TERRA FIRMA

COMPANY PROFILE

Q4 2026



TERRA FIRMA + TCR

TERRA FIRMA

STRONG FOUNDATIONS FOR A SUSTAINABLE FUTURE

STANDARD GLOBAL SGQC QUALITY CERTIFICATION

ISO 9001:2008 REGISTERED

ASCB(E) Accrediting Certifying Bodies UK

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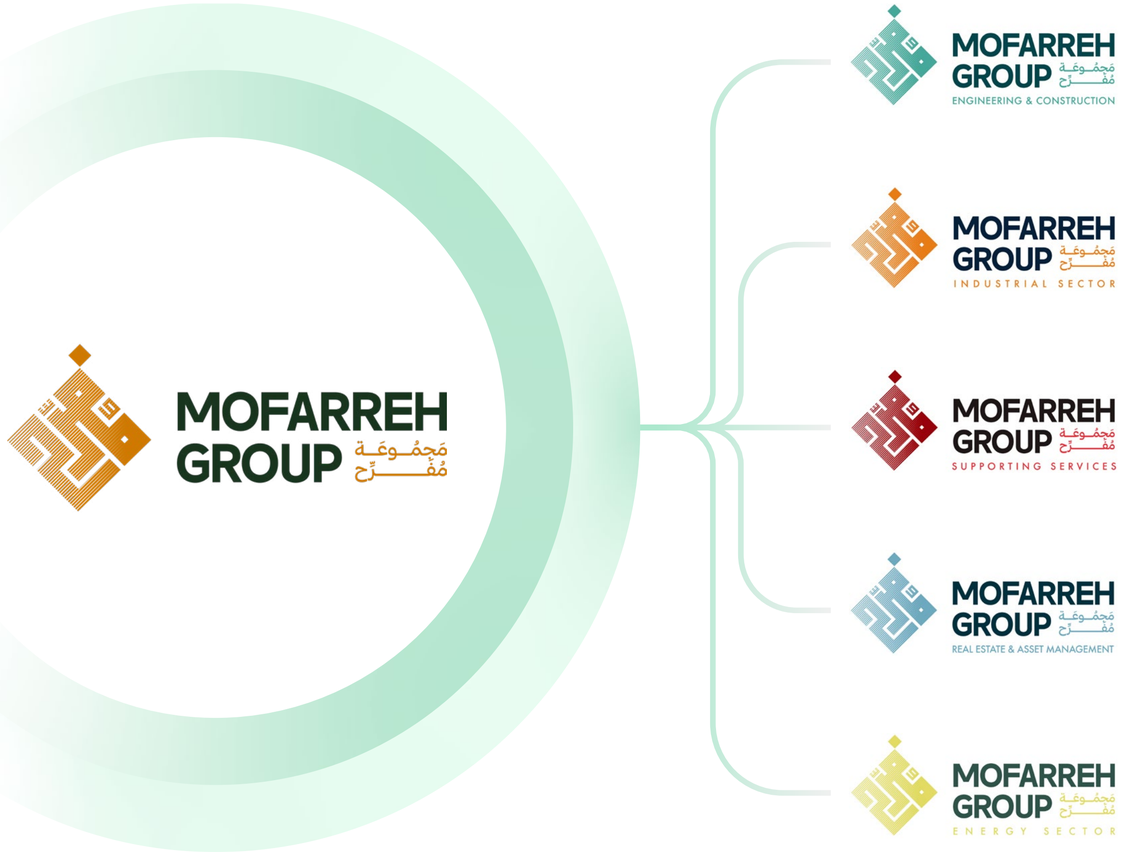
Group

MOFARREH ALHARBI & PARTNERS (MAH) was established in 1977 and has since built a strong legacy as a Saudi owned enterprise operating across contracting and trading sectors.

With decades of industry expertise, MAH delivers comprehensive solutions encompassing project management, project planning, administration, engineering, design, procurement, construction, and testing and commissioning.

The Group operates across a diversified portfolio of sectors, including civil, electrical, mechanical, telecommunications, mining, onshore and offshore works, rental equipment, landscaping, and real estate, among others, as outlined within its service offerings.

Sectors



TERRA FIRMA

TERRA FIRMA is the In-House Ground Engineering Division of Mofarreh Al Harbi & Partners (MAH) Group that provide Design and built ground improvement services using techniques like Dynamic Compaction (DC), Rapid Impact compaction (RIC), Dynamic Replacement (DR), Vibro Compaction (VC), Vibro Replacement (VR/ SC) and Rigid Inclusion (RI).

2000+
Employees

100M
m² Area Improved

9
Countries

2019
Year of Establishment

SAFE

[Sustainable, Advanced, Fast & Economical] Foundation Solutions



There is no perfect ground improvement solution that fits every soil or project. Our challenge is to provide custom made foundation and soil improvement solutions that meet our clients Budget, Schedule and Quality Standards.

ANAS **OURABI**
General Manager

Vision

To provide safe and quality work throughout the world, especially in those challenging projects where our experience and core values makes the difference.

Mission

To be contractor of choice for soil improvement works all over the world.

Core Values

- Technical excellence in Ground Engineering
- Commitment to safet
- Strong team and team development
- Integrity and honesty
- Encouragement of people creativity and ingenuity



Services

- Foundation Solutions
- Site Preparation
- Fill Compaction
- Deep Foundation
- Grouting
- Earth Retaining Structures

Services

- Existing soil conditions
- Location, schedule & budget
- Type of structure to be built
- Project design criteria

Applications



Industrial

Geotechnical solutions are used extensively in industrial projects, where the site›s subsurface conditions can impact the construction and performance of industrial facilities.



Oil & Gas

In the oil and gas industry, geotechnical ground engineering services are used to reinforce the soil conditions in which drilling operations will take place.



Infrastructure

In infrastructure projects such as roads, bridges, and tunnels, geotechnical solutions are used to improve the site›s soil conditions, properties, and control groundwater levels.



Mixed Use

Ground engineering solutions are used in mixed-use developments, which typically involve a variety of structures, including residential, commercial, and retail buildings. It will reduce the foundation sizes and project execution time.

Activities

- DC - Dynamic Compaction
- RIC - Rapid Impact Compaction
- RDC - Rapid Dynamic Compaction
- DR - Dynamic Replacement
- RDR - Rapid Dynamic Replacement
- VDR - Vibro Dynamic Replacement
- RI - Rigid Inclusion
- HEIC - High Energy Impact Compaction
- VC - Vibro Compaction
- VR - Vibro Replacement
- PVD - Pre-fabricated Vertical Drains

However, it is possible to extend our services to aspect of geotechnical engineering by utilizing the experience of our local partners and alliances.
Such additional services may include but not limited to:

Piling:

- Bored Piles
- Auger Cast Piles
- Micro Piles
- Driven Piles and Pipes
- Diaghram Walls

Grouting:

- Jet Grouting
- Compaction Grouting
- Permeation Grouting

Thrust Boring:

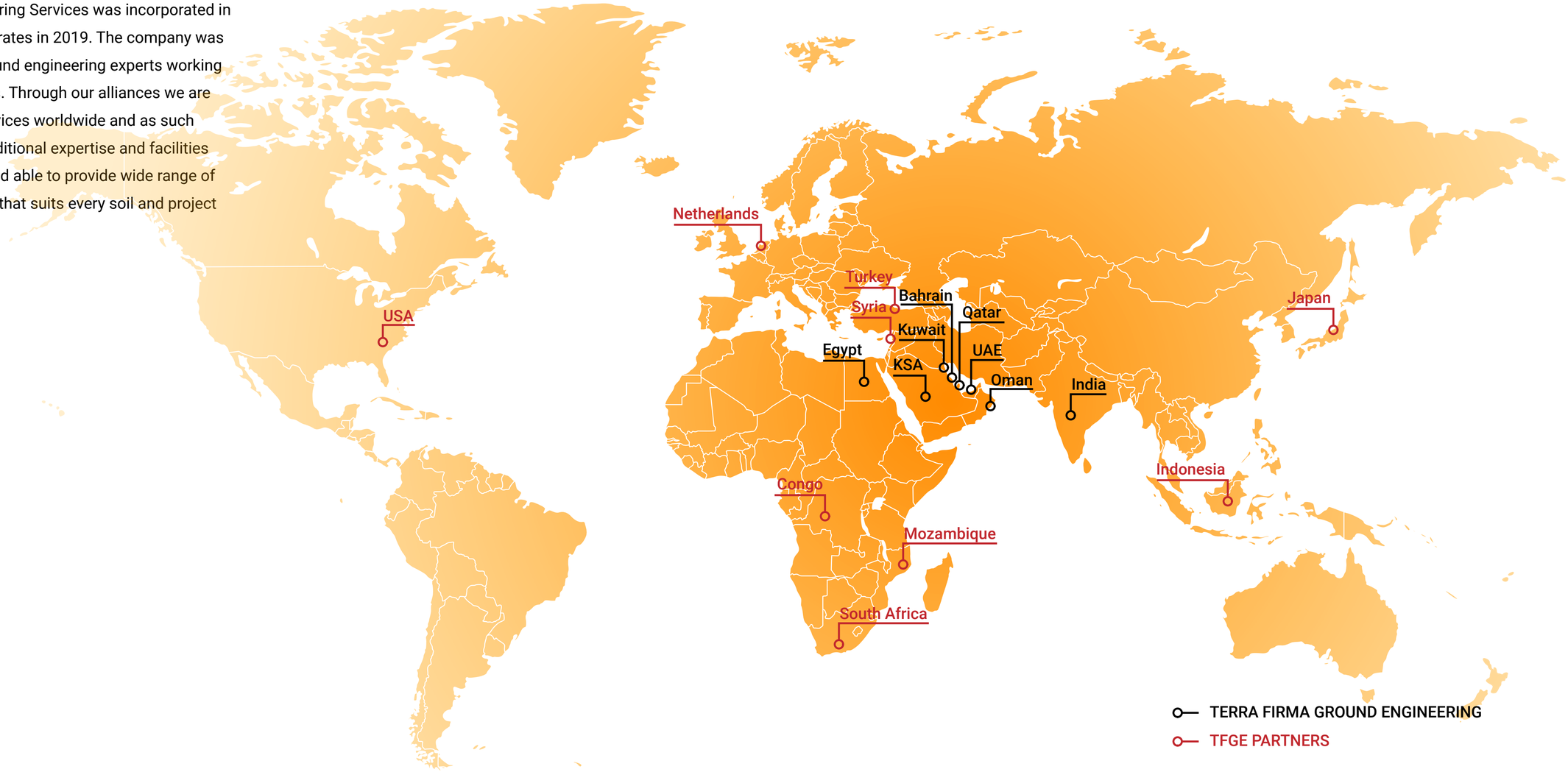
- Horizontal Drilling
- Micro Tunneling
- Pipe Jacking

Sand Compaction Piles

Instrumentation & Monitoring

Network

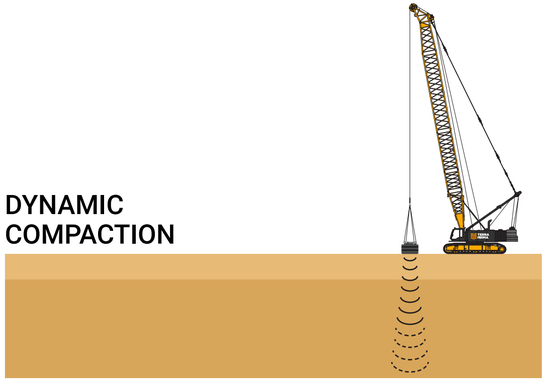
A Foundations Engineering Services was incorporated in Dubai, United Arab Emirates in 2019. The company was formed by team of ground engineering experts working together since 15 years. Through our alliances we are able to provide our services worldwide and as such we benefit from the additional expertise and facilities of our local partners and able to provide wide range of foundation techniques that suits every soil and project need.



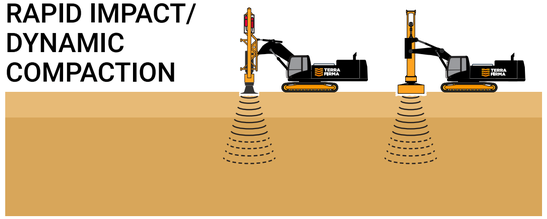
Solutions

There is no perfect ground improvement solution that fits every soil or project. Our challenge is to provide custom made foundation and soil improvement solutions that meet our clients Budget, Schedule and Quality Standards.

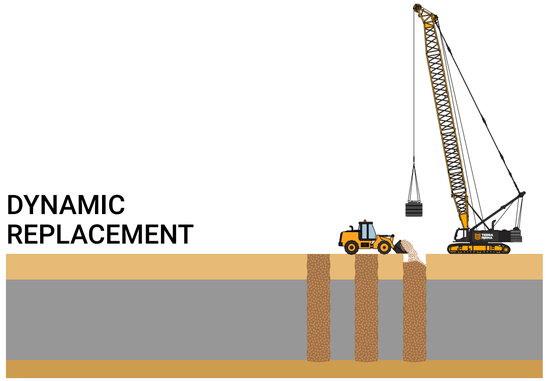
DYNAMIC COMPACTION



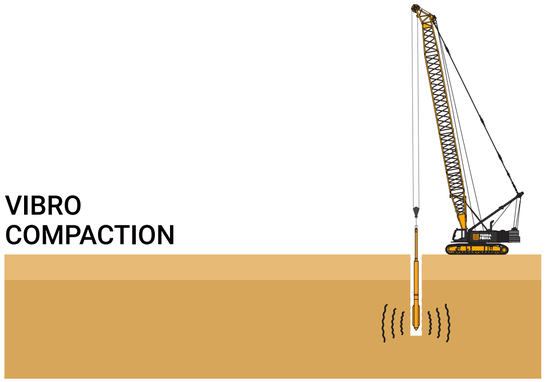
RAPID IMPACT/ DYNAMIC COMPACTION



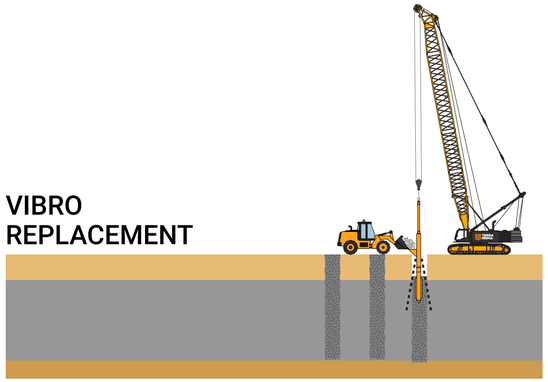
DYNAMIC REPLACEMENT



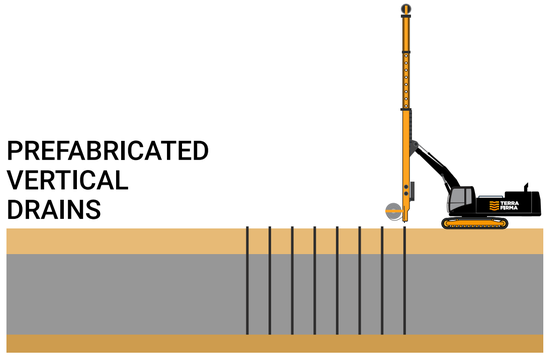
VIBRO COMPACTION



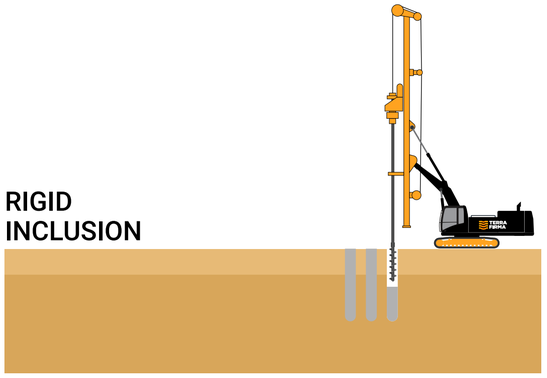
VIBRO REPLACEMENT



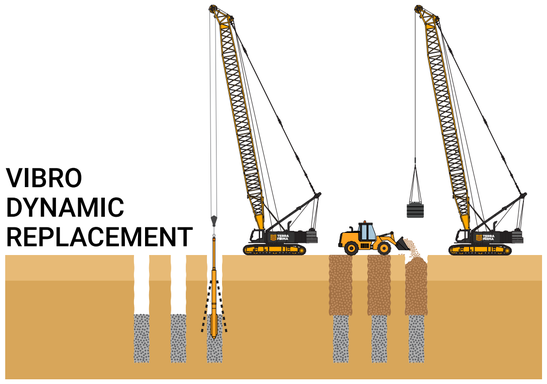
PREFABRICATED VERTICAL DRAINS



RIGID INCLUSION



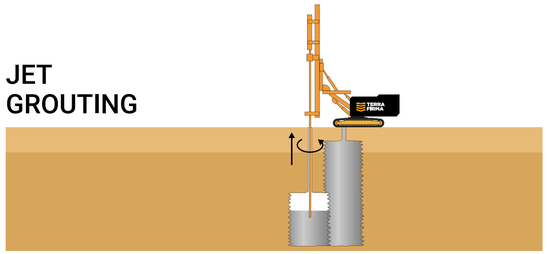
VIBRO DYNAMIC REPLACEMENT



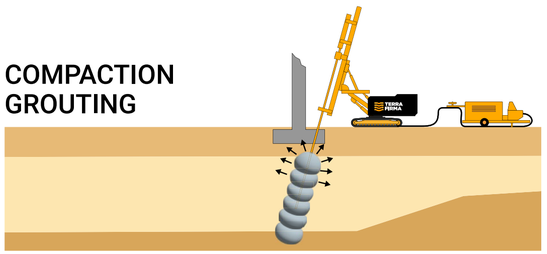
HIGH ENERGY IMPACT COMPACTION



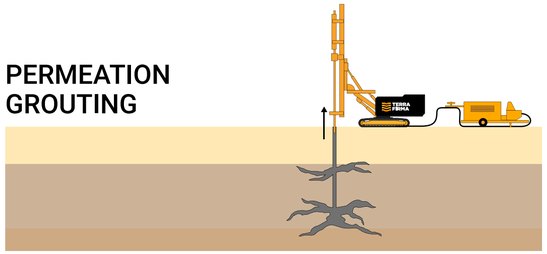
JET GROUTING



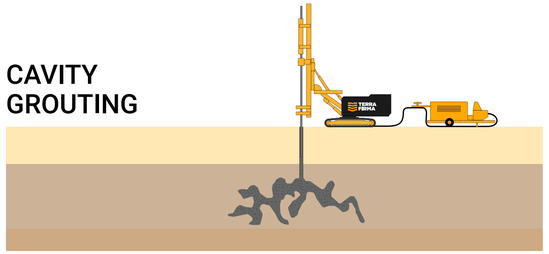
COMPACTION GROUTING



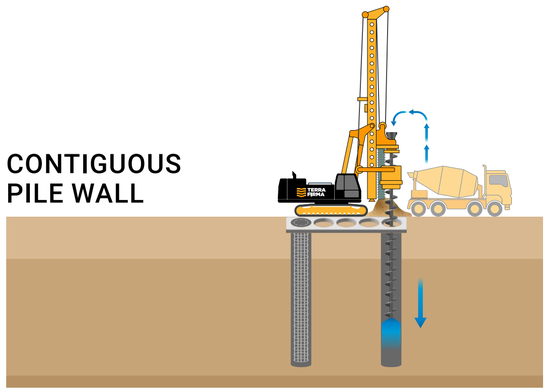
PERMEATION GROUTING



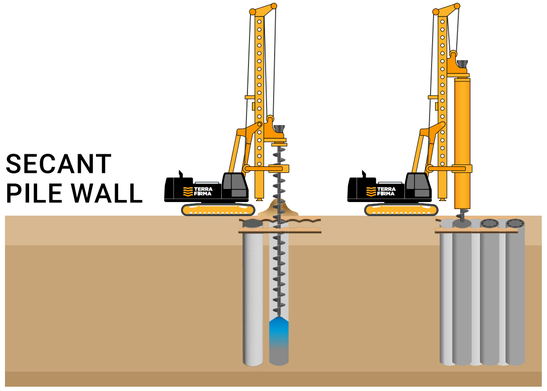
CAVITY GROUTING



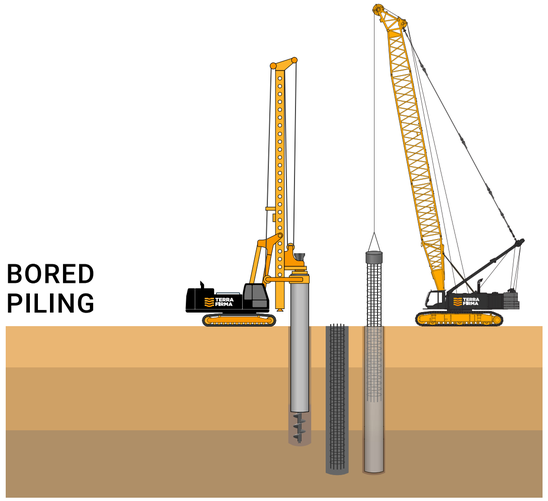
CONTIGUOUS PILE WALL



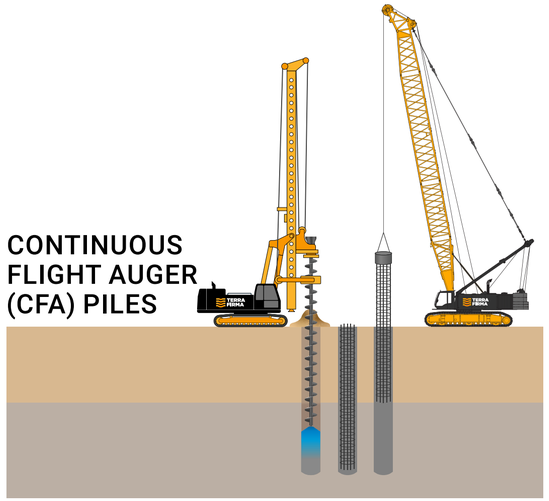
SECANT PILE WALL



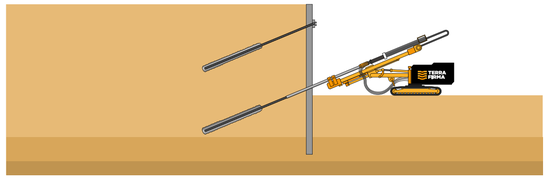
BORED PILING



CONTINUOUS FLIGHT AUGER (CFA) PILES



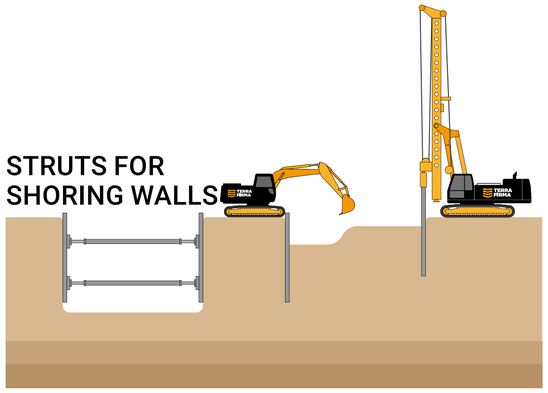
ANCHORAGE FOR SHORING WALLS



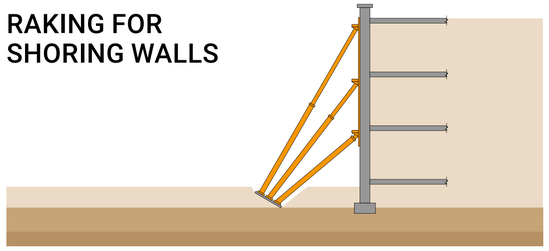
SOIL NAILS/ROCK BOLTS ANCHORING



STRUTS FOR SHORING WALLS



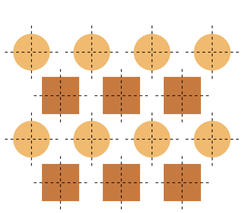
RAKING FOR SHORING WALLS



Dynamic Compaction

Dynamic Compaction (DC) is a Ground Modification technique whereby loose soils can be effectively and economically densified to improve its mechanical characteristics and allow construction of different types of structures without need of deep foundations or soil replacement. The method involves dropping a heavy steel pounders repeatedly on the ground at regularly spaced intervals. The weight and height of pounding depends on the degree of compaction desired. The usual range of pounder is between 12 ton to 25 ton and the drop height can be up to 25m.

