

**WYTHEVILLE 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 Wytheville

July 2001

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

INTRODUCTION

The Wytheville 2020 Transportation Plan was developed as a joint effort between the Virginia Department of Transportation (VDOT) and the Town of Wytheville. The purpose of this study was to evaluate the existing transportation system and future demand in the Town of Wytheville and to recommend a set of transportation improvements that could best meet existing and future transportation infrastructure needs.

Improved transportation systems are vital to Virginia's and to the local area's economic growth and development. Providing effective, safe, and efficient movement of people and goods is a basic goal of VDOT's transportation program. This guiding principle, together with consideration of environmental issues and local mobility needs, was the basis for the development of this transportation plan.

VDOT will use this plan when evaluating requests from the local governments for specific transportation projects and/or implementing projects that VDOT initiates. This list of recommendations will also be used in the statewide transportation planning process so that the magnitude of transportation needs statewide can be more accurately quantified.

STUDY AREA AND THOROUGHFARE SYSTEM

The Town of Wytheville is located in Wythe County in the New River Valley area of southwestern Virginia. The Town is located at the junction of Interstates 77 and 81 (I-77 and I-81), approximately 80 miles southwest of Roanoke, Virginia and 35 miles south of Bluefield, West Virginia. The Town of Wytheville contains an area of approximately 14 square miles. The downtown business district is in the vicinity of three major US Routes: US 11, US 21, and US 52.

The study area for the 2020 Transportation Plan coincided with the boundary line of the corporate limits. Within this boundary line (commonly called a cordon line), a set of specific roadways was selected and designated as the urban thoroughfares. The analysis and recommendations were limited to these urban thoroughfares and any new facilities recommended in this study.

Thoroughfares are defined as facilities that operate as arterials or collector routes. The distinction between functional classifications (arterial, collector, local street) is based on whether the facility primarily serves "through-traffic" or provides direct access to adjacent land. Thoroughfare roadways in cities and towns with populations over 5,000 have an "urban" designation and those in cities and towns with populations less than 5,000 are designated "rural".

Roadways not classified by this system, but deemed important by local governments, may be in the 2020 Transportation Plan as "non-thoroughfare" roadways. Typically, these are planned roadways or improvements that will be built with funds (public or private) other than VDOT funds.

DEMOGRAPHIC OVERVIEW

The 1990 Census indicated that the population in Wythe County was 25,466 with 8,038 of those residents living in the Town of Wytheville. Based on the 2000 Census, the Town of Wytheville population declined by three percent (to 7,804) while Wythe County overall increased by eight percent (to 27,599). Some of the growth experienced within the county occurred in the outer fringes of the Town of Wytheville. The 1995 Town of Wytheville Comprehensive Plan projects that, although the population of Wytheville has declined slightly, the Town population will grow to 9,031 by 2010.

Manufacturing is the dominant employment sector in the Town of Wytheville according to the 1997 Economic Census with 1,894 employees at 28 establishments. Retail trade has the second largest employment sector with 1,234 employees and the largest number of employment establishments with 114. With the Town of Wytheville being at the crossroads of two major interstates (I-77 and I-81), the accommodations and food services industries are an important part of the Town of Wytheville's economic base. There are nearly 50 establishments employing over 1,000 workers in this sector based on the 1997 Economic Census figures. This suggests that Wytheville's transportation system must serve both local commuting traffic as well as a significant amount of through traffic that identifies the town as a major stopping point.

SUMMARY OF APPROACH AND ANALYSIS METHODS

The development of the transportation plan followed a process that included data collection, review, and analysis. The data collected included information such as traffic counts, police accident reports, roadway geometric inventory data, bridge structural inspection reports, at-grade railroad crossing geometric data, tourism surveys, and goods movement surveys. Review and analysis of this data was combined with a review and analysis of previous transportation and land-use plans and other studies. Furthermore, meetings were held with local staff throughout the study process to gather additional input.

TRANSPORTATION RECOMMENDATIONS

Transportation recommendations are included in the plan as phased recommendations or other recommendations.

Phased recommendations are generally improvements to the VDOT-maintained roadway system and have been phased to establish a basis for prioritization. Phased recommendations are divided into three phases. Phase One recommendations are base year improvements intended to address the most immediate needs of the Town. Phase Two recommendations are interim study year (2010) improvements. Typically, these improvements are not needed in the immediate future. However, planning and budgeting for their future implementation may allow them to be in place for the interim study year of 2010. Phase Three recommendations are long-term (2020) improvements that do not have an immediate or short-term need. However, in the long-term, as traffic grows and existing facilities age, their importance will become more apparent. Long-term recommended improvements may also be re-evaluated as this plan is updated to determine if the need for their implementation has been met, or whether they should be deferred into the future again when their need may develop. In some instances, long-term recommended improvements may be removed from the transportation planning effort if their need does not develop or if other circumstances cause a change of priorities in the study area.

