

# **A Practical Approach to Conditions of Contract for Civil Engineering Works**

**Ir David Y. K. LEUNG**

BSc, M(Eng), Dip Arb, FCIArb, MHKIE

*in association with*

LEUNG Chung Kee



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## Introduction

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This book describes in detail the applications of 46 most important and essential clauses out of the 90 clauses in the current edition (1999 Edition) of the *General Conditions of Contract for Civil Engineering Works* (the “HKSAR Conditions”) published by the Government of the Hong Kong Special Administrative Region (HKSAR). These clauses are compared with the corresponding clauses in the current edition (7th Edition) of the UK *Institution of Civil Engineering Conditions of Contract* (the “ICE Conditions”) and the current edition (1999 Edition) of the international *FIDIC Conditions for Construction* (the “FIDIC Conditions”) (referred to as the “HKSAR Clauses,” “ICE Clauses” and “FIDIC Clauses”). For each clause there is a commentary which describes the general application of the clause, highlighting any special areas or problems arising from its past usage. The sentences and phrases of each clause/sub-clause are also meticulously analyzed, with references to academic and legal authorities as appropriate. The commentary draws experience from the author’s profession as a practising engineer and contract adviser.

Each clause of the HKSAR Conditions is followed by its Chinese translation to assist understanding, and the corresponding clauses in the ICE Conditions and the FIDIC Conditions for easy comparison. The author’s analysis and commentary on the clause, and its comparison with the ICE Clauses and the FIDIC Clauses are also included. The text is interspersed with photographs of major projects, each with a relevant question to further illustrate the application and test the reader’s understanding of the HKSAR Conditions. Suggested answers to the questions are given in the Appendixes.

The Chinese translation of the clauses of the HKSAR Conditions is not the official version and is for reference only.

# Clause 1

The HKSAR Conditions:

## Definitions and Interpretation

- (1) In the Contract the following words and expressions shall have the meaning hereby assigned to them except when the context otherwise requires:
- “Contract” means the Articles of Agreement, the Tender and the acceptance thereof by the Employer (including such further agreed documents as may be expressly referred to in or by the same: Drawings, General Conditions of Contract, Special Conditions of Contract (if any), Specification and priced Bills of Quantities.
- “Contractor” means the person, firm or company whose Tender has been accepted by the Employer and includes the Contractor’s personal representatives, successors and permitted assigns.
- “Drawings” means the drawings referred to in the Specification or Bills of Quantities and any modification of such drawings approved in writing by the Engineer and such other drawings as may from time to time be furnished in writing or approved in writing by the Engineer.
- “Employer” means the Government of the Hong Kong Special Administrative Region.
- “Engineer” means the person, company or firm appointed from time to time by the Employer and notified in writing to the Contractor to act as the Engineer for the purposes of the Contract. The person appointed may be described by name or as the holder for the time being of a public office.
- “Engineer’s Representative” means any person or persons appointed from time to time by the Engineer and notified in writing to the Contractor to perform the duties set forth in Clause 2(2). The person appointed may be described by name or as the holder for the time being of a public office.

### Corresponding clauses in the ICE Conditions:

#### Clause 1

- (1) In the Contract (as hereinafter defined) the following words and expressions shall have the meanings hereby assigned to them except where the context otherwise requires.
- (a) “Employer” means the person or persons firm company or other body named in the Appendix to the Form of Tender and includes the Employer’s personal representatives successors and permitted assignees.
- (b) “Contractor” means the person or persons firm or company to whom the Contract has been awarded by the Employer and includes the Contractor’s personal representatives successors and permitted assignees.
- (c) “Engineer” means the person firm or company appointed by the Employer to act as Engineer for the purposes of the Contract and named in the

Appendix to the Form of Tender or any other person firm or company so appointed from time to time by the Employer and notified in writing as such to the Contractor.

(d) “Engineer’s Representative” means a person notified as such from time to time by the Engineer under Clause 2(3)(a).

(e) “Contract” means the Conditions of Contract Specification Drawings Bill of Quantities the Form of Tender the written acceptance thereof and the Form of Agreement (if completed).

(g) “Drawings” means the drawings referred to in the Specification and any modification of such drawings approved in writing by the Engineer and such other drawings as may from time to time be furnished by or approved in writing by the Engineer.

### Corresponding clauses in the FIDIC Conditions:

#### Clause 1.1

In the Conditions of Contract (“these Conditions”), which include Particular Conditions, the following words and expressions shall have the meanings stated. Words indicating persons or parties include corporations and other legal entities, except where the context requires otherwise.

1.1.1.1 “Contract” means the Contract Agreement, the Letter of Acceptance, the Letter of Tender, these Conditions, the Specification, the Drawings, the Schedules, and the further documents (if any) which are listed in the Contract Agreement or in the Letter of Acceptance.

1.1.1.6 “Drawings” means the drawings of the Works, as included in the Contract, and any additional and modified



drawings issued by (or on behalf of) the Employer in accordance with the Contract.

1.1.2.2 “Employer” means the person named as employer in the Appendix to Tender and the legal successor in title to this person.

1.1.2.3 “Contractor” means the person(s) named as contractor in the Letter of Tender accepted by the Employer and the legal successors in title to this person(s).

1.1.2.4 “Engineer” means the person appointed by the Employer to act as the Engineer for the purposes of the Contract and named in the Appendix to Tender, or other person appointed from time to time by the Employer and notified to the Contractor under Sub-Clause 3.4 [Replacement of the Engineer].

## 條款 1

香港特別行政區土木工程合同一般條件：

### 定義及解釋

(1) 在這「合同」內，除內文另有需要，下列文字和詞句具有如下文所給予的含意：

「合同」指「協議書」、「投標」及獲僱主接納該「投標」的文件（包括其載有或在其內明文提及的其他議訂文件）、「圖則」、「合同一般條件」、「合同特別條件」（如有此文件的話）、「規格」及已標價的「工程量清單」。

「承建商」指其「投標」獲得僱主接納的人、商號或公司，及包括其遺產代理人、承繼人及得到允許的承讓入。

「圖則」指「規格」或「工程量清單」內所提及的圖則及任何獲「工程師」書面核准對此等圖則所作的修訂，及「工程師」可不時以書面供給或經「工程師」書面核准的其他圖則。

「僱主」指香港特別行政區政府。

「工程師」指僱主可不時委任並用書面通知「承建商」作為有關本「合同」事宜擔任工程師的人、公司或商號。對獲委任的人可以他的姓名稱呼，亦可以他當時擔任的職位稱呼。

「工程師代表」指「工程師」可不時委任並用書面通知「承建商」作為履行條款2(2)所列的職責的人。對獲委任的人可以他姓名稱呼，亦可以他當時擔任的職位稱呼。

## Commentary

For this definition Clause 1, there is no attempt to analyze each definition, but a comparison of the clause with the corresponding ones of the ICE Conditions and the FIDIC Conditions is made.

### Comparison with the ICE Conditions and the FIDIC Conditions

Term in HKSAR Conditions	Points to note in definition and interpretation		
	HKSAR Conditions	ICE Conditions	FIDIC Conditions
Contract	Meaning similar		
Contractor	Meaning similar		
Drawings	Meaning similar		
Employer	The Government of the HKSAR	A person, firm or company	
Engineer	Named in the Letter of Acceptance.	Named in the Appendix to the Form of Tender.	
Engineer's Representative	Meaning similar		

# Clause 1

(continued)

The HKSAR Conditions:

## Definitions and Interpretation

- (1) “Constructional Plant” means all appliances or things of whatsoever nature required for the execution of the Works but does not include materials or other things intended to form or forming part of the permanent work or vehicles engaged in transporting any personnel, Constructional Plant, materials or other things to or from the Site.
- “Contingency Sum” means the sum provided for work or expenditure which cannot be foreseen at the time the tender documents are issued which sum may include provision for work to be executed or for materials or services to be supplied by a Nominated Sub-contractor.
- “Contract Sum” means the total of the priced Bills of Quantities at the date of acceptance of the Tender for the Works.
- “Cost” means expenditure reasonably incurred including overheads whether on or off the Site and depreciation in value of Constructional Plant owned by the Contractor but excluding profit.
- “Final Contract Sum” means the sum to be ascertained and paid in accordance with the provisions hereinafter contained for the execution of the Works in accordance with the Contract.
- “Nominated Sub-contractor” means and includes all specialists, merchants, tradesmen and the like executing any part of the Works or supplying any materials or services for the Works who shall have been or shall be nominated by the Employer and employed by the Contractor.
- “Prime Cost Sum” means the sum provided for work to be executed or for materials or services to be supplied by a Nominated Sub-contractor; such sum shall be the estimated net price to be paid for such work executed or for materials or services supplied by a Nominated Sub-contractor, after deducting any trade or other discount.
- “Provisional Sum” means a sum provided for work or expenditure which has not been quantified or detailed at the time the tender documents are issued which sum may include provision for work to be executed or for materials or services supplied by a Nominated Sub-contractor.
- “Retention Money” means the sum retained by the Employer as retention money in accordance with the Contract.

### Corresponding clauses in the ICE Conditions:

#### Clause 1 (continued)

- (1) (i) “Tender Total” means the total of the Bill of Quantities at the date of award of the Contract or in the absence of a Bill of Quantities the agreed estimated total value of the Works at that date.
- (j) “Contract Price” means the total of the Bill of Quantities at the date of award of the Contract or in the absence of a Bill of Quantities the agreed estimated total value of the Works at that date.
- (k) “Prime Cost<sup>1</sup> (PC) Item” means an item in the Contract which contains (either wholly or in part) a sum referred to as Prime Cost (PC) which will be used for the carrying out of work or the supply of goods materials or services for the Works.
- (l) “Provisional Sum” means a sum included and so designated in the Contract as a specific contingency for

the carrying out of work or the supply of goods materials or services which may be used in whole or in part or not at all at the direction and discretion of the Engineer.

(m) “Nominated Sub-contractor” means any merchant tradesman specialist or other person firm or company nominated in accordance with the Contract to be employed by the Contractor for the carrying out of work or supply of goods materials or services for which a Prime Cost or a Provisional Sum has been included in the Contract.

(w) “Contractor’s equipment” means all appliances or things of whatsoever nature required in or about the construction and completion of the Works but does not include materials or other things intended to form or forming part of the Permanent Works.

### Corresponding clauses in the FIDIC Conditions:

#### Clause 1.1 (continued)

1.1.4.2 “Contract Price” means the price defined in Sub-Clause 14.1 [*The Contract Price*], and includes adjustments in accordance with the Contract.

1.1.4.3 “Cost” means all expenditure reasonably incurred (or to be incurred) by the Contractor, whether on or off the Site, including overhead and similar charges, but does not include profit.

1.1.4.10 “Provisional Sum” means a sum (if any) which is specified in the Contract as a provisional sum, for the execution of any part of the Works or for the supply of Plant, Materials or services under Sub-Clause 13.5 [*Provisional Sums*]

1.1.4.11 “Retention Money” means the accumulated retention money which the Employer retains under Sub-Clause 14.3 [*Application for Interim Payment Certificates*] and pays under Sub-Clause 14.9 [*Payment of Retention Money*].

1.1.5.1 “Contractor’s Equipment” means all apparatus, machinery, vehicles and other things required for the execution and completion of the Works and the remedying of any defects. However, Contractor’s Equipment excludes Temporary Works, Employer’s Equipment (if any), Plant, Materials and any other things intended to form or forming part of the Permanent Works.

