Planning & Design for Cycling – DETECTIVE AGENCY

As we saw in the cycling research article in this issue, there are various ways of making in-ground detectors work for cyclists. But how do the cyclists know when it has worked and that they have been detected?

A cunning little piece of technology has been employed in Christchurch for the past few years at locations with a dedicated cycle approach. It uses a standard pedestrian push-button call box with the top half replaced by an illuminated red cycle symbol.

An example of an automatic bicycle detector call box, Christchurch, with detector loops underneath

(note the hold-rail for waiting too)

When a cyclist reaches the crossing point and is detected by the inductive wires underneath the surface, the cycle symbol lights up. This lets the cyclist know that they have been detected and that a traffic light phase will be provided for them soon.

The modified call box with illuminated cycle symbol

The beauty of this approach is that it is very intuitive even for a cyclist unfamiliar with the system. The feedback also minimises the likelihood of cyclists failing to wait for the lights (through concern at not being detected), thus improving the perception of "law-abiding" cyclists by other road users.

(Interestingly, even though these call boxes also have a standard pedestrian-style push-button underneath, I'm informed that they are in fact dummy buttons with no effect. I would have thought that having them operational would provide a useful backup in the very unusual situation that you weren't detected automatically...)

There's no reason I guess why this approach couldn't be used for cycle lanes *away* from the kerbside as well. So long as a cycle symbol display was visible to cyclists (e.g. at an adjacent kerb?), they get the cue that they had been detected. Or perhaps you could even install a robust illuminated display flush in the road surface somehow?

To help improve the odds of being detected, small diamond markings should also be used to identify the best place above the inductive loops for detection (see figure to the right). And don't forget those handrails to keep cyclists comfortable while waiting to go (especially those with clip-in shoes).

For details about the cycle call boxes, contact Bill Sissons at Christchurch City Council (email Bill.Sissons@ccc.govt.nz, phone 03-941-8621).

Some Relevant Reading

- Austroads 1999, *Guide to Traffic Engineering Practice, Part 14: Bicycles*, Section 5.4.1 (Bicycle Detection at Traffic Signals).
- FHWA, 1998. *Implementing Bicycle Improvements at the Local Level*, Chapter 9 (Traffic Signals). US Federal Highway Agency, Publication No. FHWA-98-105. Web: ***www.bikewalk.org/bicycling/design_guide/bike_design_guide_index.htm***

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