Case Study

Bringing a critical railroad overpass into service on Norway's E6

A ViaCon steel solution installed with only 72-hour over rail-work to keep a heavily trafficked road moving

The Challenge

As part of the new four-lane E6 corridor through Lillehammer, Norway, a new railroad overpass at Storhove–Øyer was required to carry the E6 over an active railway with minimal disruption. The project demanded an accelerated installation during a tightly timed rail possession, while meeting stringent road and rail authority requirements. ViaCon Norway was engaged as a total sub-contractor to deliver concept and detailed design, authority approvals, fabrication, and installation planning alongside the general contractor.

The Solution

Working in close collaboration with AF Anlegg AS, Sweco, and Norconsult, ViaCon engineered a corrugated steel soil–steel structure, pre-assembled in nine transportable sections sized for constrained site access and the lifting capacity of a 450 ton crane operating from two positions.

The plan synchronized demolition of the existing concrete bridge, installation of new concrete foundation elements,

and placement of the soil–steel sections within a single 72-hour train stoppage window. Crane operations were planned with Nordic Cranes and backfilling was executed by AF Anlegg with subcontractor Løype Anleggsdrift AS, ensuring continuous progress throughout the possession.

ViaCon managed the concept and detailed design and approval process with Norway's rail infrastructure manager and the Norwegian Public Roads Administration, streamlining technical coordination across stakeholders.

The Advantage

End-to-end delivery

Total sub-contractor responsibility from concept and detailed design to authority approvals, fabrication, and installation planning. Pre-assembled structure installed in under 72 hours with no delays.

Optimized constructability

Nine-section modular solution matched crane capacity and constrained access, enabling rapid backfilling and reinstatement of the E6 carriageway.

Robust, durable solution

Corrugated steel plates with hot-dip galvanization and epoxy coating for long-term performance.

Specifications

- Structural system: Corrugated steel soil–steel arch (profile VP3, Spec 56s)
- Span: 13.36 m
- Rise: 7.42 m
- Length: 97.88 m (top) / 117.6 m (bottom)
- Longitudinal slope: 0.7%
- Skew/angle: 90°
- Plate thickness: 8.0 mm plate + 5.5 mm ribs under the E6 carriageway. 7.0 mm plate + 5.5 mm ribs under the pedestrian road
- Corrosion protection: Hot-dip galvanized "class B" (Fe/Zn 115) per EN ISO 1461:2009 300 µm epoxy painting (EP + EP) per EN ISO 12944
- Fasteners and plates: ~20,000 bolts across 810 plates
- Construction methodology: 6–7 weeks of pre-assembly. <72-hour rail possession for demolition, foundation element installation, and section placement. Nine steel sections installed using a 450 t crane from two lifting positions

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