Inovative Products Sustanible Solution

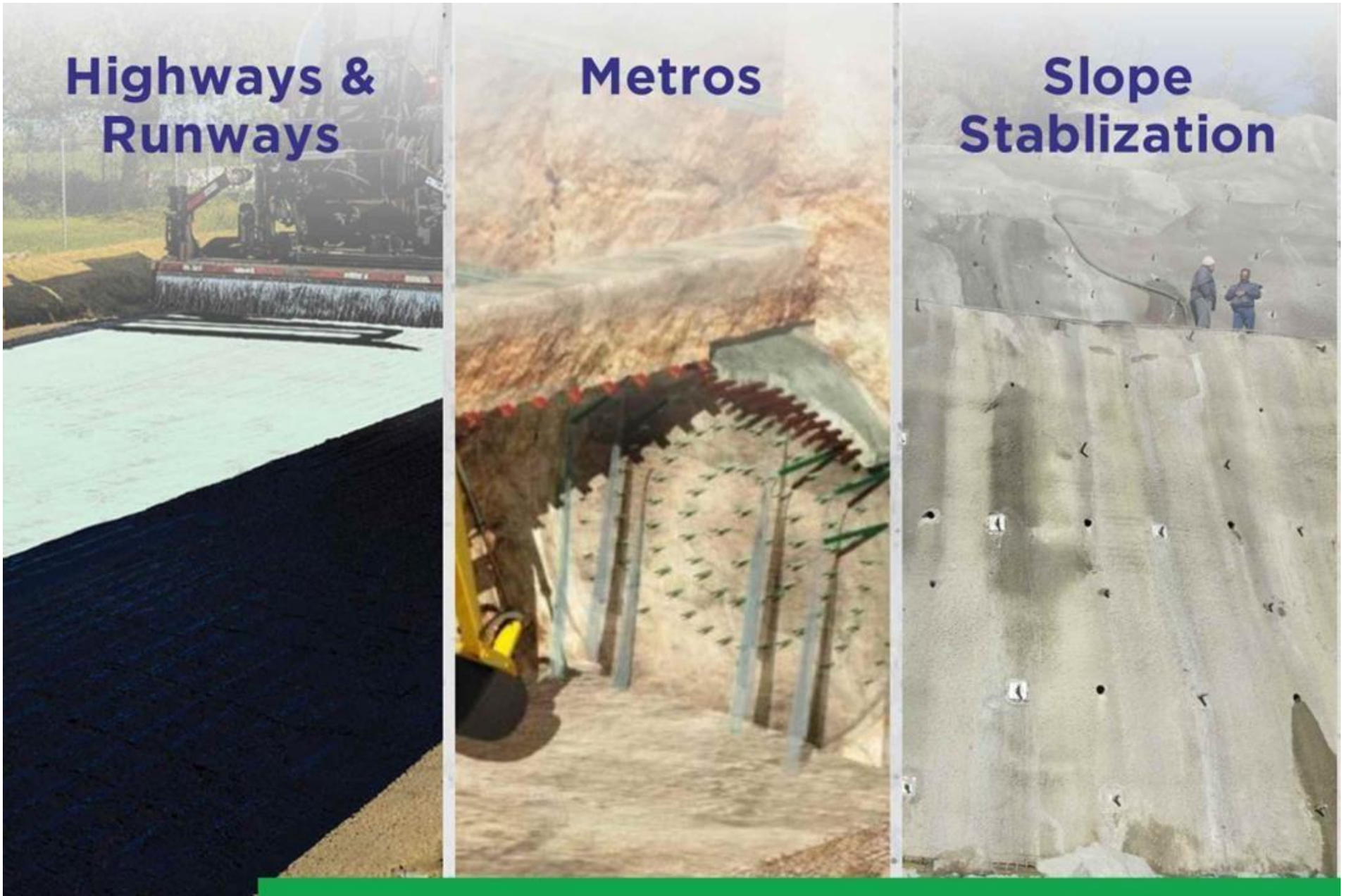
s

Aquaflux

Engineering Pvt. Ltd.

Unlocking Potential

AQUAFLUX ENGINEERING PRIVATE LIMITED



THE COMPANY

Aquaflux
Engineering Pvt. Ltd.

Tunnels & Caverns

Canals

Solar Plants

Aquaflux Eng Pvt Ltd as the name reflects the amalgamation of synergy and environment. Also dedicated itself for emerging collaborative teams across the globe and replenish innovative solutions to the world's most important needs.

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OUR STRONG BELIEFS

VISION

To impart innovatory and Non-Conventional Solutions by serving innominate requirements of industry through global association of like minded people.

MISSION

To Provide Sustainable solutions through innovative products & Services for creating ecosystem of synchronicity which leads to growth & happiness of our stakeholders.

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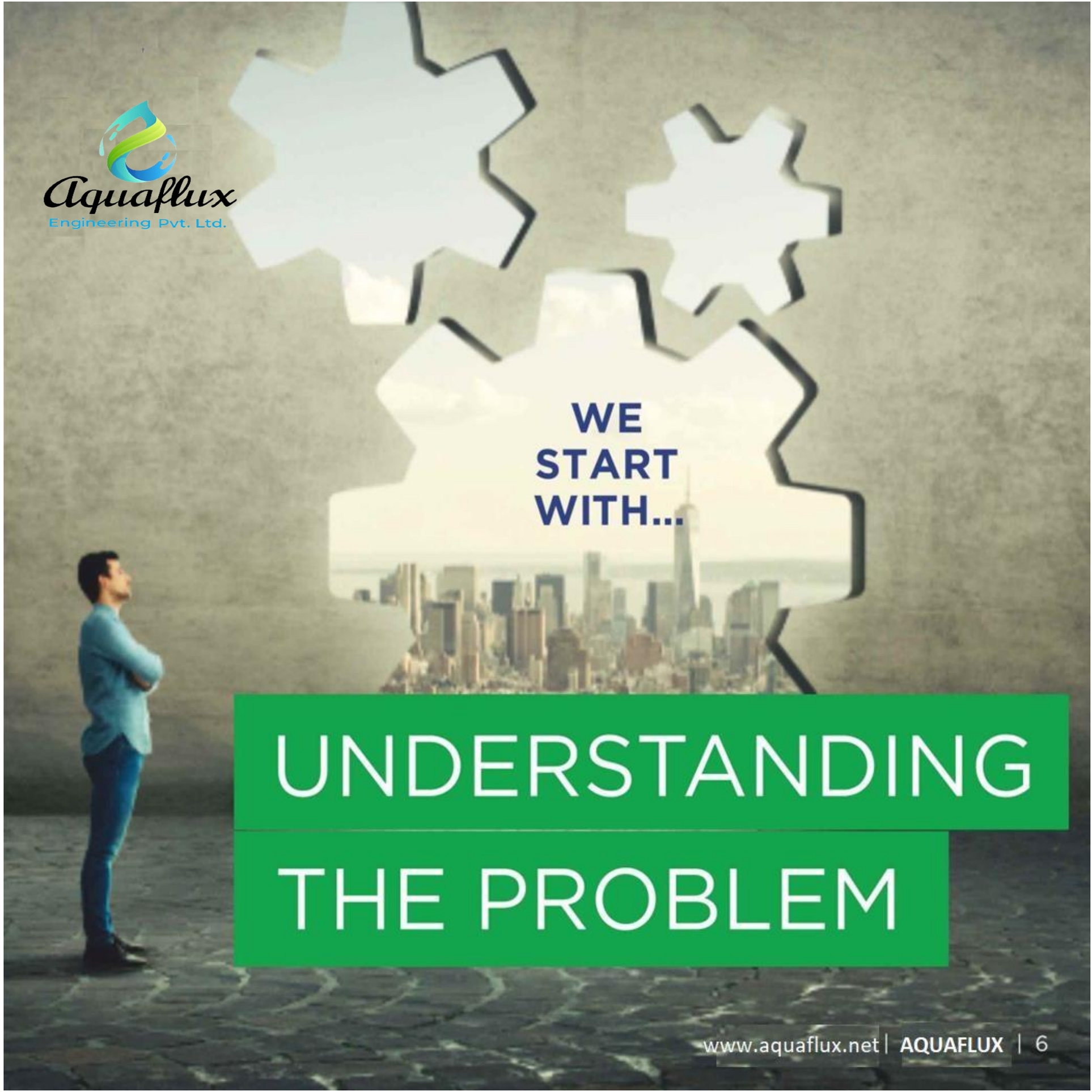
Pioneering
We always involve in new products and application areas.

Synergy
Like minded people working together produce a better outcome

Environmentalism
We care about our planet and try to provide eco-friendly solutions

Integrity
We are committed towards zeal of being honest and having strong moral principles

Resilience
We always find strength in our vulnerability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Engineering Pvt. Ltd.
WE
START
WITH...
UNDERSTANDING
THE PROBLEM

Engineering Consultancy

- Design and Drafting
- Deriving project scope and timelines
- Solution based Proposals

Material Management

- We can provide engineered products from our basket.
- Responsible for all quality checks on materials.
- Machine rental services

Project Management

- On site supervision.
- Product installation services.
- Site investigation services.
- Project financial analysis.

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WATER RESOURCES

Marine
- Dams
- HRT / LRT
- Power House
- Maintenance

Canals
- Irrigation Canals
- Industrial Waste Water Channels

Reservoirs
- Lining
- Seepage Analysis
- Solar Panels on Reservoirs

WTP/STP
- Water & Sewage Treatment Plant
- Paper-Pulp
- Industrial Waste Treatment

ENERGY

Solar
- Agricultural & Industrial Pumps
- Solar Power Plants

Hydel
- Dams
- HRT / LRT
- Power House
- Maintenance

Wind
- Wind Mill Solutions
- Foundation Bolting

Thermal
- Power Plant Building
- Reservoir Lining
- Foundation Treatment

GEOTECHNICAL

Underground
- Tunnels
- Lined and Unlined Mines
- Foundation
- Railways
- Metros
- Underpass

Surface
- Highways
- Elevated Structures
- Land reclamation
- Airports
- Petro Chemical Complexes

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Canals

- Lining of Irrigation Water Canals.
- Channeling Works – Drain and Rain Water.
- Steel and Shallow Channel Bank Protection Works.
- Solar Plant on Canals.

Sewage / Water Treatment Plant

- Preparation of STP/ WTP with Geosynthetic tubes.
- Landfill Lining.
- Sewer and Plumbing Line Rack Support System.

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WATER RESOURCES

Marine

- Tie Back Retaining Wall with Dead Man.
- Bracing for Grade Separation.
- Tie Rods for Sheet Pile Constructed Wharf.
- Break Waters & Groynes.
- Quays, Piers and Jetty.
- Seawalls & Shoreline Structures.

