

# The "Share The Road" Sign

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## Introduction

This paper discusses the “Share the Road” combination sign and its misinterpretation, and proposes eliminating the supplemental “SHARE THE ROAD” plaque.

## Background

The “Share The Road” combination sign consists of the W11-1 bicycle crossing warning sign and W16-1 “SHARE THE ROAD” plaque. See Figure 1.

The Manual on Uniform Traffic Control Devices (MUTCD) says *“The Bicycle Crossing Warning (W11-1) sign alerts the road user to unexpected entries into the roadway by bicyclists, and other crossing activities that might cause conflicts. These conflicts might be relatively confined, or might occur randomly over a segment of roadway.”*

*“A supplemental plaque with the legend AHEAD or XXX METERS (XXX FEET) may be used with the Bicycle Crossing Warning sign. Bicycle Crossing Warning signs, when used at the location of the crossing, shall be supplemented with a diagonal downward pointing arrow (W16-7) plaque to show the location of the crossing.”*

*“In situations where there is a need to warn drivers to watch for bicyclists traveling along the highway, the SHARE THE ROAD (W16-1) plaque may be used in conjunction with the W11-1 sign.”*

The MUTCD also says, *“The use of warning signs should be kept to a minimum as the unnecessary use of warning signs tends to breed disrespect for all signs.”*

The Traffic Control Devices Handbook notes the following requirements of a traffic control device:

- < fulfill a need;
- < command attention;
- < convey a clear, simple meaning;
- < command respect of road users;
- < give adequate time for proper response.

The W16-1 SHARE THE ROAD plaque was originally created by the North Carolina Department of Transportation Office (now Division) of Bicycle and Pedestrian Transportation as a supplement for the already existing W11-1 warning sign. According to the North Carolina Bicycle Facilities Planning and Design Guidelines, the “share the road” sign is *“...intended to increase bicyclists’ visibility without designating the signed roadway a preferred route. It is intended for use on roadways with high levels of bicycle traffic but relatively hazardous conditions for bicyclists. Its intention is not to encourage inexperienced bicyclists to ride on the roadway as a preferred route. This sign is especially useful in cities and towns where there are large numbers of bicyclists riding on streets which are unsuitable for designation as preferred bicycle routes due to factors such as narrow lanes, high speed traffic and/or high traffic volumes.”*



**Figure 1.** The “Share The Road” sign.

## Discussion

“However beautiful the strategy, you should occasionally look at the results.”

Winston Churchill

The W16-1 SHARE THE ROAD plaque was created with admirable intentions. It is intended to broaden the W11-1 bicycle crossing warning sign into a bicyclists “...*traveling along the highway*...” sign, or in other words, a “using the road” warning sign. Since it is to be placed on roads with “...*narrow lanes, high speed traffic and/or high traffic volumes*” that by definition are not amenable to simultaneous side-by-side within-lane sharing, the SHARE THE ROAD placard must be intended to alert motorists to “share” the road sequentially with bicycle drivers, one-after-another as is done with other motorists. But how motorists, and bicyclists, interpret the sign has not been vigorously evaluated. See Appendix A for a flawed study, and my critique.

The W16-1 SHARE THE ROAD plaque has troubling ambiguities and inconsistencies, and its usefulness is questionable. There is no credible evidence to indicate that the W16-1 placard enhances the W11-1 warning sign, but there is rationale that the “share the road” message is not received as intended by some motorists, and bicyclists. The W16-1 plaque arguably does not fulfill a need, or convey a clear, simple meaning. The “share the road” message initially appears to be a positive one of cooperation, but upon closer examination it is apparent that the message can be detrimentally unclear.

There is much contradiction in NCDOT’s justification for the W16-1 SHARE THE ROAD plaque. For example, if high levels of bicycle traffic exist on a road, how can the road be presumed to be unsuitable for bicycling? Clearly, those factors such as narrow lanes, and high speed or volume traffic must not be as dangerous as supposed. Such contradiction calls into question the rationale for, and usefulness of the sign.

Whether the “share the road” combination sign, or any sign, is necessary and beneficial to warn of same direction bicyclists is debatable. There is no evidence that lawfully operating bicyclists are at great risk of being struck from behind by motorists; the low incidence of Overtaking type collisions in the statistics bears this out. This is because roads are designed with a stopping sight distance to enable motorists to come to a complete stop prior to striking a stationary object, such as another motor vehicle waiting to make a left turn. A forward moving bicyclist creates a substantial margin for error, and the motorist at most needs only to slow to the bicyclist’s speed rather than stop.



**Figure 2.** The “Share The Road” sign used on a low speed, low volume street with a bike lane is a misuse of the warning sign. S. Greensboro St., Carrboro, NC.

