



Bonneagar Iompair Éireann  
Transport Infrastructure Ireland

## TII Publications

GE PE DN CC OP AM RE

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# The Geometric Layout of Signal-Controlled Junctions and Signalised Roundabouts

**DN-GEO-03044**  
January 2005

## About TII

Transport Infrastructure Ireland (TII) is responsible for managing and improving the country's national road and light rail networks.

## About TII Publications

TII maintains an online suite of technical publications, which is managed through the TII Publications website. The contents of TII Publications is clearly split into 'Standards' and 'Technical' documentation. All documentation for implementation on TII schemes is collectively referred to as TII Publications (Standards), and all other documentation within the system is collectively referred to as TII Publications (Technical). This system replaces the NRA Design Manual for Roads and Bridges (NRA DMRB) and the NRA Manual of Contract Documents for Road Works (NRA MCDRW).

## Document Attributes

Each document within TII Publications has a range of attributes associated with it, which allows for efficient access and retrieval of the document from the website. These attributes are also contained on the inside cover of each current document, for reference. For migration of documents from the NRA and RPA to the new system, each current document was assigned with new outer front and rear covers. Apart from the covers, and inside cover pages, the documents contain the same information as previously within the NRA or RPA systems, including historical references such as those contained within NRA DMRB and NRA MCDRW.

## Document Attributes

<b>TII Publication Title</b>	<i>The Geometric Layout of Signal-Controlled Junctions and Signalised Roundabouts</i>
<b>TII Publication Number</b>	<i>DN-GEO-03044</i>

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<b>Document Set</b>	<i>Standards</i>
<b>Publication Date</b>	<i>January 2005</i>
<b>Historical Reference</b>	<i>TD 50</i>

## NRA DMRB and MCDRW References

For all documents that existed within the NRA DMRB or the NRA MCDRW prior to the launch of TII Publications, the NRA document reference used previously is listed above under 'historical reference'. The TII Publication Number also shown above now supersedes this historical reference. All historical references within this document are deemed to be replaced by the TII Publication Number. For the equivalent TII Publication Number for all other historical references contained within this document, please refer to the TII Publications website.

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## NRA ADDENDUM TO

### TD 50/04

## THE GEOMETRIC LAYOUT OF SIGNAL-CONTROLLED JUNCTIONS AND SIGNALISED ROUNDABOUTS

This standard sets out the design standards, methodology and good design practice for the geometric layout of signal-controlled junctions and signalised roundabouts for trunk roads. Measures to ensure safe operation for all road users are described. TD 50/04 supersedes TD 50/99.

Standard TD 50/04 – The Geometric Layout of Signal-Controlled Junctions and Signalised Roundabouts – is applicable in Ireland with the following amendments:

### GENERAL

1. At several locations:

For: “Overseeing Organisation”  
Read: “National Roads Authority”;

For: “large goods vehicle”  
Read: “heavy commercial vehicle”;

For: “LGV”  
Read: “HCV”;

For: “TD 9 (DMRB 6.1.1)”  
Read: “NRA TD 9 (NRA DMRB 6.1.1)”.

# SPECIFIC

## Chapter 1 – Introduction

- 1.1 Page 1/1, Paragraph 1.2:  
For: "...below 104kph (65mph)."  
Read: "...below 100km/h (62.5mph)."
- 1.2 Page 1/2, Paragraph 1.10:  
Delete Paragraph 1.10 and replace with:  
"1.10. This Standard should be used forthwith for all schemes for the construction and/or improvement of national roads. The Standard should be applied to the design of schemes already being prepared unless, in the opinion of the National Roads Authority, application would result in significant additional expense or delay progress. In such cases, Design Organisations should confirm the application of this Standard to particular schemes with the National Roads Authority."
- 1.3 Page 1/2, Paragraph 1.13:  
For: "...not exceed 104kph (65mph)."  
Read: "...not exceed 100km/h (63mph)."

