

"Constantly Evolving, Foundation You Can Trust"



N.S.E.G.S. PROFILE

Leading provider of geotechnical investigation,
in-situ & laboratory testing services in Nepal.



2026

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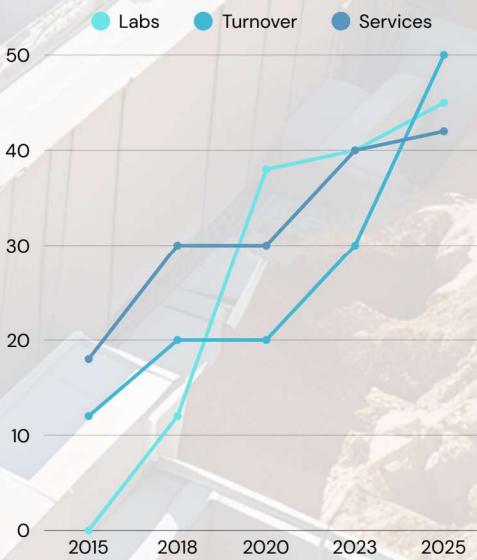
Introduction

N.S. Engineering & Geotechnical Services Pvt. Ltd. stands at the forefront of Nepal's engineering landscape as a trusted and highly capable provider of geotechnical investigation, field testing, and laboratory analysis services. Founded with a commitment to quality, integrity, and scientific excellence, our company plays a pivotal role in supporting critical infrastructure, hydropower, transportation, and environmental projects throughout the country. We pride ourselves on our multidisciplinary team of engineers, geologists, and technical specialists who bring decades of hands-on experience and problem-solving acumen to every assignment. Our laboratory is equipped with modern instruments and technologies that meet national and international testing standards, enabling us to produce reliable and accurate data essential for informed engineering design and construction decision-making.



Arun Kumar Pandit

Managing Director



Pile Lateral Load Test at Fast Track Project

Mission and Vision

→ Mission

Our mission—to deliver high-quality, innovative, and customized engineering solutions that consistently exceed client expectations. Whether it is conducting complex pile load tests, performing advanced geophysical surveys, or interpreting soil and rock behavior in the most challenging terrains, we are driven by a sense of responsibility and precision. We believe that successful engineering outcomes begin with solid ground—both literally and metaphorically—and we strive to provide that foundation for our clients.



Rato Pati · Follow

1d ·

निर्माण क्षेत्रमा मुलुकलाई 'आत्मनिर्भर' बनाउन सघाउँदै एनएस
इन्जिनियरिङ

#Ratopati

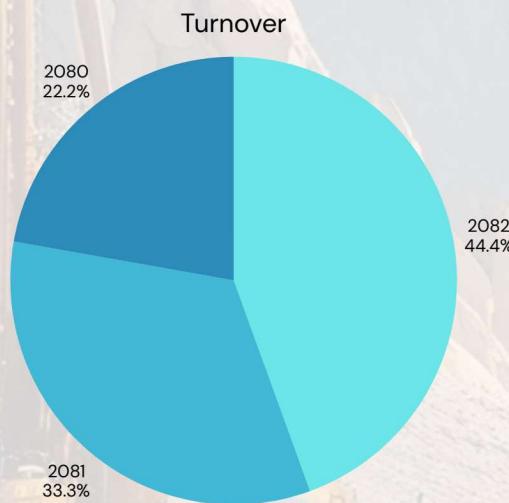


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→ Vision

Our vision is to be recognized as Nepal's most dependable and forward-thinking geotechnical and engineering solutions provider. As the country grows and develops, we envision ourselves as a long-term partner to public institutions, private developers, and international collaborators—trusted not just for our technical capabilities, but for our ethical values, professional conduct, and commitment to sustainable development. With every project we undertake, we move closer to this vision—building not just infrastructure, but confidence, reliability, and resilience in the engineering ecosystem of Nepal.



Our Services



Static Pile Load Test at Kakarbhitta-Laukahia Road Project



Optical Borehole Image Analysis at Upper Mugu Karnali HEP (191.4 MW)



Core Cutting Technique at Fast Track Project

- ➔ Field Investigations (Rotary, Auger, Percussion Drilling)
- ➔ Geotechnical Testing (Plate Load, Vane Shear, Triaxial, etc.)
- ➔ Rock Mechanical Tests (Hydro-Fracture, Direct Shear, etc.)
- ➔ Pile Tests (Static, Lateral, Dynamic, PIT, CSL)
- ➔ Laboratory Testing (Soil, Rock, Water, Bitumen, Concrete, Metal)
- ➔ Non-Destructive Testing (Rebound Hammer, UPV, Flat Jack)
- ➔ Geophysical Surveys (ERT, MASW, SRT, Borehole Imaging)
- ➔ Water Quality & Environmental Testing

Project Description

N.S. Engineering & Geotechnical Services Pvt. Ltd. has successfully contributed to a wide range of infrastructure and hydropower projects across Nepal. Our services include geotechnical investigations, pile load testing, laboratory analysis, and geophysical surveys for both government and private sector clients. Notable projects include the KTFT Project, Budhi Gandaki HEP, and various roads, bridges, tunnels, and building developments. With each project, we ensure precise data, technical excellence, and reliable support from planning through construction.



