TERRA FIRMA

PREQUALIFICATION

Q4 2026



TERRA FIRMA + TCR

TERRA FIRMA

STRONG FOUNDATIONS FOR A SUSTAINABLE FUTURE

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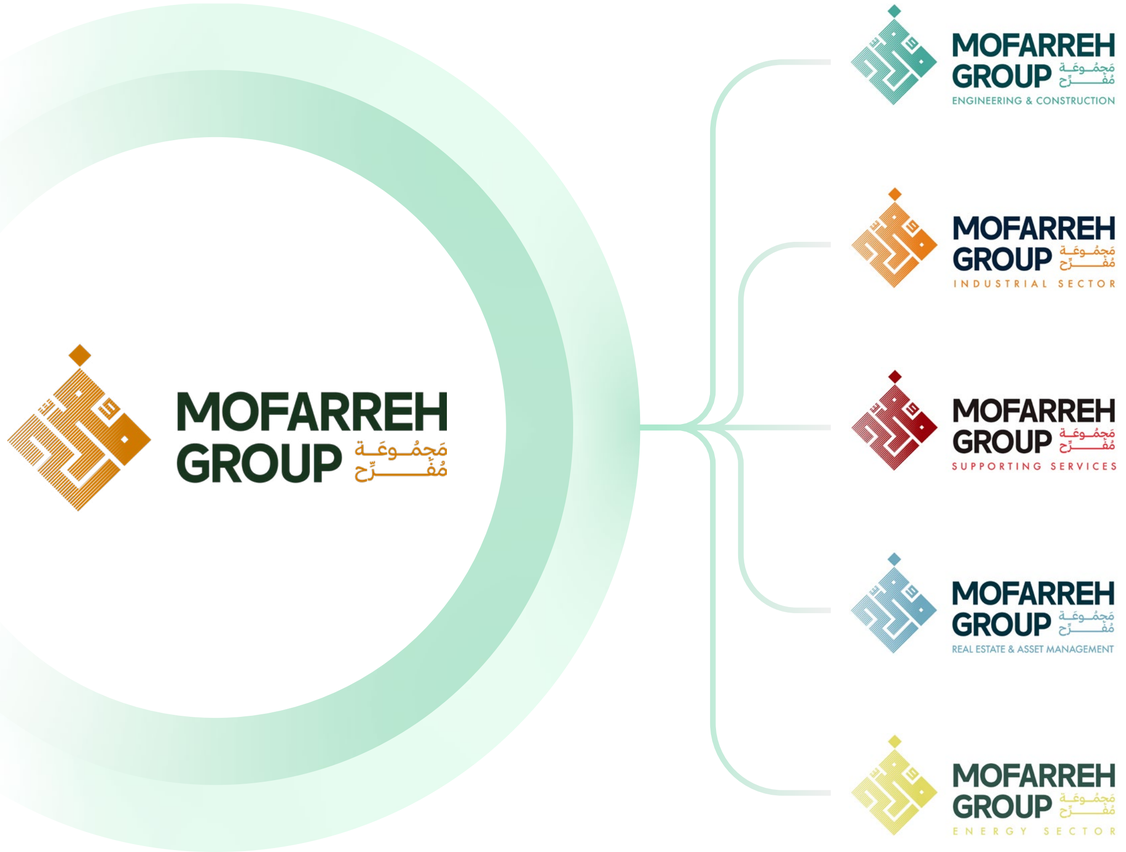
1. Group

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

Criteria

- 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
- Cavity Grouting

Thrust Boring:

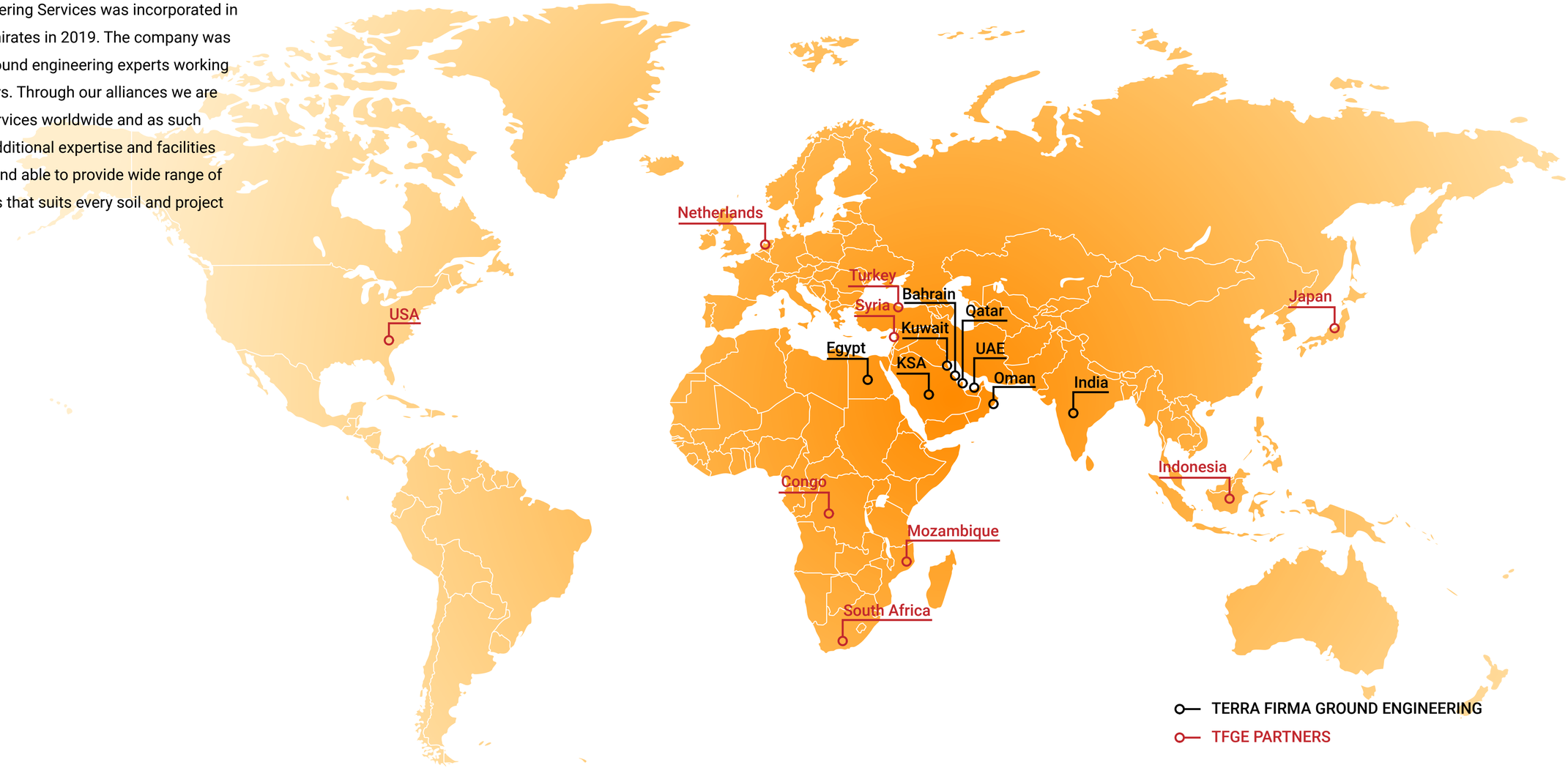
- Horizontal Drilling
- Micro Tunneling
- Pipe Jacking

Sand Compaction Piles

Instrumentation & Monitoring

2. Network

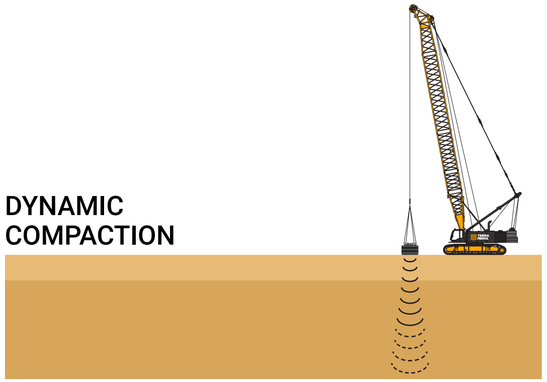
A Foundations Engineering Services was incorporated in Dubai, United Arab Emirates in 2019. The company was formed by team of ground engineering experts working together since 15 years. Through our alliances we are able to provide our services worldwide and as such we benefit from the additional expertise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



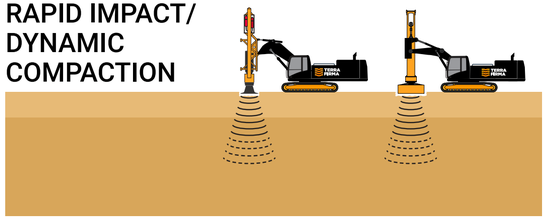
3. Solutions

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.

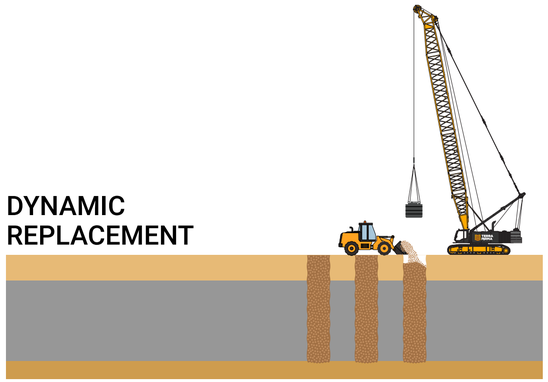
DYNAMIC COMPACTION



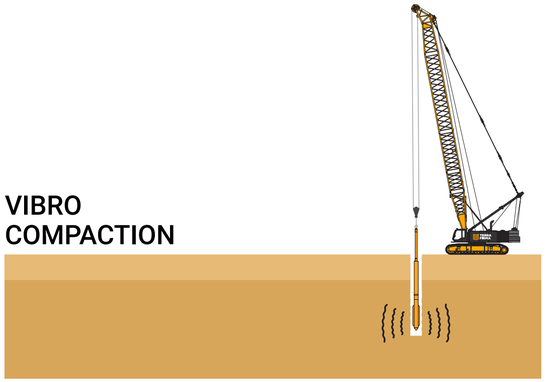
RAPID IMPACT/ DYNAMIC COMPACTION



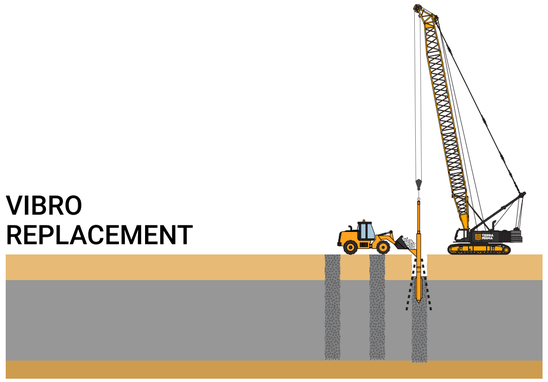
DYNAMIC REPLACEMENT



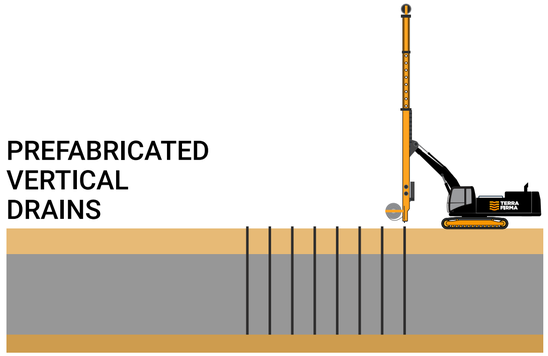
VIBRO COMPACTION



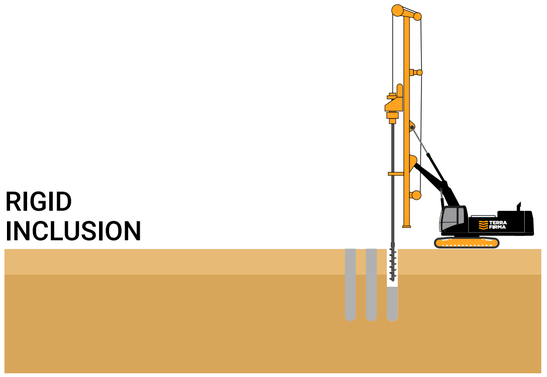
VIBRO REPLACEMENT



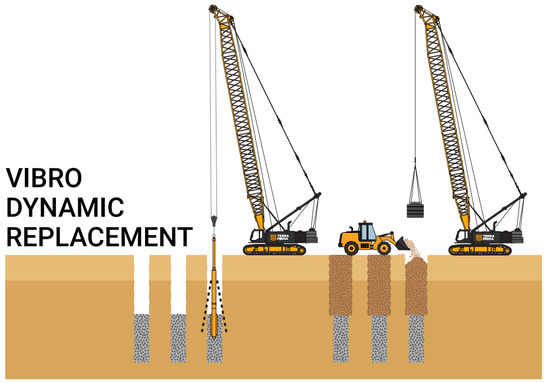
PREFABRICATED VERTICAL DRAINS



RIGID INCLUSION



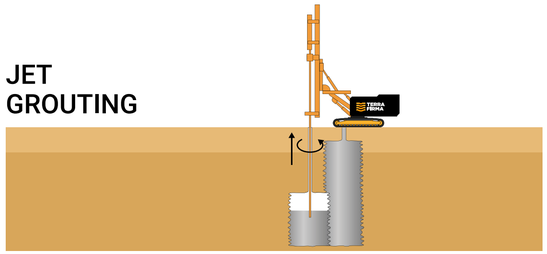
VIBRO DYNAMIC REPLACEMENT



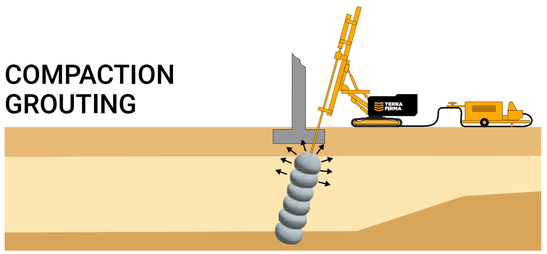
HIGH ENERGY IMPACT COMPACTION



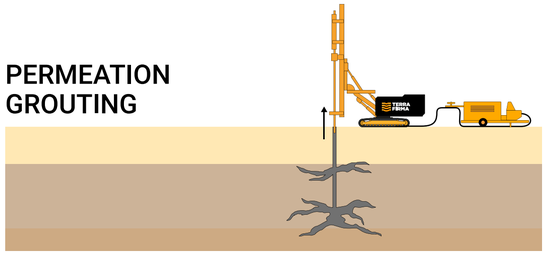
JET GROUTING



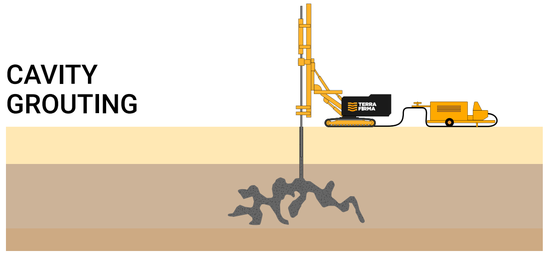
COMPACTION GROUTING



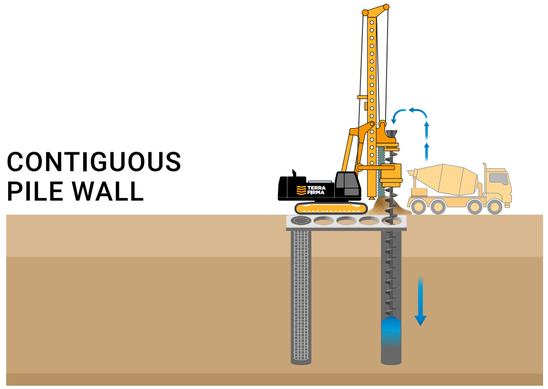
PERMEATION GROUTING



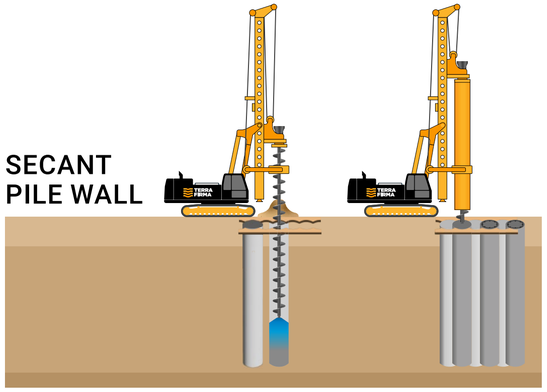
CAVITY GROUTING



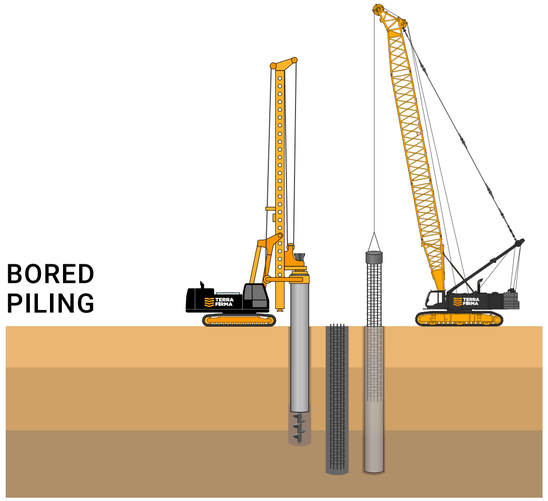
CONTIGUOUS PILE WALL



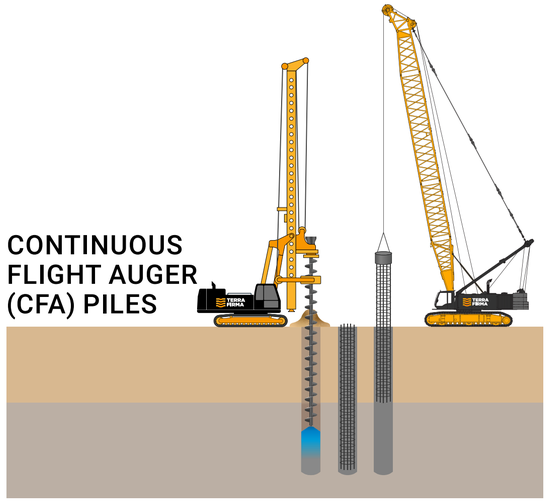
SECANT PILE WALL



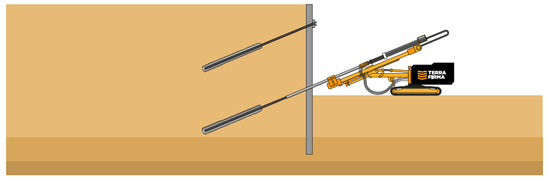
BORED PILING



CONTINUOUS FLIGHT AUGER (CFA) PILES



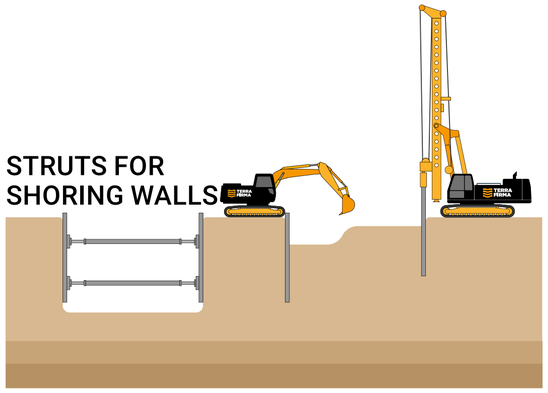
ANCHORAGE FOR SHORING WALLS



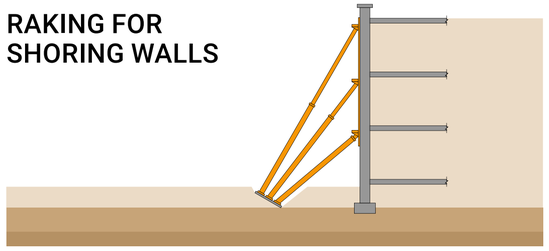
SOIL NAILS/ROCK BOLTS ANCHORING



STRUTS FOR SHORING WALLS



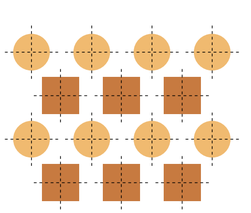
RAKING FOR SHORING WALLS



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.

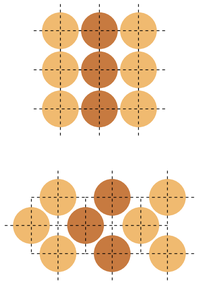
Dynamic Compaction (DC) method is applicable for a wide variety of soil conditions including saturated/ unsaturated loose Sands, even with the presence of silty pockets, dune sands, inorganic fill, reclaimed soils with variable characteristics and sizes even with presence of large sized boulders, landfills 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

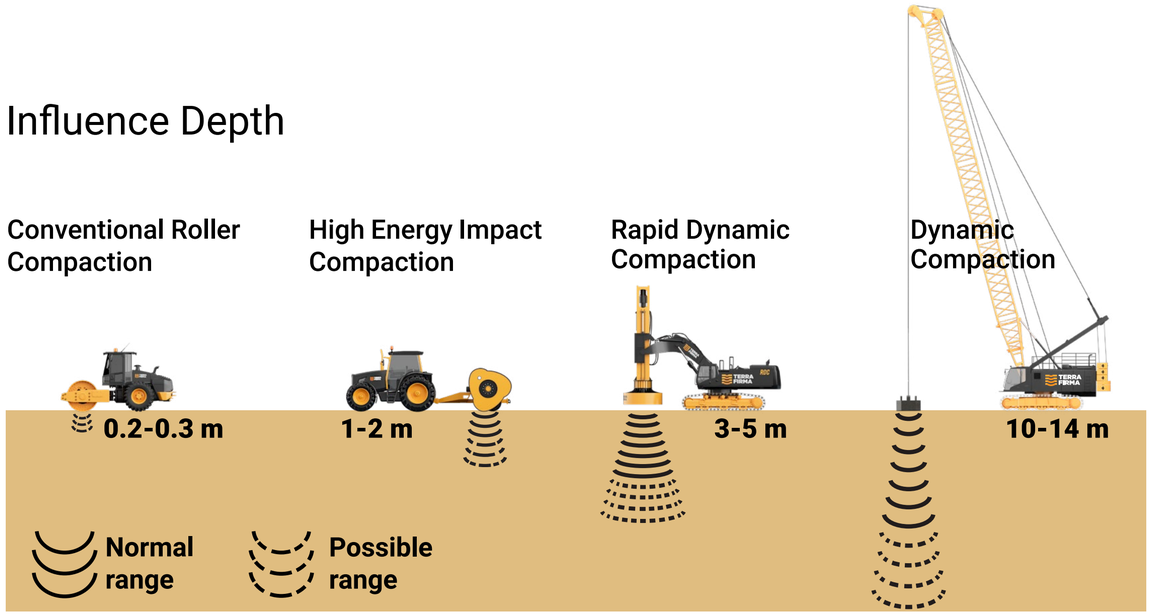
Primary Treatment

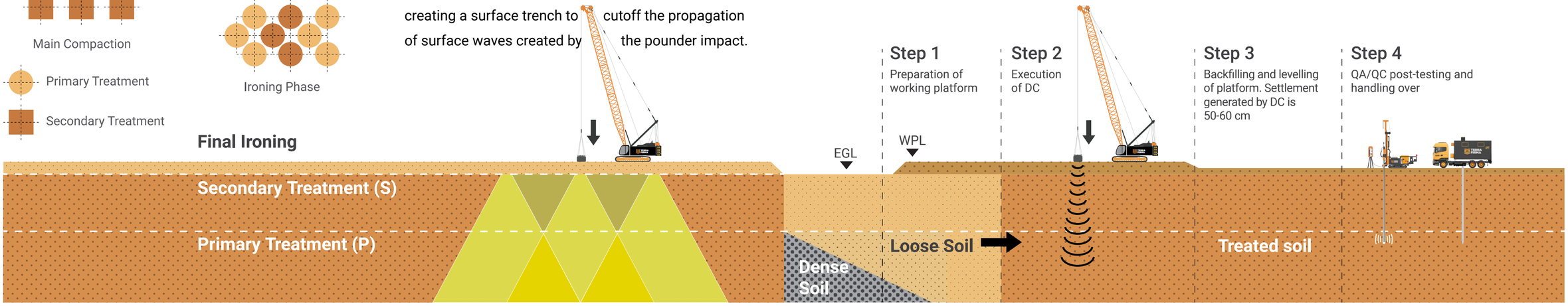
Secondary Treatment



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.

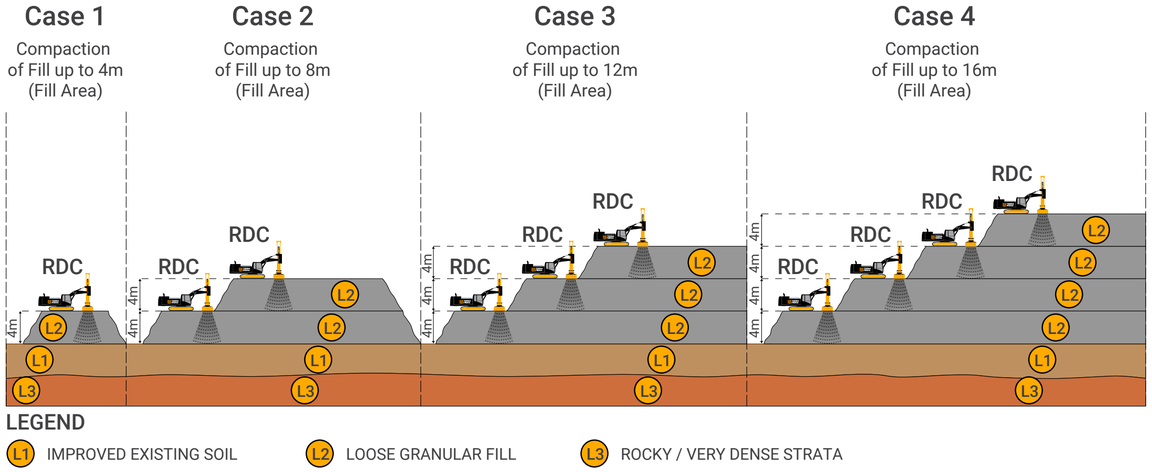
The RDC machine consists of a hydraulic excavator base with strengthened arm to which a strengthened arm to which a compaction hammer is attached.

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.



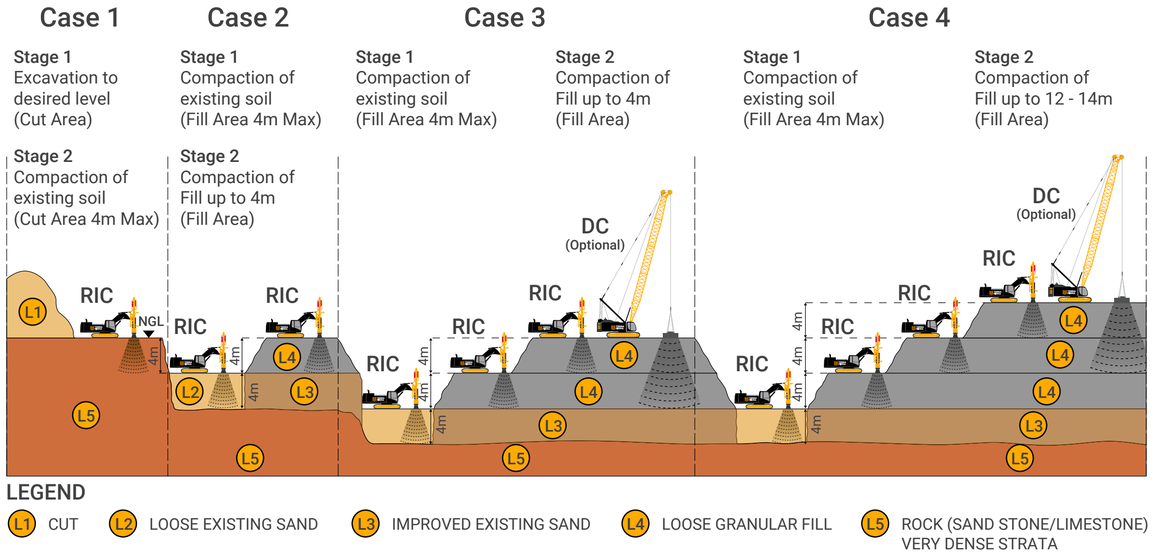
Influence Depth

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.



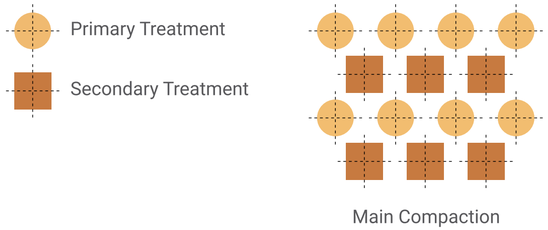
Dynamic Replacement

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.

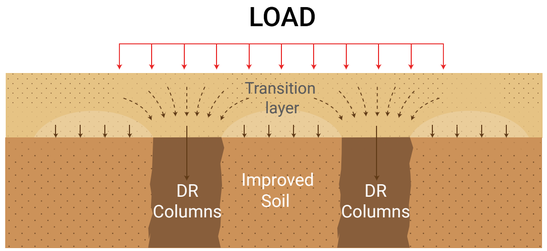
Dynamic Replacement (DR) technique can be implemented as a global treatment or localized under foundations only in order to increase the soil bearing capacity and reduce the total and differential post-construction settlements.

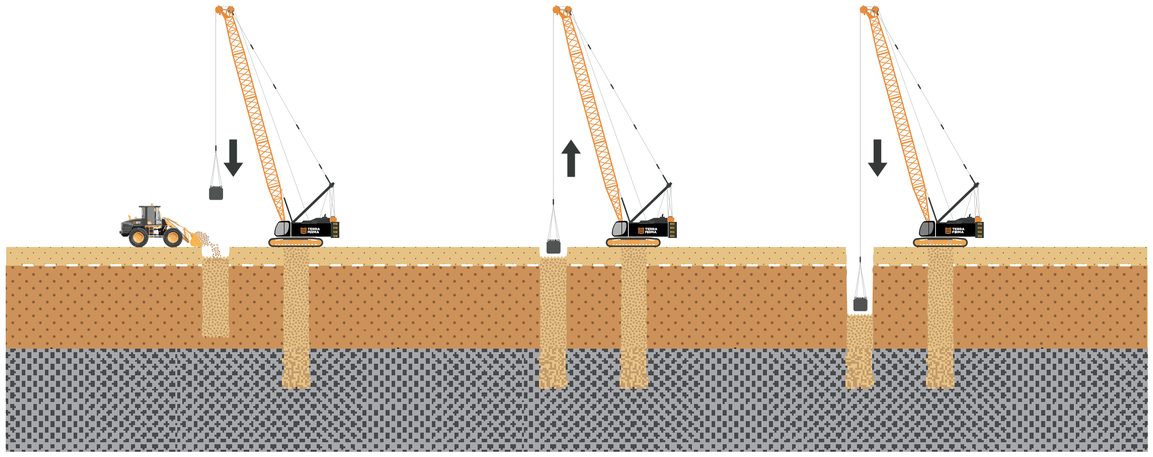
This method combines the advantages from both Dynamic Compaction and Stone Columns technologies by creating large sized Dynamic Columns with high stiffness and internal shear resistance and overall improvement of mechanical characteristics of the intermediate soil.

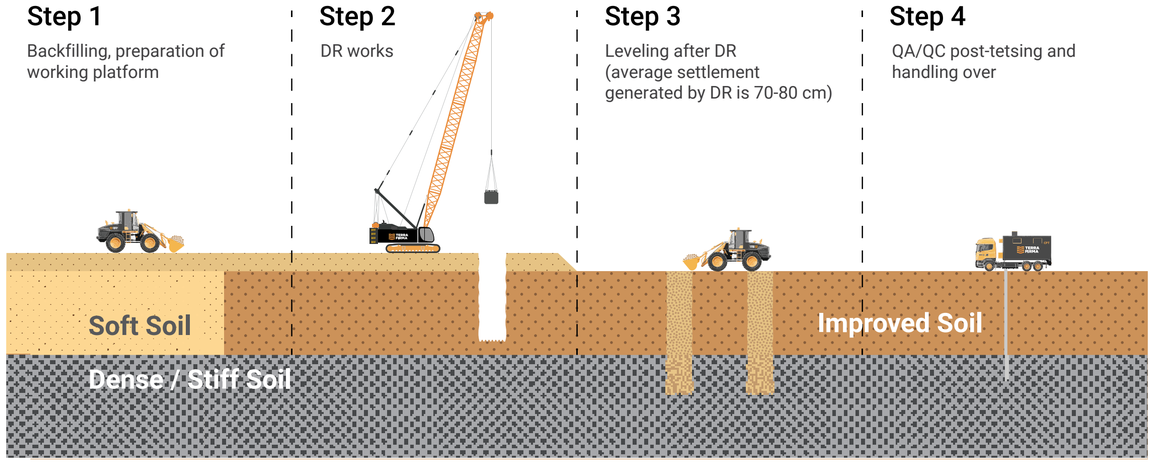
A large variety of readily available granular materials may be used for construction of the DR columns. Clean well graded sands may be the most suitable, however, other sources such as dune sands, gravel/sand mix, concrete rubble/crushed gravel mixed with sand etc. may also be successfully used.



Main Compaction







Vibro Compaction

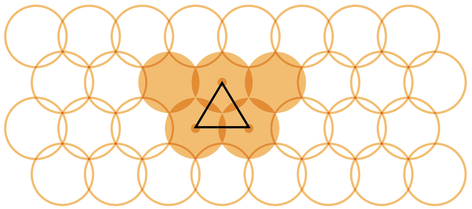
Equipment and Execution

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.

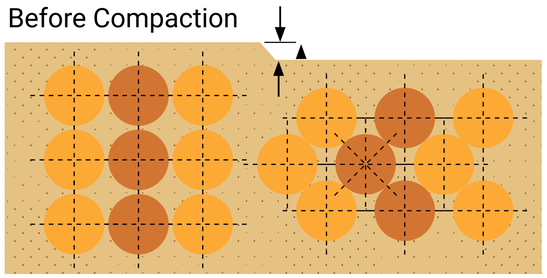
Principle of Vibro Compaction

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

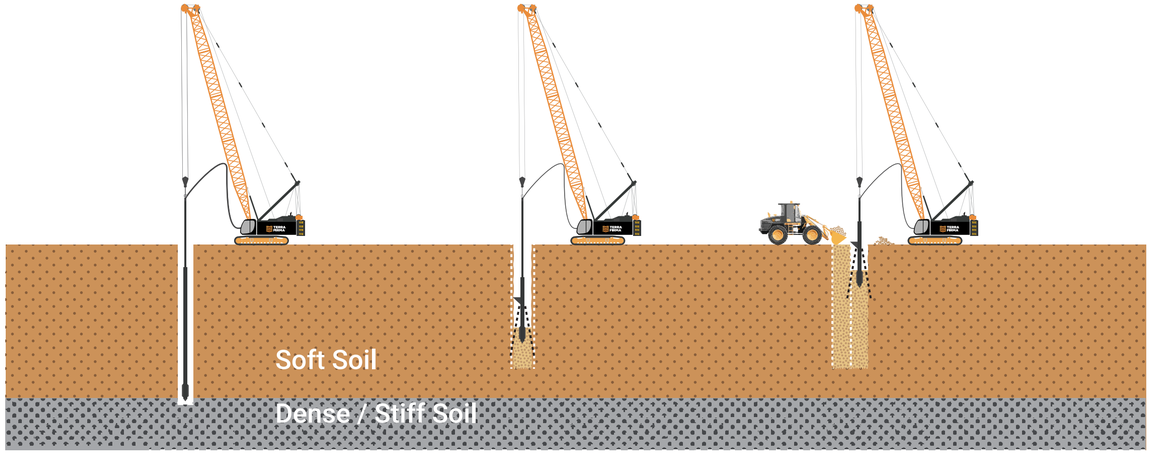
Compaction is carried out from bottom to top in predetermined steps during the field trial depending on soil behaviour. At each interval the vibrator is held vibrating until there is increase in power or for a time determined in the compaction trial which is normally 40s. The increase in density is indicated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

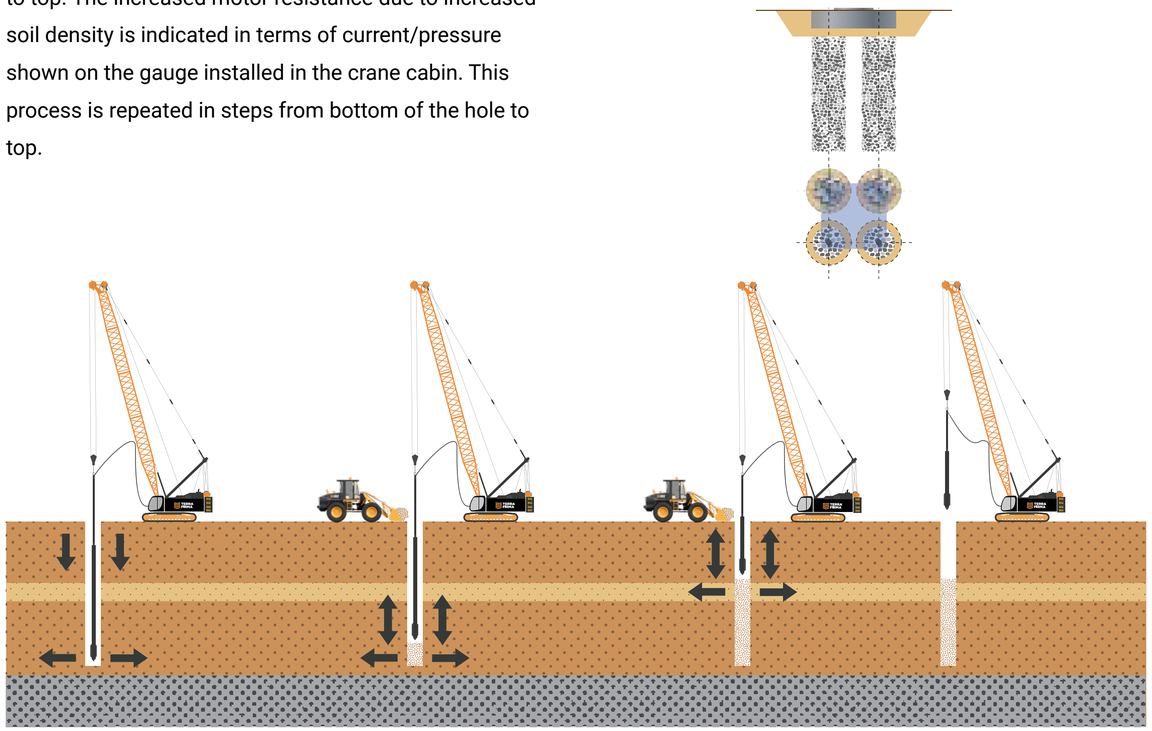
Equipment and Execution

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

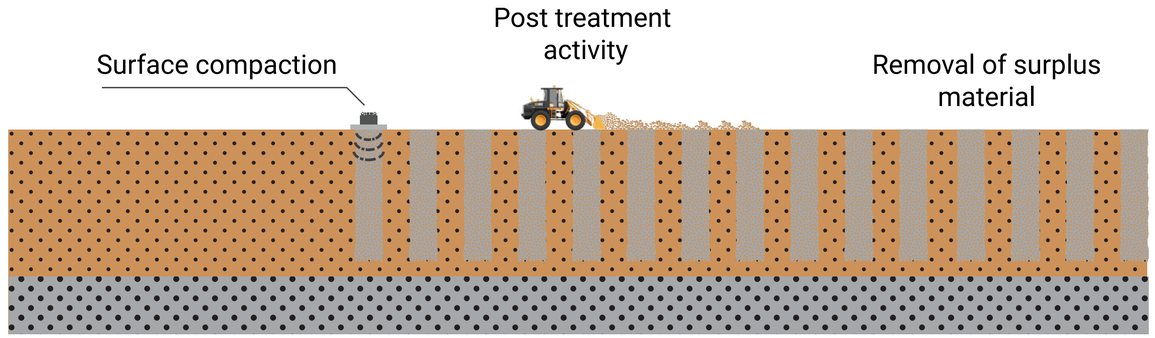
Now the coarse grained backfill material which is normally gravel or crushed stone aggregate is dumped into the hole. The stones are helped to reach the bottom of the hole by various up and down surging movements of the vibrator. Once the stones reach the bottom of the hole, the vibrator is re-penetrated 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.



