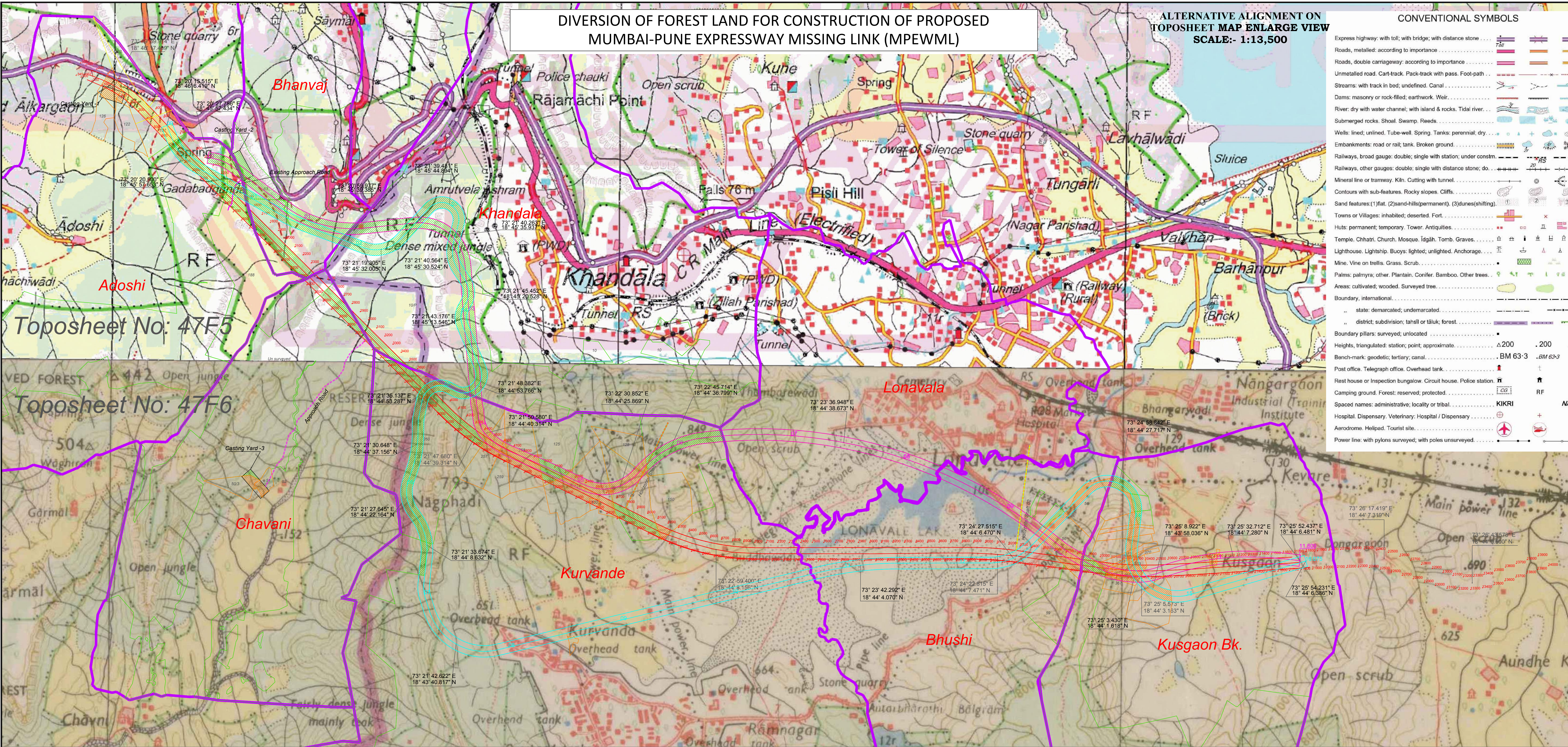
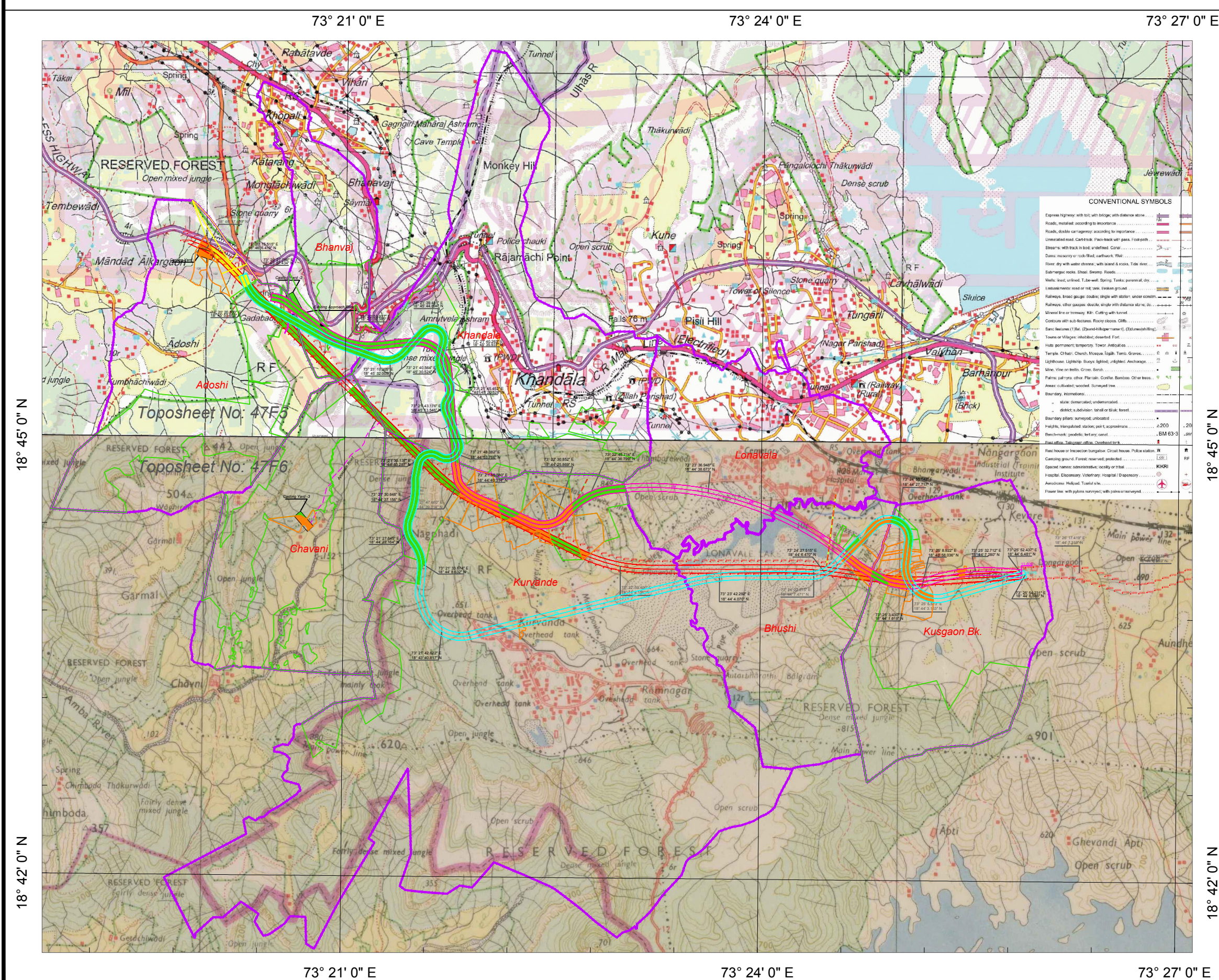




