

BSBPMG511 MANAGE PROJECT SCOPE

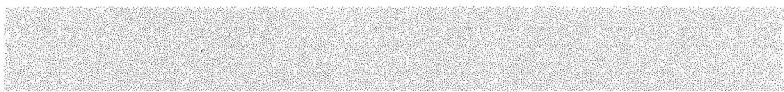
PRACTICAL ASSESSMENT INSTRUCTIONS

- The following practical assessment will require the participant to complete work related activities.
- The assessor will conduct observations of the participant's work to determine whether they display sufficient practical skills and knowledge.
- Please fill in the details below, providing your name, signature and date of assessment.
 - Your signature acknowledges that the assessor provided clear instructions and the participant understood what was required to complete this assessment.
- The assessor may substitute a Practical Task with another task of equal value.
 - Alternate tasks must be fully documented by the assessor.

Participant name Paul Russo

Participant signature 

Assessor name _____

Assessor signature 

Date 15/07/2021

Number of tasks	Number of tasks completed	Satisfactory?	
		Yes	No
1		☐	☐

ASSESSOR COMMENTS	

BSBPMG511 MANAGE PROJECT SCOPE

Practical Task 1	
Description of task: A suitable observer is to verify the participant's ability to obtain project authorisation, develop a scope management plan, and manage the application of project scope controls.	
These tasks may be simulated or real. The participant is to gather evidence of how they have completed each component of the Practical Task, which is to be submitted with this Practical Assessment sheet. The observer is to provide detailed comments on the tasks completed by the participant. The assessor is to verify the observer's comments in the Assessor Comments section, and provide the Practical Assessment outcome on the front cover of this document.	
Resources required: Project documentation, Organisational documentation.	
Assessment of task	
Name of participant:	Paul Russo
Name of observer:	Nick Brockhurst
Role of observer (Confirm suitability to sign)	Project Engineer
Email address of observer	Nick.brockhurst@cbgujv.com.au
Signature of observer:	
Date:	15/07/2021
When completing the task, did the participant:	Tick if satisfactorily completed. Provide comments if left unticked.
1 Conduct project authorisation activities	
1.1A. Develop and confirm procedures for project authorisation with an appropriate authority.	☒
1.1B. Obtain authorisation to expend resources.	☒
1.1C. Confirm project delegations and authorities in project governance arrangements.	☒
2 Define project scope	
1.2A. Identify, negotiate and document project boundaries.	☒
1.2B. Establish measurable project benefits, outcomes and outputs.	☒
1.2C. Establish a shared understanding of desired project outcomes with relevant stakeholders.	☒
1.2D. Document scope management plan.	☒
3 Manage project scope control process	
1.3A. Implement agreed scope management procedures and processes.	☒

Attachment ①

"

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Attachment ②

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Attachment ③

1.3B. Manage impact of scope changes within established time, cost and quality constraints according to change control procedures.	☒
1.3C. Identify and document scope management issues and recommend improvements for future projects.	☒
The participant's performance was: ☒ Satisfactory ☐ Not Satisfactory	

A Hashman
⑤
A Hashman
⑤

OBSERVER COMMENTS
1.1a evidence has been provided that the process of approval of the supply contract was established including a minimum number of established quote and confirmed compliance with the required scope of work 1.1B Page 2 of the attachment contains authorization from relevant signatories 1.1C The management framework is readily established in the attachment, outlining delegation of authorities dependant on the value of the contract 1.2A The contract scope is well defined through both written and visual content. A specific scope has been provided which clearly established the contract deliverables 1.2B Refer comment from 1.2A - additionally the scope provides for the desired outcomes by outlining the specific methodologies to be employed in order to align with the required outputs 1.2C The document clearly demonstrates the considerations and desired project outcomes through the use of analysis in multiple areas including cost, programme, safety and the like 1.2D very thorough 1.3A The document clearly establishes the management procedures and defines the process by which contract particulars will be realized 1.3B contract direction document provided is in line with system change control procedures and includes a timeframe, anticipated cost through established rates and definition of quality records required 1.3C clearly defined issues and rectifications required

Cross River Rail Tunnel, Stations and Development PPP Package – D&C Works

Woolloongabba - Modular Stairs

Recommendation for Award



DATE:	11-Feb-2020	CONTRACT TYPE:	Supply Contract
WORK AREA:	Woolloongabba Station	CONTRACT / PACKAGE NO.:	Q80374-WG-WC-40035-0000
PACKAGE DESCRIPTION:	Modular Stairs		

* Please specify if Early works / Temp / Supply only / consultant etc.

PROCUREMENT SUMMARY AND NEGOTIATION HISTORY

SUMMARY OF PROCUREMENT STRATEGY & SUPPLY CHAIN FINANCING NEGOTIATION:

A formal RFQ process was undertaken for the supply of modular stairs at the Woolloongabba site. Four tenderers submitted pricing (Calbah Industries, Safe Smart Access, Sun Engineering & Forefront Services). Each of the tenderer's offer was evaluated to confirm compliance with the supplied drawings. The financial comparison was undertaken based on the design, supply & delivery of two sets of modular stairs to depths of 27m & 33m.

After the financial comparison of the submitted tenders was undertaken, Calbah Industries has been selected as the preferred tenderer for the modular stair package for Woolloongabba.

NEGOTIATION LEAD:	DATE	PRICE	SCF %	COMPANY NAME
Describe any discounts or negotiations requested or to be requested :				
OFFER 1		\$337,056		Calbah Industries
OFFER 2				
OFFER 3				
FINAL OFFER		\$337,056		Calbah Industries

TENDERS RECEIVED				
COMPANY NAME	EVAL %	SUBMITTED OFFER	SCF %	FINAL OFFER (excl. GST)
Calbah Industries		\$ 337,056.00		
Safe Smart Access		\$ 423,563.00		
Sun Engineering		\$ 564,441.00		
Forefront Services		\$ 1,677,053.00		

RECOMMENDATION				
RECOMMENDED TENDERER	Calbah Industries	A	COMMITTED (FINAL OFFER)	337,056
TENDERER'S ABN	58 050 275 020	B	NON-COMMITTED (VARIATIONS)*	0
LOCAL CONTENT	No	C	GROWTH ALLOWANCE**	
INCOTERMS	N/A	TOTAL (A+B+C)		337,056

* Allowance for expected costs not included in the contract i.e. non-direct costs such as third party QA

PORTING COMMENTS

The recommended tenderer (Calbah Industries) was chosen based on on their competitive pricing & relatively short lead time for fabrication and delivery of the stairs (3 - 4 weeks). They also demonstrated knowledge of the scope in their pricing which was compliant to the scope of works, they are an Australian supplier and are proven on previous projects undertaken by CIMIC companies. Refer to form 4A for further commentary.

- Add additional pages and or space as required.

Attachment ①
→ Scope authorization.

Cross River Rail Tunnel, Stations and Development PPP Package – D&C Works

Wolloongabba - Modular Stairs

Recommendation for Award



FINANCIAL POSITION					
TOTAL BUDGET					298542.8
TOTAL FORECAST					
TOTAL PROCUREMENT PLAN TARGET					337056
TOTAL ACTUAL (RECOMMENDED)					337,056
Select one: ☐ BUDGET ☐ FORECAST			FORECAST PERIOD		
APPROVAL ROUTE					
COST CODE	QTY	DESCRIPTION	BUDGET / FORECAST VALUE	TOTAL PRICE	GAIN / (LOSS) ON BUDGET / FORECAST
Q80374.21305	1	Road header access temp. access tower/scaffold	160,344	168,528	-8,184
Q80379.21305	1	Station preliminary works access tower/scaffold	117,737	168,528	-50,791
Special Requirements (i.e. Delivery Address)					
TOTAL			278,081	337,056	-58,975
A copy of the Budget or Forecast MUST be attached to this document					

RECOMMENDATION CHECKLIST	
Form 4 - Financial comparison attached.	Yes
Copy of quotations or completed BOQ	Yes
Is Form 4a Tender recommendation form attached (Packages over \$250k) - if not detail below why not required.	Yes
Form 3c Non-financial evaluation and prequalification result (Local Benefits Test) attached	Yes
Form 3b Safety evaluation form attached.	Yes
Form 3b WHS documentation submitted	Yes
Updated scope of work included	Yes
Updated pricing schedule included.	Yes
Contract Terms and conditions accepted and/or Contract deviations & Negotiations included.	Yes
Technical deviations record if required.	N/A
Post tender MOM or Clarifications	No
If NO is answered to any of the above questions, please explain below and attach relevant documentation of how deviation and risk is managed.	

Cross River Rail Tunnel, Stations and Development PPP Package – D&C Works

Woolloongabba - Modular Stairs

Recommendation for Award



COMMERCIAL

CONTRACT START DATE	02-Mar-20	COMPLETION DATE	
PRICE BASIS (e.g. Lump sum / Schedule of Rates etc)	Lump Sum	SECURITY (Select one) (Refer preferred terms below)	☐ Bank Guarantees % ☒ Cash Retention % ☐ None

RECOMMENDED BY (Proponent / Package lead)

NAME	Paul Russo	POSITION	Project Engineer
SIGNATURE		DATE	10/3/20

APPROVALS (Refer Delegation of Authority Matrix)

POSITION	AUTHORITY LEVEL	NAME	SIGNATURE	DATE
Project Manager	Up to \$50,000 (within budget, no contract departures)	Brendan Taylor Chris Russell		15/3/20 10/03/20
Construction Director	Up to \$500,000 (within budget, no contract departures) Endorsement > \$500k	Matt Lennon Jamic Kurst		12/3 12/3
Contracts and Procurement Manager	Up to \$50,000 (within budget) Endorsement > \$500k	Sean Davidson		
Project Lawyer	Endorsement of contract departures > \$50k	Adam Balchin		
Commercial Director	Up to \$500,000 (within budget) Endorsement > \$500k or over budget	Andy Higgs		25/3/20.
Project Director	Up to \$3m, 10% or \$100k over budget Endorsement > \$3m or 10% or \$100k over budget	Andrew Large		25/3/20

Steering Committee- for any Recommendation over \$3m OR 10% over budget or \$100k over budget

POSITION	Name	Approve / Comment	SIGNATURE	DATE
CPB Authorised Representative				
BAM Authorised Representative				
Ghella Authorised Representative 1	Dale Gilbert			
Ghella Authorised Representative 2	Paolo Pediconi or Matteo Piva			
UGL Authorised Representative				

CPB CORPORATE SIGN OFF - Where Required.