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ENERGY

Solar

- Agricultural & Industrial Pumps.
- Solar Power Plants.
  - Ground Mounted.
  - Roof Mounted.
  - Floating Power Plants.

Wind

- Wind Mill Soil Survey.
- Wind Mill Foundation Designing and Strengthening.
- Foundation Bolting.
- Foundation Grouting.

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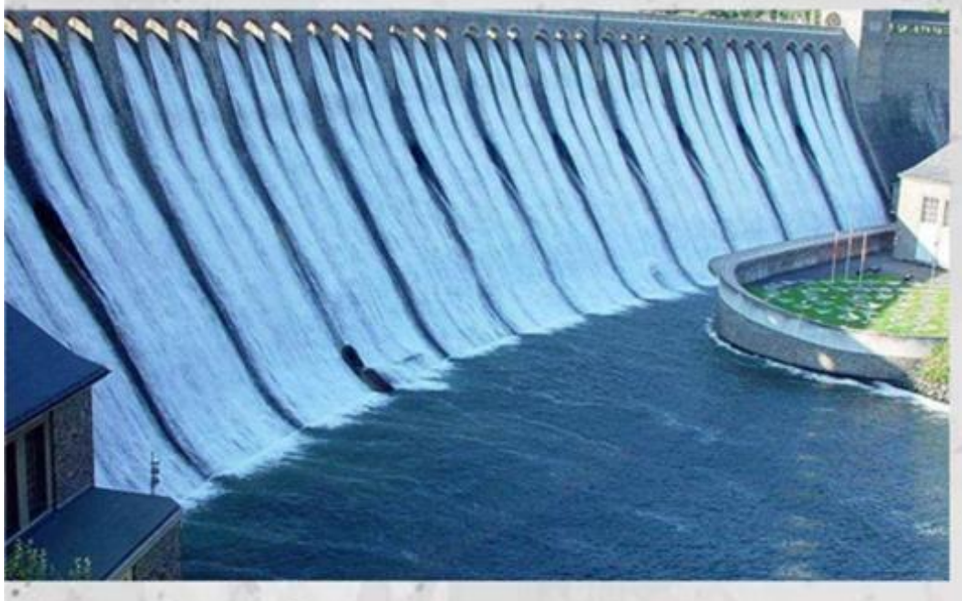

Hydel

- Power House Maintenance.
- Access Roads Landslide Protection.
- HRT / LRT Stability Works.
- Dams Structure Related Works..

Thermal

- Power Plant Building Maintenance.
- Reservoir Lining.
- Canals Reinforcement.
- Foundation Treatment.

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GEOTECHNICAL

Highways & Runways

- Basal Reinforcement.
- Sub Grade and Sub Base Improvement.
- Asphalt Pavement Reinforcement.
- Rigid Payments Strengthening.
- Embankment Stabilization.
- Retaining Earth Wall System.

Bridges & Viaducts

- Lifting and Launching Solutions.
- Seismic Restrainers.
- Bridge Foundation and Anchoring Works.

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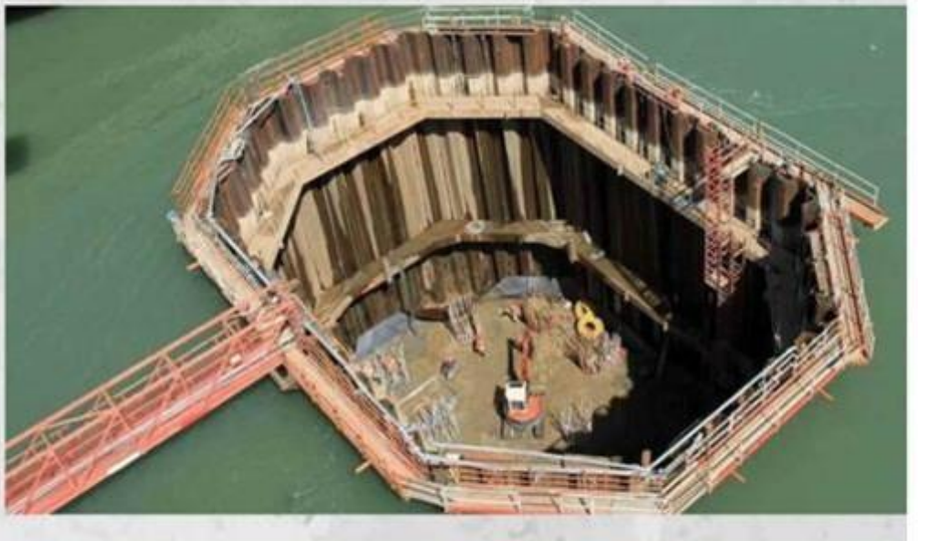
Tunnels & Caverns

- Tunnel Lining.
- Forepoling.
- Roof Bolting.
- Face Bolting.
- Tunnel Support Systems



Foundation

- Micro and Mini Piling.
- Foundation Bolting.
- Stability and Sinking Solutions.

Slope Protection

- Filling Slope Protection.
- Erosion Control Works.
- Cutting Slope Protection.
- Rock Fall Protection Works.
- Hydro-Seeding Works.

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PRODUCTS WE OFFER

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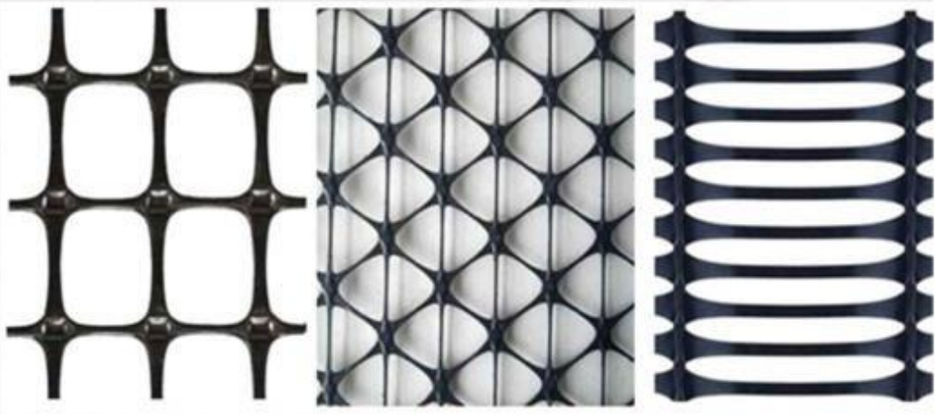
GEOSYNTHETICS

Geotextiles

Geotextiles are engineered fabrics which, when used in association with soil, have the ability to separate, filter, reinforce, protect, or drain. Typically made from Polypropylene or Polyester, Geotextile fabrics come in three basic forms: woven, needle punched or heat bonded.

Geogrids

A geogrid is geosynthetic material used to reinforce soils and similar materials. Geogrids are commonly used to reinforce retaining walls, as well as subbases or subsoils below roads or structures.



Geomembranes

High density polyethylene geomembrane manufactured from high quality polyethylene resins, duly contrasted, that comply with the most rigorous requirements established for their use.

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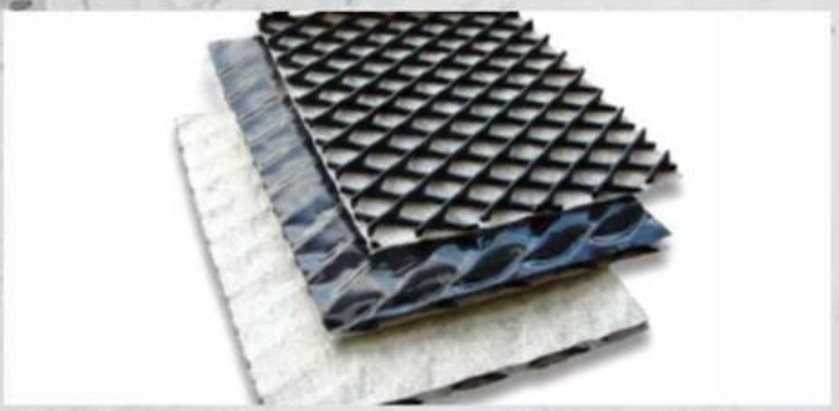
GEOSYNTHETICS



Geocomposite

Drainage composite for planar drainage manufactured by bonding a draining core - HDPE geonet with parallel overlayed nonwoven geotextile & HDPE membrane.

Geotextile - Tubes

Geotextile dewatering solution made from specially designed, dual filament, polypropylene fabric and is fabricated to the requirements of each specific project. This technology provides a simple, low maintenance, and cost effective solution for the dewatering needs of many industries..

Geo-Cells

cellular confinement systems made with ultrasonically welded high-density polyethylene (HDPE) strips or novel polymeric alloy (NPA) and expanded on-site to form a honeycomb-like structure and filled with sand, soil, rock, gravel or concrete.

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Erosion Control

Our unique product for flexible facia on slope protection works. All the three essential components are systematically arranged to from a complete solution.

Major Components :

Coir Mat **Wiro Mesh** **Polymer mat**

 # Optionally we can use geotextiles & Geogrid

Hydroseeding

Hydroseeding involves spraying a mixture of water, seed, fertilizer and protective mulch which is mixed in a tank and power sprayed onto the ground. Depending on soil conditions and the availability of water etc., other agents to supercharge growth, and co polymers to aid in holding moisture in the soil are added.

