

**GOVERNMENT OF INDIA  
MINISTRY OF RAILWAYS  
(RAILWAY BOARD)**

**Instrn. No. 28/2019**

**No. 2017/CE-IV/RUB/88**

**New Delhi dated: 24.09.2019**

The General Manager,  
All Zonal Railways.

**Sub: Drainage in LHS/RUB/Subway- Executive Summary.**

**Ref:** (i) Railway Board's letter No. 2006/CE-IV/Misc-2(RUBs) dated 18.04.2012 & 03.07.2018.  
(ii) Board's Office letter No. 2017/CE-IV/Misc (RUBs) dated 21.03.2017.  
(iii) Board's Office letter No. 2017/CE-IV/RUB/88 dated 04.10.2017 & 25.06.2019.

1. Railway Board vide letter referred above (ref. i), issued guideline that level crossing which do not qualify for sanction of RUB on cost sharing basis in terms of Para 925 of IRPWM, can be planned for elimination by Subways if found "technically feasible".

Due to large no. of representations from Public representatives (on water-logging) at newly constructed Subways, this policy was reviewed and it was decided that the responsibility for the maintenance of road passing through subway, lighting, drainage system, diversion road and any other allied works in Railway portion will be with Railways and beyond Railway portion the responsibility of maintenance rests with State Govt.

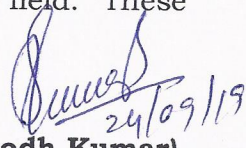
2. Therefore, the subject of Drainage assumes importance. Following is Executive Summary of instructions issued vide above referred letters. The actionable points are summarized below:

- (i) RUB/LHS/Subway should be constructed only at those locations, where it is technically feasible.
- (ii) Planning, construction and maintenance of drainage system in Railway area at RUB/LHS/Subway is the responsibility of the Railway.
- (iii) Cover shed of economical design on ramp/approaches may be provided as per site condition.
- (iv) The provision of drainage arrangement should be made the integral part of construction of RUB/LHS/Subway at planning stage itself for its proper functioning. The planning & execution should include detailing for collection of runoff water and its disposal till final outfall.
- (v) Rain water harvesting should be planned as per site conditions.
- (vi) Joints of RCC boxes should be properly sealed.
- (vii) Backfill material should be as per Clause 7.5 of IRS Bridge Substructure and Foundation Code. In lieu of graded filter (in the form of boulder/cobbles) on the vertical walls of RUB/LHS/Subway, Geo-composite drain may be used for trial purpose.

- (viii) Hump on road side or provision of reverse slope of road before start of downward ramp to RUB/LHS/Subway to avoid ingress of water through ramp and side. Retaining wall should continue along the approach slope upto the hump or from where reverse slope starts.
- (ix) Sump & pump arrangement to be done at critical locations during monsoon. The capacity of pump should be adequate.
- (x) Elaborate drainage arrangement should be done to divert surrounding water.
- (xi) No weep holes should be provided in the RCC Box and the retaining walls of the subway.
- (xii) All the above arrangements are indicative. Railway should decide the proper arrangements as indicated above as per site condition and same must be incorporated in the drawing of LHS to ensure all weather availability of the subway.

Above, instructions have been incorporated in RDSO Drawing No. RDSO/B-10159, RDSO/B-10159/1, RDSO/B-10153, RDSO/B-10156 and few more drawings of RUB/subway. These instructions are to be implemented as per site condition with ultimate aim that there should not be any water logging in the subway during its service.

The subway works are being executed by either construction or open line Engineers. They need to be sensitized for applying their Engineering knowledge to this important subject matter at the first stage of construction itself. Chief Engineer should exercise sample checks to ascertain application of above points in field. These instructions should be followed strictly.

  
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**Copy to:** PCEs & CAO/Cs, All Indian Railways, CMDs of IRCON, RITES & RVNL, MD/DFCCIL.