

Bedford 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

City of Bedford

August 2002

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INTRODUCTION

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

Effective transportation systems are essential to continued economic growth and development in the Bedford region as well as 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.

VDOT will use this plan when evaluating requests from the Bedford local government for specific transportation projects, and when implementing projects on the VDOT-maintained roadway system. The recommendations in this *Bedford 2020 Transportation Plan* also will 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

The city of Bedford is located in the heart of pastoral Bedford County. Situated on the eastern slope of the Blue Ridge Mountains, the county is located in the foothills transition zone between the fertile lands of the Central Virginia Piedmont and the rugged Blue Ridge regions. Bedford sits at the crossroads of a number of primary roadways, including U.S. Route 460, U.S. Route 221, Virginia Route 122, and Virginia Route 43. The larger adjacent metropolitan areas of Roanoke to the west and Lynchburg to the east are each less than an hour's drive from Bedford via Route 460. As a commercial center, the city has historically served the business needs of the surrounding agricultural community, while in modern times, tourism, retail, and manufacturing have comprised the majority of business conducted. As a government center, Bedford is home to municipal offices and courthouses for both the city and the county.

The study area for this Plan coincides with the corporate limits of the city of Bedford. As part of the analysis of transportation operations and needs performed for the study, however, connectivity to facilities in surrounding Bedford County and potential extension of improvements into the county were also investigated.

A subset of the city's roadway network is designated by VDOT, the Federal Highway Administration, and the City of Bedford 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 the arterial roadways. The focus of the *Bedford 2020 Transportation Plan* is this thoroughfare system. The recommendations that were developed as part of the study process were limited to existing thoroughfares and/or recommendations for new thoroughfares. In addition to roadways, improvements to the following other modes of transportation have been evaluated as part of the study: parking; bicycle and pedestrian facilities; intercity rail, bus, and air travel; transit and paratransit; taxi; and the movement of goods.

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DEMOGRAPHIC OVERVIEW

The recent 2000 U.S. Census reports the city of Bedford to have a population 6,299. According to the 1990 census, the population of the city was 6,073. The Census 2000 count represents a 3.7% increase from the 1990 count. From a planning standpoint, it is assumed that population will continue to grow at a rate comparable to the current rate of growth. Using this trendline type of analysis, the city's population is expected to continue growing at a moderate rate into the foreseeable future.

Industrial activity in Bedford includes manufacturing and textile operations. The major industrial companies in the city include: Sam Moore Furniture Industries, Rubatex Inc., Smyth Company, Bedford Weaving Mills Inc., Frank Chervan Inc., Golden West Foods Inc., Wheelabrator Abrasives, Southern Flavoring, Parkway Steel Rule, and Redco. As with population, employment in Bedford is expected to grow moderately over the 20-year horizon of the study.

SUMMARY OF APPROACH AND ANALYSIS METHODS

This transportation plan was developed as part of a structured approach with five basic components:

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

Recommendations for the *Bedford 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, other modes of transportation, and goods movement).

PHASE ONE: BASE YEAR (1999) RECOMMENDATIONS

The study identified current deficiencies in the Bedford transportation system. The two projects listed below were identified as short-term, immediate improvements:

- Reconstruct Intersection of North Bridge Street, Bedford Avenue, and Jackson Street
- Improve Intersection of Blue Ridge Avenue, Old Turnpike Drive, and Woodhaven Drive

PHASE TWO: INTERIM YEAR (2010) RECOMMENDATIONS

The interim year recommendations for the *Bedford 2020 Transportation Plan* include projects that are intended to correct existing deficiencies but, based on projected costs and potential impacts, would require a number of years to plan and fund. The projects listed below were identified as interim recommendations:

- Signalize Intersection of Independence Boulevard and Orange Street
- Improve Interchange of Route 460 Bypass and Route 122 (Burks Hill Road/Crenshaw Street)
- Construct McGhee Street Overpass at Railroad
- Widen Independence Boulevard from East Main Street to Forest Road
- Construct Service Roads along Route 460 (Blue Ridge Avenue) from Baldwin Street to Woodlawn Drive
- Improve Baldwin Street from Salem Turnpike to Macon Street

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PHASE THREE: FUTURE YEAR (2020) RECOMMENDATIONS

The Phase Three recommendations in the *Bedford 2020 Transportation Plan* are intended to support the economic and business needs of the community while enhancing both the appeal and traffic operations of Bedford's downtown area. The following projects were identified as long-term recommendations:

- Improve Interchange of Route 460 Bypass and East Main Street
- Improve South Street from East Main Street to South Corporate Limits
- Extend Independence Boulevard from Forest Road to Whitfield Drive at Oakwood Street
- Construct Crenshaw Street Bypass from Burks Hill Road to West Main Street
- Extend Otey Street from East Main Street to Longwood Avenue at Peaks Street

OTHER MODES

In developing the *Bedford 2020 Transportation Plan*, all modes of travel were considered. Either within the city itself or within an area of reasonable accessibility, Bedford residents can travel by transit, taxi, air, rail, bus, and by bicycling and walking. While fixed-route transit service is not provided, paratransit service is available for senior citizens and disabled citizens through a program operated by the non-profit Central Virginia Area Agency on Aging (CVAAA).

