Project: Reinforcement Steel Detailing for Underground Rail Tunnel in Belgium

Client: A Reputed Structural Engg Consultant in Belgium

The Project consists of the construction of a new railway tunnel link with two tracks of 1.25km long. Small portion of this project also includes upgradation to four tracks and addition of metro stations with linking to the existing railway structure and thus improving the train frequencies and speeds on the rail lines. This would also reduce motoring in the metropolis and thus ward off the threat posed by traffic congestion.

Paradigm was asked to assist the Design Consultant in structural design, reinforcement and structural steel detailing activities.

Overview plan and section of the tunnel

Objective:

- To study and prepare phase drawings which shows different stages of construction of tunnel.
- To prepare tunnel plan views, sections and details with the basis of design of inputs and phase drawings.
- To prepare structural steel drawings (Structural steel was used for temporary structures during the excavation of the tunnel)
- To prepare accurate, clear and easy to understand placement drawings of reinforcement steel
- To generate bar bending schedules from rebar detailing drawings.

Services:

- Reinforcement placement drawings & Bar Bending schedules (BBS) for side walls, floor and roof slabs of tunnel of tunnel with necessary elevation, vertical sections and plan views.
- Additional details of connections such as couplers, draad bars etc. between different phases of construction
- Structural steel drawings for galleries in the trenches with necessary details and 3D views.

Benefits:

- Accurate reinforcement steel placement drawings for use at the construction site
- Excellent quality drawings in different formats such as pdf, dwg and plt
- Timely submission of drawings
- Fast revisions as per site conditions
- Fabrication drawings and all necessary details for Steel structures.


Technology: Computer aided drafting and 3D modelling.

Design Codes Used:
Country: Belgium
Code Numbers: Euro codes

Duration: Dec 2008 – On going

Team Size: 20+