

BIG STONE GAP 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
&
THE TOWN OF BIG STONE GAP**

February 2002

This report does not constitute a standard specification, regulation or provide a funding mechanism for the included transportation recommendations.

INTRODUCTION

The Big Stone Gap 2020 Transportation Plan was developed as a joint effort between the Virginia Department of Transportation and the Town of Big Stone Gap. The purpose of the study was to evaluate the transportation system in the Big Stone Gap area and to recommend a set of transportation improvements that could best satisfy existing and future transportation needs. This study identified needs which are based upon capacity, roadway safety, geometric conditions, and land use.

Improved transportation systems remain vital to Virginia's, as well as the local area's, continued economic growth and development. The provision for the effective, safe and efficient movement of people and goods is a basic goal of all transportation programs in the Commonwealth of Virginia. It is with this basic goal in mind, and with further consideration of environmental issues and local desires, that this transportation plan has been developed.

The Virginia Department of Transportation will use this plan when evaluating requests from the local governments for specific transportation projects and/or for implementing projects that the Department initiates. The list of recommendations will also be used in the statewide transportation planning process in order that the statewide magnitude of needs can be better quantified.

STUDY AREA THOROUGHFARE SYSTEM

The Town of Big Stone Gap is located in southwestern Wise County off US Route 23. The closest metropolitan area is Kingsport, Tennessee, 37 miles to the south. The other localities in the area are Norton, Appalachia, Duffield, and Pennington Gap. The Town lies at the confluence of Powell River and South Fork Powell River. Big Stone Gap is surrounded by Jefferson National Forest. A finite urban area was established for purposes of this transportation study, which followed the corporate limits of the Town of Big Stone Gap. The proposed annexation plans of the Town of Big Stone Gap were kept in consideration, however, it is anticipated that for any transportation improvements outside the corporate limits, appropriate discussions would have to be initiated with Wise County. These parleys are outside the scope of the current study.

Inside the study area limits, a specific set of highways that have been approved by the Virginia Department of Transportation, the Federal Highway Administration, and the Town of Big Stone Gap have been selected and designated as the area's urban thoroughfares. The urban thoroughfare system is identified as roads that are functionally classified as collectors or arterials. The subsequent analysis and recommendations were limited to those designated roadways, with the exception of any recommended facility on new location and those improvements that have been requested by representatives of Big Stone Gap on the local unclassified street system. In addition, improvements to the following other modes of transportation have been evaluated: bicycle and pedestrian facilities; intercity rail, bus and air travel; transit, paratransit, and taxi; and goods movement.

DEMOGRAPHIC OVERVIEW

The population of the Town of Big Stone Gap (2000 Population 4,856) remained unchanged from 1980 to 1990 and marginally declined since. In the past, residents of the area tended to be employed in the coal industry; however, this trend has shifted to retail and services. Some of the largest employers in Big Stone Gap and immediate vicinity are Wallens Ridge State Prison, Mountain Empire Community College, Lonesome Pine Hospital, Virginia Department of Mines, Minerals and Energy, Heritage Hall, Powell Mountain Coal Company, and Wal-Mart.

PHASE ONE: BASE YEAR ROADWAY RECOMMENDATIONS

Citywide Signal Upgrade

This transportation systems management recommendation is for Citywide Signal System Upgrade and is being addressed under the Virginia Transportation Development Plan. The estimated cost of this improvement is \$531,000 which accounts for preliminary engineering, right-of-way, and construction, and is phased over five years starting with 2001-02.

Intersection of E. 5th St. and Gilley Avenue

The east approach of the intersection has a vertical sight angle issue (between the stop line and the traffic signal head mast arm). The signage complementing the signal phasing causes confusion among the motorists and needs to be reviewed. It is recommended that the issue be addressed during the Citywide Signal System Upgrade planned under Virginia Transportation Development Plan.

Intersection of E. 5th St. and Wood Avenue

Improve right turn lane radii on the west approach at this busiest town intersection. This improvement would help to facilitate truck movements from Wood Avenue onto East 5th Street. The total cost of this improvement is estimated at \$74,000 (no additional right-of-way is anticipated).

