
VOLUME 6 ROAD GEOMETRY
SECTION 1 LINKS

PART 1

TD 9/93 - AMENDMENT NO 1

HIGHWAY LINK DESIGN

SUMMARY

The Standards sets out the elements of design and principles for their co-ordination, for geometric design of an existing carriageway or new build situation. The Standards include a revised Chapter 5 and deletes Annexes B and C.

INSTRUCTIONS FOR USE

This amendment is to be incorporated in the Manual.

1. Remove existing contents page for Volume 6, and insert new contents page for Volume 6, dated February 2002.
2. Remove existing cover sheet for Highway Link Design and insert new cover sheet.
3. Remove existing TD 9/93 contents sheet and insert new TD 9/93 Amdt No 1 contents sheet.
4. Remove existing "Detailed contents of Chapters 1-8" sheet and insert new sheet dated February 2002.
5. Remove existing Chapter 0 "Foreword" pages 0/1, 0/2 and 0/3 and insert pages 0/1 and 0/2 dated February 2002.
6. Remove existing Chapter 5 (including Annexes B and C), and insert new Chapter 5.
7. Insert the Amendment Sheet at the front of the document after the new cover sheet.
8. Enter details of Amendment No 1 on Registration of Amendment sheet and sign and date to confirm the amendment has been incorporated.
9. Remove sheets 9/1 and 10/1 and insert new sheets dated February 2002.
10. Archive this sheet as appropriate.

Note: A quarterly index with a full set of Volume Contents Pages is available separately from The Stationery Office Ltd.

REGISTRATION OF AMENDMENTS

Amend No	Page No	Signature & Date of incorporation of amendments	Amend No	Page No	Signature & Date of incorporation of amendments

1.8 Urban Roads: Low speed limits (30-40 mph) may be required due to the amount of frontage activity, but also where physical restrictions on the alignment make it impractical to achieve geometry relative to a higher Design Speed. Design Speeds shall be selected with reference to the speed limits envisaged for the road, so as to permit a small margin for speeds in excess of the speed limit, as shown in Table 2. The minimum Design Speed for a primary distributor shall be 70A kph.

Design Speed Related Parameters

1.9 The Design Speed bands 120, 100, 85 kph, etc dictate the minimum geometric parameters for the design, according to Table 3, which shows Desirable Minimum (Absolute Minimum For Sag Curves only) values and values for certain Design Speed steps below Desirable Minimum. Desirable Minimum values represent the comfortable values dictated by the Design Speed.

SPEED LIMIT		DESIGN SPEED
MPH	KPH	KPH
30	48	60B
40	64	70A
50	80	85A
60	96	100A

Table 2

DESIGN SPEED kph	120	100	85	70	60	50	V ² /R
STOPPING SIGHT DISTANCE m							
Desirable Minimum	295	215	160	120	90	70	
One Step below Desirable Minimum	215	160	120	90	70	50	
HORIZONTAL CURVATURE m.							
Minimum R* without elimination of Adverse Camber and Transitions	2880	2040	1440	1020	720	520	5
Minimum R* with Superelevation of 2.5%	2040	1440	1020	720	510	360	7.07
Minimum R* with Superelevation of 3.5%	1440	1020	720	510	360	255	10
Desirable Minimum R with Superelevation of 5%	1020	720	510	360	255	180	14.14
One Step below Desirable Minimum R with Superelevation of 7%	720	510	360	255	180	127	20
Two Steps below Desirable Minimum Radius with Superelevation of 7%	510	360	255	180	127	90	28.28
VERTICAL CURVATURE							
Desirable Minimum* Crest K Value	182	100	55	30	17	10	
One Step below Desirable Min Crest K Value	100	55	30	17	10	6.5	
Absolute Minimum Sag K Value	37	26	20	20	13	9	
OVERTAKING SIGHT DISTANCES							
Full Overtaking Sight Distance FOSD m.	*	580	490	410	345	290	
FOSD Overtaking Crest K Value	*	400	285	200	142	100	

Table 3

* Not recommended for use in the design of single carriageways (see Paragraphs 7.25 to 7.31 inclusive)

The V²/R values shown in Table 3 above simply represent a convenient means of identifying the relative levels of design parameters, irrespective of Design Speed.