared to previous authorizations. Over the course of the six-year federal program, Virginia is expected to receive \$6.7 billion, a major factor in the acceleration of the state's construction program.

BEST PRACTICES

First project begins under public-private legislation

A historic construction project got under way in 1998 when a private firm began financing and building a new interstate connector road, Route 895. Also called the Pocahontas Parkway, it was the first project authorized under the Public-Private Transportation Act of 1995.

The four-lane, 8.8-mile toll road will connect Chippenham Parkway at I-95 in Chesterfield County with Laburnum Avenue and I-295 in Henrico County. It is being constructed by FD/MK, a partnership of two international construction firms, Fluor Daniel and Morrison Knudsen. The VDOT-private partnership speeds up the construction of this road, which will be completed in 2002, by 10 or more years.



Span of Rt. 895 bridge in Richmond under construction

Private firm maintains more Virginia interstate miles

One evidence of major changes in the ways VDOT does business is the transfer of maintenance responsibilities on some interstate highways from VDOT crews to a contracting firm—a major shift from a long

tradition of maintaining interstates with state forces.

More specifically, following a year's responsibility for maintaining 100 miles of I-95, Virginia Maintenance Services (VMSI) began, in July 1998, to maintain stretches of interstates in Southwest Virginia. These include I-81 from Tennessee to the Wytheville-Pulaski County line and most of I-77 in Virginia, as well as I-381 near Bristol. The contractor also provides snow removal and incident management.

VDOT has already seen improvements in highway assets as well as some cost savings through this contract. In addition, VDOT units are able to provide higher levels of service for users of primary and secondary roads in these regions.

New systems manage resources more efficiently

VDOT continues to develop new systems to manage more efficiently and economically. One of these systems is for a roadway assets inventory called the Inventory and Condition Assessment System (ICAS). The firm of Parsons Brinckerhoff is taking a high-tech inventory of VDOT's 60,000 miles of highway assets for ICAS by using satellites in the sky as well as technicians on the ground. The effort will produce geo-referenced databases. The inventory, begun in a pilot project in Fairfax, Fauquier, and Augusta counties, is continuing.

A financial management system has, after four years of development, modernized VDOT's purchasing and accounting systems. Known as FMS-II, the system is now producing reports in formats useful to managers that were unavailable before. Its services include on-line requisitions, open-to-buy contracts, inventories, payment approval, and much more.



Dr. Gerry Clemena uses one of thousands of computers necessary to the work of VDOT employees.

PC service contract is a breakthrough for savings, efficiency

Cost savings and work efficiencies are built into a contract with Halifax Technology Systems Corporation to provide personal computers for VDOT employees. The contract calls for the firm to purchase, install, maintain, and surplus PCs, in what is called a "seat-management" program.

A cost-benefit study by VDOT showed that the department has reduced its costs per desk-top unit by \$150 per year per seat. In addition, time spent waiting for purchases, installations, and repairs of PCs has been reduced markedly.

Subsequently, the VDOT seat-management program was adapted by the state Secretary of Technology for approximately 60,000 desktops in state agencies, local governments, and educational institutions.

Technology serves our business partners with project plans

Printing hundreds of sheets of plans and a proposal for each contractor who bids on a construction project is a huge task. So, early in this biennium the Construction Division began placing all of these documents on CD ROMs and making them available to all bidders.

The CDs are sold to contractors for \$10, quite a savings over the typical price of about \$75 for a set of plans and another \$25 on average for a copy of the proposal for the project.

MOVING AHEAD to

ASSIST MOTORISTS



'Smart Travel' advances assist Virginia motorists

VDOT is applying the latest in technological advances to provide real-time

motorist information, safer highways, and emergency services. Here are some examples:

Smart Tag, Virginia's electronic toll-collection system, caught on quickly in Richmond. A year after it was introduced on the Powhite Parkway Extension in 1999, almost one-third of commuters were using Smart Tag and the application rate was accelerating. Virginia first introduced Smart Tag in 1996 on the Dulles Toll Road west of Washington, D.C.