What does “SHARE THE ROAD” mean to motorists? The sign is intended to alert motorists to the presence of downstream bicycle users, but how are motorists supposed to share? Do motorists interpret the sign to mean “share the *lane*,” and that they are entitled to pass bicycle drivers within what is rightfully the bicyclist’s lane? Do motorists believe that the sign is directed toward bicyclists, informing them of a duty to share the lane space regardless of the lane width, number of lanes, or traffic conditions? Since the W16-1 SHARE THE ROAD placard does not target just motorists (i.e., it does not say “MOTORISTS: SHARE THE ROAD”), it can be interpreted to be directed at all road users, including bicycle drivers. Since it has a bicycle symbol, one could interpret the combination sign to mean “BICYCLISTS: SHARE THE ROAD.” Evidence indicates that some motorists do misinterpret the sign in these ways.

Drivers of motor vehicles typically share marked lane space with other motorists sequentially, one-after-another. Because a bicycle is so narrow, sharing with bicyclists has also often come to mean simultaneously, side-by-side partially or wholly within the lane depending on its width. But there are no operational advantages to bicyclists for allowing their lane space to be shared with motorists, particularly if the lane is narrow and traffic heavy. Under such conditions, experienced bicyclists do not enable sharing of their lane. They do this by assuming a more assertive lateral position

that compels motorists to slow or wait behind the bicyclist, and to change lanes to overtake. If the bicyclist uses the full lane, an established legitimate technique espoused in bicycling education courses, when the W16-1 SHARE THE ROAD sign is present, some motorists believe the bicyclist is being provocative and acting in opposition to the sign (i.e. not sharing), and find this objectionable. This can result in increased harassment toward bicyclists.

Do bicyclists misinterpret the sign to mean that the road is better for bicycling, a “...*preferred route*?” This would be in opposition to its intended meaning. Conversely, do they believe that the sign is placed only on “... *roadways with ... relatively hazardous conditions for bicyclists.*” and therefore avoid such roads? This would be a miscarriage of bicycling promotion.



R5-3

**Figure 3.** This sign, for example, is directed at motorists only, but the SHARE THE ROAD sign is universal.



**Figure 4.** Though it is a routine occurrence, there is no operational advantage to bicycle drivers for sharing their lane space. MLK Blvd., Chapel Hill, NC.

## Conclusions

The W16-1 SHARE THE ROAD plaque does not convey a clear, simple meaning as required of a traffic control device. It can be misinterpreted, to the extent of completely opposite its intended meaning by both motorists and bicyclists. The plaque also does not fulfill a definitive need, that being to warn motorists of downstream, same direction bicycle traffic. Such a need, if it exists at all, can be better accomplished with a stand alone W11-1 bicycle warning symbol.

While the W11-1 is called the “bicycle crossing” warning sign, it is unlikely that motorists understand that the sign is a warning for only bicycle crossings (hence the supplemental AHEAD or XXX FEET plaques), and are just as likely to interpret the graphic to mean that bicyclists are operating longitudinally along the segment of roadway. If it can be used to warn of crossing conflicts that “... *might occur randomly over a segment of roadway,*” it can justifiably also be used by itself along roadway segments to warn of random same direction bicycle traffic. Figure 5. Unlike the W16-1 SHARE THE ROAD plaque, any ambiguities or misinterpretations of the W11-1 bicycle graphic sign are not detrimental to bicyclists.



**Figure 5.** The W11-1 sign is sometimes used alone to warn motorists of same direction bicycle traffic. MLK Blvd., Chapel Hill, NC

A less ambiguous bicycle crossing warning sign could be patterned after the W8-6 TRUCK CROSSING sign, shown in Figure 6, instead saying BICYCLE CROSSING. Likewise, for longitudinal use, instead of SHARE THE ROAD, a clear supplemental written message that cannot be misinterpreted would be USING THE ROAD or similar. Figure 7. See Appendix B for other concept signs and discussion.



**W8-6**

**Figure 6.** A similar sign saying “BICYCLE CROSSING” would clearly indicate bicyclists are crossing the road.



**Figure 7.** It says what it means.

## Appendix A

<http://www.bicycleadvocacy.org/colorado.html>

### Executive Summary

“The Colorado Department of Transportation (CDOT) has concluded the "Share the Road" sign test study. The study was undertaken in cooperation with the Federal Highway Administration (FHWA) to determine if this new graphic and verbal message clearly send the message of bicycles and motor vehicles sharing the road, and therefore, should be considered for inclusion in the Manual for Uniform Traffic Control Devices (MUTCD).

The two-pronged study included the installation of 50 "Share the Road" signs along 64 miles of state highways along with an education campaign to inform the public about the signs and ask for their input via a written survey. The highways selected for testing the signs are narrow and have little or no shoulder which requires bicycle drivers and motor vehicle drivers to share the driving lane. The education campaign reached over a half million people through articles in The Denver Post, AAA's Rocky Mountain Motorist magazine, and the Bicycle Colorado magazine and newsletters. In addition, "Share the Road" brochures were distributed through a wide variety of outlets including the Colorado State Patrol, police and sheriff departments, bike shops and organizations, cities, counties, parks and recreation departments, schools, and trade shows.

