

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

सू - गर्भीय निरीक्षण आख्या एस0जी0- 659 / सड़क / पुल समरेखण / गढ़वाल / 2014

**Geological assessment of the alignment corridor
proposed for Km.13 of Chopta-Kedarkot motor
road to Kush and Kush Mahadev motor road, Distt.
Chamoli.**

23-दिसम्बर-2014

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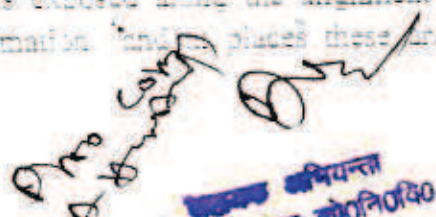
Vijay Dangwal

23.12.2014

- 1- Introduction:-** The Temporary Division, Public works Department Tharali has proposed the new construction of Kush and Kush Mahadev motor road in Tharali Block, Distt. Chamoli. Consequent upon the request made by Shri Dhan Singh Kutiya, Executive Engineer for carrying out the geological assessment of the proposed alignment of the above said road, a joint visit to the site was made on 13.12.2014. Er. D.K. Lokshali, Asst. Engineer and Er. Prasoon Nautiyal and Er. Jagmohan Mehra, Jr. Engineers, PWD, Tharali also accompanied the site visit.
- 2- Location:-** The site proposed for the construction of above said road originates from km 13.00 of Chopra-Kedarkot motor road located in Tharali Block, Distt. Chamoli.
- 3- Geological Assessment :-** Located in the Garhwal Lesser Himalayan geotectonic block the area containing the alignment of the above said road and its surroundings are occupied by the quartzites belonging to Garhwal Group. Topographically this area is rugged and dissected and comprised of fragile mountain system which are subjected to the very high in built stresses. The hillocks containing this alignment is comprised of massive bands of moderately hard quartzites which are slightly weathered and oxidized in nature. The cross slopes of this alignment are inclined at a steep angle and these are oriented in N230 to N060 direction through southward facets therefore these facets remains almost sunny and dry in the fair weather. For certain, such slopes do not retain moisture and remain almost stable under normal conditions as they do not retain moisture.

The rock masses exposed on the alignment slopes are traversed by four prominent joint sets i.e. discontinuities which are almost linear and moderately spaced.

The quartzites exposed along the alignment corridor have seen undergone polyphase deformation and in places these are sheared, shattered, deformed and recrystallized.


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By and large the site is geologically suitable and presently free from any mass wasting activities.

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. Failing to these this report will be automatically treated as cancelled.

4- Recommendations:-

1. Construct the road by half cut and half fill techniques and compact the fill material properly by dynamic compaction.
2. The hill 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.
3. Do not blast the rocks by explosives otherwise excavate the hill slope manually.
4. 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, otherwise the slope will fail and threat the safety of the village on its lower slopes.
5. Construct extra large lined drain all along the hill side of the road and make adequate cross drainage arrangements.
6. Do not dispose the excavated waste on the lower hill slopes otherwise it will threat the safety of villages located between the road.
7. 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 it was found geologically suitable for the construction of Kush and Kush Mahadev motor road in Tharali Block, Dist. Chamoli.

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सहायक अभियन्ता
रा.म. उ. वि. प्र. वि. (चमोली)

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(Vijay Dangwal)

Sr. Geologist

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