BU General Manager	< \$3,000,000			
CPB Procurement Manager	> \$1m Emailed for Review			
CPB Executive General Manager	< \$5,000,000			
CPB Managing Director	< \$20,000,000			
CIMIC Deputy CEO	> \$20,000,000			
IF DEVIATING FROM THE MANDATED MINIMUM NUMBER OF SUPPLIERS (3x) FOR RFQ, THE BELOW DOA APPLIES				
Project Manager	< \$50,000			
Project Director	< \$3,000,000			
CPB Executive General Manager	> \$3,000,000			
CPB Managing Director	> \$5,000,000			
WHERE MANDATED FRAME AGREEMENTS EXIST, APPROVAL BELOW REQUIRED FOR RECOMMENDATION OF AWARD				
CPB Managing Director	APPROVAL (CPB OWNED)			
CIMIC CEO	APPROVAL (CIMIC OWNED)			



CBGU D&C JV

Form 4a:

Tender Recommendation

(Required for Contracts > 250 K)

Procurement Package: Supply of Modular Shaft Access Stairs

Procurement Package Number: Q80374-WG-WC-40035-0000

Date: 9/03/2020

AUTHOR: PAUL RUSSO

REVIEWER: BRENDAN TAYLOR/CHRIS RUSSELL

TABLE OF CONTENTS

1	INTRODUCTION	4
2	TENDERED SCOPE OF WORKS	4
3	INVITEES AND TENDER PROCESS	6
4	TENDERS RECEIVED AND PRICES	6
5	BUDGET	8
6	TECHNICAL DISCUSSION	9
7	CONTINGENCIES & OPTIONS	9
8	SAFETY, QUALITY, ENVIRONMENTAL SUSTAINABILITY	9
8.1	SAFETY	9
8.2	QUALITY	9
8.3	ENVIRONMENTAL AND SUSTAINABILITY	10
9	HR/IR	10
10	PROGRAMME/MILESTONES	10
11	DESIGN	11
12	COMMERCIAL	11
12.1	TYPE OF CONTRACT	11
12.2	PAYMENT TERMS	12
12.3	SPECIAL CONDITIONS	12
12.4	LD's	12
12.5	INSURANCES	12
12.6	DEFECTS LIABILITY	12
12.7	BANK GUARANTEES/ SECURITY RETENTION	12
12.8	WARRANTY/ DEFECTS LIABILITY PERIOD	13
12.9	HEAD CONTRACT PASSDOWNS	13
12.10	OTHER	13
13	KEY RISKS AND OPPORTUNITIES (MAXIMUM OF 5)	13
14	RECOMMENDATION	13
15	SUBCONTRACTOR APPROVAL	13

APPROVED BY	13
LOF.A.....	13
CHRIS RUSSELL	13
BRENDAN TAYLOR.....	13
MATT LENNON	13
MOHAMMED PEER.....	14
PAUL RUSSO.....	14
SEAN DAVIDSON	14
ANDREW LARGE	14
16 LIST OF ATTACHMENTS	14

Appendix 1– Financial Summary
Appendix 2 - Tender Analysis (Price Comparison Spread sheet)
Appendix 3 – CBGU JV Codes Compliance Letter/Email
Appendix 4 – Subcontract Insurances
Appendix 5 – Queries on Contract Terms and Conditions

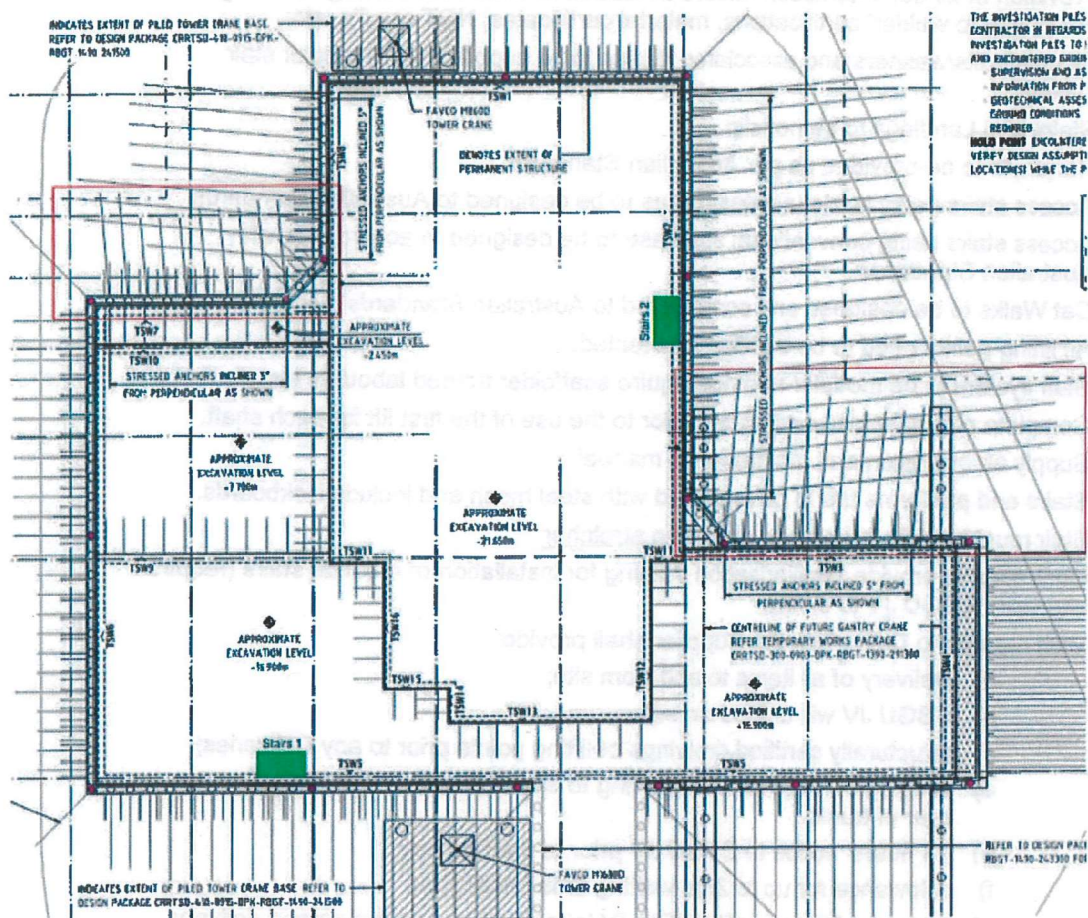
1 INTRODUCTION

This tender recommendation is for the design & supply of modular access stairs to be utilised in the Woolloongabba station box.

There are two sets of access stairs required at Woolloongabba. They must be modular to allow progressive installation of the stairs concurrent with the excavation operation. The access stairs will remain as a means of access in addition to the decline ramp throughout the station construction.

2 TENDERED SCOPE OF WORKS

The tendered scope of works is for the design & supply of two sets of modular stairs at the Woolloongabba station box. There are two sets of stairs required, in the locations identified below:



Stairs set # 1 is to be utilised by the tunnelling team, whereas stairs set # 2 will be utilised by the station construction team. Both sets of stairs are to be designed as a hanging modular access walkway off the capping beam to the shaft invert. The main requirements of the stairs which are included in the scope of works is as follows:

- Design and certify access stairs including certificate of conformity.
- Design and certification of any bracing or fixing of access stairs.
- Design and certification of any cantilever structures and anchors.
- Supply of drawings of all structural elements for 3rd party design check and imposed loads to permanent works
- Supply of drawings detailing installation and removal sequence. A separate and specific set of drawings is to be supplied for each set of stairs.
- All welding to be in accordance to AS1554.
- All structural steel to be in accordance with AS4100.
- Provision of all documentation related all Structural steel and welding including but not limited to welder' certifications, material certificates, NDT results, etc;
- All nuts/bolts/washers and associated fixings to be supplied with modular stair system
- Stairs and Landings to be nonslip
- Handrails to be provided as per Australian Standards
- Access stairs using ladder access/fixings to be designed to Australian Standards
- Access stairs using conventional staircase to be designed in accordance with Australian Standards
- Cat Walks to be designed and constructed to Australian Standards
- All lifting points need to be certified and tested.
- Stair system to be modular and not require scaffolder trained labour to install.
- Complete permit to load certificates prior to the use of the first lift for each shaft.
- Supply an operation and maintenance manual.
- Stairs and platforms are to be enclosed with steel mesh and include kickboards.
- Stair must be able to carry an operating stretcher.
- Contractor to provide familiarisation training for installation of modular stairs (require site visit). CPGU JV to install.
- With regards to Deliveries, the Supplier shall provide:
 - a) Delivery of all items to and from site;
 - b) CPGU JV will unload on site
 - c) structurally certified drawings of lifting points prior to any Deliveries;
 - d) slinging of loads prior to arriving to site or provide edge protection on rear of truck;
 - e) 24 hours' notice to CPGU JV prior to the Delivery;
 - f) Allowance for up to 2hrs waiting time onsite; and
 - g) storage of items until CPGU JV takes Delivery on the agreed delivery date;

3 INVITEES AND TENDER PROCESS

Six companies were invited by CBUG JV during a formal tender process;

1. Blask Engineering
2. Calbah Industries
3. Safe Smart Access
4. Sun Engineering
5. Forefront Services
6. Preston

All companies except for Blask Engineering & Preston submitted their tender price/rate.

4 TENDERS RECEIVED AND PRICES

The first submission of tender price/rate and the development to final tender price of the company is summarised in Appendix 1 (Financial Summary) and is fully detailed in Appendix 3 - Tender Analysis (Price Comparison Spread sheet).

The below cost comparison presents the pricing received for the design, certification, supply & delivery of two modular hanging stair accesses.