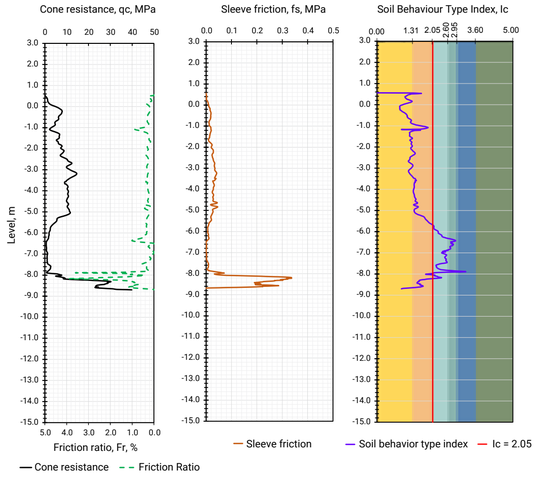
Quality Control

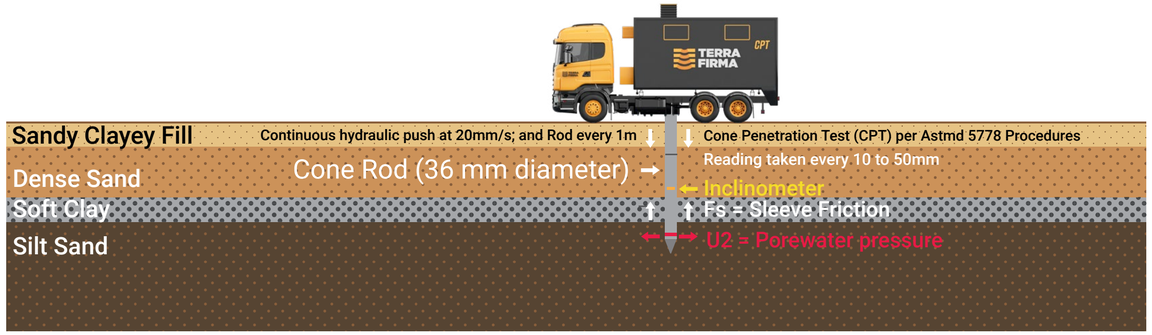
Data Recorder

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

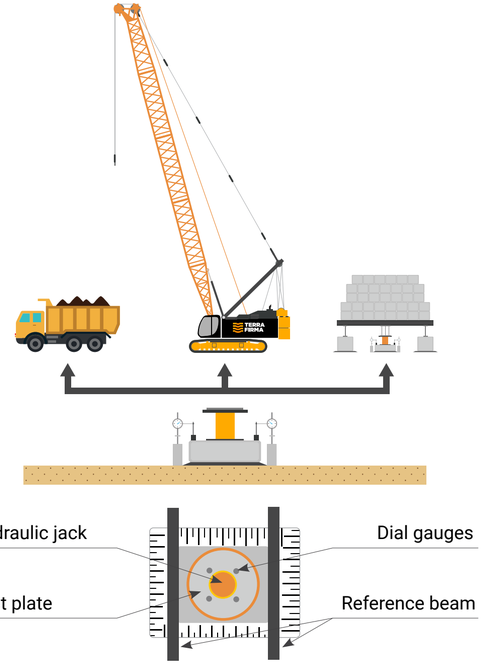
Normally Cone Penetration Tests (CPT's) are carried out for the measurement of compaction results due to its reliability and low cost. CPT's measure qc, side friction & pore water pressure. Post compact CPT is normally carried out after minimum one week of vibro compaction in order to allow excess pore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

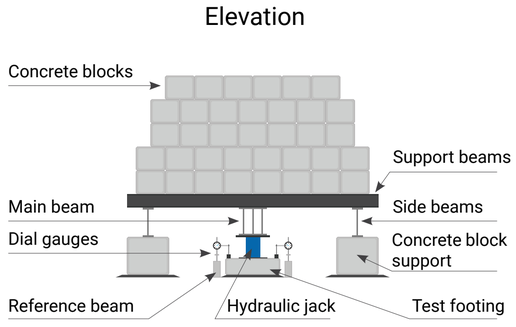


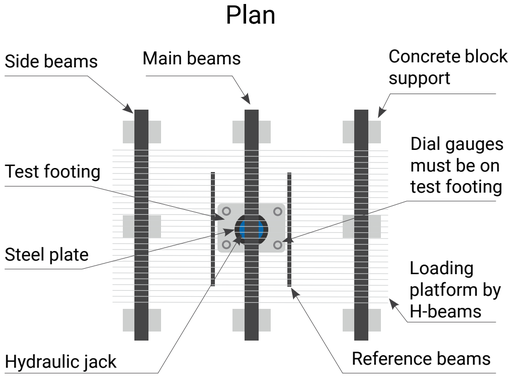


Load Tests

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.

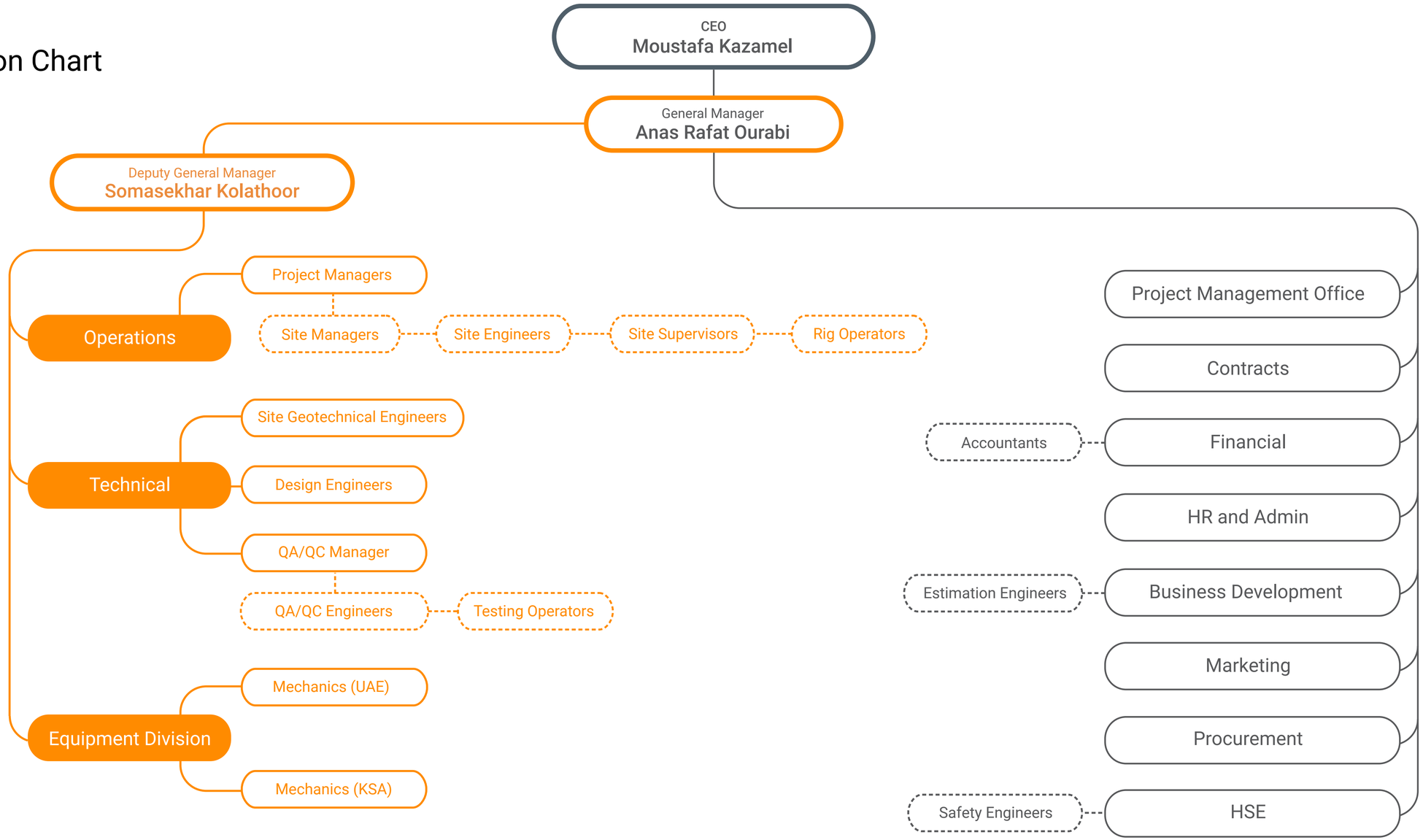






4. Team

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

Saudi



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

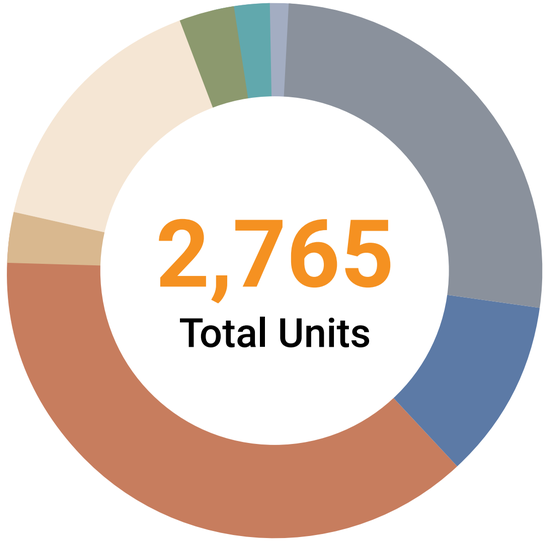
10+
Global Brands

Built to Deliver Performance at Scale

Maintained to the Highest Standards

Ready to Deploy Anytime, Anywhere

Fleet Breakdown by Category

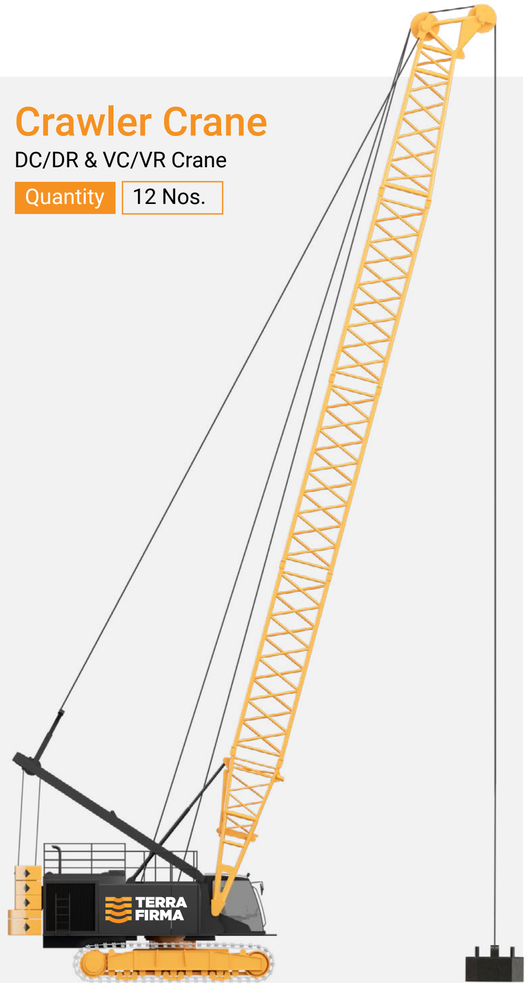


Ground Improvement	22
Testing & Instrumentation	5
Earthmoving	731
Haulage Equipment	296
Transport Fleet	1,084
Crushing & Screening	88
Site Support Equipment	451
Tanker Fleet	88

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

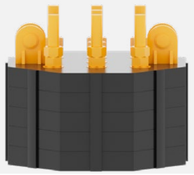
Quantity	4 Nos.



Pounders

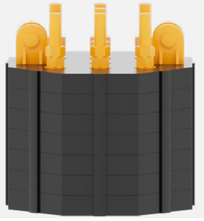
DC Pounders

Quantity	6 Nos.
Weight	16-18 Tons



DR Pounders

Quantity	9 Nos.
Weight	20 Tons



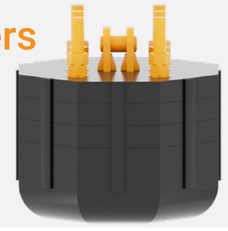
Ironing Pounders

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

6. 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
Valid Until: 17 October 2026

In-Country Value Certificate
Abu Dhabi
Certificate No: 141633
Issue Date: 25 September 2025
Valid Until: 17 October 2026

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

حكومة دبي
GOVERNMENT OF DUBAI

DUBAI
للاقتصاد والسياحة
Economy and Tourism

License No./رقم الرخصة
1199411

رخصة تجارية
Commercial License

License Details					تفاصيل الرخصة
Company Name	تيرا فيرما لأعمال حفر الأساسات ش.ذ.م.م TERRA FIRMA FOUNDATION CONTRACTING L.L.C				اسم الشركة
Business Name	تيرا فيرما لأعمال حفر الأساسات ش.ذ.م.م TERRA FIRMA FOUNDATION CONTRACTING L.L.C				الاسم التجاري
Legal Type	Limited Liability Company - Single Owner(LLC - SO)		شركة ذات مسؤولية محدودة - الشخص الواحد (ذ.م.م)		الشكل القانوني
Expiry Date	19/06/2027	تاريخ الانتهاء	Issue Date	20/06/2023	تاريخ الإصدار
VAT No.		الرقم الضريبي	Main License No.	1199411	رقم الرخصة الأم
Register No.	-	رقم السجل التجاري	DCCI No.		عضوية الغرفة

License Activities	Status	الحالة	أنشطة الرخصة التجارية
Piling & Foundation Contracting	Active	فعال	اعمال حفر الاساسات وتثبيت الركائز

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invest in dubai
invest.dubai.ae

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DUBAI
للاقتصاد والسياحة
Economy and Tourism

License No./رقم الرخصة
1199411

رخصة تجارية
Commercial License

License Members					أطراف الرخصة
Share / الحصص	Role / الصفة	Nationality / الجنسية	Name / الاسم	ID No. / رقم الشخص	
100%	مالك حصص Shares owner	السعودية Saudi Arabia	مرزوق بن مفرح الحربي MARZOUQ MOFARAH M ALHARBI	1330466	
	مدير Manager	السعودية Saudi Arabia	مرزوق بن مفرح الحربي MARZOUQ MOFARAH M ALHARBI	1330466	
	مدير Manager	دومينيكا دول الكومنولث Commonwealth of Dominica	انس رافت عرابي ANAS RAFAT OURABI	1206640	

Beneficiary Owner consent of this license has been signed on 21/09/2023. For more information or to know the Beneficiary Owner, please visit any DET service center or IID website.

تم التوقيع بموافقة المالك المستفيد لهذه الرخصة بتاريخ 21/09/2023. ولمزيد من المعلومات أو لمعرفة المالك المستفيد الحقيقي، يرجى زيارة مراكز الخدمة التابعة لدائرة الاقتصاد والسياحة أو زيارة الموقع الإلكتروني لمنصة استثمر في دبي

Address					العنوان
Phone No	+971-508919982	تليفون	P.O. Box	341101	صندوق بريد
Fax No	-	فاكس	Mobile No	+971-508919982	هاتف متحرك
Email	Anas.ourabi@terrafirmage.com				البريد الإلكتروني
Parcel ID	626-0				رقم القطعة

Office 114, Owned by سلطة دبي للمناطق الإقتصادية المتكاملة, New Dubai, New Dubai

Remarks	الملاحظات

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حكومة دبي
GOVERNMENT OF DUBAI

DUBAI
للاقتصاد والسياحة
Economy and Tourism

License No./رقم الرخصة
1199411

رخصة تجارية
Commercial License

Receipt					الإيصال
Receipt Date	21/05/2026	تاريخ الإيصال	Receipt No		رقم الإيصال
Business Name	تيرا فيرما لأعمال حفر الأساسات ش.ذ.م.م TERRA FIRMA FOUNDATION CONTRACTING L.L.C				الاسم التجاري
Procedure	Renew License			تجديد رخصة	نوع الإجراء
P.V.No.		رقم إذن الدفع	License No.	1199411	رقم الرخصة
Payment Mode	eGovernment Online Payment			الدفع الإلكتروني عن طريق الحكومة الإلكترونية	كيفية الدفع
Amount in Words	ثلاثة عشر ألف و مائة و ستة عشر درهم صفر فلسا Thirteen thousand one hundred sixteen Dirhams and zero fils				القيمة بالكلمات

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Printed Date تاريخ الطباعة

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ADRA
سلطة أبوظبي للتسجيل
Abu Dhabi Registration Authority

دائرة التنمية الاقتصادية
DEPARTMENT OF ECONOMIC DEVELOPMENT

رخصة أبوظبي الاقتصادية
Abu Dhabi Economic Licence

Licence Details — تفاصيل الرخصة

Licence Type	Business	تجارية	نوع الرخصة
Licence Category	Branch	فرع	فئة الرخصة
Licence No.	CN-5094975		رقم الرخصة
Unified Registration No.	101-2023-100166285		رقم التسجيل الموحد
Unified Licence No.	501-2023-100239310		رقم الرخصة الموحد
Establishment Date	29/10/2023		تاريخ التأسيس
Issuance Date	16/09/2026		تاريخ الإصدار
Expiry Date	29/10/2027		تاريخ الإنتهاء
Legal Form	UAE Branch - Dubai	فرع امارتية - دبي	الشكل القانوني
Trade Name	TERRA FIRMA FOUNDATION CONTRACTING L.L.C - BRANCH OF ABU DHABI 1	تيرا فيرما لأعمال حفر الأساسات ش.ذ.م.م - فرع أبو ظبي 1	الإسم التجاري

Ownership and Representatives — الملكية والممثلين

Representative of ممثل عن	Role/Position الدور/المنصب	Nationality الجنسية	Name الإسم
	Owner مالك	Saudi Arabia المملكة العربية السعودية	MARZOUQ MOFARAH M ALHARBI مرزوق مفرح بن مرزوق الحربي
	EC Authorized Signatory المفوض بالتوقيع لبطاقة المنشأة	Dominica دومينيكا	ANAS RAFAT OURABI انس رافت عرابي
	Manager مدير	Dominica دومينيكا	ANAS RAFAT OURABI انس رافت عرابي

Licence Activities — الأنشطة المرخصة

- foundations Digging , pillars installing AND rung Piles work	4390001	- أعمال حفر الأساسات و تثبيت الركائز ودق الخوازيق

Address — العنوان

Official Email	hr@terrafirmage.com	البريد الإلكتروني الرسمي
Official Mobile	+971508919982	رقم التواصل الرسمي
Address	الحصن, غرب 7_1, 0 : ٣, مبنى, بنك أبوظبي الأول ش.م.ع.	العنوان

Additional Information — معلومات إضافية

Emerging Economic Establishment		منشأة اقتصادية ناشئة
ADCCI No	8800059524	رقم عضوية الغرفة
MOHRE Establishment Card No.	1977365	بطاقة المنشأة - وزارة الموارد البشرية والتوطين
ICP Establishment Card No.	846580	بطاقة المنشأة - الهيئة الاتحادية للهوية والجنسية

www.adra.gov.ae

1 of 1 Print Date 16/09/2026 Print Time 16:45:01

للتحقق من الرخصة الاقتصادية ، يرجى زيارة خدمة "تحقق" على
To verify the economic licence kindly visit the TAHAQAQ service on www.tamm.abudhabi

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MEMBERSHIP CERTIFICATE
شهـــــادة عـضـــويـــة

غرفة أبوظبي
ABU DHABI CHAMBER

License Number : CN-5094975 — رقـم الرخـصـة :
Unified Membership No. : 8800059524 — الـرقـم الـمـوحـد :

Legal Form : **Branch of a Foreign Company** — الشكل القانوني : **فرع شركة اجنبية**

Membership Registration Date : **28-10-2023** — تاريخ تسجيل العضوية : **28-10-2023**

Certificate Issue Date : **16-09-2026** — تاريخ صدور الشهادة : **16-09-2026**

Expiry Date : **29-10-2027** — تاريخ الانتهاء : **29-10-2027**

Address : **Abu Dhabi—0 : ~-Build.** — العنوان : **ابوظبي-الحصن-0 : ~-مبنى**

Membership Nationality : **Saudi Arabia** — جنسية العضوية : **المملكة العربية السعودية**

Partner Nationalities : **Saudi Arabia** — جنسية الشركاء : **المملكة العربية السعودية**

According to Abu Dhabi Chamber of Commerce & Industry Law No. 27 of 2005 and its amendments

بناءاً على قانون غرفة تجارة وصناعة أبوظبي رقم 27 لسنة 2005 وتعديلاته فإن

TERRA FIRMA FOUNDATION CONTRACTING L.L.C - BRANCH OF ABU DHABI 1

تيرا فيرما لأعمال حفر الأساسات ش.ذ.م.م - فرع أبو ظبي 1

has been registered to exercise the following economic activity(s)

قد تم تسجيلها لممارسة الأنشطة الإقتصادية التالية

-foundations Digging , pillars installing AND rung Piles work

-أعمال حفر الأساسات و تثبيت الركائز ودق الخوازيق

This document has been issued electronically and is digitally certified. It can be verified by visiting the following website and entering the Reference Number.

تم إصدار هذه الوثيقة إلكترونيا وإعتمادها رقميا. ويمكن التحقق من ذلك بزيارة الموقع التالي وإدخال الرقم المرجعي

https://digital.abudhabichamber.ae/Portal/#/certificate-validation

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الـهـيـئـة الاتـحـاديـة لـلـضـرائـب
FEDERAL TAX AUTHORITY

United Arab Emirates

شهادة التسجيل في ضريبة القيمة المضافة
أصدرت بموجب الصلاحية الممنوحة بموجب المادة (4) من المرسوم بقانون رقم (13) لسنة 2016 بشأن إنشاء الهيئة الاتحادية للضرائب

Certificate of Registration for Value Added Tax in the United Arab Emirates
Issued under the authority allocated by Art. 4 of the Federal Decree-Law No. 13 of 2016

The Federal Tax Authority certifies that the entity below is a registered person for Value Added Tax in the UAE

تشهد الهيئة الاتحادية للضرائب أن الجهة التالية مسجلة لضريبة القيمة المضافة في الإمارات العربية المتحدة

Tax Registration Number	**104163791700003**	رقم التسجيل الضريبي
Legal Name of Entity (Arabic)	تيرا فيرما لاعمال حفر الاساسات ش. ذ. م. م	الاسم القانوني للكيان (باللغة العربية)
Legal Name of Entity (English)	**TERRA FIRMA FOUNDATION CONTRACTING L.L.C**	الاسم القانوني للكيان (باللغة الانجليزية)
The Registered Address and Contact Number	**Dubai Digital Park - Office A1, Dubai Digital park, Nad Hessa, Nad Hessah, 00000, Dubai +971508919982**	العنوان المسجل ورقم التواصل
Effective Registration Date	**01/12/2023**	تاريخ التسجيل الفعلي
First VAT Return Period	**01/12/2023 - 29/02/2024**	فترة أول إقرار لضريبة القيمة المضافة
VAT Return due date	**28/03/2024**	تاريخ استحقاق الإقرار الضريبي لضريبة القيمة المضافة
Start and end dates of Tax periods	**1st Mar to 31st May, 1st June to 31st Aug, 1st Sep to 30th Nov, 1st Dec to 29th Feb**	تواريخ بدء وانتهاء الفترات الضريبية

List of Main trade license, Sole Establishments and branches licenses details under the registered taxable person: قائمة الرخصة التجارية الرئيسية والمؤسسات الفردية والفروع المندرجة ضمن التسجيل الضريبي :

	Legal Name	License Issuing Authority	License Number/رقم الرخصة	جهة الترخيص	الاسم القانوني

يرجى التأكد من صحة تفاصيل الشهادة. يجب إبلاغ الهيئة الاتحادية للضرائب في حال تغيير الأسس التي حصلت فيها على رقم التسجيل الضريبي الخاص بك.*

***Please check that the details on this certificate are correct. You must inform the Federal Tax Authority of any change on the basis of which you obtained your Tax Registration Number.**

Date of Issue 23/07/2024 تاريخ الاصدار

	Legal Name	License Issuing Authority	License Number/رقم الرخصة	جهة الترخيص	الاسم القانوني
1	TERRA FIRMA FOUNDATION CONTRACTING L.L.C - BRANCH OF ABU DHABI 1	Abu Dhabi Department of Economic Development	CN-5094975	دائرة التنمية الاقتصادية في أبوظبي	تيرا فيرما لأعمال حفر الأساسات ش.ذ.م.م - فرع أبو ظبي 1
2	TERRA FIRMA FOUNDATION CONTRACTING L.L.C	Dubai Economy and Tourism	1199411	اقتصادية وسياحة دبي	تيرا فيرما لاعمال حفر الاساسات ش. ذ. م. م

IN-COUNTRY VALUE CERTIFICATE

برنامج المحتوى الوطني

Certificate No.: **141632**
Issue Date: **25.09.2025**
Valid Until: **17.10.2026**

TERRA FIRMA FOUNDATION CONTRACTING L.L.C

38.88%

Company General Information
License No.: **1199411**
Company Type: **SME in UAE**
Financial Year End Date: **31.12.2024**
Company Based In: **Within UAE**
Company Business: **SERVICE PROVIDER**

For Cases of Re-Certification
Re-Certification (*) No.:

Reason for this Re-Certification

Scan the QR code to verify status

Signed By
On behalf of Supplier

Name:
ANAS RAFAT OURABI

Designation:
Manager

Verified as per ICV Agreed Upon Procedures (AUP)
On behalf of Certification Body

Name:
Taher Singaporewala

Designation:
Associate Director

Electronically signed by Taher Singaporewala

Company:
MBC Auditing & Accounting

Certificate Issued Based on ICV Version: 3.0

IN-COUNTRY VALUE CERTIFICATE

برنامج المحتوى الوطني

Certificate No.: **141633**
Issue Date: **25.09.2025**
Valid Until: **17.10.2026**

TERRA FIRMA FOUNDATION CONTRACTING L.L.C - BRANCH OF ABU DHABI 1

30.12%

Company General Information
License No.: **CN-5094975**
Company Type: **SME in UAE**
Financial Year End Date: **31.12.2024**
Company Based In: **Within UAE**
Company Business: **SERVICE PROVIDER**

For Cases of Re-Certification
Re-Certification (*) No.:

Reason for this Re-Certification

Scan the QR code to verify status

Signed By
On behalf of Supplier

Name:
ANAS RAFAT OURABI

Designation:
Manager

Verified as per ICV Agreed Upon Procedures (AUP)
On behalf of Certification Body

Name:
Taher Singaporewala

Designation:
Associate Director

Electronically signed by Taher Singaporewala

Company:
MBC Auditing & Accounting

Certificate Issued Based on ICV Version: 3.0



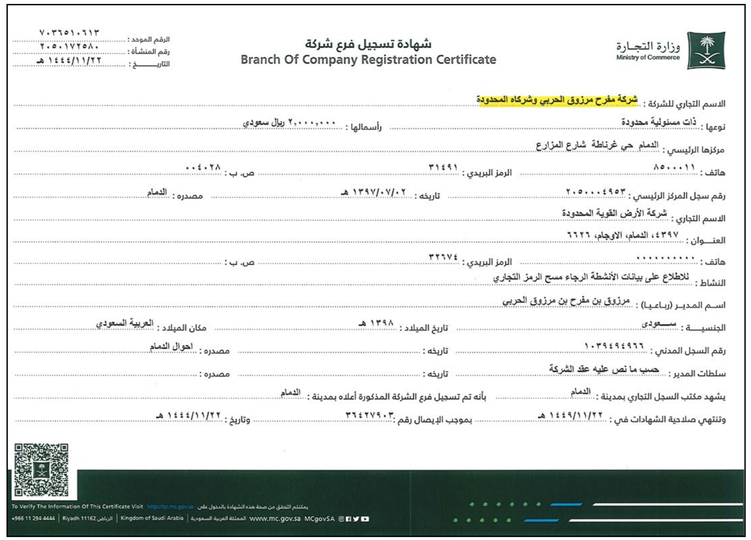
وزارة التجارة
Ministry of Commerce

Branch Of Company Registration Certificate
شهادة تسجيل فرع شركة

National Unified No : 7036510613
No. : 2050172580
Date : 1444/11/22 2023/06/11

Company's Trade Name: Company MUFREH MARZOUK AL-HARBI WESCHERKAH Ltd.
Company's type: Limited liability Company's Total Capital: 2,000,000 Saudi Riyals
Company's Head Quarter: 0000 al-dammam 31491-0000
Telephone: 0138500011 Postal Code: 31491 P.O Box: 004028
Main commercial registration number: 2050004953 Date: 1397/07/02 H / 1977/06/18 Issued by: Dammam
Trade Name: Company ARDUL AL-QUYA Ltd.
Address: 4397 al-dammam 32674-6626
Telephone: 0000000000 Postal Code: 32674 P.O Box:
Company's Activity: To view the CR activities please scan the QR code
Manager's Name: MARZOUQ MOFARAH M ALHARBI
Nationality: Saudi Arabia Date of Birth: 1398 H / 1978 Issued by: AL-ARBIA AL-SUDI
ID No: 1039494966 ID Date: / / ID Issued by: AHAWAL AL-DAMMAM
Managers Authorities: As stipulated in the company's contract Date: / / Issued by:
The Commercial registration department of city acknowledge: Dammam That this company has been registered in the registry of city: Dammam
This commercial registration will be valid: 1449/11/22 H / 2028/04/17 By the ticket No: 36427903 And Date:1444/11/22 H / 2023/06/11

To Verify The Information Of This Certificate Visit https://qr.mc.gov.sa يمكنكم التحقق من صحة هذه الشهادة بالدخول على
MCgovSA www.mc.gov.sa المملكة العربية السعودية | Kingdom of Saudi Arabia | Riyadh 11182 الرياض | +966 11 294 4444



وزارة التجارة
Ministry of Commerce

شهادة تسجيل فرع شركة
Branch Of Company Registration Certificate

الرقم الموحد : ٧٠٣٦٥١٠٦١٣
رقم المنشأة : ٢٠٥٠١٧٢٥٨٠
التاريخ : ١٤٤٤/١١/٢٢ هـ

الاسم التجاري للشركة : شركة مفرح مرزوق الحربي وشركاه المحدودة
نوعها : ذات مسئولية محدودة رأسمالها : ٢,٠٠٠,٠٠٠ ريال سعودي
مركزها الرئيسي : الدمام حي غرناطة شارع المزارع
هاتف : ٨٥٠٠٠١١ الرمز البريدي : ٣١٤٩١ ص.ب : ٠٠٤٠٢٨
رقم سجل المركز الرئيسي : ٢٠٥٠٠٠٤٩٥٣ تاريخه : ١٣٩٧/٠٧/٠٢ هـ مصدره : الدمام
الاسم التجاري : شركة الأرض القوية المحدودة
العنوان : ٤٣٩٧، الدمام، الاوجام، ٦٦٢٦
هاتف : ٠٠٠٠٠٠٠٠٠٠ الرمز البريدي : ٣٢٦٧٤ ص.ب :
النشاط : للاطلاع على بيانات الأنشطة الرجاء مسح الرمز التجاري
اسم المدير (رباعيا) : مرزوق بن مفرح بن مرزوق الحربي
الجنسية : سعودي تاريخ الميلاد : ١٣٩٨ هـ مكان الميلاد : العربية السعودي
رقم السجل المدني : ١٠٣٩٤٩٤٩٦٦ تاريخه : مصدره : أحوال الدمام
سلطات المدير : حسب ما نص عليه عقد الشركة تاريخه : مصدره :
يشهد مكتب السجل التجاري بمدينة : الدمام بأنه تم تسجيل فرع الشركة المذكورة أعلاه بمدينة : الدمام
وتنتهي صلاحية الشهادات في : ١٤٤٩/١١/٢٢ هـ بموجب الإيصال رقم : ٣٩٤٢٧٩٠٣ وتاريخ : ١٤٤٤/١١/٢٢ هـ

To Verify The Information Of This Certificate Visit https://qr.mc.gov.sa يمكنكم التحقق من صحة هذه الشهادة بالدخول على
+966 11 294 4444 | Riyadh 11182 الرياض | Kingdom of Saudi Arabia | المملكة العربية السعودية www.mc.gov.sa MCgovSA



هيئة المحتوى المحلي والمشتريات الحكومية
Local Content & Government Procurement Authority

التاريخ: 2026/09/27م
رقم الشهادة : M 325119

شهادة المحتوى المحلي
Local content certification

The Local Content & Government Procurement Authority certifies that the Local Content Score for [Mofarreh Marzouq Al Harbi and Partners] Unified National Number [7001839815] for the year ended in 31/12/2025, is 39.11%.

This certificate expires on 31/07/2027.

Note:
This certificate was issued according to the procedures followed by the Authority and based on the disclosure submitted by the entity and the report issued by the approved audit firm, without holding LCGPA minimally responsible.
This certificate is sent via electronic mail / automated system and it does not require a signature.

You can validate the information in this certificate via the following link URL or by scanning the above QR code

تشهد هيئة المحتوى المحلي والمشتريات الحكومية أن نسبة المحتوى المحلي لـ [شركة مفرح مرزوق الحربي وشركاه المحدودة] الرقم الوطني الموحد [7001839815]، للسنة المالية المنتهية بتاريخ 2025/12/31م، تبلغ 39.11%.

تنتهي صلاحية هذه الشهادة في 2027/07/31م.

تنويه:
تم إصدار هذه الشهادة بحسب الإجراءات المتبعة لدى الهيئة بناء على الإفصاح المقدم من المنشأة و التقرير الصادر من مكتب المراجعة المعتمد، دون أدنى مسؤولية على الهيئة.

هذه الوثيقة مرسلة عبر البريد الإلكتروني/ النظام الآلي ولا تحتاج إلى توقيع

يمكنك التحقق من صحة البيانات الواردة في الشهادة أعلاه من خلال الرابط التالي URL أو من خلال مسح الرمز الرقمي أعلاه



شهادة إشتراك
Membership

البوابة الموحدة للغرف السعودية

غرفة الشرقية
ASHARQIA CHAMBER

نشهد بأن
This is to certify that

شركة الأرض القوية المحدودة

عضو في الغرفة التجارية
Is a member in the chamber

تاريخ طباعة الشهادة	29/04/2025 - 01/11/1446	Certificate Date
تاريخ الاشتراك	11/06/2023 - 22/11/1444	Date of Membership
تاريخ الانتهاء	17/04/2028 - 22/11/1449	Date of Expiry
حالة الاشتراك	فعال	Subscription Status
رقم المنشأة الموحد	7036510613	NUN
رقم الإشتراك	383593	Membership No
درجة الإشتراك	الأولى	Membership Degree
الرخصة / السجل التجاري	2050172580	Commercial Record/ License
صندوق البريد		P. O. Box

التوقيع
عبدالعزيز بن سبعد المعمر
مدير إدارة المشتركين والفروع

غرفة الشرقية ASHARQIA CHAMBER



SCA
الهيئة السعودية للمقاولين
Saudi Contractors Authority

شهادة عضوية مقاول

تاريخ الإصدار : 09 Feb,2026

طبقا لتنظيم الهيئة السعودية للمقاولين فإننا نشهد بأن

شركة مفرج مرزوق الحربي وشركاه المحدودة

رقم العضوية : 10001405

مسجل في عضوية الهيئة حسب الإجراءات المتبعه و قد أعطى هذه الشهادة بناءا على ذلك

النشاط الأساسي للمقاول (*):

1 - تشييد المباني

تاريخ نهاية العضوية February 18, 2027

الرجاء التحقق من صحة وصلاحية الشهادة عبر زيارة الرابط https://muqawil.org

صدرت هذه الشهادة من الهيئة السعودية للمقاولين و تمثل ملكا للهيئة و يجب إعادتها للجهة المصدرة في حال إلغاء العضوية لأي سبب كان
لمزيد من المعلومات عن الشهادة يرجى زيارة موقعنا www.muqawil.org/ar/contractors أو الاتصال على الرقم +966920000968

جميع الحقوق محفوظة للهيئة السعودية للمقاولين

SCA
الهيئة السعودية للمقاولين
Saudi Contractors Authority

الهيئة السعودية للمقاولين

رقم الهاتف: +966920000968
البريد الإلكتروني : info@sca.sa
sca.sa

الهيئة السعودية للمقاولين
مبنى رقم 3141 طريق أنس بن مالك - العقلا
الرياض 8292-13521 المملكة العربية السعودية

رؤية VISION 2030
المملكة العربية السعودية
KINGDOM OF SAUDI ARABIA



gosi
التأمينات الاجتماعية
Social Insurance

التاريـــــخ: 10/03/2026
الموافـــــق: 1447/09/21
رمز الشهادة: 110770340

شهادة

اسم المنشأة	شركة مفرج مرزوق الحربي وشركاه المحدودة		
اسم صاحب العمل			
رقم الاشتراك	٥٠٨٠٣٧٥١١	الرقم الوطني الموحد	7001839815
العنوان	الدمام السعودية 31432 4028		

	عدد المشتركين السعوديين	عدد المشتركين غير السعوديين	المجموع
رقما	617	3095	3712
كتابة	ستمائة و سبعة عشره مشتركا	ثلاثة الاف و خمسة و تسعون مشتركا	ثلاثة الاف و سبعمائة و اثنا عشره مشتركا

تشهد المؤسسة العامة للتأمينات الاجتماعية بأن المنشأة المذكورة أعلاه قد أوفت بالتزاماتها تجاه المؤسسة وفق البيانات المقدمة منها حتى تاريخ اصدار هذه الشهادة، والتي تم منحها لتقديمه لأية جهة تطلبها، وهي صالحة لجميع الأغراض التي نصت عليها الفقرة (6) من المادة (التاسعة عشر) من نظام التأمينات الاجتماعية الصادر بالمرسوم الملكي رقم (م/33) بتاريخ 1421/9/3 هـ و المادة (العاشرة) من نظام التأمينات الاجتماعية الصادر بالمرسوم الملكي رقم (م/273) وتاريخ1445/12/26 هـ .

هذه الشهادة سارية المفعول حتى 1447/12/24 هـ.

Public عام
الشهادة معتمدة من صاحب الصلاحية ولا تحتاج لتوقيع أو ختم

تحقق من صحة وصلاحية الشهادة عبر زيارة الرابط أدناه في الموقع الالكتروني للمؤسسة العامة للتأمينات الاجتماعية او عن طريق استخدام الرمز المعرف التالي

تعد هذه الشهادة من الوثائق الالكترونية الحكومية الرسمية ويحظر قطعيا تقليدها أو إدخال أي تعديلات عليها، سواء بالإضافة أو الحذف أو التغيير في بياناتها أو غير ذلك من أنواع التعديل، وتعد الشهادة لاغية إذا شابها شيء من ذلك، كما تعرض صاحبها للمتابعة النظامية أمام الجهات المختصة بالإضافة إلى ما يفرضه نظام التأمينات الاجتماعية من عقوبات، ولا يجوز تداول الشهادة إلا في الأغراض التي أصدرت لأجلها وفقاً لأحكام نظام التأمينات الاجتماعية، والمؤسسة العامة للتأمينات الاجتماعية غير مسؤولة عن أي عملية تزوير أو تعديل تتم على البيانات الواردة فيها.

المملكة العربية السعودية، الرياض 12622 - 8308 حي الوزارات 3795
Kingdom of Saudi Arabia, Riyadh 12622- 8308 Al Wizarat 3795

800 124 3344
gosi.gov.sa



العنوان الوطني
NATIONAL ADDRESS

شخصية الـ	1096484686	رقم الإثبات	
التصميم	29/10/2026	التاريخ الأصلي	
مصمم	17/4/2027	تاريخ انتهاء الصلاحية	

أثبت عنوان إثبات العنوان

بيانات صاحب العنوان — تفاصيل صاحب العنوان

المجتمع	شركة الارض القوية المحدودة	اسم	
النشاط التجاري	7 3 5 3 0 5 9 2 7 2 3 1 3	حساب العميل	
تاريخ التسجيل	24/8/2025	تاريخ التسجيل	

شهادة الثانوية العامة — تفاصيل العنوان

تارا الموف	٦ ٦ ٤ ٢ أ د د هـ	عنوان مختصر	
شخصية	6 6 4 2	يون	طريق الملك فهد بن عبد العزيز
		شارع	شارع الملك فهد بن عبد العزيز
		رقم المبنى	6 6 4 2
قطر	7 3 0 7	الإنسان	وسط الثامان
		يصرف	حي الحسام
		رقم ثانوي	7 3 0 7
سيبي باي	3 2 2 4 3	رمز بريدي	3 2 2 4 3
مدينة	الدمام	مدينة	الدمام
	المملكة العربية السعودية		المملكة العربية السعودية

للتحقق من
https://proof.address.gov.sa/VerifyProofNA.aspx

تم إصدار هذا الإثبات إلكترونيا ولا يلزم التوقيع عليه

تم إصدار هذا الإثبات بناء على الطلب الموضح أعلاه، ويحظر قطعيا تقليده أو التسجيل أي تعديلات عليه سواء بالإضافة أو الحذف، وإحضار الإثبات لاغيا إذا شابه شيء من ذلك، كما يصدر صاحبه للمساءلة القانونية.

تم إصدار هذا الإثبات إلكترونيا ولا يتطلب توقيعا.

تم إصدار هذا الإثبات بناء على طلب المذكور أعلاه، ويحظر منعا باتا تقليده أو إجراء أي تعديلات عليه، سواء بإضافة أو حذف أي شيء، ويعتبر الإثبات باطلا إذا شابه أي شيء، ويخضع مالكه للمساءلة القانونية.

19992 https://splonline.com.sa/ar/national-address-1/



QIWA
المهارات البشرية والتنمية الاجتماعية

شهادة التوطين

Certificate ID / رقم الشهادة
162296-41602462

تاريخ الإصدار: 19/08/2026 • تاريخ انتهاء الصلاحية: 27/01/2027

تاريخ التجديد/التحديث	29/10/2026
حالة الشهادة:	معتمدة
اسم المنشأة:	شركة الأرض القوية المحدودة
رقم المنشأة:	4-2026700
رقم الترخيص:	—
الرقم الوطني الموحد:	7036510613
مستوى نطاقات الحالي:	اخضر مرتفع
نسبة التوطين:	% 18.45

تشهد وزارة الموارد البشرية والتنمية الاجتماعية بأن المنشأة أعلاه حققت متطلبات إصدار شهادة التوطين
وفُتحت هذه الشهادة بناءً عن طلبها. أصدرت الشهادة إلكترونيًا ولا تحتاج إلى ختم أو توقيع. امسح الرمز
أعلى الصفحة للتحقق من صلاحية الشهادة.