"Travel Shenandoah," or the Shenandoah Valley Advanced Traveler Information System, is a unique public-private partnership by VDOT, the Virginia Tourism Corporation, Virginia Tech's Center for Transportation Research, and the Shenandoah Telecommunications Company (Shentel). The system provides travel alerts, traffic conditions, emergency services, route guidance, food and lodging information, and tourist tips along the I-81 corridor from Lexington to Winchester.

Highwaynet.com, a joint venture begun by VDOT and EYECAS.T.com, offers commuters up-to-the-minute information on traffic conditions in Northern Virginia. The system uses traffic images from VDOT's existing network of traffic cameras and EYECAS.T's web-based, on-demand video management applications. In Highwaynet's first five days, the site had 26,248 "visitor sessions."

The **Smart Road**, the world's first real-life road laboratory, was opened this spring in Montgomery County by its builders, VDOT and the Virginia Tech

Transportation Institute. The 1.7-mile, two-lane road, which is equipped with rain- and snow-making equipment as well as sophisticated electronic measuring devices, has enormous potential for improving highway safety and for reducing the expense of roadway maintenance. Researchers from more than 100 research projects of business and government have used the road, which is expected to be an economic boon to Southwest Virginia.

VDOT prepares; Y2K bugs paralyzed



For more than three years, VDOT employees tested thousands of pieces of equipment and checked every operational system in search of the infamous "millennium bugs." Then, as the New Year began, employees were busy across the state verifying the integrity of traffic signals, toll facilities, bridges, tunnels, computer systems, et cetera!

The result? Not a glitch or a hitch in VDOT's services to the public.

I-81 safety service patrol serves Salem District motorists

A safety service patrol was established on Interstate 81 in the Roanoke and New River valleys, a service identical to those in three other Virginia transportation districts where the service has been much appreciated. The patrol also will assist motorists on I-581 and the Route 220 Expressway.

Safety service patrollers help clear highways of accidents, direct emergency vehicles, and administer first aid to injured motorists at crash scenes. They also perform minor auto repairs for motorists whose vehicles have stalled.

Taking a minute to look back as we move ahead:

A century of impressive progress closes

The 20th century has been an amazing century in many ways, especially in transportation. In Virginia, we began this century without adequate roads or highway systems, but rather with only a disjointed assortment of deeply rutted county roads.

Now, 94 years after the State Highway Commission was established, there are well-engineered roads, smooth pavements, strong bridges, and sophisticated traffic management systems on more than 56,000 miles of state-maintained roadways in Virginia. All have contributed to the state's economic development and prosperity.

Here is a snapshot of the transportation system VDOT manages:

- 56,504 miles of interstate, primary, secondary, and frontage roads;**
- 11,787 bridges;**
- four underwater tunnels in Hampton Roads;**
- two mountain tunnels in Southwest Virginia;**
- one toll road in Northern Virginia, one in Central Virginia, and one in Southeast Virginia**
- three Smart Traffic Centers;**
- 41 rest areas and 10 welcome centers; and**
- 107 commuter parking lots.**

MOVING AHEAD to

PROTECT THE ENVIRONMENT



Environmental Specialist Senior George Janek assists future environmentalists from Potomac Elementary School.

Constructing wetlands is part of the commitment to the ecology

Statewide, VDOT has more than 100 acres of new wetlands under construction. In addition, another 50 acres of wetland are under design, about twice the acreage receiving impact from construction projects.

The department operates six wetland banks and is working on agreements with federal and state regulatory agencies for three more. The acreage in these banks reduces delays in permit acquisition and roadway construction by being available before they are needed to replace wetlands affected by construction.

Peregrine falcons are focus of special VDOT care

The department placed peregrine falcon nesting boxes on eight bridges in the biennium. In six of those boxes, young falcons were hatched, and eight of the young birds have been relocated to their natural habitat in the Shenandoah Valley. Soon, VDOT hopes to place cameras in

some of the boxes so that the falcons can be watched over the Internet as they are hatched.

On the Hampton Roads Bridge-Tunnel South Island, VDOT manages the largest nesting colony for birds on the East Coast. Nests for 75 skimmers, 1,500 common terns, and 22 gull bill terns were preserved and monitored there.