All approaches to the intersection of E. 5th St. and Wood Avenue

Comprehensive review of on-street parking, signage, sight angles, pedestrian movement, lighting, and any driveway consolidation to address safety concerns. The total estimated cost of this improvement is \$100,000.

Access Road to Mountain Empire Community College off US 23

There is a safety issue at the access road to the Community College off US 23, especially for the left turns out of the College. Advance warning in the form of blinking amber or rotating spindle is recommended to alert the motorists. As the area is outside the corporate limits of the Town, the VDOT's Wise Residency office is encouraged to address this issue.

Gilley Avenue from E. 5th St to Hamblen St.

The two-lane section has level of service (LOS) deficiency. A center turn lane is recommended to address LOS concerns. The total cost of improvements is expected to be \$100,000 (no additional right-of-way is anticipated).

Gilley Avenue from Hamblen St. to Dogwood Avenue

Parts of this facility have deficient horizontal and vertical curves leading to safety concerns. It is recommended that Gilley Avenue be realigned, removing any geometric deficiencies. The total cost of the improvement is expected to be \$250,000.

Gilley Avenue from Dogwood Drive to Eastern Corporate Limits

While Gilley Avenue is a four-lane divided facility in the vicinity of US 23, it transitions to a two-lane roadway just east of Dogwood Drive. It is recommended that the four-lane divided section be extended to Dogwood Drive. The total cost of this improvement is estimated to be \$1,192,500 (\$795,000 for construction and \$397,500 for right-of-way).

Signage Along US 23

The billboards along US 23 conveying the information about the Coal Museum and Southwest Virginia Museum (both located in Big Stone Gap) need to be in the same place. Separation of these signboards tend to confuse a motorist whether it is one facility instead of two. Placing these signs simultaneously would clarify the issue. As the area is outside the corporate limits of the Town, VDOT's Wise Residency is encouraged to address the issue.

Bridge on Cumberland Ave

Bridge replacement is underway as part of the Virginia Transportation Development Plan. The \$1.428 million project is fully funded and is planned to be completed by 2005.

PHASE TWO: INTERIM YEAR (2010) ROADWAY RECOMMENDATIONS**E. 5th Street**

E. 5th Street between Wood Avenue and Aviation Road (0.3 miles) is currently a three-lane facility with center turn lane. The 2010 operating conditions warrant four through lanes. If the facility is restriped for four-lanes using the existing on-street parking pavement (without acquiring additional right-of-way), then the cost is estimated to be \$18,000.

Wood Avenue - 1st Avenue - 2nd Avenue

The section of the facility from E. 5th Street to 19th Street is currently two-lanes. The 2010 operating conditions warrant four through lanes. It is recommended that a four-lane divided urban cross-section with sidewalks and curb & gutter be constructed. The total length of this facility is 1.1 miles and the improvement will have an estimated total cost of \$7.7 million (\$5.3 million for construction and \$2.4 million for right-of-way).

19th Street

The section of the facility from 2nd Avenue to 4th Avenue is currently three-lanes (center turn lane). The 2010 operating conditions warrant four through lanes. It is recommended that a four-lane divided urban cross-section with sidewalks and curb & gutter be constructed. The total length of this facility is 0.1 miles and the improvement will have an estimated total cost of \$720,000 (\$480,000 for construction and \$240,000 for right-of-way).

4th Avenue

The section of the facility from 19th Street to the East Corporate Limits is currently two-lanes. The 2010 operating conditions warrant four through lanes. It is recommended that a four-lane divided urban cross-section with sidewalks be constructed. The total length of this facility is 0.6 miles and the improvement will have an estimated total cost of \$4.32 million (\$2.88 million for construction and \$1.44 million for right-of-way). There is a 0.4 mile section of 4th Avenue between the ECL and Route 9777 that would be also be deficient in 2010. However, as this section is under the jurisdiction of Wise County, any improvements there would need to be initiated by the County. (Note - The improvement to 4th Avenue needs to be considered along with the alternative of constructing the Armory-Shawnee Connection).

