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भारत सरकार – Government of India

रेल मंत्रालय – Ministry of Railways

रेलपथ से सटे कार्य स्थल पर सुरक्षा सावधानियाँ

SAFETY PRECAUTIONS AT WORKSITE ADJACENT TO TRACK

केमटेक/2015/सि/एस.पी.डब्लू.एस.ए.टी./1.0

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प्राक्कथन

भारतीय रेलवे में सुरक्षा मुख्य पहलू है, जिसे नजरअंदाज नहीं किया जा सकता। ट्रैक के आसपास कार्य करते समय चलित आयामों में किसी भी प्रकार का उल्लंघन ट्रेन दुर्घटनाओं को जन्म दे सकता है जो कि मानव जीवन और तैनात मशीनरी के लिए भारी नुकसान का कारण बन सकती हैं। यह अनिवार्य है कि समस्त सुरक्षा सावधानियों जैसा निर्देशों के रूप में निर्दिष्ट और परिचारित हैं, को लागू करने तथा ट्रैक पर या ट्रैक के आसन्न काम करने के दौरान उनका पालन होना चाहिए।

यह उम्मीद की जाती है कि यह हैंडबुक, निर्माण गतिविधियों में लगे भारतीय रेल सिविल इंजीनियरिंग तकनीकी कर्मचारियों के लिए काफी उपयोगी साबित होगी।

केमटेक, ग्वालियर ***(ए.आर. तुपे)***

05 अक्तूबर, 2015 ***कार्यकारी निदेशक***

FOREWORD

'Safety' is the prime concern in Indian Railways and can not be ignored. While working adjacent to track, any infringement to moving dimensions may lead to train accidents and may cause heavy loss to human lives and machineries deployed. It is imperative to apply all safety precautions as specified and circulated in the form of instructions and must be followed during working on track or adjacent to the track.

It is expected that the handbook will be quite helpful to civil engineering technical staff of Indian Railways engaged in construction and maintenance activities.

CAMTECH/Gwalior ***(A.R. Tupe)***
05, October 2015 ***Executive Director***

भूमिका

यह महसूस किया गया है कि ट्रैक के आसपास काम करने के दौरान श्रमशक्ति और मशीनरी की सुरक्षा हेतु, पयोप्त सुरक्षा उपायों को अपनाया जाना चाहिए। ट्रैक के आसपास जो काये की प्रकृति है, उसमें ट्रैक नवीकरण, गेज परिवतेन, दोहरीकरण, पुल पुननिेमोण आदि कार्यों का होना है। ये काये जो कि ज्यादातर ठेकेदारों के श्रमिक और मशीनरी द्वारा कराये जाते हैं, सुरक्षा संबधी होते हैं तथा चालित आयामों में किसी भी प्रकार का उल्लंघन रेल दुघेटनाओं को जन्म दे सकता है।

यह प्रत्येक और हर एक व्यक्ति के लिए अत्यंत आवश्यक है कि यदि वह ट्रैक से किसी भी रूप में जुड़ा है तो उसे सुरक्षा को ध्यान में रखते हुए विभिन्न ट्रैक कार्यों के निष्पादन के दौरान शॉटे कट तरीकों को नहीं अपनाना चाहिए। इस पुस्तिका में एहतियाती उपायों को कम से कम में संक्षेपित किया गया है।

यह पुस्तिका वैधानिक नहीं है और इसमें दी गइ सामग्री, सिविल इंजीनियरिंग तकनीकी कमेचारियों के ज्ञान प्रसार हेतु है। किसी न किसी रूप में अधिकांश डेटा और सूचना या अन्य, साहित्य सर्वेक्षण पर आधारित है। अधिक गहराई से जानकारी के लिए, इस विषय पर उपलब्ध प्रासंगिक साहित्य देखा जा सकता है।

हम इस पुस्तिका के आगे सुधार के लिए हमारे पाठकों से किसी भी सुझाव का स्वागत करते हैं।

केमटेक, ग्वालियर ***(एस.के.सक्सेना)***

30 सितंबर, 2015 ***उप निदेशक/सिविल***

PREFACE

It has been realized that adequate safety measures should be adopted to keep the manpower and machinery safe during working adjacent to the track. Along the track, the nature of work consists of track renewals, gauge conversions, doublings, bridge rebuilding etc. These works, mostly carried out by contractor' men and machineries are safety concerned and any infringement to moving dimensions may lead to train accidents.

It is extremely necessary for each and every person, if he who is in some or the other way connected with the track, has to be safety minded and should not adopt short cut methods during execution of various track works. In this booklet the precautionary measures are briefly summarized.

This handbook is not statutory and contents are only for the purpose of knowledge dissemination to the civil engineering technical staff. Most of the data & information in some form or the other are based on literature survey. For more in-depth information, the relevant literature available on the subject may be referred.

We welcome any suggestions from our readers for further improvement of this handbook.

