



# Rocky Mount 2020 Transportation Plan

Developed by the  
Transportation Planning Division

of the

Virginia Department of Transportation

in cooperation with the

U.S. Department of Transportation, Federal Highway Administration

and the

Town of Rocky Mount

August 2002

# Rocky Mount 2020 Transportation Plan

## INTRODUCTION

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The *Rocky Mount 2020 Transportation Plan* (the Plan) was developed as a cooperative effort between the Federal Highway Administration, the Virginia Department of Transportation and the Town of Rocky Mount. The Plan is the product of a study that evaluated the transportation system in Rocky Mount and recommended a set of transportation improvements to best satisfy existing and future transportation needs. The study identified needs based on capacity, safety and engineering aspects of the transportation system.

Effective transportation systems are essential to continued economic growth and development in the Rocky Mount region as well as the Commonwealth of Virginia as a whole. Providing for the safe, effective, and efficient movement of people and goods is a basic goal of all transportation programs in Virginia. It is with this basic goal in mind, and with further consideration of environmental issues and local government transportation objectives, that this transportation plan was developed.

The Virginia Department of Transportation (VDOT) will use this Plan when evaluating requests from the Rocky Mount local government for specific transportation projects, and when implementing projects on the VDOT-maintained roadway system. The recommendations in this *Rocky Mount 2020 Transportation Plan* will also be used as part of the VDOT statewide transportation planning process to ensure that local transportation projects are compatible with and support transportation improvements both statewide and in neighboring localities.

## STUDY AREA AND THOROUGHFARE SYSTEM

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Rocky Mount is located in the heart of Franklin County. Situated in the Blue Ridge Mountains, the town has a rolling, hilly topography, with impressive mountain views to the north and west. The town sits at the crossroads of a number of primary roadways including, U.S. Route 220, and Virginia Routes 40 and 122. The metropolitan areas of Roanoke to the north and Martinsville to the south are each less than a half-hour drive from the town via Route 220. As a commercial center, the town has historically served the business needs of the surrounding agricultural community. Retail and manufacturing currently comprise the majority of the business conducted. As a government center, the town hosts municipal offices and courthouses for both the town and Franklin County.

The study area for this transportation plan coincides with the corporate limits of the Town of Rocky Mount. As part of the analysis of transportation operations and needs performed for the study, however, connectivity to facilities in surrounding Franklin County and potential extension of improvements into the County were also investigated.

A subset of the town's roadway network is designated as the urban thoroughfare system. The thoroughfare system includes roads that are functionally classified as collectors or arterials. Arterial roads serve as the major traffic-carrying facilities in the area. Collector roads carry a lesser volume of traffic and feed traffic to these arterial roadways. The focus of the Rocky Mount 2020 Transportation Plan is this thoroughfare system, but local streets were analyzed as well. In addition to roadways, improvements to the following aspects of the transportation system have been evaluated as part of this study: parking; bicycle and pedestrian facilities; intercity rail, bus, and air; transit and paratransit; taxi; and the movement of goods.

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## DEMOGRAPHIC OVERVIEW

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The recent 2000 U.S. Census reports the Town of Rocky Mount to have a population of 4,066. According to the 1990 census, the population of the town was 4,098. The Census 2000 count represents effectively no change from the 1990 count. Based on historic trends, as well as input from local officials, the town's population is expected to remain stable over the 20-year horizon of this study.

Industrial activity in Rocky Mount includes furniture, window and modular home manufacturing. Several major industrial companies located in the town include Lane Furniture, Fleetwood Homes, Mod-U-Kraf Homes, and MW Windows. As with population, employment in Rocky Mount is expected to remain constant over the 20-year horizon of this study.

## SUMMARY OF APPROACH AND ANALYSIS METHODS

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This transportation plan was developed using a process that included:

- Data Collection
- Forecasting of Future Traffic Demands
- Development of Recommendations to Address Existing and Future Transportation Needs
- Coordination with Rocky Mount Government Officials and the Public
- Environmental Overview and Transportation Plan Documentation

Recommendations for the *Rocky Mount 2020 Transportation Plan* are based on a comprehensive review of the capacity, safety, and geometry of the existing roadway system, as well as other issues that affect the area's transportation system (such as parking). In addition, and where applicable, improvements to the following other modes of transportation were evaluated: intercity rail; intercity bus; transit and paratransit; bicycle, pedestrian, and air travel. Goods movement by rail and truck were also considered in the development of transportation recommendations.

