

DETAILED NOTE (Item no. 4)

Full Title of the Project: 62.900 km Bhanupali - Bilaspur - Beri New Rail Line Project in the State of Himachal Pradesh (Phase – IV, from km 52.015 to km 62.900)

1.0 HISTORY IN BRIEF:

- 1.1 In the year 1995-96, a traffic survey was carried out by Northern Railway in connection with construction of Bhanupali-Bilaspur-Beri New BG Railway Line. An updated traffic survey and project estimate report was submitted by Northern Railway to Ministry of Railways in July 2007.
- 1.2 There is no railway line towards Bilaspur in the state of Himachal Pradesh at present and the proposed railway line shall link this region of Himachal Pradesh, which is rich in mineral resources, with the existing railway network in the northern part of the country. District Bilaspur also has cement factories, namely, ACC and Gagal Cement Works. The finished product from these factories is transported by road at present. The Government of Himachal Pradesh has represented in the past for extending of Broad-Gauge railway network towards the state in this region.
- 1.3 The work of construction of new BG rail line was sanctioned by Ministry of Railways in 2008-09. Ministry of Railways vide letter no. 2004/W-1/RVNL/13 Pt. I dated 01.04.2015 have transferred the work of construction of Bhanupali-Bilaspur-Beri New BG Railway Line to Rail Vikas Nigam Limited (RVNL), a Government of India Undertaking, in April 2015 for execution.

2.0 PREAMBLE

- 2.1 The proposed alignment of new railway line has been worked out by use of state of art technology, satellite imageries obtained from National Remote Sensing Centre, Survey of India Sheets and Geological Survey of India Sheets pertaining to the project area. The process has also involved the development of Digital Elevation Model in addition to field traversing survey to establish and correlate for the accuracy of alignment.
- 2.2 The take off point, Bhanupali is located at latitude N 31° 17' 46", longitude E 75° 25' 30". The proposed alignment follows Southwestern Slope of Naina-Devi range in initial stretch and further follows the Gobind Sagar Reservoir. Various obligatory locations for railway stations along the proposed alignment have also been considered to serve the inhabited areas enroute. The project area is in the frontal Himalayan belt starting at plains near the interstate boundary of Punjab and Himachal Pradesh. The project area is drained by Sutlej River basin. The major river in project area is Sutlej which is joined by tributaries along both the banks of the river.


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- 2.3 The distance between Bhanupali to Beri as per existing road network is 106 km. The proposed Bhanupali-Bilaspur-Beri New BG Railway Line is 62.9 km long. The terrain in project area is undulating and the alignment crosses tributaries, khads as well as hills. Resultantly, geological mapping of the project area has been carried out to understand the details for seating of the alignment. The technically and geologically most suitable alignment has been selected.
- 2.4 The starting point, Bhanupali is a halt station on existing Sirhind-Nangal Dam Railway Line. The existing railway line is connected to Broad Gauge network of Indian Railways. As per CCEA approval, 25% cost of the project is to be shared by Government of Himachal Pradesh. Government of Himachal Pradesh is contributing towards cost of New Rail Line Project as per this decision. Govt of Himachal Pradesh has also decided to provide Govt. Land free of cost and to make use of Govt. land in Himachal Pradesh to the extent possible. The proposed alignment between Km 52.015 to Km 62.900 (i.e., Phase-IV) passes through Himachal Pradesh.
- 2.5 The elevation in the project area varies between 350 meters at Bhanupali to 554 meter above Mean Sea Level at Beri. The general weather condition is such that the temperature is in the range of 5° C to 10° C in the month of January whereas it is 35° C to 40° C during May/June.
- 2.6 The proposed new line project shall give a fillip to the region for growth and development through tourism, faster goods movement, establishment of new industry and has future potential to connect Leh region through Rohtang Pass with railway network in the rest of the country.
- 2.7 The new line project has economic and strategic importance for the region as well as for the country. In addition, such infrastructure project shall also open new avenues for academics and research as it shall bring a vast learning experience which boosts the technical knowledge for engineers in various fields of specialisation. The proposed new line shall not only connect the region with railway network but also shall be of strategic importance for the country. The region shall also get a push for socio-economic development with the construction of the railway line as variety of job opportunities shall open up for local residents in the region.
- 2.8 The alignment (**from km 52.015 to km 62.900**) shall pass through Nine villages of District Bilaspur, Himachal Pradesh, namely Nog, Balhi-Vilan, Bahli Chaleda, Bharathu, Bagharin, Beri-Rajadyan, Khatehr, Bhatehr-Uparli, Barmana. A number of 6596 persons of these villages shall be benefited directly.