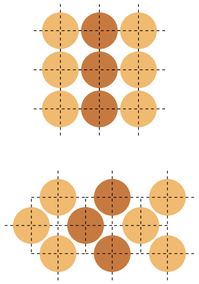
Dynamic Compaction (DC) method is applicable for a wide variety of soil conditions including saturated/ unsaturated loose Sands, even with the presence of silty pockets, dune sands, inorganic fill, reclaimed soils with variable characteristics and sizes even with presence of large sized boulders, landfills deposits and collapsible soils. Dynamic Compaction (DC) has been extensively used to compact loose soils to depths of up to 10m, in order to increase the bearing capacity, decrease post construction settlement and mitigate liquefaction risk in case of seismic events. Dynamic Compaction (DC) can be safely executed as close as 50-30m from existing/ under construction structures or concrete/civil works, without generating any undesirable vibrations. Special measures may also be taken to further reduce this distance such as decreasing the compaction energy or creating a surface trench to cutoff the propagation of surface waves created by the pounder impact.



Main Compaction

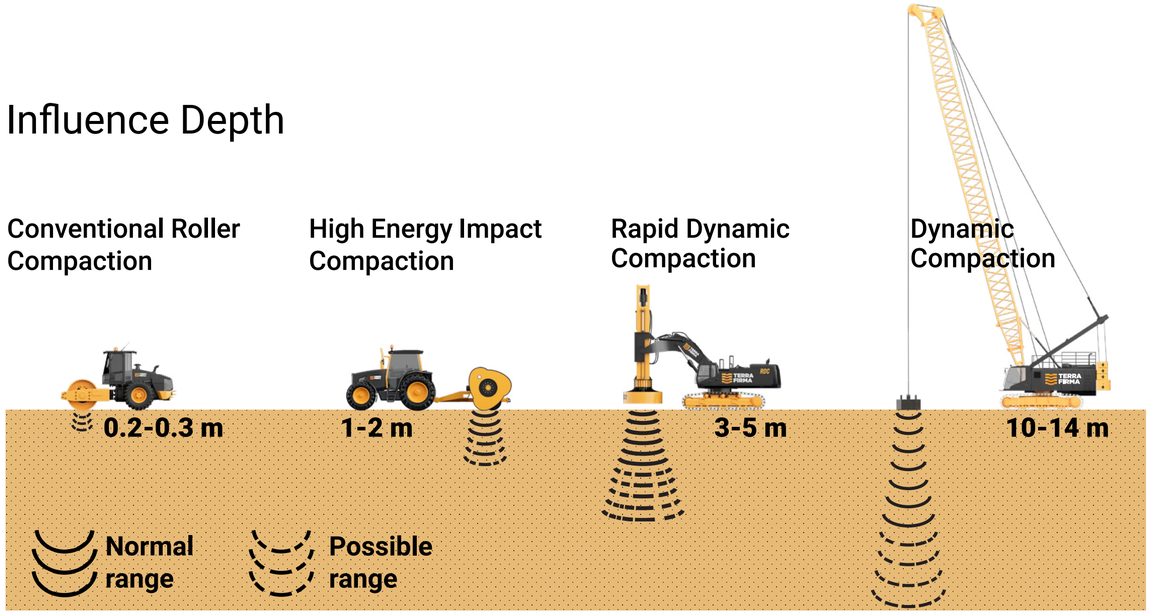
Primary Treatment

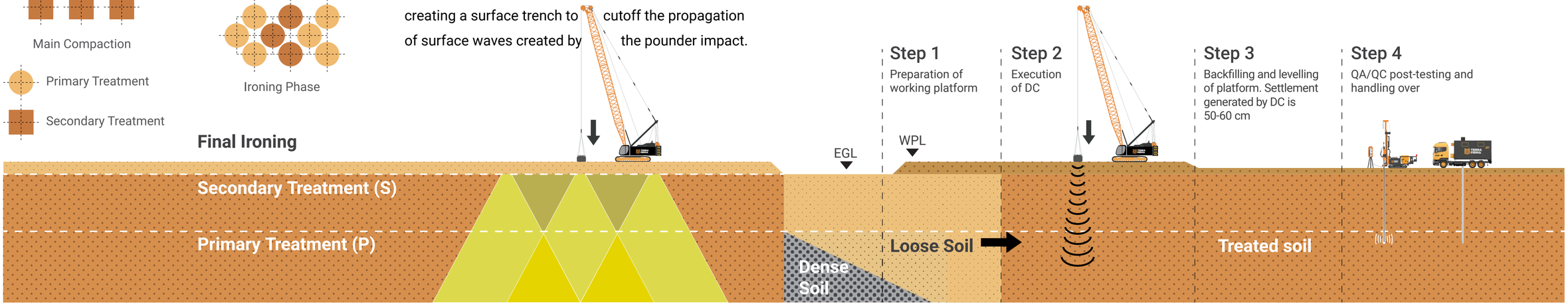
Secondary Treatment



Ironing Phase

Influence Depth





Rapid Dynamic Compaction

Rapid Dynamic Compaction (RDC) technique is a recently developed soil improvement technique, used for compaction of granular soils up to 5m deep, as alternative to DC method.

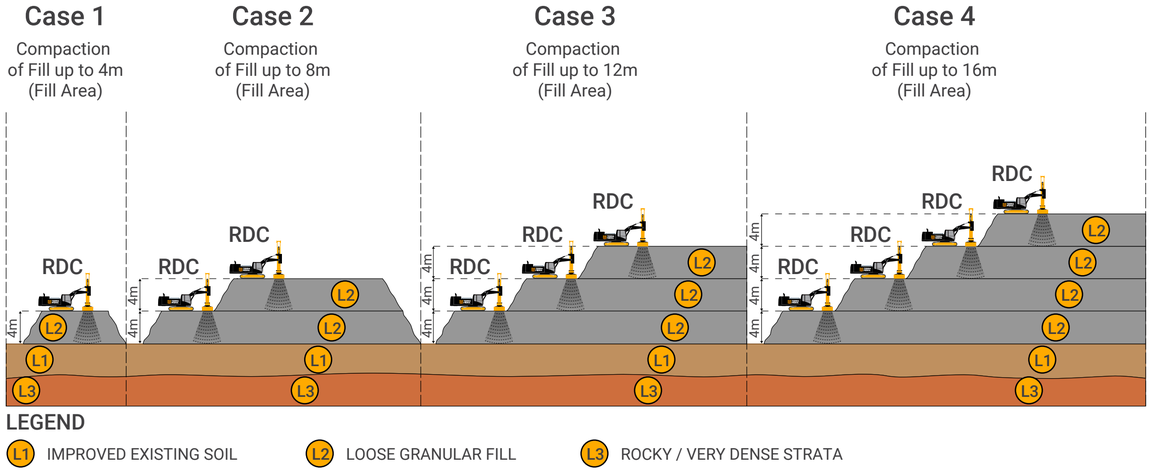
The RDC machine consists of a hydraulic excavator base with strengthened arm to which a strengthened arm to which a compaction hammer is attached.

The compaction energy is generated by the fall of a -12 16 ton hammer from height of up to 1.2 m. The hammer falls on a compaction foot having a diameter ranging from 2.0 to 2.6 m, in contract with the ground and the energy is in turn transferred to the ground.

The compaction of the subsoil is initiated by the vibrations generated by the impact of the weight upon the foot, and by the movement of the foot into the ground pushing the material into a denser structure.

RDC technique is well adapted to be used in combination with dynamic compaction and vibro dynamic compaction techniques in order to improve the surface soil.

RDC techniques generated limited vibrations comparing to dynamic compaction technique and thus can be used close to existing structures.



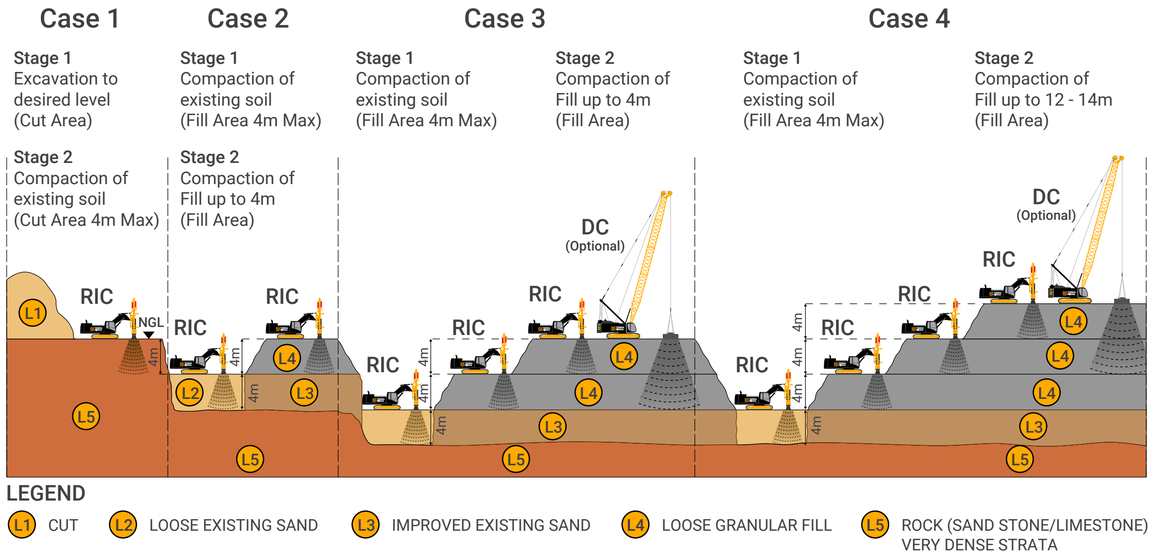
Influence Depth

Dynamic Compaction is a very effective method for fill compaction of granular materials including: Engineering fill, dune sands, dredged materials..., with very flexible specifications comparing to other classical compaction methods.

The most interesting aspect of using Dynamic Compaction for compaction of fill is that many meters of fill with thickness up to 10 meters can be placed and then compacted “in one go” instead FILL COMPACTION of compacting in thin layers, as per in traditional roller compaction.

The main advantages of DC comparing to the traditional method, are: Fast production: More than 40,000 m2/ month/crane/shift.

DC is very economical in comparison to roller compaction, especially for deep fills. Very flexible specifications for the backfilling materials.



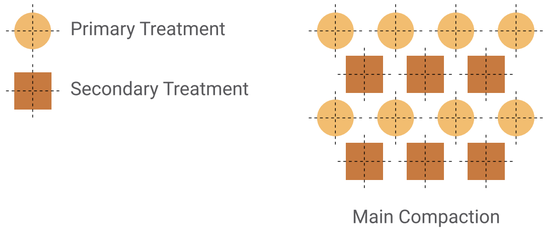
Dynamic Replacement

Dynamic Replacement (DR) technique is an extension of Dynamic Compaction (DC) to compressible soils (such as soft clays, silt, sabkha…) where a large diameter columns (up to 2.5m diameter) of very dense granular materials are constructed by dropping heavy pounders from great heights into the soft soil.

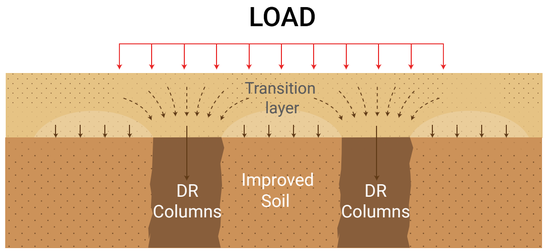
Dynamic Replacement (DR) technique can be implemented as a global treatment or localized under foundations only in order to increase the soil bearing capacity and reduce the total and differential post-construction settlements.

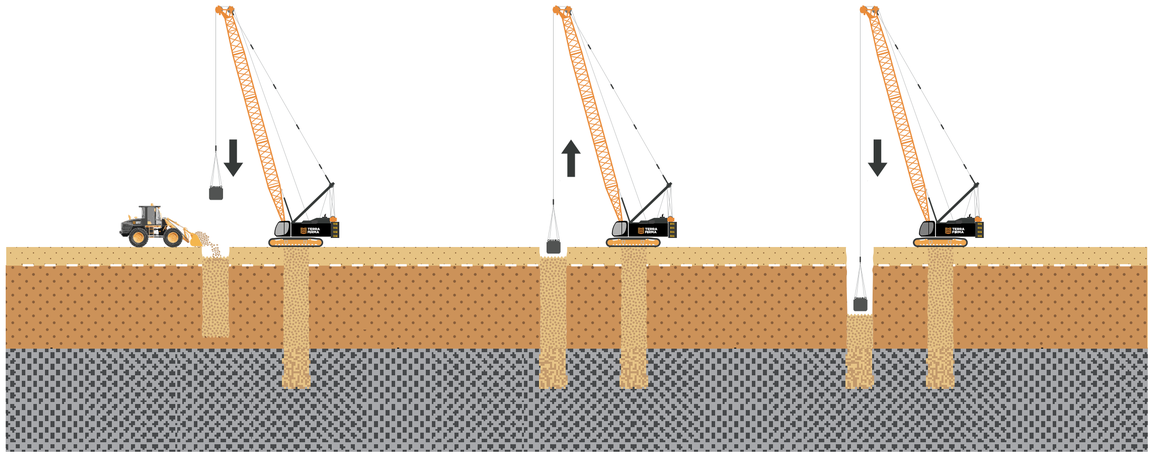
This method combines the advantages from both Dynamic Compaction and Stone Columns technologies by creating large sized Dynamic Columns with high stiffness and internal shear resistance and overall improvement of mechanical characteristics of the intermediate soil.

A large variety of readily available granular materials may be used for construction of the DR columns. Clean well graded sands may be the most suitable, however, other sources such as dune sands, gravel/sand mix, concrete rubble/crushed gravel mixed with sand etc. may also be successfully used.



Main Compaction



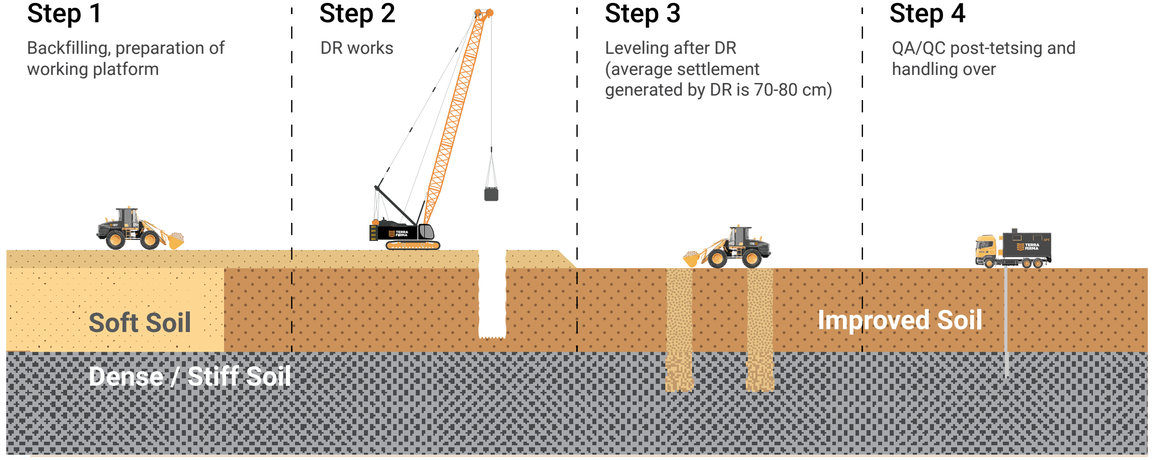


Step 1
Backfilling, preparation of working platform

Step 2
DR works

Step 3
Leveling after DR (average settlement generated by DR is 70-80 cm)

Step 4
QA/QC post-tetsing and handling over



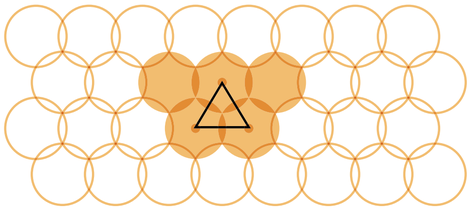
Vibro Compaction

Equipment and Execution

Depth vibrators are normally suspended from a suitable capacity crane for penetration into the ground assisted by water or air flushing under its own weight & follower tubes. Water jets are the essential part of the vibrator assembly. In granular soils the surrounding soil is compacted in predetermined stages during withdrawal from bottom to top.

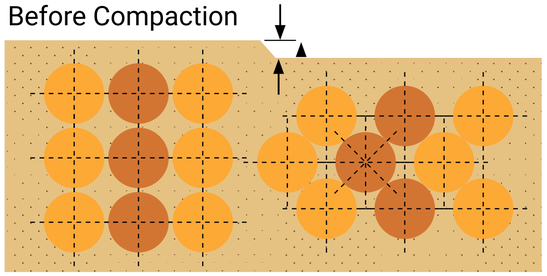
Principle of Vibro Compaction

The soil particles can be rearranged and compacted into denser state under the influence of vibrations. The range of influence zone depends on the type of vibrator used, the soil and the method employed. The soil subsidence or volume reduction after vibro compaction can reach unto %10 of the treated depth depending on the soil conditions and the intensity of the compaction effort.



Typical vibro compaction grid in triangular arrangement





Of the 10% Soil subsidence reaches up to treated depth

Work Sequence

Step 1: Penetration

With assistance of vibration, water/air jetting and under its own weight , the vibrator penetrated to the design depth. The penetration process may repeated to flush the hole and to insure that the hole stays open. Once design depth is reached, the water flow is reduced or stopped but side water jets are kept open to ensure the soil cave in from walls of the hole.

Step 2: Compaction

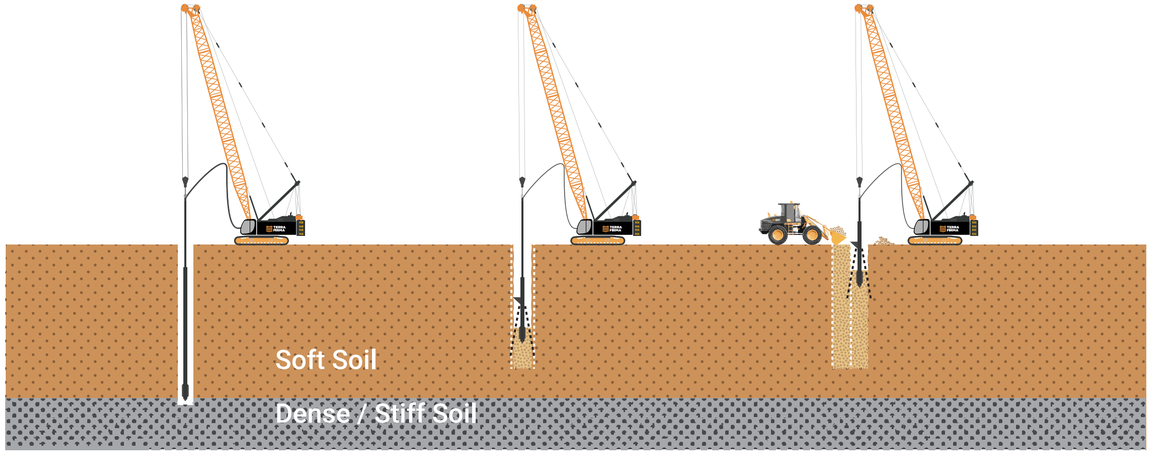
Compaction is carried out from bottom to top in predetermined steps during the field trial depending on soil behaviour. At each interval the vibrator is held vibrating until there is increase in power or for a time determined in the compaction trial which is normally 40s. The increase in density is indicated by the power consumption of the vibrator/vibroflot.

Step 3: Backfilling

A crated forms around the vibrator/vibroflot which is backfilled with either available surface sand or imported sand. In case of imported sand a volume of approximately %10 of the treated soil volume is required. In case of consumption of existing surface sand, a subsidence up to 10 % of treated depth occurs.

Step 4: Completed Surface

After completion of vibro compaction, the surface is roughly leveled and if required, compacted with a surface vibratory roller compactor.



