

**Central Highlands Council
Replacement of Bridge
No. 4110, Clyde River, Black Snake Lane**



**Request for Tender
(RFT) Design &
Construct 2021**

CONTRACT No. 01/21

CENTRAL HIGHLANDS COUNCIL
REPLACEMENT OF BRIDGE No 4110 CLYDE RV BLACK SNAKE LANE

SECTION 1 PRELIMINARIES

- 1.1 Form of Tender
- 1.2 Information to be Submitted with the Tender
- 1.3 Conditions of Tendering

SECTION 2 CONDITIONS OF CONTRACT

- 2.1 AS 4300-1995 General Conditions of Contract for Design and Construct
- 2.2 Annexure to General Conditions of Contract - Part A
- 2.3 Annexure to General Conditions of Contract - Part B

SECTION 3 PRINCIPAL'S PROJECT REQUIREMENTS

SECTION 4 SCHEDULE OF PRICES

SECTION 5 LGAT DRAWINGS FOR ROAD APPROACHES

CENTRAL HIGHLANDS COUNCIL
REPLACEMENT OF BRIDGE No 4110 CLYDE RV BLACK SNAKE LANE

1.1 FORM OF TENDER

CONTRACT NO.: 01 /21

CONTRACT TITLE: Black Snake Lane Bridge Replacement,

Returnable by 4.30 pm on 28th January 2021

TO: Central Highlands Council Office
6 Tarleton Street or PO Box 20
Hamilton, TAS 7140

Under and subject to the Conditions of Tendering in the Tender Documents

I/WE

the undersigned do hereby tender to perform the above named Works as described in this RFT, including any Tender addendums, and in accordance with the terms and conditions of the Tender Documents, as defined in the Conditions of Tendering, at the rates stated in the attached Lump Sum stated in the Schedule of Prices as applicable for the amount set out below:

Lump sum part to Contract, exclusive of GST \$.

GST \$ _____

TENDER SUM \$ _____

Dated this day of.....2019

Signature or Common Seal of Tenderer:

Designation of Authorised Signatory:

Address of Tenderer:

A.B.N. No.

Witness to Signature:

Designation/Position:

CENTRAL HIGHLANDS COUNCIL
REPLACEMENT OF BRIDGE No 4110 CLYDE RV BLACK SNAKE LANE

ANNEXURE TO THE FORM OF TENDER

Information is required and will be used to rank tenderers on the basis of the weighted attribute framework as follows:

Attribute	Main Wtg %	Attribute	Wtg %	Sub Attribute	Further Description of Requirements – Refer Ref. No. in next Table
NON PRICE	40	Track Record & Experience	10	<ul style="list-style-type: none"> Provide details of previous experience in similar projects 	1
				<ul style="list-style-type: none"> Track record in working with CHC and other Councils. Provide examples and references. 	
		Design & Methodology	20	<ul style="list-style-type: none"> Bridge Construction Methodology, including methodology to meet the limited road closure time 	2
				<ul style="list-style-type: none"> Construction Program 	3
				<ul style="list-style-type: none"> Concept Design for Bridge 	4
		Team	10	<ul style="list-style-type: none"> Project Manager 	5
				<ul style="list-style-type: none"> Site Supervisor / Foreman 	
				<ul style="list-style-type: none"> Bridge Design Engineer 	
				<ul style="list-style-type: none"> Proof Check Engineer 	
				<ul style="list-style-type: none"> Key subcontractors and suppliers 	
PRICE	60		60		
	100		100		

CENTRAL HIGHLANDS COUNCIL

REPLACEMENT OF BRIDGE No 4110 CLYDE RV BLACK SNAKE LANE

1.2 INFORMATION TO BE SUBMITTED WITH THE TENDER

TRACK RECORD AND EXPERIENCE ITEM

This attribute is used to assess the track record of the Tenderers working with Councils on bridge projects. Examples of previous similar bridge construction projects should be provided.

REF.	INFORMATION	REASON REQUIRED
1	Provide details of previous experience in similar projects, including bridge replacements in remote locations. Provide Client references for these projects to demonstrate track record	To ensure appropriate performance has occurred in the completion of previous similar works

DESIGN & METHODOLOGY ITEM

This attribute is used to assess the Principal's risk in proceeding to enter into a contract with a contractor who does not adequately understand the scope of the work or have adequate plans to deliver it. Of particular interest are complex or difficult parts of the work or where time goals are demanding. The Principal expects that this information will have essential ingredients of what and when tasks are planned as well as who will be responsible.

REF. No.	INFORMATION	REASON REQUIRED	DOCUMENTATION REQUIRED
2	Bridge Construction Methodology	To document the method of undertaking the works and demonstrate understanding of the site conditions.	Written description including methodology of existing structure removal and new bridge installation
3	Construction Program	To demonstrate that the works will be completed within the time allowed.	A Gantt chart showing key tasks and approval milestones.
4	Bridge Concept Design	To demonstrate the bridge design meets the design parameters outlined in the tender documents.	A concept design drawing for the structure showing plan, elevation and typical x-section of the proposed structure.

TEAM ITEM

This attribute is the opportunity to reward contractors that lower contract risk by proposing highly experienced teams with a workable, responsive structure.

REF.	INFORMATION	REASON REQUIRED
5	Contract Team Members: <ul style="list-style-type: none">– Project Manager– Site Supervisor/Foreman– Bridge Design Engineer– Proof Check Engineer	To ensure appropriate knowledge and experience. Name and CV required for each nominated person.

CENTRAL HIGHLANDS COUNCIL
REPLACEMENT OF BRIDGE No 4110 CLYDE RV BLACK SNAKE LANE

ADDITIONAL INFORMATION TO BE SUBMITTED WITH TENDER

The following information shall be provided and shall form part of the contract. Where the below information is not provided, this may be considered a non-conforming tender.

SUB-CONTRACTING:

Works or Service (where applicable)	Name of Firm
Design of Structure	
Proof Check of Structure	
Supply of Precast Concrete	
Cranage	
Traffic Management	
Other major component of the works not performed directly by the Tenderer (specify):	

COMPANY DETAILS:

Please provide the following information within this RFT:

- ABN
- Directors
- Date of incorporation

INSURANCES:

Please provide evidence of the following insurances at the levels specified within this RFT:

- Public Liability
- Professional Indemnity
- Workers Compensation
- Motor Vehicle
- Works Insurance

COMPANY SYSTEMS:

Please provide the following information within this RFT:

- Evidence of Quality Assurance accreditation to ISO 9001-2000
- Evidence of a Workplace Health and Safety Plan

1.3 - CONDITIONS OF TENDERING

GENERAL CONDITIONS OF TENDERING

Contractors with DSG prequalification level B2 or higher are eligible to Tender for these works.

The tender documents shall be the Form of Tender, these Conditions of Tendering, General Conditions of Contract and such Specifications, Drawings, Schedule of prices and other documents as are issued by the Principal for the purpose of tendering.

Tenders shall be for a LUMP SUM CONTRACT and shall be submitted on the Schedule of Prices in this Tender document.

This schedule shall be used as appropriate for the pricing of additional or deleted work as defined by variation, but the quantities, if any, shall not form part of the Contract. Tenders shall be deemed to be non-conforming if they are not accompanied by a fully priced Schedule of Prices.

Irrespective of the quantities shown, nothing in this specification shall be taken to relieve the Contractor of the obligation of constructing the works in accordance with the specification.

