

# TRANSPORT FOR NSW (TfNSW)

## QA SPECIFICATION G2-C2

### GENERAL REQUIREMENTS (MAJOR CONTRACTS)

#### NOTICE

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#### REVISION REGISTER

Ed/Rev Number	Clause Number	Description of Revision	Authorised By	Date
Ed 1/Rev 0	All	First issued as a model specification.	GM, RNIC	22.04.97
Ed 1/Rev 1	6 13	Currency of other RTA specifications specified. RTA Q applies when included.	GM, RNIC	17.03.98
Ed 1/Rev 2	8, Annex 2	Drawing Number B045 deleted.	GM, RNIC (Woodward)	02.06.98
Ed 1/Rev 3	17 (a)	Clause S2.15 changed to S2.16	GM, RNIC (Woodward)	14.09.98
Ed 2/Rev 0	1.1, 1.2, 18, 19, 20 Annex 2 6	New clauses added for recordkeeping and Identified Records Test Methods placed on Internet	GM, RNIC	27.09.99
Ed 2/Rev 1	1.1 6 16	Introductory paragraphs added Test Methods sold by Library. Deleted (Prescribed Payments)	GM, RNIC	05.07.00
Ed 2/Rev 2	3.4, 4, 6, 11, 17, 18.4.1, 19.1, 19.4 4 5 7 8	References changed to align with C1 Conditions of Contract. Utility conflict & delays changed Materials specifications payment clauses are not applicable Vehicle movements limited Contractor to supply boards.	GM, RNIC	18.05.01
Ed 2/Rev 3	1.2.2, 1.2.3 6 12	New subclauses RTA Library redefined Statutory reference updated	GM, RNIC	16.11.01

<b>Ed/Rev Number</b>	<b>Clause Number</b>	<b>Description of Revision</b>	<b>Authorised By</b>	<b>Date</b>
Ed 3/Rev 0	all	Fully revised for use with NSW Government GC21 - Edition 1 General Conditions of Contract	GM, RNIC	04.02.04
Ed 3/Rev 1	1.2.2 1.2.7 6.2(a) 26.5, 38.2 (new) 30, 38, 39 34, 35 (new) 40 (new)	Redrafted to plainer text. Changed meaning of Drawings Minor editorial change Requirements shown elsewhere deleted Deleted and following clauses renumbered Headings changed New clause on privacy	GM, RNIC (P Wellings)	31.03.04
Ed 3/Rev 2	2 3	Changes to documents requires Principal's written agreement Copies of standard test methods will not be provided.	GM, RNIC	05.05.04
Ed 3/Rev 3	26.1, Annex C1	Hold Point added for HR Plan	GM, RNIC	03.06.04
Ed 3/Rev 4	Guide Notes 26.6 1.1, 26.6, Annex A2, B, C1	Guidance on Primary Testing Transferred to Clause 26.7 New clauses for implementing a Primary Testing Provisional Sum	GM, RNIC	09.07.04
Ed 3/Rev 5	1.1.4, 26.1 26.5.2, Annex B 26.6.1, Annex M	Minor editorial changes Minor changes to primary testing requirements and payment Changed reference to Government Code	GM, RNIC (D Murphy)	26.10.04
Ed 3/Rev 6	Foreword	Document No. changed to G2-C2 "Major contracts" added to the title New clause after the Table of Contents	GM, RNIC	25.02.05
Ed 3/Rev 7	Guide Notes, 26.8, Annex A3	New clauses on Concrete Paving Crew Training requirements added	GM, RNIC	20.09.06
Ed 3/Rev 8	12 35 Annex C, C2	"Make of Tenderers' Prices" clause replaced by "Related Corporate Body" clause. Reference clause in OHS Regulation 2001 corrected Records of Concrete Paving Crew Training added to Identified Records	GM, IC	23.03.07
Ed 3/Rev 9	43	Clause on "Proportionate Liability" added	GM, IC	24.10.07

<b>Ed/Rev Number</b>	<b>Clause Number</b>	<b>Description of Revision</b>	<b>Authorised By</b>	<b>Date</b>
Ed 3/Rev 10	Guide Notes 42	Guide notes provided on management of WAE Drawings Examples of details to be recorded on WAE Drawings listed	GM, IC	22.09.08
Ed 3/Rev 10 (cont'd)	Annex C2 Annex M	“WAE Drawings” added to list of Identified Records References updated		
Ed 3/Rev 11	“Notice” Guide Notes 1.2.3 3 16 26.1 26.2 26.3 26.4 26.5 26.8 27 38.1 Annex A, A2	RTA PO Box and Fax numbers updated. Titles of contact persons, their phone and fax numbers updated. Reminder to highlight at Pre-Tender Meetings Primary Testing requirements deleted. Notes on Clause 26.8 on Concreting Crew Training expanded to cover Bridgeworks. Definitions of parties in Single Invitation Contracts and Minor Physical Works and Services Contracts deleted. Clause re-worded. “Record Keeping and Identified Records” clause (duplicating similar clauses in specification Q) deleted. Clause title changed. Hold Point for submission of Industrial Relations Plan transferred to Clause 26.2. Industrial Relations Plan requirements moved to this clause; clause title changed. Clause title changed; record keeping requirements referred to specification Q. Clause title changed. Clause title changed. Clause reference for rates and prices corrected. Concreting Crew Training expanded to cover Bridgeworks. Title changed to better reflect clause content. 1 <sup>st</sup> paragraph (duplicated in Annex B) deleted. Clause references updated. “NO” option added to cater for Contracts not providing a Provision Sum for Primary Testing.	GM, IC	03.07.09

<b>Ed/Rev Number</b>	<b>Clause Number</b>	<b>Description of Revision</b>	<b>Authorised By</b>	<b>Date</b>
Ed 3/Rev 11 (cont'd)	Annex A3	Concreting Crew Training expanded to cover Bridgeworks.		
	Annex C1	Clause references updated.		
	Annex C2	Identified Record - List of concreting crew members who have completed concreting training expanded to cover bridgeworks.		
	Annex M	References updated.		
Ed 4/Rev 0	Guide Notes	Guide notes on Clause 30 "Provisional Quantities and Provisional Sums" provided.	GM, IC	11.08.09
	Global	Clauses rearranged and renumbered. Some clauses retitled. Previous Clause 7 "Parent Company Deed of Guarantee" deleted.		
	1.2.6	Previous Clause 27 "Payment in Australian Currency" relocated here.		
	11	New clause with new title "Information Disclosure", grouping together previous Clause 12 "Related Corporate Body Particulars", Clause 40 "Privacy" and Clause 41 "Release of Information".		
	11.2	Previous Clause 41 retitled "Disclosure to Other Authorities".		
	11.3	Previous Clause 40 retitled "Privacy Requirements".		
	14	New clause, grouping together previous Clause 34 "Commencement of Site Work" and Clause 35 "Notification to WorkCover of Intention to Commence Construction".		
	14.1	Previous Clause 34 retitled "Notification to Principal".		
	14.2	Previous Clause 35 retitled "Notification to WorkCover".		
	18	Previous Clause 30 retitled "Keeping Site Clean".		
	20	Previous Clause 18 retitled "No Advertising".		
	23	Certification to be by Chartered Professional Engineer, with Membership of Engrs Aust.		
	30	Clause on "Provisional Quantities and Provisional Sums" added.		

<b>Ed/Rev Number</b>	<b>Clause Number</b>	<b>Description of Revision</b>	<b>Authorised By</b>	<b>Date</b>
Ed 4/Rev 0 (cont'd)	35, 36, 37, 38  37.3.1  Annex A2  Pay Item G2-C2P1  Annex D  Annex M	Sub-clauses within previous Clause 26 “Management of Work Under the Contract” and Clause 38 “Quality Assurance” rearranged under 4 new clauses: Clause 35 “Management Systems and Plans”, Clause 36 “Quality Assurance”, Clause 37 “Testing” and Clause 38 “Concreting Training”.  Primary Testing applicable only to the relevant tests listed in Annex D added.  Previous element of Primary Testing (including sampling) in respect of concrete mixed on site or at a dedicated plant deleted.  Restriction of Primary Testing to the relevant tests listed in Annex D added.  Measurement for Primary Testing to include tests listed in Annex D but to exclude Project Testing not listed as Primary Testing in Annex D added.  Schedule of Potential Tests in Primary Testing Subcontract added.  Referenced documents updated.		
Ed 4/Rev 1	13.1	Powers for “Delay costs” and “Early use” added to list of powers not delegated to Principal’s Authorised Person.	GM, IC (Mark Andrew)	11.09.09
Ed 4/Rev 2	23	Added: NPER registration as equivalent to CPEng, Engrs Aust, for certification purposes.	GM, IC	15.12.09
Ed 4/Rev 3	19 Annex A1	Clause on information signboards amended; signboards now supplied to Site by the Principal.	GM, IC	24.12.09
Ed 4/Rev 4	14.1	Commencement of site work: - notice period increased to 14 days - site work clarified to include site establishment	GM, IC	15.03.10
Ed 4/Rev 5	Annex D  Annex M	Reference to spec RTA 3052 deleted (spec withdrawn). Reference to spec RTA R59 inserted.  Referenced documents updated.	GM, IC	02.11.10
Ed 4/Rev 6	Guide Notes 31  Annex E	Guide Notes on Annex E added.  31(b) - Rewritten to require use of prescribed rates for labour and plant for the valuation of Daywork.  New Annexure titled “Schedule of Daywork Rates”.	GM, IC	07.12.10

<b>Ed/Rev Number</b>	<b>Clause Number</b>	<b>Description of Revision</b>	<b>Authorised By</b>	<b>Date</b>
Ed 4/Rev 7	Annex E	E2 “Method of Calculation of Daywork Labour Rate” added.	GM, IC	27.01.11
Ed 4/Rev 8	Annex D Annex M	Schedule of Potential Tests in Primary Testing subcontract updated. Reference documents updated.	GM, IC	16.05.11
Ed 4/Rev 9	22 22.2	Clause title changed to include “Care of Traffic Assets”. New subheading inserted for original clause as clause 22.1. New subclause, titled “Care of Traffic Assets”, on care of traffic signal detector loops, inserted.	GM, IC	08.06.11
Ed 4/Rev 10	Annex E	Comment note added requiring Tender Documenter to delete Annexure if predetermined Daywork rates are not applicable.	GM, IC	14.06.11
Ed 4/Rev 11	14.3 Annex C1	New clause on transfer of environmental protection licence and associated Hold Point. New Hold Point added to Schedule of Hold Points.	GM, IC (W Stalder)	04.07.11
Ed 4/Rev 12	Guide Notes	Primary Testing – contact person for guidance on determining Provisional Sum for Pay Item G2-C2P1 updated.	GM, IC (W Stalder)	29.08.11
Ed 5/Rev 0		Revised for use with Edition 2 of GC21. References to “RTA” changed to “RMS”.	GM, IC (M Andrew)	15.12.11
Ed 5/Rev 1	14.3 33 Annex M	“Office of Environment and Heritage” changed to “Environment Protection Authority”. New clause on use of citizen band radio channels. Referenced documents updated.	GM, IC	17.04.12
Ed 5/Rev 2	37.3.1 Annex A2 Annex D Annex D Annex M	“suppliers” deleted from Primary Testing clause. Primary Testing to include random audit testing of imported material from quarries; and deflection testing of unbound and bound base and subbase pavement layers. Circumstances where Primary Testing Subcontract is applicable clarified. Various tests removed from “Schedule of Potential Tests in Primary Testing Subcontract”. Reference specifications associated with test method in Schedule updated. Referenced documents updated.	GM, IC	11.07.12

<b>Ed/Rev Number</b>	<b>Clause Number</b>	<b>Description of Revision</b>	<b>Authorised By</b>	<b>Date</b>
Ed 5/Rev 3	Guide Notes  39  40  Annex B  Annex F	Guide Notes on WAE Drawings re-written, to provide guidance on revised requirements and method of payment for preparation of WAE drawings.  Expanded and retitled “Programs”. New sub-clause 39.1 “Contract Programs” added. Previous Clause 39 now sub-clause 39.2.  Requirements for preparation of WAE drawings expanded and reference to Annexure G2-C2/F for further requirements added.  New Pay Item G2-C2P2, for WAE Drawings, added.  New annexure on requirements for WAE Drawings added.	GM, IC	19.07.12
Ed 5/Rev 4	Guide Notes, 40, Annex F  Annex A5	Clauses reworded to clarify intent.  Option for drawings to be submitted in electronic format and in PDF format moved here from Annex F.	GM, IC	03.08.12
Ed 5/Rev 5	14.2  Annex M	Clause on notification to WorkCover deleted. Notification requirements to WorkCover to be provided in relevant Specifications.  Referenced documents updated.	GM, IC	17.10.12
Ed 5/Rev 6	Annex D  Annex M	Schedule of potential tests in primary testing subcontract updated.  Referenced documents updated.	GM, IC	22.07.13
Ed 5/Rev 7	15	Clause on existing utilities reworded to accord with terminology in spec G7.	GM, CPS	26.09.13
Ed 5/Rev 8	30	Contractor’s entitlement to additional payment or extension of time due to increase in Provisional Quantity clarified.	GM, CPS	05.11.13
Ed 5/Rev 9	Guide Notes, 38  41  Annex M	Reference to R84 deleted.  Clause on “Care, Protection and Preservation of Survey Control Marks” added.  Reference documents updated.	GM, CPS	25.06.14
Ed 5/Rev 10	Guide Notes  13.1	Guide notes on the application of new clause 40 on Christmas Closedown Period added.  Clarified that powers and functions of PAP do not extend to liquidated damages.	GM, CPS	16.07.14

<b>Ed/Rev Number</b>	<b>Clause Number</b>	<b>Description of Revision</b>	<b>Authorised By</b>	<b>Date</b>
Ed 5/Rev 10 (cont'd)	14.2	Previous clause 14.2 titled "Not Used" deleted and subsequent clause renumbered.		
	16	Title of Code of Practice for Contractor's facilities updated.  Reminder to carry out pre and post-construction land condition assessment in spec G36 inserted.  Statement prohibiting driving or parking on unpaved areas outside Site reworded to improve clarity.		
	35.2	Previous clause 35.2 on Industrial Relations Plan deleted. Subsequent clause renumbered.		
	40	New clause defining deemed Christmas Closedown Period.  Subsequent clauses renumbered.		
	41	Clause edited to clarify WAE requirements. Paper drawings to be all in A1 size.		
	42	Previously clause 41. Reminder to submit PQP for construction surveys inserted.		
	Annex A5	Table rewritten to clarify requirements for WAE drawings.		
	Annex B	P2 pay item - scope expanded to include cost of preparing electronic copy of WAE drawings.		
	Annex D	Proof rolling test deleted from Primary Testing list.		
Annex M	Referenced Documents updated.			
Ed 5/Rev 11	Guide Notes	Additional guide notes on setting the Lump Sum amount for provision of WAE Drawings inserted.  Guide notes on wet weather delay costs inserted.	GM, CPS	03.02.15
1.2.8	Definition added for "Wet Weather Day".			
43	Wet Weather Delay Costs clause inserted.			
Annex A6	Project specific requirements for Wet Weather Delay Costs inserted.			
Annex B	Pay item for Wet Weather Delay Costs inserted.			