100231084700536

TIN 3009124745 الرقم المميز
Certificate No. 100231084700536 رقم الشهادة
Certificate date 24/08/2017 تاريخ الشهادة

هيئة الزكاة والضريبة والجمارك
Zakat, Tax and Customs Authority

المملكة العربية السعودية
Kingdom of Saudi Arabia

شهادة تسجيل في ضريبة القيمة المضافة
VAT Registration Certificate

تشهد هيئة الزكاة والضريبة والجمارك بأن المكلف أدناه مسجل في ضريبة القيمة المضافة بتاريخ ٢٠١٧/٠٨/٢٤ م
The Zakat, Tax and Customs Authority certifies that taxpayer below is VAT registered on 24/08/2017 AD

Taxpayer Name	شركة مفرج مرزوق الحربي وشركاه المحدودة	اسم المكلف
VAT Registration Number	300912474500003	رقم التسجيل الضريبي
Effective Registration Date	2018/01/01	تاريخ نفاذ التسجيل
Taxpayer Address	الدمام،غرناطة،الثامن والعشرون،31491	عنوان المكلف
CR / License Contact / ID No	2050004953	رقم السجل التجاري / الرخصة / العقد / الهوية
Tax Period	Monthly-شهري	الفترة الضريبية
First Filing due date	2018/02/28	تاريخ استحقاق أول إقرار ضريبي

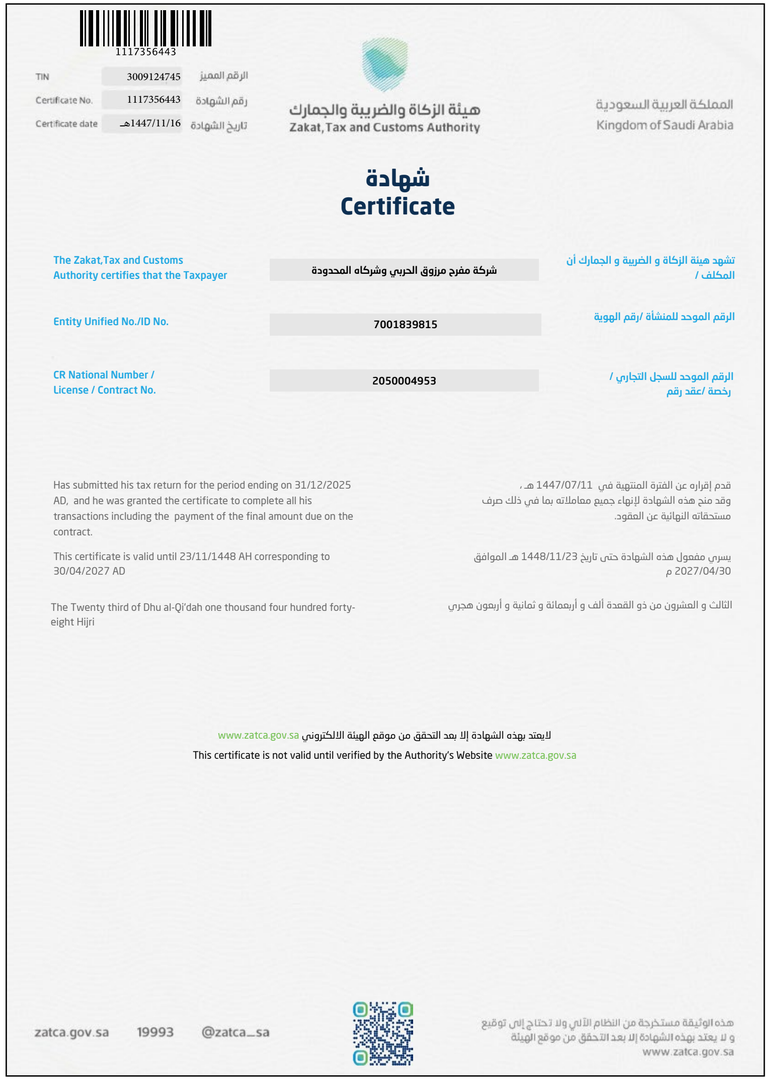
ملاحظة: كمكلفين مسجلين في ضريبة القيمة المضافة، لا يجوز لكم تحصيل ضريبة القيمة المضافة من عملائكم قبل تاريخ نفاذ التسجيل في الضريبة. و في حال تبين غير ذلك ستقوم هيئة الزكاة والضريبة و الجمارك بتنفيذ الغرامات المستحقة

Note: As a VAT registered taxpayer, you are not allowed to collect VAT from your customers prior to the effective date of the tax registration. If otherwise approved, The ZAKAT,Tax and Customs Authority will impose the applicable penalties

ضريبة القيمة المضافة VAT

zatca.gov.sa 19993 @zatca_sa

هذه الوثيقة مستخرجة من النظام الآلي ولا تحتاج إلى توقيع
و لا يعتد بهذه الشهادة إلا بعد التحقق من موقع الهيئة
www.zatca.gov.sa



1117356443

TIN 3009124745 الرقم المميز
Certificate No. 1117356443 رقم الشهادة
Certificate date 1447/11/16هـ تاريخ الشهادة

هيئة الزكاة والضريبة والجمارك
Zakat, Tax and Customs Authority

المملكة العربية السعودية
Kingdom of Saudi Arabia

شهادة
Certificate

The Zakat,Tax and Customs Authority certifies that the Taxpayer	شركة مفرج مرزوق الحربي وشركاه المحدودة	تشهد هيئة الزكاة و الضريبة و الجمارك أن المكلف /
Entity Unified No./ID No.	7001839815	الرقم الموحد للمنشأة /رقم الهوية
CR National Number / License / Contract No.	2050004953	الرقم الموحد للسجل التجاري / رخصة /عقد رقم

Has submitted his tax return for the period ending on 31/12/2025 AD, and he was granted the certificate to complete all his transactions including the payment of the final amount due on the contract.

قدم إقراره عن الفترة المنتهية في 1447/07/11 هـ ، وقد منح هذه الشهادة لإنهاء جميع معاملاته بما في ذلك صرف مستحقاته النهائية عن العقود.

This certificate is valid until 23/11/1448 AH corresponding to 30/04/2027 AD

يسري مفعول هذه الشهادة حتى تاريخ 1448/11/23 هـ الموافق 2027/04/30 م

The Twenty third of Dhu al-Qi'dah one thousand four hundred forty-eight Hijri

الثالث و العشرون من ذو القعدة ألف و أربعمائة و ثمانية و أربعون هجري

لايعتد بهذه الشهادة إلا بعد التحقق من موقع الهيئة الالكتروني www.zatca.gov.sa
This certificate is not valid until verified by the Authority's Website www.zatca.gov.sa

zatca.gov.sa 19993 @zatca_sa

هذه الوثيقة مستخرجة من النظام الآلي ولا تحتاج إلى توقيع
و لا يعتد بهذه الشهادة إلا بعد التحقق من موقع الهيئة
www.zatca.gov.sa

1117356443

TIN 3009124745 الرقم المميز
Certificate No. 1117356443 رقم الشهادة
Certificate date 1447/11/16هـ تاريخ الشهادة

هيئة الزكاة والضريبة والجمارك
Zakat, Tax and Customs Authority

المملكة العربية السعودية
Kingdom of Saudi Arabia

قائمة فروع المكلف
List of Taxpayer Branches

الرقم الموحد للسجل التجاري / رخصة /عقد CR National Number /License/Contract No	اسم الفرع Branch Name	المدينة City
2050023773	معرض مفرح مرزوق الحربي للسيارات فرع شركة مفرح مرزوق الحربي وشركاه	الدمام Dammam
2050024378	شركة مفرح مرزوق الحربي وشركاه المحدودة	الدمام Dammam
2050053918	شركة مفرح مرزوق الحربي وشركاه المحدودة	الدمام Dammam
2050067823	شركة مفرح مرزوق الحربي وشركاه المحدودة	الدمام Dammam
2050083017	فرع شركة مفرح مرزوق الحربي وشركاه المحدودة	الدمام Dammam
2050105465	نزل الفخامة للخدمات المساندة	الدمام Dammam
556	شركة مفرح مرزوق الحربي	الدمام Dammam
2050114456	نزل الفخامة للوحدات السكنية المفروشة	الدمام Dammam

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هذه الوثيقة مستخرجة من النظام الآلي ولا تحتاج إلى توقيع و لا يعتد بهذه الشهادة إلا بعد التحقق من موقع الهيئة www.zatca.gov.sa

1117356443

TIN 3009124745 الرقم المميز
Certificate No. 1117356443 رقم الشهادة
Certificate date 1447/11/16هـ تاريخ الشهادة

هيئة الزكاة والضريبة والجمارك
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Kingdom of Saudi Arabia

الرقم الموحد للسجل التجاري / رخصة /عقد CR National Number /License/Contract No	اسم الفرع Branch Name	المدينة City
2050112391	شركة أثمان الخليجية للتطوير العقاري	الدمام Dammam
2050130865	شركة قطرة للمياه	الدمام Dammam
2050129810	شركة الأعمال المعدنية لصيانة السيارات	الدمام Dammam
2050121264	شركة مفرح مرزوق الحربي وشركاه المحدودة	الدمام Dammam
2050130315	شركة القصر التنفيذي لتنظيم المعارض والمؤتمرات	الدمام Dammam
4700106973	فرع شركة مفرح مرزوق الحربي وشركاه المحدودة	الدمام Dammam
2055127133	مصنع شركة مفرح مرزوق الحربي وشركاه المحدودة	الدمام Dammam
2050160001	شركة مفرح مرزوق الحربي وشركاه المحدودة	الدمام Dammam
2050172580	شركة الأرض القوية المحدودة	الدمام Dammam

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هذه الوثيقة مستخرجة من النظام الآلي ولا تحتاج إلى توقيع و لا يعتد بهذه الشهادة إلا بعد التحقق من موقع الهيئة www.zatca.gov.sa

1117356443

TIN 3009124745 الرقم المميز
Certificate No. 1117356443 رقم الشهادة
Certificate date 1447/11/16هـ تاريخ الشهادة

هيئة الزكاة والضريبة والجمارك
Zakat, Tax and Customs Authority

المملكة العربية السعودية
Kingdom of Saudi Arabia

الرقم الموحد للسجل التجاري / رخصة /عقد CR National Number /License/Contract No	اسم الفرع Branch Name	المدينة City
3550162470	مصنع شركة مفرح مرزوق الحربي وشركاه المحدودة	تبوك Tabuk
2050140509	شركة مفرح مرزوق الحربي وشركاه المحدودة	الدمام Dammam
5900130405	شركة مفرح مرزوق الحربي وشركاه المحدودة	جازان Jazan
2050109586	مساندة الحقول لخدمات النفط والغاز	الدمام Dammam
2050197041	شركة دارة الضيافة لتنظيم المعارض والمؤتمرات	الدمام Dammam
2050081516	شركة مفرح مرزوق الحربي وشركاه المحدودة	الدمام Dammam
2050203225	شركة اوتيت القابضة	الدمام Dammam

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هذه الوثيقة مستخرجة من النظام الآلي ولا تحتاج إلى توقيع و لا يعتد بهذه الشهادة إلا بعد التحقق من موقع الهيئة www.zatca.gov.sa

7. 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

CERTIFICADO - CERTIFICATE - ZERTIFIKAT - CERTIFICAT - 证书 - شهادة - 증명서 - SERTIFICA

UID : 748151
Doc.No : CR/SD-26046/01
Initial Certification : 28/05/2024

CERTIFICATE

This is to certify that Management System of:

TERRA FIRMA FOUNDATION CONTRACTING LLC

Has been assessed and found compliant with the requirements of below:

ISO 9001:2015
Quality Management System

Certificate No:
CR/SD-26046/01

Scope of Registration:
Design, Contracting & Execution of Pilling and Foundation

IAF Code(s): 28

NACE Code(s): 43.1

Registered Site(s):
Office 114-115, Digital Park A1, Dubai Silicon Oasis, Dubai, United Arab Emirates

Certificate Issued : 10/06/2026 **Certificate Expiry :** 27/05/2027

To Verify scan QR code or visit
WWW.ITMAD.AE

040-CB-QMS

For the issuing office:
ITMAD
Authorized Signatory

ITMAD CERTIFICATION SERVICES L.L.C
P.O.Box # 232991, Office # 208, Dream Building 2, Al Qusais Ind. 4, Dubai, UAE

This certificate's validity is subject to the organization maintaining their system in accordance with ITMAD requirements for system certification. Validity can be confirmed by visiting the www.itmad.ae. This certificate will remain the property of ITMAD & must be returned upon request.

CERTIFICADO - CERTIFICATE - ZERTIFIKAT - CERTIFICAT - 证书 - شهادة - 증명서 - SERTIFICA

UID : 683610
Doc.No : CR/SD-26046/02
Initial Certification : 28/05/2024

CERTIFICATE

This is to certify that Management System of:

TERRA FIRMA FOUNDATION CONTRACTING LLC

Has been assessed and found compliant with the requirements of below:

ISO 14001:2015
Environmental Management System

Certificate No:
CR/SD-26046/02

Scope of Registration:
Design, Contracting & Execution of Pilling and Foundation

IAF Code(s): 28

NACE Code(s): 43.1

Registered Site(s):
Office 114-115, Digital Park A1, Dubai Silicon Oasis, Dubai, United Arab Emirates

Certificate Issued : 10/06/2026 **Certificate Expiry :** 27/05/2027

To Verify scan QR code or visit
WWW.ITMAD.AE

040-CB-EMS

For the issuing office:
ITMAD
Authorized Signatory

ITMAD CERTIFICATION SERVICES L.L.C
P.O.Box # 232991, Office # 208, Dream Building 2, Al Qusais Ind. 4, Dubai, UAE

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CERTIFICADO - CERTIFICATE - ZERTIFIKAT - CERTIFICAT - 证书 - شهادة - 증명서 - SERTIFICA

UID : 273045
Doc.No : CR/SD-26046/03
Initial Certification : 28/05/2024

CERTIFICATE

This is to certify that Management System of:

TERRA FIRMA FOUNDATION CONTRACTING LLC

Has been assessed and found compliant with the requirements of below:

ISO 45001:2018
Occupational Health and Safety Management System

Certificate No:
CR/SD-26046/03

Scope of Registration:
Design, Contracting & Execution of Pilling and Foundation

IAF Code(s): 28

NACE Code(s): 43.1

Registered Site(s):
Office 114-115, Digital Park A1, Dubai Silicon Oasis, Dubai, United Arab Emirates

Certificate Issued : 10/06/2026 **Certificate Expiry :** 27/05/2027

To Verify scan QR code or visit
WWW.ITMAD.AE

040-CB-OHSMS

For the issuing office:
ITMAD
Authorized Signatory

ITMAD CERTIFICATION SERVICES L.L.C
P.O.Box # 232991, Office # 208, Dream Building 2, Al Qusais Ind. 4, Dubai, UAE

This certificate's validity is subject to the organization maintaining their system in accordance with ITMAD requirements for system certification. Validity can be confirmed by visiting the www.itmad.ae. This certificate will remain the property of ITMAD & must be returned upon request.

CERTIFICADO - CERTIFICATE - ZERTIFIKAT - CERTIFICAT - 证书 - شهادة - 증명서 - SERTIFICA

UID : 484536
Doc.No : CR/SD-26046/04
Initial Certification : 28/05/2024

CERTIFICATE

This is to certify that Management System of:

TERRA FIRMA FOUNDATION CONTRACTING L.L.C - BRANCH OF ABU DHABI 1

Has been assessed and found compliant with the requirements of below:

ISO 9001:2015
Quality Management System

Certificate No:
CR/SD-26046/04

Scope of Registration:
Design, Contracting & Execution of Pilling and Foundation

IAF Code(s): 28

NACE Code(s): 43.1

Registered Site(s):
Unit 233, National Bank of Abu Dhabi Building, Al Irshan Street, Al Hisn, Abu Dhabi, United Arab Emirates

Certificate Issued : 10/06/2026 **Certificate Expiry :** 27/05/2027

To Verify scan QR code or visit
WWW.ITMAD.AE

For the issuing office:
ITMAD

Authorized Signatory

ITMAD CERTIFICATION SERVICES L.L.C
P.O.Box # 232991, Office # 208, Dream Building 2, Al Qusais Ind. 4, Dubai, UAE

This certificate's validity is subject to the organization maintaining their system in accordance with ITMAD requirements for system certification. Validity can be confirmed by visiting the www.itmad.ae. This certificate will remain the property of ITMAD & must be returned upon request.

CERTIFICADO - CERTIFICATE - ZERTIFIKAT - CERTIFICAT - 证书 - شهادة - 증명서 - SERTIFICA

UID : 381837
Doc.No : CR/SD-26046/05
Initial Certification : 28/05/2024

CERTIFICATE

This is to certify that Management System of:

TERRA FIRMA FOUNDATION CONTRACTING L.L.C - BRANCH OF ABU DHABI 1

Has been assessed and found compliant with the requirements of below:

ISO 14001:2015
Environmental Management System

Certificate No:
CR/SD-26046/05

Scope of Registration:
Design, Contracting & Execution of Pilling and Foundation

IAF Code(s): 28

NACE Code(s): 43.1

Registered Site(s):
Unit 233, National Bank of Abu Dhabi Building, Al Irshan Street, Al Hisn, Abu Dhabi, United Arab Emirates

Certificate Issued : 10/06/2026 **Certificate Expiry :** 27/05/2027

To Verify scan QR code or visit
WWW.ITMAD.AE

For the issuing office:
ITMAD

Authorized Signatory

ITMAD CERTIFICATION SERVICES L.L.C
P.O.Box # 232991, Office # 208, Dream Building 2, Al Qusais Ind. 4, Dubai, UAE

This certificate's validity is subject to the organization maintaining their system in accordance with ITMAD requirements for system certification. Validity can be confirmed by visiting the www.itmad.ae. This certificate will remain the property of ITMAD & must be returned upon request.

CERTIFICADO - CERTIFICATE - ZERTIFIKAT - CERTIFICAT - 证书 - شهادة - 증명서 - SERTIFICA

UID : 755619
Doc.No : CR/SD-26046/06
Initial Certification : 28/05/2024

CERTIFICATE

This is to certify that Management System of:

TERRA FIRMA FOUNDATION CONTRACTING L.L.C - BRANCH OF ABU DHABI 1

Has been assessed and found compliant with the requirements of below:

ISO 45001:2018
Occupational Health and Safety Management System

Certificate No:
CR/SD-26046/06

Scope of Registration:
Design, Contracting & Execution of Pilling and Foundation

IAF Code(s): 28

NACE Code(s): 43.1

Registered Site(s):
Unit 233, National Bank of Abu Dhabi Building, Al Irshan Street, Al Hisn, Abu Dhabi, United Arab Emirates

Certificate Issued : 10/06/2026 **Certificate Expiry :** 27/05/2027

To Verify scan QR code or visit
WWW.ITMAD.AE

For the issuing office:
ITMAD

Authorized Signatory

ITMAD CERTIFICATION SERVICES L.L.C
P.O.Box # 232991, Office # 208, Dream Building 2, Al Qusais Ind. 4, Dubai, UAE

This certificate's validity is subject to the organization maintaining their system in accordance with ITMAD requirements for system certification. Validity can be confirmed by visiting the www.itmad.ae. This certificate will remain the property of ITMAD & must be returned upon request.

KVQA ASSESSMENT

CERTIFICATE

This is hereby certified that the Quality Management System of

AL-ARADH AL-QAWIYYA LTD COMPANY (TERRA FIRMA)

Bldg. No. 2466, King Fahad Bin Abdul Aziz Rd, Al Hussam Dist., 34223 - Dammam, Kingdom of Saudi Arabia

Has been found to comply with the requirements of

ISO 9001: 2015

This certificate is applicable for the following scope:

Design & Execution of Site Preparation (Cut & Fill), Soil Improvement, Deep Foundation Contracting

Certificate Number: KAQM202602041

Date of initial registration:	20 February 2026
Surveillance audit on/before:	20 January 2027
Certificate expiry:	20 February 2027
Recertification due:	19 February 2029

MANAGEMENT SYSTEM CERTIFICATE

Authorised Signatory
KVQA Assessment Pvt. Ltd.

Website: www.iso-registration.com | Email: info@iso-registration.com

KVQA Assessment Private Limited is accredited to United Accreditation Foundation (UAF). UAF is internationally recognized by having a signatory status across multilateral recognition arrangement of International Accreditation Forum (IAF) and Asia Pacific Accreditation Cooperation (APAC).

The certificate is valid subject to successful completion of surveillance audits. Verify validity/status on www.iso-registration.com or on email at info@iso-registration.com

UAF address: 1060 Laskin Road, STE 12B/13B, Virginia Beach, VA 23451, United States of America

KVQA ASSESSMENT

CERTIFICATE

This is hereby certified that the Environmental Management System of

AL-ARADH AL-QAWIYYA LTD COMPANY (TERRA FIRMA)

Bldg. No. 2466, King Fahad Bin Abdul Aziz Rd, Al Hussam Dist., 34223 - Dammam, Kingdom of Saudi Arabia

Has been found to comply with the requirements of

ISO 14001: 2015

This certificate is applicable for the following scope:

Design & Execution of Site Preparation (Cut & Fill), Soil Improvement, Deep Foundation Contracting

Certificate Number: KAEM202602027

Date of initial registration:	20 February 2026
Surveillance audit on/before:	20 January 2027
Certificate expiry:	20 February 2027
Recertification due:	19 February 2029

MANAGEMENT SYSTEM CERTIFICATE

Authorised Signatory
KVQA Assessment Pvt. Ltd.

Website: www.iso-registration.com | Email: info@iso-registration.com

KVQA Assessment Private Limited is accredited to United Accreditation Foundation (UAF). UAF is internationally recognized by having a signatory status across multilateral recognition arrangement of International Accreditation Forum (IAF) and Asia Pacific Accreditation Cooperation (APAC).

The certificate is valid subject to successful completion of surveillance audits. Verify validity/status on www.iso-registration.com or on email at info@iso-registration.com

UAF address: 1060 Laskin Road, STE 12B/13B, Virginia Beach, VA 23451, United States of America

KVQA ASSESSMENT

CERTIFICATE

This is hereby certified that the Occupational Health & Safety Management System of

AL-ARADH AL-QAWIYYA LTD COMPANY (TERRA FIRMA)

Bldg. No. 2466, King Fahad Bin Abdul Aziz Rd, Al Hussam Dist., 34223 - Dammam, Kingdom of Saudi Arabia

Has been found to comply with the requirements of

ISO 45001: 2018

This certificate is applicable for the following scope:

Design & Execution of Site Preparation (Cut & Fill), Soil Improvement, Deep Foundation Contracting

Certificate Number: KAOH202602029

Date of initial registration:	20 February 2026
Surveillance audit on/before:	20 January 2027
Certificate expiry:	20 February 2027
Recertification due:	19 February 2029

MANAGEMENT SYSTEM CERTIFICATE

Authorised Signatory
KVQA Assessment Pvt. Ltd.

Website: www.iso-registration.com | Email: info@iso-registration.com

KVQA Assessment Private Limited is accredited to United Accreditation Foundation (UAF). UAF is internationally recognized by having a signatory status across multilateral recognition arrangement of International Accreditation Forum (IAF) and Asia Pacific Accreditation Cooperation (APAC).

The certificate is valid subject to successful completion of surveillance audits. Verify validity/status on www.iso-registration.com or on email at info@iso-registration.com

UAF address: 1060 Laskin Road, STE 12B/13B, Virginia Beach, VA 23451, United States of America

8. 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 a 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.

9. Projects



39

UAE



43

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



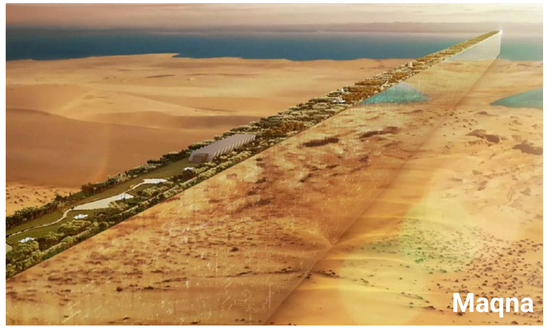
Riyas NGL Fractionation Facility (RNGLF) Site Preparation Pkg6

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



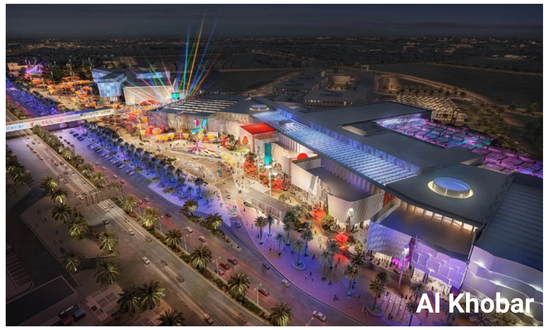
Jafourah PKG3 Project - Gas Compression Plants

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
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 m²
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 m²
Technique : Dynamic Compaction, Dynamic Replacement



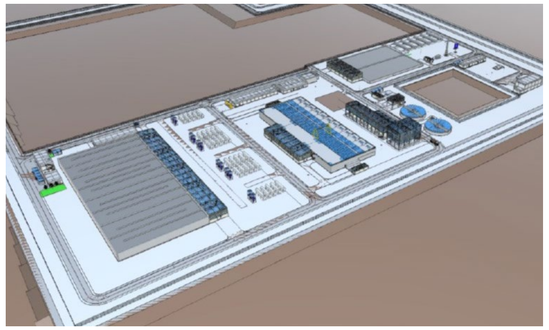
Infrastructure - Jeddah Industrial City 3 Phase 1

Client : Modon
Consultant : Parsons/EGIS
Contractor : Al Rawaf Contracting
Duration : 5 Months
Area : 3,553,772 m²
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 m²
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 m²
Technique : Rapid Impact Compaction



Bryman District

Client : National Housing Company (NHC)
Consultant : Khatib & Alami
Contractor : Al Saadi
Duration : 3 Months
Area : 500,000 m²
Technique : Rapid Impact Compaction

Letter of Appreciation

مرجان
Marjan

Enabling Works for RAK Greenfield Project

Client : Marjan
Ref no. : 110.03.26/P01c-AA/L/177
Date : 25 March 2026



مرجان
Marjan

Ref: 110.03.26/P01C-AA/L/177
25th March 2026

To:
Terra Firma Foundation Contracting LLC
Dubai - United Arab Emirates
Tel. No. +971 4 388 8453

Subject : Letter of Appreciation for Terra Firma Foundation Contracting LLC

Dear Terra Firma Team,

On of the Client 'Arabian Healthcare Group LLC', We would like to extend our sincere appreciation for your successful completion of the Enabling Works contract for the new Ras Al Khaimah Greenfield project.

Your team's professionalism, dedication, and commitment to excellence have been evident throughout the duration of the project. The timely execution of the works, adherence to quality standards, and proactive approach to addressing challenges have significantly contributed to establishing a strong foundation for the subsequent phases of development.

We particularly commend your collaborative spirit and clear communication, which have ensured smooth coordination with all stakeholders. Your efforts have played a vital role in maintaining project momentum and meeting key milestones.

Please convey our gratitude to everyone involved in this achievement. We look forward to the opportunity to collaborate with Terra Firma on future projects and wish you continued success in your endeavors.

Best Regards,

مـــرجـــان ذ.م.م
Marjan L.L.C

Mark Chicken
Senior Commercial Manager
Marjan LLC

T: +971 7 203 5000
F: +971 7 243 0268
E: info@marjan.ae
PO Box 14587
Ras Al Khaimah, UAE

marjan.ae

10. Approvals

UAE

ICTReD
Quality Prequalification Submittal

PROJECT	**YCC - Primary Roads and Infrastructure (PK2)**		
CLIENT	**ICT Real Estate Development**	**Date**	25 September 2026
PMC	**EllisDon Construction Inc.**	**Doc. Ref:**	YCC-NBHH-PK2-IN-PW-GT-PQ-00001
CONSULTANT	**Dar Alhandasah Consultants**	**Rev No:**	00
CONTRACTOR	**Nael and Bin Harmal Hydroexport**		
DISCIPLINE	**Geotechnical**		
DETAILS			
SUB-CONTRACTOR	**M/s. Terra Firma Foundation Contracting L.L.C**		
JOB DESCRIPTION	**Prequalification of M/s Terra Firma Foundation Contracting L.L.C for Ground Improvement**		
ADDRESS	**Office 114-115, DDP A1 Bldg. Nadd Hessa St P.O. Box 341101, Silicon Oasis, Dubai – U.A.E.**		
ATTACHMENTS	**Prequalification Documents**		
COMMERCIAL REGISTER	**1199411**		
INCLUDED IN VENDOR LIST	YES ☐ NO ☐		
FINANCIAL STATUS			
CURRENT PROJECT	• Kezad Warehouse - KLP7 • Hamim Camp • Masdar Hybrid Project plant 2 • AL BAHIA INFRASTRUCTURE WORKS • Masdar Infrastructure Project		
OTHERS (LIST ANY)	☑ Company profile ☑ Organization chart ☑ Trade License ☑ ISO Certifications ☑ Copies of previous project Approvals	☑ List of current and completed projects for UAE/Region with photos ☐ Compliance statement ☐ Appreciation from Entities ☐ List of bankers ☑ Others	
CONTRACTOR PROJECT MANAGER **NAME: Engr. Mamdouh Morgan Ali (PD)**	**SIGNATURE:**	**DATE:** **25 September 2026**	

ICTReD-QM-FRM-010 Rev.01

ICTReD
Quality Prequalification Submittal

Received by Consultant **NAME:**	**SIGNATURE**	**DATE**

Recommendation by Consultant Representative:	**STATUS**
The Subcontractor PQ is hereby accepted, subject to the following: • Approval is subject to satisfactory performance at site. • A copy of calibration certificates for all equipment/instruments which will be used for the project works scope/tests, calibration certificate shall be provided prior to commencing any test. • Sub-Contractor to ensure all work/tests within the project work scope will be Fully compliance with project SPEC./Contract documents /International codes and Authorities regulations. • Sub-Contractor can perform only Works which are mentioned in the Scope of work included in the submittal. • The Main contractor is to submit all technical submittals (method statement, shop drawing, risk assessment, ITP) for review and approval prior to commencing the site work. • WIRs/Test reports shall be submitted on time.	☐ Code A (Approved) ☐ Code B (Approved as Noted) ☐ Code C (Revise and Resubmit) ☐ Code D (Rejected) ☐ Code E (Information, Record)

Consultant Representative Name: Damien Hughes, Senior Resident Engineer	Signature:	Date 03 October 2026	Stamp dar Dar Al-Handasah Consultants (Shair and Partners) Abu Dhabi - U.A.E.
Client/ PMC Representative Name:	Signature:	Date	Stamp
Received by Contractors Representative Name:	Signature:	Date	Stamp

Note: Checking and approval by PMC/Consultant shall not relieve the contractor of his obligation to perform the works in accordance with the contract documents, requirements of safety and local authorities regulations.

ICTReD-QM-FRM-010 Rev.01

TFGE-SOP-F-02-11 | Revision No. 01 | Page No. 00 | Page 1

JOB COMPLETION CERTIFICATE

Project Name:	Al Amerah Residential Community (Phase-1)
Project Location:	Al Ain, Abu Dhabi, United Arab Emirates
Scope of Work:	Ground Improvement Works by Heavy Dynamic Compaction & Dynamic Compaction (HDC & DC)
Main-Contractor:	Nael General Contracting LLC
Sub-Contractor:	Van Oord Middle East Limited – Abu Dhabi
Client / Employer:	Abu Dhabi Housing Authority
Developer :	IMKAN Properties
Consultant:	AECOM
Project No.:	P252041
Contract / PO No.:	16.6086
Date of Completion:	30th March 2026

We, the undersigned, hereby certify that the above-mentioned scope of work has been completed in accordance with the Contract requirements, approved specifications and drawings, applicable standards, and instructions issued during the execution of the works.

For and on behalf of Terra Firma Foundation Contracting LLC (DC Contractor)		**For and on behalf of Van Oord Middle East Limited (Sub Contractor)**	
Name:	Amir Abdul Azeez	**Name:**	Ravikumar Badulla
Designation:	Project Engineer	**Designation:**	Technical Manager
Date:	01 October 2026	**Date:**	02 October 2026
Signature:		**Signature:**	

ISSUE DATE- 01.01.2024

NMDC DREDGING & MARINE

HUDAYRIAT ISLAND EAST EXPANSION

DOCUMENT TRANSMITTAL

Transmittal No.: 102HE-DTF-SC-027	Date: 13-July-2025
From: NMDC Dredging & Marine, P.O. Box 3649, Abu Dhabi – UAE	To: Mr. Mohammed Razik – Project Manager Terra Firma Ground Engineering, UAE
Response to Ref.:	Response Required: ☒ Yes ☐ No

Sr. No.	Document No.	Rev.	Description	*Return Status
1	P0027-K00035-NMD-MA00-XX-PQ-MR-000027	00	Prequalification Documents of M/s. Terra Firma - Subcontractor for Ground Improvement Works	Approved as noted (Code 2 B

This Submittal Intended For:	☒ Approval / Comments	☐ Information / Records
	☐ As Per Your Request	☐ For Implementation
*Return Status Codes:	☐ Approved (Code 1 A)	☒ Approved as noted (Code 2 B)
	☐ Revise and Resubmit (Code 3 C)	☐ Rejected (Code 4 D)

Sent By:

Name: Mr. Dirk Paul Hendriks	Designation: Project Manager	Signature:	Date:13.Jul.2025

Acknowledgement of Receipt:

Receiver Name:	Designation:	Signature:	Date:

Receiver Comments (if any):

1.
2.
3.
4.
5.

Consultant	Client	Contractor	FORM DT Rev.0	
PARSONS	DEPARTMENT OF MUNICIPALITIES AND TRANSPORT – AL DHAFRAH REGION MUNICIPALITY	NOOR AL SAHARA	Client	Al Dhafrah Region Municipality
			Consultant	Parsons International Limited
			Contractor	Noor Al Sahara General Contracting

Project	Emergency Repairs on the International Road (E11) In Al-Marfaa' Area	Contract No.	DRM\022\25
Transmittal Ref. No.	NAS-P726-PIL-PQ-RD-0004	Date	16-12-2025
Transmittal is Issued for your	☐ Information ☐ Co-ordination ☐ Review & Comments ☑ Approval		
Doc. Type	*PREQUALIFICATION*		
■ Civil	☐ Electrical ☐ Water ☐ Stormwater ☐ Sewer ☐ Irrigation/ Land Scaping		

I. Information

SN	Sub-Contractor's Name	Submittal No.	Revision	Remarks
1.	Terra Firma - Ground Engineering		00	

II. For the Contractor

Name	Signature	Date
Khaled Al Madani Project Manager		16-12-2025

III. Received By Consultant

Name	Signature	Date
Document Controller Badria Ahmad		17-12-2025

IV. Consultant Review and Comments

Checked By: Sooria Ashar Date: 16-12-2025 Time:

V. For Consultant

Name	Signature	Date
Wassim Jenbaz Acting Resident Engineer		17-12-2025

VI. Received by Contractor

Name	Signature	Date
Waseem Aslam Document Controller		17-12-2025

Note: This Approval does not relieve the contractor from any of his contractual obligations

Form Number: FN-CN231-1-005

ETIHAD RAIL

Capital Gate, 6th Floor, Khaleej Arabi Street (30)
PO Box 989, Abu Dhabi, UAE
Tel: +971 (0)2 499 9999 Web: www.etihadrail.ae

Comment Sheet for Transmittal: S04-IFIA-JBS-CRI-02154

Project Reference: S04 **Date:** 10/01/2025 11:27:18

Issue Reason: IFIA-Issued for Implementation-Action

Document Number	Rev	Title	Contract No.	Acceptance Status
P2319-S04-ECE-PF-00002	AA	Pre-qualification for Ground Improvement Works (M/s. Terra Firma Foundation Contracting LLC) - Abu Dhabi, Dubai, Fujairah	P2319-Package PS3 D&B of MBZ, EXPO & Fujairah Stations	02-Accepted with Co

Comments List Response	Consultant	Comment Status
#2 Comments Sheet Made by Amit Kumar-JBS on the 09/01/2025 12:20:28 Comment Code: 02-Accepted with Comments Attachments: CRS.xlsx	<Consultant Response>	Status: New

End of Document Comments List

DEPARTMENT OF MUNICIPALITIES AND TRANSPORT | PARSONS | DOĞUŞ CONSTRUCTION | GULF CONTRACTORS

SUB-CONTRACTOR PREQUALIFICATION SUBMITTAL - SCPS

Part A: Project Information:

Project Name	**MID ISLAND PARKWAY PROJECT – PHASE 1A**	**SCPS. Ref. No**	MIP1A-PQ-DGS-CIN-0063
Employer	**Department of Municipalities and Transport**	**Rev. No**	00
PMC		**Date of Submission**	**16-04-2025**
Engineer	Parsons International Limited	**SCPS Submitted By**	Dogus Abu Dhabi GCC Joint Venture
Contractor	**Dogus Abu Dhabi – GCC Joint Venture**	**SCPS Submitted To**	Parsons International Ltd.

Part B: Sub-Contractor Discipline:

Related Discipline	☐	**Civil**	☐	**Architectural**	☐ **Electrical**
	☐	**Mechanical**	☒	**Others**	

Part C: Sub-Contractor Details:

Item Description	Details	List of Attachments (Tick all provided attachments)
Name	**TERRA FIRMA FOUNDATION CONTRACTING L.L.C**	☒ Valid Membership of Chamber of Commerce ☒ Valid Municipality License ☒ Pre-qualifications ☐ Vendor List ☒ Other Valid Licenses ☒ Organization Chart ☒ ISO Certificate ☒ Quality Policy ☒ Previous Approvals ☒ List of Projects & Equipment ☐ Calibration Certificate (Specify ....)
Construction Activity/ Trade/ Scope of Work	**Soil improvement under the existing TRANSCO line using cementitious pressure grouting.**	
Overall Experience	2 Years	
Experience Related to the Project	2 Years	
Sub-Contractor/ Supplier mentioned in Vendor List?	☐ Yes ☒ No ☐ N/A	
Sub-Contractor's Address/ Location	P.O. BOX 341101, U.A.E.	
Contact Person	*Ziad Khawam*	
Tel. Number	+971 561060608	
Is Sub-Contractor Certified for any Quality Standard? (If yes, Specify?)	ISO 9001:2015	
Is Sub-Contractor Certified for any HSE Standard? (If yes, Specify?)	ISO 14001:2015, ISO 45001:2018	
Other Remarks	Email: info@terrafirmage.com Web: www.terrafirmage.com	

Form: 007 Page **1** of **3**

DEPARTMENT OF MUNICIPALITIES AND TRANSPORT | PARSONS | DOĞUŞ CONSTRUCTION | GULF CONTRACTORS

Contractor's Review:

We do certify that the submitted information herewith has been reviewed in details and in accordance with the Contract Documents except as otherwise stated here above.

	QA/QC Team Leader Subcontractor	QA/QC Manager Dogus GCC JV	HSE Manager - Dogus GCC JV	Project Manager Subcontractor	Project Director Dogus GCC JV
Name	SIJI KRISHNAN	Mehmet Alper ŞAHİN	Naveed ULLAH	ALIREZA KARIMPOUR	Kubilay ÖZTÜRK
Signature					
Date	16-04-2025	16-04-2025	16-04-2025	16-04-2025	16-04-2025

The Engineer (Parsons)

Comments (If Any) by Parsons: (Quality)

☐ A- Approved ☐ B- Approved with Comments ☐ C- Revise and Resubmit ☐ D- Rejected ☐ Info

The Engineer (Parsons)

Comments (If Any) by Parsons: (Technical)

Grouting work shall be as per Approved MS and drawings.

☐ A- Approved ☑ B- Approved with Comments ☐ C- Revise and Resubmit ☐ D- Rejected ☐ Info

The Engineer (Parsons)

Comments (If Any) by Parsons: (Safety)

☐ A- Approved ☐ B- Approved with Comments ☐ C- Revise and Resubmit ☐ D- Rejected ☐ Info

Form: 007 Page **2** of **3**

LEAD | PARSONS | GULF CONTRACTORS

Document Transmittal Form

To:	Ahmed Alhafez Construction Director, Parsons	**From:**	Ahmed El Attar Project Manager, Gulf Contractors
Record Ref: CC2-GE-PQD-CE-0001	**Rev: 0**	**No of copies: 1**	**Date: 14/01/2026**
Project Name: JUBAIL ISLAND INFRASTRUCTURE WORKS – COLLECTIVE CONTRACT-02, Package-4 & Option-4G, Souk Town Centre Bridges & Bada Al Jubail Bridges-1 & 2.			
The Employer: Jubail Island Investment Company.		**The Engineer: M/s PARSONS INTL. LTD**	
The Contractor: Gulf Contractors LLC			

Subject :- Pre Qualification Documents for Ground Improvement Works & Grouting of Cavity- Alternative.
(Sub Contractor :- Ms. Terra Firma Foundation Contracting LLC, Abu Dhabi, UAE.

Type: (Tick Applicable)	☒ Technical Data	☐ Guarantee	☒ Certificate	☒ Test Result
	☒ Schedules/ Programmes	☒ Report	☐ Statutory Issues (NOC)	☒ Others
Attachment	☐ Samples	☐ Drawings	☒ Catalogue	☐ CD's ☐ Others
Purpose of Issue (Tick Applicable)	☐ For Information	☐ For Further Actionp	☐ For Record	☒ For Review

Detail :

Eng. Shadi Mohamed
Technical Manager
Gulf Contractors

المقاولون الخليجيون GULF CONTRACTORS P.O.Box 45363, Abu Dhabi, UAE Al Jubail Island

15 JAN 2026

Received By:
PARSONS International Ltd.

The Engineer (Parsons)

Comments (If Any) by Parsons:
The attached Prequalification Documents have been reviewed and Commented as per the attached Consultant review sheets.
19.01.2026

☐ A- Approved ☑ B- Approved with Comments ☐ C- Revise and Resubmit ☐ D- Rejected ☐ Info

Signature : Resident Engineer Parsons — Ahmed Farahat 19/1/26	Received By Contractor

Distribution:

DEPARTMENT OF MUNICIPALITIES AND TRANSPORT | PARSONS | DOĞUŞ CONSTRUCTION | GULF CONTRACTORS

Method of Statement Submittal

Record Reference: MIP1A-MST-CIN-00116	Rev:00	No. of copies:1	Date: 15.08.2025
Contract Reference:	DMT-CR-190-2023		
Project Name: Mid Island Parkway Project – Phase 1A			
Employer: Department of Municipalities and Transport (DMT)	Engineer: PARSONS International Limited		
Contractor: DOĞUŞ Abu Dhabi – GCC Joint Venture			

Discipline ☒ Civil ☐ Architecture ☐ Mechanical ☐ Electrical ☐ Others

Subject Method Statement for Soil Improvement Works Using Rigid Inclusion (RI)

Description:

This method statement is applicable to define the step-by-step procedures of the **Soil Improvement Works Using Rigid Inclusion (RI) works** within the proposed project of **Mid Island Parkway Phase 1– Section 1A, Abu Dhabi**. **Soil Improvement Works Using Rigid Inclusion (RI) works** shall be executed safely and in accordance with the contract requirements and specifications, hazard and safety precautions implemented, and all the Quality Assurance/ Quality Control activities are conducted in a systematic manner, work inspected and documented as per project requirements.