Big Stone Gap Bypass

The project starts from 0.8 miles west of West Corporate Limits and terminates on US 23. It is a four-lane divided facility with partial control of access and is to be built on new location. The 3.1 mile project is part of the Route 58 Corridor Development Program. The project is currently funded for Preliminary Engineering only. The facility is expected to be in place by 2010. The project requires additional funding to the tune of \$70.732 million. (At the time of the publication of this report, the alignment for the Big Stone Gap bypass was under review. The alignment depicted in the plan may not be the most current).

19th St. Railroad Crossing

The gated crossing presents a situation of increased whistle blowing by trains leading to noise pollution. Installation of quad-gates, along with other provisions as required, would eliminate the need for whistle-blowing. The improvement is estimated to cost \$240,000.

Bridge on Gilley Avenue

The bridge over the South Fork of Powell River is proposed to be replaced in year 2010. The project is estimated to cost \$604,800.

PHASE THREE: STUDY YEAR (2020) ROADWAY RECOMMENDATIONS***E. 5th Street***

Reconstruct E. 5th Street from Aviation Road to North Corporate Limits as a four-lane urban roadway with pedestrian walkway and curb and gutter. The section of E. 5th Street (0.5 miles) is currently a three-lane facility with center turn lane. The 2020 operating conditions warrant four through lanes. The total cost of the improvement is \$3.84 million including \$2.4 million for construction and \$1.44 million for right-of-way.

Gilley Avenue

Reconstruct Gilley as a four-lane road from E. 5th St to Hamblen St. Total length of this facility is 0.1 mile. The roadway would be widened to an urban four-lane undivided cross-section with sidewalks and curb and gutter. This improvement is needed to resolve projected capacity problems in the future. The total estimated cost of this project is \$1,324,800 including the bridge replacement (\$604,000) and right-of-way (\$240,000).

Intersection of Gilley Avenue and E. 5th Street

Future conditions convey operational deficiency. The addition of an exclusive left turn lane on southbound E. 5th Street would resolve the problem. The total cost of this improvement is estimated at \$90,000 (no right-of-way acquisition is anticipated).

Intersection of Gilley Avenue and Dogwood Drive

The future operational deficiency at the intersection warrants two through lanes in each direction on Gilley Avenue. As Gilley Avenue east of Dogwood Drive is already proposed for widening to four-lanes, providing four through lanes on Gilley Avenue at the intersection is projected to cost \$274,000 (\$164,000 for construction and \$82,000 for right-of-way).

Intersection of 2nd Avenue and E. 5th Street

Provide signal at the intersection. The 2020 conditions convey operational deficiency at the presently unsignalized intersection. Estimated costs are \$180,000.

Intersection of Wood -1st Avenue and Shawnee Avenue

Provide signal at the intersection. The 2020 conditions convey operational deficiency at the presently unsignalized intersection. Estimated costs are \$180,000.

OTHER MODES OF TRANSPORTATION***Parking***

The Town of Big Stone Gap has adequate parking for its major facilities. On the four approaches of the E. 5th St. and Gilley Avenue intersection, on-street parking needs to be reviewed for safety considerations. There are no specific parking recommendations being made as part of the Big Stone Gap 2020 Transportation Plan.

Bicycle / Pedestrian

Currently there are no dedicated bicycle facilities within the corporate limits of Big Stone Gap. Sidewalks exist on either both or one side of many of the thoroughfare roadways. Specific pedestrian facility recommendations are covered under thoroughfare improvements.

Transit, Paratransit, and Taxi

The Mountain Empire Older Citizens organization offers on-demand paratransit service to the senior residents of Town of Big Stone Gap and surrounding areas. The area is also served by Taxi service, provided by private companies. No specific recommendations associated with transit, paratransit, and taxi services are being made as part of this plan.

Goods Movement

There are no specific improvements related to goods movement. Improvement in turning radius for trucks at the intersection of E. 5th St. and Gilley Avenue is covered under thoroughfare improvements. The Big Stone Gap bypass project is expected to reduce truck traffic on the town streets.

