ENGINEERS & INNOVATORS

CAPABILITY STATEMENT 2026

Delhi-NCR Mumbai Kochi Goa

www.fgsengineers.com Info@fgsengineers.com

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Introduction

Established in 2020, we are a pan India presence integrated engineering consultancy firm providing engineering services from dream to reality and beyond.

Pre-Feasibility studies	Survey & Investigation	Detailed Project Report	Project Management
Tender & Bid Management	Pre-bid Services	Detailed Design	Construction Supervision
Contract Claims Management	Maintenance Planning	Digital Engineering	Non-Destructive Testing
Infrastructure Health Monitoring	Geotechnical Investigation	Geophysical Investigation	Infrastructure Due Diligence

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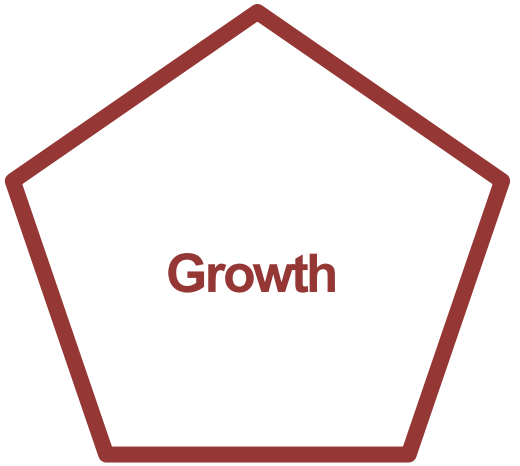
Sectors

- WATER RESOURCES
- SURFACE TRANSPORT
- UNDER GROUND STRUCTURES
- STRUCTURAL ASSESMENT
- ELECTRICAL & MECHANICAL
- SMART INNOVATIVE TECHONLOGY



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The Journey

Four times financial growth YoY

Underground, Water, Bridges, Buildings, Claim Management, Instrumentation Analysis & Smart Technologies sector covered

Presence at Delhi, Mumbai, Kochi, Goa

Largest Tunnel Design Team in India

Design software and Technological Infrastructure

Total Strength of 36 in March 2025

More than 200 Kms of tunnel design (Civil & E&M)

Experts in Tunnel, Bridges, Structures, Building, Instrumentation, Survey, Ventilation, Firefighting, SCADA, Electrical, BIM & AutoCAD

55 projects as of January 2026

Started with three Engineers

Incorporated on 23 April 2020

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KEY PROJECTS:
FEASIBILITY STUDIES & DETAILED PROJECT REPORTS (DPR)

Key Projects

Tunnels of Bharatmala – Pariyojana (DPR)

- Feasibility and DPR of Unidirectional 6-lane Expressway Tunnels of length 18.16km, part of Raipur-Visakhapatnam Economic Corridor in Odisha & Chhattisgarh under Bharatmala Pariyojana.
- 3-lane tunnel tubes of diameter 15m & cross-sectional area 138 Sqm.
- Civil and E&M design, Estimation & Costing, Bid Document preparation

Tunnels of Zanskar Valley (DPR)

- Design of more than nine tunnels 7 Km for road connectivity to Leh (Nimmu – Padam route).
- Feasibility Study (FS), Detailed Project Report (DPR) and tunnel designing, Civil & E&M design.
- Tubes of 2 x lane of diameter 9m & cross-sectional area 70 sqm.
- Project of strategic and economic significance

Project Mussoorie Tunnel NH-707A

- Feasibility and Detailed Project Report.
- Unidirectional twin tube Tunnel of length 4.5km with an approach of 5 km.
- Topographic survey and drone survey, Geological survey with satellite data and DEM, ERT, SRT, Borehole drilling and lab testing.
- Civil and E&M Design, Estimation & Costing, Bid Document preparation

Key Projects

Thiruvananthapuram Outer Ring Road Tunnels

- Feasibility study and preparation of DPR for 15 nos. of twin-tube 2-lane highway tunnels, Cut & cover and NATM Tunnels
- Hydrological studies, slope stability studies, geotechnical investigation
- Design for portals, slopes, excavation support systems, drainage, initial lining, final lining, tunnel lighting, ventilation, firefighting, power supply & distribution
- Preparation of tender schedules for floating of tender by NHAI.