In-situ Direct Shear Test (DST) at Phukot Karnali HEP (480MW)

In-Depth Description of Our Service Offerings

Field Investigation:

Geo technical

- Rotary Drilling (Capacity up to 700 m)
- Percussion Drilling
- Auger Drilling
- In-situ Vane Shear Test
- Plate Load Test
- Static Cone Penetration Test
- Field density Test
- Core cutting

Pile Test

- Static Pile Load Test by Anchorage Method and Kent Ledge Method
- Lateral Load Test
- Dynamic Pile Load Test
- Pile Integrity Test
- Pile Pullout Test
- O-Cell Test
- Crosshole Sonic Logging (CHAMP-Q)

Geo-Physical Survey:

- Borehole Camera (Television- Acoustic Borehole Scanning)
- Electrical Resistivity Tomography (ERT)
- Magnetotelluric (MT) Survey
- Seismic Refraction Tomography (SRT)
- Multichannel Analysis of Surface Waves (MASW),
- Microtremor Array Measurement (MAM)

Rock Mechanical

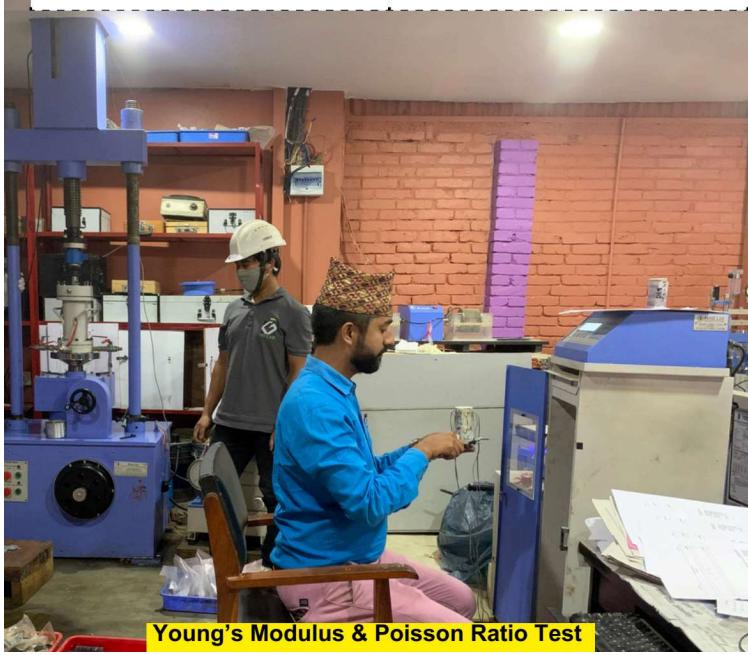
- Hydro-Fracture Test
- In-situ Direct Shear Test
- Plate-Jacking Test
- Dilatometer Test

Traffic Survey/Bridge Load/Pavement Test

- OD Survey
- Excel Load Survey
- Traffic Volume Survey
- Bridge Load test Test
- Girder Load Test
- Benkelman Beam Test

Road Marking

- Marking Thickness Detector
- Marking Retroreflectometer
- Sign Retroreflectometer



Young's Modulus & Poisson Ratio Test



Surface Dimensional Stability Test of Tiles

Laboratory Test:

Metal Test/ Rebar Test/ Wood Test/ Gabion wire	<ul style="list-style-type: none"> Tensile Strength Test/ Elongation Test Shear Test Wood Test Strand Test of Tension Cable/Steel Rope Chemical Composition of metal by Spectrometer Uniformity Adhesion Zinc Coating Dia of Wire Mass of Wire Hardness by Charpy Impact Test 	Lab Test for Rocks:	<ul style="list-style-type: none"> Triaxial Test (C & ϕ) Modulus of Elasticity Joint Direct Shear Test Poisson's Ratio Unconfined Compressive Strength Slake Durability Tensile (Brazilian) Test Point Load Test Porosity Density Water Absorption Specific Gravity Natural Moisture Content Block Coring
Lab Test for Water:	<ul style="list-style-type: none"> pH Value Chloride Content (ppm) Sulphate Content (ppm) TSP (ppm) Turbidity Total Hardness Chloride Total Alkalinity Iron Manganese Ammonia Nitrate (NO_3) Fluoride Fecal Coliform Total Suspended Solids BOD (Biological Oxygen Demand) Copper Sodium Potassium Calcium Lithium Lead Nitrate Phosphate Coliform 	Lab Test for Concrete, Aggregate & Brick:	<ul style="list-style-type: none"> Grain Size Analysis Organic Impurities Chloride Content Sulphate Soundness Alkali Reactivity Aggregate Crushing Value (ACV) Aggregate Impact Value (AIV) Flakiness & Elongation Index Los Angeles Abrasion Test (LAA) Concrete Mix Design Compressive Strength of Cube Compressive Strength of Brick Water Absorption of Brick
Lab Test for Aggregate (Coarse/Fine):	<ul style="list-style-type: none"> Proctor Compaction (OMC/MDD) California Bearing Ratio Test (CBR) Organic Content Grain Size Analysis (Dry/Wet) Mica/Clay Content 	Cement/ Lime	<ul style="list-style-type: none"> Initial Setting Final Setting Normal Consistency Soundness Compressive Strength Fineness
Flexible Conduit of metal for Building Electrical use	<ul style="list-style-type: none"> Dimension Outer Diameter Compression Resistance Permeability Resistance Corrosion Resistance Flame Retardant Properties 	Fixed Conduit (Metal)	<ul style="list-style-type: none"> Outer Diameter Thickness Hardness Tensile Strength Elongation at Break Compressive Strength Test

