Tender Document

Contract Number: QT43-01

Gold Coast Seaway Sand Bypass Pipeline Upgrade

Version 1.2

Tender Document prepared by:

Department of Transport and Main Roads
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Facsimile: +61 7 3066 4100
ABN 39 407 690 291
DMS File: /150/00860
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Section 1
Tender Information and
Conditions of Tendering
The tender information table below shall be read in conjunction with and shall form part of the Conditions of Tendering attached in this section.

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<th>Description</th>
<th>Tender Information</th>
</tr>
</thead>
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<tr>
<td>2</td>
<td>Name of Work</td>
<td>Gold Coast Seaway Sand Bypass Pipeline Upgrade</td>
</tr>
<tr>
<td>3</td>
<td>Form of Contract</td>
<td>Lump Sum Contract</td>
</tr>
</tbody>
</table>
| 4                                        | Conditions of Contract                | (i) General Conditions of Contract will be AS2124 - 1992 (not included with these documents) subject to the deletions, amendments and additions specified in these Tender Documents. Pages 59, 60 of AS2124 do not apply. Completed Annexures A and B are attached, and replace those of AS2124.  
(ii) Supplementary Conditions of Contract.  
(iii) Particular Conditions of Contract |
| 5                                        | Completion of Work                    | The work will be required to be completed within 16 weeks from the date of the Letter of Acceptance. |
| 6                                        | Tender Documents                      | Tender documents are available for download from the Queensland Government’s eTender website:  
www.tenders.qld.gov.au
by selecting the link: ‘goods and services eTender site’. |
| 7                                        | Lodgement of Tenders                 | Tenders shall be lodged online by uploading to the Queensland Government’s eTender website:  
www.tenders.qld.gov.au  
by selecting the link: ‘goods and services eTender site’. |
### Conditions of Tendering

<table>
<thead>
<tr>
<th>Clause Reference</th>
<th>Description</th>
<th>Tender Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Closing Time Day and Date</td>
<td>2:00pm AEST Wednesday 1 May 2013</td>
</tr>
<tr>
<td>8</td>
<td>Type of Tender Opening</td>
<td>Private</td>
</tr>
<tr>
<td>8</td>
<td>Opening Location</td>
<td>Bridge and Marine Engineering Unit Engineering and Technology Branch Level 13 313 Adelaide Street BRISBANE QLD 4000</td>
</tr>
<tr>
<td>9</td>
<td>Validity of Tenders</td>
<td>Tenders shall be valid for 90 days from closing date.</td>
</tr>
<tr>
<td>12</td>
<td>Rise and Fall</td>
<td>Rise and Fall will not apply.</td>
</tr>
<tr>
<td>13.4</td>
<td>Doubt or Obscurity</td>
<td>Doubt or obscurity to be set forth in writing and submitted at least one week before the closing date for tender.</td>
</tr>
</tbody>
</table>
Questions on the technical content of the Specification and Drawings arising before closure of tenders may be directed to Charles-Dean Sorbello, Graduate Engineer (Civil) telephone (07) 3066 4211.

The following particulars must accompany the Tender (Refer Clause 10).

1) A completed tender form.
2) A priced Bill of Quantities in accordance with Clause 11 of the Conditions of Tendering.
3) Completed Schedules of Rates or Schedules of plant to be used on the works or other Schedules as provided with these Tender Documents for completion by Tenderers.

The following information shall also be submitted to aid tender evaluations:

1) Statement of experience on similar works.
2) Banker’s Certificate regarding financial capacity to carry out the works.
3) Whether or not the Tenderer elects to provide additional security in lieu of retention in accordance with Clause 5.6 of the General Conditions of Contract.
4) A preliminary Works and Expenditure program (cash flow schedule).

NOTE: Attention is drawn to Clause 10.3 of the Conditions of Tendering regarding alternative tenders.

The following factors will be taken into account in tender evaluation:

1) Tender Price (30%)
2) Experience and Capability (35%)
   - Relevant Experience
   - Demonstrated Delivery of a Quality Product
   - Demonstrated Project Management
   - Company's Financial Capacity
3) Implementation (35%)
   - Understanding of Specification Requirements
   - Suitability of Proposed Construction Methodology
# CONDITIONS OF TENDERING

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<td>BILL OF QUANTITIES</td>
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<td>RISE AND FALL</td>
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<td>20</td>
<td>RIGHT TO INFORMATION AND DISCLOSURE</td>
<td>7</td>
</tr>
</tbody>
</table>
1 GENERAL

These Conditions shall apply to all Tenders for the works specified herein and shall be read in conjunction with the Tender Information included herewith. The Tender Information shall not be treated as comprehensive or complete in itself but shall form part of these Conditions.

2 WORKS

Every Tender shall be to provide the materials and labour and perform all works required in about or in connection with the works described in the Tender Information in accordance with the Specification, Plans and Drawings issued by the Principal and subject to the Conditions of Tendering and the Particular and General Conditions of Contract at or for the lump sum specified in the Tender.

3 FORM OF CONTRACT

The form of Contract tendered for shall be as specified in the Annexure A to the General Conditions of Contract and indicated in the Tender Information.

4 CONDITIONS OF CONTRACT

The Conditions of Contract shall be as indicated in the Tender Information.

5 COMPLETION OF WORKS

The successful Tenderer will be required to complete the works within the time specified in Annexure A to the General Conditions of Contract and indicated in the Tender Information. Where no such time is specified, the Tenderer shall show in its Tender the time within which it is prepared to complete the works.

6 ISSUE AND INSPECTION OF DOCUMENTS

Tender documents are available for download from the Queensland Government eTender website www.tenders.qld.gov.au and by selecting the link: ‘goods and services eTender site’. To download tender documents, the tenderer must first be registered as a supplier by selecting the link on the left side of the web page and following the registration instructions. Once registered, the tenderer must log in as a supplier to view and download the tender document by searching the contract / invitation to offer number for this contract.

7 LODGEMENT OF TENDERS

Every Tender must be submitted on-line by a registered supplier at the Queensland Government eTendering website www.tenders.qld.gov.au and by selecting the link: ‘goods and services eTender site’ and by following the instructions below:
1) Log in to the Queensland Government eTendering website.
2) View the details of the tender you wish to submit a response.
3) Click the text "Click here to submit an electronic response" located under "Responses".
4) Upload your file(s) on the 'Submit Electronic Response' page. If the file is greater than 100 MB split the file in parts and then upload. You have the option of uploading up to 15 files per response.
5) When you submit a response electronically it is automatically encrypted using a digital certificate (VeriSign - up to 128-bit depending on browser version) and transmitted via a Secure Sockets Layer (SSL) transmission session to the secure server where it is encrypted and stored until tender box opening.
6) Click the 'Submit Response' button.
7) If the tender response uploaded without error, the 'Electronic Response Confirmation' screen (including response receipt) will be displayed. You will also be sent an email with these details to your registered email address.
8) Repeat the process if you wish to submit multiple responses to the same tender.

All tenders must be uploaded to the eTender website before the closing time to be considered.

No hardcopies are to be lodged by post, courier, e-mail, phone, or facsimile. Any tenders received by post, courier, e-mail, phone or facsimile will not be considered irrespective or whether or not they were submitted before the closing time and day of lodgment.

8 OPENING OF TENDERS

Any tenders lodged on the eTender website before the time and closing date shown in the Tender Information and the eTender website will be opened by Bridge and Marine Engineering Section, Engineering and Technology Branch, Level 13, 313 Adelaide Street, Brisbane Queensland. Tenderers or their representatives and others are not entitled to be present at the opening of tenders. Information as to the names of Tenderers and the tendered prices shall not be made public.

9 VALIDITY OF TENDER

Every Tender shall be valid for the period indicated in the Tender Information, such period commencing at the date upon which Tenders close. After the expiration of such period, Tenders shall remain valid only with the written consent of the Tenderers.
10 FORM OF TENDER

10.1 Every Tender shall be in the Form of Tender provided and shall be accompanied by the information specified to be included with the Tender.

10.2 Every Tender shall state the full Christian names, surname and address of Tenderer and when the Tender is in the name of a firm the names in full and addresses of each member of the firm. When the Tender is by a Company the Tender shall state the name of the Company and the registered office of the Company.

10.3 Every Tenderer must submit a conforming Tender complying in every respect with the requirements of the Tender Documents. Any alternative Tender will not be considered unless accompanied by a conforming Tender. Alternative Tenders shall be clearly marked “Alternative Tender” on the Tender Form and attached Schedules.

11 BILL OF QUANTITIES

11.1 Where the Contract tendered for is a Lump Sum Contract, the Tenderer shall deposit with its Tender a Priced Bill of Quantities, moneyed out to agree with the Lump Sum of its Tender and signed by the Tenderer. The Lump Sum shall be the stated Lump Sum of the Tender and shall agree with the correct addition of the itemised amounts. If any Tender shall be accepted and any correction shall be necessary in such Priced Bill of Quantities to arrive at the Lump Sum in a manner hereinbefore in this clause provided, the successful Tenderer shall without any undue delay make such alterations in and to the Priced Bill of Quantities (and whether in quantities thereof or in the rates) as the Principal shall consider necessary for such purposes.

11.2 Where the Contract tendered for is a Schedule of Rates Contract, the Tenderer is required to state in the Schedule of Rates provided, or if no such Schedule is provided then in such a Schedule deposited by him with its Tender, the rates at which it offers to perform the Contract.

The Tenderer, in addition, is required to state the total price arrived at by the summing of the itemised amounts. The sum to be inserted in the Tender shall agree with the total in the Schedule of Rates and shall not be or be deemed or taken to mean a Lump Sum Contract, but shall be inserted merely to enable the Principal to ascertain which Tender is the lowest. If any errors be made in the calculation or summation of prices the Tenderer shall be bound by rates stated in the Schedule and the amount stated in the tender shall be
altered by the Principal to conform with the amount shown in the Schedule after
rection.

11.3 Where the Contract tendered for is partly a Lump Sum and partly a Schedule of Rates
Contract, clause 11.1 shall apply to the part which is on a Lump Sum basis and clause
11.2 shall apply to the part which is on a Schedule of Rates basis.

12 RISE AND FALL

The Contract will or will not be subject to Rise and Fall as specified in Annexure A to the
General Conditions of Contract and indicated in the Tender Information.

13 INFORMATION REGARDING TENDERS

13.1 Tenderers are required to visit the site of the work and satisfy themselves of local
conditions and facilities, the Principal not being liable for any claim on the grounds of
insufficient information.

13.2 Where quantities and/or items (if any) are supplied they are supplied for information only,
the Principal accepting no responsibility for their accuracy.

13.3 The Principal shall not be bound by any verbal advice given or information furnished by
any officer of the Principal in respect of the Contract but shall be bound only by written
advice or information furnished by the Principal.

13.4 Should there be any doubt or obscurity as to the meaning of any of the Tender Documents
or as to anything to be done by the Contractor or as to any other matter or thing,
Tenderers must set forth in writing such doubts or obscurity and submit the same to the
Principal Engineer, Bridge and Marine Engineering Section, Engineering and Technology
Branch, Level 13, 313 Adelaide Street, Brisbane Queensland not later than one week
before the date fixed for the delivery of the Tenders.

14 ACCEPTANCE OF TENDERS

14.1 The Principal shall not be bound to accept the lowest or any Tender.

14.2 The successful tenderer shall lodge a security deposit in accordance with clause 5 of the
General Conditions of Contract.
14.3 The company name and tender price of any tender accepted shall be published on the Queensland Government’s e-tendering website (www.tenders.qld.gov.au) within 60 days after the date of acceptance of a tender. Company names and prices of any unsuccessful tenderer will not be disclosed. No unsuccessful letter will be issued to any unsuccessful tenderer.

15 FORMAL INSTRUMENT OF AGREEMENT

A formal Instrument of Agreement will be required to be executed in accordance with clause 6.2 of the General Conditions of Contract and the amendments detailed in Annexure B.

16 AUSTRALIAN CONTENT

Tenderers are reminded of the Queensland Government’s established policy under the Government Procurement Agreement regarding Australian manufactured content. The Industrial Supplies Office (Queensland), or ISO, has been established to assist tenderers in this regard. The ISO can provide, at no cost, professional advice on the suitability of local suppliers in conformance with tender requirements while maintaining commercial confidentiality. For assistance, contact the ISO on (07) 3832 4577, facsimile (07) 3839 3067, or email info-qld@iso.net.au.

17 APPRENTICE/TRAINING REQUIREMENTS

Tenderers should take note of State Government requirements for building contracts greater than $250,000 or civil construction contracts greater than $500,000 as detailed in the Particular Conditions of Contract.

18 NOTIFICATION AND FEE PAYMENT FOR BUILDING AND CONSTRUCTION WORK

The Principal is responsible for notification and fee payment relating to construction workplaces for construction work worth $80,000 or more carried out in Queensland. Refer to clause 15 of the Particular Conditions of Contract.

19 QUALITY ASSURANCE

19.1 For this contract a documented QA system is not required. Tenderers will be evaluated on the factors detailed in the Tender Information section of these documents.
20 RIGHT TO INFORMATION AND DISCLOSURE

The Right to Information Act 2009 (RTI Act) provides members of the public with a legally enforceable right to access documents held by the Queensland Government agencies. The RTI Act requires that documents be disclosed upon request unless the documents are exempt under the RTI Act or on balance, disclosure is contrary to the public interest.

Information contained in a Tender is potentially subject to disclosure to third parties under the RTI Act.

If disclosure under the RTI Act, and / or general disclosure of a Tender submission or part thereof would be of substantial concern to a Tenderer because it will disclose trade secrets, information of commercial value, the purpose or results of research, or other information of a confidential nature, then this should be indicated in the Schedule of Right To Information Nondisclosure Documents under Section 2. The Principal cannot guarantee that any information provided by the Tenderer including information that is identified in the Schedule of Right To Information Nondisclosure Documents will be protected from disclosure under the RTI Act.

Despite any other provision of the Tender and / or the Tender process, the Principal is entitled to disclose the following details only after a contract (if any) has been awarded:

(a) the name and address of the Principal;
(b) a description of the scope of works;
(c) contract commencement or award date;
(d) contract value;
(e) name and address of the successful tenderer; and
(f) the procurement method used.

Any proposed variation by the tenderer to this clause which take away or reduce the entitlements that would otherwise be provided to the Principal under this clause will be null and void.

For information about the RTI Act, contact the RTI Manager, Right to Information and Privacy, Department of Transport and Main Roads, GPO Box 1549, Brisbane, QLD 4001, email: contactrti@transport.qld.gov.au

Information regarding Right to Information can be found via www.qld.gov.au/right-to-information. Right to Information applications can be made on-line.
Section 2
Tender Forms and Schedules
Section 2 – Tender Forms and Schedules

Instructions to Tenderer

1. The Tenderer shall complete all the schedules included in Section 2 of the Tender Document and submit these with its tender for it to be considered conforming (refer Section 1 Tender Information and Conditions of Tendering).

2. The order of the schedules submitted shall match the order in the Tender Document.

3. If the Tenderer wishes to complete the forms electronically using Microsoft Word, the Tenderer may complete the .doc version the schedules by filling in the appropriate details into each field that is highlighted yellow.

4. Hand written schedules are permitted.

5. The Tenderer shall note that only the fields highlighted in yellow are editable and are to be completed by the Tenderer. The Tenderer must not alter any other parts of the schedules.

6. Each and every schedule is to be signed and dated by the Tenderer and witnessed and the original signed pages must be submitted with the tender (note that all of the signature and date fields are not editable in the .doc file and therefore must be completed by hand).

7. If the Tenderer wishes to provide additional information to a schedule, it may do so but the schedule it refers to must be signed, dated and witnessed, even if the schedule is not fully completed. The tender must write “refer attached” onto the schedule to indicate that additional information is being provided.
TENDER FORM – LUMP SUM CONTRACT

WORK: Contract QT43-01
Gold Coast Sand Bypass Pipeline Upgrade

To be completed by the Tenderer:
I/We, Individual [ ] Company [ ] Local Government [ ] (select one [X])

Name (Full name in block letters): 

Australian Business Number (ABN):

of
Street Address
Postal Address

Do hereby tender to provide all materials and labour and perform all works required in about or in connection with the above work in accordance with the Specification, Plans and Drawings issued by the Principal and subject to the Conditions of Tendering, Supplementary Conditions of Contract, Particular Conditions of Contract, and the General Conditions of Contract for the Lump Sum of (including GST):

Amount in words:

Amount in figures: $ (including GST)

I/We will complete the work within 16 weeks from the date of the Letter of Acceptance.

