

**Sub: Ensuring Safety of railway track when work is executed in the vicinity of track by Project organizations.**

Sometimes, the works are being done by these agencies in unsafe manner resulting in accidents at work sites. In order to ensure safe running of trains, the following instructions shall be followed:

- i. It shall be ensured that the contracts connected with the safety of running trains have adequate clauses to take stringent action against the defaulting contractors.
- ii. In case of works involving joint work of Open Line and Project Organization, the duties and responsibilities should be clearly outlined in advance in a detailed written Memorandum of Understanding which shall be signed by both the parties.
- iii. Nominated Executive of the Project Organization shall arrange to impose necessary Caution Order, with or without speed restriction as per the site requirement, through the concerned ADEN of Open line.
- iv. It shall be ensured that, no new OFC or quad cable is laid close to the existing track. It shall be laid close to the railway boundary to the extent possible to avoid any interference with future works (doubling etc.). Route plan of S&T cable and electrical cable should be prepared by the concerned S&T and Electrical officers of Project Organisation, respectively and got approved from the division before undertaking the work. The completion plan of the cable route should be submitted to concerned Sr.DEN, as soon as the work is completed.
- v. Nominated Project Organization's Executive shall examine competency of the supervisors and machine/vehicle operators and accordingly issue Competency Certificate to supervisor and machine/vehicle operators of the Project Organization and its contractor's supervisor as per Format (Annexure-I) and the same will be countersigned by sectional ADEN.

## **2. Measures to be ensured prior to start of the work**

- i. Nominated executive of the Project Organization shall inform Open Line's Engineer-in-charge (ADEN/ Sr.DEN) about the location and type of work to be executed/taken up in the vicinity of the railway track, in writing.
- ii. Details of contractor assigned to execute the work shall be provided to concerned ADEN/ Sr.DEN.
- iii. 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 by lime in advance at the appropriate distance from the centre of existing track.  
Locations of marking are given in Annexure II.
- iv. Barricading as per the design given in Annexure II shall be provided in full length of work area along the track at specified distances. These barricades shall be maintained in proper working condition and removed only after completion of work.
- v. The worksite shall be suitably demarcated to keep public and passengers away from work area.
- vi. Necessary signage boards such as 'Work in progress' etc shall be provided at appropriate locations to warn the public/passengers. However, there should not be any infringement to moving dimensions due to provisions of these boards.
- vii. The Engineer in charge of Project Organization 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.
- viii. In case works is to be carried out at critical locations like in the vicinity of a tunnel, Open Cut, Bridges etc., a 'Method Statement' should be prepared and got approved from Chief Bridge Engineer/Chief Track Engineer.
- ix. Engineer in-charge of Project Organisation shall submit a certificate to sectional ADEN in writing, stating that all the prescribed methods and safety measures proposed to be adopted including arrangements for protecting the running line have been put in place, without which commencement of the work should not be allowed.

## **3. Measures to be ensured during the execution of the work**

- i. Project Organization/Contractor shall depute trained supervisors at work sites duly certified by nominated Project Organization's Executive.
- ii. The contractor shall not start any work without the presence of Project Organization's nominated supervisor or his representative and contractor's supervisor at site.
- iii. Drivers of vehicle(s) have been briefed about the safety and precautions to be taken while moving/ working close to traffic.