<p>Lab Tests for Soil:</p> <ul style="list-style-type: none"> Natural Moisture Content Atterberg's Limit Shrinkage Limit Grain Size Analysis (Wet & Dry) Hydrometer Analysis Bulk Density (Wet & Dry Density) Specific Gravity Void Ratio Direct Shear Test (C & ϕ) Triaxial Test (UU) / (CU) Unconfined Compression Test Permeability Test Consolidation Test (Swell Test) Organic content Aluminium Oxide (Al_2O_3) Silicon dioxide (SiO_2) Ferric Oxide (Fe_2O_3) 		<p>Fly Ash</p> <ul style="list-style-type: none"> Fineness (m²/kg) Blaine Air Permeability Particle retained on 45 micron IS Sieve (Wet Sieve) Specific Gravity Soundness by Auto Clave (%) Lime reactivity Avg. Compressive Strength (N/mm²) Compressive Strength for 28 days (N/mm²)
<p>Chemical</p> <ul style="list-style-type: none"> Silicon dioxide (SiO_2)+aluminium oxide (Al_2O_3)+Fe_2O_3 Silicon dioxide (SiO_2) percent by mass Chloride Content Loss on Ignition Magnesium Oxide Total Sulphur as Sulphur Trioxide (SO_3) percent by mass Alkali as Na_2O, percent by mass Moisture Content, percent by mass 	<p>Welded Steel Pipe (Hot Dip Galvanized)</p> <ul style="list-style-type: none"> Tensile Strength Yield Strength Elongation after Breaking Chemical Composition Hydraulic Test Weight Determination of galvanizing Layer Test for Uniformity of galvanizing layer Squishing Test 	
<p>EVA waterproof Board</p> <ul style="list-style-type: none"> Thickness (mm) Tensile Strength (Mpa) Elongation at break (%) Tear strength (N/mm) Water vapor permeability coefficient (cm/s) Dimensional stability ($80\pm2^{\circ}C$) Puncture resistance(N) 	<p>NON-WOVEN (GEOTEXTILE)</p> <ul style="list-style-type: none"> Mass per unit area (g/m²) Fracture strength (MD,CD) Fracture elongation (MD,CD) CBR Brusting strength (N) 	
<p>Rubber Water Stopper</p> <ul style="list-style-type: none"> Test Method for Shore Hardness (HA) Tensile strength (Mpa) Elongation at break(%) Tear strength (N/mm) Compression Set 	<p>CPVCE Pipe</p> <ul style="list-style-type: none"> Outer Diameter(mm) Wall Thickness(mm) Weight of Pipe per meter Reversion Test Density Test Internal Hydrostatic Pressure Test at $20^{\circ}C$ for 1hr Visual Appearance Tensile/Yield Strength Elongation at Break 	



Tension Load Test of Sheathing Duct



Plate Load Test at Fast Track Project

Thermo plastic paint	<ul style="list-style-type: none"> • Constituents of marking material • Color Test • Properties of Glass beads(Particle Size distribution) • Refractive Index(Glass Beads) • Freedom from defects (Glass Beads) • Softening Point • Skid Resistance % • Flow Resistance % • Luminance factor of making material % • Heat Stability Marking material-Luminance factor (as delivered or after re-melting %) 	Plastic Composite Board	<ul style="list-style-type: none"> • Moisture Content (Oven of Use) • Moisture Content (Normal) • Water Absorption • Swelling Due to General Absorption • Swelling Due to Surface Absorption • Modulus of Rupture • Modulus of Elasticity • Screw/Nail Withdrawal strength in both face and edge • Compressive Strength • Tensile Strength (Parallel and Perpendicular to surface) • Boiling Water Resistance Test • Fire Resistance • Termite Resistance • Density Test • Weathering Test • Drop test • Ash Content • Impact Resistance test
Tiles	<ul style="list-style-type: none"> • Dimensional Stability • Water Absorption • Bulk Density • Modulus of Rupture & Breaking Strength • Mohrs Hardness • Surface Abrasion resistance • Gloss Meter • Skid Resistance • Resistance to staining • Resistance to Household chemicals and swimming pool Water Cleansers Except to Cleasing Agents , Containing Hydrofluroic Acid and its Compounds • Resistance to acids and alkali's (with the exception of Hydrofluroic acid and its Compounds) 	Carbon Fiber / Glass Fiber	<ul style="list-style-type: none"> • Fiber Area weight (gm/m²) • Thickness (mm) • Density (g/cm³) • Tensile Strength (Mpa) • Elongation at break (%) • Tensile Modulus
Coal	<ul style="list-style-type: none"> • GCV(ADB Basis) • TM(Total Moisture)(ARB Basis) • IM (Inherent Moisture) ADB Basis • ASH (ADB Basis) • VM (Volatile Moisture) (ADB Basis) • FC (Fixed Carbon) (ADB Basis) • Sulphur ADB Basis 	Steel Plate	<ul style="list-style-type: none"> • Dimension (mm) • Tensile stress/Yield Stress (kN/mm²) • Elongation at Break %
Strand Wire	<ul style="list-style-type: none"> • Diameter (mm) • Nominal Sectional Area (mm²) • Breaking Load of strand (kN) • 0.2% Proof load or Load at 1% extension (kN) • Elongation % • Nominal mass (kg/1000m) • Diameter Relation between center & outer wires (Minimum difference between center wire diameter & diameter of any outer wire) in mm • Relaxation Loss after 100hr 	Sheating Duct	<ul style="list-style-type: none"> • Internal Diameter • Workability Test • Transverse Load Rating Test • Tension Load test • Water Loss Test • Wall Thickness • Compression Test for loss of wall thickness • Carbon Black Content • Carbon Black Dispersion • Melt flow Rate

