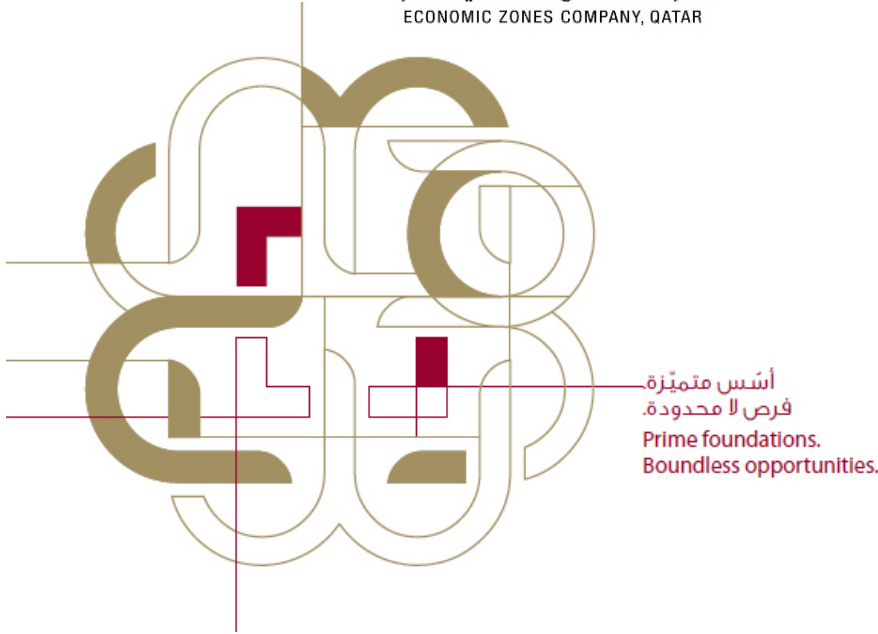




مناطق  
manateq  
شركة المناطق الاقتصادية، قطر  
ECONOMIC ZONES COMPANY, QATAR



## OPERATIONS – ZONE MANAGEMENT

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# OPERATIONS CONSTRUCTION MANUAL

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### General Information

Document Level	Level 2
Organization   Department	Operations   Zone Technical Services
Manual Description	This Manual describes the requirements in relation to construction activities within Manateq managed and/or controlled areas.
Manual Owner	Operations Director(s)

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## EXECUTIVE SUMMARY

### REGULATORY RELATIONSHIP

Construction Manual is intended as a reference book that is based on a consistent language, predefined regulations including Qatar Construction Specifications (QCS) updated version and other construction best practices. To use this document as an effective reference, it is essential that the user has a thorough understanding of the General Clauses of the lease agreement, construction plans and activities, contractual provisions, and Qatar Construction Specifications 2014 (or its latest version upon release) as well as relevant authorities' regulations and specifications.

### DOCUMENT INTENT AND ORGANIZATION

These Construction Regulations are addressed to the Investors and all Construction Parties appointed by the Investors or by Manateq (referred to as "MNTQ"), which is in charge of Logistics Parks, Mesaieed Industrial Zone and other premises managed/controlled by Manateq.

The areas managed by Manateq are located in the State of Qatar, at various locations, such as Mesaieed, Birkat Al Awamer, Aba Saleel, Al Wakra, Jery Al Samur, etc. It is intended to meet the luxury, high quality, and aesthetic needs of sophisticated investors, in a professional state-of-art development. Manateq development plans provide premium locations for construction of warehouses, retail shopping areas and restaurants, high quality hotels, entertainment and recreational facilities, mosques, community centres, labour accommodation and service hubs. The primary access to the Manateq premises is from the mainland.

Manateq development site is divided into individual Plots and Common Use Facilities as provided in the Master Plan, as it shall be amended from time to time.

The intent of this document is to regulate the construction process in a certain plot(s), starting with making the Construction Parties acquainted within Manateq "managed areas", and further enhancing the construction objectives and procedures based on the work requirements and conditions. From operational perspective where the activities are critical, this manual prescribe detailed methods and procedures, or measures, for a safe and adequate completion of works. In other cases, the instructions are limited to necessary objectives described without specifying the methods or procedures in detail. This manual provides the user(s) with a conclusion or solution and allows the investor to devise procedures accordingly, where specific methods and procedures are not provided.

These Construction Regulations stipulate that the Construction Parties cannot utilize any of the infrastructure facilities (except site access roads) or Common Use Facilities unless explicitly expressed and authorized by Manateq.

This document imposes compliance requirements and should be read in conjunction with current industry standards, the latest version of QCS, applicable laws, and Manateq's QHSE/Operations Regulations. A copy of this manual shall be provided to the Construction Parties working within Manateq premises.

This document will be updated as per the latest versions of the Controlling Standards and the Construction Parties shall follow the latest document version received by them.

### ENFORCING THE CONSTRUCTION REGULATION

The investors and their contractors shall be jointly and severally obligated to ensure compliance with this Construction Manual that are automatically considered the leading document in the Construction Contract. Neither Manateq nor their appointed TFMA (Total Facility Management Agent) will be responsible towards the Plot Investors for any damage or claim resulting from their contractors' breach of these Construction Regulations and any action taken towards any contractor.

Manateq reserve the right to inspect from time to time, either directly or by means of a TFMA, the Contractor's compliance with all applicable regulations, codes and standards. The Contractor shall, under the circumstance, respond to any defects raised in notices by Manateq/TFMA as a result of the inspection. Manateq can apply penalties directly or through Municipality in the event of the Investor/Contractor is found to be in breach of the constructions rules and regulations stated in this document.

## 1.0 ABOUT THIS MANUAL

### 1.1 INTRODUCTION

This manual provides basic instructions for identifying policies and laws that has valuable effect over the construction processes and activities, however, this manual generally does not interpret these policies or laws. It is not only investor's responsibility to comply with all the policies, laws and regulations, it also includes its designated consultants/contractor/subcontractors who may be intimated for assistance whenever deemed to be necessary. The instructions provided in this manual are generic and not to be construed as replacing, modifying or superseding any of the provisions in the lease agreement and related construction plans under the conditions where different situations that may arise on different contracts with different types of works. In case of any deviation from the instruction provided in this manual in the best interest of the public, must be based on engineering judgment and supported by individual with appropriate authority or under influence of statutory specifications.

This document is developed by MANATEQ to set the requirements in relation to investor's construction activities. The requirements of this manual are in accordance with the State of Qatar Laws and Regulations, Manateq's IMS Manual, Manateq's QHSE Regulations, and best practices.

### 1.2 PURPOSE

The intent of this document is to ensure compliance of the construction process by all investors / contractors, starting with making the Construction Parties acquainted within Manateq Managed Areas.

### 1.3 OBJECTIVES

The aim of the Construction Manual is to offer a set of rules to guide the investor during the development/construction of their facilities and to ensure that negative environmental impacts are reduced/minimized during the construction phase of the project.

- (a) Investors' responsibility to appoint credible consultants and contractors to meet their requirements complying with QCS.
- (b) Compliance with the approved land use by Manateq and/or MME
- (c) Compliance with Manateq and MME and authorities regulations and during Design and Construction phase.
- (d) Compliance with Building Permit approved designs for construction of their facilities.
- (e) Obtaining of prior approvals from authorities for any modifications/additions during construction.
- (f) Construction commencement shall be after obtaining Manateq and MME approvals.
- (g) Plot should be secured during the construction phase and only dedicated access has to be used.
- (h) During construction phase, the plot area has to be used only for approved construction works.
- (i) Compliance with Qatar Environmental laws as per QCS
- (j) Compliance with Manateq QHSE regulations

- (k) Establishment and maintaining of temporary utilities and facilities required for construction
- (l) Plot temporary fence and project signboard installation.
- (m) Obtaining of prior NOC from Manateq and/or MME to use neighbour area during construction.
- (n) Effective and in-time coordination with all stakeholders to avoid delay in construction
- (o) Achieving of construction milestones and work schedules
- (p) Conducting survey works with competent contractors to avoid encroachment issues
- (q) Segregation plot area , access area, storage area, facilities area etc. within the construction facilities
- (r) Compliance with QCS and QHSE to implement effective Traffic Management plan during construction
- (s) Compliance with regulations to appoint third parties wherever required during construction
- (t) Compliance with QCS regulations to avoid noise and other nuisance issues to neighbours
- (u) Comply with safety regulations and implement Emergency preparedness

In case of conflict with the local laws/regulations, the requirements of laws/regulations shall prevail. All such conflicts are to be brought to the attention of MANATEQ for resolution, by sending a reference to Operations Department, the decision of Operations Department shall be conclusive in this regard.

This manual shall come into effect from its date of publication and shall be applicable to all future contracts. Existing contracts shall be brought gradually in compliance with the requirements as possible and in consult, all concerned Manateq departments.

This document will be reviewed periodically as part of the continual improvement cycle.

## 2.0 SCOPE OF THE MANUAL

This manual is applicable to all processes and construction activities carried out in Manateq managed areas located in various parts of Qatar, such as Mesaieed, Birkat Al Awamer, Aba Saleel, Al Wakra, and Jery Al Samur, etc.

## 3.0 REFERENCES

The standards or documents listed below are considered as references of this procedure:

- QCS 2014 (or its latest version upon release)
- Qatar Survey Manual
- Work Zone Traffic Management Guide (WZTMG)
- Qatar Traffic Manual
- Qatar Highway Design Manual
- Ashghal Regulations
- State of Qatar Environment Protection Standard
- Ministry of Municipality and Environment (MME) Regulations
- Qatar Civil Defense Specifications.
- Kahramaa Specifications
- Other applicable specification as per relevant Authority
- Manateq QHSE Regulations
- Manateq Development Regulations

## 4.0 ABBREVIATIONS AND DEFINITIONS OF TERMS

**TABLE 1 – ABBREVIATIONS**

ABBREVIATIONS	FULL TERMS
AS	Aba Saleel
AW	Al Wakra
BA	Birkat Al Awamer
BP	Building Permit
CAP	Corrective Action Plan
CARR	Corrective Action Request & Report
FRM	Form
JAS	Jery Al Samur
KM	KAHRAMAA
LA	Lease Agreement
LAL	Land Allocation Letter
LP	Logistics Park
MCPW	Manateq Consolidated Permit to Work
MIZ	Mesaieed Industrial Zone
MME	Ministry of Municipality and Environment
NCR	Nonconformity Report
OBS	Observation
PIR	Planned Inspection Report
PTW	Permit to Work
QCS	Qatar Construction Specifications
QHSE	Quality, Health, Safety and Environment
REG	Register
RGL	Regulation
RO	Road Opening Process