Contractor Signature:

Discipline Engineer:	QA/QC Manager	HSE Manager	Construction Manager	Project Director:	Received by Parsons

The Engineer (Parsons) Material:

Comments by Parsons: (Quality)

FORM # 009 (Rev.00)

ABU DHABI HOUSING AUTHORITY | KHATIB & ALAMI | NAEL CONSTRUCT

METHOD STATEMENT SUBMITTAL

PROJECT NAME: INFRASTRUCTURE & BUILDING WORKS CONSTRUCTION, AL WATHBA NORTH, NORTH NEW & SOUTH

DOCUMENT CODE	PROJECT #	DOCUMENT TYPE	TRADE CODE	RUNNING NUMBER	REV.	DATE	AUTHOR
	AD 1826	MS	INFRA / ROAD WORKS	0003	02	21-Nov-23	

ISSUED BY: NAEL GENERAL CONTRACTING LLC TO: KHATIB & ALAMI (CEC)

DOCUMENT DESIGNATION: METHOD STATEMENT SUBMITTAL FOR COMPACTION WORKS BY RAPID IMPACT COMPACTION (RIC)

No.	Description / Title	Document No. /	Revision	No. of copies
1	METHOD STATEMENT SUBMITTAL FOR COMPACTION WORKS BY RAPID IMPACT COMPACTION (RIC)	MS-IRW-0003-02	02	01 NOS HARD COPY / SOFT COPY

RECEIVED 21 NOV 2023

SUBCONTRACTOR'S SIGNATURE: CONTRACTOR'S SIGNATURE: Mohammed Fiyaz – Project Manager Nael General Contracting L.L.C. RECIPIENT'S SIGNATURE:

The Engineer's Comments:

APPROVED 27/11/23 27.11.23

☐ Approved ☐ Approved As Noted ☐ Revise & Resubmit ☐ Rejected

Engineer Representative: Ahmed Shalaby - Director (Khatib & Alami) SIGNATURE: DATE :

RECEIVED 27/11/23 27/11/123

ABU DHABI HOUSING AUTHORITY | KHATIB & ALAMI | NAEL CONSTRUCT

DOCUMENT SUBMITTAL

PROJECT NAME: INFRASTRUCTURE & BUILDING WORKS CONSTRUCTION, AL WATHBA NORTH, NORTH NEW & SOUTH

DOCUMENT CODE	PROJECT #	DOCUMENT TYPE	TRADE CODE	RUNNING NUMBER	REV.	DATE	AUTHOR
	AD 1826	DSUB	QA/QC	1101	01	14-Mar-24	

ISSUED BY: NAEL GENERAL CONTRACTING LLC TO: KHATIB & ALAMI (CEC)

DOCUMENT DESIGNATION: FINAL REPORT (RIC) - VILLAS STAGE-1 & 2 - AL WATHBA NORTH NEW (74 PLOTS).

No.	Description / Title	Document No. /	Revision	No. of copies
1	FINAL REPORT (RIC) - VILLAS STAGE-1 & 2 - AL WATHBA NORTH NEW (74 PLOTS).		01	01 NOS. HARD COPY

CONTRACTOR'S SIGNATURE: Mohammed Fiyaz – Project Manager Nael General Contracting L.L.C. RECIPIENT'S SIGNATURE:

RECEIVED 14 MAR 2024

The Engineer's Comments:

21.03.2024

☐ Approved ☐ Approved As Noted ☐ Revise & Resubmit ☐ Rejected

Engineer Representative: Ahmed Shalaby -Director (Khatib & Alami) SIGNATURE: DATE :

21/3/24

Client Representative comments:

☐ Approved ☐ Approved As Noted ☐ Revise & Resubmit ☐ Rejected

Client Representative SIGNATURE: DATE :

RECEIVED 21 MAR 2024

QUALITY PRE-QUALIFICATION SUBMITTAL

PROJECT	Al Haffar Housing Project- Infrastructure Works- Package 1 [P154045/2025/C/001]		
CLIENT	ALDAR	Date	23/04/2026
PMC	Kellogg Brown & Root (KBR)	Doc. Ref:	HAIP1-IN-WBG-ZZ-ZZ-XX-PQ-EW-00001
CONSULTANT	Parsons International Limited. (PIL)	Rev No:	C00
CONTRACTOR	Western Bainoona Group Contracting LLC[WBG]		
DISCIPLINE	EarthWork		
DETAILS			
SUB-CONTRACTOR	Prequalification Approval - M/s. TERRA FIRMA FOUNDATION CONTRACTING L.L.C - BRANCH OF ABU DHABI 1		
JOB DESCRIPTION	For soil improvment Works		
ADDRESS	Al Hisn Street, West 7 Building, First Abu Dhabi Bank P.J.S.C, 1_ -, Abu Dhabi, UAE.		
ATTACHMENTS	Prequalification		
COMMERCIAL REGISTER	Included in Prequalification		
INCLUDED IN VENDOR LIST	YES ☐ NO ☒		
FINANCIAL STATUS	Included in Prequalification		
CURRENT PROJECT	Included in Prequalification		
OTHERS (LIST ANY)	☐ Company profile ☐ Organization chart ☐ Trade License ☐ ISO Certifications ☐ Copies of previous project Approvals	☐ List of current and completed projects for UAE/Region with photos ☐ Compliance statement ☐ Appreciation from Entities ☐ List of bankers ☐ Others	

CONTRACTOR PROJECT MANAGER	SIGNATURE	DATE
NAME: Elwaleed Elbashir Project Director		23-04-2026

FWAPW-ZZ-KBR-ZZ-ZZ-XX-FM-AD-00075[C00] QUALITY PRE-QUALIFICATION SUBMITTAL (ALD-OP-QM-PQP-FRM-00012) 1

Classification: Internal General Purpose
Rev.02

QUALITY PRE-QUALIFICATION SUBMITTAL

Received by Consultant NAME:	SIGNATURE	DATE

Recommendation by Consultant Representative:	STATUS
Recviewed and have no objection subject to comply with all attached comments and satisfactory performance	☐ CODE A - Approved ☑ CODE B – Approved with Comments ☐ CODE C – Revise and Resubmit ☐ CODE D - Rejected ☐ CODE A - Approved

Consultant Representative Name: H.olaywah	Signature: Hatem Olaywah	Date 27-4-2026	Stamp
Client/ PMC Representative Name:	Signature:	Date	Stamp
Received by Contractors Representative Name:	Signature:	Date	Stamp

Note: Checking and approval by PMC/Consultant shall not relieve the contractor of his obligation to perform the works in accordance with the contract documents, requirements of safety and local authorities' regulations.

FWAPW-ZZ-KBR-ZZ-ZZ-XX-FM-AD-00075[C00] QUALITY PRE-QUALIFICATION SUBMITTAL (ALD-OP-QM-PQP-FRM-00012) 2

Classification: Internal General Purpose
Rev.02

Key Activity :	**General Correspondences**
Status:	**Approved**

General Information

Reference Number:	O-15392 Cont-Defn-AD/GC56
Consultant Contract No:	O-14942
Contractor Contract No:	O-15392
Consultant Letter Ref No:	P2202/SH/TAQA-WS/60161
Issue Date:	2026-05-04T16:35:20.000+04:00

General Correspondences Information

Project Location:	Al Bahia Area, Abu Dhabi
Description:	Pre-Qualification Document for Soil Grouting Works M/s. Terra Firma Foundation Contracting LLC
Subject :	Pre-Qualification Document for Soil Grouting Works M/s. Terra Firma Foundation Contracting LLC

Official Use	Comments	
Eng. Khaled Nabil Projects Department Manager - Abu Dhabi	Consultant Comment:	Dear Sirs, With reference to Gulf Contractors' letter Ref. No.: GC/O-15392/2/7/19/1547/25 dated 27 April 2026 regarding the submission of the Prequalification for the Subcontractor for Soil Improvement works, we would like to highlight that special approval is being sought in this case. As per the GCC letter and subsequent communications, the listed/approved vendors did not respond to the request. Therefore, based on the subcontractor's relevant and similar experience with Aldar and other Authorities, this prequalification is being submitted for your review and consideration. We have completed our review and hereby recommend the

MASDAR CITY مدينة مصدر MUBADALA AECOM GCL الخليج للمقاولات والبستنة GULF CONTRACTING & LANDSCAPING

SUB-CONTRACTOR PREQUALIFICATION SUBMITTAL - SCPS

Part A: Project Information:

Project Name	**Masdar City Infrastructure Project**	**PQN. Ref. No**	**LD737-MCIP-GCL-PQ-PW-0035-00**
Employer	**Masdar City Services LLC**		
Employer Rep.	**Mubadala**	**Date of Submission**	**02-June-2026**
PMC / Consultant	**AECOM Middle East Ltd.**	**SCPS Submitted By**	**GCL**
Contractor	**Gulf Contracting & Landscaping**	**SCPS Submitted To**	**AECOM**

Part B: Supplier Discipline:

Related Discipline	☐	**Civil**	☐	**Utilities**	☐	**Electrical**
	☐	**Landscape**	☒	**Others (Specify): (Ground Improvement, Earthworks, Enabling works)**		

Part C: Supplier Contact Details:

Item Description	Details	List of Attachments (Tick all provided attachments)
Name	Terra Firma Foundation Contracting LLC	☒ Scope of Works ☒ Contract Documents (Dwg, BOQ & Spec) ☒ Valid Membership of Chamber of Commerce. ☒ ISO Certifications ☒ Organization chart of Supplier ☒ Previous work's approvals ☒ List of Total equipment & manpower ☒ Total No. of projects executing presently. ☒ List of manpower dedicated for this contract ☒ List of equipment dedicated for this contract ☒ CVs of proposed Engineers and Skilled Staff ☒ Project Quality Assurance Plan / Method Statement ☒ Satisfactory completion certificate of previous project /s ☐ Vendor List ☒ Other:
Construction Activity/ Trade	Subcontractor / Expert in Foundation Contracting, Piling	
Overall Experience	Ground Improvement, Enabling work, Earthworks	
Experience Related to the Project	- Emirates Glass Factory - GCC Jubail Island - Hudayryat NMDC Sadiyat Island (DOGUS/GCC)	
Sub-Contractor/ Supplier mentioned in Vendor List?	☐ Yes ☒ No ☐ N/A	
Supplier's Address/ Location	114-115 DDP A1, Silicon Oasis P.O. Box 341101, Nadd Hessa Dubai, U.A.E	
Contact Person	Mr. Ziad Khawam	
Mobile Number	+971 56 106 0608	
Other Remarks		

Contractor's Review:

"We confirm that the above-mentioned Supplier possesses all the equipment necessary to perform his job satisfactorily in accordance with the requirement of Contract Documents & the information given above is authentic"

	Sub-Contractor	Main Contractor	QA/QC	HSE	Project Manager
Name	**Mr. Ziad Khawam**	Gulf Contracting & Landscaping LLC	**Akhil Unnikrishnan**	**Muhammad Sajid Usman**	**Ihab Khalaf**
Signature					
Date	02.06.26		02.06.26	02.06.26	02.06.26

MASDAR CITY مدينة مصدر MUBADALA AECOM GCL الخليج للمقاولات والبستنة GULF CONTRACTING & LANDSCAPING

Part D: Employer/ Engineer Review and Approval[1]:

Employer/ Engineer's Comments	PMC Team HSE Comments: Please refer to the attached comments sheet and ADM Circular No. 006/2019 – Heavy Equipment & Machinery Movement. All requirements and comments shall be fully complied with and effectively implemented.			
Employer/ Engineer Approval	☐	**A: Approved**	☐	**B: Approved with Comments**
	☐	**C: Revise & resubmit**	☐	**D: Rejected**

Employer/ Engineer Approval:

	For Consultant	For Client
Name	**Firas Maleab**	
Designation	**Project Lead**	
Signature		
Date		

RAK Hospital

Method Statement Submittal Form

Project name	P252030-RAK HOSPITAL	Method Statement Submittal no.	*P252030-TFGE-ZZ-CIV-MET-0005-01*
Contract no.			
Contract description			

Contractor

Subject	Method Statement for Soil Improvement Works by Rigid Inclusion (RI) Technique				
Specification no.		Drawing reference	TFGE-P252030-CIV-MST-005_01	Date	22-May,2025
Discipline	☐ Architectural ☒ Civil/ Structural ☐ Mechanical ☐ Electrical ☐ Other (please specify):				
Date of Programmed work		Submitted for	☒ Approval ☐ Information		
Contractor Authorized representative	Osama Mostafa	Signature			

Health, Safety and Environment (HSE) Comments

1)Contractor to include risks associated to rebar protussion in the RA.
2)Contractor to include risks assoiciated with low visibility or work at night shift.

Name	Ashok Singh	Date	23 May 2025
Signature			

Consultant's Comments

- Following the Pre-CPT results, the Contractor shall submit a detailed Shop Drawing for the Rigid Inclusions, including the borehole diameter, depth, and spacing between inclusions. Additionally, the Contractor shall:
*Submit the design calculations for the Rigid Inclusions.
*Concrete Strength in Rigid inclusion used shall be as per Approved Mix Design and Approved design Calculation and Trial Mix shall satisfy the concrete design strength at 28 days
*Approved Mix designs are as following, contractor shall follow proposed mix design in Calculation to satisfy the requirements
- C28 (Cylinder) / C35 (Cube) SRC
- C32 (Cylinder) / C40 (Cube) SRC
- C35 (Cylinder) / C45 (Cube) SRC
*Submit the Method Statement and design calculations for the Zone Load Test (ZLT) to verify the bearing capacity.
*All cured concrete specimens shall meet the acceptance criteria as defined in ACI 318-19 (Article 26.12.3), ensuring design compressive strength prior to conducting the ZLT
- ITP Item 3.1 and 3.2 shall be Hold point for consultant.

Stantec (Consultant) has reviewed and accepted this method statement based on the project specification and authority standards.
he Consultant hereby relieves all responsibilities to the Contractor on the methodology of works done in accordance with this method statement. The Contractor shall ensure that the work methodology complies with all relevant codes, standards, and local regulations and shall be solely responsible for all Health and Safety and any errors or omissions in the methodology of works done.

Atif Saeed

Page 1 of 2

RAK HOSPITAL

Method Statement Submittal Form

Project name	P252030-RAK HOSPITAL	Method Statement Submittal no.	*P252030-TFGE-ZZ-CIV-MET-0007-00*
Contract no.			
Contract description			

Contractor

Subject	METHOD STATEMENT FOR ZONE LOAD TEST (ZLT)				
Specification no.		Drawing reference		Date	09-June -2025
Discipline	☐ Architectural ☒ Civil/ Structural ☐ Mechanical ☐ Electrical ☐ Other (please specify):				
Date of Programmed work		Submitted for	☐ Approval ☐ Information		
Contractor Authorized representative	**Osama Mostafa**	Signature			

Health, Safety and Environment (HSE) Comments

Contractor to mandatorily include comments in attached CRS with the MSRA.

Rohit Nair

Name	Elmonir Mohamed - Resident Engineer	Date	13 June 2025
Signature			

Consultant's Comments

- Zone Load Test shall be conducted in accordance with ASTM standards.
- The applied load must reach a minimum of 1.5 times the required bearing capacity.
- The Zone Load Test shall be performed at the deepest foundation formation level to represent the most critical soil condition
- Site surface under the plate must be properly prepared, leveled, and compacted before testing.
- All test equipment, including hydraulic jacks, load cells, and dial gauges, must be calibrated and certified

"Stantec (Consultant) has reviewed and accepted this method statement based on the project specification and authority standards.
The Consultant hereby relieves all responsibilities to the Contractor on the methodology of works done in accordance with this method statement. The Contractor shall ensure that the work methodology complies with all relevant codes, standards, and local regulations and shall be solely responsible for all Health and Safety and any errors or omissions in the methodology of works done."

Atif Saeed

Page 1 of 2

RAK HOSPITAL

Method Statement Submittal Form

Project name	P252030-RAK HOSPITAL	Method Statement Submittal no.	TFGE-P252030-MS-TRN-003-01
Contract no.			
Contract description	Lumpsum		

Contractor

Subject	Dynamic Compaction (DC) Method statement				
Specification no.		Drawing reference	TFGE-P242030-CIV-MST-002_01	Date	02-May,2025
Discipline	☐ Architectural ☒ Civil/ Structural ☐ Mechanical ☐ Electrical ☐ Other (please specify):				
Date of Programmed Work		Submitted for	☒ Approval ☐ Information		
Contractor Authorized representative	Osama Mostafa	Signature			

Health, Safety and Environment (HSE) Comments

The MSRA is reviewed and approved, the contractor shall ensure below during the operation.
• HSE team to conduct regular inspections to ensure compliance with MSRA and authority requirements.
• Work areas must be barricaded and marked with caution signs to prevent unauthorized access.
• Monitor and record vibration levels, ensuring they remain within permissible limits.
• Keep all relevant documents (NOC, MSRA, PTW, third-party certificates) available at the worksite.
• Provide necessary welfare facilities (toilets, water, rest areas, first aid, firefighting) before starting work.
• Night work requires prior approval from authority, client, PMC, and supervision consultant.
• MSRA to be communicated to all crew involved in the task.

Name	Vipin Chandran	Date	05-May-2025
Signature			

Consultant's Comments

• Ensure that the Dynamic compaction is done as per approved Shop Drawing and is accurately aligned with the established benchmark.
• Submit the topographical survey reports before and after ground improvement works.
• Ensure that, after the Dynamic Compaction, the ground level matches the formation levels as per the IFC Drawings.
• Verify bearing capacity criteria 350 kPa for Main Building and 250 kPa for Podium Area of main building in accordance with the design requirements and IFC.
• Provide the method statement and shop drawings for the Rigid Inclusions (RI) works (separately).
• Submit shop drawings for the Dynamic Compaction trial area.
• Following the Dynamic Compaction trial Area, submit a detailed report/shop drawing including the following information:
o Grid Spacing
o Number of Blows per Print
o Drop Height
o Weight of Pounder
o Number of Phases an Passes
• Perform Suitability Test for the existing soil used for backfilling.
• The Inspection and Test Plan (ITP) & Checklist must be submitted with all future method statement.

Page 1 of 2

PROCORE

Parsons International Limited
F9R8+54R - Al Danah - Zone 1
Abu Dhabi, NA
P: +971509076050

Project: MIP - 1B

Submittal #1.0-PQN-CIV-0042.0 - PQN-CIV-0042 - Pre-qualification for Ground Improvement Works - M/s Terra Firma Foundation Contracting L.L.C. 1.0 - Civil Works

Distribution Summary

Distributed by Mohamed Asaad (Parsons International Limited) on 21 Oct, 2024

To Nadeem Latif (YP-CRIG-JV), Mohamed Asaad (Parsons International Limited), Hu Peng (YP-CRIG-JV), Afthab Puthiyakath (YP-CRIG-JV), Yuebin Wu (YP-CRIG-JV)

Message None

Attachments

Name	Response	Attachments	Comments
Saleel Aerattu (Parsons International Limited)	B - Approved with Comments	PQN-CIV-0042 - Ground Improvement Works (Terra Firma).pdf, CRS-MIP-1B-PAR-PQ-GE-CIV-0042-Rev-0.xlsx	Please follow Parsons comments as noted in the attached CRS
Kanhaiya Meghwal (Parsons International Limited)	B - Approved with Comments	CRS-YP-CRIG-MIP-1B-PQN-CIV-0036-Rev-0.xlsx	Refer to attached CRS.
Muhammad Ashraf (Parsons International Limited)	B - Approved with Comments	CRS-MIP-1B-PAR-PQ-GE-CIV-0042-Rev-0 (1).xlsx, PQN-CIV-0042 - Ground Improvement Works (Terra Firma).pdf	The prequalification approval is subject to compliance with the marked comments and satisfactory performance at site
Mohamed Asaad (Parsons International Limited)	B - Approved with Comments		

Revision 0
Status B - Approved with Comments
Issue Date
Final Due Date 22 Oct, 2024
Location
Approvers Saleel Aerattu (Parsons International Limited), Muhammad Ashraf (Parsons International Limited), Kanhaiya Meghwal (Parsons International Limited), Emad Salem (Parsons International Limited), Muhammad Ashraf (Parsons International Limited), Mohamed Asaad (Parsons International Limited)
Ball in Court
Distribution
Description Dear Mr. Asaad,

Please find attached herewith Prequalification Submittal for Ground Improvement Works - M/s Terra Firma Foundation Contracting L.L.C., for your review and approval.

Thanks and Regards,
For and on behalf of YP-CRIG-JV

Submittal Manager Mohamed Asaad (Parsons International Limited)
Date Created 17 Oct, 2024
Spec Section 1.0 - Civil Works
Lead Time
Type Pre Qualification

RECEIVED
21 OCT 2024
Yas Projects-CRIG-JV
Mid Island Parkway - 1B

Abdul Afthab
Sr. Document Controller

Submittal Workflow

Name	Sent Date	Due Date	Returned Date	Response	Attachments
General Information Attachments					PQN-CIV-0042 - Ground Improvement Works (Terra Firma).pdf
Saleel Aerattu	18 Oct, 2024	28 Oct, 2024	20 Oct, 2024	B - Approved with Comments	PQN-CIV-0042 - Ground Improvement Works (Terra Firma).pdf CRS-MIP-1B-PAR-PQ-GE-CIV-0042-Rev-0.xlsx
Comment	Please follow Parsons comments as noted in the attached CRS				
Muhammad Ashraf	18 Oct, 2024	28 Oct, 2024	20 Oct, 2024	B - Approved with Comments	PQN-CIV-0042 - Ground Improvement Works (Terra Firma).pdf CRS-MIP-1B-PAR-PQ-GE-CIV-0042-Rev-0.xlsx
Comment	The approval is subject to compliance with the marked comments and satisfactory performance at site				
Kanhaiya Meghwal	18 Oct, 2024	28 Oct, 2024	18 Oct, 2024	B - Approved with Comments	CRS-YP-CRIG-MIP-1B-PQN-CIV-0036-Rev-0.xlsx
Comment	Refer to attached CRS.				
Emad Salem	18 Oct, 2024	28 Oct, 2024	20 Oct, 2024	Void	
Muhammad Ashraf	20 Oct, 2024	22 Oct, 2024	20 Oct, 2024	B - Approved with Comments	CRS-MIP-1B-PAR-PQ-GE-CIV-0042-Rev-0 (1).xlsx (Current) PQN-CIV-0042 - Ground Improvement Works (Terra Firma).pdf (Current)
Comment	The prequalification approval is subject to compliance with the marked comments and satisfactory performance at site				
Mohamed Asaad	20 Oct, 2024	22 Oct, 2024	21 Oct, 2024	B - Approved with Comments	

Yas Projects CRIG-JV	Mid Island Parkway - 1B		
Date:			
Forward to	Action	Coord	Info
Yas HO			
CRIG HO			✓
QD			
JV Coord.			
PO			✓
DPD			
Comm. Mgr.			
Const. Dir.			✓
Design Coord			
MEP			
Planning			✓
HSE			
QA/QC			✓
Material Eng.			
Admin			
Procurement			✓
NOC			
DC			✓
Pm			
Sub-Con			
Others			

22/10

PROCORE

Parsons International Limited
F9R8+54R - Al Danah - Zone 1
Abu Dhabi, NA
P: +971509076050

Project: MIP - 1B

Submittal #1.0-PQN-CIV-0042.0 - PQN-CIV-0042 - Pre-qualification for Ground Improvement Works - M/s Terra Firma Foundation Contracting L.L.C. 1.0 - Civil Works

Distribution Summary

Distributed by Mohamed Asaad (Parsons International Limited) on 21 Oct, 2024

To Nadeem Latif (YP-CRIG-JV), Mohamed Asaad (Parsons International Limited), Hu Peng (YP-CRIG-JV), Afthab Puthiyakath (YP-CRIG-JV), Yuebin Wu (YP-CRIG-JV)

Message None

Attachments

Name	Response	Attachments	Comments
Saleel Aerattu (Parsons International Limited)	B - Approved with Comments	PQN-CIV-0042 - Ground Improvement Works (Terra Firma).pdf, CRS-MIP-1B-PAR-PQ-GE-CIV-0042-Rev-0.xlsx	Please follow Parsons comments as noted in the attached CRS
Kanhaiya Meghwal (Parsons International Limited)	B - Approved with Comments	CRS-YP-CRIG-MIP-1B-PQN-CIV-0036-Rev-0.xlsx	Refer to attached CRS.
Muhammad Ashraf (Parsons International Limited)	B - Approved with Comments	CRS-MIP-1B-PAR-PQ-GE-CIV-0042-Rev-0 (1).xlsx, PQN-CIV-0042 - Ground Improvement Works (Terra Firma).pdf	The prequalification approval is subject to compliance with the marked comments and satisfactory performance at site
Mohamed Asaad (Parsons International Limited)	B - Approved with Comments		

Revision 0
Status B - Approved with Comments
Issue Date
Final Due Date 22 Oct, 2024
Location
Approvers Saleel Aerattu (Parsons International Limited), Muhammad Ashraf (Parsons International Limited), Kanhaiya Meghwal (Parsons International Limited), Emad Salem (Parsons International Limited), Muhammad Ashraf (Parsons International Limited), Mohamed Asaad (Parsons International Limited)
Ball in Court
Distribution
Description Dear Mr. Asaad,

Please find attached herewith Prequalification Submittal for Ground Improvement Works - M/s Terra Firma Foundation Contracting L.L.C., for your review and approval.

Thanks and Regards,
For and on behalf of YP-CRIG-JV

Submittal Manager Mohamed Asaad (Parsons International Limited)
Date Created 17 Oct, 2024
Spec Section 1.0 - Civil Works
Lead Time
Type Pre Qualification

Parsons International Limited Page 1 of 2 Printed On: 21 Oct, 2024 12:26 PM +04

Approvals

KSA

Project: MA'ADEN PHOSPHATE 3-PHASE 1

Title: **Method of Statement for Trial Area Soil Compaction Works By Dynamic Compaction/Dynamic Replacement (DC/DR) - RAK**

Number: MD-522-1500-CN-CV-MST-MMAH-0014

Date: 29-May-2024

Rev: A01

Ma'aden Phosphate 3 – Phase 1			
NAME	TITLE	SIGN	DATE

REVIEW GRADE		
Result	Code	Description
☐	A	Accepted
☐	C	Proceed with exceptions to next Submission and Revision
☐	R	Do Not Proceed - Revise as noted and Resubmit
☐	I	For Information

Acceptance in any of these categories in no way relieves the Contractor/Supplier of its responsibility for the due and proper performance of the Works in accordance with the Contract/Purchase Order.

PROJECT MANAGER SIGN-OFF:			
NAME		DATE	

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Worley / JESA	MA'ADEN معادن	مفرد الحربي وشركاه MOFARREH ALHARBI & PARTNERS
		Page 2 of 23
MD-522-1500-CN-CV-MST-MMAH-0014	Method of Statement for Trial Area Soil Compaction Works By Dynamic Compaction/Dynamic Replacement (DC/DR) - RAK	Date: 29-May-2024
		Rev: A01

REVISION INDEX

Rev	Date	Description
A01	29-May-2023	For Approval

Rev.	Rev. Date	Description	Prepared By	Checked By	Approved By	Employer
A01	29-May-2023	For Approval	MAH Team	Khaled Mohamed – PM	AHMED ELHANAFY - PD	

مفرد الحربي وشركاه MOFARREH ALHARBI & PARTNERS
TERRA FIRMA

MA'ADEN Phosphate 3 Phase I –Stage 4 - EPCM Project

METHOD STATEMENT FOR TRIAL AREA
SOIL COMPACTION WORKS BY DYNAMIC COMPACTION/
DYNAMIC REPLACEMENT (DC/DR)

RAS AL-KHAIR, KSA

Our Reference :MD-522-1500-CN-CV-MST-MMAH-0014
Date : 29-05-2024
Rev : A01

Revision	Date	Prepared by	Reviewed by	Approved by
01	29-May-2024	Wahith Vavanan	Ahmed Alaaeldin	Ahmed Alaaeldin

Submittal #1.0-PQN-CIV-0042.0 - PQN-CIV-0042 - Pre-qualification for Ground Improvement Works - M/s Terra Firma Foundation Contracting L.L.C.

Project: MIP - 1B

Abdul Afthab
Sr. Document Controller

Submittal Workflow

Name	Sent Date	Due Date	Returned Date	Response	Attachments
General Information Attachments					PQN-CIV-0042 - Ground Improvement Works (Terra Firma).pdf
Saleel Aerattu	18 Oct, 2024	28 Oct, 2024	20 Oct, 2024	B - Approved with Comments	PQN-CIV-0042 - Ground Improvement Works (Terra Firma).pdf CRS-MIP-1B-PAR-PQ-GE-CIV-0042-Rev-0.xlsx
Comment	Please follow Parsons comments as noted in the attached CRS				
Muhammad Ashraf	18 Oct, 2024	28 Oct, 2024	20 Oct, 2024	B - Approved with Comments	PQN-CIV-0042 - Ground Improvement Works (Terra Firma).pdf CRS-MIP-1B-PAR-PQ-GE-CIV-0042-Rev-0.xlsx
Comment	The approval is subject to compliance with the marked comments and satisfactory performance at site				
Kanhaiya Meghwal	18 Oct, 2024	28 Oct, 2024	18 Oct, 2024	B - Approved with Comments	CRS-YP-CRIG-MIP-1B-PQN-CIV-0036-Rev-0.xlsx
Comment	Refer to attached CRS.				
Emad Salem	18 Oct, 2024	28 Oct, 2024	20 Oct, 2024	Void	
Muhammad Ashraf	20 Oct, 2024	22 Oct, 2024	20 Oct, 2024	B - Approved with Comments	CRS-MIP-1B-PAR-PQ-GE-CIV-0042-Rev-0 (1).xlsx (Current) PQN-CIV-0042 - Ground Improvement Works (Terra Firma).pdf (Current)
Comment	The prequalification approval is subject to compliance with the marked comments and satisfactory performance at site				
Mohamed Asaad	20 Oct, 2024	22 Oct, 2024	21 Oct, 2024	B - Approved with Comments	

SOUTH OIL FACILITIES PROJECTS DEPARTMENT
Khurais Projects Division

أرامكو السعودية saudi aramco

PROJECT TITLE ▼	Contract Number	BI | Job Order No.
Debottleneck Produced Water Handling System	6600047860	10-13194

DOCUMENT TRANSMITTAL

Transmittal No.	SA-13194-T-0355/25
Date:	March 11, 2025

AHMED HANAFY, *Project Director*
AHMED YOUSSEF, *Project Manager*
Engineering for the Petroleum & Process Industries
P.O. Box 3920 Al-Khobar 34425, Saudi Arabia
Tel No. 054-6395252 | 056-7921024

ALI H. AL-RUBEH, *Company Representative*
Saudi Arabian Oil Company (SAUDI ARAMCO)
R-20 | 7th Floor Hugayet Tower, Al-Khobar
Mobile No. 055-680-5181 / 013 825-8928

SUBJECT | TITLE	FINAL SOIL IMPROVEMENT REPORT FILL COMPACTION / SOIL IMPROVEMENT WORKS BY RAPID IMPACT COMPACTION (FOR AREA-A1- ZONE-4)
DOCUMENT TYPE	☒ Documents ☐ Drawings ☐ Electronic File
REVIEW STATUS	☐ Approved ☒ Approved With Comments ☐ Revise and resubmit ☐ Reviewed ☐ Reviewed With Comments ☐ REJECTED
REQUIRED ACTION	☒ Information ☐ Cancellation ☐ Action

REFERENCES ▼

EN-SA-KDBN-TR-0831-25

COMMENTS | NOTES ▼

CSD has reviewed the following documents with no further comments:

Final Post-quality Control Test Report (Rev. 00) including the various Post CPTs undertaken for the Rapid Impact Compaction (RIC) technique for Debottleneck Produced Water Handling System, Area 1, Zone 4; construction activities refer to the improvement of natural soils and 2 additional fill layers by the said ground improvement method.

Contractor may proceed with works ensuring the following:

- *In case of inconsistencies on both the factual data and the engineering interpretation resulting on non-compliance of the set criteria, then, the matter shall be referred back to the Soil Improvement Contractor.*
- *CSD is only reviewing the interpretative assessment of the field findings; the accuracy of the factual data (e.g. boreholes, Post CPTs, etc.) is a full responsibility of the entities supervising the Contractor and Geotechnical Vendor and therefore, factual data are taken as default by CSD.*

The review of the documents concerns geotechnical aspects only, and does not relieve Contractor from any liabilities to contracts term/conditions nor serve as a waiver to Mandatory Saudi Aramco's Engineering Requirements.

Please acknowledge receipt and send copy via return email for our record to: crisanto.perez.1@aramco.com

TRANSMITTED BY SAPMT	*RECEIVED BY* ENPPI KSA
Signature :	Signature :
Name : **ALI H. AL-RUBEH**	Name :
Tel. No. : **055-680-5181**	Tel. No. :
Date : **03/11/2025**	Date :

fmk FFA MA

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SOUTH OIL FACILITIES PROJECTS DEPARTMENT
Khurais Projects Division

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PROJECT TITLE ▼	Contract Number	BI | Job Order No.
Debottleneck Produced Water Handling System	6600047860	10-13194

DOCUMENT TRANSMITTAL

Transmittal No.	SA-13194-T-0184/24
Date:	November 5, 2024

AHMED HANAFY, Project Director
NOUR A. HEIKAL, Project Manager
Engineering for the Petroleum & Process Industries
P.O. Box 3920 Al-Khobar 34425, Saudi Arabia
Tel No. 054-6395252 | 056-4649796

ALI H. AL-RUBEH Company Representative
Saudi Arabian Oil Company (SAUDI ARAMCO)
R-20 | 7th Floor Hugayet Tower, Al-Khobar
Mobile No. 055-680-5181

SUBJECT | TITLE	REVISED DESIGN REPORT FOR HOLDING AND OILY WATER TANKS, REV.2
DOCUMENT TYPE	☒ Documents ☐ Drawings ☐ Electronic File
REVIEW STATUS	☒ Approved ☐ Approved With Comments ☐ Revise and resubmit ☐ Reviewed ☐ Reviewed With Comments ☐ REJECTED
REQUIRED ACTION	☒ Information ☐ Cancellation ☐ Action

REFERENCES ▼

EN-SA-KDBN-TR-0570-24

COMMENTS | NOTES ▼

CSD has reviewed the document for the Revised Design Report for Holding and Oily Water Tanks, Rev.2 **with no further comments**. The report is submitted in relation to soil improvement for BI-10-13194 Debottleneck Produced Water Handling System (Early Civil Construction Package).

Note: The review of the documents concerns geotechnical aspects only, and does not relieve Contractor from any liabilities to contracts term/conditions nor serve as a waiver to Mandatory Saudi Aramco's Engineering Requirements. In addition, the review is based on the interpretative assessment of the field findings; the accuracy of the factual data (e.g. boreholes, PCPTs, etc.) is a full responsibility of the entities supervising the Contractor and Geotechnical Vendor and therefore, factual data are taken as default by CSD.

Please acknowledge receipt and send copy via return email for our record to: crisanto.perez.1@aramco.com

TRANSMITTED BY SAPMT	*RECEIVED BY* ENPPI KSA
Signature :	Signature :
Name : **ALI H. AL-RUBEH**	Name :
Tel. No. : **055-680-5181**	Tel. No. :
Date : **11/05/2024**	Date :

fmk TTB

Saudi Aramco: Company General Use

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FADHILI INCREMENT PROJECTS DEPARTMENT
FADHILI INCREMENT PIPELINES & INFRASTRUCTURE PROJECTS DIVISION
SAPMT Senior Management Office, Fadhili
Telephone No.: 013-678-0000

DOCUMENT TRANSMITTAL	Transmittal No. **FIPL&IPD-SA-MMAH-T-01730**	Date 26-Jan-25
TO: MOHAMED ADEL RAGEH CONTRACTOR Representative Dammam 31491, Saudi Arabia Tel: +966-55-361-9355	**FROM:** DAHFER A. AL QAHTANI COMPANY Representative Fadhili Increment P/L & Infrastructure Projects Div. Tel: +966-13-678-2111	
Contractor Name: Mofarreh Marzouq Al-Harbi and Partners Co. Ltd Contract No.: 6601000314 / BI-10-20857	Project Title: GIP Package 3, Offshore Gas Increment Site Preparation / Early Works Location: Fadhili	
MMAH Reference No. AFGP-MMAH-SA-T-02322		

Saudi Aramco Remarks Code:
Code A - No Objection / Reviewed *Code C - Correct & Resubmit* *Code E - For Information*
Code B - No Objection As Noted *Code D - Rejected* *Code F - Others*

Document No.	Rev.	Subject	Remarks Code	Qty	Nature
CIVIL-ASR-029	1	FINAL ASSESSMENT REPORT COMPACTION OF NATURAL GROUND FOR HEAVY HUAL ACCESS ROAD BY RAPID IMPACT COMPACTION	**A**	1	ORIG.

SAUDI ARAMCO has reviewed and approved CIVIL-ASR-029 , Final Assessment Report Compaction of Natural Ground for Heavy Hual Access Road by Rapid Impact Compaction

Should you have any questions, please contact Tariqi, Mohammed H at 013-678-2844.

DAHFER A. AL QAHTANI
Company Representative

cc: MHT

DISCLAIMERS:
- *Saudi Aramco response does not relieve the CONTRACTOR from any of its contractual obligations.*
- *Saudi Aramco response does not relieve the CONTRACTOR from any of its obligations of full compliance with the applicable SA Standards and the referenced standards.*

Transmitted By:	Received By:	Received Date
Maitham Hafed	Name and Signature	

Saudi Aramco: Company General Use

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SAUDI ARABIAN OIL COMPANY
RIYAS NGL PROJECTS DEPARTMENT
Ind Support Facs & Site Dev Div
15th Floor, Sky Tower, King Saud Bin Abdulaziz Road, Qurtuba,
Al-Khobar, Saudi Arabia

DOCUMENT TRANSMITTAL	Transmittal No. **RNGLFPD-SP-TR-0366/24**	Date May 21, 2024
TO: **Waleed Zaki Salama,** Contractor Representative Mofarreh Marzouq AlHarbi & Partners Co.Ltd Dammam 31491, Saudi Arabia	**FROM:** **Wail O. BuSaied,** Company Representative Ind Support Facs & Site Dev Div Saudi Arabian Oil Company	
Contract No. : 6601000306	**Project Title:** Riyas NGL Site Preparation	

COMPANY Response Remarks Code

THE FOLLOWING	☒ DOCUMENTS	☐ E-FILE	☐ DRAWING
COMPANY RESPONSE	☐ APPROVED	☐ REJECTED	☐ REVISE & RESUBMIT
	☐ FOR YOUR USE	☐ REVIEWED WITH COMMENTS	☒ NO OBJECTION

Contractor Reference Number	Rev	Subject	Remarks
ASP-MMAH-SA-T-00649	01	DC-DR Final Handover report, (Access Road A2 - Natural Soil + 2m Fill)	No Objection

COMPANY has no objection on the submitted report;

Please note that in case of inconsistencies on both the factual data and the engineering interpretation (that may be revealed by the subsequent CONTRACTOR during the handover) resulting on non-compliance of the early site preparation set criteria, then, the matter shall be referred back to the Early Site Preparation CONTRACTOR.

COMPANY is only reviewing the interpretative assessment of the field findings; the accuracy of the factual data (e.g. Post CPTs) is a full responsibility of the entities supervising the CONTRACTOR and Geotechnical Vendor and therefore, factual data are taken as default by COMPANY.

Should you require any further clarification, please contact Alqahtani, Mohammed Z, via mohammed.qahtani.188@aramco.com

Wail O. BuSaied, Company Representative

SAM/MZQ

Attachment(s): No
cc:
SUPERVISOR PROJECT ENGRG, Majed, Sami A
ASSOCIATE ENGINEER, Qahtani, Mohammed Z

Saudi Aramco: Company General Use

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FADHILI INCREMENT PROJECTS DEPARTMENT
FADHILI INCREMENT PIPELINES & INFRASTRUCTURE PROJECTS DIVISION
SAPMT Senior Management Office, Fadhili
Telephone No.: 013-678-0000

DOCUMENT TRANSMITTAL	Transmittal No. **GIPL&IPD-SA-MMAH-T-01406**	Date 1-Oct-24
TO: WALEED ZAKI SALAMA CONTRACTOR Representative Dammam 31491, Saudi Arabia Tel: +966-55-368-0066	**FROM:** DAHFER A. AL QAHTANI COMPANY Representative Fadhili Increment P/L & Infrastructure Projects Div. Tel: +966-13-678-2111	
Contractor Name: Mofarreh Marzouq Al-Harbi and Partners Co. Ltd Contract No.: 6601000314 / BI-10-20857	Project Title: GIP Package 3, Offshore Gas Increment Site Preparation / Early Works Location: Fadhili	
MMAH Reference No. AFGP-MMAH-SA-T-01872		

Saudi Aramco Remarks Code:
Code A - No Objection / Reviewed *Code C - Correct & Resubmit* *Code E - For Information*
Code B - No Objection As Noted *Code D - Rejected* *Code F - Others*

Document No.	Rev.	Subject	Remarks Code	Qty	Nature
CON-MOS-035	2	METHOD STATEMENT FOR SOIL IMPROVEMENT WORKS BY DYNAMIC REPLACEMENT	**B**	2	ORIG.

CONTRACTOR shall comply with the attached comments in Comments Review Sheet (CRS)- 1 sheet.

Should you have any questions, please contact Tariqi, Mohammed H at 013-678-2844.