Electric Wire

- Outer Diameter
- Diameter of Standed Thread (Core)
- Insulation Thickness
- Thickness of Single Thread of Wire
- Flammability Test of Cable

HDPE/PE Pipes

- Outer Diameter(mm)
- Wall Thickness(mm)
- Weight of Pipe per meter
- Reversion Test at 110°C
- Carbon Black Content
- Carbon Black Dispersion
- Ash Content
- Density Test
- Overall Migration Test
- Melt flow Rate
- Hydraulic Characteristics (Internal Creep Rupture Test at 80°C for 48hrs)
- Anti-Oxidant (Stabilizer) (OIT)
- Moisture Content
- Colour of Pipe
- Tensile/Yield Strength
- Elongation at Break

Non-Destructive Test:

- Rebar Scanning
- Rebound Hammer Test
- Flat Jack Test
- Push Shear Test
- Ultrasonic Pulse Velocity Test
- Pull out Test
- Penetrometer test
- Equipotential (To detect Corrosion)



Penetrometer Test



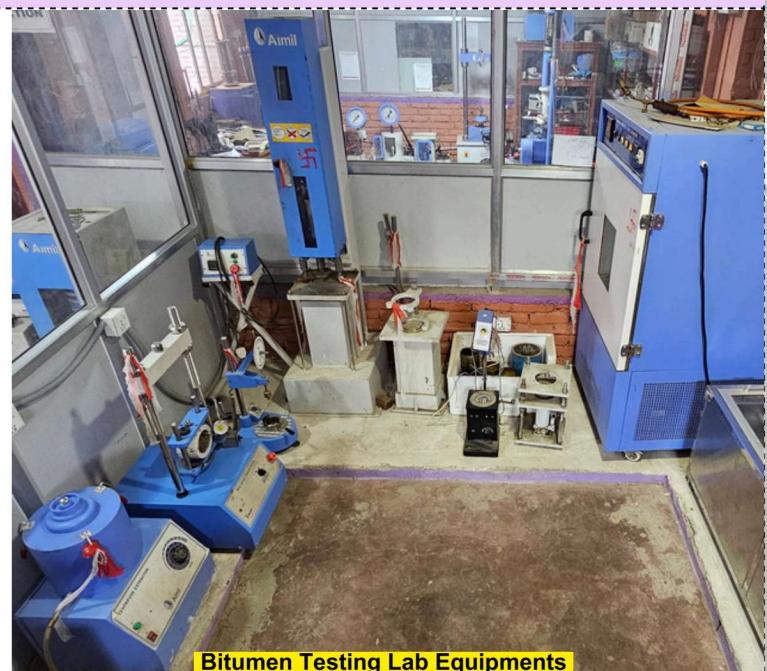
Pull Out Test



Equipotential Test For
Rebar Corrosion

Bitumen Test:

- Penetration Test
- Absolute Viscosity
- Kinematic Viscosity
- Flash Point (Cleve & open cup), °C Min
- Solubility in Trichloroethylene, Percent, Min
- Softening Point Test (Ring and Ball), °C, Min
- Test on residue from rolling thin film oven test
- Viscosity Ration at 60 °C, Max
- Bitumen Extraction
- Loss on Heating
- Storage Stability after 24hr
- Coating Ability
- Distillation
- Particle Charge
- Water Miscibility
- Stability to mixing with cement
- Ductility
- Specific Gravity Test
- Marshall Mix Design



Bitumen Testing Lab Equipments

Major Projects

Major Pile Testing Project

S.N.	Project Name	Client	Major Scope
1.	Kathmandu-Terai / Madhesh Fast Track (Expressway) Road Project (KTFT) Package-03	Kumar-Roshan-Sichuan JV	<ul style="list-style-type: none"> • High Strength Pile Dynamic Test -50 nos • Lateral Load Test-17 nos • Cross Hole Test -16 nos
2.	SAEC Mugling-Pokhara Highway Phase-I Project	ANK - ZIEC Joint Venture	<ul style="list-style-type: none"> • High Strength Dynamic Test (PDA)-7 Nos
3.	Kanchanpur-Kamala Road Project, Nepal	China Railway No.2 Engineering Group Co., Ltd	<ul style="list-style-type: none"> • High Strength Pile Dynamic Test - 42 nos • Pile Integrity test - 370 nos • Static load test - 49 nos
4.	Kathmandu-Terai/Madhesh (Expressway) Road Project (KTFT) Fast Track Package-07	Xingrun-Ashish-Tundi JV	<ul style="list-style-type: none"> • Pile Integrity Test (PIT) -160 Nos • High Strength Pile Dynamic Test (PDA) -2 nos • Lateral Load Test-10 nos • Cross Hole Test -60 nos • Pile Pull Out Test -2 nos • Plate Load Test – 8 nos • Anchorage Vertical Load Test – 6 nos • Rebar Pull out test - 4 nos
5.	Upgrading of Mahendra Highway, Kamala-Dhalkebar-Bagmati Road section and Bridges.	WEG-RCC JV	<ul style="list-style-type: none"> • Pile Integrity Test (PIT) -156 Nos • High Strength Pile Dynamic Test (PDA) -6 nos • Anchorage Vertical Load Test – 5 Nos
6.	Testing of Piles in Construction of Double Lane Dual Carriageway Standard Expressway Road, Bridge and Allied Works, Ch: 35+380 to Ch: 41+000 Contract No.: KTFT/ICB/Works/ R & B/078/079/7	Xingrun-Ashish-Tundi JV	<ul style="list-style-type: none"> • Pile Integrity Test - 183 Nos • High Strength Dynamic Test/PDA - 2 Nos • Lateral Load Test - 15 Nos • Cross Hole Test - 93 Nos • Pile Pull Out Test - 3 Nos • Plate Load Test - 11 Nos • Anchorage Vertical Load Test - 12 Nos • Rebar Pull out Test - 4 Nos