Vibro Replacement (Stone Columns)

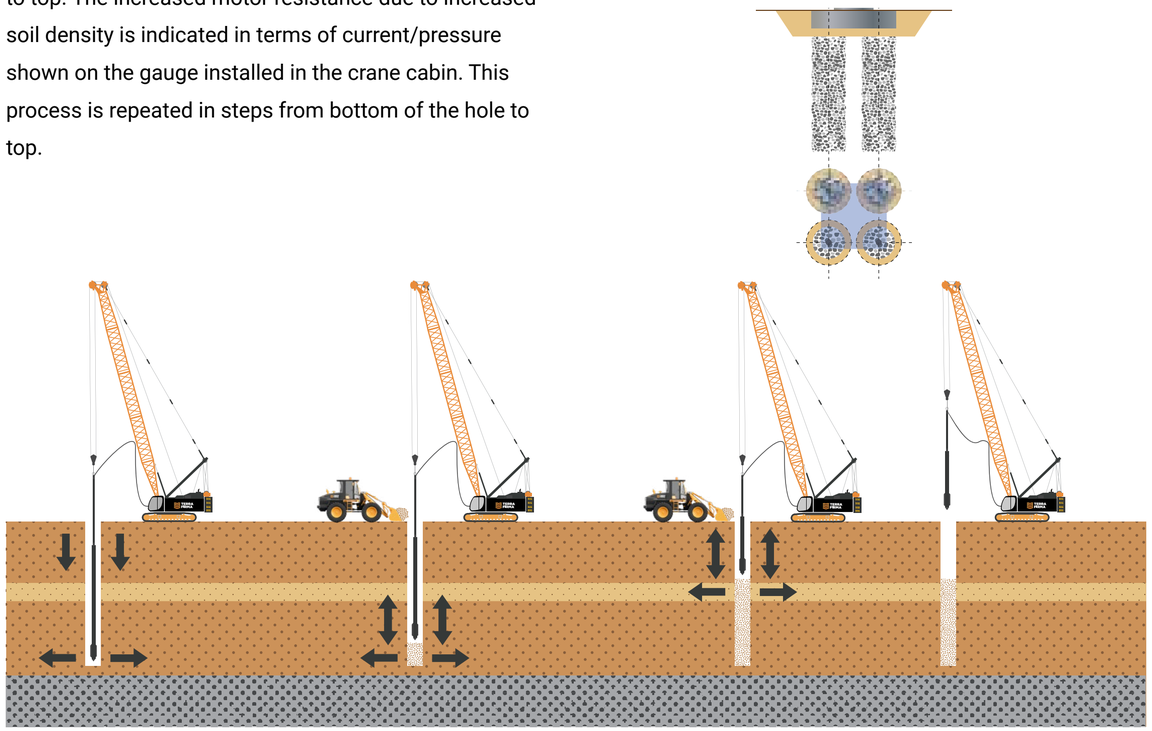
Equipment and Execution

This method entails the use of same equipment as the vibro compaction which is essentially a depth vibrator suspended from a crane. In this method the backfill material which is normally stones or crushed aggregate is used to build a stone column in non compactable soils having high fines content. The backfill is compacted and pushed into the sides of the hole, thus forming a tightly compacted stone column from bottom to top. The increased motor resistance due to increased soil density is indicated in terms of current/pressure shown on the gauge installed in the crane cabin. This process is repeated in steps from bottom of the hole to top.

Principle of Vibro Replacement

When the fines content exceeds more than %15, the vibrations from depth vibrator can no longer separate the soil particles from each other to achieve a closer density due to their cohesive forces. Improvement of such soils can be accomplished by installing stone columns.

Stone columns under a single footing



Work Sequence

Step 1: Penetration

With assistance of vibration, water/air jetting and under its own weight, the vibrator penetrated to the design depth. Upon reaching the design depth the vibrator is often completely withdrawn from the hole, allowing the hole to be cleaned from loose soil material. The water flow is adjusted to keep the annular space open around the vibrator.

Step 2: Replacement

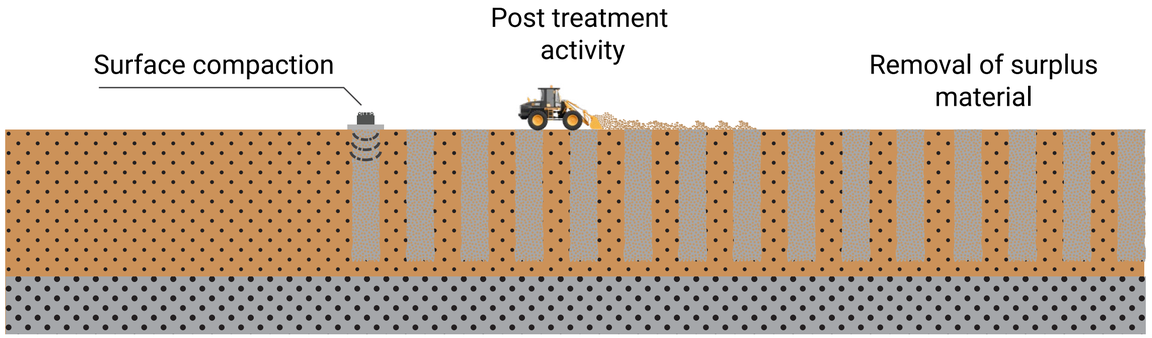
Now the coarse grained backfill material which is normally gravel or crushed stone aggregate is dumped into the hole. The stones are helped to reach the bottom of the hole by various up and down surging movements of the vibrator. Once the stones reach the bottom of the hole, the vibrator is re-penetrated to full depth again. The backfill is compacted and pushed into the sides of the hole with horizontal vibration and small up and down motion of the vibrator, thus forming a tightly compacted stone column. Increase in motor resistance indicates that the column building is completed at the particular level and repetition of the procedure should start at the next level.

Step 3: Completion of Stone Column

Further stones are added through annular space around the vibrator and the whole process is repeated up to the ground level in small steps, resulting in a densely compacted stone column which us tightly interlocked with the surrounded soil of enhanced density.

Step 4: Completed Surface

After completion of vibro replacement works, the topsoil should be cleaned off loose muddy deposits and re-compacted in layers if necessary using approved fill material to insure the correct transfer and distribution of the foundation load.



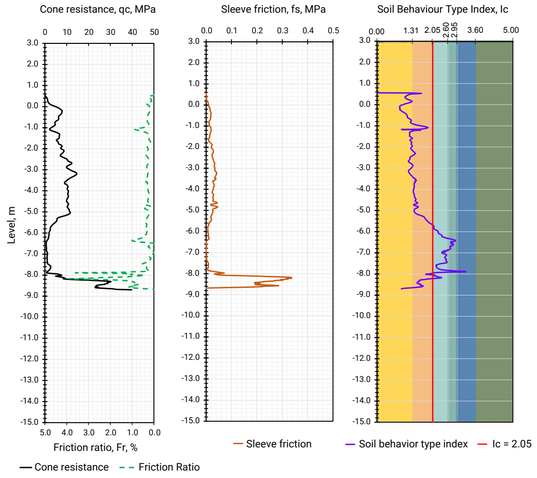
Quality Control

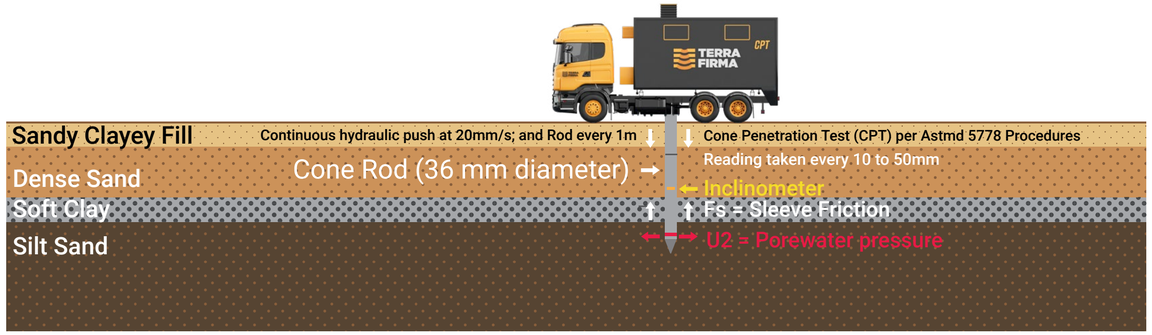
Data Recorder

The main working parameter are recorded on automated data recorder with real time printouts. The main parameters are time, power consumption and treatment depth. The data logger system is useful to control the vibro compaction of the soil and the working depth. The data logger display is normally positioned in the crane cabin.

Penetration Tests

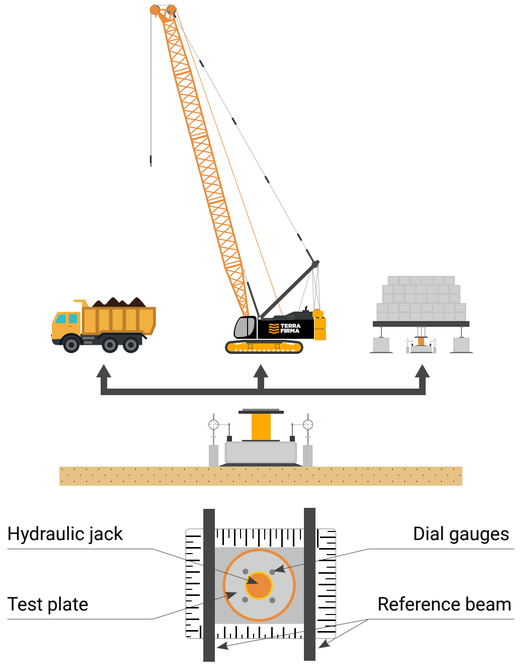
Normally Cone Penetration Tests (CPT's) are carried out for the measurement of compaction results due to its reliability and low cost. CPT's measure qc, side friction & pore water pressure. Post compact CPT is normally carried out after minimum one week of vibro compaction in order to allow excess pore water pressure to dissipate, which was created by vibro compaction process.

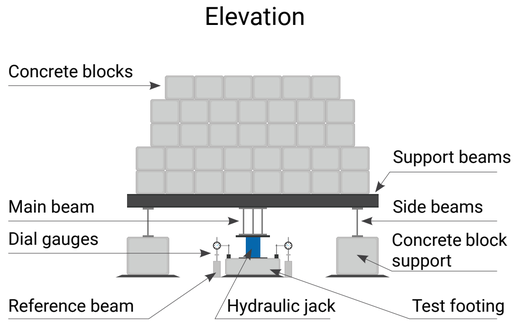


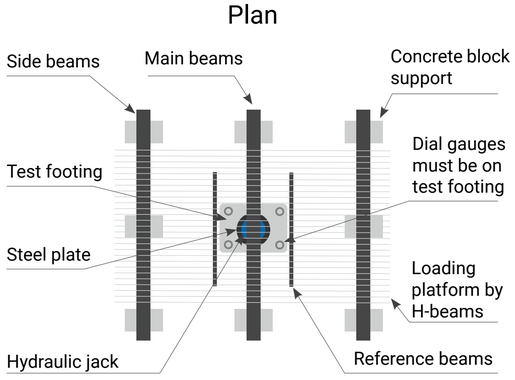


Load Tests

Are the best quality control tests for the cohesive soils treated by vibro replacement. Load test could either be a plate load test performed by using a 0.75m to 1.0m dia steel plate or a big scale zone load test using a test slab of the size between 2x2m to 3x3m depending on stone column layout, treatment depth, load and type of structure.

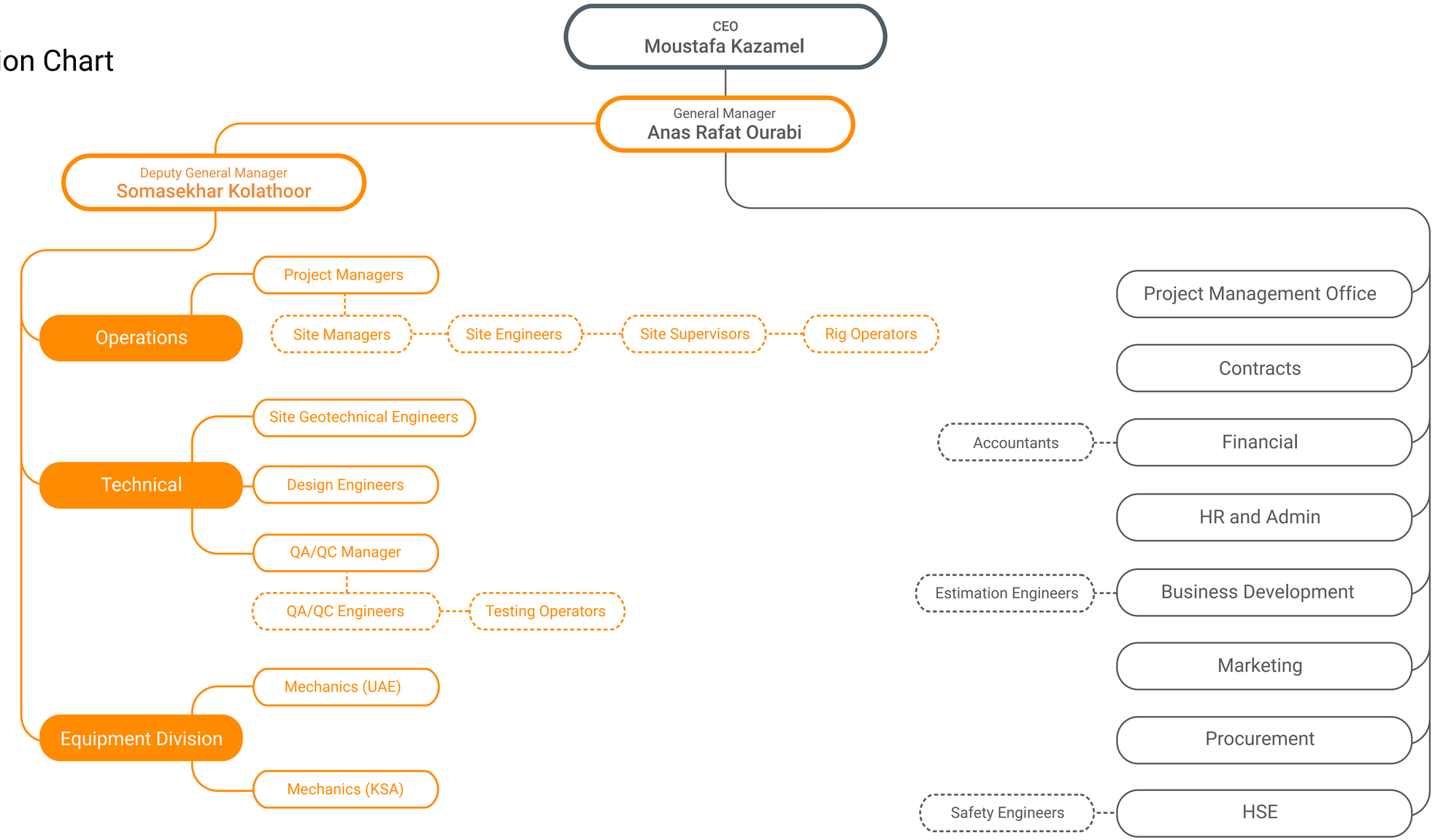






Team

Organization Chart





Anas **Ourabi**

General Manager, Geotechnical

Civil Engineering

- 20+ years of leadership experience in Ground Improvement and Geotechnical Engineering
- Bachelor's degree in Civil Engineering – Geotechnical from Tishreen University, Syria
- Directed large-scale projects across UAE, KSA, Oman, Kuwait, and Africa
- Expert in Dynamic Compaction, Replacement, and Rapid Impact Techniques

Dominican



Somasekhar **Kolathoor**

Deputy General Manager

Civil Engineering, Geotechnical

- 20+ years in Ground Improvement & Geotechnical Engineering
- Holds a Master's degree in Soil Mechanics & Foundation Engineering
- Led projects across UAE, KSA, Oman, Qatar, Kuwait and Mexico
- Specialized in Dynamic Compaction, Replacement, and Vibro Techniques

Indian



Ahmed **Alaaeldin**

Technical & Business Development Manager

Civil Engineering, Assistant Lecturer

- 13+ years of experience in Ground Improvement & Geotechnical Design
- Holds a Master's degree in Geotechnical & Structural Engineering
- Led and designed major projects across UAE, KSA, and Egypt
- Specialized in Dynamic Compaction, Rapid Impact, Stone Columns, and Shoring Works

Egyptian



Shereef **Aboo Backer**

Operation Manager

Civil Engineering

- 20+ years of experience in Ground Improvement and Geotechnical Projects
- Bachelor's degree in Civil Engineering from Calicut University, India
- Managed large-scale works across UAE, KSA, Oman, and Kuwait
- Expert in Dynamic Compaction, Replacement, and Vibro Techniques

Indian



Hossam **Edris**

Area Project Manager

Civil Engineering, Deep Foundations

- 30+ years in Deep Foundations, Ground Engineering, and Project Management
- Bachelor's degree in Civil Engineering and a Post-Graduate Diploma in Construction Management
- Led operations and major projects across UAE, KSA, Qatar, Kuwait, Oman, and India
- Specialized in Diaphragm Walls, Piling, Shoring, Anchors, Grouting, Soil Improvement, Rigid Inclusions, Dynamic Compaction, and Stone Columns

Egyptian



Alireza **Karimpour**

Area Project Manager

Civil Engineering, Geotechnical

- 25+ years of experience in Ground Improvement and Geotechnical Engineering
- Associate Degree in Civil Engineering, Road Subgrade from Lavizan University, Tehran, Iran
- Managed large-scale projects across UAE, India, Iraq, Georgia, and Central Asia
- Expert in Dynamic Compaction, Dynamic Replacement, Stone Columns, PVD, CMC, and Grouting Techniques

Iranian



Ziad **Khawam**

Business Development Manager

Civil Engineering

- 27+ years in construction, business development, and operations in UAE and GCC countries
- Degree in Civil Engineering from Jami't Alep University
- Led business growth and client relations for major projects across UAE and GCC
- Specialized in business development, sales strategy, client acquisition, and market expansion

Syrian



Mohamed Razik **Bathrudeen**

Project Manager

Civil Engineer, Geotechnical

- 15+ years of experience in Ground Improvement and Geotechnical Engineering
- Bachelor's Degree in Civil Engineering from Anna University, India
- Managed major projects across UAE and India in piling, shoring, grouting, and ground improvement
- Expert in Vibro Compaction, Dynamic Compaction, Piling, and Geotechnical Project Management

Indian



Tanush **Thampan**

Project Manager

Civil Engineering

- 10+ years of experience in Ground Improvement and Geotechnical Projects
- Bachelor's degree in Civil Engineering from Visvesvaraya Technical University, India
- Successfully led major projects across UAE, KSA, Bahrain, and India
- Expert in Dynamic Compaction, Rapid Impact, Rigid Inclusion, and Vibro Techniques

Indian



Abdelrahman **Ameen**

Project Manager

Civil Engineering

- 10+ years of experience in Civil Engineering and Project Management
- Bachelor's Degree in Civil Engineering
- Managed major projects across the Middle East in site execution and project delivery
- Experienced in project planning, coordination, execution, and operational management

Egyptian



Osama **Mostafa**

Site Manager

Civil Engineering, Geotechnical

- 10+ years of experience in Ground Improvement and Geotechnical Projects
- Bachelor's Degree in Civil Engineering from Helwan University, Egypt
- Managed major projects across UAE, KSA, and Egypt in site execution and project management
- Expert in Dynamic Compaction, Rigid Inclusions, Shoring, Piling, and Enabling Works

Egyptian



Islam **Abubaker**

Technical Engineer

Civil Engineering, Geotechnical

- 7+ years of experience in Structural and Geotechnical Design
- Bachelor's degree in Civil Engineering from Minya University, Egypt
- Worked on complex projects across UAE and Egypt, from high-rises to deep foundations
- Specialized in Piling, Shoring, Ground Anchors, and Soil Improvement Techniques

Egyptian



Wahith **Vavanan**

Geotechnical Engineer

Civil Engineering, Geotechnical

- 9+ years of experience in Geotechnical Design and Ground Improvement Projects
- Master's degree in Soil Mechanics & Foundation Engineering from Anna University, India
- Worked on large-scale developments across UAE, KSA, Kuwait, and Bangladesh
- Specialized in Dynamic Compaction, Replacement, RIC, and Vibro Techniques

Indian



Amin **Mohamed Lasheen**

Site Manager

Civil Engineering, Geotechnical

- 8+ years of experience in Ground Improvement and Geotechnical Projects
- Bachelor's degree in Civil Engineering from AAST, Egypt
- Managed large-scale site operations across Egypt with leading engineering firms
- Expert in Rigid Inclusions, Stone Columns, and PVD Techniques

Egyptian



Hussein **Sameh**

Equipment Manager

Mechatronics Engineer

- 14+ years of experience in Equipment Management for Ground Improvement and Geotechnical Engineering
- Bachelor's Degree in Mechatronics Engineering from the German University in Cairo
- Managed major equipment operations across KSA and Egypt
- Expert in Asset Management, Heavy Equipment, and Maintenance Planning

Egyptian



Mina **Gweid**

Site Manager

Civil Engineering, Geotechnical

- 10+ years of experience in Ground Improvement and Geotechnical Projects
- Bachelor's Degree in Civil Technology Engineering from Beni Suef University, Egypt
- Managed major projects across KSA and Egypt in site execution and quality control
- Expert in Dynamic Compaction, Dynamic Replacement, RDC, Stone Columns, and PVD Works

Egyptian



Mohammed **Albedaiwi**

Projects Safety Manager

Occupational Health, Safety, and Environment

- 14+ years of HSE experience in geotechnical and infrastructure projectss
- Bachelor's Degree in Business Administration with advanced Health & Safety certifications
- Led HSE operations across major Ground Improvement, Deep Piling, and RIC projects in KSA
- Expert in HSE Governance, Risk Management, Emergency Planning, and Compliance Auditing

Egyptian



Mohamed **Zakaria**

Geotechnical & Estimation Engineer

Civil Engineer, Geotechnical

- 6+ years of experience in Geotechnical Design and Ground Improvement
- Bachelor's Degree in Civil Engineering from Ain Shams University, Egypt
- Worked on major projects across UAE and Egypt in soil improvement and foundation design
- Expert in Dynamic Compaction, Dynamic Replacement, Vibro Techniques, and Geotechnical Design

Egyptian



Sujith **Madathil**

Production Design Engineer

Civil Engineering

- 15+ years of experience in Ground Improvement and Geotechnical Projects
- Diploma in Civil Engineering from the State Board of Technical Education, India
- Experienced in production design, QA/QC, and site supervision across UAE, KSA, and Africa
- Specialized in Dynamic Compaction, Replacement, and Rapid Impact Techniques

Indian



Ahmed **Ashraf**

Senior Geotechnical Design & Estimation Engineer

Civil Engineering, Geotechnical

- 8+ years of experience in Geotechnical Design and Ground Improvement Engineering
- Master's Degree in Geotechnical Engineering and Bachelor's Degree in Civil Engineering from Cairo University
- Worked on major projects across KSA, Egypt, USA, and Rwanda in design, estimation, and soil improvement
- Expert in Dynamic Compaction, Dynamic Replacement, RIC, Stone Columns, Shoring, and PLAXIS Modeling

Egyptian



Omar **Dannawi**

Technical & Commercial Engineer

Civil Engineering

- 3+ Years of experience in Ground Improvement and Civil Engineering
- Bachelor's Degree in Civil Engineering from Lattakia University in Syria
- Designed and executed projects across UAE
- Specialized in technical, operational, and tendering aspects of DC, DR and RIC techniques

Syrian



Lama **Abuteir**

Technical Engineer

Civil Engineering, Geotechnical

- 5+ years of experience in Ground Investigation, Ground Improvement and Geotechnical Projects
- Bachelor's degree in Civil Engineering from University of Palestine
- Worked on major projects across UAE in geotechnical & geophysical investigation and foundation design
- Expert in geotechnical design report and soil improvement design techniques

Palestinian

5. Equipment

Fleet Overview

Built for scale. Ready for every challenge.

