



DEPARTMENT OF TRANSPORTATION POLICY AND PROCEDURES

SUBJECT: A Standard Guidance for the Installation of a Bike Route With Striped Shoulder on an Existing City of Tucson Arterial or Collector Street.	NUMBER	PAGE 1 of 3
	EFFECTIVE DATE:	
Approved by: <i>[Signature]</i> Date: 9/27/05		

1.0 Purpose

The purpose of this policy is to provide guidance for the installation of a Bike Route with Striped Shoulder on an existing City of Tucson arterial or collector street. Roadways with these classifications are identified in the City of Tucson Major Streets and Routes Plan. The following guidance is intended for resurfacing of pavement within the existing curb lines or edge of pavement and not for new construction projects.

The “Bike Route with Striped Shoulder” is a bike facility defined by the Tucson Bike Map, November 2004 Edition (published by the Pima County Department of Transportation, copyright Pima Association of Governments), and is not to be confused with a “Bike Route.” For clarification, a Bike Route is defined as located on a local street with ‘Bike Route’ signs, and a maximum speed limit of 30 mph. A Bike Route with Striped Shoulder is defined as located on a major street, with ‘Bike Route’ signs and white painted edge line on 4-foot to 10-foot wide paved shoulder, and speed limits 25 mph or greater.

This guidance is divided into three sections: Lane Widths; Signing; and Pavement Markings.

A. Lane Widths

1. The standard width for a travel lane is 12 feet; however, for roadways with limited cross section width, travel lane widths may be reduced to 11 feet in order to provide a Bike Route with Striped Shoulder. For roadways with a posted speed limit no greater than 40 mph, travel lanes with no opposing traffic in an adjacent lane may be reduced to approximately 10 feet, with approval of the Director of the Tucson Department of Transportation.
2. The standard width for turn lanes is typically 12 feet; however, turn lanes may be reduced to 10 feet where the cross section width is limited. Turn lane widths may be further reduced to 9 feet, with approval of the Director of the Tucson Department of Transportation.
3. The standard width for a Bike Route with Striped Shoulder is 5 feet, excluding the gutter pan. For major streets with limited cross-section width, the Bike Route with Striped Shoulder may be reduced to approximately 4 feet in width, including the gutter pan. The posted speed limit, presence of vertical curb, presence of gutter pan, and significance of the proposed link in the bicycle network should be taken into consideration. Typically, higher roadway speeds (e.g., posted speed greater than 40 mph) and presence of gutter pan would indicate the need for a wider Bike Route with Striped Shoulder, where the width is available.

**DEPARTMENT OF TRANSPORTATION
STREETS AND TRAFFIC MAINTENANCE DIVISION**

SUBJECT: A Guidance for the Installation of a Bike Route With Striped Shoulder on an Existing City of Tucson Arterial or Collector Street	NUMBER	PAGE 2 of 3
	PAGE ISSUE DATE	

4. When placed to the left of a Right Turn Only lane, the width of a Bike Route with Striped Shoulder should be a minimum of 5 feet. For intersections with limited cross section width, the bike route with striped shoulder may be reduced to 4 feet in width. The width may be further reduced to 3 feet for locations of very limited pavement width, based on engineering judgment.
5. While it is generally preferred to provide some striping rather than none for locations where the roadway cross section is so limited that a Bike Route with Striped Shoulder cannot be provided, a wider outside travel lane may be used. A minimum width of 14 feet, referred to as a “wide curb lane,” can enhance the safety of a roadway for bicycle traffic.
6. It is important to continue to gain the input from the Tucson-Pima County Bicycle Advisory Committee for roadway restriping proposals that include lane widths for the Bike Route with Striped Shoulder that vary from the standard.

The table below summarizes the guidelines presented above.

**Suggested Approximate Widths for Travel Lanes
and Bike Routes with Striped Shoulders on Existing Streets**

	Bike Route With Striped Shoulder	Motor Vehicle Travel Lane
Standard Width	5 feet	12 feet
Reduced Width*	4 feet	11 feet

*may be reduced further as necessary to fit into existing roadway sections. The motor vehicle lanes may be reduced to approximately 10 feet for lanes without adjacent lanes of opposing traffic with approval by the Director of the Department of Transportation. Turn lanes may be reduced to 9 feet, as necessary.

7. Bikeways, whenever feasible, should be designed to cross railroad tracks at or near right angles. Under conditions where this is not feasible, consideration should be given to installing black-on-yellow signs indicating CROSS TRACKS WITH CARE and/or other appropriate signs to alert the cyclist to exercise caution. Bike routes with striped shoulders may also be widened at these locations, as described by the AASHTO Guide for the Development of Bicycle Facilities, to allow cyclists to cross the tracks closer to a right angle while still staying within the paved shoulder.

**DEPARTMENT OF TRANSPORTATION
STREETS AND TRAFFIC MAINTENANCE DIVISION**

SUBJECT: A Guidance for the Installation of a Bike Route With Striped Shoulder on an Existing City of Tucson Arterial or Collector Street	NUMBER	PAGE 3 of 3
	PAGE ISSUE DATE	

B. Signing

1. The D11-1 (Bike Route) sign indicates bike routes within the regional bicycle system, including Bike Routes with Striped Shoulders. These signs should be placed close to signalized intersections and at approximately one-half-mile intervals along Bike Routes with Striped Shoulders. Consideration may be given to reduce sign spacing based on engineering judgment.
2. The R5-1b (Bicycle Wrong Way) and R9-3c (Ride With Traffic) signs may be considered for use on the shoulder or between the sidewalk on the back of the D11-1 signs or on existing or other signposts located at appropriate intervals.
3. Refer to the Pima County/City of Tucson Signing Manual for guidelines, practices, and standards for the design, installation and maintenance of traffic signing within the City of Tucson.

C. Pavement Markings

1. By definition, a white painted edge line installed longitudinally approximately parallel to the curb line indicates the Bike Route with Striped Shoulder. This edge should be 6 inches wide. Intersection treatments should conform with the Pima County/City of Tucson Pavement Marking Design Manual, whenever feasible.
2. Optional word or symbol legends may be used to define bicycle facilities, as described in the Manual on Uniform Traffic Control Devices. The legends, when used, may be placed at intervals and locations matching the D11-1 signing, or as otherwise identified by the Manual on Uniform Traffic Control Devices.

The AASHTO Guide for the Development of Bicycle Facilities is an additional resource for guidelines regarding design and operations of bicycle facilities.

Streets that are currently striped in a manner that does not conform to this guideline are acceptable.