The Plan also recommends implementation of the TransDominion rail service, which will connect Bristol with both Richmond and Washington, D.C., and serve a total of 19 stations, including Roanoke, Lynchburg, Charlottesville, Alexandria and points in between, including an unmanned station in Bedford. In conjunction with this service, a train station will be needed. The Plan recommends building it in a downtown location in the vicinity of Bridge and Depot Streets.

Most goods movement in and through Bedford is accomplished by truck. While truck flow through the city is generally adequate, several of the proposed roadway recommendations will improve truck access for shippers by reducing congestion and making turning movements easier.

LOCAL PROJECTS

The Plan supports several local projects that are designed to improve both automobile and non-automobile travel. A current joint project between the City of Bedford and Bedford County will improve connectivity between the city and the commercial area to the east in Bedford County along Route 460. This commercial area includes several retail shops, fast food restaurants, gas stations, and a Wal-Mart. The project consists of a new two-lane access road between Independence Boulevard and this commercial area, created by reconstructing existing Freedom Lane, Lowry Street and Boxwood Terrace and with an extension of Boxwood Terrace on a new alignment. In addition, City officials are planning to build a 3-mile asphalt bicycle path around the D-Day Memorial, as well as designate a marked bicycle route through the downtown area. Two sidewalk construction projects have also recently been completed. One project added 1700 feet of sidewalk along College Street while the other added three-quarters of a mile of new sidewalk along McGhee Street.

ENVIRONMENTAL OVERVIEW

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

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LOCAL COORDINATION AND CITIZEN PARTICIPATION

The development of the *Bedford 2020 Transportation Plan* included coordination meetings with local staff members and a public meeting held with citizens, City officials and VDOT representatives.

The four coordination meetings held for this study were: (1) a kick-off meeting, (2) an existing conditions meeting, and (3) two draft recommendations meetings. The kick-off meeting, held in June 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 meet projected transportation needs. During a third meeting, held April and May 2001, a draft set of transportation improvements was discussed among the project team, City officials, and VDOT representatives.

A public meeting was held January 8, 2002 to present the draft Plan to City officials, citizens, and other interested parties. Meeting participants were invited to provide comments that were considered in the development of the final *Bedford 2020 Transportation Plan*.

PLAN ADOPTION

The Bedford City Council voted to adopt the *Bedford 2020 Transportation Plan* February 12, 2002.

ADDITIONAL INFORMATION

Detailed information on the development of the *Bedford 2020 Transportation Plan* and the study recommendations will be included in the *Bedford 2020 Transportation Plan Technical Report*. This document will be available for review at the Bedford City Hall and the local library. The technical report 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 Bedford Residency office, located on Route 460 in Bedford County to the east of Bedford City.

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

Information on VTDP projects for the City of Bedford can also be found by contacting the VDOT Resident Engineer at the Bedford Residency Office (540-586-7910).