Should the foregoing Tender be accepted, I/We will enter into with the State of Queensland an Indenture for the due performance and fulfilment of the Tender and Contract arising out of the acceptance thereof in accordance with the Specification, Plans and Drawings issued by the said Principal subject to the Conditions of Tendering, Supplementary Conditions of Contract, Particular Conditions of Contract, and the General Conditions of Contract and will deposit with the Principal as security for the due performance of the Contract the sum as provided by the General Conditions of Contract.

Authorised For and on Behalf of the Tenderer:

Name / Position 
Signature 
Date: 

Witness:

Name / Position 
Signature 

Section 2 – Tender Forms and Schedules
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Revision 1 - 2013
## DETAILS OF TENDERER FORM

### WORK:
- **Contract QT43-01**
- Gold Coast Sand Bypass Pipeline Upgrade

**To be completed by the Tenderer:**

<table>
<thead>
<tr>
<th><strong>Name and Title of Person For Correspondence:</strong></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Postal Address:</strong></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Phone Number:</strong></th>
<th><strong>Fax Number:</strong></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>E-mail Address:</strong></th>
</tr>
</thead>
</table>

**Authorised For and on Behalf of the Tenderer:**

<table>
<thead>
<tr>
<th><strong>Name / Position</strong></th>
<th><strong>Signature</strong></th>
<th><strong>Date:</strong></th>
</tr>
</thead>
</table>

**Witness:**

<table>
<thead>
<tr>
<th><strong>Name / Position</strong></th>
<th><strong>Signature</strong></th>
</tr>
</thead>
</table>
## BILL OF QUANTITIES– Page 1 of 2

<table>
<thead>
<tr>
<th>Item</th>
<th>Description of Work</th>
<th>Unit</th>
<th>Quantity</th>
<th>Rate $ (incl GST)</th>
<th>Amount $ (incl GST)</th>
</tr>
</thead>
</table>
### 1 PRELIMINARIES

1.01 Establish and removal of all plant and equipment necessary to carry out the works under the contract. | Item | - | - |
1.02 Prepare construction plan (including workplace safety plan, traffic management plan, and works program). | Item | - | - |

### 2 PILING

2.01 Supply, fabricate, paint and transport three new piles for the pipeline supports to the appropriate lengths as detailed in the drawings. | Item | - |
2.02 Handle, pitch, drive and cut three piles to design height and locations as shown in the drawings | Item | - |

### 3 PIPELINE SUPPORT BRACKETS

3.01 Remove and dispose of existing seaway pipeline brackets and chains at the 11 existing piles, including provision of temporary support to the seaway pipeline. | Item | - |
3.02 Supply and fabricate hot dip galvanised pipeline support brackets including all clamps and fixings | No. | 14 |
3.03 Abrasive blast all bearing surfaces on pipeline support brackets including clamps. See Specification | Each | 14 |
3.04 Supply and install CSA 75 Aluminium Alloy Anodes to pipeline support bracket | No. | 14 |
3.05 Install pipeline support bracket including all clamps and fixings and relocate existing seaway pipeline to design heights. Includes installation of contact screws for each pile bracket. | No. | 14 |
3.06 Patch repair to damaged concrete pipe casing per patch <0.5m² (Provisional if requested by Superintendent) | Prov. Each | - | PROV. ITEM RATE ONLY |

### 4 COMPLETION

4.01 Prepare and supply completion manual including as constructed drawings. | |

**LUMP SUM TOTAL***:

This Lump Sum Total includes a GST amount of: (1/11<sup>th</sup> of the Lump Sum Total)

* Transfer this amount to the Tender Form
BILL OF QUANTITIES– Page 2 of 2

These pages with the quantities and prices entered therein which have been priced to agree with the Lump Sum tendered and to conform with the Specification, Plans and Drawings, Conditions of Tendering, Supplementary Conditions of Contract, Particular Conditions of Contract, and the General Conditions of Contract, form the priced Bill of Quantities which accompanies my/our Tender.

Authorised For and on Behalf of the Tenderer:

Name / Position  
Signature  
Date:

Witness:

Name / Position  
Signature  

SCHEDULE OF HIRE RATES  
(refer Clause 40.5 (a) of the General Conditions of Contract AS2124-1992)

(1) Material - Actual cost plus  \[\text{percent}\]

(2) Transport - Invoice cost plus  \[\text{percent}\]

(3) Equipment Hired from Others - Invoice cost plus  \[\text{percent}\]

(4) Personnel
   (a) Boilermaker/Welder  \[\text{\$ per hour}\]
   (b) Tradesman’s Assistant  \[\text{\$ per hour}\]
   (c) Painter  \[\text{\$ per hour}\]
   (d) Labourer  \[\text{\$ per hour}\]
   (e) Others (Tenderer to nominate):
       \[\text{\$ per hour}\]

(5) Equipment
   (a) Abrasive blasting equipment  \[\text{\$ per hour}\]
   (b) Spray painting equipment  \[\text{\$ per hour}\]
   (c) Welder  \[\text{\$ per hour}\]
   (d) Others (Tenderer to nominate):
       \[\text{\$ per hour}\]

Note: Items (4) and (5) above are to be inclusive of profit and overheads

Authorised For and on Behalf of the Tenderer:

<table>
<thead>
<tr>
<th>Name / Position</th>
<th>Signature</th>
<th>Date:</th>
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Witness:

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<tr>
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SCHEDULE OF UNDERTAKING BY THE TENDERER TO COMPLY WITH 10 PERCENT TRAINING POLICY
(refer Clause 16 of the Particular Conditions of Contract)

It is a requirement under the Queensland Government Building and Construction Contracts Structured Training Policy (the 10 per cent Training Policy) that all tenderers for Queensland Government contracts for building construction projects (over $250 000) or civil construction project (over $500 000) provide a written undertaking with their tender that they intend to comply with the 10 per cent Training Policy (based on the deemed hours for on-the-job training).

To be completed by the Tenderer:
I/We, Individual [ ] Company [ ] Local Government [ ] (select one [X]) hereby intend to comply with the 10 per cent Training Policy (based on the deemed hours for on-the-job training) as a condition of this tender (if applicable based on the value of my tender).

The contract works tendered is deemed as Civil Construction and therefore the deemed hours of compliance training is 0.04 % x Contract Sum if my tendered sum is greater than $500 000.

Authorised For and on Behalf of the Tenderer:

Name / Position

Signature

Date:

Witness:

Name / Position

Signature
SCHEDULE OF RIGHT TO INFORMATION NONDISCLOSURE DOCUMENTS

The Tenderer shall list any parts of its submission which requires nondisclosure (provide reasons). This includes information in which disclosure would cause it substantial concern because it will disclose trade secrets, information of commercial value, the purpose or results of research, or other information of a confidential nature (refer Clause 20 of the Conditions of Tendering). Refer to the Right to Information Act 2009 for description of documents / information that are exempt under the RTI Act or on balance, disclosure is contrary to the public interest (RTI Act Schedule 4). The Principal cannot guarantee that any information provided by the Tenderer including information that is identified below will be protected from disclosure under the RTI Act.

Authorised For and on Behalf of the Tenderer:

Name / Position:  
Signature:  
Date:

Witness:

Name / Position:  
Signature:  

SCHEDULE OF RECEIPT OF NOTICES TO TENDERERS

All Notices to Tenderers received by the Tenderer must be listed below. In so doing the Tenderer acknowledges receipt of each Notice to Tenderers and agrees that its Tender includes the provisions of each Notice.

<table>
<thead>
<tr>
<th>Notice Number</th>
<th>Date of Issue of Notice</th>
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## SCHEDULE OF CONTRACTOR’S EXPERIENCE ON SIMILAR PROJECTS

The Tenderer shall submit details of the:

- Company’s experience on similar projects
- The experience of key staff (proposed to be engaged on this project) in similar projects
- The experience of sub-contractors (proposed to be engaged on this project) in similar projects

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Section 2 – Tender Forms and Schedules
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Revision 1 - 2013
The Tenderer shall provide the names and positions of the project management personnel to be used for this project. Short resumes of each person’s relevant experience shall also be provided. Provide a list of alternatives, if final selection is unknown.

<table>
<thead>
<tr>
<th>Project Personnel</th>
<th>Name</th>
<th>Position in Company &amp; Years with Company</th>
<th>Relevant Experience (projects and positions held)</th>
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<tr>
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**Witness:**

| Name / Position | Signature |
|-----------------|-----------|---------|
### SCHEDULE OF FLOATING PLANT

**OWNER OF PLANT:**

**NAME OR IDENTIFICATION OF PLANT:**

**LOCATION OF PLANT AT PRESENT TIME:**

#### DETAILS OF PLANT:

1. **Barge / Boat:**
   - length overall: 
   - beam overall: 
   - moulded depth: 
   - draft: 
   - material of construction: 
   - type of construction: 

2. **Crane To Be Used On Barge (if applicable):**
   - type: 
   - maximum lift capacity: 
   - maximum lifting radius: 
   - maximum lift at maximum radius: 
   - number of lifting hooks: 

3. **Certificate of Registration:**
   - (insert reg. number & expiry date, and attached copy)

---

**Authorised For and on Behalf of the Tenderer:**

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### Authorised For and on Behalf of the Tenderer:

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SCHEDULE OF PROPOSED PILE FABRICATION METHODOLOGY  
Part 1 of 2

METHOD FOR FABRICATION OF NEW PILE:

METHOD FOR TESTING WELDS:

Authorised For and on Behalf of the Tenderer:

Name / Position  Signature  Date:

Witness:

Name / Position  Signature
SCHEDULE OF PROPOSED PILE FABRICATION METHODOLOGY
Part 2 of 2

METHOD FOR PAINTING PILE:

METHOD FOR PROTECTING PILE TO PREVENT DAMAGE DURING TRANSPORTATION, HANDLING, PITCHING AND DRIVING:

Authorised For and on Behalf of the Tenderer:

Name / Position  Signature  Date:

Witness:

Name / Position  Signature

Section 2 – Tender Forms and Schedules
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SCHEDULE OF COATING SYSTEM FOR STEELWORK

DETAILS OF PAINT PRODUCTS, MANUFACTURE AND INSTALLATION

METHODOLOGY:

Authorised For and on Behalf of the Tenderer:

Name / Position | Signature | Date:

Witness:

Name / Position | Signature

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Revision 1 - 2013
# SCHEDULE OF PILE DRIVING PLANT

**OWNER OF PLANT:**

**NAME OR IDENTIFICATION OF PLANT:**

**LOCATION OF PLANT AT PRESENT TIME:**

## DETAILS OF PLANT:

### (1) Barge:
- length overall: __________ m
- beam overall: __________ m
- moulded depth: __________ m
- draft: __________ m
- material of construction:
- type of construction:

### (2) Pile Frame:
- height of frame from deck: __________ m
- angle of rake available forward: __________ degrees
- angle of rake available aft: __________ degrees

### (3) Winch Type and Capacity

### (4) Hammer:
- weight: __________ tonnes
- type:
- weight of ram if not drop hammer: __________ tonnes

### (5) Pile Extractor Capacity:

### (6) Certificate of Registration:
- (insert reg. number & expiry date, and attached copy)

---

**Authorised For and on Behalf of the Tenderer:**

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METHOD FOR SETTING OUT POSITION OF PILES AND DETERMINING CUT-OFF HEIGHT:

METHOD FOR INSTALLING PILES:

Authorised For and on Behalf of the Tenderer:

Name / Position  Signature  Date:

Witness:

Name / Position  Signature
SCHEDULE OF LIMITING WEATHER AND SEA CONDITIONS

WEATHER AND SEA CONDITIONS FOR WHICH INCLEMENT WEATHER MAY BE CLAIMED FOR EXTENSION OF TIME UNDER CLAUSE 35.5 (a) of AS2124-1992

Max Wind Speed: __________ knots
Max Wind Gust: __________ knots
From Wind Direction(s): __________
Maximum Wave Height: __________ m

Other limiting weather / sea conditions:

Authorised For and on Behalf of the Tenderer:
Name / Position __________________ Signature __________________ Date: __________

Witness:
Name / Position __________________ Signature __________________
Section 3
Particular Conditions of Contract
# PARTICULAR CONDITIONS OF CONTRACT

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1 EXTENT OF CONTRACT

1.1 General

The Contract shall include the supply of all plant, equipment, labour and materials necessary for the execution of the whole of the Works, all in accordance with this Specification, Particular and General Conditions of Contract and the Drawings.

The major items included in the Works are as detailed in the Specification.

2 SITE OF WORKS

2.1 General

For the purpose of this Contract the Site of Works shall be defined as detailed in the Specification.

2.2 Facilities Available to Contractor

The Contractor shall make all arrangements and be entirely responsible for the supply of all facilities and provision of all service connections required under this Contract.

3 STANDARDS AND CODES

All materials, works and tests not otherwise specified shall be in accordance with Australian Standard Specifications where such exist and in their absence with British Standard Specifications. In all cases the reference will be to the latest version of any of the Standard Specifications current at the time of letting the Contract.

4 DRAWINGS

4.1 Contract Drawings

The Drawings which form part of this Contract and which are to be read in conjunction with the Conditions of Contract and the Technical Specification are detailed in the Specification.

These drawings which are provided by the Principal for the execution of the Works shall be A3 sized paper copies of the drawings. Full sized drawings will be made available upon request by the Contractor to the Superintendent.

4.2 Information Drawings

Drawings which are provided for the information of the Contractor but which do not form part of the Contract works are listed in the Specification. These drawing were prepared for purposes other than the Contract Works and the Principal provides no warranty as to the currency or accuracy of the information on these drawings. Where the Contractor places
reliance on details contained within these drawings for the execution of the works, it shall be deemed that the Contractor has verified the accuracy of these drawings on site.

4.3 **As Constructed Drawings**

If the Specification states that ‘As Constructed Drawings’ shall be prepared, then within 28 days after the Date of Practical Completion, the Contractor shall provide these to the Principal in accordance with the requirements listed in the Specification.

Payment for compliance with the requirements of this clause shall be deemed to be included in the prices and rates Tendered or as separately itemised in the Bill of Quantities as the case may be.

5 **SITE INFORMATION**

The Site Information is made available for the information of the Contractor. The Site Information provided, such as bore logs, test pit logs, laboratory test results, and records of other site and climatic and/or environmental data or conditions is a particular description of materials encountered at the particular location or conditions observed at that particular time and location. No guarantee is given with regard to any interpretative comments or analysis contained in the Site Investigation Reports.

The Contractor, being deemed to be experienced and skilled in engineering works of the nature and extent included in this Contract, shall be fully responsible for any use, interpretation or conclusion made by itself or the authors in regard to site conditions based on the information provided and all other relevant surface, subsurface, climatic, environmental and operational conditions liable to be encountered in the execution of the Works.

6 **COMMENCEMENT AT SITE OF WORKS**

The Contractor shall advise the Superintendent, Superintendents Representative and the Regional Harbour Master (Brisbane) in writing of the date on which site works are to commence. Such advice shall be given at least two (2) weeks prior to the above date.

7 **ESTABLISHMENT / DISESTABLISHMENT**

For progress payment purposes, eighty per cent of the amount included in the Bill of Quantities for establishment / disestablishment shall be included in the assessment of value of work following completion of establishment on site to the satisfaction of the Superintendent. The remaining twenty per cent shall not be paid until the site has been cleared and the Certificate of Practical Completion has been issued.

8 **WORKS PROGRAM**

The Contractor shall carry out all work generally to a program acceptable to the Superintendent.

**Particular requirements of the works programming are as follows:**
a) **The works must be finished within 16 weeks of letting the contract.**

Within two weeks from the date of receipt of the Letter of Acceptance, the Contractor shall lodge with the Superintendent a detailed program chart which shall show the intended program of operations. This detailed program chart shall be kept up to date by the Contractor throughout the duration of the Contract and copies if amended forwarded to the Superintendent.