Cultural and historic resources research published on CDs

Staff from VDOT's Environmental Division and the College of William and Mary's Center for Archaeological Research have published reports from archaeological sites on a set of two compact disks. The sites, excavated across the state by the college, reflect some of the best archaeological recovery work VDOT has funded. Under the title "Preserving Virginia's Archaeology," the CDs address prehistoric and historic excavations.



Assistant Transportation Commissioner Jeff Southard holds a peregrine falcon chick in his hands during a visit to a VDOT-constructed falcon habitat atop the James River Bridge in Hampton Roads.

Meanwhile, staff from VDOT's Research Council have completed a statewide inventory of approximately 4,100 bridges that might have historic value. Results of that study have identified about 70 bridges worthy of consideration for preservation, while releasing the remaining bridges for expedited improvement projects when needed.

Compliance is a watchword

Seventeen months after VDOT established its new erosion and sediment control contractor certification requirements, VDOT and the Department of Conservation and Recreation have jointly trained and certified approximately 3,000 contractor and maintenance staff employees. As a result of this training, the erosion and sedimentation compliance record on highway construction and maintenance projects has dramatically improved from 36 percent to 93 percent.

Approvals streamlined for environmental documents

VDOT negotiated an agreement with the Federal Highway Administration to streamline the approval of approximately 90 percent of its federally required documents. The agreement—the only one of its kind in the country—ensures that high quality environmental analyses are produced in the shortest time and with the lowest cost to satisfy the requirements of federal law.

In addition, in cooperation with the state Department of Environmental Quality and the U.S. Army Corps of Engineers, VDOT has held permit training courses for its staff to help them expedite the process of obtaining environmental permits while they learn new developments in Virginia and federal regulations.

MOVING AHEAD with MAJOR PROJECTS

A few of the projects underway:

Reconstructing interstates

I-95/395/495 Springfield

Interchange – Construction began on this massive eight-year project in the Washington, D.C., area to revamp one of the busiest interchanges on the East Coast. More than 375,000 vehicles pass through this interchange daily. To accommodate this traffic during construction, new commuter parking lots, more transit options, and a unique "information store" in a shopping mall were provided. The project, one of the most complex undertaken by VDOT, includes 50 bridges within the interchange.

I-95 James River Bridge – Re-decking the aging floor of the James River Bridge in Richmond and keeping heavy north- and south-bound traffic moving was a major challenge. A committee organized by VDOT of citizens and businesses decided that work on the bridge should be done only at night to avoid traffic paralysis during business hours. Consequently, all lanes have been open during the day, and at night motorists continue to use the bridge in restricted lanes.

I-81 widening project – The unrelenting increase in traffic on Interstate 81 has been a concern for years. In 1998, the long-term project to add additional travel lanes in both directions to the four-lane interstate was begun in the Bristol area. Other projects and planning are under way to prepare this interstate for expansion throughout Virginia over the next two decades.

Promoting economic development

Route 58 – Progress toward the widening of this travel artery across the bottom of the state is being made in several locations. Approximately seven miles of construction were completed in Lee



The Springfield Interchange reconstruction project

County during the biennium, as well as eight miles of construction in Grayson County. Meanwhile, the widening of a 14-mile section of Route 58 in Patrick and Henry counties continues. Work on the Danville Bypass also is under way. At the end of the biennium, 65.6 miles were under construction in the corridor and 181 miles were in preliminary engineering stages.

Route 288 – After the biennium closed, a Public-Private Partnership Act proposal to build Route 288 was presented by APAC-Virginia, Inc. and was accepted by VDOT. Speedy completion of this route, which will extend 17.5 miles, is needed for economic development in Chesterfield, Powhatan, and Goochland counties. The agreement calls for the project to be completed in 2003, rather than 2006, as originally expected.

Coalfields Expressway – Following a comprehensive three-year study, the location of this \$1.1 billion project was determined in August of 2000. The four-lane divided highway will stretch 51 miles from Pound in Wise County through Dickenson and Buchanan counties to the West Virginia Coalfields Expressway.

