Designing For Cyclists

A COLOURED PERCEPTION OF CYCLISTS

More and more we are seeing the use of colour on cycle facilities around New Zealand. This raises a few interesting questions: Should you use colour to mark cycle facilities? Where do you need to? And which colour? We'll try to address some of these issues this month.

There are a number of identified benefits of having coloured cycle lanes:

- The clearly defined paths produce more consistent cyclist behaviour
- Cyclists feel safer (and overseas crash studies would appear to back this up)
- There is more awareness of cyclists by motorists
- Key conflict points are highlighted more clearly for all parties
- Motorists are more likely to give way to cyclists when crossing their cycle lane
- Coloured cycle lanes outside traffic lanes can make the road appear narrower, slowing down traffic

However coloured cycle lanes may lead to less checking or caution by cyclists (the so-called "magic carpet" effect). And then there is the cost; a rate of ~$45/m^2 is fairly typical, depending on the specific colouring method used. So the prudent use of colour is probably warranted.

Coloured surfacing can be applied in continuous lengths for high-demand cycle lanes on busy routes (e.g. multi-lane arterials). In other locations, its usefulness is often best applied to "stress" points only. This may include:

- Approach lanes to intersections (especially between traffic lanes)
- On the departure side of intersections (especially where the cycle lane shifts over laterally)
- Adjacent to areas of high parking use/turnover
- In advance stop boxes
- Across the entry and exit areas of slip lanes
- On the inside of curves
- Across side roads/accesses (particularly where the adjacent traffic lane is regularly queued, blocking visibility)
- Along narrow cycle lane sections (pinch points)
- On contra-flow cycle lanes
- Where it is useful to alert crossing pedestrians to the potential presence of cyclists
- At the transition between cycle paths and cycle lanes
- On paths with many crossings
- Along shared bus/bike lanes
- Any other unusual cycle facilities

An interesting treatment tried in a few places around New Zealand is the use of "spots" of colour (well, more like squares) at regular intervals along a cycle lane (often where the cycle logos are) to further highlight the lane.

So which colour should you use? Currently in NZ, most of the country is going with using green, while Christchurch (which has the most extensive cycle network) has used red for its routes. In the past, the issue of a standard colour has not been completely resolved, although it appears that the *NZ Cycling Design Guide* will probably endorse (but not mandate) the use of green.

Overseas practice doesn't give us any clear clues as to which colour to use. Some countries like the United Kingdom and Germany seem to use a mix of red and green as well. Others like the Netherlands and Sweden tend to favour red, while the likes of Australia and France go for green. Denmark and some places in North America have used blue (which actually has a number of visibility advantages over red and green), and apparently Switzerland has even tried yellow!

Does a standard colour really matter? Well in many respects, no. Which colour is used is of secondary importance, so long as it achieves the purpose of highlighting the area to both cyclists and other road users. Drivers and cyclists are most influenced by the presence of *any* colour rather than a specific colour. However, there could be problems if adjoining roading authorities use different colours. And it may help with better understanding by road users if the same colour is consistently used (e.g. no implication that different colours mean different things).

Some Relevant Reading

- Christchurch City Council 2001, *Cycle Lane Delineation Treatments*. Web: ***<http://www.ccc.govt.nz/Recreation/Cycling/TechnicalResearch/>***
- City of Portland 1999, *Portland's Blue Bike Lanes*. Web: ***<http://www.trans.ci.portland.or.us/bicycles/bluebike.htm>***
- UK Highways Agency 1999, *Coloured Surfacing in Road Layouts*, Design Manual For Roads And Bridges, Volume 6 (Road Geometry) Section 3 Part 4, TA 81/99. Includes some useful information on material specifications. Web: ***<http://www.official-documents.co.uk/document/deps/ha/dmrb/vol6/section3/ta8199.pdf>*** (305kb)

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