The tender process shall be undertaken in accordance with the Central Highlands Council Code of Tendering. A copy of this document shall be deemed to be included as part of the Tender Documents and is bound separately and available on Councils website at: www.centralhighlands.tas.gov.au

Tenderers attention is also drawn to the Public Interest Disclosures Act 2002 (the Act) and are advised that Central Highlands Council is required to comply with the Model Procedures to be followed by Public Bodies (The Model Procedures) that is overseen by the Ombudsman Tasmania.

Those procedures include guidance to Council for the referral of cases of misconduct to the Ombudsman or the Integrity Commission as may be relevant.

If a Tenderer or subsequently a Contractor considers that an inappropriate action or direction has been given to it during the Tender or Construction Contract process, then the matter can be referred to the General Manager and the General Manager shall seek advice as to an appropriate course of action in accordance with the Model Procedures and the Act.

Such course of action shall not limit the powers included in the Construction Contract for the application of Arbitration for the resolution of Contract disputes.

QUERIES DURING THE TENDER PERIOD

Queries during the tender period shall be addressed to the Manager Works & Services, Central Highlands Council, Jason Branch (0428 725 198) in writing or by email to jbranch@centralhighlands.tas.gov.au

PRE-TENDER SITE INSPECTION

Tenderers shall make their own arrangements for a pre-tender site inspection. It is mandatory that Tenderers visit site and understand the site and its access constraints prior to Tendering.

DUE DATE & TIME FOR CLOSE OF TENDER

Tenders shall be lodged by:

4:30 pm on 28th January 2021 in:

TENDER BOX
CENTRAL HIGHLANDS COUNCIL CHAMBERS
6 TARLETON STREET
HAMILTON TAS 7140

TENDER LODGEMENT

Tenders shall be lodged in hard copy in the Tender Box at the CENTRAL HIGHLANDS Council Chambers by the due time and date in a sealed envelope clearly marked "TENDER FOR CONTRACT NO 01 /21".

Tenders may be posted to arrive at Council Chambers BEFORE the closing date and time for Council to lodge into the Tender Box.

Tenders shall not be lodged by facsimile or email.

TENDER VALIDITY

Tenders shall be valid for 90 days from receipt.

LATE TENDERS

Late tenders will be dealt with in accordance with Council's Code of Tenders and Contracts.

TENDER ACCEPTANCE

The lowest or any tender will not necessarily be accepted.

TENDER AND SECURITY DEPOSIT

A TENDER DEPOSIT in the sum \$0 shall be lodged with the tender in accordance with the Conditions of Tendering.

A SECURITY DEPOSIT in the sum \$0 shall be lodged within 14 days of acceptance of the tender in accordance with the General Conditions of Contract.

ALTERNATIVE TENDERS

A tender conforming fully to the tender documents shall be submitted.

A tender, which does not comply with a requirement, will in the tender assessment be rated zero (0) on that component of the particular weighted attribute

Where a Tenderer wishes to base a Tender on alternative products, which are outside the Specification, this Tender shall be lodged as an Alternative Tender.

In addition to submitting a conforming tender the Tenderer may offer one only alternative except for those parts of the Works where it is stated in the specifications that alternatives will not be considered. The alternative may contain several parts.

Where an alternative is offered, the Tenderer shall provide a fully detailed description of it with his tender and shall clearly state the manner in which it differs from that specified, and any modifications which will be required to the whole or part of the work due to the use of the alternative otherwise the alternative may not be considered.

The Tenderer may, at the time of tendering, nominate a completion date prior to that shown in the Annexure Part A to the General Conditions of Contract. This may be accepted by the Principal at award, and the date for Practical Completion adjusted accordingly.

ADDITIONAL INFORMATION

Notwithstanding any other requirements of the tender documents the Principal may require, per a written request, a tenderer to submit any or all of the following prior to award:-

- I Additional details as to his/her previous experience and achievements in performing similar or comparable work and his resources and ability to carry out the Works.
- II Additional details of the construction program in such form as may be required showing the dates by which or the times within which the various stages or parts of the Works are to be completed or executed.
- III An estimated monthly cash flow schedule.
- IV Details of the construction plant proposed to be used in executing the Works.
- V Additional details of the method of construction proposed to be used in executing the Works.
- VI A brief updated outline of company organisation and financial position including audited financial statements.
- VII A Quality Plan to cover all work to be carried out for the purposes of the Contract both on-site and off-site.

Should the Tenderer fail to submit any information so required in the time stipulated in the request the Principal may thereupon treat the tender as informal.

COUNCIL'S RIGHTS

Central Highlands Council reserves the right, in its absolute discretion, to:

- (a) vary the terms of this RFT, or the structure, requirements or process referred to in this RFT;
- (b) seek clarification from any Tenderer if any aspect of their Tender is ambiguous or unclear;
- (c) extend the Closing Date and Time;
- (d) call for new Tenders;
- (e) not accept the Tender offering the lowest price;
- (f) consider or accept, or refuse to consider or accept, non-conforming Tenders at its absolute discretion;
- (g) not consider any Tender lodged after the Closing Date and Time;
- (h) not accept any Tender in its absolute discretion; and
- (i) cancel or suspend this RFT, or any processes outlined in this RFT, in its absolute discretion.

Central Highlands Council will not be liable or in any way responsible for any loss, damage, cost or expense incurred by a Tenderer in the event that Central Highlands Council exercises any rights referred to in this clause.

GENERAL TERMS AND CONDITIONS

- (a) Central Highlands Council does not warrant the accuracy of the contents of this RFT and, to the extent permitted by law, Central Highlands Council and its directors, officers, advisers, employees and agents are not and will not be liable to any Tenderer, whether arising from negligence or otherwise, for any representation contained in, or any omission from, this RFT, or for any error, inaccuracy, incompleteness or other defect in the information contained in this RFT.

- (b) Central Highlands Council is not responsible for and will not compensate the Tenderer for any costs (whether direct or indirect) incurred by the Tenderer in preparing and/or submitting a Tender in response to this RFT or in responding to any requests for clarification from Central Highlands Council.
- (c) This RFT, and the process outlined in this RFT, does not form any legally binding agreement between Central Highlands Council and any Tenderer and no legally binding relationship will exist between Central Highlands Council and any Tenderer unless and until a formal written agreement with respect to the supply of the [Goods/Services/Works] has been executed by the parties.
- (d) This RFT, and the process outlined in this RFT, must not be construed as making any express or implied representation, undertaking or commitment by Central Highlands Council that it will enter into an agreement with any person.
- (e) No contractual relationship or other obligation arises between Central Highlands Council and any Tenderer unless and until a formal contract is signed by both parties. This clause (e) applies despite any oral or written advice to a Tenderer that a Tender is preferred or successful or has been, or will be, accepted.

CENTRAL HIGHLANDS COUNCIL

REPLACEMENT OF BRIDGE No 4110 CLYDE RV BLACK SNAKE LANE

SECTION 2 CONDITIONS OF CONTRACT

- 2.1 AS 4300-1995 General Conditions of Contract for Design & Construct. The General Conditions of Contract form part of the Contract but are not included in this document
- 2.2 Annexure to General Conditions of Contract - Part A
- 2.3 Annexure to General Conditions of Contract -Part B

ANNEXURE to the Australian Standard

General Conditions of Contract - AS 4300

PART A

This Annexure shall be completed and issued as part of the tender documents and subject to any amendments to be incorporated into the Contract, is to be attached to these General Conditions of Contract and shall be read as part of the Contract.