2,765
Total Units

30+
Equipment Types

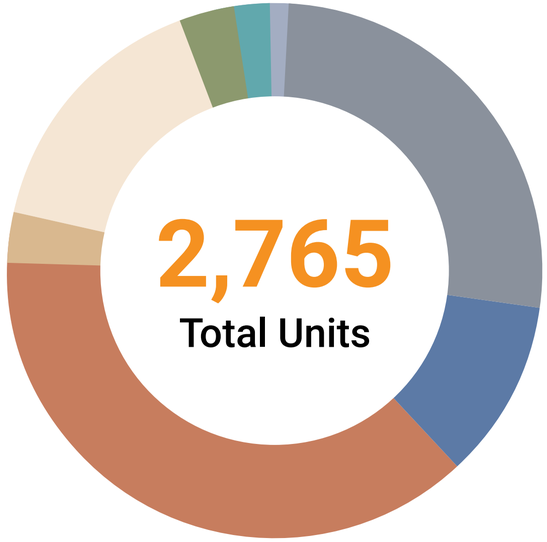
10+
Global Brands

Built to Deliver Performance at Scale

Maintained to the Highest Standards

Ready to Deploy Anytime, Anywhere

Fleet Breakdown by Category

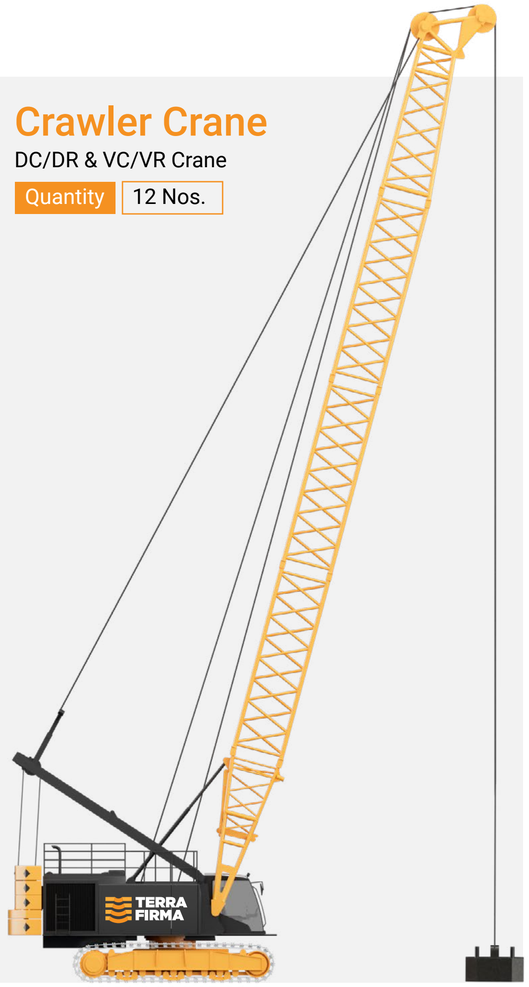


Ground Improvement	22
Testing & Instrumentation	5
Earthmoving	731
Haulage Equipment	296
Transport Fleet	1,084
Crushing & Screening	88
Site Support Equipment	451
Tanker Fleet	88

Ground Improvement

Crawler Crane
DC/DR & VC/VR Crane

Quantity	12 Nos.



RDC Machine

Quantity	8 Nos.
Capacity	17 Tons



RIC Machine

Quantity	2 Nos.
Capacity	9 Tons



Testing & Instrumentation

CPT Truck
Testing Rig

Quantity	1 Nos.



CPT Crawler Mounted
Testing Rig

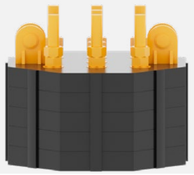
Quantity	4 Nos.



Pounders

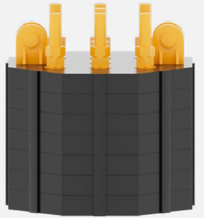
DC Pounders

Quantity	6 Nos.
Weight	16-18 Tons



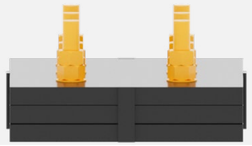
DR Pounders

Quantity	9 Nos.
Weight	20 Tons



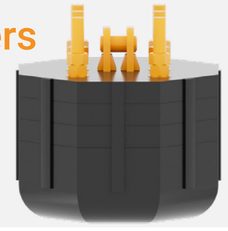
Ironing Pounders

Quantity	3 Nos.
Weight	16 Tons



DC/DR Pounders

Quantity	11 Nos.
Weight	23.5 Tons



Earthmoving



Excavator

- Caterpillar
- Komatsu
- Volvo
- Doosan
- Hitachi

270 Units



Bulldozer

- Caterpillar
- Komatsu
- Volvo

138 Units



Wheel Loader

- Caterpillar
- Kawasaki
- Doosan
- Komatsu

120 Units



Roller Compactor

- Caterpillar

80 Units



Backhoe Loader

- Caterpillar
- JCB

50 Units



Motor Grader

- Caterpillar

45 Units



Skid Loader

- Bobcat
- Caterpillar

28 Units

Fleet & Support Equipment



Haulage Equipment

Dump Truck
Dumper

- Mercedes
- Caterpillar
- Volvo

296 Units



Transport Fleet

Box Trailer
Head Trailer
Low Bed Trailer
Flat Bed Trailer

- Man
- Mercedes
- Volvo
- Local

1,084 Units



Crushing & Screening

Mobile Crusher
Screen Crusher

- Meka
- Local

88 Units



Site Support Equipment

Generator
Tower Light
Diesel Tank
Jack Hammer

- Caterpillar
- Cummins
- Denyo
- Khonaysser
- Doosan
- JCB
- KMGP
- Perkins
- Alpha-Plus
- Rockbuster

451 Units



Tanker Fleet

Tanker 12,000 Ltr
Tanker 18,000 Ltr

- Mercedes

88 Units

Licenses

Business Registrations: UAE

Dubai Trade License
License No: 1199411
Company: Terra Firma Foundation Contracting LLC
Issue Date: 20 June 2023
Expiry Date: 19 June 2027

Dubai Chamber Membership
Membership No: 468199
Member Since: 20 June 2023
Issue Date: 20 June 2023

Dubai Commercial Register
Register No: 2094842
Issue Date: 20 June 2023

Federal Tax Registration
Tax Registration No: 104163791700003
Registration Date: 01 December 2023
Date of Issue: 23 July 2024

Abu Dhabi Unified License
License No: CN-5094975
Establishment Date: 29 October 2023
Issue Date: 16 September 2026
Expiry Date: 29 October 2027

Abu Dhabi Chamber Membership
Membership No: 8800059524
Member Since: 28 October 2023
Issue Date: 16 September 2026
Expiry Date: 29 October 2027

In-Country Value Certificate
Dubai
Certificate No: 141632
Issue Date: 25 September 2025

In-Country Value Certificate
Abu Dhabi
Certificate No: 141633
Issue Date: 25 September 2025

Licenses

Business Registrations KSA

Ministry of Commerce Certificate

License/CR No: 2050004953

Member Since: 1978

Issue Date: 11 June 2023

Expiry Date: 17 April 2028

Saudi Chamber Membership

Membership No: 383593

Date of Membership: 11 June 2023

Expiry Date: 17 April 2028

SCA Membership

Membership No: 10001405

Issue Date: 09 Feb 2026

Membership Expiry: 18 Feb 2027

GOSI Social Insurance Certificate

Certificate Code: 110770340

Subscription No: 508037511

VAT Registration Certificate

VAT No: 300912474500003

Registration Effective: 01 January 2018

ZATCA Tax Compliance Certificate

Valid Until: 30 April 2027

Local Content Certificate

Valid Until: 31 July 2027

Saudization (Nitaqat) Certificate

Certificate ID: 162296-41602462

Issue Date: 19 August 2026

Expiry Date: 27 January 2027

National Address

Proof No: 1083475107

Issue Date: 29 October 2026

Expiry Date: 17 April 2027

ISO Certificates

UAE

Dubai

ISO 9001:2015
Certificate No: CR/SD-26046/01
Issue Date: 10 June 2026
Expiry Date: 27 May 2027

ISO 14001:2015
Certificate No: CR/SD-26046/02
Issue Date: 10 June 2026
Expiry Date: 27 May 2027

ISO 45001:2018
Certificate No: CR/SD-26046/03
Issue Date: 10 June 2026
Expiry Date: 27 May 2027

Abu Dhabi

ISO 9001:2015
Certificate No: CR/SD-26046/04
Issue Date: 10 June 2026
Expiry Date: 27 May 2027

ISO 14001:2015
Certificate No: CR/SD-26046/05
Issue Date: 10 June 2026
Expiry Date: 27 May 2027

ISO 45001:2018
Certificate No: CR/SD-26046/06
Issue Date: 10 June 2026
Expiry Date: 27 May 2027

KSA

ISO 9001:2015
Certificate No: KAQM202602041
Initial Registration: 20 February 2026
Certificate Expiry: 20 February 2027

ISO 14001:2015
Certificate No: KAEM202602027
Initial Registration: 20 February 2026
Certificate Expiry: 20 February 2027

ISO 45001:2018
Certificate No: KAOH202602029
Initial Registration: 20 February 2026
Certificate Expiry: 20 February 2027

HSEQ

Health, Safety, Environment, and Quality

Safety

TERRA FIRMA is a company committed to the Health and Safety of its personnel and any other personnel who may interact with TERRA FIRMA operations. The company is aware of its responsibilities and obligations towards all employees to ensure a healthy and safe working environment.

We are committed to:

- The complete Health and Safety of all personnel at all times and in all circumstances.
- Safely operate and maintain all plants and equipment employed at the construction site.
- Monitor, evaluate and continually improve our Health, Safety and Environmental (HSE) performance through the definition of operational standards, assessments and audits.
- Minimize our impact on the environmental through pollution prevention and proper waste management. Prevent property damages or injuries to third parties due to company operations.
- Continuous training and education of our personnel to provide proper skills and to ensure awareness on rights and responsibilities.
- Communicate openly with all clients and interested parties and provide them with full support in the site HSE management.
- Ensure preparedness and appropriate response to any emergency situation within our workplace.

The principles of this commitment are what drive TERRA FIRMA Health, Safety and Environmental management system. TERRA FIRMA , with the support of all levels of management, will continually review and improve the current internal policies, standards and procedures integrating the HSE objectives into the company management strategy as a contribution to the quality of the product delivered to our clients. All incidents, near misses and unsafe acts or conditions are preventable. A safe, healthy and clean working environment can and must be provided at all times. Participation in the HSE management and pro-activity towards HSE initiatives is encouraged and rewarded. The communication and regular consultation with all levels of personnel is the key to reach a wide employees consensus maintaining a high level of HSE awareness at all times and proving that people are considered the essential resource for the success of our company.

TERRA FIRMA is an organization with a continually improving commitment to addressing Health, Safety and Environmental (HSE) issues. The company is well aware of the highest international and local standards and their significant part in reducing workplace incidents and companies loss. TERRA FIRMA ultimate goal is to exceed all local and international HSE requirements and ensure our internal HSE standard is strictly followed by all personnel. The HSE management system is a core part of the company's mission and management strategy with the objective to systematically implement procedures in order to achieve a total control of our business in term of HSE and frequently carry out assessment for continuous improvement.

HSE Department

The implementation of the HSE management system requires a strong organization of people and resources ensuring that everyone is aware of their rights, roles and responsibilities. TERRA FIRMA HSE Department comprises over 10 professionals and it is rapidly expanding in order to meet the demand for HSE management at our construction sites throughout the Arabian Gulf Region. The department is essential for the success of our operations maintaining the corporate image of a company dedicated to its employees and to the quality of the product delivered. People are considered the "most valuable resource" therefore TERRA FIRMA provides training and development to all levels of personnel in order to enhance HSE skills and awareness.



Health, Safety, Environment & Quality Policy

Vision

To grow into a global ground improvement company that ranks among the top five globally by offering cutting-edge ground improvement solutions. The design approach that satisfies client needs while being affordable, sustainable, and has minimal impact on the environment.

Mission

- Operate our business in accordance with all relevant laws and rules pertaining to HSEQ as they apply to our operations and services.
- Provide SAFE (Sustainable, Advanced, Fast & Economical) foundation solutions.
- Focus and identify the customer needs and expectation and provide cutting-edge foundation design.
- Focus to achieve sustainable growth in all aspect of the business that meet the stake holders and other interest parties' expectation.
- Implement as low as reasonably practicable measures to reduce the hazard and risk associated with our activities and services to employees and other interested parties.
- Ensure the continuous improvement of our HSEQ objectives by continuous monitoring.
- We will continually improve our environmental performance.
- We will ensure workers consultation on all the aspect of HSEQ maters.
- We will ensure employees have adequate training on HSEQ requirements to ensure a safe work environment and promote safety culture.

Stop Work Authority Policy

At Terra Firma, our Health, Safety, and Environmental (HSE) policy is centered on ensuring a safe and secure work environment for all our personnel. We are committed to taking measures that are as low as reasonably practicable to avoid or reduce hazards, risks, and impacts on the environment. Our dedication to HSE principles underscores our responsibility to safeguard the well-being of our stakeholders and the preservation of the environment.

As part of our commitment to safety, it is imperative that all Terra Firma employees and contractors understand, and exercise STOP WORK AUTHORITY whenever a situation arises that puts an employee, member of the public, or the environment at risk. Management fully supports and encourages the use of STOP WORK AUTHORITY, and we rely on our employees to diligently execute this policy to maintain a safe working environment.

- STOP WORK AUTHORITY shall be applied if any situation arises due to an unsafe action, behavior, condition or omission to the workplace by any party involved in the operation. This applies to any action which may cause injury, serious harm, property damage or environmental impact if the situation were permitted to continue.
- Any person regardless of position, seniority or discipline has the right and duty to apply the STOP WORK AUTHORITY policy if it is in his/her opinion or judgment that such activity is deemed to be a potential incident.
- There shall be no blame or fault put on any employee that uses their STOP WORK AUTHORITY even if, upon investigation, the STOP WORK AUTHORITY was deemed unnecessary. The STOP WORK AUTHORITY must be applied in good faith.
- Timing is a critical factor. There should not be any delay in calling for a STOP WORK AUTHORITY order if the need arises.
- Work that has been halted due to an employee's STOP WORK AUTHORITY, shall not resume until all safety aspects have been cleared to the satisfaction of the employee who initiated the STOP WORK AUTHORITY, or the area Supervisor/Safety has properly reviewed the concern and deemed it safe to continue.

Projects



29

UAE



33

KSA



Projects

UAE



Masdar City Development Phase - 1

Client : Taraf / YAS Holding
Consultant : Egis
Contractor : Terra Firma
Duration : 6 Months
Technique : Site Works, Earth Works, Ground Improvement(DC/DR, Stone Column), Piling



Yas Canal Community Infrastructure Package - 2

Client : ICT Real Estate Development / NBHH
Consultant : DAR Sidara Company
Contractor : Terra Firma
Duration : 3 Months
Technique : DC/DR Stone Columns, Grouting Works



Hudayriyat East Expansion - Phase 3

Client : Modon Properties
Consultant : ATM
Contractor : NMDC
Duration : Ongoing
Area : 1,934,245 m^2
Technique : Dynamic Replacement and Stone Columns



Mid Island Parkway PH-1B - Saadiyat Island

Client : Department of Municipalities and Transport
Consultant : Parsons
Contractor : JV YAS projects /China Railway TunnelGroup
Duration : 11 Months
Area : 374,729 m^2
Technique : Dynamic Compaction and Dynamic Replacement



GI - Rahayel Passenger Heavy Maintenance Facility - ICAD

Client : Etihad Rail
Consultant : Jacobs
Contractor : L&T PowerChina JV
Duration : 3 Months
Area : 160,000 m^2
Technique : Rapid Dynamic Replacement and Dynamic Compaction



Sectors 20 & 22 - Infrastructure, Villas and Community Facilities

Client : Abu Dhabi Housing Authority
Consultant : (ECG) Engineering Consultants Group L&T
Contractor : NAEL Construct-Vannord (Wicks)
Duration : 3 Months
Area : 71,000 m^2
Technique : Dynamic Compaction

UAE



RAK Hospital Enabling Works

Client : Marjan
Consultant : Stantec
Contractor : Terra Firma (enabling contractor)
Duration : 3 Months
Area : 67,267.87 m^2
Technique : EW, DC, RI, Shoring



Etihad Rail - Fujairah Station

Client : Etihad Rail
Consultant : Jacobs
Contractor : China Railway International
Duration : 6 Weeks
Area : Foundation- 3,364 lm Satir case1593- LM
Technique : Rigid Inclusion



Emirati Villas Neighborhoods at Al Wathba

Client : Abu Dhabi Housing Authority
Consultant : Khatib & Alami Consolidated Consulting
Contractor : NAEL General Contractiong
Duration : 3 Months
Area : 288,086 m^2
Technique : Rapid Impact Compaction



Al Ain Amerah Residential

Contractor : Wicks
Technique : Dynamic Compaction and Rapid Impact Compaction



Etihad Rail MBZ, Dubai & Fujairah Stations

Client : Etihad Rail
Consultant : Jacobs
Contractor : China Railway Tunnel Group
Duration : 1 Month
Area : 5,310 m^2
Technique : Dynamic Compaction



Seven VIP Modular Villas

Client : Trojan
Area: 4,852 m^2
Duration: 1 Month
Technique : Dynamic Compaction

UAE



Al Haffar Housing Project Infrastructure Work - P346

Client : Aldar
Consultant : AECOM
Contractor : Western Bainoona Group
Technique : Rapid Dynamic Compaction and Rapid Impact Compaction



Emirates Float Glass Manufacturing Facility ICAD II

Client : Emirates Glass
Consultant : Design House
Area : ~36,000 sq.m
Technique : Stone Columns and Piling



Emergency Repairs on the International Road (E11), Al Marfaa

Client : Department of Municipalities and Transport
Consultant : Parsons
Contractor : Noor Al Sahara
Technique : TAM Grouting



Grouting Works for Bada Al Jubail Bridge 1 & 2

Client : Jubail Island
Consultant : Parsons
Contractor : Gulf Contractors
Duration : 2 Months
Technique : Cavity Grouting



Mid Island Parkways Phase -1A Protection of Existing Transco Network

Client : Department of Municipalities and Transport
Consultant : Parsons
Contractor : Dogus Abu Dhabi - GCC JV
Duration : 11 Months
Area : 3,675.263 m^2
Technique : Compaction Grouting



Al Bahia Assets Enhancement O-15392

Client : TAQA
Consultant : KN International
Contractor : Gulf Contractors
Area: 300 m^3
Technique : Grouting

UAE



Masdar City Infrastructure
OS49 Plot Roads, Utilities and Streetscape

Client : Masdar City
Consultant : AECOM
Contractor : Gulf Contracting & Landscaping
Area : SC: 15,201 m^2
Grouting: 3,734 m^2
Technique : Vibro Replacement/Stone Columns and Jet Grouting



Kezad Warehouse
KLP7

Client : Abu Dhabi Ports Group
Contractor : RAQ Contracting
Technique : Dynamic Compaction and Dynamic Replacement (Stone Columns)



MORGAN Project in KEZAD
KP 04

Client : Abu Dhabi Port Group
Contractor : VanGuard General Contracting
Quantity: 2,514 Lm
Technique : Rigid Inclusion



Masdar Hybrid Project
Plant 2

Client : Masdar - Solar 24 Seven
Consultant : Parsons
Contractor : Trojan Al Sahra Gen. Transport – Ramah Gen. Cont JV
Area : 5,480,000 m^2
Technique : Rapid Dynamic Compaction/Rapid Impact Compaction

KSA



Qiddiyah Jeddah - Jeddah North Coast Project

Client : Qiddiya
Consultant : DAR Al Riyadh
Contractor : Abdulmohsen Altamimi Contracting
Duration : 7 Months
Area : 4,154,544.19m^2
Technique : Dynamic Replacement and Rapid Impact Compaction



Neom Oxagon Port - Wadi Jubbah (WO 69)

Client : NEOM
Contractor : HARBICO
Duration : 3 Months
Area : 487,445 m^2
Technique : Rapid Impact Compaction



Jubail C14 Site Preparation of Support Area - Phase 2 021-C14

Client : RCJY
Contractor : HARBICO
Duration : 6 Months
Area : 810,080 m^2
Technique : Rapid Impact Compaction



Al Khobar Development Project Programme 3 Dammam & Khobar

Client : Saudi Entertainment Ventures (SEVEN)
Consultant : WS Atkins
Contractor : Mofarreh Alharbi & Partners
Duration : 3 Months
Area : 1,322 L.m
Technique : Shoring (Secant Pile Wall)



NPCC KSA Yard Facilities - Package 1

Client : NPCC
Consultant : ADEC Engineering Consultancy
Contractor : HARBICO
Duration : 6 Months
Area : 400,000 m^2
Technique : Dynamic Compaction



Fadhili Gas Plant Expansion - Offshore Gas Increment

Client : ARAMCO
Consultant : ARAMCO PMT
Contractor : AL HARBI
Area : 5,000,000 m^2
Technique : Rapid Impact Compaction and Dynamic Replacement

KSA



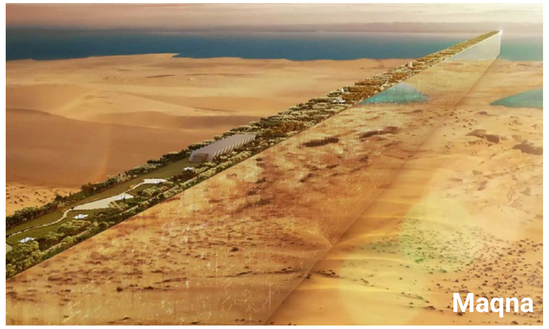
Riyas NGL Fractionation Facility (RNGLF) Site Preparation Pkg #6

Client : ARAMCO
Consultant : SAUDI ARAMCO
Contractor : Mofarreh Alharbi & Partners
Duration : 14 Months
Area : 4,350,0007.93 m^2
Technique : Dynamic Compaction, Dynamic Replacement and Rapid Impact Compaction



