



JUSTIFICATION FOR LOCATING THE PROJECT IN FOREST AREA

The Gauge Conversion(GC) work of Marwar - Mavli (152 km) Section was sanctioned in 2017-18. The existing Meter Gauge(MG) track between Marwar Jn. station (on Delhi- Ahmedabad route) and Mavli Jn. station (on Ajmer-Udaipur route) will be converted to Broad Gauge(BG). The section from Mavli Junction Station to Nathdwara station is already connected via BG track as well as MG track. So, this project will provide BG connectivity between Nathdwara and Marwar Junction stations. The Gauge conversion between Marwar - Nathdwara is essential for Unigauge Policy as well for up gradation from passenger amenities requirement. This project would provide enhanced connectivity between two important regions of Marwar and Mewar benefitting the entire region. Ahmedabad- Ajmer-Jaipur-Delhi- Main line has already been converted from MG to BG. Gauge conversion of Ajmer- Chittaurgarh- Udaipur has already been completed & Gauge conversion between Ahmedabad- Himmatnagar-Udaipur is in progress to provide continuity between Ajmer and Ahmedabad via Udaipur.

There are three alternate alignment (i.e. alternate 1,2 &3) identified for the project by carrying out detailed survey. The brief detail are as under :-

S. No.	Description		Unit	Alignment-I	Alignment-II	Alignment-III	Remarks
1	Route Length		Km.	60.090	34.532	27.132	
2	Grade	Ruling Gradient	m.	150 (C)	100 (C)	80 (C)	
		Existing Yard	m.	400	400	400	
		Proposed Yard (New)	m.	1200	400	400	
		Breathing Gradient	Nos.	4	Not considered	Not considered	
		Breathing Length	Km.	3.214	Not considered	Not considered	
3	Curve		No.	40	28	23	
	Deg. Of Curve (Maximum)		°	4	2.70	2.70	
	Curve Length		Km.	25.919	17.218	12.430	
	% Of Curve Length		%	43.134	49.861	45.813	
4	Bridge	Important	No.				
		Major	No.	8	16	14	
		Minor	No.	54	51	29	
		Viaduct	No.	2		1	
		RUB	No.	7	2	1	
		ROB	No.	2			
		Total Bridges =	Nos.	73	69	45	


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		Length of Major Bridges & Viaduct	m.	1842.200	231.800	1043.100	
5	Tunnel No.		No.	1	4	1	
	Tunnel Length		Km.	0.531	3.341	2.346	
	Longest Tunnel Length		m.	531	1531	2346	
	% Of Tunnel Length		%	0.884	9.675	8.647	
6	Station (New)		No.	7	2	2	
	Crossing Station		No.	4	2	2	
	Halt Station		No.	3	0	0	
7	Alignment in	Mixed Jungle	Km.				
		Reserved Forests	Km.				
		Protected Forests	Km.				
		Wild Life Sanctuaries	Km.	36.517	22.726	15.755	
		Total Forests =	Km.	36.517	22.726	15.755	
		% of Forest length		60.771	65.811	58.068	
8	NH Crossing		No.	0	0	0	
9	SH Crossing		No.	0	0	0	
10	MDR, Village Road Crossing		No.	10	2	2	
11	River / Nala Crossing		No.	1	2	1	
12	Filling Quantity		Cum	4,737,240.52 4	6,908,427.096	6,153,692.947	
13	Cutting Quantity		Cum	9,052,077.38 2	7,282,131.783	4,893,691.835	
14	Land Required		Hect.	414.704	278.105	199.092	
15	Comparative Cost per Km. (Approx.)		Crore	5.03	9.38	11.04	
16	Total Project Cost =		Crore	302.29	323.75	299.63	

From the details above, it is seen that alignment alternate 2 & 3 pass through high mountainous terrain, having more no. of tunnels and involved more forest land & construction cost in comparison to the alignment alternate-I. In view of above facts, the route of proposed railway alignment alternate -I has been finalized with due consideration to the aspect that the alignment should involve minimum forest land and less construction cost.

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