

## TECHNICAL AND GEOTECHNICAL REPORTS FOR THE REHABILITATION WORKS ON DN76, IONEȘTI – VÂRFURILE, KM 55+425 – KM 69+350 – TECHNICAL REPORT ON ROAD SUPERSTRUCTURE

### Goal of the project

The technical report aims at assessing the executed works, starting from the site documents drawn up during construction, as well as at proposing technical solutions which can be applied for finalizing the works.

The theme of the report requires the highlighting of the existing technical condition of the road structure and the proposition of viable alternate solutions to continue the rehabilitation, ensuring the technical and qualitative performances while speeding up the work rhythm.

### Short description of the project

Research for proposing viable technical solutions to finalize the works.

### Project implemented by

S.C. ALDOR S.R.L. Timișoara

### Implementation period

01.03.2016 – 01.07.2016

### Main activities

The assessment of the national road section to be rehabilitated, DN 76 Ionești – Vârfurile, km 55+425...km 69+350, consisted in determining the present performance indices for the realized works, as follows:

- assessment of the bearing capacity;
- assessment of the deterioration;
- assessment of evenness;
- assessment of traffic;
- assessment of road structure composition;
- condition of the realized works.

Based on the results obtained from the afore-mentioned verification, conclusions were drawn up concerning the quality of the realized works (enlargement casing) and the technical condition of the existing road section.

### Results

The investigations lead to the following conclusions:

- the realized casings differ in aspect from one section to the other or even on the length of the same section;
- the research performed shows diverse and extended degradations, multiple repairing works, totally inadequate evenness and bearing capacity at the level of the road surface, aspects arguing for the necessity of strengthening the road complex;
- the field research shows that the quality conditions are adequate at the upper side of the analyzed casings, and their bearing capacity is at least equal to the one in the existing road complexes;
- the geotechnical drillings show that the existing road layers have variable thickness, are realized in different materials and are placed on foundation grounds with low bearing capacity.

### Applicability and transferability of the results

Based on the analysis of the existing situation, the following technical solutions were analyzed:

- strengthening of the existing road complex with new bituminous layers;
- realization of new foundation layers, with or without milling the existing bituminous layers;
- application of a cold recycling technology in situ on the existing road layers.

The recommended technical solution includes the leveling of the bearing capacity on the entire width of the carriageway by applying an in situ stabilized layer with hydraulic and bituminous binder, followed by the realization of a bituminous pavement.

### Research Centre

Research Centre of Infrastructures for Constructions and Transportation – ICT –

### Research team

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