

8TH BIENNIAL CONFERENCE ON CONSTRUCTION PROJECTS FROM CONCEPTION TO COMPLETION

Session 1 Amending FIDIC for Major Projects – with reference to the
contracts used on the Doha Metro Project

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Facts on Qatar



National Wealth

- The world's richest country per capita according to International Monetary Fund (IMF)

Diverse Nation

- Home to over 85 different nationalities

Resources

- Petroleum, natural gas
- GDP \$180bn, liquefied natural gas (LNG), petroleum products, fertilizers, steel

Sports

- Hosted the 2022 FIFA world cup (18 Nov to 22 Dec 2022)

Museum of Islamic Art



National Museum of Qatar



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FIFA 2022 Stadiums



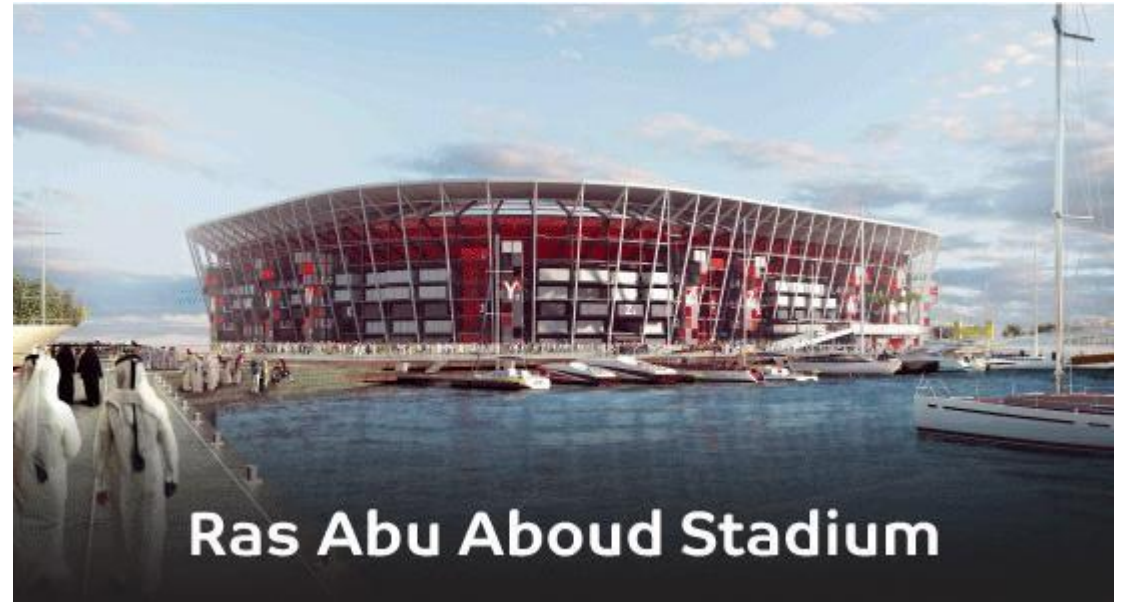
FIFA 2022 Stadiums



FIFA 2022 Stadiums



FIFA 2022 Stadiums



Doha Metro- Network Map – *to be constructed*



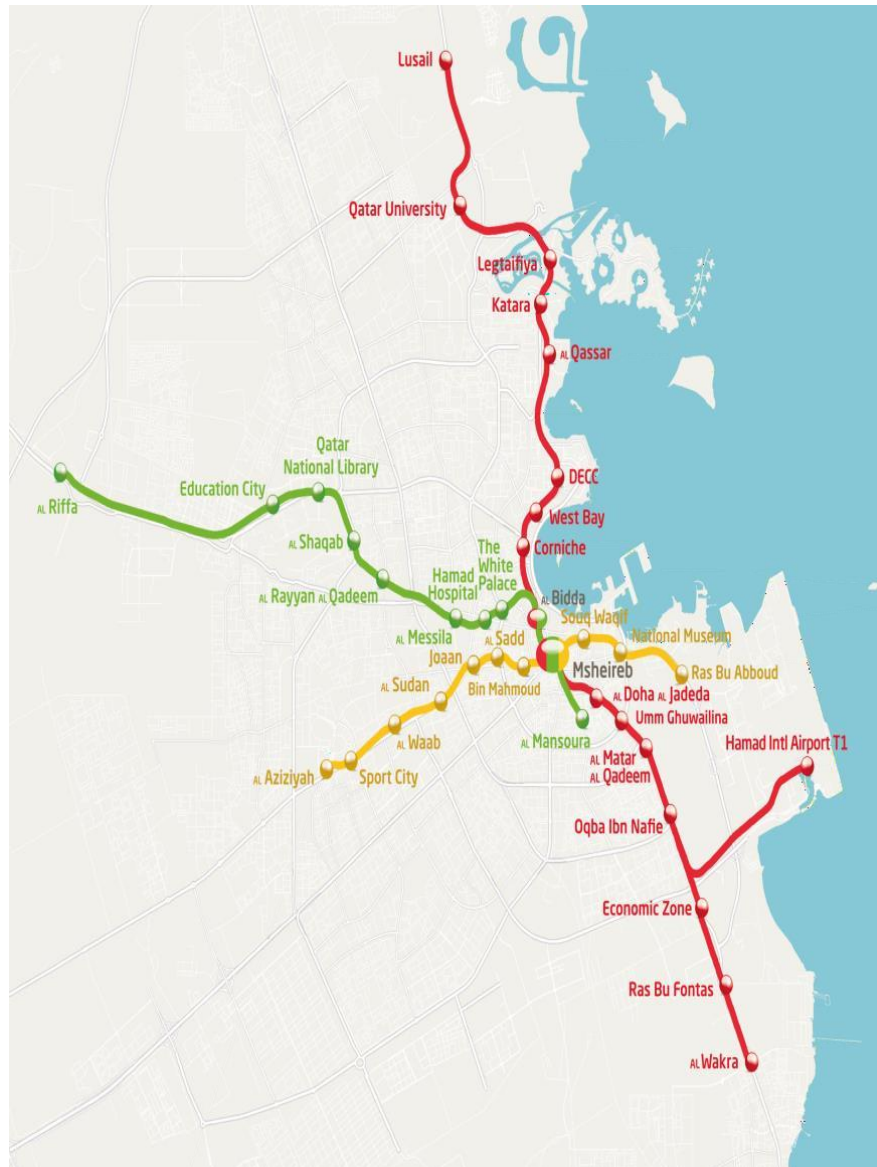
Qatar Rail-Doha Metro Phase 1



Project Data:

- Overall project value \$USD 30 billion
Construction spend rate approximately \$USD 400 million per month over 72 months
- 2019 – peak work force: 84,000 people
- 12 Civil packages and 1 Systems contract
- Commenced 2012, first contracts signed June 2013
- Fully operational December, 2019.