The program chart shall be in the form of a bar chart showing:
- a series of key activities logically linked with associated start and finish times
- activity durations
- activity float
- critical path
- hold points / milestones for paint inspections and weld testing
- when contractor will establish on site
- fabrication, pile extraction and driving activities.

### 9 QUALITY SYSTEM

### 10 MARINE SAFETY ACT, NAVIGATION REQUIREMENTS

#### 10.1 Transport Operations (Marine Safety) - 1994

The Contractor shall at all times comply with the requirements of the Transport Operations (Marine Safety) Act - 1994. In particular, the Contractor’s attention is drawn to Sections 86 to 97 of the Act which relates to the powers of the Harbour Master.

#### 10.2 Harbour Master

Harbour Master means any person for the time being appointed or deemed to be appointed under and for the purposes of the Act, as Harbour Master.

#### 10.3 Temporary Lights

The Contractor shall provide such temporary navigation lights and floating buoys on all plant, anchor ropes, and works as may be required by the Harbour Master.

#### 10.4 Non-interference with Vessels

Notwithstanding the provisions of this clause, it is expressly provided that the Contractor shall not cause any disruption to the vessel movements and operations in and around the area of the Works. The Contractor shall comply with the requirements of the Harbour Master in relation to navigation and shipping matters.
10.5 Radio Communication

The Contractor’s site office and floating plant shall be equipped with suitable radios for communicating with the Harbour Master, shipping, other craft using the port in the vicinity of the plant.

10.6 Disposal of Materials into Tidal Waters

The Contractor is required to recover any materials or objects dropped onto the sea bed or river bed, at its own cost except dredged material deposited in the designated spoil areas.

10.7 Noise and Dust Nuisance

The Contractor shall take all precaution to the satisfaction of the Superintendent, including the provision of sound deadening devices and variation of the method of employing the plant upon the works to minimise noise nuisance and shall take all reasonable precaution to avoid causing a nuisance to others in the vicinity of the works.

11 CONTRACTOR’S FLOATING PLANT AND MOORINGS AND WHARFAGE

Floating Plant is to be registered in accordance with Division 3 of the Transport Operations (Marine Safety) Regulations 2004. The Contractor shall submit details of floating plant together with copies of Survey Certificates as applicable.

Responsibility for adhering to the requirements regarding all aspects of floating plant shall be vested entirely in the Contractor, including provision of adequate markings, lighting, and secure moorings.

No moorings, wires or anchors, of either a permanent or temporary nature, shall obstruct the shipping channel at any time, and the appropriate lights and signals shall be shown as requested.

The Contractor shall take all necessary precautions to avoid damage to any marine facility of which it may make use. Any damage arising out of the Contractor’s operations shall be made good by the Contractor at its own expense to the satisfaction of the owner of the facility damaged by the Contractor.

12 CONSTRUCTION PLAN

Within 14 days after the date of the Letter of Acceptance, the Contractor shall lodge with the Superintendent a Construction Plan. This Construction Plan shall be kept up to date by the Contractor throughout the duration of the Contract and copies if amended forwarded to the Superintendent. Possession of Site will not be awarded until a Construction Plan is submitted to the Superintendent (refer to Clause 27.1 of the General Conditions of Contract).

The Construction Plan shall include without limitation the following components:

a) scope of works
b) works program (refer Clause 8 of the Particular Conditions of Contract for requirements)  
c) personnel (details of contractor’s staff, subcontractors used for the works, stakeholder contacts)  
d) plant and equipment being used for the works  
e) quality assurance plan (inspection and test plans, work methods, data recording, reporting, work improvement notices and so on)  
f) work method statements  
g) Work Health and Safety Management Plan (refer Clause 13.3 of the Particular Conditions of Contract for requirements)  
h) environmental management plan (if required under the contract – refer Specification)  

Payment for compliance with the requirements of this clause shall be deemed to be included in the prices and rates tendered.

13 WORK HEALTH AND SAFETY

13.1 Definitions

In this clause 13, the following terms are defined as follows:

(a) “Construction Works” means the Works to the extent they are construction works within the meaning of the WH&S Act.

(b) “Incident” means any safety or health related incident which occurs in relation to or in connection with the Contract, the Project, the Works or the Workplace.

(c) “Notifiable Incident” means a notifiable incident as defined by the WH&S Act.

(d) “Principal” means the entity defined under Annexure Part A of the General Conditions of Contract.

(e) “Regulator” means the regulator for work health and safety under the WH&S Act.

(f) “Superintendent” means the person stated in Annexure Part A of the General Conditions of Contract or other person appointed under the General Conditions of Contract.

(g) “WH&S Act” means the Work Health and Safety Act 2011 together with the Work Health and Safety Regulation 2011 (“WH&S Regulation”) and any other regulations, codes of practice (including new and preserved codes), and subordinate instruments in force under the Work Health and Safety Act 2011.

(h) “worker” has the meaning given by the WH&S Act.

(i) “Workplace” means a workplace as defined by the WH&S Act, which is associated with the Project or the Contract, and includes:

(i) the Site; and

(ii) any other place where work is carried out or a worker is likely to be while at work in connection with the Project, the Works, the Contract or the Contractor’s business or undertaking, but excludes any area which (and to the extent) the Principal, by notice to the Contractor, designates that area as not being included in the Workplace.
(j) “Works” means the Project Works, the Temporary Works, Works under the Contract and associated works.

### 13.2 Management and control of Workplace

The Principal:

(a) engages and appoints the Contractor as principal contractor for the Construction Works, and to be responsible for the performance of the functions of the principal contractor within the meaning of the WH&S Act; and

(b) authorises the Contractor to:
   
   (i) have management and control of the Workplace under the WH&S Act; and
   
   (ii) discharge the duties of a principal contractor under the WH&S Act.

The appointment and authorisation of the Contractor under this clause will continue until the earliest of the following occurs:

(i) the date that Practical Completion as defined under the General Conditions of Contract is reached (upon issue of the Certificate of Practical Completion under clause 42.5 of the General Conditions of Contract) and management and control of the Construction Works is handed back to the Principal or the owner of the Site; or

(ii) the date the Contract is completed (upon issue of the Final Certificate under clause 42.8 of the General Conditions of Contract) and management and control of the Construction Works is handed back to the Principal or the owner of the Site; or

(iii) the appointment is revoked by the Principal.

The Contractor must ensure signs are installed at the work site which identify the Contractor as the principal contractor in accordance with section 308 of the WH&S Regulation.

### 13.3 Work Health and Safety Management Plan

#### 13.3.1 Definition

In this clause, “Work Health and Safety Management Plan” means a written work health and safety management plan for the Workplace titled ‘Work Health and Safety Management Plan’, which must be incorporated into the Contractor’s Construction Plan (refer Clause 12 of the Particular Conditions of Contract) and which must as a minimum (and without limitation) comply with section 309 of the WH&S Regulation, be signed by the Contractor and include the following components:

(a) the names, positions and health and safety responsibilities of all persons at the workplace whose positions or roles involve specific health and safety responsibilities in connection with the project;

(b) the arrangements in place, between any persons conducting a business or undertaking at the Workplace for consultation, cooperation and the coordination of activities in relation to compliance with their duties under the WH&S Act and the WH&S Regulation;

(c) the arrangements in place for managing any Incidents that occur;
(d) any site-specific health and safety rules, and the arrangements for ensuring that all persons at the Workplace are informed of these rules;

(e) the arrangements for the collection and any assessment, monitoring and review of safe work method statements at the Workplace;

(f) version, date and document control;

(g) the Contractor's administrative details (including ABN);

(h) registrations of plant items that need to be registered under the WH&S Act;

(i) plant and equipment and their safety controls; the safe use and storage of plant;

(j) emergency planning and procedures;

(k) first aid officer(s) and location of first aid treatment;

(l) activities that require prescribed qualifications and experience and a list of workers who have the prescribed qualifications and experience;

(m) hazardous substance and dangerous goods management, the provision and maintenance of a hazardous substances register, safety data sheets, and hazardous substances storage;

(n) hazard identification, risk evaluation, control and monitoring (including hazards and risks provided by the designer to the Contractor); the management of falls and falling objects and any high risk construction work that will take place on the project including diving activities and managing vessel movement in the waterway;

(o) training (including process for inductions) and methodology of ensuring competency of workers (for example, plant operators); ensure that workers have appropriate licenses and training to undertake the work;

(p) subcontractor controls;

(q) accident reporting, recording, investigation and analysis (including reporting to the Superintendent and the Principal using procedures provided by the Superintendent to the Contractor at the Prestart meeting);

(r) work method statements provided for high risk activities;

(s) safe housekeeping practices; the provision, maintenance and management of housekeeping, facilities and a safe and healthy work environment;

(t) amenities provision;

(u) workplace security and public safety controls;

(v) safety inspections and audits; monitoring the implementation of and compliance with the plan across the project;

(w) the requirements of the Manual of Uniform Traffic Control Devices for working with traffic;

(x) copy of the design safety report prepared in accordance with the Part 6.2 of the WH&S Regulation;

(y) management and mitigation of all the hazards and risks identified by the Principal, the Principal’s designer, the Contractor’s designer, listed in the Principal supplied design safety report and Specification or provided by any other party, as well as
the health and safety hazards and risks normally expected and mitigated and controlled by a contractor at a construction site; and (z) the details of the construction project (for example, location or locations, anticipated project start and duration, and the works to be undertaken).

13.3.2 Preparation

The Contractor may only be granted possession of the Site or commence construction works once the Superintendent gives notice to the Contractor that the Work Health and Safety Management Plan is acceptable (refer Clause 27.1 Annexure Part A of the General Conditions of Contract Annexure), as follows:

(a) the Contractor must prepare and submit a Work Health and Safety Management Plan to the Superintendent for approval before any construction work starts;

(b) following receipt of the Work Health and Safety Management Plan, the Superintendent must notify the Contractor whether the Work Health and Safety Management Plan is acceptable to the Principal;

(c) if the Superintendent notifies the Contractor that the Work Health and Safety Management Plan is not acceptable, the Contractor must at its cost amend and resubmit the Work Health and Safety Management Plan; and

(d) the Contractor is not entitled to make any claim for additional costs or expense, adjustment to the contract sum or extension to the Date for Practical Completion or to make a claim in connection with any review, approval of, or modification to the Work Health and Safety Management Plan as directed the Superintendent.

13.3.3 Duty to Inform

Under section 310 of the WH&S Regulation, the Contractor must ensure, so far as is reasonably practicable, that before commencing work, each person who is to carry out construction work in connection with the project is made aware of:

(a) the content of the Work Health and Safety Management Plan for the workplace; and

(b) the person’s right to inspect the Work Health and Safety Management Plan under section 313 of the WH&S Regulation.

13.3.4 Revision and Reporting

The Contractor must:

(a) under section 311 of the WH&S Regulation review and, as necessary, revise the Work Health and Safety Management Plan to ensure that it remains up-to-date;

(b) give written monthly reports from the date of the Letter of Acceptance on its Work Health and Safety Management Plan outlining any:

(i) non compliance;

(ii) work improvement notices;

(iii)safety incidents; and
(iv) any other matters relevant to the management of work health and safety or reasonably required by the Principal; and

(c) during any audit, provide the Superintendent with all documents, access and assistance necessary for its completion.

13.3.5 Audit

The Principal may audit the Contractor’s compliance with duties and obligations under the WH&S Act and the Contract (or have it audited) and implementation of the Work Health and Safety Management Plan:

(a) at any time during the Contract after giving written notice to the Contractor;

(b) at intervals of no more than two months, unless the Superintendent reasonably considers a further or interim audit is required; and

(c) using one or both of the following forms of audit:
   (i) a check on whether the Contractor is complying with the provisions of the Work Health and Safety Management Plan; and/or
   (ii) a check on the Contractor’s individual procedures and records.

13.3.6 Nonconformance

If the Superintendent notifies the Contractor (or the Contractor is otherwise aware) of any nonconformance with the Work Health and Safety Management Plan:

(a) the Contractor must rectify the non-conformance, provide the Principal with evidence of rectification and copies of any associated amended documents and resubmit the amended Work Health and Safety Management Plan within seven days; and

(b) the Contractor must suspend the relevant portion of the construction works to which the non-conformance applies until the Contractor has addressed the safety issues identified during the audit, and in the meantime continue to comply with all duties and obligations under the WH&S Act and the Contract;

Any costs associated with rectifying the non-conformance and any associated delays must be borne by the Contractor.

If the same non-compliance is reported twice again in two respective successive audits after initial non-compliance was reported, the Principal may give notice to the Contractor of a substantial breach of the Contract under Clause 44.2 and 44.3 of the General Conditions of Contract.

13.4 Workplace Health and Safety Officer

The Contractor must appoint a person appropriately qualified to competently discharge the functions listed below in this clause 13.4, and trained to at least the standard required by the Principal (“Workplace Health and Safety Officer”).

The Contractor must ensure the Workplace Health and Safety Officer discharges the following functions:

(a) to tell the Contractor about the overall state of health and safety at the workplace;
(b) to conduct regular inspections at the Workplace to identify any hazards and unsafe or unsatisfactory work health and safety conditions and practices;
(c) to report in writing to the Contractor any hazard or unsafe or unsatisfactory work health and safety practice identified during inspections;
(d) to establish appropriate educational programs in work health and safety;
(e) to investigate, or assist in the investigation of, all Incidents at the workplace;
(f) to assist inspectors and auditors in the performance of their duties;
(g) to immediately report any work health and safety Incident or risk at the Workplace to the Contractor; and
(h) maintain the Workplace Health and Safety Officer’s training and competency.

13.5 Health and Safety Duties

13.5.1 General Duty

The parties must discharge all applicable duties under the WH&S Act and (without limiting those duties) must ensure, so far as is reasonably practicable, the health and safety of all persons associated with the Works, the Workplace, fixtures, fittings, plant and structures associated with any of them, and that persons are not exposed to risks to health and safety in relation to or connection with the Contract, the Works or the Workplace.

13.5.2 The Principal’s Obligations

The Principal must:
(a) comply with its obligations under the WH&S Act;
(b) as soon as reasonably possible, give the Contractor any information the Principal has in relation to hazards and risks at or in the vicinity of the Workplace where any construction work is to be carried out;
(c) provide the Contractor with copies of any construction drawings and specifications provided to the Contractor by the designer of any structure to be constructed under this Contract; and
(d) consult, cooperate and coordinate with the Contractor in relation to any health or safety matters arising out of or in connection with the Workplace, the Project, the Works or the Contract.

13.5.3 The Contractor’s Obligations

The Contractor must discharge its duties and comply with all relevant obligations under the WH&S Act, including (but not limited to) the following:
(a) the duties of a principal contractor;
(b) the duties of a person conducting a business or undertaking;
(c) the duties in relation to health and safety matters in relation to or connected with the management and control of the workplace;
(d) the duty to ensure all risks to health and safety are eliminated, minimised or managed; and

(e) any other duties, obligations, standards and requirements under the WH&S Act which may be or become applicable in relation to or in connection with the Contract, the Project or the Works.

Without limiting the obligations in clause 13.5.1 and 13.5.3, the Contractor must ensure:

(a) the Contractor, its officers, employees, agents and subcontractors:
   (i) are familiar with and comply with all their obligations and exercise due diligence in discharging all their duties under the WH&S Act; and
   (ii) without limiting the obligations under the WH&S Act, comply with the Principal’s reasonable policies, procedures and directions in relation to health and safety;

(b) where the Contractor provides or commissions any design for the Works, the Contractor must:
   (i) ensure that it and any designer discharge all duties as required under Part 6.2 of the WH&S Regulation;
   (ii) obtain a design safety report from any designer in accordance with the WH&S Regulation and provide a copy to the Superintendent; and
   (iii) ensure it obtains full details of all hazards and risks from any designer and incorporates corresponding methods of controlling these in the Work Health and Safety Management Plan; and

(c) it verifies the suitability and competency of its workers (including employees and subcontractors), retains evidence of that verification, and provides that evidence to the Principal promptly upon written or verbal request.