Round	Tender Price Calbah Industries	Tender Price Safe Smart Access	Tender Price Sun Engineering	Tender Price Forefront Services
1	\$323,812	\$300,35	\$564,441	\$1,677,053
	Priced both stairs to 27m deep. Did not include smoke curtain	Priced both stairs to incorrect depths (too shallow). Did not include smoke curtain. Stairs were only 1.05m wide	Priced both stairs to 27m deep. Did not include smoke curtain	Priced both stairs to 27m deep. Did not include smoke curtain
2	\$310,437	\$423,563		
	Priced stairs to correct shaft depths. 1.05m wide (still non-conforming). Include	Conforming Tender (correct shaft depths & increased width).		

	smoke curtain	Inclusive of smoke curtain		
3	\$364,611.60			
	Conforming tender – re-priced for 1.5m wide stairs			
4	\$337,056	Removal of smoke curtain does not affect price		
	No requirement for smoke curtain. Price reduced			

The summary of the full Tender assessment is set out in the table below:

Item	Evaluation Criteria	Measure	Compliant Calbah Industries	Compliant Safe Smart Access	Compliant Sun Engineering	Compliant Forefront Services
1	Safety	Compliant	YES	YES	UNSURE	YES
2	Programme	Compliant	YES	NO	NO	NO

Recommended Tenderer:

Safe smart access were forward in their proposal and visited the project to pitch their product. The tender initially was non-conforming as their stairs were only 1.05m wide which would not comply to the stretcher stair definition (must be 1.2m wide). It was also determined that the stairs had been priced to the incorrect shaft depth (was priced to 18m & 24m, required depth is 27m & 33m). Safe Smart Access provided their updating pricing on 5/2/20 which was \$116,126 more expensive than Calbah. Safe Smart access have some previous & current experience on tunnelling projects, undertaking work for Sydney Metro 2 & WestConnex.

Calbah's price initially appeared to be more expensive than Safe Smart access, although it became apparent that they had priced two sets of stairs to a depth of 27m (as per the original scope) which explained the price difference (Safe smart access had priced the incorrect shaft depths). Calbah

provided their revised pricing for a 27m deep & 33m deep modular stairs, 1.05m wide. Although instructed to price to 1.2m wide, they had provided their 1.05m wide option based on feedback from Roma St. & Albert St. station. They also provided a video which demonstrated that a stretcher could be traversed up the 1.05m wide stairs. Nevertheless, given that space is not a governing constraint in the Woolloongabba station box (unlike that of Roma St. & Albert St.), it is preferred that the wider stairs are to be utilised. Calbah provided updated pricing for a 1.5m wide module, as they don't have a 1.2m wide tread module readily available. Their pricing is \$61,951.4 cheaper than Safe Smart Access. Calbah has an extensive amount of experience on similar/curent projects, such as Melbourne Metro, West Gate Tunnel project & Westconnex M5

5 BUDGET

Cost Code	Description	Cost Code Allowance \$	Comparative Value In Subcontract \$	Gain/(Loss) \$
Q80374.21305	Roadheader Access Temp. works/scaffold	\$180,805.80 \$160,344	\$168,528	\$13,778.80 \$(8,184)
Q80379.21305	Station preliminary woks scaffold access tower	\$117,737	\$168,528	\$(50,791)
	TOTALS	298,542.8	337,056	\$(38,513.2) \$(46,697.2)

Deviation from budget allocated at Project Tender Stage (If Any): ~~\$38,513.20~~ \$46,697.20

Reason(s): Contributing factors to the increase in tendered price for the modular stairs is as follows:

At time of tender, it was envisaged that scaffold access towers would be utilised for access in and out of the station box. Since then, it has been decided to utilise steel hanging modular stairs to simplify installation & control inspection requirements.

①

Budget Approval			
Position	Name	Signature	Date:
Budget Holder	Brendan Taylor		16/3/20
Budget Holder	Chris Russell		10/03/2020

6 TECHNICAL DISCUSSION

The recommended tenderer has the technical capability to carry out these works and meet all CBGU JV requirements. Aside from presenting the most attractive pricing, Calbah's lead time for delivery on site of 3 – 4 weeks is extremely advantageous & is aligned with on site requirements. The tenderer has been responsive to all queries & demonstrated knowledge of the scope of works.

7 CONTINGENCIES & OPTIONS

An optional item that the tenderer's were requested to price is the inclusion of a smoke curtain on the outside of the modular stairs. This is to ensure that in the case of a fire, the modular stairs are a point of safe egress and would provide protection from smoke inhalation. It has since been confirmed that a smoke curtain will not be required on the stairs, therefore this has not been included in the final pricing (Safe Smart Access advised that the omission of the smoke curtain requirement had no affect to their final pricing).

8 SAFETY, QUALITY, ENVIRONMENTAL SUSTAINABILITY

8.1 Safety

The recommended tenderer shall complete and work under their own SWMS and safety system. As this is a supply only contract, the tenderer must ensure that the stairs are provided to the required dimensions & specifications.

8.2 Quality

The Subcontractor shall comply with the CBGU JV quality systems and procedures and be responsible

for all Quality Assurance matters.

Is the Tenderer Accredited to ISO 9001? YES

Are ITPs / Checklist required? NO

If yes, are off site inspections and testing schedules prepared and agreed? N/A

Any other issues?

8.3 Environmental and Sustainability

The Subcontractor is to comply with CBGU JV systems/procedures, specifically the sustainability and environmental procedures. The subcontractor has been made fully aware of the existing environmental constraints such as heritage and endangered ecological communities. The Subcontractor is expected to have a sustainability document.

Is the Tenderer required to comply with environmental and sustainability requirements? YES

If yes, does the Tenderer comply? Yes

Does the Tenderer have an Environmental Management System? N/A

9 HR/IR

Subcontractors are to work under their existing industrial agreements. All recommended Subcontractors are Codes Compliant.

When does the Tenderers Industrial Instrument (i.e EBA) expire? N/A

Program completion date? 1/8/20

10 PROGRAMME/MILESTONES

- (1) All tenderers have been advised there will be certain times over the life of project where work will spike and dip. The tenderer is prepared to work at the time as directed by CBGU JV. The below table outlines the dates which the modular stairs must be delivered to site.
- (2) The below dates are based on the most up to date earthworks program at Woolloongabba. The dates in the subcontract agreement are dependent on the contract execution date (dates will push out aligned with advised fabrication lead times).

Milestone	Target Programme Date	Date In Subcontract Agreement
Submission of final certified design documentation	25/3/20	25/3/20
Stair Set #1		

Delivery of landing frame and first modules/elements required for access up to shaft depth of 6m	5/5/20	19/5/20
Delivery of landing frame and first modules/elements required for access up to shaft depth of 12m	28/5/20	28/5/20
Delivery of landing frame and first modules/elements required for access up to shaft depth of 18m	19/6/20	19/6/20
Delivery of landing frame and first modules/elements required for access up to shaft depth of 24m	3/7/20	3/7/20
Complete delivery of stair set (last module to 27m)	20/7/20	20/7/20
Stair Set #2		
Delivery of landing frame and first modules/elements required for access up to shaft depth of 6m	6/4/20	29/4/20
Delivery of landing frame and first modules/elements required for access up to shaft depth of 18m	1/5/20	15/5/20
Delivery of landing frame and first modules/elements required for access up to shaft depth of 33m	22/7/20	22/7/20

11 DESIGN

Structural engineering and design will be performed by the supplier as per the scope defined in Annexure C of Works Contract. The foundation design and construction will be under CBUCL's responsibility.

12 COMMERCIAL

12.1 Type of contract

Type of contract is: Supply Agreement

Are there any clarifications on the terms and conditions? Yes

If yes, what are they and have they been resolved? (attach queries form and/or Form 6 as Appendix 5)

Refer to attached departures schedule

12.2 Payment terms

25 business day payment terms will apply (if not has the tenderer agreed to enter into a "Supply Chain Finance Agreement")

12.3 Special Conditions

N/A

12.4 LD's

Are they required? Yes

Rate per Calendar Day: \$1,000

Value of max LD's: 5% contract value

Are the above agreed to by the Tenderer: Yes

12.5 Insurances

Are the Tenderer's insurances adequate? Yes

If not what do they propose? _____

Are these acceptable? n/a

Copies of certificates of currency of the following insurances are attached:

	Tick as Appropriate (or N/A)
Workers Compensation	N/A
Public and Products Liability	Y
Professional Indemnity	Y
Plant and Motor Vehicle	N/A

12.6 Defects liability

Defect and liability period is: 36 Months

Agreed to by Tenderer? Yes

12.7 Bank Guarantees/ Security Retention

Are they required? Yes

Type of Security is: Bank Guarantee

What value? 2 x guarantees - 2.5% per guarantee

Expire when? N/A

Agreed to by Tenderer? Yes

①

12.8 Warranty/ Defects Liability Period

Warranty/defects liability period is: 36 Months

Performance warranty is: Bank Guarantee

Agreed to by Tenderer? Yes

Any other issues? No

12.9 Head Contract Passdowns

The relevant back-to-back requirements of the D&C Deed are included in the standard agreement.

12.10 Other

N/A

13 KEY RISKS AND OPPORTUNITIES (MAXIMUM OF 5)

Risks:

- Unforeseen delay to fabrication & delivery of stairs, preventing access to the station box.

14 RECOMMENDATION

It is recommended that Calbah Industries be awarded the Subcontract to perform these works on the basis of price and for the following reasons:

- Calbah were prompt in response to queries throughout the tender period. This also instilled confidence that they were across the scope & pricing requirements.
- Calbah's lead time for fabrication & delivery of 3 – 4 weeks (upon approval of design drawings) is extremely attractive. This will allow the full modular stair system to be delivered (rather than the staged delivery in 6m increments in the scope) on site. This gives assurance that access to the station box will be readily available if the excavation program is ahead of schedule.

15 SUBCONTRACTOR APPROVAL

Approved By	LOFA	Name	Signature	Date
Project Manager	Nil	Chris Russell Brendan Taylor	 	10/03/2020 16/3/20
Design & Construct Director	Nil	Matt Lennon Jamic Kunst		12.3.2

Commercial Lead (From Procurement Schedule)	Nil	Mohammed Peer		10/03/20
Construction Lead (From Procurement Schedule)	Nil	Paul Russo		10/3/20
Contracts and Procurement Manager	Nil	Sean Davidson		
Project Director	<\$1M	Andrew Large		
CBGU JV Board	>\$1M			

*Approval to be in accordance with the Schedule of Delegated Authority

** Insert others as directed by Project Manager, Design & Construct Director or Project Director

16 LIST OF ATTACHMENTS

①

APPENDIX 1

FINANCIAL SUMMARY

[Note: Insert Form 7]

APPENDIX 2

TENDER ANALYSIS (PRICE COMPARISON SPREADSHEET)

[INSERT]

①

APPENDIX 3

CBGU JV CODES COMPLIANCE LETTER/EMAIL

[INSERT]

APPENDIX 4

SUBCONTRACTOR'S INSURANCES

BROKERS NATIONAL

SCHEDULE OF COVER Commercial Package Our Reference 19030060

INSURED

Calbah Industries Pty Ltd

RISK ADDRESS

17-29 Arkwright Drive, DANDENONG SOUTH 3175

DESCRIPTION OF OPERATIONS

Principally Engineers - Design, Manufacture, Install, & Service/Repair (General Engineering including Mining, Oil & Gas, & Rail Industries)

PERIOD OF INSURANCE

30/03/19 to 30/03/20 Expires At 4pm Local Time

FIRE AND SPECIFIED PERILS

Loss or damage to the Insured Property by fire and other perils, as per the terms and conditions of the Policy.