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- iv. Project Organization shall ensure that any road vehicle belonging to their contractor or their suppliers etc. are not allowed to ply within 6 metres from center line of adjacent running line without presence of his Supervisor.
- v. It shall be ensured that road vehicles ply only between Sunset and Sunrise. In cases where it is necessary to work during night hours, sufficient lighting is ensured in the complete work area for the safety of public and passengers. Also, posting of additional staff as necessary for night working, shall be ensured.
- vi. Wherever provided, Engineering Indicator Boards shall be of retro reflective type only.
- vii. It shall be ensured that road vehicle/ machinery ply in a way so that these do not infringe the line of demarcation.
- viii. Only certified Look out man shall be posted where necessary.
- ix. In unusual circumstances, where operator apprehends infringement to track while working truck/machinery near running track, following action shall be taken:
  - a) The contractor/supervisor/vehicle operators should immediately protect the track and advise the situation to Station Master of nearest station and P.Way staff working in the vicinity and assist them in protecting/clearing the track.
  - b) Protection of track shall be done same as done for other emergencies as per laid down instructions.
- x. Individual vehicle/machinery shall not be left unattended at site of work. If it is unavoidable and becomes necessary to stable the road vehicle/machinery at plant near the running track, these shall be properly secured against any possible roll-off towards track and always be manned even during non-working hours.
- xi. All temporary arrangements required to be made during execution of work shall be made in such a manner that moving dimensions are not infringed. Necessary checks shall be exercised by site in charge from time to time.
- xii. In case, work has been planned to be done within 6 m of centre of adjacent track but at more than 3.5 m, it shall be ensured that ADEN of Open Line has been informed in writing, who shall then arrange to impose Caution, if necessary. Nominated executive of the Project Organization shall ensure that :
  - a) Necessary precautions for protection of track have been taken and caution order issued to trains.
  - b) Certified Look-out man/men has/have been posted along the track at a distance of 800 m from the location of work with red flag(s) and whistle(s) to warn the road vehicles regarding approaching trains.
- xiii. In case, work is planned to be done within 3.5 m. of center line of running track, it shall be ensured that ADEN of Open Line has been informed in writing, who shall then arrange Traffic Block and the work is done only under the Block Protection and necessary safety precautions for protection to track as per Para No. 806 and 807 of IRPWM are taken. (Annexure-III).
- xiv. Any excavation in station area, LC Gates and other locations shall be done only in consultation with Sr.DSTE/ADSTE of the division. However, if any cable is found, digging should be stopped and concerned Signaling/Electrical staff of Open Line should be informed immediately.

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- xv. Mobile phones or Walkie-Talkie sets where necessary should be provided at works sites.
- xvi. Implementation of supplementary site specific instruction, whenever considered necessary, issued by ADEN open line of railway should be ensured by Project Organization.

#### **4. Precautions required to be taken during execution of work requiring Traffic Blocks**

- i. Any work which infringes the moving dimensions shall be started only after the Traffic Block has been sanctioned and track protected.
- ii. It shall be the responsibility of the railway official (Open Line/Construction organization) to arrange sanction of Traffic Block and protection of railway track. Arrangement of necessary manpower, tools & equipments, etc. will be made by the Project Organization.
- iii. At locations where night working is unavoidable, proper lighting arrangement shall be made.
- iv. Before closing the work, the track shall be left with the proper track geometry so that the trains run safely.
- v. After completion of work, released sleepers and fittings should be properly stacked away from the track to be kept clear of moving dimensions.
- vi. Traffic Block shall be cancelled only when all the temporary arrangements, machineries, tools, plant etc. have been kept clear of moving dimensions.

#### **5. Stacking of material 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. A plan of proposed stacking locations should be prepared and signed jointly by ADEN of the section and Project Organization's representative.
- ii. The selected locations shall be marked with lime in advance.
- iii. Presence of an authorized representative of Project Organization while unloading and stacking shall be ensured.
- iv. The material shall be stacked upto such a height, which will not cause infringement to SOD in case of accidental roll off.

#### **6. Safety aspects to be observed while working near OHE area**

No electrical work close to running track shall be carried out without permission of Sr.Divisional Electrical Engineer of the concerned section or his authorized representative.

#### **7. Undertaking digging works in the vicinity of underground Signaling, Electrical and Telecommunication cables:**

A copy of Joint Procedure Order (JPO) for undertaking digging work in the vicinity of underground Signaling, Electrical and Telecommunication cables. (No. 2004/Sig/G/JPO

No.1/Sig/2004) is also being sent for ready reference and strict observance in field. (Copy enclosed as Annexure 'IV').

**8. Action by open line (Co-ordination & Inspection)**

- i. Open line staff and Engineers shall keep a watch on the safety precautions being taken at the work site and may stop the work, if any unsafe working is noticed in accordance with Para No. 103, 106 and 109 of IRPWM-2020.
- ii. Open line Engineers shall play proactive role, coordinate with Executive of Project Organization and keep a watch on safety precautions being taken at worksite.

This is issued with the approval of Pr. CE.

**DA: As above**

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**(Pankaj Saxena)  
Chief Track Engineer**

**Competency Certificate**

**Name of Work: .....**

Certified that Shri. .... Supervisor of M/s ..... has been examined regarding rules/safety requirements while working in the vicinity of railway track. His knowledge has been found satisfactory and he is capable of safely supervising the work as far as safety of track is concerned.