CAMTECH/Gwalior ***(S.K. Saxena)***
30 September, 2015 ***Dy. Director/Civil***

विषय-सूची / CONTENT

क्रम सख्य / CHAPTER	विवरण/ DESCRIPTION	प्रष्ठ सख्या/ PAGE NO.
	प्राक्कथन/ FOREWORD	*i*
	भूमिका/ PREFACE	*ii*
	विषय - सूची / *CONTENT*	*iii*
	संशोधन पर्चियाँ / *CORRECTION SLIPS*	*iv*
1.0	परिचय / INTRODUCTION	01
2.0	भारतीय रेल में अपनाये गए निर्देशों के आधार पर कुछ दिशा निर्देश/ SOME OF THE GUIDELINES BASED ON INSTRUCTIONS FOLLOWED IN INDIAN RAILWAYS	01
3.0	चल लाइनों और तय संरचनाओं के निकट कार्य स्थल पर सुरक्षा/ SAFETY AT WORK SITE CLOSE TO THE RUNNING LINES AND FIXED STRUCTURES	02
4.0	ट्रैक के आसपास खुदाई और ट्रेन्चिंग करते समय सुरक्षा उपाय/ SAFETY MEASURES WHILE UNDERTAKING EXCAVATION & TRENCHING ADJACENT TO TRACK	07
5.0	रेलवे ट्रैक के साथ उतराई और सामग्री की स्टैकिंग/ UNLOADING AND STACKING OF MATERIALS ALONG THE RAILWAY TRACK	08
6.0	यातायात ब्लॉक के अंतर्गत कार्य के निष्पादन के दौरान अपनाई जाने वाली आवश्यक सावधानियाँ/ PRECAUTION REQUIRED TO BE TAKEN DURING EXECUTION OF WORK REQUIRING TRAFFIC BLOCK	09
7.0	ओ.एच.ई. क्षेत्र में कार्य करते हुए सुरक्षा पहलुओं का अवलोकन करना/ SAFETY ASPECTS TO BE OBSERVED WHILE WORKING IN O.H.E. AREA	09
8.0	ट्रैक मशीनों के कार्य/ WORKING OF TRACK MACHINES	11
9.0	चालू पटरी के पास ढांचे के विध्वंस के पूर्व सावधानियाँ /PRECAUTIONS PRIOR TO DEMOLITION OF STRUCTURE NEAR RUNNING TRACK	11
10.0	संविदाओं में कार्य स्थल पर सुरक्षा के संबंध में प्रावधान/ PROVISIONS REGARDING SAFETY AT WORK SITE IN CONTRACTS	12
11.0	प्रशिक्षण/ TRAINING	13
12.0	करो और ना करो/ DO'S AND DON'TS	13
	अनुबंध/ ANNEXURE - I	15
	अनुबंध/ ANNEXURE - II	16
	संदर्भ/ REFERENCE	17
	टिप्पणी/ NOTES	18

संशोधन पर्चियों का प्रकाशन
ISSUE OF CORRECTION SLIPS

इस हस्तपुस्तिका के लिये भविष्य में प्रकाशित होने वाली संशोधन पर्चियों को निम्नानुसार संख्यांकित किया जायेगाः

The correction slips to be issued in future for this handbook will be numbered as follows:

केमटेक/2015/सि/एस.पी.डब्लू.एस.ए.टी/1.0/सी.ऐस.#XX दिनाक _____

CAMTECH/2015/SPWSAT/1.0/CS # XX date _____

जहॉ XX सम्बन्धित संशोधन पर्ची की क्रम संख्या है (01 से प्रारम्भ होकर आगे की ओर)

Where "XX" is the serial number of the concerned correction slip (starting from 01 onwards).

प्रकाशित संशोधन पर्चियॉ
CORRECTION SLIPS ISSUED

क्र.सं./ **Sr. No.**	प्रकाशन की तारीख/ **Date of issue**	संशोधित पृष्ठ संख्या तथा मद संख्या/ **Page no. and Item No. modified**	टिप्पणी/ **Remarks**

रेलपथ से सटे कार्य स्थल पर सुरक्षा सावधानियाँ
SAFETY PRECAUTIONS AT WORKSITE ADJACENT TO TRACK

1.0 परिचय / INTRODUCTION

A large number of men and machinery are deployed by the contractors for track renewals, gauge conversions, doublings, bridge rebuilding etc. It is therefore essential that adequate safety measures are to be taken for safety of the trains as well as the work force.

Several incidents have occurred in past wherein contractor's machinery while working very close to the Railway line has infringed the moving dimensions resulting into train accidents. Some accidents also took place due to infringement left at work-site after closure of the work such as repair in tunnels, Complete Track Renewals etc.

It is extremely necessary for each and every person, who are in some or the other way connected with the track to be safety minded and adopt no short cut methods during execution of various track works which may lead to compromise with the safety norms and may eventually lead to an accident. In this booklet the precautionary measures are briefly summarised.

2.0 भारतीय रेल में अपनाये गए निर्देशों के आधार पर कुछ दिशा निर्देश / SOME OF THE GUIDELINES BASED ON INSTRUCTIONS FOLLOWED IN INDIAN RAILWAYS

a. On a double line section where the tracks are close by or for track works on a long bridge, particularly on girder bridges, special care should be taken for labourers staying away from running trains from both directions while passing over the work site. There should be watchmen deployed on both sides with red flags and hooters/whistle to keep a watch on the approaching trains and alert the workers well in time with the use of hooters/whistle.

b. Caution orders speed restriction may be imposed when considered necessary. During the hours of night and at work site where speed restriction has been imposed, the lamps of the permanent indicators, which are not reflective type, should be lit at sunset and kept burning till sunrise, where trains run at night. Reflective type temporary indicators need not be lit. (Para 808,(3) of IRPWM)

c. All permissible or sanctioned infringements should be consolidated for each Division, Section wise. The consolidated list should be in possession of DRM, ADRM, Sr.DSO or DSO, Construction officer in-charge of the Division and relevant extract with each Divisional and other officers. These should be checked once a year at Assistant officer's level and it should be ensured that there is no aggravation of any permitted infringement.

d. All the works inside a tunnel, deep cutting, on bridges, constricted area etc. should be carried out under the protection of engineering signals and preferably under block protection. The Inspector concerned shall be responsible for the safety of trains and of the men and equipments.

