



XXVII FIG CONGRESS

11-15 SEPTEMBER 2022
Warsaw, Poland

Volunteering
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Justification of Junfied Geodetic Network for Rail Transport Infrastructure Project Rail Baltica

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THE NEED FOR THE DEVELOPMENT OF A UNIFIED GEODESIC NETWORK FOR THE RAIL BALTIC PROJECT

The total length of the Rail Baltica route is 870

- 213 km in Estonia;
- 265 km in Latvia;
- 392 km in Lithuania

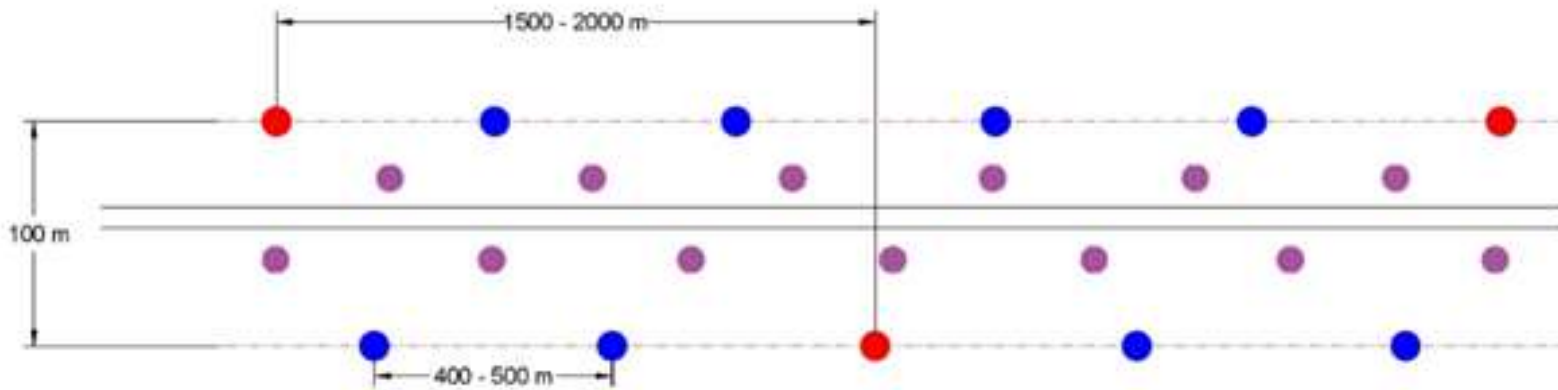




GEOGRAPHICAL LOCATION OF BAUSKA REGION (4)



LOCATION AND CONSTRUCTION OF SINGLE GEODESIC NETWORK POINTS



Signs:

--- Rail Baltica planned railway corridor

— Rail Baltica railway track



● Geodetic point of the RB1 support network



● RB1 supports network thickening network RB2



● RB1 support network on railway tie-off poles

Stage	Length (km)	RB1 points	RB2 points	RB3 points	<u>Together</u>
<i>Bauska municipality</i>	<i>27</i>	<i>16</i>	<i>15</i>	<i>166</i>	<i>197</i>
Estonia	213	126	118	1309	<u>1553</u>
Latvia	265	157	147	1629	<u>1933</u>
Lithuania	392	232	218	2410	<u>2860</u>
<u>Together:</u>	870	<u>515</u>	<u>483</u>	<u>5348</u>	

RAIL BALTICA UNIFORM GEODESIC NETWORK MEASUREMENT METHODOLOGY (6)

- Survey of RB1 network points with global positioning technology in static method versus WGS-84 system, height is determined by leveling;
- Measurement of RB2 network points with a tachometer, securing it against the RB1 network;
- RB3 network point measurement is provided by various measurement methods, providing high-precision measurements with a mean error of +/- 1 mm.

BENEFITS OF INTRODUCING LINKED GEODESIC NETWORK

- Novelty in the Baltic States and the geodetic industry
- High precision geodetic network
- Eliminate errors on cross-border sections



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Thank you for your attention!

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