



## Engineering/Projects Section: Administrative Rule No. 415

### On-Street Bicycle Facility Installation

Adopted: August 2, 2008

Revised: December 9, 2010

**DEFINITIONS:** Unless defined elsewhere in this administrative rule or by common local usage, words or phrases used here which are defined in the Manual on Uniform Traffic Control Devices (MUTCD) or in the American Association of State Highway Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities shall have the same meaning as in those documents.

**PURPOSE:** This policy is intended to guide the prioritization, feasibility, and location of installation of bike lanes and sharrows in the City.

**APPLICABILITY:** All City Engineering Division staff shall abide by this policy to the maximum extent possible, in coordination with the Bicycle Pedestrian Program Manager.

#### 1. MARKING NEW BIKE LANES OR ROUTES

The City will evaluate streets functionally classified as arterial or collector streets in the most recent Missoula Urban Area Long Range Transportation Plan, not currently designated as bike lanes or routes, for designation as a bike lane or bike route. Street sections of approximately two blocks or less should be considered under section 2 (Unique Situations) below. Streets may be proposed for designation by staff, the Bicycle Pedestrian Advisory Board, elected officials, citizens, or as street maintenance is planned. The City shall solicit public comment on actions proposed commensurate with the scale of the project. Generally, documentation called for by these guidelines is the responsibility of the City.

A. Such streets should provide a reasonable connection between portions of the current bike system (lanes, routes, trails), or on an existing or potential high-use bicycle corridor.

- **Does the street segment connect parts of the current bike system with other parts or with high-use bicycle destinations?**

B. Priority consideration should be given to establishing a bike lane on the street. Bike lanes shall be designed in conformance with AASHTO and MUTCD requirements. Where practical, City Public Works seeks to exceed these minimums, recognizing that a 6-foot bike lane width adjacent to on-street parallel parking is desirable. In full consideration of the commitment to meet and, where possible exceed the AASHTO and MUTCD standards, the following factors should be evaluated and documented:

- **Is there enough room for a bike lane without changing existing vehicle lanes or parking significantly?**
- **Is there on-street parking which can be removed or reconfigured to make room for bike lanes?**

This requires a public process, in which parties affected by removal of parking are involved. An evaluation of the parking needs along the street should be provided.

- **Can the driving lanes be narrowed to create enough room for bike lanes?**  
Documentation should be provided, showing that lanes can be narrowed or why lanes cannot be narrowed. Would the change in automobile operations result in conditions considered unsafe or at an unacceptable level of service by city public works staff?

- **Can a lane be removed to create enough room for bike lanes?**

Documentation should be provided, showing that a lane can be removed or why a lane cannot be removed. Would the change in automobile operations result in conditions considered unsafe or at an unacceptable level of service by city public works staff?

C. If a bike lane cannot be established on the target road segment, the following factors should be evaluated and documented to determine if the road segment can be classified as a bike route, and thus be marked with a shared lane marking (sharrow):

- **Can a motorist safely pass slower-moving bicyclists?**

A "yes" answer would require that one of the following conditions be satisfied:

- Having at least 14 feet of width in the travel lane; or
- Two driving lanes in each direction, so a motorist may move left to pass; or
- If one lane in each direction, either no centerline or a dashed centerline. (Motorists may not legally cross a solid centerline to pass.)
- An opportunity for slower-moving bicyclists to move over within a reasonable distance.

- **Are there any uncorrectable roadway conditions, e.g. sight-distance problems or blind curves, which would create a significant jeopardy for cyclists sharing the driving lane?**

- **Will marking the roadway with sharrows create unacceptable difficulties in motor vehicle operation of the roadway?**

- **"Is the 85<sup>th</sup> percentile speed 35 mph or less?"**

Motor vehicle speeds greater than 35 mph create significant safety risks for bicyclists in the same lane. Shared lanes are typically not recommended for streets with the 85<sup>th</sup> percentile speed exceeding 35 mph.

## 2. UNIQUE SITUATIONS (generally two blocks or less)

In unique situations that may also be hazardous, which are short in length and which are not otherwise marked as bike lanes or bike routes, the City will consider using a sharrow to indicate to motorists and bicyclists that each must share the roadway with the other for a targeted distance of generally two blocks or less. In these cases, the City will evaluate the following factors to determine if a sharrow can be justified:

- **Does the situation create an unexpected conflict between motorists and bicyclists?**

For example, does a bike lane abruptly end at a bridge abutment or a where a right-turn-only lane begins with no guidance for motorists or bicyclists?