3.0 चल लाइनों और तय संरचनाओं के निकट कार्य स्थल पर सुरक्षा / SAFETY AT WORK SITE CLOSE TO THE RUNNING LINES AND FIXED STRUCTURES

All works planned for execution close to the running lines and fixed structures, on bridges, inside tunnels, cutting, constricted area etc. should be carried out only after preparation of detailed plans for the same and getting clearance from Engineering Department of open line and approval of competent authority to ensure that the execution of the work will not in any way infringe the prescribed schedule of dimension or aggravate existing permissible infringement.

3.1 अभियंता प्रभारी द्वारा काम की शुरुआत करने से पहले यह उपाय सुनिश्चित किया जाना है / Measure to be Ensured by Engineer In-charge Prior to Start of Work

Before starting any track work the engineering incharge**,** of the section shall ensure that he has complete knowledge of the following aspects;

i) Detailed planning of the work including protection of track and safety measures proposed to be adopted and precautions to be taken at site for working of trains including materials required for protection after joint survey of site by the supervisors of the contractor and Railway.

ii) Railway supervisor at site will ensure safety precautions against any danger to safety of track and will accordingly educate the contractor’s staff and take their acknowledgement before starting the work.

iii) Before permitting the execution of certain works close vicinity of existing running line like earthwork, supply of ballast for new or existing rail line, gauge conversion or laying of concrete sleepers and rails etc. where it is necessary to use road vehicle/ machinery, Open lines Engineer-in-charge (ADEN/DEN) of the section shall ensure that he receives the prior intimation of the following aspects from Assistant Engineer/ Assistant Officer in charge of the work of the executing agency i.e. construction, electrification, S& T etc.

iv) Name and address of the contractor assigned to execute the work.

v) List of individual vehicle with numbers, name and licence particulars of the drivers, those are proposed to be used by contractor at work site.

vi) Information regarding location, where the vehicles are planned to be plied.

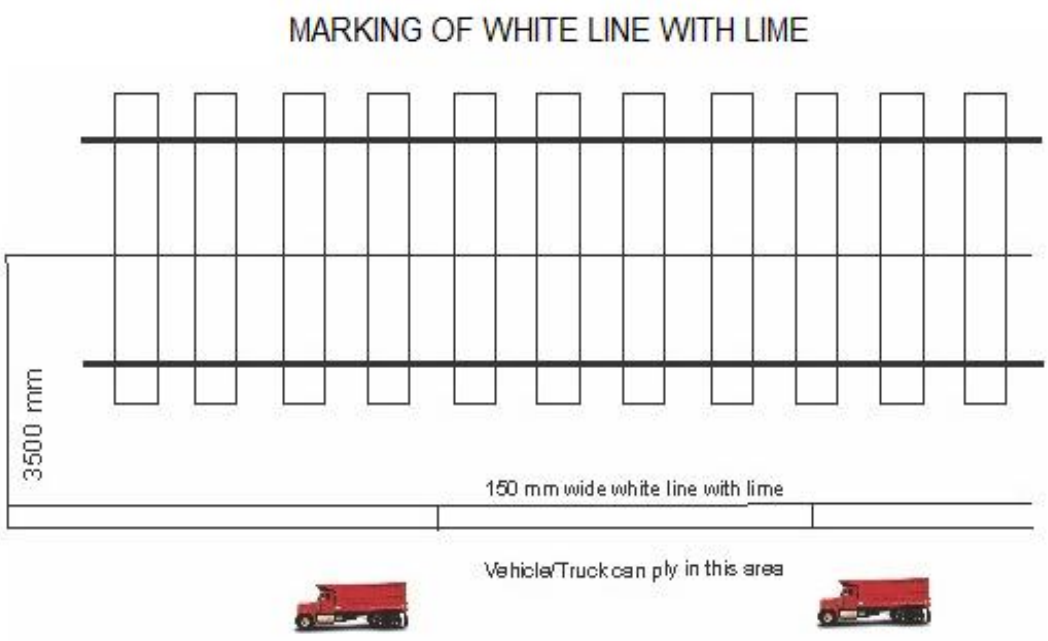
vii) The supervisor/workmen should be counselled about safety measures. The staff of the contractor should be fully trained for the work. List of contractor's supervisors who have been issued competency certificate with location and the nature of works they will supervise. A competency certificate as per proforma given below shall be issued by Assistant Engineer to the supervisor/ staff of the contractor and then only they will be allowed to start the work. Competency certificate will be valid only for the work for which it has been issued.