**TABLE 2 – TERMS & DEFINITIONS**

TERM	DEFINITION
<b>CONSTRUCTION ELEMENTS</b>	
Approved Building Plans	refers to the plans, drawings, and specifications of a Building, provided by Manateq to the Investors, or prepared by the Plot Investor's architect, consultants and approved by Manateq / Competent Authorities, as they may be varied from time to time pursuant to the prior written approval of Manateq / Competent Authorities.
Building	refers to a structure and its associated external works under construction by a Contractor.
Construction Contract	refers to the contract signed between Manateq, and/or the Investors, and any of the Construction Parties.
Construction Manual	refers to the regulations, rules, and procedures spelled out within the body of this document and any future amendment as aforementioned, or any other management and conduct rule enforced by Manateq with or without prior notice, for the sake of the proper management, administration, and control during construction.
Contract Works	refers to the construction of all improvements within the Work Area carried out under a certain contract.
Plot Unit	refers to the land leased by an Investor, within Manateq Controlled Zone.
Utilities	refers to the supply of portable water, electricity, telecommunications, sewerage network, and any other similar services.
Work Area	refers to the plot leased by an investor on which the contractor shall perform the Contract Works.
<b>ENTITIES</b>	
Construction Parties	refers to architects, engineers, consultants, contractors, subcontractors or other third parties engaged by Manateq or by the Plot Investor in the construction and fit-out of a Building.
Construction Supervision Consultant	refers to consultants and engineers/architects assigned by Manateq, or the Plot Investors, to provide supervision of the Contract Works during construction.
Contractor	refers to any person(s), sole proprietor, partnership, joint venture, or corporation that performs construction-contracting work at Manateq Zone, either under a direct contract with Manateq, or a contract with the Plot Investor(s), and the legal successors in title to these entities.
Government	refers to the Government of the State of Qatar.
Infrastructure Contractor	means the contractor with Manateq for the execution of the infrastructure works within Manateq controlled Zone.
Investors	refers to the plot Investor in Manateq controlled Zone.
Manateq	refers to Master Developer.
Subcontractor	refers to any person(s), sole proprietor, partnership, joint venture or corporation to whom part of the Contractor's work has been subcontracted and the legal successors in title to these entities.
Total Facility Management Agent (TFMA)	refers to Waseef (Partners) and/or any other firms or parties that may be assigned by Manateq and notified to the Plot Investors and Construction Parties to act as Manateq agent to implement, enforce and monitor the compliance with these Construction Regulations, rules and procedures.
<b>DATES AND PERIODS</b>	
Construction Milestones	refers to the Time Schedule target dates ("milestones") specified for completion (or start) of certain works or portions of the Contract Works in the construction and fit-out of a Building.
Defects Liability Period	means the period for notifying defects in the Contract Works, as stated in the related contract, calculated from the date of Taking Over of the Contract Works.
Working Days	refers to the days from Saturday through Thursday (inclusive) excluding Qatari official holidays. "Day" refers to a calendar day and "year" refers to a Gregorian calendar year.

## 5.0 LAW AND LANGUAGE

5.1 The **Law** of the State of Qatar shall govern these Construction Regulations.

5.2 **Terms:** In these Regulations:

- (a) “Shall” or “must” refers to a mandatory requirement.
- (b) “Should” or “may” refers to a non-mandatory good practice requirement.

## 6.0 CONSTRUCTION INITIATION

### 6.1 DELEGATION OF AUTHORITY

- 6.1.1. The Investors shall appoint a Contractor/Site Agents/Consultants that will be authorized by the Investor to act on their behalf under the Contract.
- 6.1.2. The Investors shall send a letter of authority delegation to Manateq introducing his representative or agent as the contact person with Manateq.

### 6.2. AUTHORIZATION TO COMMENCE WORK

- 6.2.1. Building Permit from authorities is required and mandatory document for construction commencement works. Prior to commencement of construction the plot Investor is required to obtain Building Permit from Authorities that remains valid for the construction period and requires to submit the copy to Manateq as a notification of commencement of mobilization and construction works. The investors has to introduce their consultants and contractors to Manateq to provide them technical brief and orientation of Manateq regulations and Zone.

### 6.3. COMPLIANCE WITH CONSTRUCTION DRAWINGS

- 6.3.1 After obtaining the Building Permit from Authorities, the investor has to approach Manateq to notify them about the mobilization and construction works program with required documents to start the Contract Works by following the approved Building Plans.
- 6.3.2 As aforementioned in the Definitions, the Building Plans include the drawings and specifications of a Building provided by Manateq to the Plot Investor, or prepared by the Plot Investor's architect, consultants and approved by Competent Authorities, as they may be varied from time to time pursuant to the prior written approval of Competent Authorities and/or Manateq.
- 6.3.3 Additional entrance to plot (or) relocation of existing entrance:  
  
If an additional gate or relocation of existing entrance is required to meet plots operational needs, then the investor shall submit a request to Manateq with proposed additional entrance or relocation details for review and feedback/approval. If the request is approved by Manateq then the plot Investor has to submit and obtain approval from MME and MOTC duly submitting a modification permit process. Investor shall hold all the responsibility of all the formal procedures, Authorities approvals, modifications or reinstatements of works for the site including all cost and time effect. The investor is liable to adhere to Manateq decision if for any reason the request for revision or relocation of entrance has not been approved by Manateq.



## 6.4. SITE ACCESS

- 6.4.1 The Contractor shall abide by the main access route, road diversion schemes and access and routing instructions issued by Manateq/Competent Authorities.
- 6.4.2 The access route and any road diversion are subject to change/revision from time to time and will be updated as necessitated by construction activities. Manateq will keep the Contractor informed of any update that might affect the access or the equipment/material hauling to the Contract Work Area.
- 6.4.3 Equally, access to the Work Area in Manateq Zone will be subject to frequent modification due to changes in traffic routing by Manateq based on progress within Manateq Construction Zone.
- 6.4.4 The Contractor shall take into account adjacent concurrent works undertaken by other contractors, allowing these contractors a safe and reasonable access at all times into their Work Areas.

## 6.5. USE OF THE WORK AREA

- 6.5.1 The Contractor's use of the Work Area shall be subject at all times Manateq's right to perform work or to retain other contractors to do so.
- 6.5.2 The Contractor shall limit work and activities to the Work Area as defined on shop Drawings or approved Building Plans. He must not utilize the external area for any purpose unless agreed by Manateq.
- 6.5.3 Manateq through TFMA shall manage all common areas outside the plot area.
- 6.5.4 The Contractor shall keep driveways and entrances serving multiple premises clear and available to all construction parties and their employees. The Contractor must not use these areas for parking or storage of materials. The Contractor shall schedule deliveries to minimize use of driveways, entrances, space, and time requirements for storage of materials and equipment on-site.
- 6.5.5 Within each Work Area, the Contractor is responsible for all operations and logistics activities. The Contractor shall take all the necessary measures to ensure that the Contract Works proceed smoothly and safely with minimum impact on surrounding areas and to keep the Work Area and his Contract Works (as far as the same are not completed or occupied by the Plot Investor) in an orderly and safe condition.
- 6.5.6 The Contractor shall treat Occupational Health and Safety (OHS) with high importance at all stages of the Contract. The Contractor shall have full regard for the occupational health and safety of all persons during their presence in the Work Area and in other places on Manateq Zone in collaboration with local Health Authorities. The Contractor shall ensure that medical staff, first aid facilities, are available at all times at the Site and at any accommodation of the Contractor's personnel and that suitable arrangements are made for all necessary welfare and hygiene requirements.
- 6.5.7 The Contractor shall take all necessary measures to prevent injury and/or illness to personnel during the period staff are at work. All of the Contractors personnel are to be issued with appropriate PPE during the period of construction, including carrying out Toolbox talks and ensuring that all equipment used are fit for purpose.
- 6.5.8 The Contractor shall develop his own HSE plan considering the minimum requirement of applicable Laws, QCS 2014 and Manateq's QHSE regulations.

## 6.6. PROTECTION OF ENVIRONMENT

The Contractor shall protect the environment and prevent pollution that affects the environment (including air, water, land, natural resources, flora, fauna, humans and their interrelationships) in which the construction activities are carried out throughout the construction period.

### 6.6.1 Waste

The Contractor shall take the necessary measures to protect the environment and to comply with the applicable laws, regulations, and codes of practice in this regard. The Contractor shall maintain good housekeeping, site tidiness, proper waste segregation, waste collection and waste disposal throughout the construction duration. The Contractor shall be responsible for any violation concerning the protection of the environment. Contractor shall follow the MME and local required regulation to manage the waste.

### 6.6.2 Environmental Pollution

The Contractor shall prevent spillage of diesel, fuel, paint, concrete, cement, thinners or any substance that causes soil contamination.

The Contractor shall control the dust, emissions, noise, vibration, and air quality caused by construction activities, in accordance with the Qatar Environmental Protection Law, MME regulations and QCS 2014 (or its latest version upon release).

### 6.6.3 Pest Control

The Contractor shall ensure that pests are not allowed to the Site facility by initiating a routine pest control program.

The Contractor shall ensure that site facility are protected from pests that can cause public health issues and costly damages to property by initiating a routine control program

The Contractor shall engage a pest control company to service the pest control as per the MME and QCS 2014 requirements. The Contractor shall use non-toxic pest control methods.

## 6.7. TEMPORARY UTILITIES AND FACILITIES WITHIN PLOT BOUNDARY

6.7.1 The Contractor shall be responsible for the provision of Temporary Utilities, Support Facilities, Security, and Protection Facilities within his Work Area for his workers and personnel and for the Plot Investor's representatives and the personnel of the Construction Supervision Consultant.

6.7.2 Unless otherwise provided by Manateq, residential accommodation of the Contractor's work force will not be permitted on Manateq Controlled Zone construction site. The Contractor shall make provision for such accommodation outside Manateq area.

6.7.3 In addition to specific responsibilities for temporary utilities and facilities and controls indicated hereof, the Contractor is responsible for the installation, operation, maintenance, and removal of each temporary utility and facility within the Work Area, and costs and use charges associated with each utility and facility.

6.7.4 In general, the Contractor shall comply with the HSE regulations of Manateq for all matters concerning health, safety, and environment.

## 6.8. TEMPORARY USE OF NEIGHBOR/ADJACENT AREAS

- 6.8.1 The use of neighbor's/adjacent areas for storage or dumping of any material shall not be permitted except if authorized by Manateq.
- 6.8.2 All negotiations required with neighbors' / adjacent plot Investors regarding authorization for access, crane radius, noise, structural fabric, safety or any other subject shall only be conducted by the Contractor, after obtaining the necessary authorization from Manateq.
- 6.8.3 The Contractor shall take all reasonable precautions to prevent damage to adjoining properties and, if any damage is caused because of the execution of the Contract Works, the Plot Investor and Contractor shall be liable and shall immediately make good at their expense to the satisfaction of Manateq to ensure the reinstatement of the used plot to its original condition.
- 6.8.4 Manateq / Competent Authorities may impose a penalty for trespassing others' properties without authorization.

## 7.0 DETAILED DESCRIPTIONS OF CONSTRUCTION MANUAL

### 7.1. COORDINATION

#### 7.1.1 General

- 7.1.1.1 The Contractor shall be fully responsible for coordination of all works within the Work Area /Plot Boundary.
- 7.1.1.2 The Contractor shall coordinate the Contract Works with the activities of other contractors or persons engaged to carry out work within the same Work Area or, where required, on Manateq Controlled Zone.
- 7.1.1.3 As soon as the Contractor becomes aware of any conflicts between his own program and the programs of any other contractor(s) or persons working within the same Work Area or on Manateq Area, which cannot be reasonably and immediately resolved directly between the parties concerned, the Contractor shall report the same for discussion at the Combined Contractors' Meeting. If any conflict cannot be resolved by mutual agreement of the concerned parties at the Combined Contractors' Meeting, Manateq Technical team shall, after further consultation with such parties, make a determination and issue directions or, if necessary, instructions on the matter. Manateq's determination shall be final and binding to all parties.
- 7.1.1.4 Coordination activities of the Contractor include, but are not limited to, the following:
  - (a) Overall coordination of the Contract Works within the Work Area.
  - (b) Obtaining the necessary approvals, permits, building permits and PTW ( Permit to Work)
  - (c) Coordinate shared access to Work Areas,
  - (d) Coordinate product selections for compatibility.
  - (e) Provide overall coordination of temporary facilities and controls.
  - (f) Coordinate, schedule, and approve interruptions of permanent and temporary utilities, including those necessary to make connections for temporary services.