DAHFER A. AL QAHTANI
Company Representative

cc: MHT

DISCLAIMERS:
- *Saudi Aramco response does not relieve the CONTRACTOR from any of its contractual obligations.*
- *Saudi Aramco response does not relieve the CONTRACTOR from any of its obligations of full compliance with the applicable SA Standards and the referenced standards.*

Transmitted By:	Received By:	Received Date
Maitham Hafed	Name and Signature	

Saudi Aramco: Company General Use

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FADHILI INCREMENT PROJECTS DEPARTMENT
FADHILI INCREMENT PIPELINES & INFRASTRUCTURE PROJECTS DIVISION
SAPMT Senior Management Office, Fadhili
Telephone No.: 013-678-0000

DOCUMENT TRANSMITTAL	Transmittal No. FIPL&IPD-SA-MMAH-T-01729	Date 26-Jan-25

TO: MOHAMED ADEL RAGEH
CONTRACTOR Representative
Dammam 31491, Saudi Arabia
Tel: +966-55-361-9355

FROM: DAHFER A. AL QAHTANI
COMPANY Representative
Fadhili Increment P/L & Infrastructure Projects Div.
Tel: +966-13-678-2111

Contractor Name: Mofarreh Marzouq Al-Harbi and Partners Co. Ltd
Contract No.: 6601000314 / BI-10-20857

Project Title: GIP Package 3, Offshore Gas Increment Site Preparation / Early Works
Location: Fadhili

MMAH Reference No. AFGP-MMAH-SA-T-02332

Saudi Aramco Remarks Code:
Code A - No Objection / Reviewed *Code B - No Objection As Noted* *Code C - Correct & Resubmit* *Code D - Rejected* *Code E - For Information* *Code F - Others*

Document No.	Rev.	Subject	Remarks Code	Qty	Nature
CIVIL-ASR-030	1	FINAL ASSESSMENT REPORT COMPACTION OF FILL FOR PATROL ACCESS ROAD BY RAPID IMPACT COMPACTION	A	1	ORIG.

SAUDI ARAMCO has reviewed and approved CIVIL-ASR-030 , Final Assessment Report Compaction of Fill for Patrol Access Road by Rapid Impact Compaction.

Should you have any questions, please contact Tariqi, Mohammed H at 013-678-2844.

DAHFER A. AL QAHTANI
Company Representative

cc: MHT

DISCLAIMERS:
- *Saudi Aramco response does not relieve the CONTRACTOR from any of its contractual obligations.*
- *Saudi Aramco response does not relieve the CONTRACTOR from any of its obligations of full compliance with the applicable SA Standards and the referenced standards.*

Transmitted By:	Received By:	Received Date
Maitham Hafed	Name and Signature	

Saudi Aramco: Company General Use

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GAS FACILITIES PROJECTS DEPARTMENT
GAS INCREMENT PIPELINES & INFRASTRUCTURE PROJECTS DIVISION
SAPMT Senior Management Office, Fadhili
Telephone No.: 013-678-0000

DOCUMENT TRANSMITTAL	Transmittal No. GIPL&IPD-SA-MMAH-T-00206	Date 3-Oct-23

TO: WALEED ZAKI SALAMA
CONTRACTOR Representative
Dammam 31491, Saudi Arabia
Tel: +966-55-368-0066

FROM: MOHAMMED A. AL-MIR
COMPANY Representative
Gas Increment P/L & Infrastructure Projects Div.
Tel: +966-13-678-6581

Contractor Name: Mofarreh Marzouq Al-Harbi and Partners Co. Ltd
Contract No.: 6601000314 / BI-10-20857

Project Title: GIP Package 3, Offshore Gas Increment Site Preparation / Early Works
Location: Fadhili

MMAH Reference No. AFGP-MMAH-SA-T-00202

Saudi Aramco Remarks Code:
Code A - No Objection / Reviewed *Code B - No Objection As Noted* *Code C - Correct & Resubmit* *Code D - Rejected* *Code E - For Information* *Code F - Others*

Document No.	Rev.	Subject	Remarks Code	Qty	Nature
CON-MOS-005	03	Method Statement for Fill Compaction Works by Rapid Impact Compaction (RIC)	B	2	ORIG.

CONTRACTOR shall refer to comments attached in Comments Review Sheet (CRS) - 1 sheet.

Should you have any questions, please contact Khalid S. Aljameel at 013-678-2700.

MOHAMMED A. AL-MIR
Company Representative

cc: KSJ/MAB

DISCLAIMERS:
- *Saudi Aramco response does not relieve the CONTRACTOR from any of its contractual obligations.*
- *Saudi Aramco response does not relieve the CONTRACTOR from any of its obligations of full compliance with the applicable SA Standards and the referenced standards.*

Transmitted By:	Received By:	Received Date
Rodelo Perez Macalintal	Vir Brian Jan Caday Bunayog Name and Signature	08Oct23

Saudi Aramco: Company General Use

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FADHILI INCREMENT PROJECTS DEPARTMENT
FADHILI INCREMENT PIPELINES & INFRASTRUCTURE PROJECTS DIVISION
SAPMT Senior Management Office, Fadhili
Telephone No.: 013-678-0000

DOCUMENT TRANSMITTAL	Transmittal No. GIPL&IPD-SA-MMAH-T-01406	Date 1-Oct-24

TO: WALEED ZAKI SALAMA
CONTRACTOR Representative
Dammam 31491, Saudi Arabia
Tel: +966-55-368-0066

FROM: DAHFER A. AL QAHTANI
COMPANY Representative
Fadhili Increment P/L & Infrastructure Projects Div.
Tel: +966-13-678-2111

Contractor Name: Mofarreh Marzouq Al-Harbi and Partners Co. Ltd
Contract No.: 6601000314 / BI-10-20857

Project Title: GIP Package 3, Offshore Gas Increment Site Preparation / Early Works
Location: Fadhili

MMAH Reference No. AFGP-MMAH-SA-T-01872

Saudi Aramco Remarks Code:
Code A - No Objection / Reviewed *Code B - No Objection As Noted* *Code C - Correct & Resubmit* *Code D - Rejected* *Code E - For Information* *Code F - Others*

Document No.	Rev.	Subject	Remarks Code	Qty	Nature
CON-MOS-035	2	METHOD STATEMENT FOR SOIL IMPROVEMENT WORKS BY DYNAMIC REPLACEMENT	B	2	ORIG.

CONTRACTOR shall comply with the attached comments in Comments Review Sheet (CRS)- 1 sheet.

Should you have any questions, please contact Tariqi, Mohammed H at 013-678-2844.

DAHFER A. AL QAHTANI
Company Representative

cc: MHT

DISCLAIMERS:
- *Saudi Aramco response does not relieve the CONTRACTOR from any of its contractual obligations.*
- *Saudi Aramco response does not relieve the CONTRACTOR from any of its obligations of full compliance with the applicable SA Standards and the referenced standards.*

Transmitted By:	Received By:	Received Date
Maitham Hafed	Name and Signature	

Saudi Aramco: Company General Use

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GAS FACILITIES PROJECTS DEPARTMENT
GAS INCREMENT PIPELINES & INFRASTRUCTURE PROJECTS DIVISION
SAPMT Senior Management Office, Fadhili
Telephone No.: 013-678-0000

DOCUMENT TRANSMITTAL	Transmittal No. GIPL&IPD-SA-MMAH-T-00580	Date 7-Feb-24

TO: **WALEED ZAKI SALAMA** CONTRACTOR Representative Dammam 31491, Saudi Arabia Tel: +966-55-368-0066	FROM: **MOHAMMED A. ALMIR** COMPANY Representative Gas Increment P/L & Infrastructure Projects Div. Tel: +966-13-678-6581
Contractor Name: Mofarreh Marzouq Al-Harbi and Partners Co. Ltd Contract No.: 6601000314 / BI-10-20857-0003	Project Title: GIP Package 3, Offshore Gas Increment Site Preparation / Early Works Location: Fadhili

MMAH Reference No. AFGP-MMAH-SA-T-00721

Saudi Aramco Remarks Code:
Code A - No Objection / Reviewed *Code B - No Objection As Noted* *Code C - Correct & Resubmit* *Code D - Rejected* *Code E - For Information* *Code F - Others*

Document No.	Rev.	Subject	Remarks Code	Qty	Nature
CON-MOS-015	00	METHOD STATEMENT FOR FILL COMPACTION WORKS BY RAPID IMPACT COMPACTION (RIC) IN AREA 3- OPEN AREA	B	1	ORIG.

CONTRACTOR shall refer to attached comments in CRDF-GIPLIPD-00122.

Should you have any questions, please contact Mubarak A. Albaqawi at mubarak.albaqawi.1@aramco.com.

***** STAMP ISSUED *****
Saudi Aramco
BI 10-20857 – Package 3, OGIP Site Preparation/Early Works
February 07, 2024

MOHAMMED A. ALMIR
Company Representative

CC: AMG/MAS

DISCLAIMERS:
- *Saudi Aramco response does not relieve the CONTRACTOR from any of its contractual obligations.*
- *Saudi Aramco response does not relieve the CONTRACTOR from any of its obligations of full compliance with the applicable SA Standards and the referenced standards.*

Transmitted By:	Received By:	Received Date
Maitham A. Al-Hafed	Name and Signature	

Saudi Aramco: Company General Use

SOUTH OIL FACILITIES PROJECTS DEPARTMENT
Khurais Projects Division

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saudi aramco

PROJECT TITLE ▼	Contract Number	BI | Job Order No.
Debottleneck Produced Water Handling System	6600047860	10-13194

DOCUMENT TRANSMITTAL	Transmittal No.	SA-13194-T-0185/24
	Date:	November 5, 2024

AHMED HANAFY, Project Director **NOUR A. HEIKAL,** Project Manager Engineering for the Petroleum & Process Industries P.O. Box 3920 Al-Khobar 34425, Saudi Arabia Tel No. 054-6395252 | 056-4649796	**ALI H. AL-RUBEH** Company Representative Saudi Arabian Oil Company (SAUDI ARAMCO) R-20 | 7th Floor Hugayet Tower, Al-Khobar Mobile No. 055-680-5181

SUBJECT | TITLE	**REVISED METHOD OF STATEMENT FOR FILL COMPACTION / SOIL IMPROVEMENT WORK BY RAPID IMPACT COMPACTION, REV.2**		
DOCUMENT TYPE	☒ Documents	☐ Drawings	☐ Electronic File
REVIEW STATUS	☒ Approved	☐ Approved With Comments	☐ Revise and resubmit
	☐ Reviewed	☐ Reviewed With Comments	☐ REJECTED
REQUIRED ACTION	☒ Information	☐ Cancellation	☐ Action

REFERENCES ▼

EN-SA-KDBN-TR-0590-24

COMMENTS | NOTES ▼

CSD has reviewed the document Revised Method Statement for Fill Compaction / Soil Improvement Work by Rapid Impact Compaction (RIC) Rev.2 with **no further comments**. The report is submitted in relation to soil improvement for BI-10-13194 Produced Water Handling System (Early Civil Construction Package).

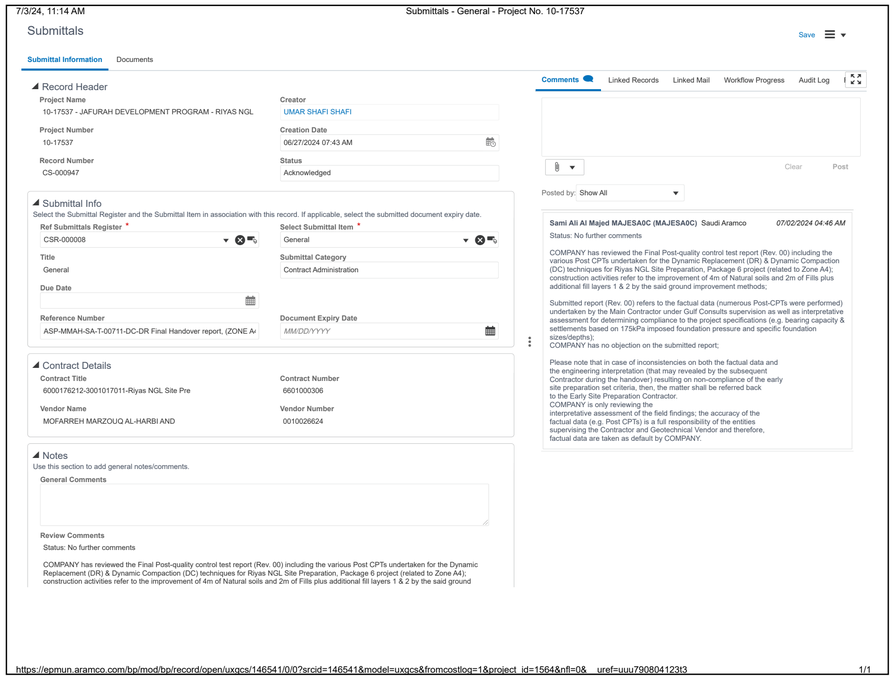
Note: The review of the documents concerns geotechnical aspects only, and does not relieve Contractor from any liabilities to contracts term/conditions nor serve as a waiver to Mandatory Saudi Aramco's Engineering Requirements. In addition, the review is based on the interpretative assessment of the field findings; the accuracy of the factual data (e.g. boreholes, PCPTs, etc.) is a full responsibility of the entities supervising the Contractor and Geotechnical Vendor and therefore, factual data are taken as default by CSD.

Please acknowledge receipt and send copy via return email for our record to: crisanto.perez.1@aramco.com

TRANSMITTED BY SAPMT	*RECEIVED BY* ENPPI KSA
Signature :	Signature :
Name : **ALI H. AL-RUBEH**	Name :
Tel. No. : **055-680-5181**	Tel. No. :
Date : **11/05/2024**	Date :

fmk TTB

Saudi Aramco: Company General Use



RCJ Submittals (Construction)

Submittal

General

Unifier Project ID: RCJ-0439	Submittal Number: 3723
Contract Number: 021-C14	Creator: Galal Elshafy
Contract Title: Site Preparation of Support Area - Phase 2 (Mofarreh M. Al-Harbi & Partners Co. Ltd)	Creation Date: 02/07/2024 11:47 AM (UTC+3)
Contractor Name: Mofarreh M. Al-Harbi & Partners Co. Ltd. (TERRA FIRMA)	Record No.: uxsubjc-0032
Title: Method Statement for Soil Compaction Works by Dynamic Compaction Replacement (DC-DR) and Rapid Impact Compaction (RIC)	Record Status: Closed
Contractor Reference Number: 773-021-C14-01-426-01	Record Last Update Date: 18/07/2024 08:07 AM (UTC+3)

Submittals types

Choose one: Technical Submittals

Technical Method Statement Submittals:	Non Technical Submittals:
Others (Please Specify):	Others (Please Specify):

Attention

Resident Engineer: Ali Aboelnaga

Subject

Subject: Method Statement for Soil Compaction Works by Dynamic Compaction Replacement (DC-DR) and Rapid Impact Compaction (RIC)

Discipline

Discip line: Civil

Other Information

Document No: 773-021-C14-01-426-01

Rev No: 1

Description: Method Statement for Soil Compaction Works by Dynamic Compaction Replacement (DC-DR) and Rapid Impact Compaction (RIC)

Material Submittal

Manufacturer Name: None	
Supplier Name: None	
Specification: RC Specification 16 Division	
CSI Code 16: 01 General Requirements	CSI Code 50:
Local Content Contract?: Yes	

RE Code and Comments

Recomm Code 1: Work May Proceed

Code: changes indicated

Comment: Work May Proceed

Approver

Project Manager Signature Name: Galal Elshafey	AR Signature Name: Ali Aboelnaga	CPS Signature Name: Mazin ZUHD
Project Manager Signature Date: 02/07/2024 11:47 AM (UTC+3)	AR Signature Date: 18/07/2024 07:44 AM (UTC+3)	CPS Signature Date: 03/07/2024 02:27 PM (UTC+3)

Submittal

0 Item(s)

No.	Sr. No	Line Item Status

Submittals (Engineering)

0 Item(s)

Creator	Record No.	Contract Number	Contractor Name	Title	Record Status	Creation Date	Submittal Number

Attachments (1) Linked Records (0) Linked Mail (0)

Submittals

Submittal Information

Record Header

Project Name: 10-17537 - JAFURAH DEVELOPMENT PROGRAM - RIYAS NGL

Creator: UMAR SHAFI SHAFI

Project Number: 10-17537

Creation Date: 03/10/2025 03:44 AM (UTC-8)

Record Number: CS-002706

Status: Acknowledged

Submittal Info

Select the Submittal Register and the Submittal Item in association with this record. If applicable, select the submitted document expiry date.

Ref Submittals Register: CSR-000008

Submittal Item: General

Title: ASP-MMAH-SA-T-01014-Fiinal Report Tetra shelter

Submittal Category: Contract Administration

Due Date:

Reference Number: ASP-MMAH-SA-T-01014 Final Handover Report Compaction RIC/RDC Tetra Shelter Area

Document Expiry Date:

Contract Details

Contract 6000176212-3001017011-Riyas NGL Title: Site Pre

Contract 6601000306 Number:

Vendor MOFARREH MARZOUQ AL-HARBI Name: AND

Vendor 0010026624 Number:

Notes

Use this section to add general notes/comments.

General Comments:

Review Comments:

Publish Path

A Publish Path is used to specify the automatic publishing of documents to a specified folder.

Publish Path: /10.00 PROJECTS - BI or JO Specific

Task Details

Record has been closed.

Workflow Progress

Step Name	Assignee	Company	Status	Action	Completion Date
Creation	UMAR SHAFI SHAFI	10026624	Completed	Send for Contrator Upload and Review	03/10/2025 03:44 AM
01 Contractor Team to Submit	UMAR SHAFI SHAFI	10026624	Completed	Submit to SA	03/10/2025 03:50 AM
03 SA Document Controller	Muhannad Almaktoum (ALMAKTMA)	SA	Completed	Assign to SAPMT	03/10/2025 04:41 AM
04 SAPMT Review	Hosam Alsubhi (ALSUHS0H)	SA	Closed	Reassign to SAPMT	03/15/2025 12:01 AM
04x SAPMT Internal Review	Renato Cuysona (CUYSONRC)	SA	Completed	Return to SAPMT	03/17/2025 03:26 AM
04 SAPMT Review	Hosam Alsubhi (ALSUHS0H)	SA	Completed	Submit to Company Rep	03/17/2025 10:59 PM
05 Company Rep Review	Adel Nasser Al Harbi HARBAN0A (HARBAN0A)	SA	Completed	Respond & Close	03/17/2025 11:40 PM

Documents

1 Item(s)

No.	Name	Title	Revision No.
001	ASP-MMAH-SA-T-01014-Fina.pdf		00

Record - General Comments

1 Item(s)

03/17/2025 03:25 AM (UTC-8) Renato Cuysona (CUYSONRC) SA

Comment Text

Status: Approved with comments COMPANY has reviewed the submitted ASP-MMAH-SA-T-01014 Final Soil Improvement Handover Report Compaction of Fill And Natural Ground Dynamic Compaction/Replacement (DC/DR) Fill Layer by Rapid Impact / Dynamic Compaction RIC/RDC Tetra Shelter Area [Natural Soil + up to 2m Fill + Fill and found acceptable with comments from CSD. 1. Final Post-quality control test report (Rev. 00) including the various Post CPTs undertaken for the Dynamic Replacement (DR) & Rapid Impact Compaction (RIC) techniques for Riyas NGL Site Preparation, Package 6 project (related to Tetra Shelter Area); construction activities refer to the improvement of Natural soils and 2m of fills plus 1 additional fill layer by the said ground improvement methods; The review is carried out as mandated by SAEP-61 to ensure the design. 2. The approval of the Soil Improvement Handover Reports shall not relieve the contractor responsibilities for the safety and soundness of the embankment sections. RCC

<Documents> - Line item - details

Line Item No: 001

Name: ASP-MMAH-SA-T-01014-Fina.pdf

Title:

Revision No.: 00

Line Item Status:

Attachments

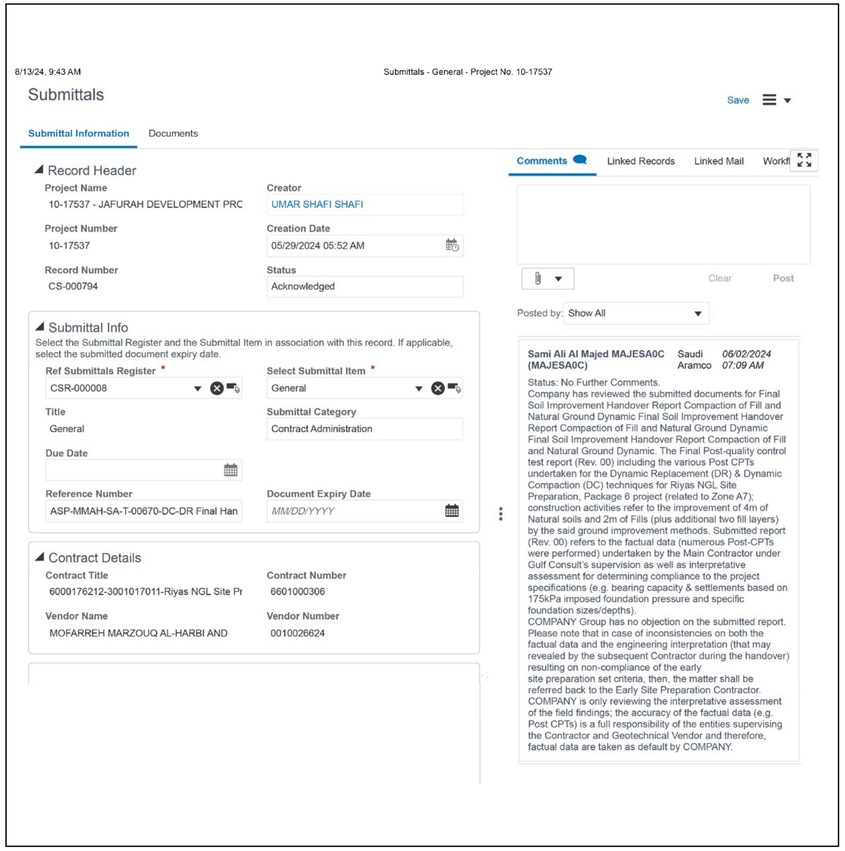
1 Item(s)

File Name	Title	Revision No.	Size	Issue Date
ASP-MMAH-SA-T-01014-Fina.pdf		00	80 MB	

Comment Text

Attachments

Attachments (0) Linked Records (0) Linked Mail (0)



8/13/24, 9:43 AM Submittals - General - Project No. 10-17537

Submittals

Save

Submittal Information | Documents

Record Header

Project Name: 10-17537 - JAFURAH DEVELOPMENT PRC
Creator: UMAR SHAFI SHAFI
Project Number: 10-17537
Creation Date: 05/29/2024 05:52 AM
Record Number: CS-000794
Status: Acknowledged

Submittal Info

Select the Submittal Register and the Submittal Item in association with this record. If applicable, select the submitted document expiry date.

Ref Submittals Register *: CSR-000008
Select Submittal Item *: General
Title: General
Submittal Category: Contract Administration
Due Date:
Reference Number: ASP-MMAH-SA-T-00670-DC-DR Final Han
Document Expiry Date: MM/DD/YYYY

Contract Details

Contract Title: 6000176212-3001017011-Riyas NGL Site Pr
Contract Number: 6601000306
Vendor Name: MOFARREH MARZOUQ AL-HARBI AND
Vendor Number: 0010026624

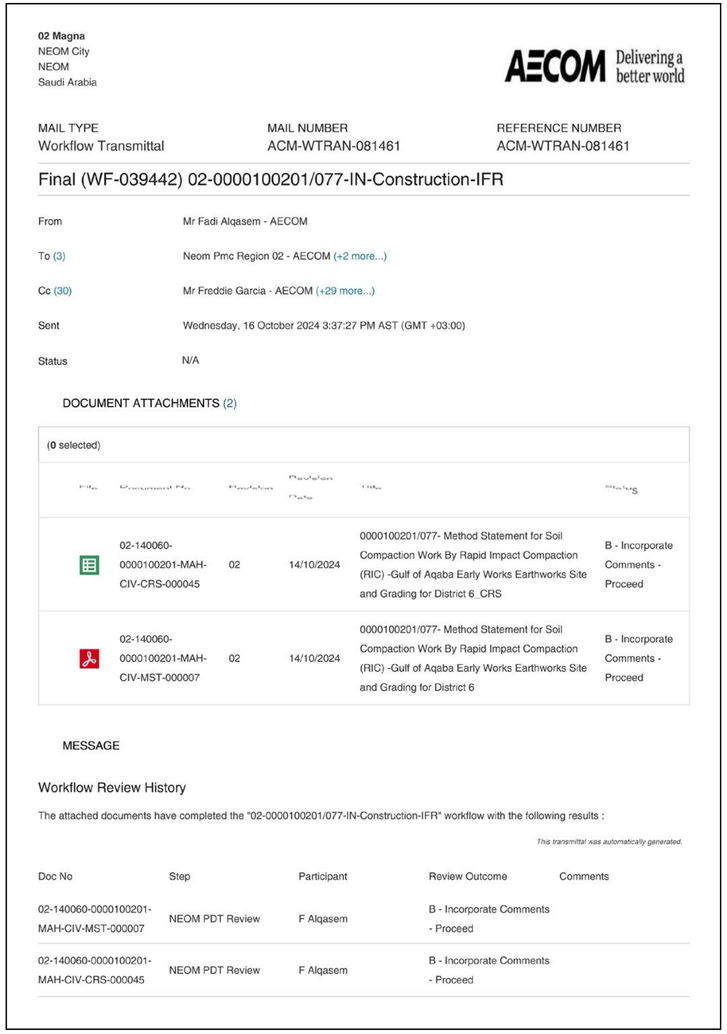
Comments | Linked Records | Linked Mail | Workfl

Clear Post

Posted by: Show All

Sami Ali Al Majed MAJESA0C (MAJESA0C) Saudi Aramco *06/02/2024 07:09 AM*

Status: No Further Comments.
Company has reviewed the submitted documents for Final Soil Improvement Handover Report Compaction of Fill and Natural Ground Dynamic Final Soil Improvement Handover Report Compaction of Fill and Natural Ground Dynamic Final Soil Improvement Handover Report Compaction of Fill and Natural Ground Dynamic. The Final Post-quality control test report (Rev. 00) including the various Post CPTs undertaken for the Dynamic Replacement (DR) & Dynamic Compaction (DC) techniques for Riyas NGL Site Preparation, Package 6 project (related to Zone A7); construction activities refer to the improvement of 4m of Natural soils and 2m of Fills (plus additional two fill layers) by the said ground improvement methods. Submitted report (Rev. 00) refers to the factual data (numerous Post-CPTs were performed) undertaken by the Main Contractor under Gulf Consult's supervision as well as interpretative assessment for determining compliance to the project specifications (e.g. bearing capacity & settlements based on 175kPa imposed foundation pressure and specific foundation sizes/depths).
COMPANY Group has no objection on the submitted report. Please note that in case of inconsistencies on both the factual data and the engineering interpretation (that may revealed by the subsequent Contractor during the handover) resulting on non-compliance of the early
site preparation set criteria, then, the matter shall be referred back to the Early Site Preparation Contractor.
COMPANY is only reviewing the interpretative assessment of the field findings; the accuracy of the factual data (e.g. Post CPTs) is a full responsibility of the entities supervising the Contractor and Geotechnical Vendor and therefore, factual data are taken as default by COMPANY.



02 Magna
NEOM City
NEOM
Saudi Arabia

AECOM Delivering a better world

MAIL TYPE	MAIL NUMBER	REFERENCE NUMBER
Workflow Transmittal	ACM-WTRAN-081461	ACM-WTRAN-081461

Final (WF-039442) 02-0000100201/077-IN-Construction-IFR

From: Mr Fadi Alqasem - AECOM
To (3): Neom Pmc Region 02 - AECOM (+2 more...)
Cc (30): Mr Freddie Garcia - AECOM (+29 more...)
Sent: Wednesday, 16 October 2024 3:37:27 PM AST (GMT +03:00)
Status: N/A

DOCUMENT ATTACHMENTS (2)

(0 selected)

File	Document No	Revision	Revision Date	Title	Status
	02-140060-0000100201-MAH-CIV-CRS-000045	02	14/10/2024	0000100201/077- Method Statement for Soil Compaction Work By Rapid Impact Compaction (RIC) -Gulf of Aqaba Early Works Earthworks Site and Grading for District 6_CRS	B - Incorporate Comments - Proceed
	02-140060-0000100201-MAH-CIV-MST-000007	02	14/10/2024	0000100201/077- Method Statement for Soil Compaction Work By Rapid Impact Compaction (RIC) -Gulf of Aqaba Early Works Earthworks Site and Grading for District 6	B - Incorporate Comments - Proceed

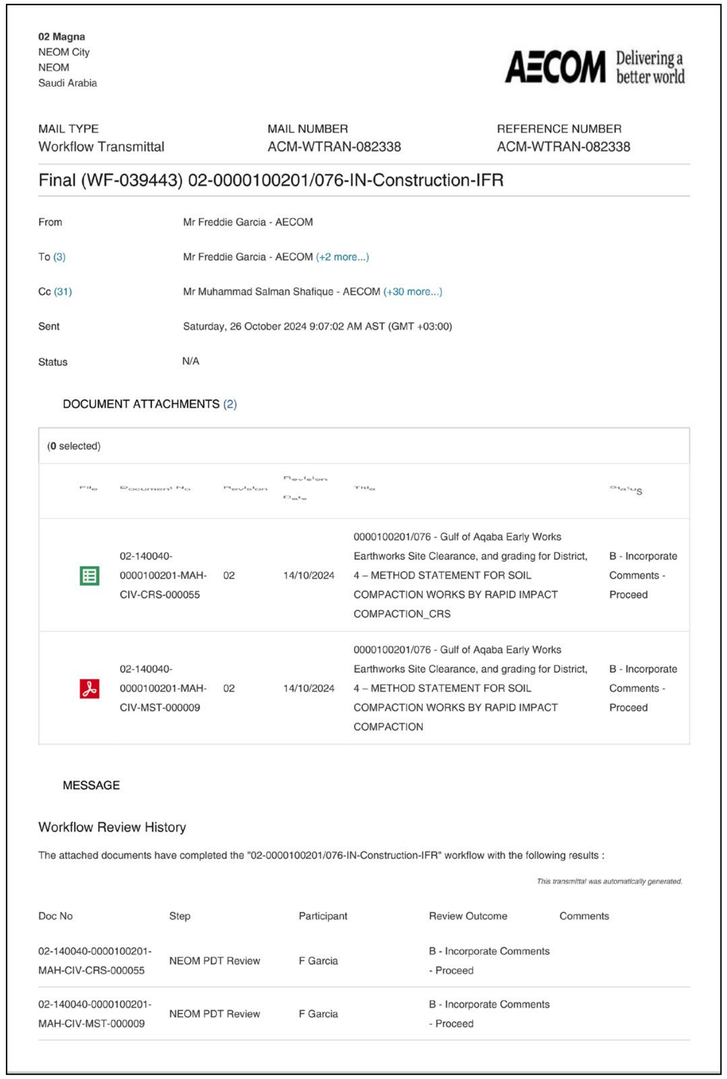
MESSAGE

Workflow Review History

The attached documents have completed the "02-0000100201/077-IN-Construction-IFR" workflow with the following results :

This transmittal was automatically generated.

Doc No	Step	Participant	Review Outcome	Comments
02-140060-0000100201-MAH-CIV-MST-000007	NEOM PDT Review	F Alqasem	B - Incorporate Comments - Proceed	
02-140060-0000100201-MAH-CIV-CRS-000045	NEOM PDT Review	F Alqasem	B - Incorporate Comments - Proceed	



02 Magna
NEOM City
NEOM
Saudi Arabia

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MAIL TYPE	MAIL NUMBER	REFERENCE NUMBER
Workflow Transmittal	ACM-WTRAN-082338	ACM-WTRAN-082338

Final (WF-039443) 02-0000100201/076-IN-Construction-IFR

From: Mr Freddie Garcia - AECOM
To (3): Mr Freddie Garcia - AECOM (+2 more...)
Cc (31): Mr Muhammad Salman Shafique - AECOM (+30 more...)
Sent: Saturday, 26 October 2024 9:07:02 AM AST (GMT +03:00)
Status: N/A

DOCUMENT ATTACHMENTS (2)

(0 selected)

File	Document No	Revision	Revision Date	Title	Status
	02-140040-0000100201-MAH-CIV-CRS-000055	02	14/10/2024	0000100201/076 - Gulf of Aqaba Early Works Earthworks Site Clearance, and grading for District, 4 – METHOD STATEMENT FOR SOIL COMPACTION WORKS BY RAPID IMPACT COMPACTION_CRS	B - Incorporate Comments - Proceed
	02-140040-0000100201-MAH-CIV-MST-000009	02	14/10/2024	0000100201/076 - Gulf of Aqaba Early Works Earthworks Site Clearance, and grading for District, 4 – METHOD STATEMENT FOR SOIL COMPACTION WORKS BY RAPID IMPACT COMPACTION	B - Incorporate Comments - Proceed

MESSAGE

Workflow Review History

The attached documents have completed the "02-0000100201/076-IN-Construction-IFR" workflow with the following results :

This transmittal was automatically generated.

Doc No	Step	Participant	Review Outcome	Comments
02-140040-0000100201-MAH-CIV-CRS-000055	NEOM PDT Review	F Garcia	B - Incorporate Comments - Proceed	
02-140040-0000100201-MAH-CIV-MST-000009	NEOM PDT Review	F Garcia	B - Incorporate Comments - Proceed	

SAUDI ARABIAN OIL COMPANY
RIYAS NGL PROJECTS DEPARTMENT
Ind Support Facs & Site Dev Div
15th Floor, Sky Tower, King Saud Bin Abdulaziz Road, Qurtuba,
Khobar, Saudi Arabia

DOCUMENT TRANSMITTAL	Transmittal No. RNGLFPD-SP-TR-0325/24	Date March 20, 2024

TO: **Waleed Zaki Salama,** Contractor Representative
Mofarreh Marzouq AlHarbi & Partners Co.Ltd
Dammam 31491, Saudi Arabia

FROM: **Wail O. BuSaied,** Company Representative
Ind Support Facs & Site Dev Div
Saudi Arabian Oil Company

Contract No. : 6601000306 **Project Title:** Riyas NGL Site Preparation

COMPANY Response Remarks Code

THE FOLLOWING	☒ DOCUMENTS	☐ E-FILE	☐ DRAWING
COMPANY RESPONSE	☒ APPROVED	☐ REJECTED	☐ REVISE & RESUBMIT
	☐ FOR YOUR USE	☐ REVIEWED WITH COMMENTS	☐ NO OBJECTION

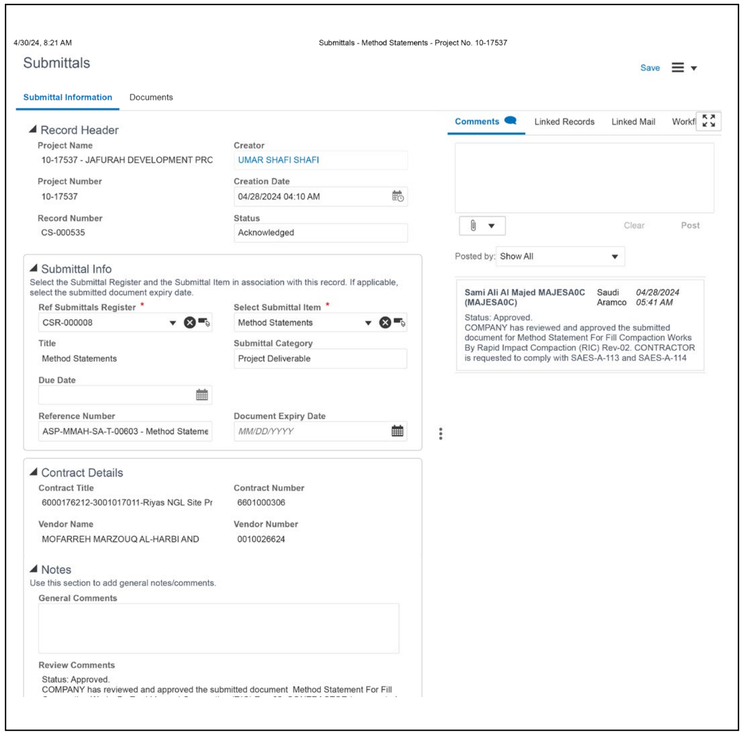
Contractor Reference Number	Rev	Subject	Remarks
ASP-MMAH-SA-T-00500	05	**MS for Trial Area Compaction by Dynamic Replacement and Compaction**	APPROVED WITH COMMENT

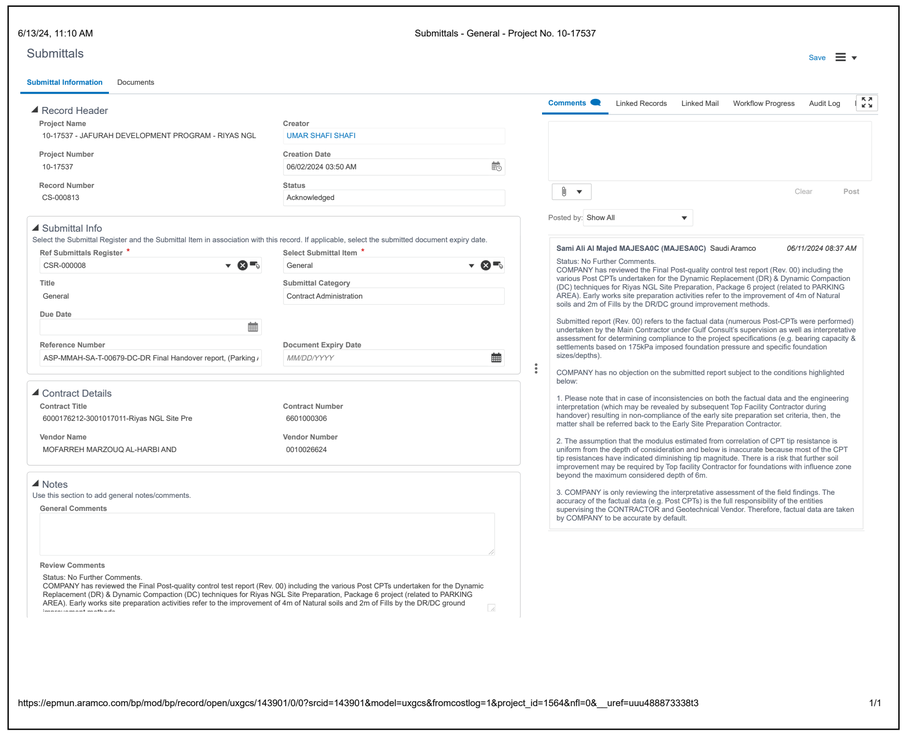
COMPANY has reviewed and approved with comment the submitted document for (**MS for Trial Area Compaction by Dynamic Replacement and Compaction**). CONTRACTOR is requested to incorporate the comments attached and submitted to COMPANY for review. Find attached comments for CONTRACTOR action.

Should you require any further clarification, please contact Zakri, Abdulrahman A, via abdulrahman.zakri.1@aramco.com

March 20, 2024
Wail O. BuSaied, Company Representative

SAM/AAZ
Attachment(s): Yes
Company Response comments, (one page)
cc:
SUPERVISOR PROJECT ENGRG, Sami A. Majed
ENGINEER, Zakri, Abdulrahman A
Project File / Transmittal Book





DOCUMENT TRANSMITTAL
SAUDI ARAMCO LONG TERM AGREEMENT (LTA) FOR OFFSHORE FACILITIES
NPCC YARD FACILITIES, RAS AL-KHAIR-SAUDI ARABIA

NPCC PROJECT NO: NPCC KSA YARD PROJECT

Attn: Mr. Anas Ourabi — **Transmittal No: NPCC/KSA/YARD/T-0061/23**

PROJECT MANAGER: Mr. Muath Hussain — **Date: 27-Aug-2023**

Issued for : Review & Approval

Attachment Type

☐ Prints ☐ Originals ☐ Reproducibles ☐ Drawings ☐ Documents ☒ X

Contractor Reference# MAH- NPCC -23003-T-0124

Document Review Status		
Code A	Approved - Work may proceed	X
Code B	Approved with comments - Work may proceed subject to addressing comments	
Code C	Revise and Resubmit - Work shall not start	
Code D	Not approved/Rejected - Work shall not start	
Code I	For information	

Sr. No.	Document Number	Description
1	MAH-NPCC-23003-REP-0014, Rev-01	Final Technical Report Post CPT at Zone-01 Area A
2	MAH-NPCC-23003-REP-0015, Rev-01	Final Technical Report Post CPT at Zone-01 Area B
3	MAH-NPCC-23003-REP-0016, Rev-01	Final Technical Report Post CPT at Zone-01 Area C
4	MAH-NPCC-23003-REP-0010, Rev-02	Final Technical Report Post CPT at Zone-01 Area D
5	MAH-NPCC-23003-REP-0013, Rev-02	Final Technical Report Post CPT at Zone-01 Area E
6	MAH-NPCC-23003-REP-0012, Rev-02	Final Technical Report Post CPT at Zone-01 Area F

COPY DISTRIBUTION — **REMARKS**

Signature
Name/Title Sofyan Rababa / Project Manager
Date: Signed: 27-Aug-23

Document Receipt

Please acknowledge receipt of the above document(s) by:
Sign and return the copy

Signature
Name/Title
Dae: Signed:

SITE PREPARATION AND GROUND IMPROVEMENT WORKS
FOR NPCC YARD DEVELOPMENT AT RAS AL KHAIR PORT, KSA
Comment Response Sheet
CRS No.: ADC-22023-GEN-CRS-019 Rev.01

Document no./Title:	**MAH-N PCC-23003-REP-0014-Rev.01** **Final Technical Report For Post CPT at Zone-1 Area-A**
Date	**24 August 2023**

Nr.	Reference No./ Section	Rev	Comments	Response	Status
1	General	00	The contractor shall submit post CPT for surface compaction. In addition post SPT	Surface compaction CPTs and post SPT will be submitted as separate	B
		01	Noted		A
2	2	00	The contractor shall refer the outcomes of his investigations only.	Noted and amended as per SPT boreholes	B
		01	Noted		A
3	Appendix-6	00	• The Contractor shall provide charts for soil classification, shear strength, and α factor with Elastic Modulus vs. Level before considering the equivalent qc. • The long-term settlement (consolidation and secondary consideration to be considered in the analysis for cohesive material.	The required graphs are added Based on soil samples obtained from boreholes no cohesive material is encountered, hence no consolidation settlement analysis is required to be performed. CPT results shows cohesive like layer due to low qc value which is confirmed to be silty sand from boreholes.	B
		01	Noted		A
4	Appendix-6	00	• Check and adjust Cwγ and Cwq according to the groundwater level • Adjust FOS against BC as agreed	The Cwγ and Cwq values are matching with ground water level +1.0m elevation from boreholes. Refer to SPT logs submitted as addendum to this final report FOS is used as 2.5 as per technical note for qsafe calculations.	B
		01	Noted.		A
5	Appendix-6	00	The contractor shall consider 50 years for long-term calculations.	Noted and amended	B
		01	Noted		A
6	Appendix-6	00	The Foundation Base Level shall be tied to FGL +5.00. Check and Revise	Foundation level is considered at 0.00 ground depth for zero embedment depth footings. Details added in section 5.0	B

SITE PREPARATION AND GROUND IMPROVEMENT WORKS
FOR NPCC YARD DEVELOPMENT AT RAS AL KHAIR PORT, KSA
Comment Response Sheet
CRS No.: ADC-22023-GEN-CRS-019 Rev.01

Document no./Title:	**MAH-N PCC-23003-REP-0014-Rev.01** **Final Technical Report For Post CPT at Zone-1 Area-A**
Date	**24 August 2023**

Nr.	Reference No./ Section	Rev	Comments	Response	Status
		01	Noted		A

Document Code Status	A		
A – Approved. Work may proceed	B – Approved with Comments Work may proceed subject to addressing the comments. The contractor shall revise and resubmit	C – Revise & Resubmit before proceeding The contractor shall revise and resubmit. Work shall not start.	D – Not Approved The document is not technically approved. Work shall not start.