COMPETENCY CERTIFICATE

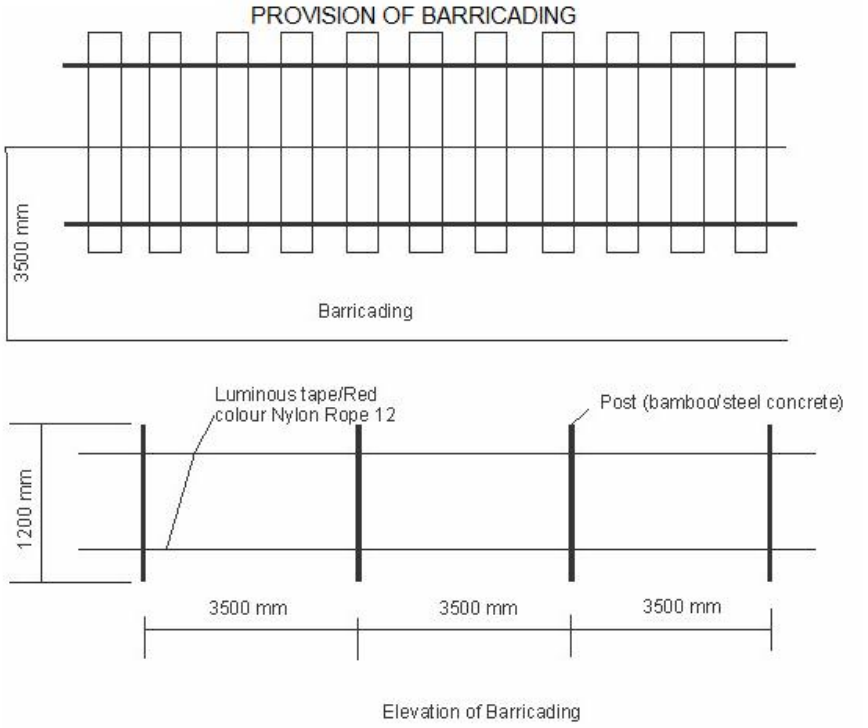
Certified that Shri _____P.Way supervisor of M/s. _____ has been examined regarding P.Way working on _____work. His knowledge has been found satisfactory and he is capable of supervising the work safely.

viii) The other organisations working in the section should submit to ADEN the names of supervisors of construction organisations/other organisations who are going to be site incharge / incharge of work site.

ix) Before the start of work, the land strip adjacent to running track where road vehicle machinery is to ply for the work shall be demarcated with lime in advance at the appropriate distance from the centre of existing track and acknowledged by contractor. Sketches showing the location of marking are as under;



x) Barricading as design given below shall be provided in full length of work area along the track at the specified distance;



xi) The worksite shall be suitably demarcated to keep public and passengers away from work area. Necessary signage boards such as 'Work in progress' etc shall be provided at appropriate locations to warn the public/passengers.

xii) Check list given in Annexure-I shall be used to ensure that all the Requisites measures have been taken before start of the work.

3.2 निष्पादन एजेंसी और अभियंता प्रभारी को कार्य के क्रियान्वित करने के दौरान यह उपाय सुनिश्चित किया जाना है / Measures to be Ensured During The Execution of The Work by Executing Agency and Engineer In-charge

The Engineer in-charge shall approve the methodology proposed to be adopted by the contractor, with a view to ensure safety of trains, passengers and workers and he shall also ensure that the methods and arrangements are actually available at site before start of the work and the contractor's supervisors and the workers have clearly understood the safety aspects and requirements to be adopted/followed while executing the work.

i) There shall be an assurance register kept at each site, which will have to be signed by both, i.e. Railway Supervisor or his representative as well as the contractor's supervisor as a token of their having understood the safety precautions to be observed at site.

ii) The contractor shall not start any work without the presence of railway supervisor or his representative and contractors supervisor at site.

iii) Only trained supervisors have been deputed at work sites duly certified by ADEN/in charge of the work.

iv) Drivers of road vehicles / machinery have been briefed about the safety and precautions to be taken while moving / working close to traffic / track.

v) The contractor shall not allow any road vehicle belonging to him or his suppliers etc. to ply within 6meters from centre of running line without presence of railway trained supervisor.

vi) Contractor shall ply road vehicles only between sunrise and sunset. When vehicle is plied to work during night hours, sufficient lighting shall be ensured in the complete work area for the safety of public and passengers. Engineering indicator will be of luminous material. Also the luminous tapes should be used for demarcation of prohibited area. Additional staff shall be posted as necessary for night working.

vii) The area of work should be demarcated by providing barricades and Sign Boards, which will enable the work-men posted at site and also the lorry drives to have clear guide lines of the movement on vehicles.

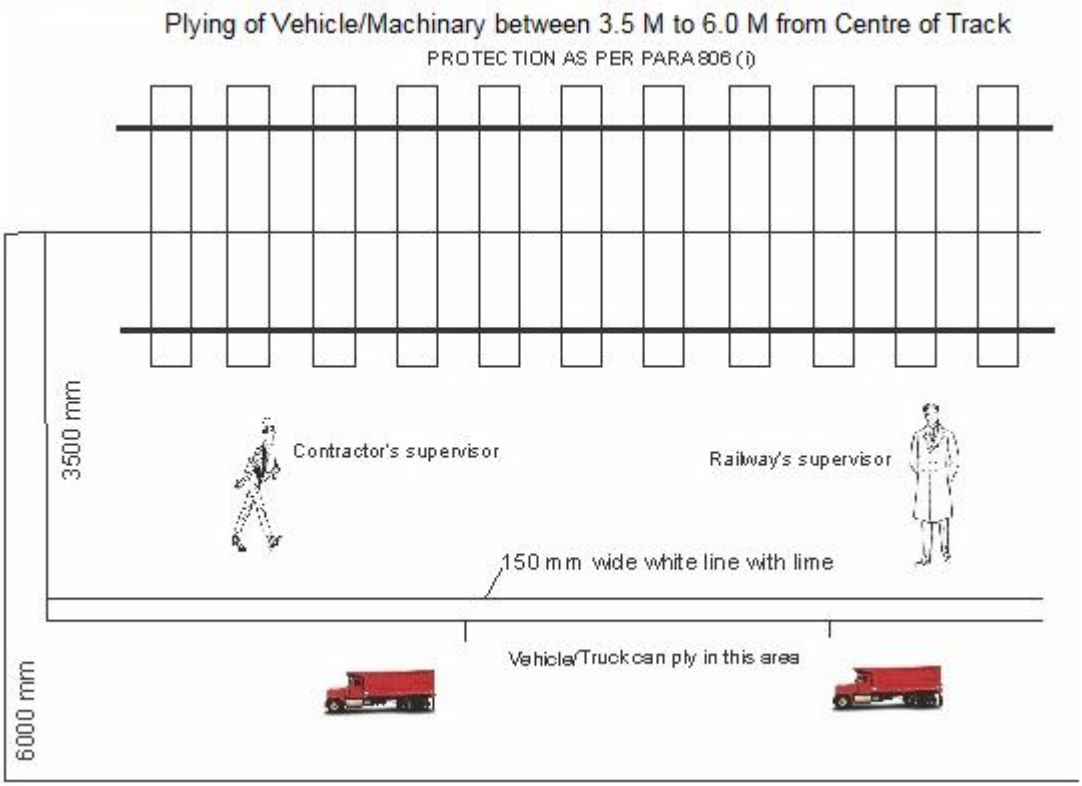
viii) Contractor shall ensure that road vehicle / machinery ply in a way so that these do not infringe the line of demarcation.

