

State of Colorado

DEPARTMENT OF TRANSPORTATION
HQ Safety and Traffic Engineering Branch
4201 East Arkansas Ave., EP700
Denver, CO 80222
303.512.5134 Phone
303.757.9219 Fax



June 14, 2005

Federal Highway Administration
Office of Transportation Operations
400 Seventh Street, SW, HOTO
Washington, DC 20590

Re: Request for Permission to Experiment to Install Shared Lane Markings
U.S. 287/South College Avenue Bicycle Lane Project
CDOT Local Agency Project STE M455-063, 14363
Follow-up to February 3, 2005 letter

Dear Sir or Madam

The Colorado Department of Transportation respectfully requests permission to experiment with the installation of Shared Lane Markings on the above-referenced project. The subject pavement marking is a marking that delineates where both bicyclists and motorists share a travel lane. This symbol has recently been adopted by the California Traffic Control Devices Committee on August 12, 2004 for use on California roads. It is also our understanding that the Shared Lane Marking will be the only symbol recommended to FHWA for inclusion in the next Manual on Uniform Traffic Control Devices (MUTCD).

The following information provides some background on our project and also summarizes project information as requested in the Manual on Uniform Traffic Control Devices, Section 1A.10, Interpretations, Experimentations, Changes, and Interim Approvals.

BACKGROUND

The Colorado Department of Transportation and the City of Fort Collins have secured Transportation Enhancement funding to install bike lanes along U.S. 287 between Carpenter and Harmony Roads in the City of Fort Collins, Colorado, an approximate three mile section of state highway.

U.S. 287 currently has two lanes for vehicle travel in both the north and south directions, with a center median and left turn lanes at intersections. A shoulder area exists along the corridor length that is currently used for acceleration and deceleration at critical locations as well as by bicyclists.

The project budget is not sufficient to widen the roadway for bike lanes along the entire length of the corridor. As such, signing and striping is being planned to designate the shoulder area as a

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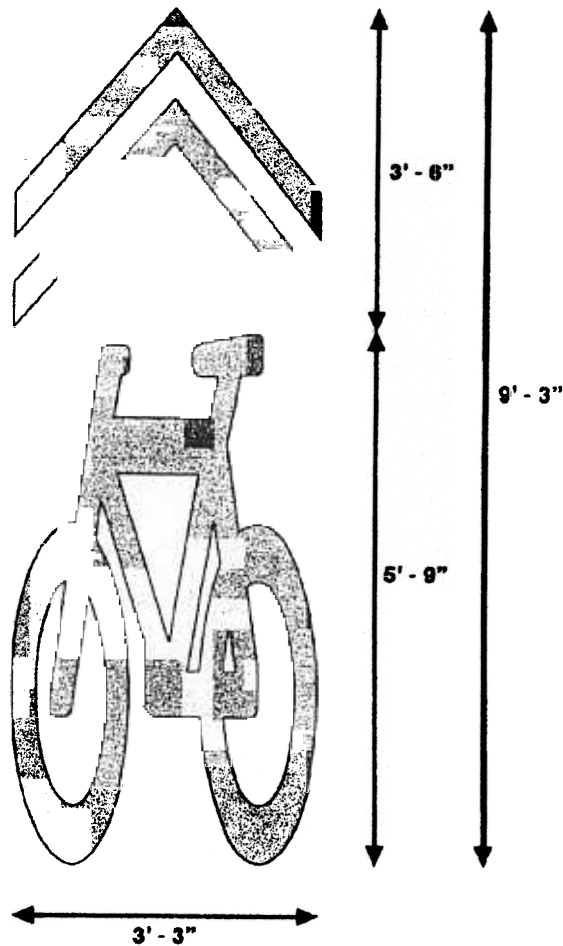
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bike lane, but in most locations where acceleration and deceleration lanes exist, the plan is to have both vehicles and bicyclists share these lanes.

REQUESTED DATA

- A. Nature of Problem** – Sufficient funding is not available to widen U.S. 287/South College Avenue at all locations where auxiliary lanes exist. Bicyclists currently use the shoulder and auxiliary lanes for travel and the application of the Shared Lane Marking is foreseen to provide a safer bicycling environment within the auxiliary lanes.
- B. Description of Proposed Experimentation** – Install the Shared Lane Marking in acceleration and deceleration lanes at critical intersections to notify motorists and bicyclists of the shared-lane concept.
- C. Shared Lane Marking Illustration** – See the adjacent figure for a representation of the proposed pavement marking.