<b>Ed/Rev Number</b>	<b>Clause Number</b>	<b>Description of Revision</b>	<b>Authorised By</b>	<b>Date</b>
Ed 5/Rev 12	Guide Notes, 43, Annex A5, Annex B  19, Annex A1  Annex A1	Clauses dealing with Wet Weather Delay Costs revised.  Amended to cater for situation where information signs are not supplied by Principal, and for removal of signs at 12 months after Completion.  Requirement to comply with DIRD signage guidelines added as notes to Tender Documenter.	GM, CPS	06.05.15
Ed 5/Rev 13	22.3  44, Annex A6  Annex G	Clause on Chain of Responsibility added.  Australian Industry Participation Plan (AIP Plan) requirements added.  New annexure on CoR Management Plan and Reporting requirements.	GM, CPS	22.09.15
Ed 5/Rev 14	44  44.2  Annex A6	Headings added to form new clauses 44.1 to 44.3.  Title of monitoring Federal Government Department updated.  Preparation, certification and reporting requirements of AIP Plan for projects falling under the <i>Australian Jobs Act 2013</i> added as Alternative 2.  Table added providing options as to which of the two Alternatives for preparation, certification and reporting requirements of AIP Plan applies. Notes added to provide guidance on choosing of the various Alternatives.	GM, CB	28.07.16
Ed 5/Rev 15	Guide Notes  37.3.1 39.1  39.2	Reference to ICN-130 removed.  Branch name and key personnel's contact details updated.  Minor rewording of Primary Testing clauses.  Clause reworded.  Requirement made explicit to show in program work carried out off site.  Submission of estimated (forecast) Claimed Amount each month until Completion mandated.  New clause added on updated Contract Program to show any divergence in activity logic, and reasons for shortfall in Scheduled Progress and proposed corrective action.	GM, CB	21.03.17

<b>Ed/Rev Number</b>	<b>Clause Number</b>	<b>Description of Revision</b>	<b>Authorised By</b>	<b>Date</b>
Ed 5/Rev 15 (cont'd)	39.3 42 Annex A2 Annex D Annex M	Software changed to either Primavera P6 or MS Project 2010. Clause on preservation of survey control and cadastral marks updated. Exclusions to Primary Testing reworded to clarify intent. Minor rewording to clarify intent. Referenced documents updated.		
Ed 5/Rev 16	Annex B	Clause on measurement reworded to improve clarity.	MCQ	26.07.17
Ed 5/Rev 17	Guide Notes	Notes on Primary Testing rewritten and updated.	DCS	01.09.17
Ed 5/Rev 18	1.2.7 Annex M	Clause on nomenclature referencing AS 1348 (withdrawn) deleted. Referenced documents updated.	MCQ	28.03.18
Ed 5/Rev 19	34	Option to purchase RMS Test Methods and model specifications deleted. Statement on measurement and payment in Material specification deleted.	MCQ	12.12.18
Ed 5/Rev 20	Annex B Annex M	Previous clause 22.3 and Annex G deleted. Heavy Vehicle CoR requirements moved to spec G22. Minor rewording to clarify measurement for payment under Primary Testing. Referenced documents updated.	MCQ	22.10.19
Ed 5/Rev 21	Global	References to “Roads and Maritime Services” or “RMS” changed to “Transport for NSW” or “TfNSW” respectively.	DCS	22.06.20
Ed 5/Rev 22	Guide Notes, 38 Annex M	Concreting training requirements extended to Spec R81 “No Fines Concrete Subbase”. Referenced documents updated.	MCQ	10.08.20
Ed 5/Rev 23	Guide Notes, 38 Annex M	Concreting training requirements no longer applicable to Spec R81 “No Fines Concrete Subbase”. Referenced documents updated.	SMCSp	17.02.21

## **GUIDE NOTES**

(Not Part of Contract Document)

The clauses in this Specification are suitable for most contracts. However, the wording should be checked for each project to ensure that they are appropriate, in accordance with Clause 2.5.4 of the Engineering Contracts Manual and, if necessary, project specific changes made to the clauses.

### **Clause 37.3 Primary Testing**

Refer to TfNSW Infrastructure Contract Note ICN 239.

Where the roadworks component of a contract exceeds \$2M, Primary Testing applies. Accordingly, in Annexure G2-C2/A2, the inclusion of a Provisional Sum for Primary Testing must be shown as “Yes” and in the Schedule of Rates, a Provisional Sum of the amount of generally between 1% and 2% of the Contract Price must be included for Primary Testing.

Laboratories engaged for site product conformity testing must comply with the following Registration Category and Class:

<b>Approximate Contract Value</b>	<b>Registration Category and Class</b>
Below \$10M <sup>(1)</sup>	L1
Above \$10M but below \$200M <sup>(1)</sup>	L2
Above \$200M <sup>(1)</sup>	L3

**Notes:**

<sup>(1)</sup> Where the earthworks component exceeds \$2M.

Varying the above requirement, for example, for lower valued contracts or for wholly bridgeworks contracts, require approval from Director Contracts Administration, Commercial Services Branch (Telephone: 02 9462 6584).

The Provisional Sum must be administered in accordance with the General Conditions of Contract.

Clause 37.3.3 requires the contractor and TfNSW to jointly open the tenders for the Primary Testing subcontract.

The Contractor will be paid for tests classed as Primary Testing carried out by the accepted laboratory in accordance with the provisions of Annexure G2-C2/B.

### **Clause 38 Concreting Training**

Clause 38 applies when Annexure G2-C2/A specifies that Concrete Paving and/or Bridge Concreting Crew Training is a requirement for Work Under the Contract. The default option is shown as “Yes”. However, for the case where it is considered that neither Concrete Paving nor Bridge Concreting Crew Training is required for a particular contract, advice must be obtained from Pavement Manager (Rigid Pavement) (Telephone: 02 8837 0780) before changing the option to “No”.

The training requirements specified in Annexure G2-C2/A apply to TfNSW R82 “Lean-mix Concrete Subbase”, TfNSW R83 “Concrete Pavement Base” and TfNSW B80 “Concrete Work for Bridges”.

### **Clause 40 Christmas Closedown Period**

Clause 40 defines the non-working days that are deemed to comprise the Christmas Closedown Period(s) that are included within the extended contract period arising from extensions of time

granted. It will be the default clause to apply in the absence of a direction in the Contract or subsequent written agreement between the Principal and the Contractor on each individual Christmas Closedown Period.

### **Clause 41 and Annexures G2-C2/B and F      Work-As-Executed Drawings**

Refer to TfNSW Infrastructure Contract Note No. 186.

Clause 41 and Annexure G2-C2/F provide detailed requirements for the preparation of work-as-executed (WAE) drawings. Annexure G2-C2/A4 provides an option to specify whether the WAE drawings need to be submitted in electronic format.

Amend Annexure G2-C2/F where necessary to suit the requirements of the project for the preparation of WAE drawings.

A new Pay Item, G2-C2P2, has been added in Annexure G2-C2/B to provide for the costs of preparation of WAE drawings. This Pay Item must be included in the Schedule of Prices or Schedule of Rates for all major Contracts.

The Lump Sum in Pay Item G2-C2P2 is not to be priced by the Contractor in his tender, but rather an amount set by the Principal.

Careful consideration needs to be given when setting the amount for the Lump Sum. If the amount is set too low, the Contractor may not be motivated to provide WAE drawings of the required quality in a timely manner.

As a guide, for contracts with a TfNSW estimated value of \$5M or more, an amount of 1% of the estimate, up to a maximum amount of \$1M, is suggested. Smaller amounts would be appropriate for lower value contracts.

Guidance on determining the Lump Sum for Pay Item G2-C2P2 can be sought from Director Contracts Administration.

### **Clause 43 and Annexures G2-C2/A5 and B      Wet Weather Delay Costs**

Wet Weather Delay Costs (WWDC) apply when the time period for completion is more than 52 weeks.

The purpose of WWDC is to reimburse the Contractor for a portion of their site overheads, should the project be affected by an unreasonably high amount of wet weather during the construction period.

The WWDC rate is to be determined in conjunction with the Delay Costs Rates in Contract Information Item 49A. The WWDC rate should be equal to 50% of Rate 2 as calculated in accordance with Procedure ICP-16.

The Project Manager must nominate the Threshold Number of Wet Weather Days that must occur first before WWDC are payable. This is an estimate of the amount of time lost during construction due to wet weather (and consequences of wet weather) that a Contractor should reasonably expect for that particular location of the project site and then factored up to represent an unreasonably high amount of wet weather.

Refer to ICP-18 and ECM Section 2.3.3 for guidance on calculating the Threshold Number of Wet Weather Days.

## **Annexure G2-C2/E**

Commercial Services Branch will provide the Dayworks rates for the labour and plant items listed in Annexure G2-C2/E for inclusion in the Annexure when the draft Tender Documents are reviewed by CSB.





# GENERAL REQUIREMENTS (MAJOR CONTRACTS)

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VERSION FOR: DATE:
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## FOREWORD

### TfNSW COPYRIGHT AND USE OF THIS DOCUMENT

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#### When this document forms part of a contract

This document should be read with all the documents forming the Contract.

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### REVISIONS TO PREVIOUS VERSION

This document has been revised from Specification TfNSW G2-C2 Edition 5 Revision 22.

All revisions to the previous version (other than minor editorial and project specific changes) are indicated by a vertical line in the margin as shown here, except when it is a new edition and the text has been extensively rewritten.

### PROJECT SPECIFIC CHANGES

Any project specific changes are indicated in the following manner:

- (a) Text which is additional to the base document and which is included in the Specification is shown in bold italics e.g. ***Additional Text***.
- (b) Text which has been deleted from the base document and which is not included in the Specification is shown struck out e.g. ~~Deleted Text~~.

# **TfNSW QA SPECIFICATION G2-C2**

## **GENERAL REQUIREMENTS (MAJOR CONTRACTS)**

### **1 GENERAL**

#### **1.1 STRUCTURE OF THE SPECIFICATION**

This Specification includes a series of annexures that detail additional requirements and information.

##### **1.1.1 Project Requirements**

Project specific details of work are shown in Annexure G2-C2/A.

##### **1.1.2 Measurement and Payment**

Measurement and payment must be in accordance with Annexure G2-C2/B.

##### **1.1.3 Schedules of HOLD POINTS and Identified Records**

The schedules in Annexure G2-C2/C list the **HOLD POINTS** that must be observed. Refer to Clause 1.2.8 or Specification TfNSW Q for the definition of **HOLD POINTS**.

The records listed in Annexure G2-C2/C are **Identified Records** for the purposes of TfNSW Q Annexure Q/E.

##### **1.1.4 Referenced Documents**

Unless specified otherwise or expressly supplied by the Principal, the applicable issue of a referenced document must be the issue current at the date one week before the closing date for tenders, or where no issue is current at that date, the most recent issue.

Standards, specifications and test methods are referred to in abbreviated form (e.g. AS 2350). For convenience, the full titles are given in Annexure G2-C2/M.

#### **1.2 INTERPRETATION OF CONTRACT DOCUMENTS**

The following interpretations apply to the Contract Documents unless the context requires otherwise.

##### **1.2.1 Exercise of the Principal's Authorised Person's Powers by the Principal**

The powers given to the Principal's Authorised Person in the Specifications may be exercised, after the issue of the Final Payment Schedule, by the Principal or by a person authorised by the Principal to exercise those powers.

##### **1.2.2 Duties of the Contractor**

All actions, work, supply of Materials and responsibilities described in the Contract Documents must be carried out by you, unless specifically stated otherwise.

Where a requirement of the specifications identifies a particular item as something to be included, the requirement is not limited or qualified by doing this.

### 1.2.3 Definition of Parties in the Documents

The terms “TfNSW”, “Transport for NSW” and “Authority” mean, unless specifically defined otherwise, “Principal”.

The term “Superintendent” means, unless specifically defined otherwise, “Principal’s Authorised Person”

The terms “you” and “your” mean “the Contractor” and “the Contractor’s”, respectively.

### 1.2.4 Communications

All communications between the Principal, you and your representatives must be in the English language.

### 1.2.5 Legal Units of Measurement

All measurement of physical quantities must be in Commonwealth legal units within the meaning of the *National Measurement Act 1960 (Cwth)*.

### 1.2.6 Payment in Australian Currency

All payments to be made under the Contract must be in Australian currency.

### 1.2.7 (Not Used)

### 1.2.8 Definitions

“TfNSW G2-C2” appearing in the Contract Documents means this Specification.

“**Construction plant**” means all plant, motor vehicles, appliances and things (including scaffolding, formwork and the like) of whatsoever nature used or in use in or about the execution of the Work under the Contract but does not include materials, plant, equipment or other things intended to form or forming part of the Works.

“**Drawings**” means the drawings as may be supplied to you at any time by the Principal, or the use of which has been permitted by the Principal, for the purposes of the Contract.