The recommendations were divided into three phases. Phase One recommendations address existing deficiencies and the most immediate transportation needs of the area. Phase Two recommendations apply to an interim year of 2010, and Phase Three recommendations are long-term projects (year 2020). Projects in all three phases are intended to accommodate travel demands to the horizon year of 2020.

## PHASE ONE: BASE YEAR (1999) RECOMMENDATIONS

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This study identified current deficiencies in the Rocky Mount transportation system. Aspects of potential deficiencies in the existing transportation system included traffic flow and safety concerns, parking, and goods movement by truck. Two projects were identified as a short-term, immediate improvement and are described below.

### Pell Avenue at Tanyard Road

Over the three-year period analyzed in the preparation of this Plan (1996 to 1998), this intersection experienced more than 10 accidents in each year. Recommended safety improvements to this intersection include consideration of disallowing right-on-red, making adjustments to the signal phasing, and installing warning signage on approaches to the intersection.

### Main Street at State Street and Grassy Hill Road

This intersection experienced 16 accidents over the three-year safety analysis period, with close to 50 percent of the accidents being rear-end collisions. Warning signage is recommended to address safety issues at this location.

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## Route 40 at Route 220

Install traffic signal on Route 40 at the Route 220 interchange ramps. This improvement is listed in the development phase of Virginia Transportation Six-Year Program (FY 2003-2008).

## PHASE TWO: INTERIM YEAR (2010) RECOMMENDATIONS

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The interim year recommendations for the Rocky Mount 2020 Transportation Plan includes three projects that are intended to address existing deficiencies but, based on projected costs, would require a number of years to plan and fund.

### Franklin Street at Floyd Avenue

Anticipated traffic volumes at this intersection will result in unacceptable levels of delay. The installation of a traffic signal at this location, pending the results of detailed traffic signal warrant studies, is recommended.

### Main Street from Floyd Avenue to State Street

To improve traffic flow through downtown Rocky Mount, upgrade and interconnect traffic signals at the intersections of Main Street and the following six crossing roads: Floyd Avenue, East Court Street, Tanyard Road, Pell Avenue (Route 40 East), Franklin Street (Route 40 West), and State Street.

### Franklin Street from Floyd Avenue to the West Corporate Limits

Widen Franklin Street to four lanes. This improvement is listed in the development phase of Virginia Transportation Six-Year Program (FY 2003-2008).

### Tanyard Road at Wray Street and Franklin County High School

This intersection experienced a total of 20 accidents over the three-year analysis period, with over 50 percent angle accidents. Because of this accident experience, and due to the fact that this location is at the entrance to a high school, a traffic signal is recommended (pending the results of detailed traffic signal warrant studies).

## PHASE THREE: FUTURE YEAR (2020) RECOMMENDATIONS

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The Phase Three 2020 recommendations in the *Rocky Mount 2020 Transportation Plan* are intended to support the mobility, economic, and business needs of the community while enhancing both the appeal and traffic operations of Rocky Mount's transportation system.

### Diamond Avenue

To support existing and planned land uses along Diamond Avenue and provide alternative access to these areas, the recommendation is to upgrade existing Diamond Avenue to meet current standards and extend it to the Route 40 Bypass described below. This alternative access is needed because the current access crosses railroad tracks that can be blocked by long, slow-moving or stopped trains.

### East-West Connector - Scuffling Hill Road

To facilitate east-west traffic flow to and from existing and planned land uses on the west side of Rocky Mount and to relieve traffic on streets in the downtown areas, the recommendation is to improve Scuffling Hill Road between Routes 40 and 220 Business to meet current urban standards with curb, gutter, and sidewalks. The roadway would remain as a 2-lane facility. The roadway would be straightened by constructing approximately 2,000 feet of roadway on new alignment midway between the west corporate limits and Main Street.

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## Route 40 Bypass

To provide for north-south travel through the region and to relieve downtown roadways in Rocky Mount, the construction of a Route 40 Bypass as a four-lane facility on new alignment is recommended.

## Tanyard Road Extended

The lack of direct east-west roadway connections in Rocky Mount results in capacity pressures at two intersections on Main Street, at Pell Avenue and at Franklin Street. While these two intersections are anticipated to be over-capacity by the year 2020, options for adding capacity are limited by right-of-way constraints. In addition, the offset nature of these two intersections make efficient operations difficult. To provide an alternative for east-west traffic to divert from these intersections and to address overall east-west roadway capacity concerns through the central portion of Rocky Mount, a two-lane connecting road from Franklin Street to Main Street is recommended. This recommendation includes the intersection improvement of Main Street and Tanyard Road/Tanyard Road Extension.