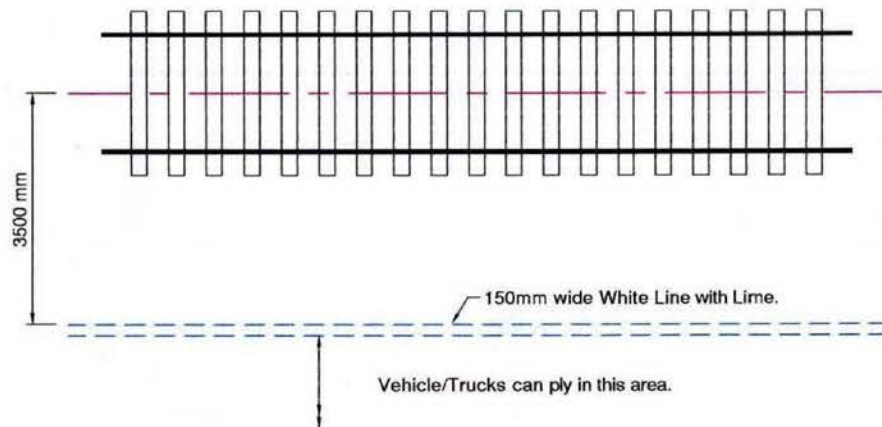
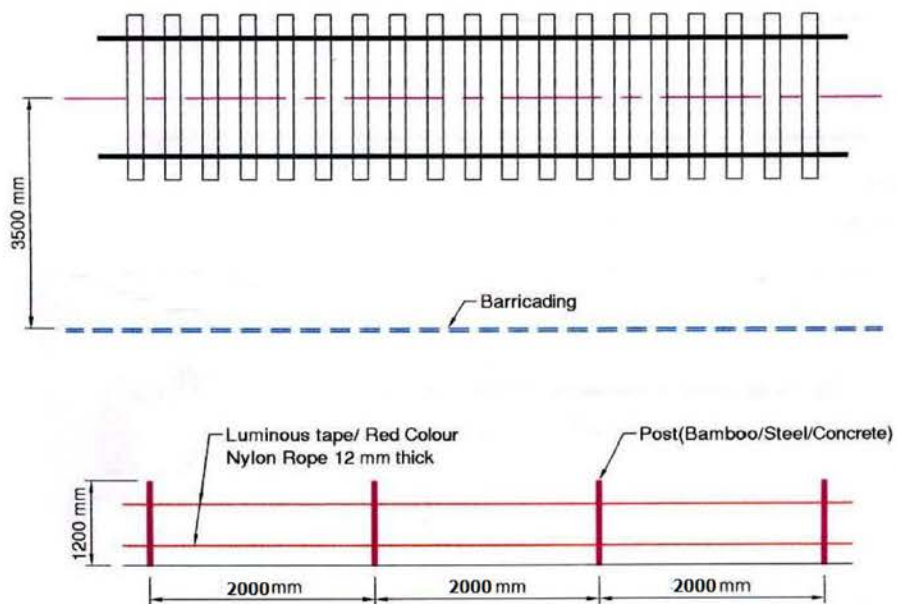
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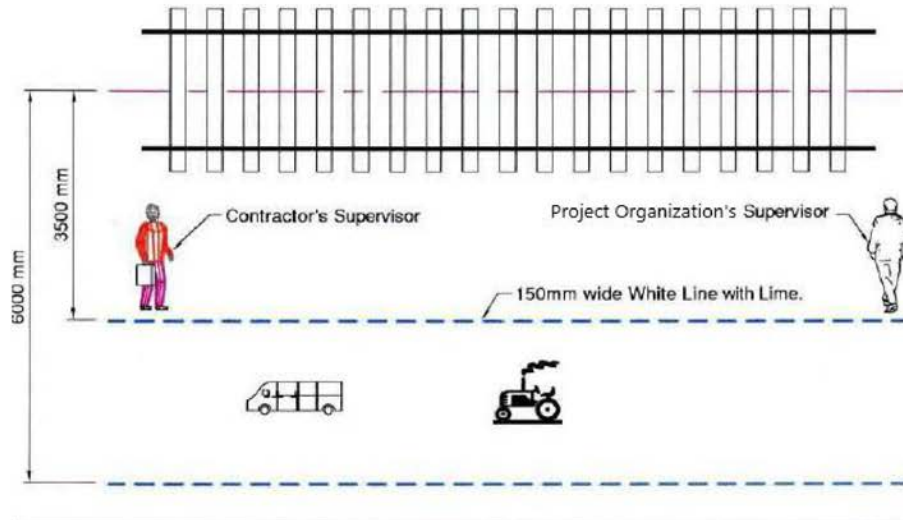
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above of ADEN of Railway)

Assistant Divisional Engineer  
(Sectional)