13.5.4 Primary Responsibility

As between the Principal and the Contractor:

(a) where a duty is held by both parties, and without limiting the Principal’s rights under the Contract, the Contractor has the primary responsibility for ensuring that duty is discharged and any investigations are undertaken;

(b) if the Contractor cannot discharge its work health and safety duties and obligations under the WH&S Act or the Contract to the standard imposed by the WH&S Act or the Contract, the Contractor must:
   (i) ensure work health and safety is preserved including, if necessary, by stopping the relevant part of the Works; and
   (ii) immediately notify the Principal and consult, cooperate and coordinate with the Principal to ensure any duties are discharged or issues resolved to the standard required; and

(c) if the Contractor in its capacity as principal contractor or otherwise in relation to the Contract, the Workplace or the Works, creates, sends or receives any document, notice or report under the WH&S Act, it must forward a copy to the Principal.
13.5.5 Notifiable Incidents

If the Contractor becomes aware of any Notifiable Incident arising out of or in connection with the Contract, the Workplace or the conduct of the Principal’s business or undertaking, the Contractor must:

(a) ensure that the Regulator is notified immediately;
(b) notify the Principal immediately (no later than one hour) after the Contractor becomes aware of the occurrence; and
(c) promptly provide the Principal with a copy of the notification to the Regulator.

13.5.6 Incidents

Subject to clause 13.5.5, if the Contractor becomes aware of any Incident, the Contractor must:

(a) notify the Principal as soon as possible after the occurrence;
(b) carry out any investigations required by the WH&S Act, the Contract or the Principal;
(c) keep the Principal informed, to the Principal’s satisfaction, of the status of any investigations of the Incident; and
(d) do all that the Principal reasonably considers necessary to assist the Principal with any investigations into any Incident, including requiring, to the extent possible, the Contractor’s agents, subcontractors, employees and invitees to assist the Principal.

13.6 Communication, consultation and coordination

The Contractor must, before commencing the Works and then on an ongoing basis, consult, cooperate and coordinate with:

(a) the Principal;
(b) all other duty holders in relation to any duty held by the Contractor;
(c) workers (whether or not directly employed by the Contractor) who are or are likely to be directly affected; and
(d) relevant suppliers, contractors and other third parties,

in relation to any health or safety matters arising out of or in connection with the Workplace, the Works or the Contract.

Without limiting the obligation listed above under Clause 13.6, the Contractor must as a minimum, comply with the Principal’s reasonable policies and procedures in relation to communication, consultation and coordination.

13.7 Indemnities

The Contractor indemnifies and will keep indemnified the Principal from and against all claims, costs, expenses, fines, charges or other liabilities which may be brought against or made on the Principal, or which the Principal may pay, sustain or be put to, arising by reason of or in connection with:
(a) any breach by the Contractor of its obligations under this clause 13 or its duties under the WH&S Act, including any delay, cessation of work, cost, notice, requirement or similar matter which occurs as a result of such breach; and/or

(b) the Principal being deemed under the WH&S Act to be the person with management and control of the Workplace, or the person with management and control of any fixtures, fittings and plant, in relation to or in connection with the Workplace, prior to termination of the appointment in accordance with clause 13.2.

It is not necessary for the Principal to incur expense or make a payment before enforcing any indemnity conferred by this clause 13.7.

This clause 13.7 survives termination of the Contract.

14 DANGEROUS MATERIALS

14.1 Inflammable Liquids

Attention is drawn in particular to Section 213 of the Transport Operations (Marine Safety) Act 1994 relating to dangerous substances and Division 13 of the Transport Operations (Marine Safety) Regulation 2004 as they relate to the transport and handling of dangerous cargoes by sea.

14.2 Abrasive Blasting

Attention is drawn to the workplace health and safety code of practice ‘Abrasive Blasting Code of Practice 2004’, which details blast media which should not be used abrasive blasting. Attention is also drawn to clause 18.2 of the Particular Conditions of Contract relating to the Environment Protection Act.

15 BUILDING AND CONSTRUCTION WORK

The Principal is responsible for notification and fee payment to the Building and Construction Industry (Portable Long Service Leave) Authority (Qleave) relating to construction workplaces for construction work worth $80,000 or more carried out in Queensland, in accordance with the Building and Construction Industry (Portable Long Service Leave) Act 1991 and the Building and Construction Industry (Portable Long Service Leave) Regulation 2002.

16 THE 10 PER CENT TRAINING POLICY - APPRENTICE/TRAINING REQUIREMENTS

The Queensland Government Building and Construction Contracts Structured Training Policy (the 10 per cent Training Policy) requires that a minimum of ten per cent of the total labour hours on any Queensland Government building or civil construction project (over $250,000 for building or $500,000 for civil construction) be undertaken by apprentices, trainees, cadets or Indigenous workers, and through the up-skilling of existing workers to a maximum of 25 per cent of the deemed hours. Existing workers must be engaged in training that is delivered by registered training organisations and universities which lead to nationally
recognised building and construction qualifications. **This policy does not apply to dredging contracts.**

To meet this policy requirement, the Contractor, in its execution of the work under the contract, must employ on the Site, either directly or indirectly apprentices, trainees, cadets or Indigenous workers, and through the up-skilling of existing workers for a number of labour hours no less than:

a) For building contracts the number derived by multiplying the accepted contract sum by 0.08%

b) For civil construction contracts the number derived by multiplying the accepted contact sum by 0.04%

For the purposes of this clause the term ‘apprentices/trainees’ shall include any employees engaged in the following arrangements:

a) a formal apprenticeship or formal traineeship as provided for in State vocational and training legislation;

b) a cadetship or scholarship incorporating formal tertiary professional or technical education.

For compliance with the policy, the Contractor must:

1. Provide written undertaking to comply with the policy (using the corresponding tender schedule);

2. Register the project with Construction Skills Queensland at [www.csq.org.au/10percenttraining](http://www.csq.org.au/10percenttraining) to register and manage the project online;

3. Provide Construction Skills Queensland with a Compliance Plan within 10 working days of the date of acceptance of tender;

4. Ensure that the project employs sufficient apprentices / trainees / cadets to comply with the policy and/or implement a training program aimed at up-skilling the workers on site;

5. Track the apprentices, trainees, cadets, and / or indigenous workers engaged on the project. Eligible apprentices / trainees /workers can be employed directly by the Principal Contractor, subcontractor, or be accessed through a group scheme or Government agency such as Q Build;

6. Identify any up-skilling of existing workers directly employed by the contractor or subcontractor (recognised national qualifications only) up to a maximum of 25% of the deemed training hours only;

7. Provide Construction Skills Queensland with a completed Interim Compliance Report after each 13 weeks of the construction phase;

8. Provide Construction Skills Queensland with a completed Practical Completion Report within 15 days of the date of practical completion.

To achieve compliance with the 10 per cent Training Policy, the Contractor shall contact Construction Skills Queensland on 1800 798 488 or visit [www.csq.org.au/10percenttraining](http://www.csq.org.au/10percenttraining).
Additional information on the policy can be found at:  

Contractor must provide evidence of compliance with the policy, and this information will ultimately be considered in any review of their eligibility to tender for future government work. Evidence shall be in the form of providing copies of Compliance Plan, Interim Compliance Report, and Practical Completion Report to the Superintendent as the same time these are issued to Construction Skills Queensland.

The Contractor acknowledges that failure to comply in part or in whole with this requirement for employment of apprentices/trainees will be a substantive factor that will be taken into account in the award of future Contracts by the Principal (the State of Queensland).

17 RATES OF WAGES AND CONDITIONS OF EMPLOYMENT

Subject to the provisions of any Act or of any Award relative to preference of employment (and subject also to clause 26 of the General Conditions), the Contractor shall have the right to select any labour which may be required in or about or in connection with the performance of the Contract.

In the performance of the Contract, Award conditions shall be observed and Award rates paid by the Contractor.

18 STATUTORY APPROVALS

18.1 General

Further to the provisions of clause 14 of the General Conditions of Contract, the Principal has undertaken to obtain the Statutory Approvals which are listed in Specification and paid the fees attached to such applications and approvals:

The Contractor shall be required to comply with the Conditions attached to these approvals in the performance of this Contract.

Except as provided for herein, the Contractor shall be required to comply fully with the provisions of clause 14 of the General Conditions of Contract.

Payment for compliance with the requirements of this clause shall be deemed to be included in the prices and rates Tendered.

18.2 Environmental Relevant Activities

The Environment Protection Act 1994 defines environmentally relevant activities (ERAs) as activities that are likely to cause environmental harm (such as dredging and abrasive blasting) and the Act requires that these activities have Development Approval and a Registration Certificate. The Contractor shall be required to obtain Development Approval and a Registration Certificate for all ERAs carried out during the course of the contract unless noted otherwise. In the case of Dredging ERAs only, the Principal will obtain the Development Approval for the ERA (16) Extractive and screening activity.
Under the Act, the applicant for the Registration Certificate is the Contractor as being the entity who carries out the activity and will be responsible for paying all fees. The Contractor will be required to obtain a Registration Certificate for all ERAs or organise for the transfer of an existing Registration Certificate to its own name and shall comply with all conditions accompanying those permits. Copies of Registration Certificates and Development Approvals shall be forwarded to the Superintendent prior to Possession of Site being granted.

19  SUPERINTENDENT’S REPRESENTATIVES

19.1 ADVISOR (MARINE INFRASTRUCTURE)

The Advisor (Marine Infrastructure), Gold Coast Waterways Authority, including any person for the time being performing the duties of the said nominated Advisor (Marine Infrastructure) shall be the Superintendent’s Representative in accordance with clause 24 of the General Conditions of Contract for the supervision, examination, and testing of the works at its discretion.

19.2 Inspector

The Superintendent may from time to time appoint Inspectors who shall be Superintendent’s Representatives in accordance with clause 24 of the General Conditions of Contract.

Each Inspector so appointed shall have such authority to issue instructions under the Contract as will relate to the adherence to the Specifications and Drawings or to the quality of materials and workmanship. The Contractor shall afford the Inspector the necessary facilities for the performance of its duties.

An appointment under this clause does not prevent the exercise of power, duty, discretion or authority by the Advisor (Marine Infrastructure) referred to in clause 19.1.

20  RELATIONS WITH OTHER CONTRACTORS

The Contractor shall afford all reasonable facilities during progress of the work to other Contractors (whether Contractors of the Principal or not) carrying out other works in the area. The Contractor shall allow them all reasonable access required to carry out their work and shall confer with them regarding connections between their work and that of this Contract.

21  PRIVACY AND PROTECTION OF PERSONAL INFORMATION

In this clause, Personal Information means information or an opinion (including information or an opinion forming part of a database), whether true or not, and whether recorded in a material form or not, about an individual whose identity is apparent, or can reasonable be ascertained, from the information or opinion.

Where the Contractor has access to Personal Information in order to fulfil its obligations under this Contract, it must:
a) if the Principal is an “agency” within the meaning of the Information Privacy Act 2009, comply with Part 1 and 3 of Chapter 2 of that Act in relation to the discharge of its obligations under this Contract, as if the Contractor was the Principal;
b) not use Personal Information other than for the purposes of the Contract, unless required or authorised by law;
c) not disclose Personal Information without the written agreement of the Principal unless required or authorised by law;
d) not transfer Personal Information outside of Australia without the written agreement of the Principal;
e) ensure that access to Personal Information is restricted to those of its employees and officers who require access in order to perform their duties under the Contract;
f) ensure that its officers and employees do not access, use or disclose Personal Information other than in the performance of their duties under the Contract;
g) ensure that its officers, employees, agents and subcontractors who have access to Personal Information comply with obligations the same as those imposed on the Contractor under this clause, including, when requested by the Principal, requiring them to sign a deed of privacy;
h) inform itself of, become familiar with and observe the requirements of the Department of Transport and Main Roads’ Information Standard 42 and the department’s privacy plan and comply with such other privacy and security measures as the Principal reasonably advises the Contractor in writing from time to time;
i) where Personal Information is no longer required to be held for the purposes of the Contract, return the Personal Information to the department; and
j) where Personal Information is required to be collected by the Contractor on behalf of the department, ensure that the information is relevant to the activity of the collector and that individuals are provided with advice as to why the information is being collected, under what legislation it is being collected and to whom the information usual gets disclosed.

Nothing in this clause is intended to limit any obligation of the Contractor under the Privacy Act 1988 (Cwlth) that the Contractor may have as an organisation with respect to Personal Information.

The Contractor must immediately notify the Principal on becoming aware of any breach of this clause.

22 INTELLECTUAL PROPERTY

The intellectual property rights of any new contract material are vested to the Principal. The Contractor must, prior to commencing work in relation to a deliverable, obtain from every person who is to create contract material which is to form part of or constitute the deliverable, and provide to the Principal, a written assignment from that person to the Principal of any intellectual property rights which may vest in that person as a result of that person performing the work.

For the purpose of this clause:
(a) 'deliverable' means any document, data listing or other creation needed to be delivered to the Principal in order to complete the performance of the services.
(b) 'new contract material' means contract material forming part of or constituting a deliverable that is created, written or otherwise brought into existence by or on behalf of the contractor in the course of performing the services.
A copy of all workings, drawings, computer files, etc produced during the course of and for the Contract are to be forwarded to the Principal at the completion of this contract. The contractor is to retain the originals until after construction is complete to enable any design queries or questions to be answered. The Principal will notify the Contractor in writing when construction is complete and the workings etc can be forwarded.

23 ORDER OF PRECEDENCE OF DOCUMENTS

The following order of precedence shall apply where there is any ambiguity, discrepancy or inconsistency between the documents comprising the Contract. (Documents higher in the list have a higher priority).

(a) Formal Instrument of Agreement
(b) Letter of Acceptance
(c) Notice To Tenderers
(d) Any Special Conditions of Contract
(e) Particular Conditions of Contract
(f) General Conditions of Contract
(g) Drawings
(h) Specifications
(i) Conditions of Tendering
(j) Completed Tender Form and Tender Schedules modified as necessary by post-tender correspondence
(k) Other Contract Documents

In the event that the aforesaid order of precedence of Contract Documents cannot be reasonably applied, or in the event that when that order or precedence is applied some doubt arises as to the resolution of any differential matter or thing, as between any two or more of the said Documents, then the Superintendent shall be the sole arbiter as to which Contract Document shall apply to that matter or thing.

24 RIGHT TO INFORMATION AND DISCLOSURE

The Right to Information Act 2009 (RTI Act) provides members of the public with a legally enforceable right to access documents held by the Queensland Government agencies.

The RTI Act requires that documents be disclosed upon request unless the documents are exempt under the RTI Act or on balance, disclosure is contrary to the public interest.

Information relating to this Contract is potentially subject to disclosure to third parties under the RTI Act.

If disclosure under the RTI Act, and / or general disclosure of information provided by the Contractor in connection with this Contract, would be of substantial concern to a Contractor because it will disclose trade secrets, information of commercial value, the purpose or results of research, or other information of a confidential nature, then this should be indicated in by the Contractor in writing to the Superintendent. The Principal cannot guarantee that any information provided by the Contractor will be protected from disclosure under the RTI Act.
Despite any other provision of this Contract, the Principal is entitled to disclose the following details:

(a) the name and address of the Principal;
(b) a description of the scope of works;
(c) contract commencement or award date;
(d) contract value;
(e) name and address of the successful tenderer; and
(f) the procurement method used.
Section 4
General Conditions of Contract
GENERAL CONDITIONS OF CONTRACT

The General Conditions of Contract for the Works shall be the Australian Standard AS 2124-1992: GENERAL CONDITIONS OF CONTRACT, subject to the deletions, amendments and additions listed in Annexures A and B herewith.
ANNEXURE to the Australian Standard General Conditions of Contract PART A

This Part shall be issued as part of the tender documents and is to be attached to the General Conditions of Contract and shall be read as part of the Contract.

Clause 1 Law of QUEENSLAND

Clause 1 Place for Payment BRISBANE

Clause 2 Name and Address of Principal THE STATE OF QUEENSLAND ACTING THROUGH THE GOLD COAST WATERWAYS AUTHORITY

Ground Floor, 40-44 Seaworld Drive
Main Beach Queensland 4217

The Chief Executive Officer is authorised to sign for the Principal.

Clause 2 Name and Address of Superintendent Director (Bridge and Marine Engineering)
Department of Transport and Main Roads Engineering and Technology Branch
Level 13, 313 Adelaide Street
Brisbane Queensland 4000

Clause 3.1 Nature of Contract is Lump Sum Contract, not subject to rise and fall in costs.

