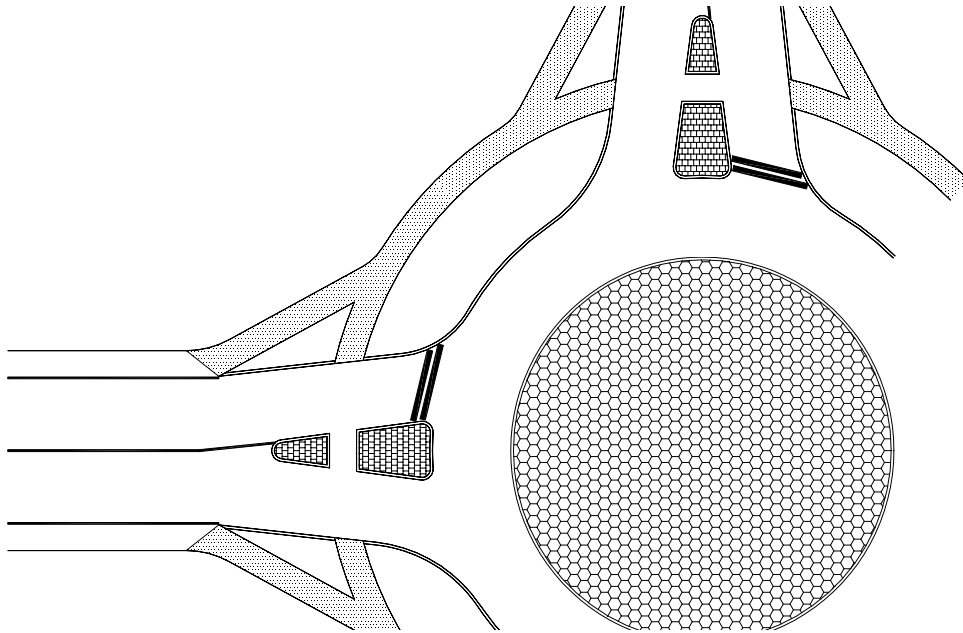


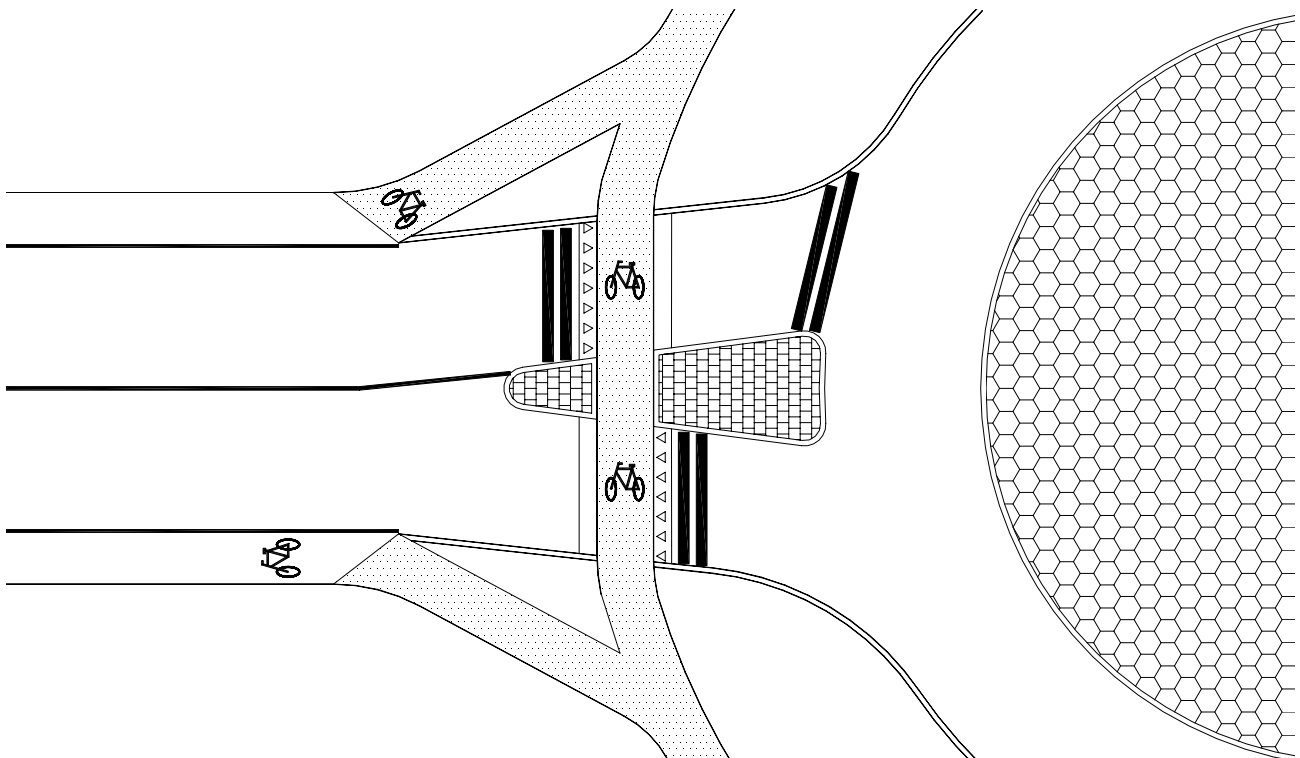
### AROUND ABOUT A ROUNDABOUT

In the last *ChainLinks*, we looked at some on-road solutions to providing for cyclists at roundabouts. An alternative approach is to provide **separate** pathways for cyclists circulating around the outer perimeter of the roundabout. The figure below shows a typical layout; note the use of splitter islands to provide refuges for crossing:



This approach has been used recently on many new roundabouts in NZ (e.g. Christchurch ring road) and is the preferred design now in the Netherlands. By separating the paths from the road it clearly defines the give-way priorities. Unfortunately these priorities are often to the detriment of cyclists who will have to give way to a number of legs that they wouldn't have to if staying on the road.

A variation on this is to give priority to the circulating cyclists rather than the entry/exit traffic, i.e.:



This form of priority is generally used in the Netherlands for urban areas only, where more cyclists are expected (it is also notable that for their newer multi-lane roundabouts, only a single exit lane is provided that then widens to two lanes **after** the cycle crossings). At the very least, this design should be considered here on minor side-road legs of roundabouts. For smooth operation, the path has to be sufficiently far away from the roundabout to allow an exiting vehicle to stop clear of the circulating traffic, e.g. >5m.

Priority for cycle crossings is not currently legally covered by NZ Traffic Regulations; because it is not technically an intersection you can't use Give Way signs for example. Hopefully this will be rectified soon under LTSA's forthcoming Road User and Traffic Control Devices Rules. Providing the cycle path on a raised platform can help to reinforce its priority (and slow down traffic anyway). Apparently however this method can also suffer from that previously-mentioned "magic carpet" effect that has caused concern about some raised pedestrian crossings.