“**Environment**” means the natural and the built environment and all aspects of the surroundings of human beings (including physical, biological and aesthetic aspects).

“**Hold Point**” means a point beyond which a work process must not proceed without the Principal's express written authorisation.

“**Specification**” means the Specification for work to be carried out as existing at the date of acceptance of tender or otherwise forming part of the Contract Documents and any modification of such Specification thereafter directed or the use of which has been permitted by the Principal.

“**Witness Point**” means a point in a work process where you must give prior notice to the Principal and the option of attendance may be exercised by the Principal.

“**Work Under the Contract**” means the work which you are or may be required to execute under the Contract and includes the Works, all variations, remedial work, construction plant and Temporary Work, design and design documentation.

## **2 EVIDENCE OF CONTRACT**

The Contract is formed by issue of the Letter of Award even though a Deed of Contract Agreement is later executed by you and the Principal.

Until the Deed of Contract Agreement is executed, the agreement in writing between you and the Principal for the execution of the Works, which includes the Letter of Award and other documents intended to apply, constitutes the Contract.

You agree that any amendment or alteration made by you to any part of the Contract Documents before execution of the Contract by the Principal is not binding on the Principal unless you had brought the proposed amendment or alteration to the Principal’s attention and the Principal expressly agreed in writing to that amendment or alteration before the Principal executed the Contract.

A failure by you to execute and return to the Principal two copies of the Deed of Contract Agreement as required by Clause 7.5 of the General Conditions of Contract is a Contractor’s Default.

## **3 NO APPROVAL OF DOCUMENTATION**

Management system and management plan documentation and any other documents submitted by you before the date of the Letter of Award are not to be deemed as accepted or approved because of:

- (a) the Principal's acceptance of your tender or other offer;
- (b) the entering into of the Contract by the Principal;
- (c) a reference to any such documentation in the Contract; or
- (d) any conduct by or on behalf of the Principal.

Management system and management plan documentation and any other documents submitted by you after the date of the Letter of Award are not deemed as accepted or approved unless acceptance or approval is an express requirement of the Contract and the Principal has notified you in writing of its acceptance or approval.

## **4 CONTRACTOR AS TRUSTEE**

### **4.1 APPLICATION**

If you enter into the Contract as a trustee, this clause will apply.

### **4.2 REPRESENTATIONS AND WARRANTIES**

You are deemed to have made the following representations and warranties:

- (a) entered into the Contract as trustee using its powers under the relevant trust deed and other enabling documents and has power to enter into and perform its obligations under the Contract and to carry on the transactions contemplated by those documents ('trust documents');
- (b) hold the trust property on trust under the trust documents;
- (c) the trust documents given to the Principal are up to date and constitute all of the documents in relation to the trust and all the terms of the trust;
- (d) all consents and authorisations required for the execution, delivery and performance of the Contract have been obtained and are effective and current;
- (e) the Contract is entered into as part of the due and proper administration of the trust and is for the benefit of the beneficiaries;
- (f) no conflict of interest or breach of trust occurs as a result of you entering the Contract;
- (g) no beneficiary is presently entitled;
- (h) any of your existing or future rights of indemnity as trustee or lien securing that right have not been excluded, limited or otherwise diminished;
- (i) as trustee you are not required to follow the instructions of any person;
- (j) there has been no resolution or direction to terminate the trust;
- (k) there has been no resolution or direction to remove you as trustee;
- (l) you are the sole trustee of the trust; and
- (m) you are not entering into the Contract in a capacity as responsible entity of a registered scheme (as those terms are defined in the *Corporations Act 2001(Cwth)*).

### **4.3 UNDERTAKINGS OF THE CONTRACTOR AS TRUSTEE**

You must not, without the prior written approval of the Principal:

- (a) amend the trust documents;
- (b) dispose of trust property;
- (c) grant any security in relation to the trust property;
- (d) make any capital distribution in cash or in the form of trust assets;
- (e) resign or appoint any new or additional trustees;
- (f) appoint any new beneficiaries to the class of beneficiaries or exercise any power resulting in a change to the vesting day;
- (g) permit the beneficiaries to use the trust property;
- (h) incur any debt other than in the ordinary course of business of the trust;
- (i) lend money which forms part of the trust property;
- (j) give a guarantee as trustee; or
- (k) blend or mix trust property with any other property.

You must not do anything (or omit to do anything) which may:

- (i) constitute a breach of trust; or
- (ii) diminish, limit or exclude the trustee's right of indemnity or any lien in respect of that indemnity.



You must:

- (a) ensure that the indemnity and lien will not be diminished, limited or excluded; and
- (b) obtain the above obligations in the same terms from any future trustee.

Immediately notify the Principal if any of the prohibitions are or may be breached.

#### **4.4 EVENTS OF DEFAULT**

The following will constitute a Contractor's Default:

- (a) any breach of any representation, warranty or obligation under this clause or any of the trust documents; or
- (b) any winding up of the trust on the resolution of the beneficiaries or otherwise;
- (c) the trust is found to be improperly constituted;
- (d) any breach of trust;
- (e) you as trustee are found by a court not to have the requisite power to enter into the Contract or the trust documents or make the representations, warranties or obligations contained therein;
- (f) any receiver or receiver and manager is appointed to the trust property; or
- (g) the trust terminates.

### **5 NO PROPORTIONATE LIABILITY IN SUBCONTRACTS**

Include in each Subcontract and Contract with a Supplier or a Consultant, a provision which excludes, to the extent permitted by law, the operation of Part 4 of the *Civil Liabilities Act 2002 NSW* and any equivalent statutory provision, in relation to all rights, obligations and liabilities in connection with that Subcontract or Contract whether such rights, obligations or liabilities are sought to be enforced as a breach of Contract or a claim in tort or otherwise.

### **6 CUSTOMS DUTY**

If the Contract Price includes an amount for customs duty on materials which will be consumed for or will form part of the Works, promptly make all necessary applications to the relevant authorities for customs duty concessions which may be granted on the materials.

The Contract Price will be reduced by the amount of customs duty concession obtained or which should have been obtained, less the reasonable expenses incurred by you in obtaining the concession.

### **7 ROYALTIES AND FEES**

Unless otherwise provided in the Contract, pay all royalties, fees and other payments payable for or in connection with any land, matter or thing used or to be used or supplied in performance of the Contract.

If directed by the Principal, before the issue of the Final Payment Schedule under Clause 61 of the General Conditions of Contract, give to the Principal a signed statement or statutory declaration that

all such royalties, fees and other payments and royalties and fees payable under Clause 23.6 of the General Conditions of Contract have been paid or satisfied.

## **8 MORAL RIGHTS**

Obtain in writing from your employees, Subcontractors, Suppliers, Consultants and licensees all necessary, unconditional and irrevocable:

- (a) consents permitted by applicable law, to any alterations to, or use of the existing intellectual property or intellectual property for the purpose of the Works that would otherwise infringe their respective moral rights, defined below, in such intellectual property, whether occurring before or after the consent is given; and
- (b) waivers permitted by applicable law of their respective moral rights outside Australia, for the benefit of the Principal.

Provide the Principal with copies of each written consent and waiver obtained under this clause, at the Principal's request, or within 14 days of the date of this Contract, whichever occurs first.

Use your best endeavours to ensure that none of your employees, Subcontractors, Suppliers, Consultants or licensee institutes, maintain or support any claim or proceeding for infringement of their moral rights by the Principal.

For the purposes of this clause, "moral rights" means any of the rights described in Article 6b is of the *Berne Convention for the Protection of Literary and Artistic Work 1886*, being "*droit moral*" or other analogous rights arising under any applicable statute (including the *Copyright Act 1968 (Cwth)*, its amendments or any other law of the Commonwealth).

## **9 WARRANTIES GENERALLY**

Obtain the warranties, guarantees and defects liability rights ("Rights") in respect of Materials:

- (a) as specified in the Contract; and
- (b) as offered by Suppliers, Subcontractors and Consultants.

Use your best endeavours to ensure either that the Rights are created in favour of the Principal or that the benefit of the Rights is assigned to the Principal on request.

Hold the benefit of all Rights obtained or available to you also for the benefit of the Principal and enforce any of the Rights at the request of and for the benefit of the Principal.

## **10 MINERALS AND FOSSILS**

The Principal is deemed to be the owner of all valuable minerals, fossils, articles or objects of antiquity or anthropological or archaeological interest, treasure trove, coins or other items of value found on the Site ("valuable items").

Immediately on discovery of a valuable item, take precautions to prevent loss or removal of or damage to the valuable item and notify the Principal of its discovery.

Your reasonable extra costs, if any, as determined by the Principal of taking such precautions will be reimbursed by the Principal.

## **11 INFORMATION DISCLOSURE**

### **11.1 RELATED BODY CORPORATE PARTICULARS**

The Principal is required to disclose information about the contract pursuant to the *Government Information (Public Access) Act 2009 (NSW)* (GIPA).

So that the Principal can comply with section 29(b) of the GIPA, you must promptly advise the Principal of particulars of any related body corporate (within the meaning of the *Corporations Act 2001 (Cwth)*) in respect of you, or any other private sector entity in which you have an interest, that will be involved in carrying out any of your obligations under the Contract or will receive a benefit under the Contract.

### **11.2 DISCLOSURE TO OTHER AUTHORITIES**

In addition to the entities listed in Clause 19 of the General Conditions of Contract, the Principal may make information concerning you available to authorities or agencies who are members of Austroads Ltd.

### **11.3 PRIVACY REQUIREMENTS**

If, under the Contract, you are required to disclose personal information as defined under either of the *Privacy and Personal Information Protection Act 1998 (NSW)* or the *Health Records and Information Privacy Act 2002 (NSW)* (“the Acts”), you must:

- (a) if the disclosure is not authorised under the provisions of either of the Acts, obtain the consent of the natural person to whom that personal information relates in relation to the Principal’s collection and use of that personal information for the purposes of the Contract or the purposes authorised by the Contract;
- (b) ensure that the personal information disclosed is accurate; and
- (c) inform that natural person:
  - (i) that the personal information has been collected by the Principal; and
  - (ii) of any other matters that either of the Acts requires.

## **12 DATE COMPLIANT**

Ensure that management systems correctly process dates/times and do not produce ambiguous dates/times in documents and records.

## **13 PRINCIPAL'S AUTHORISED PERSON**

### **13.1 LIMITATIONS**

Notwithstanding Clause 2.2 of the General Conditions of Contract, the powers and functions of the Principal's Authorised Person do not extend to the following in the General Conditions of Contract (clause references quoted below are those in the General Conditions of Contract):

- (a) Assignment (Clause 9);
- (b) Changes to Statutory Requirements (Clause 49);
- (c) Liquidated damages only (Clause 51);
- (d) Acceleration (Clause 52);
- (e) Principal's suspension (Clause 53);
- (f) Early use (Clause 64);
- (g) Termination for Contractor's Default or Insolvency (Clause 73); and
- (h) Termination for Principal's convenience (Clause 74).

### **13.2 AUTHORISED DELEGATES**

The Principal's Authorised Person:

- (a) may from time to time appoint named persons ("Authorised Delegates") to exercise any or all of the powers and functions of the Principal's Authorised Person; and
- (b) must notify you in writing of any such appointment and of the powers and functions delegated.

Any delegation under this Clause will not prevent the Principal's Authorised Person from exercising a delegated power or function.

The Principal's Authorised Person must not appoint more than one person to exercise a particular power or function in respect of the same subject matter. Without limitation, the Principal's Authorised Person may appoint a person to exercise a particular power or function in respect of part of the Site or in respect of a particular activity under the Contract, and another person to exercise the same power or function in relation to a different part of the Site or a different activity.

An appointment may be revoked at any time by notice to you.

An Authorised Delegate may on the same terms delegate the exercise of all or any of the powers and functions delegated to it (or revoke the delegation) but the Authorised Delegate must not appoint more than one person to exercise a particular power or function.

## **14 COMMENCEMENT OF SITE WORK**

### **14.1 NOTIFICATION TO PRINCIPAL**

Before commencing any work on the Site (including work on establishing your site facilities), give the Principal at least 14 days written notice of the proposed commencement or such shorter period agreed to by the Principal.

## **14.2 TRANSFER OF ENVIRONMENT PROTECTION LICENCE**

If you are required to hold an environment protection licence (EPL) for the Works and the Principal has been issued with an EPL prior to award of the Contract, you must not commence work on site until the Environmental Protection Authority (EPA) has transferred the EPL into your name.

### **HOLD POINT**

Process Held: Commencement of work on site.

Submission Details: At least seven (7) days prior to the proposed commencement of work, provide a copy of the transferred environment protection licence to the Principal.

Release of Hold Point: The Principal will consider the documents prior to authorising the release of the Hold Point.

## **15 EXISTING UTILITIES - GENERAL**

The information available on the locations of existing utilities is approximate only and in some cases may be inaccurate or incomplete. The Principal accepts no responsibility for and does not guarantee or make any representation as to the accuracy of the information. Make further enquiries and carry out investigations as may be necessary to locate any such utilities.

There may exist underground utilities which are not shown on the Drawings, or at locations or elevations different from those shown on the Drawings. Ascertain the exact location and elevation of each underground utility prior to doing any work that may damage such utility.

If any existing or proposed utility conflicts with the location or elevation of any item of construction shown on the Drawings, notify the Principal of such conflict. A conflict is not considered to exist unless an existing utility service occupies the same space as that intended for the item to be constructed or minimum clearances will be infringed. Any variation to the work required will be determined in accordance with Clause 48 of the General Conditions of Contract.

Where your method of working results in additional adjustments being deemed necessary by any utility owner, arrange for and bear all costs in relation to those additional adjustments, notwithstanding that the Principal may have approved the method of working.

You will not be responsible for the routine maintenance of any utility installed or constructed by the various utility owners, but will be responsible for the protection of such utility during the currency of the Contract.

