

GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
(RAILWAY BOARD)

No. 2013/CE-II/CS/6

New Delhi, dt. 07.05.2014.

The General Managers (Engg.)-CR, ER, ECR, ECoR, NR, NCR, NER, NFR, NWR, SR, SCR, SER, SECR, SWR, WR, WCR and Metro Railway/Kolkata.

The General Manager (Const.), N.F.Railway, Guwahati.

The CAO/Const. All Indian Railways.

FA & CAO, All Indian Railways.

The General Managers (Engg.) – ICF/Chennai, RCF/Kapurthla, DLW/Varanasi, CLW/Chittranjan, W&AP/Yelahanka, Bangalore & DMW/Patiala.

The Director General (Track), RDSO/Alambagh, Lucknow.

Chief Commissioner of Railway Safety, Lucknow.

Managing Director, IRCON, New Delhi.

Managing Director, RITES, New Delhi.

Managing Director, DMRC, Metro Bhawan, Barakhamba lane, New Delhi.

Managing Director, CONCOR, New Delhi.

Managing Director, RVNL, August Kranti Bhawan, Bhikaji Cama Place, New Delhi.

Managing Director, DFCCIL, Pragati Maidan, Metro station, New Delhi.

Managing Director, PIPAVAV Railway Corp. Ltd., 1st Floor Jeeven Tara Building, Gate No.4, Parliament Street, New Delhi.

Managing Director, MRVC, Church Gate station Building 2nd Floor, Mumbai – 400020.

Managing Director, RLDA, IRCON Office Compound, Next to Safdarjang Rly. station, Motibagh-I, New Delhi.

Managing Director, Konkan Railway Corporation Ltd, Belapur Bhawan, Sector-11, CBD Belapur. Mumbai. Pin - 400614.

Director, IRICEN, Pune.

Director, IRIEN, Nasik.

Director, , IRISSET, Secunderabad.

Director, IRIMEE, Jamalpur.

Director, IRITM, Vill. Kanausi, Hardoi, Manik Nagar, Lucknow.

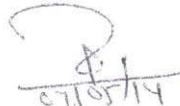
Director General, National Academy of Indian Railways, Vadodara.

Genl. Secretaries, AIRF, NFIR, IRPOF, FROA, AIRPFA, DAI (Railways) Rail Bhawan, New Delhi.

Sub: Advance Correction Slip No. 135 to the Indian Railways Permanent Way Manual.

Ministry of Railways (Railway Board) have decided that correction/addition as indicated in the enclosed Advance Correction Slip No.135 dated 07.05.2014, to relevant para of the IRPWM, be made.

Receipt of this letter may please be acknowledged.


(Pankaj Tyagi)
Director Civil Engg.(P),
Railway Board.

No. 2013/CE-II/CS/6

New Delhi, dt. .05.2014.

Copy to :

Sr. PPS/PS to CRB, ME, ML, MS, MM, MT, FC, Secretary.

AM(CE), AM(Works), AM(Budget), AM(Elect.), AM(Fin.), AM(Sig.), AM(Plg.), AM(Staff), AM(Mech.), AM(PU.), AM(Tele.), AM(Traffic), Adv./Project, Adviser(Bridges), Adv.Adv(Vig.), Adv(L&A), Adv(Safety), Adv(Project), AM(Stores), AM(IT), AM(T&C), Adv.(Rates), AM(Comml.).

EDCE(P), EDTK(M), EDTK(MC), EDTK(P), EDCE(G), EDCE(B&S)I, EDCE(B&S)II, ED(L&A)I, ED(L&A)II, ED(L&A)III, ED(Works), EDW(Plg.), EDV(E), ED(Proj.M.), ED(Safety), EDF(X)I, EDF(X)II.

DTK(MC), DTK(M), DTK(P), DCE(B&S), DCE(B&S)II, Dir(Works)-I, Dir(Works)-II, Dir.Works(Plg.), Dir(L&A), OSD(ME), DVE-I & DVE-II, Dir./TMS, IPWE(I).

Director/C&IS - for uploading on Railway Board website.

INDIAN RAILWAYS PERMANENT WAY MANUAL
ADVANCE CORRECTION SLIP No.135 dated .05.2014

1. The existing Para 151 (1) (a) shall be replaced with the following:-

Para 151 (1) (a) - Level-cum-gauge, square, hemp cord, metre stick, keying and/or spiking hammer, fish-bolt spanner, 2 sets of H.S. flags, (2 H.S. lamps/Tricolor torches in the night), 2 nos whistle thunderers, 10 detonators, marking chalk and Rail thermometer.

