## F

कार्य का नाम:--

जनपद देहरादून मैं ग्राम सभा रैनापुर में गिरधारी लाल फार्म से तुडान माजरे तक सड़क निर्माण हेतु 0.40 है0 वन भूमि का लो0नि0वि0 को हस्तान्तरण।

## **Task Force Certificate**

1. Lay out of the land be followed as far as possible.

2. Heavy cutting/filling be avoided - as far as possible. The technology of cut and fill method is to be adopted. Steep hill slopes also to be avoided.

3. Unstable/slide- prone areas to be avoided. For identifying such area the advice of

Geotechnical engineers and geologists to be taken survey for alignment.

4. A Comparison of various possible alignments with reference potential.

A Comparison of various possible alignments with reference potential be made and the alignment involving minimum erosion risks be preferred.

Apart from the stage of planning the road alignment, effective steps are also required to be taken by ground engineer during the process of road construction for minimized ecological disturbance to the hill roads. Broadly the measures to be taken have been identified as-

5. Cut and fill method to be adopted while excavating for road formation and heavy earth

cutting is to be avoided. Box cutting is to be avoided to the extent possible.

6. Blasting by explosives is to be restricted to the minimum. Lay out of holes to be drilled for blasting is to be planned keeping in view the line of least resistance and the existence of joints. Controlled blasting should be repeated using low charge and care be taken to avoid activating slide zones or widening fissures and cracks in tocks. Use of delay detonators in large scale blasting work is to be made for an online dispersion of check waves, so that minimum disturbance is caused to the rock stratum as a result of the blasting process.

7. All cut slopes, unstable hillside and slide prone erosion prone area are to be provided with suitable collection measures by using one of other of the developed by CRRI. Several techniques have been sponsored by CRRI like simple vegetative. Turing bitumen much treatment and slide treatment by simple vegetative Turing seams to be the most appropriable preventive in situations. This should be established in the dandified slopes after the

excavation is made.

8. Adequate drainage measures and protective structures like intercepting each water drains, longitudinal drains culverts, breast walls, retaining and the walls are provided for purposes of establishing the slopes. Growth vegetative cover is stimulated in the disturbed hill slope above the road level by planning suitable fast growing shrubs and plants. In certain selected unstable areas terraced. Afforestation has also been protected as a established measure with good results.

Over the past few years the roads wing of the Ministry of shipping and transport has issued instruction laying down broad guidelines and checklist of the preparation of road construction projects which provide an in built mechanism erosion control for the guidance and follow up action by engineers of state 'PWD' Bonder Roads Organization and others engaged in construction of hill roads these should be observed.

प्रमाणित किया जाता है कि योजना आयोग द्वारा गठित टास्क फोर्स की उपरोक्त संस्तुतियां प्रस्तावक विभाग को मान्य है।

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