

दक्षिण मध्य रेलव
प्रमुख मुख्य इंजीनियर का कार्यालय,
पांचवीं मंजिल, रेल निलयम
सिकंदराबाद- 500 071



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No.W.71/Br/Bridge Policy/Vol.II

Dt:29.04.2022

Sr.DEN/Co-ord/SC, GTL, BZA, HYB, GNT & NED

Sub: Provision of filter media behind boulder filling at Abutments, Wing walls, Retaining walls .- Reg.

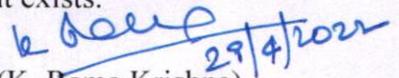
Ref: 1. This office letter no.W.71/Br/Bridge Policy, dated 30.06.2020.

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As per para 7.5 of Foundation and Sub-structure code, 60cm of boulder backing along with granular backfill is required to be provided behind abutments, Wing walls, return/earth retaining walls for effective drainage through weep holes since these walls are not designed to take the load of submerged back fill. In all the approved GADs, provision of boulder backing with granular backfill is indicated in the Notes for implementation in the field. Vide this office letter under reference-1, GSB was also permitted for use as granular material behind the boulder backing since GSB is found conforming to the groups of granular material specified under IS:1498 i.e. GW,GP, & SW. Further, in this letter, instructions on provision of boulder backing with granular backfill were reiterated again.

In this regard, it has come to notice that while executing the earth retaining walls in Bridge/RUB works, granular soil filling along with boulder backing is not being done for various reasons such as non-availability of Railway land adjacent to the retaining/return walls etc., This will make the weep holes ineffective and may cause buildingup of excess pressure behind the walls in submerged soil condition leading to wall collapse in extreme cases. Few such incidences of collapse were also reported by the divisions recently.

Hence, instructions on provision of boulder backing with granular soil filling as given under para 7.5 of Foundation and Sub-structure code are reiterated once again for implementation in the field without fail. Where there are field constraints in implementing these instructions for mass concrete walls with weep holes, as an alternative, RCC retaining walls (without weep holes) shall be adopted. In this regard, a drawing for U-shaped RCC retaining walls for various heights was already issued for adoption in the field. If for any reason (Rly land constraints, Rocky strata behind the wall etc.), it is not possible to do the boulder backing and granular fill as per the approved GAD for the aforesaid bridge components, the approved GAD shall be referred back to Headquarters Bridge designs office for giving an alternative design to that specific bridge component where the constraint exists.


(K. Rama Krishna)

Chief Bridge Engineer

C/-PCE/SC, CAO/C/SC, CPD/BW/SC, CPD/SD/SC for information please

C/- CE/RSW/SC, CTE/SC, CE/TM/SC, CGE/SC, CE/TP/SC, CE/Works/SC, CE/P&D/SC, CE/SD/SC
for information please.