

The Necessity to Standardize Procedures of Providing Engineering Geological Data for Designing Road and Railway Tunneling Projects

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Abstract : One of the main problems of the design stage relating to many tunneling projects is the lack of an appropriate standard for the provision of engineering geological data in a predefined format. In particular, this is more reflected in highway and railroad tunnel projects in which there is a number of tunnels and different professional teams involved. In this regard, comprehensive software needs to be designed using the accepted methods in order to help engineering geologists to prepare standard reports, which contain sufficient input data for the design stage. Regarding this necessity, applied software has been designed using macro capabilities and Visual Basic programming language (VBA) through Microsoft Excel. In this software, all of the engineering geological input data, which are required for designing different parts of tunnels, such as discontinuities properties, rock mass strength parameters, rock mass classification systems, boreability classification, the penetration rate, and so forth, can be calculated and reported in a standard format.

Keywords : engineering geology, rock mass classification, rock mechanic, tunnel

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