2. The existing Para 910 (1) (g) and (i) and note to Para shall be replaced with the following:-

Para 910 (1) (g): 10 No. detonators in Tin Case.

Para 910 (1) (i) : 2 No. Banner flag.

“**Note:** In the case of level crossings in multiple lines the hand signal flags/lamps, detonators and Banner flags shall be increased suitably.”

3. The existing Para 1007 (c) shall be replaced with the following:-

Para 1007 (c): 10 detonators in a tin case.

4. The existing Para 1116 (c) shall be replaced with the following:-

Para 1116 (c): Detonators 10 nos.

5. The existing Annexure-9/7 of Para 918 (2) shall be replaced by the new **Annexure-9/7 Para 918 (2)** as attached.

(Colour of speed breaker sign has been changed from Yellow to Black).

6. The existing Annexure-2/11 (Sketch and Table) and Annexure-2/13 (Sketch) of Para 263 of IRPWM shall be replaced by the new **Annexure-2/11 (Sketch and Table) and Annexure-2/13 (Sketch) of Para 263** as attached.

7. The existing Annexure-2/6 Para 237(5) Proforma for inspection of points and crossings given shall be replaced by the new **Annexure-2/6 Para 237(5) proforma for inspection of points and crossings** as enclosed.

8. The existing para 1014(1) (d) of Indian Railways Permanent Way Manual shall be replaced by the following:-

Para 1014(1) (d) - Cuttings and Hills designated as vulnerable by DEN/Sr. DEN.

A new note may be added in the last of Para 107 to IRPWM as under:

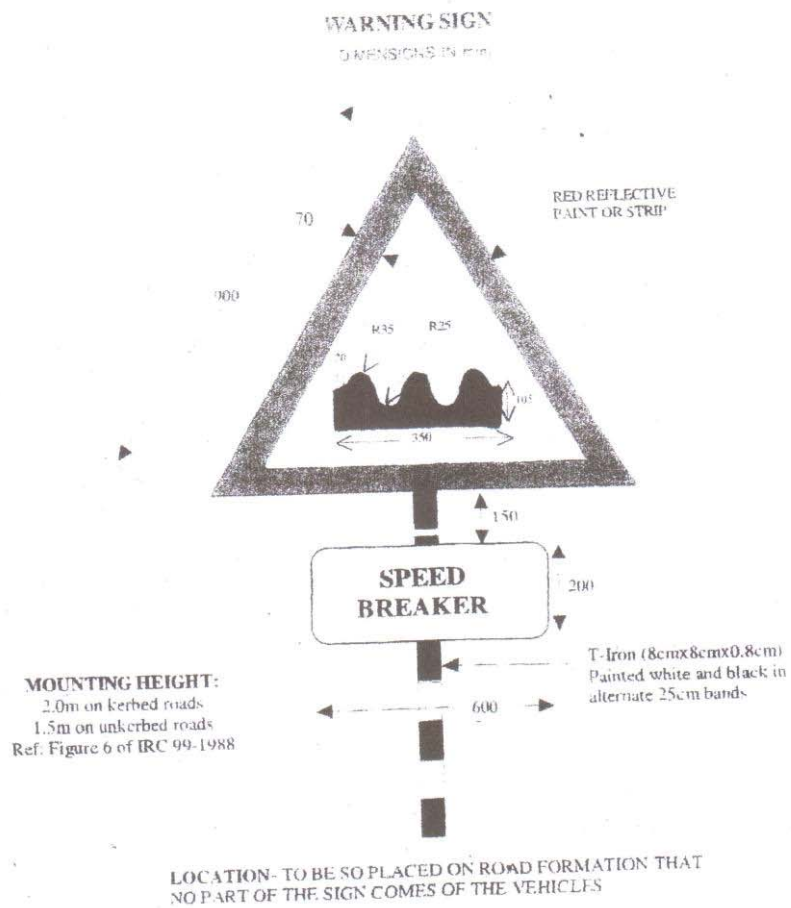
Note – The Assistant Engineer shall inspect the cuttings in his jurisdiction as per applicable provisions of Bridge manual.