Interest Insured:

Sum Insured \$

Building(s)	3,215,281
Stock	22,174
All Contents Other Than Stock	110,871
Removal of Debris - Included	
Total	3,348,326

Excess

Excess

Basic Excess \$500

Cyclone Excess \$2,000 except for Earthquake or Malicious Damage losses, where the excess is as shown in the Policy

Endorsements

Removal of Debris: Included
Co Insurance Applies - Insure For Full Value
Flood Cover Excluded
Reinstatement & Replacement
Extra Cost of Reinstatement
Seasonal Stock Increase: Retailers Only
Other Endorsements / Exclusions: As Per Policy

THEFT

Loss or damage caused by:

1. Theft consequent upon forcible and violent entry to the premises.
2. Theft by a person feloniously concealed on the premises.

Attachment 2
→ Work scope management plan



Work Scope

CRR Tunnel, Stations & Development (D&C Works) Project

Package No: TBA
Package Description: Woolloongabba Underground Primary Structure
Site Project Reference: TBA
Procurement Document Reference: Q80370-RFQ-003

A	TBA	Draft for Tender	TBA	TBA	TBA
			PR		
Rev	Date	Reason for Revision	By	Check	PD

Contents

1. COMMUNICATIONS	3
2. INTRODUCTION	3
2.1. Purpose and Scope	3
2.2. Project Details	3
2.3. Project Location	3
3. GENERAL SCOPE	4
4. DETAILED SCOPE OF WORKS	4
4.1. QLD Government Policy Requirements	2417
4.2. On-Boarding	2418
4.3. Dockets & Timesheets	2418
5. PROGRAMME OF WORKS	2518
6. APPENDIX A – Package Specific Drawings	2518
7. APPENDIX B – Technical Specifications	2518
8. APPENDIX D – Other Documents & Forms	2518
9. APPENDIX E – Subcontractor Quality Deliverables	2519
10. APPENDIX F – General Inclusion and Exclusions	2519



CONTENT

1. COMMUNICATIONS

The Contractor/Supplier/Vendor is not to communicate directly with the Principal unless specifically authorised by the person nominated in Annexure B of the Contract to receive Notices.

2. INTRODUCTION

2.1. Purpose and Scope

This Work Scope and its referenced documents details the requirements for the Works to be performed.

2.2. Project Details

Cross River Rail is a 10.2km rail line between Dutton Park and Bowen Hills, which includes a 5.9km twin tunnel under the Brisbane River and Brisbane CBD.

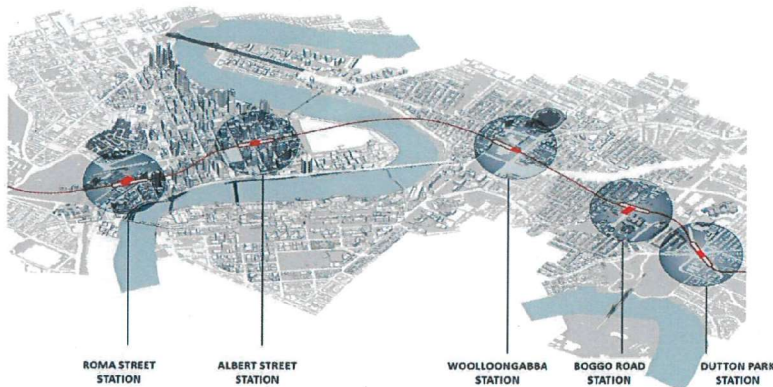
The project also includes construction of four new high-capacity underground stations at Boggo Road, Woolloongabba, Albert Street, Roma Street and redevelopment of the existing over Dutton Park Station. Cross River Rail will integrate with proposed Brisbane Metro services.

The TSD Package will primarily deliver the underground section of the project. The scope of work will include:

- the tunnel from a southern portal near Dutton Park station, under the Brisbane River and the CBD, to a northern portal beyond Normanby,
- four new underground stations at Boggo Road, Woolloongabba, Albert Street and Roma Street,
- the tunnel portals and dive structures,
- all associated mechanical, electrical and safety systems, including vertical transportation for passengers at underground stations, and
- tunnel track work, traction power systems and selection rail operation and control infrastructure.

2.3. Project Location

Refer to the map below for a project overview: -



3. GENERAL SCOPE

The works in this scope comprises, but is not limited to the Form, Reinforcement, Pour (FRP) (~~form, reinforcement, pour~~) of the Underground Primary Structure (UPS) at Woolloongabba station. This scope includes:

- Reinforced concrete slabs-on-ground
- Reinforced concrete external perimeter retention walls
- Reinforced concrete columns & internal load-bearing walls
- Reinforced & precast concrete suspended floors, slabs & beams
- Toppings and infills to precast concrete elements
- Steel load bearing columns
- Reinforced concrete plinths & corbels
- Penetrations & openings for vertical transport and services

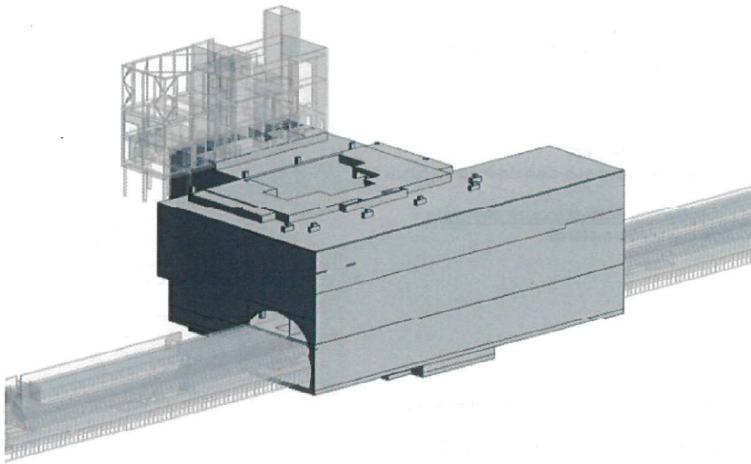
This scope does not include:

- Temporary initial retention
- Supply of precast concrete elements
- Above ground structures & canopies
- North & South Cavern Construction
- Cavern & platform structures
- Escalator & Lift Installation
- Mezzanine & platform pre-cast installation
- Ancillary structures (internal non-load bearing elements and secondary structures)
- Mechanical & electrical fitout

4. DETAILED SCOPE OF WORKS

The underground primary structure comprises the construction of the below ground portion of the station building at Woolloongabba, including the ground floor itself, as shown highlighted grey in the below schematic:

②



The UPS is approximately 83m long x 68m wide with varying depths, at a maximum of 36m. It contains eight levels of below ground [accommodation structure](#) described as follows:

- B9 plant level
 - Reinforced concrete slab on ground, cast on a Cavidrain sub-slab drainage system
 - Perimeter retention walls – [single sided construction against rock or shotcrete retention structure, backfilled with free draining granular material \(need to check this – may go to concrete\)](#)
 - Internal load bearing walls
 - Reinforced concrete columns
 - Reinforced concrete ventilation shaft
 - Main station sump
 - [Lift Pit](#)
- B8 rail corridor
 - Reinforced concrete slab on ground, cast on a cavidrain sub-slab drainage system
 - [Part of the floor is a suspended reinforced concrete slab](#)
 - Perimeter retention walls, – [single sided construction against rock or shotcrete retention structure, backfilled with free draining granular material](#)
 - Reinforced concrete internal load bearing walls
 - [Reinforced Concrete Suspended slab over Tunnel ventilation system \(B9 Area\) including penetrations \(cut out and removed after tunnelling works are finished.](#)
- B7 back-of-house plant area
 - Suspended reinforced concrete slab
 - Internal load bearing reinforced concrete walls
 - Reinforced concrete columns
 - ~~Post-tensioned~~ Reinforced concrete beams
 - Perimeter retention walls, – [single sided construction against rock or shotcrete retention structure, backfilled with free draining granular material](#)
- B6 platform (note: the precast [platform & topping slabs are elements](#) not included in this package)
 - Internal load bearing reinforced concrete walls
 - Reinforced concrete columns
 - Perimeter retention walls, – [single sided construction against rock or shotcrete retention structure backfilled with free draining granular material](#)
 - [Topping slabs to precast slab beams.](#)

- B4 comprises ~~F~~ront of ~~H~~ouse (mezzanine) & ~~b~~ack of ~~H~~ouse areas
 - Suspended reinforced concrete slab over the rail corridor & back of house area
 - ~~Post tensioned~~ reinforced concrete beams
 - ~~Steel columns located below escalator support locations~~
 - Reinforced concrete columns
 - Internal load bearing reinforced concrete walls
 - Escalator pits within the suspended reinforced concrete slab
 - Reinforced concrete slab on ground cast on a ~~C~~avidrain sub-slab drainage system in the south western corner
 - Perimeter retention walls, – single sided construction against rock or shotcrete retention structure backfilled with free draining granular material
 - Topping slabs to precast slab beams.
- B3 back of house plant area
 - Suspended reinforced concrete slab
 - ~~Post tensioned~~ reinforced concrete beams
 - Reinforced concrete columns
 - Reinforced concrete slab on ground, cast on a ~~c~~avidrain sub-slab drainage system
 - Internal load bearing reinforced concrete walls
 - Perimeter retention walls, – single sided construction against rock or shotcrete retention structure backfilled with free draining granular material
- B2 plant areas and escalator mid-landings in vertical transport shaft
 - Suspended reinforced concrete slab at back-of-house area
 - ~~Post tensioned~~ reinforced concrete beams
 - Reinforced concrete columns
 - ~~Pre cast deck units with reinforced concrete diaphragm topping slabs~~
 - Internal load bearing reinforced concrete walls
 - Perimeter retention walls, – single sided construction against rock or shotcrete retention structure backfilled with free draining granular material
 - Topping slabs to precast slab beams.
- B1 back of house plant area
 - Suspended reinforced concrete slab at back-of-house area
 - ~~Post tensioned~~ reinforced concrete beams
 - Reinforced concrete columns
 - ~~Pre cast deck units with reinforced concrete diaphragm topping slabs~~
 - Internal load bearing reinforced concrete walls
 - Perimeter retention walls, – single sided construction against rock or shotcrete retention structure backfilled with free draining granular material
 - Topping slabs to precast slab beams.
- L0 lower buried structure below external precinct area
 - Suspended reinforced concrete slabs
 - Reinforced concrete columns
 - ~~Post tensioned~~ reinforced concrete beams
 - ~~Pre cast super T girders with reinforced concrete diaphragm topping slabs~~
 - Perimeter retention walls, – single sided construction against rock or shotcrete retention structure backfilled with free draining granular material
 - Topping slabs to precast slab beams.
- L0 ground floor station concourse area and ground floor service building
 - Suspended reinforced concrete slab to service building

