COST BENEFIT ANALYSIS

Name of Scheme: Construction of Road Bharath to Keshwan upto Ingwan Gali Under CRF.

Total Cost of Project/ Scheme	**1790.00 Lacs**
Length of the Road	**13.00 Kms**
Population	**7000 Souls**
PCU's	**129**
Distance reduction	**13.00 Kms**
Saving in Vehicle Operation Cost.	**VOC x Distance x PCU x 365**

As per IRC norms and guidelines of May 1998.
Assuming the vehicle operating cost at Rs. 7.00/Km/PCU
The annual saving in VOC may be quantified as under

$$\frac{7 \times 13.00 \times 129 \times 365}{100000} = 42.84 \text{ lacs}$$

TRAVELING TIME SAVED

Population   7000 Souls

Assuming 10% of the population is engaged in taking commercial activities with average time reduction of 5 min/ km with probability of securing employment at 0.65 and the current wage rate at Rs. 225/ day, the proportionate saving in travel time shall be as under: -

(a) Manday saved

$$= 0.10 \text{ of population x time x time reduction}$$
$$\frac{0.10 \times 7000 \times 5 \times 365 \times 13.00}{60 \times 8} = 34598.95 \text{ days}$$

(b) Value of travel time saved

$$= \frac{34598.95 \times 0.65 \times 225}{100000} = 50.60 \text{ lacs}$$

Benefits an account of saving of of Doda District
$$= 26.13 \times 13.00 = 339.69 \text{ lacs}$$

Total benefit of project
$$= 339.69 + 42.84 + 50.60 = 433.13 \text{ lacs}$$

Physical and Financial Phasing:

Year	Physical	Financial
1st Year	30%	537.00 lacs
2nd Year	40%	716.00 lacs
3rd Year	30%	537.00 lacs
Total		1790.00 lacs

Benefits: - 433.13

Particular	1st Year	2nd Year	3rd Year	4th Year	Total
Capital cost	537.00	716.00	537.00	-	1790.00
Benefits	129.94	173.25	129.94	433.13	-
Discount factor	0.87	0.756	0.658	2.73	-
Present Worth of Cost	467.19	541.29	353.34	-	1361.72
Present of Benefit	113.05	130.98	85.50	1182.44	1511.97

BCR   = $\dfrac{\text{Present Worth of Benefit}}{\text{Present Worth of cost}}$ $\dfrac{1511.97}{1361.72} = 1.11$

BCR = 1:11 OK

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