A new note may be added in the last of Para 124 to IRPWM as under:

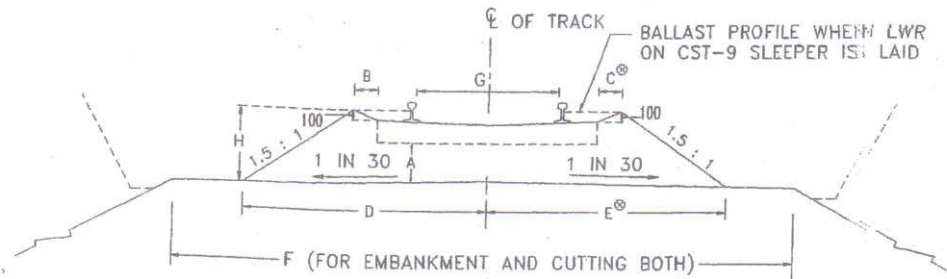
Note – The Senior Section Engineer/P.Way (SSE/P.Way) shall inspect the cuttings in his jurisdiction as per applicable provisions of Bridge manual.

A new note may be added in the last of Para 139 to IRPWM as under:

Note – The Junior Engineer (P.Way) shall inspect the cuttings in his jurisdiction as per applicable provisions of Bridge manual.

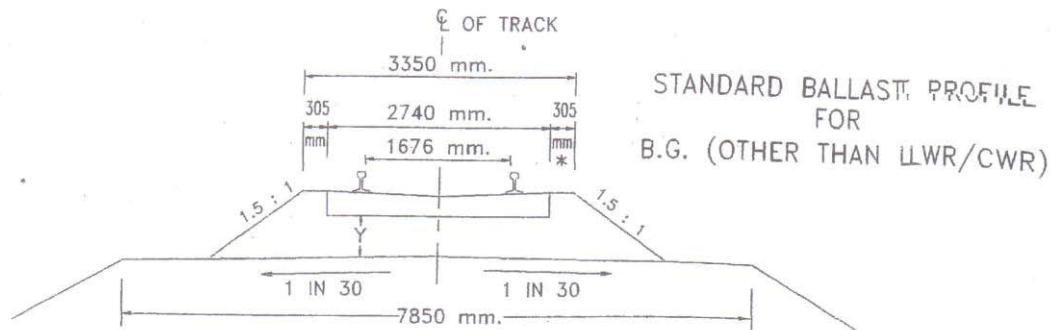


BALLAST PROFILE FOR LWR TRACK (SINGLE LINE B.G.)



G Gauge	Type of Sleeper	A	B	C*	D	E*	F	F1	H	Quantity of Ballast per meter in		Remarks
										Straight Track	Curved Track	
1676 mm	Wooden	250	350	500	2,270	2,420	6,850	6,250	540	1.682M ³	1.646M ³	1. The Minimum Clean Stone Ballast cushion below the bottom of sleeper i.e., A-250 mm. 2. For routes where increase in speeds are to be more than 130 Kmph. A-300 mm. or 200 mm. along with 150 mm. of sub-ballast. 3. Suitable dwarf walls shall be provided in case of cuttings, if necessary for retaining ballast. 4. *On outer side of curves only. 5. Cess may be widened where required depending on local conditions and outside of curves. 6. All dimensions are in mm. 7. † 200 over 150 Sub-Ballast.
	"	300	"	"	"	"	"	"	590	1.782M ³	1.853M ³	
	"	†	"	"	"	"	"	"	640	1.982M ³	2.060M ³	
	Steel Trough	250	350	500	2,280	2,430	6,850	6,250	550	1.762M ³	1.827M ³	
		300	"	"	"	"	"	"	600	1.962M ³	2.035M ³	
		†	"	"	"	"	"	"	650	2.162M ³	2.242M ³	
	PRC	250	350	500	2,525	2,675	6,850	6,250	640	1.954M ³	2.032M ³	
		300	"	"	"	"	"	"	690	2.158M ³	2.243M ³	
		350	"	"	2,852	3,002	7,850	7,850	715	2.216M ³	2.320M ³	
		†	"	"	"	"	"	"	740	2.362M ³	2.455M ³	
	2 Block	250	350	500	2,360	2,510	6,850	6,250	630	2.110M ³	2.193M ³	
		300	"	"	"	"	"	"	680	2.314M ³	2.405M ³	
		†	"	"	"	"	"	"	730	2.518M ³	2.616M ³	

ANNEXURE-2/13 Para 263



PROFORMA FOR INSPECTION OF POINTS AND CROSSING

Station :		Point No.:	
Location :		Rail section :	
Type of sleeper/assembly :		Angle of crossing :	
Nominal gauge of turnout :		Left hand or right hand :	
Laid on straight or on curve of radius :		Similar/contra flexure :	
Date of laying sleeper (mm/yyyy):		Type of Crossing :	

