



COMPANY PROFILE

VISHWAS GEOTECH PVT. LTD.

TECHNICAL CONSULTANCY & CIVIL ENGINEERING LABORATORY



- ISO/IEC 17025 Certified (NABL)
- ISO 9001:2015 Certified
- MSME Registered



We Believe in Quality & Efficiency “Smarter Faster Better”

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ABOUT US:

OVERVIEW

Vishwas Geotech Pvt. Ltd. (VGPL) is established in 2018 and founded by the renowned people having years of experience in the Geotechnical and Civil Engineering industries. VGPL is established to provide Superior class services in various sectors of Civil Engineering. Our experienced team aims to offer a good service where quality, efficiency and values are concern.

We are working in the field of sub surface investigation for foundation, Site exploration, Geological Investigation, Laboratory Investigation with field testing for Roads & Bridges. We also conduct NDT of existing concrete structures. Vishwas Geotech Pvt. Ltd. has a team of Professional Consulting Engineers who have good experience in various sectors of Civil Engineering. In India, VGPL have worked on projects in Gujarat, Rajasthan, Maharashtra, Karnataka, Orissa, West Bengal, Uttar Pradesh, Delhi, Punjab etc.

Vishwas Geotech Pvt. Ltd. have provided various geotechnical solutions including Liquefaction assessment, bearing capacity assessment and settlement assessment for shallow foundations, Pile capacities calculation, Review and Assessment of various soil investigation reports along with provision of expert recommendations for various geotechnical works, finalization of geotechnical reports to match with acceptable/exceeding industrial standards for various projects.

Repeated endorsement to us by our satisfied clients is our reward in industry. It is our constant endeavor to build trust and surpass customer expectations with high quality Geotechnical works for the infrastructure sector.

OUR VISION

Our Vision is to become a Trusted Global Partner with care, protect, to be responsible for world of tomorrow. Our vision is not just what we want to be but even more importantly it is also about how we want to be as an organization. We aim to Responsible, Respectful, caring and sensitive not only to the environment but also very much to our clients.

OUR MISSION

Our Mission is to provide reliable and value added Geotechnical services and pursue excellence through continuous improvement while delivering to our customers engineering solutions that are innovative, advanced and environmental friendly.

CERTIFIED

Our ISO 9001-2015 certification demonstrates our commitment to Services in line with our environmental goals.



MANAGEMENT

OVERVIEW



Mohan Singh
Field Head & Director

With 20 Years of Experience and Expertise in Geotechnical Field, Founded Vishwas Geotech Pvt. Ltd. with a vision to provide effectiveness in Civil Engineering Field Testing.



Vishwas Kumar
Technical Head & Director
D.C.E., B.E. Civil

Co-founded Vishwas Geotech Pvt. Ltd. with a vision to establish it as a specialist Civil Engineering Laboratory and driving business growth through financial discipline and technical knowledge.



Pushendra Singh
Admin Head & Quality Manager
D.C.E., B.E. Software Engineering

Mr. Singh opens the line of communication between clients, customers, and businesses to get projects done. He has shaped the culture of the organisation, overseeing all the growth with its related changes and contributing to all the key strategies that have positioned VGPL among the leading service providers.



Varun Patel
Technical Head & Partner
D.C.E., B.E. Civil

At the forefront of financial leadership, as a business partner, and as a Technical Head at VGPL, Mr. Varun Patel is a friendly, high performing and deeply analytical leader whose passion is for driving business growth with his 19 Years of Experience in Technical Field.

LABORATORY ACCREDITATION

ISO/IEC 17025:2017 (NABL) ACCREDITATION WITH CERTIFICATE NO. TC-8999



**National Accreditation Board for
Testing and Calibration Laboratories**

CERTIFICATE OF ACCREDITATION

VISHWAS GEOTECH PRIVATE LIMITED

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

**"General Requirements for the Competence of Testing &
Calibration Laboratories"**

for its facilities at

A - 14, CP NAGAR PART - 2, GHATLODIA, AHMEDABAD, GUJARAT, INDIA

in the field of

TESTING

Certificate Number: TC-8999

Issue Date: 18/09/2022

Valid Until:

17/09/2024

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.
(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Identity : VISHWAS GEOTECH PRIVATE LIMITED

Signed for and on behalf of NABL



N. Venkateswaran
Chief Executive Officer

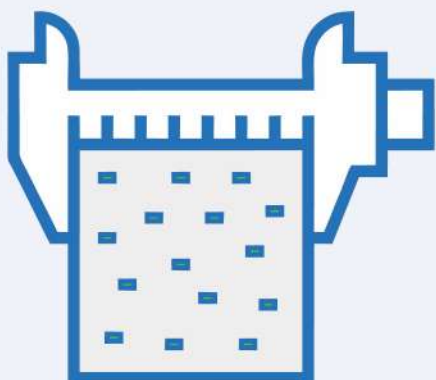
SERVICES



GEOTECHNICAL INVESTIGATION



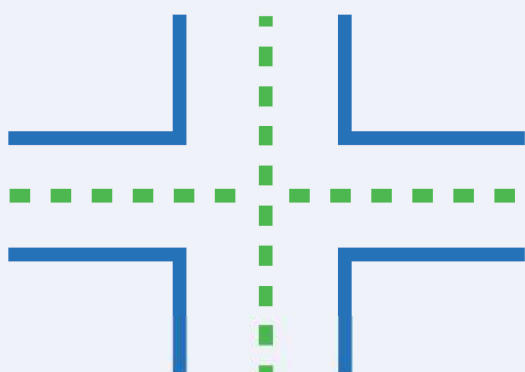
LABORATORY INVESTIGATION



CONSTRUCTION MATERIAL TESTING



NON DESTRUCTIVE TESTING



PAVEMENT EVALUATION TESTING



ENGINEERING SURVEYING

SERVICES

IN-SITU (FIELD) GEOTECHNICAL TESTING

- ▶ **Drilling in Soil & Rock Up to 150 Meters**
- ▶ **Marine Investigation**
- ▶ **Collection of UDS**
- ▶ **SPT**
- ▶ **DCPT**

GEOTECHNICAL FIELD TEST

- ▶ **Field Plate Load Test**
- ▶ **Field Pile Load Test**
- ▶ **Field Density Test**
- ▶ **Modulus of Subgrade Reaction**