- (g) Coordinate construction and operations of the Contract Works, including all interfacing activities, with work performed by other contractors and persons working in Manateq premises.
- (h) Prepare Coordination Drawings, if necessary, to coordinate work by more than one contractor.
- (i) Coordinate with utility contractors for connection of utilities.
- (j) Coordinate sequence of activities to accommodate tests and inspections, and coordinate schedule of tests and inspections.
- (k) Provide information necessary to adjust, move, or relocate existing utility structures affected by construction.
- (l) Maintain existing permanent benchmarks, control points, and similar reference points installed Competent Authorities.
- (m) Participate in cleaning of common areas and coordinate progress cleaning of areas or pieces of equipment where more than one contractor has worked.
- (n) Coordinate protection of the Contract Works.
- (o) Coordinate fire protection and control measures.
- (p) Coordinate preparation and submittal of as built or record drawings.
- (q) Coordinate preparation and submittal of operation and maintenance manuals.
- (r) Coordinate traffic control plan.

## 7.1.2 Contractor Construction Schedule

- 7.1.2.1 Apart from the program required to be submitted under the terms of each contract, a construction schedule for the main activities should be submitted by the Contractor to Manateq for record.
- 7.1.2.2 Arrange activities in the schedule by Section and/or major area, as applicable.
- 7.1.2.3 Include constraints and work restrictions indicated as follows in the program and show how the sequence of the Contract Works is affected.
  - (a) Follow the design & construct undertaking form
  - (b) Coordination with existing construction
  - (c) Uninterruptible services whenever applicable.
  - (d) Environmental control.
- 7.1.2.4 Indicate important stages of construction for each major portion of the Contract Works, including, but not limited to, the following:
  - (a) Installation
  - (b) Connection of utilities
  - (c) Tests and inspections
  - (d) Startup and placement into final use and operation

7.1.2.5 Identify each major area of construction for each major portion of the Contract Works. Indicate where each construction activity within a major area must be sequenced or integrated with other construction activities to provide for the following:

- (a) Structural completion
- (b) Permanent space enclosure
- (c) Completion of mechanical installation
- (d) Completion of electrical installation
- (e) Utilities tie in
- (f) Substantial Completion

7.1.2.6 Include in the schedule, milestones and any sectional completion requirements, including but not necessarily limited to Commencement Date, dates for Taking- Over sections or parts of the Contract Works, and date for Taking-Over the whole of the Contract Works.

7.1.2.7 Submit updates of the Program to Manateq on quarterly basis.

### 7.1.3 Quarterly Progress Report

7.1.3.1 The Contractor shall submit to Manateq Quarterly Progress Reports describing the status of work activities over the preceding Quarter.

7.1.3.2 Each Quarterly Report shall include:

- (a) General description of progress including design (if any), shop drawings, procurement, manufacture, delivery to Work Area, construction, erection and testing.
- (b) Photographs showing the status of manufacture and progress on the Work Area.
- (c) A quality control report
- (d) A copy of the latest quarterly update Construction Schedule and a Time Control Report.

## 7.2. SURVEY WORK

### 7.2.1 Purpose

This Section describe the procedure to define the general procedures, requirements and controls to be adopted for establishment of plot survey control point in Manateq premises.

### 7.2.2 Scope of Work

This Section is applicable for all the survey activities for establishment, measurements, and reporting of the plot boundary survey point, topographical survey, and reconnaissance survey.

### 7.2.3 Requirements:

- (a) All the survey works shall be carried out as per Qatar Survey Manual, QCS 2014 and
- (b) The Project Coordinate System is QNG (Qatar National Grid)
- (c) All the levels to be specified with reference to QND (Qatar National Datum)
- (d) With reference to QCS 2014, Section-1, Part-13, the subsequent clause to be followed by contractor.

## 7.2.4 Site Information and Inspection

### 7.2.4.1 Site Information

- (a) Before commencing the setting out of the Works, the Contractor shall ascertain the location of all existing underground services within the Site boundary.
- (b) Any conflict between existing services and any part of the proposed Works shall be brought to the attention to the Manateq immediately.
- (c) Any re-work resulting from the Contractor's failure to locate and identify services shall be undertaken at the Contractor's cost.

### 7.2.4.2 Site Inspection

The Contractor shall arrange for surveys to be undertaken, in conjunction with Manateq for site access, to confirm that the relevant survey information is a true and accurate record of their condition.

## 7.2.5 Site Survey

- (a) The Contractor shall provide the Site survey to the relevant authorities and the correctness of that survey shall be entirely the Contractor's responsibility.
- (b) The Site survey shall comply with the requirements of the Qatar Survey Manual as a minimum.
- (c) The Contractor shall within 3 weeks from commencement of Works, carry out a check of the coordinates and levels of all permanent monuments, benchmarks and survey markers used in the determination of the site survey model and proposed to be used for the setting out of the Works.

## 7.2.6 Setting Out of the Works

- (a) The Contractor shall carry out at his own cost the setting out of the Works.
- (b) The Contractor shall be responsible for:
  - i. True and proper settings out of the Works in relation to reference data given in the Project Documentation.
  - ii. Accurately setting out the positions, levels, and dimensions of all parts of the Works.
- (c) Any loss resulting from errors in the setting out of the Works shall be the responsibility of the Contractor. Setting out shall be reviewed by the Consultants before commencing the Works, but such approval shall in no way relieve the Contractor of his responsibility for the correct execution of the Work.
- (d) The Contractor shall always maintain all measuring and recording equipment in good working order.
- (e) The Contractor shall provide all required assistance for checking the setting out and taking measurements of the Works, including labour, equipment and transportation.

## 7.2.7 Approvals

- The contractor has to obtain all necessary approvals and permits from relevant authorities, consultants, and clients.
- Kindly refer the site entry application form (MNTQ-OD-FRM-01-Site Access request) prior to commence work at site. (The Site entry application is applicable only for Survey works, Geotechnical works, application can be obtained from Manateq by sending an email to [enquiries@manateq.qa](mailto:enquiries@manateq.qa)).

## 7.2.8 Type of Survey Marks

With reference to Qatar Survey Manual (Section-2.3.8.1) the following type of survey points to be installed.

All Manateq plot survey Marks shall be approved Survey Marks (see Figure -1.0). The anchor "Type A" is to be used in preference, where less hard ground conditions permit.

Where conditions prohibit the use of either type of mark, the Technical Advisor from plot consultant may authorize the use of an alternative marker, being a steel pin (sp) (See Figure-2.0), feno mark (fm) (See Figure -3.0) or Hilti nail (HN) (See figure 4.0). Existing, as built wall and building corners, concrete boundary pillars, or other physical features approved by plot consultant, may be adopted as cadastral.