Intercity Rail, Bus and Air Travel

Currently, there is no intercity passenger rail service, bus service, or air service located in the Town of Big Stone Gap. The passenger bus service is available from Greyhound Bus Lines in Kingsport, Tennessee, 35 miles south, or Abingdon, Virginia, approximately 60 miles southeast. Kingsport, Tennessee, also houses the Tri City Airport for commercial air travel. Lonesome Pine Airport on Route 640 in Wise County provides a mix of private and corporate services to Wise, Scott, & Dickerson Counties. There is no passenger rail service located in Southwest Virginia. Even though there is a lack of intercity rail, bus and air travel facilities in the vicinity of Big Stone Gap, no improvements are recommended at this time.

LOCAL ROADWAY PROJECTS***W. 5th St. - Gilley Avenue Connection (YEAR 2010)***

The facility is designed to ease congestion in the heart of the town (E. 5th St. & Wood Avenue) and is proposed as a mini bypass. Some of the traffic commuting between the western and eastern part of the town currently using Wood Avenue, E. 5th St., and Gilley Avenue is likely to divert to the new facility. The project is proposed as a Local Initiative as both W. 5th St. and the section of Gilley Avenue are not on the thoroughfare system. The 0.2 mile long project is proposed as two-lane rural roadway (24' pavement without side-walks or curb and gutter). The project has an estimated total cost of \$250,000 (\$200,000 for construction and \$50,000 for right-of-way).

Armory Rd- E. Shawnee Avenue Connection (YEAR 2010)

The need for this facility was analyzed in relation to proposed improvements on 19th Street and 4th Avenue. The 19th Street railroad crossing has the potential of blocking emergency access to the only hospital in the Town of Big Stone Gap. Grade-separation of 19th Street was previously examined for feasibility. The proposed improvements on 4th Avenue have the potential for serious right-of-way impacts. The Armory Rd- E. Shawnee Avenue connection provides an alternative access between the central and northeastern part of the town. The facility is proposed just north of the Virginia National Guard building and then bridging over the railroad and stream to the east of the gully and gently sloping south to join E. Shawnee Avenue. A detailed feasibility study needs to be conducted for this route. If considered feasible, it would eliminate the need for improvements on 19th Street and 4th Avenue as well as provide an alternate route for emergency vehicles to access the hospital from the northeast part of the Town. The 0.4 mile long 2-lane rural roadway (24' pavement without side-walks or curb and gutter) has an estimated total cost of \$1.184 million (\$947,200 for construction and \$236,800 for right-of-way).

W. 4th St. Railroad Crossing (YEAR 2010)

Railroad warning lights are proposed for this crossing and are estimated to cost \$25,000.

E. 9th St. Railroad Crossing (YEAR 2010)

The gated crossing presents a situation of increased whistle blowing by trains leading to noise pollution. Installation of quad-gates, along with other provisions as required, would eliminate the need for whistle blowing. The improvement is estimated to cost \$240,000.

ENVIRONMENTAL OVERVIEW

An environmental overview was conducted for the Big Stone Gap roadway recommendations that included widening (providing additional travel lanes) or development of new roadway facilities. The results of the environmental overview are included in the Big Stone Gap 2020 Transportation Plan Technical Report.

LOCAL COORDINATION & CITIZEN PARTICIPATION

The development of the Big Stone Gap 2020 Transportation Plan included several coordination meetings with local staff members of the Town and a public meeting held with VDOT representatives, PDC representatives, Town officials, and residents of Big Stone Gap. For information on the transportation plan, contact the Town of Big Stone Gap or visit the project web site at <http://www.vdoturbanplans.com>.

The coordination meetings consisted of a kick-off meeting, an existing conditions meeting, a draft recommendations meeting, and the public meeting. The kick-off meeting, held on May 12, 1999, enabled the project team to discuss with local staff the purpose and scope of the study, the schedule for data collection and plan preparation, and the coordination process. The second meeting (existing conditions), held on February 3, 2000, allowed the project team to present the results of baseline and horizon year traffic analysis and also allowed local staff to communicate desired transportation needs. At the draft recommendations meeting, held on September 26, 2000, the project team presented and discussed with Town officials the draft 2020 Transportation recommendations. Input provided by the town staff was used to draft the final recommendations.

