Justification for Selection of Proposed Alignment

Preliminarily three possible alignments were identified for construction of New BG Railway line in Forest Lands in various villages of Shivamogga and Davanagere. After verifying the three alignments based on technical and economic feasibility and intension to minimize the usage of forest land, the Proposed Alignment has the least Length of alignment passing through forest area and least Area of Forest Diversion (10.07 km/ 47.91 Ha) when compared to Alternate Alignment – 1 (11.95 km/54.57 ha) and Alternate Alignment – 2 (11.3 km/60.48 ha). Hence there will be least amount of Deforestation and major other factors considered while finalizing the Alignment are mentioned below.

1. Proposed Alignment has the shortest possible Length (103.74 km) when compared to Alternate Alignment – 1 (108.58 kms) and Alternate Alignment – 2 (120.10 kms) which directly reduces the cost of construction.
2. Proposed Alignment has the least Length of alignment passing through forest area and least Area of Forest Diversion (10.07 km/ 47.91 Ha) when compared to Alternate Alignment – 1 (11.95 km/54.57 ha) and Alternate Alignment – 2 (11.3 km/60.48 ha). Hence there will be least amount of Deforestation.
3. No tunnels were proposed in the Proposed Alignment as compared to Alternate Alignment – 1 (1 No's) and Alternate Alignment – 2 (3 No's) which directly reduces the cost of construction.
4. Total Number of Bridges (125 no's) to be constructed in the Proposed Alignment is less as compared to Alternate Alignment – 1 (137 No's) and Alternate Alignment – 2 (142 No's) which directly reduces the cost of construction.
5. Total Number of Curves (45 no's) in the Proposed Alignment are less as compared to Alternate Alignment – 1 (50 No's) and Alternate Alignment – 2 (56 No's) which directly affects the speed of Train and cost of the construction.
6. Proposed Alignment joins Ranebennur at Bangalore end whereas Alternate Alignment – 2 joins Ranebennur at Hubli end which requires change of direction of engine for trains leaving for Hubli from Shivamogga which will increase the Travel time.

In view of the above advantages mentioned, Proposed Alignment is technically executable, economically viable and ecologically less impactful when compared to the other two Alternative Alignments.

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Sagar Division, SAGAR

Deputy Conservator of Forests
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Asst. Engineer
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SOUTH WESTERN RAILWAY

Name of Work : Reconnaissance Engineering cum Traffic Survey for the New Railway line between Shivamogga - Ranebennur via Shikaripura

Agency Patil Engineers & Contractors, Hubli

Comparison Statement

SL No.	Description		Proposed Alignment	Alternate Alignment - 1	Alternate Alignment -2
1	Construction Length		95.72	100.36	115.1
2	Existing Length		8.02	8.02	5.00
3	Total Length in km		103.74	108.38	120.10
4	**Passing through Forest area Length in km (Approx.)**		**10.07**	**11.95**	**11.3**
5	**Area Extent (Hectares)**		**47.91**	**54.57**	**60.48**
6	No. of Tunnels		0	1	3
7	Length of Tunnels (km)		0	2.00	7.00
a.	Number of Stations		12	12	15
b.	Number of Existing Stations		3	3	2
8	Number of Proposed Stations		9	9	13
a.	Total No. of Bridges		125	137	142
b.	Major Bridges		14	16	10
c.	Minor Bridges		49	56	62
9	Road Bridges		62	65	70
10	Total No. of Curves		45	50	56
11	Take off from		Runs on Existing Railway line Birur - Talaguppa section from Shivamogga station upto Kotegangur Station and then starts of as a doubling line running parallel to existing Birur talaguppa section up to konagavalli station and then Takes off from Right hand side curve	Runs on Existing Railway line Birur - Talaguppa section from Shivamogga station upto Kotegangur Station and then starts of as a doubling line running parallel to existing Birur talaguppa section up to konagavalli station and then Takes off from Right hand side curve	Runs on Existing Railway line Birur - Talaguppa section from Shivamogga station upto 5 kms and then takes off from Right hand side curve
12	Joining		At Bangalore End	At Bangalore End	At Hubli End
13	Advantages	a.	Less Forest area to be acquired and least length of railway line running through forest compared to other alternatives	-	
		b.	Shortest length compared to other alternatives	-	-
		c.	No Tunnels to be constructed	-	-
		d.	Number of Curves are least among alternatives	-	-
		d.	Total number of Bridges are less compared to other alternatives	-	-
14	Disadvantages	a.	-	More Forest Area to be acquired and more length of railway line running through forest area	More Forest Area to be acquired and more length of railway line running through forest area
		b.	Terrain is more undulated	Terrain is more undulated	Terrain is more undulated
		c.	-	No. of Bridge crossings are more	No. of Bridge crossings are more
		d.	-	Crosses NH-4 twice at joining end near Ranebennur	Joining is from Hubli end at Ranebennur
		e.		No. of Curves are more	No. of Curves are more

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