## 條款

### 1

(續)

香港特別行政區土木工程合同一般條件：

## 定義及解釋

- (1) 「施工設備」指實施「本工程」所需要的一切器械或任何物件，無論該等器械或物件屬何等性質，但不包括預定或已經構成永久工程一部份的物料或其他物件，也不包括用以運載任何人員、施工設備、物料或其他物件往返工地的車輛。
- 「應變金額」指在發出投標文件時未能預測到的工程或支出而預留的金額，此金額可包括為「指定次承判商」實施的工程或供應的物料或提供的服務而預留的金額。
- 「合同款項」指僱主接納「本工程」「投標」當日已標價的「工程量清單」的總值。
- 「費用」指合理的支出，包括工地內或工地外的經常開支及「承建商」所擁有的「施工設備」的折舊，但不包括利潤。
- 「最終合同金額」指按照「合同」實施「本工程」而根據以下條文確定及支付的金額。
- 「指定次承判商」指及包括所有已是或將由「僱主」指定及得到「承建商」僱用以實施「本工程」任何部分或為「本工程」供應任何物料或提供任何服務的專門人員、商人、技術人員等人。
- 「基本成本金額」指為「指定次承判商」實施的工程或供應的物料或提供的服務而預留的金額，此金額是在扣除任何商業折扣或其他折扣後為「指定次承判商」實施的工程或供應的物料或提供的服務而估計須支付的淨價格。
- 「備用金額」指發出投標文件時還未計算數量或詳細列出的工程或支出而預留的金額，此金額可包括為「指定次承判商」實施的工程或供應的物料或提供的服務而預留的金額。
- 「保留金」指「僱主」按照「合同」保留作為保留金的金額。

### Comparison with the ICE Conditions and the FIDIC Conditions

Term in HKSAR Conditions	Points to note in definition and interpretation		
	HKSAR Conditions	ICE Conditions	FIDIC Conditions
Constructional Plant	Includes Temporary Works. Also includes the Engineer’s and the Contractor’s transport vehicles.	The term “Contractor’s Equipment” is used.	Excludes Temporary Works.
		—	
Contingency Sum	—	No such term.	
Contract Sum	—	The term “Contract Price” is used.	
Final Contract Sum	—	No such term.	
Cost		Meaning similar	
Provisional Sum		Meaning similar	
Retention Money	—	No such term is used; the word “retention” is used in its general sense.	
Nominated Sub-contractor		Meaning similar	

## Clause 2

The HKSAR Conditions:

### Duties and Powers of the Engineer and the Engineer's Representative

(continued)

- (3) The Engineer may from time to time delegate to the Engineer's Representative any of the duties and powers vested in him. Any such delegation shall be in writing signed by the Engineer and shall specify the duties and powers thereby delegated. No such delegation shall have effect until a copy thereof has been delivered to the Contractor. Any written instruction or written approval given by the Engineer's Representative to the Contractor within the terms of such delegation, but not otherwise, shall bind the Contractor and the Employer as though it had been given by the Engineer.

Provided that:

- (a) failure of the Engineer's Representative to disapprove any work or material shall not prejudice the power of the Engineer thereafter to disapprove such work or material;
- (b) if the Contractor or the Employer shall be dissatisfied by reason of any decision of the Engineer's Representative they may refer the matter to the Engineer who shall confirm, reverse or vary such decision.
- (4) No act or omission by the Engineer or the Engineer's Representative in the performance of any of his duties or the exercise of any of his powers under the Contract shall in any way operate to relieve the Contractor of any of the duties, responsibilities, obligations or liabilities imposed upon him by any of the provisions of the Contract.

#### Corresponding clauses in the ICE Conditions:

##### Clause 2 (continued)

- (4) The Engineer may from time to time delegate to the Engineer's Representative or any other person responsible to the Engineer any of the duties and authorities vested in the Engineer and he may at any time revoke such delegation. Any such delegation
- (a) shall be in writing and shall not take effect until such time as a copy thereof has been delivered to the Contractor or his agent appointed under Clause 15(2);
- (b) shall continue in force until such time as the Engineer shall notify the contractor in writing that the same has been revoked;
- (c) shall not be given in respect of any decision to be taken or certificate to be issued under Clauses 12(6) 44 46(3) 48 60(4) 61 65 or 66.
- (5) (a) The Engineer or the Engineer's Representative may appoint any number of persons to assist the Engineer's Representative in the carrying out of his

duties under sub-clauses (3)(b) or (4) of this Clause. He shall notify to the Contractor the names duties and scope of authority of such persons.

(b) Such assistants shall have no authority to issue any instructions to the Contractor save insofar as such instructions may be necessary to enable them to carry out their duties and to secure the acceptance of materials and workmanship as being in accordance with the Contract. Any instructions given by an assistant for these purposes shall where appropriate be in writing and be deemed to have been given by the Engineer's Representative.

(c) If the Contractor is dissatisfied by reason of any instruction of any assistant of the Engineer's Representative appointed under sub-clause (5)(a) of this Clause he shall be entitled to refer the matter to the Engineer's Representative who shall thereupon confirm reverse or vary such instruction.

#### Corresponding clauses in the FIDIC Conditions:

##### Clause 3.2

The Engineer may from time to time assign duties and delegate authority to assistants, and may also revoke such assignment or delegation. These assistants may include a resident engineer, and/or independent inspectors appointed to inspect and/or test items of Plant and/or Materials. The assignment, delegation or revocation shall be in writing

and shall not take effect until copies have been received by both Parties. However, unless otherwise agreed by both Parties, the Engineer shall not delegate the authority to determine any matter in accordance with Sub-Clause 3.5 [Determinations].

Assistants shall be suitably qualified persons, who are competent to carry out these duties and exercise

this authority, and who are fluent in the language for communications defined in Sub-Clause 1.4 [*Law and Language*].

Each assistant, to whom duties have been assigned or authority has been delegated, shall only be authorized to issue instructions to the Contractor to the extent defined by the delegation. Any approval, check, certificate, consent, examination, inspection, instruction, notice, proposal, request, test, or similar act by an assistant, in accordance

with the delegation, shall have the same effect as though the act had been an act of the Engineer. However:

(a) any failure to disapprove any work, Plant or Materials shall not constitute approval, and shall therefore not prejudice the right of the Engineer to reject the work, Plant or Materials;

(b) if the Contractor questions any determination or instruction of an assistant, the Contractor may refer the matter to the Engineer, who shall promptly confirm, reverse or vary the determination or instruction.

## 條款 2

(續)

香港特別行政區土木工程合同一般條件：

### 「工程師」及「工程師代表」的職責與權力

- (3) 「工程師」可不時將他獲授予的任何職責及權力授權給「工程師代表」。任何此類授權必須以書面作出，由「工程師」簽署，並必須述明藉此授權的職責及權力。此類授權必須在授權書的副本交給承建商後才能生效。「工程師代表」所發給承建商的任何書面指令或書面批核，在此類授權條件範圍內，但不在其他方面，對「承建商」及「僱主」皆有約束力，而該指令或批核等同由「工程師」所發給的。但是：
- (a) 「工程師代表」即使未能拒絕批核任何工程或物料，亦不會損害「工程師」日後拒絕批核此等工程或物料的權力；
- (b) 如「承建商」或「僱主」不滿「工程師代表」的任何決定，他們可以將有關事情提交「工程師」，由「工程師」確認、推翻或更改此項決定。
- (4) 「工程師」或「工程師代表」在履行他在「合同」內的任何職責或行使「合同」內的任何權力時，他的任何作為或不作為，皆不會在任何方面減免「合同」內任何條文加諸於「承建商」的任何職責、任務、責任或法律責任。

#### **Analysis and application**

Clause 2(3) “The Engineer may from time to time delegate to the Engineer’s Representative any of the duties and powers vested in him ...”

From this sentence, it appears that the HKSAR Conditions do not put any limitation on the duties to be delegated by the Engineer. In practice, the valuation of variation, the certification of claims, the granting of extension of time and the giving of decision on a matter under dispute are not delegated, as in the ICE Conditions.

Clause 2(3) “... Any written instruction or written approval given by the Engineer’s Representative to the Contractor within the terms of such delegation, but not otherwise, shall bind the Contractor and the Employer as though it had been given by the Engineer ...”

It should be noted that the Engineer has no power to amend the terms and conditions of the Contract, nor to relieve the Contractor of his obligations under the Contract under sub-clause 1(d) and the Engineer’s Representative’s instruction or approval on such aspects shall not have any effect.

Clause 2(3)(a) “failure of the Engineer’s Representative to disapprove any work or materials shall not prejudice the power of the Engineer thereafter to disapprove such work or material;”

Please also see sub-clause (4), which says any act or omission by the Engineer or the Engineer's Representative in the performance of any of his duties shall not relieve the Contractor's obligations. Neither the Engineer nor the Engineer's Representative has the power to alter the Specification, unless such work is required under a variation<sup>5</sup> under Clause 60.

Clause 2(3)(b) "if the Contractor or the Employer shall be dissatisfied by reason of any decision of the Engineer's Representative, they may refer the matter to the Engineer who shall confirm, reverse or vary such decision."

The sub-clause is self-explanatory. It quite often happens on the Site that the Contractor may not be satisfied with the decision of the Engineer's Representative, e.g., payment matters and he then writes to the Engineer for a review first. If he is still not satisfied with the Engineer's review, he can seek decision under Clause 86.

Clause 2(4) "No act or omission by the Engineer or the Engineer's Representative in the performance of any of his duties or the exercise of any of his powers under the Contract shall in any way operate to relieve the Contractor of any of the duties ... imposed upon him by any provision of the Contract."

As explained in the commentary to sub-clause (3)(a), the Engineer has no power to alter the Contract requirements unless necessitated by a variation under Clause 60. If the Engineer approves material or workmanship not satisfying the Contract requirements, the Contractor can protect himself from future disapproval by requesting a variation order from the Engineer.

### **Comparison with the ICE Conditions**

This ICE Clause 2 is similar to the HKSAR Clause except that it expressly states that the Engineer's Representative cannot order any work involving delay or any extra payment by the Employer or make any variation of the Works, and in particular he cannot delegate to the Engineer's Representative the power under Clauses 12(6), 44, 46(3), 48, 60(4), 61, 65 or 66 regarding granting extension of time, accelerating completion, certifying completion, issue of final and maintenance certificates and determination of the Contractor's appointment respectively.

### **Comparison with the FIDIC Conditions**

One major difference between the FIDIC Conditions and the HKSAR and ICE Conditions is that Clause 3.2 states that the Engineer shall be deemed to act for the Employer. This means that the Engineer no longer acts in an impartial role between the Employer and the Contractor. If there is any requirement to obtain the Employer's approval before the Engineer exercises his authority, it should be stated in the Particular Conditions. The Engineer has no authority to relieve either Party from his duties, obligations and responsibility. Also, the Engineer's approval, certification, instruction or similar acts shall not relieve any of the Contractor's responsibility. The Engineer may delegate his duties to several "assistants," including a resident engineer and independent inspectors who must be suitably qualified. Failure of the assistants to disapprove workmanship or materials shall not prejudice the right of the Engineer to reject them and if the Contractor is not satisfied with the decision of the assistants, he can appeal to the Engineer.

