

CALCULATION FOR BENEFIT COST RATIO

Name of the Scheme: Construction of road Katyara to Kansar via Haddal.

Total cost of Project/Scheme	:	Rs. 300.00 Lacs
Length of Road/Bridge incl. approaches	:	2.00Kms
Population	:	4000 souls
PCU's	:	139
Distance Reduction	:	2.00

SAVING IN VEHICLE OPERATION COST

As per IRC norm and guidelines of May 1998 assuming the $= \text{VOC} \times \text{Dist. Red} \times \text{PCU} \times 365/2$

Vehicle Operating Cost at Rs. 7.00/Km/PCU. The annual

Saving in VOC may be quantified considering 50% period for $= 139 \times 2.00 \times 7.00 \times 365/2$
 Transportation of Agriculture and other economic activities = 3.55 Lacs

TRAVEL TIME SPEED

Population

Assuming 10% of the population is engaged in taking commercial Activities with average time reduction of 5m in /Km with probability of securing employment at 0.65 and the current wages rate at Rs150/day, the proportionate saving in travel time shall be as under:

a) Man days saved reduction		$= 10\% \text{ of population} \times \text{time} \times \text{time}$ $= 0.10 \times 4000 \times 5/60 \times 365/8 \times 2.00$ $= 3042.00$
b) Value of travel time saved		$= \frac{\text{Man days saved} \times 0.65 \times 150}{100000}$ $= \frac{3042 \times 0.65 \times 150}{1000000}$ $= 7.90$
Total Benefits		$= 76.35 + 3.55 + 7.90$ $= 87.80 \text{ Lacs}$

PHASING

First Year = 2016-17 @ 40% = 120.00

Second Year = 2017-18 @ 60% = 180.00

Total = 300.00Lacs

BENEFITS

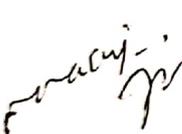
Particulars	1 st Year	2 nd Year	3 rd Year	Total
Capital Cost	120.00	180.00	--	300.00
Benefits	--	21.95	87.80	--
Discount Factor	0.87	0.756	2.73	--
Present worth of cost	104.40	136.08	--	240.48
Present worth of Benefits	--	16.59	239.69	256.29

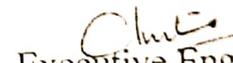
BCR = $\frac{\text{Present worth of benefit}}{\text{Present worth of cost}}$

= $\frac{256.29}{240.48}$

= 1.07

BCR = 1:1.07


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