Visuals-Direct from-Site



Static Pile Load Test at Kamala-Kanchanpur Road Project



Pile Pull Out Test at Fast Track



High Strain Pile Dynamic Test at Kamala-Kanchanpur Road Project

Major Tunnel, Road & Bridge Project

S.N.	Project Name	Client	Major Scope
1.	Kathmandu-Terai/Madesh Fast track Mahadevtar Tunnel Project	Henan Communication s Planning and Design Institute Company Ltd	<ul style="list-style-type: none"> • Vertical, Inclined and Horizontal drilling upto 320m • Laboratory testing of rock samples • Magnetelluric Survey (depth=up to 800m)
2.	<p>Detailed Feasibility Study of 5 Road tunnels :</p> <ul style="list-style-type: none"> - Kulekhani-Bhimphedi Tunnel. 3.165km - Banepa-Sindhuli sadak (Khurkot-Sindhulii Khanda Tunnel) 4.9km/6.4543km - Pokhara-Baglung Road (Hemja Nayapul Khanda) Tunnel 7.053 km/8.788km /8.384 km - Lamabagar Road Tunnel 3.598km/1.451km - Butwal-Narayanghat (Daunne Khanda) Road Tunnel 4.09 km/6.125km 	Department of Road Maintenance branch	<ul style="list-style-type: none"> • Geophysical Survey (2D ERT Survey) at the portal area of Portal Road tunnel • Geological and engineering geological Study of Tunnel area • Probabilistic and Deterministic Seismic hazard analysis of tunnel area
3.	Kathmandu Terai-Madhes (Expressway) Fast Track Road Project KTFT CP10,Nepal	CREGC-COVEC JV	Rotary drilling, ERT, SRT, MAM, MT, Geological & Engineering Geological Survey, Detailed Slope Investigation, Hydrological Hydrogeological Survey
4.	Kathmandu Terai-Madhes (Expressway) Fast Track Road Project KTFT CP8B,Nepal	Motidan Construction Sewa Pvt. Ltd.	<ul style="list-style-type: none"> • Rotary Drilling, Srt, • Geological Survey , • Hydrological Study, • Sesismic Safety analysis of Bridge
5.	Kathmandu Terai-Madhes (Expressway) Fast Track Road Project KTFT CP9B,Nepal	XCGC-Hanuman Baniya JV	Rotary drilling, ERT, SRT, MAM, MT, Geological & Engineering Geological Survey, Detailed Slope Investigation, Hydrological Hydrogeological Survey

Visuals-Direct from-Site



Vertical Down Borehole
Drill work inside tunnel



Vertical Up Borehole
Drill work inside tunnel

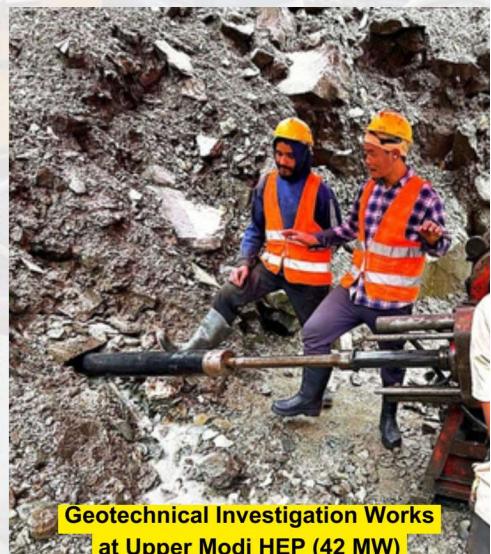


Drilling work at KTFT-
CP10 up to 460m depth

Major Hydropower Project

S.N.	Project Name	Client	Major Scope
1.	Upper Trishuli Hydroelectric Project	Power Construction Corporation of China	<ul style="list-style-type: none"> • Vertical, Inclined and Horizontal drilling • Laboratory testing of rock samples
2.	Nalgad Hydropower Project	SMEC-MWH JV	<ul style="list-style-type: none"> • vertically Upward/downward, Inclined and Horizontal drilling = 284m • Hydrofracture Test = 3 nos • Insitu Direct Shear Test = 4 nos • Plate Jacking Test = 9 nos • Installation of piezometer = 80m • Laboratory testing of rock samples
3.	Lower Solu HEP	Aera Consultant Pvt. Ltd.	<ul style="list-style-type: none"> • Vertical, Inclined and Horizontal drilling • Laboratory testing of rock samples
4.	Upper Bheri Hydroelectric Project 325 MW -PROR	Integrated Mobility Solutions Pvt. Ltd.	<ul style="list-style-type: none"> • ERT, SRT, MASW
5.	Mewa Khola Hydroelectric Project 50 MW Taplejung	Mewa Developers Ltd.	<ul style="list-style-type: none"> • Core drilling, Field test • Laboratory testing, liquefaction and bearing capacity analysis
6.	Bhotekoshi 1 Hydropower Project	Electropower Company Limited	<ul style="list-style-type: none"> • Vertically upward drilling
7.	Upper Arun Hydroelectric Project.	NEA Engineering Company	<ul style="list-style-type: none"> • Block Shear Test, Plate jacking test, Dialometer Test
8.	Super Trishuli Hydropower Project (100 MW) at Chumlingtar.	CE Construction Pvt. Ltd.	<ul style="list-style-type: none"> • Direct Shear Test
9.	Upper Tamor A Hydropower Project located in Taplejung District	Union Hydropowern Ltd	<ul style="list-style-type: none"> • Geotechnical Investigation