In certain instances, you may be required to provide the various utility owners with the opportunity to remove, relocate, or work on their utilities before you proceed with succeeding construction operations. Should you suffer any delay due to the moving of any such utilities, or the operations of any utility owners, except where the delay is due to work chargeable to you or to your omission or negligent act, you may apply to the Principal for an extension of time in accordance with Clause 50 of the General Conditions of Contract.

Do not stop the Works because of any operation by utility owners without the written agreement of the Principal.

Conduct your operations so as to interfere as little as possible with the operations of utility owners or their contractors on or near the Site. The Principal reserves the right to permit utility owners and others to work on or near the Site.

## **16 CONTRACTOR'S FACILITIES**

Comply with the requirements of the “Code of Practice - Managing the Work Environment and Facilities”, issued by Safe Work Australia.

Carry out the pre and post-construction land condition assessments in accordance with Specification TfNSW G36 for the Principal’s land used by you for locating your site facilities.

Supply, equip, service and neatly maintain all necessary buildings, workshops and storage areas for the satisfactory completion of the Works. Provide properly constructed toilets and washing facilities for the use of all personnel.

Whether established on the road reserve or elsewhere, implement erosion and sedimentation control measures.

Provide adequate rubbish receptacles. Service these receptacles regularly and to the satisfaction of the Principal to ensure that the construction area remains tidy.

Provide security for your buildings, materials, construction plant and machinery. Take all necessary precautions to make the area safe to the public.

Do not drive or park any plant and vehicles, including employees’ motor vehicles, on unpaved areas outside the Site without the approval of the Principal.

Protect, reinstate and revegetate all areas used by you within the nominated area. Reinstatement will include ripping, topsoiling and grass seeding or alternatively, turfing so as to reinstate the land to a condition at least similar to the condition before disturbance.

## **17 EXTRA LAND REQUIRED BY CONTRACTOR**

Procure for yourself and at your own cost the occupation or use of or relevant rights over any land or space in addition to the Site which you may deem necessary for the execution of the Works or for the purposes of the Contract; and as a condition precedent to any obligation to return the Post-Completion Undertaking, if so required by the Principal's Authorised Person, provide a properly executed release from all claims or demands (whether for damages or otherwise howsoever) from the owner or occupier of and from other persons having an interest in such land.

## **18 KEEPING SITE CLEAN**

Keep the Work Under the Contract clean and tidy as it proceeds and regularly remove from the Site rubbish and surplus material, from the start of Work Under the Contract including during the period for rectifying any Defects and during any period of maintenance by you.

The Principal may remedy any breach of this clause by you and the costs of remedy are a debt due by you to the Principal.

## **19 INFORMATION SIGNBOARDS**

Erect two (2) information signboards at prominent locations within the Site which are approved by the Principal.

Where so stated in Annexure G2-C2/A1, the Principal will supply the sign panels and associated mounting posts, attachment brackets and other accessories. Where the signboards are not supplied by the Principal, arrange for their manufacture and delivery to site. In such cases, the Principal will provide you with details of the sign face layout.

Do not erect on the Site any other form of sign bearing your name.

Remove the information signboards and dispose of them off site at the times stated in Annexure G2-C2/A1. Make good any disturbed ground caused by the removal of the signboards.

Payment for the supply (where required), erection, removal and disposal of the information boards is deemed to be included in the rates and prices generally.

## **20 NO ADVERTISING**

Do not exhibit, or permit to be exhibited on the Site or on any land to which you have access under the Contract any advertisements, unless the written permission of the Principal has been obtained.

## **21 INSPECTION BY VISITORS**

Refer all applications for Site inspections to the Principal. Do not arrange inspections by visitors without the Principal's prior approval. The Principal has the right to conduct inspections of the Works with visiting parties.

## **22 USE OF PUBLIC ROADS AND CARE OF TRAFFIC ASSETS**

### **22.1 USE OF PUBLIC ROADS**

Vehicles or equipment hauling material over public roads must be fitted with tight tailgates and have a freeboard of not less than 75 mm without cones or piles of material which may spill on to the roadway. Vehicles when loaded must comply with the requirements of the *Road Transport (Mass, Loading & Access) Regulation 2005 (NSW)* or such lower load limits as may have been set by the relevant authority, and provide evidence to this effect to the Principal.

Promptly remove from existing roadways all dirt and other materials that have been deposited by your hauling and other operations.

Take suitable precautions to ensure that under no circumstance could any rock be dislodged onto any adjacent roadway, track or railway track in use. Where the Principal considers that the precautions taken are not satisfactory, cease the work immediately until the necessary precautions have been taken.

Construction plant or equipment must not be allowed to park on or within the pavement or shoulders of any existing trafficked roadway.

If you wish to use public roads surrounding the Site for the purpose of undertaking Work Under the Contract, obtain approval from the relevant authority for the use of these public roads. Any conditions for such use are a matter between you and the relevant authority.

## **22.2 CARE OF TRAFFIC ASSETS**

Notify the Principal prior to the commencement of work near traffic signals and other traffic facilities. The Principal will advise you if you also need to notify the Transport Management Centre (TMC) and TfNSW Road Network Operations Branch (telephone: (02) 8396 1697).

Where traffic signal detector loops or other traffic facilities loops are damaged or made inoperable during the course of work, notify the TMC and the Principal immediately.

Engage a Traffic Signal Contractor prequalified by the TfNSW to reinstate the loops.

Use prefabricated loops and reinstate the loops within 24 hours of their becoming inoperable and have them connected and operating within a further 24 hours, unless a concession is granted by the Principal. All applications for a concession must be supported by documentation stating the reason for the application and the scheduled completion date.

Where detector loops and other traffic facilities loops need to be removed or made inoperable in order to complete Work Under the Contract, the costs of reinstatement will be borne by the Principal. Where the detector loops and other traffic facilities loops are damaged due to your act or omission, the costs of reinstatement will be borne by you.

## **23 USE OF STRUCTURES BY CONSTRUCTION PLANT**

Unless specified elsewhere, structures, including bridges and culverts, have not been designed for use by heavy construction plant. Such plant must not travel on the structures without the prior approval of the Principal.

If you intend to use any heavy plant on any structure, submit calculations, prepared and certified by a Chartered Professional Engineer with Membership of Engineers Australia (or equivalent) and practising in the field of structural engineering or equivalent, to verify the structural adequacy of the structure to the Principal for approval at least two weeks prior to the proposed use of the structure by the plant. An equivalent would be an Engineer registered on the National Professional Engineers Register (NPER) in the general area of practice of Structural Engineering.

These calculations must be accompanied by details of contact locations, areas and weights, path of vehicle, speed and frequency of use. These calculations must conform to the design management procedure required in TfNSW Q Clause 7.3.

## **24 SITE MEETINGS**

At intervals of one month, unless otherwise mutually agreed between you and the Principal, arrange a duly authorised representative to attend the Site Meeting. Subcontractors and Consultants must also attend the Site Meeting if required by the Principal.

Unless otherwise agreed, the Principal's Authorised Person will chair the meeting and will arrange for the recording of minutes. Within one week of the meeting, the Principal must issue to you a copy of the minutes. Within three days of issue of the copy of the minutes, notify the Principal of any item



from the meeting which in your opinion has not been correctly recorded. The agreed minutes must be confirmed at the next Site Meeting held.

## **25 EMERGENCY CALLOUT AVAILABILITY**

Within fourteen days of the date of execution of the Contract, submit to the Principal information, to the satisfaction of the Principal, regarding the capability to answer requests for emergency action at any time, in relation to the Works and in relation to your responsibilities under the Contract regarding adjacent landowners, the general public and utility owners.

The cost of providing this capability and the cost of any actions necessary as a result of this capability is deemed to be your responsibility in accordance with Clause 26 of the General Conditions of Contract.

## **26 COMMUNITY RELATIONS**

Notify the Principal of any complaints received from members of the community concerning the Work Under the Contract. Deal with all such complaints promptly and provide written evidence to the Principal of actions proposed to deal with the complaints.

## **27 PRINCIPAL AND PRINCIPAL'S AUTHORISED PERSON MAY MAKE RECORDS**

The Principal and the Principal's Authorised Person may record the progress and performance of the Works. Without limitation, records may be made:

- (a) in any medium;
- (b) at any place where work (including Testing) is being carried out or materials being prepared;
- (c) as part of an audit or surveillance or for any other reason.

The Principal and the Principal's Authorised Person may use the records made for any purpose.

## **28 SCHEDULE OF RATES**

### **28.1 APPLICATION**

This clause applies if a Schedule of Rates forms part of the Contract Documents. This clause does not apply to any work which is covered by a lump sum specifically accepted by the Principal.

### **28.2 RATES AND LUMP SUMS**

The rates and lump sums in the Schedule of Rates are deemed to include the cost of carrying out the whole of the Works, services and other incidentals associated with or necessary for the carrying out of the Works and the performance of your obligations under the Contract.

Where a section or item does not appear in the Schedule of Rates, the cost thereof is deemed to be included in the rate or lump sum for the section or item associated with that section or item, but where there is no section or item associated with that section or item, the cost thereof is deemed to be included in the rates or lump sums generally.

Where any section or item in the Schedule of Rates is unpriced by you, all costs applicable to that section or item are deemed to be included elsewhere in the Schedule of Rates.

Where the Specifications or Drawings provide for the Principal to direct an item of work and the pay item/s is identified, the work is deemed to be the subject of a Provisional Sum or Provisional Quantity under the identified pay item/s.

A direction is not required to be given by the Principal by reason of the actual quantity of a section or item being greater than or less than the quantity shown in the Schedule of Rates for that section or item.

## **29 SCHEDULE OF PRICES**

### **29.1 APPLICATION**

This clause applies if a Schedule of Prices forms part of the Contract Documents. This clause does not apply to any work which is covered by a Schedule of Rates.

### **29.2 RATES AND PRICES**

The lump sum accepted by the Principal covers everything associated with or necessary for your performance of the Contract.

You are deemed to have agreed that:

- (a) the cost of a work or service which is expressly covered by an item listed in the Schedule of Prices is included in the rate and price for the item, and
- (b) the cost of a work or service which is not expressly covered by an item listed in the Schedule of Prices is included in other rates and prices of the Schedule of Prices.

Errors in the Schedule of Prices must be corrected to ensure that the total of the rates and prices as extended for all items in the Schedule of Prices always equals the lump sum accepted by the Principal.

Correct the errors as agreed between you and the Principal or, if no agreement is reached, as determined by the Principal.

The rates and prices in the Schedule of Prices:

- (i) may be used to value variations, and
- (ii) must be used to assess the value of unincorporated Materials and the Value Completed properly included in a Payment Claim under Clause 62 of the General Conditions of Contract.

## **30 PROVISIONAL QUANTITIES AND PROVISIONAL SUMS**

### **30.1 PROVISIONAL QUANTITIES**

For items of work which are subject to a Provisional Quantity, you are not entitled to payment additional to that provided under Clause 55.5 of the General Conditions of Contract or an extension of time for Completion if the Principal instructs you to carry out a greater quantity (within a reasonable range of variability for the type of work in question) or a lesser quantity of work than the Provisional Quantity, or instructs that no work for that item will be carried out.

### **30.2 PROVISIONAL SUMS**

For items of work which are subject to a Provisional Sum, you are not entitled to payment additional to that provided under Clause 55.4 of the General Conditions of Contract or an extension of time for Completion if the Principal instructs you to carry out work having a cost greater or less than the Provisional Sum, or does not instruct that work which is the subject of a Provisional Sum will be carried out.

## **31 DAYWORK**

Where the Progress Claim to be submitted by you under Clause 58 of the General Conditions of Contract includes a claim for payment for Daywork in accordance with Clause 47.4 of the General Conditions of Contract, the form of statement in relation to Daywork must be as follows:

- (a) Particulars to be recorded each day
  - (i) Labour
    - Name and classification of each employee
    - Number of hours, rate and (extended) cost of work during ordinary hours
    - Number of hours, rate and (extended) cost of work during overtime hours
  - (ii) Plant and Equipment
    - Description, number of hours, rate and (extended) cost of usage
  - (iii) Materials
    - Description, quantity, unit, rate and (extended) cost
  - (iv) Subcontractors, Suppliers and Consultants
    - Description, units, hours, rates and (extended) costs
- (b) The rates for labour and plant used for the valuation of Daywork must be those listed in Annexure G2-C2/E.

Should the appropriate plant item not be listed in Annexure G2-C2/E, or where the Daywork is performed by a supplier, subcontractor or consultant, copies of actual invoices, receipts, orders, subcontracts, professional fees, hire rates, establishment charges etc. for all plant, equipment, services and materials must be submitted in support of each claim for Daywork.

## 32 RESPONSIBILITY FOR AND NOTICE OF MEASUREMENT

The measurement of work as required for the purposes of the Contract is the responsibility of the Principal. The Principal will give reasonable notice to you of the intention to measure work and you must, if so directed by the Principal, be represented at and assist in the taking of measurements. If you are not represented at the time appointed by such notice for the taking of measurements, the Principal may proceed in your absence and the measurements taken by the Principal will be binding on you.

A record of the measurements will be kept by the Principal and will, on request by you, be made available to you.

## 33 USE OF CITIZEN BAND RADIO CHANNELS

Comply with the *Radiocommunications Act 2002 (Cwth)* and Radiocommunications (Citizen Band Radio Station) Class Licence in your operation of citizen band (CB) radio on site.

Do not use channels (radio frequencies) that are not allocated for general use, or channels that have generally accepted use by certain groups (e.g. channels 10, 18, 29 and 40)

A list of the UHF CB radio service channel allocations can be obtained from:

<http://www.acrem.org.au/Contents.php?ID=24>

then selecting “UHF Channels”.

You are responsible for any fines or other penalties that may be imposed for the deliberate misuse of legally allocated channels.

## 34 SPECIFICATIONS AND TEST METHODS

The TfNSW Specifications and Test Methods stated in the Contract Documents, including any project specific amendments, apply to the Contract.

Except for copies of any special test methods supplied under Clause 7.4 of the General Conditions of Contract, copies of TfNSW Test Methods will not be provided.