LABORATORY INVESTIGATION

Soil

- ▶ **Gradation (Grain Size Analysis)**
- ▶ **Atterberg's Limit**
- ▶ **Free Swell Index**
- ▶ **MDD & OMC by Proctor Test**
- ▶ **Liquid Limit Test**
- ▶ **Plastic Limit Test**
- ▶ **California Bearing Ratio**
- ▶ **Shear Parameters Test**
- ▶ **Specific Gravity**
- ▶ **Bulk Density of Soil**
- ▶ **Permeability Test**
- ▶ **Consolidation Test**
- ▶ **Unconfined Compressive Strength**
- ▶ **Swelling Pressure Test**
- ▶ **Moisture Content**

Rock

- ▶ **Unconfined Compression Strength**
- ▶ **Water Content Test**
- ▶ **Direct Shear Test (Cohesion)**

CONSTRUCTION MATERIAL TESTING

- ▶ **Coarse Aggregate**
- ▶ **Fine Aggregate**
- ▶ **Bitumen**
- ▶ **Concrete**
- ▶ **Cement**
- ▶ **Pavement Material Testing**
- ▶ **Concrete Mix Design**
- ▶ **Bituminous Mix Design**

PAVEMENT EVALUATION TEST

- ▶ **Falling Weight Deflectometer (FWD)**
- ▶ **Bump Integrator (5th Wheel)**
- ▶ **Benkelman Beam Deflection (BBD)**
- ▶ **Network Survey Vehicle (NSV)**

NON - DESTRUCTIVE TESTING

- ▶ **Rebound Hammer Test**
- ▶ **Ultrasonic Pulse Velocity Test**

SERVICES

ENGINEERING SURVEYING

- ▶ **Topographical Survey (Contour & Traverse)**
- ▶ **DGPS Survey**
- ▶ **Land Survey**
- ▶ **Contour Survey**
- ▶ **Area & Boundary Survey**
- ▶ **Traffic Survey**
- ▶ **Condition Survey**
- ▶ **Axle Load Survey**
- ▶ **Route Alignment Survey**

STRUCTURAL DESIGN CONSULTANCY

- ▶ **Commercial Building Design**
- ▶ **Residential Buildings Design**
- ▶ **Road, Highways & Bridges Design**

OTHER SPECIAL SERVICES

Other Testing Services —————

- ▶ **Electrical Resistivity Test**
- ▶ **Pile Integrity Test (NDT)**
- ▶ **Soil Chemical Test**
- ▶ **Water Testing (Irrigation, Construction & Drinking Purposes)**

Other Consultancy Services —————

- ▶ **Architectural Design**
- ▶ **Ground Improvement**
- ▶ **Third Party Inspection (Road & Building)**
- ▶ **Structural Audit**
- ▶ **DPR Preparation (Detailed Project Report - Road & Highways)**



SERVICES

IN-SITU (FIELD) INVESTIGATION (ONSHORE - LAND)

VGPL provides skilled and experienced teams of professional geologists, geochemists and geophysicists who are able to work effectively in any given environment around the world, on a wide range of commodities and deposit styles. A geotechnical investigation will include surface exploration and subsurface exploration of a site.

Below-ground investigation by boring, sampling, and testing the soil strata to establish its compressibility, strength, and other characteristics likely to influence a construction project, and prepare a subsurface profile and soil report. Also called foundation investigation, soil investigation, soil test, or subsurface investigation.

VGPL Provides various soil testing services which includes both field and laboratory investigation service. We are operating at Pan India level. Based on the requirements of client we provide field and laboratory testing services in NABL Accredited laboratories. Our laboratory perform all the testing for physical and engineering properties of soil / rock as per relevant guidelines of Indian standards.

For field exploration works, we are now providing various services as listed below:

- ◆ Field exploration works in soil and rock up to 150 meters.
- ◆ Collection of disturbed and undisturbed samples
- ◆ Performing Penetration Tests (SPT, DCPT, and SCPT)





SERVICES

IN-SITU (FIELD) INVESTIGATION (OFFSHORE - MARINE)

VGPL is specialized in Offshore Geotechnical Investigation as well as providing a wide range of underwater (offshore, nearshore, coastal, river, and reservoir) geotechnical services for subsea pipelines, offshore wind turbines, offshore wind farms, artificial islands, marine platforms, harbors, subsea infrastructures, subsea cables etc.

For Marine exploration works, VGPL is providing various services as listed below:

- ◆ Underwater exploration in Soil and Rock up to 150 meters.
- ◆ Marine site characterization.
- ◆ Performing Offshore Penetration Test (SPT).
- ◆ Collection of disturbed (DS) and undisturbed samples (UDS).
- ◆ Conducting Offshore Cone Penetration Testing (CPT).
- ◆ Accurate geotechnical characterization and determining engineering properties of soft marine clays, seabed mud, seabed sand, under consolidated clays, and other near-surface (near mud-line) seabed materials.





SERVICES

GEOTECHNICAL FIELD TEST

Field Testing is a term used for all in situ based methods and techniques that qualitatively and quantitatively determine physical, strength, deformability and hydro mechanical properties of geo materials in geotechnical site investigation.

Field Plate load and Pile load test

- ◆ Plate Load Test is a field test for determining the ultimate bearing capacity of soil and the likely settlement under a given load.

Field CBR Test

- ◆ To evaluate the strength of a sub grade soil, sub base, and base course material for design of thickness for highways and airfield pavement.

Field Density Test

- ◆ Field Density Test is a Quality Control test carried out at site for knowing the increased density or compaction achieved at site on the soil layer.

Modulus of Subgrade Reaction

- ◆ Modulus of Sub-grade reaction is a stiffness parameter that is commonly used to define the support conditions of footings and mat foundations.





SERVICES

LABORATORY INVESTIGATION – SOIL & ROCK

Geotechnical Laboratory tests consists of number of tests for the properties of soil. These tests are done to find out the suitability of soil for the construction projects. Laboratory Investigation is used to find Index properties (Soil Classification) as well as engineering properties (To determine the strength & deformation properties) as per the standard procedure.

Gradation (Grain Size Analyses)

- ◆ The purpose of the analysis is to derive the particle size distribution of soils. Sieve Grain Size Analysis is capable of determining the particles size ranging from 0.075 mm to 100 mm.

Atterberg's Limit

- ◆ The Atterberg's limits can be used to distinguish between silt and clay, and to distinguish between different types of silts and clays. The water content at which the soils change from one state to the other are known as consistency limits or Atterberg's limit.

Free Swell Index

- ◆ Free Swell Index is the increase in volume of a soil, without any external constraints, on submergence in water.

