

## Cost Benefit Analysis


**Name of Project :-** Construction of Main Approach Road from T14 Adit , RD. 2/975 to T14 P1 , RD. 12/425 and 3 no's muck dumping yards.

A.

**Udhampur Baramulla Srinagar Rail Link (USBRL) Project** is a project of national importance undertaken by Northern Railway. The project is also being monitored at the highest level, by the Hon'ble Prime Minister Office on 'Pragati' Portal and the deadline to complete the project is Dec'22. The project consists of tunnels and bridges of different categories constructed in the interior regions of Jammu and Kashmir with little or no connectivity to main roads in the initial stage. In order to achieve the connectivity a road network of approximately 210 kilometres has been developed. The roads developed provides connectivity to main roads of the districts in case of emergency during operation of the railway track as a part of disaster management plan.

**Rate of Return :** The Udhampur Baramulla Srinagar Rail Link (USBRL) Project gives a negative rate of return of **-13.84%**. The copy has been enclosed. The Detailed Project Report of the project has already been uploaded on the Parivesh Portal.

The construction of main approach road from T14 Adit to T14 P1 is also a part of disaster management plan under USBRL Project. In view of above, separate economic analysis of the road is not required.




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**COVERING NOTE FOR DETAILED**  
**PROJECT REPORT OF UDHAMPUR-SRINAGAR-**  
**BARAMULLA NEW B.G.LINK**

Udhampur – Srinagar-Baramulla New B.G. Link as per the detailed survey has a total length of 287 kms. The DPR is in ten Chapters and contains a synopsis which briefly explains each chapter and other important aspects of the report.

The report explains about the methodology adopted for detailed survey of the line. It also discusses about the various routes which had been studied before arriving at the final alignment. For this purpose, the alignment has been divided in two distinct sections namely Udhampur – Qazigund covering a length of 167 kms and Qazigund – Baramulla spanning the valley with a length of 120 kms.

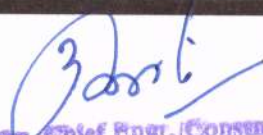
A study to assess the impact of the project on the environment has also been carried out. Report covers briefly all important aspects of this study. As a result of this study, it is revealed that the project even without an environment management plan is eco friendly.

  
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The report also gives the details of the quantity of earthwork, span arrangements of various major bridges. Minor bridges required for the project have also been listed. Standard of construction for permanent way have also been discussed. Details of the facilities required to be provided at each station including quarters have also been incorporated. The important specifications for executing the Civil Engineering works and important design considerations have also been detailed. Since tunnelling covers approximately 53% of the length in Udampur – Qazigund Section, the details of the tunnelling aspect have also been covered in the report.

Separate chapters are devoted to the Signalling and Telecommunication as also for Electrical Engineering. Keeping in view the modern developments, the project envisages the use of modern telecommunication equipment also. To avoid failures, stand by telecommunication links through satellite have been envisaged for the project.

Though a separate volume is devoted to traffic survey, this volume also gives the summary of the important aspects of the projected traffic. The traffic earnings contained in the report have been incorporated after a detailed traffic survey. Since the B.G. line is likely to be opened in the first phase between Udampur – Katra and Qazigund – Baramulla, the traffic projections have been given for :

  
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- i) Udampur-Katra
- ii) Qazigund – Srinagar
- iii) Srinagar –Baramulla
- iv) Udampur – Katra – Qazigund
- v) Entire Section.

The total passenger potential for these sections is projected as 32809 per day at the commencement of the operation which has been assumed to be 2007-08. The total passenger gross earning has been estimated to be approximately Rs.5398 Lacs per annum likely to accrue from the 12 trains most of which will terminate in the Valley. The working expenses for the coaching traffic will be approximately Rs.5325 Lacs per annum. The detailed traffic survey report duly vetted by Finance is also attached as a separate volume.