## OTHER MODES AND GOODS MOVEMENT

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In developing the *Rocky Mount 2020 Transportation Plan*, all modes of travel were considered. Either within the town itself or within an area of reasonable accessibility, Rocky Mount residents can make use of transportation by bus, air, and rail, and by bicycling and walking. Options currently not available, however, include taxi service and direct intercity bus service.

While fixed-route transit service is not provided, paratransit service is available for senior citizens and disabled citizens on Medicaid through a program operated by the non-profit Support To Eliminate Poverty (STEP). A formal VDOT ridesharing lot near the intersection of Route 40 and Route 220 is currently used by about 25 people per day. Since ridesharing can lessen traffic congestion and reduce pollution and fuel consumption, this Plan recommends monitoring informal park and ride lots and converting them to formal lots as the need becomes evident.

Pedestrian travel is encouraged in Rocky Mount. In 1999, the Town's five-year plan for sidewalk construction included the following streets: Circle Drive, Tanyard Road, Hatcher Street, Maynor Street, Wray Street, Fairlawn Drive, Donald Avenue, Knollwood Drive, and Dent Street. In June 2000, the Town completed and opened a quarter-mile walking trail in Mary Bethune Park.

The town has no bicycle lanes on its streets or dedicated bicycle paths. Bicycle travel is permitted on local roads, which are generally wide enough and carry sufficiently low traffic volumes to allow for safe bicycle travel.

Rocky Mount's last taxi company ceased operations in 1999, and service has not been re-established. Since taxis provide a means of transportation for people who either cannot afford a vehicle or cannot drive, methods to encourage such service are recommended.

The majority of goods and raw materials shipped into and out of the town is accomplished by truck. Very little use of air and rail freight transport was reported by the major industries in Rocky Mount. Commercial air service is offered at the Roanoke Regional Airport, located 25 miles to the north.

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## LOCAL PROJECTS

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Local planning goals and efforts often result in the identification of projects that are either not located on the designated thoroughfare system, or reflect improvements that are intended to support future development or affect the way that a locality is intending to grow. The improvements that result from or support these local planning initiatives are included in the transportation plan as local projects. Two local projects are included in the Rocky Mount 2020 Transportation Plan.

### School Board Road at Norfolk Southern Railroad Tracks

School Board Road currently passes under the railroad tracks at a substandard underpass. With increasing traffic, as well as substantial use by large school buses, this underpass requires reconstruction. This recommendation addresses the railroad underpass, the stream crossing, and realignment and widening of the existing road approaches to the underpass. This will improve both sight distance and safety at this location.

### Court Street from Donald Avenue to the East Corporate Limits

This local roadway is recommended for improvement to meet current urban 2-lane standards.

## ENVIRONMENTAL OVERVIEW

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An environmental overview was conducted for the projects in the *Rocky Mount 2020 Transportation Plan*. There were no environmental features identified in Rocky Mount that would preclude the implementation of any of the included recommendations.

## LOCAL COORDINATION AND CITIZEN PARTICIPATION

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The development of the *Rocky Mount 2020 Transportation Plan* included coordination meetings with local Town officials and a public meeting with citizens, local officials, and VDOT representatives.

The three coordination meetings held for this study were: (1) a kick-off meeting, (2) an existing conditions meeting, and (3) a draft recommendations meeting. The kick-off meeting, held in April 1999, enabled the project team to discuss the purpose and scope of the study, the schedule for data collection and plan preparation, and the coordination process. At the second meeting (existing conditions), held in October 2000, the project team presented the results of the base year and horizon year traffic analysis and discussed potential projects to address projected transportation needs. In March 2001, a draft set of transportation improvements was sent to Town officials and VDOT representatives for review.

A public meeting was held on January 7, 2002 to present the draft transportation plan to Town officials, citizens and other interested parties. Comments from meeting participants were considered in the development of the final Rocky Mount 2020 Transportation Plan.

## PLAN ADOPTION

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The Rocky Mount Town Council adopted the *Rocky Mount 2020 Transportation Plan* on July 8, 2002.