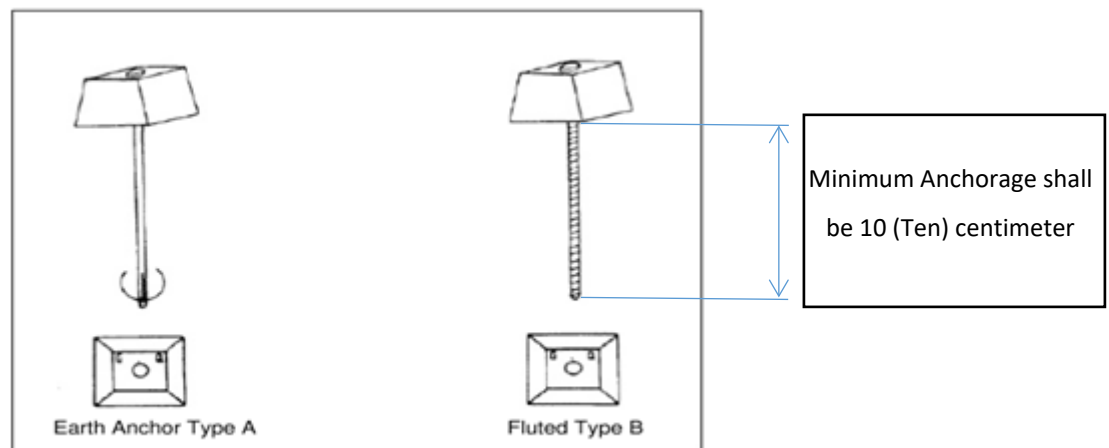


Figure - 1.0 - Standard Proprietary Marker

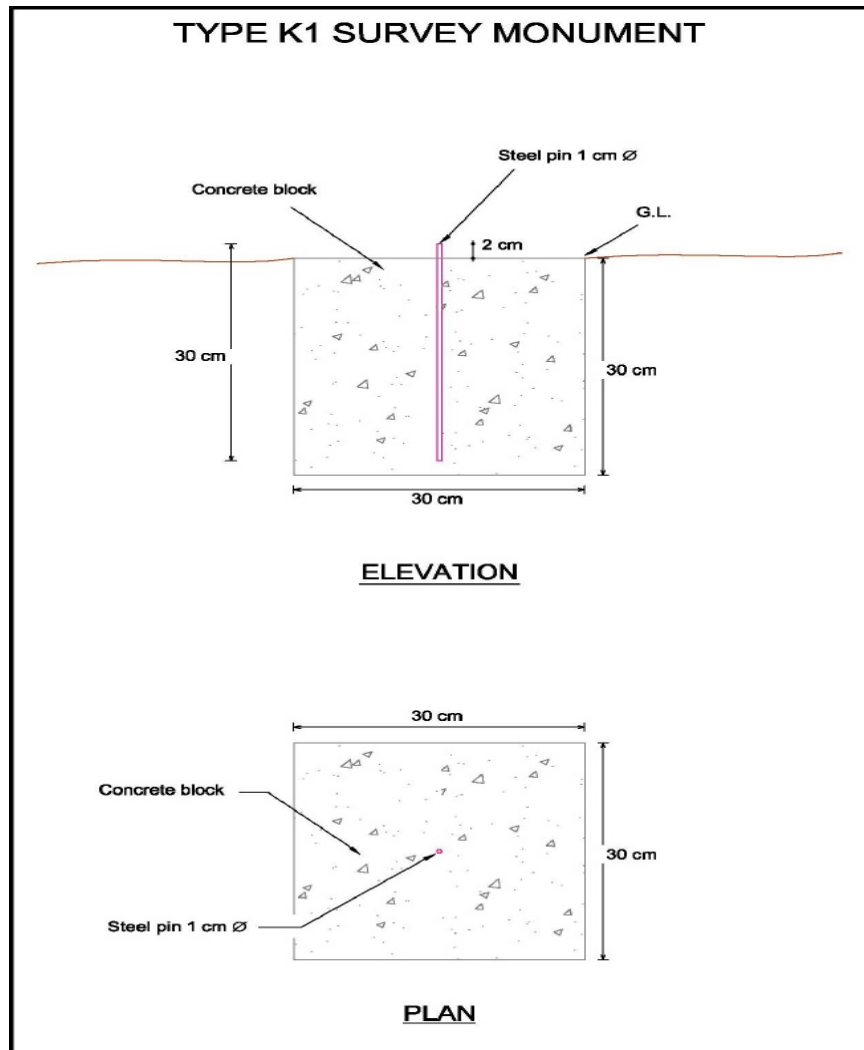


Figure- 2.0- Steel Pin survey mark

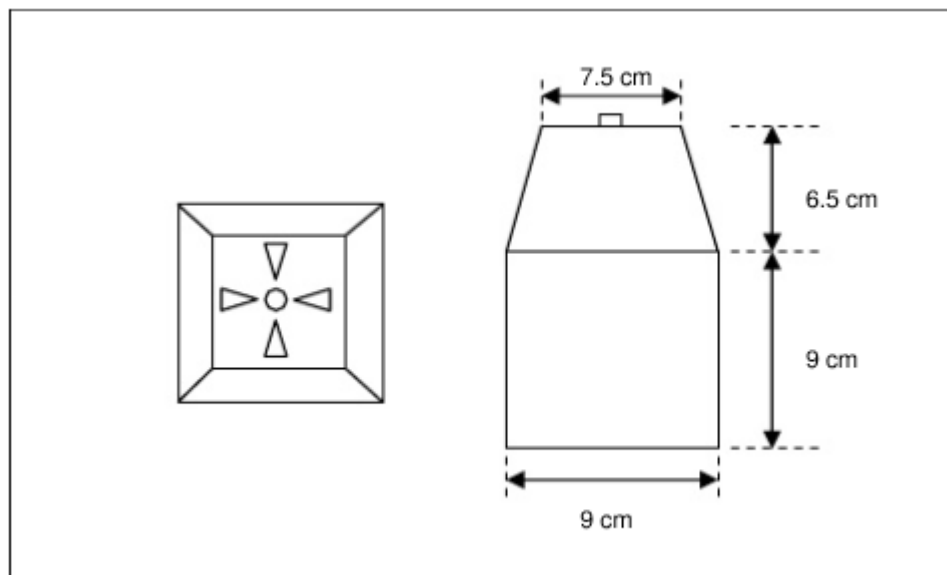


Figure 3.0 Feno Mark



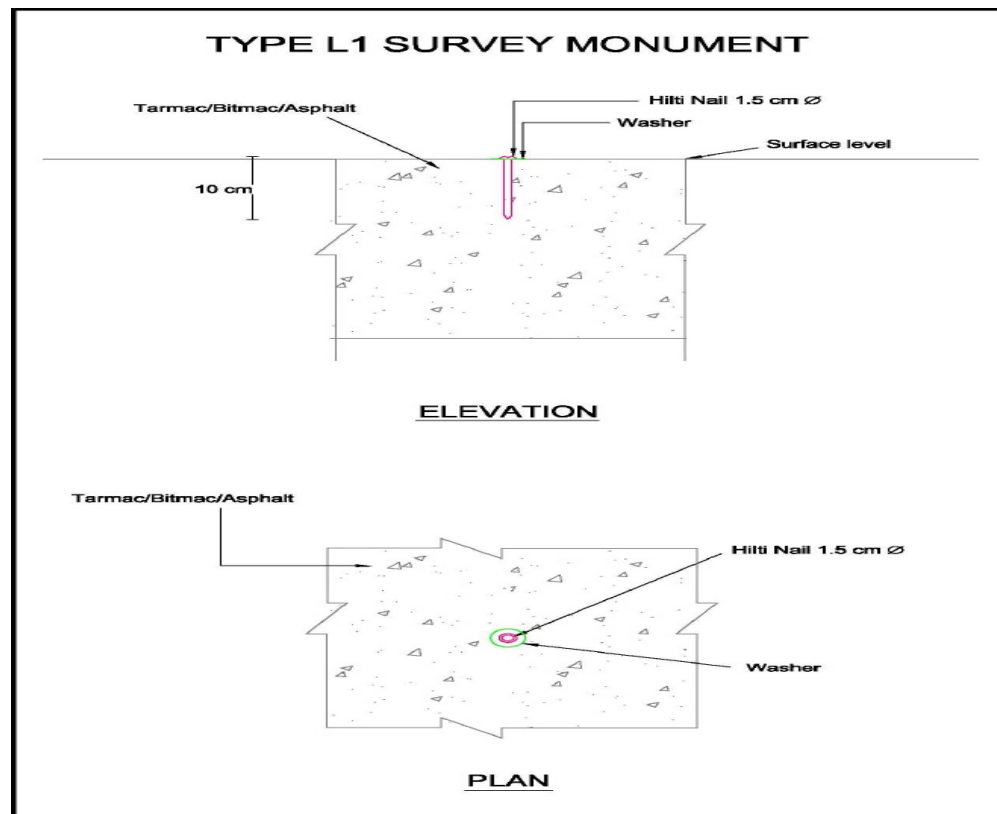


Figure 4.0 Hilti survey mark

## 7.3. TEMPORARY SITE FACILITIES

### 7.3.1 Purpose

This section illustrates the procedures that Investor/Contractor has to adopt for the installation of fence / hoarding work and site facilities and office setup associated with Handed over plot.

### 7.3.2 Location

This task shall be performed on site-wide basis, in conjunction with approved construction drawings, and approved location by plot consultant.

### 7.3.3 Temporary work

- (a) Everything used for and in connection with the Temporary Works shall be fit for the purpose, in serviceable condition and in compliance with any relevant standard.
- (b) The Contractor shall design his Temporary Works to be of adequate strength, stability, and suitability.
- (c) The Contractor shall submit details of any Temporary Works proposed to the Consultants for review before commencing the work. Such details shall include, but not be limited to design calculations and drawings. The submission to the Consultants of any such details shall not relieve the Contractor of his responsibility for sufficiency of the Temporary Works or of his other duties and responsibilities.

- (d) The Contractor is responsible for ensuring that Temporary Works are not in any way detrimental to existing structures in any way. Particular care shall be taken with scaffolding to avoid staining or mechanical damage to finishing.
- (e) The Contractor shall make safe and reinstate all areas affected by Temporary Works.

### 7.3.4 Fencing / Hoarding

#### First Requirements:

- (a) Investor should not place the fence on the road or pavement without taking prior permission from Manateq and/or Authorities to do so.
- (b) Investor should not put the fence as to hamper to the movement in the site or the lanes that lead to the site of the work, services, or the arrival of emergency vehicles or hinder their movement.
- (c) The height of the fence shall be at least (2 m) and not more than (5.50) meters, and it has to be built solid and consistently so that it is covering all aspects of the site.
- (d) The openings between the wall panels shall be not more than (8 cm), and not more than (30 cm) height from the ground in places where there is no storage of volatile materials such as sand, small leaves, chopped wood or gravel, etc. Must have the fence without openings of all parties in the case of a store of materials mentioned above.
- (e) Should place grids of green fiber, which is transparent, solid, covering the scaffolding and the building in full. Must have small openings, which does not allow the volatility of the substances arising because of work, and in case of volatile materials such as sand or dust, it must place a paperboard on the scaffolding from outside. This procedure is mandatory for buildings overlooking the Streets or sidewalks of less than 5 meters or if they are adjacent to the buildings at less than 10 meters.
- (f) It must leave a distance of not less than (1.5) meters of sidewalks for the passage of pedestrians if the construction completely closed, and it may exploit a part of the sidewalk for a temporary fence, and that after taking the approval.
- (g) It must protect pedestrians from any falling material or volatile from the work site and through the establishment of safe corridors covered up no less than (2.40 meters) from the sidewalk with the provision of sufficient lighting.
- (h) Shall construct a safe passage in case of exploitation of the sidewalk, with a width not less than (1.50 meters). Appropriate concrete barriers, with slopes and appropriate handles for the hands, and the provision of adequate lighting and put the warning light signals, it must be taken as the official approvals from Manateq, and traffic management departments or other concerned services departments.
- (i) It must have the approval by the neighbors/Manateq in the case of the exploitation a part of the land adjacent to the site that does not exceed one meter from the limits of the work site, and provided that it does not affect the property of neighbors in any way.
- (j) It must build boxes to protect the public interest equipment in the case of the fence nearby it, and provided such boxes does not cause any hinder to access them in the event of service or regular maintenance.

- (k) The fence bearing columns being strong and tightly installed on concrete bases and that do not exceed the limits of the plot boundary.
- (l) The fence must be painted by the color that determined by plot consultants, as well must obtain a prior approval if it wants to change the color.
- (m) The Indicative signs should not exceed and company logo in the case putting it on the fence about 5% of its area, as it shall obtain approval on the ads, logos or signs that the company would like placing them on the wall with Provision scheme (Sketch) shows the final form of the fence.
- (n) Providing the scheme for approval shows the form and details of the temporary fences to be built and its location on the ground.
- (o) It must provide a detailed architectural drawings and construction of the fences that the height exceeds of the previous conditions and that of in order to obtain approval before proceeding the work.
- (p) Contractor will be responsible for the restoration and maintenance of the fence and remove it upon completion of the project.
- (q) Contractor will be fully responsible for the damage to the street or the floor by installing the fence and restore the position as it was.
- (r) Manateq may request on certain places or occasions to replace (part or complete) corrugated sheets with plywood if the plot falls under a location that is likely to maintain certain image.

**Second:** The special temporary fence conditions in the case of demolition.

In addition to the conditions above, the Contractor must comply with the following:

- (a) Contractor should install a wall of iron grille (Steel) with openings no greater than (5X5) cm and a distance not more than (2.5) meters between the columns of the grille with openings not more than (10) cm from the ground, before the initiation of demolition.
- (b) Should cover the iron grille in the case of a volatile material from the site, including the following:
  - A. panels of wood with a thickness of not less than (0.6) cm.
  - Or
  - B. panels of painted corrugated galvanized sheet or similar.

**Third:** Special temporary fence conditions in the case of excavations:

In addition to the general conditions of the fence, the Contractor shall comply with the following:

- (a) Contractor should install a solid barriers (concrete) around the fossils that are near to the border of the road, which its depth about (50) cm, and which being far from the border of the road or areas, it is sufficient to install a grille and warning signs.
- (b) It should install warning signs continuously and phosphorous signals on both sides of the excavation.
- (c) It should be placed a temporary barrier of grill or wood on the excavation which its depth less than (50) cm, and in both cases, it must put signs or traffic signs or instructions about the region.