A public meeting was held at the Big Stone Gap Municipal Building on November 14, 2001. The purpose of the meeting was to present the draft recommendations to Town officials, citizens, and other interested parties, and to receive comments on the plan.

PLAN ADOPTION

The Big Stone Gap Town Council adopted the transportation plan at the council meeting held on February 12, 2002.

ADDITIONAL INFORMATION

More details on the development of the Big Stone Gap 2020 Transportation Plan and the study recommendations are available in the Big Stone Gap 2020 Transportation Plan Technical Report and the Big Stone Gap 2020 Transportation Plan website, <http://www.vdoturbanplans.com/bigstonegap.htm>.

In addition to this 2020 transportation plan for the Town of Big Stone Gap, the Virginia Transportation Development Plan (VTDP) also addresses regional transportation needs. The VTDP is a comprehensive listing of transportation projects scheduled for construction or improvement over the next six fiscal years, as well as anticipated funding allocations. More information regarding the VTDP can be obtained on the Internet at the address <http://www.vdot.state.va.us/proj/projects.html>. VTDP projects in the Town of Big Stone Gap are found by selecting Volume 1, then selecting 'Urban System' under the Bristol District. Information on VTDP projects for the Town of Big Stone Gap can also be found by contacting the VDOT Resident Engineer at the Wise Residency Office in Wise, Virginia (540-328-9331).

