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04_TRANSPORTATION AND INFRASTRUCTURE

Tresfjord Bridge

E136 Tresfjord Bridge and Vågstrand Tunnel

The Tresfjord Bridge | Photo: NPRA (Statens Vegvesen)

The Tres Fjord Bridge is part of the E136 Tres Fjord Bridge and Vågstrand Tunnel project, which is intended to shorten the road distance between Ålesund and Åndalsnes by 13 kilometres. The actual fjord crossing comprises a 1 290-metre bridge and a causeway about 800 metres long, which cross the Tres Fjord between Vikebukt and Remmem. The maximum water depth along the line of the bridge is about 40 metres.

A preliminary project with cost estimates was conducted for a steel solution and two concrete options. These were developed further into tender documents. On the basis of the tenders received, the decision was taken to develop one the concrete options into a construction plan. Construction work began in 2012 and is due to be completed in the autumn of 2015.

PROJECT	PROJECT TYPE	LOCATION	CLIENT	TIME PERIOD	KEY NUMBERS
The Tresfjord Bridge	Preliminary project, construction plan and supervision in the construction period	Tresfjord, Møre og Romsdal county	Norwegian Public Roads Administration, western region	2010 - 2015	Investment about NOK 0.9 billion (2012 value)

SCOPE OF WORK

The span distribution for the chosen option is: L = 50 + 5 x 60 + 90 + 160 + 90 + 10 x 60 = 1 290 metres.

Clearance for vessels is 32 metres and the width is 60 metres. The bridge is supported on steel core piles in axes 0, 1 and 19, founded directly on bedrock in axes 2 and 3, on cast steel tube piles with a diameter of 1 200 mm in axes 4-6 and 9-18, on cofferdams resting on bedrock in axis 7 and on cofferdams resting on unconsolidated material in axis 8. The superstructure on the side spans has a box cross-section with a constant height of three metres, while the push-out part has a cross-section varying from three to nine metres. The total bridge width is 13.5 metres, with two lanes of 4.5 metres and three-metre a pedestrian/cycle lane.

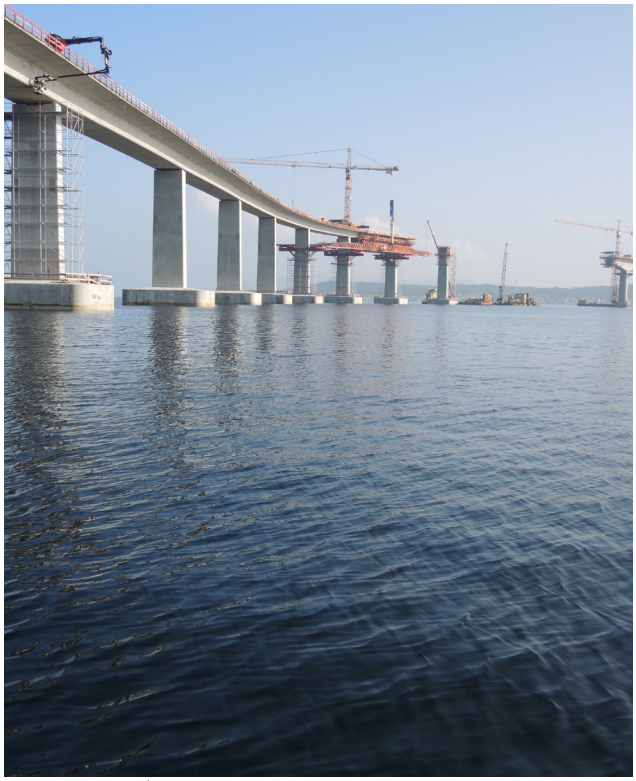
The side spans are built in sections with supporting formwork wagons, while the push-out part is constructed with the aid of wagons on each cantilever.

OUR SERVICES

- Updated preliminary project with cost estimates for steel and concrete options
- Photographs
- Complete construction plan for concrete option
- Supervision in the construction phase

DISCIPLINES

- Architecture
- Structural engineering
- Geotechnology
- Project management and administration
- Highway engineering



Side span, axes 9-19 | Photo: Semko Majidian, Multiconsult

Top: FFB axis 7 | Photo: Kjell Arvidsson, NPRA
The Tresfjord Bridge | Photo: Per T Nilsen/visualisation: Multiconsult

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