## 7.3.5 Site Facilities

### Requirements:

- (a) The contractor shall prepare the detail plan and layout of all temporary facilities for e.g. site office, water tank, septic tank, labor welfare, rest area, fuel tank (approved by WOQOD), generator setup, etc. that needs to be installed at site and shall be submitted to consultants prior to commence any work at site.
- (b) All generators and transformers on the Worksite shall be located in areas that are fenced and secured to prevent any unauthorized entry. Each such location will be provided with portable fire extinguishers and signage. All electrical systems shall be bonded to the earth. The DG should have the bund wall/ secondments spill tray to cover the spillage in case of emergency.
- (c) Detailed method statement to be submitted for installation of Site office (Porta cabin or blockwork etc.) specifying methodology, risk assessment, approved drawings, checklist, inspection test plan and other applicable information as per requirement of plot consultants.
- (d) All the required permits and necessary approval shall be obtained from all relevant Authorities, Clients, and consultants.
- (e) The contractor shall design the wastewater disposal system. The contractor shall be responsible for obtaining approval from MME. Ensure the capacity of septic tank is based on the number of personnel planned to deploy at location.
- (f) The contractor has to clarify the proposed septic tank will be encased in suitable backfill or open. If it has opened proper barricading to be provided according to HSE requirements.
- (g) Assembly points shall be clearly shown on layout plan and all necessary signage shall be displayed at site.
- (h) All existing underground services shall be investigated prior to commence any work.
- (i) Installation of diesel tank shall be in accordance with approval of Woqod.
- (j) Approved traffic management plan to be followed.
- (k) The disposal of the waste, domestic waste, hazardous waste etc. shall be accordance to MME and QCS 2014 requirements.
- (l) Emergency contact no. shall be displayed at adequate locations.
- (m) Manateq will grant a right of access only within the road reservation. Should the Contractor need to use adjacent areas of land for camps, plant site etc., he shall arrange for the right to use the said land from Manateq.
- (n) The Contractor shall provide, maintain and subsequently remove temporary roads, paths, and parking areas and refuse disposal areas. The area occupied by temporary roads, paths, parking areas and refuse disposal areas or otherwise affected by them shall be restored to their original condition on completion of the Project or as per requirement of Manateq.
- (o) The contractor will in no way be relieved of his responsibility under Qatari Law to provide medical care, facilities, insurance, etc. to workers on site, and that Hamad Medical Corporations facility is mainly for the purpose of the general public (so that Hamad Medical Corporation can respond more quickly to emergency incidents in a rapidly changing infrastructure).

- (p) The contractor must maintain all site facilities in clean and sanitary fashion. The contractor shall comply all the requirements with Ministry of Health and Drainage Department of the MME in all matters of health and sanitation.

## 7.3.6 Project Sign Board

### 7.3.6.1 Definitions

For the purpose of these rules and regulations, the following definitions shall apply:

**Building Permit** – A written authorization granted by Municipality to an applicant allowing him to proceed with the construction of a specific project after plans, specifications and other pertinent documents have been found to be in conformity with building regulation.

**Business Sign** – An accessory sign that directs attention to a profession, business, commodity, service, or entertainment conducted, sold, or offered in the same place where the business is located.

**Directional Sign** – An official sign directing traffic movement, parks, government institutions, landmarks etc.

**Display Sign** – Any material, device, or structure that is arranged, intended, designed, or used as an advertisement, announcement, or directory that includes a sign, sign screen, signboard, or advertising device of any kind.

**Display Surface** – The entire area of the signboard or the entire area enclosed by the extreme limits or perimeter of the signboard.

**Multi-Faced Sign** – An advertising sign or signboard structure with three or more faces oriented in different directions.

**Setback** – The horizontal distance measured from the outermost face of the building/structure to the property lines that must be free of all forms of physical obstructions that can negatively affect natural light and ventilation or that can impede access to the sides and rear area.

**Sign/Signboard** – Any letter, word, numerical, pictorial presentation, illustration, declaration, emblem, logo, device, symbol or trademark, banner or pennant, whether illuminated or not, electronic, static or dynamic, or any figure, or similar character that is attached to, painted on, or in a manner represented on structure. It is used to announce, direct attention to or advertise and visible to the public.

**Sign Structure** – Any means to support the installation of sign/signboard and this includes the structural frame, anchorages and fasteners to support and suspend such sign/signboard.

### 7.3.6.2 General Provisions

- (a) Signs or signboard structures shall promote and uphold the public information upon their immediate approaches. Immediate approaches shall mean a distance not exceeding fifty (50.00) meters from the periphery of said areas.
- (b) Signs shall display or convey only messages or visuals that conform to public decency and good taste.

- (c) Signs or signboard structures shall follow standards of design, construction and maintenance in the interest of public safety, convenience, good viewing and to promote proper urban design or community architecture.
- (d) Signs or signboard structures may be constructed only in areas where zoning regulations permit them.
- (e) Signs or signboard structures shall be constructed in accordance with the provisions of QCS 2014 or the latest version of QCS. Sign or signboard structures exceeding three (3.00) meters in height from the ground shall be adequately designed and constructed based on the generally accepted architecture and engineering practice. Design plans shall be signed and sealed by a duly registered architect or civil engineer.
- (f) Signs or signboard structures built within Logistics Parks Zones and Industrial Zones managed by MANATEQ shall be of incombustible materials.
- (g) Signs shall be placed in such a manner that no part of its surface will interfere in any way with the free use of a doorway, a fire escape, standpipe or other required means of exit and fire-protective devices.
- (h) Signs shall be erected in such a manner as not to confuse or obstruct the view or interpretation of any public sign, traffic signal, or device, nor obstruct the sight, attract or distract the attention of motorists, reflect blinding light or cause glare to oncoming traffic.
- (i) Signs shall only be written in Arabic or English.
- (j) For the project larger than (10000) m<sup>2</sup> and the length of the fence exceed (150 meters) and it requires to installed more than one sign, it shall be coordinate with the competent department.
- (k) It must coordinate with the competent department in the event of the any change or amendment to the sign or in its data.

### 7.3.6.3 Design, Construction, Supports, and Anchorage

- 7.3.6.3.1 Sign or signboard structures shall be provided with an appropriate device, such as pulleys, capable of being lowered jointly and severally by the owner of the sign structure and the advertising agency upon receipt of typhoon advisory.
- 7.3.6.3.2 Free-Standing Signs – New and existing free standing mounted off-premise signs shall be allowed under the following guidelines:
  - (a) New freestanding off-premise signs or signboard structures shall have a setback of minimum (1.00) meters at the front and one (1.00) meters at the sides and rear. The setback provision shall be measured from the front line of the plot to the outermost edge of the billboard display frame.
  - (b) Sizes of signs and signboard structures vary from two (2.00) meters by three (3.00) meters or three (3.00) meters by five (5.00) meters up to 20 square meters depending on the location, the stability of the upright supports, and the compliance of the setback requirements and zoning classification of the site.

- (c) The Sign shall be well installed and tight at the site and mounted on columns within the concrete bases and that does not exceed the borders of the allocated site.

#### 7.3.6.4 Material Requirements

In addition to the provisions on Materials of QCS 2014 on Supports and Anchorages, the following shall likewise be applicable:

- (a) Signs consisting of banners, pennants, tarpaulins, and other similar non-rigid materials shall not be installed near power lines.
- (b) Sign structures carrying signs and signboards made of such materials shall be required to maintain a horizontal clearance from the power lines.

#### 7.3.6.5 Information Contained on Sign Boards

- (a) Master Developer – MANATEQ name and Logo
- (b) Investor Name / Owner name / Plot (or) PIN number.
- (c) Name and description of the project (and contract number if any) / Plot & PIN number.
- (d) Number and date of the building permit
- (e) Consultant office name, phone number, fax number, mobile phone number
- (f) Contractor Name, phone number, fax number, mobile phone number
- (g) Name of the person responsible for the site and phone number
- (h) Emergency phone number in off working hours
- (i) The name of subcontractors, if any
- (j) Perspective of the project, (perspective is Optional).
- (k) Duration of the project and the date set for the commencing the works and the expected date of the completion of the project
- (l) Put a cautionary guideline for safety reasons or any other precautions are needed

Plot Dimension	Signboard Height	Signboard Width	Total Area	Rise of Signage	Perspective Space	Character	Number	Letters Color	Sign Background
Below 5000 Sq. meter	Maximum 3.5 m with or without perspective	Min 1.2 m and Max 2.4 m	N/A	Min 70 Cm	25%	8 cm	6 cm	Black	White
Above 5000 Sq. meter	Max 5 m	Max 4 m	Max 20 meters Square	Max 2.70 meters of the ground	Max 40% of sign space	8 cm	6 cm	Black	White
Above 10000 Sq. meter	Same signboard specification like above 5000 Sq. meter plot area but number of signboards must be more than one.								

Reference: 1) MANATEQ logo – specification is available on the Manateq website ([www.manateq.qa](http://www.manateq.qa)) as a guideline  
2) Authorities requirement: please refer **MME Decree No. 120 regarding the sign of the site Article (1)**

### 7.3.6.6 Maintenance

Signboard shall be maintained in a safe and presentable condition. Should a signboard become, in the opinion of MANATEQ or TFMA, unsafe or show extensive deterioration due to poor maintenance, the service provider/investor, upon notice of MANATEQ OPERATIONS DEPARTMENT, shall immediately restore the signboard to a safe and satisfying condition. The owner of the sign or signboard structure shall keep in repair and in proper state of preservation all signs, together with all of their supports, braces, and anchors.

Signboard structures shall be inspected annually and after every occurrence of major typhoons or earthquakes.

### 7.3.7 Working on the Sidewalks

No contractor can drill, move, remove or break the sidewalk, nor tiling work, nor barriers of the sidewalk, nor work nearby it, nor under it, nor create any barriers or occupancy of any fixed, mobile, temporary areas of storage, without the prior approval of the competent department, or other relevant authorities.

#### General Conditions

You must consider the following conditions and procedures when working on the sidewalk, as follows:

- (a) The Contractor shall comply with regulations and instructions issued by Manateq, and the rules of safe passage contained in Qatar Traffic Manual.
- (b) The Contractor shall install the warning, indicative signs, night-lights at work areas. Shall maintain all necessary protection requirements, like barriers and indicative signs around the excavations to alert and protect the pedestrians, and install bridges over the excavations in the right places to facilitate traffic. It must take all necessary precautions to prevent the occurrence of any damage or hinder the movement because of the excavations and the implementation of the works.
- (c) The Contractor shall obtain a license from Manateq in case of need to use the sidewalk or any part of it to put building materials or waste on a temporary basis during construction or demolition or maintenance.
- (d) Contractor shall comply with the return as it was after the completion of the work and repair any defect in the sidewalks with the removal of parts invalid and reposition it to its natural state as they were.
- (e) The work shall be in accordance with the conditions specified by the competent department of Manateq or authorities.
- (f) The work shall be done during the prescribed period.

The sidewalks, which allocated to the movement of the pedestrian that is near to work sites, shall be open to the movement and the contractor shall take required precautions to protect the pedestrian, and if he needs to close it or close a part of it, the Contractor shall comply with the following:

- (a) Cover the sidewalk during construction or demolition if the building has two floors or more, or if the work is adjacent to the sidewalk with distance not less than 8 meters from the edge of the sidewalk or the road, and is less than (5 meters) measured from the middle of the sidewalk, to be covered under the following conditions:



- (b) Coverage shall be along the work site be with the provision of sufficient width for pedestrians on the sidewalk without causing an overstocked or obstruct traffic of the pedestrian through the covered corridor.
- (c) It must provide lighting photovoltaic (natural and artificial) to make safe pedestrian passage at all times.
- (d) The design of the covered part (Ceiling) shall be along with the footpath bear the weight of at least strength about (8k Newton/ m<sup>2</sup> ) and (10k Newton/ m<sup>2</sup>). In the case of use of part-covered (the ceiling) in the storage of some materials, and it shall take with the proportions in the above-mentioned cases, code of structural loads (whichever is greater).
- (e) It must protect the edges of the ceiling of the umbrella from the top by panels with height not less than (100) cm in order to prevent any fall of the materials from outside the ceiling. The board may be oblique to the outside but not more than 45 degrees, and provided that it is tight with the ceiling and does not conflict with vehicular traffic.
- (f) The loading and unloading openings (if any) shall be allocated to be in existing ceiling of the umbrella, closed all the time and open only in the case of use.
- (g) The Floor of the tiled roof shall be built from slabs with thickness not less than (5 cm) adjacent to each other and it must be linked well between it and the framework of the covered corridor to avoid movement.
- (h) If the covered corridor adjacent to the building, which is under construction, maintenance or demolition, it must be fence the building area in full, and it may use or create a corridor inside the gates point of the building.
- (i) The contractor may choice between the sidewalk cover (or) a fence along the edge of the sidewalk if the distance between the center of the sidewalk and the building, which is under construction or demolition or maintenance, is more than 5 meters and less than (8 meters).