Item

- | | | |
|-----|---|---|
| 1. | The law applicable is that of the State or Territory of:
(Clause 1) | Tasmania |
| 2. | Payments under the Contract shall be made at:
(Clause 1) | Hamilton, Tasmania |
| 3. | The Principal: | Central Highlands Council |
| 4. | The address of the Principal: | 6 Tarleton St, Hamilton. TAS. 7140 |
| 5. | The Contractor: | As per Instrument of Agreement |
| 6. | The address of the Contractor: | As per Form of Tender |
| 7. | The Superintendent:

(Clause 2) | Central Highlands Council |
| 8. | The address of the Superintendent: | 6 Tarleton St, Hamilton. TAS. 7140 |
| 9. | The period of time for Practical
(Clause 2) | 30 th of June 21 |
| 10. | Preliminary Design:
(Clause 2) | (A) A Preliminary Design is not included in the Principal's Project Requirements. |
| 11. | The Principal's Project Requirements are described in the following documents (additional to those listed in the Annexure item for Preliminary Design):
(Clause 2) | Documents describing the Principal's Project Requirements are:
As per the section 3 of this document |
| 12. | Limits of accuracy applying to quantities for which the Principal accepted a rate or rates:
(Clause 3.3(b)) | No limit |
| 13. | Contractor shall provide security in the amount of:
(Clause 5.2) | 5% of GST exclusive Contract Sum |

14. Principal shall provide security in the amount of:
(Clause 5.2) Not Applicable
15. Retention moneys shall be deducted progressively as follows:
(Clauses 5.5 and 42.1) Not Applicable
16. The period of notice required of a party's intention to convert security into cash or to have recourse to security:
(Clause 5.5) 5 Days
17. The percentage to which the Principal's entitlement to security is reduced:
(Clause 5.8) 50%
18. The percentage to which the Contractor's entitlement to security is reduced:
(Clause 5.8) Not Applicable
19. Holding of and interest on cash security – the Alternative applying:
(Clause 5.10) Not applicable
20. The number of copies of documents to be supplied by the principal
(Clause 8.3) Two (2)
21. Documents, number of copies, and the time or design stages at which they are to be supplied by the Contractor:
(Clause 8.4)

<u>DOCUMENTS</u>	<u>NO. OF COPIES</u>	<u>TIME/DESIGN STAGE</u>	<u>SUPERINTENDENT'S DIRECTION REQUIRED</u> <u>YES / NO</u>
Contract Management Plan	2	Not less than 7 days prior to possession of Site.	Yes
Design documents for construction of bridge.	4	Not less than 7 days prior to issue for construction of the relevant element of the bridge.	Yes

<u>DOCUMENTS</u>	<u>NO. OF COPIES</u>	<u>TIME/DESIGN STAGE</u>	<u>SUPERINTENDENT'S DIRECTION REQUIRED YES / NO</u>
Certificate of Design, and Proof check for each element of the bridge.	2	Not less than 7 days prior to issue for construction of the relevant element of the bridge	Yes
As-constructed drawings	1	Prior to, and a condition of Practical Completion.	Yes
22. The time within which the Superintendent must give a direction as to the suitability and return the Contractor's copies: (Clause 8.4)		Seven (7) days	
23. Work which cannot be subcontracted without approval:		All works	
24. Subcontractors or Selected subcontractors whose contracts the Principal may direct be novated: (Clause 10)		Not Applicable	
25. The percentage for profit and attendance: (Clause 11(b))		Ten (10%)	
26. Intellectual property rights granted to the Principal - the Alternative applying: (Clause 13.2)		Alternative 1	
27. Legislative Requirements not required to be satisfied by Contractor: (Clause 14.1)		Not Applicable	
28. Insurance of the work under the Contract - the Alternative applying (Clause 18)		Alternative 1	
(a) The amount for demolition and removal of debris: (Clause 18(ii))		As per schedule	
(b) The amount for consultants' fees: (Clause 18(iii))		\$10,000	
(c) The value of materials or things to be supplied by the Principal:		Not Applicable	

(Clause 18(iv))

- (d) The additional amount of percentage: Ten (10) %
(Clause 18(v))
29. Public liability policy of insurance -the Alternative applying: Alternative 1
(Clause 19)
30. If Alternative 1 applies the amount of public liability insurance shall be not less than: \$10,000,000
(Clause 19)
31. Amount of Contractor's professional indemnity insurance shall be not less than: \$5,000,000
(Clause 21)
32. Period for which Contractor's professional indemnity insurance shall be maintained after issue of the Final Certificate: Five (5) years
(Clause 21)
33. Categories of Consultants and amounts of Consultants' professional indemnity insurance: CATEGORY AMOUNT \$
(Clause 21) All \$5,000,000
34. Period for which each Consultant's Professional Indemnity insurance shall be maintained after issue of the Final Certificate: Five (5) Years
(Clause 21)
35. The time by which access to the Site shall be given: Upon acceptance of the Contract Management Plan
36. The time for giving possession of the Site to enable commencement of further work: Upon acceptance of the Contract Management Plan
(Clause 27.1)
37. The times by, or periods within which the Superintendent is to furnish information, materials, documents or instructions to the Contractor: To be identified by the Contractor in the construction program
(Clause 33.1)
38. Events causing delay:
- Industrial conditions Applicable
(Clause 35.5 (a)(i))
- Inclement weather Applicable
(Clause 35.5 (a)(ii))

- | | |
|---|----------------------------------|
| 39. Rate of liquidated damages:
(Clause 35.6) | \$150 per day |
| 40. Limit of liquidated damages:
(Clause 35.7) | Unlimited |
| 41. Bonus for early Practical Completion:
(Clause 35.8) | Nil |
| 42. Limit of bonus:
(Clause 35.8) | Not Applicable |
| 43. Other events for which extra costs for
delay or disruption are payable:
(Clause 36) | Not Applicable |
| 44. The Defects Liability Period:
(Clause 37) | 52 calendar weeks |
| 45. The charge for overheads, administrative
costs, site supervision, establishment costs,
attendance and profit for Daywork:
(Clause 41(f)) | Refer Annexure Part B Clause 1.7 |
| 46. (a) Times under the Contract for payment
claims:
(Clause 42.1) | Last day of each calendar month |
| OR | |
| (b) Stages of the work under the Contract
for payment claims:
(Clause 42.1) | Not Applicable |
| 47. Unfixed plant and materials for which
payment claims may be made before they
are incorporated in the Works:
(Clause 42.2) | Not Applicable |
| 48. The amount of additional security for
unfixed plant and materials:
(Clause 42.2) | Not Applicable |
| 49. The rate of interest on overdue payments:
(Clause 42.7) | Eight (8) % |
| 50. The delay in giving access to the Site
which shall be a substantial breach:
(Clause 44.7(c)) | After 3 months |
| 51. The delay in giving possession of the Site or
sufficient of the Site which shall be a | |

- | | |
|--|---|
| substantial breach:
(Clause 44.7(d)) | After 3 months |
| 52. Further steps required before proceedings-
the Alternative applying:
(Clause 47.2) | Alternative 1 |
| 53. The person to nominate an arbitrator:
(Clause 47.3) | Chairman, Tasmanian
Division, Institution of
Engineers (Australia). |

ANNEXURE to the Australian Standard

General Conditions of Contract - AS 4300

PART B

NOTE: This table is intended for easy reference to clauses that may have been deleted, amended or added to Australian Standard 4300-1995.