MDD & OMC by Proctor Test

- ◆ This test is performed to determine the relationship between the moisture content and dry density of a soil for a specified compactive effort.

Shear Parameters

- ◆ Generally, the Direct Shear Test is considered one of the most common and simple tests to derive the strength of a soil and can be performed on undisturbed or remolded samples. In soil mechanics, the shear strength is evaluated using the Mohr-Coulomb (M-C) Failure Criterion.

Specific Gravity

- ◆ The Specific Gravity is computed as the ratio of the weight in air of a given volume of soil particles at a stated temperature to the weight in air of an equal volume of distilled water at the same temperature.

Bulk Density of Soil

- ◆ Bulk density is the mass of the soil sample per unit volume including voids, or the weight of the soil sample for a given volume. It is also used to measure the degree of soil compaction and to calculate the porosity and void ratio when the specific gravity of the sample is known.



SERVICES

LABORATORY INVESTIGATION – SOIL & ROCK

Permeability Test

- ◆ The constant head permeability test is a common laboratory testing method used to determine the permeability of granular soils like sands and gravels containing little or no silt. This testing method is made for testing re-constituted or disturbed granular soil samples.

Consolidation Test

- ◆ Consolidation test is used to determine the rate and magnitude of soil consolidation when the soil is restrained laterally and loaded axially. The Consolidation test is also referred to as Standard Oedometer test or One-dimensional compression test.

Unconfined Compressive Strength

- ◆ Unconfined Compression Test (UCT) is a simple laboratory testing method to assess the mechanical properties of rocks and fine-grained soils. It provides a measure of the undrained strength and the stress-strain characteristics of the rock or soil.

Swelling Pressure

- ◆ The expansive clays increase in their volume when they come in contact with water owing to surface properties of these clay types. The pressure which the expansive soil exerts, if it is not allowed to swell or the volume change of the soil is arrested, is known as Swelling Pressure of Soil.

Moisture Content

- ◆ The method is based on removing soil moisture by oven-drying a soil sample until the weight remains constant. The moisture content (%) is calculated from the sample weight before and after drying.

Unconfined Compression Strength (Rock)

- ◆ UCT is a laboratory test used to derive the Unconfined Compressive Strength (UCS) of a rock specimen. Unconfined Compressive Strength (UCS) stands for the maximum axial compressive stress that a specimen can bear under zero confining stress.





SERVICES

CONSTRUCTION MATERIAL TESTING

1) Coarse Aggregate

◆ **Gradation**

⇒ Grading of aggregates is determining the average grain size of the aggregates before they are used in construction.

◆ **Aggregate Impact Test**

⇒ Aggregate impact value is used to classify the stones in respect of their toughness property Water Absorption & Specific Gravity

◆ **Flakiness & Elongation Index**

⇒ Flakiness and Elongation Index Test are tests to be performed on aggregate in the laboratory. This test gives the percentage of flaky and elongate aggregate present in the total aggregate sample.

◆ **Crushing Value**

⇒ The aggregate crushing value gives a relative measure of the resistance of an aggregate to crushing under a gradually applied compressive load.

◆ **Abrasion Value**

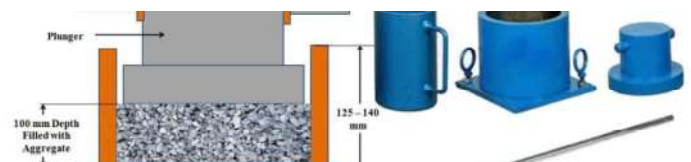
⇒ The abrasion test determines the relative quality, strength, and durability of mineral aggregates subject to impact and Abrasion.

◆ **Soundness of Aggregate**

⇒ This test is intended to study the resistance of coarse and fine aggregates to weathering action and to judge the durability of the coarse aggregate.

◆ **Petrography**

⇒ Aggregate petrography is the most effective method for determining the suitability of an aggregate source for use in concrete. These evaluations involve visual and microscopic examination of carefully selected representative aggregate particles.





SERVICES

CONSTRUCTION MATERIAL TESTING

2) Fine Aggregate

◆ **Gradation (FM)**

⇒ Fineness modulus is generally used to get an idea of how coarse or fine the aggregate is. More fineness modulus value indicates that the aggregate is coarser and small value of fineness modulus indicates that the aggregate is finer.



◆ **Water Absorption & Specific Gravity**

⇒ The water absorption of aggregate used for concrete has a significant effect on the required water content of the mix in order to produce concrete which is sufficiently workable in its fresh state and sufficiently strong in its hardened state.

⇒ The objective of specific gravity test is to, To measure the strength or quality of the material.



◆ **Silt Content**

⇒ Silt Content Test for Sand, also known as fine aggregate, is a vital construction material and is widely used in construction work. Sand plays an essential role in concrete and mortar; hence it is necessary always to choose the right quality sand for the construction work.





SERVICES

CONSTRUCTION MATERIAL TESTING

3) Bitumen

◆ **Penetration**

⇒ Penetration test of Bitumen determines the hardness or softness of bitumen by measuring the depth in millimeter to which a standard loaded needle will penetrate vertically in five seconds while the temperature of the bitumen sample is maintained at 25°C

◆ **Softening Point**

⇒ Bitumen's are viscoelastic materials without sharply defined melting points; they gradually become softer and less viscous as the temperature rises. The softening point of bitumen can be determined through the use of a ring and ball apparatus immersed in distilled water (30 to 80°C).

◆ **Kinematic Viscosity**

⇒ Kinematic viscosity is an important property of fuel, which directly influences the fuel atomization quality and size of the fuel droplet in the spray.

◆ **Absolute Viscosity**

⇒ It is a measure of the resistance to flow. Higher the viscosity of liquid bitumen, the more nearly it approaches a semi-solid state in consistency. Thick liquid is said to be more viscous than a thin liquid of the road pavement.

◆ **Ductility**

⇒ The ductility test gives a measure of adhesive property of bitumen and its ability to stretch. ... Binder material having insufficient ductility gets cracked when subjected to repeated traffic loads and it provides pervious pavement surface.

◆ **Solubility in trichloroethylene**

⇒ The bitumen content of a bituminous material is measured by means of its solubility in carbon disulfide. The solubility test is used to detect contamination in asphalt cement.





SERVICES

CONSTRUCTION MATERIAL TESTING

4) Concrete

◆ ***Compressive Strength of Cube & Core***

⇒ This test is considered as the most popular test performed on concrete in construction as it gives a general idea on all the characteristics of concrete. Based on this test, one can either accept or reject concrete work.