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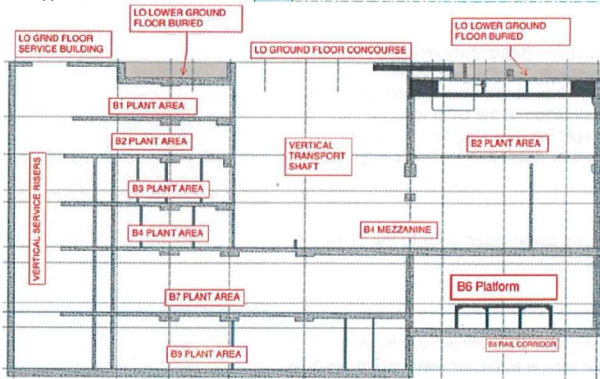
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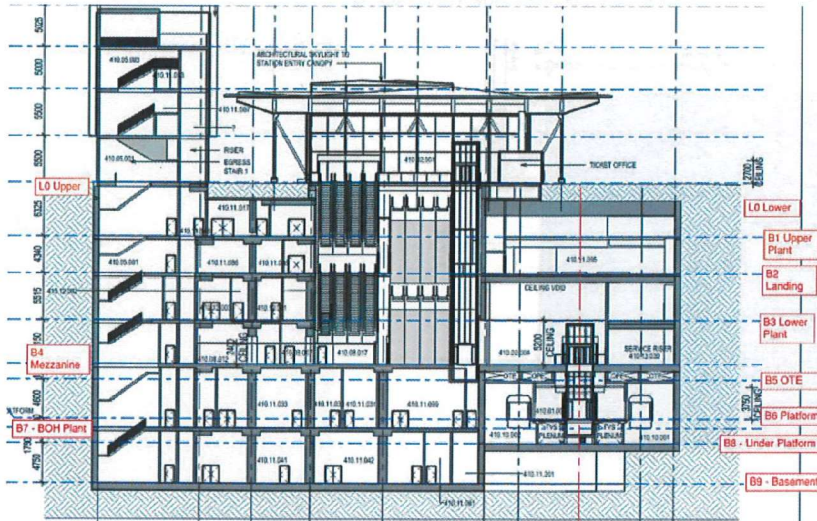
- o Internal load bearing reinforced concrete walls
- o Reinforced concrete columns
- o ~~Post-tension~~-reinforced concrete beams
- o Topping slabs to precast slab beams.
- o Pre-cast deck units with reinforced concrete diaphragm topping slabs

Below is a typical cross section of the UPS:

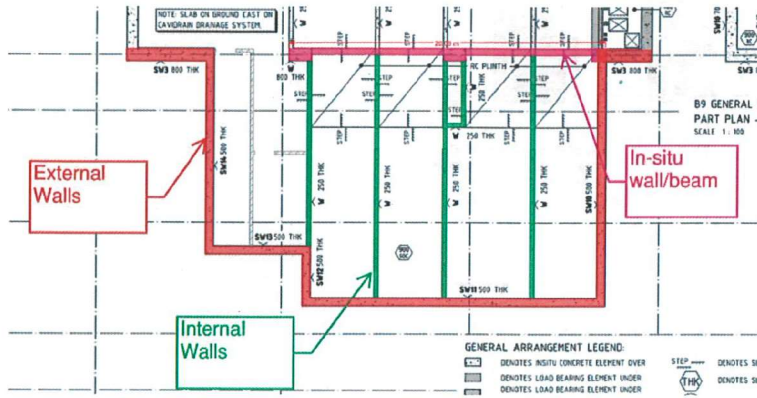


Commented [CR1]: Might need to replace this if drawings are ready with precasts at level B4, alternatively highlight and note affected area

Commented [RP2R1]: Updated this cross section which shows the precast at level 4



②

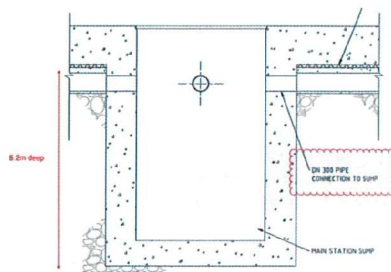
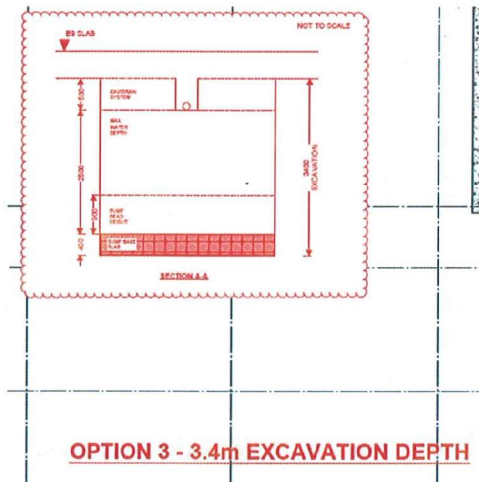


Level B9 main station sump

The station sump is located on the B9 slab & to occur concurrently with the base slab works. The sizing of the sump is 5.97m long x 5.53m wide x 3.46m deep with in-situ reinforced concrete elements; a 400mm slab on ground, 700-~~800~~mm thick walls & 400mm suspended topping slab with penetrations. This is shown on CRTSD-410-0450-DRG-RBGT-1470-131301, however the dimensions have been altered as per the below mark up.

Commented [CR3]: Station sump dimensions confirmed as changed. Will attached revised drawing. Dimensions amended to revised drawing

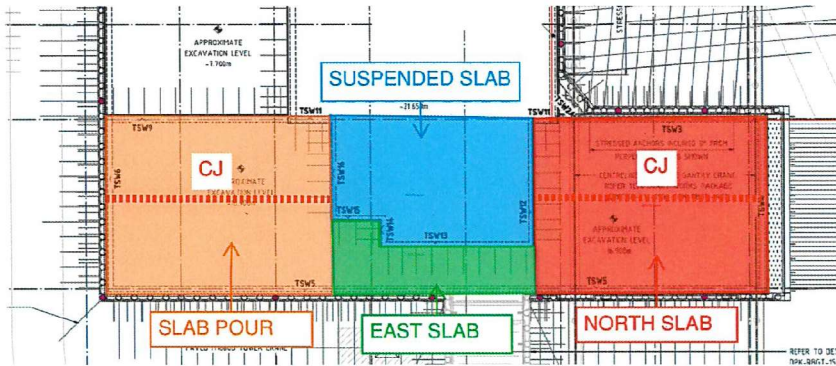
2



**** Need to add goods lift pit in here.**

Level B8 base slab

The level B8 slab is a combination of a suspended slab over level B9 area, with slab on ground to the northern and southern cavern interfaces. The B8 slab break up is shown below.



The B8 north slab is a 900mm slab on ground, shown on drawing [CRRSTD-410-0450-DRG-RBGT-1470-131314](#). The pour size is approximately 591m³, with 148t of reinforcing steel. The B8 north slab is to be split into two separate pours to accommodate the northern cavern excavation works which will occur concurrently with the slab construction.

The B8 south slab is a 900mm slab on ground, shown on drawing [CRRSTD-410-0450-DRG-RBGT-1470-131311](#). The pour size is approximately 574m³, with 144t of reinforcing steel. The B8 south slab is to be split into two separate pours to accommodate the southern cavern excavation works which will occur concurrently with the slab construction.

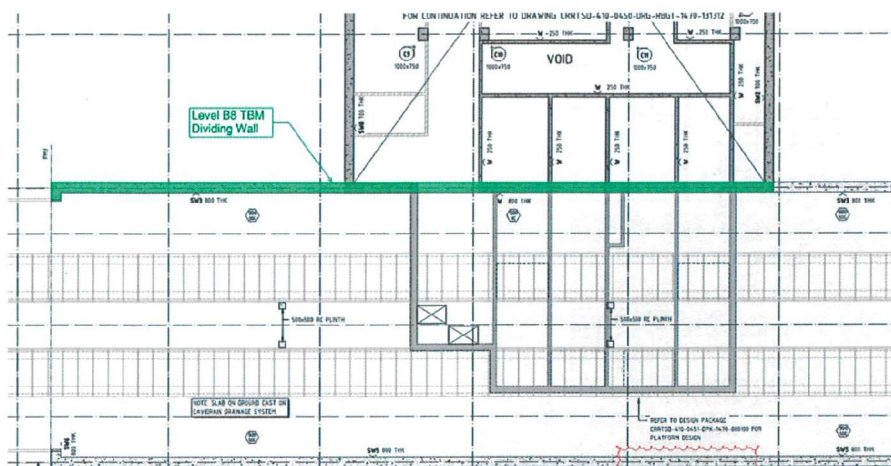
The B8 suspended slab is a 500mm suspended slab over B9, shown on drawing [CRRSTD-410-0450-DRG-RBGT-1470-131311](#). The pour size is approximately 199m³ with 40t of reinforcing steel.

The B8 east slab is a 900mm slab on ground, shown on drawing [CRRSTD-410-0450-DRG-RBGT-1470-131311](#). The pour size is approximately 150m³ with 38t of reinforcing steel. The east slab & suspended slabs are to be poured monolithically.

