



TWIN FLYOVER

SP 46 Baranzate-Rho Flyover - Italy, 2001

PROJECT CHARACTERISTICS

Works: curved long span motorway flyover structure. The structure consists of 2 decks placed side by side composed of steel beams and concrete deck cast in place over precast slabs, as formwork.

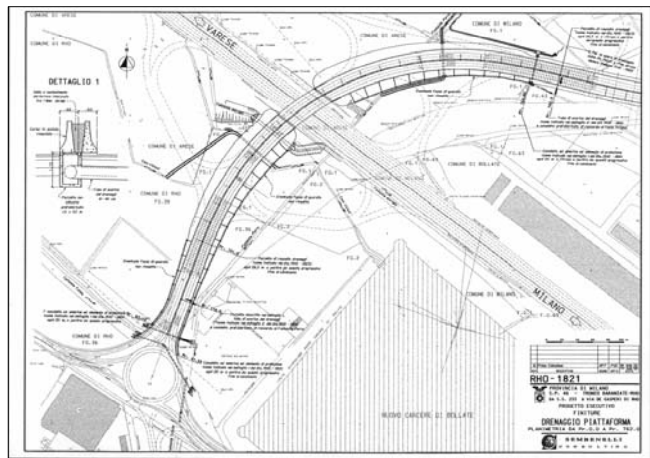
The project includes 1.5 km section of the North Ring Road of Milan and a section of 2 lanes of 3.75 m plus a continuous emergency lane of 3.00m between the S.P.46 Baranzate-Rho and the S.S. 233 Via De Gasperi of Rho. This project will completely change the road characteristics of the Rho-Monza to a modern motorway section, with a double "New Jersey" barrier in the central reserve and a class "H3" steel barrier along the sides. The road project speed is from 65 to 80 km/h.

Descriptions and dimensions:

- *Structures:* twin steel-concrete composite beams supported on reinforced concrete abutments with raft foundations.
- *Deck dimensions:* 57 m span and 54 m across the motorway, 5.5 m minimum overhead clearance.

Other works:

- *Varesina Underpass:* TENSITER, type S512 precast structure founded below ground level and waterproofed with a geomembrane.
- *Marietti Channel Underpass:* precast rectangular box culvert.



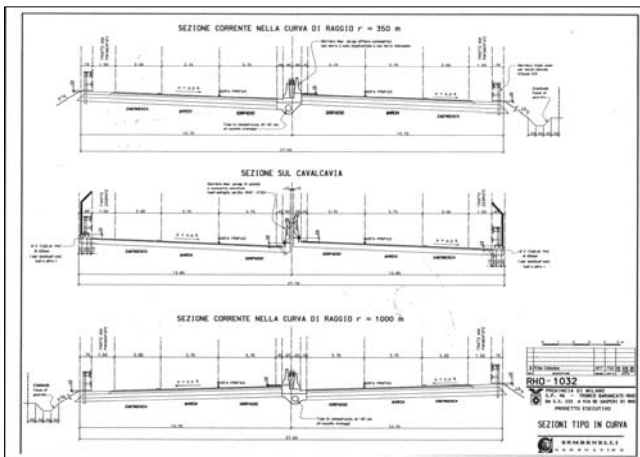
PROFESSIONAL SERVICES PERFORMED

Final design of the road system between the Bollate rotary on SP 46 and the De Gasperi rotary on SS 223 in the municipality of Rho.

Final design of the hydraulic works: small bridges, culverts and ditches. Surfaces drainage works.

Final design and assistance during construction of the new flyover (deck, abutments, foundation).

AUTOSTRADA spa has requested for the new widening works on the A8 motorway, a net space of the overpass increased in order to allow further widening of the motorway platform and to build a clover-leaf junction for the new Fair at Rho-Pero.



The raft foundation slab is placed on the recompacted ground at 2 m depth and is 1.5 m. thick

The flyover decks have been designed to be quickly assembled.

Beams are pre-assembled at site and the erection of all the deck is done in one night closing the motorway to traffic.

The metallic barrier, class H3, is 'Autostrade' type with yielding supports, ensuring an Accident Security Index ASI < 1.