



GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
(RAILWAY BOARD)

INDIAN RAILWAYS PERMANENT WAY MANUAL

2024

Published by :

Indian Railways Institute of Civil Engineering, Pune

For Government of India

Ministry of Railways (Railway Board),
New Delhi



अनिल कुमार खंडेलवाल
ANIL KUMAR KHANDELWAL



सत्यमेव जयते



सदस्य इन्फ्रास्ट्रक्चर, रेलवे बोर्ड
एवं पदेन सचिव, भारत सरकार
रेल मंत्रालय

**MEMBER INFRASTRUCTURE, RAILWAY BOA
& EX-OFFICIO SECRETARY
GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS**

FOREWARD



The “**Indian Railways Permanent Way Manual (IRPWM)**” was published in the year 2020. As new technologies are adopted and other issues keep on coming for improved maintenance, repair and relaying of track, the correction slips are issued as a regular practice. Around 22 such A & C slips had been issued in the last four years. IRPWM is an important document which is frequently referred by Track maintenance officials in the course of their day-to-day maintenance work. It becomes difficult for a practising field engineer, to connect the relevant correction slip issued separately, particularly when they are large in numbers. Therefore, it was considered necessary to update the manual by incorporating all the amendments issued after the last publication of manual. This re-printed edition incorporates all addendum & correction slips issued to the IRPWM up to the advance A & C No. 22.

It is expected that this updated Manual will be of immense use to the Permanent Way Personnel in easily accessing latest instructions related to track and thereby helping them in maintaining and upkeep of the track more effectively and efficiently in their day to day working.

26th Aug, 2024

(Anil Kumar Khandelwal)

PREFACE TO THE FIRST REPRINT 2024 TO IRPWM



The IRPWM 1986 was published and was reprinted many times duly incorporating the Correction slips issued from time to time. The need for removing the obsolete paragraphs in the then existing IRPWM was felt and thus, the redrafted IRPWM was issued in 2020 with new and updated provisions pertaining to the maintenance of Permanent Way.

The last 4 years has seen rapid strides in improvement in the maintenance of Permanent Way and a total of 22 Correction Slips have been issued to this redrafted IRPWM 2020. Thus, it was considered necessary to reprint it duly incorporating all changes, so as to have a ready reference for use of the Permanent Way officials.

It is expected that this reprinted Manual will be helpful to the Permanent Way Personnel in accessing the updated and latest instructions related to P. way and improve their efficiency so as to take Indian Railways forward.

PUNE
August 2024

A handwritten signature in black ink, appearing to read 'Sunil Kumar Jha'.

(Sunil Kumar Jha)
Director General
IRICEN / PUNE

FOREWORD TO REDRAFTED IRPWM (2020)



“Indian Railways Permanent Way Manual” was published in the year 1986, as per the recommendations of the 49th Track Standards Committee. Thereafter, it was reprinted on different occasions incorporating Advance Correction Slips issued from time to time.

There was need to issue updated Manual in view of various technological advancements which have taken place over the years. Description of obsolete materials like 90R Rails, Wooden Sleepers, Steel sleepers, etc. which are no longer in use have been removed. Meter Gauge and Narrow Gauge have been omitted in this IRPWM. For these, provisions of old IRPWM shall continue to hold. **Reference to all relevant drawings & specifications have also been provided in this manual, making it simple and more useful.**

The contents are reorganised, grouping similar topics in one chapter. In the beginning abbreviation and terminology has been added for ready reference. There is a total reduction of about 20% in volume.

The IRPWM and LWR manuals have been merged. Now in place of two manuals related to track, only one manual needs to be referred by field officials. All relevant provisions have been placed in logical sequence.

The redrafted manual has passed through several rounds of scrutiny by IRICEN faculty, two member committees for each chapter, deliberation in 88thTSC, sub-committee of six SAG officers, RDSO and Railway Board before its final approval.

It is hoped that this updated manual will help the Permanent Way men, in easy understanding the provisions and implementing them in the field in their day to day working.

New Delhi
June, 2020

(Vishwesh Chaube)
Member Engineering
Railway Board

921 Criteria for Replacement of Existing Level Crossings (other than those provided on deposit terms) with Road Over/Under Bridges on Cost Sharing Basis –

- (1) Minimum Train Vehicle Units (TVU) on a Level Crossing should be 1 lakh per day to become eligible for replacement with Road Over/Under Bridges on 'Cost Sharing' basis. However, this could be relaxed in the following cases :
 - (a) Suburban sections having high frequency of train services; and
 - (b) Near stations where detentions to road traffic are very high on account of either shunting operations or multi-directional receipt/dispatch of trains or stabling of trains etc.
- (2) Preference should be given to the Level Crossings located on trunk routes vis-à-vis those located on branch lines. In any case, minimum number of times the level crossing is required to be closed against the road traffic should at least be 12 times per day.
- (3) Subject to (1) and (2) above, priority should generally be accorded by the concerned State Government giving preference to Level crossings on National/State Highways.
- (4) In case of Road Over/Under Bridges constructed in replacement of busy level crossings situated in Municipal/Corporation/ Metropolitan areas where Light Vehicular traffic is considerable and where the Railways are satisfied that closure of the level crossings would cause hardship, additional provision may be made for construction of the subway or a light Over Bridge with ramps for the use of light vehicular traffic at the time of framing the proposal for the construction of Road Over/Under Bridges. The proposals for providing the ramps/sub-way should be examined critically and should be provided for, only in the case of genuine hardships and not as a matter of course. The cost of these ramps/subway will be shared equally with the Sponsoring Authority on 50:50 basis.
- (5) Closure of the Level Crossings should be ensured before commissioning of the Road Over/Under Bridges. All such cases where State/Local Authorities do not agree to abide by this should be reported to the Railway Board promptly.
- (6) Railways may, based on specific request of concerned Road authorities, consider sharing cost of constructing new FOUR lane Road Over Bridge in lieu of level crossings having minimum TVU of 3 Lakh per day comprising not less than 6000 Road vehicle units. The cost sharing of FOUR lane Road over bridge should be resorted to only if the concerned Road authorities have converted the approach road into four lane or are simultaneously doing four laning of approach portion.