**PROJECT: UP-GRADATION OF TWO LANE WITH PAVED SHOULDER FROM DESIGN KM. 12+850 TO KM. 20+300 OF 7.450 KM. LENGTH ON GOHA-KHELLANI SECTION ON NH-244 IN UNION TERRITORY OF JAMMU & KASHMIR ON EPC MODE (PACKAGE I)**

**TABLE: B ESTIMATION OF COST OF FOREST DIVERSION**

| Sr. No | Parameter | Remarks |
|---|---|---|
| 1 | Ecosystem services losses due to Proposed Forest Diversion | Forest Area diverted: 5.325 Ha.<br>NPV rates at Eco class VI @70% canopy density, Dense forest @8,97,000/Ha<br>8,97,000 X 5.325 = 47,76,525.<br><br>**Total NPV=** 47,76,525 (0.47 Cr) |
| 2 | Loss of animal Husbandry productivity, including loss of fodder | Loss of animal husbandry productivity including loss of fodder due to diversion of RF land will be negligible. |
| 3 | Cost of Human Resettlement | 0.0 |
| 4 | Loss of public facilities and administrative infrastructure (Roads, building, school, dispensaries, electric line, railways, etc. on forest land, which would require forest land if these facilities were diverted due to the project. | 0.0 |
| 5 | Possession value of forest land diverted | 30 % of NPV<br>0.30 X 0.47 Cr = 14,32,958 (0.14 Cr) |
| 6 | Cost of suffering to oustees | 0.0 |
| 7 | Habitat Fragmentation Cost | 0.0 |
| 8 | Compensatory afforestation and soil and moisture conservation Cost | Total 10.65 Ha. X 1,69,557 = 18,05,782.05 **(0.18 Cr.)** |

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**TABLE: C EXISTING GUIDELINE FOR ESTIMATING BENEFIT FOR FOREST DIVERSION IN CBA**

| Sr. No | Parameter | Remarks |
|---|---|---|
| 1 | Increased in productivity attribute to specific project | Vehicle Mobility is difficult and time consuming in Mountainous region due to land slide, snow fall and heavy traffic on existing roads. By this project of a greenfield 2 lane road with paved shoulder, saving in travel time, fuel and energy, reduction in accidents and casualty will be seen. This shall help in increasing the productivity of the entire region as it will give a boost to commercial and tourism activities, as well as improving connectivity. This will lead to an increase in the number of pilgrimages and tourists visiting the state. The project is an alternate route to connect Srinagar and border areas in J&K with all-weather roads. Strategic to ease the traffic volume on Jammu-Srinagar Highway via Jawahar Tunnel i.e., NH-44 after construction of this alternative route to reach Srinagar via NH-244. To avoid the accident-prone area due to land slide on the present Goha-Khellani Road and also to avoid poor geometry of this road, the new alignment is proposed from the end of the Sudh Mahadev Tunnel to Khellani town, and Goha village is being connected with a link road which will reduce the travel time to the surroundings area. |
| 2 | Benefits to economy due to the specific project | The main objective of this project is to alleviate the current unsafe condition of the highway and provide better quality, 24 hours 7 days all-weather connectivity between Jammu and Srinagar and safe transport to the user. The project will yield significant economic benefits to the Union territory of Jammu and Kashmir. The greenfield two-lane road and paved shoulder will lead to improved connectivity, higher safety and will allow savings of time, fuel and energy, which will play a role in improving the socio-economics condition of the people of the Union Territory of Jammu and Kashmir in many folds. It will aid in boosting the tourism, pilgrimage in the region and also generate direct and indirect employment opportunity for the people in addition to the other indirect benefits by way of saving vehicle operating costs, less |

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| | | |
|---|---|---|
| | | fuel consumption and saving time and cost of passenger travel, casualty etc.<br>An amount of Rs. 250 million (per capita expenditure of tourist taken as Rs.10,000 (approx.) per person for 10-day package for additional 5000 tourist may be earned from tourism due to approximately increase of 10% tourist flow of 2.5 lacks of present tourist flow. |
| 3 | Number of populations benefited due to specific project | According to 2011 census, the population of District Udhampur and Doda is 5,54,985 and 4,09,936, respectively. This entire population of both the district will be benefited by the greenfield road. Further lakhs of pilgrims and tourist visit Jammu and Kashmir every year, will also be benefited by the project as it will lead to an improvement in connectivity. In addition, the defense force deployed at the LOC and LAC along border of Pakistan and China will also be benefited immensely. Economic benefits due to tourism enhancement- 25 Cr approx. access to District, Farmer Product, LOC/LAC area Pakistan and China approx. 30 Cr<br>**Approx. Total 55.0 Cr.** |
| 4 | Economics benefits due to of direct and indirect employment due to the project | Approximately direct employment of Skilled Labors (Temporary) about 300 manpower for 5 Year that will be cost approximate Rs. 84 Cr and approximately skilled 40 Manpower for 45 Years will get employment during operation and maintenance(temporary) that will be cost approximately 100.7 Cr. Total employment potential will cost approximately **184.7 Cr**. |
| 5 | Economic benefits due to compensatory afforestation. | The amount of Rs. **0.61 Cr** deposit to forest department for CA. There will be various employment generate for execution as well as maintenance of this CA works. |

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**TABLE: A DETAILS OF COST BENEFIT RATIO**

| Sl. No | Particular | Amounts | Remarks |
|---|---|---|---|
| 1 | Total Cost (Investment Incurred) | | |
| A | Construction Cost of project | 122.51 | |
| B | NPV, CA, R&R, LA and Other | 30.34 | |
| **Total** | | **152.85** | |
| 2 | Benefits from taking age of road as 50 Years | | |
| A | Economics benefits Saving in travel time and vehicle operating cost for 50 Year | 25 Cr. | |
| B | Approximately direct employment of Skilled Labors (Temporary) about 300 manpower for 5 Year that will be cost approximate Rs. 84 Cr and approximately skilled 40 Manpower for 45 Years will get employment during operation and maintenance(temporary) that will be cost approximately 100.7 Cr. Total employment potential will cost approximately 184.7 Cr.) | 184.7 Cr | |
| C | Economic benefits due to tourism enhancement- 25 Cr approx. access to District, Farmer Product, LOC/LAC area Pakistan and China approx. 30 Cr Approx. | 55.00 Cr | |
| **Total** | | **264.7 Cr** | |
| | Benefit/Cost= 264.7/152.85 | 1.73 | |
| Note: Therefore, Construction of road is economically viable and Socially beneficial. | | | |

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