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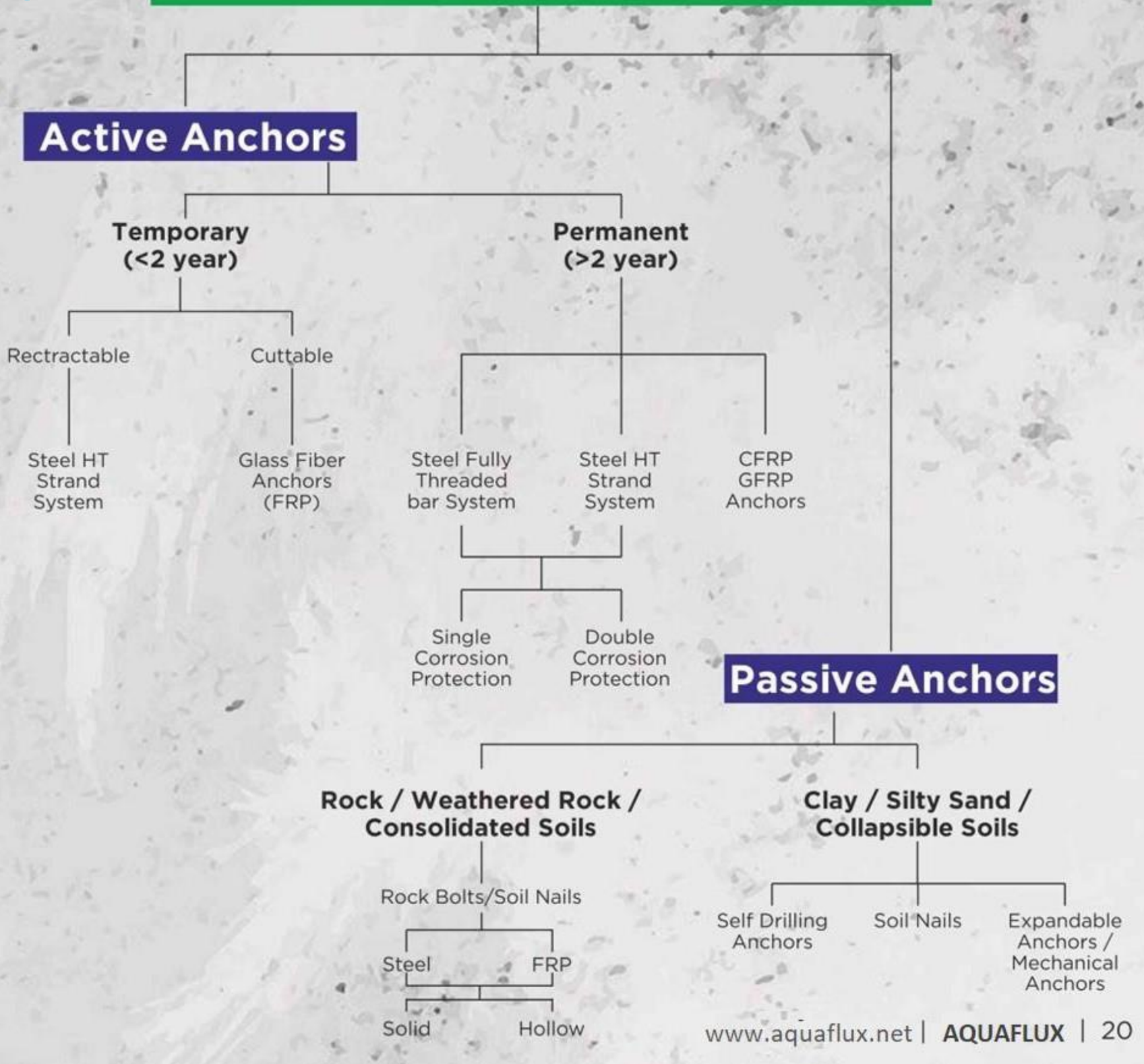
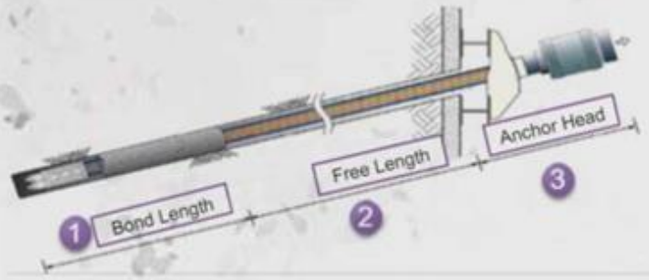
GROUND ANCHORS



Active Anchors

Ground Anchors: Ground anchoring is a common name applied to an engineered system that mechanically fixes a structure to the ground, enabling load transfer into a competent stratum. The tensile forces applied are resisted by the shear strength of the surrounding ground. Ground Anchors can be classified as active and passive anchors.

Active Anchors : An active anchor is post/pre-tensioned before it takes up the load, which prevents distortion of the structure. The tendon is usually made of pre-tensioned steel/FRP cables. Post-tensioned rock anchors actively transfer loading between the anchored structure and its underlying rock mass, thereby lowering the structure's centre of gravity.



Based on Service life requirements active anchors can be classified into two types:

1. **Temporary applications: Design life of less than 2 years**
   A. **Retractable Anchors:** Removable anchors are required where it is undesirable or unacceptable to leave them in the ground, particularly in urban areas where they often extend into adjacent properties.
   B. **Cuttable Anchors:** These anchors can be cut after use.

2. **Permanent applications: Design life of more than 2 years:**
   A. **Steel Fully Threaded Bar System:** Continuous thread high-tensile hot rolled bars made up of high-performance steel
   B. **Steel HT Strands System:**
   C. **CFRP Anchors**

STEEL (Codes & Standards)	FRP (Codes & Standards)
• BS EN 1997 (Eurocode 7) • BS EN 1537 • BS 8081	• ACI 440-4R-04 • BS EN 1997 (Eurocode 7) • BS EN 1537 • BS 8081 • ISO 6934-4

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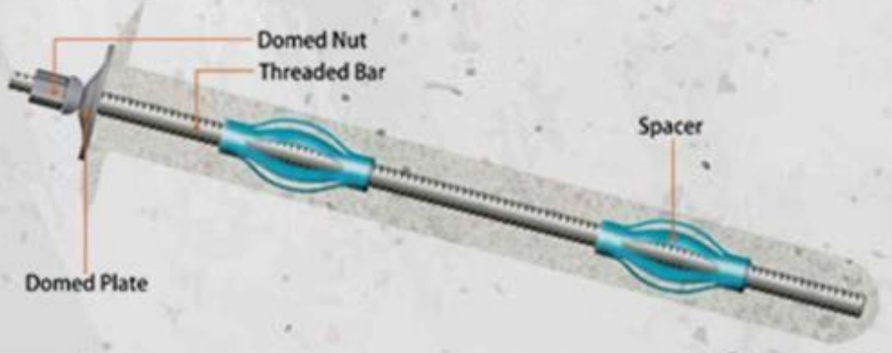
Passive Anchors: A passive anchor is tensioned by the structure itself applying load to it. It does not usually have a free length of tendon. Generally, the tendon is made of steel or an alloy material. Passive rock anchors have high capacity to resist event-induced tensile loading, such as loading arising from periodic seismicity or seasonal buoyancy.Depending upon the method of installation/ existing rock or soil conditions, these anchors can be used:

1. **Soil nails**: Soil nails/Rockbolts are drilled and grouted bars (normally threaded steel bar or reinforcement, but can also be fibreglass). Installed on a regular grid pattern the nails/bolts are passive (non-stressed) elements and typically secure a facing support of shotcrete and/or mesh with a nut and plate or cogged end. Soil nailing / Rock bolting is typically used to stabilise existing slopes or excavations where top to bottom staging is advantageous.
   # Available in both SCP & DCP when used in steel and FRP nails also used where corrosive environment noticed.

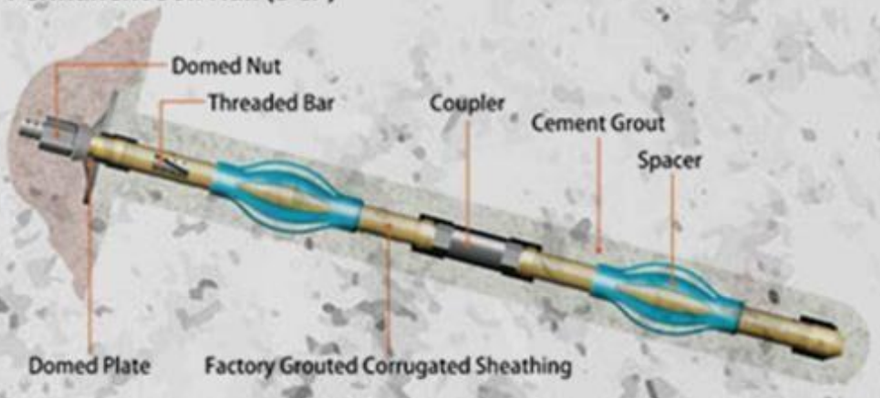
2. **Rock Bolts:** A rock bolt is a long anchor bolt used for stabilising rock faces. Rock bolts transfer the load from the unstable exterior to the confined (and much stronger) interior of the rock mass. Rock bolts work by 'knitting' the rock mass together sufficiently before it can move enough to loosen and fail by unravelling (piece by piece). Rock bolts are commonly used in tunnels or rock cuts.
   Rock bolts can either be anchored into the rock by mechanical or epoxy means. Rock bolts are made from steel or Fibre Reinforced Polymers (FRP). The most common FRP is fibreglass (GFRP), but other systems are available. Available in both SCP & DCP versions.

Temporary Soil Nail



STEEL (Codes & Standards)	FRP (Codes & Standards)
• FHWA-IF-03-017 • FHWA-SA-96-069 • HK GEOGUIDE 7	• ACI 440-4R-04 • FHWA-IF-03-017 • FHWA-SA-96-069 • HK GEOGUIDE 7 • ISO 6934-4

Permanent Soil Nail (DCP)



Passive Anchors

3. **Self-Drilling Anchors:** Self-drilling hollow bar system with simultaneous grout flushing, the installation procedure can be decisively eased and shortened. Hollow Bar serves as a drill rod. It is fitted with a lost drill bit at the top that can be adapted to different soil conditions. After each single section of 1 to 6m, the subsequent bar is coupled to the previously installed segment.

   At the final stage of drilling, cement mortar is injected into the hollow core of the bar using an injection adapter that is mounted at the drilling unit. The grout flushing simultaneously serves as slurry to stabilize the borehole and ensures the efficient retro flush of the borehole cuttings. Once the required installation length has been reached, the grouting unit is switched to grouting mortar because it reaches higher compression strengths and thus ensures better load-bearing capacities.

Components of SDA: • Hollow Bar • Coupler • Drill Bit • Nut • Plate

4. **Mechanical Anchors:** The mechanical bolt is a unique combination rock bolt system. It offers the combined advantages of an immediate point anchorage and subsequently a fully grouted rock bolt. A two-step installation procedure allows fast installation and immediate anchorage, separate and independent grouting provides flexibility in regard to working cycles. Due to the controlled grouting procedure and different bar coatings available.

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OTHER GEOTECH PRODUCTS

TH Profiles

These are supporting element in tunnel and normally consist of steel structures in designed patterns.

Foundation Bolts

Large & high strength bolt used to secure the base of column to the foundation.

Fore Poling Umbrella Pipe Roof System

A ring-bit system are designed to be drilled with a tap hammer in an umbrella shape as second support in a tunnel road.