### **Notes**

1. *Day v Ost* [1973] 2NZLR, see also Note 2.
2. *Sutcliffe v Thakrah* [1974] AC 727. For a full discussion, see Max Abrahamson, *Engineering Law and the ICE Contracts*, 4th Edition, Chapters 13–14.
3. See the commentary in Ian Duncan Wallace, *A Commentary on the FIDIC International Standard Form of Engineering and Building Contract*, p. 28.
4. Max Abrahamson, *Engineering Law and the ICE Contracts*, 4th Edition, p. 34.
5. Max Abrahamson, *Engineering Law and the ICE Contracts*, 4th Edition, pp. 73 and 127.



## Clause 5

*The HK SAR Conditions:*

### Documents Mutually Explanatory

- (1) Save to the extent that any Special Condition of Contract provides to the contrary the provisions of these General Conditions of Contract shall prevail over those of any other document forming part of the Contract.
- (2) Subject to the foregoing the several documents forming the Contract are to be taken as mutually explanatory of one another but in case of ambiguities or discrepancies the same shall be explained by the Engineer who shall issue to the Contractor instructions clarifying such ambiguities or discrepancies. Where the Contractor makes a request in writing to the Engineer for instructions under this sub-clause the Engineer shall respond within 14 days of receipt of such request.

Provided that:

- (a) work shown on the Drawings or described in the Specification but not measured in the Bills of Quantities shall be dealt with in accordance with Clause 59;
- (b) if in the opinion of the Engineer compliance with such instructions shall involve the Contractor in any expense which by reason of any ambiguity or discrepancy the Contractor did not and had no reason to anticipate, the Engineer shall value such expense in accordance with Clause 61, and shall certify in accordance with Clause 79;
- (c) if in the opinion of the Engineer compliance with such instructions shall involve the Contractor any saving then the Engineer shall value such saving and deduct the same from the Contract Sum accordingly.

#### Corresponding clauses in the ICE Conditions:

##### Clause 5

The several documents forming the Contract are to be taken as mutually explanatory of one another and in case of ambiguities or discrepancies the same shall be explained and adjusted by the Engineer who shall thereupon issue to the Contractor appropriate instructions in writing which shall be regarded as instructions issued in accordance with Clause 13.

##### Clause 13

- (3) If in pursuance of Clause 5 or sub-clause (1) of this Clause the Engineer shall issue instructions which involve the Contractor in delay or disrupt his arrangements or methods of construction so as to

cause him to incur cost beyond that reasonably to have been foreseen by an experienced contractor at the time of tender then the Engineer shall take such delay into account in determining any extension of time to which the Contractor is entitled under Clause 44 and the Contractor shall subject to Clause 53 be paid in accordance with Clause 60 the amount of such cost as may be reasonable except to the extent that such delay and extra cost result from the Contractor's default. Profit shall be added thereto in respect of any additional permanent or temporary work. If such instructions require any variation to any part of the Works the same shall be deemed to have been given pursuant to Clause 51.

#### Corresponding clauses in the FIDIC Conditions:

##### Clause 1.5

The documents forming the Contract are to be taken as mutually explanatory of one another. For the purposes of interpretation, the priority of the documents shall be in accordance with the following sequence:

- (a) the Contract Agreement (if any),
- (b) the Letter of Acceptance,
- (c) the Letter of Tender,
- (d) the Particular Conditions,

- (e) these General Conditions,
- (f) the Specification,
- (g) the Drawings, and
- (h) the Schedules and any other documents forming part of the Contract.

If an ambiguity or discrepancy is found in the documents, the Engineer shall issue any necessary clarification or instruction.

## 條款 5

香港特別行政區土木工程合同一般條件：

### 文件的互相解釋

- (1) 除「合同特別條件」內的任何條文有相反意思外，本「合同一般條件」的條文凌駕於任何作為「合同」部分的其他文件。
- (2) 在符合上文規定下，作為本「合同」的各文件必須視作可互相解釋，但如出現含糊或差異時，則必須由「工程師」解釋，而「工程師」須向「承建商」發出指令，澄清含糊或差異之處。如「承建商」以書面要求「工程師」根據本款發出指令，「工程師」必須在收到這要求後14天內回覆。  
但是：
  - (a) 在「圖則」上示明或「規格」內敘述的工程，如沒有在「工程量清單」內計量，則必須根據第59條處理；
  - (b) 如「工程師」認為依從上述指令會引致「承建商」牽涉任何開支，而此項開支是因任何含糊或差異造成，而「承建商」事前沒有亦沒有理由預計得到，則「工程師」必須根據第61條為此項開支釐訂價值，並且必須根據第79條予以核實；
  - (c) 如「工程師」認為依從以上指令將會引致「承建商」有任何節約，「工程師」必須為該項節約釐訂價值，並就此從「合同款項」中扣除該項節約。

### Commentary

A typical Government construction contract includes basically the Conditions of Contract, Specification, Bill of Quantities, together with the Method of Measurement and Drawings. The *General Conditions of Contract*, *General Specification* and *Standard Method of Measurement* published by the Government are all standardized documents but amendments and additions to these documents are made from time to time to make improvements and to reflect Government policies through technical circulars or circular memoranda. Particular Specification, Particular Preamble to Standard Method of Measurement, Bill of Quantities and Drawings are prepared for individual contracts usually by the Consulting Engineers. For major contracts, these could come to tens of thousands of pages but are prepared within a few months. There are bound to be inconsistencies, say, within the drawings, or conflicts between specifications and drawings, or conditions of contract and specifications. This Clause attempts to deal with such conflicts and provides remedies to the Contractor.

### Analysis and application

Clause 5(1) “Save to the extent that any Special Conditions of Contract provides to the contrary ...”

The Special Conditions must give the extent to which it takes precedence over the General Conditions. In other words, to avoid argument, it must state which clauses or sub-clauses of the General Conditions are omitted or replaced by the Special Conditions. The Special Conditions must be vetted by lawyers.

Clause 5(1) “... the provisions of these General Conditions of Contract shall prevail over those of any other documents forming part of the Contract.”

This accords a higher status to the General Conditions of Contract, which overrides all other documents in case of any inconsistencies and conflicts, except the Special Conditions of Contract. It is appreciated, however, that the General Conditions of Contract is a standard document, which describes the obligations, duties, responsibilities and liabilities of the contracting parties and the duties and powers of the Engineer. It is a framework and basis upon which all other documents are prepared and it rarely touches upon details regarding payment from which most contractual disputes arise. Direct conflicts between certain sentences or phrases of the General Conditions of Contract and other documents, such as the General Specification, do not usually occur, especially when the other documents are prepared by an experienced drafter.



Clause 5(2) "... the several documents forming the Contract are to be taken as mutually explanatory of one another but in case of ambiguities or discrepancies the same shall be explained by the Engineer ..."

It suggests that the other documents such as the Specification, Bill of Quantities and Drawings are all accorded with equal status. By virtue of definition in Clause 1, the Specification, Bill of Quantities and Drawings includes all post-contract documents incorporated by variation orders or supplemental agreements. It is often necessary to find out the true intentions of the parties from different parts of the contract documents, e.g., for multiple ducts surrounded by concrete, do we measure the length of only one duct or the length of all individual ducts and add all the lengths together for the purpose of payment? To find out the true intention, we have to read the Standard Method of Measurement, the Particular Preamble to it, the Drawings, the Bill of Quantities and sometimes the Specification. To find out the true meaning, we can follow the Court's general rule of interpretation such as the Golden Rule<sup>1</sup> (using plain ordinary meaning, e.g., it is arguable that the surface area of a glass panel means one side, two sides or six sides of it), customs and technical usage (based on expert's opinion), and *Ejusdem Generis* (any general words following particular words of a similar class refers to that class, e.g., soil, rocks, boulders and other materials where other materials should usually refer to natural materials like stones, pebbles but not steel). If two or more possible interpretations are possible, the Engineer has to pay attention to the *Contra Proferentum* rule, which means the interpretation shall be against the party responsible for drafting the clause. Usually legal advice is required for interpretation having major significance as regards to cost or time. Sometimes, the Court would imply a term into the contract for business efficacy, but a term will only be implied if it is not inconsistent with the express terms.<sup>2</sup>

Clause 5(2) "... the Engineer who shall issue to the Contractor instructions clarifying such ambiguities or discrepancies ... within 14 days of receipt of such request ..."

Upon request by the Contractor or if the Engineer considers necessary without a request, the Engineer shall issue instruction to clarify ambiguities or discrepancies. Many contractors make systematic requests for further information and clarifications in the hope of making out cases for seeking reimbursement or extension of time and the Engineer may find himself inundated by such requests. The Engineer should bear in mind that the Contractor shall usually be responsible for supplying construction materials complying with the Specification and choosing his own method of construction. He may point out that many of such requests are in fact not necessary. If such practice persists, he should bring it up to the Contractor's higher management.

Clause 5(2)(a) "work shown on the Drawings or described in the Specification but not measured in the Bills of Quantities shall be dealt with in accordance with Clause 59;"

This refers to missing items, which are to be dealt with under Clause 59(3) and the value of work involved shall be ascertained in accordance with Clause 61(1)(a).

Clause 5(2)(b) "if in the opinion of the Engineer compliance with such instruction shall involve the Contractor in any expense ... the Engineer shall value such expense in accordance with Clause 61, ..."

The word "expense" is not defined in the Contract but it is similar to the measure of damages, which arise naturally in the usual course of things. It includes Site overhead and office overhead but it is unclear whether profit should be included. However, since the valuation is based on Bills of Quantities rates in accordance with Clause 61, profit has been included.

### **Comparison with the ICE Conditions**

The ICE Conditions accords equal status to all contract documents and therefore in case of conflict, more weight could be attached to those documents specifically prepared for the Contract as a whole, e.g., the Bills of Quantities or Particular Specification rather than the printed *Conditions of Contract* or *Standard Method of Measurement* (which are of general application and may be less likely to reflect the intention of the parties when entering into the Contract).

## Clause 15

The HKSAR Conditions:

### Works to be to the Satisfaction of the Engineer

Save in so far as it is legally or physically impossible the Contractor shall execute the Works in strict accordance with the Contract to the satisfaction of the Engineer and shall comply with and adhere strictly to the Engineer's instructions on any matter related to the Contract whether mentioned in the Contract or not.

#### Corresponding clauses in the ICE Conditions:

##### Clause 13

- (1) Save insofar as it is legally or physically impossible the Contractor shall construct and complete the Works in strict accordance with the Contract to the satisfaction of the Engineer and shall comply with and adhere strictly to the Engineer's instructions on any matter connected therewith (whether mentioned in the Contract or not). The Contractor shall take instructions only from the Engineer or subject to Clause 2(4) from his duly appointed delegate.
- (2) The whole of the materials Contractor's Equipment and labour to be provided by the Contractor under Clause 8 and the mode manner and speed of construction of the Works are to be a kind and conducted in a manner acceptable to the Engineer.
- (3) If in pursuance of Clause 5 or sub-clause (1) of this Clause the Engineer shall issue instructions

which involve the Contractor in delay or disrupt his arrangements or methods of construction so as to cause him to incur cost beyond that reasonably to have been foreseen by an experienced contractor at the time of tender then the Engineer shall take such delay into account in determining an extension of time to which the Contractor is entitled under Clause 44 and the Contractor shall subject to Clause 53 be paid in accordance with Clause 60 the amount of such cost as may be reasonable except to the extent that such delay and extra cost result from the Contractor's default. Profit shall be added thereto in respect of any additional Permanent or Temporary Works. If such instructions require any variation to any part of the Works the same shall be deemed to have been given pursuant to Clause 51.