SITE PREPARATION AND GROUND IMPROVEMENT WORKS
FOR NPCC YARD DEVELOPMENT AT RAS AL KHAIR PORT, KSA
Comment Response Sheet
CRS No.: ADC-22023-GEN-CRS-020 Rev.01

Document no./Title:	**MAH-N PCC-23003-REP-0015-Rev.01** **Final Technical Report For Post CPT at Zone-1 Area-B**
Date	**24 August 2023**

Nr.	Reference No./ Section	Rev	Comments	Response	Status
1	General	00	The contractor shall submit post CPT for surface compaction. In addition post SPT	Surface compaction CPTs and post SPT will be submitted as separate submittal	B
		01	Noted		A
2	2	00	The contractor shall refer the outcomes of his investigations only.	Noted and amended as per SPT boreholes	B
		01	Noted		A
3	Appendix-6	00	• The Contractor shall provide charts for soil classification, shear strength, and α factor with Elastic Modulus vs. Level before considering the equivalent qc. • The long-term settlement (consolidation and secondary consideration to be considered in the analysis for cohesive material.	The required graphs are added Based on soil samples obtained from boreholes no cohesive material is encountered, hence no consolidation settlement analysis is required to be performed. CPT results shows cohesive like layer due to low qc value which is confirmed to be silty sand from boreholes	B
		01	Noted		A
4	Appendix-6	00	• Check and adjust Cwy and Cwq according to the groundwater level • Adjust FOS against BC as agreed	The Cwy and Cwq values are matching with ground water level +1.0m elevation from boreholes. Refer to SPT logs submitted as addendum to this final report FOS is used as 2.5 as per technical note for qsafe calculations	B
		01	Noted		A
5	Appendix-6	00	The contractor shall consider 50 years for long-term calculations.	Noted and amended	B
		01	Noted		A
6	Appendix-6	00	The Foundation Base Level shall be tied to FGL +5.00. Check and Revise	Foundation level is considered at 0.00 ground depth for zero embedment depth footings. Details added in section 5.0	B

SITE PREPARATION AND GROUND IMPROVEMENT WORKS
FOR NPCC YARD DEVELOPMENT AT RAS AL KHAIR PORT, KSA
Comment Response Sheet
CRS No.: ADC-22023-GEN-CRS-020 Rev.01

Document no./Title:	**MAH-N PCC-23003-REP-0015-Rev.01** **Final Technical Report For Post CPT at Zone-1 Area-B**
Date	**24 August 2023**

Nr.	Reference No./ Section	Rev	Comments	Response	Status
		01	Noted		A

Document Code Status	A		
A – Approved. Work may proceed	B – Approved with Comments Work may proceed subject to addressing the comments. The contractor shall revise and resubmit	C – Revise & Resubmit before proceeding The contractor shall revise and resubmit. Work shall not start.	D – Not Approved The document is not technically approved. Work shall not start.

SITE PREPARATION AND GROUND IMPROVEMENT WORKS
FOR NPCC YARD DEVELOPMENT AT RAS AL KHAIR PORT, KSA
Comment Response Sheet
CRS No.: ADC-22023-GEN-CRS-021 Rev.01

Document no./Title:	**MAH-N PCC-23003-REP-0016-Rev.01** **Final Technical Report For Post CPT at Zone-1 Area-C**
Date	**24 August 2023**

Nr.	Reference No./ Section	Rev	Comments	Response	Status
1	General	00	The contractor shall submit post CPT for surface compaction. In addition post SPT	Surface compaction CPTs and post SPT will be submitted as separate submittal	B
		01	Noted		A
2	2	00	The contractor shall refer the outcomes of his investigations only.	Noted and amended as per SPT boreholes	B
		01	Noted		A
3	Appendix-6	00	• The Contractor shall provide charts for soil classification, shear strength, and α factor with Elastic Modulus vs. Level before considering the equivalent qc. • The long-term settlement (consolidation and secondary consideration to be considered in the analysis for cohesive material.	The required graphs are added Based on soil samples obtained from boreholes no cohesive material is encountered, hence no consolidation settlement analysis is required to be performed. CPT results shows cohesive like layer due to low qc value which is confirmed to be silty sand from boreholes	B
		01	Noted		A
4	Appendix-6	00	• Check and adjust Cwy and Cwq according to the groundwater level • Adjust FOS against BC as agreed	The Cwy and Cwq values are matching with ground water level +1.0m elevation from boreholes. Refer to SPT logs submitted as addendum to this final report FOS is used as 2.5 as per technical note for qsafe calculations	B
		01	Noted		A
5	Appendix-6	00	The contractor shall consider 50 years for long-term calculations.	Noted and amended	B
		01	Noted		A
6	Appendix-6	00	The Foundation Base Level shall be tied to FGL +5.00. Check and Revise	Foundation level is considered at 0.00 ground depth for zero embedment depth footings. Details added in section 5.0	B

SITE PREPARATION AND GROUND IMPROVEMENT WORKS
FOR NPCC YARD DEVELOPMENT AT RAS AL KHAIR PORT, KSA
Comment Response Sheet
CRS No.: ADC-22023-GEN-CRS-021 Rev.01

Document no./Title:	**MAH-N PCC-23003-REP-0016-Rev.01** **Final Technical Report For Post CPT at Zone-1 Area-C**
Date	**24 August 2023**

Nr.	Reference No./ Section	Rev	Comments	Response	Status
		01	Noted		A

Document Code Status	A		
A – Approved. Work may proceed	B – Approved with Comments Work may proceed subject to addressing the comments. The contractor shall revise and resubmit	C – Revise & Resubmit before proceeding The contractor shall revise and resubmit. Work shall not start.	D – Not Approved The document is not technically approved. Work shall not start.

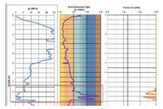
SITE PREPARATION AND GROUND IMPROVEMENT WORKS
FOR NPCC YARD DEVELOPMENT AT RAS AL KHAIR PORT, KSA
Comment Response Sheet
CRS No.: ADC-22023-GEN-CRS-013 Rev.03

Document no./Title:	**MAH- NPCC -23003-REP-0010-Rev.02** **Final Technical Report For Post CPT at Zone-1 Area-D**
Date	**24 August 2023**

Nr.	Reference No./ Section	Rev	Comments	Response	Status
1	General	00	Please provide a list of references	Noted and amended	B
		01	Noted until providing the report		B
		02	Noted		A
2	General	00	Refer to MAH- NPCC -23003-LTR-0010, the ironing pass shall be conducted. Therefore, the final analysis shall consider the upper 1.5m-thick layer to check compliance with the Project requirements.	Noted and Ironing pass is performed in Zone 1. The upper 1.5 meter will be tested again and will be checked with the target performance criteria mentioned in NPCC/YARD/KSA/L-0005. As the analysis of CPT results in this report has achieved the performance criteria for bearing capacity, settlement and liquefaction, reanalysis of tests after ironing might not be necessary as the calculation results will be much better after ironing pass.	B
		01	Due to the delay of the project, the supplementary report for surface compaction for the upper 1.50m thick layer may be submitted separately.		B
		02	No response.	Surface compaction CPTs and post SPT will be submitted as separate submittal	B
		03	Noted		A
3	General	00	Please add a paragraph for the groundwater level		B
		01	Noted until providing the report	Noted and amended	B
		02	This report is rev.02. Revise The contractor shall refer to the outcomes of his investigations.	Noted and amended as per SPT boreholes	B

SITE PREPARATION AND GROUND IMPROVEMENT WORKS
FOR NPCC YARD DEVELOPMENT AT RAS AL KHAIR PORT, KSA
Comment Response Sheet
CRS No.: ADC-22023-GEN-CRS-013 Rev.03

Document no./Title:	**MAH- NPCC -23003-REP-0010-Rev.02** **Final Technical Report For Post CPT at Zone-1 Area-D**
Date	**24 August 2023**

Nr.	Reference No./ Section	Rev	Comments	Response	Status
		03	This report is Rev.03 Noted		A
4	Appendix-6	00	• The Contractor shall provide charts for soil classification, shear strength, and α factor with Elastic Modulus vs. Level before considering the equivalent qc. • Show the idealized soil profile along with all design values (γ, φ & E) • Some layers (e.g., refer to the below figure) show soil-like cohesive material. Please address these layers to check compliance with the Project requirements, especially for Mat foundations. 	Noted and amended. α factor is still considered as 4 as for normally consolidated soil instead of 6 for analysis of Post CPT as the ZLT is pending. The properties of soil showing cohesive-like material is also considered in analysis of bearing capacity and the result complies with the project performance criteria.	C
		01	Noted until providing the report with considering the below points • The interpreted soil properties and idealized soil profile with design values are to be included in the report as per the comment		C

SITE PREPARATION AND GROUND IMPROVEMENT WORKS
FOR NPCC YARD DEVELOPMENT AT RAS AL KHAIR PORT, KSA
Comment Response Sheet
CRS No.: ADC-22023-GEN-CRS-013 Rev.03

Document no./Title:	**MAH- NPCC -23003-REP-0010-Rev.02** **Final Technical Report For Post CPT at Zone-1 Area-D**
Date	**24 August 2023**

Nr.	Reference No./ Section	Rev	Comments	Response	Status
			• Noted, please clarify if there are layers with α factor less than 4. • The long-term settlement (consolidation and secondary consideration to be considered in the analysis. The used parameters should be clarified • Refer to NPCC/YARD/KSA/L-003, Post-SPT tests shall be conducted as a tool to calibrate post-CPT results. The contractor shall submit a supplementary report that includes SPT.		
		02	Please provide your response on rev.01 The charts of soil parameters before equivalent qc are not clarified yet as commented earlier. The calculations of long-term settlement for cohesive material (consolidation and secondary consolidation) are not clarified yet.	The required graphs are added Based on soil samples obtained from boreholes no cohesive material is encountered, hence no consolidation settlement analysis is required to be performed. CPT results shows cohesive like layer due to low qc value which is confirmed to be silty sand from boreholes	B
		03	Noted		A
5	Appendix-6	00	• Refer to MAH- NPCC -23003-PRO-0001, bearing capacity analysis shall be carried out based on a reliable correlation/approach. • For BC calculations, average qc within a depth one foundation width below the bottom of the footing. the analysis shows that qc value is fixed for different widths of foundations for the same box.	Bearing capacity analysis cross-check will be carried out for critical points as agreed and the equation suggested by client/consultant will be used as capping value for Bearing capacity.	C
		01	Noted. refer to MAH- NPCC -23003-PRO-0001, please consider the adjusted value of the safety factor for the CPT approach and consider also classical bearing capacity equations		B

SITE PREPARATION AND GROUND IMPROVEMENT WORKS
FOR NPCC YARD DEVELOPMENT AT RAS AL KHAIR PORT, KSA
Comment Response Sheet
CRS No.: ADC-22023-GEN-CRS-013 Rev.03

Document no./Title:	**MAH- NPCC -23003-REP-0010-Rev.02** **Final Technical Report For Post CPT at Zone-1 Area-D**
Date	**24 August 2023**

Nr.	Reference No./ Section	Rev	Comments	Response	Status
		02	No response on adjusted safety factor as agreed	FOS is used as 2.5 as per technical note for qsafe calculations	B
		03	Noted		A
6	Appendix-6	00	Please justify the project lifetime of 25 years that utilized in long-term settlement calculations	Usually, a period of 10 years (related to yard maintenance) is considered for structures to calculate long term settlement as the soil will undergo complete creep settlement in this time period. But for additional safety 25 years has been considered for calculations.	C
		01	Noted, please address 50 years for long-term settlement. No significant difference is expected		B
		02	No response. Consider 50 years for long-term settlement	Noted and amended	B
		03	Noted		A
7	Appendix-6	00	Design parameter values for some layers are over-estimated when compared to the qc value of these layers e.g., Elastic modulus from level 0.00 to level -5.00 for box 83. Please check.	Calculation of elastic modulus is performed by considering an α factor of 4 even for post CPT and it is capped at 80 MPa in all cases.	C
		01	As discussed with the designer engineer on the site, there are layers that are overestimated values compared to the resulting qc	Amended	C
		02	Noted		A

SITE PREPARATION AND GROUND IMPROVEMENT WORKS
FOR NPCC YARD DEVELOPMENT AT RAS AL KHAIR PORT, KSA
Comment Response Sheet
CRS No.: ADC-22023-GEN-CRS-013 Rev.03

Document no./Title:	**MAH- NPCC -23003-REP-0010-Rev.02** **Final Technical Report For Post CPT at Zone-1 Area-D**
Date	**24 August 2023**

Nr.	Reference No./ Section	Rev	Comments	Response	Status

Document Code Status	A		
A – Approved. Work may proceed	B – Approved with Comments Work may proceed subject to addressing the comments. The contractor shall revise and resubmit	C – Revise & Resubmit before proceeding The contractor shall revise and resubmit. Work shall not start.	D – Not Approved The document is not technically approved. Work shall not start.

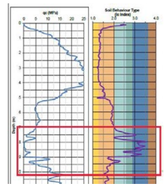
SITE PREPARATION AND GROUND IMPROVEMENT WORKS
FOR NPCC YARD DEVELOPMENT AT RAS AL KHAIR PORT, KSA
Comment Response Sheet
CRS No.: ADC-22023-GEN-CRS-018 Rev.02

Document no./Title:	**MAH- NPCC -23003-REP-0013-Rev.02** **Final Technical Report For Post CPT at Zone-1 Area-E**
Date	**24 August 2023**

Nr.	Reference No./ Section	Rev	Comments	Response	Status
1	General	00	Please provide a list of references	Noted and amended	B
		01	Noted.		A
2	General	00	Refer to MAH- NPCC -23003-LTR-0010, the ironing pass shall be conducted. Therefore, the final analysis shall consider the upper 1.5m-thick layer to check compliance with the Project requirements.	Noted and Ironing pass is performed in Zone 1. The upper 1.5 meter will be tested again and will be checked with the target performance criteria mentioned in NPCC/YARD/KSA/L-0005. As the analysis of CPT results in this report has achieved the performance criteria for bearing capacity, settlement and liquefaction, reanalysis of tests after ironing might not be necessary as the calculation results will be much better after ironing pass.	B
		01	Noted.		A
3	General	00	Please add a paragraph for the groundwater level	Noted and amended	B
		01	The contractor shall refer only to the outcomes of his investigations.	Noted and amended as per SPT boreholes	B
		02	Noted		A
4	General	00	Refer to NPCC/YARD/KSA/L-003, Post-SPT tests shall be conducted as a tool to calibrate post-CPT results.	SPT will be conducted and submitted as a separate report	C
		01	Noted		A
5	Appendix-6	00	• The Contractor shall provide charts for soil classification, shear strength, and α factor with Elastic Modulus vs. Level before considering the equivalent qc.	Noted and amended. α factor is still considered as 4 as for normally consolidated soil instead of 6 for analysis of Post CPT as the ZLT is pending. The properties of soil showing cohesive-like material is also	C

SITE PREPARATION AND GROUND IMPROVEMENT WORKS
FOR NPCC YARD DEVELOPMENT AT RAS AL KHAIR PORT, KSA
Comment Response Sheet
CRS No.: ADC-22023-GEN-CRS-018 Rev.02

Document no./Title:	**MAH- NPCC -23003-REP-0013-Rev.02** **Final Technical Report For Post CPT at Zone-1 Area-E**
Date	**24 August 2023**

Nr.	Reference No./ Section	Rev	Comments	Response	Status
			• Show the idealized soil profile along with all design values (γ, φ & E) • Some layers (e.g., refer to the below figure) show soil-like cohesive material. Please address these layers in terms of bearing capacity settlement (short & long term) and liquefaction to check compliance with the Project requirements, especially for Mat foundations. 	considered in analysis of bearing capacity and the result complies with the project performance criteria.	
		01	1- The required charts are missing 2- Noted	The required graphs are added Based on soil samples obtained from boreholes no cohesive	B

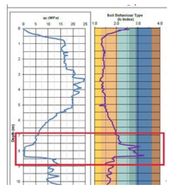
SITE PREPARATION AND GROUND IMPROVEMENT WORKS
FOR NPCC YARD DEVELOPMENT AT RAS AL KHAIR PORT, KSA
Comment Response Sheet
CRS No.: ADC-22023-GEN-CRS-018 Rev.02

Document no./Title:	**MAH- NPCC -23003-REP-0013-Rev.02** **Final Technical Report For Post CPT at Zone-1 Area-E**
Date	**24 August 2023**

Nr.	Reference No./ Section	Rev	Comments	Response	Status
			3- The long-term settlement (consolidation and secondary consideration to be considered in the analysis for cohesive layers.	material is encountered, hence no consolidation settlement analysis is required to be performed. CPT results shows cohesive like layer due to low qc value which is confirmed to be silty sand from boreholes	
		02	Noted		A
6	Appendix-6	00	• Refer to MAH- NPCC -23003-PRO-0001, bearing capacity analysis shall be carried out based on a reliable correlation/approach. • For BC calculations, average qc within a depth one foundation width below the bottom of the footing. the analysis shows that qc value is fixed for different widths of foundations for the same box.	Bearing capacity analysis cross-check will be carried out for critical points as agreed and the equation suggested by client/consultant will be used as capping value for Bearing capacity.	C
		01	• Check Cwy for the foundation with a width of 1.50 according to the groundwater level • adjust FOS against BC as agreed	The Cwγ and Cwq values are matching with ground water level +1.0m elevation from boreholes. Refer to SPT logs submitted as addendum to this final report FOS is used as 2.5 as per technical note for qsafe calculations.	B
		02	Noted		A
7	Appendix-6	00	Please justify the project lifetime of 25 years that utilized in long-term settlement calculations. The contractor shall consider project lifetime of 50 years.	Usually, a period of 10 years (related to yard maintenance) is considered for structures to calculate long term settlement as the soil will undergo complete creep settlement in this time period. But for additional safety 25 years has been considered for calculations.	C
		01	Consider 50 years for long-term settlement	Noted and amended	B
		02	Noted		A

SITE PREPARATION AND GROUND IMPROVEMENT WORKS
FOR NPCC YARD DEVELOPMENT AT RAS AL KHAIR PORT, KSA
Comment Response Sheet
CRS No.: ADC-22023-GEN-CRS-017 Rev.02

Document no./Title:	**MAH- NPCC -23003-REP-0012-Rev.02** **Final Technical Report For Post CPT at Zone-1 Area-F**
Date	**24 August 2023**

Nr.	Reference No./ Section	Rev	Comments	Response	Status
			• Show the idealized soil profile along with all design values (γ, φ & E) • Some layers (e.g., refer to the below figure) show soil-like cohesive material. Please address these layers in terms of bearing capacity settlement (short & long term) and liquefaction to check compliance with the Project requirements, especially for Mat foundations. 	The properties of soil showing cohesive-like material is also considered in analysis of bearing capacity and the result complies with the project performance criteria.	
		01	1- The required charts are missing 2- Noted	The required graphs are added Based on soil samples obtained from boreholes no cohesive	B

SITE PREPARATION AND GROUND IMPROVEMENT WORKS
FOR NPCC YARD DEVELOPMENT AT RAS AL KHAIR PORT, KSA
Comment Response Sheet
CRS No.: ADC-22023-GEN-CRS-018 Rev.02

Document no./Title:	**MAH- NPCC -23003-REP-0013-Rev.02** **Final Technical Report For Post CPT at Zone-1 Area-E**
Date	**24 August 2023**

Nr.	Reference No./ Section	Rev	Comments	Response	Status
8	Appendix-6	00	Design parameter values for some layers are over-estimated when compared to the qc value of these layers e.g., Elastic modulus from level +1.00 to level -4.00 for box 48. Please check.	Calculation of elastic modulus is performed by considering an α factor of 4 even for post CPT and it is capped at 80 MPa in all cases.	C
		01	Noted		A
9	Appendix-1	00	Show the location of CPT Z1- box 77-B	Noted and amended	B
		01	It has not shown yet	Added	B
		02	Noted		A

Document Code Status	A		
A – Approved. Work may proceed	B – Approved with Comments Work may proceed subject to addressing the comments. The contractor shall revise and resubmit	C – Revise & Resubmit before proceeding The contractor shall revise and resubmit. Work shall not start.	D – Not Approved The document is not technically approved. Work shall not start.

SITE PREPARATION AND GROUND IMPROVEMENT WORKS
FOR NPCC YARD DEVELOPMENT AT RAS AL KHAIR PORT, KSA
Comment Response Sheet
CRS No.: ADC-22023-GEN-CRS-017 Rev.02

Document no./Title:	**MAH- NPCC -23003-REP-0012-Rev.02** **Final Technical Report For Post CPT at Zone-1 Area-F**
Date	**24 August 2023**

Nr.	Reference No./ Section	Rev	Comments	Response	Status
			• The long-term settlement (consolidation and secondary consideration to be considered in the analysis.	material is encountered, hence no consolidation settlement analysis is required to be performed. CPT results shows cohesive like layer due to low qc value which is confirmed to be silty sand from boreholes	
		02	Noted		A
6	Appendix-6	00	• Refer to MAH- NPCC -23003-PRO-0001, bearing capacity analysis shall be carried out based on a reliable correlation/approach. • For BC calculations, average qc within a depth one foundation width below the bottom of the footing. the analysis shows that qc value is fixed for different widths of foundations for the same box.	Bearing capacity analysis cross-check will be carried out for critical points as agreed and the equation suggested by client/consultant will be used as capping value for Bearing capacity.	C
		01	• Check Cwy for the foundation with a width of 1.50 m according to the groundwater level • Adjust FOS against BC as agreed	The Cwγ and Cwq values are matching with ground water level +1.0m elevation from boreholes. Refer to SPT logs submitted as addendum to this final report FOS is used as 2.5 as per technical note for qsafe calculations.	B
		02	Noted		A
7	Appendix-6	00	Please justify the project lifetime of 25 years that utilized in long-term settlement calculations. The contractor shall consider project lifetime of 50 years.	Usually, a period of 10 years (related to yard maintenance) is considered for structures to calculate long term settlement as the soil will undergo complete creep settlement in this time period. But for additional safety 25 years has been considered for calculations	C
		01	Consider 50 years for long-term settlement as per previous comment	Noted and amended	B
		02	Noted		A

SITE PREPARATION AND GROUND IMPROVEMENT WORKS
FOR NPCC YARD DEVELOPMENT AT RAS AL KHAIR PORT, KSA
Comment Response Sheet
CRS No.: ADC-22023-GEN-CRS-017 Rev.02

Document no./Title:	**MAH- NPCC -23003-REP-0012-Rev.02** **Final Technical Report For Post CPT at Zone-1 Area-F**
Date	**24 August 2023**

Nr.	Reference No./ Section	Rev	Comments	Response	Status
1	General	00	Please provide a list of references	Noted and amended	B
		01	Noted.		A
2	General	00	Refer to MAH- NPCC -23003-LTR-0010, the ironing pass shall be conducted. Therefore, the final analysis shall consider the upper 1.5m-thick layer to check compliance with the Project requirements.	Noted and Ironing pass is performed in Zone 1. The upper 1.5 meter will be tested again and will be checked with the target performance criteria mentioned in NPCC/YARD/KSA/L-0005. As the analysis of CPT results in this report has achieved the performance criteria for bearing capacity, settlement and liquefaction, reanalysis of tests after ironing might not be necessary as the calculation results will be much better after ironing pass.	B
		01	Noted.		A
3	General	00	Please add a paragraph for the groundwater level	Noted and amended	B
		01	The contractor shall refer only to the outcomes of his investigations.	Noted and amended as per SPT boreholes	B
		02	Noted		A
4	General	00	Refer to NPCC/YARD/KSA/L-003, Post-SPT tests shall be conducted as a tool to calibrate post-CPT results.	SPT will be conducted and submitted as a separate report	C
		01	Noted		A
5	Appendix-6	00	• The Contractor shall provide charts for soil classification, shear strength, and α factor with Elastic Modulus vs. Level before considering the equivalent qc.	Noted and amended. α factor is still considered as 4 as for normally consolidated soil instead of 6 for analysis of Post CPT as the ZLT is pending.	C

SITE PREPARATION AND GROUND IMPROVEMENT WORKS
FOR NPCC YARD DEVELOPMENT AT RAS AL KHAIR PORT, KSA
Comment Response Sheet
CRS No.: ADC-22023-GEN-CRS-017 Rev.02

Document no./Title:	**MAH- NPCC -23003-REP-0012-Rev.02** **Final Technical Report For Post CPT at Zone-1 Area-F**
Date	**24 August 2023**

Nr.	Reference No./ Section	Rev	Comments	Response	Status
8	Appendix-6	00	Design parameter values for some layers are over-estimated when compared to the qc value of these layers e.g., Elastic modulus from level +1.00 to level -5.00 for box 81. Please check.	Calculation of elastic modulus is performed by considering an α factor of 4 even for post CPT and it is capped at 80 MPa in all cases.	C
		01	Noted		A

Document Code Status	A		
A – Approved. Work may proceed	B – Approved with Comments Work may proceed subject to addressing the comments. The contractor shall revise and resubmit	C – Revise & Resubmit before proceeding The contractor shall revise and resubmit. Work shall not start.	D – Not Approved The document is not technically approved. Work shall not start.

DOCUMENT TRANSMITTAL

SAUDI ARAMCO LONG TERM AGREEMENT (LTA) FOR OFFSHORE FACILITIES

NPCC YARD FACILITIES, RAS AL-KHAIR-SAUDI ARABIA

NPCC PROJECT NO: NPCC KSA YARD PROJECT

Attn: Mr. Anas Ourabi — **Transmittal No: NPCC/KSA/YARD/T-0063/23**

PROJECT MANAGER: Mr. Muath Hussain — **Date: 29-Aug-2023**

Issued for : Review & Approval

Attachment Type

	Prints		Originals		Reproducibles		Drawings		Documents	X

Contractor Reference# MAH- NPCC -23003-T-0131

Document Review Status

Code A	Approved - Work may proceed	X
Code B	Approved with comments - Work may proceed subject to addressing comments	
Code C	Revise and Resubmit - Work shall not start	
Code D	Not approved/Rejected - Work shall not start	
Code I	For information	

Sr. No.	Document Number	Description
1	MAH-NPCC-23003-REP-0022, Rev-02	Final Technical Report Post CPT at Zone-02 Area A
2	MAH-NPCC-23003-REP-0029, Rev-01	Final Technical Report Post CPT at Zone-02 Area B

COPY DISTRIBUTION — **REMARKS**

Signature

Name/Title Sofyan Rababa / Project Manager

Date: Signed: 29-Aug-23

Document Receipt

Please acknowledge receipt of the above document(s) by: Sign and return the copy

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SITE PREPARATION AND GROUND IMPROVEMENT WORKS FOR NPCC YARD DEVELOPMENT AT RAS AL KHAIR PORT, KSA

Comment Response Sheet

CRS No.: ADC-22023-GEN-CRS-022 Rev.02

Document no./Title:	**MAH-NPCC-23003-REP-0022-Rev.02 Final Technical Report For Post CPT at Zone-2 Area-A**
Date	**29 August 2023**

Nr.	Reference No./ Section	Rev	Comments	Response	Status
1	General	00	The contractor shall submit post CPT for surface compaction. In addition post SPT	Surface compaction CPTs and post SPT will be submitted as separate submittal as agreed in weekly meeting.	B
		01	Noted		A
2	2	00	The contractor shall refer the outcomes of his investigations only.	Noted and amended as per SPT boreholes	B
		01	Noted		A
3	Appendix-6	00	• The Contractor shall provide charts for soil classification, shear strength, and α factor with Elastic Modulus vs. Level before considering the equivalent qc. • The long-term settlement (consolidation and secondary consideration to be considered in the analysis for cohesive material.	The required graphs are added. Based on soil samples obtained from boreholes no cohesive material is encountered, hence no consolidation settlement analysis is required to be performed. CPT results shows cohesive like layer due to low qc value which is confirmed to be silty sand from boreholes.	B
		01	Noted		A
4	Appendix-6	00	• Check and adjust Cwy and Cwq according to the groundwater level • Adjust FOS against BC as agreed	The Cwy and Cwq values are matching with ground water level +1.0m elevation from boreholes. Refer to SPT logs submitted as addendum to this final report. FOS is used as 2.5 as per technical note for qsafe calculations.	B
		01	Noted. Refer to section 5 of the report		A
5	Appendix-6	00	The contractor shall consider 50 years for long-term calculations.	Noted and amended	B
		01	Noted		A

SITE PREPARATION AND GROUND IMPROVEMENT WORKS FOR NPCC YARD DEVELOPMENT AT RAS AL KHAIR PORT, KSA

Comment Response Sheet

CRS No.: ADC-22023-GEN-CRS-022 Rev.02

Document no./Title:	**MAH-NPCC-23003-REP-0022-Rev.02 Final Technical Report For Post CPT at Zone-2 Area-A**
Date	**29 August 2023**

Nr.	Reference No./ Section	Rev	Comments	Response	Status
6	Appendix-6	00	The Foundation Base Level shall be tied to FGL +5.00. Check and Revise	Foundation level is considered at 0.00 ground depth for zero embedment depth footings.	B
		01	Noted		A
7	Appendix-6	00	The safe bearing capacity is not correct according to the estimated ultimate bearing capacity (e.g, Box-295, qn is 414 kPa whereas qsafe equals 258 kPa). It seems that the value of internal of friction angle is overestimated related to value of qc. Check and clarify	1. Achievement of bearing capacity for 1.25m width footing is further confirmed by achievement of performance line after surface compaction. 2. Average Phi in soil profile is capped at 40 degrees.	C
		01	Closed		A
8	Appendix-6	00	Since the width of the foundation is 1.25m, then the maximum thickness of each layer within the influence depth (6.0m) does not exceed 1.0m. Refine the soil parameters to correspond to 1.0m thickness for each layer	After surface compaction the CPT reveals the minimum value of average qc more than 9.0 MPa (within 1.5 m) in zone of maximum settlement 1xB (about 1.25m), so the calculations are in conservative side. Surface compaction report will be submitted as separate submittal.	C
		01	Closed		A
9		01	Liquefaction analysis sheets are irrelevant to the boxes of the report. Check	Amended	B
		02	Closed		A

SITE PREPARATION AND GROUND IMPROVEMENT WORKS
FOR NPCC YARD DEVELOPMENT AT RAS AL KHAIR PORT, KSA
Comment Response Sheet
CRS No.: ADC-22023-GEN-CRS-022 Rev.02

Document no./Title:	**MAH-NPCC-23003-REP-0022-Rev.02** **Final Technical Report For Post CPT at Zone-2 Area-A**
Date	**29 August 2023**

Nr.	Reference No./ Section	Rev	Comments	Response	Status

Document Code Status	A		
A – Approved. Work may proceed	B – Approved with Comments Work may proceed subject to addressing the comments. The contractor shall revise and resubmit	C – Revise & Resubmit before proceeding The contractor shall revise and resubmit. Work shall not start.	D – Not Approved The document is not technically approved. Work shall not start.

SITE PREPARATION AND GROUND IMPROVEMENT WORKS
FOR NPCC YARD DEVELOPMENT AT RAS AL KHAIR PORT, KSA
Comment Response Sheet
CRS No.: ADC-22023-GEN-CRS-023 Rev.01

Document no./Title:	**MAH-NPCC-23003-REP-0029-Rev.01** **Final Technical Report For Post CPT at Zone-2 Area-B**
Date	**29 August 2023**

Nr.	Reference No./ Section	Rev	Comments	Response	Status
1		00	Liquefaction analysis sheets are irrelevant to the boxes of the report. Check	Amended	B
		01	Closed		A

Document Code Status	A		
A – Approved. Work may proceed	B – Approved with Comments Work may proceed subject to addressing the comments. The contractor shall revise and resubmit	C – Revise & Resubmit before proceeding The contractor shall revise and resubmit. Work shall not start.	D – Not Approved The document is not technically approved. Work shall not start.

DOCUMENT TRANSMITTAL
SAUDI ARAMCO LONG TERM AGREEMENT (LTA) FOR OFFSHORE FACILITIES
NPCC YARD FACILITIES, RAS AL-KHAIR-SAUDI ARABIA

NPCC PROJECT NO: NPCC KSA YARD PROJECT

Attn: Mr. Anas Ourabi — **Transmittal No: NPCC/KSA/YARD/T-0073/23**
PROJECT MANAGER: Mr. Muath Hussain — **Date: 20-Sep-2023**

Issued for : Review & Approval

Attachment Type

Prints ☐ Originals ☐ Reproducibles ☐ Drawings ☐ Documents ☒

Document Review Status		
Code A	Approved - Work may proceed	X
Code B	Approved with comments - Work may proceed subject to addressing comments	
Code C	Revise and Resubmit - Work shall not start	
Code D	Not approved/Rejected - Work shall not start	
Code I	For information	

Contractor Reference# MAH- NPCC -23003-T-0138

Sr. No.	Document Number	Description
1	MAH-NPCC-23003-REP-0031, Rev.01	Final Technical Report for Post CPT at Zone-03

COPY DISTRIBUTION — **REMARKS**

Signature
Name/Title Sofyan Rababah / Project Manager
Date: Signed: 20-Sep-23

Document Receipt

Please acknowledge receipt of the above document(s) by:
Sign and return the copy

Signature
Name/Title
Dae: Signed:

SITE PREPARATION AND GROUND IMPROVEMENT WORKS
FOR NPCC YARD DEVELOPMENT AT RAS AL KHAIR PORT, KSA
Comment Response Sheet
CRS No.: ADC-22023-GEN-CRS-029 Rev.00

Document no./Title:	**MAH-NPCC-23003-REP-0042 Rev-00** **Final Technical Report for Post CPT at Roads**
Date	**17 September 2023**

Nr.	Reference No./ Section	Rev	Comments	Response	Status
1		00	The submitted results shall be under the contractor's supervision and QC. The interpretation and conclusion shall be under contractor's liabilities.		

Document Code Status	A		
A – Approved. Work may proceed	B – Approved with Comments Work may proceed subject to addressing the comments. The contractor shall revise and resubmit	C – Revise & Resubmit before proceeding The contractor shall revise and resubmit. Work shall not start.	D – Not Approved The document is not technically approved. Work shall not start.

SITE PREPARATION AND GROUND IMPROVEMENT WORKS
FOR NPCC YARD DEVELOPMENT AT RAS AL KHAIR PORT, KSA
Comment Response Sheet
CRS No.: ADC-22023-GEN-CRS-030 Rev.00

Document no./Title:	**RoadsMAH-NPCC-23003-REP-0052 Rev-00** **Final Technical Report Post CPT at Ancillary**
Date	**18 September 2023**

Nr.	Reference No./ Section	Rev	Comments	Response	Status
1		00	The submitted results shall be under the contractor's supervision and QC. The interpretation and conclusion shall be under contractor's liabilities.		

Document Code Status	A		
A – Approved. Work may proceed	B – Approved with Comments Work may proceed subject to addressing the comments. The contractor shall revise and resubmit	C – Revise & Resubmit before proceeding The contractor shall revise and resubmit. Work shall not start.	D – Not Approved The document is not technically approved. Work shall not start.

SITE PREPARATION AND GROUND IMPROVEMENT WORKS
FOR NPCC YARD DEVELOPMENT AT RAS AL KHAIR PORT, KSA
Comment Response Sheet
CRS No.: ADC-22023-GEN-CRS-031 Rev.00

Document no./Title:	**MAH-NPCC-23003-REP-0031 Rev-01** **Final Technical Report for Post CPT at Zone-3**
Date	**19 September 2023**

Nr.	Reference No./ Section	Rev	Comments	Response	Status
1		00	The submitted results shall be under the contractor's supervision and QC. The interpretation and conclusion shall be under the contractor's liabilities.		

Document Code Status	A		
A – Approved. Work may proceed	B – Approved with Comments Work may proceed subject to addressing the comments. The contractor shall revise and resubmit	C – Revise & Resubmit before proceeding The contractor shall revise and resubmit. Work shall not start.	D – Not Approved The document is not technically approved. Work shall not start.

Qiddiya Coast Project
3rd Floor Building IN-01 ITCC Complex
AlRaidah Digital City,
Al Nakhil District
Qiddiya
Riyadh 12382 Saudi Arabia

QIC DP - Qiddiya Coast
3rd Floor Building IN-01 ITCC Complex
AlRaidah Digital City, Al Nakhil Dist.
Riyadh
Saudi Arabia, Riyadh 12382 Saudi Arabia

MAIL TYPE	MAIL NUMBER	REFERENCE NUMBER
Workflow Transmittal	QDPCS-WTRAN-001656	QDPCS-WTRAN-001656

Final (WF-001570) 02020_AMT_Contractor - Method Statement (MST)- Method Statement For Soil Improvement Works using Dynamic Replacement, Dynamic Compaction, & Rapid Impact Compection Techniques.

From	Mr James Mita - QIC DP - Qiddiya Coast
To (6)	Mr Yasir Abbas - Abdulmohsen Altamimi Contracting Company (+5 more...)
Cc	Mr Craig Wood - QIC DP - Qiddiya Coast
Sent	Thursday, 25 July 2024 10:23:30 AM AST (GMT +03:00)
Status	N/A

DOCUMENT ATTACHMENTS (1)

(**0** selected)

File	Document No	Revision	Revision Date	Title	Status
	QCP-AMT-TEC-MST-CIV-02-Z01-00022	03	24/04/2024	Method Statement For Soil Improvement Works using Dynamic Replacement, Dynamic Compaction, & Rapid Impact Compection Techniques.	B - Approved with Comments

MESSAGE

Workflow Review History

The attached documents have completed the "02020_AMT_Contractor - Method Statement (MST)- Method Statement For Soil Improvement Works using Dynamic Replacement, Dynamic Compaction, & Rapid Impact Compection Techniques." workflow with the following results :

This transmittal was automatically generated.