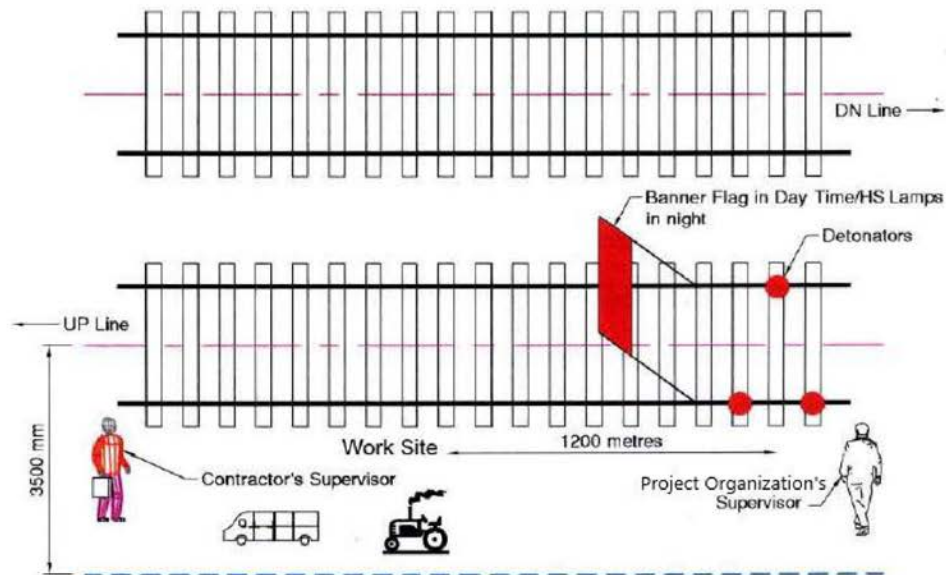


**A) Marking of White Line with Lime.****B) Provision of Barricading.****Elevation of Barricading**

) Plying of Vehicles/Machinery between 3.5 Mts. to 6.0 Mts. from centre of track.



) Plying of Vehicles/Machinery within 3.5 Mts. from centre of track.



Work to be done as per para 806 and para 807 of IRPWM.



**Joint procedure order for undertaking digging work in the vicinity of underground Signaling, Electrical and Telecommunication cables.**

**(No.2004/Sig/G/ JPO No.1/Sig/2004)**

A. A number of Engineering works in connection with gauge conversion/doubling/third line are in progress on various railways, which require extensive digging work near the running track, in close vicinity of the working S&T cables carrying vital safety circuits as well as electrical cables feeding the power supply to Cabins, ASM room, RRI Cabin, Intermediate Block Huts (IBH) etc. Similarly, S&T organization under open line or construction units under CAO/C are executing various signaling and telecommunication works requiring digging of earth for laying of cables or casting of foundations for the erection of signal posts etc. RailTel are also executing the work of laying of quad cable and OFC on various Railways as a part of sanctioned works for exclusive use of Railways for carrying voice and data i.e. administrative and control communication, PRS, FOIS etc. or shared by RailTel Corporation of India Ltd. On certain sections digging is also required for laying of electrical cable and casting of foundation for the erection of OHE masts by Electrical cable and casting of foundation for the erection of OHE masts by Electrical Deptt. Generally, these works are executed by contractors employed by these organizations.

B. However, while carrying out these works in the vicinity of working signaling, telecommunication

and electrical cables, at times, cable cuts take place due to JCB machines working along the track or during the digging work being done by Contractors carrying out the Civil Engineering works. Similarly, such cable cuts are also resulting due to works undertaken by S&T or Electrical deptts. Such cable faults results in the failure of vital signaling and telecommunication circuits.

C. Henceforth, the following joint procedure shall be followed by Engineering, Electrical and S&T (and RailTel organization, wherever such works are being done by them) officers of the respective divisions and by the construction Organization, while carrying out any digging work near to existing signaling & telecommunication and electrical cables, so that the instances of cable cut due to execution of works can be controlled and minimized.

1. S&T Department (and RailTel, where they have laid the cables) & Electrical Deptts. shall provide a detailed cable route plan showing exact location of cable at an interval of 200m or wherever there is change in alignment so that the same is located easily by the Engineering official/contractor. This cable may be by Sr.DSTE/DSTE or Sr.DEE/DEE of the divisions or Dy.CSTE/C or Dy.CEE/C within a reasonable time in duplicate. DSE/DEN or Dy.CE/C will send copies to their field unit i.e. AEN/SE/P.Way & works.