Other recommendations focus on parking, bicycle/pedestrian facilities, intercity rail, intercity bus, air travel, transit, paratransit, taxi, and goods movement and may include areas of special concern. These items are not typically funded as part of the urban transportation plan, but may include components addressed by any of the phased recommendations.

PHASED RECOMMENDATIONS

PHASE ONE: BASE YEAR (2001) RECOMMENDATIONS

Roadway Improvements

- There were no base year roadway improvements identified for the Town of Wytheville.

Intersection Improvements

- The intersection of 4th Street at US 11 (W Main Street) should be widened to include exclusive northbound and southbound left turn bays. The total cost of this improvement has been estimated at \$625,000.
- The intersection of Marshall Street at Chapman Road is one of the highest accident locations in the Town of Wytheville. Intersection improvements recommended include signalization, improved striping, and removal of any sight distance barriers. The total cost of this improvement has been estimated at \$180,000.

PHASE TWO: INTERIM YEAR (2010) RECOMMENDATIONS

Roadway Improvements

- Construct a new 4-lane rural roadway to extend US 11 (E Main Street) from the I-77/81 interchange to Nye Road. This project includes turn lanes at Nye Road and the use of the existing bridge structure across the interstate but requires improving the interstate ramp geometry to a traditional diamond interchange with stop controls and median crossovers where the exit ramps intersect US 11 (E Main Street). The total length of this project is 0.20 miles and the total cost has been estimated at \$2,586,000.

- Construct a new 2-lane urban roadway to extend Marshall Street from S 4th Street to US 21 (Grayson Road). This project includes improvement and re-designation of a local roadway (Railroad Avenue) as part of the Marshall Street extension as well as a new bridge over the railway. The total length of this project is 0.68 miles and the total cost has been estimated at \$4,167,000.
- Improve Peppers Ferry Road to a 4-lane urban divided roadway from 0.06 miles south of I-81 Northbound to the Wytheville ECL. This project includes replacement of the I-77 and I-81 bridge structures, bike lanes, and access management/intersection improvements at the interstate ramp junctures. The total length of this project is 1.12 miles and the total cost has been estimated at \$11,601,000.
- Construct a new 3-lane urban roadway to extend Spring Street from S 11th Street to US 11 (E Main Street), including new, coordinated signals at the US 11 (E Main Street) and 11th Street intersections. Completion of this project will allow the re-designation of Monroe and/or Spring Street as US 11, allowing current US 11 (E Main Street) to function as a local business access roadway. The total length of this project is 0.15 miles and the total cost has been estimated at \$1,960,000.

Intersection Improvements

- The intersection of US 11 (E Main Street) at Lithia Road is forecast to operate at LOS E (at-capacity) in at least one peak hour period. Recommended intersection improvements include aligning the Lithia Road approach opposite Malin Drive and signaling this intersection. The extension of US 11 (E Main Street) to Nye Road and subsequent improvements of the interstate ramp junctures should improve intersection visibility and signalized intersection spacing. The total cost of this improvement has been estimated at \$1,145,000.
- US 11 (E Main Street) from 11th Street to the I-77/81 interchange ramps (six existing signals) – Implementation of a coordinated signal system on US 11 (E Main Street) is recommended to improve vehicle platooning, provide more gaps for side-street access, and reduce signal congestion. The top two highest accident segments are on US 11 (E Main Street). The total cost of this improvement has been estimated at \$720,000.

PHASE THREE: STUDY YEAR (2020) RECOMMENDATIONS

Roadway Improvements

- Widen US 21 (Grayson Road) from the Wytheville SCL to US 21 (W Main Street) to a 4-lane urban roadway, including replacement of an existing Norfolk Southern railroad bridge. The total length of this project is 0.93 miles and the total cost has been estimated at \$6,928,000.
- Widen US 52 (N 4th Street) from Fairview Road to Wytheville WCL to a 4-lane divided rural roadway including a 16 foot median. The total length of this project is 1.46 miles and the total cost has been estimated at \$6,351,000.
- Improve Cove Road from Peppers Ferry Road to Holston Road to 2-lane urban standards. The total length of this project is 0.52 miles and the total cost has been estimated at \$1,638,000.
- Convert Spring Street from S 12th Street to US 11 (E Main Street) and Monroe Street from US 11 (West Lee Highway) to N 11th Street to one-way pairs. This will divert east-west through traffic from US 11 (E/W Main Street) onto the paired roadway system and allow US 11 (E/W Main Street) to function as a pedestrian-friendly and parking accessible downtown business street. This will also allow for further expansion of the downtown grid system. This includes signal upgrades, lane restriping, and signing on both thoroughfares and removal of on-street parking on Spring Street. The total cost has been estimated at \$1,190,000.