**The general conditions of footpaths around the work sites and the temporary sidewalk:**

The contractor shall take into account the movement of pedestrians and vehicles on the project since the design of the temporary lanes and sidewalks for pedestrians around the work site and must take into account the following:

- (a) The separation of the temporary sidewalks for pedestrians of the work area, and the movement of vehicles, equipment, and vehicles stationed, entering, or leaving from the site.
- (b) The separation of movement and passage of pedestrians as they do not conflict with vehicular traffic.
- (c) The temporary sidewalks and corridors with entrances, exits, and floors are similar to the original lanes and sidewalks that are closed temporarily.
- (d) The Contractor shall provide the shop drawings of the sidewalk to be closed down to the competent departments indicating the dimensions of the pedestrian paths to obtain a permit before closing partially or completely the sidewalk.
- (e) In case of the work of a temporary pedestrian walkway on the border of the path of cars, it must take into account the following:
  - i. Obtaining the required permit from Manateq or Authority to construct pedestrian paths inside the road path if the closure is required fully, and there is no substitute for it.

- ii. Installing an indicative and warning signs to guide pedestrian traffic to another sidewalk in the absence of the ability to make pedestrian paths within the border of the road.
- iii. The pedestrian must be protected and install the appropriate guidelines signs to alert vehicles and pedestrians if the construction of temporary pavement built inside or in the path of vehicular traffic and comply with the requirements issued by Manateq, noting the following:
  - If the traffic is high, it must prevent pedestrians from passing cars nearby the concrete barriers, and its height shall be not less than (85 cm).
  - If the traffic is low and the speed is not high, it can install plastic cones to determine the path of pedestrians.
- iv. The necessity to adhere to the general specifications adopted by the Public Works Authority when designing, creating, or re-creating and/or renovate the sidewalks.
- (f) The car entering or standing on sidewalks is not allowed, except the temporary entrances designated for that car.
- (g) The conduct of a bicycle or motorbike on temporary sidewalks is not allowed, except tracks designed for it.
- (h) The executive contractor shall maintain the cleanliness of the temporary pavement and remove all cuttings that would cause damage in safety.
- (i) The contractor shall provide the disabilities requirements in temporary work in sidewalks, such as ramps and paving materials and implementation of the requirements of pedestrian facilities, and other requirements mentioned in the other requirements approved.
- (j) The sidewalk shall be free of obstacles, protrusions, and a rough surface to avoid slipping.
- (k) The sidewalk shall be appropriate to human scale and encouraged to walk and feel safe for pedestrians.
- (l) Taking into account the difference in the dimensions of the sidewalks and the elements that it contains, according to the sidewalk position of public services.
- (m) Taking into account the level of the sidewalk and the road teams, linking the pavement level with the level of the next sidewalk.
- (n) Provide the lighting and reduce the glowing light, especially in places where pedestrians need to read traffic and indicative signs.
- (o) Provide a clear traffic signs and control means.
- (p) Avoid the extreme tendency of the slopes, not to hinder the movement of pedestrians or disabilities.
- (q) Taking into account the work of the appropriate tendency to ensure that the discharge of water from the surface of the sidewalks to the level of the road or surrounding roads.
- (r) The ground shall be stable and non-slippery.



## 7.4. TEMPORARY TRAFFIC MANAGEMENT SCHEME

### 7.4.1 Purpose

Pursuant to compliance with QHSE Regulations of Manateq, Work zone traffic management Guide (WZTMG) and other applicable regulations as per Govt. of Qatar.

### 7.4.2 Scope of work

This document applies to the planning of traffic routes within Manateq premises as the provision of information for any plans that may affect other adjacent areas or the public.

### 7.4.3 Requirements

#### 7.4.3.1 General Information

- (a) Physical boundary of the roads controlled by contractor/ investor within premises of Manateq.
- (b) Detail drawing showing the entrance, exit, signage, and location of barriers, crossings, pedestrian way, and other relevant information as per requirement of clients shall be submitted for approval.
- (c) Access road detailed plan to be submitted by contractor to all relevant authorities, clients for approval.
- (d) Appropriate traffic and safety signage to be provided to guide the vehicle movements while on site.
- (e) Roadways shall be segregated from pedestrian access way as much as possible.
- (f) All roads must be adequately provided with lights from the entrance to the drop off point.
- (g) Only authorized delivery vehicles shall be permitted to enter the construction site passage.
- (h) The logistic plan shall be in line with the agreed works execution program with Traffic management plan and dewatering plan.
- (i) This plan shall be updated on regular basis and upon major changes for e.g. rerouting of dewatering line etc.

- (j) Contractor shall not close any road or part thereof or change the traffic pattern without prior notification and approval from Manateq and having an approved Traffic management plan in place.
- (k) Contractor shall ensure that Manateq's assets and properties are adequately protected from any potential damage that may arise because of their operation.
- (l) All works on or adjacent to live road/haul road shall be set up in accordance with latest "Work zone traffic management guide" issued by public work authority.
- (m) All temporary traffic signs and their set up must be accordance with WZTMG in regard to size, color, position, height, and reflective specifications.
- (n) Proposed location for installation of hard barriers, water/sand filled plastic barriers shall be clearly marked on traffic management plan.

#### 7.4.3.2 Restriction of the use of road

- (a) All construction material deliveries to construction site must have proper clearance and documentation.
- (b) The visitors log must be maintained at all time by the plot contractor.
- (c) All vehicles and equipment going into site must be in good condition.
- (d) Notice Board shall be provided at Entrance location, informing the Dos and Don'ts to delivery drivers and visitors in Arabic, English, Hindi, and Nepali.

#### 7.4.3.3 Site Speed Limits

- (a) Drivers must be adhered strictly to posted speed on Road.
- (b) In bad weather (Rain, fog), the speed limit may be reduced further to suit site condition.

#### 7.4.3.4 Pedestrian

- (a) Provision of separate traffic routes for pedestrian (1.5m minimum width) shall be clearly marked and demarcated.
- (b) All workers/visitors must use the pedestrian access provided on site at all time.

#### 7.4.3.5 Traffic calming measure

- (a) Speed humps to be provided at all site access gates and other identified locations as per requirement of Manateq.
- (b) Speed limit signs shall be installed from Entrance gate to plot entry.
- (c) Random speed monitoring shall be done by contractor HSE personnel and if found any violations, appropriate actions to be taken and inform Manateq and consultants.

#### 7.4.3.6 Parking, Loading/Unloading Provision

- (a) All vehicle parking on site must observe the reverse parking policy wherever possible.
- (b) Parking areas shall be provided with adequate illumination. Suitable provision shall be made for bus stops/parking areas.
- (c) Areas of loading and unloading must be separated from general access areas.
- (d) The loading and offloading area must be provided with trained banksman.

#### 7.4.3.7 Vehicle and Personnel requirement

- (a) All drivers must have valid State of Qatar driving License.
- (b) Mobile equipment operator must have the valid third-party certifications.
- (c) Using of mobile phones is strictly prohibited during operation.
- (d) Seat belt must be on while operating vehicles and equipment.
- (e) All vehicles and equipment's must have proper registration card.

#### 7.4.3.8 Information, Instruction, and Training

- (a) Information related to Site access route, specific locations etc. will be provided to all concerned parties, but must include, Manateq, TFMA, Project consultants, and other related stakeholders.
- (b) Training shall be provided periodically to all workers flagging the Risks and awareness while performing their duties. Records should be maintained throughout the work.

#### 7.4.3.9 Emergency Arrangements

- (a) In the event of breakdown of any vehicles or equipment, the contractor plant & machinery, the contractor shall make all necessary arrangements to clear road.
- (b) The contractor shall inform the HSE departments of Manateq, TFMA, Project consultants.
- (c) Emergency contact details shall be displayed at all adequate locations.

#### 7.4.3.10 Maintenance of Traffic Flow

- (a) The Contractor shall allow for the construction of temporary diversions to permit all existing traffic movements for the duration of the Contract period.
- (b) All diversions shall be constructed in accordance with the latest edition/version of Qatar Traffic Manual "Traffic Control at Roadworks" booklet and the Qatar Highway Design Manual and shall be approved prior to the implementation by both the Engineer and Traffic Police. It is the Contractor's responsibility to ensure that any traffic diversion required is properly signed, demarcated, illuminated, controlled, and maintained at all times.

- (c) Upon request, the Contractor shall install and commission temporary traffic signals capable of handling the diverted traffic.
- (d) Sequential arrow boards operating on a 24-hour basis (engine or solar powered) must be used at all diversion points.
- (e) Within the limits of the project where pedestrian traffic is present, all excavated areas, regardless of depth, must be cordoned off by means of wired mesh panels of height no less than 1.8m connected together to form a continuous barrier wall.

## 7.5. LAYDOWN & STORAGE AREA

### 7.5.1 Introduction

The operation of laydown yard or storage area to facilitate the construction of large project can often present hazards that are overlooked or unaddressed. The lack of attention may create difficulties with storage and access of equipment's, materials and tools but can adversely affect the overall safety and productivity of entire work site.

The following information offers guidance on setting up and operating laydown and storage area. The contractor / investor should familiarize themselves with Manateq Regulations, clients and consultant requirements related to safety, health, and environment.

### 7.5.2 General Description:

This chapter discusses the hazards associated with five main components of the Laydown/storage area.

- A. The site itself
- B. The equipment on site
- C. The materials on site
- D. The people working on site
- E. Scaffoldings

#### A. The site itself

- (a) Site security is first area concern of any site (Refer Manateq QHSE Regulations, and QHSE Clauses in the land agreements).
- (b) The laydown area shall be completely enclosed by fence (Approved by Plot Project Consultant) at least 2.0m in height and as per requirement of clients, consultants, and relevant authorities.
- (c) Nothing should store next to fence. Adequate safe distance should be left open next to fence so that fence can be inspected on a regular basis.
- (d) Some type of check in station or Guardroom should be located next to main entrance gate and adequate signage to be installed to direct people. The Main gate and access to site should be locked as unauthorized people wandering around a site are not only hazards to themselves, but they can cause unnecessary damage to equipment and materials in several ways.
- (e) The Contractor is responsible to record and control in and out of the materials.

- (f) Any materials or equipment shall not be stored near to fence, which may affect adjacent plot contractor/investor.
- (g) Its contractor responsibility to confirm any utility services underneath laydown area and found if any shall be properly relocated as per requirements of relevant authorities, clients, and consultants.
- (h) Adequate drainage facilities to be provided at laydown/storage area.