BIG STONE GAP TRANSPORTATION RECOMMENDATIONS

Route	Facility Name	From	To	Road Segment Length (miles)	Recommendation	Cost# (in 2000 \$)	Existing Typical Section (Width)	Recommended Typical Section (Width)	1999 ADT	2020 ADT
0023 BUS	E 5TH ST	ALT RTE 58	AVIATION RD	0.3	CITYWIDE SIGNAL UPGRADE AS PART OF VIRGINIA TRANSPORTATION DEVELOPMENT PLAN (BASE YEAR), COST INCLUDES CITYWIDE SIGNAL UPGRADE; REVIEW OF ON-STREET PARKING SIGNAGE, SIGHT DISTANCES, LIGHTING, AND DRIVEWAY CONSOLIDATION TO ADDRESS SAFETY (BASE YEAR); MAINLANE WIDENING TO 4 THROUGH LANES (2010).	572,400	U2 (56')	U4 (56')	9,650	13,450
0023 BUS	E 5TH ST	AVIATION RD	NCL BS GAP	0.5	MAINLANE WIDENING TO 4 THROUGH LANES (2020).	3,840,000	R2 (30')	U4 (48')	8,200	12,450
ALT 0058	WOOD AVE	E 1ST STREET	RTE 23 (5TH ST)	0.4	CITYWIDE SIGNAL UPGRADE AS PART OF VIRGINIA TRANSPORTATION DEVELOPMENT PLAN (COST INCLUDED IN THE FIRST LINE ITEM); REVIEW OF ON-STREET PARKING SIGNAGE, SIGHT DISTANCES, LIGHTING, AND DRIVEWAY CONSOLIDATION TO ADDRESS SAFETY CONCERNS (BASE YEAR).	31,200	U2 (60')	U2 (60')	6,600	7,200
ALT 0058	E 5TH ST	WOOD AVE	GILLEY AVE	0.2	CITYWIDE SIGNAL UPGRADE AS PART OF VIRGINIA TRANSPORTATION DEVELOPMENT PLAN (COST INCLUDED IN THE FIRST LINE ITEM); REVIEW OF ON-STREET PARKING SIGNAGE, SIGHT DISTANCES, LIGHTING, AND DRIVEWAY CONSOLIDATION TO ADDRESS SAFETY CONCERNS (BASE YEAR).	15,600	U2 (45')	U2 (45')	7,400	8,850
ALT 0058	GILLEY AVE	E 5TH ST	HAMBLEN ST	0.1	CITYWIDE SIGNAL UPGRADE AS PART OF VIRGINIA TRANSPORTATION DEVELOPMENT PLAN, (COST INCLUDED IN THE FIRST LINE ITEM) (BASE YEAR); MAINLANE WIDENING TO 3 LANES IN BASE YEAR; WIDENING TO 4 THROUGH LANES (2020). COST INCLUDES BRIDGE REPLACEMENT.	1,424,800	R2 (20')	U4 (48')	10,800	13,550
ALT 0058	GILLEY AVE	HAMBLEN ST	DOGWOOD DR	0.7	REALIGNING HORIZONTAL AND VERTICAL CURVES (BASE YEAR).	250,000	R2 (22')	R2 (24')	12,400	15,800
ALT 0058	GILLEY AVE	DOGWOOD DR	SRT614 (SCL BSG)	0.1	WIDEN TO 4 THROUGH LANES (BASE YEAR).	1,192,500	R2 (22')	U4 (48')	16,000	22,750
	WOOD AVE	RTE 23 BUS (5TH ST)	SPRING ST	0.1	CITYWIDE SIGNAL UPGRADE AS PART OF VIRGINIA TRANSPORTATION DEVELOPMENT PLAN (COST INCLUDED IN THE FIRST LINE ITEM), (BASE YEAR); REVIEW OF ON-STREET PARKING SIGNAGE, SIGHT DISTANCES, LIGHTING, AND DRIVEWAY CONSOLIDATION TO ADDRESS SAFETY CONCERNS (BASE YEAR); MAINLANE WIDENING TO 4 THROUGH LANES (2010).	487,800	U2 (56')	U4 (56')	8,650	11,450
	WOOD AVE	SPRING ST	SHAWNEE AVE E	0.1	WIDEN TO 4 THROUGH LANES (2010).	720,000	R2 (22')	U4 (48')	7,000	9,050
	WOOD-1ST AVE-2ND AVE	SHAWNEE AVE	19TH STREET	0.9	WIDEN TO 4 THROUGH LANES (2010).	6,480,000	R2 (24')	U4 (48')	10,200	13,500
	4TH AVE	19TH STREET	ECL BIG STONE	0.6	WIDEN TO 4 THROUGH LANES (2010).	4,320,000	R2 (22')	U4 (48')	8,900	12,800
	19TH STREET	2ND AVE	4TH AVE	0.1	WIDEN TO 4 THROUGH LANES (2010).	720,000	U2 (36')	U4 (48')	9,750	12,900
ALT 0058	BIG STONE GAP BYPASS	WCL BS GAP	ECL BIG STONE GAP	3.1	BIG STONE GAP BYPASS: PROJECT UNDER VIRGINIA TRANSPORTATION DEVELOPMENT PLAN (2010).	70,732,000	NONE	U4 (48')	NA	NA