Intersection Improvements

- No recommendations

OTHER RECOMMENDATIONS

Parking

Year 2010 and 2020 Transportation Plan recommendations to improve access to Spring Street from US 11 (E Main Street) (2010) and to convert Spring and Monroe Streets to one-way pairs in the downtown core (2020) are designed to improve parking operations on US 11 (E/W Main Street) between 11th Street and 12th Street. These improvements will reduce through traffic volumes on US 11 (E/W Main Street), thus providing additional time and safety for parallel and angled parking maneuvers and improving access to downtown retail enterprises.

Bicycle/Pedestrian

The Town of Wytheville has a Bikeway Plan which recommends an extensive system of bicycle routes to be completed in phases. Town staff requested that specific recommendations from their Bikeway Plan be included in the 2020 Transportation Plan. Recommended bicycle routes have been included that would serve as the primary bicycle transportation facilities between Wytheville's major tourist, shopping, and employment areas. These include:

- Interstate Bicycle Route 76, which follows Peppers Ferry Road, Monroe Street, and US 11 (West Lee Highway) through Wytheville (high priority)
- N 1st Street from Main Street to Monroe Street
- Lithia/Peppers Ferry Roads Connector (Currently in the VTDP and being designed and constructed)
- Withers Road from S 11th Street to Calhoun Street
- Spring Street from S 1st Street to US 11 (E Main Street)
- Cove Road from Wythe View Drive to Mountain View Drive
- Ridge Road
- US 21 (N 4th Street) from Holston Road to Northwinds Apartments
- Holston Road
- Grayson Road from Spring Street to the Presbyterian Children's Home

These improvements should be considered for implementation as corresponding roadway improvements are designed and constructed.

Secondary bicycle routes should be identified by Town staff that would provide access to the primary bicycle routes and other destinations within and adjacent to the Town of Wytheville. These routes would be located on Town-maintained streets.

In addition to bicycle routes, sidewalks, footpaths, and multi-use recreational paths already planned for the Town of Wytheville should be prioritized into primary and secondary pedestrian transportation routes. Planned pedestrian routes adjacent to, or on, thoroughfares would be incorporated into the design of improvements to those thoroughfares.

Intercity Rail

The nearest intercity rail stop (un-staffed) is in Hinton, West Virginia (70 miles north) on the east-west rail route. A full service station on the same line is located in Prince, West Virginia (85 miles north). Nearest direct access to the north-south line is at Greensboro, North Carolina (110 miles southeast). No formal plans for initiation of rail passenger service have been announced in the region. However, feasibility studies conducted by the Virginia Department of Rail and Public Transportation in 1994 and 1997 have investigated initiation of rail passenger service between Bristol, Richmond, and Washington D.C. and included a proposed station in Wytheville. It is recommended that the Town of Wytheville support any plans that may be formalized to establish rail passenger service in the region.

Intercity Bus

Greyhound Lines bus service is located just outside Wytheville in Fort Chiswell (8 miles east) and provides regularly scheduled access to transfers nationwide. No enhancements are recommended at this time.

Air Travel

Commercial Service

Commercial flights from four regional airports within 110 miles connect Wytheville to major hubs. Commercial air passenger service is available at Roanoke Regional Airport (75 miles northeast by I-81); Tri-Cities Regional Airport in Blountville, Tennessee (82 miles southwest by I-81); Smith Reynolds Airport (85 miles southeast by I-77 and US 52) in Winston-Salem, North Carolina; and Piedmont Triad International Airport in Greensboro, North Carolina (110 miles southeast by I-77, US 52, and I-40). Airfreight and charter services are available at each of these airports.

General Aviation

The closest general aviation facilities are available at Mountain Empire Airport, which is jointly owned by Smyth and Wythe counties, located 15 miles west of Wytheville by I-81. Mountain Empire Airport has a 5,250-foot lighted runway (75 feet wide), no tower, three hangars capable of holding 30 planes, and charter and airfreight services available. The airport can be accessed from US 11 with signs on both US 11 and I-81.