Copies of TfNSW Test Methods and model specifications may be downloaded from the TfNSW website as follows:

- (a) go to: <http://www.rms.nsw.gov.au>
- (b) click on Business & Industry
- (c) click on Partners and Suppliers
- (d) click on Specifications
- (e) accept Disclaimer
- (f) select Specification group or Test Method Volume
- (g) select Specification or Test Method.

## **35 MANAGEMENT SYSTEMS AND PLANS**

### **35.1 GENERAL**

Plan, establish, implement and maintain the specified Management Systems and Plans required by the Specifications and demonstrate compliance in accordance with the Contract. Failure to do so is deemed to be a Contractor's Default for the purposes of Clause 73 of the General Conditions of Contract.

Notwithstanding Clause 59.2 of the General Conditions of Contract, if at the time a payment would otherwise be due under that clause there is any obligation outstanding under this Clause 35, the time for payment is extended until you have complied with the requirements of this Clause 35.

### **35.2 RECORD KEEPING**

Record keeping of the specified Management Systems and Plans must comply with Clauses 1.2.5 and 4.2.4 and Annexure Q/E of TfNSW Q.

## **36 QUALITY ASSURANCE**

### **36.1 DEFINITIONS USED IN QUALITY ASSURANCE PROVISIONS**

The definitions in TfNSW Q must be used in the interpretation of the words and expressions used in the quality assurance provisions of the Contract (unless the context otherwise requires). The quality assurance provisions on the Contract include Clauses 35, 36 and 37 of this Specification and TfNSW Q.

### **36.2 MONTHLY PRODUCT QUALITY SUMMARY**

The Conformance Records to be submitted under Clause 58.6.3 of the General Conditions of Contract must include a summary of product quality records which demonstrates conformity of the Works with Contract requirements.

The summary must indicate the Lots or components, or both, of the Works which have achieved full conformity with Contract requirements.

### **36.3 AUDIT AND SURVEILLANCE**

The Principal may take samples of materials or work and/or direct you to open up or pull down completed work and to reinstate it later, and for that purpose may require access to the Site pursuant to Clause 34.3 of the General Conditions of Contract.

### **36.4 COVERING UP OF WORK AND NOMINATION OF HOLD AND WITNESS POINTS**

The Principal may:

- (a) direct that any part of Work Under the Contract must not be covered up or made inaccessible without the Principal's prior approval;
- (b) nominate any point in a work process as a Hold Point or Witness Point.

## **37 TESTING**

### **37.1 GENERAL**

Carry out sampling and testing and provide the results to the Principal for verification of performance within the time required by the Contract. If no specific time limit applies, provide the results upon completion of the testing.

Additional or special tests may be conducted by the Principal or a person (which may include you) nominated by the Principal.

### **37.2 COSTS OF TESTS**

Include in the rates and prices generally the costs associated with all testing required under the Contract (refer Annexure G2-C2/B), except for any tests paid by the Principal as Primary Testing (refer Clause 37.3).

Any testing directed by the Principal that is additional to both your testing obligations under the Contract and the Primary Testing dealt with under Clause 37.3, will be instructed and valued as a *Variation* under the General Conditions of Contract.

The valuation of any Variation will exclude the costs of testing:

- (a) in respect of Work Under the Contract, that is covered up or made inaccessible without the Principal's prior approval where such was required; or
- (b) that is consequent upon a failure of you to comply with a requirement of the Contract.

### **37.3 PRIMARY TESTING SUBCONTRACT**

#### **37.3.1 Application**

Clause 37.3 applies only when Annexure G2-C2/A specifies that a Provisional Sum for Primary Testing is included in the Contract.

Primary Testing applies only to those tests which are listed in Annexure G2-C2/D and are relevant to the Works.

Primary Testing must conform to the requirements for Project Testing (refer to TfNSW Q Annexure Q/L) and must only be carried out by you (including your subcontractors) using a laboratory that is independent (refer to TfNSW Q Annexure Q/L) and with appropriate TfNSW Registration or otherwise agreed to by the Principal.

Allow in the Contract Program (refer to General Conditions of Contract Clause 22.2) the time necessary for implementing Primary Testing and ensure that commencement of testing is not delayed.

#### **37.3.2 Subcontract Documents**

The procedure for managing subcontract work required by TfNSW Q Clause 7.4 must specifically address the inviting and accepting of tenders and management of the Primary Testing subcontract and must be consistent with the "NSW Government Code of Practice for Procurement".

Submit to the Principal proposed subcontract documents including the proposed invitation to tender, proposed subcontract schedule of rates and a list of specifications and drawings. The proposed

subcontract schedule of rates must include each test type for all Primary Testing listed as individual tests with estimated quantities shown. The rates must include the costs of establishing, equipping, accrediting, operating and decommissioning the laboratory, selecting test locations, sampling, testing, transporting samples and reporting. The estimated quantities must not be less than those needed to conform to the specified minimum frequency of testing applied to the expected number of Lots.

Any testing that you are required to undertake or procure under the Contract which is not Primary Testing must not be included in the subcontract documents for Primary Testing.

Liquidated damages payable by the subcontractor to you must not exceed the rates agreed by the Principal.

Show in the proposed invitation to tender the place and time nominated by the Principal for submitting the tenders.

### **HOLD POINT**

Process Held: Inviting tenders for the Primary Testing subcontract.

Submission Details: Proposed subcontract documents and proposed invitation to tender including schedule or rates and list of tenderers to be invited and a list of supplementary information that will be provided to the tenderers. Submit the procedure required by TfNSW Q Clause 7.4 for the management of the subcontract work.

Release of Hold Point: The Principal may require changes to the submitted documents prior to authorising the release of the Hold Point.

### **37.3.3 Inviting and Accepting Tenders**

Invite tenders using the proposed subcontract documents and the list of tenderers submitted to the Principal.

The tender process must be agreed between you and the Principal. The Principal and you will open the tenders together.

Examine and analyse the tenders in accordance with the submitted procedure for the management of subcontract work. Do not communicate with the tenderers prior to the award of a subcontract unless with the prior approval and in the presence of the Principal. Analyse the tenders and submit your recommendation to the Principal. If there are tenders priced lower than the recommended tender, provide in the assessment the reason for not recommending these lower priced tenders.

## **HOLD POINT**

Process Held:	Accepting tenders for the Primary Testing subcontract.
Submission Details:	All tenders received, including the tendered schedule of rates, the assessment and recommendation with reasons for recommending the successful tenderer, at least 7 days prior to the proposed acceptance of the tender. Submit any changes to the procedure required by TfNSW Q Clause 7.4 for the management of the subcontract work.
Release of Hold Point:	The Principal will consider the submitted documents prior to authorising the release of the Hold Point or the Principal may object to the acceptance of the recommended tender.

Any proposed changes to the subcontract must only be accepted with the prior agreement of the Principal.

## **38 CONCRETING TRAINING**

Clauses 38 and A3 apply when Annexure G2-C2/A specifies that Concrete Paving and Bridge Concreting Crew Training is a requirement for the Work Under the Contract.

The training requirements specified in Annexure G2-C2/A apply to TfNSW R82 “Lean-mix Concrete Subbase”, TfNSW R83 “Concrete Pavement Base” and TfNSW B80 “Concrete Work for Bridges”.

You are responsible for arranging training and maintaining records of training of your own direct work force and any subcontract concrete paving and/or bridge concreting construction personnel.

Nominate a person who is in charge of each separate paving crew or bridge concreting crew engaged on work under the above Specifications. The paving crew and/or bridge concreting crew include people engaged in establishing stringlines and fixed forms, placing and fixing reinforcement, tie-bars and dowels, receiving and placing concrete, operating slipform pavers or vibrating screeds, and compaction, finishing, texturing, curing, debonding and early age protection of concrete.

## **39 PROGRAMS**

### **39.1 CONTRACT PROGRAM**

Submit to the Principal a Contract Program complying with Clause 22.2 of the General Conditions of Contract.

In addition, the Contract Program (including any updated Contract Program) must:

- (a) identify any activities required to be performed outside of the working hours or working days as allowed under Clause 18 of the General Conditions of Contract;
- (b) allow for work being the subject of Provisional Quantity or Provisional Sum Pay Items included in the Schedule of Rates and Schedule of Prices;
- (c) show all activities required to achieve Completion which are carried out away from the Site, both in and outside Australia. These activities include but are not limited to concrete precasting, steelwork fabrication and manufacture of equipment to be installed as part of the Works;



- (d) include a schedule showing the estimated (forecast) Claimed Amount (the total sum of the estimated value of work carried out each month plus any amount attributed to the value of unincorporated Materials to be included in the Payment Claim) for each of the remaining months of the Contract until Completion.

### **39.2 UPDATED CONTRACT PROGRAM**

When submitting the monthly updated Contract Program in accordance with Clause 22.3 of the General Conditions of Contract, include:

- (a) reasons for any divergence in activity logic in the Contract Program;
- (b) reasons for any shortfall in Scheduled Progress from that shown in the previous monthly (updated) program, and any proposed steps to make good any shortfall in Scheduled Progress.

### **39.3 SOFTWARE**

Submit all Contract Programs as both paper and electronic documents.

For Contract Programs submitted as an electronic document, the software used must be either Primavera P6 or MS Project 2010.

### **39.4 FINAL “AS-BUILT” CONTRACT PROGRAM**

By the Actual Completion Date for the Works, unless already provided by you, submit to the Principal a detailed “as-built” Contract Program for the Works.

## **40 CHRISTMAS CLOSEDOWN PERIOD**

If the Principal extends the time for Completion of the Works or of a Milestone such that the adjusted Contractual Completion Date falls on or after the start of a Christmas Closedown Period, then unless agreed otherwise with the Principal, the days that are deemed to comprise the Christmas Closedown Period and which are not considered to be working days are set out in the table below:

<b>Day of Week on which Christmas Day falls:</b>	<b>Start of Closedown Period will be:</b>	<b>End of Closedown Period will be:</b>
Monday	Monday 25 December	Sunday 7 January
Tuesday	Monday 24 December	Sunday 6 January
Wednesday	Monday 23 December	Sunday 5 January
Thursday	Monday 22 December	Sunday 4 January
Friday	Friday 25 December	Sunday 10 January
Saturday	Saturday 25 December	Sunday 9 January
Sunday	Saturday 24 December	Sunday 8 January

## **41 WORK-AS-EXECUTED DRAWINGS**

Maintain and progressively update throughout the duration of the Contract a set of paper drawings in A1 size showing the work-as-executed (WAE) details for the Works.

By the Actual Completion Date for the whole of the Works, provide to the Principal a paper set in A1 size of the WAE drawings.

If so specified in Annexure G2-C2/A4, provide also an electronic copy of the WAE drawings in the manner specified in Annexure G2-C2/F.

Further requirements for the preparation of WAE drawings are stated in Annexure G2-C2/F.

Examples of amended details include (but are not necessarily limited to) the following where they have been amended from those shown in the design drawings:

- (a) Batter slopes.
- (b) Road geometry, such as alignment, levels or cross-falls.
- (c) Pavement cross-section details, particularly those adjoining an existing pavement.
- (d) Subsoil drainage, such as levels and alignment and types.
- (e) Stormwater drainage system, such as alignment, levels, pit types and locations, and pipe sizes.
- (f) Kerbs such as kerb types and locations.
- (g) Safety barriers, such as barrier types and locations.
- (h) Pavement markings.
- (i) Concrete structures, such as shape, levels and reinforcing details.
- (j) Steel structures (including those supporting major signs), such as shapes, levels and welding and bolting details.
- (k) Piles, such as toe levels, position deviation (but only those exceeding tolerance), and any additional piles driven within the pile group.
- (l) Bridge bearings, expansion joints and other proprietary products installed.
- (m) Noise Walls.
- (n) Reinforced Soil Walls.
- (o) Street or tunnel lighting.
- (p) Intelligent transport system (ITS) cables.

## **42 CARE, PROTECTION AND PRESERVATION OF SURVEY CONTROL AND CADASTRAL MARKS**

No survey control or cadastral marks including permanent survey marks, boundary marks, reference marks and bench marks as defined by the Surveying and Spatial Information Act 2002 (NSW) and Surveying and Spatial Information Regulation 2012 (NSW) are to be damaged, disturbed or destroyed without prior authorisation from the NSW Surveyor General.

Comply with Specification TfNSW G71 for care, protection and preservation of survey control and cadastral marks.

Comply also with TfNSW G71 for submission of the PROJECT QUALITY PLAN for construction surveys.

Maintain an up-to-date Survey Control and Cadastral Marks Register of all survey control marks that make up the Survey Control Network and the cadastre in accordance with TfNSW G71.

By the Actual Completion Date for the whole of the Works, submit to the Principal the final Survey Control Marks and Cadastral Marks Register, together with evidence that all destroyed survey control and cadastral marks have been replaced in accordance with the NSW Surveyor General's requirements and all cadastral plans, locality sketches and diagrams relating to the Survey Control Network and the cadastre have been submitted as required by NSW Surveyor General's Direction Nos. 11 and 12.

## **43 WET WEATHER DELAY COSTS**

Clause 43 applies when Annexure G2-C2/A5 specifies that a Pay Item for Wet Weather Delay Costs is included in the Contract.

For the purpose of this clause, a Wet Weather Day means a day for which an extension of time for Completion of the whole of the Works is granted pursuant to Clause 50 of the General Conditions of Contract, due either to delay caused solely by wet weather or its consequential effects on the Works, or where a delay due to wet weather is concurrent with one or more of the causes of delay listed in Clause 51.1 of the General Conditions of Contract.

In your claim for an extension of time under Clause 50 of the General Conditions of Contract, notify the Principal which particular days are claimed as Wet Weather Days.

You are entitled to payment of Wet Weather Delay Costs, but only for each Wet Weather Day in excess of the Threshold Number of Wet Weather Days stated in Annexure G2-C2/A5, and at the rate specified in Annexure G2-C2/A5.

Any amount payable for Wet Weather Delay Costs under Pay Item G2-C2P3 may be claimed in relevant Payment Claims.