Site Preparation for Support Area 21-C14 - Phases 2&3

Client : RCJY
Consultant : Royal Commesion
Contractor : Royal Commesion
Area : 100,000 m^2
Technique : Dynamic Replacement



WO76 - NEOM

Client : NEOM
Consultant : AECOM
Contractor : AL HARBI
Area : 408,654 m^2
Technique : Rapid Impact Compaction



Two Diammonium Phosphate Plants (Phase 1) Maaden Phosphate 3 Plants (Phase 1)

Client : Maaden
Consultant : Maaden
Contractor : AL HARBI
Area : 121,000 m^2
Technique : Dynamic Compaction / Dynamic Replacement



Jafura Gas Compression Plant (GCP) -04 Site Preparation -Trevi

Client : ARAMCO
Consultant : ABC
Contractor : Trevi
Duration : 2.5 Months
Area : 500,000 m^2
Technique : Rapid Impact Compaction



Debottleneck Produced Water Handling System

Client : ARAMCO
Contractor : ENPPI
Area : 349761.9 m^2
Technique : Rapid Dynamic Compaction

KSA



WO77 - NEOM

Client : NEOM
Consultant : AECOM
Contractor : AL HARBI
Area : 852,917 m^2
Technique : Rapid Impact Compaction



Al Uqair Development - South Phase

Client : Al Uqair Development
Contractor : AL HARBI
Duration : 3 months Phase-1, 6 months Phase-2
Area : 872,300 m^2 (DR)
181,022 m^2 (RIC)
Technique : Dynamic Replacement, Rapid Impact Compaction



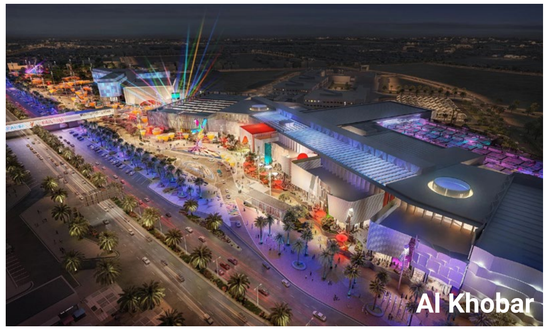
Jafourah PKG3 Project - Gas Compression Plants

Client : ARAMCO
Contractor : TR & SFEC
Area : 2,169,139.018 m^2
Technique : Rapid Impact Compaction



Jeddah Logistics Park Package 1

Client : DP World
Consultant : GEO Global Engineering Office
Contractor : EDECS
Duration : 2.5 Months
Area : 184,363 m^2
Technique : Rapid Impact Compaction



Program 3 Al Khobar Entertainment Development

Client : Saudi Entertainment Ventures (SEVEN)
Consultant : WS Atkins
Contractor : SBG & Madarat El Emar
Duration : 00 Months
Area : 17,814.15 m^2
Technique : Dynamic Replacement



Supply and Construction of Potable Water Pumping Station / Phase II

Client : RCJY
Contractor : Al Rafia Contracting Company
Area : 85,225 m^2
Technique : Dynamic Compaction, Rapid Impact Compaction, Rigid Inclusion

KSA



Hajar Site Preparation

Client : Hajr Two Electricity Company
Contractor : JV TR - ORASCOM/ SFEC
Duration : 1.5 Months
Area : 336,646 m^2
Technique : Rapid Impact Compaction



Construction of Qurayyah-4 380kV BS

Client : Saudi Electic Company
Contractor : L&T Power Transmission
Duration : 1 Month
Area : 40,000 m^2
Technique : Dynamic Compaction, Dynamic Replacement



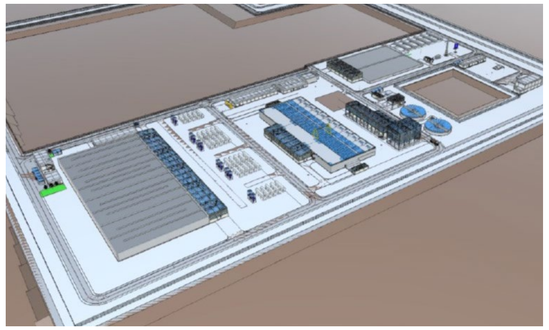
Infrastructure - Jeddah Industrial City 3 Phase 1

Client : Modon
Consultant : Parsons/EGIS
Contractor : Al Rawaf Contracting
Duration : 5 Months
Area : 3,553,772 m^2
Technique : Rapid Impact Compaction



Housing Infrastructure Development Project

Client : National Housing Company (NHC)
Contractor : Saad Saeed Al Saadi (SD)
Duration : 1 Month
Area : 81,000 m^2
Technique : Rapid Dynamic Compaction



ZULUF Water Treatment Project - Roads

Client : ARAMCO
Contractor : Fisia italimpianti / Rawad Al Binah Cont.
Duration : 2.5 Months
Area : 120,000 m^2
Technique : Rapid Impact Compaction



Bryman District

Client : National Housing Company (NHC)
Consultant : Khatib & Alami
Contractor : Al Saadi
Duration : 3 Months
Area : 500,000 m^2
Technique : Rapid Impact Compaction

TCR

SPECIALIST GROUTING PARTNER

Specialist expertise. Combined capability.

Terra Firma partners with TCR to deliver specialist grouting solutions, combining ground engineering expertise with TCR's geotechnical capabilities.

TCR combines design and analysis with specialist grouting techniques to address complex ground conditions. Its capabilities include permeation grouting, compaction grouting, jet grouting and cavity filling.

30+ YEARS
of Experience

300+ PROJECTS
Delivered

100+ CLIENTS
Served

CONTENTS

Capabilities
Equipment
Major Projects

TCR

CAPABILITIES

DESIGN & ANALYSIS

- Structural Assessment
- Structural Modelling & Strengthening Design
- Geotechnical Modelling & Design

GEOTECHNICAL

- Compaction Grouting
- Permeation Grouting
- Jet Grouting
- Hydro Fracture Grouting
- Micropiles
- Consolidation Grouting
- Slope Stabilization
- Tube-A-Manchette Grouting
- Cavity Filling
- Chemical Grouting

STRUCTURAL & CIVIL

- Carbon Fiber Reinforced Polymer
- Waterproofing
- Crack Injection (Wet & Dry)
- Patch Repair
- Jacketing
- Complete Retro Fitting

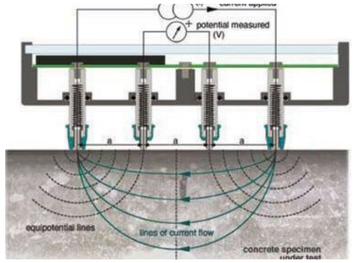
DESIGN & ANALYSIS

TCR

STRUCTURAL ASSESSMENT

TCR carries out inspection & survey for the assessment of the existing structure for the design & propose viable solution for the strengthening & rehabilitation and bring back to the original specification. Semi destructive & non destructive test employed for the complete assessment.

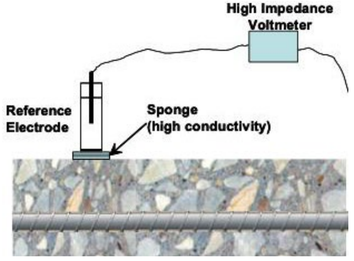
- Visual Inspection
- Mapping of defects
- Concrete core drilling & testing
- Concrete cover determination
- Half cell potential
- Depth of carbonation
- Ultrasonic pulse velocity
- Rebound hammer
- Chemical test on extracted samples
- Resistivity test

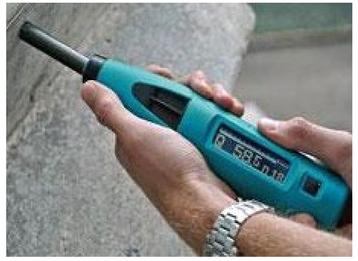




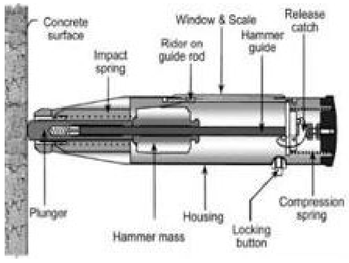








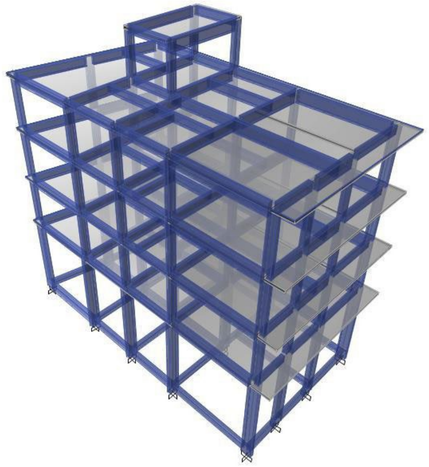


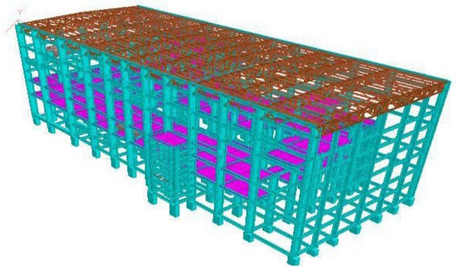


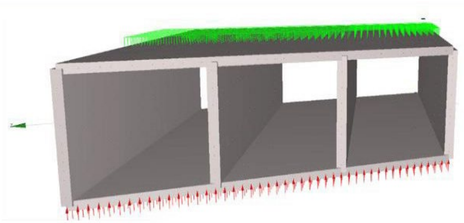
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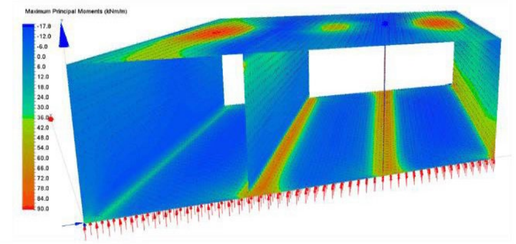
STRUCTURAL MODELING & DESIGN

TCR is having qualified design team for the modeling & strengthening design by using advance software like eTabs, Staad Pro, Prokon and Safe etc., as per the project technical requirement.





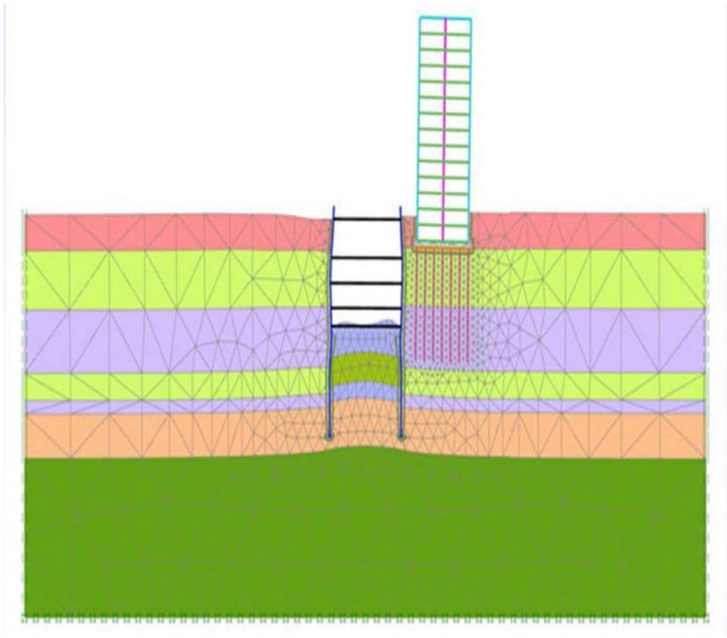


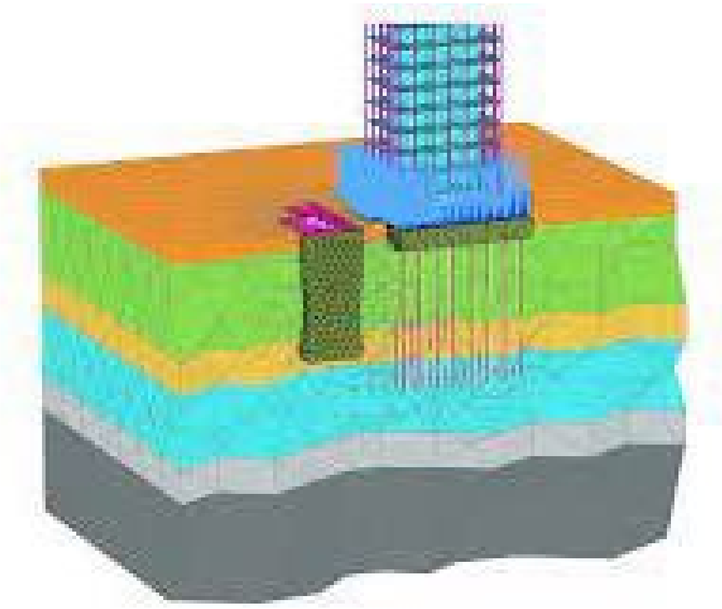


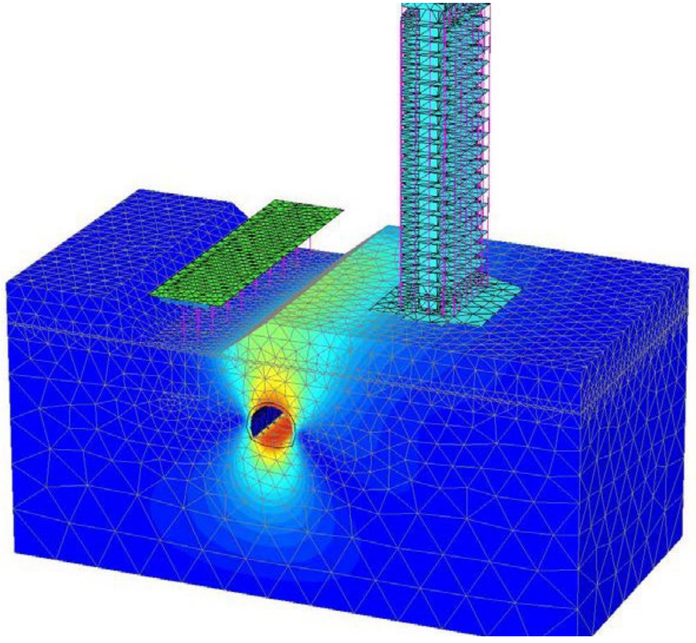
TCR

GEOTECHNICAL MODELING & DESIGN

TCR is having qualified design team for the geotechnical modelling & ground stabilization design by using advance software like Plaxis 2D & 3D & Safe etc., as per the project technical requirement.







TCR

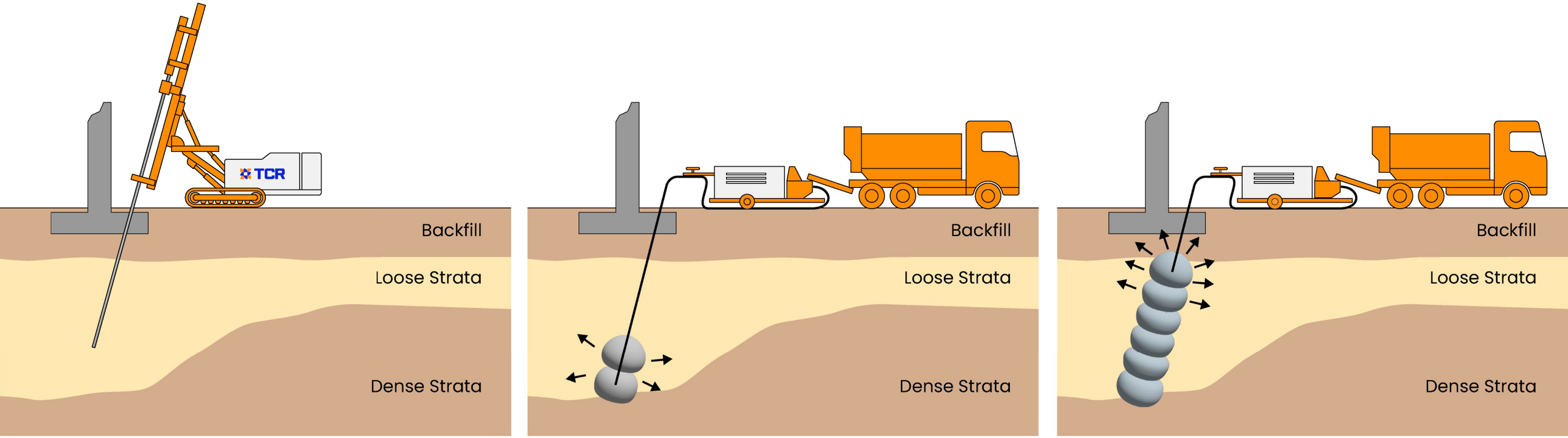
GEOTECHNICAL

TCR

COMPACTION GROUTING

Compaction Grouting densifies loose granular soils reinforces fine grained soils, and stabilizes subsurface voids or sinkholes by the staged injection of low-slump, low mobility aggregate grout.

It is performed by injecting grouting pipe up to the maximum depth then grout slowly injected by lifting the pipe to form overlapping grout bulbs. It increases the soil density & stiffness by displacing the loose soil.



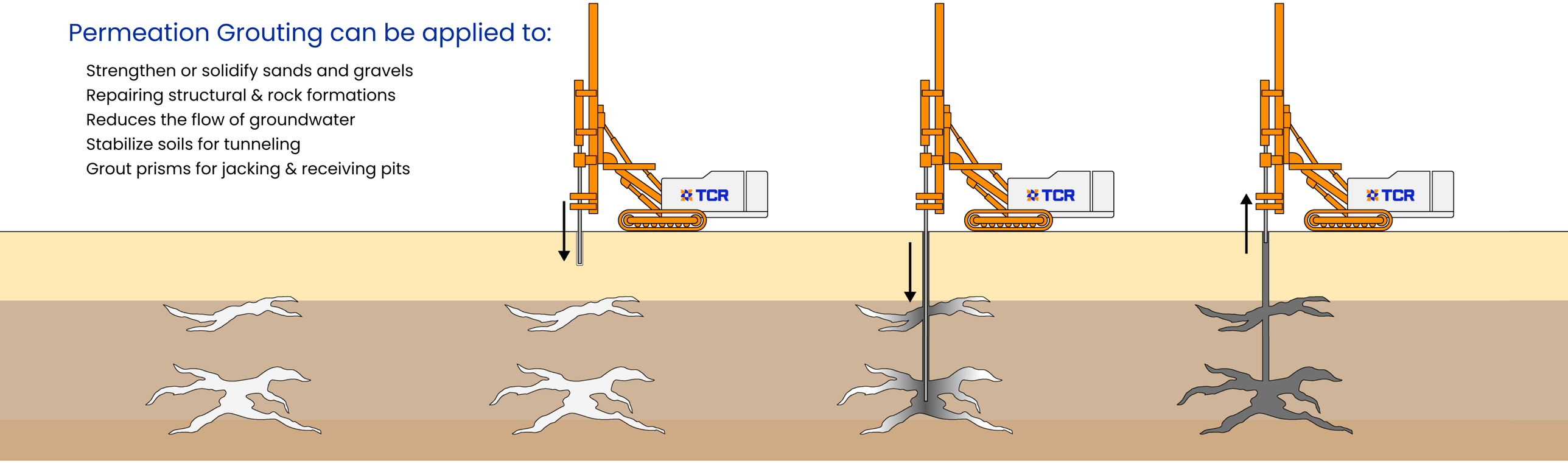
TCR

PERMEATION GROUTING

Permeation grouting consists of injecting a flowable grout into granulated soils conditions to form a solid cohesive mass. To achieve the highest quality, Permeation grouting is performed under safe controlled, low-pressure injection with experienced personnel in order to permeate the designed grout zones without inducing fracturing.

Permeation Grouting can be applied to:

- Strengthen or solidify sands and gravels
- Repairing structural & rock formations
- Reduces the flow of groundwater
- Stabilize soils for tunneling
- Grout prisms for jacking & receiving pits



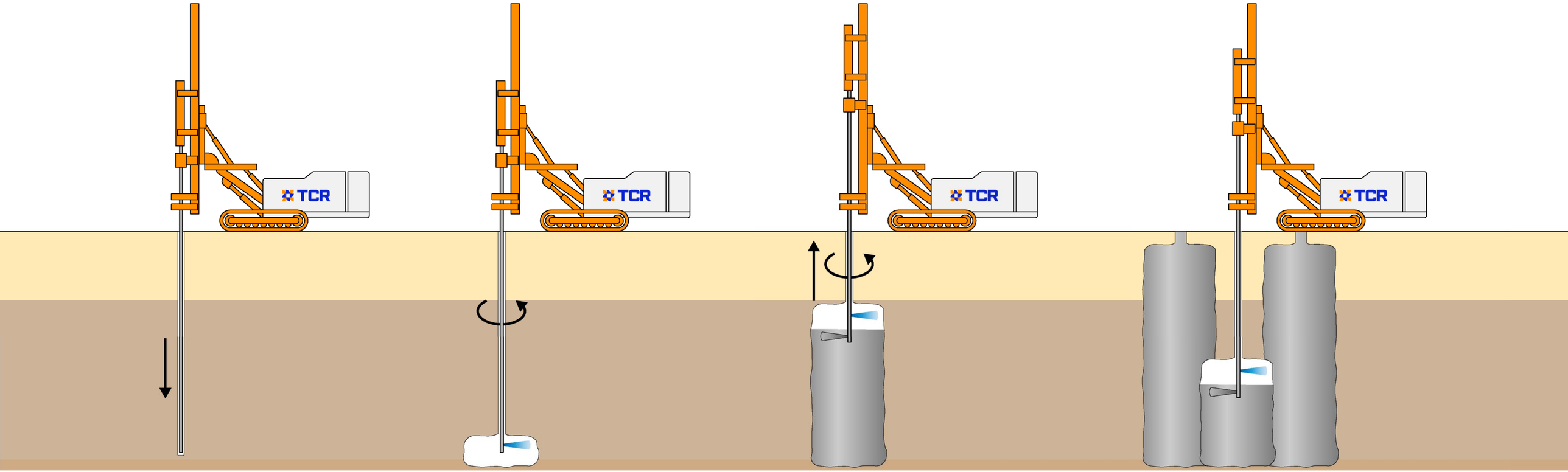
TCR

JET GROUTING

Jet grouting is a method of soil stabilization which involves the injection of a stabilizing fluid into the subsoil (or the soil under treatment) under high pressure under high velocity with single, double & triple injection system.