No additional enhancements to air services are proposed at this time.

Transit, Paratransit, and Taxi

The Town of Wytheville currently operates the Wytheville Transit System, a public transportation system funded through the District III Governmental Cooperative, to provide service to its citizens Monday through Friday. This is a demand-response system primarily serving handicapped and elderly persons to fulfill medical, health, and shopping needs. It is recommended that Town staff evaluate current and future transit demand to determine if the existing demand response transit system should be increased to a deviated fixed route service.

A private cab company provides taxicab service to the citizens of Wytheville. Taxi service will expand at a rate influenced by the market and by local regulations.

Goods Movement

Due to its strategic location at the juncture of two major interstate highways, Wytheville is a very desirable location for commerce and industry. As a result, a large amount goods movement activity occurs within the Town. Significant truck traffic exists on US 52 (N 4th Street) near the Fairview Industrial Park and near the industrial facilities on Marshall Street. In the future, Town staff projects that Peppers Ferry Road will carry increased truck traffic because of the success of Progress Park, which is located just outside the Town boundary. There is also some concern about truck traffic using Withers Road to access US 11 (E Main Street).

A major freight line of the Norfolk Southern Corporation traverses Wytheville providing rail access between the Port of Hampton Roads, the Appalachian coalfields, and western US markets. Industry is also located in the southeast portion of Town along the railroad tracks.

Most of the truck issues will be resolved by implementing the Peppers Ferry Road, N 4th Street (from Fairview Road to the WCL), and the Marshall Street extension improvements. The Marshall Street extension should reduce east-west cut-through traffic on Withers Road by improving accessibility to the industry centers from US 11 (Main Street).

Tourism

The Tourism Department and the Chamber of Commerce manage a visitor's center. It is open Monday through Friday from 8:00 AM to 5:00 PM. The Town has a tourism marketing plan and is currently trying to attract motor coach companies, automobile associations, meetings, and conferences. Areas identified by Town staff as having significant tourist traffic, mainly on holiday weekends, are Exits 72 and 73 to/from I-81/77. There are currently no parking, pedestrian, or roadway capacity problems associated with tourism in Wytheville, therefore, no improvements are recommended at this time.

LOCAL PROJECTS

Local, or non-thoroughfare, projects are planned roadways recommended for construction based upon previously adopted land use and transportation plans and Town staff recommendations. There are no local roadway improvement projects recommended.

ENVIRONMENTAL OVERVIEW

An environmental overview was conducted for the Wytheville thoroughfare roadway recommendations that included widening (providing additional travel lanes) or development of new roadway facilities. To conduct the environmental overview, secondary data from VDOT and other readily available sources was used. Information on the environmental overview methodology can be found in the Wytheville 2020 Transportation Plan Technical Report. The following is a brief summary of potential environmental impacts:

- Relocations were identified for the Spring Street extension (S 11th Street to US 11 (E Main Street)): 2 businesses and 1 home.
- Potential wetland impacts exist with the widenings on Peppers Ferry Road, US 21 (Grayson Road), US 52 (N 4th Street), and with the Main Street extension.

These estimates are intended to represent the worst-case scenario of impacts. Further evaluation of environmental impacts resulting from each of these recommendations should occur once they are developed in more detail. Local projects included in this plan are for information purposes only and are not necessarily supported by VDOT. Therefore, they were not reviewed as part of the environmental overview. There were no additional environmental features identified in Wytheville that would preclude implementation of any of the recommendations.

LOCAL COORDINATION AND CITIZEN PARTICIPATION

The development of the Wytheville 2020 Transportation Plan included several coordination meetings with Town staff and a public meeting held with VDOT representatives, Town officials, and residents from Wytheville.

The coordination meetings consisted of a kick-off meeting, an existing conditions meeting, and a draft recommendations meeting. The kick-off meeting, held in April 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 in June 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. Finally, at the draft recommendations meeting, held in December 2000, the project team presented and discussed with Town officials the draft 2020 transportation recommendations. Town staff provided input that was then used to draft the final recommendations.

After the series of coordination meetings, a public meeting was held at the Wytheville Municipal Building on May 31, 2001. The purpose of this meeting was to present the recommendations to Town officials, citizens, and other interested parties, to receive comments on the plan, and to allow the Town council to consider adopting the plan.

PLAN ADOPTION

The Small Urban Area Transportation Plan for the Town of Wytheville was adopted by the Wytheville Town Council on July 9, 2001.

