its Engineering Company

# INFRASTRUCTURE DEPARTMENT

Brochure

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# The Department

Infrastructure plays a key role in economic development and the people's quality of life. That is why their design, implementation, maintenance, and care is now more vital than ever to keep the country moving.

ITS works with clients by providing comprehensive services and concrete solutions for all kinds of challenges, thanks to the technical know-how and years of experience in the infrastructure sector.

The team offers and develops engineering services ranging from feasibility studies through to final and executive designs to implement functional infrastructure with the aim of improving the socio-economic conditions of the territory, ensuring its functionality and compatibility with the environment and landscape.

ITS develops services in the field of transportation infrastructure and network services, applying international environmental sustainability protocols. These include the Envision protocol, the first rating system for designing and implement sustainable infrastructure.

# Services

ITS develops services starting with socio-economic screening of the territory, analysis of existing infrastructure and planning of possible developments-working in collaboration with clients and public agencies-in order to arrive at the design having identified the most effective solutions with respect to the complexity of the context, paying particular attention to: functionality of the work, socio-economic sustainability, operation and maintenance costs, environmental and landscape enhancement.

## 01 Planning and design

- Planning and technical and economic feasibility studies
- Final, executive design
- Construction and detailed design
- Project verification for validation purposes
- Accompanying public debate

## 02 Project Management

- Economic and financial planning
- Time monitoring and control
- Integration and coordination of specialized services
- Assistance to the RUP and contracting stations

## 03 Construction Management

- Construction Management
- Time and cost monitoring and control
- Operations management, construction accounting, global management of surveying, staking and tracking
- Structural and technical-functional inspections
- Technical-administrative inspections

## 04 Functionality and Manteinance

- Drafting maintenance plans
- Monitoring during operation
- Work files and manuals
- Monitoring and management of maintenance and construction sites using integrated information systems

## 05 Safety and Environment

- Safety coordination during the design phase
- Safety coordination during the execution phase
- Risk assessment
- Construction site study
- Work scheduling

## 06 BIM - Building Information Modelling

- Model creations
- Management and coordination and modeling activities
- Code checking
- ACDat platform management

# Our Projects

# Forlì Airport

## Verification of Meteorological System Installation Project

In 2023, we supported ENAV S.p.A. with a specialized verification service for the meteorological system installation project at Forlì Airport.
This targeted intervention was carried out during the executive design phase to ensure full compliance with the technical and functional standards required for high-tech airport infrastructure.
Our strengths—precision, reliability, and rapid execution—contributed to the efficiency and safety of a key asset in the regional airport network.

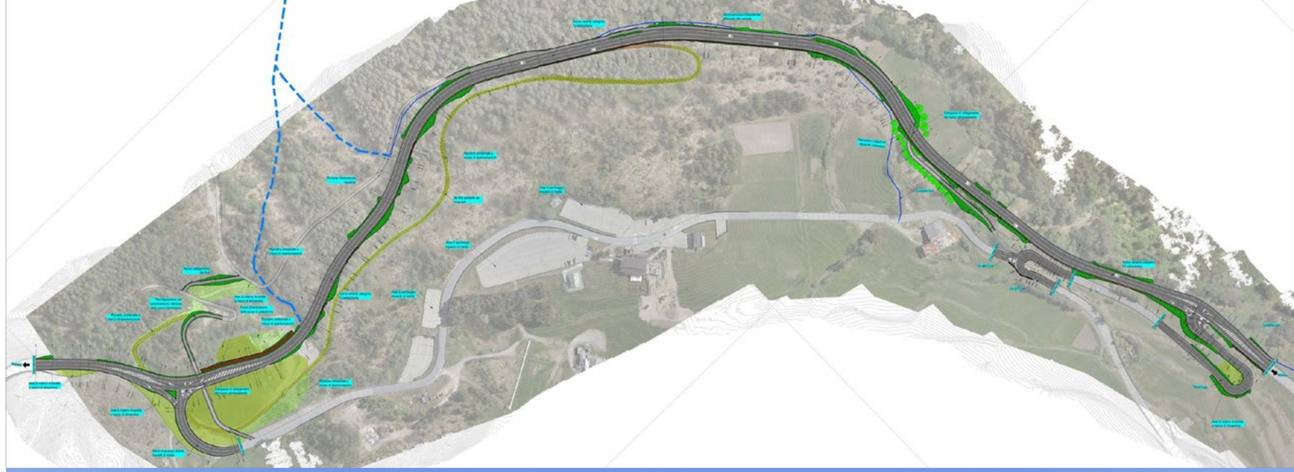
| | |
|---|---|
| Location: | Emilia-Romagna, ITALY |
| Client: | ENAV S.p.A. |
| Year: | 2023 |
| Work amount: | 13.520,00 € |
| Categories: | - |
| Services provided: | Executive design |