Jet-grouting ground improvements application:

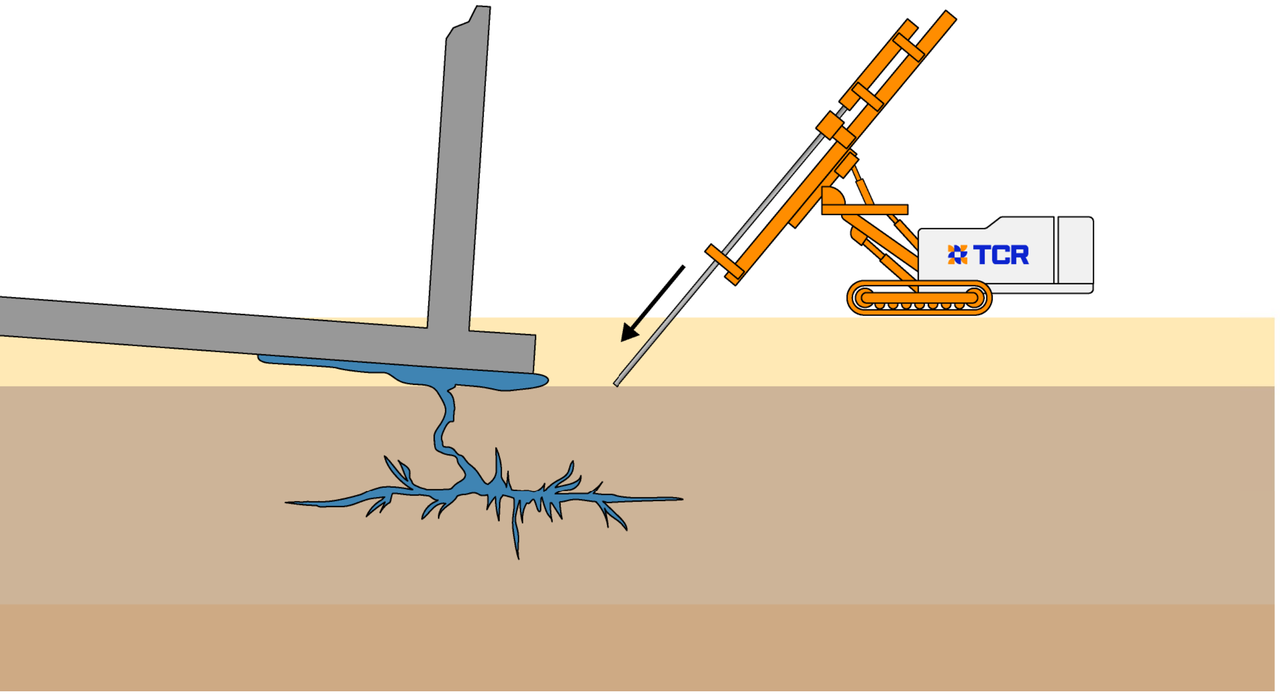
- Horizontal barriers
- Groundwater control
- Tunneling
- Support excavation
- Underpinning
- Soil Stabilization

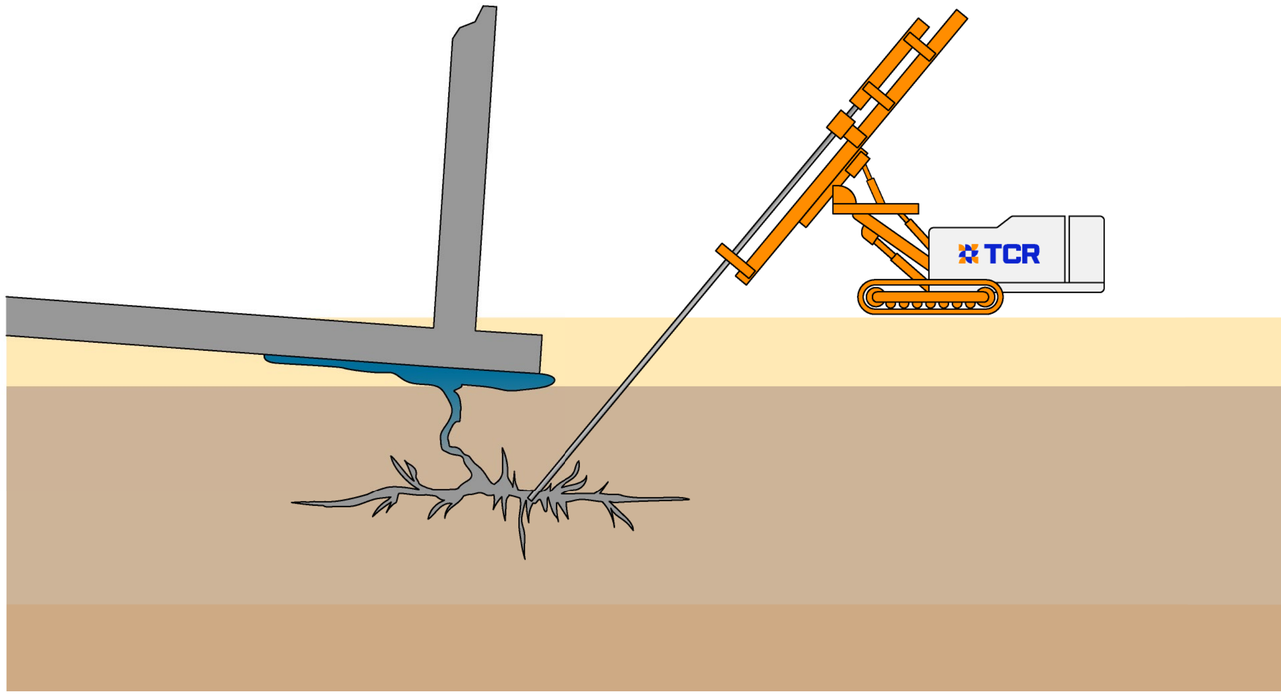


TCR

HYDRO FRACTURE GROUTING

Hydro Fracture also known as compensation grouting is a technique in which a low viscosity cement grout is injected under high pressure. The grout will split open the ground using hydro fracturing and it creates lenses that would penetrate void spaces or fractures. Soils are also displaced using this process. Fracture grouting is commonly used for structures releveling and on stabilizing overlying structures during tunneling.



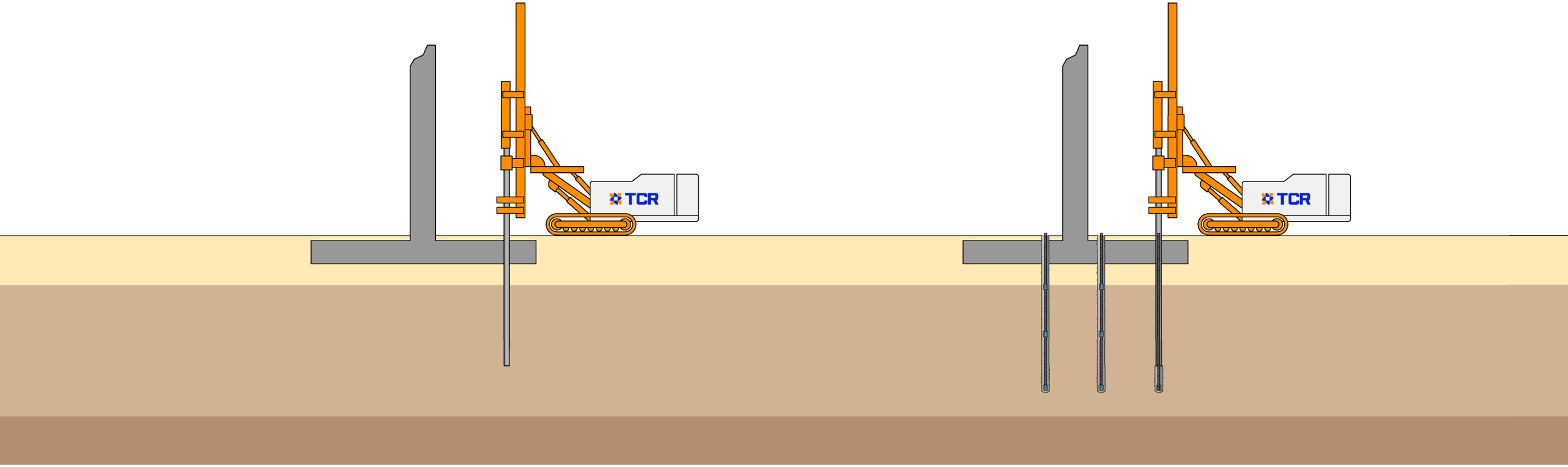


TCR

MICROPILE

Micro piles are deep foundation element constructed using high-strength, small-diameter steel casing and/or threaded bar.

Micro pile casing generally has a diameter in the range of 3 to 10 inches. Typically, the casing is advanced to the design depth using a drilling technique. Reinforcing steel, typically an all-thread bar, is inserted into the micro pile casing. High-strength cement grout is then pumped into the casing. The casing may extend to the full depth or end above the bond zone with the reinforcing bar extending to the full depth.



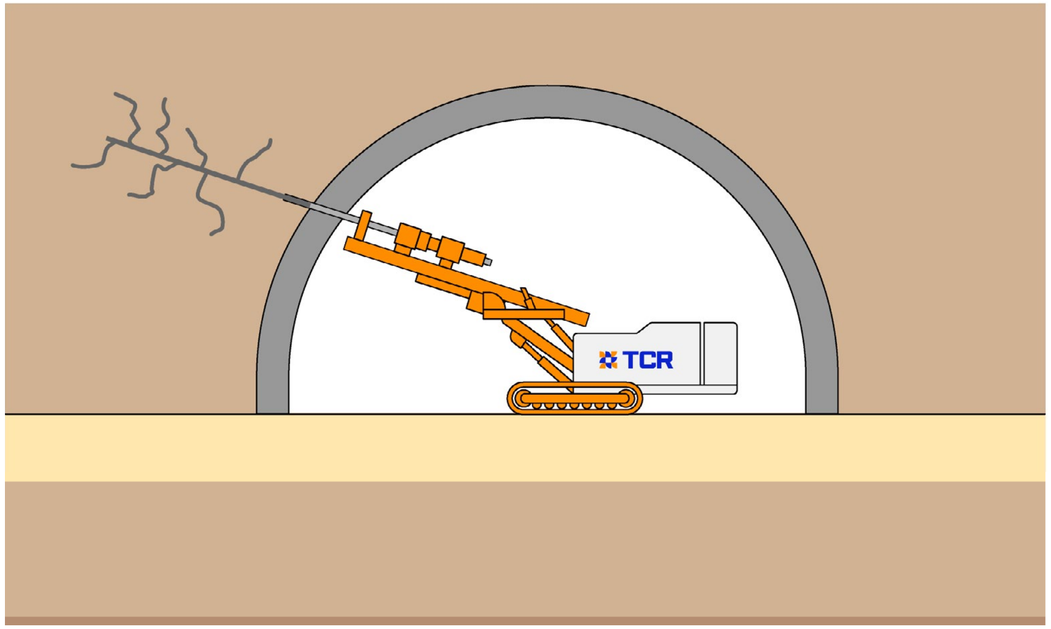
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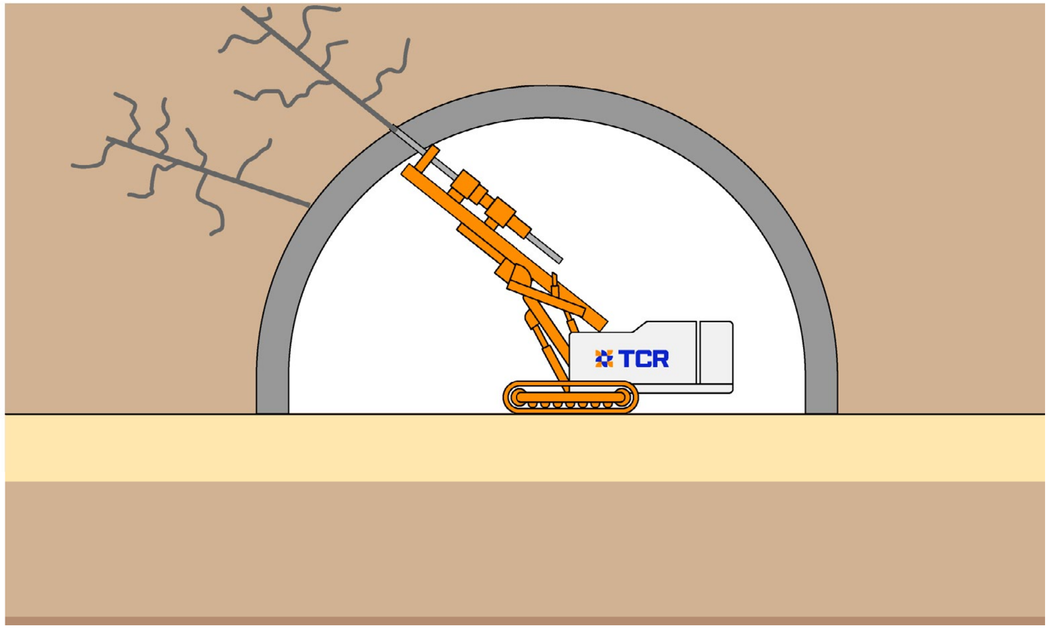
CONSOLIDATION GROUTING

Consolidation is a grout injection technique which consolidate a layer of soil and increase the density to fill the fractures or discontinuities in rock mass. The discontinuities in a rock mass control fundamental rock mass properties such as permeability, strength, and deformability.

Consolidation grouting reduces the hydraulic gradient and stops the flows, it commonly used based on the nature of discontinuity/ deformity

- Curtain Grouting
- Water Cut-off Grouting
- Foundation Grouting
- Initial Excavation Grouting





TCR

SLOPE STABILIZATION

Slope stabilization is the protection of an inclined surface due to sliding or collapse failure. Different earth retention systems, including soil nailing, and tieback walls, can carry out slope stabilization and remediation measures.

Anchored block slope stabilization consists of discrete, anchored concrete blocks placed in a pattern on a slope to increase the slope stability. The block layout pattern is typically in rows across the slope or retaining wall.



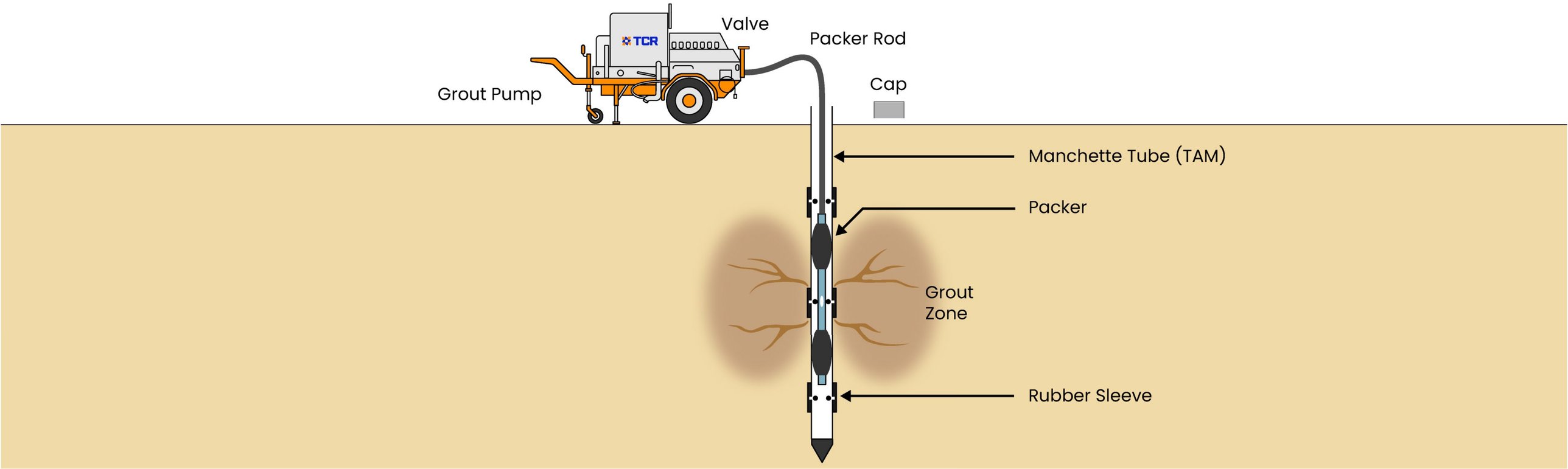


TCR

TUBE-A-MANCHETTE GROUTING

Tube a Manchette (TAM) grouting method involves the use of perforated pipe along with a special sleeve grout. These pipes/tubes are then inserted into the hole for grouting with short sections of rubber sleeve (Manchette) on the outer part of the pipe that acts as a one-way valve.

Double packer is used to pump the grout into manchette tube until the packer is halfway past the set of the holes drilled into the tubes. Grout is pumped into the hole between confining packers by applying pressure. Pressure pushes the grout past the small rubber sleeves to cover perforation, rupture the sleeve grout and enter the soil.

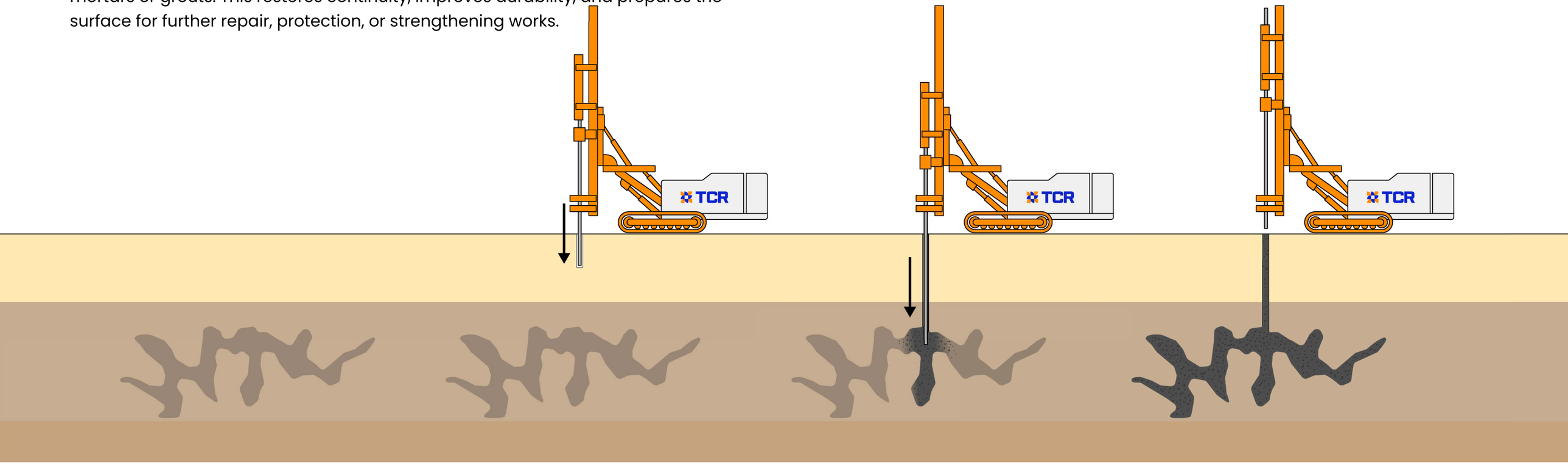


TCR

CAVITY FILLING

Cavity filling is the treatment of voids, honeycombs, and gaps in concrete caused by poor compaction, segregation, or deterioration. These defects can reduce strength and allow water and chemicals to penetrate the structure.

Cavity filling involves cleaning the affected area and filling it with suitable repair mortars or grouts. This restores continuity, improves durability, and prepares the surface for further repair, protection, or strengthening works.

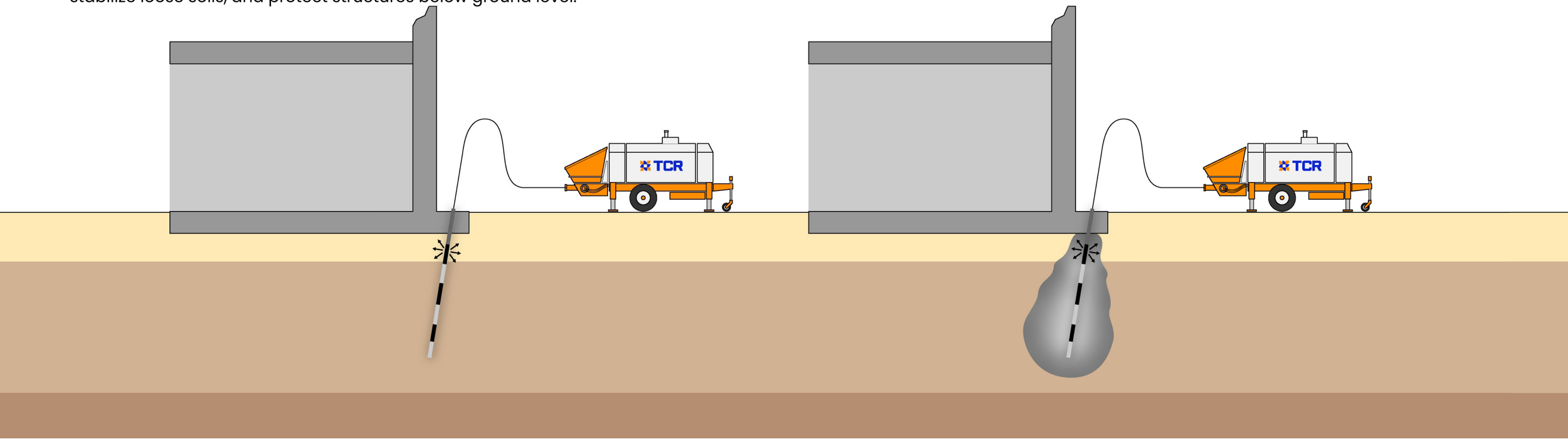


TCR

CHEMICAL GROUTING

Chemical grouting is a ground improvement and waterproofing technique used to seal voids, fissures, and permeable soils. It involves injecting low viscosity chemical solutions that penetrate fine cracks and soil pores.

The grout reacts and solidifies within the ground, reducing permeability and increasing stability. Chemical grouting is commonly used to control water ingress, stabilize loose soils, and protect structures below ground level.



TCR

STRUCTURAL & CIVIL

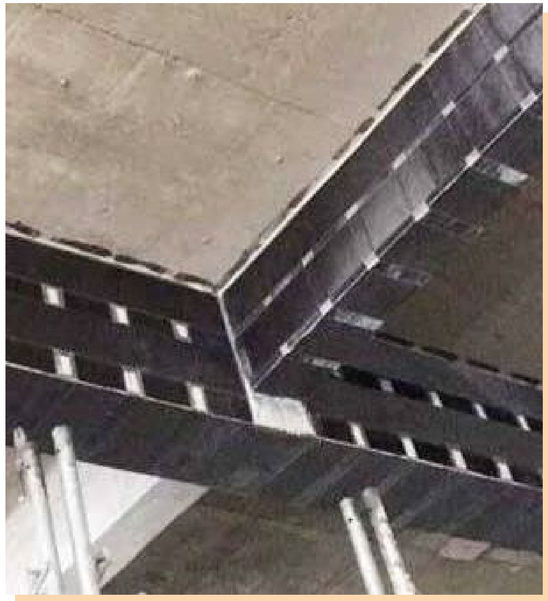
TCR

CARBON FIBRE REINFORCEMENT POLYMER (CFRP)

Carbon fiber reinforced polymer (CFRP) is one of the composite materials which is used in both repairing and strengthening of reinforced concrete structures.

