

MISTAKE AND THEIR RESULTS TO POSITIONING AND SIZES OF DRAINAGE STRUCTURES AT FOREST ROADS

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ABSTRACT

The forest roads provide access to forest resources in carrying out main forestry activities such as protection, afforestation, management, recreation and firefighting. The main task of all drainage structures and walls is protected against external aggressors to the forest roads. The useful life of forest road due to drainage structures is prolonged. The drainage structures and protective structures in used forest roads are various types. These are dip drains, pipes, culverts, bridges, water-bars and walls. The occurring errors by planning and constructions operations are shortened the life of drainage structures. Especially, the mistakes during planning works of drainage structures are constituted major problems. These problems are large or small of cross section of drainage structures, mistake of positioning, materials and mistake to size of drainage structures etc. In this study, areas are located in northern Turkey. These regions are Sile and Bahcekoy Forest Administration. The drainage structures on forest roads in study areas are different size culvert and pipes. Inside drainage structure are found false ones together with right ones. In this study, the planning and constructions operations of positioning drainage structures on sample forest roads were investigated. In the results, locations and constructions of some drainage structures have been determined to be incorrect and errors have revealed.

Planning and Building Mistakes at Drainage Constructions



Figure 1. The fault walls and fault positioning



Figure 2. The used deficient materials



Figure 3. The small drainage constructions according to road platform

Some suggestions made in the light of this study are presented below;

- Firstly, the planning operation of drainage constructions on forest road must be ideally.
- Field and road codes must be considered in the choice of location. The incorrect selection codes can be block for functioning of drainage constructions.
- Drainage constructions must made with 30° - 45° angle according to road platform. It must not be vertical position according to road. The road platform must used as a whole for culverts and pipes.
- The entry and exit of culverts must be walls and the walls must protect these drainage constructions.
- The materials chosen for drainage constructions must be ideally. The mistake in materials chosen will be disruptive for forest road and these constructions.
- The periodical maintenance for drainage constructions must be every year.

Keywords: forest road, drainage structure, culvert, pipe, cross section, positioning, size