
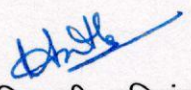


परियोजना का नाम:- जिला योजना में जनपद बागेश्वर में नरगोली-सिमायल-भंडारी-  
सलिया-जग्यूड़ाबास मोटर मार्ग का निर्माण।

भू-वैज्ञानिक की आख्या

—संलग्न हैं—

  
सहायक अभियंता  
प्रान्तीय खंड, लो०नि०वि०  
बागेश्वर

  
अधिशाली अभियंता  
प्रान्तीय खंड, लो०नि०वि०  
बागेश्वर

नोट- प्रयोक्ता ऐजेन्सी द्वारा भू-वैज्ञानिक की आख्या प्राप्त कर प्रस्ताव के साथ संलग्न की जायेगी।



कार्यालय प्रमुख अभियन्ता एवं विभागाध्यक्ष  
उत्तराखण्ड लोक निर्माण विभाग,  
देहरादून।

भू – गंभीर निरीक्षण आख्या एस0जी0- 154/सड़क/पुल समरेखण/कुमांऊ/2014

**Geological Assessment of the alignment proposed for  
Nargoli-Simalyal-Bhandarisera-Saliya-Jogyudabaans  
motor road, Distt. Bageshwar.**

21-फरवरी-2014



(13)

**Geological Assessment of the alignment proposed for Nargoli-Simalyal-Bhandarisera-Saliya-Jogyudabaans motor road, Distt. Bageshwar.**

**Vijay Dangwal**

**21-02-2014**

**1- Introduction:-** The Provincial Division, Public Works Department, Bageshwar has proposed the construction of 7.00 km long motor road namely Nargoli-Simalyal-Jogyudabaans in Distt. Bageshwar. On the request of Er. Mahendra Kumar, Executive Engineer I carried out the geological assessment of the proposed alignment on 22.11.2013 in presence of Er. G.C. Tiwari, Astd. Engineer and Er. Chanchal Singh Koranga Jr. Engineer, Provincial Division, PWD, Bageshwar.

**2- Location:-** The proposed alignment of Nargoli-Simalyal-Jogyudabaans motor road originates from km 2 of Khatigaon-Nargoli-Chantola motor road in Kanda Sub Division, Distt. Bageshwar.

**3- Geological frame work and assessment of the site:-** Geologically the alignment proposed for Nargoli-Jogyudabaans motor road lies in the inner lands of Kumaon Lesser Himalayan Belt occupied by the rocks of Almora Thrust sheet, Berinag quartzites and Tejam dolomites with subordinate shales and slates. Mostly the Quartzites and phyllites which are thinly bedded are exposed in this area which are mostly marked by the longitudinal shears of varying thickness of clay gauges and partings of crushed rocks. These rock masses are mostly covered by the overburden material of varying thickness which are comprised of residual soils and composite material. The slope facets of the proposed alignment are inclined at low to moderate angle and are oriented in N 330 to 180 direction from starting to the end point. The overburden cover of the slope across which the road passes contains plastic clays in abundance especially between upper and lower Simalyal villages. This overburden material exhibits very low parameters of physical competency and its "Undrained Shear Strength" has been assessed ranging between 100 K Pa to 150 K Pa particularly in moist conditions, otherwise it is very hard i. e. 400 K Pa to 500 K Pa under dry conditions. Due to this typical characteristic of the material it is necessary to maintain the dryness of the slope forming material in case of the construction of road through it. The rock masses exposed along the alignment are highly jointed, crushed and sheared in nature and it is almost partially weathered and oxidized in nature.

By and large the alignment slopes are stable and presently free from any mass wasting/sliding activities.



On the basis of the above and the study carried at the site the following recommendations are being made for the construction of the proposed road failing to these this report will be considered as cancelled.

#### **4- Recommendations-**

- 1- Form the road by half cut- half fill techniques and do not excavate the full bench in order to road construction.
- 2- In order to form the road bench avoid deep box cuts on the hill slope, otherwise excavate the hill side slope properly maintaining the angle of repose.
- 3- The entire road surface between upper and lower Simyal villages must be sealed edge to edge.
- 4- Protect the entire hill side slope by constructing the suitable designed retaining walls.
- 5- Construct extra wide lined drain all along the hill side of the proposed road and make adequate cross drainage arrangements.
- 6- Do not dispose the drained water on the loose/dispersive/soft ground.
- 7- Do not dispose the excavated waste on the lower slopes.
- 8- In order to check the infiltration of waters in the slope forming material seal the entire carriage way by black top and shoulders by cement concrete.
- 9- All the construction activities should be carried out as per the norms and Standard laid by the MORTH/ BIS codes for the Construction similar Structures.

**5- Conclusion:-** On the basis of the geological/geotechnical studies carried at the site and with the above recommendations, the proposed alignment was found geologically suitable for the construction 7.00 km long motor road namely Nargoli-Simyal-Jogyuda baans motor road in Distt. Bageshwar.

*V. Dangwal*  
21.02.2014  
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Sr. Geologist

Office of the Engineer in Chief,  
PWD Dehradun.

*विजय दंगवाल*  
*21.02.2014*  
*Dehradun*