Commented [K04]: Include drawing reference

Level B8 Wall

The B8 wall is highlighted below, shown on drawings [CRRSTD-410-0450-DRG-RBGT-1470-131311](#). It is an 800mm thick, 57m long & 8.45m high. This is also known as the 'TBM Dividing Wall' as it provides delineation to the back of house station structure, and allows construction of the concrete structure in this area to progress concurrent with the tunnelling operations.



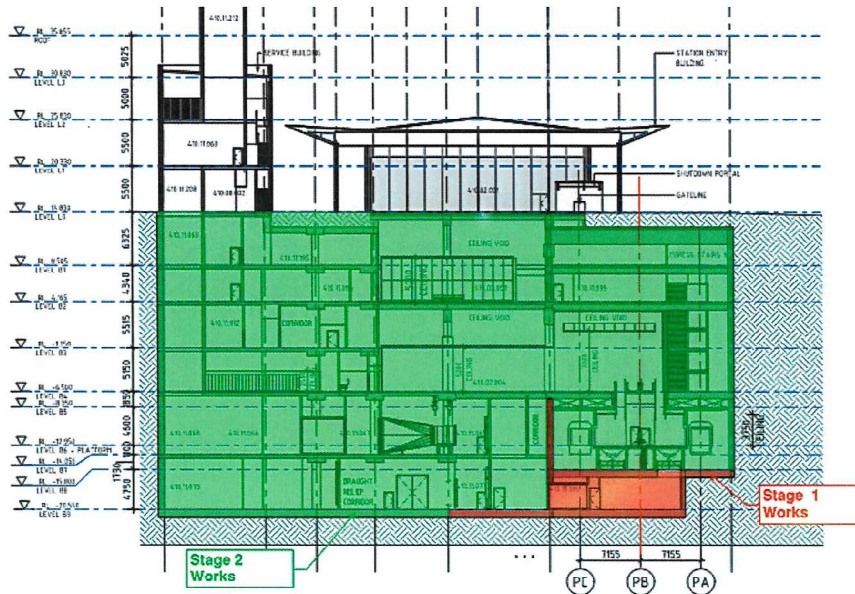
Given the criticality of the TBM works for the entire project & subject to progress of the above works & adjacent works, there may be instances where some of the works must be staged differently/ceased to accommodate TBM enabling works. The Contractor shall allow for such instance/s.

Stage 2:

Completion of stage 1 will allow the TBM to be launched northerly towards Albert St. Station. This eastern half of the station box will function as the primary access to the north & south caverns, materials & spoil handling for the TBM & -road header tunnel construction.

Stage 2 -comprises the construction of the entire remaining underground primary structure. The western half or 'back of house' structure shall be constructed concurrent to tunnelling operations, with the remaining eastern half or 'front of house' structure to be completed after tunnelling operations have ceased.

The below figure is a cross section of the UPS showing the stage 1 and 2 split.



Without limiting the general description of the work scope, the following specific requirements form part of the work scope;

The extent of the Subcontract Works includes but is not limited to the supply and installation of all formwork, reinforcement fixing, and the pouring of all cast-in-situ concrete associated with the Gabba Station. Refer Figures 1 - 3 for the general arrangement.

The Subcontractor will ensure that there is sufficient competent and experienced engineering.

Supervision and labour provided to support the scope and the Contractor's program.

The construction of the station **REFFRP** package and associated elements will follow the excavation of the box in preparation for commencing the TBM. Once the surrounding ground surface has been trimmed to height, the area will be handed over to the Subcontractor.

- ~~The Contractor is responsible for the provision of all access, labour, supervision, plant, equipment, materials, tools, consumables, overheads, taxes, wages, accommodation, transport, site allowances, assisting CBGU JV in preparation of all quality documentation and any other incidental costs whatsoever required as deemed as necessary for the completion of works defined by this Contract. Works shall be carried out in accordance with the requirements detailed in CBGU JV Drawings, Procedures and Construction Program, Authorities and General Legislative requirements;~~
- Where working in and around mobile plant, the Contractor will make note of and comply with CBGU's safety essential relating to Plant Operating Zone (POZ). Specific requirements are outlined further in CBGU JV's Safety Essential – Mobile Plant;
- Installation of all CBGU JV supplied steel reinforcement;
- Placement, finishing & curing of all CBGU JV supplied concrete;
- -Provision of and adherence to dust control and noise mitigation measures. Area is to be left clean and tidy at the end of each shift including clean up and removal of materials, overspills, slurry etc;

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Commented [CR5]: Need to review this.

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Commented [CR6]: Do we include all the safety essentials and associated details in the tender pack? If not we should if we are expecting them to comply.

Commented [RP7R6]: Yes all the safety essentials are included in the tender pack – contractors are expected to comply

Commented [RP8R6]:

2

- Provision of ~~a~~ the required numbers of qualified and trained first- aider(s) working on site ~~in each to suit the number of~~ work crews on site at all times;
- The Contractor acknowledges that the design is incomplete as of the date of tender. Changes to the existing scope may be required to suit final design;
- Cleaning and washing down of vehicles ~~prior to leaving site~~ must be completed prior to leaving the Site to control debris from impacting public roads. The Contractor must, as a minimum, cover all construction vehicles to prevent any loss of fuels, lubricants, load or other substances, whether in the form of dust, liquids, solids or otherwise. Any spillage or build-up of such material or debris must be cleaned up promptly and any damage caused by such an occurrence must be immediately repaired;
- All plant is to be submitted for inspection by CBGU JV prior to commencement of works on site. Plant inspections will be charged at a \$1850 for initial inspections and \$1890 for second and subsequent inspections. Inspection charges will be deducted from payment claims;
- Provision of -Safe Work Method Statements (SWMS) and a construction programme at least 4 weeks prior to commencing works;
- The permitted times for construction heavy traffic (i.e. vehicles over 12.5m length undertaking spoil haulage and material delivery/ equipment delivery) to the Woolloongabba worksite is 24hrs, 7 days a week except Monday to Friday – 7.00am to 9.00am-00am and 4.30pm to 6.30pm;
- CBGU JV shall provide ~~a single access point~~ to the invert of the station box by way of a modular stretcher stair scaffold & ~~twin~~ alimak. All other access equipment required to complete the scope must be provided by the Subcontractor;
- ~~For the entirety of the works, CBGU JV will supply & operate craneage. The sizing, type & number of cranes is still to be determined, however they will be sized to serve all lifts required within the station box (small lifts, formwork, tools, all precast items etc). The Contractor is to liaise with the CBGU JV foreman for all required lifts and acknowledges that they will interface with other Contractors as necessary;~~
- ~~Provision of trained & competent dogmen/riggers for all required lifting activities;~~
- Provide a detailed construction methodology to CBGU JV for approval covering the following aspects of the scope, namely;
 - Concrete placement method for each element, including concrete pour plans, methods to restrict water evaporation and plastic cracking etc;
 - ~~Precast dock unit/girder installation procedure;~~
 - Construction of post tension beams;
- All drainage identified on the drawings is to be installed (cast in drainage items free issued by CBGU JV) by the Contractor (see drainage section below);
- All penetrations & voids shown on the design drawings. All locations have been considered in the permanent works design to accommodate for all logistical requirements throughout the station construction process;
- The set out and installation of all CBGU JV supplied cast in items specifically nominated in the design drawings inclusive of, but not limited to hold down bolts, block outs, cut-outs & penetrations as shown or as required. All materials required for the chemical or mechanical anchoring of cast in items is to be supplied by the Contractor;
- Installation of water proof membrane on the roof slab as noted at locations specified on the design drawings;
- The Contractor must ensure that all plant & equipment utilised for the scope of works are within the allowable live loadings stipulated on the loading plans detailed in the design package 410-0450;
- Stressed anchors are installed by others as part of the temporary retention of the station box. These are required to be destressed (by others) as the UPS is constructed, transferring the load from the temporary retention system to the permanent works system. The anchors have been positioned such that they are approximately 1.5m above permanent floor height. In some instances, the anchors can only be destressed once the floor above and below has been constructed, hence the potential requirement for penetrations in the wall to allow destressing. The Contractor shall allow for this & coordinate with other Contractors to facilitate the destressing of anchors. These locations are identified within design package 410-0910;
- CBJU JV shall undertake the main dewatering of the station box throughout the construction of the UPS via sumps in the base of the excavation. The Contractor shall coordinate its works around all required dewatering activities. The Contractor shall be responsible for any localised dewatering required floor by floor as a result of its works.

Commented [KO9]: Potential to include item in pricing schedule? review

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Commented [CR10]: Re word and check this.

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Commented [KO11]: Re wording of the contractor requirements with regard to mobile forklift etc

Commented [CR12]: Precast installation by others. FRP contractors to place concrete toppings, infills

Commented [RP13R12]: Precast installation to stay in scope for now

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Commented [CR14]: Do we want the FRP contractor doing the waterproofing?

Commented [RP15R14]: I think they will be best placed to undertake these works (water guards/hydrophilic strips at the CJ between walls/slabs, as well as waterproof sheeting & topping slab at L0)

Commented [KO16R14]: Option 1 we go out for pricing, option 2 include wording for allowance to coordinate etc

Commented [CR17]: Check we are including the latest load plans received this week

Commented [RP18R17]: Acknowledged

Commented [CR19]: Need to be specific about which levels require penetrations in the permanent wall. Need detail of how they are unfilled.

Commented [RP20R19]: Locations on de-stressing are currently in question with RBG

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- CBGU JV shall be responsible for the provision and maintenance of a lined washout area suitable for the washout of concrete agitators only;
- CBGU JV shall be responsible for the offsite disposal of excess concrete where placed in the designated area by the Contractor
- CBGU JV shall be responsible for the provision and serving of 24x general waste skips, 2 recycling bins and 24x steel skip bin for use by the Contractor for each level. The Contractor shall be responsible for offsite disposal of all other waste. CBGU JV shall provide five turn outs of each bin per level. Any costs associated with any further turn outs shall be borne by the Contractor.

Commented [CR21]: Surely we should be stipulating a reasonable amount of excess concrete i.e. - a maximum of 4% of the theoretical volume of the pours? If they have to abandon a pour or order significantly more than required we shouldn't have to deal with the disposal costs.

Commented [KO22R21]: Include a trigger % for over orders in contract.

Commented [RP23R21]: Go with 4%

Commented [CR24]: Timber waste? By the contractor?

Commented [RP25R24]: General waste?