ix) The look out and whistle caution orders shall be issued to the trains and speed restrictions imposed where considered necessary. Suitable flagmen/detonators shall be provided where necessary for protection of trains.

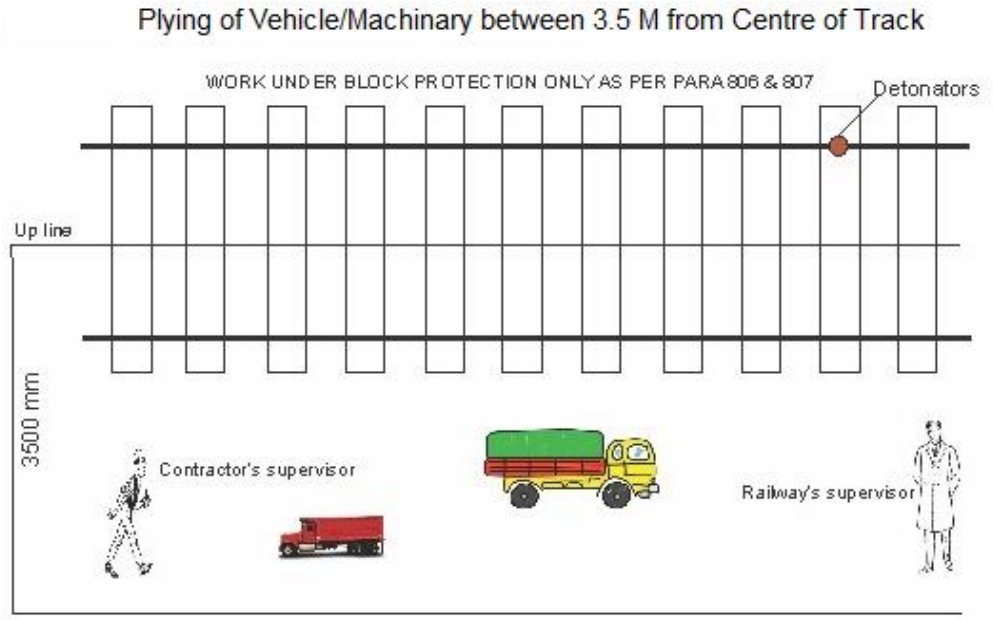
x) In unusual circumstances, where operator apprehends infringement to track while working truck/machinery near running track, following action shall be taken;
   a) The track should be protected as per the provision of IRPWM laid in para 806(i) by the Railway staff.
   b) Any emergency, if occurs, will be protected and attended by the Railway staff, contractor's staff may assist the Railway staff.

xi) All temporary arrangements required to be made during execution of work shall be made in such a manner that moving dimensions are not infringe. Necessary checks shall be exercised by site incharge from time to time.

xii) In case, work has been planned to be done within 6m but beyond 3.5 m of centre of track, it shall be ensured that, necessary precautions for protection of track have been taken as per para 806(i) of IRPWM and look out man has been posted where necessary.



xiii) In case work is planned within 3.5 m of centre line of adjacent track, it shall be ensured that the work is done under block protection only and necessary safety precautions for protection to track as per para no. 806 and 807 of IRPWM are taken.



xiv) Proper communication system shall be available in form of Mobile phones or Walkie-Talkie sets, where necessary at works sites.

xv) In one block section, Lorries should be permitted to work at not more than two locations at a time.

xvi) Where turnings of Lorries are found necessary in course of work, locations for reversing for the purpose of turning should be nominated and should be selected in such a way that there is no danger to the running train. At such locations, a Railway official not below the rank of Works / P-Way supervisor should be available with Hand Signal Flag to ensure that the Lorries do not infringe the Standard Dimension for the running lines. Sufficiently strong stoppers or rail barricades should be installed at such locations wherever required to ensure that even by carelessness or oversight the Lorries do not infringe the fixed dimensions. Wherever Lorries have to take turn, the reversing should be done in such a way the driver invariably faces the running lines at all time.

xvii) The new embankment for doubling should be made extra wide at every 500m or so interval for permitting turning/crossing of vehicles/construction machinery. The extra earthwork involved in such widening of embankment, may be included in the schedule of quantities as a paid item.

xvii) Engineering Supervisors and Contractor's representative should ensure the clearance of total infringements before they leave the work site.

xviii) Supplementary site specific instructions, wherever considered necessary, shall be issued by the Engineer in Charge.

xix) While inspecting the worksite check list given in Annexure -II shall be used to ensure that all the Requisites measures have been taken during the execution of the work.

