

**NRA ADDENDUM TO**  
**BD 37/01**  
**LOADS FOR HIGHWAY BRIDGES**

**October 2001**

Standard BD 37/01 - Loads for Highway Bridges - is applicable in Ireland with the following amendments:

## **GENERAL**

1. Standard BD 37/01 is to be used for the design of road bridges only. For the design of railway bridges, design organisations shall consult the relevant railway authority for the loading requirements to be used.
2. Where the Standard is applied for the design of structural components which are procured through a contract incorporating the NRA Specification for Road Works, products conforming to equivalent standards and specifications of other member states of the European Union will be acceptable in accordance with the terms of Clauses 104 and 105 of that Specification. Any contract for the procurement of structural components which does not include these Clauses must contain a suitable clause of mutual recognition having the same effect, regarding which advice should be sought.
3. The Standard provides specification requirements for use in public purchasing contracts. It does not lay down legislation requirements for products and materials used in road construction in Ireland.
4. The 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.
5. At several locations:
  - For: "Great Britain"  
Read: "Great Britain and Ireland";
  - For: "highway"  
Read: "road";
  - For: "Overseeing Organisation"  
Read: "National Roads Authority";
  - For: "trunk road"  
Read: "national road".

## SPECIFIC

### 1. BD 37/01

- 1.1 Page 1/1, Paragraph 1.1, line 9:  
For: “Department of Transport”  
Read: “UK Department of Transport”.
- 1.2 Page 1/1, Paragraph 1.2, line 7:  
For: “the United Kingdom wind map”  
Read: “the British Isles wind map”.
- 1.3 Page 2/1, Paragraph 2.2, line 3:  
For: “additional requirements are given in BD 21 (DMRB 3.4)”  
Read: “refer to the National Roads Authority for any additional requirements for such structures.”
- 1.4 Page 3/1, Paragraph 3.1, line 1:  
For: “highway bridges belonging to the Overseeing Organisation”  
Read: “road bridges on schemes funded by the National Roads Authority”.
- 1.5 Page 4/1, Paragraph 4.1, table:  
Delete the table in Paragraph 4.1 and replace with:

<b>Class of road carried by structure</b>	<b>Number of units of type HB loading</b>
Motorways and other National Primary and Secondary Roads (including structures at junctions and interchanges)	45
Regional Roads	37.5
Other public roads	30

- 1.6 Page 5/1, Section 5, References 5 and 8:  
Delete References 5 and 8 and replace with:  
“(5) (Not Used).
- (8) NRA TD 27 (NRA DMRB 6.1.2) Cross-Sections and Headroom.
- (9) NRA Manual of Contract Documents for Road Works, Volume 1: Specification for Road Works.”

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- 1.7 Page 6/1, Section 6:  
Delete text and replace with:  
“6.1 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”
2. **Appendix A**
- 2.1 Page A/10, clause 1.2, line 3:  
For: “United Kingdom”  
Read: “United Kingdom and Ireland”.
- 2.2 Page A/10, clause 1.2, line 4:  
Add the following at the end of clause 1.2:  
“In the case of railways, the loading requirements shall be agreed with the relevant railway authority.”
- 2.3 Page A/23, clause 5.3.2.2.1, line 3:  
Add the following at the end of the first paragraph of clause 5.3.2.2.1:  
“In Ireland, values of  $V_b$  shall be increased by 2m/s above the values obtained from Figure 2.”
- 2.4 Page A/46, clause 5.3.9:  
Delete Clause 5.3.9 and replace with:  
“**5.3.9 Aerodynamic effects.** For design rules for the aerodynamic effects on bridges see BD 49 (DMRB 1.3.3). For the Vibration Serviceability Requirements for Foot and Cycle Track Bridges, see Appendix B.”
- 2.5 Page A/67, Footnote:  
Delete final sentence of footnote and replace with:  
“Rules for the design of road parapets in Ireland, including requirements for high level of containment parapets, are set out in BD 52 (DMRB 2.3.3).”
- 2.6 Page A/69, clause 6.8:  
After clause number insert “\*\*\*” and add footnote at the bottom of page:  
“\*\*\* For vehicle collision loads, see BD 60 (DMRB 1.3.5). Clause 6.8 shall only be used for loads on foot/cycle track bridge ramps and stairs which are structurally independent of the main road-spanning structure and for loads on foot/cycle bridge supports with a carriageway clearance equal to or greater than 4.5m. For all other bridges, vehicle collision loads shall be calculated in accordance with BD 60 (DMRB 1.3.5).”
- 2.7 Page A/69, clause 6.8.1, line 4:  
After “supports” insert “\*\*\*\*” and add footnote at the bottom of the page:  
“\*\*\*\* Criteria for the provision of safety fences in Ireland are set out in NRA TD 19 (NRA DMRB 2.2.8A).”

- 2.8 Page A/72, clause 7.2:  
After clause number insert “\*\*” and add footnote at bottom of page:  
“\*\* For vehicle collision loads on foot/cycle track bridges, see BD 60 (DMRB 1.3.5). Clause 7.2 shall only be used for vehicle collision loads on foot/cycle track bridge ramps and stairs which are structurally independent of the main road-spanning structure and for loads on foot/cycle track bridge supports with a carriageway clearance equal to or greater than 4.5m. For all other foot/cycle track bridges, vehicle collision loads shall be calculated in accordance with BD 60 (DMRB 1.3.5).”
- 2.9 Page A/72, Footnote:  
Delete footnote \* and replace with:  
“\* Rules for the design of pedestrian parapets in Ireland are set out in BD 52 (DMRB 2.3.3).”
- 2.10 Page A/97, Paragraph E.1, line 8:  
For: “U.K.”  
Read: “U.K. and Ireland”.

### 3. References

- 3.1 Page A/106:  
Add the following references:  
“Design Manual for Roads and Bridges (DMRB), as implemented in Ireland:
- Volume 1: Highway Structures: Approval Procedures and General Design:
- BD 49: Design Rules for Aerodynamic Effects on Bridges (DMRB 1.3.3).
- BD 60: Design of Highway Bridges for Vehicle Collision Loads (DMRB 1.3.5).
- Volume 2: Highway Structures: Design (Substructures and Special Structures) Materials:
- NRA TD 19: Safety Barriers (NRA DMRB 2.2.8A).
- BD 52: The Design of Highway Bridge Parapets (DMRB 2.3.3).”



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Engineering