Third Crossing in Hampton Roads

After a comprehensive study of alternatives by VDOT over several years, the Commonwealth Transportation Board approved a recommended location of a third crossing of Hampton Roads waterways. The board endorsed an option that doubles the I-664 Monitor-Merrimac

Memorial Bridge-Tunnel and adds connections to Craney Island and Norfolk. Final design is expected to begin in early 2001.

I-73 - This new interstate has been proposed to connect Michigan and South Carolina and states in between, including Virginia. A number of routes have been proposed through Southwest Virginia, and the Draft Environmental Impact Statement for these routes has been forwarded to the Federal Highway Administration. Public hearings on selection of a route through Virginia, or on a decision not to build a new interstate, were held in December 2000.

Promoting quality of life

A program to finance transportation-related projects around the state with federal funds has been a benefit to many Virginia communities. Under the TEA-21 legislation, VDOT awarded grants for a variety of "enhancement projects" during the biennium.

Projects included bicycle and pedestrian facilities, preservation of historic railway depots and other buildings, streetscape enhancements, and many other improvements. The Commonwealth Transportation Board awarded a total of \$37.9 million in grants for 217 projects over the past two years.

Other Events of the Biennium

Storms, floods, blizzards, but...

It was a biennium of weather blitzes! **First it was Hurricane Bonnie**, which blasted through Hampton Roads in August of 1998. But her evening's destruction was minimized by VDOT crews, who by exhausting and sleepless work restored the roadways of the region before the surge of next morning's traffic.

Then, Christmas week of 1998, ice, snow and sleet brought down trees across hundreds of Central Virginia highways. A massive effort by VDOT employees and contractors during the holidays cleared the debris and opened the roads.

Next came Floyd, a hurricane intent on delivering a knockout blow to Central and Southeast Virginia in September of 1999. At the peak of the storm, 300 roads were closed by high water or downed trees. But VDOT crews rotated on and off duty round the clock for days to get roads open again. Often employees were on duty while their own homes needed repair from the storm's damage.

And in January 2000, **an unpredicted and heavy blizzard** hit a large area of the state. It was the worst winter storm in four years. Again, VDOTers were ready, clearing the roads and repairing the damage. Citizens sent a steady stream of positive comments to the department about a good job under trying circumstances.

FINANCIAL SUMMARY

of all VDOT Special Revenue and Debt Service funds for the bienniums ending June 30, 1998 and 2000.

REVENUES

	2000	1998
State sources	\$2,443,035,039	\$2,188,249,151
Special Session sources	1,312,587,137	1,160,073,707
Federal aid	1,011,452,297	857,124,310
Toll facilities	99,110,067	85,549,693
Local sources	71,204,682	67,422,638
Interest Income	58,996,739	80,532,523
Total revenues	4,996,385,961	4,438,952,022

EXPENDITURES

Highway system acquisition and construction	2,568,523,640	2,282,768,436
Highway system maintenance	1,508,391,109	1,358,618,010
Financial assistance to localities	410,790,722	388,682,812
Mass transit assistance	219,417,758	183,578,087
Debt service expenditures	181,427,946	157,386,682
Administrative and support services	175,093,104	145,399,402
Toll facility operations	73,984,217	92,324,016
Port and port facility assistance	54,932,818	48,393,781
Other costs	36,656,100	32,805,272
Airport assistance	31,390,239	27,653,589
Capital outlay	29,925,842	30,017,639
Transfers to General Fund	13,635,895	12,633,823
Support to (from) other state agencies	(9,377,563)	(34,669,628)
Total expenditures	5,294,791,827	4,725,591,921
Revenues over (under) expenditures	(298,405,866)	(286,639,899)

Other financing sources (uses)

Bond proceeds	237,240,006	356,665,571
Escrow agent payment defeasance	0	(139,104,938)
Total other financing sources (uses)	237,240,006	217,560,633

Revenues and other sources over (under) expenditures and other uses	(61,165,860)	(69,079,266)
Beginning fund balance	723,939,989	793,019,255
Ending fund balance	\$662,774,129	\$723,939,989