The following Clauses have been amended and differ from the corresponding Clauses in AS 4300-1995

1.1 CLAUSE 5 - SECURITY, RETENTION MONEYS AND PERFORMANCE UNDERTAKINGS

Security

Delete the first paragraph of Clause 5.3 and substitute the following:

The Security shall be in the form of an unconditional undertaking given by an approved financial institution. On Contracts up to \$500,000 where a Term Deposit in the name of the Principal is used, it shall be valid for the full term to Final Certificate plus 3 months.

Clause 5.4, add the following:

Where a Contractor has failed to submit the necessary Security by the due date, the Principal shall withhold progress payment(s) until the required Security is forwarded.

Clause 5.7, add the following after the first paragraph:

In compliance with the requirements of specification clause G1.7.3.3 security reduction shall not occur until the Superintendent has received from the Contractor a set of all records for the Contract, including inspection and test records, control charts, statistical analyses and compliance certificates from suppliers.

Where a Term Deposit is used for security on a Contract up to \$500,000, no reduction will be allowed at Practical Completion.

1.2 CLAUSE 9.2: Subcontracting (Including Work Performed by Consultants)

Delete last paragraph and substitute new paragraph:

Approval may be conditional upon-

(a) the subcontract including -

- (i) provision that the subcontractor shall not assign or subcontract without the consent in writing of the Contractor;
 - (ii) provisions which may be reasonably necessary to enable the Contractor to fulfil the Contractor's obligations to the Principal; and
- (b) the Contractor providing-
- (i) where the subcontract price for the particular work is greater than \$50,000, confirmation that the proposal subcontract conditions incorporate AS 4303-1995 as the General Conditions of Subcontract and contain no amendments other than those necessary to reflect the head contract Conditions of Contract; and
 - (ii) a warranty that the subcontract will be entered into in accordance with the requirement of Clause 9.2(b)(i).

Notwithstanding the provisions of this Clause 9.2, the Superintendent may approve subcontract conditions that do not comply with the requirements of Clause 9.2(b).

1.3 CLAUSES 18 AND 19 - INSURANCE

The following insurances are also required:

- Motor vehicle third party property damage policy with a minimum of \$20,000,000 legal liability cover
- Worker's compensation policy including liability by statute at Common Law to comply with the Workers Rehabilitation and Compensation Act 1988.

1.4 CLAUSE 32 - WORKING HOURS

Further to Clause 32, the working hours and working days shall be as nominated by the Contractor at the time of tender as indication of times required to complete the Contract to meet the Due Date for Practical Completion.

Work on Sundays and Public Holidays shall not normally be permitted.

1.5 CLAUSE 33.2 – Contractor's Program

Delete the third and fourth paragraphs and substitute the following new paragraph:

The Contractor shall within 14 days of notification of acceptance of tender submit to the Superintendent a program for the works.

This program shall form part of the Contract, and shall be used for the purposes of extensions of time under Clause 35.5 of the General Conditions of Contract.

Where a change in the scope of the works results in an alteration to the critical path or the logic of the construction program, then a revised program shall be submitted to the Superintendent within 7 days of this change being directed.

1.8 CLAUSE 42.1–PAYMENT CLAIMS, CERTIFICATES, CALCULATIONS AND TIME FOR PAYMENT

Add the following clause:

Where a valid Tax Invoice is not received, payments will not be processed. Any delay in awaiting the receipt of a valid Tax Invoice shall not incur a penalty of overdue payment on the Principal under Item 49 of Annexure Part A.

2. The following Clauses have been added to those of AS 4300 - 1995:

2.1 PRECEDENCE OF DOCUMENTS

For the purpose of Clause 8.1, the Superintendent in resolving any ambiguity or discrepancy shall use the following rules.

In the event there is any conflict between the Agreement, the General Conditions of Contract including the Annexures, the Specification, the Schedules, the Drawings and other documents evidencing the Contract or any of them then the order of precedence shall be as described hereunder:

- (a) the provisions of the said Agreement shall be paramount;
- (b) the provisions of the General Conditions, including the Annexures, shall take precedence over the Specification, Schedules, Drawings and other documents (other than the Agreement);
- (c) where the Annexures to the General Conditions of Contract contradict or have provisions inconsistent with the General Conditions of Contract, to the extent of the inconsistency, the General Conditions shall not apply to the Contract;
- (d) where the job specific part of the Specification has provision inconsistent with the standard (Numbered) Parts of the Specification, then the job specific part shall apply;
- (e) in the case of any conflict between the Specification, Drawings or other documents evidencing the Contract (other than the Agreement and the General and Special Conditions of Contract), the Superintendent shall give a direction.

2.2 COST ADJUSTMENT

Cost Adjustment shall not apply.

CENTRAL HIGHLANDS COUNCIL

REPLACEMENT OF BRIDGE No 4110 CLYDE RV BLACK SNAKE LANE

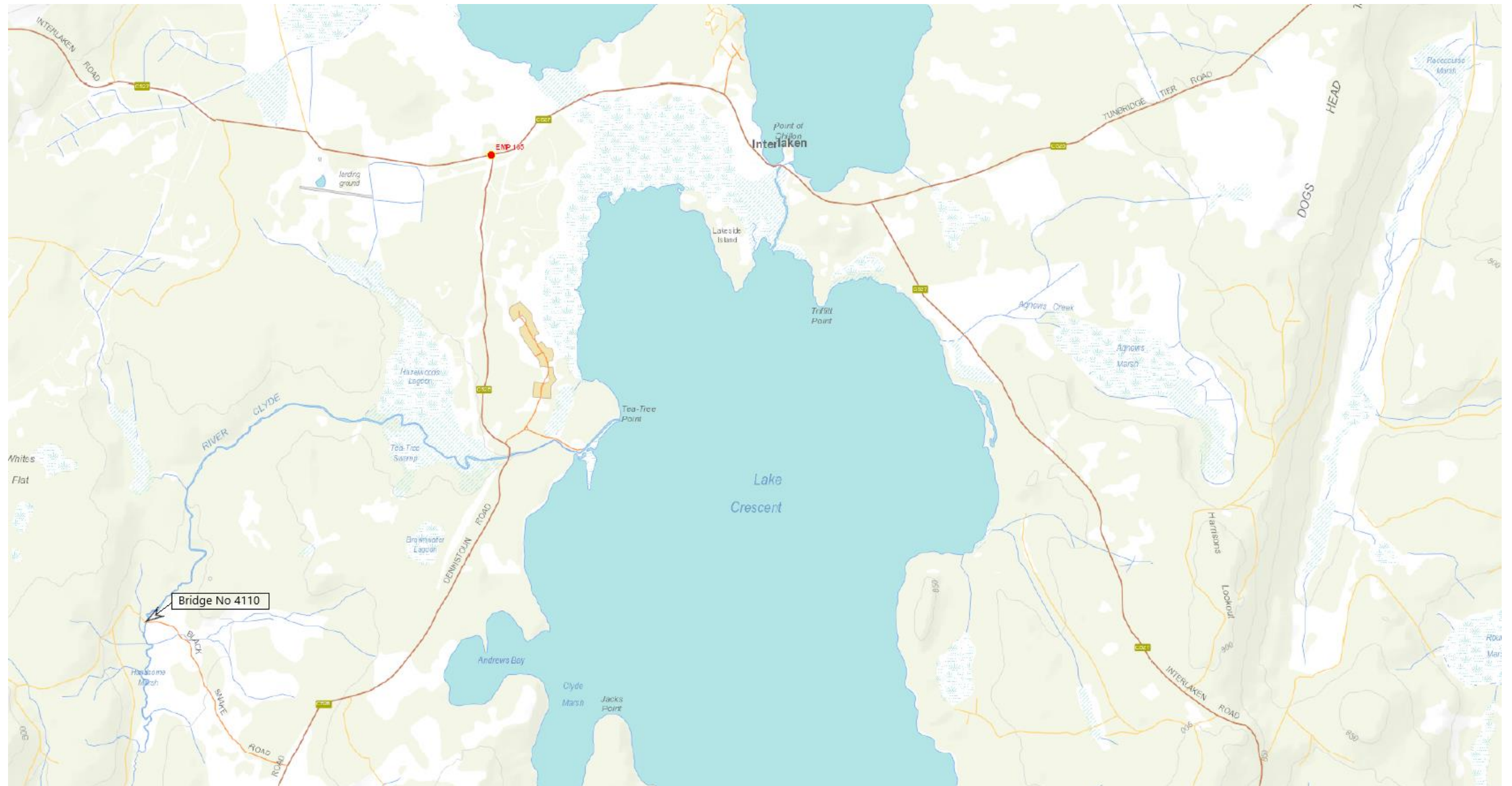
SECTION 3 PRINCIPAL'S PROJECT REQUIREMENTS