Mussoorie Road Tunnels

- Feasibility and Detailed Project Report of two tunnels of approximate length 2.1km and 2.7km.
- Located near Mussoorie town at Hathi Paon
- Complex geology and terrain
- Topographic survey, drone survey, geological mapping, ERT, SRT, Borehole drilling and lab testing
- Civil and E&M Design, Estimation & Costing, Bid Document preparation

Bengaluru Urban Tunnel DPR Review

- Review of the Detailed Project Report for the proposed twin-tunnel project in Bengaluru, Karnataka
- 16km twin-tube, three-lane unidirectional tunnels with multiple entries and exits
- Review of civil design proposal for TBM, NATM and Cut & Cover tunnel sections including costing and suggestions for improvement
- Review of proposed ventilation, firefighting, power distribution scheme, SCADA system, etc. including costing and suggestions for improvement.

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KEY PROJECTS:
DETAILED DESIGN CONSULTANCY

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Key Projects

Tunnels Talcher – Bimalagarh (Detailed Design)

- ECoR Project at Angul Orrisa.
- PMC and Design of Railway Tunnel.
- Tunnels Length 0.9 km & Slope Stability of 350m.
- Tube diameter 7m & cross-sectional area 90 Sqm.
- Civil & E&M design.

Kiratpur-Nerchowk Tunnels (Detailed Design).

- Detailed E&M Design of four tunnels 6 km.
- Lighting, Ventillation, Fire fighting, Power Supply & Distribution, Traffic Management, Communication.& SCADA.
- Longest Tunnel twin tube each of length 1.8 km

Palakkad Water Tunnel (Detailed Design)

- Water Canal Project in Palakkad in Kerala.
- Detailed design of two water tunnels of 680 mtrs & 300mtrs.
- D-shaped 3m dia tunnel with x-section area 7.06sqm.
- Complex geology with overburden of 18m.
- Significant project in irrigation in the district of Palakkad

Ramban – Banihal Pkg 3 (Detailed Design)

- Road Tunnels on NH connecting Srinagar - Jammu.
- Seven 2 x lane Road Tunnels of Length 4 km, dia 10m, X-section 100 sqm.
- Two new tunnels and five partially completed.
- Slope Stability Analysis.
- Civil & E&M detailed design.

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Key Projects

ECoR Khurda Road-Bolangir Section

- Detailed design for three single tube rail tunnels of length – 800m, 1775m, and 2620m
- Design of Tunnel and Cut & Cover sections including excavation, support system, initial lining, niches/refuges, final lining
- Design of Tunnel MEP systems – Lighting, Ventilation, Firefighting, Power Supply, SCADA

CG-03 Expressway Tunnel

- 2.79km twin-tube expressway tunnel part of Raipur-Visakhapatnam Economic Corridor under Bharatmala Pariyojana
- Civil: Portals, excavation support, drainage, initial lining, final lining, portal buildings, etc.
- E&M: Lighting, ventilation, fire detection & alarm, firefighting, communication, tunnel monitoring, SCADA, and power supply and distribution

Shimla Bypass Tunnels

- Detailed design of electromechanical (E&M) systems for two twin-tube road tunnels of Package-1 of NH-5 from Kaithlighat to Shakral
- Lighting, Ventilation, Firefighting, Fire Detection, Emergency Communication, Traffic Management, Power Supply, ITCS
- Technical bid evaluation & Review of Vendor Submissions

Kottavalasa-Koraput BG Doubling Project

- 17 tunnels (~19.35km):
- Civil: Earthwork in formation, portals, drainage, initial and final lining, excavation supports, buildings, etc.
- E&M: Lighting, ventilation, firefighting, fire alarm & detection, SCADA, power supply
- 6 Major Bridges & 39 Minor Bridges

Key Projects

Yavatmal Rail Tunnel (Detailed Design)

- 2.9km single track rail tunnel between Wardha and Nanded in the State of Maharashtra
- Civil detailed design for construction including portal slopes, excavation support class, drainage, technical buildings, etc.
- Tender design for electromechanical systems including lighting, ventilation, firefighting, power supply, etc. along with portal technical buildings.