#### Corresponding clauses in the FIDIC Conditions:

##### Clause 4.1 (part)

The Contractor shall design (to the extent specified in the Contract), execute and complete the Works in accordance with the Contract and with the Engineer's instructions, and shall remedy any defects in the Works.

##### Clause 19.7

Notwithstanding any other provision of this Clause, if any event or circumstance outside the control of the Parties (including, but not limited to, Force Majeure) arises which makes it impossible or unlawful for either or both Parties to fulfil its or their contractual obligations or which, under the law governing the Contract, entitles the Parties to be

released from further performance of the Contract, then upon notice by either Party to the other Party of such event or circumstance:

- (a) the Parties shall be discharged from further performance, without prejudice to the rights of either Party in respect of any previous breach of the Contract, and
- (b) the sum payable by the Employer to the Contractor shall be the same as would have been payable under Sub-Clause 19.6 [*Optional Termination, Payment and Release*] if the Contract had been terminated under Sub-Clause 19.6.

## 條款 15

香港特別行政區土木工程合同一般條件：

### 「本工程」須達至「工程師」滿意的程度

除在法律上或實際上不可能外，「承建商」必須嚴格按照「合同」實施「本工程」，以使到「工程師」滿意，並且必須嚴格遵守「工程師」對任何與「合同」有關的事宜的指令，無論這些事宜在「合同」中是否有提及。

#### Commentary

This Clause 15 imposes an obligation on the Contractor to complete the Works in strict accordance with the Contract to the satisfaction of the Engineer and comply with his instruction on any matters related to the Contract. This Clause appears to give very wide power to the Engineer in controlling the execution of the Works. Under the Contract, the Engineer can issue instruction to clarify documents and Drawings, order variations and if he is dissatisfied with any material, workmanship, method of construction, safety aspects or the progress of Works, he can request the Contractor to take all necessary measures to his satisfaction to remedy the situation. There are various provisions under the Contract under which the Contractor may claim extension of time and monetary compensation, e.g., Clause 5 for clarifying documents and Clause 60 for variation, but the Contractor's duty to complete the Works shall not be relieved even he faces great difficulties during construction, unless he can plead legal or physical impossibility. The issue concerning impossibility raises a lot of contentions, locally and abroad, and it is not uncommon for the Contractor to plead impossibility when he experiences difficulties with ground conditions, utilities or even high prices in carrying out the Works. In some cases, the Engineer may have to modify his design and issue variations to overcome the alleged impossibility.

#### Analysis and application

Clause 15 "Save in so far it is legally or physically impossible ..."

Legal impossibility means the Works, whether in whole or in part, are prohibited by law or infringe private rights which are capable of being protected by injunction, e.g., works contravening the EIAO, infringing the intellectual property rights or intruding into private lands. For physical impossibility, it is much more difficult to define and this leads to a lot of contentions with far-reaching consequences. Physical impossibility could mean that the works are extremely difficult to construct, to the extent that even if a lot of additional works, extra plant and resources are employed, the Contractor is still unable to bring the works to completion. Physical impossibility could also mean some supervening event, such as landslide, or fire destroying the Site<sup>1</sup> and the Works, or the lack of construction material on a global basis making further construction impossible or impracticable,<sup>2</sup> and this may be dealt with under the common law of frustration<sup>3</sup> or Clause 85 which provides for frustrations. Whatever the cause of physical impossibility, it is submitted that with the current engineering technology, very few things cannot be achieved with ample time, effort and money, but the question is whether such results are within the original contemplation of the parties in a business context.<sup>4</sup> In a pipe-laying contract in which the specified tolerances were extremely stringent, the contractor plead physical impossibility. The Court held that absolute impossibility was not the meaning to be applied but the situation should be looked at from a "practical commercial point of view" and "in an ordinary competitive commercial basis."<sup>5</sup> This is in fact the principle being followed in the current litigations and arbitrations. For major HKSAR contracts tendered with a marking scheme, the Contractor's proposal submitted during the tender is usually bound into the Contract. A Special Condition requires the Contractor to rectify his own deficiencies in the design if the design is subsequently found to be impossible to construct. However, if the impossibility is not due to the design deficiencies but arising from supervening events, such as worldwide shortage of materials, the Contractor may not be responsible.

## Clause 22

*The HKSAR Conditions:*

### Damage to Persons and Property

- (1) The Contractor shall, except if and so far as the Contract otherwise provides, indemnify and keep indemnified the Employer against all losses and claims for injury or damage to any person or property whatsoever, other than surface or other damage to land or crops on the Site, which may arise out of or in consequence of the execution of the Works and against all claims, demands, proceedings, damages, costs, charges and expenses whatsoever in respect thereof or in relation thereto.
- (2) The Contractor shall make good or at the option of the Employer shall pay to the Employer the cost of making good any damage, loss or injury which may occur to any property of the Employer and shall recompense the Employer in respect of any damage, loss or injury which may occur to any agent or employee of the Employer by or arising out of or in consequence of the execution of the Works or in the carrying out of the Contract.

#### Corresponding clauses in the ICE Conditions:

##### Clause 22

- (1) The Contractor shall except if and so far as the Contract provides otherwise and subject to the exceptions set out in sub-clause (2) of this Clause indemnify and keep indemnified the Employer against all losses and claims in respect of
  - (a) death of or injury to any person or

(b) loss of or damage to any property (other than the Works)

which may arise out of or in consequence of the construction of the Works and the remedying of any defects therein and against all claims demands proceedings damages costs charges and expenses whatsoever in respect thereof or in relation thereto.

#### Corresponding clauses in the FIDIC Conditions:

##### Clause 17.1

The Contractor shall indemnify and hold harmless the Employer, the Employer's Personnel, and their respective agents, against and from all claims, damages, losses and expenses (including legal fees and expenses) in respect of:

- (a) bodily injury, sickness, disease or death, of any person whatsoever arising out of or in the course of or by reason of the Contractor's design (if any), the execution and completion of the Works and the remedying of any defects, unless attributable to any negligence, wilful act or breach of the Contract by the Employer, the Employer's Personnel, or any of their respective agents, and

(b) damage to or loss of any property, real or personal (other than the Works), to the extent that such damage or loss:

- (i) arises out of or in the course of or by reason of the Contractor's design (if any), the execution and completion of the Works and the remedying of any defects, and
- (ii) is attributable to any negligence, wilful act or breach of the Contract by the Contractor, the Contractor's Personnel, their respective agents, or anyone directly or indirectly employed by any of them.

## 條款 22

香港特別行政區土木工程合同一般條件：

### 對人及財產的損害

- (1) 除「合同」另有規定外並限於其所載情況下，「承建商」必須保障「僱主」免除因實施「本工程」而可能引起或造成的一切損失及對任何人受損傷或財產受損害（「工地」內的土地面層或其他土地或農作物損害除外）的索償，及一切因此所牽涉或與此有關的任何索償、要求、訴訟、賠償、訟費、收費及開支，並使「僱主」繼續可得到此保障。
- (2) 對於「承建商」實施「本工程」或履行「合同」所引致或造成「僱主」的任何財產受到的損害、損失或人身損傷，「承建商」必須使其復原或按「僱主」的選擇向「僱主」支付使其復原的費用。對「僱主」的任何代理人或僱員所受到的任何損害、損失或人身損傷，「承建商」也必須向「僱主」作出補償。

#### Commentary

This Clause 22 generally provides indemnity to the Employer against any claims for injury or damage by the third party against the Employer as a result of construction works carried out by the Contractor, subject to the exceptions described in sub-clauses (2)(b)(i) and (ii) regarding the use or occupation by the Employer or any interference of others' right which is the unavoidable results of executing the Works in accordance with the Contract. The Clause also provides for the apportionment of costs arising from damage or injury between the Employer and the Contractor if the damage or injury is caused partly by the default of the Engineer or the Employer. Sub-clause (2) obliges the Contractor to make good any damage to the Employer's property or to pay to the Employer if the Employer wishes to carry out the repair work himself.

#### Analysis and application

Clause 22(1) "The Contractor shall, ... indemnify and keep indemnified the Employer against all losses and claims for injury or damage to any person or property whatsoever, other than surface or other damage to land or crops on the Site, which may arise out of or in consequence of the execution of the Works ..."

"To indemnify the Employer against all losses" means to protect the Employer from any financial consequence resulting from any injury or damage to the third party. When the Employer receives any notice of claim from the third party, he can simply pass the notice to the Contractor who will deal with the claim and if legal proceedings are instituted against the Employer and in many cases also against the Contractor and the Engineer, the Employer can rely on the Contractor to employ lawyer to defend the case. However, if the Employer, for political or other reasons wishes, to have his own legal representation, he may not arguably get back his legal cost from the Contractor. In many cases, the Employer may like to see that the Contractor settles the case with the claimant as soon as possible but he should refrain from any direct involvement in the settlement process as far as possible since the Contractor is entitled to defend his case and there is also complication regarding the insurance position. The wording "other than surface or other damage to land ... on the Site" usually means that the Contractor will not be responsible for any damage done if the Employer fails to obtain a legal right to construct the works over or through the land. The damage can be caused by both the permanent works and all necessary Temporary Works. It is therefore essential that the Engineer and the Employer clear all the land issues before calling the Tender. The wording "damage to ... crops" may include fruit trees or trees for commercial use.

Clause 22(2) "The Contractor shall make good or at the option of the Employer shall pay to the Employer the cost of making good any damage, loss or injury which may occur to any property of the Employer ..."

This sub-clause requires the Contractor to make good any damage caused to the Employer's property, e.g., for a roadwork contract, the Employer's property includes the existing road and road furniture. In many

such case the Engineer may direct a variation of the Works instead of complete re-execution, e.g., for a bored pile below the specified capacity, an additional smaller pile can be placed and the pile cap can be modified. The Government now uses a Special Condition, which empowers the Engineer to accept substandard Works (which would not affect the future functioning) and determine a deduction of the Contract price.

### ***Analysis and application***

Clause 46(1) “The Engineer shall during the progress of the Works ...”

The wording “during the progress of the Works” may arguably suggest that the Clause applies to the construction period only. For rectification of defective works during the Maintenance Period, the Engineer can invoke Clause 56(2) and (3) on execution of work of repair.

Clause 46(1)(c) “... notwithstanding any previous examination, measurement or test thereof or any interim payment therefor, ...”

In general, the Contractor’s obligation to comply with the Contract provisions will not be affected by the Engineer’s or Engineer’s Representative’s previous act or omission in accordance with Clause 2(4) or the previous approval of documents submitted by the Contractor under Clause 7(5). There may be an argument that the previous approval of substandard works or materials constitutes a variation to works or materials to a lower standard. Unless the Contractor confirms in writing subsequently that a variation has been ordered and that order was made before the variation takes place, such approval by the Engineer may not bind the Employer.

Clause 46(3) “... would involve the removal and re-execution of the original permanent works the Engineer may but shall not be obliged to give directions for a variation of the Works in lieu of such removal and re-execution at no additional expense to the Employer.”

The Engineer may have an option to give direction for variation of the Works in lieu of removal to ameliorate the grave financial and time consequences. This should be wide enough to cover cases where the Contractor submits remedial proposals which amounts to a variation of the Works and the Engineer gives approval. The Engineer normally requires the proposals to be checked by an independent checking engineer. For major remedial works involving substantial re-design by the Contractor, the future responsibility of the re-design should be clarified and this should preferably also involve an agreement between the Employer and the Contractor.

Clause 46(3) “... such variation has involved the Contractor in expense in excess of that which would have been involved in the removal and re-execution of the original permanent works then the Engineer shall value such excess ...”