4.0 ट्रैक के आसपास खुदाई और ट्रेन्चिंग करते समय सुरक्षा उपाय / SAFETY MEASURES WHILE UNDERTAKING EXCAVATION & TRENCHING ADJACENT TO TRACK

i) Before taking up any digging activity on a particular work by any agency Sr. DSTE/DSTE or Sr. DEE/DEE of the section shall be approached in writing by the concerned Eng. or S&T or Electrical officer for permitting to undertake the work.

ii) After getting the permission from S&T or Electrical Deptt. as case may be the, relevant portion of the cable route plan shall be attached to the letter through which permission is issued to the contractor by concerned Eng. official for commencement of work and ensuring that the contractors has fully understood the cable rout plan and precautions to be taken to prevent damage to the underground cables. The contractor shall be asked to study the cable plan and follow it meticulously to ensure that the safety the cable is not endangered. Such a provision including any penalty for default should form part of agreement also. However,

basic responsibility will be of the Department executing the work and the Contractor.

iii) While digging in station area, if any cable is found, digging should be stopped and concerned signalling /electrical staff should be informed immediately.

iv) No new OFC or Quad cable shall be laid close to the existing track. It shall be laid close to the Railway boundary to the extent possible to avoid any interference with the future work (doubling etc.). It shall be ensured in the new work of the cable laying that the cable route is properly identified with electronic or concrete markers.

v) Trenches and foundation pits should be adequately and securely fenced, provided with proper caution signs and marked with red lights at suitable intervals during night to avoid accidents. Adequate protective measures should be taken to see that the excavation operations do not affect or damage adjoining existing buildings.

vi) Position of all underground installations such as sewer, gas pipes, water pipes, electrical cables and other civic facilities that may cause danger during the work should be checked and proper precautions should be taken not to damage them.

vii) Land should be cleared of trees, loose boulders and other obstructions before excavation commences so as to avoid accidents.

viii) Where hard rock is found with and blasting operations are considered necessary, the contractor should obtain the permission of the Engineer-in-Charge in writing for resorting to blasting operation.

ix) Proper precautions should be taken for safety of persons and adjacent track before undertaking any blasting operation. Red flags should be prominently displayed around the area to be blasted. All the people on the work except those who actually light the fuses should be withdrawn to a safe distance of not less than 300 metres from the blasting site.

5.0 रेलवे ट्रैक के साथ उतराई और सामग्री की स्टैकिंग / UNLOADING AND STACKING OF MATERIALS ALONG THE RAILWAY TRACK

i) The sites for material stacking shall be selected in advance ensuring that no part of the stacked material would infringe the standard moving dimensions or inconvenience to any worker or the public. Necessary fencing and lights are to be provided. Later on the material may be stacked to a place from where it may be conveniently disposed off. A plan of proposed stacking locations be made and signed jointly by a competent Railway representative and authorized Contractor's representative, if stacking is done within 6 meters of track centre.

ii) The selected locations within 6 meters shall be marked by lime in advance.

iii) All unloading operations near the track should be undertaken under the supervision of a competent P.Way Supervisor.

iv) The unloaded ballast/rails/sleepers/other P.Way materials after unloading along track should be kept clear off moving dimensions and stacked as per the specified heights and distance from the running track, which will not cause infringement to SOD in case of accidental roll off.

v) After completion of work, the released sleepers and fittings shall be properly stacked away from the track clear of moving dimensions.

vi) While inspecting the worksite, check list given In Annexure-II shall be used to ensure that all the requisite measures have been taken during the execution of work.

6.0 यातायात ब्लॉक के अंतर्गत कार्य के निष्पादन के दौरान अपनाई जाने वाली आवश्यक सावधानियाँ / PRECAUTION REQUIRED TO BE TAKEN DURING EXECUTION OF WORK REQUIRING TRAFFIC BLOCK

i) Any work, which infringes moving dimension, shall be started only after the traffic blocks have been imposed and track protected.

ii) At location where night working is unavoidable, proper lighting arrangement should be made.

iii) Before closing the work, the track shall be left with the proper track geometry so that the trains run safely. After completion of work, the released sleepers and fittings should properly stacked away from the track to be kept clear of moving dimensions.

iv) Block shall be removed only when all the temporary arrangements, machineries, tools, plants, etc. have been kept clear of moving dimensions.

7.0 ओ.एच.ई. क्षेत्र में कार्य करते हुए सुरक्षा पहलुओं का अवलोकन करना / SAFETY ASPECTS TO BE OBSERVED WHILE WORKING IN OHE AREA

i) The risk of direct contact with live OHE is ever present while working in electrified sections such as for painting of steel work of through spans of bridges and platform cover.

ii) The return current in the rails may cause dangerous voltages. During maintenance or renewal of track, continuity of the rails serving electrified tracks shall invariably

be maintained. For bridging gaps which may be caused during removal of fish-plates or rails, temporary metallic jumpers of approved design shall be provided.

iii) No electrical work close to running track shall be carried out without permission of Railway's representative.

iv) No work shall be done within a distance of two meters from the live parts of the OHE without a 'permit-to-work'.

v) While unloading rails from BFRs in an electrified section, it should be ensured that no metallic rod/ stick held by the workmen come in touch with the OHE. A minimum distance of 2 m has to be maintained between live OHE wire and body part of worker or tools or metallic supports etc.

vi) It is important to note that dangerous voltages may be induced in metallic masses such as fencing posts, continuous metallic mass (unloaded rails) of length greater than 300 metres in the vicinity of traction conductors. To avoid possibility of shock due to such voltages, the metallic structures are bonded together and earthed.

vii) No electric connection etc. can be tapped from OHE.

viii) Authorized OHE staff should invariably be present when the relaying work or any major work is carried out.