#### FREIGHT TRAFFIC

The total earning from the freight traffic is estimated as Rs.3233 Lacs per annum. Working expenses being Rs.1880 Lacs, the net earning will stand at approximately Rs.1353 Lacs.

The report also contains the construction schedule in the form of the PERT charts developed through the use of MS Project. For this purpose, the project has been divided in three separate parts namely Udampur – Katra, Katra – Qazgiund and

  
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Qazigund – Baramulla. Since sufficient funds have been made available w.e.f. 1998-99 onwards, the project commencement has been assumed as 1-4-98. The completion time for Udampur – Katra and Qazigund- Baramulla has been taken as 2002-03 and that for the entire section has been taken to be 2007-08. These dates can only be adhered to if the requisite funds are made available for the project.

The narrative report gives the summary of the total cost which stands at Rs.3077.2376 Crores inclusive of all the departments. This however does not include the cost of the rolling stock which has been estimated in the traffic report as Rs. 166.92 Crores.

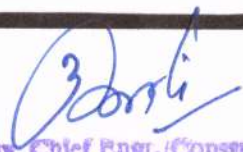
#### RATE OF RETURN

Taking all the inputs and outputs into account, the project gives a negative rate of return of – 13.84% .

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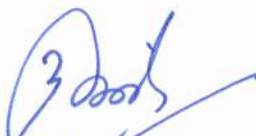
  
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**Project Name:** Land Indent for acquisition of Forest Land for construction of proposed approach Road from T14P1 to Adit T14 for a length of approximately 04km along with 3 no dumping yards.

**Cost benefit analysis**

**Table- B: Estimation of cost of forest diversion**

S.N o.	Parameters	Details	Remarks
1	Ecosystem services losses due to proposed forest diversion	74.44 lakhs	NPV 8,45,000 per ha (Class V)
2	Loss of animal husbandry productivity including loss of fodder.	7.44 lakhs	10% of NPV
3	Cost of human resettlement	0.00	---
4	Loss of public facilities and administrative infrastructure (Roads, building, school, dispensaries, electric lines, railway, etc.) on forest land which would require forest land if these facilities were diverted due to the project.	0.00	---
5	Possession value of forest land diverted	22.33 lakhs	30% of NPV
6	Cost of suffering to oustees	0.00	---
7	Habitat Fragmentation Cost	37.22 lakhs	50% of NPV
8	Compensatory Afforestation and soil & moisture conservation cost.	20.03 lakhs	1.0 lakhs per ha for 5.7 ha (double of FA proposed , Mahore Forest Division) 1.20 lakhs per ha for 11.92 ha (double of FA proposed , Ramban Forest Division)
	<b>Total</b>	<b>161.46 lakhs</b>	

  
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**Table-C: Existing guidelines for estimating of forest diversion in CBA**

SNO.	Parameters	Details	Remarks
1	Increase in productivity attribute to the specific project	There are 472 trees are growing on the 8.81 ha forest land proposed to be diverted it can be calculated about 54 trees per hectare. It is proposed to undertake compensatory afforestation on 17.62 ha degraded forest land (double of 8.81 ha) in the Division/district.	
2	Benefits to economy due to specific project.	The proposed approach road is an important part of disaster management plan. Moreover , the proposed approach road will provide all weather connectivity to the villages as earlier no village road is available for nearby villages,	
3	No. of population benefitted due to specific project.	Entire population along the project road will be benefitted.	
4	Economic benefits due to direct and indirect employment due to the project.	100 nos. temporary employment will be directly benefitted being involved in construction work of the project. Alongside, other indirect long-term benefits in terms of medical facilities, and considerably reduction in travelling time. Further, due to all weather connectivity in the area livelihood opportunity directly and indirectly will be created for locals.	
5	Economic benefits due to compensatory afforestation.	There Shall be compensatory afforestation on 17.62 ha degraded forest land (double of 8.81 ha) in the Mahore and Ramban Forest Division/ Reasi and Ramban district respectively. Over the years it will lead economic benefits by providing timber, fuel land fodder in the area.	

  
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