The main function of fiber reinforced materials is to provide sufficient strength and stiffness along the development direction of components and support the mechanical traction of structural components. Glass fiber, carbon fiber, and aramid fiber are the most commonly used fiber types in commercial applications.









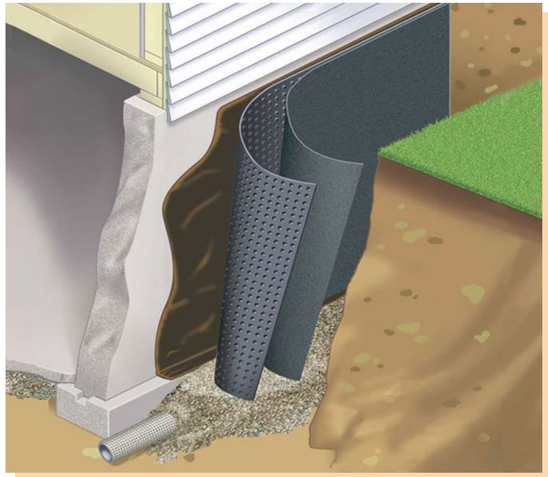
TCR

WATERPROOFING

Waterproofing is the process of making an object or structure waterproof or water-resistant so that it remains relatively unaffected by water or resisting the ingress of water under specified conditions. Such items may be used in wet environments or underwater to specified depths.

Cementitious Waterproofing.
Liquid Waterproofing Membrane.
Bituminous Coating Waterproofing.
Bituminous Membrane Waterproofing.
Polyurethane Liquid Membrane Waterproofing.









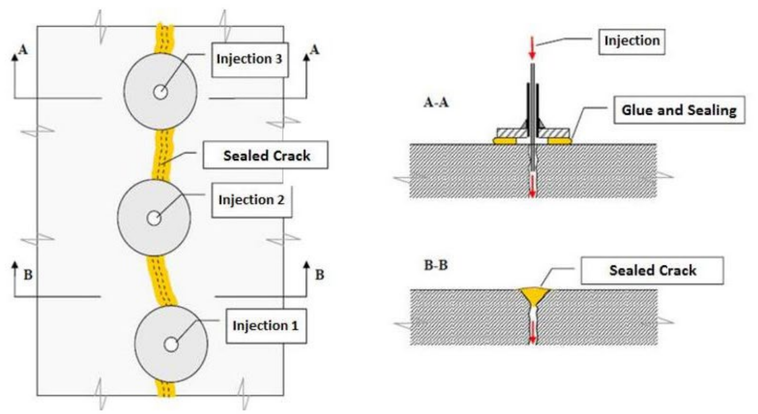
TCR

CRACK INJECTION (WET & DRY)

Epoxy injection is an economical method of repairing non moving crack in concrete walls, slabs, columns, and piers is capable of restoring the concrete to its pre cracked strength. Prior to doing any injection it is necessary to determine the cause of crack, other wise if the source of cracking is not determined and remedied the concrete may crack again.

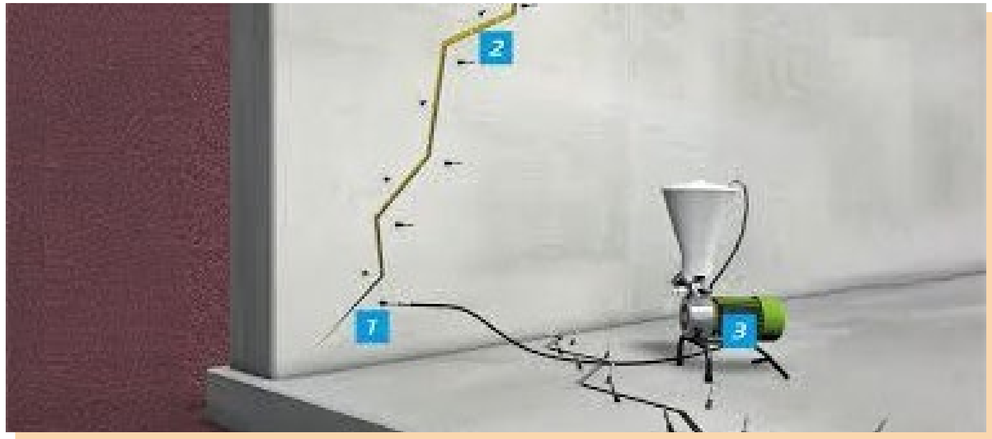












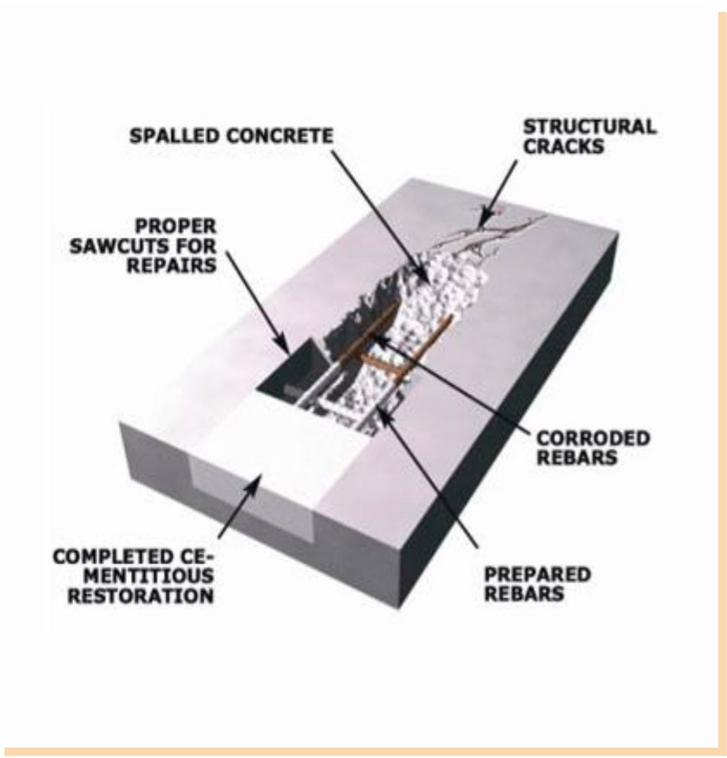
TCR

PATCH REPAIR

Patch repair is the most common technique to repair corrosion damage in RC structures. For a patch repair, the concrete cover is typically removed to approximately 25 mm past the steel bars (which are then cleaned of corrosion products) and a repair material is installed.



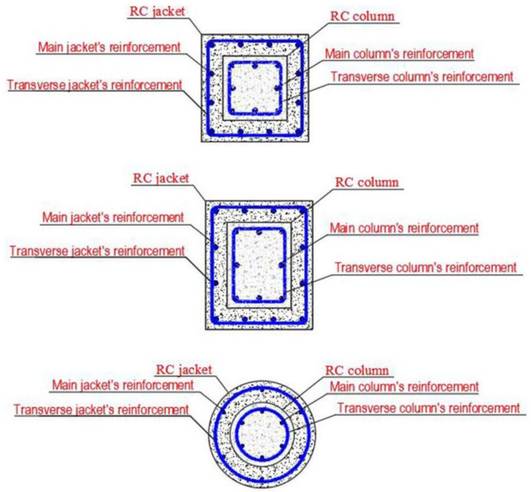




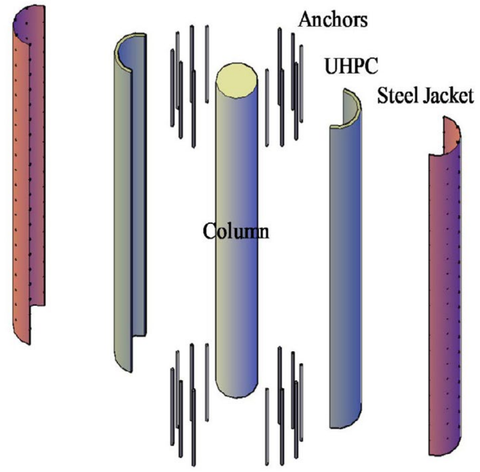
TCR

JACKETING

Concrete strengthening is a process used to add or restore ultimate load capacity of reinforced concrete columns. It is used for seismic retrofitting, supporting additional live load or dead load that not included in the original design, to relieve stresses generated by design or construction errors, or to restore original load capacity to damaged structural elements.







TCR

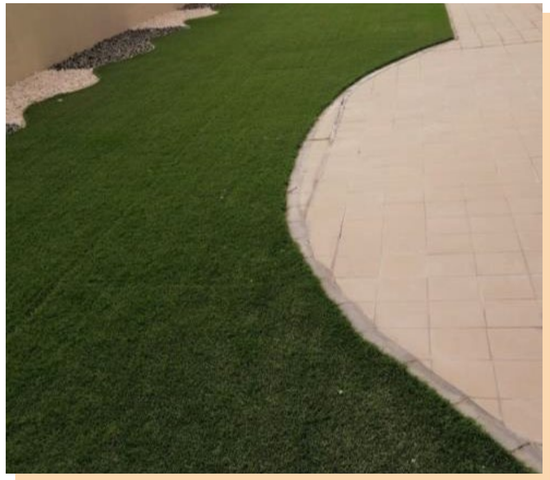
RETRO FITTING & CIVIL WORKS

TCR is doing the complete retro fitting & finishing works to deliver the turn key project, our team is experienced & trained for the following works.

- Block work & plastering
- Painting
- Epoxy Flooring
- Complete MEP
- Floor & wall tiling
- Interlocking floors
- Landscaping









TCR

EQUIPMENT

DRILLING RIGS

GROUT PUMPS

CONCRETE REPAIRING PUMPS

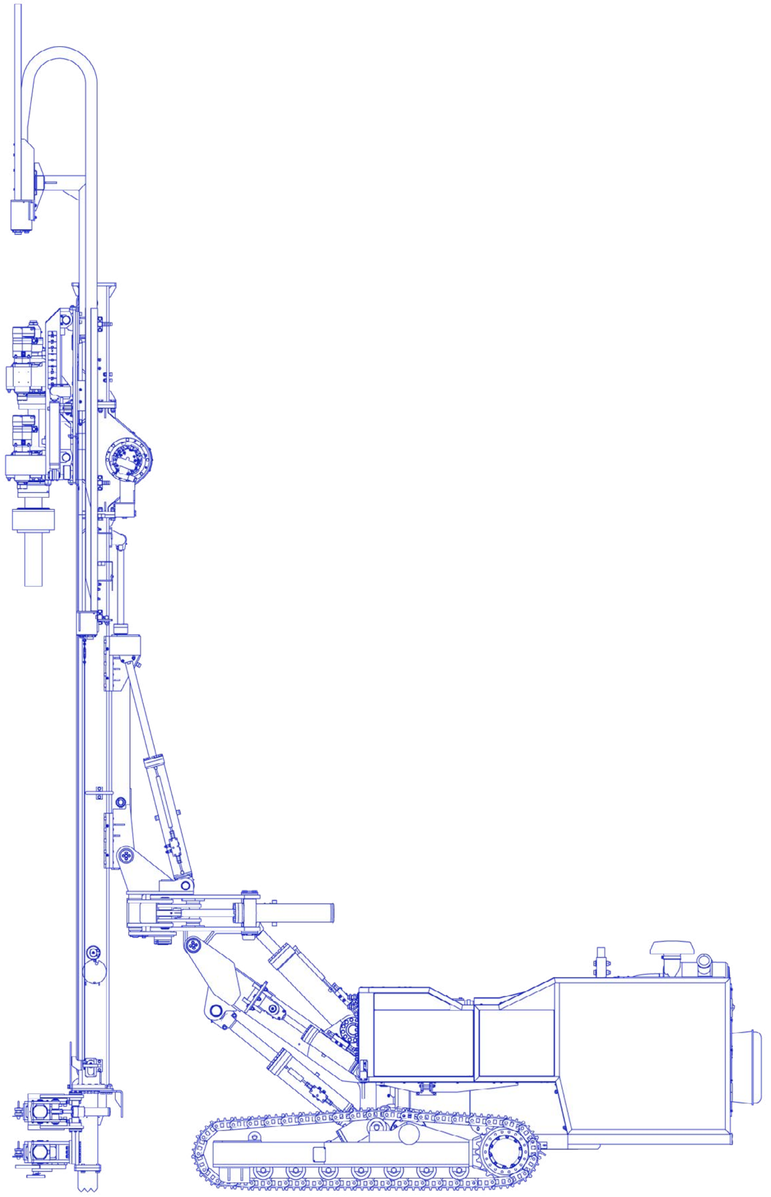
CONCRETE PUMPS

AIR COMPRESSORS

CENTRAL GROUT MIXING PLANT

CONCRETE GROUT EQUIPMENTS

OTHER EQUIPMENTS



EQUIPMENT

DRILLING RIGS


HUTTE HBR 504


G KLEMM KR806-3


KLEMM 702


SOILMEC SM 401


BERETTA T21


BERETTA T43


CASAGRANDE C6


CASAGRANDE C6 XP


TESCAR TES 20


BERETTA T21


MAIT 405


GKLEM 401

HIGH PRESSURE JET GROUT PUMPS


LEC XTB-2B



METAX

CONCRETE PUMPS



MECBO



REED B50

GROUT PUMPS



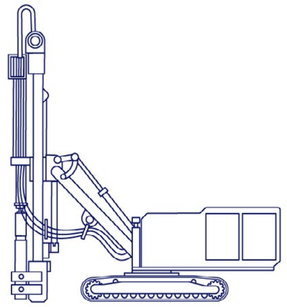
SON MAK EP 100


PUTZMEISTER P13


SON MAK EP 150

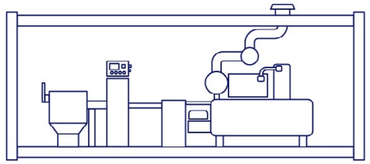

OBERMANN 110

TCR



DRILLING RIGS

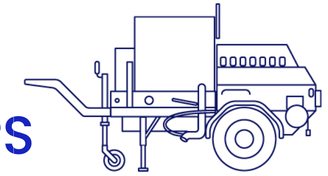
Sr No.	Machine Name	Nos.
1	SOILMEC SM 401 (JET GROUTING)	1
2	KLEMM KR806 (DOUBLE HEAD)	1
3	KLEMM KR 401-2 (JET GROUTING)	1
4	CASAGRANDE C6	1
5	CASAGRANDE C6XP	1
6	TESCAR TES20	1
7	BERETA T21	2
8	BERETA T43	2
9	MAIT 405	1
10	HUTTE HBR 504	1



GROUT PUMPS

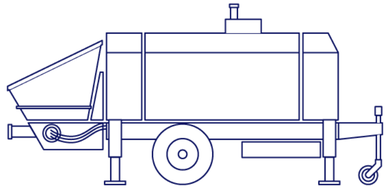
Sr No.	Machine Name	Nos.
1	METAX MP5-470 (JET GROUTING)	1
2	SON MAK EP100	1
3	GAODETEC LEC XTB -2B (JET GROUTING)	1
4	SON MAK EP150	1
5	OBERMANN HD 115 (JET GROUTING)	1
6	CHEM GROUT CG-550	8
7	TECHNIWELL TW CJU (JET GROUTING)	1

CONCRETE REPAIRING PUMPS



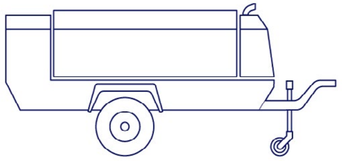
Sr No.	Machine Name	Nos.
1	PUTZMEISETER P13	3
2	PUTZMEISETER MP25	4
3	PUTZMEISETER SEVTM	2
4	REED SOVA SHOTCRETE PUMP (DRY METHOD)	1

CONCRETE PUMPS



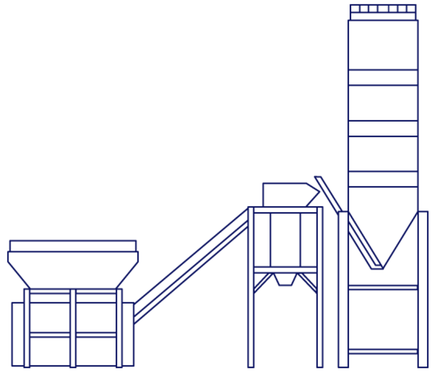
Sr No.	Machine Name	Nos.
1	REED B20 BF4M	2
2	MECBO CAR P6	1

AIR COMPRESSORS



Sr No.	Machine Name	Nos.
1	ATLAS COPCO XAHS950 CD	1
2	ATLAS COPCO XAS 97	1

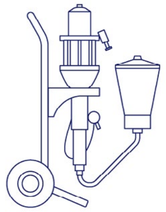
CENTRAL GROUT MIXING PLANT



Sr No.	Machine Name	Nos.
1	CENTRAL GROUT MIXING BATCH PLANT 25M3/ HOUR CAPACITY	2

TCR

CHEMICAL GROUT EQUIPMENTS



Sr No.	Machine Name	Nos.
1	WIWA 2K INJECTION PUMP	1
2	DESOI PULL DEVICE H-1	1
3	INFLATABLE PACKERS	15
4	LENSES EXTRACTION	2

OTHER EQUIPMENTS



Sr No.	Machine Name	Nos.
1	CORING MACHINES	2
2	WATER JET MACHINE	2
3	WELDING MACHINES	3
4	WATER TANK	6
5	CEMENT STORAGE SILO	1
6	STEEL CUTTING MACHINES	3
7	STEEL BENDING MACHINES	2

TCR

MAJOR PROJECTS

GEOTECHNICAL WORKS

- Ground Improvement - Citizen Houses
- Tam Grouting & Refurbishment - Hulaila RAK
- Track Modification - Yas Marina Circuit
- Shamkha Medical Center
- Abu Dhabi Future School
- Tanveer Hall - University of Sharjah
- Junior Staff Accomodation - Dubai Dry Dock World
- Residential Compound - Khalifa City

STRUCTURAL STRENGTHENING & RETROFIT WORKS

- Structural Repair & Leakage Treatment - Business Bay
- Structural Strengthening - Carlton Hotel Deira
- Radiant Square Project, City of Lights - Reem Island
- Atrium Towers Plot - Al Reem Island
- Sharjah Sports Club, Samnan - Sharjah
- Martyr's Square - Sharjah
- Structural Modification - Marina Mall
- Structural Changes - Circle Mall JVC
- Structural Strengthening - Paragon Bay Mall
- Gabion Wall Rayyana Boundary - Khalifa City

TCR
GEOTECHNICAL

Citizen Houses

دائـرة البلـديـات والـنـقـل
DEPARTMENT OF MUNICIPALITIES AND TRANSPORT

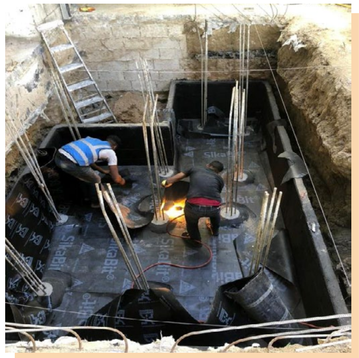
Ground improvement works for Damaged Citizen Houses in Different area in Emirates of Abu Dhabi

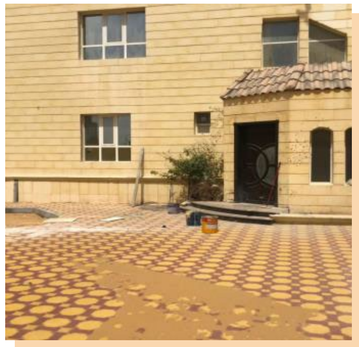
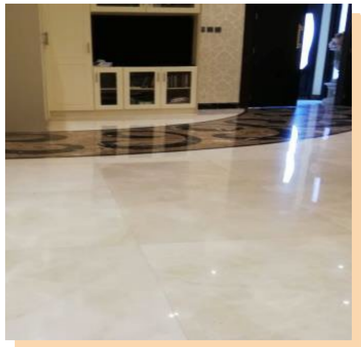
Challenge

Citizen houses & plots in different areas of Emirates of Abu Dhabi having geotechnical deformities, cavities, soil fracture and liquifaction resulting in the differential settlement of the ground and structural damage.

Solution

TCR has been appointed by Abu Dhabi City Municipality for the mitigation of the geotechnical problem. Ground improvement & structural strengthening techniques like Jet Grouting, Micropile, Soil Mixing, Compaction Grouting, TAM Grouting, Permeation grouting, crack repair, slab thickening, waterproofing and finishing were used successfully.

Client

Crown Prince Court

Consultant

Al Torath International

Location

Abu Dhabi Mainland

TCR
GEOTECHNICAL

Tam Grouting & Refurbishment Hulaila

Structural repairs and refurbishment work of the warehouses and surrounding roads in shed 12, 14 and 16 in Hulaila

Challenge

Structural Strengthening such as voids in some areas, slab strengthening. Additional slabs to create raised floor (Loading Bays)

Solution

TCR has been appointed by Client to address the above requirements. Voids were closed with the combination of steel beams, micro-concrete and normal concrete. The nearby structural elements (slabs, columns and beams) were strengthened by section enlargement and CFRP to bear the additional loads. It was a design and build project carried out under the supervision of consultants.

Client

M/s Ras Al Khaimah Economic Zone

Consultant

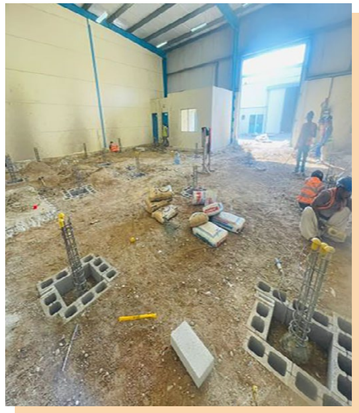
M/s Designer Engineering Consultant

Location

Hulaila, RAK








TCR
GEOTECHNICAL

Track Modification

Modification of F1 Racetrack at t-11 for 2021 Formula One

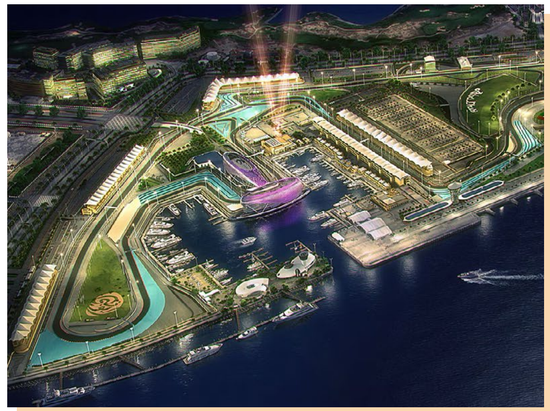
YAS MARINA CIRCUIT

Challenge

Yas Marina circuit planned for the modification of F1 racetrack at T-11 for 2021 Formula One event but the soil strata beneth the planned area was loose to support the new track.

