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Office of Empannelled Geologist

पत्रांक 622 / 148व्यक-सा0 / 13 दिनांक 15 / 05 / 2013

P.W.D. Uttarakhand

Geological Investigation Report
E.G. – Road / Bridge / Alingment
Sahiya – 1/2018

Geological Assesment of the Alingment Corridor Proposed For – From
HARMOU – LALAU TO GOTHAN Motor Road, Block – Kalsi, Distt.
Dehradun

Ocotober 2018

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26/10/2018

- सत्यापित अभ्यास
सहायक अभियन्ता
अस्थाई खण्ड, लोअर वि०
साहिवा (देहादून)

The details of the joints recorded at the site are given in the following table:-

Table

S. No.	Feature	Dip angle	Azimuth
1	2	3	4
J ₁	(S ₀ Bedding Joint)	50°	N180
J ₂	(S ₁ Foliation Joint)	25°	N155
J ₃	(Random Joint Set)	65°	N135
J ₄	(Sealed with Quartzite's)	40°	N105
J ₅	Joint	35°	N245

The overburden material exposed along the alignment corridor is comprised of the scanty rock fragments of various shapes and sizes embedded in the clay- silt matrix. This overburden material is naturally well compacted and dense in nature.

The slope forming overburden materials do not contain any soft/dispersive soils.

By and large the alignment slopes are stable and do not bear any signature of mass wasting/land sliding.

On the basis of the geological / geotechnical studies carried at the site and the facts mentioned above the following recommendations are being made for the construction of the proposed road.

3. Recommendation:-

- The alignment some time traverses along/across minor fault zone which is geologically fragile and special attention needs to be given for stability of road where alignment crossing the Nalas or Gads or Local streams.
- The hill slope is another factor responsible for geological hazards; the road basically traverses the slope class 34° to 55° special attention needs to be given for stability where it is 48° to 60° in some parts.
- Special attention must be give at the point of H.P. Bend at the time of construction of road.
- Do not dispose the debris in hill side, dispose it in a safe zone.

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(v) Do not blast heavily on the rocks and blasting is restricted near the human settlement / public property.

(vi) The road must have extra wide lined long drain with adequate cross drainage arrangement.

(vii) The road must be formed shoulder to shoulder paved, this is so to check the water ingress into the sub surface material.

(viii) Construct suitably designed retaining walls / Breast wall all along the road, it is essential for the overall stability of the hill slope.

(ix) All the construction activity must be carried out as per the standards and norms following the IS codes prescribed for the similar civil construction in Himalayan Zone.

(x) The proposed alignment along with new alignment.

(xi) This report is prefeasibility report. At the time of construction it need separate geological concern.

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 2.00 Km. long motor road named From Harmou - Lalau motor road to Gothan Motor Road, Block Kalsi, Distt, Dehradun Uttarakhand.

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