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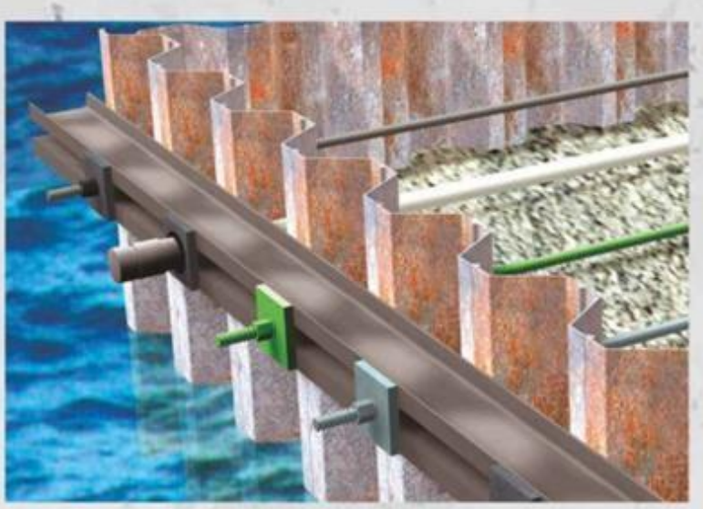
ENGINEERED BAR SYSTEMS

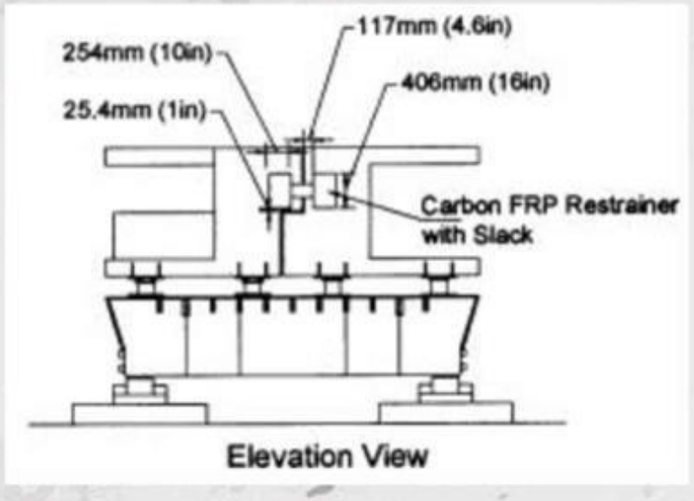
Marine Tie Rods



Architectural Tie Rods

High Strength – Fully Threaded Bars

FRP & Steel Seismic Restrainer



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SOLAR PRODUCTS

Canal Top Solar Power Plant

- No additional requirement of land for power generation.
- Reduces water evaporation from Canal.
- Increased output from power plant due to reduction in heat losses.

Solar Water Pump

- 1. Stand alone system.
- More working Hours.
- Reliable out put.
- Pollution free .

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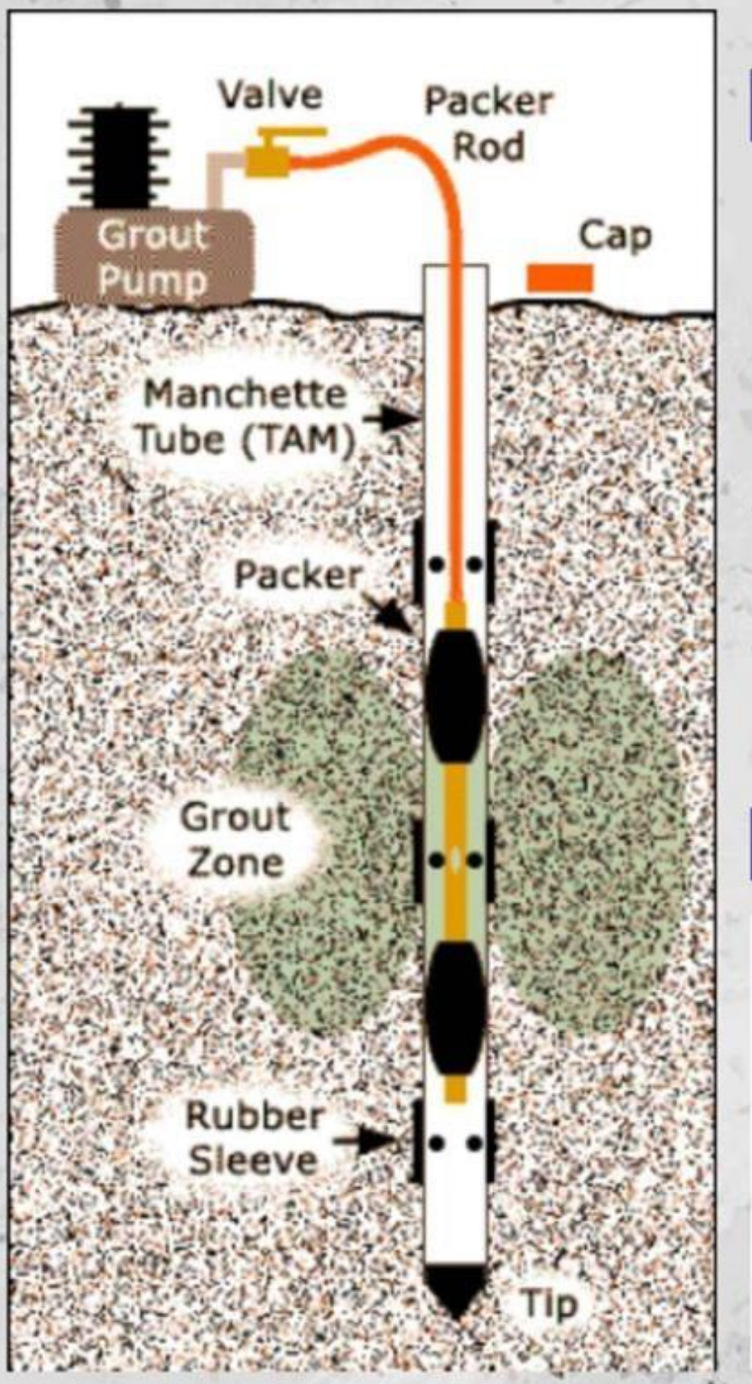
GROUTING SOLUTIONS



Manchette Tube System

Manchette Tube
- Raised Rubber Tube
- Recessed Rubber Tube Tube

Couplings
- Centre Stop Coupling
- Smoothbore Coupling
- Heavy Duty Coupling
- Steel Coupling

Tips and CapsPackers
- Inflatable Seal Packer
- Sliding Seal Packer
- Mechanical Packers

Packer Rod
- Connecting Valve
- Grout Pump

Resin/Cement/Grout Capsule

why?

Aquaflux

Engineering Pvt. Ltd.

Understand

We know the subject & we know you...

Panacea

We have various solutions for single problem but we try to find optimum way out of numerous....

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Engineering Pvt. Ltd.

Innovative Products ... Sustainabile Sulotions ...

Operate

We see how processes can be refined in terms of costs, time, staff involved and steps required to best meet targets.

Strategy

Focus on assist you with the long-term vision...