DOHA METRO PROJECT- PHASE 1 (2013- 2020) OVERVIEW



3

Lines



21

TBMs



140

Tunnels



8.7

Viaducts



37

(31 UG)

Stations



2019

Phase 1
operational

Tunneling



140 km tunnel

21 TBMs



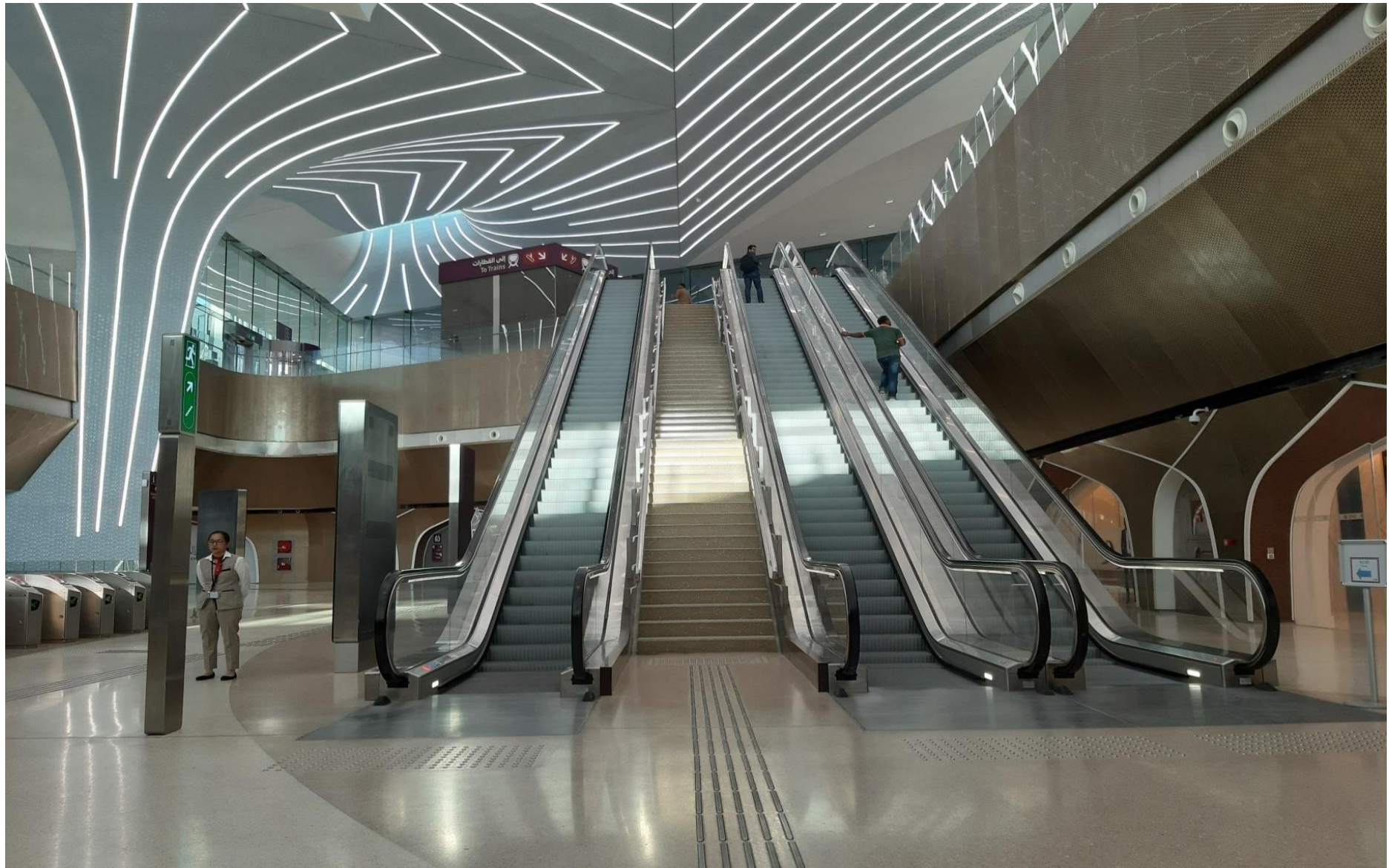
Branding “Vaulted Spaces”