## ADDITIONAL INFORMATION

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Detailed information on the development of the *Rocky Mount 2020 Transportation Plan* and the study recommendations will be included in the *Rocky Mount 2020 Transportation Plan Technical Report*. This document will be available for review at the Rocky Mount Town Hall and the local library. The technical report

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will also be available in Richmond at the central office of VDOT's Transportation Planning Division, the VDOT Salem District office in Salem, and the VDOT residency office in Rocky Mount.

Projects included in the Virginia Transportation Six-Year Program (FY 2003-2008) are not part of the *Rocky Mount 2020 Transportation Plan*. The Six-Year Program can be reviewed online at <http://www.virginiadot.org>.

Information on Six-Year Program projects for the Town of Rocky Mount can also be found by contacting the VDOT Resident Engineer at the Rocky Mount Residency Office (540-586-7910).

Route	Facility Name	From	To	Road Segment Length	Recommendation	Estimated Cost [1]	Existing Typical Section	Recommended Typical Section	Average Daily Traffic			
									Year 1999	Year 2010	Year 2020	
40	Pell Avenue	at Tanyard Road		N/A	Safety improvements to intersection including prohibition of right-on-red, phasing adjustments, and installation of warning signage	\$80,000	N/A	N/A	N/A	N/A	N/A	
220 BUS	Main Street	at State Street and Grassy Hill Road		N/A	Install warning signs to address safety issues	\$6,000	[2]	N/A	N/A	N/A	N/A	
40	Route 40	Route 220		N/A	Install signal at interchange ramps	\$100,000		N/A	N/A	N/A	N/A	
40	Franklin Street	at Floyd Avenue		N/A	Install signal at intersection	\$180,000	[3]	N/A	N/A	N/A	N/A	
220 BUS	Main Street	Floyd Avenue	State Street (south end)	0.4	Upgrade and interconnect traffic signals at six locations on Main Street. Intersections include Floyd Avenue, East Court Street, Tanyard Road, Pell Avenue (Route 40 East), Franklin Street (Route 40 West), and State Street	\$1,200,000		N/A	N/A	10,600	13,100	16,000
1013	Tanyard Road	at Wray Street and high school		N/A	Install signal at intersection	\$180,000	[3]	N/A	N/A	N/A	N/A	
1004	Diamond Avenue	Franklin Street	VA 40 Bypass	1.1	Upgrade existing Diamond Avenue and extend to proposed VA 40 Bypass (0.4 miles of this improvement are located in Franklin County)	\$3,465,000	[4]	N/A	U2	2,200	2,800	3,400
40	Franklin Street	Floyd Avenue	West corporate limits	0.8	Widen existing roadway to four lanes	\$2,717,000		U2	U4	11,830	14,400	16,800
640 and 1011	East-West Connector - Scuffling Hill Road	VA 40 West	South Main Street	2.0	Develop 2-lane urban facility between Routes 40 and 220 Business. Potential corridor for much of this roadway is existing Scuffling Hill Road (includes 0.3 miles of road on new alignment to straighten connection)	\$6,300,000	[4]	N/A	U2	N/A	N/A	5,000
40	VA 40 Bypass	North Main Street	VA 40 West	2.5	Construct four-lane facility on new alignment	\$12,800,000	[5]	N/A	R4D	N/A	N/A	5,900
1013	Tanyard Road Extended	Main Street	Franklin Street	0.3	Construct two-lane connecting road from Franklin Street to Main Street	\$1,260,000	[6]	N/A	U2	N/A	N/A	N/A
649	School Board Road	at Norfolk Southern railroad tracks		N/A	Reconstruct railroad overpass, stream crossing, and realign and widen existing roadway to improve sight distance and safety (local roadway improvement)	\$1,263,000	[7.8]	R2	U2	N/A	N/A	N/A
1002	Court Street	Donald Avenue	East Corporate Limits	0.8	Improve existing alignment to U2 standards (local roadway improvement).	\$2,520,000	[4.8]	R2	U2	N/A	N/A	N/A
ESTIMATED TOTAL THOROUGHFARE SYSTEM COST						\$28,288,000	[8]					

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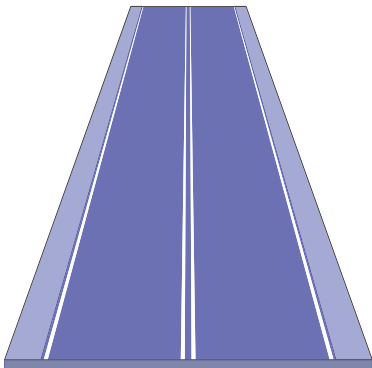
**Notes:**