## B. The equipment on site

- (a) Heavy Equipment on any construction projects creates hazards unique to their use and the laydown or storage area is no exception.
- (b) Equipment may have to be moved many times to get in the best position to make the repair. All this activity can cause havoc in a cramped laydown yard hence it is best to isolate these activities whenever possible.
- (c) Another problem area with equipment, especially in laydown area is misuse of equipment. The contractor/investor has to ensure optimize usage of all equipment in laydown area to maintain safe work environment as per Manateq HSE regulations.

## C. The materials on site

- (a) The site plan of laydown area has to be prepared by contractor / investor showing the complete details and location for storage of materials/equipment, service area etc. and that plan should be approved by relevant authorities, clients, and consultants prior to deliver any material or equipment at site.
- (b) The hazardous and non-hazardous materials shall be stored separately as per recommendation of manufacturer and supplier.
- (c) Provision of proper storage facilities for flammable substances such as bottled gases and fuels.

## D. The people working on site

- (a) The work environment at laydown area is constantly changing hence competent, experience and knowledgeable yard crew is required.
- (b) The proper signage, training, safety induction, mockup drills, workshops to be arranged on regular basis at laydown area to enhance skill of workforce to prevent any major cause or incidents.

## E. Scaffoldings

Assembling and disassembling of scaffoldings may cause disturbance to the neighbors, therefore contractor must adhere to the following in conjunction with QCS related requirements regarding safety requirements for building works maintenance and demolition.

- (a) First erection phase to be programmed, whereas works to be commenced during weekends for commercial areas, or during evening times subject to obtaining prior approvals.
- (b) Scaffolding construction activities and dismantling activity shall be carried out by competent scaffolding supervisor. All employees involved in scaffolding construction activities and dismantling activity will be trained in safe methods of working to achieve fall prevention or

arrest. Contractors will maintain detailed information of the training provided and the methods that they have used for assessment of competency and suitability for all employees undertaking scaffolding construction activities. Third Party Certification shall be available at all times.

- (c) Dismantling of Scaffoldings to be carried out during normal allowed working hours unless a prior approval granted to extend the working hours.
- (d) Scaffoldings adjacent to neighbors' boundaries or being erected for more than week, all must be inspected at least once in a week, this is also applying to weather changes condition when stability and strength can be impacted and specialized technical person in this case must conduct the inspection. Inspection sheet records must be kept at site, and to be available during inspection.

## 7.6. EXCAVATION

### 7.6.1 Scope and Application

This section provides guidance for persons conducting a business or undertaking on how to manage the health and safety risks associated with excavation work. This section applies to all types of excavation work, including bulk excavations more than 1.5 meters deep, trenches, shafts, and tunnels. The guidance in this section is relevant to excavation contractors as well as persons conducting a business or undertaking who have management or control of workplaces where excavation work is carried out, such as principal contractors or Investor.

### 7.6.2 Principal Contractor / Investor

The principal contractor/ investor has a range of duties in relation to excavation work including:

- (a) preparing and reviewing a HSE management plan
- (b) obtaining Safe Work Method statement before any high-risk construction work commences
- (c) putting in place arrangements to manage the work environment including falls, facilities, first aid, an emergency plan and traffic management
- (d) Installing signs showing the principal contractor's name, contact details, and location of any site office.
- (e) Securing the construction workplace.
- (f) Approved third party shall do topographical and detailed survey from MMUP and as per Qatar survey manual and as per requirement of clients and consultants prior to commence any work at site.
- (g) All interface issues to be resolved well in advance in consultation with clients and consultants and Authorities to avoid further delay in construction, which may affect project completion date.

#### 7.6.2.1 Method Statement and Risk Assessment (RAMS)

A Contractor / Investor conducting excavation work must prepare a RAMS before the construction work starts. The RAMS must:



- (a) Method statement describing the step by step logical sequence of how a work activity is to be carried out safely and without risk to people, materials, and equipment.
- (b) Identify the type of high-risk construction work being done.
- (c) Specify the health and safety hazards and risks arising from that work.
- (d) Describe how the risks will be controlled.
- (e) Describe how the control measures will be implemented, monitored, and reviewed.
- (f) Be developed in consultation with workers and their representatives who are carrying out the high-risk construction work.
- (g) Inspection Test Plan
- (h) Checklist
- (i) Relevant drawings
- (j) Valid certificates/permits

### 7.6.2.2 Adjacent Buildings or Structures

- (a) Excavation work may seriously affect the security or stability of any part of a structure at or adjacent to the location of the proposed excavation which can lead to structural failure or collapse. Excavation work must not commence until steps are taken to prevent the collapse or partial collapse of any potentially affected building or structure.
- (b) Any excavation that is below the level of the footing of any structure including retaining walls that could affect the stability of the structure must be assessed by a competent consultant's engineer and secured by a suitable ground support system, which has been designed by a competent consultant's engineer. Suitable supports to brace the structure may also be required and should be identified by a competent consultant's engineer.
- (c) It is also important that other buildings in and around the excavation site are not adversely affected by vibration or concussion during the excavation work. Special precautions may need to be taken near hospitals and other buildings containing equipment sensitive to shock and vibration.
- (d) Excavation work must be carried out in a way that does not cause flooding or water penetration to any adjacent building.
- (e) The excavation contractor shall not occupy the adjacent plot of investor by means of dumping excavated soil, storage of materials etc.

### 7.6.2.3 Underground Utilities Services

- (a) Utilities services include the water network, sewerage network, telecommunications, and electricity in pipes or lines. The contractor / Investor must manage the risks associated with essential services at the workplace.
- (b) Specific control measures must be implemented before using excavators or other earthmoving machinery near overhead electric lines. The relevant authority should be

consulted regarding approach distances and appropriate control measures implemented to prevent any part of the plant or any load carried on it from coming too close or contacting overhead electric lines.

- (c) Information on the location of underground services may be obtained from relevant authorities, clients, and consultants. Any underground service plans / drawings that are obtained including information on underground essential services must be provided to the principal contractor and/or the Investor. Other relevant parties including any subcontractors and plant operators carrying out the excavation work should also be provided with information about essential services and other plans, so the information is considered when planning all work in the area.
- (d) Underground services information obtained must be:
  - Made available to any worker, principal contractor and subcontractors
  - Readily available for inspection, as required under HSE, and
  - Retained until the excavation work is completed or, if there is a notifiable incident relating to the excavation work.
- (e) Available information about existing underground essential services may not be accurate. Therefore, it is important that excavation methods include an initial examination of the area to be excavated, for example, sampling the area by exposing a short section of underground services usually using trial pits, electronic utility services detector etc. and have to prepare as built data of existing underground utilities and to be submitted to clients and consultants.

#### 7.6.2.4 Securing the Work Area

While securing the trench or excavation, you must consider:

- (a) Risks to health and safety arising from unauthorized access to the work area, and
- (b) The likelihood of unauthorized access occurring.

This requirement aims to protect other workers on site who may be at risk by restricting access to the excavation area. It applies in addition to the duty that the person with management or control of the construction site has to ensure, so far as is reasonably practicable, that the site is secured from unauthorized access from members of the public, for example when the site is near schools, parks, shops or other public places.

#### 7.6.2.5 Emergency Plan

- The contractor shall ensure that the project specific emergency plan in line with QCS 2014 should be in place and liaison with the Civil Defense (Fire Department) to deal with unexpected incidents (i.e., soil slippage/erosion, flooding, gas leaks, etc.) and the rescue of workers from an excavation.
- A copy of Initial incident Notification followed by Incident Investigation form to be duly filled and sent to Manateq within stipulated time frame.
- Emergency drills shall be conducted periodically, and records must be kept at site.

## 7.6.3 CONTROLLING RISKS IN EXCAVATION WORK

Contractors shall appoint a competent excavation supervisor for all excavation works. Temporary barriers should be used to protect workers and travelling public from excavations that are more than 300mm deep in accordance with the Qatar Work Zone Traffic Management Guide.

### 7.6.3.1 Excavated material and loads near excavations

All the loading and unloading near the excavations must be in accordance with QCS 2014, approved method statement, risk assessment and lifting plan approved by appointed plot consultant/Client.

### 7.6.3.2 Falls

In managing the risks of falls, the Contractor must adhere to the QCS 2014, Ashghal and Kahramaa requirements and compliance with the approved method statement and risk assessment control measures.

## 7.7. DEWATERING

- (a) The plot contractor has to follow and ensure compliance of State Authorities and QCS regulations to address dewatering subjects in plot area.
- (b) It should be noted that legislative requirements, standards, and requirements detailed in State Authorities and QCS regulations have to be complied by the contractor.
- (c) The practice of dewatering applies to any construction site (includes any onsite and offsite excavated areas), where the presence of water creates unsafe conditions, potential damage, or restricts construction operations.
- (d) Construction sites where water is present in any form, including intermittent runoff, streams, standing water, groundwater, or other bodies of water.

### (e) Environmental Permit

The Contractor shall obtain an Environment Permit from MME prior to dewatering activity.

### (f) Emergency Management Measures

The Contractor shall ensure that the project specific emergency plan and drills are in place and in line with QCS 2014 and Manateq QHSE Regulations.

## 7.8. FUEL TANK - WOQOD APPROVED

### 7.8.1 Purpose

This section illustrates the procedures that contractor/Investor has to adopt for the installation of Fuel tank.

### 7.8.2 Location

This task shall be carried out on a site-wide basis. It shall be in conjunction with approved construction drawings, and approved location by plot consultants and WOQOD.



### 7.8.3 Requirements

- (a) Storage Tank Bund wall should be constructed using concrete material and should be plastered inside & outside and the concrete base should be 10-centimeter thickness. Fabricated steel plate bund wall is also allowed. The volume should be %110 of the tank's volume.
- (b) Bund wall drainpipe should have a valve with a pipe blind cap installed at all times.
- (c) Bund wall should be painted with standard caution stripes.
- (d) Three (3)-meter free open space should be maintained around the bund wall.
- (e) Dry Chemical Powder and Foam Fire Extinguishers to be placed 5 meters away from the storage tank and to be installed inside industrial type boxes. The required quantity of fire extinguishers for each tank capacity is as per below:
  - 2,500 / 5,000 liters' capacity storage tank = 2 x 6 KG Chemical Powder
  - 15,000 / 10,000 / 20,000 liters' capacity storage tank = 2 x 12 KG Chemical Powder
  - 50,000 liters' capacity storage tank = 1 trolley 20-Gals Foam Chemical & 2 x 12 KG Chemical Powder
- (f) No electrical connections inside the bund wall area and all pumps & meters should be installed outside the bund wall area.
- (g) There should be a designated legal parking for WOQOD road tanker and easy access in/out from the site.
- (h) Contractor is fully responsible for all the mandatory safety and environmental measures related to diesel product handling.
- (i) The contractor has to follow all HSE and Environment regulations according Qatar Gov. Laws, MME, Authorities, and WOQOD etc.
- (j) Storage area shall have access only for Authorized person.
- (k) All construction shall be done in line with QCS 2014 regulations.
- (l) Emergency contact details shall be displayed at adequate locations.