From a CDOT maintenance perspective the signs receive mixed reviews based primarily on two test corridors where vandalism finally prevailed and no signs remain. Statewide, a total of 26% of the signs have been vandalized or removed. However, the signs on the other test corridors are relatively vandal free.

Citizens responding to the survey clearly have a more positive outlook on the sign than the vandals who removed the signs along Highway 105. In fact, 32% said the sign and the education campaign are an excellent idea and they would like to see more signs installed and the educational efforts increased. Survey responses were received from fifteen states and over fifty-five cities in Colorado and 79% of the respondents drive a motor vehicle as well as a bicycle.

The sign and the share the road message was clear to over 92% of the respondents, only 3.6% said the message was not clear. Of that minority, some were protesting having another sign on the roadway, rather than objectively assessing this sign and its message. In addition, two important benefits of this study are that 21% of the respondents now know bicyclists have the same rights and duties as motorists on Colorado roads and 76% said they will be more considerate when sharing the road.”

### Share the Road Survey Results--415 Respondents

Question ONE: I am a:

Answer Options	# of Respondents	# of Total Respondents
Motorist	59	14.2%
Bicyclist	14	3.3%
Both	329	79.2%
No response	13	3.1%

Question TWO: Prior to reading this information, did you know that bicyclists have the same rights and duties as motorists on Colorado roads?:

Answer Options	# of Respondents	# of Total Respondents
Yes	319	76.8%
No	85	20.5%
No response	11	2.7%

Question THREE: The sign and graphic clearly send the message of bicyclists and motorists sharing the road.

Answer Options	# of Respondents	# of Total Respondents
Definitely	312	75.2%
Somewhat	70	16.9%
Not at all	15	3.6%
No response	18	4.3%

Question FOUR: After reading about the intention of the Share the Road sign, will you be more considerate of bicyclists and/or motorists when sharing the roadway?

Answer Options	# of Respondents	# of Total Respondents
Definitely	260	62.6%
Somewhat	55	13.3%
Not at all	34	8.2%
No response	33	8.0%
Already am	57	13.7%

### **Critique**

The Executive Summary paints a positive picture of the sign's effectiveness, but critical examination of the study design and results suggests this is a false positive. There are at least two fatal methodological errors which render the study invalid.

First, any alleged effectiveness of the sign was confounded by the extensive publicity campaign accompanying its placement. Moreover, such a publicity campaign is a one time event, and any effectiveness of it is short lived, whereas a sign is intended as a stand-alone, long term intervention. Also, the MUTCD requires signs to "convey a clear, simple meaning." A sign shouldn't need a publicity campaign to explain its meaning.

Second, the survey sample was not an unbiased population. While the sign is intended to be an intervention to warn motorists, a very high 82.5% of survey respondents rode a bicycle. This biased population likely skewed the results: bicyclists would be expected to respond favorably to a bicycle related message. A more useful sample would have been only motorists who don't ride a bicycle, but these comprised just 14.2% of respondents. Also, the survey did not consider non-respondents. Those who chose to respond were likely interested in the subject matter.

A specific criticism involves question three, "The sign and graphic clearly send the message of bicyclists and motorists sharing the road." This question does not address what "share the road" is supposed to mean or how respondents interpreted the message. Furthermore, it was found that only 75.2% of respondents, most of whom rode a bicycle, believed that the words SHARE THE ROAD on the placard definitely clearly send the message of sharing the road!

## Appendix B

The roads and traffic law are designed to be a cooperative system without competition. The directive to COEXIST conveys this message in an unambiguous manner. The COEXIST concept sign is inclusive, depicting universal symbols for pedestrians, cars, busses/trucks, and bicyclists. It is simple and attractive.

The STREETS ARE FOR EVERYONE concept sign offers a positive affirmation while also communicating the secondary vertical SAFE message. This sign could be used as a stand alone sign, or as a supplemental plaque to the COEXIST sign. Figure 8.

A precedent setting “COEXIST” bumper sticker admonishes religious and secular tolerance. Figure 9.



**Figure 9.** The COEXIST message is widespread and universally well understood, if not practiced.

CITYWIDE WATCH FOR PEDESTRIANS signs are placed on major Chapel Hill, NC entrance ways. Figure 10. This message is weak and ambiguous. The instruction to “WATCH FOR PEDESTRIANS” is like a sight seeing phrase, as if pedestrians may suddenly appear like rare humpback whales. It does not send the message that motorists are required to yield where appropriate, or that Chapel Hill is a “pedestrian friendly” community. Further, the sign pertains to pedestrians only.

Replacing the CITYWIDE WATCH FOR PEDESTRIANS and SHARE THE ROAD signs with COEXIST and STREETS ARE FOR EVERYONE signs would reduce ambiguity, consolidate signs, and more strongly foster a unique sense of community.



**Figure 8.** COEXIST sign with optional SAFE placard developed by the Chapel Hill Bicycle and Pedestrian Board.



**Figure 10.** Currently existing sign at major entrance ways to Chapel Hill.