

MOTORWAY A10/171 ORLEANS

ORLEANS - LOIRET - France



TYPE OF PROJECT

YEAR OF CONSTRUCTION
2021

CLIENT
COFIROUTE

CONTRACTOR
Guintoli/NGE
GC/Siorat/Agilis/Eiffage/Matière

DESIGNER
EGIS VILLES ET
TRANSPORTS

PROD. RELATED

MACRES (1.770 Sqm), TerraMesh (1280 Sqm), MonoAxial GeoGrids (49200 MI)

Challenge

The motorway plan highlighted the continued increase in traffic on the A10 between the A19 and the A71. In this context, the development of the A10 motorway north of Orléans aimed in particular to improve traffic flow with the creation of new lanes and the adaptation of motorway junctions. As part of these developments, retaining structures in embankments reinforced with a concrete facing and mineral facing were necessary.



Abutment C1



Abutment C3

Solution

The reinforced embankments made by Maccaferri formed the return walls of the C1 and C3 abutments of the PSI986 structure. This viaduct connects the A71 to the A10 via the Vierzon-Tours ramp, spanning the A10 (Paris-Tours). For each abutment, 3 MacRes® walls were made: the 2 ramp walls and a wall positioned at the rear of the load-bearing abutment which closes the reinforced embankment and creates an inspection space under the abutment. Maccaferri's MacRes system consists of precast concrete panels with standard dimensions of 1.5m x 1.5m with a minimum thickness of 14cm. Geosynthetic reinforcements of the ParaWeb type are connected to the facing: these are strips made up of a bundle of high-tenacity polyester fibers contained in a polyethylene sheath. The stability of the massif is ensured by the interaction between the reinforcement strips and the structural backfill placed behind the facing. The concrete facing only plays an aesthetic role and local containment of the backfill. In the extension of the A10 / A71 ramp, France Maccaferri also participated in the development of the SOUT991 and SOUT992 walls located below the west side of the A71. The retaining solution chosen for these structures is a reinforced embankment with a mineral facing of the Terramesh System type. It is a gabion-type mineral facing that is extended by a sheet of metal mesh 3 m in length. The installation of the concrete and mineral-facing structures was carried out by teams from France Maccaferri.



Abutment C1



ParaWeb Abutment C1



Abutment C1 & C3



Terramesh System wall



Terramesh System wall



OPEN GOOGLE MAPS



OPEN GOOGLE EARTH