ix) In the electrified territories, the cutting and day to day trimming of the trees, wherever required shall be done in the presence of authorized engineering and TRD staff to ensure safety and to maintain the 4 m safety clearances from OHE.

x) Power block is correctly taken and 'Permit to work' is issued.

xi) The structure bonds, track bonds, cross bonds, longitudinal rail bonds are not disturbed and if disconnected for the work, they are reconnected properly when the track work is completed.

xii) The track level is not raised beyond the permissible limit during the work.

xiii) The relative alignment of the centre line of the track with respect to the alignment of the contact wire must be maintained within the specified tolerances.

xiv) No fallen wire or wires shall be touched unless the power has been switched off and the wire or wires have been suitably earthed.

xv) In the electrified section, for carrying out repairs/ painting works etc. to bottom of FOB, top chords and bracing of trough type / semi through type girder bridges and other overhead structures over track, power block should be taken before commencing the work in consultation with SSE (Electrical). Staff working on station roofs and signal gantries and similar structures adjacent to Live Overhead

Equipment shall not use any measuring tapes, tools and materials when there is a possibility of their being dropped or carried by wind on to the live overhead equipment.

xvi) In AC traction areas, intimation should be given to the concerned officers of the Electrical General services and also S&T Department, since all the S&T and Electrical lines are cabled on account of Electrical Induction.

xvii) During excavation, if workmen come across tiles or bricks in an arranged manner, they should at once report the matter to the higher officials. Any further excavation should be carried out only in the presence of the authorized staff of Electrical and or S&T department as the case may be.

xvi) No crane shall be worked except on the authorised '**permit-to-work'.**

xvii) For inspection of roofs and sides of a tunnel, the overhead equipment shall be rendered **'dead'**.

8.0 ट्रैक मशीनों के कार्य / WORKING OF TRACK MACHINES

Track machine working is likely to produce a dusty atmosphere and/or heavy noise pollution. Hence extra care is necessary at site to ensure safety of workers. For this, the following steps should be taken.

i) Hooters should be provided on the track machines. These hooters should preferably have remove control operation so that the Lookout man standing around 150 m away from the track machine can operate the hooter to warn the staff working on/around the track machine about approaching train on adjoining track.

ii) Temporary `Whistle Board` should be fixed on the adjoining track, which can be moved along with track machine worksite.

iii) It is necessary that all trains passing on the adjoining track should be issued a caution order "OBSERVE HAND SIGNAL, WHISTLE FREELY AND STOP, IF REQUIRED". Such caution order on the adjoining track is necessary due to high noise level caused by track machine and large concentration of staff working around it.

9.0 चालू पटरी के पास ढांचे के विध्वंस के पूर्व सावधानियाँ / PRECAUTIONS PRIOR TO DEMOLITION OF STRUCTURE NEAR RUNNING TRACK

i) If the structure to be demolished is one which may have got hidden damages, caused by fire, flood or earthquake, measures necessary to prevent accidental collapse by way of bracing, shoring, etc., should be provided.

ii) When demolition by explosives has to be resorted to, this should be done only after the approval of the Authority and after taking necessary precautions.

iii) Prominent danger signs should be posted all round the property and all openings giving access to the structures should be kept barricaded or manned except during the actual passage of workmen or equipment. However, provision should be made for at least two independent exits for escape of workmen during any emergency. During night, warning lights should be placed on or above all barricades.

iv) All gas, water, electricity, steam and other service lines should be shut off outside the property line after notifying the service companies and concerned authorities and obtaining their approval. Any temporary service connections required for the demolition work should be separately taken and arranged in such a manner as to afford safety to the workmen.

v) When work is not in progress, watchmen should be provided to prevent unauthorised entry of the public in the danger zone.

vi) All necessary safety appliances should be issued to the workers prior to starting of work.

vii) Safety distances to ensure safety of the public should be clearly marked and prominent sign boards posted. Every sidewalk or road adjacent to the work should be closed or protected.

10.0 संविदाओं में कार्य स्थल पर सुरक्षा के संबंध में प्रावधान / PROVISIONS REGARDING SAFETY AT WORK SITE IN CONTRACTS

Following items, which are illustrative rather than exhaustive, be provided in the works contract, involving works near track;

i) The Contract Agreement should contain all the provisions of safe working as suitable barricading and signboards to forewarn the road vehicle driver, its type, level of contractor's supervisors who will necessarily be present if work is being done in vicinity of track etc should be specifically provided as an item in tender schedule and paid for as the work progress, rather than mentioning the same in general way in the General conditions or Special conditions. The luminous tape, strung on bamboo poles can be considered for such barricading and provided as separate item in schedule.

ii) Provision for contractor's flagman and supervisors: The engineer- in-charge or his authorized representative will personally counsel, examine & certify the contractor's flagman & supervisor and will give written permission, giving names of such flagman & supervisor to be deployed on the work, location, period and time of the work Contractor shall not normally change such authorized persons. In exceptional circumstances only, contractor should approach Railway for counselling of fresh staff. Photo ID of trained staff and supervisor shall he provided. Staff trained at one site can be used for other site also.

iii) For items such as walkie-talkie sets and mobile phones suitable provision may be incorporated in the tender conditions as per site requirement.

11.0 प्रशिक्षण/ TRAINING

a. Special Training and Counseling should be imparted to all Field staff engaged in maintenance of railway assets regarding the Safety at work site and all of them should be in possession of a Compendium prepared in the same format as Engineering Standing order No.16 (Annexure-VI) issued by the Railway Board in August, 1999.

b. Similar training should be organised for railway's Associates and Contractors working in close proximity of the running track as directed by the Railway Board in their letter No.99/CE-II/PRA/32 of 20.04.2000.