- [1] The cost estimates included in this table are planning level costs in year 2000 dollars. These cost estimates are based on statewide unit cost averages and should be used for planning purposes only. Actual construction and right-of-way costs may vary based on local conditions.
- [2] The unit cost for a warning sign is \$3,000.
- [3] Assumes a total cost of equipment and installation of \$180,000 per signal.
- [4] The unit cost for this urban 2-lane roadway is assumed to be \$2.1 million per mile, with an additional 50 percent for right-of-way and utilities.
- [5] The unit cost for this rural 4-lane divided roadway is assumed to be \$4.1 million per mile, with an additional 25 percent for right-of-way and utilities.
- [6] The unit cost for this urban 2-lane roadway is assumed to be \$2.1 million per mile, with an additional 100 percent for right-of-way and utilities.
- [7] Estimated cost for reconstruction of railroad underpass is \$1.0 million, including provisions for maintaining rail traffic during construction. Realignment of approach roadway is estimated as 0.1 mile of urban 2-lane roadway at \$2.1 million per mile, with an additional 25 percent for right-of-way and utilities.
- [8] Local projects cost estimates are provided for informational purposes only in the table below, and are not included in the total cost.

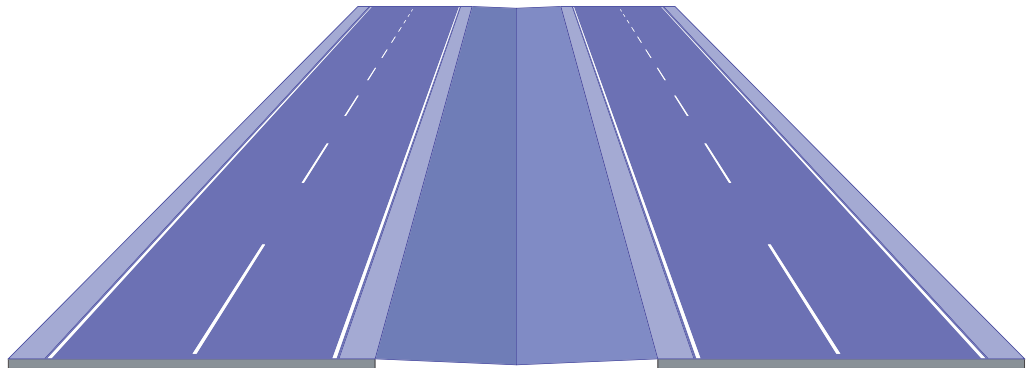
N/A -- Not applicable

## TYPICAL SECTIONS

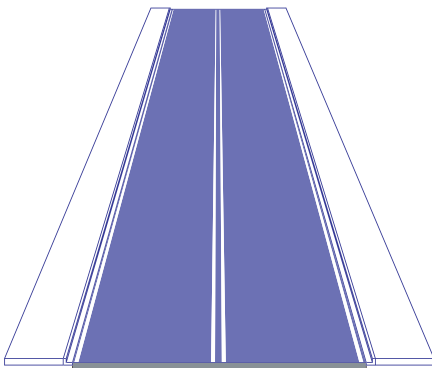
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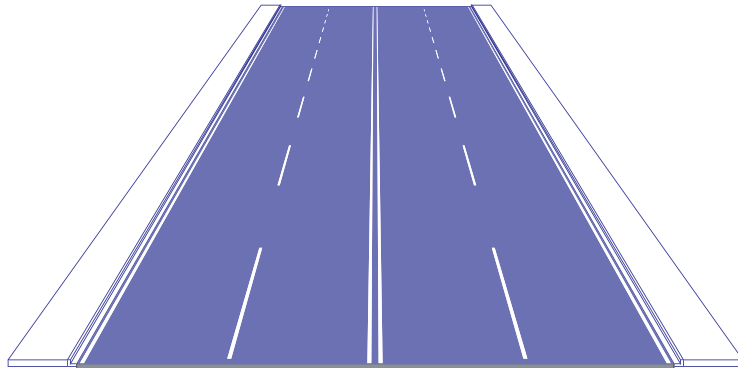
**R2**  
Rural two-lane roadway with standard shoulders



**R4D**  
Rural four-lane divided roadway with standard shoulders



**U2**  
Urban two-lane roadway with curb, gutter, and sidewalk



**U4**  
Urban four-lane roadway with curb, gutter, and sidewalk