Solution

TCR has been appointed by Abu Dhabi Motorsports Management for the mitigation of the geotechnical problem. Jet Grouting andControlled modulus column technique was used with the protection of utilities successfully.









Client

Abu Dhabi Motorsports Management

Consultant

KN International

Location

Yas Marina Abu Dhabi

TCR
GEOTECHNICAL

Shamkha Medical Center

Faced differential settlement due to liquefaction of the strata

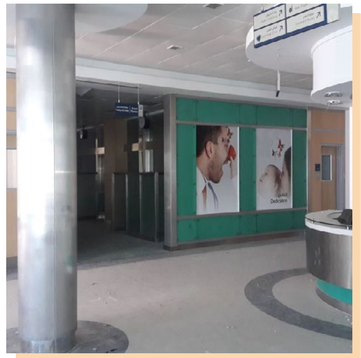
SEHA

Challenge

Type B Medical Center (SEHA) faced differential settlement due to liquefaction of the strata, areas in Abu Dhabi having geological issues of loose strata and underground cavities resulting settlement causing damage to the structure.

Solution

TCR has been appointed by ASGC for the mitigation of the geotechnical & structural problem. Based on the recommendation of the engineer and available data Micropile & pile caps was used to add the support to the existing structure to avoid the effect in future.








Client

Abu Dhabi Health Services Co. (SEHA)

Consultant

HDP

Location

Al Shamkha - Abu Dhabi

TCR
GEOTECHNICAL

Abu Dhabi Future School

دائـرة الـتـعـلـيـم والـمـعـرفـة
DEPARTMENT OF EDUCATION
AND KNOWLEDGE

Mitigation of the geotechnical & structural problem

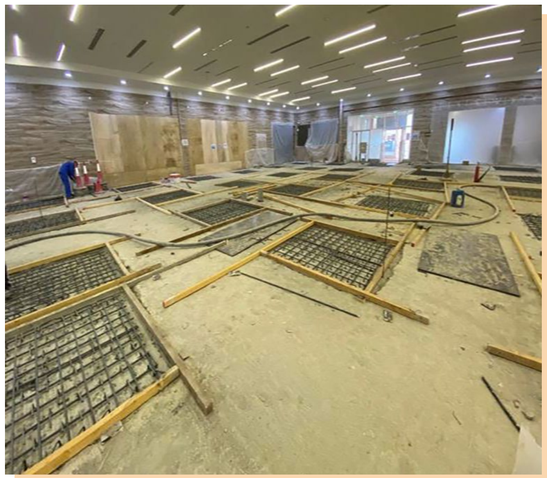
Challenge

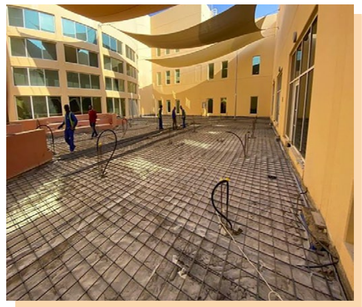
Future school located in Shakhbout city Abu Dhabi was built by contractor without the improvement of the soil strata resulting post construction deflection of concrete elements, differential settlement of internal floors & outer area and wall deflection.

Solution

TCR has been appointed by Musanada for the mitigation of the geotechnical & structural problem. Based on the recommendation of the engineer and available data various ground improvement techniques like Jet Grouting, Micropile, TAM Grouting, pile caps and slab strengthening were used successfully.











Client

Musanada

Consultant

Al Suweidi

Location

Shakhbout City

TCR GEOTECHNICAL

Tanveer Hall

Mitigation of the geotechnical & structural problem at University of Sharjah

Government of Sharjah
Department of Public Works
حكومة الشارقة
دائرة الأشغال العامة

Challenge

Tanveer hall auditorium located at higher collage of technology in University of Sharjah faced differential settlement due to liquefaction of the soil strata resulted in the structural deformation & damage to the concrete elements

Solution

TCR has been appointed by DPW Sharjah for the mitigation of the geotechnical & structural problem. Based on the recommendation of the engineer and available data TAM Grouting Techni was used successfully.





Client

Department of Public Works - Sharjah

Consultant

Eforce

Location

Sharjah University







TCR GEOTECHNICAL

Junior Staff Accomodation

IMD 189B - Block-E, DDWD-D Junior Staff Accommodation (JSA-1)

Challenge

Junior staff accomodation for port Rashid in Dubai faced severe settlement & structural damage due to consolidation of strata, root cause identified was the hydro geological effect in close vicinity of the shore line.

Solution

TCR has been appointed by Dry Docks for the mitigation of the geotechnical & structural problem. Based on the recommendation of the engineer and available data TAM Grouting Technique was used for the densification of the strata and creating a barrier to eliminate the hydrostatic effect in future.

Client

Drydock World Dubai

Consultant

Eforce

Location

DP World - Port Rashid Dubai









TCR
GEOTECHNICAL

Residential Villa Compound

Residential compound of 38 villas, plot 46 sector 44, Khalifa City - Abu Dhabi

Challenge

Villa compound owned by Her Highness Shekha Mozah Tahnoon Mohammed Al Nahyan having differential settlement due to loose strata and liquefaction causing the damage to the structure.

Solution

TCR has been appointed by CATIC for the mitigation of the geotechnical problem and structural repairs. Micropile, TAM Grouting & structural strengthening & retro fitting works were done to increase the bearing capacity in order support the structure and subsidize the effect in future.








Client

H.H. Sheikha Mozah Tahnoon Mohammed Al Nahyan

Consultant

Architectural Engineering Consultants

Location

Khalifa City - Abu Dhabi

TCR

STRUCTURAL STRENGTHENING & RETROFIT

Structural Repair & Leakage Treatment

ALSAYYAH

Structural Repairs & Leakage Treatment to Basement 1,2,3,4, @ 4B+G+19 Commercial and Residential Building at Business Bay, Dubai

Challenge

Blue Bay Tower located in Business bay Dubai owned by Al Sayyah Group faced structural issues like delamination of slab & pile cap, Upliftment of raft due to hydrostatic pressure, corrosion of rebar, Water leakage and structural cracks.

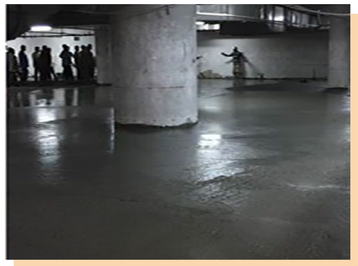
Solution

TCR has been appointed by Al Sayyah Group for the mitigation of the issues, various techniques like dewatering, demolition & recasting of effected slabs, thickening of non affected slab, waterproofing, closing of dewatering wells & epoxy traffic flooring were used successfully.








Client

Al Sayyah & Sons Investment

Consultant

Architectural Engineering Consultants

Location

Khalifa City - Abu Dhabi

TCR

STRUCTURAL STRENGTHENING & RETROFIT

Carlton Hotel Deira

المستثمر الأول
THE FIRST INVESTOR

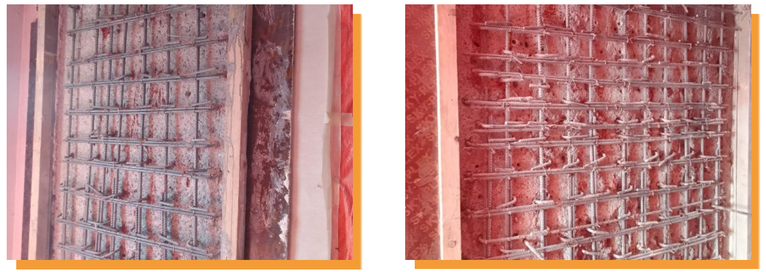
Structural Strengthening works at Carlton Hotel Deira

Challenge

Carlton Hotel located in Deira, Dubai - Challenges Structural strengthening due to corrosion of steel in the columns, beams and demolition and reconstruction of 2 slabs.

Solution

TCR has been appointed by the client for the mitigation of the problems and executed successfully strengthening using section enlargement technique and deep skin repair method and demolition and reconstruction of 2 slabs.










Client

The First Investor

Consultant

Chawla Architectural and Consulting Engineers

Location

Deira, Dubai

TCR

STRUCTURAL STRENGTHENING & RETROFIT

Radiant Square Project

Radiant Square Project, Plot RT3-13, City of Lights,
Reem Island, Abu Dhabi

Challenge

Radiant Square Tower (5 Towers) located in Reem Island owned by Maliah Group faced structural issues like delamination of raft slab in basement, Uplift due to hydrostatic pressure, corrosion of rebars, water leakage and structural cracks.

Solution

TCR has been appointed by Client to address the above requirements and mitigation of the issues, like dewatering thickness of affected slabs, waterproofing, closing of dewatering wells. It was a design and build project carried out under the supervision of consultants.

Client

M/s Malaih
Investment & Proj. Dev't.

Consultant

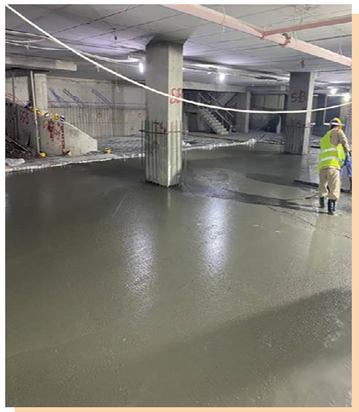
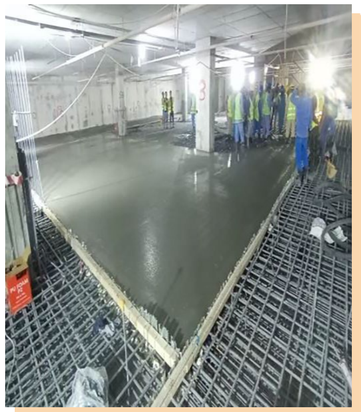
M/s Architectural
Consulting Group (ACG)

Location

Reem Island, Abu Dhabi





TCR

STRUCTURAL STRENGTHENING & RETROFIT

Atrium Towers Plot

Strengthening of Piles at C23-C24 Sector No.RT3

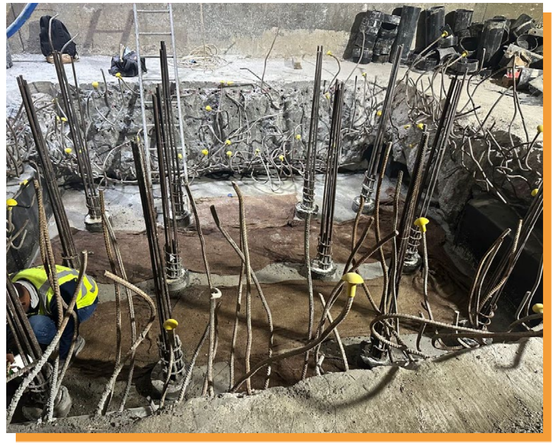
RADIANT REAL ESTATE

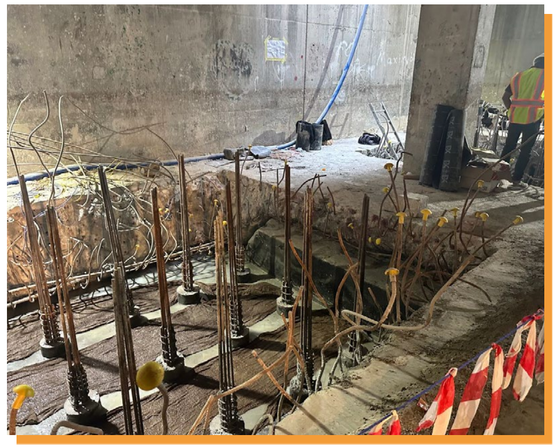
Challenge

Atrium Tower Located in Al Reem Island Abu Dhabi – main challenges enlargement of raft due to earthquake design regulations.

Solution

TCR has been appointed by the client for the mitigation of the problems and executed successfully strengthening of piles adding additional micro piles and enlargement of pile cap.











Client

Radiant Real Estate

Consultant

e11 Engineering Consultancy & Project Management

Location

Al Reem Island, Abu Dhabi

TCR

STRUCTURAL STRENGTHENING & RETROFIT

Sharjah Sports Club

302-082, Structural repair works for the buildings of Sharjah Sports Club – Samnan Branch

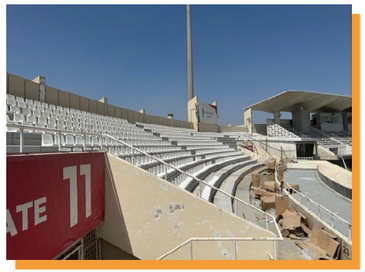
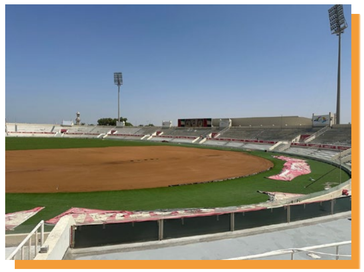
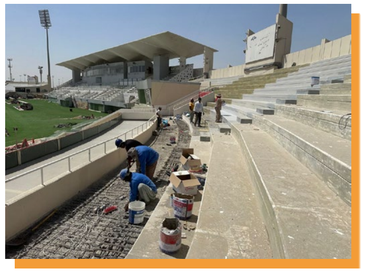
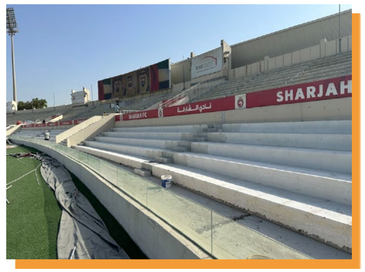
Government of Sharjah
Department of Public Works
حكومة الشارقة
دائرة الأشغال العامة

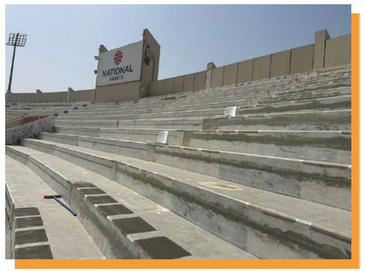
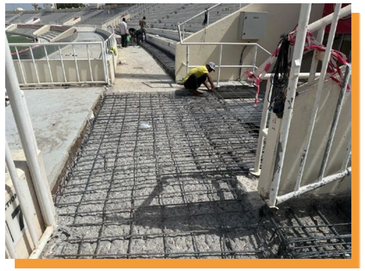
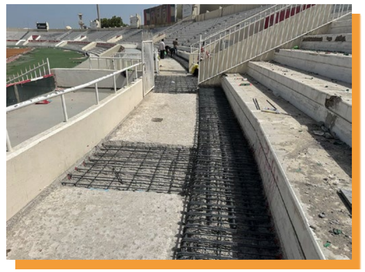
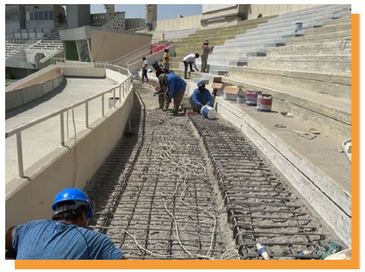
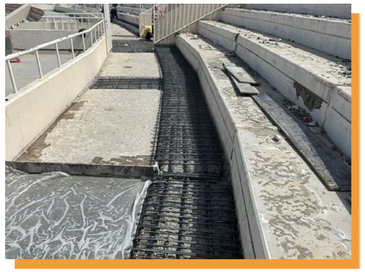
Challenge

Samnan Club located in Sharjah Industrial area -5 – main challenges structural rectification, water proofing and complete renovation of football stadium including replacement of chairs.

Solution

TCR has been appointed by Department of Public Works for the mitigation of structural problems. Based on the recommendations from engineers, TCR executed the works and completed successfully within the time frame.

Client

Department of Public Works - Sharjah

Consultant

Eforce Engineering Consultancy

Location

Samnan, Sharjah

TCR
STRUCTURAL STRENGTHENING & RETROFIT

Martyr's Square

601-058, Remedial/Strengthening Works Required for Martyr's Square Visitors Building

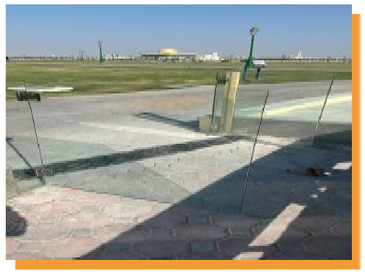
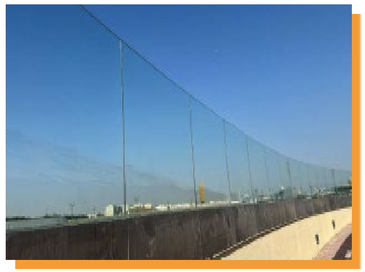
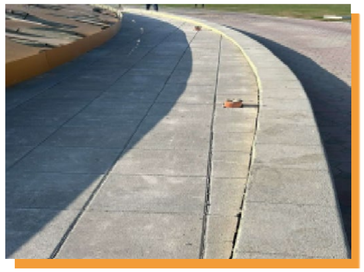
Government of Sharjah
Department of Public Works
حكومة الشارقة
دائرة الأشغال العامة

Challenge

Martyr's square is located at University of Sharjah facing leakage on the basement due to absence of waterproofing membrane.

Solution

TCR has been appointed by Department of Public works for the mitigation of the geotechnical and structural remedial works. based on the recommendation of the Engineer and available data curtain injection technic was used and succeeded along with other remedial works.







Client

Department of Public Works - Sharjah

Consultant

Eforce Engineering Consultancy

Location

Sharjah

TCR

STRUCTURAL STRENGTHENING & RETROFIT

Structural Modification of Marina Mall

National Investment Corporation

Structural Modification Works including Void Filling at Marina Mall, Abu Dhabi

Challenge

Proposed Structural Modification Works including Void Filling at FM 9, 10 and 11, upgrading of Marina Mall, Abu Dhabi.

Solution

TCR has been appointed by Client to address the above requirements. Voids were closed with the combination of steel beams, micro-concrete and normal concrete. The nearby structural elements (slabs, columns and beams) were strengthened by section enlargement and CFRP to bear the additional loads. It was a design and build project carried out under the supervision of consultants.

Client

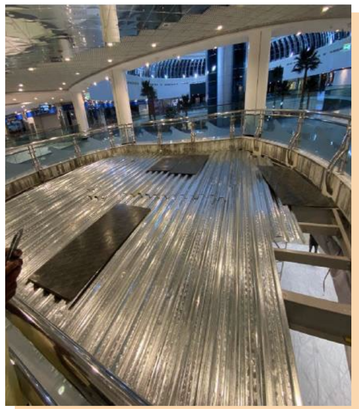
M/s National Investment Corporation (PISC)

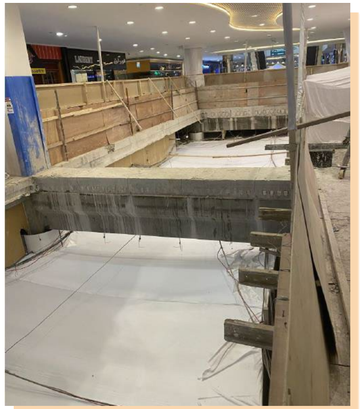
Consultant

M/s WME Engineering Consultant

Location

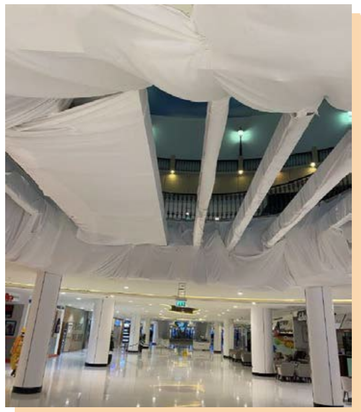
Marina Mall, Abu Dhabi











TCR

STRUCTURAL STRENGTHENING & RETROFIT

Circle Mall JVC

NAKHEEL

Structural Changes to Accommodate New Leasable Area in First & Second Floor at Circle Mall Plot at No. JVC11VP200

Challenge

Structural modifications such as closing of voids in some areas, creating new openings in some areas, slab extension to accommodate escalators and elevators. Additional slabs to create raised floors (loading bays).

Solution

TCR has been appointed by Client to address the above requirements. Voids were closed with the combination of steel beams, micro-concrete and normal concrete. The nearby structural elements (slabs, columns and beams) were strengthened by section enlargement and CFRP to bear the additional loads. It was a design and build project carried out under the supervision of consultants.

Client

Nakheel Properties

Consultant

Arif & Bintoak Consulting Architects & Engineers

Location

Jumeirah Village Circle Dubai










TCR
STRUCTURAL STRENGTHENING & RETROFIT

Structural Strengthening

TAMOUH

Structural strengthening at Paragon Bay Mall, Reem Island, Abu Dhabi

Challenge

Structural Strengthening such as voids in some areas, slab strengthening. Additional slabs to create raised floor (Loading Bays).

Solution

TCR has been appointed by Client to address the above requirements. Voids were closed with the combination of steel beams, micro-concrete and normal concrete. The nearby structural elements (slabs, columns and beams) were strengthened by section enlargement and CFRP to bear the additional loads. It was a design and build project carried out under the supervision of consultants.

Client

M/s TAMOUH

Consultant

M/s Al Torath

Location

Reem Island, Abu Dhabi








TCR

STRUCTURAL STRENGTHENING & RETROFIT

Gabion Wall Rayyana Boundary

Gabion Wall Rayyana Boundary Wall Phase 2 at Khalifa City

ALDAR

Challenge

Repairs of Gabion Wall Rayyana Boundary Wall Phase 2 at Khalifa City - Abu Dhabi.

Solution

TCR has been appointed by Client to address the above requirements. The purpose of this procedure is to provide details of Soil improvement by Jet Grout technique. It was a design and build project carried out under the supervision of consultants.









Client

M/s Aldar Properties

Consultant

M/s Bainona Engineering Consultant

Location

Khalifa City, Abu Dhabi

Trusted by the Region's Leading Developers and Visionaries

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معادن MAADEN
DP WORLD
سابك sabic
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NEOM نيوم
Qiddiya
SEVEN SAUDI ENTERTAINMENT VENTURES
دار ALDAR
NHC
LARSEN & TOUBRO
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