ELRs are Shared Roadways

# Problem

1. Advisory bike lanes (AKA dashed bike lanes by the FHWA) are currently required to have an approved request to experiment but the FHWA has announced that they are not approving requests for experimentation (for more information, see [www.edgelaneroads.com](http://www.edgelaneroads.com)). This decision prohibits agencies from improving streets to support vulnerable road users (VRUs) and appears to subject drivers to less-safe streets (see “Safety Considerations for All Road Users on Edge Lane Roads”, Mineta Transportation Institute, March 2021, DOI: 10.31979/mti.2021.1925).
2. Classifying ELRs as bicycle lanes creates a conflict with state laws that prohibit motor vehicles from driving in bicycle lanes. ELRs are shared streets, not individual lanes attached to an existing street. Additionally, this treatment supports all types of vulnerable road users, not just bicyclists.

Question: How can an agency install an edge lane road (ELR), remain compliant with the MUTCD, avoid conflicts with state law, and do so without needing a request to experiment?

# Solution

While advisory bike lanes do not exist in the 2009 MUTCD, shared roadways do. This allows an ELR facility to be installed as a shared roadway.

To install an ELR as a shared roadway, an agency must designate and appropriately mark the street as a bicycle route. As a shared roadway, the design space becomes more flexible. An ELR with only color to indicate edge lanes without lane lines is one example of the possibilities. The process to designate a bicycle route is not defined by the MUTCD but an agency should investigate whether any laws or procedures govern this process in their jurisdiction. If an agency feels that marking the bicycle route is appropriate, the D11-1 BIKE ROUTE sign is sufficient.

If symbols are wanted within the edge lanes, the agency cannot use the symbols reserved for bicycle lanes, i.e. the bicycle symbol, the helmeted bicyclist symbol, or the words “BIKE LANE”. If the facility is intended to support bicyclists, a shared lane marking (SLM) is appropriate.

This process allows an agency to install an MUTCD-compatible shared roadway facility that functions as an ELR without the need for an approved request for experimentation.

# Are ELRs a shared roadway or a new type of bike lane?

The FHWA views ELRs as a bike lane into which drivers can move to pass an approaching vehicle, hence their use of the names dashed bike lane or advisory bike lane. This viewpoint is problematic given that the entire road is affected and driver-to-driver interactions are significantly changed. Characteristics that identify this facility as a shared roadway include:

* An ELR can only be put on streets without a centerline which only impacts MVs,
* ELRs require bidirectional motor vehicle traffic to share one lane and to negotiate to safely pass one another, even when no bicyclists are present,
* Bicyclists aren’t prohibited from using the central lane and MVs aren’t prohibited from the edge lane – everybody shares the street,
* ELRs support all types of VRUs, not just bicyclists,
* The preferred method for passing VRUs in the edge lane is for drivers to encroach into the other edge lane, when possible, to maximize horizontal clearance followed by a return to the center area.
* ELRs already exist in the US that support both bicyclists and pedestrians and some have been installed primarily to support pedestrians, and
* Advocates for vision challenged pedestrians support the ELR concept because it is a safer treatment than the standard two-lane road without ped facilities – one of these was Janet Barlow.
* ELRs have potential use on low-volume, rural roads as a treatment to reduce the rate of single-vehicle, roadway departure crashes even if no VRUs are intended to be supported.

These characteristics are not the indicators of a new type of bike lane; they are the hallmarks of a shared roadway treatment. And shared roadways are in the MUTCD.

# Explanation and Support for the Shared Roadway Approach

## What is a Shared Roadway?

On page 20 in Section 1A.13 of the 2009 MUTCD, a shared roadway is defined as:

**Shared Roadway—a roadway that is officially designated and marked as a bicycle route, but which is open to motor vehicle travel and upon which no bicycle lane is designated.**

The term occurs four other times in the MUTCD but no occurrence adds to this definition. It is clear that a shared roadway must not contain an MUTCD-defined bicycle lane.