◆ ***Workability by Slump***

⇒ Workability tests are carried out on the property of the concrete which determines its ability to be placed, compacted and finished without segregation. A well compacted concrete will produce a good strength concrete.





SERVICES

CONSTRUCTION MATERIAL TESTING

5) Cement

◆ *Compressive Strength*

⇒ Compressive strength of the cement is the property of the cement which specifies how much load it can withstand when cement is made into a hardened mass mixing with standard sand & water.

◆ *Consistency*

⇒ The consistency of cement paste is defined as the percentage of water requirement of cement paste at which the viscosity of paste is such a way that it determines the amount of water needed to make a paste. It is necessary to determine consistency because the amount of water affects the setting time of the cement.

◆ *Initial & Final Setting time*

⇒ The initial setting time of concrete is the time when cement paste starts hardening while the final setting time is the time when cement paste has hardened sufficiently in such a way that a 1 mm needle makes an impression on the paste in the mould but 5 mm needle does not make any impression.

◆ *Fineness by Dry Sieving*

⇒ The fineness of cement has an important bearing on the rate of hydration and hence on the rate of gain of strength and also on the rate of evolution of heat. Finer cement offers a greater surface area for hydration and hence faster the development of strength.

◆ *Soundness by Le-Chatelier*

⇒ It is very important that the cement after setting shall not undergo any appreciable change of volume. Certain cements have been found to undergo a large expansion after setting causing disruption of the set and hardened mass. This will cause serious difficulties for the durability of structures when such cement is used.

⇒ The unsoundness in cement is due to the presence of excess of free lime than that could be combined with acidic oxide at the kiln. It is also likely that too high a proportion of magnesium content or calcium sulphate content may cause unsoundness in cement. Soundness of cement may be determined by two methods, namely Le-Chatelier method and autoclave method.



SERVICES

PAVEMENT MATERIAL TESTING (ROAD & HIGHWAYS)

1) Sub-Base & Soil

Sub base is an important layer in flexible pavement which functions as a secondary load spreading layer, drainage layer and as a preparatory platform for the construction of road base. The stiffness of a sub base layer is important as it contributes to the strength of the flexible pavement.

The function of a sub base is to help prevent pumping of fine-grained, subgrade soils. Pumping, which leads to the loss of soil material beneath slab edges and joints, occurs when three factors exist in combination: pump able soils, excess water under the pavement, and frequent heavy truck loads. This will include:

- ◆ *Stabilization of Soil*
- ◆ *Granular Sub-base (GSB)*
- ◆ *Dry Lean Concrete (DLC)*

2) Base Layer

The bottom layer essentially consists of an unbound mixture of coarse and fine crushed stone as well as crushed sand to achieve the desired bearing capacity and absorb traffic loads so that the underlying subgrade is not deformed. The base layer forms the foundation for the road surface. This will include:

- ◆ *Non-Bituminous Layer*
 - ⇒ Wet Mix Macadam
 - ⇒ Stabilize WMM
- ◆ *Bituminous Layer*
 - ⇒ Bituminous Macadam
 - ⇒ Mix Seal Surfacing
 - ⇒ Dense Bituminous Macadam
 - ⇒ Bitumen Concrete
 - ⇒ Semi Dense Bitumen Concrete
 - ⇒ Mastic Asphalt
- ◆ *Concrete Pavement*
 - ⇒ PQC
 - ⇒ DLC





SERVICES

MIX DESIGN (CONCRETE & BITUMINOUS)

Concrete Mix Design

- ◆ Concrete mix design is the procedure for finding the right quantities of these materials to achieve the desired strength. Accurate concrete mix design makes concrete construction economical. Large constructions such as Bridges, dams requires huge amount of concrete, using the right quantity of constituents make the structure economical.
- ◆ Concrete Mix design should ensure following objectives.
 - a) To achieve the designed/ desired workability in the plastic stage.
 - b) To achieve the desired minimum strength in the hardened stage.
 - c) To achieve the desired durability in the given environment conditions.
 - d) To produce concrete as economically as possible.

Bituminous Mix Design

- ◆ A pre-planned bituminous mix design for pavement construction helps in producing a mix that is workable, durable, strong, and economical in nature. One of the widespread use of bitumen is in the pavement design and construction.
- ◆ Bituminous Mix Design should ensure following objectives.
 - a) To obtain a durable pavement, sufficient amount of bitumen is required.
 - b) Adequate strength must be provided to obtain resistance against the shear deformation under higher temperatures.
 - c) Additional voids have to be incorporated to facilitate the compaction performed by the traffic.
 - d) The premature cracking in the bitumen pavement can be avoided by providing sufficient flexibility for the bitumen.

Concrete
Mix Design



Bituminous
Mix Design





SERVICES

PAVEMENT EVALUATION TEST (ROAD & HIGHWAYS)

The main function of Pavement evaluation is to assess the condition of the pavement so that the maintenance and strengthening jobs can be planned in time. Systematic monitoring of pavement performance including structural and functional evaluation by using modern devices helps in achieving long lasting and better performing pavements and efficient management of road network within the given budget.

Falling Weight Deflectometer (FWD) Test

- ◆ An FWD is by far the most commonly used non-destructive test (NDT) device used by highway agencies for pavement structural evaluation and health monitoring. An FWD is used as a testing device for measuring the physical properties of pavement. The FWD process applies dynamic loads to a pavement surface, simulating the magnitude and duration of a single heavy moving wheel load.