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Route	Facility Name	From	To	Road Segment Length	Recommendation	Estimated Cost [1]	Existing Typical Section	Recommended Typical Section	Average Daily Traffic		
									Year 2000	Year 2010	Year 2020
43/221/122 BUS and 902/905	Intersection of North Bridge Street, Bedford Avenue and Jackson Street			N/A	Reconstruct intersection to improve safety. Improvements include: realignment and correction of vertical geometry for Bedford Avenue approach and correction of vertical geometry for Jackson Street approach.	\$3,500,000 [2]	N/A	N/A	N/A	N/A	N/A
122 and 909	Intersection of Independence Boulevard and Orange Street			N/A	Install signal at intersection as warranted.	\$180,000 [3]	N/A	N/A	N/A	N/A	N/A
460 BYP and 122 BUS	Interchange of US 460 Bypass and VA 122 (Burks Hill Road/Crenshaw Street)			N/A	Interchange improvements including: widen both westbound and eastbound exit ramps to 2 lanes; and widen pavement on Crenshaw Street from westbound ramp to school/D-Day Memorial entrance to 4 lanes (provides for northbound left turn lane at school/Memorial entrance, southbound right turn lane at westbound Route 460 ramp, plus one northbound through lane and one southbound through lane). Improvements also include installation of interconnected traffic signals, if warranted, at eastbound ramps, westbound ramps, and school/Memorial entrance.	\$2,000,000 [2]	N/A	N/A	N/A	N/A	N/A
460 BYP and 460 BUS	Interchange of US 460 Bypass and East Main Street			N/A	Interchange improvements to resolve long-term safety and traffic flow issues. Specific improvements to be determined.	N/A [4]	N/A	N/A	N/A	N/A	N/A
460	Intersection of Blue Ridge Avenue, Old Turnpike Drive, and Woodhaven Drive			N/A	Improvements to median crossing and approaches, including Route 460 east of this intersection. Improvements include: shift median crossing to improve crossover alignment, add right and left turn lanes on Route 460 (Blue Ridge Avenue), widen westbound Route 460 from 1 to 2 lanes from the off-ramp to eastbound Route 460 Business to the on-ramp from westbound Route 460 Business.	\$1,800,000 [2]	N/A	N/A	N/A	N/A	N/A
907	McGhee Street Overpass at Railroad			N/A	Construct new overpass at railroad tracks.	\$1,500,000 [2]	N/A	N/A	560	660	766
43	South Street	East Main Street	South Corporate Limits	1.1	Improve existing alignment to U2 standards.	\$3,465,000 [5]	R2	U2	1,500	1,800	2,100
122	Independence Boulevard	East Main Street	Forest Road	1.8	Widen two-lane portions (1.4 miles) to provide continuous four-lane facility.	\$10,080,000 [6]	U2	U4	9,400	11,100	12,900

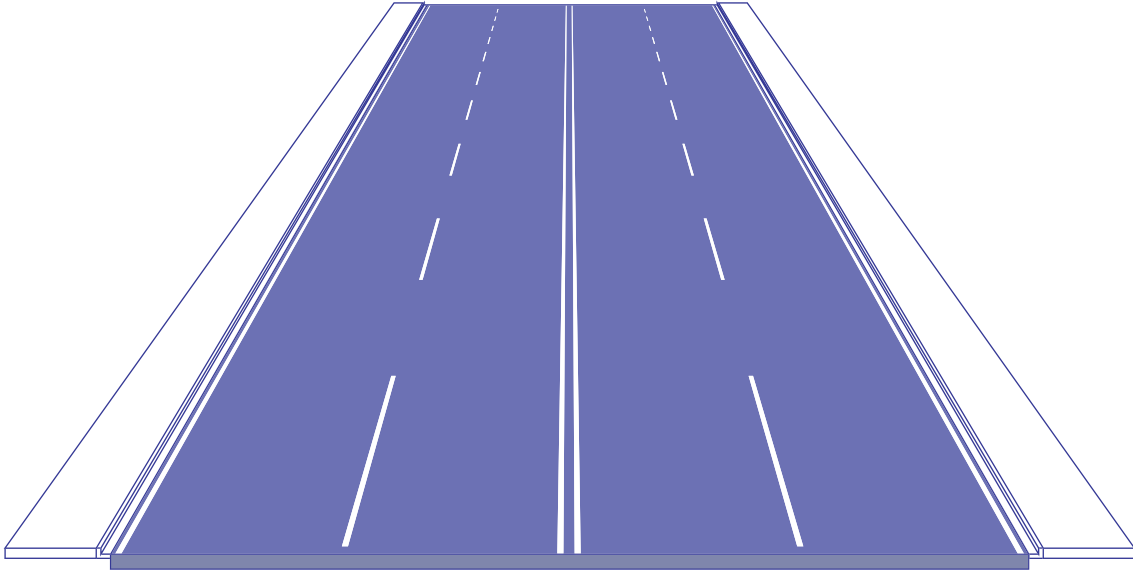
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Route	Facility Name	From	To	Road Segment Length	Recommendation	Estimated Cost [1]	Existing Typical Section	Recommended Typical Section	Average Daily Traffic		
									Year 2000	Year 2010	Year 2020
N/A	Independence Boulevard Extended	Forest Road	Whitfield Drive at Oakwood Street	0.7	Construct two-lane facility on new alignment.	\$2,205,000 [5]	N/A	U2	N/A	N/A	3,000
N/A	Crenshaw Street Bypass	Burks Hill Road	West Main Street	0.6	Construct two-lane facility on new alignment.	\$1,890,000 [5]	N/A	U2	N/A	N/A	3,200
N/A	Otey Street Extended	East Main Street	Longwood Avenue at Peaks Street	0.4	Construct two-lane facility on new alignment; includes new bridge over railroad.	\$2,142,000 [7]	N/A	U2	N/A	N/A	4,000
N/A	US 460 (Blue Ridge Avenue)	Baldwin Street	Old Turnpike Drive/ Woodhaven Drive	0.93	Construct two-lane service roads on new alignment along the North and South sides of US 460 (Blue Ridge Avenue). Access to both service roads would be via existing Baldwin Street; the north road would connect to Macon Street while and the south road would connect to Woodhaven Drive.	\$2,930,000 [5,8]	N/A	U2	23,600	36,297	53,729
N/A	Baldwin Street	Salem Turnpike	Macon Street	0.3	Improve existing alignment to U2 standards.	\$945,000 [5,8]	N/A	U2	2,000	2,300	2,600
ESTIMATED TOTAL THOROUGHFARE SYSTEM COST						\$28,762,000					