Commented [KO26R24]: All temporary materials brought to site as part of the completion of the works shall be taken off site by contractor i.e CBGU D&C JV will not be responsible for disposal.

Commented [KO27]: Specify number of bins in each work areas supplied by CBGU D&C JV. JM providing detail on quantities

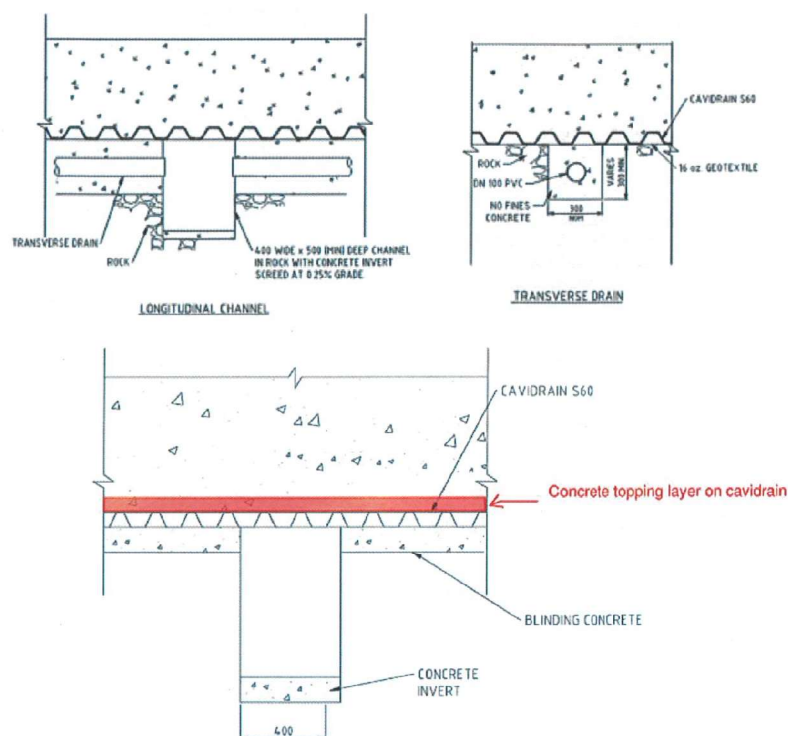
Drainage

The underground primary structure is designed as a drained structure. Water is collected through the external perimeter walls and channelled into the under slab cavidrain -system. This flow is then conveyed into transverse & longitudinal channels cut in rock underneath the cavidrain invert, which drain into the concrete sump of the underground primary structure.

The Contractor shall install all drainage identified on the drawings. CBGU JV shall provide all required cast in drainage items. This includes, but not limited to:

- Installation of under slab drainage collection channels
 - Transverse & longitudinal drainage channels are to be excavated in the rock invert of the station. Detail excavation of the transverse & longitudinal channels to be undertaken by CBGU JV. These are open channels cut into the rock with a concrete screed invert graded towards the sump of the underground primary structure. The longitudinal drain is a 400mm wide x 500mm deep open channel. Access openings are to be provided at 12m spacings in the open drain to facilitate the future cleaning and maintenance of the channels. The openings are to be covered with CBGU JV supplied galvanised steel bolted covers.
 - The transverse drains are at 12m centres under the platform along level B8. They comprise of DN100 pipe in no fines concrete surround. Below are typical cross sections of the transverse & longitudinal drains
- Install the under slab cavidrain system
 - CBGU JV shall provide the excavation to the required level (underside of blinding layer).
 - The Contractor is to place a layer of blinding concrete with perforations to allow ingress of water
 - Cavidrain sheeting is to be installed as per the manufacturers specifications on the-a concrete blinding layer
 - It should be noted that a concrete protection layer will be required on top of the cavidrain prior to the structural slab construction
 - FRP of overlying structural slab
 - Subcontractor to allow for the installation of flushing points as nominated on the drawings

2



Commented [CR28]: We might be better to draw this detail up ourselves showing the blinding layer required under the Cavidrain and the protection layer on top

Commented [RP29R28]: Drawing has been updated to show protection layer

Formwork

Formwork

The Subcontractor should include and allow for the following:

(a) Design and supply all necessary formwork support systems to perform the Subcontract Works in accordance with statutory requirements, relevant Codes of Practice including AS3610, and provide necessary documentation. All approvals will be obtained, and written evidence given to the Contractor of these approvals, prior to the Works commencing. All forms must meet the requirements outlined in MRTS70 and give the class of finish required in the design report.

(b) All formwork must be in accordance with the Formwork Code of Practice 2016, this includes RPEQ certification as necessary to comply with the code, or as required by the Contractor after completion of a risk assessment. Copies of all design drawings and pre-pour reports must be provided to the Contractor by the Subcontractor and must be approved by the Contractor prior to commencing the work.

(c) Supply, erect and dismantle all scaffolding, platforms and ladders required to carry out the Subcontract Works, unless they are a part of the temporary works support structures.

(d) Install all scaffolding to the Australian Standards as required by the Contractor and supply design and RPEQ certification of the same.

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- (f) Construction and maintenance of access in accordance with the formwork and scaffolding codes of practice 2016 to elements at all levels where operations are being undertaken.
- (g) Stripping and removal of all formwork from concrete areas.
- (h) Supply and application of all form oil and any other necessary consumables.
- (i) The Construction program must clearly set out formwork activities.
- (j) Rectify any non-compliant or defective Work as and when directed by the Contractor to the nominated standard. This will include for the removal and/or patching of slurry runs or concrete residue as a result of badly fitting forms to complete the works to the required class of finish. All rectification Work is to be completed as the work proceeds and at the Subcontractor's cost.
- (k) Fix all stop ends, rebates, cast-in's and the like as required.
- (l) Supply and install safety fences and posts to Australian Standards and to the satisfaction of the Contractor to keep areas safe.
- (m) The Subcontractor must not use quick cut power saws on the project unless they are operated by a ticketed/competent person.
- (n) The Subcontractor must form expansion and construction joints as detailed in the design drawings including the installation of dowels, couplers and compressible filler materials. The Subcontractor is responsible for green cutting where required and adequate protection of the joint areas.
- (o) Responsibility for delivery of all materials, plant, equipment and labour to the Workfront from the laydown yard (where approved by the Contractor) or otherwise.
- (p) Assume that all handling of materials once in the box will be the responsibility of the Subcontractor
- (q) Supply of water proofing to wall/base slab interface at B9/B8.

The Contractor shall supply and install all necessary formwork to construct the various concrete elements and achieve the required finish.

In carrying out the Works the Contractor shall be responsible for:

- ~~Design & certification, supply, erection, stripping & removal of all formwork, falsework, temporary guards, barriers, handrails, scaffolding, work platforms, temporary support systems (including but not limited to precast beams, propping of slabs, soffits, columns, formwork systems etc) The Subcontractor shall submit designs to CCGU for review prior to use. Each design shall be certified by an RPEQ Engineer. The Subcontractor shall adhere to the CCGU permit to load system for temporary works & is to allow for each temporary works element to be certified by a RPEQ engineer prior to loading.~~
- ~~Unloading, handling, assembly, erection, modifying, installation of stop ends, stripping, and demobilization of all formwork and falsework, temporary access, scaffold and the like to complete the works;~~
- ~~The supply and application of form oils, concrete retarders and curing compounds~~
- ~~The cleaning, blowing out and removal of all debris from all formworks, decks and foundations prior to the placement of concrete to achieve the required finish standards~~
- ~~Achieving the required standard of concrete finish.~~
- ~~Providing CCGU JV with at least four weeks' notice of requiring any CCGU JV supplied cast in items~~
- ~~The supply, set out and installation of any compressible fillers or fibreboards where shown or as required by the Contract documentation;~~
- ~~Supply and installation of fillets/mouldings to all external corners as specified in the design drawings and specification;~~

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- Remove all temporary fixings in concrete and make good holes left after removal. In all cases, totally removable fixings shall be used in lieu of fixings that will wholly or partially remain in the structure. Any temporary fixings required in existing permanent works to fasten/support formwork must be approved by CBCU prior to undertaking
- The removal of all tie bolt anchors, rods and other fixings used in the construction of the formwork at the time of stripping, and the knocking back and abrading flat of, concrete chipping on finished surfaces due to formwork not being close fitting or taped;
- Where required, the contractor is responsible for design and supply of all temporary formwork elements, boards and access ways. This is inclusive of third party design verification as well as onsite inspections.
- Supply of water proofing to wall/base slab interface at B9/B8.

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Reinforcement

The Subcontractor shall include and allow for the following:

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(a) Reinforcement will be supplied by the contractor. All reinforcement deliveries are to be received and checked by the Subcontractor. Any discrepancies must be immediately brought to the attention of the Contractor. Confirmation of receipt of delivery is to be submitted to the Contractor via signed schedule at the end of each shift. The Subcontractor has allowed for minor alterations to the bars if required.

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(b) Reinforcement, including tie wire, chairs, aspros/ spacers and the like will be supplied by the Contractor. Approval of schedules, ordering, planning and management of deliveries to the work front is the responsibility of the Subcontractor.

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(c) No scheduled reinforcement will be cut or bent by the Subcontractor unless prior approval has been obtained from the Contractor. Failure to adhere to this requirement is at the Subcontractor's risk and cost.

(d) Laps lengths will conform to MRTS71 and MRTS71A unless otherwise stated in the design drawings and documentation.

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(e) Supply all temporary works packages required for lifting prefabricated cages. Temporary works packages must be signed off by a RPEQ and submitted to the Contractor for approval prior to use.

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(f) Allow for the installation and maintenance of protective caps or lacer bars to reinforcement bars until reinforcement is encased in concrete. Protective measures are to be supplied by the sub-Contractor, for installation by the Subcontractor.

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(g) Tie wire will be supplied by the Contractor for each delivered schedule of reinforcement. The Subcontractor must be responsible for the controlled distribution of tie wire and will advise the Contractor of further purchase requirements well in advance to prevent any delays to works. Delays associated with non-supply will not be accepted.

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(h) Program and co-ordinate for the supply of free issue reinforcement and other associated materials from the Contractor at least 1 week in advance. This must be included on the construction program depicting date, time and quantity of materials required. The Subcontractor will be liable for any cost incurred by failure to comply with these notice periods.

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(i) The Subcontractor must comply with the Contractors pre-pour checklists and the supervisor will be required to attend pre-pour inspections as per the subcontractor's request. Works must be substantially complete at this stage. There should not be more than minor works and final cleaning happening at inspection time.