Visuals-Direct from-Site



Major Transmission Line & Substation

S.N.	Project Name	Client	Major Scope
1.	Design, Supply, Installation, Testing and Commissioning of Amlekhgunj 132/66/11KV Substation	TBEA Co. Ltd.	Detailed Geotechnical Investigation Works
2.	Engineering and Environmental Study of Kohalpur-Surkhet-Upper Karnali 400KV Transmission Line and Kohalpur-New Butwal 400KV Transmission Line	ELC Electroconsult SPA	Detailed Geotechnical Investigation Works
3.	Geotechnical Investigation of different substation and transmission line - SS9 Anarmani -SS4 Tingla -TL3	ELC Electroconsult SPA	Detailed Geotechnical Investigation Works
4.	Geotechnical Investigation for TL1, Inaruwa-Arun Hub, SS3, and SS1-Arun Hub transmission lines	ELC Electroconsult SPA	Detailed Geotechnical Investigation Works
5.	Karmadev (Indo-Nepal Border) - Phukot (Kalikot) 400 kV Double Circuit Karnali Corridor Transmission Line and Associated Substations.	Jade Consult	Detailed Soil investigation works

Visuals-Direct from-Site



PIT Test at Kamala-Kanchanpur



Crosshole Sonic Logging Test at Fast Track Project



Universal Testing Machine (UTM)

Major Projects (Non Destructive Test)

S.N.	Project Name	Client	Major Scope
1.	Non-Destructive Tests & Destructive Test On France Embassy, Lazimpath, Kathmandu	Miyamoto International Nepal Pvt. Ltd. Kathmandu, Nepal	Re-bar Scanning, Push Shear Test & Schmidt Hammer Test
2.	Sanepa Apartment, Lalitpur	Miyamoto International Nepal Pvt. Ltd	Rebound Hammer, Rebar Scan, Core Cut, UPVT test, Equi-potential test for rusting
3.	Park View Horizon	Park View Horizon	Ultrasonic Pulse Velocity test
4.	Restoration of Gopichandra mahabihar, Lalitpur	Prakritik Sanu Suwal JV	Flat Jack test
5.	Non Destructive Test of Skyone Tower At Naxal, Kathmandu	Skyline Developers Pvt. Ltd. Kathmandu, Nepal	Rebound Hammer, Rebar Scan, UPVT test
6.	Non-Destructive Test for Lalbakaiya River Bridge, Nijgad (28 nos. of piles)	Road Division, Chandranigahapur	Schmidt Hammer Test, Ultrasonic Pulse Velocity, Rebar Scanning, MASW Survey
7.	DIO (NEPAL) BRITISH GURKHAS (Existing Building)	Miyamoto International Nepal Pvt. Ltd	Rebar Scanning Works, Schmidt Rebound Hammer, Core Cutting and UCS

Visuals-Direct from-Site



NDT-Ultra Sonic Pulse Velocity Test



NDT-Schmidt Rebound Hammer Test



Flat Jack Test

Our Approach

We follow a client-centered, quality-assured approach combining field experience, scientific precision, and technological advancement. From planning to execution, every step is carried out under strict quality control to ensure accurate and actionable results.

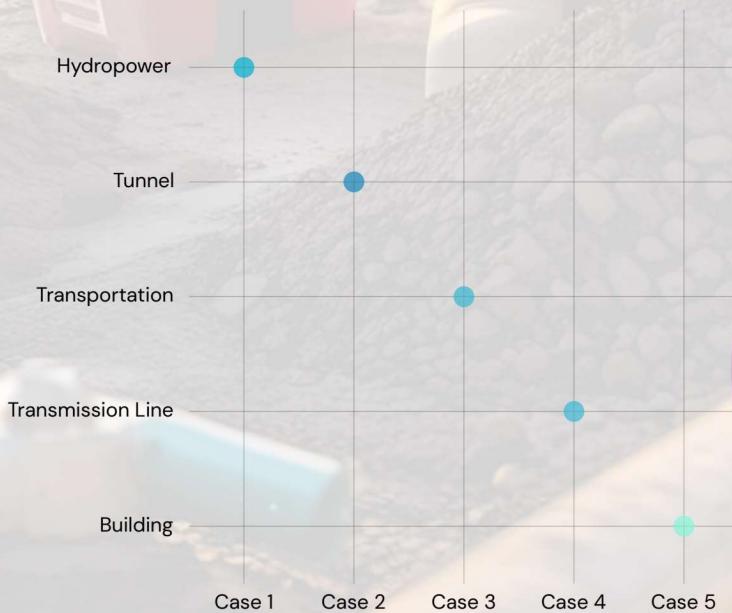


Case Studies

Over the years, N.S. Engineering & Geotechnical Services Pvt. Ltd. has contributed to some of Nepal's most ambitious infrastructure and hydropower projects through its specialized geotechnical and laboratory services. Our involvement in high-impact projects has demonstrated our technical proficiency, commitment to quality, and ability to deliver under challenging environments and timelines. One of our flagship projects includes the KTFT Project, where we performed high-strain dynamic pile testing, lateral load tests, and pile integrity assessments for critical structural components, ensuring the foundation's safety and compliance with international standards. Another significant milestone was our engagement in the Budhi Gandaki Hydroelectric Project (HEP), one of Nepal's largest planned hydropower developments. Our team executed advanced borehole investigations inside riverbeds, acoustic borehole scanning, and laboratory analysis of rock cores and soil samples—contributing valuable data for tunnel and dam design.