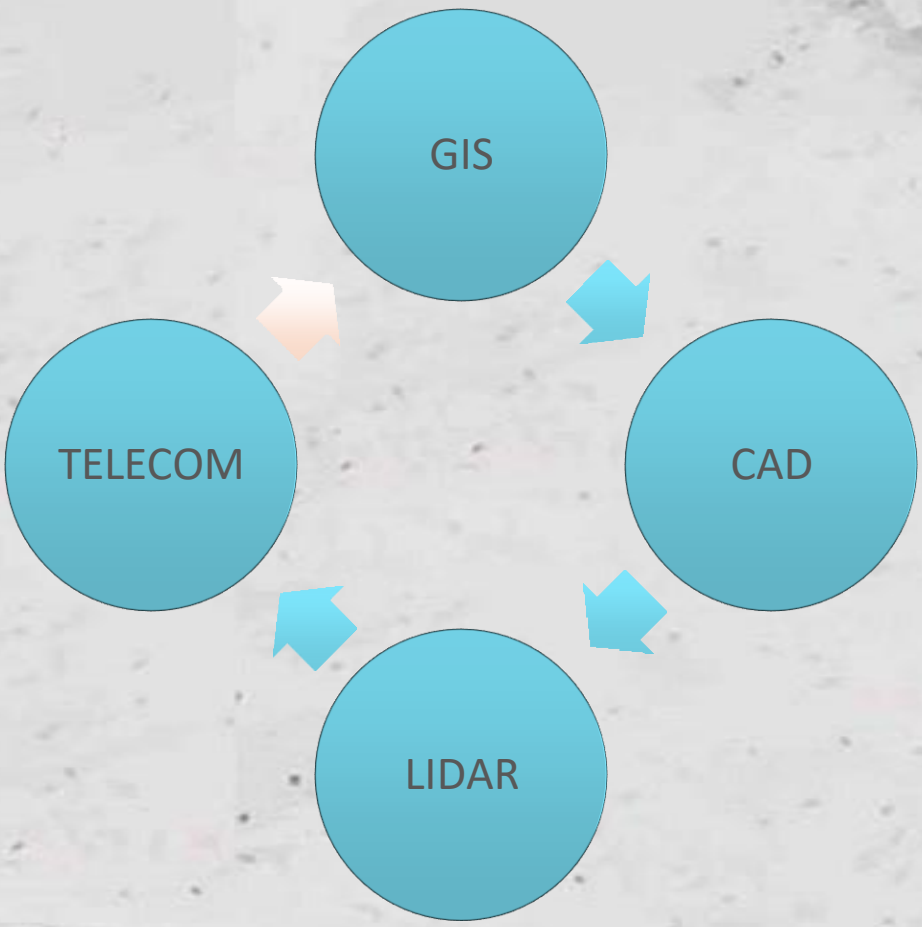
SURVEY & DEVELOPMENT SERVICE

EXPERTISE

- GIS
- LIDAR
- CAD
- TELECOM

SOFTWARE USED

- AUTOCAD
- QGIS
- ARCGIS
- MICROSTATION
- OTHER GIS SOFTWARE

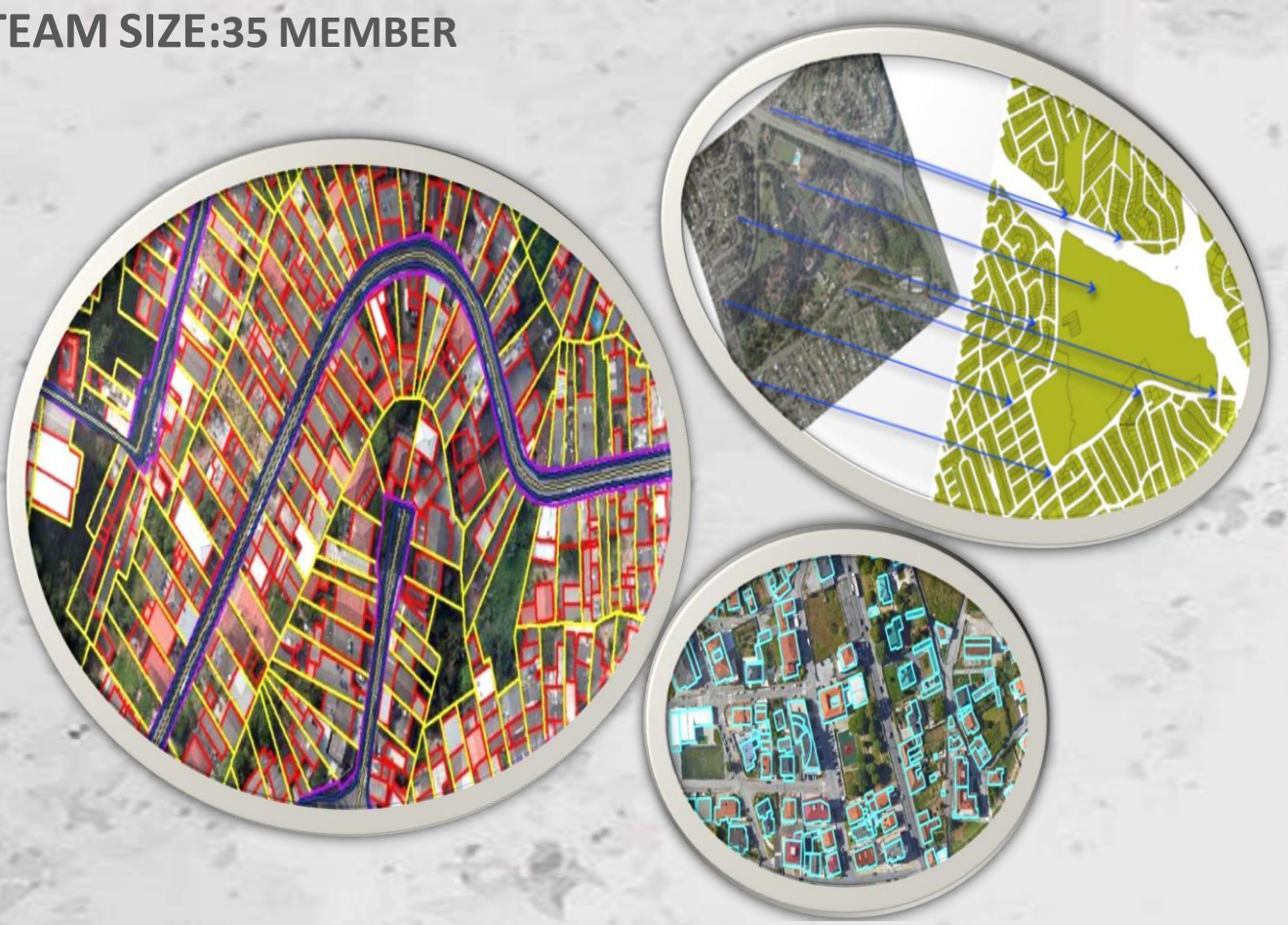


GIS MAPPING

SOFTWARE USED

1. QUANTUM GIS
2. PG ADMIN
3. ARC GIS
4. AUTOCAD MAP
5. GOOGLE EARTH
6. GLOBAL MAPPER

TEAM SIZE:35 MEMBER

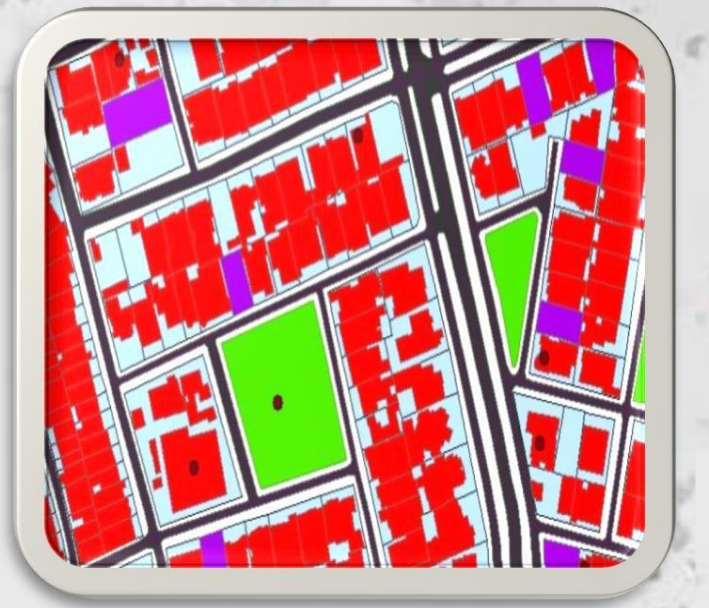


PROJECTS UNDERTAKEN & COMPLETED

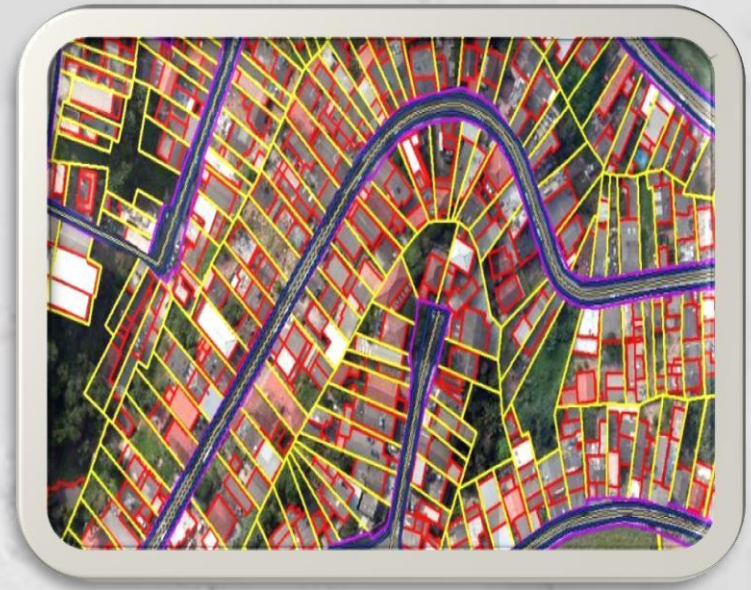
COMPLETED MAJOR PROJECT DETAILS

GIS MAPPING

1. URBAN MAPPING

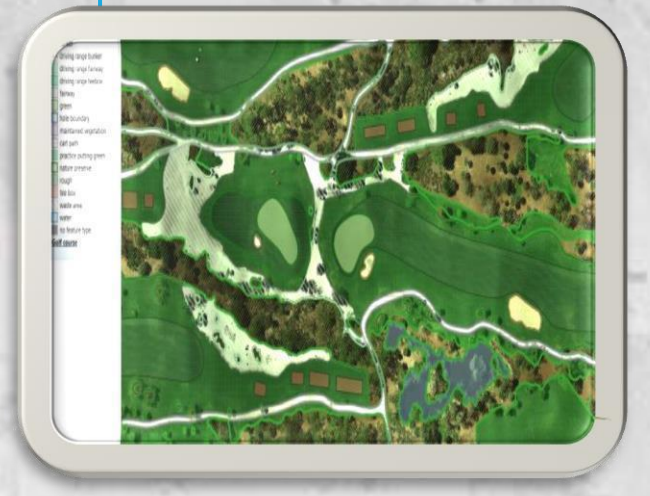


2. PREPARATION OF BASEMAP

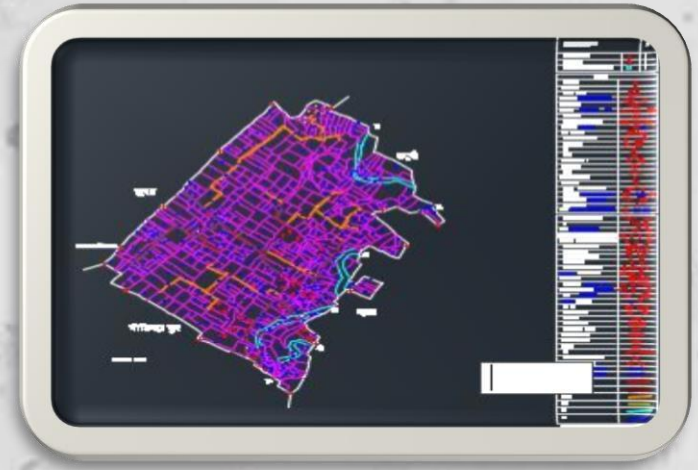


3. 2D BUILDING FOOTPRINT CAPTURE