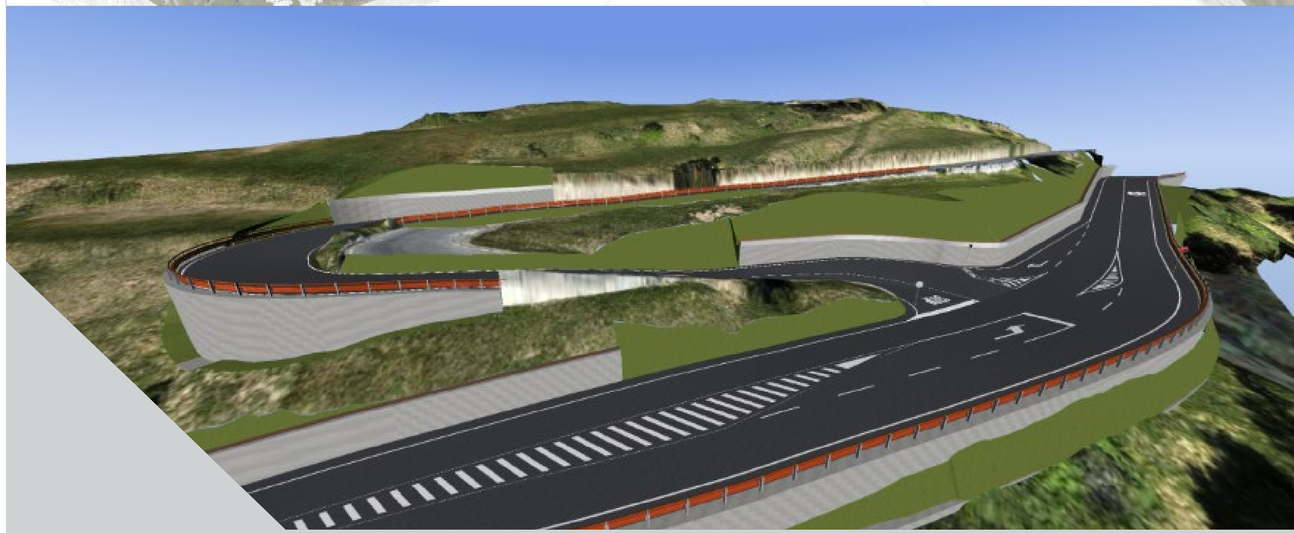
# Variant Road of Motte di Oga

## Road Safety Improvement and Traffic Reduction

This project focuses on the design of a new road alignment for Provincial Road N°28, providing a bypass to avoid the winding road and intersections through nearby towns. The latest road is approximately 1,200 meters long and aims to improve road safety by reducing traffic passing through the municipalities of Valdisotto and Valdidentro. The road is designed as an 'F2 secondary suburban road' and features significant support structures, such as gravity walls and tie-back anchor systems, tailored to the challenging mountainous terrain.

Special attention was given to minimizing excavation and earthworks by optimizing the planimetric and altimetric alignment. A drainage system, such as 'Gabbiodren,' was also incorporated to reduce soil saturation and prevent groundwater intrusion in landslide-prone areas. The project was developed using BIM methodology, beginning with a LIDAR survey to generate a Digital Terrain Model (DTM). An Environmental Impact Assessment (EIA) screening was conducted to ensure sustainable development.