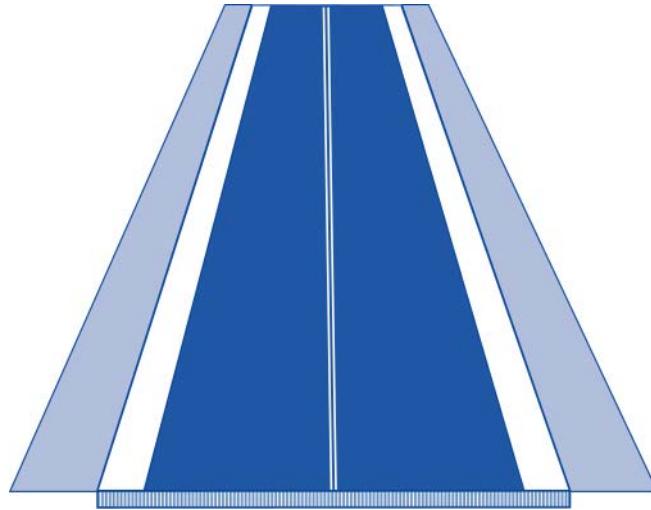
	*5TH-GILLEY CONN	W 5TH STREET	GILLEY AVE	0.2	CONSTRUCT NEW 2 LANE URBAN ROADWAY CONNECTING SOUTHERN END OF W 5TH ST TO GILLEY AVE W (2010).	250,000	NONE	R2 (24')	NA	NA
	*ARMORY RD-SHAWNEE CONN	ARMORY RD	SHAWNEE	0.4	CONSTRUCT NEW 2 LANE RURAL ROADWAY CONNECTING ARMORY RD N OF VIRGINIA NATIONAL GUARD, WITH A BRIDGE OVER THE RAILROAD, TURNING SOUTH ALONG THE HILL, AND LINKING TO SHAWNEE (2010).	1,184,000	NONE	U2 (30')	NA	NA
	INTERSECTION	WOOD AVE	E 5TH ST	NA	LOCATION HAS HIGH NUMBER OF ACCIDENTS. RECOMMENDATION COVERED UNDER THOROUGHFARE IMPROVEMENTS (BASE YEAR). WIDEN TURNING RADIUS FOR RIGHT TURN FROM EASTBOUND WOOD AVE ON TO E 5TH ST (BASE YEAR).	74,000	NA	NA	NA	NA
	INTERSECTION	GILLEY AVE	E 5TH ST	NA	SIGNAGE AND SIGNAL IMPROVEMENT FOR RIGHT TURN FROM WESTBOUND GILLEY AVE TO BE TAKEN UP WITH THE CITYWIDE SIGNAL IMPROVEMENT PROJECT IN THE VIRGINIA TRANSPORTATION DEVELOPMENT PLAN (BASE YEAR). LEFT TURN LANE TO BE ADDED TO THE SOUTHBOUND E 5TH ST (2020).	90,000	NA	NA	NA	NA
	INTERSECTION	GILLEY AVE	DOGWOOD DR	NA	LOCATION HAS HIGH NUMBER OF ACCIDENTS. RECOMMENDATIONS COVERED UNDER THOROUGHFARE IMPROVEMENTS (BASE YEAR). FOR 2020, NEED ADDITIONAL THRU LANE ON GILLEY AVE AT THE INTERSECTION ONLY.	246,000	NA	NA	NA	NA
	INTERSECTION	2ND AVE	E 5TH ST	NA	LOCATION HAS HIGH NUMBER OF ACCIDENTS. RECOMMENDATIONS COVERED UNDER THOROUGHFARE IMPROVEMENTS (BASE YEAR). PROVIDE SIGNAL IN 2020.	180,000	NA	NA	NA	NA
	INTERSECTION	WOOD-1ST AVES	SHAWNEE AVE	NA	LOCATION HAS HIGH NUMBER OF ACCIDENTS. RECOMMENDATIONS COVERED UNDER THOROUGHFARE IMPROVEMENTS (BASE YEAR). 2020 CONDITIONS WOULD WARRANT A SIGNAL.	180,000	NA	NA	NA	NA
	RAILROAD GRADE CROSSING	NORFOLK SOUTHERN RAILWAY	E 19TH ST	NA	INCREASED WHISTLE BLOWING BY TRAINS. INSTALLATION OF QUAD GATES WILL ELIMINATE THE NEED FOR WHISTLE BLOWING (2010).	240,000	NA	NA	NA	NA
	*RAILROAD GRADE CROSSING	L & N RAILROAD	W 4TH ST	NA	RAILROAD WARNING LIGHTS TO BE INSTALLED IN 2010	25,000	NA	NA	NA	NA
	*RAILROAD GRADE CROSSING	NORFOLK SOUTHERN RAILWAY	E 9 TH ST	NA	INCREASED WHISTLE BLOWING BY TRAINS. INSTALLATION OF QUAD GATES WILL ELIMINATE THE NEED FOR WHISTLE BLOWING (2010).	240,000	NA	NA	NA	NA
	BRIDGE	GILLEY AVE	SOUTH FORK POWELL RIVER	NA	FAIR TO SATISFACTORY CONDITION. REPLACEMENT RECOMMENDED IN 2020 AT THE TIME OF ROAD WIDENING. THIS COST IS ALSO INCLUDED IN ROADWAY WIDENING.	604,800	NA	NA	NA	NA
	BRIDGE	CUMBERLAND AVE	SOUTH FORK POWELL RIVER	NA	REPLACEMENT OF BRIDGE UNDERWAY THROUGH VIRGINIA TRANSPORTATION DEVELOPMENT PLAN (BASE YEAR).	1,028,000	NA	NA	NA	NA
				TOTAL*		93,429,100				

Planning level cost estimates are based on statewide averages and include estimated right of way costs.

