

Ovit Highway Tunnel General Directorate of Highways

Location: İkizdere, Rize Province and İspir, Erzurum Province, Turkey

Date: 2012 - 2018

Structure: Twin Highway Tunnel; Ventilation Pilot Tunnel

Length: Highway Tunnels – 7.8 mi (12.5 km)
Pilot Tunnel – 1.1 mi (1.7 km)

Cross-Section: Pilot Tunnel – 611 ft² (56.7 m²)

Geology: Granitoids, porphyries, and basaltic lava flows

Cost: ~\$193 million USD

Client: TTS International Engineering & Architecture Co. Ltd.

Owner: General Directorate of Highways

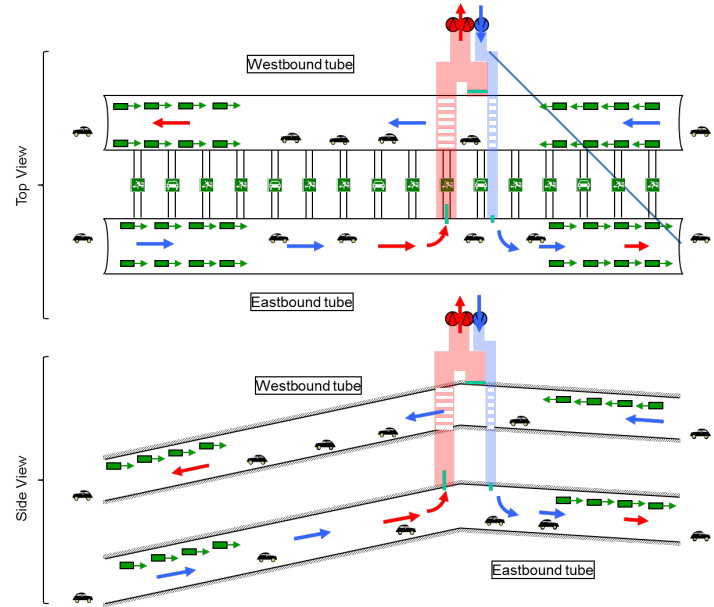


Figure 1. Ventilation concept schematic.

Tunnel Ventilation Design Services:

The Ovit Tunnel consists of twin two-lane traffic tunnels, approximately 7.8-miles in length, crosscutting Mt. Ovit in Turkey. Built to bypass the Ovit Pass, the Ovit Tunnel will provide access to the Black Sea for the Eastern Anatolia region and allow uninterrupted year-round transportation between the Rize and Erzurum Provinces.

Gall Zeidler Consultants (GZ), in association with HBI Haerter, developed a ventilation design for the tunnels. The design included assessment of required ventilation infrastructure, numerical analyses for simulation of tunnel aerodynamics and algorithms applied to ventilation equipment dynamic control. A 3-D computational fluid dynamic simulation was also conducted.

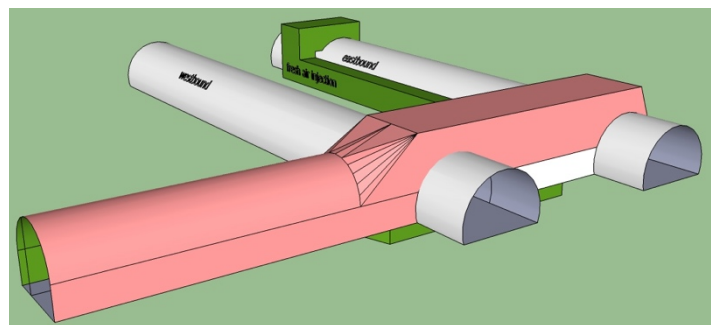


Figure 2. Schematic of connection of pilot tunnel with two main tunnels.