ADDITIONAL INFORMATION

More details on the development of the Wytheville 2020 Transportation Plan and the study recommendations are available in the Wytheville 2020 Transportation Plan Technical Report and at the Wytheville 2020 Transportation Plan website, <http://www.vdoturbanplans.com/Wytheville.htm>. Copies of the Technical Report are located at the Wytheville Town Library and the Wytheville Municipal Building. They are also available for review at the VDOT Transportation Planning Division at the central office in Richmond, Virginia, at the VDOT Bristol District office in Bristol, Virginia, and at the VDOT Residency office in Wytheville, Virginia.

Projects included in the Virginia Transportation Development Plan (VTDP) are not part of this recommendations package. The VTDP can be reviewed online at VDOT's website, <http://www.virginiadot.org>.

Information on VTDP projects for the Town of Wytheville can also be obtained by contacting the VDOT Resident Engineer at the Wytheville Residency office in Wytheville, Virginia (276-228-2153).

WYTHEVILLE TRANSPORTATION RECOMMENDATIONS¹

Route No	Route Name	From	To	Road Segment Length	Recommendation	Cost (Yr 2000\$)	Existing Typical Section (Width)	Recom. Typical Section (Width)	Average Daily Traffic (ADT)		
									Year 2000	Year 2010	Year 2020
US 11	E Main St	I-77/I-81 Ramps	Nye Rd	0.20	Year 2010 extend 4-lane section over I-77/I-81 (use existing bridge) to Nye Rd, including turn lanes at Nye Rd, reconfiguration of interchange ramps & median crossovers	2,586,000	-	R4D (48')	-	-	-
	Marshall St Extension	US 21 (Grayson Rd)	S 4 th St	0.68	Year 2010 construct new 2-lane urban roadway, including improvement and re-designation of Railroad Ave ² (local road) & new bridge over RR	4,167,000	-	U2 (30')	-	-	-
	Peppers Ferry Rd	0.06 Mi. S. of northbound I-81 ramps	ECL Wytheville	1.12	Year 2010 improve to 4-lane urban divided highway (primary standards) including replacement of I-81/I-77 bridges	11,601,000	U3 (36')	U4D (48')	7,800	9,100	10,500
	Spring St	S 11 th St	US 11 (E Main St)	0.15	Year 2010 construct new 3-lane roadway connecting Spring St to US 11 (E Main St), including 2 new, coordinated signals	1,960,000	-	U3 (36')	-	-	-
US 21	Grayson Rd	SCL Wytheville	W Main St	0.93	Year 2020 widen to 4-lane urban roadway & replace Norfolk Southern railway bridge	6,928,000	R2 (27')	U4 (48')	6,380	8,800	11,200
US 52	N 4 th St	Fairview Rd	WCL Wytheville	1.46	Year 2020 widen to 4-lane rural divided roadway including 16' median	6,351,000	R2 (22')	R4D (48')	8,200	9,900	11,900
	Cove Rd	Peppers Ferry Rd	Holston Rd	0.52	Year 2020 reconstruct roadway to two-lane urban standards	1,638,000	R2 (21')	U2 (30')	2,890	3,900	4,900
	Monroe St	US 11 (W Lee Hwy)	N 11 th St	0.84	Year 2020 convert to one-way street & create one-way pair with Spring St, including signal upgrades, coordination, lane re-striping and signing	636,000 ³	U2 (40')	U2 (40')	8,920	10,300	11,600
	Spring St	S 12 th St	US 11 (E Main St)	0.95	Year 2020 convert to one-way street & create one-way pair with Monroe St, including removal of on-street parking, signing, signal upgrades, & re-striping for 3-lanes	554,000 ³	U2 (48')	U3 (48')	3,490	4,200	4,900
	Intersection Improvement	N/S 4 th St	US 11 (W Main St)	N/A	Year 2001 widen intersection to include exclusive NB and SB left turn bays	625,000	N/A	N/A	N/A	N/A	N/A
	Intersection Improvement	Marshall St	Chapman Rd	N/A	Year 2001 signalize intersection, re-stripe lanes, and remove any sight distance barriers	180,000	N/A	N/A	N/A	N/A	N/A
	Intersection Improvement	US 11 (E Main St)	Lithia Rd	N/A	Year 2010 align Lithia approach opposite Malin Dr and signalize intersection	1,145,000	N/A	N/A	N/A	N/A	N/A
	Intersection Improvement	US 11 (E Main St)	I-77/I-81 to 11 th St	N/A	Year 2010 implement coordinated signal system on US 11 (E Main St) (6 signals)	720,000	N/A	N/A	N/A	N/A	N/A
Total						\$39,091,000					

¹ Only thoroughfare roadways with recommendations are shown. For a complete listing of thoroughfare roadways, please refer to the Wytheville 2020 Transportation Plan Technical Report or the Wytheville 2020 Transportation Plan website, <http://www.vdoturbanplans.com/Wytheville.htm>.