If a variation to the Works affected by defective workmanship, etc. is ordered, this proviso defines the financial limit which the Contractor is liable, i.e., the Cost of removal and re-execution of the original permanent works but there is no provision for any saving as a result of the direction of the Engineer for a variation. It should be noted that the variation should presumably not result in a lower standard of the overall work. As explained in the commentary, a Special Condition adopted by the Government allows acceptance of substandard work which would not compromise its future performance and the Engineer can determine a deduction of the Contract price.

Clause 46(4) “... materials supplied by the Employer, ... the Contractor could not have reasonably ascertained that the material was not in accordance with the Contract then the Engineer shall ascertain the Cost incurred ...”

For materials supplied by the Employer for incorporation into the Works, it is very important that all tests are completed satisfactorily and the materials are thoroughly inspected by the Contractor in the presence of the Engineer’s Representative. Where appropriate, the Contractor shall be obliged to sign a document stating that all materials are to the Contractor’s satisfaction. However, for any latent defects, this sub-clause may still be invoked.



### ***Comparison with the ICE Conditions***

The ICE sub-clause 39(1) is very similar to the HKSAR sub-clause 46(1) except that the former also covers any “design by the Contractor or for which he is responsible.” The HKSAR Conditions now relies on a Special Condition concerning design by the Contractor under which the Contractor is responsible for making good any defects arising from his own design. The ICE sub-clause 39(2) allows the Employer to carry out any replacement work in case the Contractor refuses or fails to comply with the instruction of the Engineer while the HKSAR Conditions relies on Clause 82, which covers both non-urgent and urgent cases.

### ***Comparison with the FIDIC Conditions***

This FIDIC Clause 7.6 is more logically arranged and its application is not limited to “during the progress of the Works” and would therefore arguably cover both the Construction and Defects Notification Period. It should be noted, however, that the FIDIC Conditions has a long and substantial Clause (sub-clause 11.1 to 11.6) covering remedial works during the Defects Notification Period. The FIDIC Clause 7.6 covers unsatisfactory materials and plant, which are part of the Permanent Works and any other completed Works that is not in accordance with the Contract. Additionally, the Contractor is obliged to execute any work which is urgently required for the safety of the Works. For all the above, the Contractor has to comply with the instruction within a reasonable time or immediately if urgency is specified, unlike the HKSAR Conditions and the ICE Conditions, which only requires unsatisfactory materials to be removed within a reasonable time. The FIDIC Clause also allows the Employer to arrange his own persons to carry out the repair works if the Contractor fails to do so and recover Cost from the Contractor as the Employer’s Claims.



**Q** 20

The contractor has commenced the construction of this gantry before the steel structural strength is tested. The structural strength is subsequently found to be slightly below the requirements. What courses of action are opened to the Engineer?

## Clause 47

*The HK SAR Conditions:*

### Commencement of the Works

The Contractor shall commence the Works on the date for commencement of the Works as notified in writing by the Engineer and shall proceed with the same with due diligence. The date so notified by the Engineer shall be within the period of time after the date of acceptance of the Tender as stated in the Appendix to the Form of Tender. The Contractor shall not commence the Works before the notified date for commencement.

#### Corresponding clauses in the ICE Conditions:

##### Clause 41

(1) The Works Commencement Date shall be

- (a) the date specified in the Appendix to the Form of Tender or if no date is specified
- (b) a date between 14 and 28 days of the award of the Contract to be notified to the Contractor by the Engineer in writing or

(c) such other date as may be agreed between the parties.

(2) The Contractor shall start the Works on or as soon as is reasonably practicable after the Works Commencement Date. Thereafter the Contractor shall proceed with the Works with due expedition and without delay in accordance with the Contract.

#### Corresponding clauses in the FIDIC Conditions:

##### Clause 8.1

The Engineer shall give the Contractor not less than 7 days' notice of the Commencement Date. Unless otherwise stated in the Particular Conditions, the Commencement Date shall be within 42 days after the Contractor receives the Letter of Acceptance.

The Contractor shall commence the execution of the Works as soon as is reasonably practicable after the Commencement Date, and shall then proceed with Works with due expedition and without delay.



## 條款 47

香港特別行政區土木工程合同一般條件：

### 「本工程」的開始

「承建商」必須依照「工程師」以書面通知的「本工程」開工日期開始「本工程」，及必須盡力施行「本工程」。「工程師」通知的日期必須是在「投標表格」的「附件」中所載述的「投標」獲接納日期後的一段時間內。「承建商」不可在獲通知的開工日期前開始「本工程」。

#### Commentary

For the HKSAR civil engineering contracts, the Contractor is usually given 14 days after the letter of acceptance to commence the Works and the times for completion then run from that date. For a very tight programme, the period of commencement may be shortened to 7 days. To commence the Works within 14 days is more reasonable because the Contractor has to arrange his insurance and mobilize his resources before commencing any works on the Site. During this period, the Contractor must very quickly produce a programme for the Works under Clause 16 of the HKSAR Conditions or an initial Works Programme (under a Special Condition for Mega Project Contracts).

#### Analysis and application

Clause 47 “... on the date for commencement of the Works as notified in writing by the Engineer ...”

Notification may be given in the letter of acceptance if the tender is accepted by the Consultant on behalf of the Employer or in a separate letter by the Engineer after acceptance of Tender by the Employer.

Clause 47 “... and shall proceed with the same with due diligence ...”

It is suggested that commencement must be real and substantial which may take place on Site or off-Site depending on the circumstances. For example, if the Site is along a stretch of busy road, or in a densely populated area, the arrangement for traffic diversion or baseline monitoring of environmental data may take at least several weeks before substantial Works can commence on the Site.

Clause 47 “... The date so notified by the Engineer shall be within the period of time after the date of acceptance of the Tender as stated in the Appendix to the Form of Tender ...”

Though the Engineer can give a notice period less than the period of time stated in the Appendix to the Form of Tender, he should be mindful of the time required for taking out insurance and the Contractor’s mobilization.

#### Comparison with the ICE Conditions

The ICE Clause 41 is similar to the HKSAR Clause 47 but it specifies a date of commencement between 14 days and 28 days of the award of Contract (which means the same as the issue of the letter of acceptance) or any other date as may be agreed. This is considered to be a more practical and equitable arrangement.

#### Comparison with the FIDIC Conditions

The FIDIC sub-clause is also similar but it specifies a date of commencement between 7 days and 42 days after the letter of acceptance, to cater for different situations in different countries.

## Clause 79

The HKSAR Conditions:

### Interim and Final Payments, Retention Money and Interest

(continued)

- (6) Within 90 days after the date of issue of the maintenance certificate the Contractor shall submit to the Engineer a statement of final account and supporting documentation showing in detail the value in accordance with the Contract of the work done in accordance with the Contract together with all further sums which the Contractor considers to be due to him under the Contract up to the date of the maintenance certificate. Within 90 days after receipt of the final account and of all information reasonably required for its verification, the Engineer shall issue a final payment certificate stating the sum which in his opinion is finally due under the Contract up to the date of the maintenance certificate, and after giving credit to the Employer for all sums previously paid by the Employer and for all sums to which the Employer is entitled under the Contract the Engineer shall state the balance (if any) due from the Employer to the Contractor or from the Contractor to the Employer as the case may be. Such balance shall be paid to or by the Contractor as the case may require within 28 days of the date of the certificate.

#### Corresponding clauses in the ICE Conditions:

##### Clause 60

- (4) Not later than 3 months after the date of the Defects Correction Certificate the Contractor shall submit to the Engineer a statement of final account and supporting documentation showing in detail the value in accordance with the Contract of the Works carried out together with all further sums which the Contractor considers to be due to him under the Contract up to the date of the Defects Correction Certificate.

Within 3 months after receipt of this final account and of all information reasonably required for its verification the Engineer shall issue a certificate stating

the amount which in his opinion is finally due under the Contract from the Employer to the Contractor or from the Contractor to the Employer as the case may be up to the date of the Defects Correction Certificate and after giving credit to the Employer for all amounts previously paid by the Employer and for all sums to which the Employer is entitled under the Contract.

Such amount shall subject to Clause 47 be paid to or by the Contractor as the case may require. The payment becomes due on certification. The final date for payment is 28 days later.

#### Corresponding clauses in the FIDIC Conditions:

##### Clause 14.10

Within 84 days after receiving the Taking-Over Certificate for the Works, the Contractor shall submit to the Engineer six copies of a Statement at completion with supporting documents, in accordance with Sub-Clause 14.3 [*Application for Interim Payment Certificates*], showing:

- (a) the value of all work done in accordance with the Contract up to the date stated in the Taking-Over Certificate for the Works,
- (b) any further sums which the Contractor considers to be due, and
- (c) an estimate of any other amounts which the Contractor considers will become due to him under the Contract. Estimated amounts shall be shown separately in this Statement at completion.

The Engineer shall then certify in accordance with Sub-Clause 14.6 [*Issue of Interim Payment Certificates*].

##### Clause 14.11

Within 56 days after receiving the Performance Certificate, the Contractor shall submit, to the Engineer, six copies of a draft final statement with supporting documents showing in detail in a form approved by the Engineer:

- (a) the value of all work done in accordance with the Contract, and
- (b) any further sums which the Contractor considers to be due to him under the Contract or otherwise.

If the Engineer disagrees with or cannot verify any part of the draft final statement, the Contractor shall submit such further information as the Engineer may reasonably require and shall make such changes in the draft as may be

agreed between them. The Contractor shall then prepare and submit to the Engineer the final statement as agreed. This agreed statement is referred to in these Conditions as the "Final Statement."

However if, following discussions between the Engineer and the Contractor and any changes to the draft final statement which are agreed, it becomes evident that a dispute exists, the Engineer shall deliver to the Employer

(with a copy to the Contractor) an Interim Payment Certificate for the agreed parts of the draft final statement. Thereafter, if the dispute is finally resolved under Sub-Clause 20.4 [*Obtaining Dispute Adjudication Board's Decision*] or Sub-Clause 20.5 [*Amicable Settlement*], the Contractor shall then prepare and submit to the Employer (with a copy to the Engineer) a Final Statement.

## 條款 79 (續)

香港特別行政區土木工程合同一般條件：

### 中期及末期付款、保留金及利息

- (6) 「承建商」必須在保養證明書頒發的日期後90天內提交最終帳目報表及支持文件給「工程師」，詳細標明「承建商」按照「合同」完成的工程而依據「合同」計算的工程價值，及「承建商」認為直至保養證明書的日期為止按照「合同」應獲得支付的所有其他金額。「工程師」在收到最終帳目及為核實這帳目而合理地需要的所有資料的90天內必須頒發最終付款證明書，說明他認為直至保養證明書的日期為止按照「合同」最終須付的金額。「工程師」在扣除「僱主」之前已支付的所有金額及按照「合同」「僱主」有權獲得支付的所有金額後，必須說明「僱主」須支付「承建商」或「承建商」須支付「僱主」（視情況而定）的餘額（如有的話）。此餘額必須在該最終付款證明書的日期後28天內由「僱主」支付「承建商」或由「承建商」支付「僱主」（視情況而定）。

#### *Analysis and application*

This sub-clause (6) describes the procedures and the obligation of the Contractor and the Engineer in finalizing the account after the issue of the maintenance certificate. As explained before, the maintenance certificate is usually issued many months or even a couple of years after the expiry of the Maintenance Period and by that time, all the valuation of variations and most of the claims should have been finalized and the retention money has been released. There should be very little money due to the Contractor or vice versa. However, there may still be one or a few outstanding claims, which may have to be decided by the Engineer or to be resolved by mediation or arbitration. In practice, the Contractor may not observe this 90 days time limit either because not all documents are readily available or there is a lack of manpower to gather and submit information. There is little sanction against the Contractor except that the Engineer may unilaterally issue the final payment certificate under sub-clause (7). However, the Engineer must observe his 90 days time limit to issue the final payment certificate or the Contractor may be able to claim interest. Also, after the issue of the final payment certificate, the Employer must pay within 28 days or Clause 79(4) (a) regarding interest on late payment shall apply.