In addition to these, our expertise has been instrumental in various other projects involving in-situ direct shear tests, hydro-fracture test, and plate jacking assessments within complex geological settings. Our clients include both public institutions and private developers, and we consistently tailor our approach to suit the unique demands of each site. These case studies not only reflect our technical capabilities but also highlight our dedication to delivering actionable insights that drive engineering decisions. Each project has helped us refine our methodology, upgrade our technology, and deepen our understanding of Nepal's diverse and often unpredictable geotechnical landscape. Through these experiences, we have established ourselves as a trusted partner in the country's journey toward sustainable and resilient infrastructure development.

Project Case Studies



Client Testimonials

N.S. Engineering & Geotechnical Services Pvt. Ltd. has had the privilege of working with a wide range of clients, including government ministries, departments, and corporate agencies under the Government of Nepal (GON). The company has also built a strong reputation among international donor and development partners such as the World Bank, Asian Development Bank (ADB), and several bilateral and multilateral aid agencies including JICA, DFID, SDC, UNDP, USAID, KfW, CIDA, and others.

Over the years, N.S. Engineering has developed extensive experience collaborating with international consulting firms from across the globe, including those based in China, Japan, Germany, United Kingdom, France, Canada, Italy, Australia, India, Norway, Finland, Austria, Netherlands, USA, Malaysia, and New Zealand, among others. These collaborations have enriched our technical understanding and widened our global exposure in delivering Geo-technical and Engineering services.

Furthermore, our team has accumulated significant experience through active involvement in various infrastructure development projects. These professional engagements have provided valuable opportunities for our technical and administrative staff to collaborate closely with both national and international experts. Such collaborations have fostered a continuous process of knowledge exchange, capacity building, and technology transfer. As a result, N.S. Engineering has developed a strong in-house capability to deliver services that adhere to cutting-edge technological standards and align with globally accepted best practices. Our hands-on experience and co-implementation of projects alongside internationally recognized firms have significantly enhanced our confidence and competence in managing complex engineering, environmental, and geo-technical assignments, meeting the expectations of the global consulting industry.



Major Clients:



Be a ChangeBuilder.
HAZAMA ANDO
CORPORATION



中國建築
CHINA STATE CONSTRUCTION



CHINA RAILWAY GROUP LIMITED



中工国际工程股份有限公司
CHINA CAMC ENGINEERING CO., LTD.



中国土木工程集团有限公司
CHINA CIVIL ENGINEERING CONSTRUCTION CORPORATION



विद्युत उत्पादन कम्पनी लिमिटेड
Vidhyut Utpadan Company Limited



এনএইচ ইঞ্জিনিয়েরিং কর্পোরেশন লি.
NEA ENGINEERING COMPANY LTD.



HANUMAN
CONSTRUCTION

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KUMAR SHRESTHA NIRMAN SEWA (P.) LTD.

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Construction Pvt Ltd



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MOTIDAN
CONSTRUCTION SEWA P. LTD.



Laboratory & Equipments

N.S. Engineering & Geotechnical Services Pvt. Ltd. operates a fully equipped, state-of-the-art materials testing facility under the name N.S.E.G.S Laboratory, which plays a vital role in supporting our engineering and geotechnical services. Strategically located in Lalitpur, our laboratory is staffed by a dedicated team of engineers, geologists, and certified technicians and is outfitted with modern equipment that adheres to both national and international testing standards.

The lab performs a comprehensive range of tests across various construction materials including soil, rock, concrete, aggregate, bitumen, water, metal, wood, and other building materials. Key testing capabilities include Proctor Compaction, California Bearing Ratio (CBR), Atterberg Limits, Direct Shear, Triaxial and Unconfined Compression Tests for soil; compressive strength and mix design evaluations for concrete and brick; as well as Los Angeles Abrasion, Flakiness Index, and soundness for aggregates. The laboratory also provides full-spectrum water quality analysis, including pH, turbidity, heavy metals, ammonia, nitrate, phosphate, and microbial testing such as total and fecal coliform.

In addition to conventional material testing, the laboratory is also equipped for Non-Destructive Testing (NDT) such as Rebound Hammer Test, Ultrasonic Pulse Velocity (UPV), Rebar Scanning, and Flat Jack Test—essential for structural integrity assessments in existing buildings and infrastructure. Chemical composition analysis is conducted using advanced spectrometers, enabling detailed evaluation of metals and construction components. The lab further supports specialized geotechnical testing such as pile integrity testing (PIT), crosshole sonic logging (CHAMP-Q), plate load testing, and hydro-fracture assessments, ensuring the strength and stability of foundation systems. With a strong focus on accuracy, calibration, and quality control, N.S. Laboratory delivers data that is both reliable and actionable, empowering our clients to make informed decisions in complex engineering projects. Our laboratory has consistently supported both government and private sector initiatives, reinforcing our commitment to delivering safe, efficient, and cost-effective infrastructure solutions.

Core In-House Specialists

N.S. Engineering & Geotechnical Services Pvt. Ltd. is proud to present its team of in-house key experts who collectively contribute to our mission of engineering excellence. Our human resource pool comprises seasoned professionals including geotechnical engineers, geologists, laboratory technicians, drillers, and field supervisors—all of whom play an integral role in ensuring the quality and precision of our services.