- D. Supporting Data on Development** - The Shared Lane Marking is used in the United States (Chicago) and in Paris, France. The City of San Francisco, California, Department of Parking & Traffic, recently completed a study that compared two shared lane pavement marking symbols after researching shared vehicle/bike lane applications of other governing agencies across the United States and abroad. The study was prepared by Alta Planning + Design and the final report was completed in February, 2004 (San Francisco's Shared Lane Pavement Markings: Improving Bicycle Safety). The project team recommended that "the bike-and-chevron marking be used as a standard marking for shared-use lanes on appropriate streets in San Francisco." The symbol has subsequently been adopted by the California Traffic Control Devices Committee on August 12, 2004 for use on California roads.



- E. Patent/Copyright Protection** – It is unknown whether the Shared Lane Marking is copyrighted. Since this marking has been used in other cities, our judgment is that there is not a patent or copyright protection for this symbol.
- F. Time Period** – The time period for experimentation is one year beginning about July, 2005. The location for the experimentation is along U.S. 287, between Carpenter and Harmony Roads in the City of Fort Collins, Colorado.
- G. Research and Evaluation Plan** – The Colorado Department of Transportation, in concert with the City of Fort Collins, will oversee the evaluation and monitoring of the experiment. The following summarizes the planned evaluation and monitoring program:

The research will employ a Baseline-Across-Sites design. The plan includes an initial baseline study of the effectiveness of bike lane markings installed at critical locations where both vehicles and bicyclists share acceleration and deceleration auxiliary lanes and shoulders.

The City of Ft. Collins proposes to videotape critical locations for a 2-hour period during AM and PM peak hours on weekdays and again on weekends at regular 3-month intervals throughout the experimentation period. The video logs will then be analyzed to measure the following occurrences:

1. The percent wrong-way bicycling (scored from videotapes from a number of pre-selected sites along the route).
2. Percent of bicyclists riding in the bicycle lane vs. in the vehicle lane or on the sidewalk.
3. Lateral distance between motor vehicles and the bicycle lane.
4. Distance between cyclists and parked vehicles.
5. Conflicts between bicycles and motor vehicles that require evasive action such as sudden braking or direction changes to avoid a crash. Conflicts would be measured at specific locations where they occur most often, i.e. intersections.

Additionally, the following data will also be collected and reported for the same observation periods indicated above:

6. Motor vehicle speed.
7. Directional and Total motor vehicle volume.
8. Directional and Total bicycle volume.
9. Bicycle marking durability.

Following the collection of baseline data the bicycle marking installations will begin. Since the land use and general traffic patterns can change over time a method to control for these changes is necessary for an adequate study.

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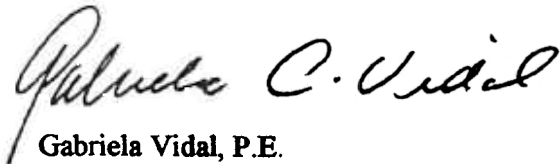
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- H. Application Restoration** – The Colorado Department of Transportation and City of Fort Collins agree to restore the site within three months following the end of the time period of the experiment and to terminate the experiment as required in Section 1A.10 if an unsafe condition arises. If the experiment appears to be successful, however, the Colorado Department of Transportation will request that the MUTCD be changed to include the Shared Lane Marking in the next edition and that the Shared Lane Marking remain in place.
- I. Semiannual Progress Reports** – The Colorado Department of Transportation and City of Fort Collins agree to provide progress reports every three months of the experimentation of the Shared Lane Marking application and to provide a final report within three months after the end of the experimentation period.

Our goal for this project is to provide a safer riding environment for commuter bicyclists along U.S. 287 that greatly improves existing conditions. Thank you for your attention to this request. If you require any additional information, please do not hesitate to call me.

Respectfully,

COLORADO DEPARTMENT OF TRANSPORTATION



Gabriela Vidal, P.E.
Safety & Traffic Engineering Branch Manager

Cc: Kathleen Bracke, City of Fort Collins – Transportation Planning
Kyle Lambrecht, City of Fort Collins – Engineering
Eric Bracke, City of Fort Collins, Traffic Operations
Marcee Allen, Federal Highway Administration
Robert Garcia, CDOT R-4 Traffic
Peter Graham, CDOT R-4 Traffic
Larry Haas, CDOT R-4 Traffic
Wendy Turner, CDOT R-4 Traffic
Dwayne Wilkinson, CDOT Staff Traffic