## Clause 79

The HK SAR Conditions:

### Interim and Final Payments, Retention Money and Interest

(continued)

- (7) If the Contractor fails to submit a statement of final account within 90 days of the date of the maintenance certificate in accordance with sub-clause (6) of this Clause the Engineer shall be entitled to issue a final payment certificate without reference to the Contractor.

#### Corresponding clauses in the ICE Conditions:

(There is no corresponding sub-clause.)

#### Corresponding clauses in the FIDIC Conditions:

##### Clause 14.12

When submitting the Final Statement, the Contractor shall submit a written discharge which confirms that the total of the Final Statement represents full and final settlement of all moneys due to the Contractor under or in connection with the Contract. This discharge may state that it becomes effective when the Contractor has received the Performance Security and the outstanding balance of this total, in which event the discharge shall be effective on such date.

##### Clause 14.13

Within 28 days after receiving the Final Statement and written discharge in accordance with Sub-Clause 14.11 [*Application for Final Payment Certificate*] and Sub-Clause 14.12 [*Discharge*], the Engineer shall issue, to

the Employer, the Final Payment Certificate which shall state:

- (a) the amount which is finally due, and
- (b) after giving credit to the Employer for all amounts previously paid by the Employer and for all sums to which the Employer is entitled, the balance (if any) due from the Employer to the Contractor or from the Contractor to the Employer, as the case may be.

If the Contractor has not applied for a Final Payment Certificate in accordance with Sub-Clause 14.11 [*Application for Final Payment Certificate*] and Sub-Clause 14.12 [*Discharge*], the Engineer shall request the Contractor to do so. If the Contractor fails to submit an application within a period of 28 days, the Engineer shall issue the Final Payment Certificate for such amount as he fairly determines to be due.

#### Notes

1. For a general discussion on payment of materials off-Site, see Roger Knowles, *150 Contractual Problems and Their Solutions*, Note 7.3 .
2. *Pacific Associates v Baxter* [1990] 1 QB993 CA; *Leon Engineering and Construction Co. Ltd. v Ka Duk Investment Co.* [1989] 47 BLR139.

## 條款 79

香港特別行政區土木工程合同一般條件：

### 中期及末期付款、保留金及利息

(續)

- (7) 如「承建商」未能按照本條第(6)款在保養證明書的日期90天內提交最終帳目報表，「工程師」有權在無須諮詢「承判商」下頒發最終付款證明書。

#### **Analysis and application**

In practice, the Engineer will allow adequate time for the Contractor to arrange the submission of his final account. The issue of a final payment certificate without consultation with the Contractor under this sub-clause (7) is undesirable because such a final payment certificate may still be disputed by the Contractor.

#### **Comparison with the ICE Conditions**

The main differences between this ICE Clause 60 and the HKSAR Clause 79 are:

- (i) The ICE sub-clause 60(2) requires payment from the Employer only 28 days after the delivery of monthly statement from the Contractor while the HKSAR Clause allows 21 days plus 21 days, i.e., a total of 42 days. The ICE sub-clause allows 25 days for the Engineer to certify but only 3 more days for the Employer to make payment.
- (ii) The goods or materials under the ICE Clause 60(1)(b) and (c) are not subject to retention. Clause 60(1)(c) allows off-Site payment of materials<sup>1</sup> specified in Appendix to Form of Tender.
- (iii) Under the ICE Clause, one-half of the retention money is released to the Contractor upon the issue of the Certificate of Substantial Completion of the Works, or one-half of the proportional amount of retention money is released to the Contractor upon the issue of the Certificate of Substantial Completion of any Section or part of the Works, depending on whether the Works are divided into Sections or not. The remaining retention money is released to the Contractor at the end of the Defects Correction Period or the last of the Defects Correction Periods. Under the HKSAR Clause, retention money will only be released after the issue of the maintenance certificate.
- (iv) Under the ICE sub-clause 60(7), the interest of any overdue payment is compounded monthly at a rate of 2% above the best lending rate, while under the HKSAR Clause, simple interest is usually payable at 1% below the judgment debt rate.
- (v) Under the ICE sub-clause 60(8), it is explicitly stated that the power of the Engineer to omit from any certificate the value of materials or works which are found to be unsatisfactory shall not extend to works or materials of the Nominated Sub-contractors.

#### **Comparison with the FIDIC Conditions**

The main differences between the FIDIC Clause 14.7 and the HKSAR Clause 79 are:

- (i) The FIDIC Clause 14.7 allows for advance payment to the Contractor as an interest-free loan for mobilization.
- (ii) The total time allowed for the Employer to make payment certified by the Engineer is 56 days after receiving the Contractor's statement.
- (iii) The FIDIC sub-clause 14.5(b) allows for Plant and Material listed in Appendix to Tender to be paid once shipped or have been shipped to the Country en route to the Site.
- (iv) Similar to the ICE Clause, the FIDIC Clause 14.9 allows the release of one-half of the retention money or proportional money after the issue of the Taking-Over Certificate. It also allows further release of remaining retention money after the expiry of the Defects Notification Period.
- (v) The FIDIC Clause 14.8 also allows finance charge to be compounded monthly for the Employer's failure to make payment.
- (vi) The FIDIC Clause 14.6 takes a more cautious approach for withholding the Interim Payment Certificate on unsatisfactory works.
- (vii) The FIDIC Clause gives a more detailed procedure to follow for the Final Payment Certificate and especially in case of disagreement by the Contractor or a dispute arises between the Employer/Engineer and the Contractor.

(Please see opposite page for Notes.)

## Suggested Answers to Questions

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### Question 1

Since the TCSS contractor is employed by the Government, he is called Specialist Contractor, which is defined as “any contractor employed by the Employer to execute Specialist Works.” Under Clause 20, the main Contractor is not responsible for the safety of the operation of the Specialist Works. However, under Clause 21, the main Contractor is responsible for the care of the Specialist Works.

### Question 2

Though the back-span is supported by “specially designed falsework,” it is part of the Works and the contractor carrying out such work is domestic sub-contractor. Under Clause 20, the main Contractor is responsible for the safety of its operation and under Clause 21, the main Contractor is responsible for the care of such works.

### Question 3

Loosening the ground for hydroseeding is the responsibility of the Contractor and the Engineer needs not give the order to do so. Even if the Engineer had given the order, it does not entitle the Contractor to any other payment except payment under the original terms of the Contract, since Clause 2(4) states that “no act or omission by the Engineer ... shall in any way operate to relieve the Contractor of any duties, responsibilities ...”

### Question 4

There is a discrepancy between the Specification and the Drawing. The Contractor should write to the Engineer asking for clarification and according to Clause 5, the Engineer shall issue instruction to clarify such discrepancy. According to sub-clause (b), if the compliance with such instruction shall involve the Contractor in expense which the Contractor did not or had no reason to anticipate, the Engineer shall value such expense. In the case of the spacing of the bolts which needs to have 75mm clear width, the Contractor needs to rectify and it is likely that the Contractor should be compensated.

### Question 5

This depends on the design requirements stipulated in the Contract, usually found in the Specification or the Drawings. This problem of matching levels is not only limited to noise barriers but also to parapets and surfacing. Engineers experienced in bridge construction should be able to write into the Contract a procedure or design requirement which the experienced Contractor can follow to complete the work, e.g., calculation of precamber, etc. In the unfortunate event that the noise barrier components do not fit into the as-built bridge structure, the determination of liability depends on how the Contract is written and what subsequent actions have been taken by the Engineer and the Contractor, i.e., whether clarifications have been requested by the Contractor or the instructions given by the Engineer.

### Question 6

The Drawings for the specially designed falsework are supplied by the Contractor and therefore in accordance with Clause 8(2), the Employer may use any information provided by the Contractor but he shall not divulge such information except for the purpose of the Contract or for the purpose of carrying out any repair, amendment, extension or other work connected with the Works. In this case, the Employer wants to extend the back-span and this falls within the provision of Clause 8(2).

### Question 7

This is a typical case illustrating the need to inspect the Site and the Contractor has to satisfy himself, before submitting his Tender, as regards existing roads or other means of communication and access to the Site under Clause 14. A weekday inspection reveals the traffic queue and therefore the Contractor claiming remedy must fail.

### Question 8

This question involves the principle of risk-sharing under the Contract. Under Clause 13, the Contractor “shall be deemed to have examined and inspected the Site and its surroundings and to have satisfied himself, before submitting his Tender, as regards existing roads ... access to the Site, the nature of the ground and subsoil ... and generally to have obtained his own information on all matters affecting his Tender.” Under Clause 14, the Contractor “shall be deemed to have satisfied himself before submitting his Tender as to the correctness and sufficiency of his Tender.” Therefore, the Contractor has to take the risks arising from traffic, utilities and environmental constraints. However, regarding underground utilities, if uncharted utilities are found which critically delay the Works, the Contractor may claim for extension of time under Special Circumstance or any appropriate SCC Clauses regarding utilities obstruction. In the more difficult cases where the utilities, whether charted or uncharted, create a situation where their diversion is impossible or impracticable within reasonable time frame, the Contractor may be relieved of his responsibility for the concerned work under Clause 15. Under such case, the Engineer needs to issue variation order to avert such impossibility or impracticability. In the case where the anticipated time for diversion of utilities are very substantial and may be less desirable for the project, the Engineer may also issue variation orders to assist the progress of the Works. Under such circumstances, the Engineer may take into account the original reasonable time for diverting such utilities in considering whether an extension of time should be granted to the Contractor. To a lesser extent, the above cases also apply to environmental and traffic constraints.

### Question 9

The Clause 16 programme shows the Contractor’s intending sequence, method and timing for carrying out the Works and his working arrangement, Constructional Plant and Temporary Works. The programme also shows the various critical paths to the completion of the Works. The Engineer needs to grant extension of time for the completion of the Works and pay prolongation cost under Clauses 50 and 63 respectively only if the delay impacts on the critical paths of the approved programme. Even though the Employer’s delay impacts on the critical path, the Contractor may not be automatically entitled to extension of time because he has a general duty to mitigate the delay using reasonable endeavour (see Clause 50, Note 8). Apart from that, the Mega Project Conditions of the HKSAR impose a duty on the Contractor to submit a revised programme and the mitigation measures the Contractor proposes to adopt. The Engineer can take the Contractor’s action or non-action into account when considering any extension of time.

### Question 10

To distinguish Temporary Works and Constructional Plant, we look at the definition under Clause 1. “Temporary Works” means all temporary work of every kind required for the construction, completion and maintenance of the Works while “Constructional Plant” means all appliances or things of whatsoever nature required for the execution of the Works but does not include materials or other things intended to form or forming part of the permanent work or vehicles in transporting any personnel, Constructional Plant, materials or other things to or from the Site. We therefore see that the definition of Constructional Plant is much wider, including also the Temporary Works. Therefore, all the trusses and specially made lifting appliances at the column head, and even the temporary concrete columns are Constructional Plant. The fixed trusses and temporary concrete columns are Temporary Works.

