

**Name of work:- Construction of Bridge cum Barrage across river
Ghataprabha near Herkal village in Bilagi tq. Of Bagalkot Dist.**

GPS Co-ordinates of Right side Approach road for length of 950mtr

| sl no | Latitude | Longitude | Remarks |
|----------|---------------|---------------|---------|
| point 1 | 16°15'9.62"N | 75°43'27.65"E | |
| point 2 | 16°15'5.75"N | 75°43'29.28"E | |
| point 3 | 16°15'2.10"N | 75°43'30.61"E | |
| point 4 | 16°14'59.11"N | 75°43'33.15"E | |
| point 5 | 16°14'56.40"N | 75°43'36.09"E | |
| point 6 | 16°14'53.82"N | 75°43'36.87"E | |
| point 7 | 16°14'51.85"N | 75°43'35.65"E | |
| point 8 | 16°14'50.29"N | 75°43'34.50"E | |
| point 9 | 16°14'47.46"N | 75°43'34.87"E | |
| point 10 | 16°14'46.74"N | 75°43'36.92"E | |
| point 11 | 16°14'45.33"N | 75°43'39.17"E | |
| point 12 | 16°14'43.65"N | 75°43'40.05"E | |

for
Asst. Executive Engineer
KBJNL, Gates Sub-Divn,
ALMATTI-586291.

Amr
Executive Engineer.
KBJNL.; Dam Division
Almatti.

HERKAL SCHEMES
CALCULATION OF BENEFIT COST RATIO(BCR)
Cost includes Herkal (South), Herkal (North) LIS and Bridge cum Barrage

Figures are in Rs lakhs

| A | Gross Receipts | Before Irrigation | After Irrigation |
|----------|--|--------------------------|-------------------------|
| 1 | Gross value of farm produce | 2366.36 | 9652.00 |
| 2 | Dung receipts(at 30%of the fodder expenditure) | 106.49 | 289.56 |
| 3 | Total A : Gross Receipts(1+2) | 2472.85 | 9941.56 |
| B | EXPENSES: | | |
| 1 | Expenditure on seeds | 88.06 | 133.60 |
| 2 | Expenditure on manure etc. | 463.17 | 467.82 |
| 3 | Expenditure on hired labour(human and bullock) | 473.27 | 1930.40 |
| 4 | Fodder expenses(as percentage of gross value of produce) | | |
| | (15% ,10% of item A.1) | 354.95 | 965.20 |
| 5 | Depreciation on implements (2.7% of Item A.1) | 63.89 | 260.60 |
| 6 | Share and cash rent (5% 3% of Item A.1) | 118.32 | 289.56 |
| 7 | Land Revenue (2% of Item A.1) | 47.33 | 193.04 |
| 8 | Total B : Expenses (1 to 7) | 1608.99 | 4240.22 |
| C | NET VALUE OF PRODUCE | | |
| 1 | Total gross receipts(Total A.3) | 2472.85 | 9941.56 |
| 2 | Minus total expenses (Total B.8) | 1608.99 | 4240.22 |
| 3 | Net value of produc © : [1-2] | 863.85 | 5701.33 |
| D | ANNUAL BENEFITS: | | |
| 1 | Net value after irrigation (C:3) | | 5701.33 |
| 2 | Minus Net value before irrigation (C:3) | | 863.85 |
| 3 | Net annual benefits (D):[1-2] | | 4837.48 |
| E | Other net annual benefits due to aquaculture including pisciculture, drinking & industrial water supply, hydro-power generation, animal husbandry, catchment area treatment chargeable to project, canal bank plantation, reservoir periphery, afforestation etc | | 900.00 |
| F | TOTAL NET ANNUAL BENEFITS (D3+E) | | 5737.48 |
| | BC Ratio Calculation | | |
| | Total Cost of the Project | | 32725.00 |

| | | | |
|--|---|--|-----------------|
| | Cost of the Land development of CCA of 9248.73 Ha at 1000/Ha | | 92.49 |
| | | | 32817.49 |
| G | ANNUAL COSTS | | |
| 1 | Intrest on Capital @10% (Esimated total cost of the project including cost of land development @ Rs.1000/ Ha) (Rs 28542.49 Lakhs) | | 3281.75 |
| 2 | Depreciation of the project at 1 % of the cost of the project for 100 years life excluding cost of Land, R&R cost.(Rs.28542.49 Lakhs x 1%) | | 328.17 |
| 3 | Annual operation and maintenance charge at Rs 600 per Ha of ICA (9248.73 Hax 600) | | 55.49 |
| 4 | Energy cost for Lift Head works | | 397.65 |
| 5 | Maintainance of the Head works at 1% its cost | | 3.50 |
| 6 | Depreciation of the pumping system @ 8.33% of the cost of the pumping system assuming life of the system as 12 years (1785.97Lakhs x 8.33%) | | 148.77 |
| 7 | Depreciation of the raising mains @ 3.33% of the cost of the raising mains assuming life of the system as 30 years (9719.793Lakhs x 3.33%) | | 323.67 |
| 8 | Total (E):Annual costs (1 to 6) | | 4539.01 |
| BENEFITS COST RATIO = $\frac{\text{F : Annual Benefits}}{\text{G.7: Annual cost}} = \frac{5737.48}{4539.01} = 1.26$ | | | |

Assistant Executive Engineer
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