

- I. Introduction. Components of Road Structure (subgrade, embankments, cuts). Selection of road cross section.
- II. Input data for design and construction of road structures. Geotechnical data. Climate data. Hydrological data.
- III. Soil classifications for road design. GN200 classification, Unified Soil Classification System, AASHTO Soil Classification, frost susceptibility classification, geological classification.
- IV. Cut slope and fill slope design and construction.
- V. Slope protection. Retaining walls.
- VI. Road drainage systems.
- VII. Road embankment construction technology. Embankment settlement. Construction of road embankments on firm soil or bedrock. Construction of road embankments on soft and compressible ground. Embankment construction near structures.
- VIII. Soil compaction, Proctors Compaction Test, Optimum water content, soil compaction control.
- IX. Cut construction technology. Preparatory works. Cut in soil. Cut in rock.
- X. Excavation in rock. Rock blasting technology.
- XI. Soil stabilization. Mechanical stabilization. Lime/Cement stabilization. Bituminous soil stabilization. JET grouting.
- XII. Road Construction Machines. Selection of equipment. Compaction equipment.
- XIII. Geosynthetics in road construction.
- XIV. Maintenance and Service of roads

Literature:

Caicedo, B. (2018). Geotechnics of Roads: Fundamentals (1st ed.). CRC Press.

<https://doi.org/10.1201/9780429025914>

Zdravko Joksić, "Donji stroj saobraćajnica", Naučna knjiga Beograd, 1984.

Dragan Č. Lukić, Petar V. Anagnosti, „Geotehnika saobraćajnica“, Građevinski fakultet Subotica i Časopis „Izgradnja“ Beograd, 2010.