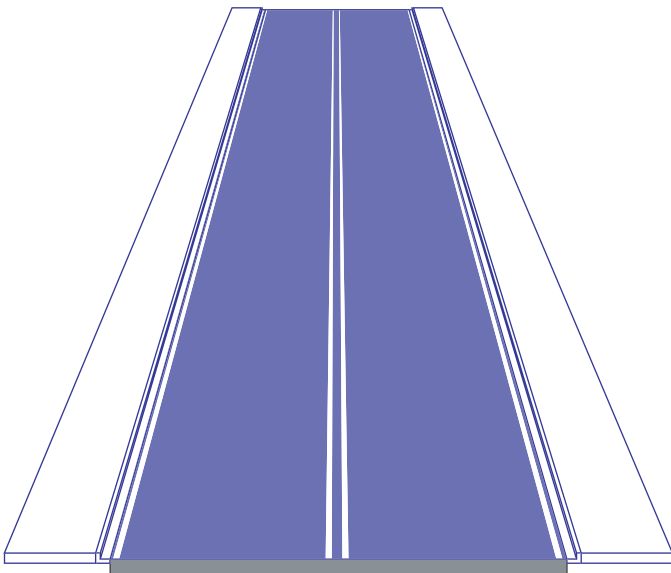
Notes:

- [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] Cost estimate developed by VDOT Bedford residency.
 - [3] Assumes a total cost of equipment and installation of \$180,000 per signal.
 - [4] Long-term improvements at this location are needed to ensure continued safe and efficient traffic operations in the future. The specifics of this improvement have not been determined at this time.
 - [5] The unit cost for an urban 2-lane roadway is assumed to be \$2.1 million per mile, with an additional 50 percent for right-of-way and utilities.
 - [6] The unit cost for an urban 4-lane roadway is assumed to be \$4.8 million per mile, with an additional 50 percent for right-of-way and utilities.
 - [7] The unit cost for an urban 4-lane roadway is assumed to be \$4.8 million per mile, with an additional 50 percent for right-of-way and utilities. Also assumes at 30-foot wide structure of 350 in length (at \$84 per square foot).
 - [8] Local improvement; not included in total thoroughfare system cost.
- N/A -- Not applicable

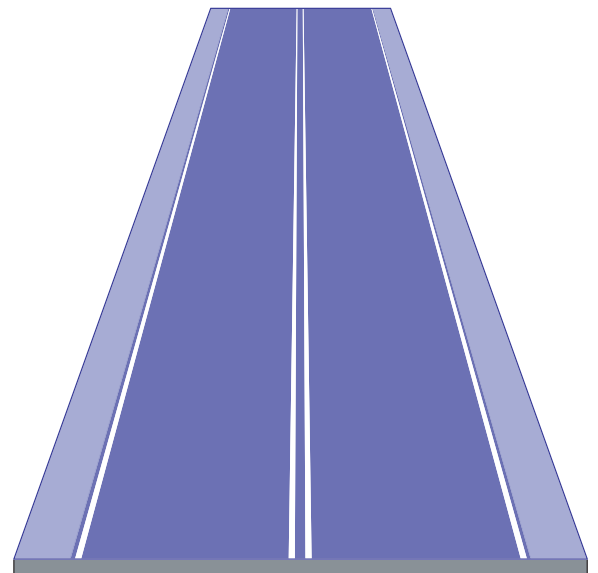
TYPICAL SECTIONS



U4
Urban four-lane roadway with curb and gutter.



U2
Urban two-lane roadway with curb and gutter.



R2
Rural two-lane roadway with standard shoulders and ditches.

Unless right-of-way considerations preclude their inclusion, sidewalks are recommended on both sides of the urban roadways.