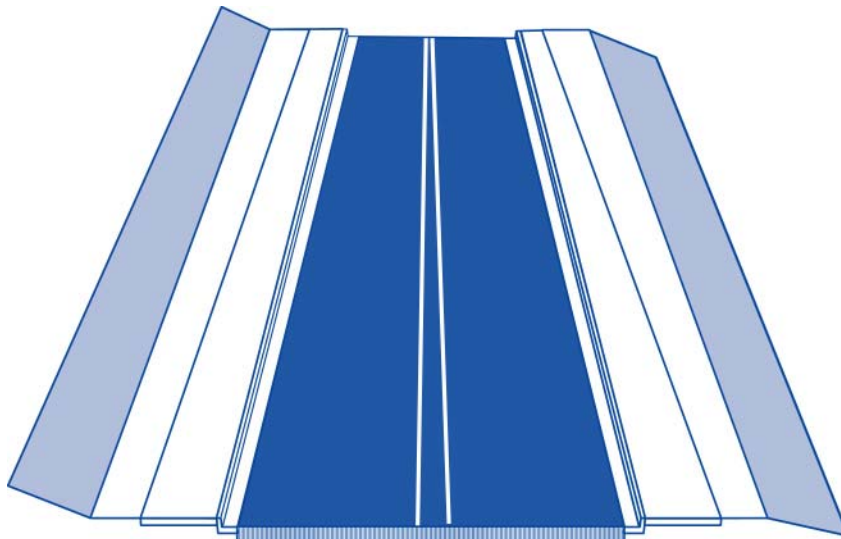
* Does not include new roadway recommendations of W. 5th – Gilley connection, Armory Rd. – E. Shawnee Connection, and improvements on the railroad crossings of W. 4th St. and E. 9th St., since they are considered to be local initiatives.

TYPICAL SECTIONS¹

R2
Rural two-lane roadway with standard shoulders and ditches

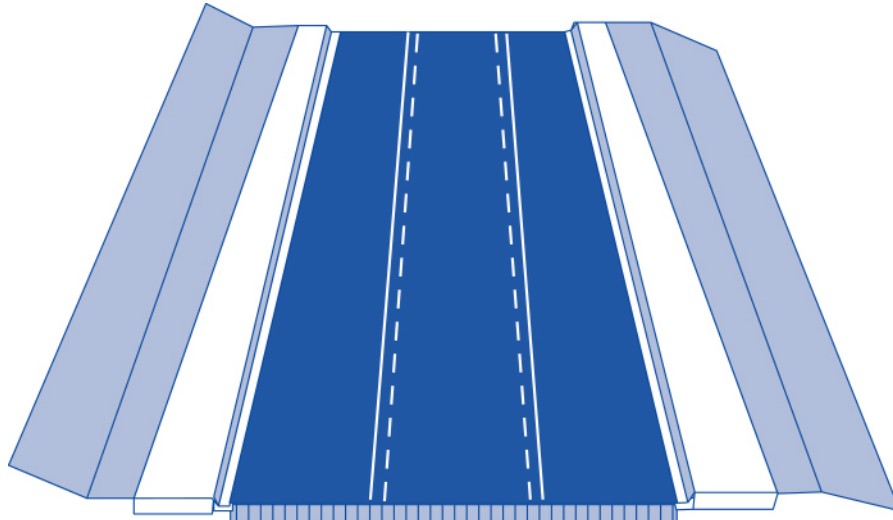


U2
Urban two-lane roadway with curb and gutter



¹ Recommended typical sections assume 12' wide travel lanes.

U3
Urban two-lane roadway with curb and gutter and center turn-lane



U4
Urban four-lane roadway with curb and gutter