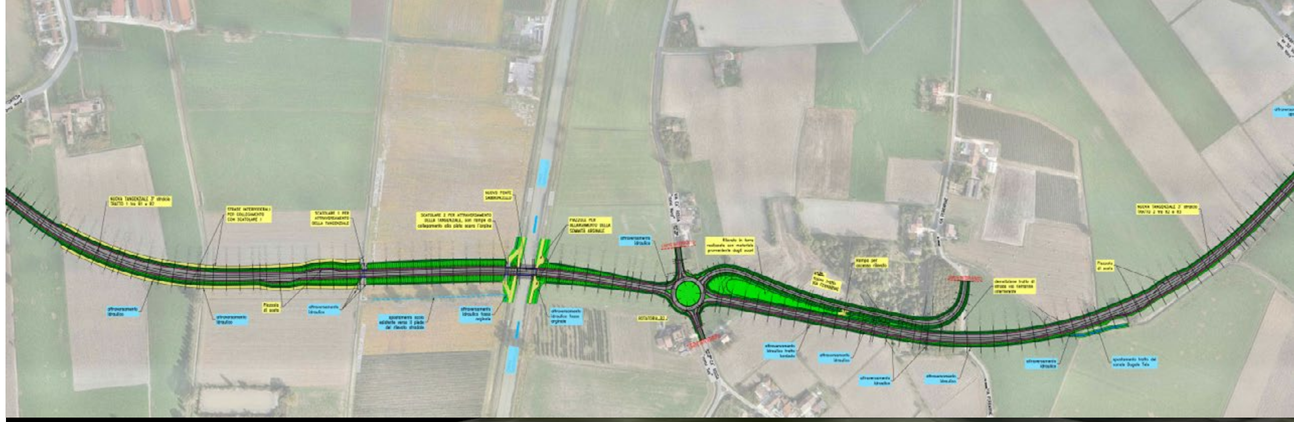


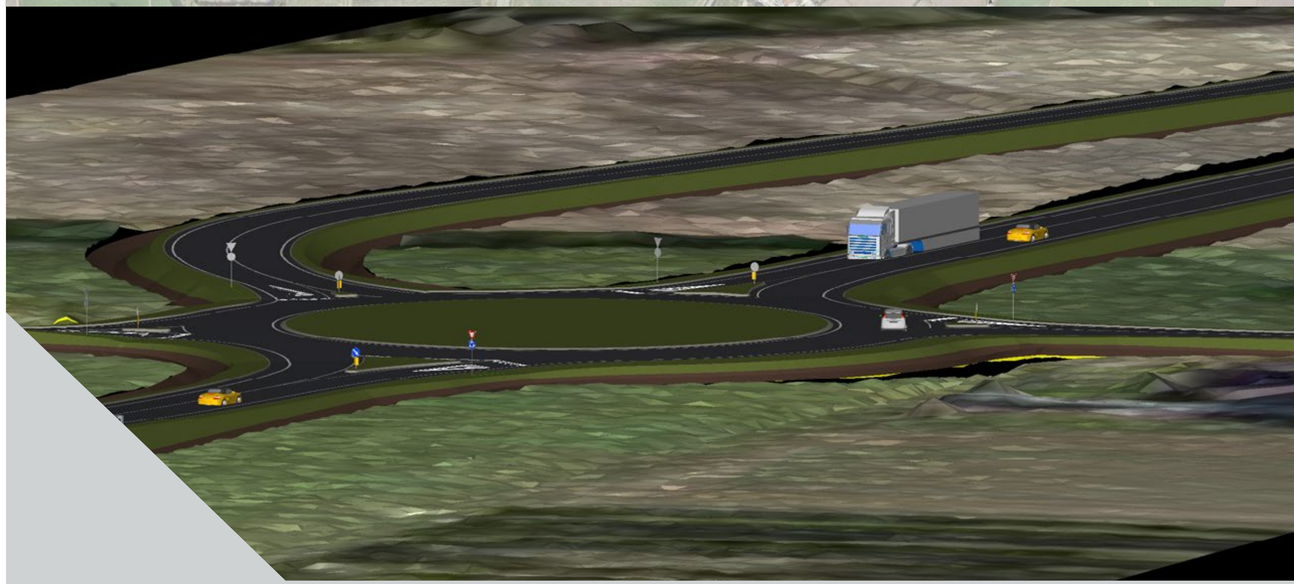
| | |
|---|---|
| Location: | Lombardy, ITALY |
| Client: | Province of Sondrio |
| Year: | 2022 - ongoing |
| Work amount: | €8.8 million |
| Categories: | V.02, S.03, S.04, S.05 |
| Services provided: | Final and executive design, safety coordination during design, EIA (Environmental Impact Assessment) screening |