Akhnoor-Sungal-Poonch Tunnel

- Detailed design for 2.79 km single tube, bi-directional tunnel
- Unique cross-section and ventilation requirements
- Civil detailed design with analysis and drawings
- E&M detailed design with lighting, semi-transverse ventilation, firefighting with hydrant and high pressure mist system, CFD analysis, tunnel monitoring system, and power distribution with comprehensive CFD analysis

Satna-Panna Rail Tunnel (Detailed Design)

- Detailed Civil Design for 310m long rail tunnel
- Single tube, single track tunnel in the State of Madhya Pradesh
- Design of portal slopes, excavation support, drainage, trolley refuge niches etc.
- Critical Feature: Tunnel passing under NH-39

Key Projects

Design of Abutment under Project Udayak

- Design of abutment for 74m span steel super structure (through type) Major Permanent Bridge, open foundation
- At km. 12.300 on Hayuliang-Metengliang-Changlohagam of 1444 BCC (GREF) Sector over Teepani Nallah under 48 BRTF in Arunachal Pradesh
- One abutment of box type and one abutment of counterfort type

Design of Abutment under Project Udayak

- Design of abutment for 80m span steel super structure (through type) Major Permanent Bridge with open foundation
- At km. 8.475 on Tenai-KKG road, over Sapti Nallah, under 48 BRTF in Arunachal Pradesh
- Two abutments of Cantilever type

Indore-Budni Bridge/Viaduct

- Detailed Design of two viaducts between Mangaliyagaon (Indore) and Budni part of new Broad Gauge rail line,
- Over NH-52 and near Datuni Dam in the State of Madhya Pradesh
- Length of bridge/viaduct: 2400m & 7540m
- Railway standard spans

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KEY PROJECTS:
PRE-BID DESIGN CONSULTANCY

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Key Projects

Daspalla-Banigucha Rail Tunnels

- Pre-bid services for three rail tunnels: 800m, 1775m, and 2620m
- Geological assessment
- Civil, E&M Quantity Calculation and Cost Estimation
- Ventilation with shaft arrangement between tunnels

Tunnels in Leh, Ladakh

- Pre-bid services for two tunnels
- Length of tunnels(500m & 420m)
- Cut & Cover type
- One minor bridge
- Civil Quantity Calculation and Lighting estimation

Akola-Khandwa Rail Tunnel

- Pre-bid services for 6km rail tunnel with escape tunnnel
- Design, pre-bid estimation and costing for Civil structures - tunnel, niches, buildings, etc.
- Design, pre-bid estimation and costing for tunnel and building lighting, ventilation, firefighting, power supply and SCADA systems

Sudhmahadev-Dranga Tunnels

- Two twin-tube tunnels
- Total tunnel length approximately 8km
- Approach road of length 4.5km
- Pre-bid services with detailed quantity calculation and estimation for Civil structures and E&M Systems

Key Projects

Pre-bid Services 80 Railway Bridges

- Pre-bid design of 80 Major, Minor Bridges & RUB.
- Nimach – Dalauda, Ratlam M.P
- 1Important Bridge 335 m, 13 x Major Bridges, 52 Minor Bridges, 14 X Road Under Bridge
- Design, Quantity Calculation & Cost Estimation.

Bijni-Mandi Tunnel Project

- Pre-bid design and estimation for for 4-lane, 3.5km twin-tube tunnel
- Approximately 2km approach road
- One major bridge
- Detailed quantity calculation and estimation for Civil structures and E&M Systems

E&M Shimla Bypass Tunnel

- E&M pre-bid for 2 packages of 5 tunnels 10 km.
- Kathlighat -Shakrall – Dalli section Shimla H.P.
- Two lane,Twin tube road tunnel, longest one 2.7km.
- Lighting, Ventilation, CFD analysis, Fire fighting, Power Supply & Distribution, Traffic Management, Communication & SCADA .

Shinkun La Tunnel

- Pre-bid Design of structures, estimation & costing for 4.1km Twin Tunnels at Shinkun La Pass, Himachal Pradesh-Ladakh
- Civil and E&M systems
- 2 tunnels and 3 bowstring bridges
- Extreme climatic conditions

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Key Projects

HORC Rail Project

- Pre-bid Design of Structures for Haryana Orbital Rail Corridor Project Package - C4
- 4.7km long tunnel: 3.6km NATM;1.1km Cut & Cover
- 5 Major Bridges and 11 Minor Bridges
- Geological assessment
- Civil, E&M Quantity Calculation and Cost Estimation