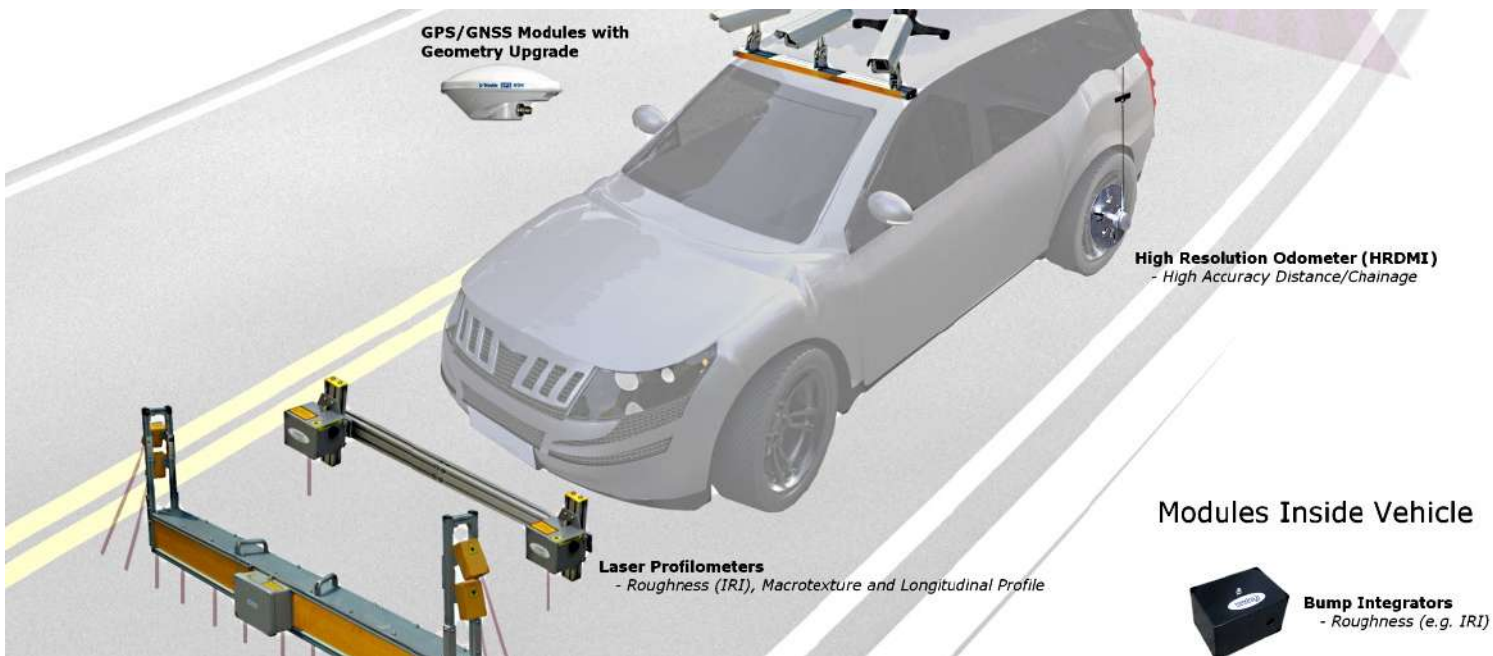
Benkelman Deflection (BBD) Test

- ◆ This method of test covers a procedure for the determination rebound deflection of pavement under static load on the rear axle of the standard Truck. It is a test to determine the necessity of required overlay over existing pavement.

Bump Integrator (For measuring Unevenness or Roughness)

- ◆ The Bump Integrator readings are used to analyze the linear profile and calculate the 'Roughness' of a road surface. It is a test which gives the riding quality of any pavement.





SERVICES

PAVEMENT EVALUATION TEST (ROAD & HIGHWAYS)

Network Survey Vehicle (NSV)

- ◆ The Network Survey Vehicle is based on the latest survey techniques utilizing Laser, Global Positioning System and Video image processing tools etc.
- ◆ The Survey Vehicle is used for automatic collection of road inventory and pavement condition related data required for Road Asset Management, Pavement Maintenance Management System and Road Safety Audit Related Studies. The system is capable of collecting the following information at Highway Speeds:
 - ⇒ Longitudinal profiling (International Roughness Index)
 - ⇒ Transverse profiling (Rut Depth)
 - ⇒ Pavement Texture in terms of Mean Profile Depth
 - ⇒ Road Geometry Data (cross slope, gradient, curvature)
 - ⇒ GPS coordinates (X, Y, Z) viz. longitude, latitude & altitude
 - ⇒ Video imaging for Roadside furniture / Road Assets
 - ⇒ Video imaging for Pavement Surface Distresses



Network Survey Vehicle (NSV)



SERVICES

NON DESTRUCTING TESTING

Non Destructive Testing refers to an array of inspection methods that allow inspectors to evaluate and collect data about a material, system or component without permanently altering it or damaging it. The purpose of NDT is to inspect a component in a safe, reliable and cost effective manner without causing damage to the equipment and shutting down plant operations.

Rebound Hammer Test

- ◆ This test assessing the likely compressive strength of concrete with the help of suitable co-relations between rebound index and compressive strength. The hammer measures the rebound of a spring-loaded mass impacting against the surface of a sample. The test hammer hits the concrete at a defined energy. Its rebound is dependent on the hardness of the concrete and is measured by the test equipment.

Ultrasonic Pulse Velocity Test

- ◆ Ultrasonic Pulse Velocity (UPV) testing is used to determine the integrity and quality of structural concrete or stone (up to 6 feet thick) by measuring the speed and attenuation of an ultrasonic wave passing through the element being tested. The Ultrasonic pulse velocity test is performed on concrete to assess the quality of concrete by passing ultrasonic pulse velocity through it.



Rebound Hammer



Ultrasonic Pulse Velocity



SERVICES

ENGINEERING SURVEYING

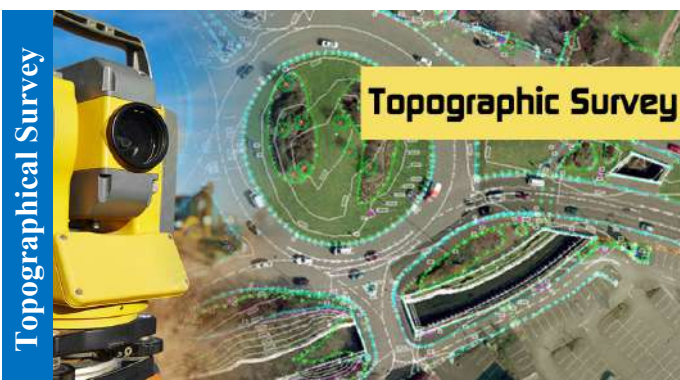
Civil Surveying is essential for the success of many construction projects, from residential and commercial buildings to infrastructure. It gives project managers and engineers the geographical information they need to build a structure that will stand up reliably in the local terrain and helps them map out how their project should unfold.

Topographical Survey (Contour & Traverse)

- ◆ A topographical survey is a tool for determining the relative locations of points (places) on the earth's surface by measuring horizontal distances, differences in elevation and directions. Topographic surveys are typically the first step in any construction or development project, it may be necessary to perform a topographic land survey to identify various features and elevations of area land.
- ◆ The survey is then drawn up into an appropriate and detailed plan it includes human-made features such as boundaries, neighboring buildings, walkways etc. The topographical survey also picks up natural features such as trees, ponds and ground contours.

