Road tunnels

COMPLETE SOLUTIONS FOR DESIGN, ENGINEERING, SUPPLY AND INSTALLATION OF ELECTROMECHANICAL WORKS, MANAGEMENT, MONITORING AND CONTROL SYSTEMS.
Complete solutions for design, engineering, supply and installation of electromechanical works, management, monitoring and control systems.
Supply and installation
Design and Engineering of electromechanical and IT systems for road tunnels.

All design and engineering needs from one source.

ELEF offers diverse solutions for road tunnel electromechanical installation, management, monitoring and control systems, in accordance with the provisions of the latest standard and regulation for road tunnels.

ELEF can provide design and engineering for the following sectors/project’s sections:

**Electromechanical systems**
- Tunnel power distribution (networks, substations, UPS, emergency)
- Lighting system
- Ventilation systems
- Fire detection and extinguishing
- Variable message signs, traffic lights
- SOS, PA, Telephone network and emergency call.
- CCTV and Video control system
- Weather and visibility data, carbon monoxide concentration.
- IP network cabling for data, video and audio
- IT equipment, installation and commissioning

**In-house development of IT applications, equipment operating logic, software engineering and development.**
- Design of road tunnel management, monitoring and control systems
- Development of appropriate application software
- Automatic Incident Detection
- Emergency management scenario
- Traffic monitoring and management
- Video surveillance systems
- Communication with external systems
- Local and remote monitoring and control centres
- Mobile applications
- Equipment monitoring, metering data and statistics
- IP networking, data centres, storage, servers, video wall
- VOIP and Radio-communications system

Detail and proper design is a must for the works implementation.

ELEF considers crucial the reduction of maintenance and energy costs; during the design and engineering phases the picking of technologies that ensure, in addition to optimal performance, a long life, low maintenance needs and low energy consumption are top priority. ELEF has its own laboratory to test new equipment/solutions and the Client’s tailored software before sending to the job site for installation.

Our team of engineers have the expertise, experience and technical knowledge to solve complex road tunnel engineering and design challenges of electromechanical and management systems.
Supply and installation of electromechanical and IT equipment and systems.

Based on more than 200 km of implemented projects know-how and experiences, we are able to provide added value turn-key solutions to our clients.

Works properly done and on schedule are the keys of ELEF’s success on projects implementation.

With a pool of highly qualified professional engineers, ELEF can provide design, supply, installation, commissioning, services for electromechanical systems and IT equipment with dedicated specialist and manpower for each-one of the specialties.

Each site has its own history; each site provides us with useful information to improve the design and the selection of equipment to improve product quality, increase the reliability of the installations and reduce operating costs.

Working closely with clients, we employ knowledge and expertise gained from years of hands-on experience in design and construction to deliver optimal road tunnels solutions.
Management, monitoring and control systems.

Today’s tunnels are longer, larger, safer and more sophisticated than ever.

ELEF supplies complete solutions for road tunnels management; systems, traffic and security are constantly under monitoring and control.

For effective tunnel control, several subsystems must be integrated into a consistent system. Its proper functioning is most important in emergency cases, when it must timely provide all necessary information on the tunnel state to the tunnel operating personnel and external services.

Comprehensive road tunnel management, monitoring and control can operate in automatic, semi-automatic and manual mode with predefined or user modifiable scenario/sequence of actions.

Tunnel control centre permits management, monitoring and control of all technical equipment of the road tunnel systems such as but not limited to: Power supply, ventilation, lighting, emergency call system, video monitoring, traffic analysis, traffic control, incident detection, fire detection, fire fighting.
ELEF Spa is a joint-stock company active in the field of engineering, design and supply of electrical installations and technological plants. ELEF has a wide experience in design & built electrical and technological plants for the industrial, civil, private and public sectors.

ENERGY: Substations.

INDUSTRY: power distribution, remote control system, heating & air conditioning plants.

SPECIAL INSTALLATION: special system for banks, commercial/shopping canters, hospitals, building automation, remote control, security system and access control, CCTV, Public lighting & Smart City solutions.

COMMUNICATIONS: Electronic systems, automation systems and telecommunications networks.

TRANSPORTATION: airport, port, railways, metro, highways tunnels, road public lighting system.

IN-HOUSE PRODUCTION: Switch and distribution board, switch-gear, for low and medium voltage; power centre, panel boards & controls; airport runway guidance signs, in compliance with ICAO guidelines standards; solar cell powered street lighting system.

More than 35 years experience in design & built electrical and technological plants for the industrial, civil, private and public sectors.

www.elef.it