4. GOLF COURSE DIGITIZATION

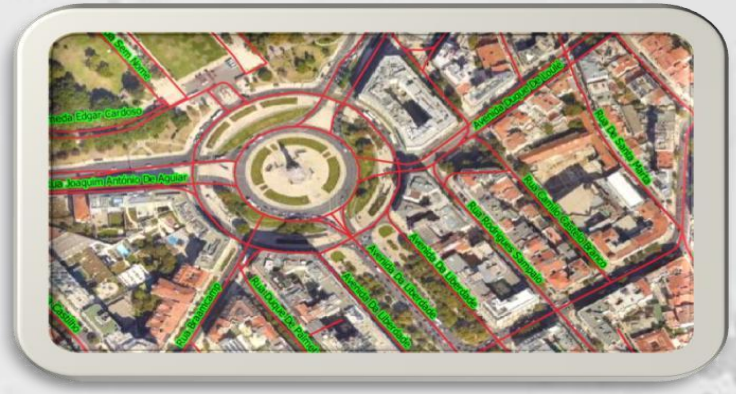


5. CADASTRAL MAPPING PROJECT

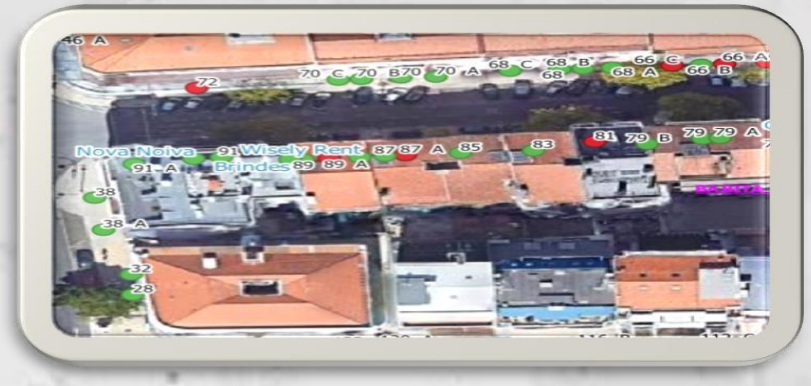


6. GEO-REFERENCING

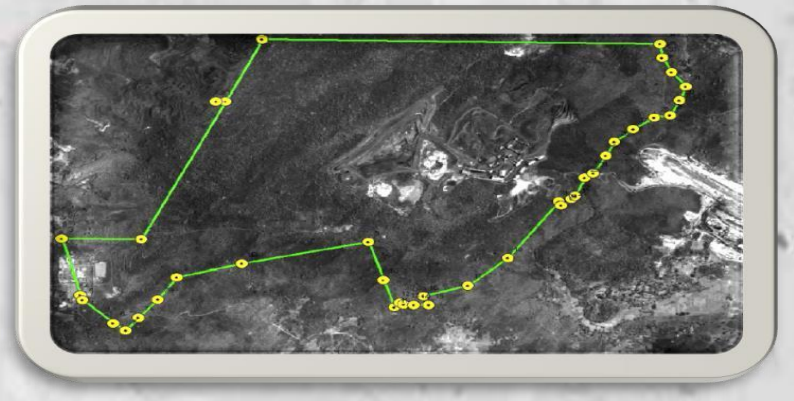
7. ROAD NETWORK DIGITIZATION



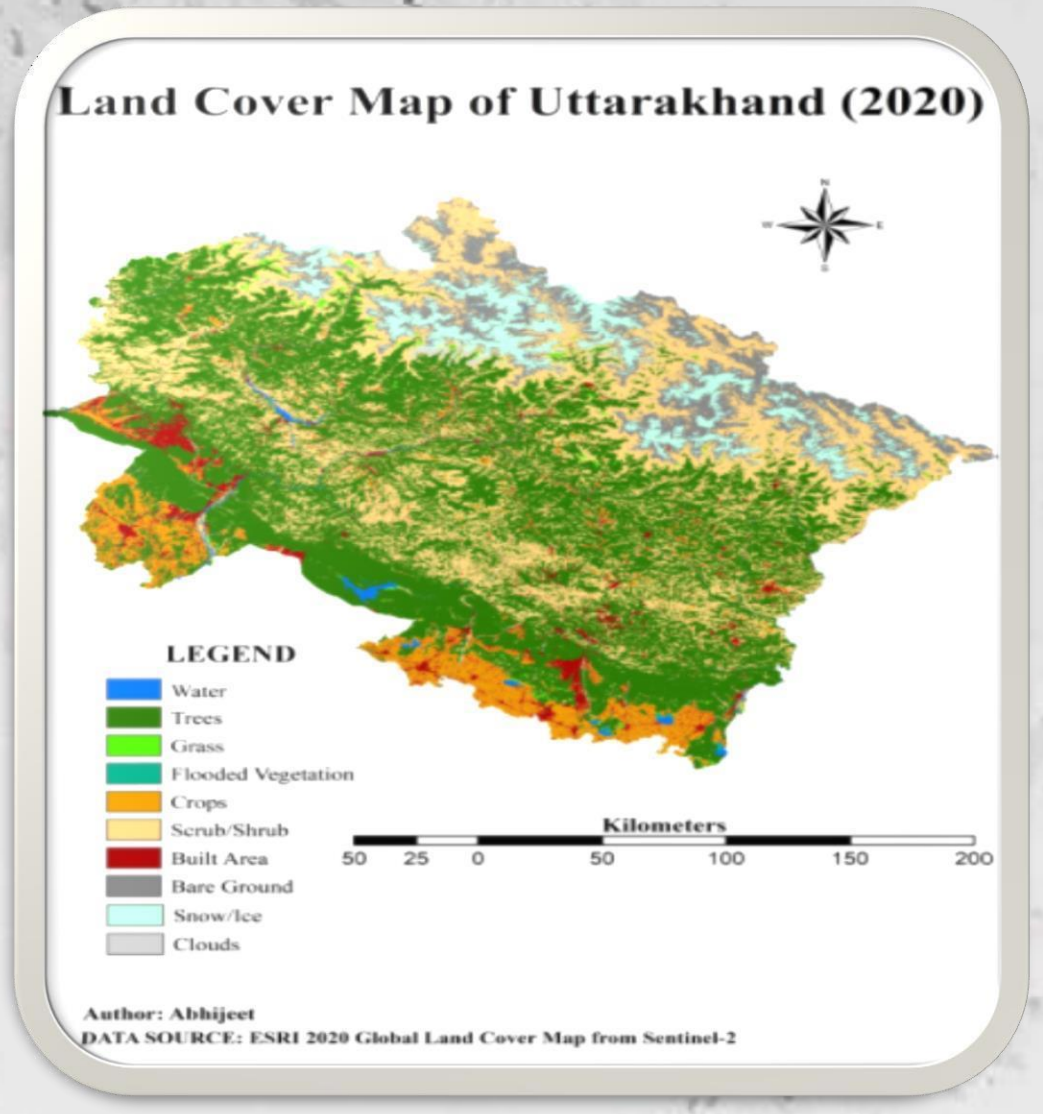
8. CAPTURING BUILDING DOOR & GATE



9. SURVEY DATA INTEGRATION (DGPS & ETS)



10. LANDBASE



11. SMART CITY MAPPING

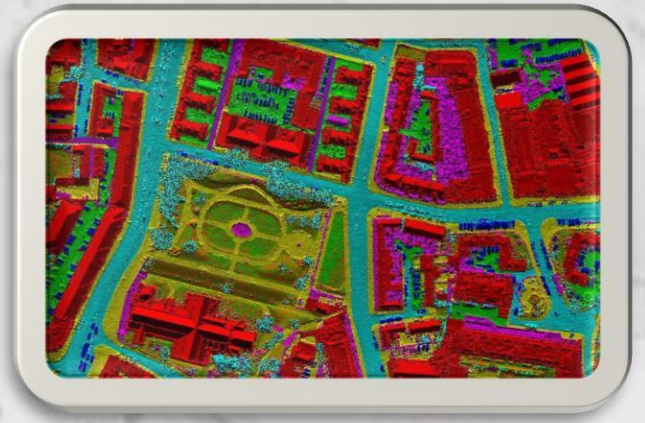
12. LULC(LAND USE & LANDCOVER

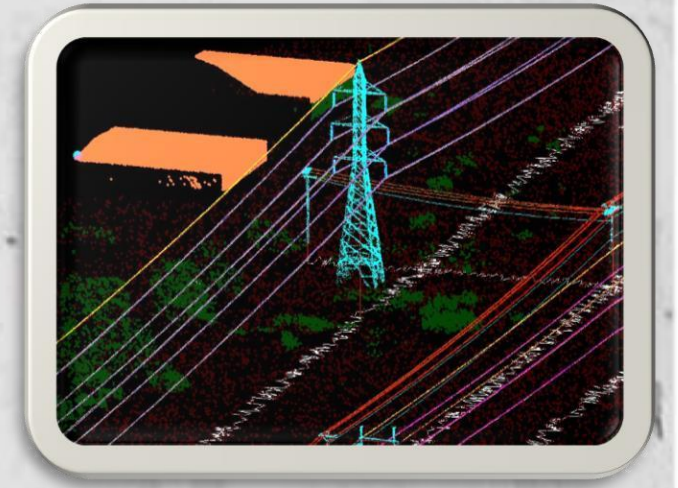
LIDAR DATA PROCESSING

SOFTWARE USED

1. BENTLEY MICRO STATION
2. TERRA SOLID(TERRA MATCH,TERRA SCAN,TERRA MODEL)

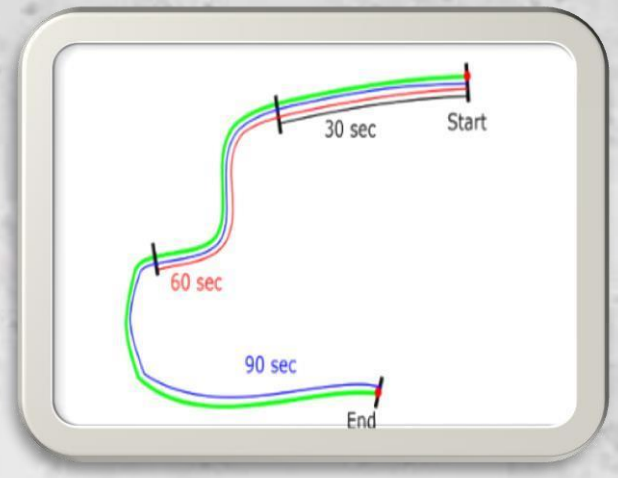