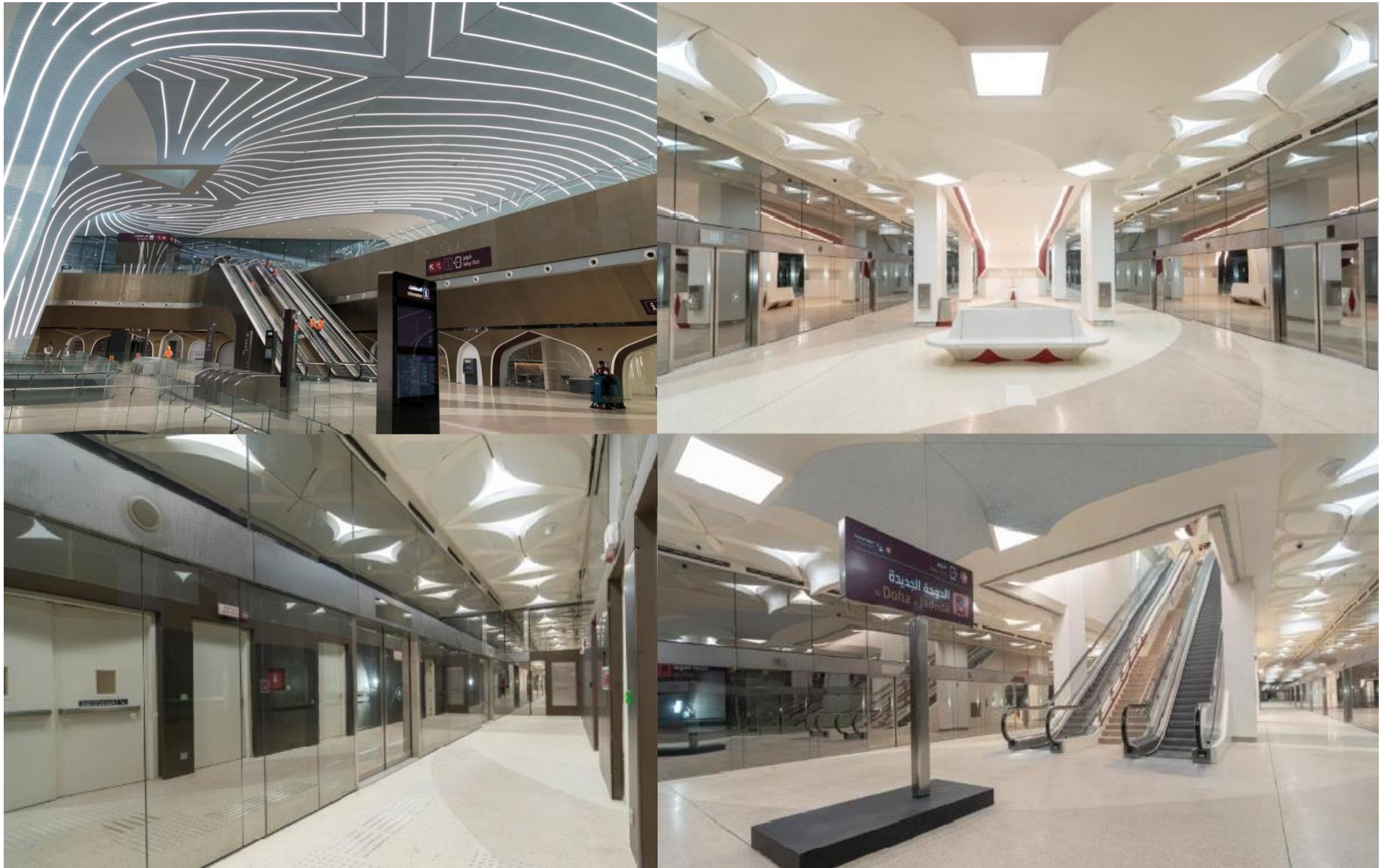
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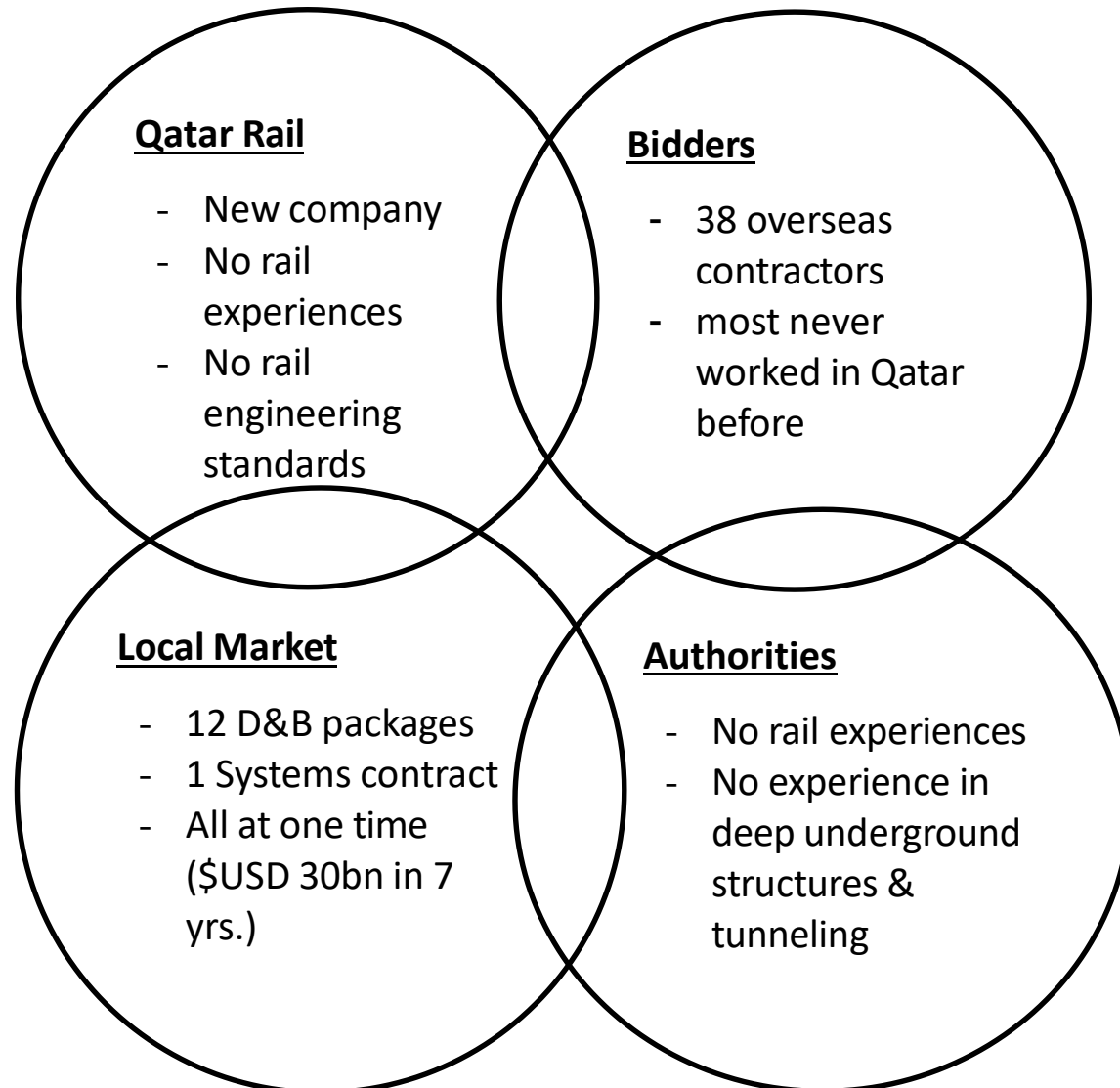
Branding “Vaulted Spaces”



Stations



Issues & Risks for the Procurement Strategy



Issue #1: The General Conditions are but one contract volume: FIDIC 2017 (Yellow Book) Cl 8.3 & Associated Definitions – changes marked

Clause 8.3 Programme

1. The changes made in the 2017 version of the Yellow Book to the programme contents section of Clause 8.3 and the associated new and changed definitions are shown in underlined text below:

Definitions

1.1.38 “Extension of Time” or “EOT” means an extension of the Time for Completion under Sub-Clause 8.5 [Extension of Time for Completion].

1.1.55 “No-objection” means that the Engineer has no objection to the Contractor’s Documents, or other documents submitted by the Contractor under these Conditions, and such Contractor’s Documents or other documents may be used for the Works.

1.1.67 “Programme” means a detailed time programme prepared and submitted by the Contractor to which the Engineer has given (or is deemed to have given) a Notice of No-objection under Sub-Clause 8.3 [Programme].

1.1.71 “Review” means examination and consideration by the Engineer of a Contractor’s submission in order to assess whether (and to what extent) it complies with the Contract and/or with the Contractor’s obligations under or in connection with the Contract.

Clause 8.3 Programme

The Contractor shall submit an initial programme for the execution of the Works to the Engineer within 28 days after receiving the Notice under Sub-Clause 8.1 [Commencement of Works]. This programme shall be prepared using programming software stated in the Employer’s Requirements (if not stated, the programming software acceptable to the Engineer). The Contractor shall also submit a revised programme which accurately reflects the actual progress of the Works, whenever any programme ceases to reflect actual progress or is otherwise inconsistent with the Contractor’s obligations.