DGPS Survey

- ◆ A Differential Global Positioning System (DGPS) is an enhancement to the Global Positioning System (GPS) which provides improved location accuracy, in the range of operations of each system, from the 15-meter nominal GPS accuracy to about 1-3 cm in case of the best implementations.





SERVICES

ENGINEERING SURVEYING

Land Survey

- ◆ Land surveying is the detailed study or inspection, by gathering information through observations, measurements in the field, questionnaires, or research of legal instruments, and data analysis in the support of planning, designing, and establishing of property boundaries.

Contour Survey

- ◆ A contour survey is a way to easily visually understand the vertical and horizontal shape (the “topography”) of your land. Contouring in surveying is the determination of the elevation of various points on the ground and fixing these points of the same horizontal positions in the contour map. To exercise vertical control levelling work is carried out and simultaneously to exercise horizontal control chain survey or compass survey or plane table survey is to be carried out. If the theodolite is used, both horizontal and vertical controls can be achieved from the same instrument. Based on the instruments used one can classify the contouring in different groups.

Traffic Survey

- ◆ Traffic Survey is an elaborate investigation and meticulous analysis of the transportation system in a specific area, which is supported by an expansive collection of data. Usually, traffic studies are used to examine a recurring transportation problem and propose a solution that will yield less traffic and congestion in that particular area. Traffic survey is used to determine the capacity of Highway & to determine CV per day for Pavement Design.





SERVICES

ENGINEERING SURVEYING

Condition Survey

- ◆ Pavement Condition Surveys give an indication of the serviceability of the road pavements and also the physical condition of the assets. It is referred to as the collection of data to determine the ride quality and structural integrity of a road segments. Pavement Condition Survey is a term which can be used to determine the necessity of any proposals over pavement.

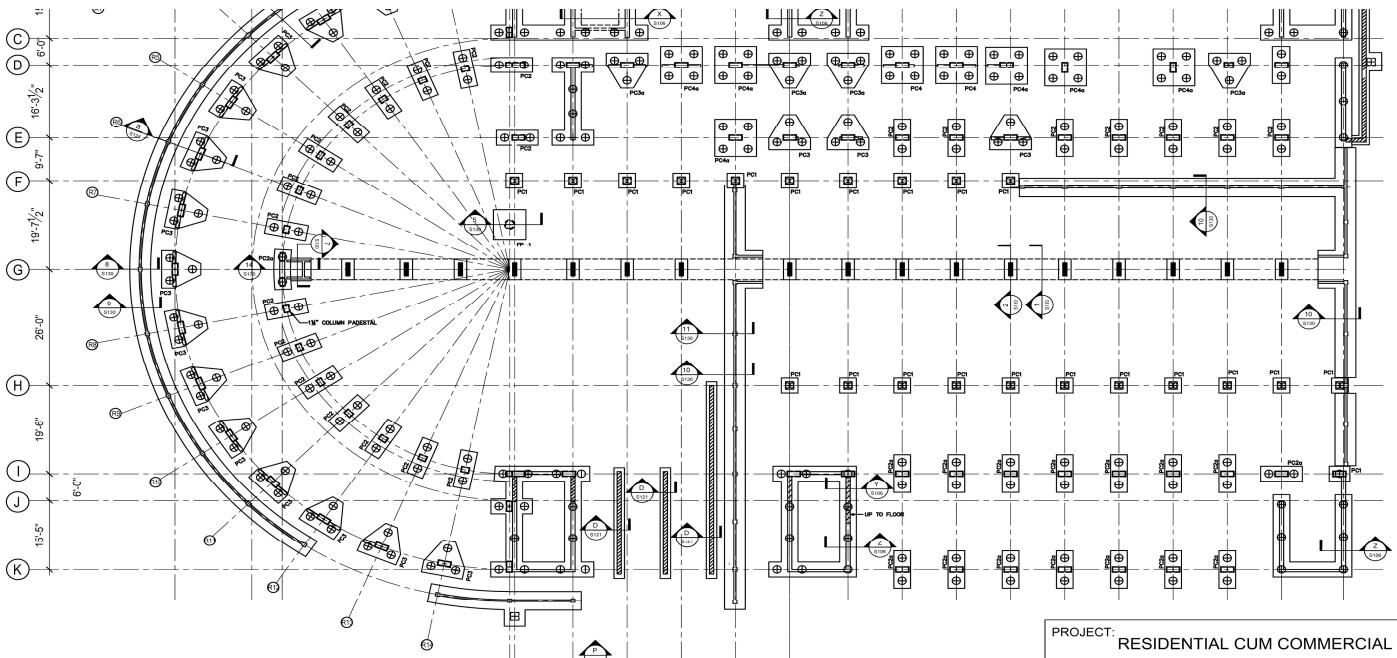
Axle Load Survey

- ◆ The main purpose of the axle loads for trucks survey is to collect preliminary information regarding the range of heavy axle loads traversing the nation's main highways.

Route Alignment Survey

- ◆ The position or the layout of the center line of the highway on the ground is called the alignment. Alignments surveys are widely provided for safety and protection purposes of different routes and highways. The alignment surveys include horizontal alignment, cross-section angle, and vertical alignment of roads. The various engineering surveys which are carried out for the choice of route of a new railway line, Road, Canal, Pipelines, Electrical Lines, Drainage & Sewage surveys can broadly be divided into three categories: Reconnaissance Survey, Preliminary Survey & Location Survey. We provide all the consulting services, including feasibility study, detailed project report and cost estimation, etc. for Route & Alignment Surveys.





SERVICES

STRUCTURAL & ARCHITECTURAL DESIGN CONSULTANCY

Commercial Building Design

- ◆ In today's competitive business world, it not only becomes imperative for organizations to create a unique brand identity but also ensure that their commercial buildings stand out as well. VGPL provide the assets of the building design as per customer requirements.

Residential Building Design

- ◆ Residential building means any improved real property, or portion thereof, situated in the City, designed or permitted to be used for many purposes. VGPL provide the design of the residential building with the desired concept.

Road, Highway & Bridge Design

- ◆ Roads, bridges, and highways are used to ensure the safe and effective transportation of people and goods. For that purpose, VGPL provides the design cost-effective and as per the standard specification.

Architectural Design

- ◆ Architectural design is a concept that focuses on components or elements of a structure. An architect is generally the one in charge of architectural design.





