प्रपत्र– 2.28

परियोजना का नामः–जनपद बागेश्वर के जिला पंचायत क्षेत्र खुनौली के एस.सी.एस.पी. में चयनित ग्राम ग्वातोली में करीमपुर से एस.सी.एस.पी. में ही चयनित ग्राम मउडियार तक मोटर मार्ग की स्वीकृति तथा स्वतंत्रता संग्राम सेनानी श्री राम दत्त जोशी के गांव को बनलेख मोटर मार्ग में मिलान के कार्य का वनभूमि प्रस्ताव उत्तराखण्ड लोक निर्माण विभाग को हस्तान्तरण प्रस्ताव।

भू वैज्ञानिक की आख्या

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

भू–गर्भीय निरीक्षण आख्या एस0जी0–249 / सड़क / पुल सम्प्रेक्षण / कुमाऊं / 2015

Geological Assessment 2 km long alignment corridor proposed for Gwatoli-K[redacted]pur to freedom fighter Shri Ram Dutt Joshi's village M[redacted]lyar Distt. Bageshwar, Uttarakhand.

02–सितम्बर–2015

AE II / JE(T)

3/9/15

Geological Assessment 2 km long alignment corridor for Gwatoli-Kareempur to freedom fighter Shri Ram Dutt Joshi's village Maudiyar Distt. Bageshwar, Uttarakhand.

Vijay Dangwal
02-09-2015

1. Introduction:- The Construction Division, PWD, Kapkot has been entrusted for the construction of 2 km long motor road proposed for Gwatoli-Kareempur to village Maudiyar to connect freedom fighter Shri. Ram Dutt Joshi's village Maudiyar in Distt. Bageshwar. On the request made by Shri. Harish Pangti, Executive Engineer I carried out the geological/geotechnical assessment of the proposed alignment corridor of this road on 15.08.2015. Er. Prakash Lal, Astt. Engineer and Er. Lalit Siradi, Junior Engineer, PWD, Kapkot was present during the site visit.

Two alternative alignments i.e Alignment No.1 and Alignment No.2 was proposed for the construction of the above said motor road. On the basis of the various geological, geotechnical, geo-morphological parameters and vis-a-vis study, the alignment No.1 with no HP Bend was found suitable for the construction of the above said motor road. The present report is being generated by [redacted] proposed alignment No. 1.

2. Location:- The proposed alignment of the above said motor road originates from km 30 of Bageshwar-Dofad-Dharamghar-Kotmanya motor road and within its fall 2.00 km length it ends on the upslopes of freedom fighter Shri. Ram Dutt Joshi's house.

3. Geological Assessment:- Geologically, this alignment corridor lies in a part of Inner Lands of Kumaon Lesser Himalaya. The terrain containing it is characterized by the low to moderately inclined hill slopes oriented towards the NE and NW directions. The rock masses belonging to Tejam Group are exposed in this area which along the proposed alignment corridor are underlained by thick cover of overburden material having thickness of 4.0 to 6.0 m order. The bed rocks are completely absent along the surface of the alignment corridor it's adjoining cross slopes as evident by the visual inspection. The surface geology of this alignment is comprised of the composite soil formed of the angular rock fragments embedded in the silty clay matrix. The rock fragments are firmly embedded in the matrix. This slope forming material is naturally dense, hard, compact and it is semi-dispersive in nature. The terrain containing this alignment experiences very slow process of sheet erosion as evident by the growth of the vegetation in and around this area.

Physically, the slope forming material exposed throughout the alignment corridor looks competent and its "Undrained Shear Strength" has been assessed ranging between 300 K Pa to 400 K Pa.

The entire visible slopes of this alignment do not contain any soft soils/plastic clays in abundance and the visible section is completely free from the signatures related to the ground deformations. Nowhere terrain cracks on the ground, sink/pot holes were encountered during the walkover survey. The entire ground as a whole or in a part do not

contain any marsh land and nowhere signatures related to the slush like conditions were observed visually.

By and large the alignment slopes are stable and presently free form any landslide/ mass wasting 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 the report will be treated as cancelled.

4. Recommendations:-

1. Form the road by half cut - half fill method and compact the fill material properly by dynamic compaction.
2. Do not dispose the excavated waste on the lower slopes, otherwise it will threat the overall stability of the hill slopes.
3. Construct suitably designed retaining walls/ brest walls all along the road.
4. Construct large hill side [redacted] drain all along the road and make adequate cross drainage arrangements.
5. Make adequate arrangements to dispose the drained water on the safe/ stable ground.
6. The drainage work must be taken up immediately after the excavation of the hill slopes.
7. All the construction activity must be carried out as per the standard codes of practice and standards and norms laid by the BIS/MORTH.

5. Conclusion:- On the basis of the geological studies carried at the site and with the above recommendations, the proposed site was found geologically suitable for the construction of 2 km long alignment corridor proposed for Gwatoli-Kanempur to village Maudiyar Distt. Bageshwar under the District plan

21/9/15

(Vijay Dangwal)
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Office of the Engineer in Chief,
PWD Dehradun

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