Clause 3.3(b) The limits of accuracy for which the Principal accepted a rate or rates are plus or minus 20%.

Clause 4.1 Alternative 3 applies, the Bill of Quantities forms part of the Specification.

Clause 4.2 A priced copy of the Bill of Quantities shall be lodged with the tender.

Clause 5.2 The Contractor shall provide security. The amount shall be determined in accordance with the following:

<table>
<thead>
<tr>
<th>Contract Sum</th>
<th>Amount of Security</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not above $20,000</td>
<td>5% of the Contract Sum.</td>
</tr>
<tr>
<td>Over $20,000 and not</td>
<td>$1,000 plus 2.5% of the amount by which the Contract</td>
</tr>
<tr>
<td>over $100,000</td>
<td>Sum exceeds $20,000.</td>
</tr>
<tr>
<td>Over $100,000</td>
<td>$3,000 plus 1% of the amount by which the Contract</td>
</tr>
<tr>
<td></td>
<td>Sum exceeds $100,000.</td>
</tr>
</tbody>
</table>
Clause 5.7 The Contractor is entitled to 100% of the security deposit upon the issue of the certificate of Practical Completion and 100% of retention moneys upon the issue of the Final Payment Certificate.

Clause 5.9 Alternative 2 shall apply to interest earned.

Clause 11(b) The percentage for profit and attendance shall be 15%.

Clause 11(c) The amount or percentage for profit and attendance shall be 15%.

Clause 18 Alternative 1 applies, the Contractor shall provide the insurances.

Clause 18 The total amount of insurance to cover items (ii), (iii) and (v) shall be of 20% of the Contract Sum.

Clause 18 For (iv) an amount of Nil.

Clause 19 Alternative 1 applies, the Contractor shall provide the insurances to a minimum amount A$10,000,000 and should satisfy itself that the amount is adequate to meet its possible liabilities under these Conditions.

Clause 27.1 The time for giving site possession is 14 days from receipt of Security Deposit and evidence of Insurances required under Clause 18 and 19 and receipt of a deemed suitable Construction Plan in accordance with Clause 12 of the Particular Conditions of Contract.

Clause 32 The working hours and working days shall be 7 am to 6 pm Monday to Sunday.

Clause 35.2 The Date for Practical Completion is 16 weeks from the date of the letter of acceptance.

Clause 35.5 Delays in the execution of the Works caused by inclement weather conditions shall not form grounds for additional payment, but will be considered grounds for extension of time pursuant to Clause 35.5 of the General Conditions of Contract.

Clause 35.6 Liquidated damages shall be $330 per calendar day.

Clause 36 Extra costs for Delay or Disruption will be paid for in following events; There are no foreseen causes of delay. Where variations under Clause 40 result in extensions of time, any costs incurred due to the extra time shall be included in the agreed price for the variation.

Clause 37 Defects Liability Period for the Works is 26 weeks.

Clause 41(f) The charge for overheads, profit etc for Daywork shall be 15%.

Clause 42.1 Times for Payment Claims shall be monthly.
**Clause 42.3** Retention Moneys for:

a) work incorporated in the Works and any work or items for which a different amount of retention is not provided, 10% of the value until 5% of the Contract sum is held;
b) items on site but not yet incorporated in the Works; 10%
c) items off site but in Australia; 10%
d) items not in Australia; 10%
e) disbursements incurred by the contractor for customs duties, freight, marine, insurance, primage, landing and transport in respect of the work under the contract; 10%

**Clause 42.9** The rate of interest on overdue payments shall be 6% per annum.

**Clause 44.7** The delay in giving possession of the site which shall be a substantial breach is 28 days from expiry of the period given for Clause 27.1.

**Clause 47.2** Alternative 2 shall apply in proceeding with dispute resolution.

**Clause 47.3** The person to nominate an arbitrator is the Chair of the Chapter of the Institute of Arbitrators and Mediators Australia in Queensland.

**Clause 47.3** The location of arbitration shall be Queensland.
### ANNEXURE to the Australian Standard General Conditions of Contract  
#### PART B

This table lists clauses that have been deleted, amended or added to Australian Standard 2124-1992, and is to be attached to the General Conditions of Contract and shall be read as part of the Contract. The NOTE preceding Clause 1 on Page 5 of AS2124 - 1992 is deleted.

1. The following Clauses have been deleted from the General Conditions in AS2124-1992:

   - Clause 32 Working Hours
   - Clause 35.7 Limit on Liquidated Damages
   - Clause 35.8 Bonus for Early Practical Completion

2. The following Clauses have been amended and differ from the corresponding Clauses in AS2124 - 1992:

   **Clause 6.2** Add the following:
   "If the Contractor fails to duly execute the Formal Instrument of Agreement within the time and in the form prescribed in this clause, the Principal may, notwithstanding any other provision contained in these General Conditions of Contract, withhold the payment of any money or moneys due to the Contractor under the Contract until the Contractor has executed such Formal Instrument of Agreement."

   **Clause 7** Add the following:
   "Service of payment claims under the *Building and Construction Industry Payments Act 2004* by the Contractor on the Principal shall be made by forwarding or serving such claims to the Superintendent or other such person nominated by the Principal.

   The Contractor must ensure that within 24 hours after any notice (other than a payment claim or payment schedule) under the *Building and Construction Industry Payments Act 2004* is given or received by the Contractor or any subcontractors, a copy of that notice is given to both the Superintendent and the Principal."

   **Clause 22** Delete the words "or Inspector" wherever they occur.

   **Clause 23** Add the following:
   "For the purpose of receiving and delivering claims (including payment claims made under the *Building and Construction Industry Payments Act 2004*) the Superintendent shall act as an agent of the Principal."

   **Clause 42.1** Delete the following from lines 34-35:
   "or within 14 days of issue by the Superintendent of the Superintendents payment certificate, whichever is earlier"

   Add the following:
“Within 7 days of issue of the Superintendent's Payment Certificate, the Contractor shall issue to the Principal or the Principal shall issue to the Contractor, as the case may be, a tax invoice complying with the GST Legislation in respect of the relevant supply. This tax invoice shall be dated to reflect the original claim date.”

Clause 42.4 Unfixed Plant and Materials

Payment for plant or materials intended for incorporation in the Works but not incorporated, the Principal will make payment for this plant or materials only if the Contractor provides:

(a) additional security in the form of a bank guarantee in an amount equal to the payment claimed for the plant or materials;

(b) satisfaction to the Superintendent that the ownership of such plant and materials will pass to the Principal upon the making of the payment claimed; and

(c) satisfaction to the Superintendent that such plant or materials are properly stored, labelled the ‘Property of the Department of Transport and Main Roads’, and adequately protected in a secured fenced compound that prevents public access.

3. The following Clauses, the full texts of which are contained in these Tender Documents, have been added to those of AS2124 - 1992:

Clause 5.11 Forfeiture of Security
Clause 21.7 Authorized Representative of Principal
Clause 30.7 Australian Content
Clause 32 Hours of Work and Supervision Costs
Clause 49 Statutory Declaration in respect of Final Certificate

Clause 5.11 FORFEITURE OF SECURITY

If the contract is terminated under Clause 44.4 (b), any security provided by the Contractor pursuant to Clause 5.2 shall be totally and finally forfeited to the Principal so as to defray administrative costs in establishing a replacement contract.

Clause 21.7 AUTHORIZED REPRESENTATIVE OF PRINCIPAL

The Principal may by notice in writing to the Contractor appoint an authorized representative to act for him for the purpose of any or all of Clauses 21.1 to 21.5 and the Contractor shall accept such Representative as the authorized agent of the Principal for the foregoing purpose or purposes so notified to the Contractor.

Clause 30.7 AUSTRALIAN CONTENT
No materials other than those of Australian manufacture shall be used by the Contractor in its performance of the Contract unless otherwise specified or approved by the Superintendent upon one or more of the following grounds:

(a) the specified article is not made in Australia; or
(b) the quantity required cannot be supplied within a reasonable time; or
(c) the specified article is not available on reasonable terms and conditions.

Clause 32  **HOURS OF WORK AND SUPERVISION COSTS**

32.1  **Hours of Work**

The working hours and working days shall be as stated in Annexure A. These shall not be varied without the prior approval of the Superintendent except when in the interests of safety of the work under the Contract or to protect life or property the Contractor finds it necessary to carry out work outside the working hours or on other than the working days stated in the Contract. In such cases the Contractor shall notify the Superintendent in writing of the circumstances as early as possible.

32.2  **Supervision Costs when Hours Varied**

It is hereby expressly provided that should the Superintendent approve a variation in working hours the Contractor may have to pay to the Principal an amount of sixty dollars ($60) for each hour of work outside the working hours and working days specified in Clause 32.1 hereof.

The amount due and payable in this respect at the time of issuing of a progress certificate or final certificate shall be deducted from the payment in accordance with Clause 42.10 of the General Conditions of Contract.

Clause 49  **STATUTORY DECLARATION IN RESPECT OF FINAL CERTIFICATE**

Further to clause 43, before payment is made in respect of the Final Certificate, the Contractor shall make and deliver to the Principal a statutory declaration to the effect prescribed by clause 43 and to the further effect that all claims of every description whatsoever (and whether for damage or injury to property or persons otherwise howsoever) arising out of the Contract have been satisfied.
Section 5
Specification
# SPECIFICATION

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DRAWINGS
1 GENERAL

1.1 Extent of Contract

The Contract shall include the supply of all plant, equipment, labour and material necessary for the execution of the whole of the Works required for Gold Coast Seaway Sand Bypass Pipeline Upgrade, all in accordance with this Specification, Particular and General Conditions of Contract and the Drawings.

The major items included in the Works are as follows:

1. Fabricate 14 new pipe bracket support clamps including fixings and anodes.
2. Remove existing support brackets or chains on the seaway pipeline and reinstate pipeline to new design levels.
3. Install 3 new support piles at the South Stradbroke Island reach of the pipeline.
4. Install 14 new pipe bracket support clamps to pipeline at new design levels.

1.2 Drawings

This Specification and the Conditions of Contract shall be read in conjunction with the following Drawings:

<table>
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1.3 Site of Works

For the purpose of this Contract the site of the works shall be defined as an area 30 meters from the seaway pipeline in all directions, between the south and north training walls of the Gold Coast Seaway.
1.4 Datums

1.4.1 Height Datum

All heights and soundings are in metres and are reduced to the vertical datum as defined on drawing 465455A.

1.4.2 Horizontal Datum

All coordinates are in metres and are based on the horizontal datum as defined on drawing 465455A.

1.5 Disposal of Materials

All waste materials from the works shall become the property of the Contractor for disposal ashore.

The Contractor shall exercise care not to dispose of materials in or allow any material to enter into the ocean. The works area and its environs shall be inspected after the works are completed and the Contractor shall be required to remove, at his own expense, any waste materials required to be removed under this Contract.

1.6 Transport

Special care shall be taken in the lifting, handling and transporting of all installed items to ensure protection from damage. In particular, all open joints, gussets and other projecting parts shall be protected to the satisfaction of the Superintendent.

All items shall be rigidly braced and packed to prevent distortion of the section during transportation. It shall be the responsibility of the Contractor to carry out remedial measures on any item which arrives on site in a distorted condition, notwithstanding satisfactory inspection and checking in the fabrication works.

1.7 Temporary Lights

It shall be the responsibility of the Contractor to provide temporary lights in working order to the approval of the Superintendent for any pile not driven to depth before sunset. Under no circumstances shall any exposed pile be left unlit at sunset on any day during the period of the Contract.

The lights shall be visible through 360 degrees at a minimum distance of 1500 metres.

1.8 Contractor to Visit Site of Works

The Contractor shall be deemed to have fully informed itself as to the site of the work, facilities, transportation, storage and handling of materials, availability of labour and materials and other matters and conditions whatsoever affecting the carrying out of the works.

No claim for extra compensation in excess of the tendered price will be considered on any ground such that the Contractor was not conversant with local conditions prevailing at the
1.9 Hold points and Witness Points
For Hold Points (where specified), work is not to proceed until released in writing by the Superintendent.

For Witness Points (where specified), the Contractor shall give a minimum 48 hours notice of an activity requiring inspection. The inspection will be scheduled during normal business hours.

1.10 Safety Hazards Identified in the Design Process
The following hazards have been identified in the design process (refer to Clause 13 of the Particular Conditions of Contract about mitigation).

1. Public accessing work site.
2. Working next to or over water.
3. Lifting, transporting and handling pipe support clamps.
4. Diving - when installing steel pipe bracket support clamps.
5. Dangerous marine animals (stingers, sharks, stone fish, and so on).
6. Working underwater near suspended loads while using breathing apparatus.
7. Vessels using the seaway entrance

1.11 As Constructed Drawings
The Contractor shall supply ‘As Constructed’ drawings in accordance with this Clause and Clause 4.3 of the Particular Conditions of Contract.

The Contractor shall prepare a set of A3 or A1 sized paper hardcopy contract drawings marked-up by hand in red ink to accurately reflect ‘As Constructed’ details.

1.12 Use of the Waterway By Others
The Contractor shall at all times accommodate reasonable and safe use of the waterway by such vessels as may normally be expected to use the waterway. The Contractor shall at its own expense provide buoys and markers to identify any local channel to be used by other vessels and to advise any required speed restriction in accordance with the requirements of the Harbour Master. If the works or the Contractors vessel(s) impose restrictions on the size of the other vessel that can enter the waterway the Contractor shall be required to move his plant and equipment at regular intervals to allow the free passage of vessels subject to such restrictions. The Contractor shall not be entitled to any payment for delays resulting from the compliance with this clause.
PARTICULARS

2.1 Repair to Existing Submerged Pipeline

The existing submerged pipeline is coated with a 30mm thick concrete casing. Any damaged casing located within 1m of the support pile shall be repaired by the Contractor upon request by the Superintendent.

Repair of the concrete casing will be by suitable epoxy putty capable of application and curing whilst under seawater. The Epoxy putty shall be finished to the level of the existing concrete. Curing times and application technique shall be as per the manufacturer’s recommendations. Details of the proposed product and application together with the manufacturer’s data sheets are to be supplied to the Superintendent prior to any repair works for review.

2.2 Removal of Existing Pipeline Brackets and Chains

The seaway pipeline is currently supported by 11 steel piles. The pipeline is suspended by either steel chain or steel flat loops attached to the pile.

A dive inspection of the pipeline was performed on the 27 March 2012, photo screen shots of this inspection video are included in Appendix A – Photos of Pipeline and Piles.

The contractor is to remove and dispose ashore the existing brackets and chains supporting the pipeline.

2.3 Removal of Marine Growth

Prior to installation of support brackets, the existing marine growth on the pile and/or submerged pipeline in the immediate vicinity of the pipeline supports shall be removed by the Contractor. Removal of the marine growth shall be performed without causing damage to the steel pile or the concrete casing of the pipeline. Surfaces that are to be used as a bearing surface for clamping the steel bracket to shall be visibly free from all algae and marine growth including hardened coral.

Payment for removal of marine growth shall be included in the tendered rates for installation of the pipeline brackets.

2.4 Test assembly of Pipeline Support Bracket

Prior to commencement of underwater installation of the pipeline support brackets the contractor shall first test assemble the pipeline support bracket. This shall be performed by the Contractor in order to establish that they can suitably undertake the works while submerged. WITNESS POINT

2.5 Preparation of Bracket Surfaces in Contact with Support Piling

To ensure adequate friction between the support pile and the pile bracket clamp surfaces, all fraying surfaces shall be whip blasted prior to installation on the piles. Whip blasting shall be performed to an extent such that it removes the metallic lustre from the fresh galvanised
coatings. All whip blasted surfaces shall be made available to the Inspector prior to the clamp or clamp brackets being installed onto the support piling. **HOLD POINT**

### 2.6 Installation of Pipeline Support Brackets

The Contractor shall install the pipeline support brackets to the levels shown in the drawings. It may choose to use the additional set out clamps detailed to establish an accurate point from which the pipe support bracket can be installed onto.

At all times during the installation of the pipeline support brackets the Contractor must insure that the pipeline is adequately supported to avoid the pipeline spanning between more than two successive piles.

