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„Protected Intersection“ - pro and contra using the example of the redesign of the intersection Voltmannstraße/Jöllenneckerstraße in Bielefeld“

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Abstract

Due to the traffic turnaround, cycling is booming, which is why traffic planners are increasingly being prompted to address the concerns of road users that have been neglected for years.

In this essay it is investigated whether the "protected intersection" or also "Dutch-style intersection" often demanded by interest groups implemented at a common junction on the basis of the currently valid regulations of the Forschungsgesellschaft für Straßen- und Verkehrswesen e. V. (FGSV). This design is intended to significantly improve the guidance of cyclists at junctions, especially in cases of conflict between turning motor vehicles and cyclists.

To this end, the most common types of regulation of general junctions is first be explained on the basis of the currently valid regulations. In some cases, it is also be examined whether the characteristics of a protected intersection are already anchored in these types of regulations.

Based on this, the typical protected intersection is shown, explained and derived on the basis of structural- and signalling-characteristics and internationally selected examples.

These features are used in the course of redesigning the Jöllenneckerstrasse/Voltmannstrasse junction.

The redesign is based on an iterative process in order to apply the applied features in the design process and to explain their consequences.

Finally, indications of the applicability of a general design approach are given. Looking ahead, the future handling of protected crossings are explained.