

प्रारूप-33

परियोजना का नाम :- जनपद टिहरी गढ़वाल के विकास खण्ड भिलंगना में मूलगढ ठेला
गण्डराखाल मोटर मार्ग का भेलगढी से पांडवगांव तक विस्तार कार्य
। (लम्बाई-6.825 कि०मी०)

भू-वैज्ञानिक की आख्या

(प्रस्तावित स्थल की भू-वैज्ञानिक द्वारा निर्गत अद्यतन निरीक्षण आख्या प्राप्त कर संलग्न की जाय।)

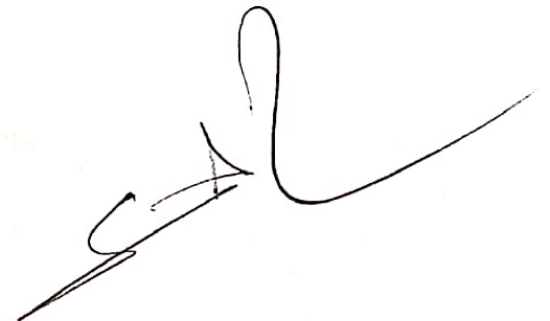
संलग्न है

**Geological Report of the proposed Extension of Thella- Gandra Khal road
from Bhelgarhi to Pandav Gaon Road**

PWD Division, Ghansali proposed a 09.7 km Extension of Thella- Gandra Khal road from Bhelgarhi to Pandav Gaon Road. As requested by Verma, EE, PWD Division, Ghansali, I carried out Geological investigations of the proposed alignment in the presence of Er. Kapil Kumar, A. E. and Er. Pankaj Chauhan, J. E. on 20th May2018.

General Geological Condition:

Geologically the investigated the area comes under the Higher Himalayan terrain. The proposed alignment falls between 1200 to 1900 meters a.m.s.l. The major ridge present in this area is roughly trending in NNW-SSE. At right angle to the main ridge, numerous secondary and tertiary spurs intersect the area showing highly dissected topography. The general slope is East or West facing.



Rock types:

Lithologically, the area is constituted by Slates, Quartzites, dolomites and metabasics. The highly fractured and shattered rocks are testimony of active tectonics in the region. Numerous local faults are also visible in the area. The steep slopes and rugged topography of the region indicate that the area is neotectonically active. Basics and quartzites are massive in nature. Four sets of joints are prominent in the rocks. The trend of Quartzites is 25° due S.

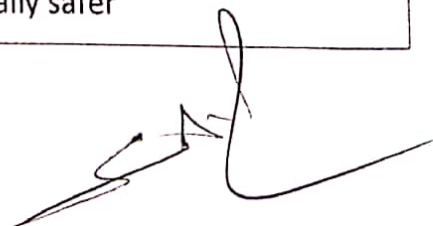
Detailed investigation of the alignment and suggested corrective measures are as:

1. The alignment is proposed to be Extended from Bhelgarhi of Thella-Gandrakhal road
2. At the starting there is cultivable field. The material is loose and there is every possibility of slope failure in case of slope disturbance during the road construction.



3. Considering this very fact it is advisable that proper breast and retaining wall be constructed in order to avoid any possibility of slope failure.
4. There are all 10 HP bends proposed on the alignment. The general condition at the HP bend is as follows.

HP Bend	Ground condition
1st	Proposed on cultivable field, still the slope is gentler and geologically safe
2nd	Proposed on cultivable field the slope is gentle and geologically seems safer
3rddo.....
4th	Proposed on steeper slope extra measures are advisable.
5th	Cultivable fields the steeper slope, hard rock, proper measures are advisable in order to avoid slope failure
6th	Slope is steeper extra measures are advisable
7th	The slope is made up of hard rock , the slope is compatibly gentler but still extra measures are advisable
8th	Cultivable fields the slope is gentle though the terrain consist of very hard quartzite but for HP bend one has to take extra precautions.
9 th	Gentle slope geologically safer

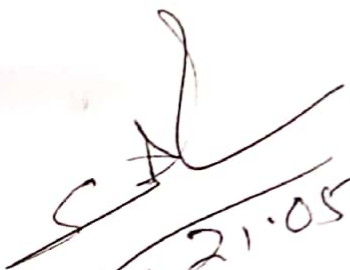


10th

On cultivable fields and the slope is gentle

5. The terrain is fragile at places hence proper measures should be taken to ensure slope stability.
6. Most of the alignment will pass through gentle slope hence the alignment is geologically safe provided hill side road code of conduct during construction are followed.
7. Proper drains and parapet / scrubbers walls at appropriate locations be constructed as per norms of hill side road safety.

The proposed extension of the road may be geologically safe provided the construction agency (PWD Division) takes care of the above-mentioned corrective measures. Suggestions may be sought in future if problem arises at some point.


21.05.18
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