### 2.7 Commissioning

After installation of the pipeline support brackets the works will require inspection while under normal operating conditions. The Contractor shall advise the Superintendent within 2 weeks of the date which it requires the final inspection dive to verify the completion of the works. The notice shall also be provided to the Advisor (Marine Infrastructure) Gold Coast Waterways Authority, 40-44 Seaworld Drive, Main Beach QLD 4217, who will provide the inspection dive at no cost to the Contractor.

### 3 STEELWORK

#### 3.1 GENERAL

This Specification refers to the supply, fabrication and erection and/or installation of steel items for the works in accordance with AS 4100–1998: *Steel structures*.

#### 3.2 STEEL MATERIALS

##### 3.2.1 Ordinary Structural Steel

Unless otherwise noted, specified or approved, all steel must be of Australian manufacture, all plates, flats, rolled sections and hollow structural sections must be **350 grade steel** complying with the following Australian Standards:

- AS/NZS 1163–2009: *Cold-formed structural steel hollow sections*
- AS/NZS 1594–2002: *Hot-rolled steel flat products*
- AS/NZS 3678–2011: *Structural steel - Hot-rolled plates, floorplates and slabs*
- AS/NZS 3679.1–2010: *Structural steel - Hot-rolled bars and sections*

All materials must be free from rust, surface defects, heat-affected zones or other defects. Material with surface defects which in the opinion of the Inspector would provide an unsatisfactory finish will be rejected.
3.2.2 Special Steels

Cast Steel must comply with AS 2074–2003 Cast steel.

Stainless Steel must be grade 316. Bolts designated as CR STL (corrosion resistant steel) on the Drawings must be this grade and must have rolled threads.

3.2.3 Bolts, Nuts and Washers

Unless otherwise specified or shown on the Drawings, all bolts, nuts and washers must be supplied and installed in accordance with the following Standards as applicable:

AS 1110.1–2000: ISO metric hexagon bolts and screws - Product grades A and B - Bolts
AS 1110.2–2000: ISO metric hexagon bolts and screws - Product grades A and B - Screws
AS 1111.1–2000: ISO metric hexagon bolts and screws - Product grade C - Bolts
AS 1111.2–2000: ISO metric hexagon bolts and screws - Product grade C - Screws
AS 1214–1983: Hot-dip galvanized coatings on threaded fasteners (ISO metric coarse thread series)
AS/NZS 1252–1996: High strength steel bolts with associated nuts and washers for structural engineering
AS/NZS 1559–1997: Hot-dip galvanized steel bolts with associated nuts and washers for tower construction
AS 1237.1–2002: Plain washers for metric bolts, screws and nuts for general purposes - General plan
AS 1237.2-2002: Plain washers for metric bolts, screws and nuts for general purposes - Tolerances

3.3 FABRICATION AND ERECTION

3.3.1 General

The fabrication and erection of all steelwork must be carried out in accordance with the requirements of AS 4100–1998: Steel structures. In particular, the Contractor's attention is drawn to sections 14, 15 and 16 titled Fabrication, Erection and Modification of Existing Structures respectively.

Fabrication must be carried out under workshop conditions in order that minimum work is required at the site of erection or installation of the steel items. The Superintendent may request trial assemblies be carried out to prove the accuracy of the workmanship before dispatching the items to the sites.

Allowance should be made for insulating collars in drill holes where dissimilar metals are in contact.
3.3.2 Preparation and Cutting

All plates, bars and section must be flattened and straightened and made free from twist before any other work is done on them. The method adopted for this work must not to injure or mark the material.

Cold sawing must be used when it is required to cut a section accurately to length, or where a rough edge might detract from the appearance of the structure.

Cold or hot sawing or machine gas cutting, or for small sections and plates, cropping and shearing may be used where the edges are to be butt welded, or where the exact length of a member is not vital to design and where a rough edge will not detract from the appearance of the structure, or where the edges are required to be machined after cutting.

Gas cutting by hand must not be permitted.

All burrs left by sawing, cutting or shearing must be removed before fabrication or assembly. The sharp arises of plate must be removed by light grinding.

3.3.3 Welding

All welding must be carried out in accordance with AS/NZS 1554.1–2000: Structural steel welding - Welding of steel structures with the exception of Section 7 Inspection which shall not apply.

For the purposes of this Specification the term ‘Inspector’ referred to in the above Standard shall be taken to mean the Superintendent.

Welding procedure sheets as required under the above Standard must be forwarded to the Superintendent for information only, before the associated welding is carried out (Hold Point).

Where welding procedures are not prequalified, the Contractor must provide to the satisfaction of the Superintendent, documentary evidence and/or test results as necessary to have the welding procedures qualified in accordance with the above Standard before the associated welding is started (Hold Point).

The Superintendent or its Representative must have access at all times to all relevant phases of the work and reasonable notice must be given in advance of the start of welding operations.

The Superintendent or its Representative must have the opportunity to witness all testing of welding procedures and welder qualification tests that are required. The Superintendent may require evidence that welders employed on the works have satisfactorily completed appropriate tests as laid down in AS1796–2001: Certification of welders and welding supervisors and are deemed competent.

Before and during welding operations, the Superintendent or its Representative may inspect the setup of the work and check that the welding is being correctly carried out. However such checking will not relieve the Contractor of its responsibility to carry out the welding in accordance with this specification and as shown on the Drawings.
The Contractor is responsible for carrying out non-destructive tests on all SP welds and selected GP welds by ultrasonic or other means using a NATA registered laboratory. Copies of results must be forwarded to the Superintendent immediately when available. Testing must be in accordance with AS/NZS 1554.1.

Where flaws in the welds are found, the Superintendent shall determine what imperfections are acceptable and what imperfections will involve cutting out and re-welding. Such determination shall, where possible, be based on the requirements of AS/NZS 1554.1 Section 6, Quality of Welds. Costs of any subsequent testing will be borne by the Contractor.

3.3.4 Bolted Connections

All bolts, nuts and washers, of any designation, must be hot dip galvanized in accordance with the section Protective Treatment of Steelwork, except where the Drawings nominate any bolt, nut and washer to be of stainless steel or other non-ferrous material.

All high-strength bolts, with their nuts and washers must comply with AS/NZS 1252 and be supplied as hot dip galvanized from the manufacturer.

Where fabricated items are specified to receive protective treatment after assembly and tightening of nuts and bolts, the Superintendent shall inspect all such connections and its acceptance of these must be obtained before proceeding with the protective treatment. Nevertheless any bolts and nuts found to contain slack following the application of protective treatment must be tightened to the satisfaction of the Superintendent.

At any time throughout the Contract period and/or the Defects Liability Period, the Contractor must, where directed by the Superintendent:

a) tighten all nuts and bolts found to contain slack irrespective of whether such slack was caused by shrinkage of materials or any other cause whatsoever,

b) remove any connector showing signs of rust and replace it with a new connector of the same designation all at its own expense.

Where tightening of any nut or bolt or the replacement of any connector results in damage to or a discontinuity in the protective treatment of the structure such damage or discontinuity must be made good to the entire satisfaction of the Superintendent all at the Contractor's expense.

3.3.5 Commercial, Precision and High-Strength Bolts to Snug Tight

This Section applies to commercial bolts conforming to AS 1111.1 and precision bolts conforming to AS 1110.1 of strength grades 4.6 and 8.8 respectively and to high-strength bolts of strength grade 8.8 conforming to AS/NZS 1252, tightened to snug tight in accordance with AS 4100. Bolted connections of these types are designated 4.6/S or 8.8/S on the drawings.

Washers must be provided both at heads and nuts of all-through bolts and bolt lengths must be such as to allow not less than 3 mm and not more than 12 mm of the bolt projecting beyond the nut.
3.3.6 High Strength bolts in Structural Connections

This Section applies to high-strength bolts of strength grade 8.8 conforming to AS/NZS 1252 and fully tightened in friction type and bearing type joints in accordance with AS 4100. Bolted connections of these types are designated 8.8/TF on the drawings.

The assembly of joints must be strictly in accordance with the procedures set down in AS 4100. Galvanized load bearing indicating washers must be used for indicating the tension in the galvanized bolt and nut assembly.

To limit the ingress of moisture into the joint the assembly must be tightened until the gap between the washer and nut is just closed.

3.4 PROTECTIVE TREATMENT OF STEELWORK

3.4.1 General

All steelwork shall have the protective treatment as described in the drawings and in the table below.

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<tr>
<th>Member</th>
<th>Protective Treatment</th>
<th>Coating type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel Piling</td>
<td>Paint on exterior surface</td>
<td>Paint as per Clause 5.12</td>
</tr>
<tr>
<td>Steel backing clamp and setout guide clamps</td>
<td>Hot dip galvanise only</td>
<td>As per Cause 3.4.3</td>
</tr>
<tr>
<td>Pipe support bracket including front clamps</td>
<td>Hot dip galvanise only</td>
<td>As per Cause 3.4.3</td>
</tr>
</tbody>
</table>

3.4.2 Passivation of Stainless Steel

All welds in stainless steel must be passivated by the application of a ten percent nitric acid solution followed by washing clean with fresh water.

3.4.3 Hot Dip Galvanizing

Prior to delivery to the galvanizer, the Contractor must ensure that any surface coatings including painted markings, weld slag and weld glazing are entirely removed by blasting, chipping or scraping. Failure to remove such surface coatings could result in rejection of the galvanized item through areas remaining ungalvanized.

The Contractor must consult with the galvanizer and subject to agreement by the Superintendent's Representative provide such drain and vent holes and handling attachments as may be necessary or as may be shown on the Drawings.

The galvanized coating on all items to be galvanized must conform to:

AS 1397–2011: Continuous hot-dip metallic coated steel sheet and strip - Coatings of zinc and zinc alloyed with aluminium and magnesium
AS/NZS 4534–2006: Zinc and zinc/aluminium-alloy coatings on steel wire

AS/NZS 4680–2006: Hot-dip galvanized (zinc) coatings on fabricated ferrous articles

AS/NZS 4791–2006: Hot-dip galvanized (zinc) coatings on ferrous open sections, applied by an in-line process

AS/NZS 4792–2006: Hot-dip galvanized (zinc) coatings on ferrous hollow sections, applied by a continuous or a specialized process

However the dimensions of hot-dip galvanized fasteners must comply with the requirements of Section 5 of AS 1214 – 1983 Hot-dip galvanized coatings on threaded fasteners (ISO metric coarse thread series). The uniformity of the coating of hot-dip galvanized fasteners must comply with clause 6 of the same Standard.

Except where shown on the drawings or directed otherwise by the Superintendent, all items must be galvanized after fabrication and care must be exercised to ensure that the entire surface of such items is coated. Areas of the galvanized coating damaged by welding, drilling, cutting, etc. or by excessively rough treatment during handling and transit must be made good, as directed by the Superintendent, in accordance with the provisions of AS/NZS 4680, AS/NZS 4791 and AS/NZS 4792. The method of repair and the materials used therein must be subject to the approval of the Superintendent's Representative.

Special attention must be paid to the conditions of transport, shipment and storage to avoid the possibility of wet-storage stain (white rust). The Superintendent may require any wet-storage stain on any galvanized article to be removed.

All edges of galvanized steelwork must be wiped clean of droppings, tears and all sharp protuberances whilst still fluid. No such defects will be acceptable in the finished element.

It is realised that multiple dipping may be required for very large items and that this will detract from the appearance of the galvanizing at the overlaps of the dippings.

3.4.3.1 Protection of Electrical Contact with Anode

Steelwork shall be galvanized prior to the application of the aluminium anode. The contractor must insure that excess zinc from the galvanising process does not prevent electrical contact between the aluminium anode and the pipeline support bracket.

The black steel nuts welded to pile clamps and clamp brackets shall have their threads mechanically cleaned to allow for electrical connection between the black steel nuts and the contact screws. After galvanising any zinc or residue remaining on the threaded portion of the contact screw nuts shall be removed by re-tapping of the nuts.

The M16 MS studs used for connecting the aluminium anode must be mechanically cleaned thoroughly to clean metal after galvanising to allow for electrical contact with the anode.
4 STEEL PILING

4.1 TYPE OF PILES

The work required under this section includes the fabrication and installation of steel piling to the necessary lengths, cross-section and in positions as indicated in the relevant Drawings.

4.2 SUPPLY OF PILE LENGTHS

The Contractor shall supply and fabricate the required lengths of piling as shown on the Drawings and as indicated in the Bill of Quantities.

4.3 FABRICATION AND SPICING

The requirements of the Steelwork section of this Specification shall apply to all stages of pile fabrication.

Fabrication of piles shall include those fabrication and field splices necessary for fabricating the piles to the required lengths.

The circumferential welds shall be full penetration, S.P. butt welds. Circumferential field splice welds shall incorporate an internal backing plate/jointing band.

Full details for the fabrication and welding for such piles shall be furnished and forwarded to the Superintendent for information only.

All pile sections shall be joined to match as near as practicable. The maximum allowable mismatch of the end sections to be butt welded shall not exceed 3 mm radially at any location on the circumference.

The tolerance on straightness of completed piles shall not exceed: \[ \frac{\text{Length}}{400} \]

All piles shall be correctly finished, free of cracks, surface flaws laminations and other defects. The repair of minor defects by welding or otherwise shall be permitted only with the approval of the Superintendent.

Surface treatment and painting of piles shall be as described under the section of this Specification titled Painting of Steel.

All stages in fabrication and coating of the piles shall be subject to inspection. Notice of at least one clear working day shall be given to the Superintendent for all pile coatings operations.

4.4 PLANT USED FOR DRIVING PILES

Piles shall be driven from a fixed platform or from suitable floating plant using an approved form of piling hammer.
4.5 PARTICULAR PRECAUTIONS TO BE OBSERVED

All piles shall be driven in the presence of the Superintendent's Representative. Pile driving equipment shall not be removed from the pile without the approval of the Superintendent's Representative.

4.6 HANDLING OF PILES

Handling, transporting and pitching of piles shall be carried out in such a manner to ensure that the piles are not damaged. Coatings which have been damaged during handling and pitching shall be made good before driving. Holes for lifting will be permitted in steel piles only providing the section in which the hole is located does not form part of the finished installed pile.

Piles in storage shall be stacked approximately horizontally and in such a way as to avoid permanent distortion of any part.

4.7 PITCHING AND DRIVING

Piles shall be set out to the alignment and centres shown on the Drawings and shall be plumb. Each pile shall be driven without stopping except for any additional splicing necessary until the required penetration and/or capacity is obtained as specified.

The Contractor shall be deemed to have allowed for any strengthening of the heads of piles as may be necessary to resist driving stresses, and for the use of a suitable helmet.

Steel piles shall be driven open-ended unless specific approval is granted by the Superintendent to do otherwise.

4.8 ACCURACY OF PITCHING AND DRIVING

Piles shall be pitched to correct alignment and centres. The following tolerances apply:

(i) Navigation Beacon (Single Pile)
A tolerance of ± 1000mm measured at the pile head will be allowed for all piles. Deviation from nominated rake shall not exceed 1 horizontal in 25 vertical.

(ii) Pontoon Restraining Piles
A tolerance of ± 50 mm measured at mean sea level will be allowed for restraining piles. Deviation from the nominated rake shall not exceed 1 horizontal in 100 vertical.

(iii) Structural Piles
A tolerance of ± 100 mm measured at the pile head will be allowed for all piles. Deviation from nominated rake shall not exceed 1 horizontal in 100 vertical.

Should any piles driven exceed these specified tolerances the Superintendent may direct that the Contractor shall extract and drive a replacement pile or piles at his own expense in the correct position.
In the event of a pile being out of position, and the Superintendent, at his absolute discretion, has not ordered withdrawal of the pile or a replacement pile as indicated above, the Contractor shall be liable for the full cost of any alterations necessary to the structure to accommodate the pile which is out of position.

4.9 DRIVING RECORDS

The Contractor shall keep records of the driving of every pile as instructed by the Superintendent and shall submit these to the Superintendent not later than 24 hours after driving.

Unless instructed otherwise, the records shall show the date and time of driving, the number, weight and length of the pile, type and energy of the hammer, number of blows per 0.5 metre during the entire driving and the number of blows per 25 mm over the last 300 mm of penetration.