2. 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 Engg. or S&T or Electrical officer for permitting to undertake the work. After ensuring that the concerned executing agencies including the contractor have fully understood the S&T and Electrical cable route plan shall permit the work in writing.

3. After getting the permission from S&T or Electrical Deptt. as the 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 Engg. official for commencement of work and ensuring that the contractors have fully understood the cable route 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 of the cable is not endangered. Such a provision, including any penalty for default, should form part of agreement also. It is advisable that a suitable post of SE(Sig) or SE(Tele) or SE(Elect.) shall be created chargeable to the estimate of doubling/Gauge conversion, who can help Engg. agencies in the execution of the work. However basic responsibility will be of the Department executing the work and the Contractor.

4. The SE(P.Way) or SE (Works) shall pass on the information to the concerned SE(Sig) or Se (Tele) or Se (Elect.) about the works being taken up by the contractors in their sections at least 3 days in advance of the day of the work. In addition Engineering control shall also be informed by SE(P.Way) or SE (Works), which in turn shall pass on the information the Test Room/Network Operation Centre of Rail Tel/TPC/Electrical Control.

5. On receiving the above information, SE (sig.) or SE (Tele) or SE (Elect.) shall visit the site on or before the date of taking up the work and issue permission to the contractor to commence the work after checking that adequate precautions have been taken to avoid the damage to the cables. The

permission shall be granted within 3 days of submission of such requests

6. The name of the contractor, his contact telephone number, the nature of the work shall be notified in the Engineering Control as soon as the concerned Engg. official issue the letter authorizing commencement of work to the contractor. Test Room be given a copy and Test Room shall collect any further details from the Engineering Control and shall pass it on to S&T/Rail Tel & Elect. officials regularly.

7. In case of works being taken up by the State Government, National Highway Authority etc. the details of the permission given i.e. the nature of work, kilometer etc. be given to the Engineering Control including the contact person's number so that the work can be done in a planned manner. The permission letter shall indicate the contact numbers of Test Room/Network Operations Centre of RailTel/TPC/Elect.Control.

8. Where the nature of the work taken up by the Engineering Department is such that the OFC or other S&T cables or Electrical cables is to be shifted and relocated, notice of minimum one week shall be given so that the division/RailTel/Construction can plan the works properly for shifting. Such shifting works shall in addition for security and integrity of the cables be supervised by S&T supervisors/RailTel supervisors/Electrical supervisors.

9. The concerned SE(P.Way)/SE(Works)/SE(Tele)/SE(Elect.) or RailTel supervisors, supervising the work of the contractor shall ensure that the existing emergency sockets are not damaged in view of their importance in providing communication during accident/emergency.

10. In case of minor nature of works where shifting of cable is not required, in order to prevent damage to the cable, the Engineering Contractor shall take out the S&T or optical fibre cable or Electrical cable carefully from the trench and place it properly alongside at a safe location before starting the earthwork under the supervision of SE (Sig) or SE (Tele) or SE (Electrical). The cable shall be reburied soon after completion or excavation with proper care including placement of the brick over the cable by the concerned S&T supervisors or Electrical Supervisors. However, the work will be charged to the concerned Engineering works.

11. In all the sections where major project are to be taken up/going on RailTel/S&T Deptt. shall deploy their official to take preventive/corrective action at site of work.

12. No new OFC/Quad cable shall be laid close to existing track. It shall be laid close to Railway boundary as per extant instructions i.e. 1.0m from the Railway boundary to the extent possible to avoid any interference with future works (doubling etc.) It shall be ensured in the new works of cable laying that the cable route is properly identified with electronic or Concrete markers. Henceforth, wherever cable laying is planned and before undertaking the laying work, the cable route plan of the same shall be got approved from the concerned Sr.DEN or Dy.CE/Const to avoid possible damages in future. Such approvals shall be granted within 7 days of submission of the requests.

13. The works of excavating the trench and laying of the cable should proceed in quick succession, leaving a minimum time between the two activities.

14. Any damage caused to OFC/Quad cable or Electrical cable during execution of the work, necessary debit shall be raised on Engineering Department who shall bear the cost of the corrective action.

15. All types of bonds i.e. rail bond, cross bond and structure bond shall be restored by the Contractor with a view to keep the rail voltage low to ensure safety of personnel.

16. Above joint circular shall be applicable for construction as well as open line organization of Engineering, S&T & Electrical.

17. The S&T cable and Electrical cable route plan should be got approved from the concerned Sr.DSTE/DSTE & Sr.DEE/DEE respectively, before undertaking the work and completion cable route plan should be finalised Block section by block section as soon as the work is completed.

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