## How does the MUTCD Define a Bicycle Lane?

On page 11 in Section 1A.13 of the 2009 MUTCD a bicycle lane is defined as:

**Bicycle Lane—a portion of a roadway that has been designated for preferential or exclusive use by**

**bicyclists by pavement markings and, if used, signs.**

On page 415 in Section 3D.01 of the 2009 MUTCD, a standard statement reads:

**C. Bicycle lane—the preferential lane-use marking for a bicycle lane shall consist of a bicycle symbol or the word marking BIKE LANE (see Chapter 9C and Figures 9C-1 and 9C-3 through 9C-6).**

In addition, on page 806 in Section 9C.04 of the 2009 MUTCD, a standard statement reads:

**Longitudinal pavement markings shall be used to define bicycle lanes.**

These standard statements require a bicycle lane, as defined by the MUTCD, to include longitudinal markings to define the lane and either the bicycle symbol, the helmeted bicyclist symbol or the words “BIKE LANE” in the lane. To avoid misinterpretation as a bicycle lane, an ELR cannot use these 3 symbols.

## What does it Mean to Designate and Mark a Bicycle Route?

On page 13 in Section 1A.13 of the 2009 MUTCD, a (designated) bicycle route is defined as:

**Designated Bicycle Route—a system of bikeways designated by the jurisdiction having authority with appropriate directional and informational route signs, with or without specific bicycle route numbers.**

On page 801 in Section 9B.21 of the 2009 MUTCD, an option statement reads:

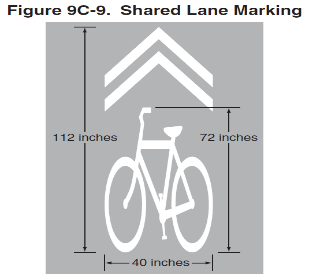
**The Bicycle Route Guide (D11-1) sign (see Figure 9B-4) may be installed where no unique designation of routes is desired.**

The MUTCD does not define the bicycle route designation procedure. If an agency wishes to mark their facility, they are allowed to mark the route with a D11-1 BIKE ROUTE sign.

## Why are Shared Lane Markings (SLMs) a Good Fit for ELRs?

On page 810 in Section 9C.07 of the 2009 MUTCD, a standard statement reads:

**Shared Lane Markings shall not be used on shoulders or in designated bicycle lanes.**

Use of an SLM affirms the edge lane’s status as something other than a bicycle lane. Additionally, the listed uses for SLMs in Section 9C.07 revolve around shared use and are an excellent description of ELR function.

Note: A commonly held but mistaken belief is that edge lanes are shoulders. Edge lanes are part of the traveled way and cannot be shoulders (see the Traveled Way definition in Section 1A.13).

# What is the Approach for an ELR that Supports Non-Bicyclists?

If an agency wishes to install an ELR that primarily supports non-bicyclists or supports other VRUs in addition to bicyclists, it should first designate and mark the street as a bicycle route to establish it as a shared roadway. It may seem contradictory to designate a street as a bicycle route if an agency is wanting to install a pedestrian facility but note that all U.S. ELRs installed for pedestrians to date are also used as de-facto bicycle facilities. And vice versa in some cases.

The agency then has to decide how to mark the edge lanes. The agency may choose to use no symbols in the edge lanes, giving maximum flexibility. The potential downside of no symbols is possible road user confusion if the edge lane width approaches the center lane width – this may occur when edge lanes are wide enough to support side-by-side bicycle riding or other uses. If an SLM or other bicycle-supportive symbol is already part of the edge lane design, the agency may add symbols indicating the other supported user types, e.g. pedestrian.

Installing an ELR intended to support pedestrians raises unresolved ADA issues. Some communities officially install them as bicycle facilities without prohibiting use by pedestrians to avoid this issue. Other communities choose to recognize that the edge lanes are an improvement, though not perfect, for all pedestrians over a two-lane configuration and recognize them as pedestrian facilities.