4.10 DEFECTIVE OR DAMAGED PILES

Piles damaged in anyway may be condemned and replacement ordered by the Superintendent, or the Superintendent may demand such remedial repairs as deemed necessary. Any such replacement or remedial repairs shall be at no extra cost to the Principal.

4.11 CUTTING OFF OF PILES

After driving, the piles shall be trimmed to the levels and profiles shown on the Drawings. Sealing plates, bond bars or other attachments shall be supplied and fixed in position in accordance with other Sections of this Specification and the Drawings.

4.12 MINIMUM DRIVEN PENETRATION

Penetration under self weight shall mean penetration of the pile with the helmet and hammer resting on the pile.

Driven penetration shall mean that penetration achieved beyond penetration under self weight due to the action of an operating hammer.

The minimum driven penetration for a particular pile shall be to the design depths as shown in the drawings; or a specific distance authorised by the Superintendent's Representative for a particular pile during the course of piling operations.

4.13 MAXIMUM TOTAL PENETRATION

The maximum total penetration for a particular pile shall be the greater of the following:

Two metres beyond the design depth as shown in the drawings; or a specific distance authorised by the Superintendent's Representative for a particular pile during the course of piling operations.
The method of determining the ultimate driving resistance for each individual pile shall be as determined by the Superintendent and shall be based upon the average set achieved by the last ten blows delivered by the piling hammer.

Where the minimum ultimate driving resistance has not been achieved and the maximum penetration has been reached, driving shall cease and the Superintendent's Representative's direction regarding further driving shall be sought.

Should the Superintendent's Representative not approve a pile which has failed to achieve the specified minimum ultimate driving resistance after the maximum specified penetration has been reached, the Superintendent's Representative may order the Contractor to continue driving the pile until the specified ultimate driving resistance is achieved and order extensions to the pile as required at the Principal's cost.

**4.14 FAILURE TO ACHIEVE MINIMUM PENETRATION**

Where difficulty is encountered in achieving the required minimum penetration, the Contractor shall increase the driving energy per blow delivered to the pile to a level just below that which would cause damage to the pile. Before proceeding with such an operation, the Contractor shall first obtain approval of his proposed methods of increasing the energy per blow from the Superintendent's Representative.

In addition to the above the Contractor may change his method of driving the pile in order to achieve the required penetration. Such changed methods will require approval by the Superintendent's Representative before being used.

Should such methods fail to achieve the required penetration and should the Superintendent not accept as being satisfactory the partially driven pile, the Superintendent may at the Principal's cost:

(i) test load the pile;
(ii) order the pile to be pulled and re-driven.

**4.15 ACCEPTANCE OF PILES AFTER DRIVING**

Each pile shall be subject to approval by the Superintendent's Representative after being driven.

**4.16 ALTERNATIVE METHODS OF PILE INSTALLATION**

Alternative methods of pile installation, i.e. Jetting, vibro hammer, screwing, pre-drilling, etc. will be considered. Details of alternative methods must be submitted to the Superintendent for approval.
5  PAINTING OF STEEL

5.1  SKILLED APPLICATION

The Contractor must follow the recommendations of the paint manufacturer in selecting only skilled applicators and using correct application procedures, in addition to those given below, in order to ensure a high quality result. Except for reinstatement of areas damaged during transport and installation, the protective coating must be applied to the steelwork in a workshop giving protection from sun, wind and rain.

5.2  SURFACE PREPARATION

All rough edges, burrs, and so on must be ground smooth. Sharp irregularities in the welds and all welding slag and spatter and weld dags must be removed.

All surfaces to be coated which show traces of oil, grease or other contaminant must be cleaned by an approved solvent and washed thoroughly with clean water before commencing blast cleaning. Solvent cleaning must be carried out in accordance with AS1627.1–2003: Metal Finishing – Preparation and pre-treatment of surfaces – Removal of oil, grease and related contamination.

All surfaces must then be dry abrasive blast cleaned to class 2½ finish in accordance with AS 1627.4–2005: Metal finishing - Preparation and pretreatment of surfaces - Abrasive blast cleaning of steel. The blast profiles must be 25 to 75 microns.

Cleaning after blasting must be in accordance with AS 1627.4. The cleaned surface must be left free of any contamination and must be coated on that day before the dew point is reached and before any contamination or discoloration of the surface occurs.

All surfaces to be coated must be completely dry and free from all oil, dust and other foreign matter at the time of coating. Where there is discoloration within a short time after blast cleaning, the surface must be thoroughly washed with fresh water and reblasted. If necessary the procedure shall be repeated.

Sand must not be used for open air abrasive blasting. Materials and methods of abrasive blasting must meet the relevant requirements of the Work Health and Safety Act 2011.

5.3  ENVIRONMENTAL OBSERVATIONS RECORDING

The contractor shall record the following data 3 times daily when undertaking surface preparation and coating activities:

- Dry Bulb temperature
- Wet Bulb temperature
- Strata Temperature
- Relative Humidity
- Dew Point
5.4 ABRASIVE BLASTING AND LEGISLATIVE REQUIREMENTS

5.4.1 Licensing

The Contractor must comply with the requirements of the administering authority (Department of Environment and Heritage Protection or the relevant local authority). The Contractor must supply the Superintendent with a copy of his current licence under the Environmental Protection Act for abrasive blasting or proof of application.

5.4.2 Abrasive Blast Material

The abrasive blast material used must be consistent with requirements of the relevant administering authority (Department of Environment and Heritage Protection or the relevant local authority). The Contractor is responsible for adequate collection and lawful disposal of waste material generated as a result of abrasive blasting.

5.5 CONDITIONS FOR COATING APPLICATION

The coatings must be applied under cover so that they are protected from exposure to rain, wind, dew, and so on

Work must not be performed in the following circumstances:

a) If the surface is wet or likely to become wet after blasting or before or during application of prime coating or top coating.

b) On the surfaces where condensation is likely to form, i.e. when the surface temperature of the steel is less than 5°C and/or 3°C above the dew point of the surrounding air.

c) When the relative humidity of the surrounding air is greater than 50% when air temperatures are below 10°C.

d) When the extremes of surface metal temperature exceed 40°C or are lower than 5°C.

Particular care must be taken to ensure that spent abrasive material and other foreign matter is not allowed to impinge on and adhere to freshly coated surfaces. Any previous suitable coats must be dry and free from any contamination, and sufficiently roughened if necessary.

An efficient air line filter separator must be fitted as close as possible to the pressure pot to eliminate line condensation and oil in the air supply to the spray gun.

5.6 COATING SYSTEM

The coating system must be solvent based inorganic zinc coating. The coating system must have or must be well advanced towards the procurement of relevant APAS approvals. The Contractor must obtain the approval of the Superintendent’s Representative for the proposed coating system prior to purchasing the paint. The system used must comprise of only one manufacturer’s product. The finished coat colour must be grey.
The solvent based inorganic zinc coating must be applied in one coat to achieve a minimum dry film thickness of 75 microns. The application methods must be strictly in accordance with the manufacturer's instructions.

Paint must be mixed with a mechanical mixer and allowed to stand for a time specified by the manufacturer before application which must be by airless spray.

If thinning is necessary for spraying, only thinners recommended by the manufacturer for use with that product must be used.

The second and any subsequent coats should be applied as soon as the previous coat is firm, but no coat must be left more than the maximum time recommended by the paint manufacturer before recoating.

The finished coating must be generally smooth and free from protuberances. A minor amount of sags, dimpling and curtaining which does not exceed 2-3% of the surface area will not be considered cause for rejection.

Inspection of the finished coating must be carried out in the presence of the Superintendent's Representative or his Inspector using an approved pinhole detector and magnetic dry film thickness gauge. Where the coating fails to meet the Specification, it must be repaired at the direction of the Superintendent's Representative.

The coating system adopted is summarised in the Coating Specification Summary at the end of this section.

5.7 CURING

The finished system must be allowed to cure for at least seven days before either:

a) Transporting to site if painting is being done off site; and

b) Installation.

5.8 PATCH-PAINTING AND REINSTATEMENT OF DAMAGED SURFACES

This clause refers to patch-painting and to the reinstatement of pinholes, damaged areas and site welded areas in the shop-applied paint system.

Areas which will not be subject to immersion before the repaired coating has fully cured must be reinstated in accordance with the following procedure.

a) Abrasive blast the area to be coated to AS 1627.4 class 2½ finish minimum with a 60 to 70 micron blast profile and feather back the adjacent coating to 20mm.

b) Clean areas which have been subject to salt spray by washing thoroughly with fresh water after abrasive blasting, allow to dry and reblast to the required grade and profile.

c) Swab the surface liberally with a thinner recommended by the paint manufacturer.
d) Apply by spray solvent based inorganic zinc coating to achieve the required film thickness of 75 microns.

Details of this system are included in the *Coating Specification Summary* at the end of this section.

In the case of areas which will be subject to immersion before the coating has fully cured the procedure, repair material and surface preparation required must be as recommended by the manufacturer of the originally applied coating.

NOTE: It is essential that repair coatings are kept strictly within the prepared areas and that no overlapping of the adjacent untouched coating occurs.

**5.9 PATCH-PAINTING OF INSITU PILES AND FITTINGS**

This clause refers to patch painting of insitu piles and fittings and the reinstatement of pinholes, damaged and site welded areas in the paint system.

a) The steel surface must be prepared using high pressure water blast to remove all salt build-up. Clean the damaged surface and rust patches back to white metal by mechanical grinding or other approved methods to Class 2.5 finish minimum with a 60 to 70 micron blast profile and feather back the adjacent coating to 20mm. in accordance with AS1627.4.

b) All paints must be thoroughly mixed and applied at the container consistency and must not be thinned or otherwise altered except in accordance with the manufacturer's instructions. Brushes and rollers must be clean and in good condition. Paints must be applied so as to be free from sags, brush marks or other defects.

Each coat must be thoroughly dry before the succeeding coat is applied. Two days must elapse between succeeding coats unless special paint, requiring more or less time is used.

Where necessary and where required by the manufacturer's instructions, each previous coat must be sanded down and dusted down before the succeeding coat is applied.

c) Apply by spray solvent based inorganic zinc coating to achieve the required film thickness of 75 microns.

**5.10 HANDLING AND TRANSPORT**

Particular care must be taken to avoid damage to coatings in handling and transport. Padded slings must be used and soft pads placed beneath components when stacked. Components must be stored clear of the ground on timber blocks. Painted components must be supported at least 300 mm above the ground for inspection.
5.11 COATING SPECIFICATION SUMMARY – NEW COATING ON CLEAN STEEL

The surface preparation for ungalvanised steel must be abrasive blast clean to AS1627.4 Class 2 ½ Finish minimum (25 to 75 microns blast profile).

The surface preparation for galvanised steel must be solvent wash to AS1627.1.

The coating specification summary for a new coating on clean steel is outlined in Table 1 below.
Table 1 – Summary of coating system for new coating on clean steel.

<table>
<thead>
<tr>
<th>Coating Number</th>
<th>Protective Coating System</th>
<th>Dry Film Thickness Per Coat</th>
<th>Colour</th>
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<tbody>
<tr>
<td>1st Coat</td>
<td>Solvent based inorganic zinc coating, Carboline Carbozinc 11, or approved equivalent.</td>
<td>75 microns</td>
<td>Grey</td>
</tr>
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</table>

5.12 COATING SPECIFICATION SUMMARY – PATCH PAINTING AND REPAIR OF DAMAGED AREAS

The surface preparation for a damaged area of existing paint must be abrasive blast clean to AS1627.4 Class 2.5 Finish minimum (60 to 70 microns blast profile).

The coating specification summary for repair to an existing damaged coating is outlined in Table 2 below.

Table 2 – Summary of coating system for new coating on clean steel.

<table>
<thead>
<tr>
<th>Coating Number</th>
<th>Protective Coating System</th>
<th>Dry Film Thickness Per Coat</th>
<th>Colour</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Coat</td>
<td>Solvent based inorganic zinc coating, Carboline Carbozinc 11, or approved equivalent.</td>
<td>75 microns</td>
<td>Grey</td>
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APPENDIX A – PHOTOS OF PIPELINE AND PILES

(Seaway Pipeline – Northern end of exposed pipe)

(Seaway Pipeline – 46 metres from northern end of exposed pipe)
(Seaway Pipeline – 61 metres from northern end of exposed pipe)

(Seaway Pipeline – Pile 11 – Chain Support)
Section 5 – Specification
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Revision 1 - February 2013

(Seaway Pipeline – Pile 10 - Chain Support – showing damage to casing)

(Seaway Pipeline – Pile 10- Chain Support)
Section 5 – Specification

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Section 5 – Specification

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Section 5 – Specification

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(Seaway Pipeline – Pile 5 - Bracket Support)

(Seaway Pipeline – Pile 4 - Bracket Support)
(Seaway Pipeline – Pile 3- Bracket Support)

(Seaway Pipeline – Pile 2- Bracket Support)
(Seaway Pipeline – Pile 1 - Bracket Support)

(Seaway Pipeline – Pile 1 - Bracket Support – Showing Bracket Detail and existing anode)
(Seaway Pipeline – Southern end of exposed pipeline)
APPENDIX B

Drafting Presentation Standards For External Sources Supplying Drafting Documentation
Drafting Presentation Standards For External Sources Supplying Drafting Documentation

Major Infrastructure Projects

Transport and Marine Infrastructure Delivery Branch

Prepared by: Alan Johnsson and Craig Barel
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Branch: Transport and Marine Infrastructure Delivery Branch
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Department: Department of Transport and Main Roads
Location: Floor 3, 260 Queen Street, Brisbane Queensland 4000
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Contact for enquiries and proposed changes
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Version history

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<td>09/09/2009</td>
<td>Craig Barel</td>
<td>Updated departmental template and naming</td>
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Document sign off
The following officers have approved this document.

Customer
Name
Position
Signature  Date

Sponsor
Name
Position
Signature  Date

The following officer has endorsed this document.

Name  Alan Johnsson
Position  Technical Manager
Signature  Date
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1 Purpose

The purpose of this document is to outline the requirements for the provision of drafting documentation to the Department of Transport and Main Roads - Major Infrastructure Projects – Transport and Marine Infrastructure Delivery Branch from an external source, namely a consultant or contractor.

Where a consultant or contractor employs a sub-consultant or sub-contractor it shall be the responsibility of the principal consultant or principal contractor to ensure that the sub-consultant’s or sub-contractor’s documentation is prepared and submitted in accordance with these requirements.

2 Scope

The following will detail the requirements of the Department of Transport and Main Roads - Major Infrastructure Projects – Transport and Marine Infrastructure Delivery Branch drafting documentation standards whether in electronic or hard copy format.

3 Required Documentation

Consultants or contractors are required to provide the following documentation:

- Paper copy of tender issue (see Section 5)
- Film copy of construction issue including subsequent amendments, and "As Constructed" issue (see Section 5)
- Electronic copy of tender issue, construction issue including subsequent amendments, and “As Constructed” issue (see Section 4)

4 Electronic Media

4.1 Type

Digital copies of drawings shall be supplied on one of the following:

- CD / DVD
- Electronic mail (e-mail). At present e-mail size is generally restricted to 5Mb. This includes the mail message and any accompanying file attachments.

The consultant or contractor is to certify that all electronic data is virus free. The files shall be provided in the AutoCAD file format currently used by Major Infrastructure Projects – Transport and Marine Infrastructure Delivery Branch. If it is agreed that the consultant or contractor can use their own support files such as fonts, shapes, line types, and plot styles, then those support files must be provided along with the drawing files.
4.2 Compression

Data may be supplied in a compressed format agreed to by the nominated Major Infrastructure Projects Officer. Detailed accompanying documentation together with a copy of the software to reverse the process along with instructions on how to use the program to extract the file(s) shall be provided. If possible, self-extracting files should be provided to avoid having to provide any decompression software. All drawing files shall be fully purged, using the AutoCAD "purge" command, to reduce file size before transmittal.

4.3 Data Ownership

All data supplied by the consultant or contractor shall become the property of the Department of Transport and Main Roads. It shall not be used, copied, or reproduced by the consultant or contractor without the prior written approval of the nominated Major Infrastructure Projects Officer.

