BACKGROUND

Bridges present unique challenges to bicycle transportation planners, though few studies have compared users’ opinions about safety and ease-of-use across different bridge facilities. Many of Portland’s bicycle commuters cross its bridges regularly, and counts seem to show that some are preferred over others. We chose to look at three popular bridges that provide generally similar facilities. In this case, they are all at or near the level of motorized traffic. At the same time, they vary in noticeable ways: the Burnside Bridge provides only a bike lane while Hawthorne and Broadway provide separated paths that are shared with pedestrians. Broadway’s path is structurally divided from traffic though it has less usable width.

RESEARCH OBJECTIVES

We wanted to know whether bicyclists found particular facilities safer or easier to use than others. Additionally, we were interested in exploring whether safety or ease-of-use ratings varied by the amount of bicycle or pedestrian traffic. We performed intercept surveys of bicyclists on the Broadway, Burnside, and Hawthorne bridges to reveal user preferences and whether these preferences are related to the amount of perceived bicycle and pedestrian traffic.

FINDINGS

Participants preferred bridge facilities that were separated from motorized traffic in both safety and ease-of-use ratings. Barriers appear to enhance the perceived safety of the facility even when its functional width is smaller. Responses also helped us identify problematic bridge approaches and exits in need of improvement, most of which were adjacent to the Burnside Bridge. We obtained mixed results for the relationships between bicycle or pedestrian traffic vs. safety or ease-of-use, so further research is needed. However, it does indicate that the relationship is more complex than expected.

CONCLUSIONS

Our findings suggest that bridge improvements and future bridges should provide paths that are separated from motorized traffic. They should also include barriers if possible. As long as the facility’s capacity is appropriate for its demand, sharing the path with pedestrians or substantial bicycle traffic does not appear problematic. It is also important that connections of the same quality are provided between these bridges and nearby bike routes in order to encourage and maintain the use of present facilities.