Dareota-Kalarbala Tunnel

- Pre-bid engineering design of civil structures and E&M systems
- 345m twin-tube unidirectional traffic tunnel near Shimla, Himachal Pradesh
- Detailed quantity estimation and costing

Kottavalasa-Koraput BG Doubling Project

- Pre-bid engineering design for:
  - 17 tunnels
  - 6 Major Bridges
  - 39 Minor Bridges
- Detailed quantity estimation and costing for Civil Structures and E&M systems

Eastern Connectivity Tunnel

- Pre-bid civil and electromechanical design of tunnel, portal technical buildings, ancillary buildings, trumpet interchange, approach road and pavement
- Project in the premises of Bengaluru International Airport Limited.
- Detailed quantity estimation and costing

KEY PROJECTS:
PRE-FEASIBILITY STUDIES

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Key Projects

Jangi Thopan Hydropower Project

- Location Jangi Thopan, Rampur H.P (780MW).
- Pre-feasibility studies for 12 km TBM HRT scheme of diameter 10m & cross-sectional area 80 sqm.
- Kinematic & Slope Stability analysis of Dam site.
- Geological Mapping and Geophysical testing.
- Study of Alignments.

Sunni Dam Kinematic Analysis (382 MW)

- Project Location Sunni, Rampur H.P.
- Kinematic & Slope Stability analysis of Mining Area above dam site.
- Geological preliminary studies.
- Stability solution for slopes.

Thiruvananthapuram City Water Supply Project

- Location: Neyyar, Thiruvananthapuram, Kerala
- Water tunnel project to improve potable water supply in the capital city
- Geological survey, assessment, and design for pre-feasibility stage requirements.

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OTHER PROJECTS

Key Projects

Qazigund-Banihal Tunnel Due Diligence

- Site inspection, assessment and evaluation of the 8.45km long twin-tube tunnel connecting Jammu and Kashmir valley
- Determination of net present value, proposals for upgrade and operation strategy, estimation of operation and maintenance cost
- Review of existent condition of the tunnel
- Recommendations for improved safety and operability.

OD-7 Proof Checking and Value Engineering

- Twin-tube, Six-lane Expressway Tunnel, 3.4km in Raipur-Vishakhapatnam Economic Corridor, part of Bharatmala Pariyojana
- Proof-checking of design of E&M systems: Lighting, Ventilation, Firefighting, ELV and Power Supply System
- CFD analysis for value engineering for ventilation and firefighting

Kodak House Settlement Analysis

- Structural Health Monitoring of more than 100 years old Anglo-Scottish Society's heritage structure.
- Detection and location of structural defects using SHM sensors in quantifying the severity of defects.
- Complex situation of TBM vibration and Building Vibration.

Key Projects

Luhri Hydropower Project (210 MW), H.P

- Tunnel Monitoring and analysis
- Collection and detailed analysis of geotechnical instrumentation data from load cells, strain gauges, inclinometers, borehole extensometers etc.
- Detailed Analytical Monthly reports with behaviour analysis for slopes, tunnels, powerhouse, etc.

Arun-III Hydropower Project (900 MW), Nepal

- Tunnel monitoring and analysis
- Design Parameters Models & Lining Performance during & after construction
- Collection and detailed analysis of geotechnical instrumentation data from load cells, strain gauges, bi-reflex targets, inclinometers, borehole extensometers etc.
- Impact monitoring on the surrounding environments such as ground settlement and groundwater regime

Vyasi Hydropower Project (120 MW), Dehra Dun

- Tunnel Monitoring and analysis
- Collection and detailed analysis of geotechnical instrumentation data from load cells, strain gauges, inclinometers, borehole extensometers etc.
- Detailed Analytical Monthly reports with behaviour analysis for slopes, tunnels, powerhouse, etc.

OUR CLIENTELE

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MINISTRY OF ROAD TRANSPORT & HIGHWAYS
NEW DELHI

NHAI

East Coast Railway

SJVN

Border Roads Organisation

IRCON INTERNATIONAL LIMITED
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Contact Us

www.fgsengineers.com

info@fgsengineers.com

Frontier Geoservices Private Limited
Regd Office : C-360 LGF Hub & Oak, Defence Colony, New Delhi-110024 India
Business Office: 166/29, D-Block, Sector-50, Noida-201301 (UP) India