TEAM SIZE:15 MEMBER





LIDAR

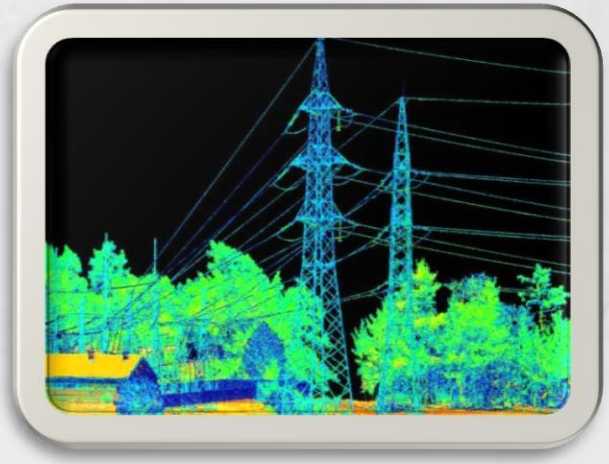
1. TRAJECTORY MATCHING



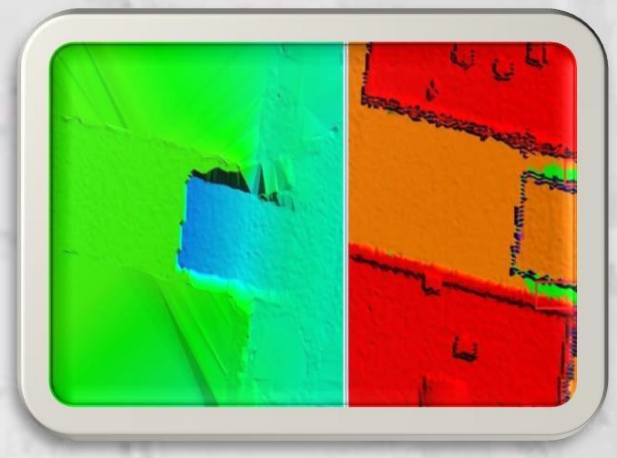
2. FEATURE EXTRACTION FROM POINT CLOUD

3. POINT CLOUD ANNOTATION

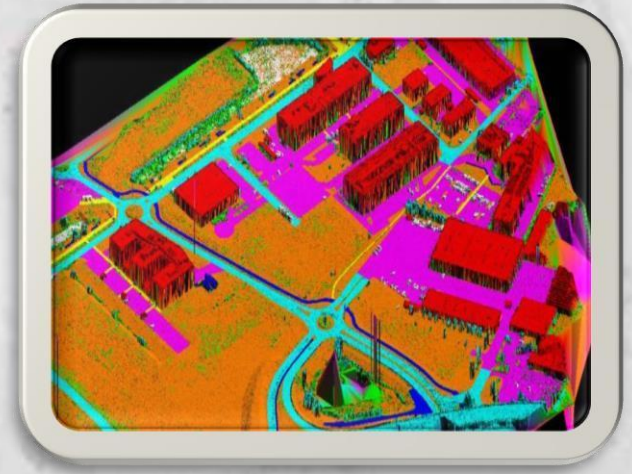
4. POWERLINE CLASSIFICATION



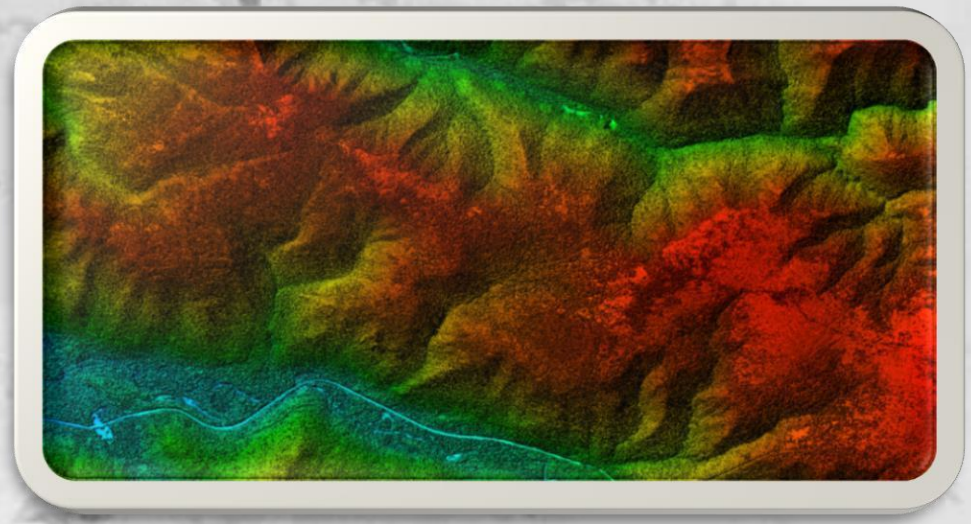
5. GROUND CLASSIFICATION



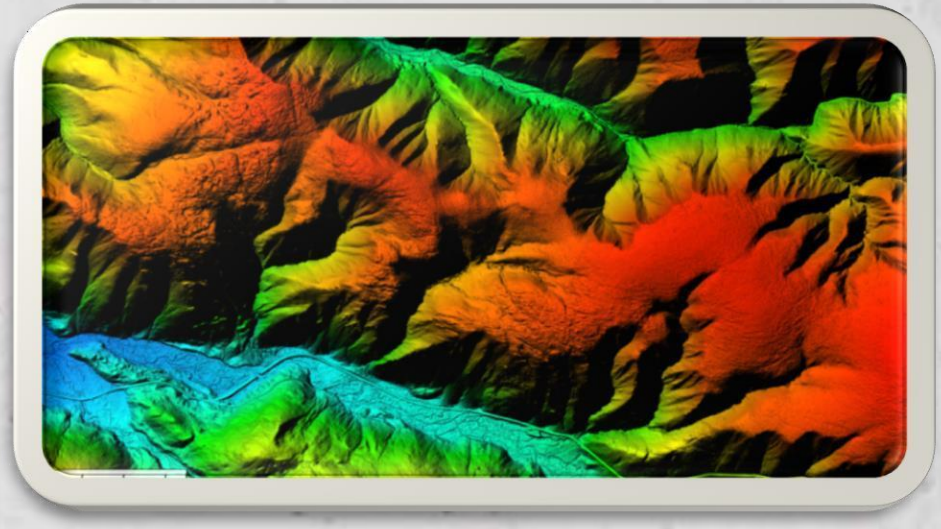
6. POINT CLOUD ADVANCE CLASSIFICATION

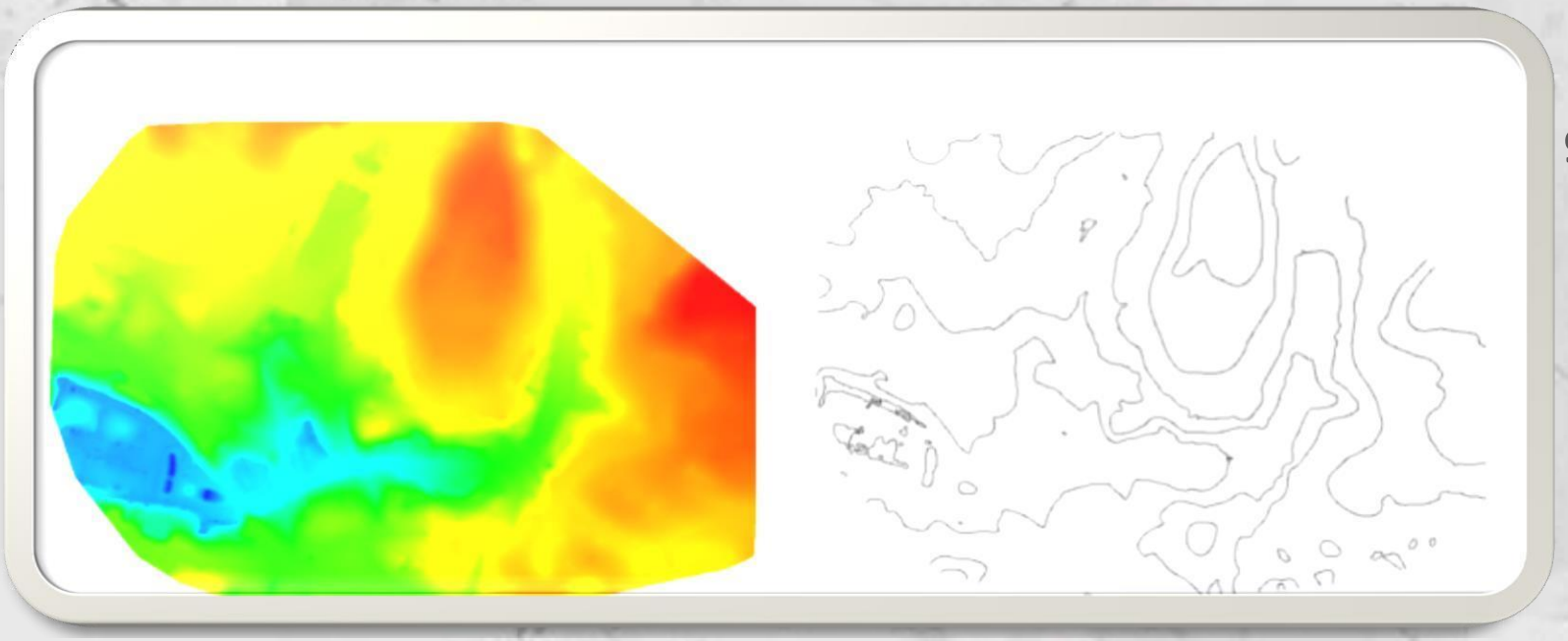


7. DTM



8. DSM





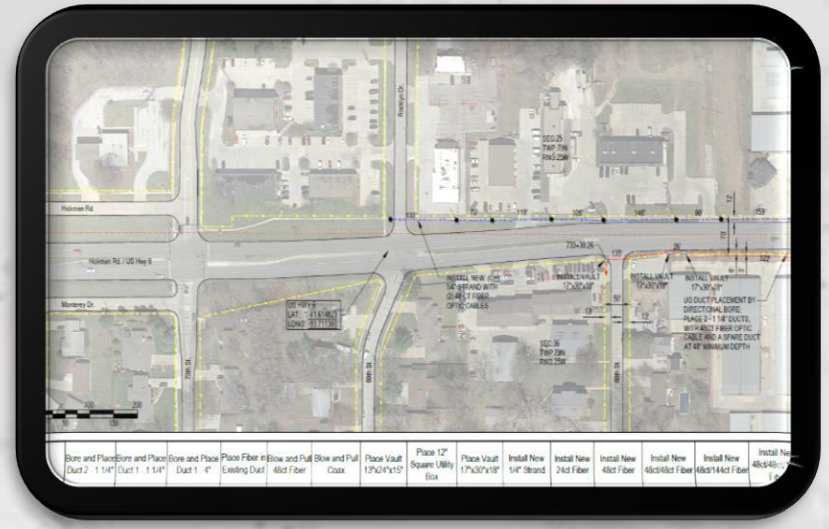
9. CONTOUR GENERATION

PROJECTS UNDERTAKEN & COMPLETED

TELECOME MAPPING

1. PLANNING AND DESIGN

2. DRAFTING



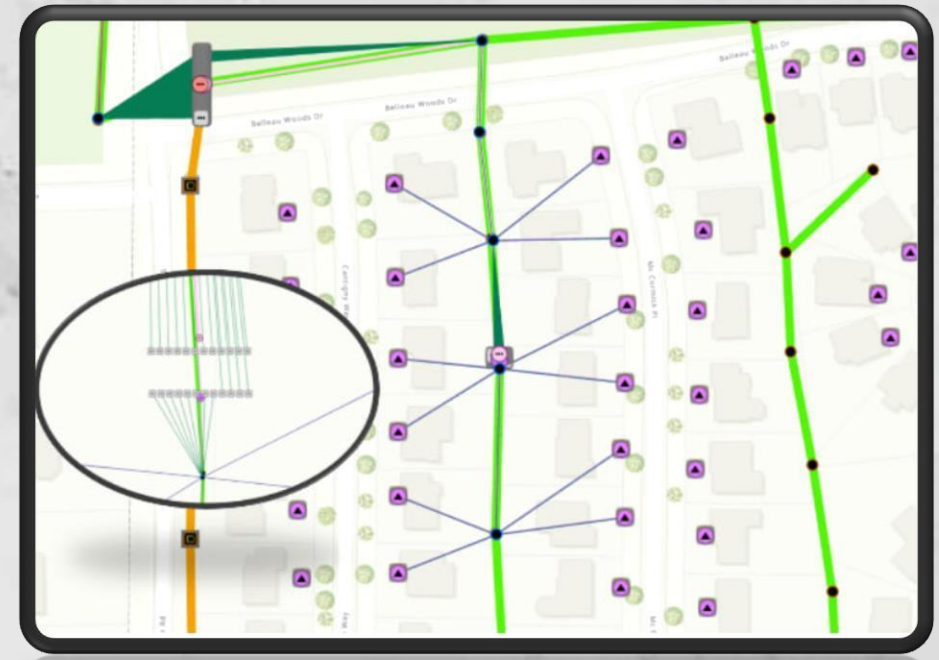
3. PERMIT

