EFFECTIVE MANAGEMENT OF SURFACE RUNOFF WATER ON RAILWAY STATION

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Abstract

A drainage of railway track is always essential of the railway track . absence of effective drainage system, to drain away the water coming to railway tracks. May not lead to the problem in maintenance of track but also after construction of drainage system, the water does no get effectively drain way from the track formation. Therefore it very important to design of an effective drainage system in these project investigation of current condition its limitation and remedial major for effective drainage system to satisfy the current and future needs is suggested.

I. INTRODUCTION

Good surface water management is about making sure that rain can drain effectively through our environment, using a combination of natural and manmade drainage networks. Surface water flooding happens when intense rainfall overwhelms local drainage capacities. These intense rainfall events, usually associated with thunderstorms, tend be localized and can develop very quickly. Forecasting the location, severity and timing of the heaviest rainfall with a useful lead in time and level of confidence is a significant challenge. This means that surface water flooding is more difficult to forecast than flooding from rivers and the sea. Surface water flooding can happen a long way from a river or stream, in places that people wouldn't expect to flood, simply because there is nowhere else for the excess rainwater to go.

Existing drainage methods for railway track

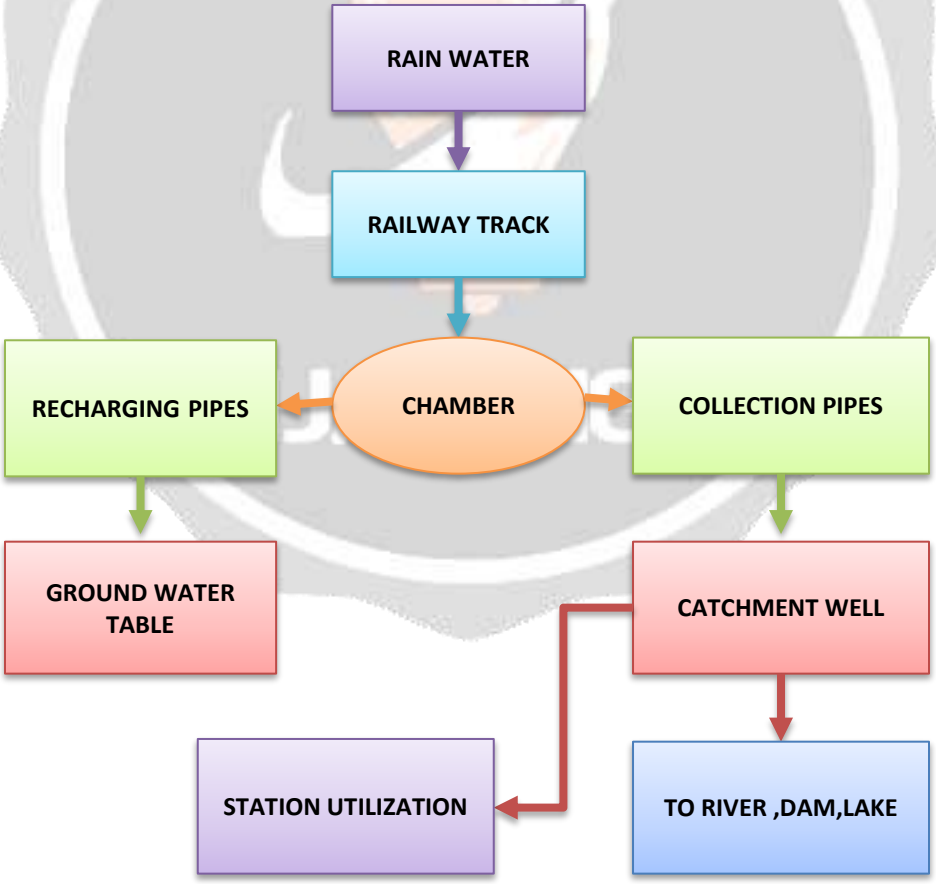
Open longitudinal Side Ditch-Drains: There are unlined and lined open longitudinal Side Ditch-Drains. Unlined ditch-drains should be trapezoidal in cross section with 45 0 side-slopes. V-shaped ditches are easily blocked by debris and are susceptible to erosion

Rain water which flows on railway track called as runoff water enters through chamber.
It is necessary because water is the enemy of railway track depend in large extend.
If water can be taken out and kept away from the track bed.

Fig. 1 Previous methods problem statement

Flow Diagram

Effective surface run off water on railway station



Methodology

1) Rainwater
2) Collection chamber
3) Recharging pipes/ run off water drainage line
4) water catchment well
5) Overflow situation
6) station utilization

RAINWATER:-

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fig Rainwater

Collection Chamber

Chamber is the very important part of drainage system.
Collect the surface run of water without any blockage.
The chamber diameter varies to as per requirement.
In this chamber is provide to the railway track both sides.

Recharging pipes/run off water drainage lines

R.C.C. Pipes

G.I. pipes

Catchment Well

To recharging remaining water to collected in water catchment well/recharging well.

The stations run off water collecting in this well.
This well sufficient water storage capacity.
This well don't mixed any drainage or sewer water.
Well two work are carry out groung water recharging and station utilization.

Fig catchment well

Overflow situation

The well certain level below the 1meter in ground level
This over flow water supplied near river or dam, cannels.

RESULT

To avoid run water on railway track for easy and safe transportation of railway and for ground water recharging successfully.

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