PROJECT SPECIFIC SPECIFICATION

3.1 INTRODUCTION

The Central Highlands Council (CHC) invites tenders for the design and construction of the replacement Bridge on Black Snake Lane over Clyde River.

The bridge is located off Dennistoun Road, approximately 6.2km from the Dennistoun Interlaken Road Intersection. Easting: 508158 Northing: 5329717 as marked in the picture below.



3.2 OBJECTIVES

The overall objective is to provide a best value replacement structure, in accordance with Council objectives, AS5100 2017 and Department of State Growth (DSG) standards, whilst minimising environmental and stakeholder impact.

Specific objectives are as follows:

- To provide a single lane bridge in accordance with AS5100:2017.
- Minimum design life to be 80-100 years, preferable construction is with concrete elements;
- To provide a durable structure with minimal maintenance requirements during its service life;
- To remove and replace the existing bridge, and install the new bridge within the minimum road closure timeframes.
- To undertake the construction work safely and with minimal environmental and stakeholder impact;

The project will be judged as a success by Council if all objectives are met. To assess the best tender and hence select the Contractor with the highest potential to meet these objectives, a weighted attribute assessment shall be undertaken that takes account of price and non-price elements.

3.3 EXISTING BRIDGE

The existing bridge is a one span Timber multi log structure, approximately 6.2m long with logs extending for road fill containment. The current Overall width of the bridge is 5.6m.

The existing supports are not piled, having transverse timber log abutments found on loose rock foundation.

Note, the existing bridge has no load limit, however any superimposed load during the construction works should be verified by the Contractor's design engineer.

3.4 SCOPE OF WORKS

The works under this contract include, but are not limited too, the provision of materials, plant and labour for the following tasks:

- 1) Provide a Contract Management Plan for the works
- 2) Design, proof check, documentation and specifications for construction, which satisfies the scope of works
- 3) Liaison and co-ordination with key stakeholders, including relevant service providers and adjacent landowners;
- 4) Setout and construction of a new bridge to the requirements of this RFT;
- 5) Demolition of the existing bridge;
- 6) Removal of existing demolished bridge materials.
- 7) Integration of bridge liaison with Council for road approaches works;
- 8) Supply and installation of batter protection where required
- 9) Minimise environmental erosion impacts during construction, including impacts on the river channel water quality.
- 10) As built drawings and calculations.
- 11) Clean up site and remove all waste materials from site.
- 12) Defects Liability period for 12 months.

The following works will be undertaken by Central Highlands Council;
All associated approach roadworks including backfill.

The Contract also includes the following works that are deemed to be included in the prices tendered by the tenderer, but not be limited to:

- All overheads insurances, set-out costs
- All acquisition and supply of materials, delivery, storage, insurance and testing
- All subcontractors costs
- All underground service locations
- All mobilisation & demobilisation costs
- All WH&S, Quality and Environmental Management systems costs including obtaining the online Council Contractor Induction Certification for ALL employees or sub-contractors working on site
- All fees applicable by any Authority
- All excavation, disposal, filling, re-instatement works
- All precautionary works required to preserve existing infrastructure
- All traffic management required to complete the works

3.5 PRINCIPAL'S TECHNICAL PARAMETERS

3.5.1 Bridge Design and Construction Standards

The bridge superstructure design shall comply with the requirements of AS5100–2017 with a design live load of SM1600.

3.5.2 Dimensional Parameters

The new bridge shall be constructed on the same Vertical and Horizontal alignment as existing with the abutments oriented at 19 degrees to minimize river turbulence and obstruction to water flow.

The minimum width between kerbs shall be 4.5m.

The length of the bridge shall be designed to achieve a minimum hydraulic opening of 1.5m x 9.5m.

3.5.3 Hydraulic Parameters

A single span bridge is preferred to reduce the buildup of debris against the bridge and to improve hydraulic flows. If a two span structure is proposed, the overall bridge length shall be increased to achieve a similar hydraulic opening as a single span bridge, with blade type piers.

The existing bridge approaches has evidence of being overtopped in the past. Therefore, the new bridge design should allow for this

The bridge should be designed for flood loads assuming $V_s = 2.0\text{m/s}$ and $V_u = 3.0\text{m/s}$.

3.5.4 Geotechnical and Abutments

No Geotechnical investigation has been carried out at this site.

The tenderers are to assume pile foundation and supply a provisional cost for mass reinforced concrete footing as per schedule.

If Mass reinforced concrete footing is found ideal, the contractor shall excavate and expose the proposed rock on which the abutments are proposed to be located, and confirm the rock is bedrock and not simply a large floating rock. Evidence is to be provided to the superintendent.

This is a Hold Point.

Where the rock is sloping and there is the potential for sliding of the abutment, the rock should be levelled by rock breaker or concrete layer prior to casting the abutment. Precast abutments are not permitted onto bedrock unless there is an insitu concrete layer between the rock and the precast to ensure even and full bearing of the abutment onto rock. In addition, the abutments shall be positively pinned to the bedrock.

3.5.5 Barriers

Council does not require barriers to be installed on the bridge or approaches. Contractor shall supply and install guideposts on top of kerbs at 3.0m spacings.

Kerbs shall be provided for the full length of the bridge a minimum 250mm high in accordance with AS5100:2017.

3.5.6 Durability

The long-term durability of the structures is of paramount importance to Council. To this end, a service life of 100 years is required with minimal maintenance requirements over the service life.

The principal structural components shall be reinforced concrete including pre-cast and/or pre-stressed and shall be designed, detailed and constructed to meet the durability objectives.

Steel may be used for piling, but loss of steel section due to corrosion and exposure to stream abrasion over the 100-service life must be taken into account in the design. Tubular or hollow section steel piles shall be concrete filled.

The minimum specification for concrete shall be S50 in accordance with DSG specification 610. Use of supplementary cementitious materials with portland cement such as Silica Fume, Fly Ash or GGBF Slag is permitted.

Corrosion inhibitors are not required. Cover to concrete shall be strictly in accordance with AS5100.5.

3.5.7 Air Entrainment of Concrete

As the bridge will be subjected to regular freeze/thaw cycles, all concrete used in the works shall have a minimum air entrainment of 5.5%.

The mix design used in the works shall be submitted to the Superintendent prior to concrete works commencing, clearly showing the air entrainment. This is a Hold Point.

3.5.8 Drainage

The design shall ensure water will drain freely from the new bridge deck by providing a minimum 2% crossfall.

