# What are the Impacts of Adding Bicycle Infrastructure on a Low Speed Road?: Sociotechnical Synthesis

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On my honor as a University student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments.

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Bicycle infrastructure on low speed roads has a significant effect on the safety of bicyclists and drivers alike. Bicyclists are often faced with many problems on a roadway that deal with maneuvering to avoid vehicles or other obstacles on the road. And many times, bicyclists face these issues because of a lack of bicycle infrastructure. The adaption of bike lanes and sharrows onto low speed roads will be evaluated on the basis of poor bicycle-vehicle interactions. The addition of bicycle infrastructure involves the human need for this type of safety measure as well as the social responses that may arise due to this type of change. The theory of coproduction will used to describe the mutual shaping of bicyclists and drivers, as well as the influence of federal or local governments on the creation of bicycle infrastructure. Case studies of cities with and without bicycle infrastructure will be examined in order to detail the effects of bike lanes and sharrows on roadway usability and safety. This research hopes to achieve a greater understanding of the impacts of bicycle infrastructure on cities and roads. Established bicycle infrastructure will heighten the awareness of drivers to bicyclists which will, hopefully, alter future road designs to incorporate more bicycle infrastructure.

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