# Quistello Southern Bypass

## Completion of the “Southern Bypass of Quistello” system in the province of Mantua

The project involves the development of definitive and executive design plans and safety coordination during the design phase. The proposed solution aims to divert traffic from the town centre of Quistello, improve traffic flow, and reduce congestion by bypassing the urban area. The new road network integrates with the existing infrastructure by constructing three roundabouts, each with a diameter of 50 meters. To maintain connectivity between agricultural lands and intermodal roads, an underpass has been designed using reinforced concrete culverts sized to accommodate agrarian vehicles, including harvesters. A comprehensive study of the intermodal road network resolved all interferences and ensured full accessibility to agricultural areas. The road design was developed using LIDAR survey data, generating a point cloud and Digital Terrain Model (DTM). The modelling of the new infrastructure was executed using Building Information Modeling (BIM) methodology.





| | |
|---|---|
| Location: | Lombardy, ITALY |
| Client: | Province of Mantua |
| Year: | 2021 - ongoing |
| Work amount: | €6.5 million |
| Categories: | V.02, S.04 |
| Services provided: | Final and executive design, safety coordination during design, geotechnical and seismic investigation |

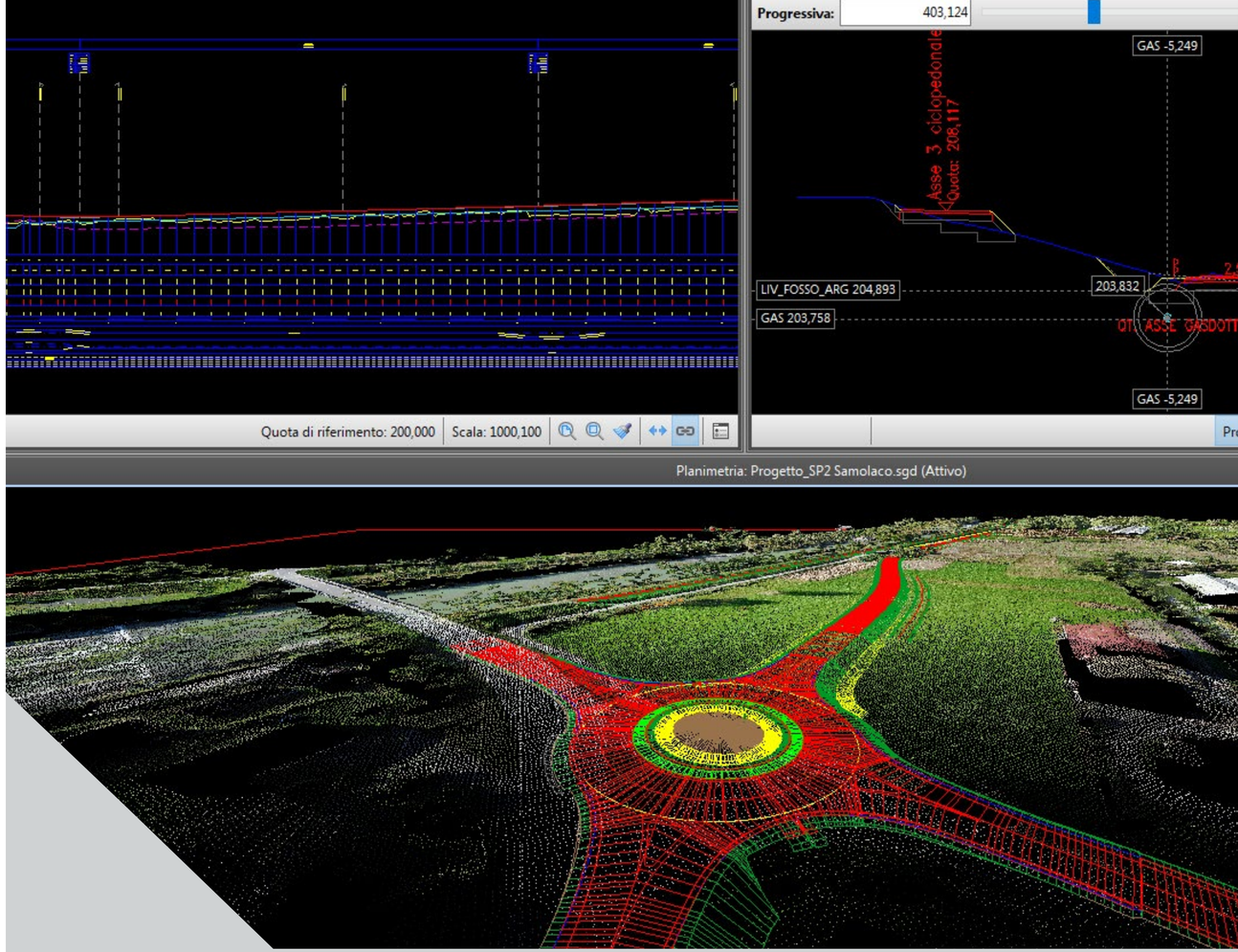
# Trivulzia Variant Road

## Enhancing road Safety and Traffic flow in Samolaco

The project involves the design of a new 3 km roadway alignment aimed at improving road safety and reducing traffic through the Municipality of Samolaco, located in Valchiavenna. The new infrastructure will be connected to the existing provincial road through two roundabout intersections. The road platform follows an F2 section, ensuring optimal functionality and safety.

The road layout was developed using advanced methodologies, including LIDAR survey data, point cloud processing, and Digital Terrain Model (DTM) data to ensure the best design quality. Building Information Modeling (BIM) methodology was employed to assess the minimum clearance distances from the MP gas pipeline and the AT power line.

In addition to the detailed design process, the project underwent a Regional VIA verification procedure. Key outputs include structural calculation reports, geological and hydrogeological studies, environmental feasibility and monitoring plans, and traffic diversion and safety coordination plans.




| | |
|---|---|
| Location: | Lombardy, ITALY |
