

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

भू - गर्भीय निरीक्षण आख्या एस0जी0-774/सड़क/पुल समरेखण/ गढ़वाल/2015

Geological assessment of 0.6 km long alignment corridor  
proposed for Pandav-Thali Rajkiya Ayurvedic Chikitsalaya-  
Rajkiya Uchhatar Madhyamik Vidhyalya Pandavthali-Uchola-  
Mana motor road, in Jakholi Block, Distt. Rudraprayag.

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18-अप्रैल-2015



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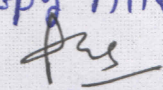
Vijay Dangwal

18.04.2015

**1. Introduction:-** The Provincial Division, Public Works Department, Rudraprayag has been entrusted for the construction of 0.6 km long alignment corridor proposed for Pandav-Thali Rajkiya Ayurvedic Chikitsalaya-Rajkiya Uchhatar Madhyamik Vidhyalaya Pandavthali-Uchola-Mana motor road, in Jakholi Block, Distt. Rudraprayag vide letter no. 532/ जिला योजना/अर्थ एवं संख्या/लो०नि०वि०/2012-13 दिनांक 11-09-2012- Consequent upon the request made by Er. Indrajeet Bose, Executive Engineer I carried out the geological assessment of the proposed alignment corridor for this road on 16.03.2015 in presence of Er. Arjun Singh Panwar, Asstt. Engineer and Er. Yogesh Kumar, Jr. Engineer, PWD, Rudraprayag.

**2. Location:-** The proposed alignment originates from the bridge located at km 13.50 of Mayali-Guptakashi motor road within the District boundaries of District Rudraprayag.

**3. Geological Assessment:-** Geologically the alignment corridor proposed for Rajkiya Ayurvedic Chikitsalaya-Rajkiya Uchhatar Madhyamik Vidhyalaya Pandavthali Uchola Mana motor road lies in the upper lands of Garhwal Lesser Himalaya exposed with the rocks belonging to Garhwal Group i.e which in and around the area of alignment are represented by the quartzites, dolomites, metabasics, schists and spillites etc. The entire terrain in and around this alignment corridor is characterized by rugged and dissected topography with the moderately inclined grounds in between the hill slopes in the form of stepped like cultivated fields. The rock masses exposed around this alignment corridor are very hard, compact to open jointed, thinly foliated, blocky and slight to partially weathered in nature. All along this alignment corridor these rock masses are overlain by the thick cover of overburden material which seems to have a wide range of thickness. The overburden material deposited on and across this alignment corridor is naturally dense and compact in nature and do not contain any plastic/soft clays. The rock fragments are firmly embedded in the binding matrix which is largely comprised of the clayey material. The slope forming material on and across this alignment exhibits very high values of physical competency which has been assessed ranging between 400 K Pa to 500 K Pa. By and large the alignment slopes are stable and do not contain signatures related to the land sliding/ground deformations.

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On the basis of the geological inspection of the site studies carried and the facts given above, the following recommendations are being made for the construction of the proposed road failing to these this report will be automatically treated as cancelled.

#### **4. Recommendations:-**

1. Construct the road by full excavation on the hill slopes/full benching.
2. The either side slopes of the entire road must be protected by suitably designed retaining walls/ breast walls, this work shall be carried out simultaneously with the advancement of the road cutting. This is very important for the stability of the hill slopes.
3. The entire surface of the road from outer edge to inner edge must be sealed immediately after the excavation, this is so as to check the water infiltration into the sub soil.
4. Construct extra large lined drain all along the hill side of the road and make adequate cross drainage arrangements. The accumulated rain water run-off from this road and its upslope catchment should not allow to flow freely over the lower hills, otherwise it will severely threat the stability of the hill slopes.
5. Do not dispose the excavated waste on the lower slopes, otherwise it will threat the stability of the many houses and the hill slopes.
6. All the construction activity must be carried out as per the standard codes of practice laid by the BIS and MORTH.

**5. Conclusion:-** On the basis of the geological / geotechnical studies carried at the site and with the above recommendations, the site was found geologically suitable for the construction of 0.6 km long alignment corridor proposed for Pandav-Thali Rajkiya Ayurvedic Chikitsalaya-Rajkiya Uchhatar Madhyamik Vidhyalaya Pandavthali-Uchola-Mana motor road, in Jakholi Block, Distt. Rudraprayag

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18/11/15  
(Vijay Dangwal)  
Sr. Geologist  
Office of the Engineer in Chief,  
PWD, Dehradun.