SERVICES

OTHER SPECIAL SERVICES

Electrical Resistivity Test

- ◆ The electrical resistivity method involves the measurement of the apparent resistivity of soils and rock as a function of depth or position.

Pile Integrity Test (NDT)

- ◆ Pile integrity test (PIT), is a common non-destructive test method for the evaluation of pile integrity and/or pile length. Pile integrity tests can be used for forensic evaluations on existing piles or quality assurance in the new construction.

Soil Chemical Test

- ◆ A soil chemical test can determine fertility, or the expected growth potential of the soil which indicates nutrient deficiencies, potential toxicities from excessive fertility and inhibitions from the presence of non-essential trace minerals.

Water Testing (Irrigation, Construction & Drinking Purposes)

- ◆ Water quality testing is conducted to test water for chemical and biological agents.

Third Party Inspection (Road & Building)

- ◆ A third-party inspection is the evaluation or assessment of your project for quality control purposes. It is conducted by independent third-party company (like VGPL) for the project authority.

Structural Audit

- ◆ Structural Audit is done for knowing the real status of the old buildings. It helps identify any signs of material deterioration.

DPR Preparation (Detailed Project Report - Road & Highways)

- ◆ For any Infrastructure projects like Highways, buildings, Bridges, Industry or any other project, preparation of a perfect DPR is very essential.
- ◆ DPR is a very detailed and elaborate plan for a project indicating overall programme, different roles and responsibilities, activities and resources required for the project.

MACHINERY



Hydraulic Diamond Core Drilling Rig on Trolley

- ◆ **Number of Machine:** We have 2 Nos. of Hydraulic Drilling Rigs.
- ◆ **Drilling Capacity in Soil:** 75mm(3 inch) to 150mm(6 inch) dia. Borehole up to 100 Meter (328 foot).
- ◆ **Drilling Capacity in Rock:** 75mm(3 inch) to 150mm(6 inch) dia. bore hole up to 100 Meter (328 foot).
- ◆ **For Use in:** Mining exploration, Diamond Core Drilling in Any type of Rock, Stone, Soil and Sand.
- ◆ **Machine Usage:** Mining exploration, Diamond Core Drilling, Geotechnical Drilling, Auger Drilling, SPT-UDS in Soil, Rock Core sampling and Blast hole Drilling.

Trolley Mounted Rotary Drilling Rig

- ◆ **Number of Machine:** We have 2 Nos. of Trolley Mounted Rigs.
- ◆ **Drilling Capacity in Soil:** 75mm(3 inch) to 450mm(18 inch) dia. Borehole up to 150 Meter (492 foot).
- ◆ **For Use in:** Mining exploration, Drilling in Any type of Soil and Sand.
- ◆ **Machine Usage:** Mining exploration, Geotechnical Drilling, Auger Drilling, SPT-UDS in Soil.



Voltas Diamond Core Drilling Rig



- ◆ **Number of Machine :** We have 1 No. of Voltas Drilling Rig.
- ◆ **Drilling Capacity in Soil:** 75mm(3 inch) to 150mm(6 inch) dia. Borehole up to 100 Meter (328 foot).
- ◆ **Drilling Capacity in Rock:** 75mm(3 inch) to 150mm(6 inch) dia. bore hole up to 100 Meter (328 foot).
- ◆ **For Use in:** Mining exploration, Diamond Core Drilling in Any type of Rock, Stone, Soil and Sand.
- ◆ **Machine Usage:** Mining exploration, Diamond Core Drilling, Geotechnical Drilling, Auger Drilling, SPT-UDS in Soil, Rock Core sampling and Blast hole Drilling.

MACHINERY



Calyx Rotary Drilling Machine

- ◆ **Number of Machine :** We have **18** Nos. of Calyx Rotary Machines.
- ◆ **Drilling Capacity in Soil:** 75mm(3 inch) to 150mm(6 inch) dia. Bore hole up to 50 Meter (164 foot).
- ◆ **Drilling Capacity in Rock:** 75mm(3 inch) to 150mm(6 inch) dia. bore hole up to 50 Meter (164 foot).
- ◆ **For Use in:** Drilling in Any type of Rock, Stone, Soil and Sand.
- ◆ **Machine Usage:** Diamond Core Drilling, Geotechnical Drilling, SPT-UDS in Soil, Rock Core sampling.

Rotary Drilling Rig with Auger Attachment

- ◆ **Number of Machine:** We have **1** No. of Rotary Drilling Rig with Auger Attachment.
- ◆ **Drilling Capacity in Soil:** 100mm(4 inch) to 150mm(6 inch) dia. Bore hole up to 15 Meter (50 foot).
- ◆ **For Use in:** Drilling in Any type of Soil and Sand.
- ◆ **Machine Usage:** Geotechnical Drilling, SPT-UDS Sampling in Soil.



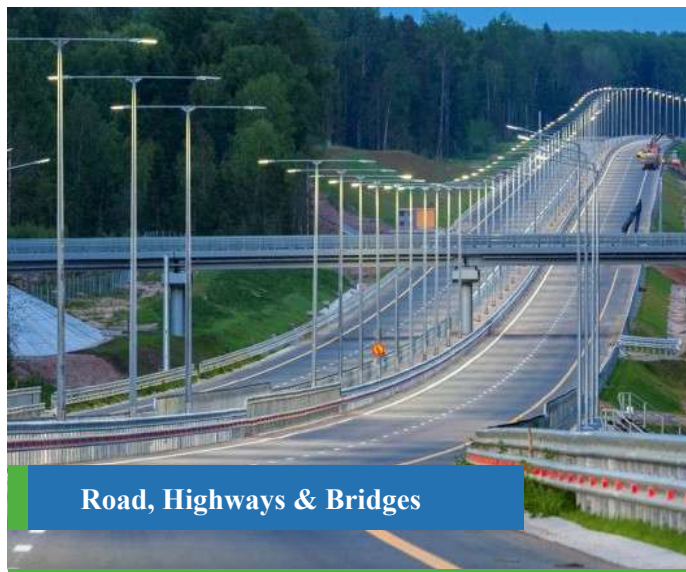
Hand Auger Drilling Equipment with Tripod Setup

- ◆ **Number of Machine:** We have **8** Set of Hand Auger Equipment with Tripod Setup.
- ◆ **Drilling Capacity in Soil:** 100mm(4 inch) to 150mm(6 inch) dia. Bore hole up to 10 Meter (32 foot).
- ◆ **For Use in:** Drilling in Any type of Soil and Sand.
- ◆ **Machine Usage:** Geotechnical Drilling, SPT-UDS Sampling in Soil.