The initial programme and each revised programme shall be submitted to the Engineer in one paper copy, one electronic copy and

additional paper copies (if any) as stated in the Contract Data, and shall include:

- (a) the Commencement Date and the Time for Completion, of the Works and of each Section (if any);
- (b) the date right of access to and possession of (each part of) the Site is to be given to the Contractor in accordance with the time (or times) stated in the Contract Data. If not so stated, the dates the Contractor requires the Employer to give right of access to and possession of (each part of) the Site;
- (c) the order in which the Contractor intends to carry out the Works, including the anticipated timing of each stage of design, preparation and submission of Contractor's Documents, procurement, manufacture, inspection, delivery to Site, construction, erection, installation, work to be undertaken by any nominated Subcontractor (as defined in Clause 4.5 [Nominated Subcontractors]), testing, commissioning and trial operation;
- (d) the Review periods under Sub-Clause 5.2.2 [Review by Engineer], and periods for Review for any other submissions specified in the Employer's Requirements or required under these Conditions;
- (e) the sequence and timing of inspections and tests specified in, or required by, the Contract;
- (f) for a revised programme: the sequence and timing of the remedial work (if any) to which the Engineer has given a Notice of No-objection under Sub-Clause 7.5 [Defects and Rejection] and/or the remedial work (if any) instructed under Sub-Clause 7.6 [Remedial Work];
- (g) all activities (to the level of detail specified in the Employer's Requirements), logically linked and showing the earliest and latest start and finish dates for each activity, the float (if any), and the critical path(s);
- (h) the dates of all locally recognised days of rest and holiday periods (if any);
- (i) all key delivery dates of Plant and Materials;
- (j) for a revised programme and for each activity: the actual progress to date, any delay to such progress and the effects of such delay on other activities (if any); and
- (k) a supporting report which includes:
 - (i) a description of all the major stages of the execution of the Works;
 - (ii) a general description of the methods which the Contractor intends to adopt in the execution of the Works;
 - (iii) details showing the Contractor's reasonable estimate of the number of each class of Contractor's Personnel, and of each type of Contractor's Equipment, required on the Site, for each major stage of the execution of the Works;
 - (iv) if a revised programme, identification of any significant change(s) to the previous programme submitted by the Contractor;
and
 - (v) the Contractor's proposals to overcome the effects of any delay(s) on progress of the Works.

2. Observations

- Very prescriptive and in many cases uses “technical” (i.e., programming) terms
- Proscribes detail to be included in each Contractor Programme to the level of:
 - “One paper copy” of each programme
 - *(h) the dates of all locally recognised days of rest and holiday periods (if any);*
 - *(i) all key delivery dates of Plant and Materials*
- Combines and mixes concepts of the planning of the works with delay and recovery issues

3. The General Conditions are not the only contract volume

- The setting for my comments is that FIDIC 2017 users, and those who might seek to amend other standard forms of General Conditions, need to understand, and take into account, two (2) critical factors:
 - A. The content of the other contract volumes
 - B. If, and to what extent, those volumes address topics also addressed in the General Conditions.

- **Why is this important?**

First is the application of the primacy clause in FIDIC 1.5 viz:

Clause 1.5 (Priority of Documents) provides that:

The documents forming the Contract are to be taken as mutually explanatory of one another. If there is any conflict, ambiguity or discrepancy, the priority of the documents shall be in accordance with the following sequence:

- (a) *the Contract Agreement;*
 - (b) *the Letter of Acceptance;*
 - (c) *the Letter of Tender;*
 - (d) *the Particular Conditions Part A – Contract Data;*
 - (e) *the Particular Conditions Part B – Special Provisions;*
 - (f) **these General Conditions;**
 - (g) **the Employer’s Requirements;**
 - (h) *the Schedules;*
 - (i) *the Contractor’s Proposal;*
 - (j) *the JV Undertaking (if the Contractor is a JV); and*
 - (k) *any other documents forming part of the Contract.*
-

- **The complete contract volumes for the QR contracts looked like:**

Vol 1: Formal Instrument of Agreement

Vol 2: Commercial (pricing; bills of quantities; provisional sums; cost escalation)

Vol 3: General Conditions of Contract

Vol 4: Employer’s Requirements – General

Vol 5: Employer’s Requirements – Particular

Vol 6: Employer’s Requirements – Design Specifications

Vol 7: Employer’s Requirements – Materials & Workmanship Specifications

Vol 8: Employer’s Requirements – Tender Drawings

Vol 9: Employer’s Requirements – Employer’s Investigations

- Secondly, a modern set of Employer Requirements (in the QR contracts, Volume 4 – See Table of Contents at Annexure A) will contain a section on “Project Controls” and is likely to state:

Example of the detailed requirements for Project Controls and Programmes in an Employer's Requirements section in a FIDIC-style contract.

1. PLANNING, PROGRAMMING AND PROGRESS MANAGEMENT

1.1. Project Management

1.1.1. The Contractor shall provide effective project management of all Contract activities for the work under the Contract. It is a prime responsibility of the Contractor to manage the work under the Contract to achieve the requirements of the Contract, meeting all the time requirements without delays. The Contractor shall cooperate fully with the Engineer in coordination with all parties involved with the project, not only limited to the designer(s) of interfacing works, other Contractor(s), private developers and concerned local authorities.

1.2. Software

1.2.1. The Contractor shall implement and use a computerised system to plan, execute and manage the design and construction of the work under the Contract throughout the work under the Contract.

1.2.2. Programme management software shall be in accordance with the Technical Information Management Plan included in Employer's Program Plans and shall provide data in formats completely compatible with the system used by the Engineer. The software shall be Primavera Project P6.

1.2.3. If required by the Engineer, five (5) copies of the software and relevant installation and operation manuals licensed for use in connection with the work under the Contract shall be provided free of charge to the Engineer and the Employer.

1.2.4. The Contractor shall comply with all protocols related to the access to and the security of the Employer's and Engineer's computer networks and intranet.

1.3. Programmes

1.3.1. The Contractor shall develop a detailed, logical method of executing the work under the Contract and shall provide programmes which shall reflect the detailed planning to be undertaken.

1.3.2. The Contractor shall comply with the work breakdown structure provided by the Engineer.

1.3.3. The programmes shall be realistic, achievable and shall fully reflect the Employer's Requirements and shall be accompanied by detailed supporting plans.

1.3.4. Programme activities shall be discrete items of work, which when combined, produce definable elements, components, leading to Milestones, Key Interface Dates and Sectional Completion dates and clearly identify the completion obligations of the Contractor.

1.3.5. Any programme activity creating an imposed time or other constraint shall be fully defined by the Contractor.

1.3.6. Activity descriptions shall clearly convey the nature and scope of the Works. Programmes shall take into account the activities of preceding, concurrent, adjacent, and follow-on parts and Sections of the work under the Contract as well as utility service diversions, new utility installations and connections, and any other activity that may affect the progress of the work under the Contract.

1.3.7. Milestones, Key Interface Dates, Sectional Completions and Taking Over Dates shall be an integral part of all programmes and all activities. Sequencing and interrelationships required to achieve each of these dates shall be shown on the programme.