ALTERNATIVE MAP SCALE:- 1:50,000

COMPARATIVE AREA STATEMENT AND JUSTIFICATION



Sr. No.	Description	Alternative Alignment - I	Alternative Alignment - II (Preferred alignment)	Alternative Alignment - III
1	Total Length	11809.704 m	13300 m	160759 m
2	Tunnel Length	920 m (1 tunnels)	10580 m (2 tunnels)	2536 m (1 tunnel)
3	Viaduct Length	8790 m	1415 m	-
4	Viaduct Height	40 to 60 m	60 to 150 m	-
5	Gradient in Tunnel	3.30%	3%	5%
6	No. of Curves	5 curves	3 curves	15 curves
7	Design Speed	100 km/hr	120 km/hr	80 km/hr
8	Radius	Min. Radius: 400 m	Min. Radius: 1500 m (50m transition length)	Min. Radius: 150 m (50m transition length)
		Max. Radius: 3000 m	Max. Radius: 3000 m	Max. Radius: 4000 m
9	Total Land Requirement	118,097 Ha	128,0295 Ha	160,759 Ha
10	Forest Area	Forest: 75,055 Ha	Total Forest land: 74,7102 Ha (Alibaug-34,2028 Ha & Pune-40,5074 Ha)	Forest: 84,92 Ha
			Total Non-Forest land: 53,3193 Ha (Alibaug- 2,2740 Ha & Pune- 51,0453 Ha)	
11	Non-forest area	Non-Forest: 43,042 Ha		Non-Forest: 75,839 Ha

Justification for choosing the preferred Alignment (Alternative Alignment - II):

1. Safety Aspects:
Safety of Commuters was the first priority for selection of alternatives as MPEWML is passing through Western Ghats which has steep slopes and sharp turns. Minimum number of horizontal curves with a gradient of 3%, will ensure free flow of traffic and will achieve reduction in number of accidents, conforming with IRC specifications, as against a gradient of 5% in the ghat section of the existing YCEW.

2. Technical Aspects:
Design speed of 120 km/hr as specified by IRC can only be achieved on Alignment No. 2 (Alternative Alignment - II). The curves in the preferred alignment is minimum compared to other two alignments. In the preferred alignment, the minimum curves are considered which will be feasible for the natural gradient.

3. Environmental Aspects:
As per alternative alignment assessment, the forest land required for three alternatives is 75.055Ha, 74.7102 ha and 84.92 ha respectively.

Although the forest land is maximum in preferred alignment (Alternative Alignment - II), about 10.58 km of the forest land is falling under tunnel area so the tree felling and destruction of forest land and natural assets like natural drainages, flora and fauna is minimum compared to other two alignments.

Considering the above reasons Alternative Alignment - II has been recommended by the Technical Advisory Committee of MSRDC, comprising Traffic-expert from IIT (Mumbai), Tunnel expert, Geological expert and Transportation expert, under the Chairmanship of the Retd. Secretary of PWD, Government of Maharashtra. Therefore, Alternative-II has been finalized by MSRDC as the preferred alignment.

(Sanjay Gangurde)
Executive Engineer
MSRDC Ltd., Mumbai.

Deputy Conservator of Forests
Pune Division (M.S.)

Deputy Conservator of Forest
Alibaug Division,
Alibaug (M.S.)

DRAWING NO.:-

DATE:- MAY - 2018

SHEET:- 1 Of 1

PAPER:-A0 (REV :- R0)

DRAWN (A) DESIGNED (B) CHECKED (C) APPROVED (D)