Speaking of pedestrians, in most cases you will also expect foot traffic to want to get around the roundabout too. How the cyclists and pedestrians cohabit requires some attention to detail, otherwise cyclists might prefer their chances on the roundabout (or stay away completely!). Adequately wide paths (e.g. 2.0m+) and shared path signage may do the trick; or parallel path networks may be in order. Use of coloured surfacing on the cycle/shared paths and cycle/pedestrian stencils may also help to highlight the special nature of this path.

You may also want to consider whether your circulating paths are explicitly one-way (in the same direction as the adjacent traffic flow) or two-way (allowing right-turners to "short-cut"). Two-way paths often have a poor safety record. Motorists may not be expecting cyclists from either direction, and opposing cyclists could get a rude shock too. Consider path arrows and the angle of your path merges to clarify this.

Providing perimeter paths generally requires significant extra land to do properly, so they won't be appropriate everywhere. If you make the route too circuitous then many cyclists won't bother using it either. And if the traffic volumes mean that cyclists on the paths will have just as much trouble crossing the approach legs as they would negotiating the roundabout, then you really need to consider grade-separation (e.g. underpasses) or change the intersection to a signalised one.

Finally, remember again all the little details. Path-to-road transitions should be smooth and handrails provided at crossing points. Cyclist regulatory and warning signs and logo stencils should be liberally used, together with direction guidance if necessary. And don't forget to make sure that cyclists remaining on the road can still negotiate the roundabout reasonably by slowing traffic down.



*A recent roundabout reconstruction in Christchurch (Bexley/Dyers). Note the handrails at all crossing points.*

### **Some Relevant Reading**

- Austroads, 1999. *Guide to Traffic Engineering Practice, Part 14: Bicycles*, Section 5.5.2 (Roundabouts) and Section 6.7.2 (Crossings of Roads)
- Boender, John P. 2000. The New Dutch Guidelines on Roundabouts. *Conference Proceedings 2nd International Symposium on Highway Geometric Design*, June 14-17 2000, Mainz, Germany. Editors: R. Krammes & W. Brilon, pp.184-191.
- CROW, 1998. *Uniformity in Roundabouts*. CROW Publication 126, Ede, The Netherlands.

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