1.3.8. The programming shall not impose constraints which in any way affect the float or limit the achievement of Key Interface Dates, Sectional Completion or Taking Over.

1.3.9. The critical path shall be clearly identified in the programmes and fully described in the accompanying programme narrative.

1.3.10. The Contractor's prime point of contact for all matters relating to planning, programming and progress management shall be the Engineer.

1.4. Programme Submissions

- 1.4.1. All submissions of proposed programmes and schedules 28 days from the Commencement Date shall include the actual progress of work and forecast of work remaining. Actual progress shall be stated in terms of completed Milestones, Key Interface Dates, Sectional Completion and Taking Over (as defined in the Schedule of Payments) with the corresponding earned value; and percentage completions of activities commenced but between Milestones, Key Interface Dates, Sectional Completion and Taking Over; and remaining duration and actual start and finish dates for each activity in the work under the Contract.
- 1.4.2. If the Programme fails to comply with the Contract or to be consistent with actual progress, the Contractor shall amend the programme taking into account the Engineer's comments and/or requirements and resubmit the Programme within 14 days for review by the Engineer.

1.5. Master Programme – First Submissions

- 1.5.1. Within 28 days of the Commencement Date, the Contractor shall submit the initial 'Master Programme' for review by the Engineer. The detailed Master Programme shall be fully compliant with the key interface and Taking Over schedule and milestone time programme and shall provide full programme details for the first six (6) months of the Contract and outline details for the remaining period of the Contract.
- 1.5.2. Within 180 days of the Commencement Date, the Contractor shall submit to the Engineer for review a fully comprehensive Primavera Project P6 based, resource and cost loaded detailed 'Master Programme'. In identifying all construction, installation, fitting out, testing and commissioning activities and associated interfaces, it shall include:
- a) key plans showing the zones/location mentioned in the programme;
 - b) method statement narrative explaining contract components, areas, zones methodology, sequence of construction, logistics, temporary facilities, safety and security, traffic and utility diversions, planning, permits and licences, interface management with other construction packages, contractual milestones, imposed constraint dates and assumptions;
 - c) work breakdown structure (WBS) shall be in accordance with the Contract and for review by the Engineer;
 - d) activity coding system as defined by the Engineer;
 - e) cost accrual coding shall be defined by the Engineer;

- f) level 2 programme showing design programme, construction sequence taking into consideration of all the interfaces with other contracts in the Qatar Integrated Rail Project (QIRP) Phase 1. This shall be used as a guideline for preparing the Contractor's detailed design and construction programme;
- g) critical path of the work under the Contract;
- h) planned progress S curve derived from budgeted cost loaded on to the schedule cumulative and monthly cashflows;
- i) long lead items and forecasts of all Milestone dates, Key Interface Date, Sectional Completion dates and Taking Over dates; and
- j) time chainage diagrams, using TILOS software, fully in compliance with the Master Programme.

1.6. Programme – Updates

1.6.1. The detailed Master Programme shall be updated and submitted monthly by the Contractor, or as required by the Engineer and an electronic copy shall be provided to the Engineer accordingly.

1.6.2. The Contractor shall produce and submit a summary level report on the Master Programme for the Engineer's review. This report shall contain the following information as a minimum planning requirement:

- a) activity description planned and remaining duration;
- b) planned and actual percentage progress, calculated from quantity of works completed;
- c) baseline start and finish dates (original);
- d) current early start and early finish dates;
- e) forecast finish dates as on data dates;
- f) actual start and actual finish dates;
- g) contractual and monitoring milestone dates and other key dates (original, plan and actual);

- h) long lead and critical material milestone dates;
- i) a programme for Authorities' Approvals;
- j) main interface dates;
- k) for all items covered under provisional sums and all variations or other items to be paid under schedules of rates: quantity to complete, actual quantity achieved and remaining quantity to be completed; and an 'S' curve showing actual and planned percentages of progress; and
- l) in submitting the detailed Master Programme and all updates to it, the Contractor shall ensure that it meets with the requirements of the Contract.

1.6.3. The Contractor shall fully cooperate with the Engineer in the review of the Contractor's programmes and schedules. It remains Contractor's responsibility to ensure that provisions such as information to be provided by the Engineer, are included and thereby incorporated into the programmes, sub-programmes and the work.

1.7. Sub Programmes below the Master Programme

1.7.1. The Contractor shall also provide sub programmes completely consistent with, but at a more detailed level than, the Master Programme, including:

- a) design, procurement and manufacturing sub programme;
- b) construction and installation sub programme;
- c) fitting out sub programme; and
- d) testing and commissioning sub programme.

1.7.2. These sub-programmes shall be updated and issued to the Engineer monthly.

1.8. Supplementary Programmes List

1.8.1. The Master Programme and sub programmes shall be supplemented by the following, in a format to be agreed with the Engineer:

- a) three (3) month rolling programme;
- b) five (5) week rolling programme; and
- c) time chainage and time location programme.

1.9. Effects on Programme of Delays and Change

1.9.1. The Contractor shall report any potential or actual delays which may affect the overall completion to the Engineer in a timely manner and recommend suitable measures to overcome the identified issues.

- **Issues arising:**

- Real possibility of conflicts between the General Conditions and the Employer's Requirements
- **Q:** How much programme detail should be contained in the General Conditions if there are Employer Requirements that address programme content and when up-dates are provided by the Contractor?
- **Q:** Can you draft or settle a set of General Conditions in the absence of a full understanding of the contents of the Employer's Requirements.
- **Q:** Is it the better role of General Conditions of Contract to "*point to*" the Employer's Requirements wherever possible – and let the ER's do the detailed work – rather than seek to specify in the GC's every small detail of programmes (and other topics)?
- The parties can easily amend the ER's, but amending the GC's is almost impossible on a project once it starts.

- **Using the Employer's Requirements to specify programme requirements would make cl 8.3 look like:**

8.3 Programme

8.3.1 *The Contractor has developed a level 2 programme for the purposes of the tender which shall include the activities of the first 6 months and outlines details of the remaining period of the Contract. The Contractor shall implement this programme from the Commencement Date and for 6 months.*

8.3.2 *The Contractor shall submit a detailed time programme to the Engineer within 180 days after the Commencement Date, and thereafter **in the formats and at the times as stated in the Employer's Requirements.***

8.3.3 *The Contractor shall also submit to the Engineer updated programmes when so instructed by the Engineer **in accordance with the Employer's Requirements.***

8.3.4 *Subject to any extension of Time for Completion, any updated programme submitted in accordance to Sub-Clause 8.3.2 shall not show any movement in the Time for Completion.*



ISSUE #2: ARE THE FIDIC CONDITIONS TOO (NARROWLY) FOCUSED ON THE *WORKS*? EXAMPLE: FIDIC 2017 Yellow Book – Section 5: Design

1. In the 1999 FIDIC suite – and for this note the Yellow Book is the example – there was very little scope or detail regarding the Contractor’s *design* obligations. So it was with some anticipation that the FIDIC community looked forward to the 2017 revisions.