| Client: | Province of Sondrio |
| Year: | 2019 - 2022 |
| Work amount: | €5.2 million |
| Categories: | V.02, S.05, S.03, D.04, IA.03 |
| Services provided: | Final and executive design, safety coordination during design |

# Ripa Road

## Safety enhancement in La Spezia – Rockfall Tunnel construction

This project addressed critical safety and geological challenges along Ripa Road in Liguria, Italy. A 158-meter-long rockfall tunnel was designed and constructed, complemented by slope stabilization works and the installation of rockfall barriers. Advanced 2D impact energy and bounce height analyses optimized protection measures. The intervention significantly improved the road's resilience to hydrogeological disruptions, ensuring safer and more reliable connectivity for the region.

| | |
|---|---|
| Location: | Liguria, ITALY |
| Client: | I.R.E S.p.A. |
| Year: | 2018 - 2020 |
| Work amount: | €3.3 million |
| Categories: | V.02, S.03, S.05, D.04, IA.03 |
| Services provided: | Final and executive design, safety coordination during the design phase, site supervision, operational direction, safety coordination during execution |

# Alemagna Road

## Enhancement for the Milan–Cortina 2026 Olympic Games

Per l'avvio dei mondali di sci "Cortina 2021", ANAS SpA, d'intesa con il Ministero delle Infrastrutture e Trasporti, ha avviato un'iniziativa intesa a risolvere il maggior numero di punti critici della mobilità presente lungo la SS n. 51 "di Alemagna", nel tratto compreso tra Pian di Vedoia (terminale della A27), e Cortina. Nel tratto di Longarone, gli obiettivi dell'intervento sono la risoluzione della carenza funzionale dell'intersezione a raso tra la SS n. 51 e la SP n. 251 (direzione Val Zoldana) all'ingresso sud di Longarone, e la messa in sicurezza ed adeguamento geometrico e prestazionale del tratto di strada statale compreso tra il predetto svincolo e la galleria Termine, presente a Nord dell'abitato di Castellavazzo. Tra le principali opere d'arte progettate, 3 nuovi ponti a sezione mista acciaio e c.a., l'adeguamento sismico di due ponti in c.a. esistenti, e l'adeguamento di un sovrappasso ferroviario alla linea Conegliano – Calalzo. La progettazione stradale e strutturale è avvenuta con metodologia BIM, partendo da rilievo LIDAR dell'intero tracciato.

| | |
|---|---|
| Location: | Veneto, ITALY |
| Client: | ANAS S.p.A. |
| Year: | 2019 |
| Work amount: | €16.9 million |
| Categories: | S.03, S.04, S05, V.02 |
| Services provided: | Technical-economic feasibility study, executive design, safety coordination during the design phase |