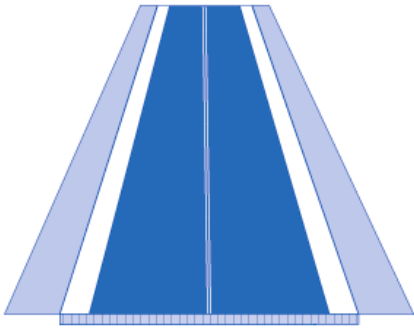
² Railroad Ave (currently a locally maintained road) will be redesignated Marshall St and added to the VDOT thoroughfare roadway system.

³ The total cost for the conversion of Monroe Street and Spring Street to one-way pairs is \$1,190,000.

TYPICAL SECTIONS

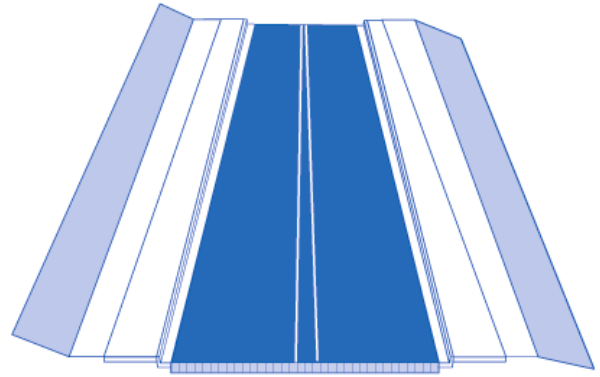
R2

Rural 2-lane roadway with standard shoulders and ditches



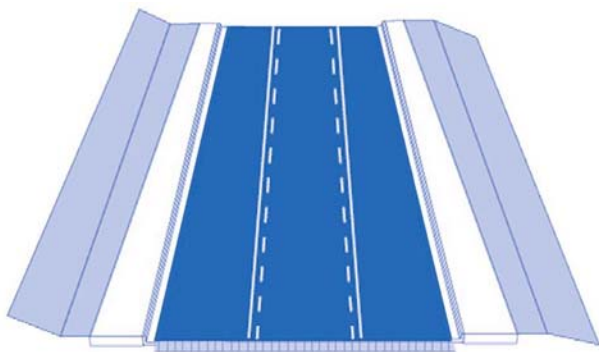
U2

Urban 2-lane roadway with curb and gutter



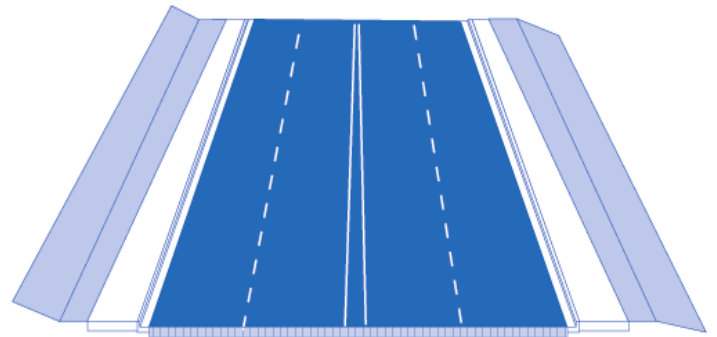
U3

Urban 2-lane roadway with curb and gutter, sidewalks and center-turn lane



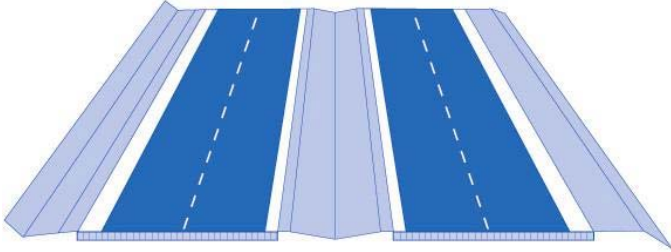
U4

Urban 4-lane roadway with curb and gutter



R4D

Rural 4-lane divided with standard shoulders and ditches



U4D

Urban 4-lane divided with curb and gutter