## **44 AUSTRALIAN INDUSTRY PARTICIPATION PLAN (AIP PLAN)**

### **44.1 GENERAL**

Clause 44 applies when the Contract Information item 16C of the General Conditions of Contract specifies that the Contractor must comply with and implement the Certified AIP Plan.

The Principal is required to prepare and implement an Australian Industry Participation Plan for the project, in order to provide full, fair and reasonable opportunities to Australian entities through all tiers of the supply chain.

### **44.2 CERTIFIED AIP PLAN AND REPORTING**

Annexure G2-C2/A6 will state which of the clauses, whether Alternative 1 or Alternative 2, will apply to this contract.

**Alternative 1**

A copy of the Principal's draft AIP Plan is included in Annexure G2-C2/A6. Within 30 days of the Date of Contract, provide the following details to the Principal:

- (a) estimated percentage of imported goods and services for each category of works listed under the "Civil Contractor" heading in the table included in section 2.1 of the draft AIP Plan;
- (b) estimated amounts and percentages required to populate the table included in section 2.2 of the draft AIP Plan; and
- (c) other details required to finalise the Principal's AIP Plan.

The Principal will incorporate your details provided into the draft AIP Plan and obtain certification of the AIP Plan from the Department of Industry, Innovation and Science. The Principal will then issue you with a copy of the Certified AIP Plan.

Comply with the Certified AIP Plan at all times, and report on your implementation of the Certified AIP Plan on the details and at the times stated below:

- (i) any variations to the Certified AIP Plan, as relevant, during the progress of the Works;
- (ii) any other details related to your implementation of the Certified AIP Plan that may, from time to time, be requested by the Principal; and
- (iii) at the time of the Principal and the Contractor reaching agreement that Completion has been achieved but before the Principal has given the Contractor a notice stating the Actual Completion Date, details of the following:
  - actual percentage of imported goods and services for each category of works listed under the "Civil Contractor" heading in the table included in section 2.1 of the Certified AIP Plan;
  - actual amounts and percentages for purchased goods and services (refer to the table included in section 2.2 of the Certified AIP Plan).

**Alternative 2**

A copy of the Principal's Certified AIP Plan is included in Annexure G2-C2/A6.

Comply with the Certified AIP Plan at all times, and report on your implementation of the Certified AIP Plan on the details and at the times stated below:

- (i) any variations to the Certified AIP Plan, as relevant, during the progress of the Works;
- (ii) any other details related to your implementation of the Certified AIP Plan that may, from time to time, be requested by the Principal;
- (iii) the monthly progress report must incorporate an "Australian Industry Participation Plan" section that sets out details of compliance with and implementation of the Certified AIP Plan; and
- (iv) within 5 months of the Date of Contract, and then at 6 monthly intervals, provide to the Principal a completed Compliance Report using the latest Compliance Report template.

The Compliance Report template is available from the following Australian Government Department of Industry, Innovation and Science internet address:

<http://www.industry.gov.au/industry/IndustryInitiatives/AustralianIndustryParticipation/Pages/AIP-plans-required-Jobs-Act-2013.aspx>

### **44.3 IMPLEMENTATION**

Engage with the Department of Industry, Innovation and Science's Entrepreneurs Programme to support the capability of your subcontractors, where relevant.

Include a provision to ensure compliance with the Certified AIP Plan in your subcontract documents for all subcontracts valued at or over \$100,000.00. Provide evidence of this to the Principal when requested by the Principal.

All costs associated with implementation of the Certified AIP Plan and compliance with this clause is deemed to be included in the rates and prices generally.

## ANNEXURE G2-C2/A – PROJECT SPECIFIC REQUIREMENTS

*NOTES TO TENDER DOCUMENTER: (Delete this boxed text after customising Annexure G2-C2/A)*

*Where “Yes / No” or other type of options are shown in the following sections, delete whichever option that is not applicable.*

### A1 GENERAL

#### A1.1 Supply and Removal of Information Signboards

*NOTES TO TENDER DOCUMENTER: (Delete this boxed text after customising Annexure G2-C2/A1)*

*Projects fully or partially funded by the Australian Government Department of Infrastructure and Regional Development (DIRD) must comply with the DIRD signage guidelines, available from: <http://investment.infrastructure.gov.au/funding/projects/>*

*For projects funded by DIRD (whether fully or partially), the information signboards are to be removed only at 12 months after Completion.*

Refer to Clause 19.

Item	Description	Requirement
A1.1	Information signboards supplied by the Principal	Yes / No <sup>(1)</sup>
A1.2	Information signboards to be removed at	Completion / 12 months after Completion

**Notes:**

<sup>(1)</sup> Where signboards are not supplied by the Principal, the Principal will provide details of the sign face layout.

### A2 PRIMARY TESTING

Refer to Clause 37.3.

Item	Description	Requirement
A2.1	A Provisional Sum for Primary Testing is included in the Contract	Yes / No

Primary Testing (including sampling) includes:

- (a) compaction and moisture testing of layers of earthworks (including foundation preparation and backfill for structures, culverts and pipes) and unbound and bound base and subbase pavement layers;
- (b) properties of materials and layers for earthworks, backfill and pavement layers listed in (a) above;
- (c) surface characteristics, including deflection testing of earthworks and unbound and bound base and subbase pavement layers;

- (d) proportion and/or spread rates of additives and strength of stabilised earthworks and unbound and bound base and subbase pavement layers; and
- (e) random audit testing of imported materials to check conformity with Specifications, when directed by the Principal;

but is restricted to tests listed in Annexure G2-C2/D which are relevant to the Works.

Primary Testing does not include any of the following:

- (i) sampling and testing of material from a commercial quarry;
- (ii) sampling and testing of material where its quality is specified to be verified by the supplier;
- (iii) sampling and testing of concrete constituents, mixed concrete and hardened concrete elements;
- (iii) sampling and testing carried out by any party other than the laboratory awarded the Primary Testing Subcontract or its approved subcontractors.

### **A3 CONCRETING TRAINING**

Refer to Clause 38.

<b>Item</b>	<b>Description</b>	<b>Requirement</b>
A3.1	Concrete Paving and/or Bridge Concreting Crew Training is a requirement for the Work under the Contract	Yes <sup>(1)</sup>

**Notes:**

- <sup>(1)</sup> Concrete Paving and/or Bridge Concreting Crew Training is always required.

Arrange Concrete Paving and/or Bridge Concreting Crew Training and maintain records of this training as follows:

- (a) The nominated person in charge of the crew and at least half the remainder of the crew present at each separate concrete paving or bridge concreting site for the Work under the Contract must have successfully completed the TfNSW Training Course “Concrete Paving Crew Training” for concrete paving or “Bridge Concrete and Concreting Training” for bridge concreting. These crew members are qualified to carry out TfNSW concrete paving or bridge concreting work;
- (b) Establish and maintain a list of the names of all crew members that have successfully completed the TfNSW training courses (qualified crew members) for the Contract works. The list of qualified crew members forms part of submission details for HOLD POINT release for all paving trials; and
- (c) In addition to any other records held by you, maintain at each separate concrete paving or bridge concreting site a copy of the list of the names of all qualified crew members. This information must be provided to the Principal when requested at any time during concrete paving or bridge concreting.

In the event that the required number of qualified crew members are not present at any separate concrete paving site, only the concrete in those concrete delivery vehicles that have departed from the concrete production plant to that separate paving site may be incorporated into the pavement.

Further pavement construction at that paving site must not recommence until the required number of qualified crew members are present at that paving site. Install a construction joint where necessary.

**G2-C2****General Requirements (Major Contracts)**

In the event that the required number of qualified crew members are not present at any separate bridge concreting site, do not commence the concrete pour.

You must bear all expenses that arise as a result of any nonconformity with the requirements of this clause.

**A4 WORK-AS-EXECUTED DRAWINGS**

Refer to Clause 41.

Item	Description	Requirement
A4.1	Paper set of WAE drawings in A1 size required	Yes <sup>(1)</sup>
A4.2	Electronic copy of WAE drawings required	Yes / No
A4.3	If requirement for item A4.2 is “Yes”, electronic format required in	intelligent pdf <sup>(2)</sup> / CADD software <sup>(3)</sup>

**Notes:**

- (1) A paper set of WAE drawings is always required.
- (2) pdf produced from electronic design model, of resolution 300 pixels per inch (ppi) when displayed in A1 size. pdf must not be scanned copies of paper WAE drawings.
- (3) WAE details incorporated in electronic design model using standard TfNSW CADD software.

**A5 WET WEATHER DELAY COSTS**

Refer to Clause 43.

*NOTES TO TENDER DOCUMENTER: (Delete this boxed text after customising Annexure G2-C2/A5)*

*For guidance on completing the table below, refer to the Guide Notes at the front of this document. Obtain the concurrence of Director Contracts Administration for the nominated number of days in Item A5.2 and the calculated rate in Item A5.3.*

Item	Description	Requirement
A5.1	A Pay Item for Wet Weather Delay Costs is included in the Contract	Yes / No
A5.2	Threshold Number of Wet Weather Days	..... days
A5.3	Rate for calculating Wet Weather Delay Costs	\$...../day (excl GST)

**A6 PRINCIPAL’S AIP PLAN**

Refer to Clause 44.

*NOTES TO TENDER DOCUMENTER: (Delete this boxed text after customising)*

*When completing the table below:*



*Alternative 1 applies where the total capital expenditure of the project is less than \$500 million (incl. GST), and the Federal Government provides a funding contribution of an amount equal to or greater than \$20 million.*

- *Alternative 2 applies where the total capital expenditure is equal to or more than \$500 million (incl. GST), regardless of the funding contribution amount from the Federal Government. Note that for projects where land acquisition costs is a large component of the total project costs, the former can be excluded from the total project costs when determining which one of the two Alternatives apply.*
- *For all other cases, the Australian Industry Participation Requirements under Clause 44 does not apply.*

*Where Alternative 2 applies, an Australian Industry Participation Plan must be prepared under the Australian Jobs Act 2013 (Cwth) and certified by the Australian Industry Participation Authority.*

*Section 2.3.3.5 of the Engineering Contracts Manual provides further information on the preparation and certification of each AIP Plan.*

<b>Item</b>	<b>Description</b>	<b>Requirement</b>
A6.1	Certified AIP Plan and reporting requirements in accordance with Clause 44.2 which are applicable	Alternative 1 / Alternative 2 / Not Applicable <sup>(1)</sup>

**Note:**

- <sup>(1)</sup> Entire Clause 44 does not apply, as stated in Contract Information item 16C of the General Conditions of Contract.

*NOTES TO TENDER DOCUMENTER: (Delete this boxed text after customising Annexure G2-C2/A6. If the AIP Plan is not required for the project, mark Annexure G2-C2/A6 as NOT USED.)*

*Insert here a copy of the draft or Certified Roads and Maritime's AIP Plan, as relevant.*

*The TfNSW Project Manager for the project is to prepare the draft or Certified AIP Plan for inclusion in G2, using the relevant templates available for download from the TfNSW Commercial Branch intranet site, which can be accessed using the link below (under "Guides" section):*

*<http://home.rta.nsw.gov.au/org/structure/infra/infcontr/icb/index.html>*

## **ANNEXURE G2-C2/B – MEASUREMENT AND PAYMENT**

Except where specific pay items are provided, all costs associated with complying with the requirements detailed in this Specification are deemed to be included in the rates and prices generally for the Work Under the Contract.

### **Pay Item G2-C2P1 Primary Testing Subcontract**

Pay Item G2-C2P1 only applies when Annexure G2-C2/A states that a Provisional Sum for Primary Testing is included in the Contract.

Pay Item G2-C2P1 is a Provisional Sum.

Payment will be the amount paid to the Subcontractor by applying the subcontract schedule of rates for Primary Testing adopted in accordance with Clause 37.3, plus the Provisional Sum margin added in accordance with Clause 55.4 of the General Conditions of Contract.

Measurement for payment will include tests (but subject to the exclusions given in the next paragraph below) which:

- (a) are listed in the tender accepted under Clause 37.3.3;
- (b) verify conformity or show nonconformity of the work or material with the requirements in the Contract, including specified trials.

Measurement for payment will exclude tests which:

- (i) are nonconforming, i.e. tests that are not carried out correctly in accordance with the specified test method;
- (ii) are not required under the Contract and your submitted Inspection and Test Plans;
- (iii) are part of Project Testing and are not listed as Primary Testing in either Annexure G2-C2/A or Annexure G2-C2/D;
- (iv) are carried out by a laboratory that does not conform to Clause 37.3.1;
- (v) are not used to verify conformity.

Payment to the testing laboratory subcontractor for tests carried out by the laboratory solely for your own internal auditing purposes or for your own convenience is your responsibility.

Attach to each summary of product quality records submitted in accordance with Clause 36.2, a list of the work Lots showing the Primary Test type used for each, together with their quantities eligible for payment under this Pay Item.

**Pay Item G2-C2P2 WAE Drawings**

*NOTES TO TENDER DOCUMENTER: (Delete this boxed text after customising Annexure G2-C2)*

*The Lump Sum for Pay Item G2-C2P2 is not to be a tendered Lump Sum but a Lump Sum set by the Principal.*

*Careful consideration needs to be given in setting the amount for the Lump Sum. If it is set too low, the Contractor may not be motivated to provide WAE drawings of the required quality in a timely manner. For contracts with an estimated value of \$5M or more, an amount of 1% of the TfNSW estimate, up to a maximum of \$1M is suggested. Smaller amounts would be appropriate for lower value contracts.*

Pay Item G2-C2P2 is a Lump Sum item.

The Lump Sum provides for the costs of all work associated with the preparation, printing and certification of a paper copy of WAE drawings and if specified in Annexure G2 C2/A4, preparation of an electronic copy.

50% of the Lump Sum will be paid on a pro-rata basis, having due regard to the progressive provision of WAE drawings (or evidence that they are under active development).

Payment of the remaining 50% of the Lump Sum will be made on receipt of the final WAE drawings.