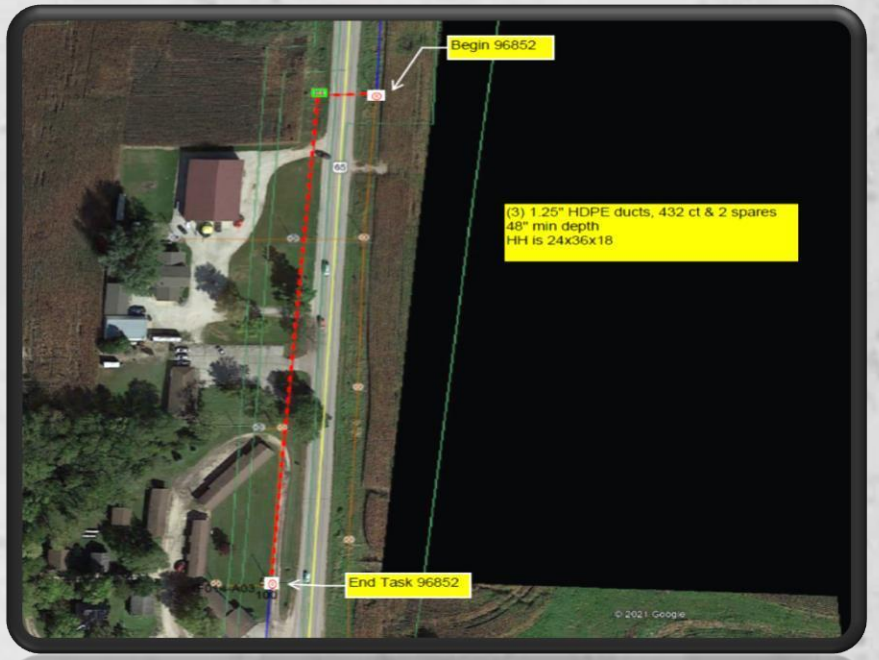
TELECOM MAPPING

SOFTWARE USED

1. QGIS
2. AUTOCAD MAP
3. CIVIL 3D

TEAM SIZE:10



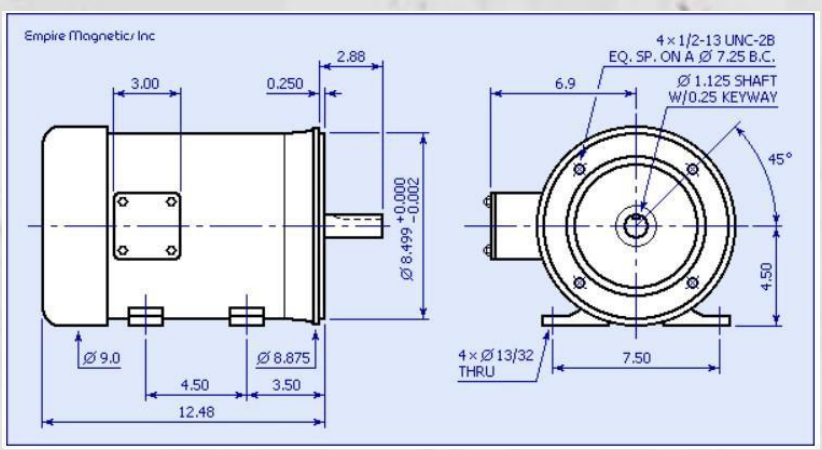


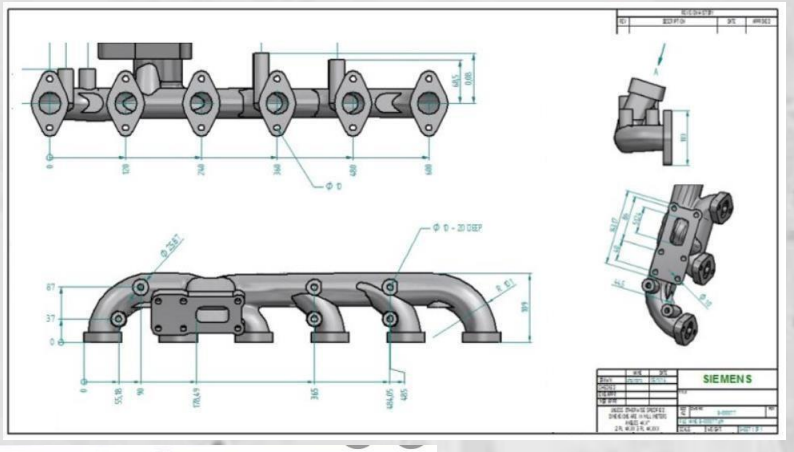
CAD

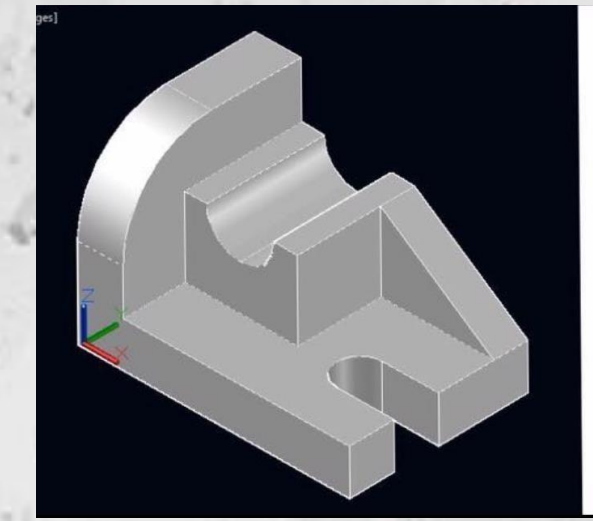
SOFTWARE USED

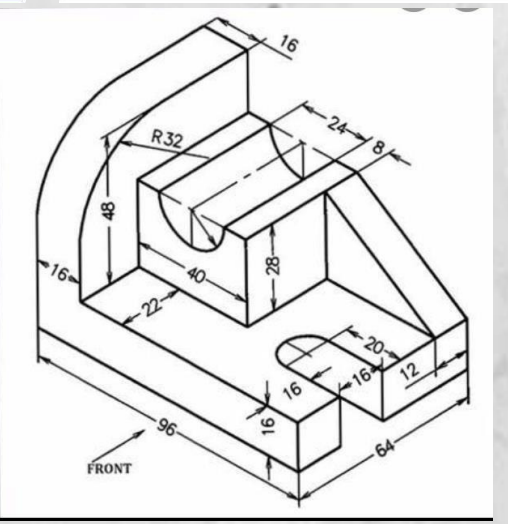
1. **AUTOCAD MAP**
2. **CIVIL 3D**

TEAM SIZE: 05



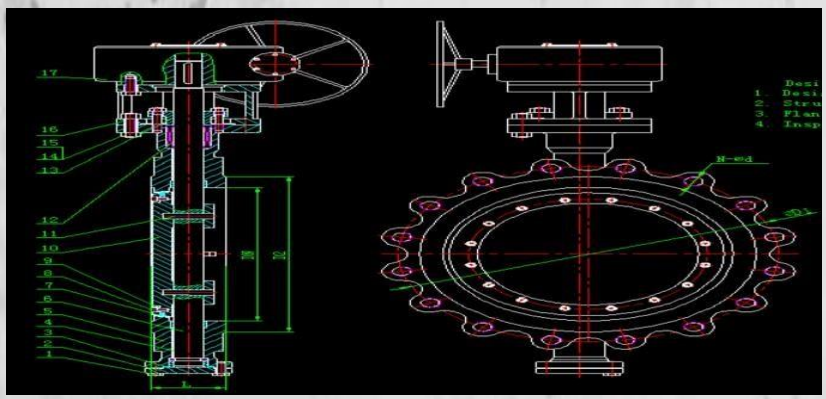






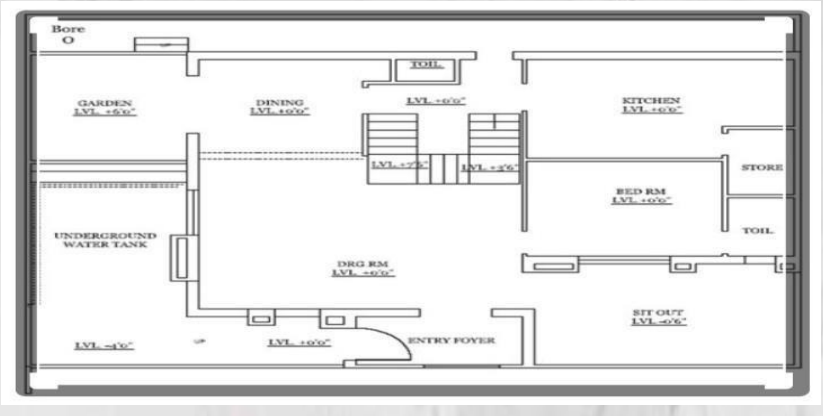
CAD

1. CAD DRAFTING & DRAWING

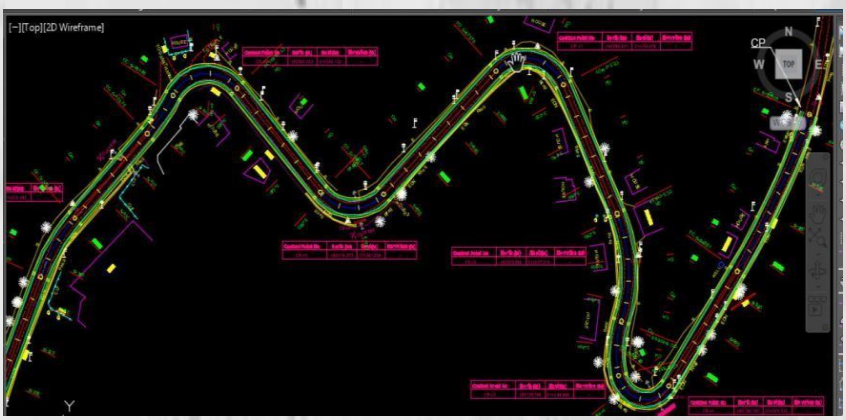


2. LAYOUT PLAN

3. FLOOR PLAN



4. CIVIL DRAWING



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GST: 01AATCA0654J1ZQ **CIN**: U45309JK2019PTC011273