Doc No	Step	Participant	Review Outcome	Comments
QCP-AMT-TEC-MST-CIV-02-Z01-00022	QDP QA Check	Q GateKeeper	A - Approved	
	CSC Review	M Alfukaha	B - Approved with Comments	1. Dynamic replacement has no specifications in the contract documents. Client approval on this MS is mandatory to proceed with the works accordingly. Otherwise, to provide detailed specs to follow. 2. Final surface to be leveled and compacted to meet the specs. 3. For RIC provide the compaction pattern. 4. Paragraph 9.2 explains trial preparation for DR. need to explain the same for RIC & DC also production parameters. 5. Paragraph 9.4-point c: Explain where the backfilling is required. 6. The Risk assessment is not signed by the contractor HSE manager. 7. For RIC Explain the impact pattern with influence zone. 8. ZLT and PLT to follow the specified MS 9. See markups
	HSE Review	W Ghanem	B - Approved with Comments	- Please refer to SC comments. - Responsibilities section is missing. - Assessment team should include the main contractor core team.
	QDP Quality Review	D Nugroho	B - Approved with Comments	
	QDP Approval	J Mita	B - Approved with Comments	

Qiddiya Coast Project
3rd Floor Building IN-01 ITCC Complex
AlRaidah Digital City,
Al Nakhil District
Qiddiya
Riyadh 12382 Saudi Arabia

MAIL TYPE	MAIL NUMBER	REFERENCE NUMBER
Workflow Transmittal	QDPCS-WTRAN-005757	QDPCS-WTRAN-005757

Final (WF-004826) 02020_AMT_Contractor - Technical Submissions -Final Technical Report#03 (FTR) for Section-01, Part-03, Subsection-(28&30-COMPLETE) & Subsection-(26,29&31-PARTIAL)

From	Mr James Mita - QIC DP - Qiddiya Coast
To (4)	Mr Yasir Abbas - Abdulmohsen Altamimi Contracting Company (+3 more...)
Cc (2)	Mr Craig Wood - QIC DP - Qiddiya Coast (+1 more...)
Sent	Thursday, 1 May 2025 1:46:08 PM AST (GMT +03:00)
Status	N/A

DOCUMENT ATTACHMENTS (1)

(**0** selected)

File	Document No	Revision	Revision Date	Title	Status
	QCDW701-AMT-C02020-REP-CIV-0000-X000-000004	00	10/04/2025	Final Technical Report#03 (FTR) for Section-01, Part-03, Subsection-(28&30-COMPLETE) & Subsection-(26,29&31-PARTIAL)	A - Approved

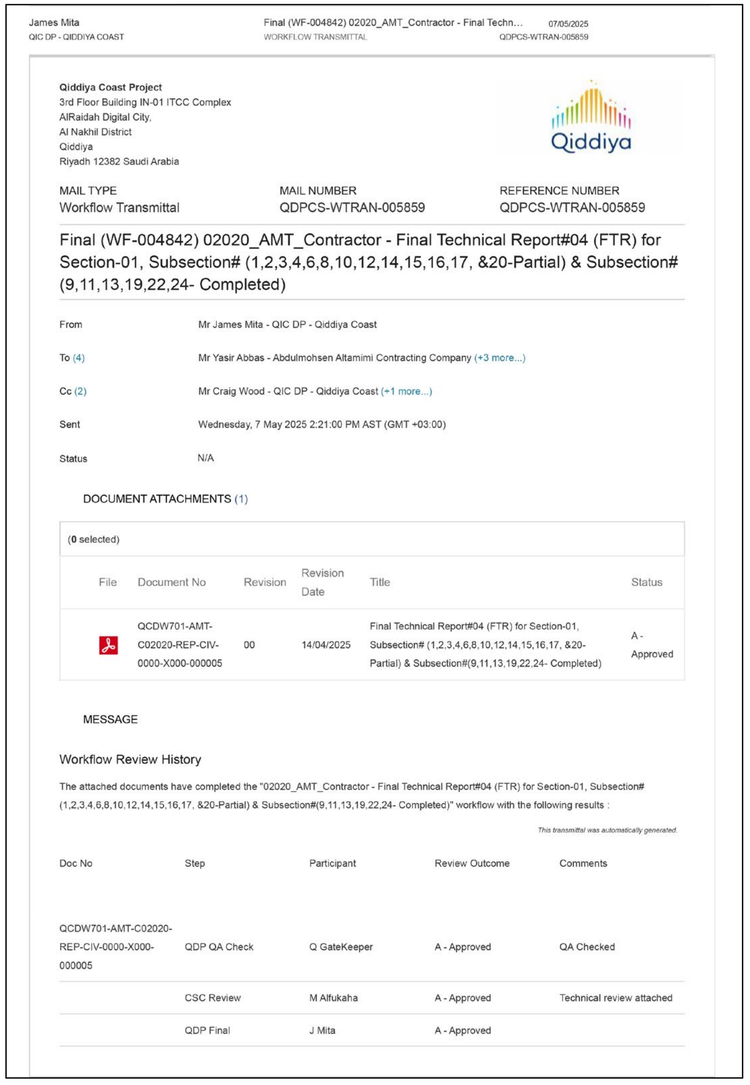
MESSAGE

Workflow Review History

The attached documents have completed the "02020_AMT_Contractor - Technical Submissions -Final Technical Report#03 (FTR) for Section-01, Part-03, Subsection-(28&30-COMPLETE) & Subsection-(26,29&31-PARTIAL)" workflow with the following results :

This transmittal was automatically generated.

Doc No	Step	Participant	Review Outcome	Comments
QCDW701-AMT-C02020-REP-CIV-0000-X000-000004	QDP QA Check	Q GateKeeper	A - Approved	QA Checked
	CSC Review	M Alfukaha	A - Approved	The ground improvement works using Rapid Impact Compaction (RIC) have been successfully implemented and have effectively improved the soil conditions to meet the project design criteria. [Review report attached].
	QDP Final	J Mita	A - Approved	



James Mita
QIC DP - QIDDIYA COAST

Final (WF-004842) 02020_AMT_Contractor - Final Techn... 07/05/2025
WORKFLOW TRANSMITTAL QDPCS-WTRAN-005859

Qiddiya Coast Project
3rd Floor Building IN-01 ITCC Complex
AlRaidah Digital City,
Al Nakhil District
Qiddiya
Riyadh 12382 Saudi Arabia

MAIL TYPE	MAIL NUMBER	REFERENCE NUMBER
Workflow Transmittal	QDPCS-WTRAN-005859	QDPCS-WTRAN-005859

Final (WF-004842) 02020_AMT_Contractor - Final Technical Report#04 (FTR) for Section-01, Subsection# (1,2,3,4,6,8,10,12,14,15,16,17, &20-Partial) & Subsection# (9,11,13,19,22,24- Completed)

From: Mr James Mita - QIC DP - Qiddiya Coast
To (4): Mr Yasir Abbas - Abdulmohsen Altamimi Contracting Company (+3 more...)
Cc (2): Mr Craig Wood - QIC DP - Qiddiya Coast (+1 more...)
Sent: Wednesday, 7 May 2025 2:21:00 PM AST (GMT +03:00)
Status: N/A

DOCUMENT ATTACHMENTS (1)

(0 selected)

File	Document No	Revision	Revision Date	Title	Status
	QCDW701-AMT-C02020-REP-CIV-0000-X000-000005	00	14/04/2025	Final Technical Report#04 (FTR) for Section-01, Subsection# (1,2,3,4,6,8,10,12,14,15,16,17, &20-Partial) & Subsection#(9,11,13,19,22,24- Completed)	A - Approved

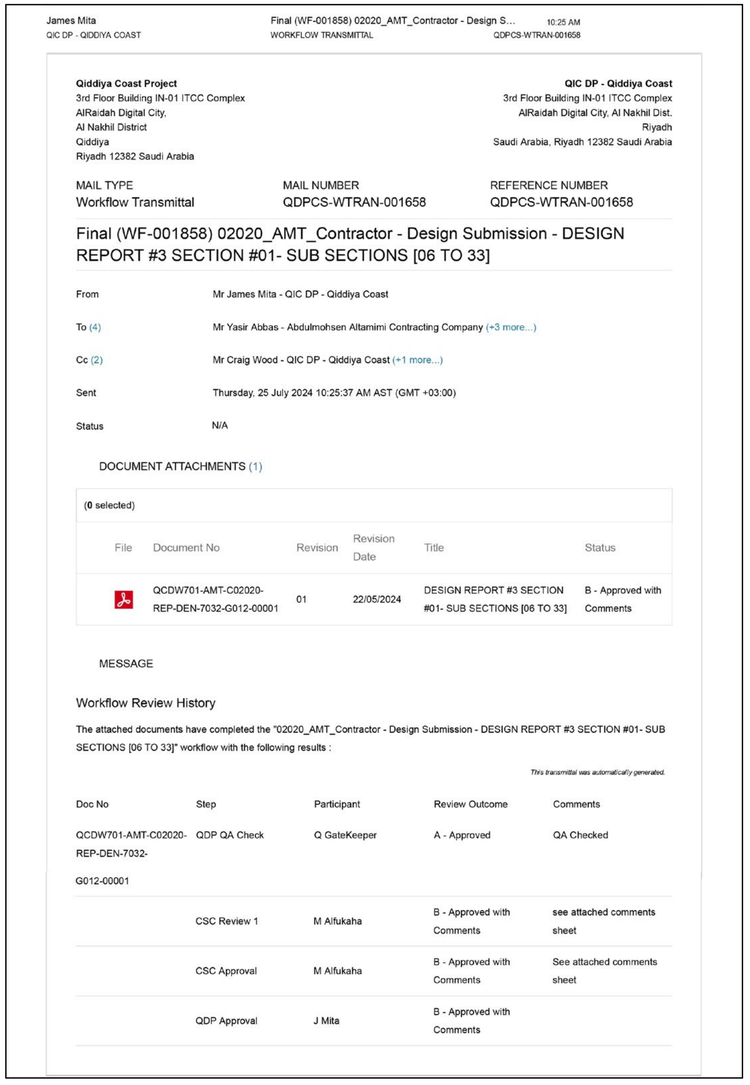
MESSAGE

Workflow Review History

The attached documents have completed the "02020_AMT_Contractor - Final Technical Report#04 (FTR) for Section-01, Subsection# (1,2,3,4,6,8,10,12,14,15,16,17, &20-Partial) & Subsection#(9,11,13,19,22,24- Completed)" workflow with the following results :

This transmittal was automatically generated.

Doc No	Step	Participant	Review Outcome	Comments
QCDW701-AMT-C02020-REP-CIV-0000-X000-000005	QDP QA Check	Q GateKeeper	A - Approved	QA Checked
	CSC Review	M Alfukaha	A - Approved	Technical review attached
	QDP Final	J Mita	A - Approved	



James Mita
QIC DP - QIDDIYA COAST

Final (WF-001858) 02020_AMT_Contractor - Design S... 10:25 AM
WORKFLOW TRANSMITTAL QDPCS-WTRAN-001658

Qiddiya Coast Project
3rd Floor Building IN-01 ITCC Complex
AlRaidah Digital City,
Al Nakhil District
Qiddiya
Riyadh 12382 Saudi Arabia

QIC DP - Qiddiya Coast
3rd Floor Building IN-01 ITCC Complex
AlRaidah Digital City, Al Nakhil Dist.
Riyadh
Saudi Arabia, Riyadh 12382 Saudi Arabia

MAIL TYPE	MAIL NUMBER	REFERENCE NUMBER
Workflow Transmittal	QDPCS-WTRAN-001658	QDPCS-WTRAN-001658

Final (WF-001858) 02020_AMT_Contractor - Design Submission - DESIGN REPORT #3 SECTION #01- SUB SECTIONS [06 TO 33]

From: Mr James Mita - QIC DP - Qiddiya Coast
To (4): Mr Yasir Abbas - Abdulmohsen Altamimi Contracting Company (+3 more...)
Cc (2): Mr Craig Wood - QIC DP - Qiddiya Coast (+1 more...)
Sent: Thursday, 25 July 2024 10:25:37 AM AST (GMT +03:00)
Status: N/A

DOCUMENT ATTACHMENTS (1)

(0 selected)

File	Document No	Revision	Revision Date	Title	Status
	QCDW701-AMT-C02020-REP-DEN-7032-G012-00001	01	22/05/2024	DESIGN REPORT #3 SECTION #01- SUB SECTIONS [06 TO 33]	B - Approved with Comments

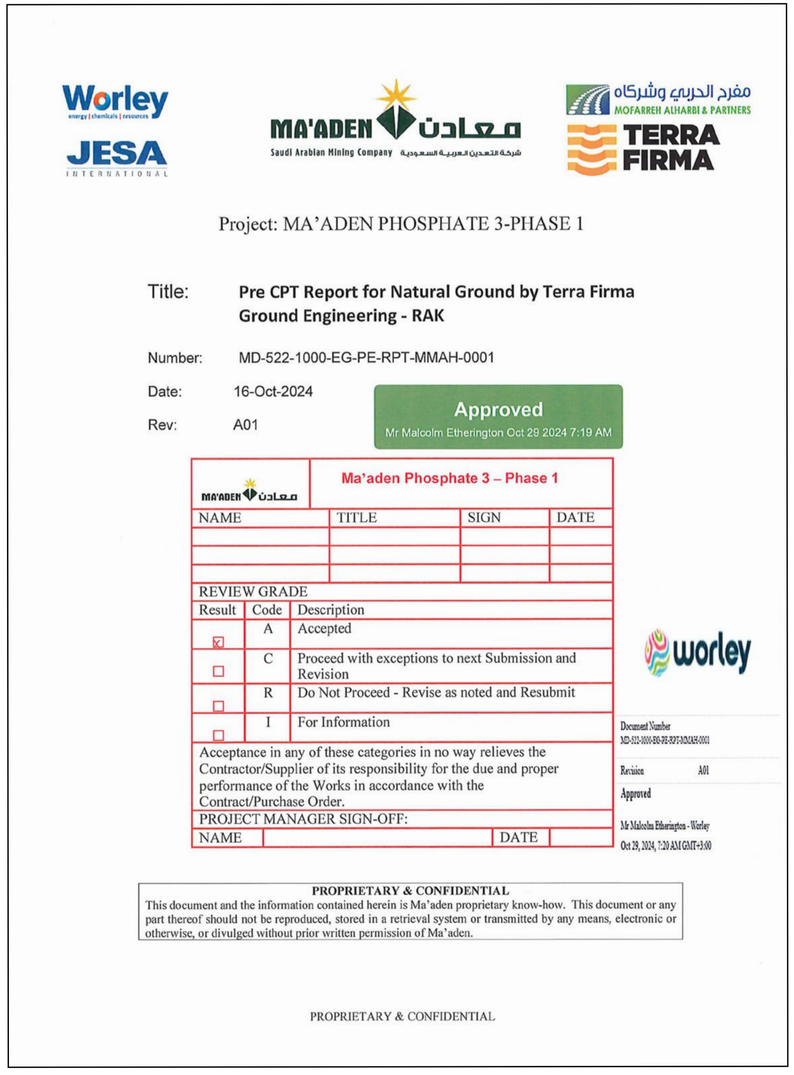
MESSAGE

Workflow Review History

The attached documents have completed the "02020_AMT_Contractor - Design Submission - DESIGN REPORT #3 SECTION #01- SUB SECTIONS [06 TO 33]" workflow with the following results :

This transmittal was automatically generated.

Doc No	Step	Participant	Review Outcome	Comments
QCDW701-AMT-C02020-REP-DEN-7032-G012-00001	QDP QA Check	Q GateKeeper	A - Approved	QA Checked
	CSC Review 1	M Alfukaha	B - Approved with Comments	see attached comments sheet
	CSC Approval	M Alfukaha	B - Approved with Comments	See attached comments sheet
	QDP Approval	J Mita	B - Approved with Comments	



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MA'ADEN معادن Saudi Arabian Mining Company شركة التعدين العربية السعودية
MOFARREH ALHARBI & PARTNERS مفرد الحربي وشركاه
TERRA FIRMA

Project: MA'ADEN PHOSPHATE 3-PHASE 1

Title: **Pre CPT Report for Natural Ground by Terra Firma Ground Engineering - RAK**

Number: MD-522-1000-EG-PE-RPT-MMAH-0001
Date: 16-Oct-2024
Rev: A01

Approved
Mr Malcolm Etherington Oct 29 2024 7:19 AM

Ma'aden Phosphate 3 – Phase 1

NAME	TITLE	SIGN	DATE

REVIEW GRADE

Result	Code	Description
☑	A	Accepted
☐	C	Proceed with exceptions to next Submission and Revision
☐	R	Do Not Proceed - Revise as noted and Resubmit
☐	I	For Information

Acceptance in any of these categories in no way relieves the Contractor/Supplier of its responsibility for the due and proper performance of the Works in accordance with the Contract/Purchase Order.

PROJECT MANAGER SIGN-OFF:

NAME		DATE	

worley

Document Number
MD-522-1000-EG-PE-RPT-MMAH-0001
Revision A01
Approved
Mr Malcolm Etherington - Worley
Oct 29, 2024, 7:20 AM GMT+3:00

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Client: SEVEN SAUDI ENTERTAINMENT VENTURES Project Managment Consultant: WSP Cost Consultant Management: Turner & Townsend AtkinsRéalis Supervision Consultant:	PROJECT: PROGRAM 3 - AL KHOBAR ENTERTAINMENT DEVELOPMENT - 3KHOB01 LOCATION: AL KHOBAR COMPLEX CONTRACT REFERENCE NO. 1394-8-2023 DOCUMENT TITLE: Method Statement for Zone Load Test (ZLT)	مجموعة بن لادن السعودية SAUDI BINLADIN GROUP CONTRACTING Project No. 55002650 Doc. No. 3KHOB01-KHOB-07-SBG-CC-MES-00021 Rev. B CRS No. 3KHOB01-KHOB-07-SBG-CC-CRS-00232 Date: 04th May 2025 Page 1 of 84

CONTRACT TITLE:

PROGRAM 3 – AL KHOBAR ENTERTAINMENT DEVELOPMENT – 3KHOB01

DOCUMENT TITLE:

Method Statement for Zone Load Test (ZLT)-In Situ CBR

مجموعة بن لادن السعودية SAUDI BINLADIN GROUP CONTRACTING — ***Saudi Binladin Group***

Template No.: 3KHOB01-KHOB-08-QM-TEP-00005_00_Contractor Submittal Cover page_240721

Client: SEVEN SAUDI ENTERTAINMENT VENTURES Project Managment Consultant: WSP Cost Consultant Management: Turner & Townsend AtkinsRéalis Supervision Consultant:	PROJECT: PROGRAM 3 - AL KHOBAR ENTERTAINMENT DEVELOPMENT - 3KHOB01 LOCATION: AL KHOBAR COMPLEX CONTRACT REFERENCE NO. 1394-8-2023 DOCUMENT TITLE: Method Statement for Compaction by Dynamic Replacement	مجموعة بن لادن السعودية SAUDI BINLADIN GROUP CONTRACTING Project No. 55002650 Doc. No. 3KHOB01-KHOB-07-SBG-CC-MES-00022 Rev. A CRS No. 3KHOB01-KHOB-07-SBG-CC-CRS-00175 Date: 7th December 2024 Page 1 of 50

CONTRACT TITLE:

PROGRAM 3 – AL KHOBAR ENTERTAINMENT DEVELOPMENT – 3KHOB01

DOCUMENT TITLE:

Method Statement for Compaction by Dynamic Replacement

مجموعة بن لادن السعودية SAUDI BINLADIN GROUP CONTRACTING — ***Saudi Binladin Group***

Template No.: 3KHOB01-KHOB-08-QM-TEP-00005_00_Contractor Submittal Cover page_240721

Worley energy | chemicals | resources JESA INTERNATIONAL
MA'ADEN معادن Saudi Arabian Mining Company شركة التعدين العربية السعودية
مفرد الحربي وشركاه MOFARREH ALHARBI & PARTNERS

Project: MA'ADEN PHOSPHATE 3-PHASE 1

Title: **Method of Statement for Trial Area Soil Compaction Works By Dynamic Compaction/Dynamic Replacement (DC/DR) - RAK**

Number: MD-522-1500-CN-CV-MST-MMAH-0014

Date: 29-May-2024

Rev: A01

MA'ADEN معادن	Ma'aden Phosphate 3 – Phase 1		
NAME	TITLE	SIGN	DATE

REVIEW GRADE		
Result	Code	Description
☐	A	Accepted
☐	C	Proceed with exceptions to next Submission and Revision
☐	R	Do Not Proceed - Revise as noted and Resubmit
☐	I	For Information

Acceptance in any of these categories in no way relieves the Contractor/Supplier of its responsibility for the due and proper performance of the Works in accordance with the Contract/Purchase Order.

PROJECT MANAGER SIGN-OFF:			
NAME		DATE	

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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

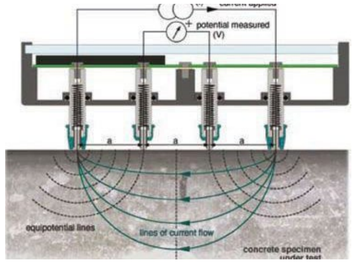
DESIGN & ANALYSIS

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.

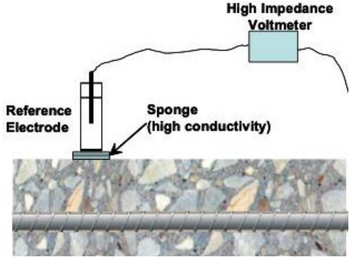
- Visual Inspection
- Mapping of defects
- Concrete core drilling & testing
- Concrete cover determination
- Half cell potential
- Depth of carbonation
- Ultrasonic pulse velocity
- Rebound hammer
- Chemical test on extracted samples
- Resistivity test

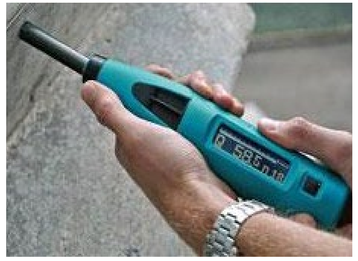




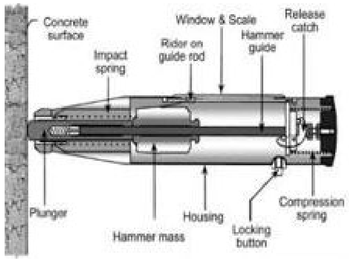








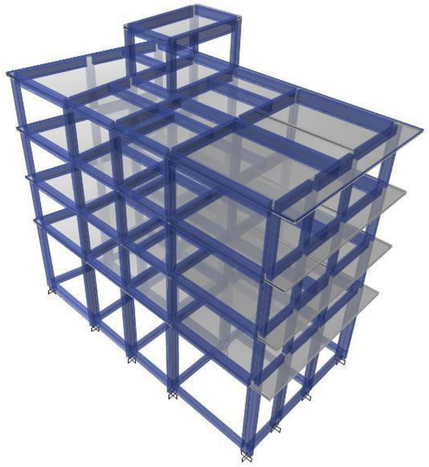


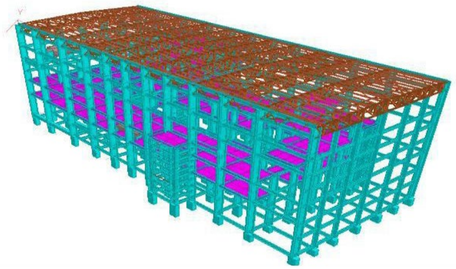


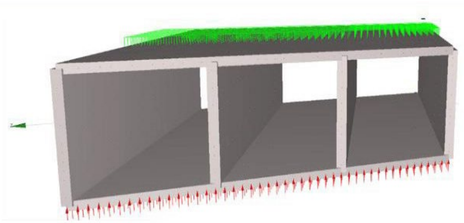
TCR

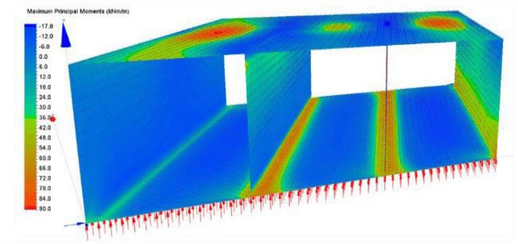
STRUCTURAL MODELING & DESIGN

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.





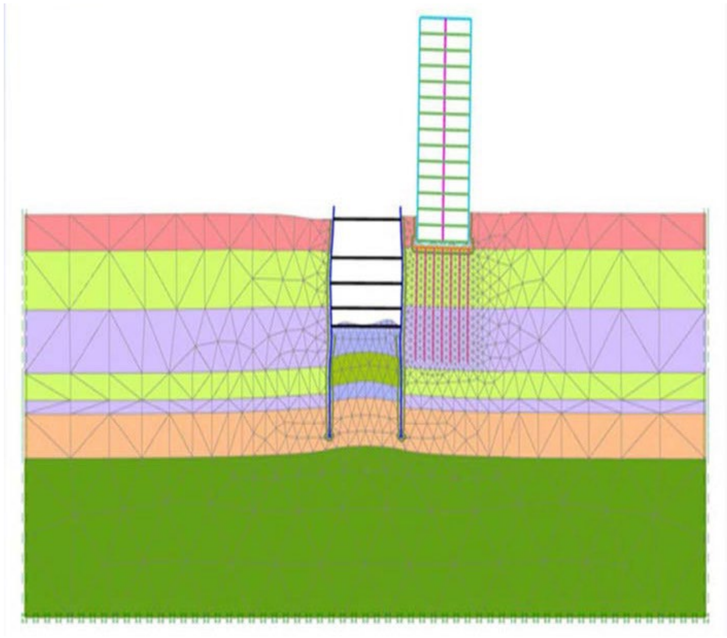


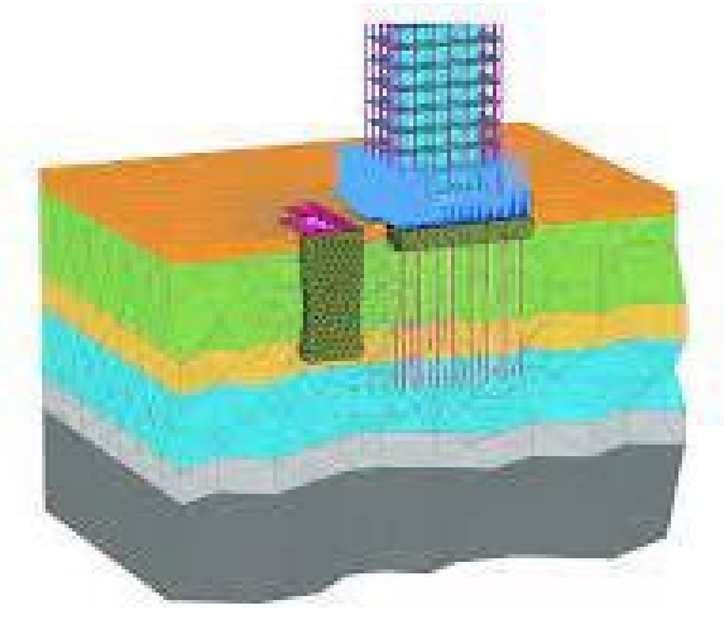


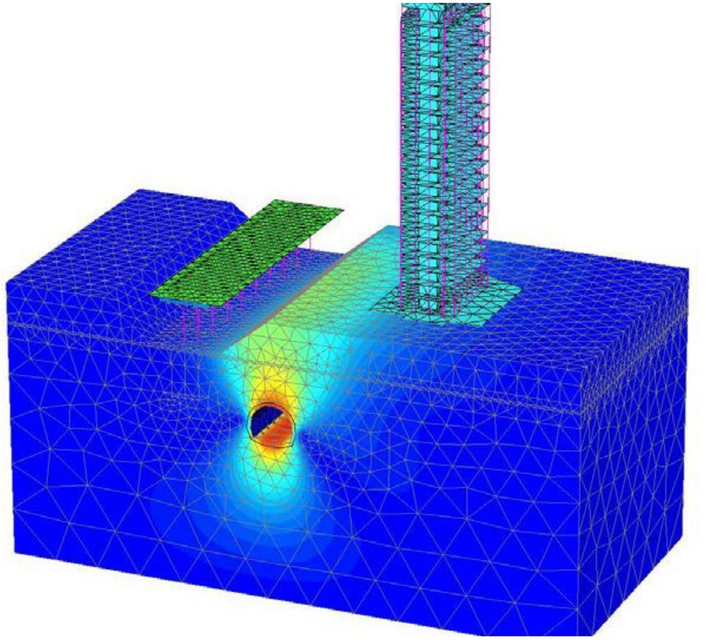
TCR

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

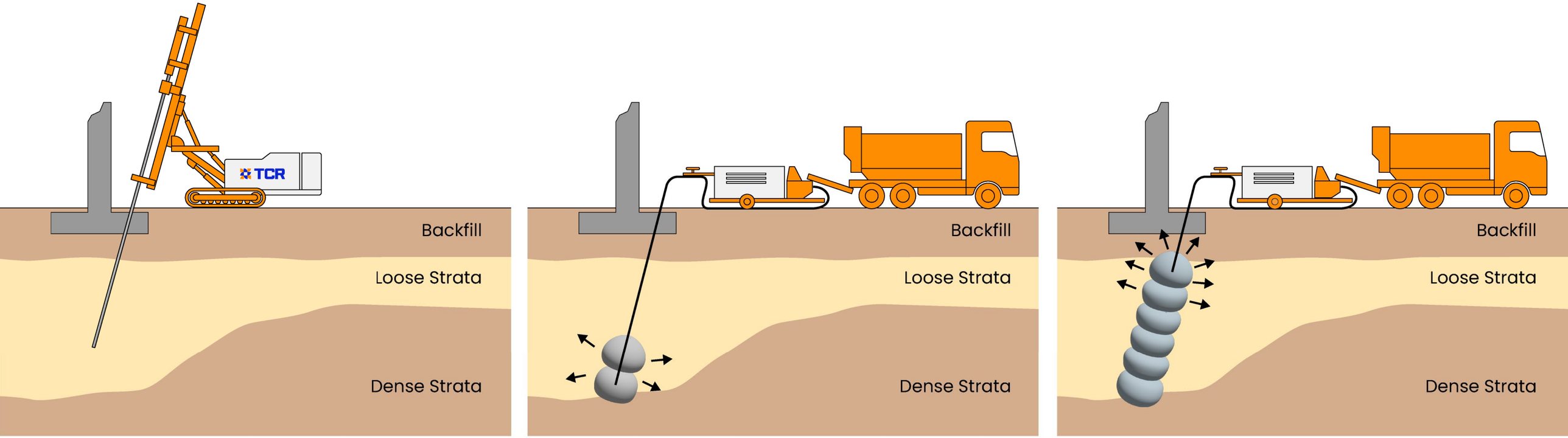
GEOTECHNICAL

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.



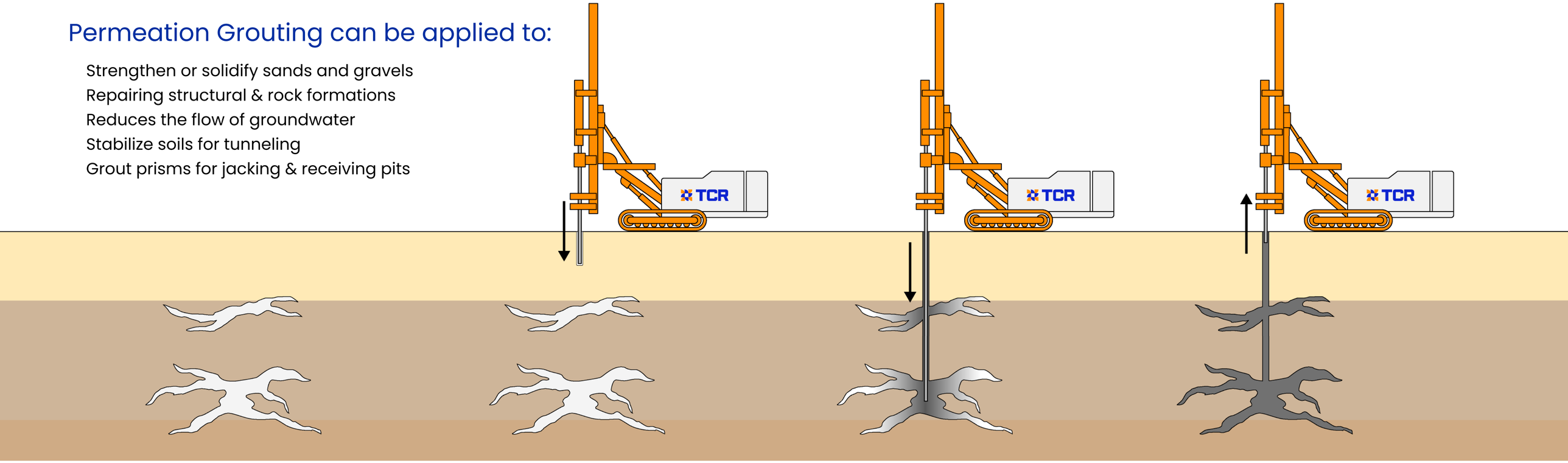
TCR

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



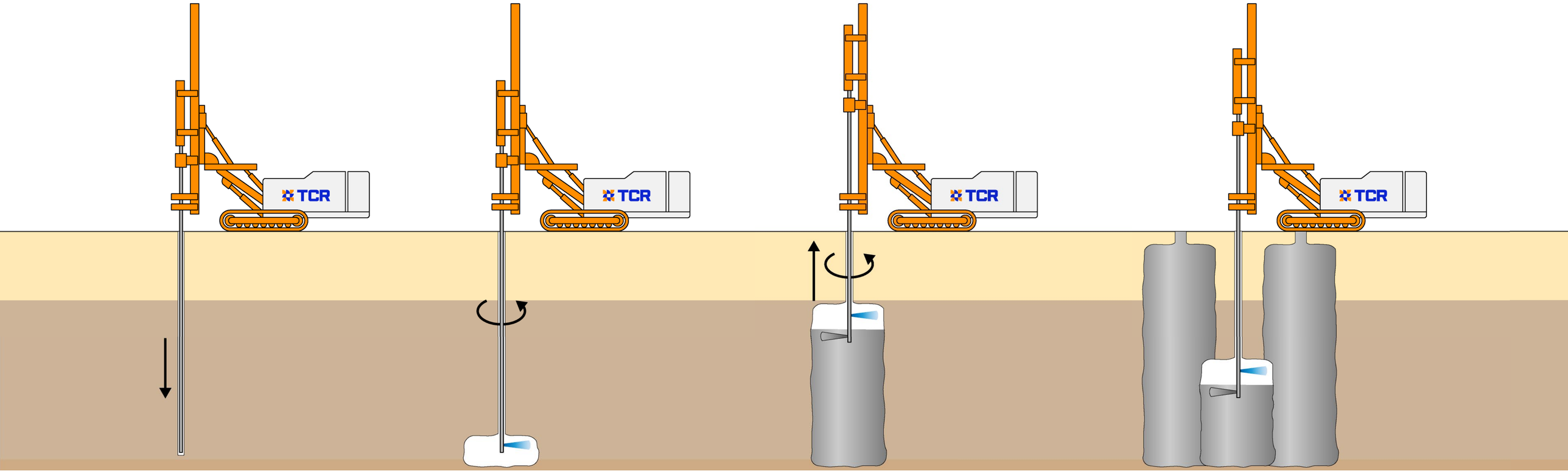
TCR

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:

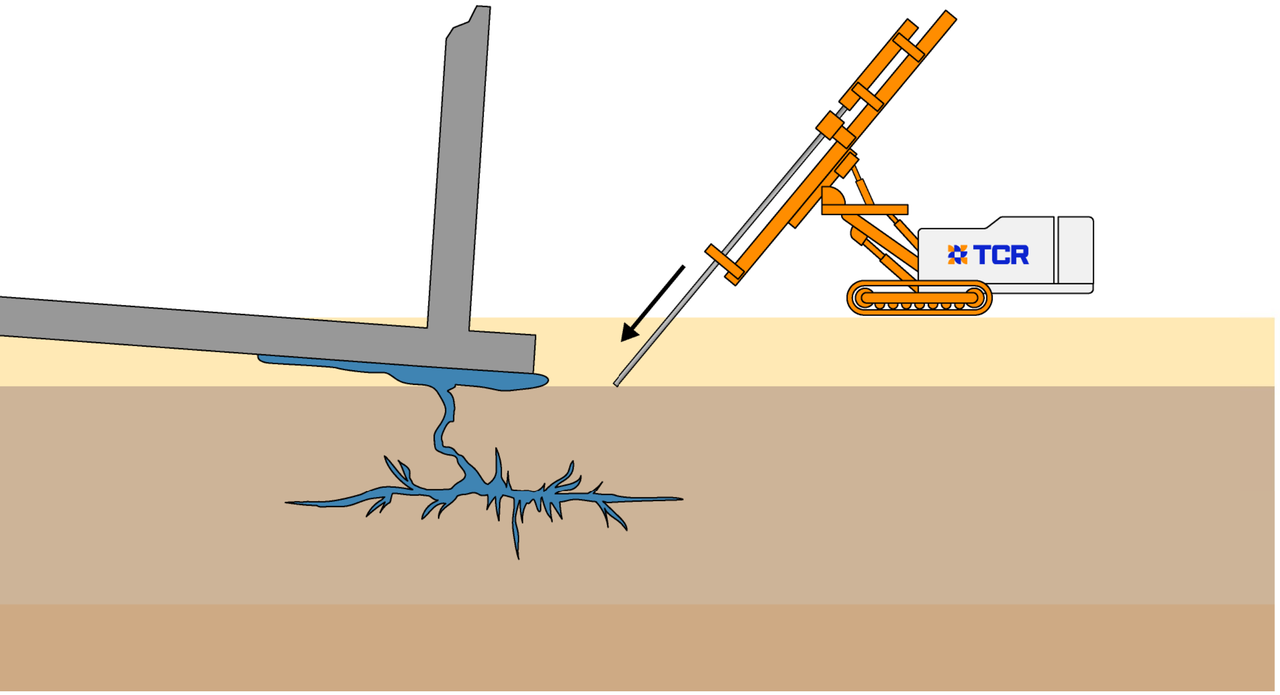
- Horizontal barriers
- Groundwater control
- Tunneling
- Support excavation
- Underpinning
- Soil Stabilization

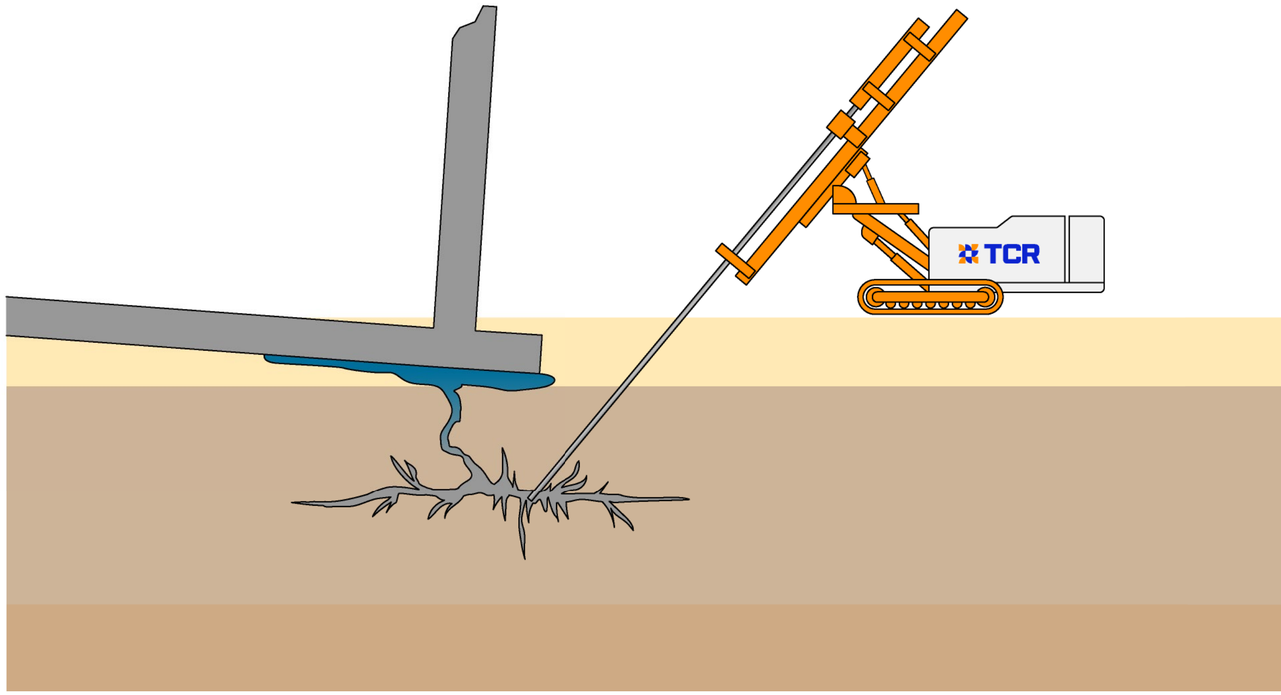


TCR

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.



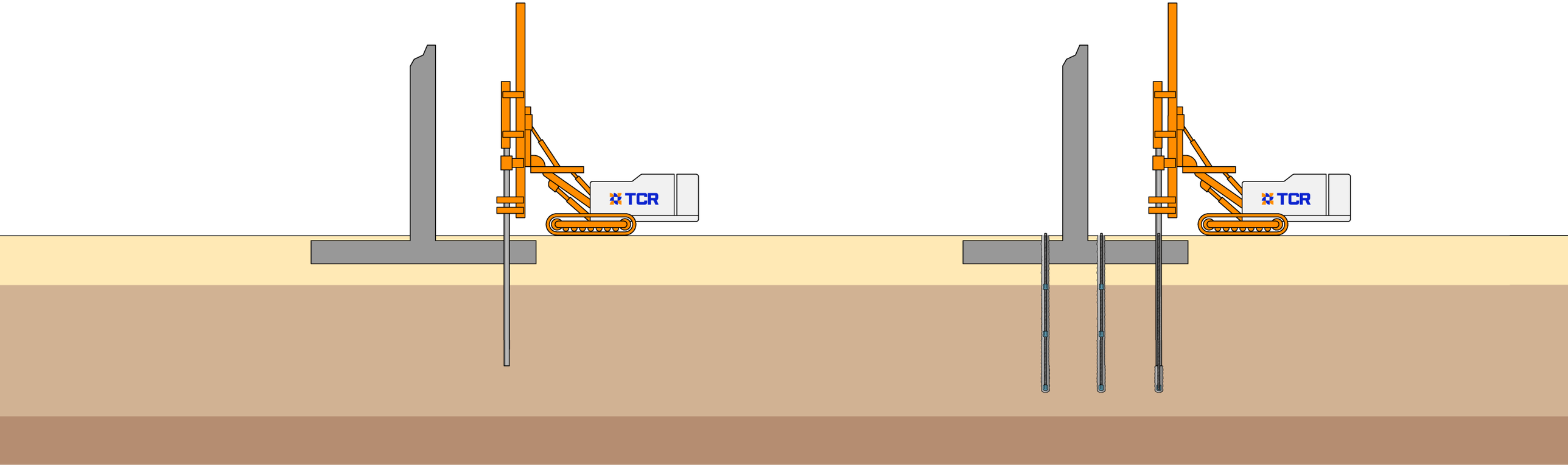


TCR

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.