**Pay Item G2-C2P3 Wet Weather Delay Costs**

*NOTES TO TENDER DOCUMENTER: (Delete this boxed text after customising Annexure G2-C2)*

*The rate for Pay Item G2-C2P3 is not to be a tendered rate but a rate set by the Principal, equal to 50% of the calculated Rate 2, determined in accordance with Procedure ICP-16. Refer also the Guide Notes and Annexure G2-C2/A, Item A5.3.*

*In the Schedule of Rates, after inserting the calculated rate against the Pay Item, insert the words "Rate only" under the "Quantity" column.*

Pay Item G2-C2P3 only applies when Annexure G2-C2/A5 specifies that a Pay Item for Wet Weather Delay Costs is included in the Contract.

The unit of measurement is "day".

Payment will be made for the quantity of "days" for which Wet Weather Delay Costs is payable in accordance with Clause 43, and at the rate stated in Annexure G2-C2/A, item A5.3.

## **ANNEXURE G2-C2/C – SCHEDULES OF HOLD POINTS AND IDENTIFIED RECORDS**

Refer to Clause 1.1.3.

### **C1 SCHEDULE OF HOLD POINTS**

<b>Clause</b>	<b>Description</b>
14.2	Transfer of Environment Protection Licence
37.3.2	Submission of proposed Primary Testing subcontract documentation
37.3.3	Submission of Primary Testing subcontract, assessment and recommendation

### **C2 SCHEDULE OF IDENTIFIED RECORDS**

The records listed below are Identified Records for the purposes of TfNSW Q Annexure Q/E.

<b>Clause</b>	<b>Description of Identified Record</b>
26	Notification of any complaint received from members of the public concerning the work.
39	Final “as-built” Contract Program
41	Work-as-executed drawings

## ANNEXURES G2-C2/D – SCHEDULE OF POTENTIAL TESTS IN PRIMARY TESTING SUBCONTRACT

The Primary Testing Subcontract apply only to the provision of testing services to the extent that:

- (i) the listed tests apply to the Works;
- (ii) they are undertaken either on Site or at a dedicated stationary plant and/or dedicated quarry or borrow site, established specifically for the purpose of sourcing the materials for the Works.

for the following tests:

<b>Primary Test</b>	<b>Test Method</b>	<b>Test Description</b>	<b>Contained in TfNSW Specification</b>
Material Property	TfNSW T102	Pretreatment of Road Construction Materials by Compaction	R44, R57, R58, R59, 3051, 3071, 3580
	TfNSW T103	Pretreatment of Road Construction Materials by Artificial Weathering	R44, R57, R58, R59, 3051, 3071, 3580
	TfNSW T106	Coarse Particle Size Distribution of Road Construction Materials (by Dry Sieving)	3051, 3071
	TfNSW T107	Fine Particle Size Distribution of Road Construction Materials	R11, 3051
	TfNSW T108	Liquid Limit of Road Materials	R33, R44, 3051, 3071
	TfNSW T109	Plastic Limit and Plasticity Index of Road Construction Materials	R11, R23, R33, R44, R55, 3051, 3071
	TfNSW T117	California Bearing Ratio of Remoulded Specimens of Road Construction Materials	R44, 3051, 3071
	TfNSW T123	pH Value of a Soil (Electrometric Method)	R55
	TfNSW T201	Particle Distribution of Aggregates (by Washing)	R11, R23, 3580
	TfNSW T203	Particle Distribution of Aggregates Finer Than 75 µm (by Washing)	3580
	TfNSW T213	Particle Shape by Proportional Calliper	3051
	TfNSW T215	Wet/Dry Strength Variation	R44, R55, 3051, 3580
	TfNSW T219	Acid Soluble Sulphate Content in Road Construction Materials	3051
	TfNSW T223	Determination of the Point Load Strength of Rock Specimens (Field Method)	R44
TfNSW T239	Fractured Faces of Course Aggregate	3051	

Primary Test	Test Method	Test Description	Contained in TfNSW Specification
	TfNSW T276	Foreign Materials Content of Recycled Crushed Concrete	3051, 3071
Material Property (cont'd)	TfNSW T1004	Quantitative Determination of Chloride Ion in Water	R71, R73, R75
	TfNSW T1014	Quantitative Determination of Sulphate Ion in Water	R71, R73, R75
	TfNSW T1015	Microbiology of Water Used in Roadworks (Thermotolerant Coliforms)	R71, R73, R75
	AS 3550.4	Determination of Solids - Gravimetric Method	R71, R73, R75
	AS 1289.3.6.1	Determination of the particle size distribution of a soil - Standard method of analysis by sieving	3051
	AS 1289.6.7.2	Determination of permeability of a soil - Falling head method for a remoulded specimen	3051
Moisture Content	TfNSW T120	Moisture Content of Road Construction Materials (Standard Method)	R44, R71, R73, R75
	TfNSW T121	Moisture Content of Road Construction Materials (Sand Bath or Hot Plate Method)	R44, R71, R73, R75
	TfNSW T180	Moisture Content of Road Construction Materials (Microwave Oven Method)	R44, R71, R73, R75
Compaction	TfNSW T111	Dry Density/Moisture Relationship of Road Construction Materials	R44, R71, R73, R75, 3051, 3071
	TfNSW T112	Dry Density/Moisture Relationship of Road Construction Materials (Modified Compaction)	R71, 3051
	TfNSW T119	Field Density of Road Construction Materials (Sand Replacement Method)	R11, R23, R44, R50, R71
	TfNSW T162	Compaction Control Test (Rapid Method)	R44, R50, R71, R73, R75
	TfNSW T166	Relative Compaction of Road Construction Materials	R11, R23, R33, R37, R38, R44, R50, R58, R59, R71, R73, R75
	TfNSW T173	Field Wet Density of Road Construction Materials (Nuclear Gauge in Direct Transmission Method)	R11, R23, R44, R71, R73, R75

**General Requirements (Major Contracts)****G2-C2**

<b>Primary Test</b>	<b>Test Method</b>	<b>Test Description</b>	<b>Contained in TfNSW Specification</b>
Pavement Compressive Strengths, Density, etc	TfNSW T114	Maximum Dry Compressive Strength of Road Construction Materials	3051, 3071
	TfNSW T116	Unconfined Compressive Strength of Remoulded Road Construction Materials	R71, R73, R75, 3051
	TfNSW T131	Unconfined Compressive Strength of Road Construction Materials (Blended in the Laboratory with Cementitious Binders)	R44, R73, R75, 3051, 3071
	TfNSW T171	Modified Texas Triaxial Compression Test for Pavement Materials	3051
Earthworks Stabilisation	TfNSW T136	Rate of Spread of Dry Powder Binders	R50, R71, R75
	TfNSW T137	Cement Content of Cement Stabilised Material (Heat of Neutralisation Method)	R50
Deflection Testing of Pavement	TfNSW T160	Deflection Measurement (Portable Beam)	R44
	TfNSW T199	Deflection Testing of Road Formation	R44
Ride Quality of Pavement	TfNSW T182	Pavement Surface Roughness	R71, R73, R75
	TfNSW T188	Project Ride Quality (Vehicular Laser Profilometer)	R71, R73, R75
Reinforced Soil Wall Backfill	AS 1289.3.6.1	Determination of the particle size distribution of a soil - Standard method of analysis by sieving	R57
	AS 1289.4.2.1	Determination of the sulfate content of a natural soil and the sulfate content of the groundwater - Normal method	R57
	TfNSW T108	Liquid Limit of Road Material	R57, R58, R59
	TfNSW T109	Plastic Limit and Plasticity Index of Road Construction Materials	R57, R58, R59
	Q181C	Effective Angle of Friction at Constant Volume Conditions for Granular (Coarse Grained) Materials	R57, R58, R59
	TfNSW T123	pH Value of Soil (Electrometric Method)	R57
	TfNSW T185	Resistivity of Sands and Granular Road Construction Material	R57
	TfNSW T1010	Quantitative Determination of Chlorides in Soil	R57
BS 1377	Method of Test for Soils for Civil Engineering Purposes - Triaxial Tests	R57	

<b>Primary Test</b>	<b>Test Method</b>	<b>Test Description</b>	<b>Contained in TfNSW Specification</b>
Geotextile	AS 3706	Geotextiles - Methods of Test (all tests in Tables R63/E.1 and R63/E.2)	R63



**ANNEXURE G2-C2/E – SCHEDULE OF DAYWORK RATES****E1 SCHEDULE OF DAYWORK RATES**

Refer to Clause 31.

The following rates for labour and plant must be applied to the valuation of Daywork to the extent that the listed rates apply to the work.

*NOTES TO TENDER DOCUMENTER: (Delete this boxed text after customising Annexure G2-C2/E)*

*The rates for the labour and plant items listed in the tables below will be provided by Commercial Services Branch for insertion into specification G2-C2.*

*If predetermined rates are not applicable, delete everything under this annexure and set the heading to "NOT USED".*

<b>Item No</b>	<b>Description</b>	<b>Unit</b>	<b>Ordinary Time</b>	<b>Time and a Half</b>	<b>Double Time</b>
L1	Labourer	hour			
L2	Tradesperson	hour			
L3	Leading Hand	hour			

<b>Item No</b>	<b>Plant Description (includes operator and fuel)</b>	<b>Unit</b>	<b>Rate (all hours)</b>
P1	Skidsteer loader (Bobcat)	hour	
P2	Skidsteer loader and broom	hour	
P3	Backhoe (dig depth up to 5 m)	hour	
P4	Backhoe + hammer	hour	
P5	Dozer 98 to 145 kW (equivalent to Caterpillar D6)	hour	
P6	Dozer 145 to 175 kW (equivalent to Caterpillar D7)	hour	
P7	Dozer 220 to 305 kW (equivalent to Caterpillar D8)	hour	
P8	Dozer 305 to 400 kW (equivalent to Caterpillar D9)	hour	
P9	Grader 160 kW (equivalent to Caterpillar 14H)	hour	
P10	Loader (up to 90 kW)	hour	
P11	Roller, multi-tyred < 14 t	hour	
P12	Roller, multi-tyred > 15 t	hour	
P13	Roller, padfoot < 12 t	hour	
P14	Roller, padfoot > 12 t	hour	

<b>Item No</b>	<b>Plant Description (includes operator and fuel)</b>	<b>Unit</b>	<b>Rate (all hours)</b>
P15	Roller, smooth drum < 12 t	hour	
P16	Roller, smooth drum > 12 t	hour	
P17	Scraper, open bowl, 17 to 28 m <sup>3</sup>	hour	
P18	Excavator < 10 t	hour	
P19	Excavator < 10 t + hammer	hour	
P20	Excavator 12 t	hour	
P21	Excavator 12 t + hammer	hour	
P22	Excavator 20 t	hour	
P23	Excavator 20 t + hammer	hour	
P24	Excavator 30 t	hour	
P25	Excavator 30 t + hammer	hour	
P26	Watercart 15,000 L	hour	
P27	Truck 13 t payload	hour	
P28	Truck and dog 30 t payload	hour	
P29	Vacuum broom	hour	
P30	Road profiler < 1 m cutting width	hour	
P31	Road profiler > 1 m cutting width	hour	
P32	Air compressor (without operator) 41 L/s	day	
P33	Air compressor (without operator) 83 L/s	day	
P34	Generator 6.8 kVA (without operator)	day	
P35	Water Pump < 1,000 L/min (without operator)	day	
P36	Water Pump 1,000 to 2,000 L/min (without operator)	day	
P37	Wacker packer (without operator)	day	
P38	Wacker plate (without operator)	day	
P39	Handheld pneumatic hammer 10 kg (without operator)	day	
P40	Quick cut concrete saw (without operator)	day	
P41	Flexi drive motor and poker vibrator (without operator)	day	
P42	Flexi drive motor and pump (without operator)	day	

**E2 METHOD OF CALCULATION OF DAYWORK LABOUR RATE**

(ℓ = notional monetary unit)

**Table E2.1 - Calculation of Ordinary Daywork Labour Hourly Rate**

<b>Labour Hours</b>		
a	Days per year	365
b	Weekend days (52weeks*2days)	104
c	Total week days (a-b)	261
d	Annual leave (4weeks)	20
e	Public holidays	9
f	Picnic Day	1
g	Sick leave (estimate)	5
h	Total working days (c-d-e-f-g)	226
i	Wet weather (estimate)	20
j	Rostered days off	13
k	Productive working days per year (h-i-j)	193
l	Productive working hours per day (8 hours daily less 0.5 hour unproductive)	7.5
m	Productive working hours per year (k*l)	1,447.5
<b>Daily Wages</b>		
n	Award rate	ℓ 20.00
o	Negotiated EBA hourly allowance	ℓ 9.00
p	Base hourly rate (n+o)	ℓ 29.00
q	Paid working hours per day	7.60
r	Base daily rate (p*q)	ℓ 220.40
s	Daily fares	ℓ 17.00
t	Daily rate (r+s)	ℓ 237.40
<b>Annual Wages</b>		
u	Base annual wage (c*r)	ℓ 57,524.40
v	Travelling allowance (h*s)	ℓ 3,842.00
w	Leave loading (t*d*17.5%)	ℓ 830.90
x	Annual wage (u+v+w)	ℓ 62,197.30
<b>Statutory On Costs</b>		
y <sub>1</sub>	Payroll tax (x*5.45%)	ℓ 3,389.80
y <sub>2</sub>	Superannuation (x*9%)	ℓ 5,597.80

y <sub>3</sub>	Workers Compensation levy ( $[(x+y_2)*5.79\%]$ )	£ 3,925.30
y <sub>4</sub>	Severance pay ( $r*10days$ )	£ 2,204.00
y	Total On Costs ( $y_1+y_2+y_3+y_4$ )	£ 15,116.90
z	Labour cost per annum ( $x+y$ )	£ 77,314.20
<b>Labour Costing (Ordinary Time)</b>		
	Daywork labour cost per hour ( $z÷m$ )	£ 53.40