Unfortunately, and with respect to the drafting committee, these revisions really added very little, if anything, to the nature and scope of the Contractor’s *design* obligations.

Here are the changes marked up:

- 5.1 General Design Obligations *The Contractor shall carry out, and be responsible for, the design of the Works. Design shall be prepared by designers who:*
- (a) are engineers or other professionals, qualified, experienced and competent in the disciplines of the design for which they are responsible.*
 - (b) comply with the criteria (if any) stated in the Employer’s Requirements; and*
 - (c) are qualified and entitled under applicable Laws to design the Works.*
- Unless otherwise stated in the Employer’s Requirements, the Contractor shall submit to the Engineer for consent the name, address, detailed particulars and relevant experience of each proposed designer/design*

Subcontractor.

The Contractor warrants that the Contractor, the Contractor's designers and design Subcontractors have the experience, capability and competence necessary for the design.

2. The amendments are focused on the nature and qualifications of the *designers*, rather than the nature of the Contractor's *design obligations*.
3. It is submitted that a significant limitation in the FIDIC 2017 suite is the failure to appreciate that the Contractor's design obligations are a discrete and (should be) a substantial part of his overall "scope of work". They need to be expressed in much greater detail for a number of reasons.

Performance Contracting

4. First, the contractual components of performance-based contracting need to be understood. *Performance contracts* are a development of what is historically labelled "design & construct" contracts. D&C contracts are still used extensively and are a valid form of project delivery. What the "*performance*" factor adds is a hierarchal structure in the Employer's Requirements, whereby the technical and engineering outcomes of a project are specified as the ultimate obligation(s) on the Contractor.
5. Examples of projects where a performance approach is commonly used are hospitals; airports; power

stations; rail systems and plant such as processing plant and industrial complexes.

6. In these types of projects, the Employer would normally give to the bidders (and then the successful Contractor) some form of preliminary project layout and design. The Employer produces a preliminary project layout and design to be able to set the project in its desired landscape or route alignment and to understand the range of land use and statutory approvals that might be required.
7. One critical issue in *performance contracting* is establishing the key technical and engineering dimensions and parameters of a project to enable bids to be obtained on a like-for-like basis.
8. The performance criteria might include topics such as the required *reliability and availability* of mechanical and power systems – both as sub-units, and then as the completed system. These items can be expressed as the *mean time between failure* (MTBF) or for say rail transport systems the *mean distance* (travelled by the rail cars) between failure (MDBF). For complex projects like airports, these types of performance criteria are developed further and into mathematically based formulae that set targets of like 99% for plant *availability and reliability*. Items of plant that commonly attract these performance criteria are baggage handling systems and transport systems like escalators, elevators and travelators. Similarly for MEP systems such as fire suppression and standby power.
9. In these circumstances, the critical decisions which directly affect these outputs are made during the

design phase. Complex mechanical and electrical systems are made up of component parts. The term *design* is used in the contract to include, relevantly, the specification and then selection of the mechanical and electrical components that go to make up the installed system.

10. In a Yellow Book- type design and build contract it will be expected that the Contractor (in conjunction with its consultants) will have to *design and then specify and procure* all of the component parts, so that the completed system(s) meets the applicable performance requirements.
11. Against this background, if the completed and installed system(s) does not perform as required, then one ground of complaint by the Employer will be that there were breaches by the Contractor in the *design phase*, as well as that the final Works do not perform as contracted for. Hence, having detailed and prescriptive design requirements in the General Conditions of Contract is essential to give the Employer the contractual platform to support any claims against the Contractor when a performance-based contract goes wrong.

What is needed to properly scope the Contractor's design obligations?

12. What is needed firstly is a recognition that the Contractor's scope of work comprises two (2) key components:
 - a. The *design services* to take any Employer preliminary design and develop it into a final design for the construction of the Works. And here *design* means the full suite of classic design services plus the selection of all of the individual mechanical and electrical components to make the relevant system function to the levels and in the manner specified in the contract; plus
 - b. The construction of the *physical Works*, as defined i.e., the Temporary Works and the Permanent Works.
13. The Contractor will need to take any *preliminary design* and produce the final design. Related contract issues associated with a scheme like this will be amendments to the provisions that relate to *Errors in Employer Requirements* (cl 1.9) and others.

14. Below is a set of terms that comprehensively set out a Contractor's design obligations (as drafted into FIDIC Section 5):

"Design Documents" means the drawings, specifications, manuals, documents and other information, samples, models, materials, patterns and the like required by the Contract and which have been created (and including, where the context so requires, those to be created) by or on behalf of the Employer or by the Contractor for the work under the Contract.

"work under the Contract" means all tasks and activities performed or required to be performed by the Contractor to carry out its obligations under the Contract including all Contractor's Design Obligations (as defined in Sub-Clause 5.1.2), the Works, Variations, Remedial Work, demolition work, all management functions, Site clearing and clean-up.

5 General Design Obligations

- 5.1 *The Contractor shall carry out and complete the **Contractor's Design Obligations** and in doing so is fully responsible and bears all risk in ensuring that the design of the Works is to the highest level of quality and suitability and to international engineering standards so that the Works will be fit for purpose and use, will be durable and will have the serviceability and design life required by the Contract or otherwise by the world's best practices.*
- 5.2 *The "**Contractor's Design Obligations**" include the following:*
- (a) ensure that all Design Documents satisfy the Employer's Requirements;*
 - (b) ensure that the Design Documents contain sufficient detail to construct the Works, so that the Works, when completed, will satisfy the Contractor's Warranties;*
 - (c) ensure that the details contained in any Design Documents are coordinated with the details contained in all other design documents produced by Interfacing Parties or Subcontractors;*
 - (d) ensure that any necessary approval is obtained from the relevant Authority in relation to the Design Documents;*

- (e) *allow the Engineer, the Employer or any person nominated by the Employer, access to partially completed Design Documents at any time;*
 - (f) *keep the Engineer informed of the progress of the Design Documents;*
 - (g) *conduct sufficient investigations to ascertain the existence and extent of any Site Conditions which may have an effect on the Works;*
 - (h) *design the Works so that the Works, when constructed, shall be structurally and aesthetically compliant;*
 - (i) *ensure that appropriately skilled, experienced, qualified persons acceptable to the Engineer at all times supervise and co-ordinate:*
 - (i) *the design and specification of the Works and the preparation of the Design Documents; and*
 - (ii) *the construction of the Works in accordance with the Design Documents;*
 - (j) *provide such additional information in relation to the Design Documents as the Engineer requires in a form required by the Engineer without any Entitlement (and ensure that the appropriate personnel are available to attend meetings in order to provide that information); and*
 - (k) *obtain a statement of no objection of the Engineer to the Design Documents in accordance with the procedures in the Contract, prior to commencing the Works encompassed by such particular Design Documents.*
-

