परियोजना का नामः– जिला योजना के अन्तर्गत सिलंगी से सेंज मोटर मार्ग के नव निर्माण हेतु 0.350 हे0 आरक्षित वन भूमि तथा मक डिस्पोजल हेतु 0.050 हे0 कुल भूमि 0.400 हे0 आरक्षित वन भूमि का लो0नि0वि0 को हस्तान्तरण प्रस्ताव।

भू–वैज्ञानिक की आख्या

भू–वैज्ञानिक की आख्या संलग्न है।

अमीन

कनिष्ठ अभियन्ता
अस्थाई खण्ड लो0नि0वि0
गौचर

सहायक अभियन्ता
अस्थाई खण्ड लो0नि0वि0
गौचर

अधिशासी अभियन्ता
अस्थाई खण्ड लो0नि0वि0
गौचर

कार्यालय प्रमुख अभियन्ता एवं विभागाध्यक्ष
उत्तरखण्ड लोक निर्माण विभाग,
देहरादून

भू–गर्भीय निरीक्षण आख्या एस0जी0– 945 / सड़क / पुल सम्रेखण / गढ़वाल / 2016

Geological Assessment of the alignment proposed for Silangi-Sainj motor road, Distt. Chamoli.

04.फरवरी.2016

Geological Assessment of the alignment proposed for Silangi-Sainj motor road, Distt. Chamoli.

Vijay Dangwal
04-02-2016

1- Introduction:- The Temporary Division, Public Works Department Gaucher vide G.O. No. 1154/जि0यो0–3/2011–12 दिनांक 06.09.2011 has been entrusted for the construction of 1.00 km long motor road namely Silangi to Sainj motor road in Karanprayag Constituency.On the requested made by Shri. Amit Patel the undersigned made a joint visit in order to carry out the geological assessment of the proposed alignment and the site visit was made on 07.01.2016. Shri. Anshuman Gupta, Jr. Engineer also accompanied the site visit.

2- Location:- The alignment corridor proposed for the construction of Silang to Sainj motor road originates from km 15.00 of Sonla-Kandara motor road located in Karanprayag constituency, Distt. Chamoli.

3- Geological Assessment:- Geologically, the alignment corridor proposed for the construction of Silangi to Sainj motor road lies in a part of Inner lands of the Garhwal Lesser Himalyan Belt. The quarzites which are thickly bedded, massive, hard and compact in nature are exposed in the area of this alignment. These quartzites are traversed by many linear discontinuities which are widely spaced to one another. The surface to these joints are tight. The terrain containing this alignment is rugged and dissected. The cross slopes of this alignment are inclined at low to moderate angle. Most of the alignment slopes are covered by the thick cover of overburden/hill wash material. The scanty outcrops of rock mass exposed on the slopes is slightly weathered and oxidized in nature and at places it is sheared and tectnized in nature. According to the manual tests performed on these rocks the "Uniaxial Compressive Strength" of these was estimated ranging between 100 M Pa to 200 M Pa. These estimated values come under the rock mass description "Strong Rock" which indicates that these rocks are physically competent and sound in nature. The over burden material deposited on the cross slopes of this alignment corridor is comprised of composite material where in the rock fragments are embedded in the clayey matrix. The "Undrained Shear Strength" of this material was assessed ranging between 200 k Pa to 350 k Pa which falls under the "Stiff" soils.

By and large, the alignment slopes are stable and free from landslides/ mass wasting.

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 bridge.

4- Recommendations:-

1. In order to form the bench of the road, blasting by means of explosives is restricted on the rocks. The road must be formed by half cut-half fill method and the excavation of the rocks must be done manually.
2. Do not dispose the excavated waste on the lower slopes, otherwise it will threat the stability of the hill slope as well as the road.
3. The entire road bench of the road must be sealed by black top/concrete, this is so as to check the infiltration of water into the subsurface material.
4. The either side slopes of the road must be protected by constructed the suitably designed Retaining and Breast walls.
5. All the construction activity must be carried out as per the standards and norms following the BIS codes prescribed for the similar civil construction in Himalayan Zone.

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 the 1.00 km long Silangi to Sainj motor road in Karanprayag Constituency, Distt. Chamoli.

V. Dangwal
04/02/2016

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