## Chapter 2 – Geometric Design Features

- 2.1 Page 2/4, Paragraph 2.23:  
For: "...not exceed 56kph (35mph),"  
Read: "...not exceed 55km/h (35mph)."
- 2.2 Page 2/9, Paragraph 2.51:  
For: "...greater than 72kph (45mph)."  
Read: "...greater than 70km/h (44mph)."
- 2.3 Page 2/11, Paragraph 2.56:  
Delete Paragraph 2.56 and replace with:  
"2.56 Traffic signs and road markings (including yellow box markings) are specified in the Traffic Signs Manual and the Road Traffic (Signs) Regulations. Advice on the provision of road markings to indicate non-hooking turns is given in TA 8 (DMRB 8.1.1)."

## Chapter 3 – Safety

- 3.1 Page 3/2, Paragraph 3/12n:  
Delete item n and replace with:  
"n. is the junction on a route with particular requirements for abnormal loads."

## Chapter 4 – Road Users’ Specific Requirements

- 4.1 Page 4/1, Paragraph 4.2:  
Delete Paragraph 4.2 and replace with:  
  
“4.2 Provisions for pedestrians, cyclists, equestrians and buses may require additional signing in accordance with the Road Traffic (Signs) Regulations and may require special authorisation by the Minister for Transport.”
- 4.2 Page 4/1, Paragraph 4.3, line 10:  
For: “a **Toucan** crossing”  
Read: “a combined crossing”.
- 4.3 Page 4/2, Paragraph 4.15, line 1:  
Delete the first two sentences  
“4.15 The crossing ... is 2.4m.” and replace with:  
“4.15 The crossing place should be indicated by two rows of studs or marks as indicated in the Road Traffic (Signs) Regulations and the Traffic Signs Manual. The crossing place should be a minimum of 2.4m wide.”
- 4.4 Page 4/2, Paragraph 4.15, line 9:  
For: “**Toucan** crossings”  
Read: “combined pedestrian/cyclist crossings”
- 4.5 Page 4/3, Paragraph 4.21, line 1:  
For: “Toucan crossings”  
Read: “combined pedestrian/cyclist crossings”
- 4.6 Page 4/5, Figure 4/4, title:  
For: “Combined Toucan and Equestrian Crossing”  
Read: “Combined Crossing for Pedestrians, Cyclists and Equestrians”.

## Chapter 7 – References

- 7.1 Page 7/1, 1. DESIGN MANUAL FOR ROADS AND BRIDGES, reference c:  
Delete reference c and replace with:  
“c. NRA TD 9, Road Link Design (NRA DMRB 6.1.1).”
- 7.2 Page 7/2, 2. TRAFFIC SIGNS REGULATIONS:  
Delete Section 2 and replace with:  
“2. TRAFFIC SIGNS REGULATIONS  
Road Traffic (Signs) Regulations 1997.  
Traffic Signs Manual, Department of the Environment and Local Government.”

## Chapter 8 – Enquiries

8.1 Page 8/1, Section 8:

Delete text and replace with:

“8.1. All technical enquiries or comments on this Standard should be sent in writing to:

Head of Project Management and Engineering  
National Roads Authority  
St Martin’s House  
Waterloo Road  
Dublin 4”



.....  
E O’CONNOR  
Head of Project Management and Engineering

## Annex 1 – Terms and Definitions used in Signal Control

A1.1 Page A1/1, Paragraph A1.1, line 4:

For: “TR 0141B”

Read: “TR 0141C”

A1.2 Page A1/1, Paragraph A1.2, line 2:

For: “TR 0141B”

Read: “TR 0141C”

A1.3 Page A1/1, Paragraph A1/3, line 2

For: “Traffic Signs and General Directions, 1994, Traffic Signs Regulations (Northern Ireland) 1997 (TSR[NI])”

Read: “the Road Traffic (Signs) Regulations 1997.”

A1.4 Page A1/2, Paragraph A1.4:

Delete paragraph A1.4 and replace with:

“A1.4 Details of the equipment relevant to pedestrian facilities are contained in TA 15 (DMRB 8.1.1).”

A1.5 Page A1/2, Paragraph A1.5:

Delete paragraph A1.5, Table A1/1 and the associated heading









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