Table E2.2 - Calculation of Overtime Daywork hourly rates

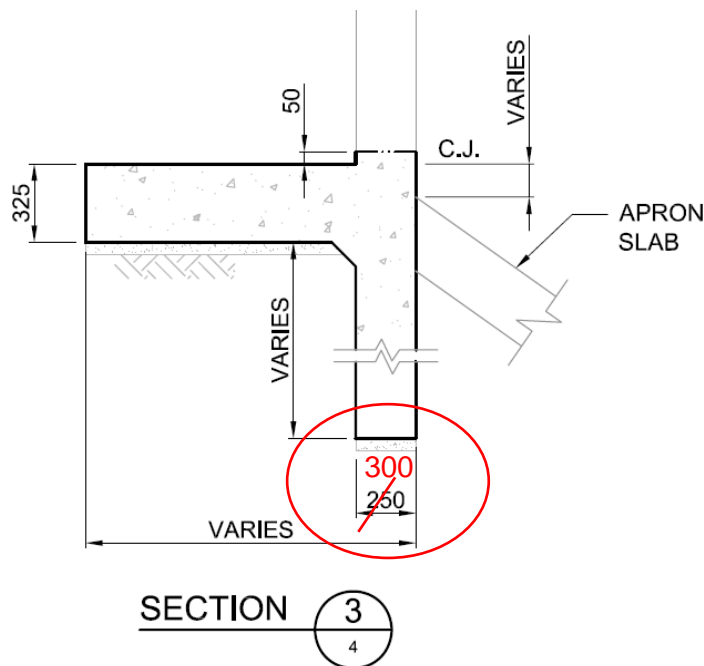
		Time and a half	Double Time
<b>Daily Wages</b>			
a	Award Overtime rate	£ 30.00	£ 40.00
b	Negotiated EBA hourly allowances	£ 10.00	£ 12.00
c	Base hourly rate (a+b)	£ 40.00	£ 52.00
<b>Statutory On Costs</b>			
x <sub>1</sub>	Payroll tax ( $c*5.45\%$ )	£ 2.20	£ 2.80
x <sub>2</sub>	Workers Compensation Levy ( $c*5.79\%$ )	£ 2.30	£ 3.00
x	Total On Costs ( $x_1+x_2$ )	£ 4.50	£ 5.80
<b>Labour Costing (Overtime)</b>			
	Daywork overtime labour cost per hour ( $c+x$ )	£ 44.50	£ 57.80

## ANNEXURE G2-C2/F – REQUIREMENTS FOR WAE DRAWINGS

### F1 CHANGES OR AMENDMENTS ON DRAWINGS

- All changes must be marked in red.
- Added lettering or callout text must be in red and at least 3.5 mm high on an A1 sheet. The text must still be easily readable if the drawing is reproduced in A3 size.
- The amendments depicting work-as-executed details must be carefully and accurately prepared, shown in red colour and indicated by encircling the amended details with a red circular or oval “bubble” or a wavy line (“clouded”).
- The original detail or dimension must be shown and struck through with a red line (or red cross marks) and the new detail or dimension must be shown in red.

#### Example:



- The original design and the work-as-executed details must be clearly distinguishable and be of acceptable quality to enable permanent storage of the drawing, microfilming and electronic scanning.
- If insufficient room is available on the drawing for changes to be indicated clearly, a new sheet must be added, with suitable changes made to the index. WAE changes must not be shown on the back of drawings.

### F2 CERTIFICATION

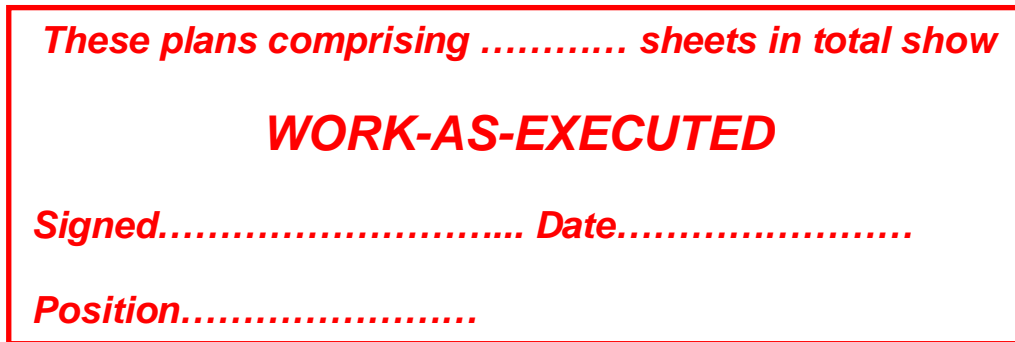
Every set of WAE drawings must be certified and signed by a person employed by the Contractor who is in a position to know the details of the WAE changes.

The certification must state: “I certify that the work has been constructed in accordance with these drawings including the changes marked in red”. The certification may be integrated with the WAE stamp as shown in Example 2 below.

Every sheet of the WAE drawings must be stamped with an appropriate red certification, and signed. If you advise the Principal that a signature on each sheet is not practical (as in the case of a very large set of drawings), the Principal may accept the WAE drawings with the first sheet stamped and signed (as shown in either Example 1 or Example 2), and with all other sheets bearing an appropriate marking (as shown in Example 3).

**Example 1:**

Acceptable style for a single drawing or the first sheet of a set of drawings, with the certification inserted under or adjacent to the stamp, as illustrated below.



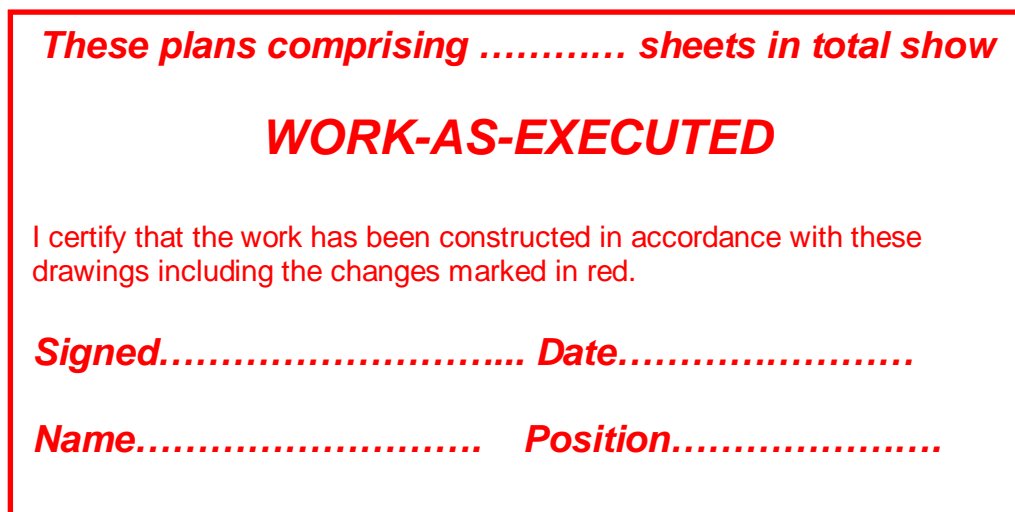
*I certify that the work has been constructed in accordance with these drawings including the changes marked in red.*

*Signed..... Date.....*

*Name..... Position.....*

**Example 2:**

Acceptable style for a single drawing or the first sheet of a set of drawings, with the certification integrated within the stamp, as illustrated below.



**Example 3: Acceptable style for following sheets of a set of multiple drawings**



**ANNEXURES G2-C2/G TO G2-C2/L – (NOT USED)**

## **ANNEXURE G2-C2/M – REFERENCED DOCUMENTS**

Refer to Clause 1.1.4.

### **TfNSW Specifications**

TfNSW G36	Environmental Protection
TfNSW G71	Construction Surveys
TfNSW Q	Quality Management System
TfNSW R11	Stormwater Drainage
TfNSW R23	Plastic Flexible Pipes
TfNSW R33	Trench Drains
TfNSW R37	Intra-pavement Drains
TfNSW R38	Edge Drains
TfNSW R44	Earthworks
TfNSW R50	Stabilisation of Earthworks
TfNSW R55	Rock Filled Gabions and Mattresses
TfNSW R57	Design of Reinforced Soil Walls
TfNSW R58	Construction of Reinforced Soil Walls (Contractor's Design)
TfNSW R59	Construction of Reinforced Soil Walls (Principal's Design)
TfNSW R63	Geotextiles (Separation and Filtration)
TfNSW R71	Unbound and Modified Pavement Course
TfNSW R73	Construction of Plant Mixed Heavily Bound Pavement Course
TfNSW R75	Insitu Pavement Stabilisation Using Slow Setting Binders
TfNSW R82	Lean-mix Concrete Subbase
TfNSW R83	Concrete Pavement Base
TfNSW B80	Concrete Work for Bridges
TfNSW 3051	Granular Pavement Base and Subbase Materials
TfNSW 3071	Selected Material for Formation Layers
TfNSW 3580	Aggregate Filter Materials for Subsurface Drainage

### **TfNSW Test Methods**

TfNSW T102	Pretreatment of Road Construction Materials by Compaction
TfNSW T103	Pretreatment of Road Materials by Artificial Weathering
TfNSW T106	Coarse Particle Distribution in Road Materials (by Dry Sieving)
TfNSW T107	Fine Particle Distribution in Road Construction Materials
TfNSW T108	Liquid Limit of Road Materials



TfNSW T109	Plastic Limit and Plasticity Index of Road Construction Materials
TfNSW T111	Dry Density/Moisture Relationships of Road Construction Materials (Standard Compaction)
TfNSW T114	Maximum Dry Compressive Strength of Road Construction Materials
TfNSW T116	Unconfined Compressive Strength of Remoulded Road Construction Materials
TfNSW T117	California Bearing Ratio of Remoulded Specimens of Road Construction Materials
TfNSW T119	Field Density of Road Construction Materials (Sand Replacement Method)
TfNSW T120	Moisture Content of Road Construction Materials (Standard Method)
TfNSW T121	Moisture Content of Road Construction Materials (Sand Bath or Hotplate Method)
TfNSW T123	pH Value of a Soil (Electrometric Method)
TfNSW T131	Unconfined Compressive Strength of Road Construction Materials (blended in the laboratory with Cementitious Binders)
TfNSW T136	Rate of Spread of Lime or Cement
TfNSW T137	Cement Content of Cement Stabilised Material (Heat of Neutralisation)
TfNSW T160	Deflection Measurement (Portable Beam)
TfNSW T162	Compaction Control Test (Rapid Method)
TfNSW T166	Relative Compaction of Road Construction Materials
TfNSW T171	Modified Texas Triaxial Compression Test for Pavement Materials
TfNSW T173	Field Wet Density of Road Construction Materials (Nuclear Gauge in Direct Transmission Method)
TfNSW T180	Moisture Content of Road Construction Materials (Microwave Oven Method)
TfNSW T182	Road Roughness Testing
TfNSW T185	Resistivity of Sands and Granular Road Construction Material
TfNSW T188	Project Ride Quality (Vehicular Laser Profilometer)
TfNSW T199	Deflection Testing of Road Formation
TfNSW T201	Particle Distribution of Aggregates (by Washing)
TfNSW T203	Particle Distribution of Aggregates Finer than 75 µm (by Washing)
TfNSW T213	Particle Shape by Proportional Calliper
TfNSW T215	Wet/Dry Strength Variation
TfNSW T219	Acid Soluble Sulfate Content in Road Construction Materials
TfNSW T223	Determination of the Point Load Strength of Rock Specimens (Field Method)
TfNSW T239	Fractured Faces of Coarse Aggregate
TfNSW T276	Foreign Materials Content of Recycled Crushed Concrete
TfNSW T1004	Quantitative Determination of Chloride Ion in Water Where Chloride Content is More Than 15 ppm
TfNSW T1010	Quantitative Determination of Chlorides in Soil
TfNSW T1014	Sulphate Ion in Water

TfNSW T1015      Microbiology of Water used in Roadworks (Thermotolerant Coliforms)

**Australian Standards**

AS 1141	Methods for sampling and testing Aggregates
AS 1141.6.1	Particle density and water absorption of coarse aggregate – Weighing-in-water method
AS 1141.11	Particle size distribution by sieving
AS 1141.14	Particle shape, by proportional calliper
AS 1141.20.1	Average least dimension – Direct measurement (nominal size 10 mm and greater)
AS 1141.20.2	Average least dimension – Direct measurement (nominal sizes 5 mm and 7 mm)
AS 1141.22	Wet/dry strength variation
AS 1141.41	Polished aggregate friction value – Horizontal bed machine
AS 1289	Methods of testing soils for engineering purposes
AS 1289.3.6.1	Determination of the particle size distribution of a soil – Standard method of analysis by sieving
AS 1289.4.2.1	Determination of the sulfate content of natural soil and the sulfate content of the groundwater – Normal method
AS 1289.6.7.2	Determination of permeability of a soil – Falling head method for a remoulded specimen
AS 3550.4	Waters - Determination of Solids - Gravimetric method
AS 3706	Geotextiles – Methods of test
AS/NZS ISO 9001	Quality management systems - Requirements

**Queensland Department of Transport Test Method**

Q181C      Effective Angle of Friction at Constant Volume Conditions

**British Standards**

BS 1377      Method of Test for Soils for Civil Engineering Purposes

**NSW Government**

NSW Government Code of Practice for Procurement

**Safe Work Australia Documents**

Code of Practice - Managing the Work Environment and Facilities

**Legislation**

Civil Liabilities Act 2002 (NSW)

Copyright Act 1968 (Cwth)

Corporations Act 2001 (Cwth)

Government Information (Public Access) Act 2009 (NSW)

Health Records and Information Privacy Act 2002 (NSW)

National Measurement Act 1960 (Cwth)

Privacy and Personal Information Protection Act 1998 (NSW)

Radiocommunications Act 2002 (Cwth)

Road Transport (Mass, Loading & Access) Regulation 2005 (NSW)

Surveying and Spatial Information Act 2002 (NSW)

Surveying and Spatial Information Regulation 2012 (NSW)

**Surveying Standards**

Surveyor General's Direction No 11 "Preservation of Survey Infrastructure"

Surveyor General's Direction No 12 "Control Surveys and SCIMS"