PROJECTS



Metro & Railways



Road, Highways & Bridges



Energy - Power Plants & Refineries



Irrigation & Public Health



Real Estate - Commercial & Residential Building



Traffic & Transportation

KEY PROJECTS

GEOTECHNICAL INVESTIGATION

SR. NO.	PROJECT WORK	CLIENT	CITY / STATE
1	Geotechnical Investigation for Construction of 2.0 Lac. Ltr. Cap. UG Sump at Simli Village Under Sinor Regional Water Supply Scheme Based on Bulk Pipe Line.	Jalaram Project Pvt. Ltd.	Gujarat
2	Geotechnical Investigation for Construction of UG Sump & WTP at Various Locations of Patadungri Regional Water Supply Scheme.	Krishna Construction Co.	Gujarat
3	Geotechnical Investigation on Project Development & Detailed Project Report Preparation for development of "Atal Progressway (Green field progress-way) from Bundi in Rajasthan to Etawah in Uttar Pradesh via Sheonpur and Morena Bhind district in the state of Madhya Pradesh.	L.N. Malviya Infra Project Pvt. Ltd.	Madhya Pradesh
4	Geotechnical Investigation for Budhel to Nari Circle Bhavnagar bypass in the state of Gujarat.	Shiv Builders	Gujarat
5	Geotechnical Investigation for Construction of Various RCC U/G Sump & WTP at Dabhasa HW, Dabhasa Village Under Padra (Agmentation) Regional Water Supply Scheme.	Krishna Corpindia Private Limited	Gujarat
6	Geotechnical Investigation at Banas River for Barmer – Palanpur Pipeline Project in the state of Gujarat.	JSIW	Gujarat
7	Geotechnical Investigation for MANGALA CRUDE OIL PIPELINE AND ASSOCIATED FACILITIES OF M/s HRRL (EPCC-16) in the state of Rajasthan.	JSIW	Rajasthan
8	Geotechnical Investigation for Telecommunication Monopole Towers at Various locations in Gujarat.	Strucon Consultancy Services	Gujarat
9	Geotechnical Investigation for Telecommunication Monopole Towers at Various locations in Gujarat.	Multi Projects Consulting Engineers	Gujarat
10	Geotechnical Investigation for Telecommunication Monopole Towers at Various locations in Rajasthan.	Multi Projects Consulting Engineers	Rajasthan

KEY PROJECTS

GEOTECHNICAL INVESTIGATION

SR. NO.	PROJECT WORK	CLIENT	CITY / STATE
11	Geotechnical Investigation for Telecommunication Monopole Towers at Various locations in Pune.	Green Design	Maharashtra
12	Geotechnical Investigation for Construction of Road Under Bridge (RUB) in lieu of Level Crossings LC 25 (Makarba Crossing), & LC 26 (Makarba Lake Crossing) between Vastrapur and Sarkhej Stations as Part of Gauge Conversion of Railway Line in Ahmedabad.	Sarjan Construction Pvt Ltd.	Gujarat
13	Geotechnical Investigation, required field tests and Laboratory test for "Preparation of Detailed Project Report (DPR), Tender Document (BOQ Carrying out E Tendering Process, Agreement and Quality Check for Roads Proposed for up gradation with New Technologies like Full Depth Reclamation and Stabilization under PMGSY III" in the State of Uttar Pradesh.	Translink Infrastructure Consultants Pvt. Ltd.	Uttar Pradesh

PAVEMENT EVALUATION

SR. NO.	PROJECT WORK	CLIENT	TEST
14	Completing Six Laning of Bagodara-Tarapur-Vasad Road (PKG-1) km 0/0 to 53/800 in the state of Gujarat on DBFOMT on Modiefied Annuity Basis (SH-8) in the State of Gujarat.	Kalthia Engineering and Construction Ltd.	Network Survey Vehicle (NSV)
15	Development of NH-147 (Old NH8C) including 6 Lanning with service road on either side from km 0/0 to 44/200 in the state of Gujarat on EPC basis of Package-III km 31/300 to km 35/480 in the state of Gujarat. (Service Lane)	NCC Infraction Pvt. Ltd.	Falling Weight Deflectometer (FWD)
16	Widenning to Six Lane of Exis ng Four Lane Jetpur-Gondal-Rajkot Sec on from km 117.600 to km 185.000 on Na onal Highway No.27 in the State of Gujarat on EPC Mode under Bharatmala Pariyojana.	Kalthia Engineering and Construction Ltd.	Falling Weight Deflectometer (FWD)
17	Development of NH-147 (Old NH8C) including 6 Lanning with service road on either side from km 0/0 to 44/200 in the state of Gujarat on EPC basis of Package-III km 31/300 to km 35/480. (Flyover) (Ongoing)	Ajay Engineering	Network Survey Vehicle (NSV)

KEY CLIENTS



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VISHWAS GEOTECH - YOUR GROWTH PARTNER

We take great pride in offering services and solutions across the entire cycle of a civil infrastructure project. By adopting modern technologies and techniques, we are well ahead of our competitors and have shown good judgment in rejecting the superannuated manner of delivery. The potential for civil infrastructure in the future is limitless, but the person who has brilliant people working for him will gain the most. Be wise. Make Vishwas Geotech Pvt. Ltd. a partner in your progress.

PAN INDIA SERVICES



SCAN QR CODE FOR MORE DETAILS



VISHWAS GEOTECH PVT. LTD.

TECHNICAL CONSULTANCY & CIVIL ENGINEERING LABORATORY

ADDRESS

REGISTERED OFFICE

📍 C-2, Vardhman Nagar Flat,
Nr. Arjun Tower, Opp. C.P. Nagar,
Ghatlodia, Ahmedabad-380061.

OTHER DETAILS

- 📄 CIN No. U74999GJ2018PTC104960
- 📄 GSTIN : 24AAGCV6540F1ZE
- 📄 PAN : AAGCV6540F

LABORATORY

📍 A-14, CP Nagar Part-2,
Opp. Arjun Tower, Ghatlodia,
Ahmedabad - 380061. (Gujarat)

COMPANY CERTIFICATIONS

- 📄 ISO 9001:2015 CERTIFIED
- 📄 ISO/IEC 17025:2017 ACCREDITED
- 📄 GOVT. APPROVED LABORATORY

CONTACT DETAILS

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