12.0 करो और ना करो / DO'S AND DON'TS

a. Boulders including CST-9 plate, rail pieces etc., should not be left unguarded in the mid-section to facilitate miscreants for their unauthorized placing on the track particularly in areas prone for such miscreant activities.

b. Whenever construction of the double line is undertaken fencing alongside the Railway line in complete length of the block section where doubling is being done should be erected so as to prevent any infringements to the moving dimensions likely to be caused by moving or stationary vehicles used for execution of the works. The fencing should conform to the design approved by CE/Construction.

c. Suitable gates/barriers should be installed across the new embankment, preferably adjoining the manned/unmanned level crossings. The entry for the vehicles should be regulated by an authorized representative of the Engineer-in-charge during the working hours.

d. The design & drawings of FOB other than standard designs/drawings, if adopted, should be adopted "in toto" without any alterations. If any alternation, modification required fresh design should be done.

e. Any unusual noticed at site during fabrication & erection shall be viewed seriously and shall not be neglected. The design section should be consulted immediately. In case it is not possible to attend the same well in time do not keep it in a state affecting the running line till it is attended.

f. Open line Supervisors & Officers should be vigilant about the work being carried out by Construction Organization on & near running lines and promptly bring into the notice of any deficiencies/defects/unusual noticed and prompt remedial action should be taken.

g. During construction it should be ensured that any structure or part of the structure should not be subjected to loads for which it is not designed. Especially in FOBs. Precast slabs to be placed should not be stacked at one place.

***

Annexure-I

CHECK LIST (Before starting the work)

Name of Work.....

Location.....

Duration of Work: From.....To.....

Sr. No.	Description	YES	NO
1.	Contractor's supervisor identified /selected. Who is going to be site-incharge.		
2.	Training imparted to contractor's supervisor and certificate issued.		
3.	Work site inspected by contractor's supervisor/other department's supervisor along with contractor's supervisor.		
4.	Precautions to be taken, identified and listed.		
5.	Plan of work drawn out by contractor's supervisor in consultation with Railway's supervisor.		
6.	Plan of work, brought to the knowledge of open line ADEN/SSE-P.Way & Works.		
7.	Before start of work, proper line marking/barricading done at site of work.		
8.	Men deputed for protection of work along with safety equipments.		
9.	Caution order issued to the train drivers in case work is being done within 6 meter of centre of running track.		
10.	Drivers of vehicle/machinery being used have been identified.		
11.	Drivers of vehicle/machinery briefed about the safe working.		
12.	Sufficient lighting provided at site of work for night working.		
13.	Infringement checked.		
14.	Sectional open line ADEN/SSE-P.Way & works have satisfied themselves regarding safety arrangements.		
15.	Availability of Walkie-Talkies sets for communication.		

Signature of Contractor's/
Other department supervisor

Signature of open Line's
Supervisor

Date:

Annexure-II

CHECK LIST (While inspecting the worksite)

Name of Work.....

Location.....

Duration of Work: From.....To.....

Date of Inspection.....

Sr. No.	Description	YES	NO
1.	Does the contractor's supervisor have the certificate?		
2.	Does the knowledge of contractor's supervisor on safety of track and worksite is up to the mark?		
3.	Is Railway's supervisor of construction organisation/ other department available at site?		
4.	Is knowledge of Railway's supervisor OK?		
5.	Is Lime marking/barricading done?		
6.	Are adequate safety precautions taken?		
7.	Are communication facilities (Walkie-Talkies sets) available at site?		
8.	Are only identified drivers driving the vehicle/machinery?		
9.	Is whole worksite safe for working of men/vehicles and trains?		
10.	Are adequate lighting arrangements done at site?		
11.	Are adequate protection equipments available at site?		
12.	Is caution order to trains being issued?		
13.	Are train drivers following the enforced temporary speed restriction?		
14.	Is work permit been taken for working in electrified territory/station yard (P&C areas)?		

Signature of Inspecting Officer

Designation

संदर्भ / REFERENCE

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***

टिप्पणी / NOTES

गुणवत्ता नीति

रेलों में यात्री और माल यातायात की बढती माँग को पूरा करने के लिए गुणवत्ता प्रबंध प्रणाली में अनुसंधान, डिजाइनों और मानकों में उत्कृष्टता तथा सतत् सुधारों के माध्यम से सांविधिक और नियामक अपेक्षाओं को पूरा करते हुए सुरक्षित, आधुनिक और किफायती रेल प्रौद्योगिकी का विकास करना।

QUALITY POLICY

To develop safe, modern and cost effective Railway technology complying with Statutory and Regulatory requirements, through excellence in Research, Designs & Standards and Continual improvements in Quality Management System to cater to growing demand of passenger and freight traffic on the Railways.

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हमारा उद्देश्य

अनुरक्षण प्रौद्यौगिकी और कार्यप्रणाली को उन्नयन करना तथा उत्पादकता और रेल्वे की परिसम्पत्ति एवं जनशक्ति के निष्पादन में सुधार करना जिससे अन्तर्विषयों में विश्वसनीयता, उपयोगिता और दक्षता प्राप्त की जा सके।

यदि आप इस सन्दर्भ में कोई विचार और सुझाव देना चाहते हों तो कृपया हमें इस पते पर लिखें:

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Our Objective

To upgrade Maintenance Technologies and Methodologies and achieve improvement in productivity and performance of all Railway assets and manpower which inter-alia would cover Reliability, Availability, and Utilisation.

If you have any suggestion & comments, please write to us:

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