### Question 11

Under Clause 20(2), the Contractor shall in connection with the Works provide and maintain all lights, guards, fences and warning signs. The provision of guarding, lighting to the public road and fencing to the private development are in connection with the Works and therefore the Contractor has to pay for it. Under Clause 13 regarding a deeming provision for the inspection of the Site before submitting the Tender and Clause 14 concerning sufficiency of the Tender, the Contractor is not entitled to claim even he has provided more lighting, guarding and fencing than he envisaged at the Tender. However, under the ICE Conditions Clause 11, “The Contractor shall be deemed to have inspected and examined the Site ... and to have satisfied himself so far as is practicable and reasonable before submitting his tender ...” And together with its Clause 12 regarding compensation for adverse physical condition, the Contractor may be entitled to claim extra if the lighting, guarding and fencing he provided are more than he could reasonably envisaged. Similar provisions are found in the FIDIC Conditions.



### Question 12

Under Clause 53(5)(b), “The Engineer, following a written request from the Contractor, may give a certificate of completion in respect of any substantial part of the Works which has been completed to the satisfaction of the Engineer ... and is capable of permanent occupation and/or permanent use by the Employer.” The completion of the cable-stayed bridge tower, though being very substantial and expensive, does not satisfy the above condition of permanent occupation or use and therefore the partial completion certificate cannot be granted.

### Question 13

Under Clause 22(2), “The Contractor shall make good or at the option of the Employer shall pay to the Employer the cost of making good any damage ... to any property of the Employer ...” The Sewage Treatment Work is the property of the Government and therefore the Contractor is responsible for any accidental damage.

### Question 14

Regarding insurance, any component of the cable-stayed bridge is very expensive and it is desirable to buy Works insurance covering all the Works. The Site is in the proximity of the public road and the container operation and therefore third party insurance is inevitable. Under the law, the Contractor has to buy employees’ compensation insurance for all his employees, and especially the workmen. It should include the workmen of all his sub-contractors if separate insurance policies are not taken out by the sub-contractors. The position with the self-employed is more complicated and generally they should provide their own insurance policies. If there is any design by the Contractor, the Contractor, his designer and independent checker should take out professional indemnity insurance. In most cases, the Contractor also insures his plant.

### Question 15

The container boxes being blown off causing damage to the Contractor’s falsework system is a damage to the Contractor’s Plant or Temporary Works, or subsequent damage to the permanent work of the Employer. The Contractor may sue the container operator under the law of tort, and especially the container operator’s negligence. In reality, such losses are covered by insurance policies and the insurance company will pay but recover from the container operator. If there is any excess to be paid by the Contractor himself, he can recover the excess from the container operator.

### Question 16

The tower crane is the Plant or Temporary Works designed and constructed by the Contractor who is fully responsible for its safety. If it falls onto the adjacent container operator’s land, under Clause 22(1), the Contractor shall indemnify the Employer against all claims for damage by the container operator and he must be responsible for all the consequences. Usually the Contractor takes out third party insurance and except for paying the excess, he will be covered by this policy.

### Question 17

The lighting term contractor is employed by the Employer and is a Specialist Contractor. The erection of the lighting post is not part of the Works but is Specialist Works as defined in Clause 1. Under Clause 20, the Employer is responsible for the safety of its own Specialist Works. Therefore the Contractor will not be responsible for any damage to property arising therefrom. Therefore, the damage to the private car is the Employer’s own responsibility. As regards the damage to the adjacent columns, since the Contractor is not responsible for the safety and stability of the lighting post, the damage to the columns will also be the Employer’s own responsibility.

### Question 18

Under Clause 30, the Contractor has to comply with the law and addition and amendment to the law, and therefore in the absence of any Special Conditions, the Contractor has to engage the service of the two structural engineers at his own expense. However, as described in the general commentary to Clause 30, a Special Condition allows compensation to the Contractor for any change in law described in the Schedule attached to the Special Condition. In this case, the amendments are most likely to be made under the *Builder’s Lift and Tower Working Platform (Safety) Ordinance*, which is described in the Schedule and therefore the Contractor is entitled to compensation.



**Question 19**

This is a high-level construction Site of major safety concern and hence the *Factories and Industrial Undertakings Ordinance* must be observed. Since lifts transporting workers and people are provided, the *Builder's Lift and Tower Working Platforms (Safety) Ordinance* is applicable. The construction noise must be abated to the standard required by the *Noise Control Ordinance*. The Site also involves waste disposal and hence the *Waste Disposal Ordinance* must be observed. The workers on Site must be subject to the *Employment Ordinance*, and also the *Immigration Ordinance* if foreign workers are involved. The *Employees' Compensation Ordinance* governs the compensation to workers in case of any injury. The electricity and gas operations must be subject to the *Electricity Ordinance* and *Gas Safety Ordinance*. Finally, all construction activities involving public roads must comply with the *Road Traffic Ordinance*.

**Question 20**

The erection of gantry before the strength of structural steel is tested is at the Contractor's own risk. Under Clause 46, the Engineer can order the Contractor to remove unsatisfactory works. If removal of the completed works is not practical, the Engineer can order a variation of the works in lieu of removal at no extra cost to the Employer. In this case, however, there is no need for the removal or a variation. The Engineer can simply accept the slightly substandard material and determine a reduction in price under a Special Condition to GCC Clause 46.

**Question 21**

The decision not to divert the overhead cable appears to have come from the utilities company, which is a third Party to the Contract. However, since the Employer have incorporated into the Contract that the cable will be diverted, the subsequent decision, whoever makes it, may be regarded as a change of contract requirements in accordance with Clause 60, which empowers the Engineer to order any variation necessary or desirable for the completion of the Works. The accommodation of the overhead cable involves a change of method and timing of construction. Therefore the Contractor can claim extension of time in accordance with Clause 50 and disruption costs in accordance with Clause 63.

**Question 22**

The Engineer approved the Contractor to build the gantry at the location and the gantry was subsequently built. To impose the restriction of loading activities to non-peak hours by the Marine Department is similar to restricting loading and unloading in a stretch of road adjacent to a construction site by the Transport Department. The Marine Department is in fact carrying out its statutory function. The Contractor may claim extension of time under Clause 50 "Special Circumstance", but he will not be entitled to claim costs.

**Question 23**

If the lack of progress is due to the fault of the Contractor, the Engineer is "empowered to instruct the Contractor in writing to carry out the Works, or any part thereof during any hours of the day" And he may therefore instruct the Contractor to carry out night work. However, before giving such instruction, he must be sure that all likely extension of time has been granted to the Contractor or otherwise the Contractor can claim extra payment in accelerating the Works.

**Question 24**

Clause 51 allows the Engineer to require the Contractor to take steps to expedite the completion of the Works, including carrying out the Works during any hours of the day. Instructing the Contractor to provide more plant specifically designed by the Contractor is rather unusual and it may not be a valid instruction. If it has to be done, it would be prudent to sign a Supplementary Agreement with the Contractor, specifying each Party's responsibility. The design and the operation of the Specific Plant must be made the responsibility of the Contractor.

**Question 25**

The achievement of a "Stage" is different from the completion of a Section in that the responsibility for the care of the part of Works achieved under a Stage is not passed to the Employer 28 days after the achievement of the Stage, but in the latter,

the responsibility for the care of Works is passed to the Employer. In order to allow the container vehicles to pass between the columns, we have to ensure that the responsibility for the care of Works still lies with the Contractor and therefore a staged completion of the columns has to be specified. Apart from that, it has to be stated in the Contract that the container vehicles are allowed to pass between the columns.

### **Question 26**

Under Clause 53(5)(b), the Engineer, following a written request from the Contractor, may give a certificate of completion in respect of any substantial part of the Works which has been completed to the satisfaction of the Engineer and is capable of permanent occupation and/or permanent use by the Employer. Regarding this particular case, the completion of one viaduct of the dual 3-lane road is undoubtedly a substantial part of the Works. Also, the phrase “capable of permanent occupation and/or permanent use by the Employer” does not require actual occupation or use, and even though the Employer does not use it, the Engineer can still certify partial completion. When certifying partial completion, the Engineer should ensure that any outstanding works are completed within the Maintenance Period of that particular part, which starts to run upon certification of that part.

### **Question 27**

Upon completion of the flyover ready for opening to traffic, the Engineer can have two choices. He can either certify the completion of the whole of the Works leaving the ground level works as outstanding Works, or he can certify partial completion of the flyover. If he adopts the second approach, he can still have control in the completion of the ground level works. If he adopts the first approach, he has to make sure that the majority of the ground level works are completed within the few months after certification of completion because the Maintenance Period for the ground level works is effectively reduced.

### **Question 28**

It is obviously better to investigate the cause of the movement before covering up the slope with permanent surface protection and therefore the Engineer should first suspend part of the slope works under Clause 54(1). Under sub-clause (2)(d), the suspension is for the safety of the Works and the safety of the person and therefore the Contractor may not be entitled to any time extension nor cost reimbursement. Then the Engineer may instruct the Contractor to investigate the cause of the slope movement under Clause 58. Depending on the results of investigation, if the Contractor is responsible for the defects, he has to propose remedial works under Clause 46, generally at no additional time and expenditure to the Employer. However, if the Employer is at fault, i.e., design fault, then extension of time and reimbursement of expenditure should be granted to the Contractor under Clause 58(3) and/or the exception to Clause 54(2)(d). Obviously, the Engineer has to minimize the time for investigation and require the Contractor to implement temporary protective measures to the concerned slope.

### **Question 29**

The Labour Department is a Government Department but it is acting in its statutory capacity to suspend the Works. The sliding of the girder is the fault of the Contractor and therefore he should be responsible for its own delay and costs. The Engineer should just carry out his own investigation and request the Contractor to submit any preventive and improvement proposals. He could also request the Contractor to submit a revised programme to ensure timely completion of the Works and to take steps as necessary to expedite the completion of the Works under Clause 51(1). As regards the injuries of the workmen, the Contractor shall be responsible and it would be compensated under the employees' compensation insurance, which is mandatory under the law.

### **Question 30**

The need to install a new automatic smoke detection system after the issue of a Certificate of Completion requires the Engineer to order such work during the Maintenance Period. Though the HKSAR General Conditions of Contract does not allow for ordering variation during the Maintenance Period, a Special Condition has been incorporated into all HKSAR Contracts, which allow the Engineer to do so (see the comparison of Clause 60 with the ICE Conditions on p. 147).

**Question 31**

When considering whether substantial completion of the Works can be granted, the basic test is the readiness for “operational or functional occupation” (see p. 116). Out of the four kilometers of twin decks, only two sections of parapets are outstanding. By suitable temporary traffic measures, the bridge decks can be opened to traffic and hence there is no difficulty in certifying substantial completion.

**Question 32**

When considering the measurement of the Works, we must first refer to the Standard Method of Measurement (SMM) because under Clause 59(1), the Bill of Quantities shall be deemed to have been prepared in accordance with the procedures set forth in the Method of Measurement. According to the SMM Clause 8.30–8.32, concrete profile barriers shall be measured along the centre-line of the profile barriers in linear metres. The item coverage for concrete profile barriers includes precasting, transporting and fixing in position, jointing, ducts and drain pipes, filling and compaction to core, concrete topping, etc. The concrete barriers in the photo consist of a wide earth-filling but no concrete topping, possibly for planting purposes. A particular preamble has to be written to cover the situation. A typical section showing the centre-line of the profile barrier has to be shown.