- (m) Necessary permits and approvals shall be taken for any type **HOT** work nearby storage area.
- (n) Proper housekeeping shall be maintained surround Fuel storage area. (Combustible material shall not be kept nearby)

## 7.9. TOWER CRANE

Cranes, whether used to construct the Works or provided as part of the permanent Works, must have a current test certificate issued by a competent testing authority approved by the Consultant. Copy of test certificate should be available at site for inspection.

The Contractor shall ensure that the project-specific Lifting Plan is in place. Erection and dismantling of tower cranes shall be carried out by competent personnel and in line with Section 11 Part 1.4.3.39 Tower cranes of QCS 2014 and Manateq QHSE Regulations. Third Party Certification shall be available at site for inspection.

Tower Crane shall be operated by trained and competent operators who are in possession of an operator's license issued by a Third Party. Prior to commence any work at site all personnel shall receive site-specific safety induction and briefing on approved lifting plan, method statement and Risk assessments. This induction and briefing shall be recorded as per requirement of Manateq QHSE Regulations.

## 7.10. HISTORICAL BUILDINGS AND ARTEFACT/ANCIENT HISTORICAL PIECES

In order to save/protect important Historical artefact/ancient historical pieces and maintain them in the same shape and same location, contractor must strictly follow the bellow:

- (a) Ensure all operations are in line with an approach for supporting, protecting of historical/ecological areas & zones, and mitigation/limitation of any possible influences accordingly.
- (b) In the event of finding any artefact/ancient historical piece at the workplace, Contractor personnel must immediately inform and report the chief engineer (responsible person), Qatar Tourism Authority (visit Qatar) and Qatar museum or the nearest police station. All found artefact/ancient historical pieces to be recorded and kept in a register.

## 7.11. GEOTECHNICAL INVESTIGATION

### 7.11.1 Objectives

This section is developed to set guideline for investors/Investors' representative or other related parties to step in geotechnical investigation works/soil investigation in the designated plot. In addition, to ensure all related approvals and permits to conduct geotechnical investigation works in Manateq Managed Areas are obtained from relevant authorities as per set standards in the State of Qatar.

This chapter has been developed in compliance with the existing local laws/regulations; in case of a conflict with the local laws/regulations, the requirements of the local laws/regulations shall prevail. All such conflicts are to be brought to the attention of MANATEQ for resolution.

### 7.11.2 Site Entry Application:

Investor/Investor's representative will communicate with Manateq operation department to submit application for site entry, on areas where applicable, to conduct geotechnical investigation. The filled application will be submitted through email or walk into Manateq office to document controller of operation department. Upon received application form with attachments from Investor/Investor's

representative, document controller will forward to Manateq Technical Manager and TFMA for review and approval.

### 7.11.3 Assessment of Site Entry Application:

Upon receiving application and relevant documents mentioned in the Site Entry Application Section B, The TFMA representative will go through, check the application, and confirm acceptance. Then the application will be brought to Manateq Operation department for approval and stamped.

The TFMA representative will communicate with investor and PMC/CMC or MC wherever applicable to circulate the approval. The medium of communication can be through either email or telephonic conversation.

In this regard, the TFMA representative will ensure PMC/CMC will facilitate the investor to access in the development premises and no conflict to conduct geotechnical investigation works

The investor/Investor's representative is solely responsible to follow site safety policy and will have own safety measures during work on site.

### 7.11.4 Work commencement:

Investor/Investor's representative will notify Manateq operation department/TFMA in advance to start work at site. On the first day, all team members will go through safety induction as per site requirement and any new member joining in the team will have to go through the same induction to secure gate pass.

The working time in the site will be as per project main contractor's time schedule and all team must abide by the set safety policy. Specifically, for traffic movement in the project is restricted to certain limit therefore need special precaution to avoid any accident.

For safety regulation comply with QHSE Regulations, and QHSE Clauses in the land agreements (as applicable).

### 7.11.5 Work Completion and Record:

Upon completion of the work, the investor will submit Report to Manateq operation department for record.

## 7.12. OUTSIDE PLOT WORKS AND MANATEQ CONSOLIDATED PERMIT TO WORK (MCPW)

### 7.12.1 MCPW System

A MCPW system authorizes specific parties to conduct work at a specific time and within common areas of Economic Zones or Logistic Parks managed by Manateq. It ensures proper planning of the work and that risks are adequately managed by formalizing the required controls. It ensures communication between site management, supervisors, operators, and the work team. (Please refer to Manateq MCPW as referred in the QHSE regulation).

### 7.12.2 Objectives of MCPW System

The objectives and functions of MCPW system are:

- (a) Ensuring the proper authorization of designated work. This may be work of certain types, or work of any type within certain designated areas, other than normal operations.

- (b) Making clear to people carrying out the work the exact identity, nature, and extent of the job and the hazards involved, and any limitations on the extent of the work and the time during which the job may be carried out. Specifying the precautions to be taken including safe isolation from potential risks such as hazardous substances and energy sources.
- (c) Ensuring that the person in charge of a unit, plant or installation is aware of all the work being done
- (d) Providing not only a system of continuous control but also a record showing that the nature of the work and the precautions needed have been checked by an appropriate person or people.
- (e) Providing for the suitable display of permits.
- (f) Providing a procedure for times when work has to be suspended. (i.e., stopped for a period)
- (g) Providing for the procedures or arrangements for work activities that may interact with or affect any of these activities.
- (h) Providing a formal hand-over procedure for use when a permit is issued for a period longer than one shift or when permit signatories change.
- (i) Providing a formal hand-back procedure to ensure that any part of the plant affected by the work is in a safe condition and ready for reinstatement.

### 7.12.3 QPRO and MCPW Matrix applicable for the works in common areas

ZONE	QPRO AUTHORITY	PTW AUTHORITY	PROCESS
Mesaieed Industrial City	Qatar Petroleum	MANATEQ	QPRO+ Manateq MCPW
Birkat Al Awamer Logistic Park	Ashghal	MANATEQ	QPRO
Aba Saleel Logistic Park	Ashghal	MANATEQ	QPRO
Al Wakra Logistic Park	Ashghal	MANATEQ	QPRO + Manateq MCPW
Jery Al Samur Logistic Park	Not Applicable	MANATEQ	Manateq MCPW

### 7.13. UTILITIES TIE-INS INTERFACES

The investors, their Consultants and Contractors should adhere to the locations and details including tie-in locations provided in the utilities plot sheets during design stage for its respective plot. In case of any conflict with the utilities tie-in connection locations, levels or coordinates, the site infrastructure As-Built tie-in locations and conditions shall prevail. All such information related to any conflicts are to be brought to Manateq attention for information and resolution. In case if it is deemed to be necessary to relocate/change tie-in connection locations to meet plot requirements Investor shall hold all the responsibility of all the formal procedures, authorities approvals, modifications or reinstatement of works for the site including all cost and time effect. Detailed request stating the reason along with proposed alternative works drawings, method statements and risk assessment report has to be submitted for review and approval by Manateq. Manateq Operations Department decision in all cases shall be conclusive in this regard.



The investor is liable to fill up the Tie-In application Form and send an advance notice request to Manateq at least two months before attaining Building Completion Certificate so that the required utility services connections to plot can be reviewed and assessed. The plot investor, its designated consultant, contractor and subcontractor must adhere to all Manateq procedures and guidelines for utilities service connections.

### 7.13.1 Potable Water Service Connection

Plots Investors has to submit the Tie-in application to Manateq in advance notice at least two months before attaining Building completion certificate for review and approval, upon approval of the application from Manateq the investors have to approach Kahramaa to comply with Kahramaa requirements and procedures to avail the water supply. In case the plots investors' wishes to utilize KM water for construction purpose, then they have to approach Manateq and Kahramaa to fulfill their requirements and follow the same procedure, as mentioned above, which is subject to Manateq and Kahramaa approvals.

### 7.13.2 Foul Sewage Connection

Plots Investors has to submit the Tie-in application to Manateq in advance notice to construct plot sewage network manhole at tie-in location, Manateq will review and approve the application for necessary constructions of manhole and tie-in connection, until the investor obtained Building Completion Certificate, the tie-in sewage pipe should be plugged and it is not allowed to discharge sewage during plot construction phase. Upon obtaining BCC (Building Completion Certificate) the investor has to approach Manateq to obtain the approval to unplug the tie-in network and commence discharge to the permissible quantity of domestic foul sewage from plot to Manateq network conforming to plot utilities data sheets, land use regulations and Kahramaa regulations for the estimated discharge of foul sewage. During construction phase, the plot investor should have its own arrangement for sewage collection and disposal, discharging any foul sewage to Manateq main drainage/foul network in construction phase is strictly prohibited.

### 7.13.3 Electricity Connection (LV/MV)

Plots Investors has to submit the Tie-in application to Manateq in advance at least one month along with all pertaining documents and approvals from Kahramaa, based on site conditions and availability of Kahramaa approval Manateq will review the request/application and provide feedback/Permit to work to the investor.

In case the plots investors' wishes to utilize KM electricity for construction purpose, then they have to follow the above-mentioned same procedure to obtain approval to make tie-in.

### 7.13.4 Fire Water Line Connection (Wherever Applicable)

- (a) Investors is liable to construct a chamber for Fire Valve prior to commencement of its construction activities at the site to protect from any sort of damage and easy operation of the valve in future.
- (b) Investors shall Install a flow meter at their respective fire water line for fire water usage monitoring purposes
- (c) Investors shall follow Manateq permit to work system prior to any activity related to the fire network or any other activities affecting Manateq assets. Investors will be therefore require to adhere the following procedures:



1. The investor shall submit the Permit to Work form while applying for tie-in/service connection
2. Prior to the request for valve opening for QCDD inspection, investors shall be required to provide the evidence for an approved hydro test of its fire system and installed fire equipment from its designated consultant.
3. The investor shall make additional arrangements of assigning a separate water tanker at site while a request for the opening of the main fire line valve. This will help in catering any potential loss of water during the testing and inspection.
4. In case the investor may request for its fire system hydrostatic testing through Manateq Fire Network system, the investor shall bear all expenses including testing and provision of water utilized for the testing.

### 7.13.5 Treated Sewage Effluent Water (Wherever Applicable)

In case approved by concerned authorities, TSE may be provided to the investor (for their landscaping/irrigation purpose only) at Investors' own expenses including collection and delivery from the pumping station to the respective plot.

### 7.13.6 Telecom ducts tie-in connection

Plots Investors has to submit the Tie-in application to Manateq in advance notice to construct plot telecom network manhole at tie-in location, Manateq will review and approve the application for necessary construction of manhole and tie-in connection. The plot's investors have to approach Telecom Service Providers to request the required services for their plot's telecommunications connection.

## 7.14. MANATEQ FORMS AND APPLICATIONS

The required Manateq forms and applications mentioned below and/or any other information required about the plots and regulations can be obtained from Manateq by sending an email or a letter to the email [enquiries@manateq.qa](mailto:enquiries@manateq.qa) addressing plot ID number on the subject line and describing the request.

List of Applicable Manateq Forms and Applications and Regulations:

- (1) Site Entry Application
- (2) MCPW Application (Manateq Consolidated Permit to Work)
- (3) Utilities Tie-in Application
- (4) Project Signboard regulations and specifications
- (5) Initial Incident Notification
- (6) Plot Design and construction Milestone Undertaking Form
- (7) Manateq QHSE Regulations