5 Hard Copy Media

Hard copies of drawings shall be supplied in accordance with the following:

Tender Issue including subsequent revisions or amendments:
- On bond type paper (Black Label Bond CAD, 80gsm from Oce´ Australia or approved equivalent)
- Or photocopy quality paper (80 gsm) for A3 and A4 sized drawings

Construction Issue including subsequent revisions or amendments:
- good quality double matt polyester drafting film 0.110mm minimum thickness

"As Constructed" Issue:
- good quality double matt polyester drafting film 0.110mm minimum thickness

6 CADD Software

The current CADD software systems used in Major Infrastructure Projects – Transport and Marine Infrastructure Delivery Branch are as follows:
- AutoCAD
- AutoCAD Civil 3D

7 CADD File Format

To facilitate data retrieval and other processes within Major Infrastructure Projects – Transport and Marine Infrastructure Delivery Branch, it is necessary to have a common file structure for the long term storage of project data.

This enables:
- All relevant project files to be stored together
- A common directory path that is easily accessed by all users
- Copying and archiving a project’s data files is more easily achieved
7.1 **File Naming Convention**

- Drawing file names shall be exactly the same as the drawing number. For example, drawing number BN-10-2-5A will be in a file named BN-10-2-5A.dwg. Refer to Section 9 for details on drawing numbering.
- Append amendment, revision or issue numbers directly to the drawing number without spaces, underscores or hyphens.
- Numbers shall not be padded with leading zeros. For example INB-01-01-10.dwg is not acceptable it should be INB-1-1-10.dwg
- There shall be only one drawing per drawing file.

7.2 **Plot Style Files**

Major Infrastructure Projects – Transport and Marine Infrastructure Delivery Branch shall provide a plot style file to be used by the consultant or contractor. See Section 8 for further details about colour assignments and line weights. If it has been agreed that the consultant or contractor can use their own plot style file then the plot style file must be supplied to Major Infrastructure Projects – Transport and Marine Infrastructure Delivery Branch along with the drawings.

7.3 **AutoCAD External References and Drawing Exchange**

When drawings are created that contain external reference files (XREFS), the initial configuration of the XREFS must be addressed when the drawing is setup to enable the drawing to be exchanged or shared across a network successfully. This is because XREFS are separate AutoCAD drawing files that are read and displayed when the parent drawing is opened.

When you attach XREFS to a drawing, there are methods of pathing the XREF files to ensure problem-free file operations including when data is archived. XREFS should be kept in a separate folder. The XREF path shall be relative to the folder containing the dependent drawings (the path shall not be absolute).

When drawings are distributed that contain XREFS, it is important that one of the following is performed in order to ensure that the drawing can be read successfully:

- Path the XREFS correctly to ensure that all XREFS are included in the drawing. Use relative paths only.
- For superseded drawings, use the bind option to bind all XREFS into the drawing before making subsequent changes to any XREFS. The drawing will no longer depend on the external reference files, however the advantages of using XREFS in the drawing will be lost.
- XREFS should only be bound by using the insertion method so that it becomes a block.
8 Drawings

8.1 General

This section sets out the general requirements for the preparation and presentation of drawings and shall also be read in conjunction with Australian Standard AS1100 Technical Drawing – General Principals, AS1101 – Graphical Symbols for General Engineering, or other relevant Standards. Third angle projection shall be used on all drawings. All sections should be oriented in the third angle where possible.

8.2 Drawing Size

Consultants are required to provide drawings on the following size sheets in accordance with Australian Standard AS1612. Major Infrastructure Projects – Transport and Marine Infrastructure Delivery Branch preferred sizes are A1, A3, and A4 while A0 and B1 are non-preferred sizes. Tabulated below is a summary of the sizes acceptable.

<table>
<thead>
<tr>
<th>Sheet Designation</th>
<th>Trimmed Width (W) mm</th>
<th>Trimmed Length (L) mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>A0</td>
<td>841</td>
<td>1189</td>
</tr>
<tr>
<td>A1</td>
<td>594</td>
<td>841</td>
</tr>
<tr>
<td>A3</td>
<td>297</td>
<td>420</td>
</tr>
<tr>
<td>A4</td>
<td>210</td>
<td>297</td>
</tr>
<tr>
<td>B1</td>
<td>707</td>
<td>1000</td>
</tr>
</tbody>
</table>

8.3 Drawing Templates

Major Infrastructure Projects – Transport and Marine Infrastructure Delivery Branch shall supply electronic drawing templates containing the frame, text style, dimension styles, line types and default layering structure to be adopted. Major Infrastructure Projects – Transport and Marine Infrastructure Delivery Branch can supply A0, A1, A3, A4, and B1 frames as required. If Major Infrastructure Projects – Transport and Marine Infrastructure Delivery Branch supplies drawing frames examples can be shown of drawing numbers, amendments, and so on. These drawing frames should have sign-off from Major Infrastructure Projects and by any external client for example, Translink, depending on the project. The consultant or contractor may modify the drawing frames to include the consultant’s or contractor’s name or business logo, and the consultant’s or contractor’s own drawing numbers in such a place and size so as not to impair the functional drawing area. The nominated Major Infrastructure Projects Officer shall be consulted in this process.
8.4 Line Types, Shapes, Text, Dimensioning, and Layering

Line types – the template drawing provided to the consultant or contractor shall contain Major Infrastructure Projects – Transport and Marine Infrastructure Delivery Branch line types. The consultant or contractor shall use Major Infrastructure Projects – Transport and Marine Infrastructure Delivery Branch or default AutoCAD line types wherever possible. If the consultant or contractor uses other line types then they must supply the line type definition file and any necessary shape files along with the electronic drawings. All colours and line weights shall adhere to Major Infrastructure Projects – Transport and Marine Infrastructure Delivery Branch plot style file which will be supplied to the consultant or contractor. The colours and line weights to be used are as follows:

<table>
<thead>
<tr>
<th>Pen No.</th>
<th>Line weight (mm)</th>
<th>Colour</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (red)</td>
<td>0.25</td>
<td>black</td>
</tr>
<tr>
<td>2 (yellow)</td>
<td>0.18</td>
<td>black</td>
</tr>
<tr>
<td>3 (green)</td>
<td>0.35</td>
<td>black</td>
</tr>
<tr>
<td>4 (cyan)</td>
<td>0.50</td>
<td>black</td>
</tr>
<tr>
<td>5 (blue)</td>
<td>1.00</td>
<td>black</td>
</tr>
<tr>
<td>6 (magenta)</td>
<td>0.70</td>
<td>black</td>
</tr>
<tr>
<td>7 - 255</td>
<td>use object line weight</td>
<td>use object colour</td>
</tr>
</tbody>
</table>

Text – on all drawings, text shall be in uppercase using ISOCP font with the exception of site and locality plans where other fonts such as italic and lower case may be used to indicate land and sea areas. Text shall generally be left justified with the exception of tables and headings that may be centre justified. An ISOCP text style shall be provided in the template drawing that is supplied to the consultant or contractor. Text shall have the following properties:

<table>
<thead>
<tr>
<th>Height (mm)</th>
<th>Line weight (mm)</th>
<th>Pen No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.8</td>
<td>0.18</td>
<td>2 (yellow)</td>
</tr>
<tr>
<td>2.5</td>
<td>0.25</td>
<td>1 (red)</td>
</tr>
<tr>
<td>3.5</td>
<td>0.35</td>
<td>3 (green)</td>
</tr>
<tr>
<td>5.0</td>
<td>0.50</td>
<td>4 (cyan)</td>
</tr>
<tr>
<td>7.0</td>
<td>0.70</td>
<td>6 (magenta)</td>
</tr>
</tbody>
</table>
The size of text used on all drawings shall conform to the table below:

<table>
<thead>
<tr>
<th>Text height (mm)</th>
<th>Description of usage</th>
</tr>
</thead>
</table>
| 1.8             | Used only where congestion is a problem.  
                         For example, very densely placed survey levels. |
| 2.5             | General notes, notes on views, scales under view titles, and text in tables. |
| 3.5             | Any note that needs to stand out, a sub heading for tables or general notes. |
| 5.0             | Subheading under view (not underlined), heading for view (underlined).  
                         Titles for tables and general notes. |
| 7.0             | Any major heading on a drawing that needs to stand out. |

Dimensions – shall use 2.5 mm high text with ISOCP font.  Filled arrow heads shall be used and are to be 3 mm in size. All dimension lines, arrows and text are to use a 0.25 mm pen (pen no. 1 red). The template drawing provided to the consultant or contractor shall contain appropriate dimension styles.  All dimensions shall be in millimetres unless noted otherwise (U.N.O.) and shall be to the nearest 1 mm.

Layer Structure – all AutoCAD objects shall have their colour and line type properties set to “ByLayer” so that the colour and line type of an object is adopted from the layer it resides on.  The layer naming convention shall use a descriptive name for the objects contained, appended with an abbreviation of the line type and the line weight values, separated by underscores.  For example, a layer named KERB_CON_025 will contain kerb line work with a CONTINUOUS line type and a line weight of 0.25 mm.  The 0.25 mm line weight means the layer colour will be set to red (pen no. 1).  A Layer named TXT_025 will contain text that is 2.5 mm high with a line weight of 0.25 mm, colour red (the line type is to be set to CONTINUOUS for all text and dimension layers).  Dimensions shall be on a layer named DIM with a line weight of 0.25 mm, colour red.

9 Drawing Numbering

9.1 Requirements

Drawing numbers, including the numbering structure, will be supplied to the consultant or contractor by the nominated Major Infrastructure Projects Officer. The numbers are stored on a card system and this information is then transferred into a database. In order for the storage and retrieval system to maintain integrity and satisfy State Government document management requirements, the following must be adhered to:

Each drawing shall have a separate drawing number.  Sets of drawings shall not have a common drawing number with individual sheet numbers. If a cover or index sheet listing the drawings in a project is included, this sheet must also have an individual drawing number.
The consultant or contractor shall be responsible for the issuing of drawing numbers to any sub-consultants or sub-contractors employed on the project and ensuring that no duplicate use of drawing numbers occurs. The consultant or contractor may add their own drawing numbers for their own record keeping systems, in such a place and size agreed to by the nominated Major Infrastructure Projects Officer.

9.2 Numbering Structure

Major Infrastructure Projects is responsible for delivering Major Projects and Other Transport Related Projects. The numbering system consists of four (4) elements separated by hyphens and is described below.

9.2.1 Major Projects

The first element (2-4 alpha numeric characters beginning with a letter) represents a project identifier code.

The second element (a number) represents a locality/job code.

The third element (a number) represents a discipline code.

The fourth element (a number) represents a drawing number.

These codes are combined to form the drawing number that is assigned and appears on a drawing.

An example of this type of drawing number is MP-1-2-3 whereby:

The first element ‘MP’ represents a project identifier code e.g. Major Projects

The second element ‘1’ represents a locality/job code e.g. Boggo Road Busway

The third element ‘2’ represents a discipline code e.g. Structural

The fourth element ‘3’ represents a drawing number e.g. Slab Details

9.2.2 Other Transport Related Projects

The first element (2-4 alpha numeric characters beginning with a letter) represents an area code.

The second element (a number) represents a locality code.

The third element (a number) represents a job code.

The fourth element (a number) represents a drawing number.

These codes are combined to form the drawing number that is assigned and appears on a drawing.

An example of this type of drawing number is CN-3-11-3 whereby:

The first element ‘CN’ represents an area code e.g. Cairns

The second element ‘3’ represents a locality e.g. Smith’s Creek

The third element ‘11’ represents a job code e.g. Cairns Operations Base Administration Building

The fourth element ‘3’ represents a drawing number e.g. Upper Floor Plan
9.2.3 Amendments, Revisions, or Issue Numbers

Acceptable forms of amendment and/or issue numbers are as follows:

- T1 – Tender Issue with subsequent amendments T2, T3, and so on.
- C1 – Construction Issue with subsequent amendments C2, C3, and so on.
- A to Z may be used when no requirement is stated to differentiate between Tender and Construction Issue.

Examples of amended drawings showing amendment or issue numbers are as follows:

- MP-1-2-3T1 or MP-1-2-3 T1 (Where T1 is placed in a separate box)
- MP-1-2-3C1 or MP-1-2-3 C1 (Where C1 is placed in a separate box)
- CN-3-11-3A or CN-3-11-3 A (Where A is placed in a separate box)

If Major Infrastructure Projects – Transport and Marine Infrastructure Delivery Branch supplies drawing frames, examples of drawing numbers, amendments, and so on can be entered on the frame if required. All frames (especially if modified by the consultant or contractor) should have sign-off from Major Infrastructure Projects and by any external client for example, Translink, depending on the project before being used.

10 Drawing Sign Off

When drawings are ready for issue the hardcopies must be signed by hand and then the signatures are to be typed in on the electronic copies of the drawings. Signatures shall be as follows:

- Drafting – initialled by the consultant’s or contractor’s drafter
- Drafting Checked – initialled by the consultant’s or contractor’s drafting checker
- Design – initialled by the consultant’s or contractor’s designer
- Design Checked – initialled by the consultant’s or contractor’s design checker
- Date – the date of certification by the consultant or contractor
- RPEQ No. – the RPEQ No. of the consultant’s or contractor’s certifier
- Certified – signature of the consultant’s or contractor’s certifier
- Examined – signature of the Major Infrastructure Projects examiner
- Approved – signature of the Major Infrastructure Projects or client approver

When drawings are amended, the hardcopies must be re-certified by hand (Date, RPEQ No., and Certified as above) and the details of the amendment must also be dated and initialled by hand. The re-certification and the date and initials of the amendment are then to be typed in on the electronic copies of the amended drawings.

The initials for Drafting, Drafting Checked, Design, Design Checked, and the signatures for Examined and Approved are to be typed in for hardcopies of amended drawings. For more details on amending drawings refer to Section 11.
11 Procedure to Amend a Drawing

If a consultant or contractor is required to amend a drawing after signatures (including providing "As Constructed" drawings) the following process shall be used:

- Make a copy of the original AutoCAD drawing file and rename the copied file to include the latest issue number e.g. CN-3-11-3A.dwg. Does not apply to "Constructed As Drawn".
- Insert in red notation Superseded on the original CADD file. Does not apply to "Constructed As Drawn".
- If the drawing to be amended contains XREFS then the XREFS need to be bound in the original drawing (by the insert method) to preserve the status of the original version. Otherwise changing an XREF would also modify the original version, not just the amendment drawing. Does not apply to "Constructed As Drawn".
- Place a red Superseded stamp on the original hard copy drawing. Does not apply to "Constructed As Drawn".
- The CADD drawing shall reflect the changes by having the relevant parts erased and redrawn to show the correct information. Does not apply to "Constructed As Drawn".
- When it is useful to highlight an amendment, a symbol shall be placed on the drawing adjacent to each alteration and the amendment shall be highlighted by clouding. In some cases highlighting amendments is impractical e.g. when the entire drawing is changed. Discretion should be used to ensure highlighting amendments is useful. Does not apply to "Constructed As Drawn".
- The amendment letter and a brief description of the amendment shall be placed in the Amendments portion of the title block. For "As Constructed" drawings a brief description of the amendment shall be placed in the Amendments portion of the title block followed by AS CONSTRUCTED. Amend the drawing number with the next amendment or issue letter.
- If there are no “As Constructed” alterations then the original hard copy drawing shall be issued with the words CONSTRUCTED AS DRAWN placed in the Amendments portion of the title block. Note in this case the original drawing number is kept. There is no requirement to amend the drawing with next amendment or issue letter however; the bottom right hand corner of the drawing is stamped As Constructed in red ink.
- For an "As Constructed" drawing including "Constructed As Drawn" insert in red notation As Constructed in the bottom right hand corner of the drawing area of the CADD drawing.
- On the CADD drawing remove the typed-in signature, date, and number for RPEQ. Does not apply to "Constructed As Drawn".
- The drawing shall be resigned by the RPEQ (does not apply to "Constructed As Drawn") and the amendment or issue section of the title block is initialed and dated by the project engineer or the person authorised for making the change. This initialling and dating applies to all amendments and "As Constructed" including "Constructed As Drawn".
- Update CADD drawing to reflect signatures.
- Subsequent amendments to any particular drawing need to follow the process as described above.
• The consultant or contractor shall supply documentation as described in Section 3.