ISSUE #3: DISPUTE MANAGEMENT – WHAT IS BEST FOR THE PROJECT

	FIDIC	Qatar Rail
20.1	Contractor 's Claims	Contractor 's Claims
20.2	Appointment of the Dispute Adjudication Board	Project level meetings and escalation to Senior Executives
20.3	Failure to Agree Dispute Adjudication Board	Expert Determination (opt –in)
20.4	Arbitration	Arbitration (but with special features – see below)

ARBITRATION- THE QATAR RAIL FORMAT

Design & Build Contract

20.4 Arbitration

- 20.4.1** If the dispute is not resolved between the Parties by the procedures set out in Sub-Clause 20.2.1.3 or Sub-Clause 20.3 at the request of either Party, the dispute shall be referred to arbitration to be finally settled.
- 20.4.2** The arbitration shall be conducted in accordance with the ICC Rules for Arbitration 2012 (the "Rules"),
- (a)** by a panel of 3 arbitrators appointed in accordance with the Rules;
 - (b)** be in English;
 - (c)** have the seat of arbitration in Qatar;
 - (d)** the law of the arbitration shall be Laws of Qatar; and
 - (e)** the Contractor shall not raise or plead any objection or defense to any request by the Employer pursuant to Article 7, Article 9 and/or Article 10 of the Rules.
- 20.4.3** Neither party shall refer a dispute to arbitration or make application to the ICC or otherwise seek to commence arbitration proceedings, until after a Taking Over Certificate for the whole of the Works has been issued under the Sub-Clause 10 (Employer's Taking Over). For the avoidance of doubt, this arbitration agreement is not effective until, and has as a pre-condition to it becoming effective, the issuance of the Taking Over Certificate for the whole of the Works.

Features of Qatar Rail's 20.4.3

20.4.3 Neither party shall refer a dispute to arbitration or make application to the ICC or otherwise seek to commence arbitration proceedings, until after a Taking Over Certificate for the whole of the Works has been issued under the Sub-Clause 10 (Employer's Taking Over). For the avoidance of doubt, this arbitration agreement is not effective until, and has as a pre-condition to it becoming effective, the issuance of the Taking Over Certificate for the whole of the Works.

- RFC – if Employer terminates Contractor for cause - “TOC” means after the works are completed by the replacement contractor
- Systems contract: the TOC condition was replaced with “not before 31 December 2020” i.e., a date as opposed to an event.

Other FIDIC amendments (QR contracts)

In addition to the above amendments, amendments were also made to these provisions:

- **Cl 3 Engineer:** all instructions by the Engineer that could result in time or money needed the Employer's written consent.
- **Cl 4.15 Site Data and Site Conditions:** expanded to cover follow-on contractors, who were to take over the earlier work of others. Hence the "Site" was the *as-built* of the previous contractor(s)
- **CL 9 & 10 Tests on Completion & Employer's Taking Over:** ensured that the Employer's Requirements included a discrete section on what was required in terms of testing of overall and completed sections and the Works, to achieve "Completion".
- **Cl 14 Payment Claims:** progress payment claims could only be submitted if first approved in terms of content. i.e., separation of core work and payment and claims outside the contract scheme for payment.
- **Cl 19 Force Majeure:** expressly excluded (1) risks allocated under the contract; (2) events or circumstances *in the country* of the permanent works.

Annexure A – QR contracts, Volume 4 –Table of Contents

Contents

	Page Number
1. PROGRAM DEFINITION	1
1.1 Introduction.....	1
2. QUALITY MANAGEMENT	2
2.1 Compliance.....	2
2.2 Quality Manual.....	3
2.3 Quality Plans.....	3
2.4 Inspection and Test Plans (ITP)	3
2.5 Reports of Inspections, Tests and Trials	4
2.6 Quality Control Register	4
2.7 Internal Audit.....	5
2.8 Quality Training.....	5
2.9 Quality Management System Information	5
2.10 Audits.....	6
2.11 Quality Control Requirements	6
2.12 Notice of Place of Manufacture and/or Source of Supply	7
3. PLANNING, PROGRAMMING AND PROGRESS MANAGEMENT	8
3.1 Project Management.....	8
3.2 Software.....	8
3.3 Programmes	8
3.4 Programme Submissions	9
3.5 Master Programme – First Submissions	9
3.6 Programme - Updates	10
3.7 Sub Programmes below the Master Programme	11
3.8 Supplementary Programmes List	11
3.9 Effects on Programme of Delays and Change.....	11
4. RECORD KEEPING, PROGRESS REPORTING AND CONTROL.....	12
4.1 Record Keeping.....	12
4.2 Progress Reporting.....	12
4.3 Exception Reporting	12
4.4 Visuals Reporting	12
5. INFORMATION MANAGEMENT	17
5.1 General.....	17
5.2 Project Management Information System (PMIS).....	17

5.3	Electronic Document Management System (EDMS).....	17
5.4	Records	18
5.5	Document Submittal Register.....	20
5.6	Document Submissions.....	20
5.7	Electronic Submissions.....	20
6.	TECHNICAL INFORMATION MANAGEMENT.....	21
6.1	Scope.....	21
7.	CHANGE MANAGEMENT.....	22
7.1	Scope.....	22
7.2	Change Management Plan.....	22
8.	COMMERCIAL MANAGEMENT.....	23
8.1	General.....	23
8.2	Cash Flow Reporting.....	23
8.3	Variation Reporting.....	23
8.4	Variation Proposals.....	23
8.5	Monthly Contract Price assessments.....	24
9.	COST MANAGEMENT REPORTING.....	25
9.1	General.....	25
10.	STAKEHOLDER AND COMMUNICATIONS MANAGEMENT.....	26
10.1	General.....	26
10.2	Stakeholder and Communications Management Plan.....	26
10.3	External Communications.....	26
11.	SYSTEMS ASSURANCE.....	27
11.1	General.....	27
11.2	Independent Safety Assessor (ISA).....	27
11.3	Safety Cases.....	27
11.4	System Assurance Activities.....	27
11.5	Systems Assurance Deliverables.....	28
12.	DESIGN MANAGEMENT.....	32
12.1	General.....	32
12.2	Design Verification Engineer (DVE).....	32
12.3	DVE Certification.....	32
12.4	Design Plan.....	33
12.5	Design Submission Stages.....	33
12.6	Detailed Design Stage 1.....	33