# Curtarolo Bridge

## Structural Rehabilitation and Reconstruction of the Bridge Deck over the Brenta River on the former SS47, km 14+020

Located in the heart of the Province of Padua, the bridge on the former SS47 in Curtarolo underwent major structural rehabilitation, including the complete reconstruction of the bridge deck. The goal was to enhance safety and structural durability, ensuring the continuity of a strategic transport infrastructure.
The project included the development of both the detailed and final designs, safety coordination, and construction supervision for a high-value and technically complex intervention, managed with precision and expertise.

| | |
|---|---|
| Location: | Veneto, ITALY |
| Client: | Province of Padua |
| Year: | 2019 |
| Work amount: | €2.865.000,00 |
| Categories: | - |
| Services provided: | Final and executive design, safety coordination during design phase |

# Ski area Rumerlo Network Road

## New access to the ski areas of Rumerlo and Piè Tofana - plan for the interventions for the CORTINA 2021 Ski World Championship

The project involves the definitive and executive design for upgrading the municipal road network to improve accessibility to the Rumerlo and Piè Tofana ski areas, focusing on the infrastructure required for the CORTINA 2021 Ski World Championship. This includes the construction of a 640-meter bypass road, 6.0 meters wide, to facilitate modifications in the Rumerlo finish area as per FIS (International Ski Federation) requests. In addition to the road, the project covers the creation of the FINISH AREA, the arrival zone for the ‘Stratofana’ (women) and ‘Vertigine’ (men) tracks, which will share a single finish area in Rumerlo. This area will have all necessary technical infrastructure, including media spaces, spectator reception areas, security services, transit, and parking zones. Reinforced concrete retaining walls, foundation piles, and micropile-anchored tiebacks are included in the design to ensure structural stability.

| | |
|---|---|
| Location: | Veneto, ITALY |
| Client: | Fondazione Cortina 2021 |
| Year: | 2019 |
| Work amount: | €4.8 million |
| Categories: | V.03, S.03, S.04, S.05, D.04, P.02, IA.01 |
| Services provided: | Technical and economic feasibility design, final and executive design, safety coordination during design |

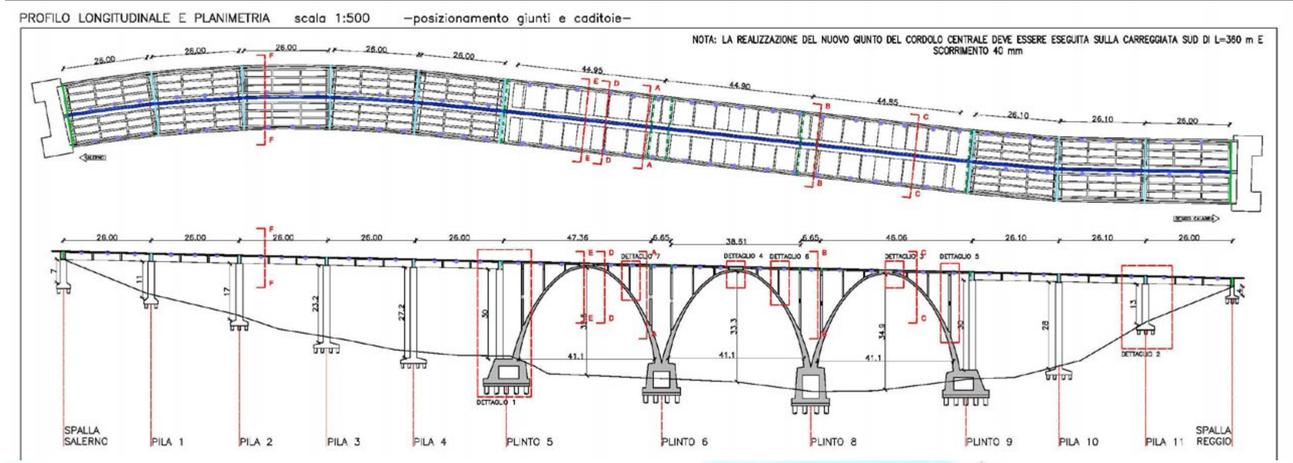
# Salerno-Reggio Calabria

## Extraordinary maintenance work on the highway from km 433+765 to km 442+077 between Campo Calabro and Santa Caterina

The design involved extraordinary maintenance work to upgrade the existing highway section.