**Question 33**

This depends on whether the median drainage has been particularized in the Specification and/or in the Bill of Quantities, including its location. Under Clause 5(2), the Engineer shall issue to the Contractor instructions clarifying the ambiguities and discrepancies. If the compliance of instruction shall involve any expense by reason of ambiguities or discrepancies the Contractor did not and had no reason to anticipate, the Engineer shall value such expense. Also, if extra time is involved, the Engineer can grant extension of time in accordance with Clause 50(1)(a)(iii).

**Question 34**

The model may sometimes be useful in arbitration on the valuation of cost because it can be used together with photographs to give a three dimensional appreciation of the Site conditions. The model can give the arbitrator a good appreciation on whether any works are carried out under similar conditions and circumstances to any item of work priced in the Contract, in accordance with Clause 61(1)(b) and (c).

**Question 35**

In making such valuation, the Engineer should first base on the rate of the 1.2m high parapet. He should break down the work into various components, i.e., formworks, concrete, reinforcement, etc., and assess the costs of these components. From these costs, the Engineer then builds up the Cost for the 1.5m high profile barrier.

**Question 36**

Though under Clause 62 the Engineer can order work on a daywork basis, it may not be appropriate to do so if the works require intense planning and with some design element. The FIDIC Conditions Clause 13.6 specifically says that daywork is for works of a minor or incidental nature. The HKSAR Conditions Clause 62 does not expressly say so, but there are internal guidelines for ordering daywork. For the electrical components missing from the Drawings, warranties and some design are usually required and ordering daywork may not be appropriate.

**Question 37**

For the removal of the dangerous boulder on the slope, Temporary Works design is inevitably required and ordering daywork may not be appropriate. A proper variation order should be issued which should include design and checking. If the boulder falls down, the Contractor has the primary responsibility and the designer and checker would also be liable. If, however, daywork is ordered, the Contractor may not be fully responsible and the Engineer may have some liability depending on the manner he orders the daywork.

**Question 38**

If the precast segments have to be cast 200 mm shorter than the original design, the Engineer has to issue a variation order under Clause 60. Under Clause 63(c), the Contractor may, by reason of the progress of the Works or any part thereof having been materially affected by the variation order, seek reimbursement. The direct cost of the variation order, such as extra construction joints, formworks, etc., may be evaluated under the variation order, while any delay or disruption to the progress of the Works can be separately valued under Clause 63(b).

**Question 39**

For the laying of additional water-cooling main, the Contractor should first request the Engineer to issue a variation order. The Contractor should keep all contemporary records, such as payment vouchers, labour, Plant and materials used including all idling time, for the valuation of the variation order under Clause 61 by the Engineer. It is likely that the Engineer's variation order would cover the direct costs. For any indirect costs, such as disruption to progress of work and prolongation of time for completion, the Contractor has to submit a notice of claim under Clause 64(2) within 28 days after the Engineer's instruction. Under Clause 64(3), the Contractor has to keep contemporary records and agree on such records with the Engineer's Representative. Under Clause 64(4), the Contractor has to submit interim accounts with full and detailed particulars supporting his claim and any further accounts as necessary.

**Question 40**

During examination times, the Contractor is required to mitigate the noise, and he may not be able to use powered mechanical Plant to carry out the work, or he may have to erect temporary noise screens to reduce the noise. This involves a change of method of working and/or additional Temporary Works and will be effected by the Engineer issuing a variation order to the Contractor. The Contractor should furnish relevant information to enable the Engineer to value the variation order. If the Contractor wishes to submit a claim for disruption to the progress of work and overall delay in the time for completion, he should follow the procedures stipulated under Clause 64.

**Question 41**

While the Engineer reviews the details of reinforcement in the cross-beams, the launching girder will be idling and other works for the deck will be suspended. The Contractor should:

- (1) request the Engineer to suspend that part of the Works under Clause 54(1);
- (2) apply to the Engineer who shall ascertain the Cost incurred under Clause 54(2) and the Engineer shall then certify the Cost under Clause 79.

If the Engineer refuses to issue a suspension order, the Contractor can submit a notice of claim under Clause 64(2) and then follow the procedures in Clauses 64(3) and (4).

**Question 42**

According to Clause 1(1), the Provisional Sum means a sum provided for work or expenditure which has not been quantified or detailed at the time the Tender documents are issued. It may have a brief description in the Bill of Quantities. If such a sum has been provided for the video work, the Engineer can order such work and value in accordance with Clause 61, otherwise the Engineer may order such work through a variation order under Clause 60 using the Contingency Sum

**Question 43**

According to Clause 81(1), if the Contractor gets bankrupt, the Employer can enter upon the Site and may use the Constructional Plant, temporary buildings and materials which become the property of the Employer under Clauses 71 "Vesting of Constructional Plant and Temporary Buildings" and 72 "Vesting of Materials". According to Clause 1, Constructional Plant includes the falsework system and the crawler crane. By the same Clause 81(1), the Employer may sell any of the Constructional Plant, temporary buildings and unused materials for the satisfaction of any sum due to the Employer under the Contract.

**Question 44**

Under the HKSAR Conditions Clause 79(1)(c), the Contractor may get interim payment for the value of materials for inclusion in the permanent work not being prematurely delivered to the Site. Since the steel deck unit is in Mainland China, the Contractor cannot claim interim payment unless any Special Conditions provide for that. Even so, a set of procedures has to be complied with and usually an offshore bond is required from the Contractor. If the ICE Conditions were used, under its Clause 60(1)(c), the value of a list of any of those goods or materials identified in the Appendix to the Form of Tender, which have not yet been delivered to the Site but the property of which has seen vested in the Employer pursuant to Clause 54 can be included in the interim payment.

**Question 45**

Under the HKSAR Condition Clause 79(1)(b), the Contractor can get interim payment for the value of Temporary Works for which a separate sum is provided in the Bill of Quantities. If the launching girder is not included in the Bill of Quantities, no interim payment can be made. Also, the launching girder is arguably not Temporary Work but is Constructional Plant. For the ICE Conditions, under Clause 60(1)(d), the value of the Contractor's equipment for which separate amounts are included in the Bill of Quantities can be included in the interim payment. Under the FIDIC Conditions, interim payment can be made to the Plant intended for the Works under Clause 14.3(e).

**Question 46**

Under Clauses 79 and 52, the Employer can deduct liquidated damages from the interim payment. However, if the Contractor's cash flow to complete the Works is seriously affected, it is not uncommon that the Engineer, after taking account of the overall situation, recommends to the Employer to withhold the deduction of liquidated damages. This is especially the case if there are claims for extension of time and/or money, which have not yet been finalized. Also, if there is a bond which can cover future deduction or if the retention money is adequate, then the Employer can withhold the deduction.

**Question 47**

Under Clause 58, prior to the issue of the maintenance certificate, the Engineer can instruct the Contractor to investigate the cause of any defects. If the defects are the ones which the Contractor should be liable in accordance with the Contract, the Contractor shall bear the cost of investigation and subsequent making good of the defects. If, however, the defects are discovered after the maintenance certificate is issued, the Contractor shall only be responsible if such defects could not with reasonable diligence have been discovered by the Engineer. Similar to the HKSAR Conditions, latent defects discovered after the issue of the Defects Correction Certificate (Clause 61(2)) under the ICE Conditions or the Performance Certificate (Clause 11.9) under the FIDIC Conditions are still the liability of the Contractor.

**Question 48**

According to Clause 81(1), the Employer can sell the Constructional Plant and apply the proceeds of sale towards the satisfaction of any debt owed by the Contractor to the Employer. Since \$10M is still owed to the Employer and the Plant is worth \$8M, the Employer can sell the plant and retain all the money.

**Question 49**

If the Contractor goes bankrupt, the Employer may follow the following steps under Clause 81:

- (a) He shall give at least 7 days' notice to the Contractor and then enter upon the Site and expel the Contractor from the Site.
- (b) He shall make a record of the state of completion of the Works and update all measurements; he shall also make a complete record of the Constructional Plant and materials on Site.
- (c) At the same time, he shall decide the approach to complete the Works by using his own workforce or call a new contract; he can make use of the Constructional Plant and materials which have been vested upon him under Clauses 71 and 72.

- (d) If the Employer decides to retain the service of the existing sub-contractors or suppliers, he can require the Contractor to assign the benefit of any sub-contracts to him.
- (e) Under a Special Condition, the Engineer can certify money due to either party when the difference between the following can be ascertained:
  - (i) such sum as would have been due to the Contractor if he had completed the Works together with any proceeds of sale; and
  - (ii) the Cost of completing the Works, with damages for delay and other expenses properly incurred by the Employer.

### Question 50

Although the outstanding works are outside the Site limit, provided those works are included into the Contract, the Contractor has no right to refuse carrying out those works. However, the Engineer must ensure that the land is available from the Lands Department and check that the insurance covers those works. If the Contractor still refuses to carry out the works, the Engineer may give the Contractor 14 days' notice in writing to carry out such works under Clause 82(1). If the Contractor still fails to do so, the Employer shall be entitled to carry out such works by his own workers, e.g., his maintenance contractor. All additional expenditure properly incurred by the Employer shall then be deducted from the Contractor's account under Clause 83.

### Question 51

This situation will put the Employer into a very difficult situation and it is very undesirable even though the Employer has the power to carry out such work by invoking Clause 82 for several reasons:

- (a) Though the Contractor's claims for EOT and money are apparently unjustified from the Engineer's point of view, the decisions of the Engineer are subject to review by the future arbitrator, and if the arbitrator rules in favour of the Contractor, the Employer may have to compensate the Contractor for any disruption, prolongation and loss of profit.
- (b) The works to be completed by the new Contractor may have technical interface with the Contractor's completed works and there may be uncertainty as to each Party's responsibility in case of any future failure of the work.
- (c) It may be difficult for the Employer to find a new Contractor to complete the Works. The maintenance contractor may not be technically competent enough to carry out such work or unwilling to do so because of the low Contract rates. Calling a new contractor will take at least several months.
- (d) The Contractor may insist that he has a right to complete the work himself even if he risks himself exposing the liquidated damages being deducted by the Employer.

Having considered all the above, the Employer may first use all administrative means to oblige the Contractor to cooperate. Such means include the consideration of giving adverse performance reports and suspending the Contractor from tendering future works. The Employer, after the decisions from the Engineer, can propose adjudication as a quick means to decide on the claims. As a last resort, the Employer only then uses his own workers or maintenance contractor to complete the works to meet the deadline. See Note 1 of Clause 82.

### Question 52

The Contractor can raise a dispute anytime and ask for the Engineer's decision under Clause 86. If the dispute cannot be resolved by the Engineer's decision, the Contractor can propose mediation or adjudication (under a Special Condition). The Employer is likely agreeable to mediation or adjudication. However, the Contractor cannot commence arbitration until the alleged completion of the Works under Clause 86(3), unless agreed by both Parties.

### Question 53

The *Arbitration Ordinance* (Cap. 341) allows the parties to make an agreement in their contract to submit their dispute to arbitration, but that does not mean that the Court can be put aside altogether. When one party challenges the jurisdiction of the arbitrator to decide on the particular dispute, the arbitrator can submit to the High Court for a ruling. The arbitrator can also submit a preliminary question of law in connection with the dispute to the Court. When the arbitrator has made an award, the parties can have some limited rights of appeal to the Court. Finally, the Court is involved in enforcing the arbitral award.



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