Kerbs are required and they shall be provided with scuppers. These scuppers shall be minimum 100mm wide, 80mm high and at maximum 1.5m center's.

3.5.9 Demolition of the Existing Bridge

All existing bridge remnants and bridge debris at the site shall be demolished and removed. The demolition materials shall be at a minimum completely removed from the site environment such that they are not visible at the site to passers-by, regardless of any arrangements the Contractor may make with adjacent landowners.

Demolition of the existing bridge structure shall be performed in accordance with AS 2601, Demolition of Structures.

Care shall be taken to minimise material falling into the river during demolition.

The existing bridge has no load limit restrictions other than legal state limit, which shall be enforced during construction, and reflected in the Contractor's

methodology.

The methodology for demolition shall be provided in the Contract Management Plan.

3.5.10 Road Approaches

All associated road approach works including backfill will be undertaken by Council as per the LGAT specifications. Approach road design shall be in accordance with LGAT std. dwg TSD-R01-V2

3.5.11 Services

The presence or otherwise of services in the vicinity of the structure shall be confirmed by the Contractor.

A Dial Before You Dig search, and subsequent physical service locations shall be undertaken prior to commencing site works.

All existing services are to be protected by the Contractor as necessary during the construction. All costs associated with this work shall be borne by the Contractor.

3.5.12 Programme

A detailed program outlining the key activities necessary to complete the works shall be supplied within fourteen (14) days of the acceptance of the tender.

Tenderers are requested to clearly identify on the programme the following:

- Sequence in which the Works will be carried out

- The estimated duration of all activities including proposed completion date
- The proposed road closure dates.
- A time scale of calendar weeks with individual activity durations not exceeding two (2) weeks
- Allowance for wet weather
- Working and non-working days
- The inter-relationships between activities
- The sequence of activities which constitute the critical path or path culminating in practical completion
- Significant milestones and hold points as required under this Contract
- Lead times for supply of major components
- Key interfaces with work by the Principal or other contractors including provision of access and document approvals

The program shall be in a Gantt chart format using Microsoft Project, or similar and be provided as a PDF. Council will look favourably to a tenderer that is able to construct the bridge with a Minimal road closure.

The program shall include a schedule of anticipated monthly progress claims to be made throughout the duration of the Contract.

3.5.13 Road Closure

Superintendent is to be notified of road closure times two weeks prior to the start of construction works on site.

Road Closure notification signs are to be install one week prior to works starting.

A temporary bypass is not required at this stage. This will be treated as a variation of works if it becomes necessary. All site works shall be done during the nominated road closure time.

3.5.14 Traffic Management

The contractor shall prepare and implement an accredited Traffic Management Plan in accordance with AS1742.3. The Contractor is required to submit an Accredited Traffic Management Plan to the Principal within 7 days of the anticipated possession of site date.

Road closure requirements, the contractor shall erect signage. The signs must be installed and maintained by the contractor until completion of the closure. The sign shall be installed at least 1 weeks prior to the closure.

Outside the specified road closure time, the road shall remain open at all times with the appropriate advisory signs in accordance with AS1742.3.

3.5.15 Batter Protection

If the abutments are founded directly onto bedrock, no batter protection is required otherwise incorporated within the design. Wingwalls shall be angled to the abutments to suit the 19 degrees skew and shall be supported off the new abutments and not rely on the foundation material below.

Where the wingwalls are not founded on rock, the material below the wingwalls shall be provided with batter protection in accordance with (historical) DSG specification B1. This batter protection shall match into the rock protection on the road approaches

3.6 DESIGN REQUIREMENTS

Bridge Design Engineer – All design work shall be undertaken by a professional Engineer, experienced in the relevant engineering fields and qualified for CPEng of the IEAust.

Proof Check Engineer – All design work shall be undertaken by a professional Engineer, experienced in the relevant engineering fields and qualified for CPEng of the IEAust. The proof check engineer shall be from a firm independent of the design engineer.

Design Documentation – The contractor shall provide the following documents to the Superintendent:

Prior to commencement of individual elements:

- Certificate of Design
- Certificate of Proof check
- Construction Drawings

Prior to Practical Completion;

- A full set of “As Constructed” drawings in both hard copy and electronically in DXF or DWG format certified by the Bridge Design Engineer.
- At the conclusion of the project and to enable practical completion to be awarded, the successful contractor is required to provide certification from their nominated design engineer on the replacement bridge

The design process should incorporate legislative requirements regarding Safety in Design. Council are available to attend a workshop organised by the Contractor to review Safety in Design for this project.

3.7 MANAGEMENT SYSTEMS

3.7.1 General

The contractor shall implement a Contract Management Plan as required by DSG specification Sec 160, including but not limited to:

- Quality Plan
- Safety Management Plan
- Environmental Management Plan (CEMP)
- Traffic Management Plan

The Contract Management Plan shall be required to be submitted and accepted by the Superintendent as a condition for possession of site.

The Contract Management Plan shall include the following:

- Key Safety Management roles & responsibilities, including line of reporting
- Safe Work Method Statements that address hazards identified for all key activities in the performance of the works
- Incident control procedures to be adopted to identify and control any hazardous materials either found on site or if the site is contaminated by a spill
- Statutory and internal safety incident notification and reporting procedures

3.7.2 WHS Requirements

The successful Tenderer shall participate in Council’s online Contractor Induction prior to commencement of works. The online induction for contractors is a mandatory requirement that ALL contractors and their subcontractors must complete before proceeding to undertake works within or on Council’s land, buildings or facilities.

Council is required (WHS Harmonised Legislation enacted in Tasmania, January 2012) to ensure that any Contractor being engaged has a developed and documented safety management system to identify and control task related hazards.

Council requires copies of documentation relating to the works being undertaken under provision of services prior to the commencement of any work. This may include but not be limited to Safe Work Method Statement (SWMS), Job Safety Analysis (JSA) or Job Risk Assessment (JRA) that have been developed to manage hazards.

The Contractor shall have in place a safe work method system specific to the tasks being undertaken, which outlines how personnel will undertake relevant tasks in line with the appropriate WHS regulations e.g. codes of practice (construction, working at heights, trenching etc.). Copies of the codes can be downloaded from <http://worksafe.tas.gov.au/home>. The works shall be undertaken in accordance with all relevant safety Acts, Regulations and Codes of Practice (as applicable) including, but not limited to the following:

- Work Health and Safety Regulations 2012 (Tasmania)
- All relevant associated Codes of Practice

For the purposes of the operation of the Act, the Contractor is deemed to be the “Person Conducting a Business or Undertaking (PCBU)”.

3.7.3 Environmental Requirements

General Requirements

The Contractor shall ensure that all vehicles, plant and equipment are cleaned of all soil, vegetation and other organic matter prior to establishing on site and prior to de-mobilisation to reduce risk of spreading weeds and pathogens.

The Contractor shall be responsible for making good any damage or contamination to fencing, drains, roads, footpaths and surfaces generally and any other works which may be disturbed or injured in carrying out the works.

Restrict dust caused by the works to an acceptable minimum. Properly dispose of solid, liquid and gaseous contaminants in accordance with the statutory and contractual requirements.