The section under intervention includes no.7 viaducts, no.3 tunnels, and some minor works (retaining walls, minor overpasses, bridges, and manholes). Specifically, the interventions involved:

resurfacing of the road pavement; resurfacing safety barriers and road signs; hydraulic works for water regulation platform; rehabilitation of deteriorated reinforced concrete works; remaking of expansion joints expansion on viaducts; waterproofing of viaduct deck; green works and environmental mitigation; junction lighting system; upgrading to the current regulations of tunnel lighting systems.




| | |
|---|---|
| Location: | Campania, ITALY |
| Client: | ANAS S.p.A. |
| Year: | 2015 |
| Work amount: | €79.4 million |
| Categories: | V.03, S.03, S.04, D.04 E.17, IA.03 |
| Services provided: | Final and executive design and safety coordination during design |

# Irno and Cristoforo Viaducts

## Improvement of the Safety of Irno and Cristoforo Viaducts (km 54+850, Salerno Bypass)

The intervention focused on improving the safety of the "Irno" and "Cristoforo" viaducts at km 54+850 of the State Road N°18, specifically emphasizing regulatory upgrades to the safety barriers. Given budget constraints, above-ground structural reinforcements were prioritized to address degradation, improve seismic load responses, and enhance road safety with updated containment systems. Key works included resurfacing select piers, abutments, and anchorage curbs for barriers. The restoration followed ANAS guidelines, encompassing surface cleaning, rebar realignment, passivation, cementitious mortar application, and protective coatings to extend the structures' lifespan. Expansion joints were installed to ensure the continuity of the road deck.

In addition to the structural improvements, traffic management plans ensured phased construction to minimize disruption, with at least one lane remaining open during the works. Safety measures included separate zones for construction vehicles and public traffic secured with fencing to prevent unauthorized access, especially at night.

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|---|---|
| Location: | Campania, ITALY |
| Client: | ANAS S.p.A. |
| Year: | 2014 |
| Work amount: | €6.7 million |
| Categories: | V.02, S.03, S.04 |
| Services provided: | Final and executive design, safety coordination during design |

# Delle Mire Variant Road

## Connecting A27 Vittorio Veneto South Toll Gate to Alemagna

ITS oversaw the design and execution of critical infrastructure improvements to connect the A27 Vittorio Veneto South toll gate with the Alemagna road, optimizing heavy vehicle traffic and reducing urban congestion. The project involved 110 technical drawings and 25 reports, as well as detailed studies on traffic flow, noise impact, geological surveys, and tunnel risk analysis.

Key features included an artificial tunnel constructed using top-down methods with post-tensioned slabs, diaphragm walls, and a single-span bridge over the Cervada Stream, designed with weight-reduction techniques for improved performance and easier maintenance. Environmental measures integrated soundproof “green” barriers with photovoltaic panels and sustainable hydraulic systems. These innovations ensured minimal territorial impact in an area intersected by major infrastructure and industrial activities.

| | |
|---|---|
| Location: | Veneto, ITALY |
| Client: | Province of Treviso |
| Year: | 2010 - 2012 |
| Work amount: | €5 million |
| Categories: | V.02, S.03, S.05, S.04, IA.03, D.0 |
| Services provided: | Executive design and safety coordination during the design phase |

# New Connecting Road to Villorba

## Enhancing Accessibility and Mobility

This project involved the design and construction supervision of a 3.8 km direct connection linking the State Road N°13 "Pontebbana," Provincial Road N°102 "Postumia," and the A27 Treviso North tollgate. The intervention aimed to improve traffic flow and accessibility in the northern quadrant of the tollgate while minimizing disruptions to the surrounding infrastructure.

The work consisted of a 1.6 km northern bypass of Catena di Villorba and a 2.2 km parallel road to the A27, both designed as a Type D "urban arterial" road with a single 9.5 m-wide lane per direction. Key features included three large-diameter roundabouts (up to 75 m), a 200 m-long artificial tunnel under the Venice-Udine railway, and a 37.5 m monolithic underpass constructed using UCS technology.