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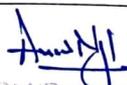
3.0 KEY FEATURES

3.1 Technical Specifications: The proposed railway line has been planned with following technical parameters.

SN	Item	Specification
1	Gauge	1676 mm Broad Gauge, Single Line
2	Ruling Gradient	1 in 80 (compensated gradient)
3	Electrification	Electrification is a part of the project.
4	Maximum Degree of Curve	2.75 Degree with relaxation up to 4 degrees on need base.
5	Maximum Speed of Passenger Train	100 Kmph
6	Maximum Speed of Goods Train	75 Kmph
7	Gradient in Station Yard	1 in 400
8	Standard of Loading	25 Ton (2008 Standard)
9	Type of Traction	Electric Traction.
10	Seismic Zone	Zone – V (As per BIS, 1893: 2002)

3.2 Project at a Glance (From Km. 52.015 to Km. 62.900)

SN	Feature	Details
1	Gauge	1676 mm (Broad Gauge)
2	Length	10.885 Km. (Total project length 62.900 Km.)
3	States Benefitted	Himachal Pradesh
4	Classification of Route	E Route
5	Formation	
	Total Length in Cutting/ Filling	5.02 Km
	Side Slope in Filling	2H: 1V
	Side Slope in Cutting	1H :1V
6	Gradient	
	Ruling Gradient	1 in 80 (compensated Gradient)
	Gradient in Station Yard	1 in 400
7	Curve	
	Total No. of Curve	9
	Maximum Degree of Curve	2.69°
	Total Percentage of Track in Curve	21.20%
8	Bridge	
	Total No. of Bridges	5
	No. of Major Bridges	2
	No. of Minor Bridges	2
	No. of R.O.B. / R.U.B.	1
9	Tunnels	
	Total No. of Tunnels	3
	Total Length of Tunnels	5.467 Km
	Length of Longest Tunnel	2.70 Km


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SN	Feature	Details	
	Total Percentage of Tunnel Length	50.22%	
	Details of Tunnels		
	Tunnel No.	Length in meter	
10	T-18	618.5	
	T-19	2702.8	
	T-20	2145.9	
11	Stations		
	No. of Stations	1	
12	Name of Stations		
	Station Name	Height above M.S.L.	Type of Station
	Beri Station (H.P.)	554.783	Surface

3.3 A typical cut section and fill section is attached as annexure- A & B.

4.0 FOREST CONSERVATION AND LAND ACQUISITION

4.1 The land requirement and Right of Way for proposed new railway line is governed by the provisions contained in Indian Railway Engineering Code. The land for the project shall be acquired through Revenue Department of concerned state of Himachal Pradesh as per extant policy instructions. An area of 12.04 hectare of forest area (6.91 ha open surface area and 5.13 ha tunnel area) and 40.52 hectare of non-forest land in district Bilaspur is involved in this proposal (**Phase – IV, from km 52.015 to km 62.900**).

4.2 The required land for the project falls in district Bilaspur in state of Himachal Pradesh. The requirement of land from km 52.015 to km 62.900 as per Right of Way has already been provided to the concerned Revenue Authority in the state. The process of land acquisition has already commenced.


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