The previous EMPC (Miscellaneous Noise) Regulations 2014 expired on 21 July 2016 and were replaced with the Environmental Management and Pollution Control (Noise) Regulations 2016 on 17 August 2016. Please visit <http://epa.tas.gov.au/policy-site/Pages/Noise-Regulations.aspx> for the latest updates on these regulations. Tenderers are to familiarise themselves with these noise regulations and adhere to the regulations whilst undertaking Council projects. In summary, the **prohibited hours** for use of mobile machinery and portable equipment (E.G: forklift trucks, tractors, graders, rollers & cranes; power and percussion tools, compressors, pumps, generators and cement mixers) at residential premises, construction and demolition sites are Monday to Friday: before 7:00am and after 6:00pm; Saturday: before 8:00am and after 6:00pm; and Sunday or Public Holiday: before 10:00am and after 6:00pm.

Working in or near river and waterways

Preventative measures shall be taken to minimise turbidity, disturbance to the sediments and water pollution from oil and fuel. Downstream residents shall be informed of all activities that may cause water to be polluted prior to that activity being undertaken.

Disturbance to waterway channel banks and bed deposits shall be minimised to that necessary for construction of the bridge. The runoff of silt from earthworks shall be minimised by appropriate construction techniques, e.g. shaping temporary construction surfaces away from the waterway edge, use of temporary berms and drainage channels across disturbed areas, diversion of flow around disturbed areas, use of silt settlement basins, use of silt traps within open drains near the shoreline. Runoff and erosion controls shall be installed prior to vegetation clean-up works. Stockpile sites shall be located clear of water courses and silt stop fences shall be installed to control runoff.

The discharge locations of open drains shall be protected by suitable rock-lining and dispersal aprons to prevent scouring of the river banks. Riverbanks disturbed during construction shall be protected from scouring and further erosion by placement and maintenance of silt fencing until adequate vegetative cover is established.

Silt stop fencing in accordance with historical Department of State Growth Clause R75.3 shall be provided at the toe of all new embankments.

During bridge construction and during bridge demolition, procedures shall be implemented to contain any wastes, spoils from saw-cutting and the like. During dewatering of any coffer facilities, containment and/or filtering measures shall be used to minimise the discharge of turbid water directly to the waterway. Such measures may include the erection of filter cloth retention enclosures on the banks of the main channel, excavated settlement basins and

mechanical filtration equipment. The protection of remnant vegetation on the banks of the main channel during erection of such structure shall be ensured.

Any substance that has potential for contamination of soil or water shall be stored and handled within bunded areas, with a cover to prevent filling with rainwater. Refuelling activities shall not be carried out on the riverbanks or on the bridge, except where full containment of any potential spillage is provided. The use of diesel hammers for pile driving will not be permitted without prior approval. Oil absorbent materials shall be available at all times for immediate control of any oil or fuel spillages, and in the event of any spilled substances shall be immediately used. Waste materials including contaminated soil and water, following clean-up of spill shall be removed from site and disposed of at an approved waste facility. Any spill of a contaminating substance shall be reported to the Superintendent.

When concrete is cast, containment of runoff from pour areas shall be ensured, especially in the construction of pile caps near water level. Concrete delivery and placement shall not result in spillages into the area between the banks of the waterway.

During demolition and removal activities preventative measures shall minimise loss of saw or drill cuttings, broken off timber components and other debris pieces and particulates or spoil into the water. In particular, the Contractor shall ensure any pieces of the existing structure are prevented from falling into the river and estuarine area. Appropriate collection measures shall be used to allow settlement and catchment of wastes from demolition.

Aboriginal Cultural Heritage

There are no known aboriginal sites or cultural landscape values of significance identified on or in the near vicinity of the existing bridge site. However, in the event that any sites of Aboriginal significance or Aboriginal relics are found or uncovered the Contractor must cease works and notify Superintendent immediately.

Contractors are reminded of the Aboriginal Relics Act 1975 and if required shall arrange contact with Tasmanian Aboriginal Land and Sea Council (TALSC) and DPIPWE Director of Parks and Wildlife for further advice and any relevant permit required.

All Aboriginal relics are protected under the Act unless a permit from the Minister is issued. It is an offence to damage or interfere with protected sites or objects. The Aboriginal Relics Act provides for the management of protected sites and objects.

Further information can be found on the Aboriginal Heritage Tasmania website at: <http://www.aboriginalheritage.tas.gov.au/>.

3.8 INTERFACE WITH ADJACENT LANDOWNERS

Initial contact with the landowner will be made by Council, advising of the planned road closure period.

Once the date for site works is confirmed, the contractor shall advise the Council of the proposed bridge closure at least 28 days prior.

Landowners shall not be otherwise impacted by unplanned works.

There shall be no storage of materials or machinery unless by prior written agreement with the landowner.

The Superintendent shall be kept informed of all landowner communications.

3.9 HOLD POINTS

Further works shall not proceed until the Superintendent has reviewed and released the following hold points:

- Contract Management Plan in accordance with Department of State Growth Specification Sec 160.
- Design documentation approval, including design and proof check certificates
- Mix designs demonstrating the inclusion of air entrainment
- Following placement of reinforcement and prior to concrete placement for precast and insitu concrete components
- Set-out for new bridge on site
- Evidence of rock or Pile required loads achieved for abutment foundations
- Prior to full road closure – please articulate the road closure timeframe in the construction program.
- Prior to beam/deck placement
- Practical completion and handover

The review and release of a hold point shall not constitute approval of the item or works presented. The responsibility remains with the Contractor to construct the works in accordance with the design and specification.

3.10 PAYMENT

Payment shall be by lump sum. Payments will be completed following Principal assessment of progress claims and supporting documentation.

Tenderers shall lodge with the principal a priced copy of the Schedule of Prices (Section 4) along with their tender. The summation of the prices for the items in the schedule of prices shall equal the lump sum tendered. All work required under the Contract shall be deemed to be included in one or more of the items listed in the schedule. The schedule shall be for information only and shall not form part of the contract.

3.11 GENERAL SPECIFICATIONS

The following General Specifications form part of this contract.

- DEPARTMENT OF STATE GROWTH – STANDARD SPECIFICATIONS
- STANDARD DRAWINGS LOCAL GOVERNMENT ASSOCIATION TASMANIA (<http://www.lgat.tas.gov.au>)

The Department of State Growth Standard Specifications and LGAT drawings are not included in this tender document. They can be viewed at the relevant website.

By tendering for this contract the Contractor confirms that he/she has sighted the General Specifications as listed above and that the Contractor has no clarifications or qualifications on those documents other than, if any, those provided in the alternative tender.

Furthermore, if a component is not covered by any of the above Specifications then a specification (based on Australian Standards, industry standards, and compatible with the above standard specifications) may be used, subject to approval of the Superintendent.

Where a conflict occurs between documents, it shall be determined by the Superintendent. The order of precedence will generally be as follows:

- Principal's Tender Documentation;
- DSG's Standard Documents, Specifications and Drawings;
- LGAT standards and drawings
- Other Australian Standards or Industry Standards.