- **Will applying a sharrow increase the likelihood that motorists will accommodate bicyclists in the targeted distance, assuming responsible motorist behavior?**

- **Does applying a sharrow in the situation increase the risk to bicyclists?**

- **Does applying a sharrow in the situation create unsafe motorist operations within the targeted distance?**

## 3. PLACEMENT OF MARKINGS

A. For roadways with (a) two lanes in either direction, or (b) one lane in either direction and either no centerline or a dashed centerline:

- **With On-Street Parking.** Place the shared lane pavement markings a minimum of 11' from the face of curb in the presence of on-street parking. This distance can be increased for:

- Downhill sections (greater than 5%)
- Areas where wider vehicles park
- Where cyclists may still encounter motorists trying to pass without changing lanes, as in lanes with a combined width of 20'-21'.

- **Without on-street parking.** In any travel lane narrower than 14', recommended placement is at 4' from the face of the curb, but may be shifted further into travel lane to avoid obstacles near the curb, such as longitudinal joints or seams, depressed storm drainage facilities, etc.
- B. For roadways with one lane in each direction of travel -- either one-way or two-way with a solid centerline.
- Sharrows should be placed closer to the center of the travel lane. This placement presumes that there is no means for a motorist to safely pass cyclists. The shared lane pavement marking is therefore placed closer to the center of the travel lane so as to send a message that motorists cannot pass in the segments with the markings.
- C. Sharrows should not be placed in high-wear locations such as in the wheel track so they will not be worn off by traffic in a very short time period.
- Field judgment should determine placement as close to these guidelines as possible.
- D. Frequency of Application
- Provide one marking every 250 feet wherever practical. Place markings 50' toward the center of the roadway segment from the inside of crosswalks at both ends of the segment.

4. REPLACING EXISTING BIKE ROUTE SYMBOLS

The City will replace the "bike in the house" symbol with the sharrow symbol on all designated bike routes whenever:

- A. the street has been resurfaced, or
- B. on streets not being resurfaced but where the paint of the old symbols is sufficiently worn that applying the new symbol on those bike routes will not result in confusion.


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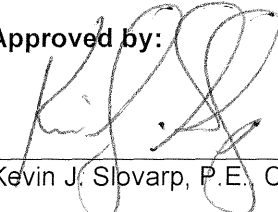
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**Approved by:**

  
 Kevin J. Slovarp, P.E., City Engineer

<b>I. For segments proposed to be included in the bike system:</b>		
A. Does the segment connect portions of the current bike system or is it on a high-use corridor?	YES NO	Proceed in this chart No action possible
B. Can a bike lane be striped on this roadway segment?		
1. Is there enough room for a bike lane to be striped without changing lanes or parking?	YES NO	Stripe with bike lanes Proceed in this chart
2. Is there on-street parking which can be removed or reconfigured to make room for bike lanes?	YES NO	Stripe with bike lanes Proceed in this chart
3. Can driving lanes be narrowed to make room for bike lanes?	YES NO	Stripe with bike lanes Proceed in this chart
4. Can one or more driving lanes be removed to make room for bike lanes?	YES NO	Stripe with bike lanes Proceed in this chart
C. If a bike lane cannot be striped on this roadway segment, can sharrows be marked?		
1. Can a motorist safely pass a slower-moving bicyclist within a reasonable distance?	YES NO	Proceed in this chart No action possible
2. Are there any uncorrectable roadway conditions which would create jeopardy for a bicyclist sharing the travel lane?	YES NO	No action possible Proceed in this chart
3. Will marking the roadway with sharrows create unacceptable difficulties in motor vehicle operation on the roadway?	YES NO	No action possible Proceed in this chart
4. Is the 85 <sup>th</sup> percentile speed under 35 mph?	YES NO	Sharrows may be installed Action possible only by admin exception
<b>II. For unique situations</b>		
1. Does the situation create an unexpected conflict between motorists and bicyclists?	YES NO	Proceed in this chart Sharrows not necessary
2. Will a sharrow increase the likelihood that motorists will accommodate bicyclists in the targeted distance?	YES NO	Proceed in this chart Sharrows not necessary
3. Does applying a sharrow in the situation increase the risk to bicyclists?	YES NO	Don't consider sharrows Proceed in this chart
4. Does applying a sharrow in the situation create unsafe motorist operation within the targeted distance?	YES NO	Don't consider sharrows Sharrows may be applied
<b>III. Other information to help with placement of markings (circle answer)</b>		
• Is there more than one lane in the direction of travel?	YES	NO
• If only one lane in direction of travel, is the centerline	nonexistent	dashed solid
• Is existing or potential bicycle use...	high	moderate low
• Is the Average Daily Traffic	under 5,000	5,001 to 10,000 10,001 to 20,000 Over 20,000