Detail of deep screening :	1st	2nd	3rd	4th
Date (mm/yyyy) :				
Manual/Mechanized				
Date of laying new/reconditioned crossing (mm/yyyy):	1st	2nd	3rd	4th
Crossing unique number				
Manufacturer				
Date of laying new/reconditioned switch (mm/yyyy):	1st	2nd	3rd	4th
LH :				
RH:				

Particulars	Details of Inspection	Action taken with date and sign	Details of Inspection	Action taken with date and sign
1	2	3	4	5
I. General -	Date of Inspection :		Date of Inspection :	
1. Condition of ballast and drainage in turnout. (Clean cushion to be measured only once in a year)				
II Switch assembly and lead				
2. Condition of sleepers, slide chairs, plate screws, heel & distance blocks, other fittings of switch including tightness of bolts etc:				
3. Condition of tongue rails:	LH	RH	LH	RH
a) Whether chipped or cracked over 200 mm length within 1000 mm from ATS.				
b) Whether twisted or bent (causing gap of 5 mm or more at toe)				
c) Remarks over condition of tongue rail, whether it requires reconditioning or replacement				
4. Condition of Stock rail, burr formation to be mentioned specifically				
5. Creep and squareness of tongue rail at toe of switch				
6. Straightness of straight stock rail if laid on straight: (Measured on 7.5m chord)				
7. Packing conditions under the switch assembly (preferably to be observed under traffic)				
	LH:	RH:	LH:	RH:
8. Throw of Switch				
9. Housing of stock and tongue rails:				
10. Gap between top edge of leading stretcher bar and bottom of rail foot:				
11. Working of SSD (If provided)				
12. Gauge and cross level in switch and lead	G	XL	G	XL

Particulars	Details of inspection						Action taken with date and sign	Details of inspection						Action taken with date and sign
1	2						3	4						5
a) At 450mm ahead of toe of switch														
b) At ATS between two stock rails														
c) Gauge and cross level for ML and turnout side. Versine of stock rail for turnout side upto end of lead	ML			T/O				ML			T/O			
Station	G	XL	Ve	G	XL	Ve		G	XL	Ve	G	XL	Ve	
ATS/HEEL ---- 0														
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														

Note: 1) Stn. no. 0 to be marked at heel of switch for straight switch & at ATS for curved switches. Subsequent stations shall be marked at every 3m. Versines to be recorded on 6m chord length commencing from station no.1. 2) Versine reading shall be taken for turnout side except for symmetrical split turnout where it shall be taken on mainline side 3) In case of gap between T/R and S/R, that should be added to gauge measurement.

III. Crossing Assembly

13. Condition of crossing

a) Sign of propagation of crack (if any) in crossing assembly:

b) Baring on top surface at nose:

c) In case of Heat-treated welded crossing, Weld texture on top surface. If any flow or separation of weld portion:

d) Tightness of bolts at C/distance block at toe, heel and nose of crossing as applicable

e) condition of gapless joints

14. Wear of crossing (to be measured with straight edge at 100 mm from ANC)

LH wing rail	Nose	RH wing rail	LH wing rail	Nose	RH wing rail

For CMS crossing, Actual wear for 52 kg section = measured wear - 2.0mm & Actual wear for 60 kg section = measured wear - 2.5 mm

15. Gauge and cross level at crossing

ML			T/O			ML			T/O		
G	XL		G	XL		G	XL		G	XL	

a) 1 m ahead of ANC

b) 150 mm behind ANC

c) 1 m behind ANC

16. Condition of check rail fitting eg. bearing plates, keys, blocks, bolts and elastic fastenings:

--	--	--	--	--	--	--	--	--	--	--	--

Particulars	Details of inspection		Action taken with date and sign	Details of inspection		Action taken with date and sign
1	2		3	4		5

17. Clearance of check rails:

LH RH LH RH

a. Opposite ANC:

b. At 1st block towards toe of crossing and 1st block towards heel of crossing

c. At the flared end towards heel and at the flared end towards toe

18. clearance of wing rail (only for built up crossing)

IV Turn in curve:

19. Turn in curve- Stations to be marked at 3m interval. Versines to be measured on 6m chord station no. 0 to be marked at the centre of last long sleeper in case of PSC sleepers otherwise at heel of crossing. STATION NO.

	Ve	G	XL		Ve	G	XL
0	xxxxxxx				xxxxxxx		
1							
2							
3							
4							
5							
6							
7							

20. Availability of 150 mm additional ballast shoulder width on out side of turn in curve.

V. General

21. Any other special feature /defects.

21. Signature of the inspecting official with date

NOTE : Locations where the gauge and cross levels are to be checked should be painted on the web of the rail.