The relevant DSG standards include but are not limited to:

- Sec 160: Construction – General
- Sec 167: Traffic Management
- Sec 176: Environmental Management
- Sec 605: Driven Piles
- Sec 610: Structural Concrete
- Sec 611: Steel Reinforcement
- Sec 612: Post Tensioning
- Sec 614: Formwork
- Sec 620: Precast Concrete Units
- Sec 622: Pre-tensioning of Concrete
- Sec 630: Fabrication of Steelwork
- Sec 631: Protective Treatment of Steelwork
- Sec 652: Supply of Elastomeric Bearings
- Sec 656: Installation of Elastomeric Bearings
- Sec 660: Bridge Expansion Joints
- Sec 670: Steel Bridge Barriers
- Sec 713: Beaching

CENTRAL HIGHLANDS COUNCIL
REPLACEMENT OF BRIDGE N^o 4110 CLYDE RV BLACK SNAKE LANE

SECTION 4 SCHEDULE OF PRICES

CENTRAL HIGHLANDS COUNCIL
REPLACEMENT OF BRIDGE No 4110 CLYDE RV BLACK SNAKE LANE

ITEM NO.	DESCRIPTION	AMOUNT \$ (excl. GST)
1	Preliminaries, inc mobilisation and demobilisation, preparation of construction/project management plan, traffic management plan, identification of site hazards, training, signage, project management and all WHS requirements	
2	Design, proof check and as-constructed details	
3	Traffic management throughout the duration of the works	
4	Demolition and disposal of debris	
5	Supply and installation of Piles	
6	Supply and installation of Bridge Substructure including abutments, wingwalls and scour protection	
7	Supply and Installation of precast beams	
8	Supply and installation of bridge kerbs, guideposts and delineation	
9	Rock protection works.	
10	Other items not mentioned above (please state)	
Total (excl. GST) carried to form of tender		

CENTRAL HIGHLANDS COUNCIL
REPLACEMENT OF BRIDGE No 4110 CLYDE RV BLACK SNAKE LANE

PILING ALLOWANCES AND PRICING

The following rates are required for piling:

PILE GROUP	PILE TYPE	NUMBER PER GROUP	LENGTH ALLOWED PER PILE	TOTAL LENGTH ALLOWANCE PER PILE GROUP
ABUTMENT A				
ABUTMENT B				

Note: add additional line if required

PILING VARIATION RATES

The following rates are required for piling:

FOUNDATION GROUP	PILE TYPE	RATES PER DRIVEN LENGTH, lm	SPLICE, EACH
Abutment A			
Abutment B			

Note: add additional line if required

MASS REINFORCED CONCRETE FOOTING PRICING

In the event of requirement of a mass reinforced concrete footing – a rate for the footing, is required (for assessment and determination of contract variations). Tenderers are requested to allow a minimum of 20 m³ for assessment purposes (10 m³ on each supports) and accommodate all necessary associated costs. The unit rate will be used for the variation, if required (in lieu of Item no.5 of the schedule).

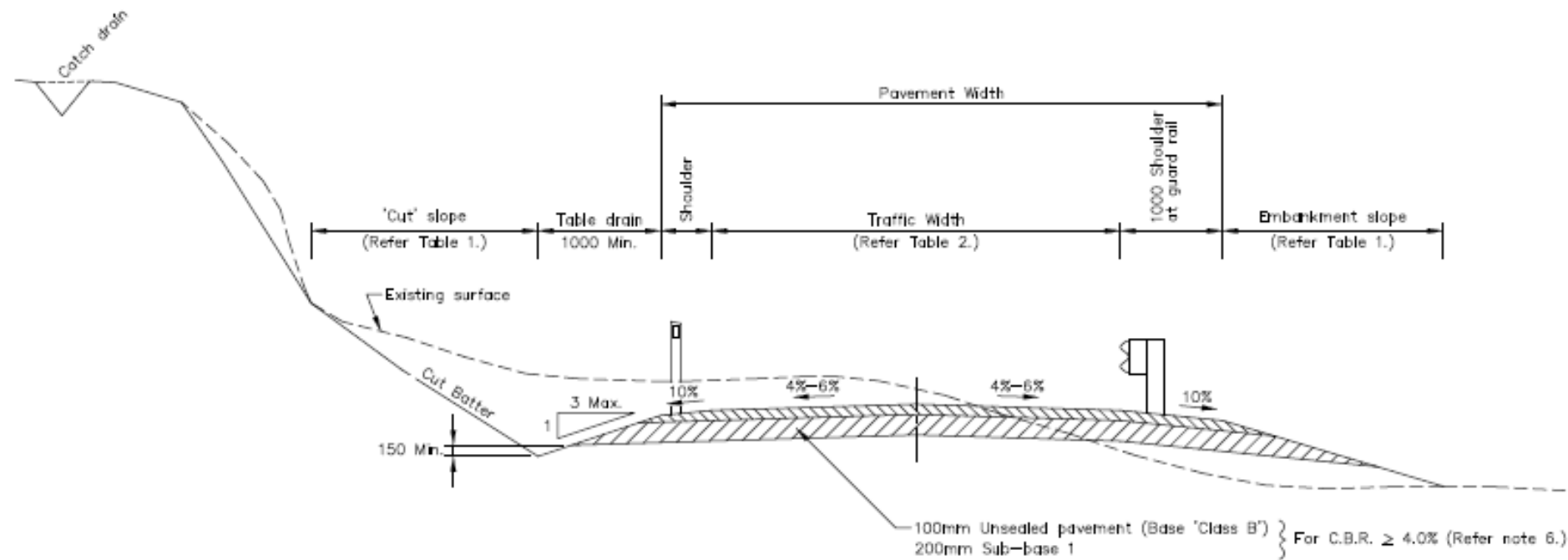
FOUNDATION GROUP	RATE PER M ³	TOTAL M ³ (NOM.)	TOTAL AMOUNT (\$)
Abutment A		10	
Abutment B		10	

Note: add additional line if required

CENTRAL HIGHLANDS COUNCIL

REPLACEMENT OF BRIDGE No 4110 CLYDE RV BLACK SNAKE LANE

SECTION 5 LGAT DRAWINGS FOR ROAD APPROACHES



TYPICAL CROSS SECTION
SCALE 1 : 50

TABLE 1

SOIL / ROCK TYPE	EMBANKMENT		CUTTING	
	Vertical	Horizontal	Vertical	Horizontal
Solid Rock	—	—	1.00	0.25
Loose Rock	1.00	2.00	1.00	1.33
Sand	1.00	3.00	1.00	3.00
Stiff Clay	1.00	1.00	1.00	1.00
Soft Clay	1.00	3.00	1.00	1.50

TABLE 2

CODE*	A.A.D.T.	(w) TRAFFIC WIDTH	GRAVEL SHOULDER	VERGE	PAVEMENT WIDTH	LOGGING ROUTE	HEAVY VEHICLES	BUS ROUTE	Bends with < 50m sight line
US1	<30	4000 (S)	500	NO	5	NO	< 5%	NO	w + 1000
US2	30 - 100	4000 (S)	1000	NO	6	YES < 5%	< 5 %	YES	w + 1000
US3	100 - 300	5500 (D)	1000	NO	7.5	YES	< 10%	YES	w + 500
US4	> 300	6000 (D)	1000	NO	8	YES	> 10%	YES	w + 500

*To satisfy a Road Class (eg. US3) the capability to comply with A.A.D.T, LOGGING ROUTE, HEAVY VEHICLE and BUS ROUTE is necessary.

(S) - SINGLE LANE
(D) - DUAL LANE

NOTES

- Alignment to satisfy min. Design speed.
- Roadside table drains, cut off drains and culverts to be installed to suit topography.
- Provision for widening or passing bays may be required where sight distance requirements cannot be met or there are limited options for vehicles to pull off the road.
- Refer Sheets TSD-R25, TSD-R28, TSD-R29 and TSD-R30 for Guide Post / Guard Rail installation.
- Refer to Austroads AGRD-10 Part 6: Roadside Design, Safety and Barriers
- Design of pavements to consider project traffic loading, sub-grade strength and comply with the procedures in either:
 - A.R.R.B. A.P.R.G. Report no. 21, A Guide to the Design of New Pavements for Light Traffic.
 - Austroads - Pavement Design (2004)
 - 'A Guide To The Structural Design Of Road Pavements'