Name	Position/Description	Qualification	Relevant Past Experience
Arun Kumar Pandit	Managing Director	MSc. in Geotechnical Engineering	19 Years experience in Geotechnical field & Civil Construction
Dhurba Raj Tirpathi	Director	Bachelor in Civil Engineering	28 Years Experience in Civil Engineering
Shrawan Kumar Thapa	Director	MSc. in Transportation Engineering	30 Years experience in Geotechnical field & Civil Construction
Madhav Pokhrel	Director	MSc. in Disaster Risk Engineering and Management	15 Years Experience in Civil Engineering
Arjun Adhikari	Director	MSc. in Geotechnical Engineering	20 Years experience in Geotechnical field & Civil Construction
Anand Gupta	Engineer/Geotechnical	MSc. in Geotechnical Engineering	18 Years experience in Geotechnical field & Civil Construction
Dr. Suman Panthi	Geologist	PhD in Engineering Geology	25+ Years experience in Geological Field

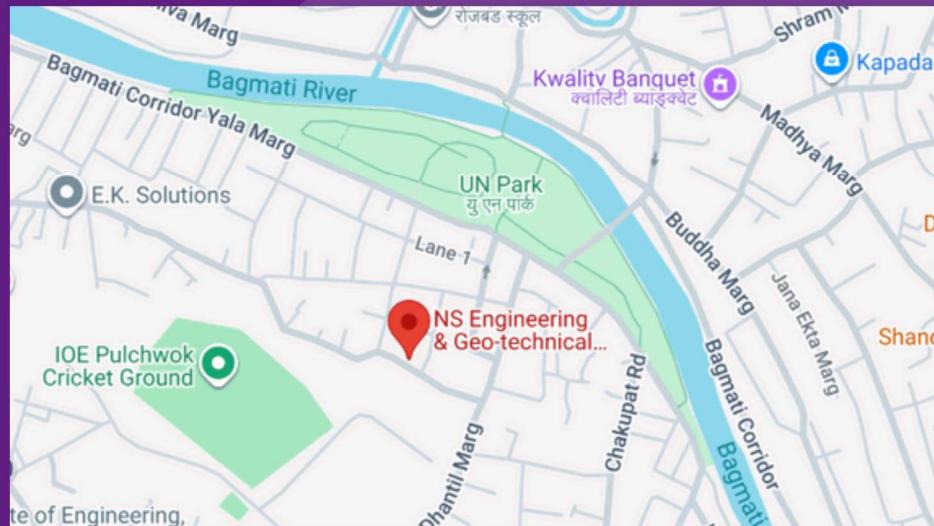
Alisha Shrestha	Lab Incharge	Masters in Sanitary Engineering	5 Years experience in Material Testing
Rishab Dev Poudel	Engineer/Geotechnical	MSc. in Geotechnical Engineering	5 Years Experience
Bigyan Thapa	Engineer/Civil	Bachelor in Civil Engineering	1 Year Experience
Manish Adhikari	Engineer/Geologist	MSc. in Engineering Geology	2 Years experience
Mohan Raj Shrestha	Engineer/Geologist	MSc. in Engineering Geology	5 Years experience
Puspa Deshar	Engineer/Civil	Bachelor in Civil Engineering	2 Years experience
Bipana Thapa	Engineer/Geologist	MSc. in Geology	2 Years experience
Namrata Shrestha	Engineer/Geologist	BSc. Geology	1 Year experience
Sanjay Dutta Chaudhary	Engineer/Civil	Bachelor in Civil Engineering	2 Years Experience
Arun Lekhi	Engineer/Civil	Bachelor in Civil Engineering	3 Years experience
Rajesh Singh	Quality Manager	Bachelor in Civil Engineering	2 Years Experience
Anuz Kunwar	Engineer/Civil	Bachelor in Civil Engineering	1 Year experience
Siwani Rauniyar	Engineer/Civil	Bachelor in Civil Engineering	1 Year experience
Basanti Sapkota	Engineer/Civil	Diploma in Civil Engineering	1 Year experience
Pushpa Gautam	Account Officer	10+2 (Bachelor in Business Studies running)	3 Years experience
Apekshya Lamichhane	Account Officer	10+2 (Bachelor in Business Studies running)	3 Years Experience
Usha Chaudhary	Documentation	10+2 (Bachelor in Business studies Running)	2 Year experience
Rajan Prasad Humagain	Resource Personnel	B.Com	13 Years experience
Vibek Mijar	Resource Personnel	Junior Engineer	2 Years Experience
Rupesh Kumar Pandit	Resource Personnel	Junior Engineer	1 Year Experience
Arjun Pandit	Resource Personnel	Junior Engineer	1 Year Experience
Punita Chaudhary	Resource Personnel	10+2	1 Year Experience
Rakhesh Barahi	Resource Personnel	10+2	5 Years Experience
Bishnu Chaudhary	Lab Technician	SLC	2 Years experience

Samjhana Chaudhary	Lab Technician	SLC	2 Years experience
Karuna Ghimire	Lab Technician	Junior Engineer	1 Year Experience
Gangadhar Shrestha	Lab Technician	10+2	1 Year Experience
Bijay Pandit	Lab Technician	Diploma in Civil Engineering	7 Years Experience
Ricky Mandal	Field Supervisor	SLC	2 Years experience
Harendra Singh	Field Supervisor	SLC	2 Years experience
Bipin Paswan	Field Supervisor	SLC	2 Years experience
Siyaram Singh	Field Supervisor	SLC	2 Years experience
Arpan Sahu	Driller	SLC	2 Years Experience
Rajendra Shrestha	Driller	SLC	3 Years experience
Lal Bahadur Sahu	Driller	SLC	3 Years experience
Min Bahadur Bohara	Driller	SLC	2 Years Experience





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