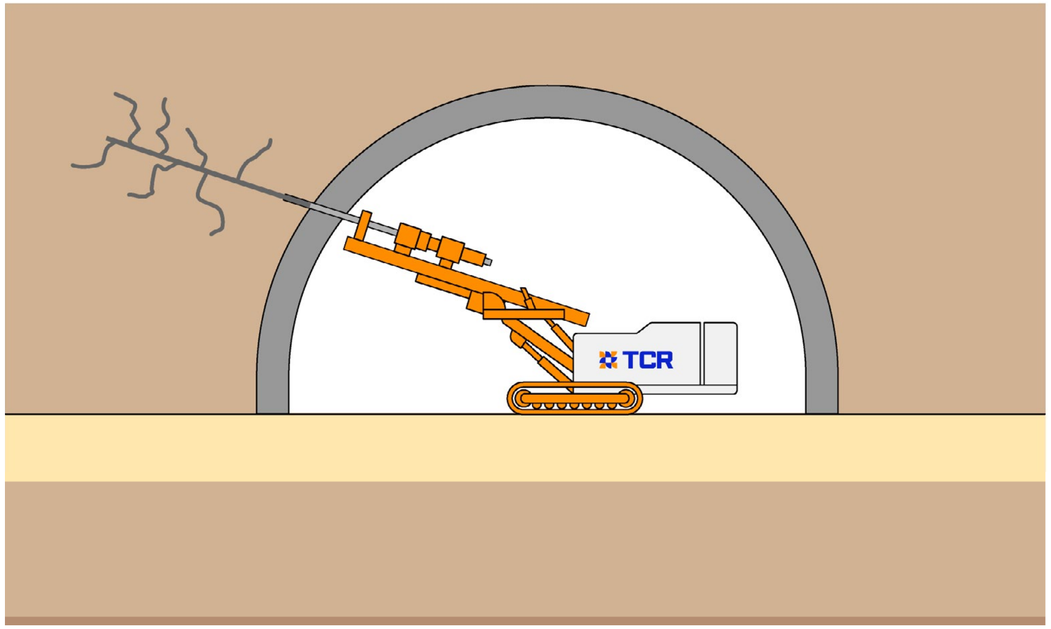
TCR

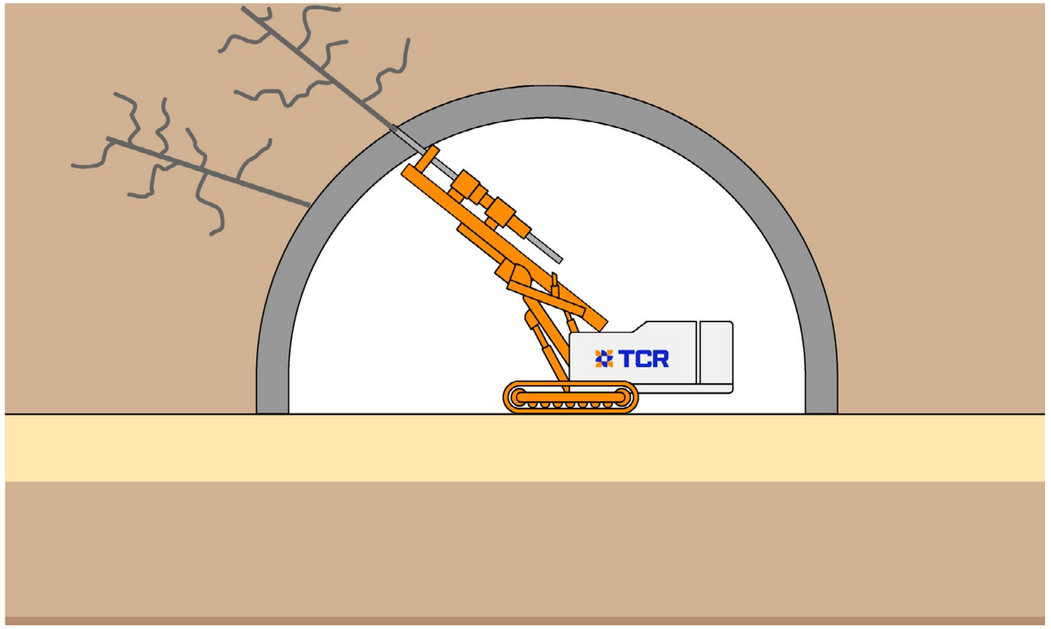
CONSOLIDATION GROUTING

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.



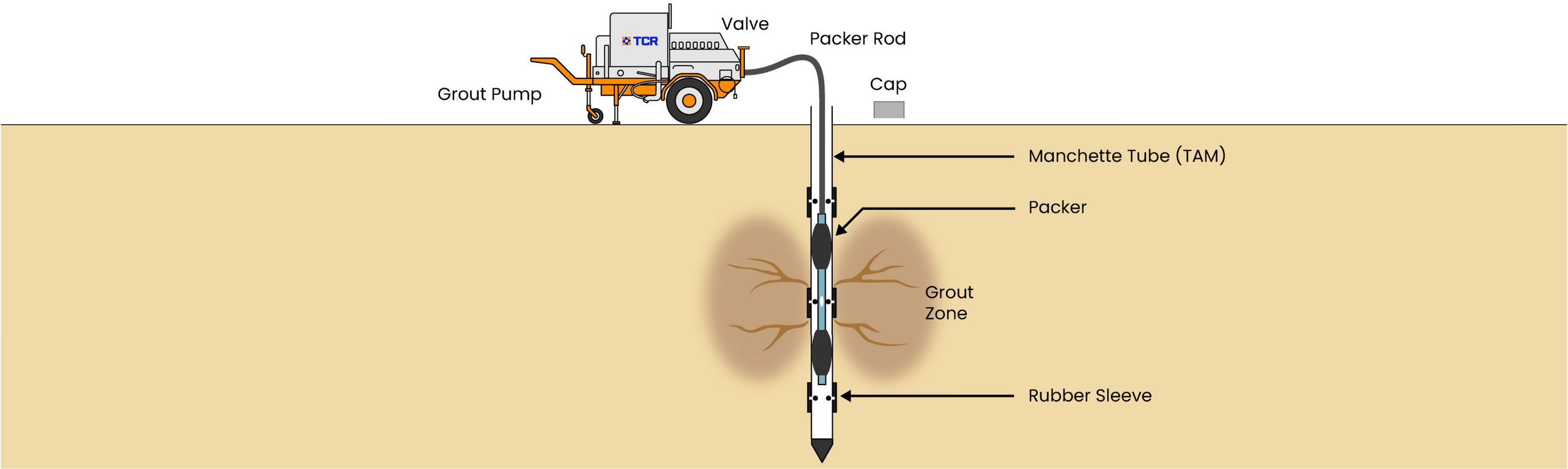


TCR

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.

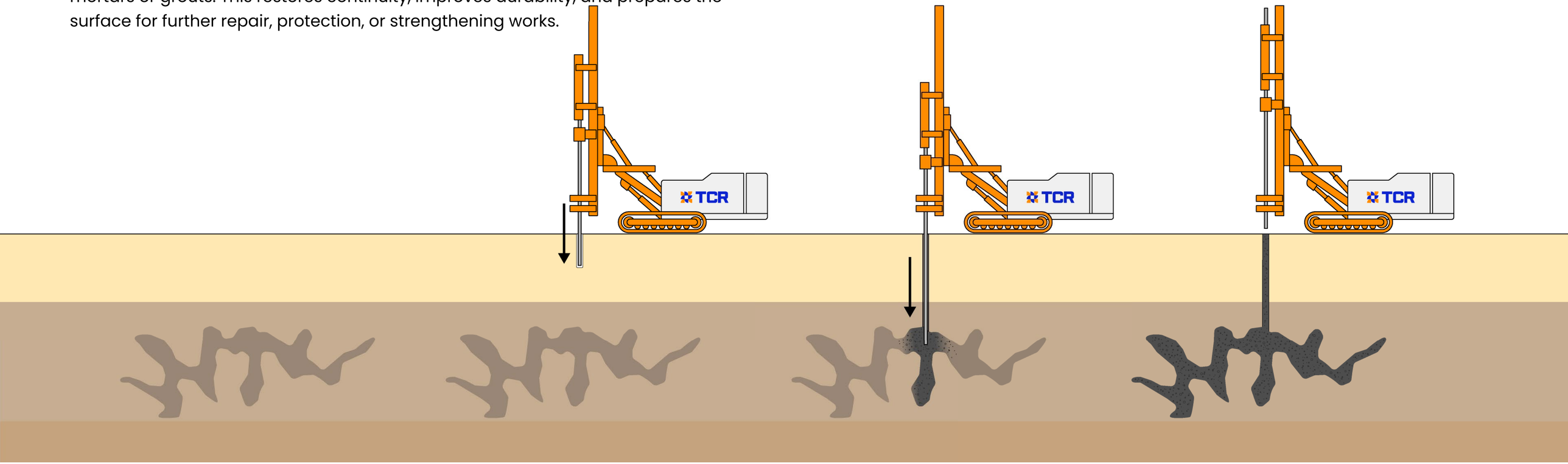


TCR

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.

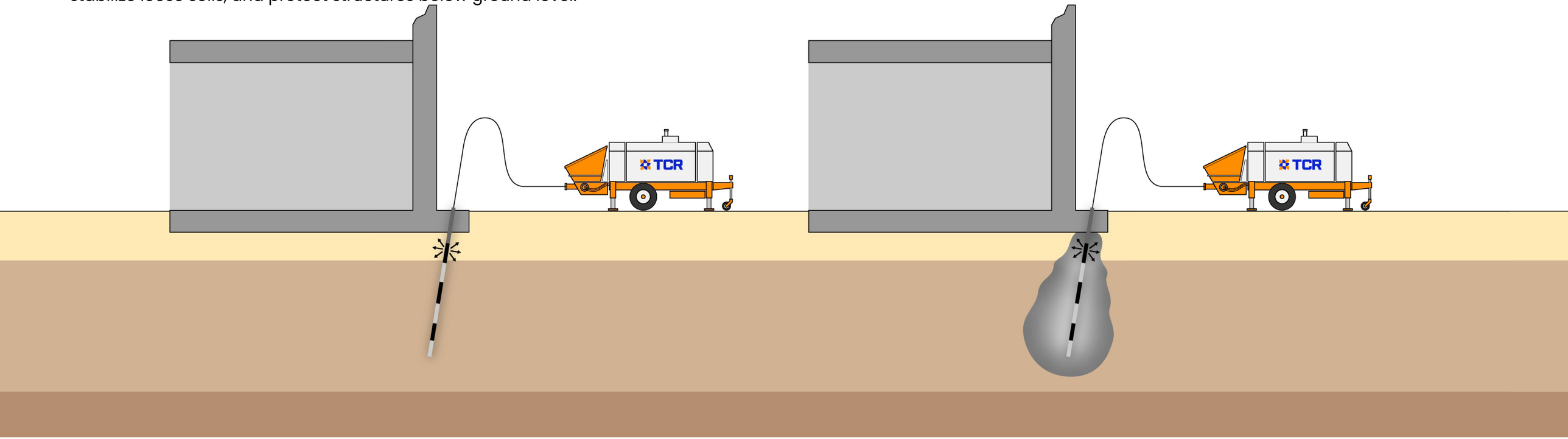


TCR

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.



STRUCTURAL & CIVIL

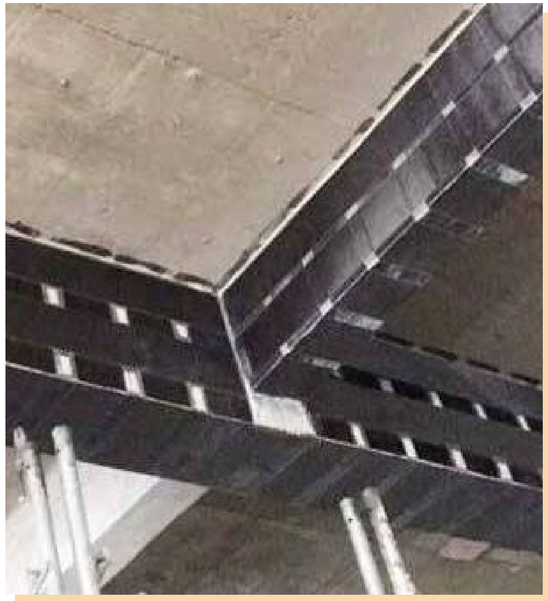
TCR

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.









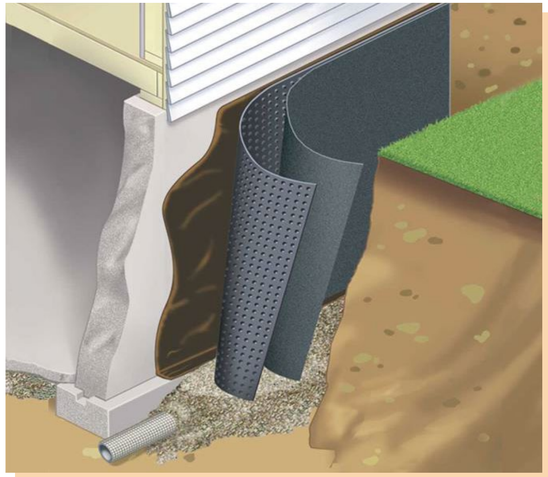
TCR

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.









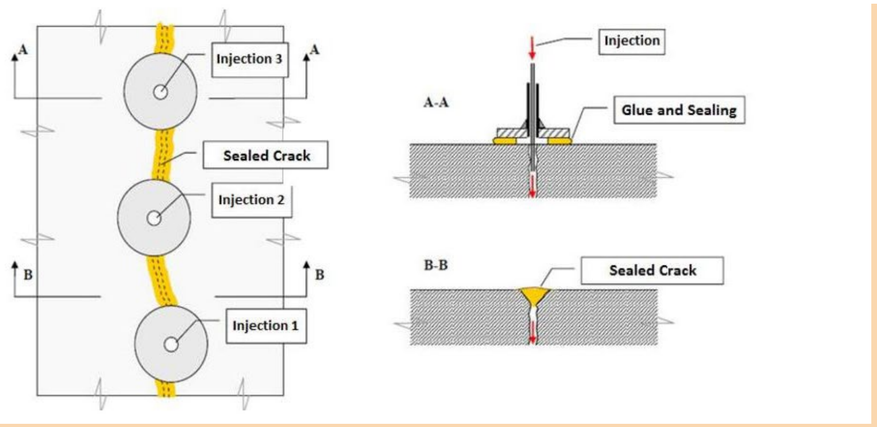
TCR

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.

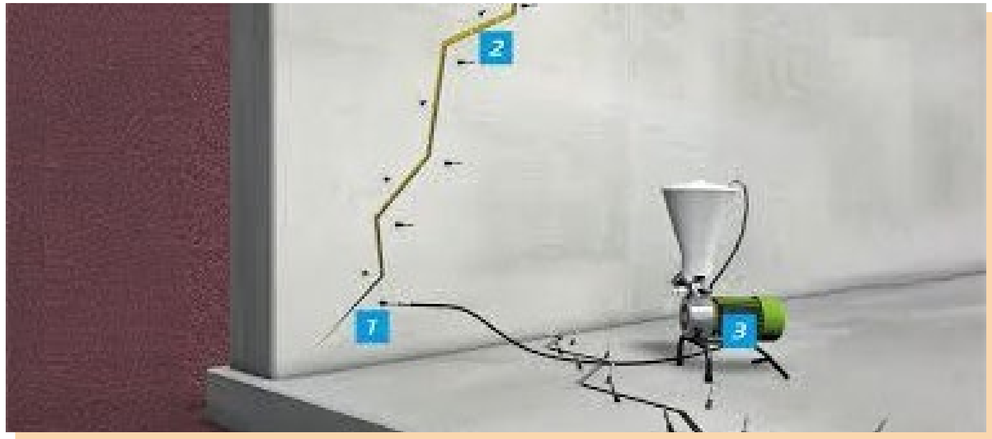












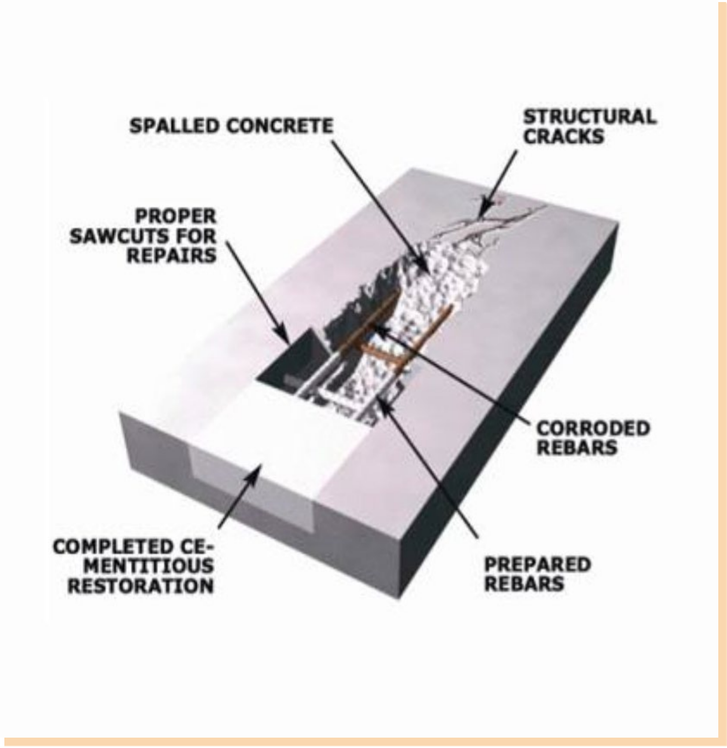
TCR

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.



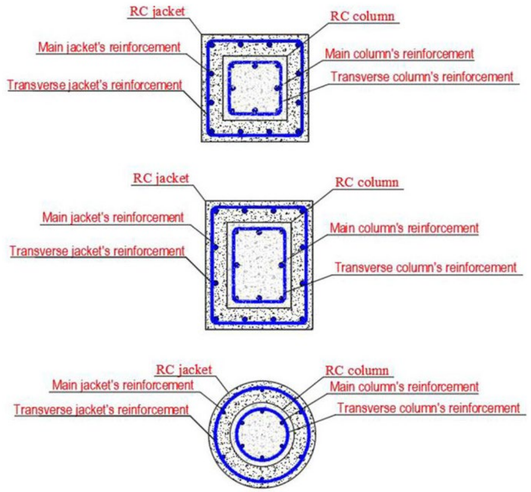




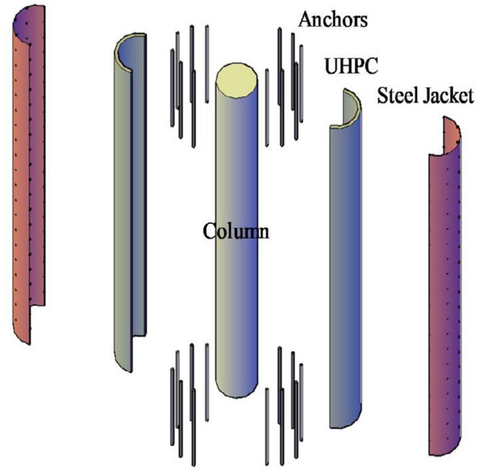
TCR

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.







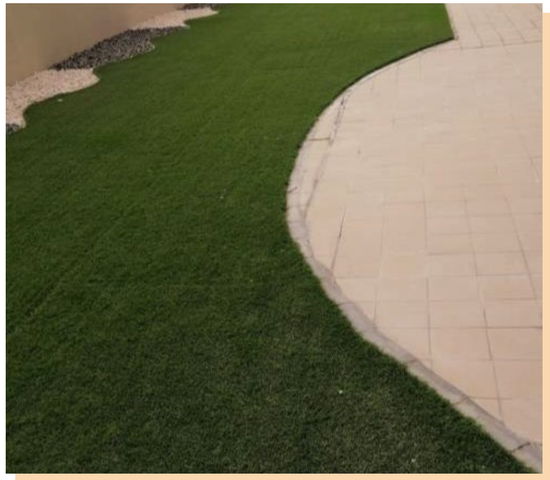
TCR

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

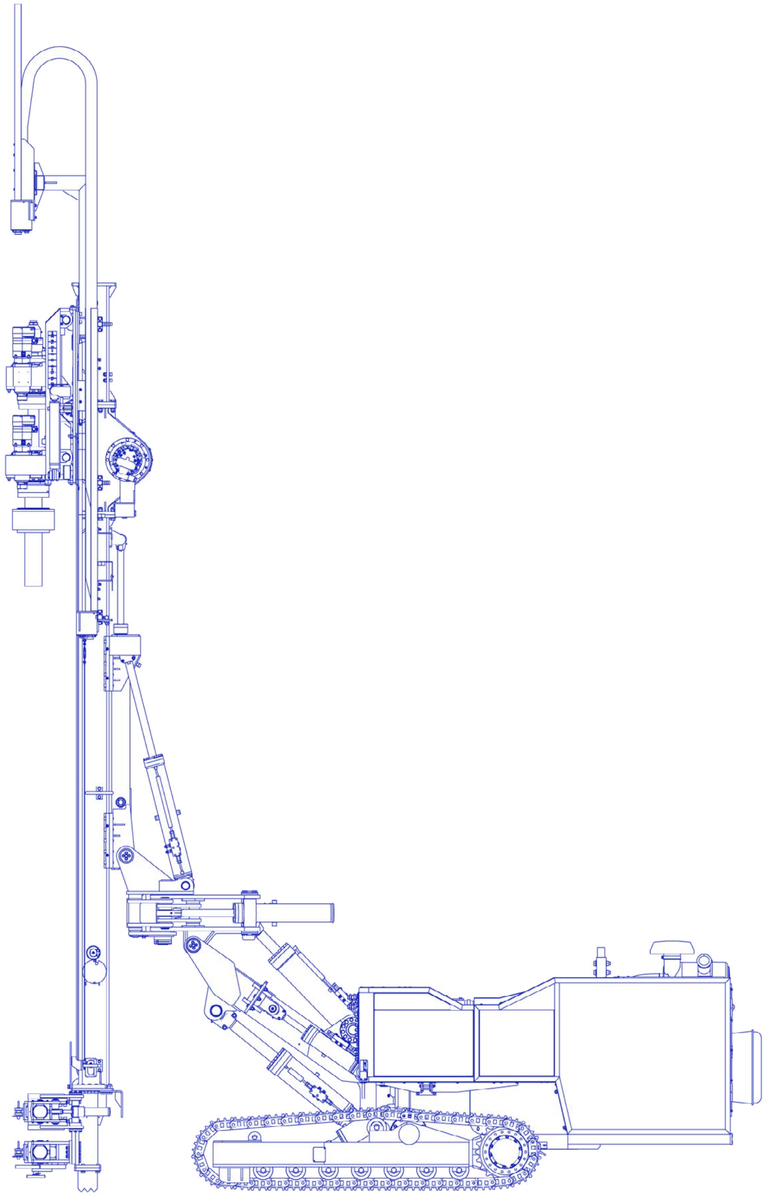
CONCRETE PUMPS

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



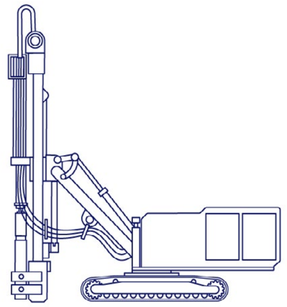
SON MAK EP 100


PUTZMEISTER P13


SON MAK EP 150

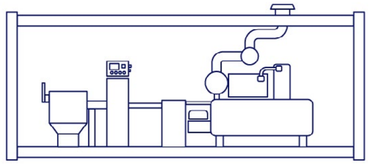

OBERMANN 110

TCR



DRILLING RIGS

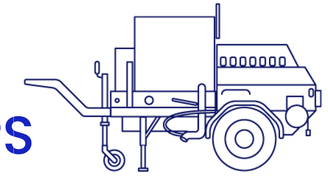
Sr No.	Machine Name	Nos.
1	SOILMEC SM 401 (JET GROUTING)	1
2	KLEMM KR806 (DOUBLE HEAD)	1
3	KLEMM KR 401-2 (JET GROUTING)	1
4	CASAGRANDE C6	1
5	CASAGRANDE C6XP	1
6	TESCAR TES20	1
7	BERETA T21	2
8	BERETA T43	2
9	MAIT 405	1
10	HUTTE HBR 504	1



GROUT PUMPS

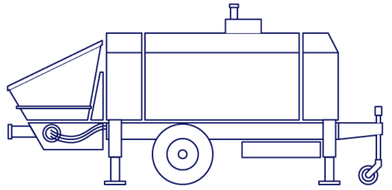
Sr No.	Machine Name	Nos.
1	METAX MP5-470 (JET GROUTING)	1
2	SON MAK EP100	1
3	GAODETEC LEC XTB -2B (JET GROUTING)	1
4	SON MAK EP150	1
5	OBERMANN HD 115 (JET GROUTING)	1
6	CHEM GROUT CG-550	8
7	TECHNIWELL TW CJU (JET GROUTING)	1

CONCRETE REPAIRING PUMPS



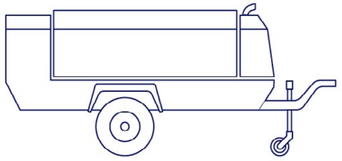
Sr No.	Machine Name	Nos.
1	PUTZMEISETER P13	3
2	PUTZMEISETER MP25	4
3	PUTZMEISETER SEVTM	2
4	REED SOVA SHOTCRETE PUMP (DRY METHOD)	1

CONCRETE PUMPS



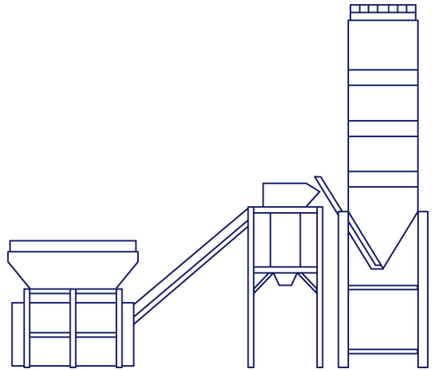
Sr No.	Machine Name	Nos.
1	REED B20 BF4M	2
2	MECBO CAR P6	1

AIR COMPRESSORS



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

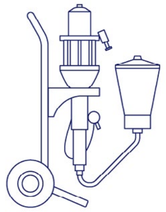
CENTRAL GROUT MIXING PLANT



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

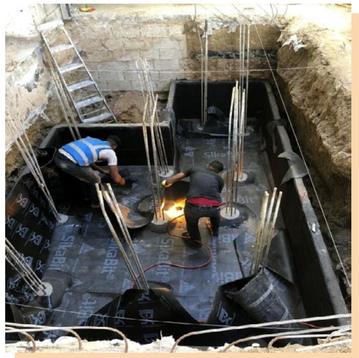
Ground improvement works for Damaged Citizen Houses in Different area in Emirates of Abu Dhabi

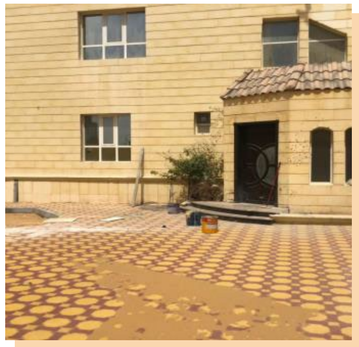
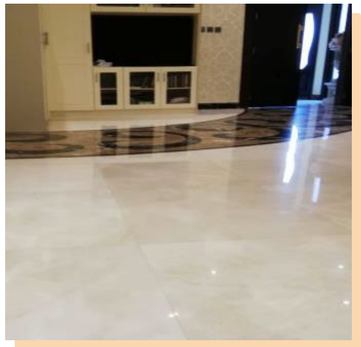
Challenge

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

YAS MARINA CIRCUIT حلبة مرسى ياس

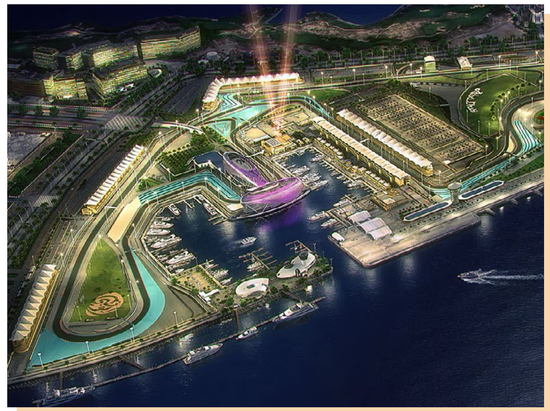
Modification of F1 Racetrack at t-11 for 2021 Formula One

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

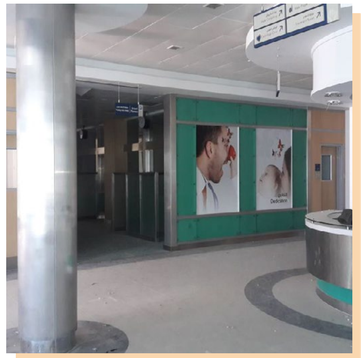
Faced differential settlement due to liquefaction of the strata

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

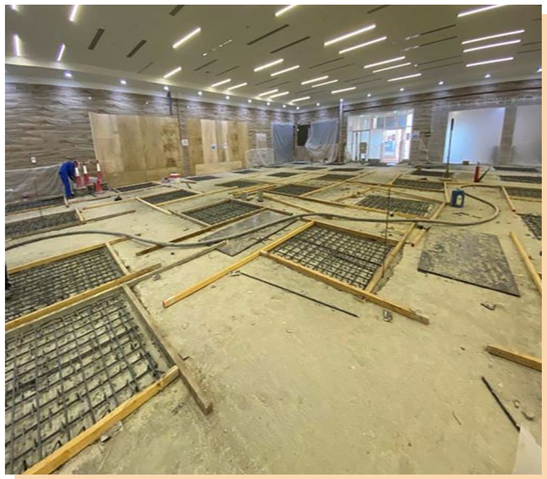
Consultant

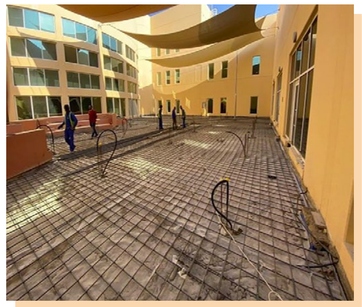
Al Suweidi

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

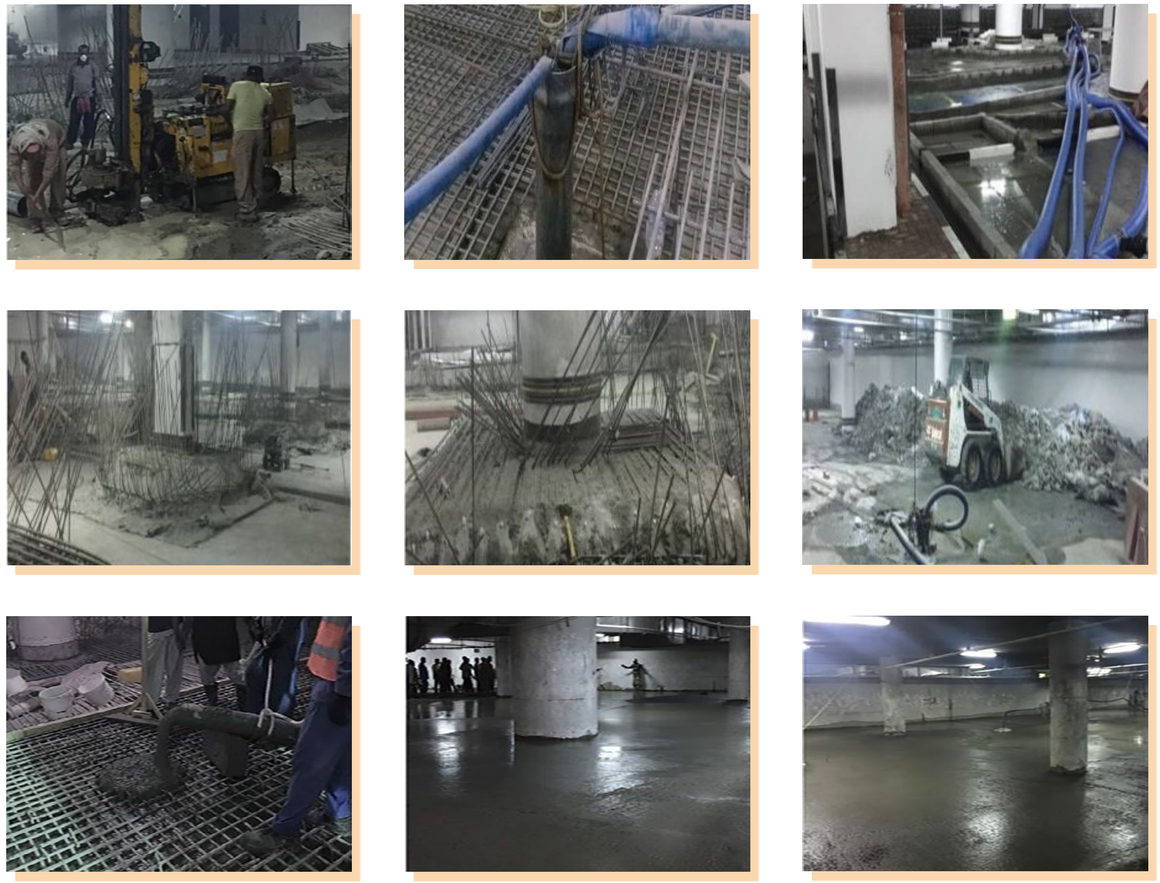
Structural Repairs & Leakage Treatment to Basement 1,2,3,4, @ 4B+G+19 Commercial and Residential Building at Business Bay, Dubai

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

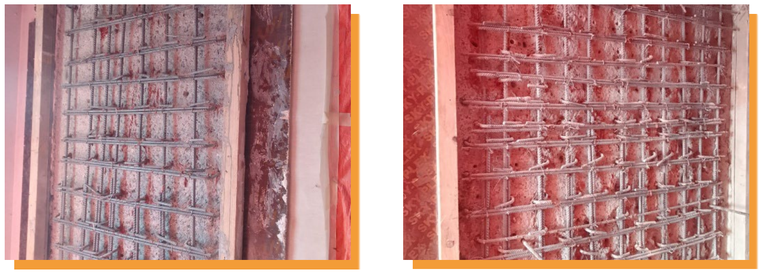
Structural Strengthening works at Carlton Hotel Deira

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

Malaih investment & Projects Development LLC

Challenge

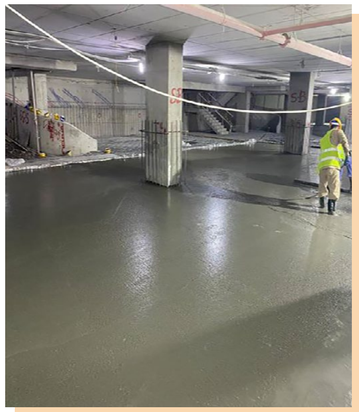
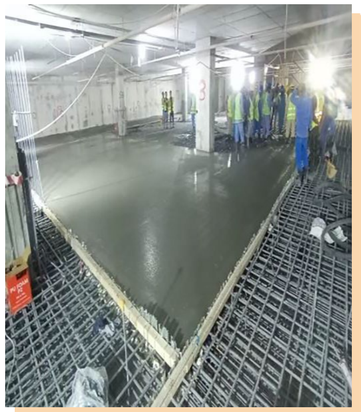
Radiant Square Tower (5 Towers) located in Reem Island owned by Maliah Group faced structural issues like delamination of raft slab in basement, Uplift due to hydrostatic pressure, corrosion of rebars, water leakage and structural cracks.

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

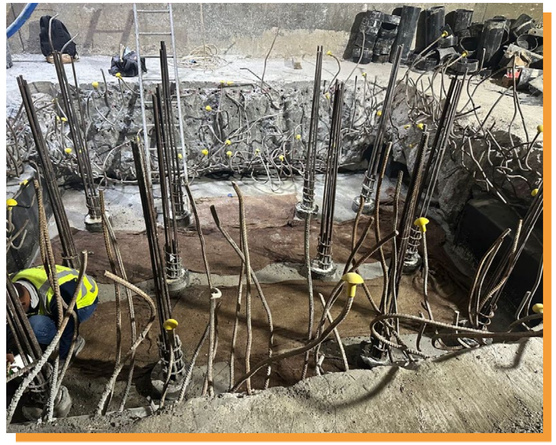
RADIANT REAL ESTATE

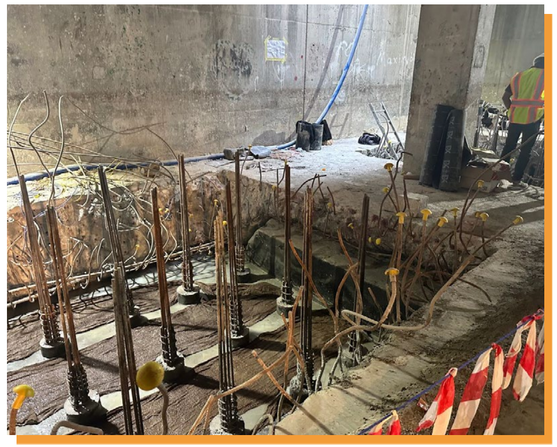
Challenge

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

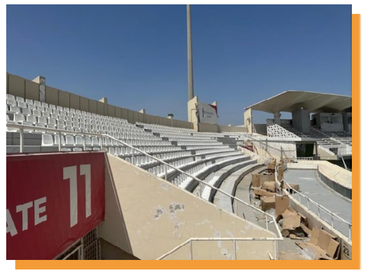
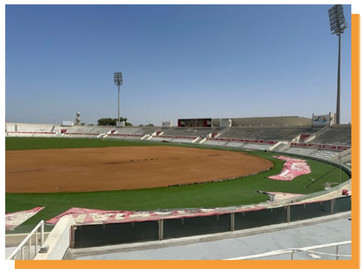
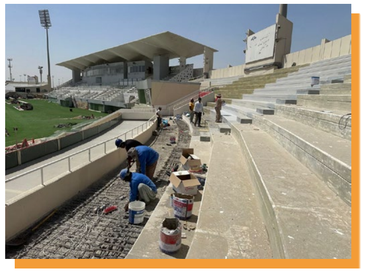
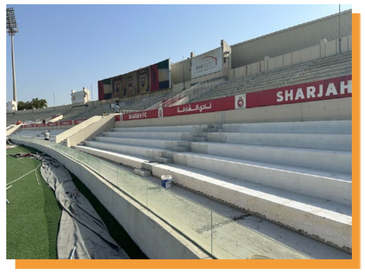
Government of Sharjah
Department of Public Works
حكومة الشارقة
دائرة الأشغال العامة

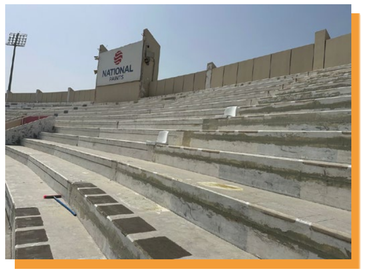
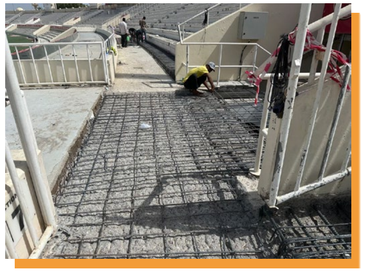
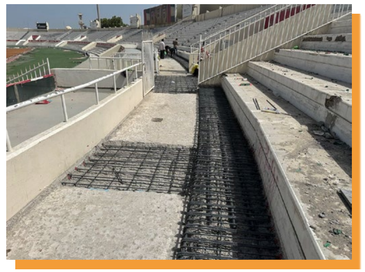
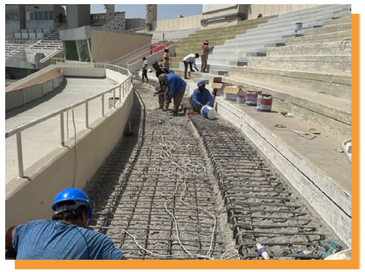
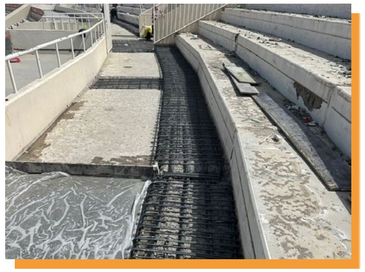
Challenge

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

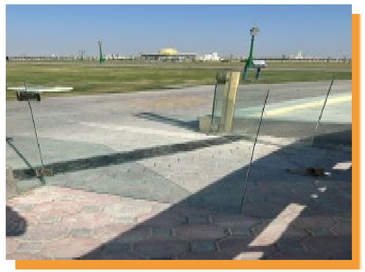
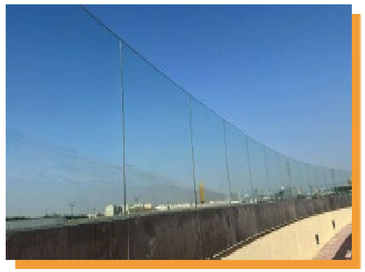
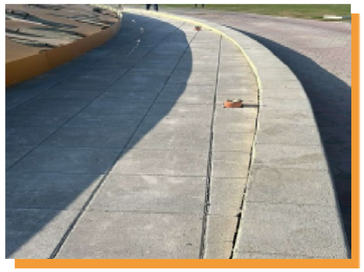
Government of Sharjah
Department of Public Works
حكومة الشارقة
دائرة الأشغال العامة

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

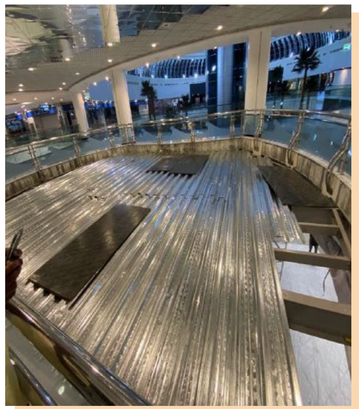
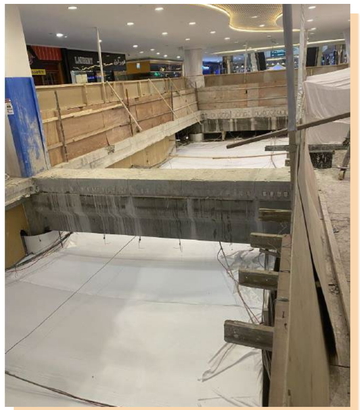
M/s National Investment Corporation (PISC)

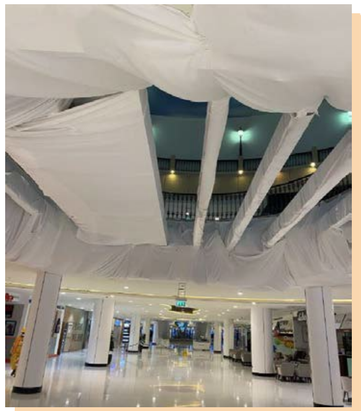
Consultant

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

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

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DP WORLD
سابك sabic
مجموعة روشن ROSHN GROUP
NEOM نيوم
Qiddiya
SEVEN SAUDI ENTERTAINMENT VENTURES
دار ALDAR
NHC
LARSEN & TOUBRO
الهيئة الملكية للجبيل وينبع Royal Commission for Jubail & Yanbu
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