Additional improvements included rationalized local access, traffic separation near the tollgate, and provisions for future highway integrations. Environmental and infrastructural impacts were minimized while ensuring long-term performance and connectivity.


| | |
|---|---|
| Location: | Veneto, ITALY |
| Client: | Province of Treviso and Municipality of Villorba |
| Year: | Year: 2009 - 2011 |
| Work amount: | €11.9 million |
| Categories: | V.02, S.05, S.03, D.04, IA.03 |
| Services provided: | Operational structure management and safety coordination during execution |

# Road Infrastructure and Bypass at S. Artemio

## A new road connecting to the headquarters of the province of Treviso, obtained from the former psychiatric hospital of S. Artemio

The assignment concerns the executive design of the works of "New Road connection to the S. Artemio – II° half" contracted with an open integrated tender procedure, and relating to the construction of a vehicular underpass in Via Ghirlanda (having a section of 13.0 x 5.2 m), a pedestrian underpass (having a section of 3.0 x 2.7 m) and the completion of the new link to the Provincial Road for a length of 1.2 km.

The study of the underpass construction system was particularly attentive to the geotechnical situation of the site, characterized by a gravel subsoil with a flowing aquifer just below the countryside plan, the presence of the Venice-Udine double railway line and the delicacy of the existing environmental and landscape balance.

| | |
|---|---|
| Location: | Veneto, ITALY |
| Client: | Province of Treviso |
| Year: | 2008 - 2009 |
| Work amount: | 4.3 million |
| Categories: | V.02, S.03, S.05, D.04, AI.03 |
| Services provided: | Executive design for integrated tendering and safety coordination during the design phas |

# Variant Road in Portogruaro

## Upgrading work on the 1st Lot - Construction of the 2nd and 4th Lots

The variant route develops for about 12.5 km, bypassing the urban settlement of Portogruaro to the north, with connections by intersection at staggered levels to Treviso, with the road to Pordenone and to Udine.
The route of the 1st and 2nd Lot is spread over about 3 km and includes within its roads in detected, n.3 viaducts on mixed steel and concrete structure, n.1 roundabout and n.1 overpassing.
The n.4 Lot is developed over a length of about 5 km and inside there are several major works of art, including n.3 viaducts in a mixed structure, n.3 junctions, n.2 underpasses and n.1 overpass, as well as roads in detected.

| | |
|---|---|
| Location: | Veneto, ITALY |
| Client: | ANAS S.p.A. |
| Year: | 1998 - 2008 |
| Work amount: | €58.4 million |
| Categories: | V.02, S.03, S.04, S.05, D.04, IA.03 |
| Services provided: | Final and executive design, safety coordination during the design phase |

# RFI Framework Agreement

## Operational directorates territorial infrastructure of Ancona e Bari

The Framework agreement concerns technical and economic feasibility design services, final, executive, and investigations surveys, including all special and ancillary services, of the work relating to the railway headquarters and its civil works, tunnels, buildings and associated RFI Spa facilities.


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|---|---|
| Location: | Marche – Apulia, ITALY |
| Client: | RFI S.p.A. |
| Year: | 2022 – ongoing |
| Work amount: | - |
| Categories: | V.03, S.03, S.04, S.05, D.04 |
| Services provided: | - |

# ANAS Framework Agreement

## Three-year agreement for design services related to scheduled maintenance

The Framework Agreement concerns the executive design for the extraordinary maintenance work of bridges, viaducts, and tunnels in relation to Lot 2 ANAS-North East, including the compartments of Veneto, Friuli-Venezia Giulia, and Emilia-Romagna.


| | |
|---|---|
| Location: | Veneto- Emilia-Romagna – Friuli-Venezia Giulia, ITALY |
| Client: | ANAS S.p.A. |
| Year: | 2018 - 2023 |
| Work amount: | €50 million |
| Categories: | V.03, S.03, S.04, S.05, D.04 |
| Services provided: | Final and executive design and safety coordination during execution |

# RFI Framework Agreement

## Services of completion of the preliminary projects for the arrangement of the Piraineto Trapani line via Milo-Alcamo

The preliminary design for upgrading the Piraineto-Trapani line via Milo was developed as part of the framework design agreement.
The line has been disused for several years due to the stations of Calatafimi and Segesta Tempio and the construction of two underpasses in Trapani and Segesta.
Overall, the intervention concerns about 47 km of railway line.


| | |
|---|---|
| Location: | Sicily, ITALY |
| Client: | RFI S.p.A. |
| Year: | 2016 |
| Work amount: | €84.3 million |
| Categories: | V.03, S.03, S.04, S.05, D.04 |
| Services provided: | Preliminary design |

MONTI

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Engineering
Company

## Operational offices

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