12.7	Detailed Design Stage 2.....	34
12.8	Design Submission Requirements	36
12.9	Format of Calculations.....	37
12.10	Drawing and CAD Data	37
12.11	Detailed Design Stage 1 Submission (Preliminary Design)	37
12.12	Manufacture, Construction and Installation	38
12.13	Working Drawings	38
12.14	As-Built Drawings and Calculations.....	38
12.15	Detailed Topographical Survey	38
12.16	Design Checking Plan	39
13.	VALUE MANAGEMENT/VALUE ENGINEERING	42
13.1	General.....	42
13.2	VM/VE Management Plan	42
13.3	Reporting VM and VE.....	42
13.4	Register of VM/VE Initiatives.....	42
13.5	Approval and Acceptance of VM/VE Proposals.....	43
14.	REQUIREMENTS MANAGEMENT	44
14.1	General.....	44
15.	CONFIGURATION MANAGEMENT	45
15.1	General.....	45
16.	CONSTRUCTION, MANUFACTURING AND INSTALLATION.....	46
16.1	Demolition of Structures	46
16.2	Method Statements	46
16.3	Contractor’s Equipment.....	47
16.4	Removal of Temporary Works and Facilities.....	47
16.5	Temporary Traffic Management	47
16.6	Disposal of Excavated Materials	48
16.7	Storage, Shipping and Delivery	49
17.	TESTING AND COMMISSIONING.....	51
17.1	Testing.....	51
17.2	Commissioning Co-ordination	52
18.	OPERATING AND MAINTENANCE MANUALS, RECORD DRAWINGS	53
18.1	General.....	53
18.2	Record Drawings.....	53
19.	TRAINING	55

19.1	Training requirement	55
19.2	Training Objectives.....	55
19.3	Selection of Trainees.....	55
19.4	Training Methods.....	55
19.5	Contractor’s Training Staff.....	56
19.6	Training Locations	56
19.7	Training Equipment	57
19.8	Administration.....	57
20.	HEALTH AND SAFETY MANAGEMENT	58
20.1	General.....	58
20.2	Legislation, Codes of Practice etc.....	58
20.3	Management Responsibility	59
20.4	Subcontractors	59
20.5	Breach of Health and Safety Obligations	59
20.6	Contractor’s Documentation	59
20.7	Health and Safety Plan.....	60
20.8	Health and Safety Manual Procedures	61
20.9	Risk Assessments	62
20.10	Method Statements	63
20.11	Contractor’s Safety Arrangements	63
20.12	Employer Safety Audits	64
20.13	Internal safety audits	64
20.14	Reporting of Accidents, Incidents and Dangerous Occurrence.....	65
20.15	Monthly Reports	65
20.16	Health and Safety Staff.....	65
20.17	Health and Safety Promotion and Incentive Schemes.....	66
20.18	Health and Safety Information.....	66
20.19	Health and Safety Training.....	67
20.20	Alcohol and Drugs	67
20.21	Emergency Procedures and Facilities	67
20.22	First Aid Facilities.....	68
20.23	Tunnel and Underground Work.....	68
20.24	Standby Contractor’s Equipment.....	68
20.25	Lifting Appliances and Lifting Gear.....	69
20.26	Fire Precautions	69

20.27	Dangerous Goods, Dangerous Substances.....	70
20.28	Passenger Hoists	71
20.29	Excavations	71
20.30	Site Transport.....	71
20.31	Driving/Operator’s Licenses	71
20.32	Specialist Safety Equipment.....	72
20.33	Personal Protective Equipment (PPE)	72
20.34	Ladders, Temporary Access	72
20.35	Working Over or Near Water	73
20.36	Work Over Public Areas	73
20.37	Site Security	73
21.	SUSTAINABILITY.....	74
21.1	General.....	74
21.2	GSAS Rating System Elements: Categories and Criteria.....	74
21.3	Urban Connectivity	74
21.4	Site.....	76
21.5	Energy	77
21.6	Water	78
21.7	Materials	78
21.8	Indoor Environment	79
21.9	Cultural and Economic Value	81
21.10	Management and Operations.....	81
22.	ENVIRONMENTAL	83
22.1	General.....	83
22.2	Management and Subcontractors	83
22.3	Personnel.....	84
22.4	Breach of Environmental Obligations.....	84
22.5	Environmental Management System Manual (EMS Manual)	85
22.6	Environmental Impact Assessment Report (EIA Report).....	85
22.7	Environmental Management Plan (EMPs).....	85
22.8	Environment Mitigation Implementation Plan.....	86
22.9	Risk Assessments	86
22.10	Environmental Inspections and Monitoring by the Contractor	86
22.11	Environmental Audits by the Contractor.....	87
22.12	Environmental Audits by the Employer	88

22.13	Reporting of Environmental Incidents	88
22.14	Monthly Reports	88
22.15	Sources of Nuisance	89
22.16	Batching and Crushing Contractor’s Equipment	89
22.17	Water Borne Silt and Debris	89
22.18	Mitigation of Environmental Impacts	89
22.19	Land Use and Property Impacts.....	89
22.20	Transport and Traffic Impacts	90
22.21	Visual and Landscaping Impacts.....	90
22.22	Air Quality Impacts	90
22.23	Soils, Geology and Water Quality Impacts.....	92
22.24	Water Quality.....	93
22.25	Water Pollution: Marine Based Operations	94
22.26	Noise Impacts.....	94
22.27	Noise Control.....	94
22.28	Waste Impacts.....	95
22.29	Socio-economic Impacts	95
22.30	Ecology Impacts	96
22.31	Other Impacts	97
22.32	EMP Template.....	97
23.	RISK MANAGEMENT.....	99
23.1	General.....	99
23.2	Risk management plan.....	99
24.	INTERFACE MANAGEMENT.....	100
24.1	General.....	100
24.2	Interfaces.....	100
24.3	Interfacing Parties.....	100
24.4	Responsibilities of the Contractor.....	100
24.5	Interface Management System (IMS).....	101
24.6	Interface Management Plan (IMP)	101
24.7	Responsibility Interface Matrix and Interface Sheets	102
24.8	Interface Register	103
24.9	Coordinated Design Interface Programme (CDIP) and Report.....	103
24.10	Design Control Interface Documents	103
24.11	Interface Management Software and Reporting	103

25.	SURVEY	104
26.	SITE MANAGEMENT	105
26.1	Access to the Site	105
26.2	Site Installation	105
26.3	Site Conditions, Maintenance and Clearance	106
26.4	Site Traffic Management and Transport Safety	108
27.	SITE AND LABOUR CAMP WELFARE.....	110
28.	CONTRACTOR’S ORGANISATION AND SUPERINTENDENCE	111
28.1	Organisation chart	111
28.2	Key personnel.....	111
28.3	Design Team	113
28.4	Subcontractors.....	113
28.5	Architecture.....	114
28.6	Signage.....	114
28.7	HSSE Staff.....	114
28.8	Responsibility Matrix.....	115

Appendix A - Program Definition

Appendix B - File Naming Conventions and Metadata Requirements

Appendix C - CAD Manual

Appendix D - GIS Manual

Appendix E - Building Information Modelling - Standards, Methods, and Procedure