HIMACHAL PRADESH
PUBLIC WORK DEPARTMENT

State: Himachal Pradesh Division: HPPWD Div No.-II
Branch: Buildings & Roads

Name of Work:- C/O Link road Bassi to Ghawandal KM 0/0 to 6/00.

Pre-Feasibility Report

The Pre-Feasibility Report framed by Er. D.C. Thakur, Executive Engineer, H.P.P.W.D. (B&R) Division Ghumarwin for the probable cost of **Rs. 339.94 Lakhs** Approx.

History

The economical & social development of Himachal Pradesh depends mostly on the efficient road system of communication in the absence of Railways & Water Transport. Roads are the only lifelines of people of this hilly state. Himachal Pradesh has been blessed with excellent agro climate conditions for Horticultures and growing cash crops, off season vegetables and potential for tourism, forest and generation of Hydro power, cannot be explored without proper road communication means.

The Himachal Pradesh Government has given special priority to the construction/improvement of roads. This .is an important and old road having" link from social economic as well as tourism point of view for Himachal Pradesh.

1. C/O Link Road from Bassi to Ghawandal Km 0/00 to 6/00. The total length considered in this project for Formation Cutting standard is **6/00 KM.** This portion of the road starts from Bassi and ends at Ghawandal. This stretch of the road is single lane with clear carriage way of 3.05 m to 3.35 m. The terrain traverses from 1238 Meter to 1144 Meter above MSL and is Mid Mountains in nature. The average rainfall is about 1100mm per year. Most of the road section is passing through Forest area/Open area and very less through built up area. Accordingly, this project report has therefore been framed to cover the cost of proposed work & is being submitted herewith for arranging necessary administrative-approval & expenditure sanction of the competent authority.

2. Geometric Design Standards

Formation width of the road has been proposed 5.00 m – 7.00 m with a carriage way width 3.05m to 3.35m and shoulder approximate 1.25m have been taken for estimate. The design speed for this has been considered as 40km/hour and horizontal curves have been designed accordingly. The cross slope has been adopted as per calcification of the road. There are frequent sharp horizontal curves along the road, however because of row restriction it may be difficult to improve all the sharp curves. Horizontal curves have been designed for a speed of 40km/hour with appropriate transition curved and super elevations. The minimum radius of curves to14m recommended by SP-20 has been adhered to the super elevation and extra widening at curves has been designed as per the norms recommended in

IRC:SP:20.

3. Topographic survey

Topographic survey has carried out using plane table and dumpy level as found convenient with required accuracy for field work. Topographic survey has been carried out within the form of open traverse stations. All features has been accurately picked up and properly identified. Proposed road has been marked covering center line, edges of road and edge shoulder etc. along with centerline chain marked on site. Typical feature are also recorded with base line chain age. Cross section has been taken @ 15.00 intervals up to 7.00m. The cross sectional levels have been taken on ground as necessary to define ground profile. Temporary bench left at permanent structures.

4. Environments Factor

The proposed road would prove to be beneficial to the users. The benefits could be mostly of a wealthy - economics nature by way of access to health, education, markets and tourism. Travelers will have more and easy opportunities to interaction. During construction considering the level of pollution effects will be negligible. Adequate number of cross drainage structures and longitudinal drains are provided to ensure that water is quickly drained off and no damage is caused to the road & pavement. All the excavated material shall be utilized for backfilling behind retaining walls and for earth filling in depressions. Compensatory afforestation's shall be carried out for the tress which is to be uprooted along the proposed alignment if any.

5. Metalling, Tarring, Drainage and protective works,

Proposed road has no proper provision for any longitudinal drainage system as well as protection work along the road. Based upon the requirement of the road, provision for the drainage and protection work has been proposed. V-Shape Standard drain as per calculation has been proposed. Retaining Wall wherever required are proposed. Actual height has been considered for costing purpose. The design of retaining walls shall be as per standard drawings Parapets where ever required on concrete structure and on the ground on valley side have been proposed as per site requirements. All the detail are enclosed in the relevant chapters of concerned items.

6. Disposal of waste/debris

All waste material including excavated earth, Surplus construction material and dismantled structure (if any) shall be disposed in accordance to EMM provisions. The sites for such disposal have been identified. The total quantity of soil /debris gained through excavation foundation will be utilized on the ongoing road work and for any balance; the same shall be disposing off at specific site location on barren land.

7. Quantities and cost

The work will be executed based on MORD specification for the roads and bridge work" (Latest revision), adopting equipment intensive construction method for the items not covered by the above said specification and required to be used, specification as being adopted for National Highway works in Himachal Pradesh, which have been prepared and approved by the MORTH have also been provided for. The Quantities of all items have been complied under nine heads to match the milestones, the quantities are based on surveys, cost estimate, investigation (in

volume-I) and drawing (volume-II) unit rates for the various items have been of labour & material. The rate analysis, detail of the quantities and estimated cost are included in volume-I.

ABSTRACT OF COST					
Name of Work:- C/O Bye Pass Road from Neoty to Rana Kyar via Civil Hospital Nerwa Km 0/00 to 5/772.					
Sr. No.	**Description of Item**	**Quantity**	**Rate in Lakh**	**Unit**	**Amount in Lakh**
1.	Formation Cutting	6.00	25.12	Per /Km	150.72
2.	Construction of X-Drainage	6.00	12.31	Per /Km	73.86
3.	Construction of Side Drain (Katchha)	6.00	4.73	Per /Km	28.38
4.	Construction of Parapits	6.00	2.55	Per /Km	15.3
5.	Crash Barrier on Under Curves	1.5	11.27	Per /Km	16.905
6.	Crate Walls for Dumping Sites	6.00	2.29	Per /Km	13.74
		Total			**298.91 (A)**
Add @ 10.5% Escalation for the period Two years on (A)					**31.39 (B)**
		Total (A+B)			**330.03**
Add @ 3% Contingency Charges on (A+B)					**9.91 (C)**
		Grand Total ((A+B)+C)			**339.94**

Assistant Engineer
Sub Division Naina Devi
HPPWD, Bilaspur

Executive Engineer
Division No.-II
HPPWD Bilaspur