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~~(i) The Subcontractor is responsible for the installation of all reinforcement supports including aspros and spacer bars where and as required. Assume at this stage cast in items are to be supplied by the Contractor.~~

~~(k) The Subcontractor must ensure that all stainless steel reinforcement is handled and stored as outlined in MRTS71A.~~

~~(l) All reinforcement must be fabricated and placed in accordance with MRTS71 and MRTS71A.~~

~~(m) The Subcontractor is required to clean out all tie wire, debris and foreign matter prior to pour presenting to Contractor for inspection.~~

~~(n) Assume that all handling of materials once in the box will be the responsibility of the Subcontractor.~~

Reinforcement

- The Contractor shall install all reinforcing bars and tie wire free issued by CBGU JV including all spacers and accessories in accordance with the Specification and drawings.
- ~~The supply of plant, labour, and equipment required to take delivery of and be responsible for all handling of reinforcement, bar chairs and any other free issued materials upon delivery to the construction site. Unloading of delivery vehicles shall occur within 1hr of their arrival onsite.~~
- ~~The Contractor shall, in consultation with CBGU JV supervision, coordinate all deliveries to site. CBGU JV will then provide 24hrs notice of confirmed upcoming deliveries for free issued items and advise a planned delivery window of up to 3hrs duration;~~
- ~~The placement and fixing of the steel reinforcing, couplers, dowels and starter bars to the required levels, grades and tolerances as specified~~
- The Contractor shall remediate work that is not sufficient in spacing, lap length, cover or size of bar (or any other way) in a timely manner, as directed, without disruption to the construction programme. Therefore, if remediation works are required, extra manpower will be allowed for and provided by the Contractor without claim for an extension of time or cost variation;
- The Contractor shall consult with and request from CBGU JV, a minimum of four weeks in advance for the scheduling of the steel reinforcing. Any extra steel, plus any additional cartage and return charges will be back charged to the Contractor;
- The Contractor shall be back charged for any reinforcement wastage over and above CBGU JV's as scheduled requirement in accordance with the design drawings;
- The Contractor shall be entitled to claim reinforcement fixing on a tonnage rate, as per the pricing schedule, as per the agreed steel reinforcing schedule quantities. For avoidance of doubt, the Contractor shall not be paid for additional reinforcement installed for the Contractor's convenience or reordered/replaced due to loss or wastage;
- ~~The Contractor is responsible to review the reinforcement schedule in advance of the works to identify any shortcomings or deficiencies. Shortcomings or deficiencies identified on site shall be rectified as soon as practicable by CBGU JV, however delays on site and associated costs are the responsibility of the contractor;~~
- ~~The Contractor will be responsible for the supply, fixing, maintaining and removing as necessary of protective bar caps to all exposed ends of reinforcing bars;~~
- ~~It is the Subcontractor's responsibility to keep the pour area clean; this means picking up tie wire efforts and debris before a pour. Any waiting time incurred on concrete delivery, due to area not being cleaned will be charged back to the Contractor;~~
- ~~CBGU JV shall provide a main waste bin and a scrap steel bin at a location agreed upon by the CBGU JV Supervisor and the Contractor. The Contractor will remove steel scrap from its work areas and place into the scrap bin on a daily basis in order to keep the work area free of waste;~~
- Provision of compressed air or by other means for the cleanout of the forms prior to the placement of concrete. Compressors and all auxiliary equipment will be supplied by the Contractor;
- ~~The Contractor shall maintain on site at all times spare tools, including but not limited to nips, bolt cutters, oxy sets and the like to maintain production;~~
- ~~The Contractor shall provide a qualified welder/s to allow welding of reinforcement where detailed on the drawings as per the specification. This includes the welding of reinforcing bars, splices, ligatures, including the supply of all necessary tools, consumables & welding procedures. The~~

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~~Contractor shall be responsible for ensuring that fire extinguishers are allocated as required for the safe completion of the works.~~

Concrete Placement

The Subcontractor has included and allowed for the following:

- (a) ~~The Subcontractor is to supply labour, and tools to place, compact, finish and cure concrete to the required finish including roughened surfaces for construction joints in accordance with MRTS70.~~
- (b) ~~The Subcontractor will supply all compaction equipment necessary to complete the concrete pour(s).~~
- (c) ~~The Contractor will supply ready-mix concrete to the Subcontractor. It will be the responsibility of the Subcontractor to calculate the volume of concrete required and place an order for supply with the Contractor's representative with an agreed -notice period.~~
- (d) ~~The Subcontractor must execute the concrete placement and finish to comply with the Drawings and Specifications. Concrete must be placed, compacted, finished and cured in accordance with MRTS70.~~
- (e) ~~The Subcontractor must allow for the initial application of curing and maintaining a curing system for the specified length of time outlined in MRTS70 and the design documentation. The Subcontractor is to seek clarity from the Contractor if there is a discrepancy between design and Specification requirements.~~
- (f) ~~The Subcontractor must allow for (including all plant and materials) the cleaning out, green cutting and scabbling of concrete works as required at all interfaces and construction joints specified on the design Drawings.~~
- (g) ~~The Subcontractor shall allow for the clean-up of overspills and droppings and dispose of them on site as directed by the Contractor.~~
- (h) ~~The Subcontractor will provide all necessary plant and equipment including spare equipment to ensure continuous operation during concreting.~~
- (i) ~~The Subcontractor will clean out and prepare the form area prior to the concrete pour in a manner satisfactory to the Contractor to ensure staining of the concrete element is prevented.~~
- (j) ~~Allow for waste concrete to be discharged at designated washout bays. All concreting plant, tools and equipment are to be cleaned only in the designated washout bays.~~
- (k) ~~The Subcontractor is to allow for all concrete pumping requirements. Details of the pumps and durations on site to be ???~~

Concrete

- ~~All concrete supplied by CBGU JV shall be placed in accordance with the specifications & design drawings. All concrete supplied will be free issue, except for wastage in excess of 10% which shall be back charged to the Contractor.~~
- ~~The Contractor shall manage the entirety of the concrete pour process. This includes -co-ordinating the timely delivery of concrete with CBGU JV supervisory personnel, specifying concrete agitator release times. Any waiting time incurred by CBGU JV in excess of 60mins from the time of arrival of the concrete agitator on-site will be back charged to the Subcontractor.~~
- ~~Maintain a concrete pour record noting the delivery times, slumps, strengths, temperature, placement times etc. ensuring the concrete is placed within the required parameters stipulated by the CBGU JV Inspection & test plan. Contractor to collect all delivery docket and collate. All dockets shall be provided to CBGU D&C JV at COB of each day.~~

Commented [KO30]: May need to change to project specification? Update with correct specification document.

Commented [RP31R30]: Just note this as the technical documents

Commented [RP32R30]:

Commented [CR33]: To be what?
I assume we are getting the contractors to price the pumping so we can compare to us providing the pumps?

Commented [RP34R33]: I had omitted concrete pumping as I thought we were providing this. JM can provide more on this?

Commented [KO35R33]: Include in separate section 'Options' to allow pricing of items such as Concrete pumping, concrete supply

Commented [KO36]: Include coordination section for concrete works

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Commented [KO37]: Need to ensure this is in line with our concrete supply agreement and specification

Commented [KO38]: Broader coverage as per specification/technical documents engineering team to review requirement

Commented [KO39]: Form worker to clean the deck prior to pour

- Adherence to CBGU JV's concrete pre-pour procedure for all elements in the permanent works
 - Contractor engineer & foreman to inspect the works and complete CBGU supplied inspection checklist to ensure conformity of the works to the drawings & specification.
 - Contractor to organise inspection with CBGU JV engineer & foreman after inspection checklist is complete. The complete & signed checklist to be submitted along with a request to CBGU JV engineer for final sign off of the works.
 - Contractor & CBGU JV to organise inspection with D.A. 24 hours prior to placement of concrete. Concrete orders shall not be confirmed until this inspection has been completed
- Installation of 75mm blinding layer under all footings & slabs following verification from the geotechnical assessor. The extent of blinding is to be agreed in writing with CBGU JV's supervisor prior to commencing works. The payable quantity will be measured on an as-built basis by CBGU JV's surveyor up to the limit of the agreed extents only. For avoidance of doubt, any blinding constructed beyond the agreed extent will be considered wastage and will not be payable. Concrete wastage beyond 240% will be back charged to the Contractor. The blinding layer shall have perforations where required for drainage.
- ~~Installation & preparation of all construction joints (sawn joints, permanent movement joints, keyed joints, expansion joint) in accordance with the drawings, including supply of all required jointing materials, inclusive but not limited to joint fillers, sealants, fibreboards, hydrophilic strips, water stops etc.~~
- ~~The placement, compaction and finishing of the concrete to the required levels, grades, tolerances and finishes as specified. Where this does not conform, all rectification works shall be the Contractor's responsibility.~~
- ~~The Contractor shall be entitled to claim concrete works on a m3 rate, as per the pricing schedule. The payable quantity shall be as per the theoretical quantity calculated from the design documentation. Where concrete is placed against an excavated surface, the as built survey will be considered. For avoidance of doubt, the Contractor shall not be paid for additional concrete installed for the Contractor's convenience or for additional concrete supplied due to loss or wastage~~
- The Contractor is to be back charged for any quantities of concrete in excess of 240% of the total contract theoretical quantity calculated from the design documentation. Where concrete is placed against an excavated surface, the as built survey will be considered
- ~~The Contractor shall provide, operate and maintain all equipment including but not limited to, static line pumps, kibbles, chutes, tremies, vibrators and motors, laser levels, motorised trowels, generators, lights, scaffolding, ladders, safety signage, and equipment associated with the works. The Contractor is to have spare vibrators and motors at all times~~
- ~~There are 2 x 60m concrete boom pumps (supplied by CBGU JV) positioned on the perimeter of the station box which are to be used for all concrete pumping requirements of the Contractor. The Contractor is to provide 1 week lookahead detailing all concrete pumping requirements. The Contractor acknowledges that there may be multiple pours scheduled on the same day and will be flexible to meet any changes/unavailability of concrete pumps. CBGU JV shall not be liable for any delay (time & cost) due to unavailability of concrete pumps.~~
- ~~The Contractor shall ensure that sufficient spare equipment is available on-site to assure continuity and quality of concrete pours. This shall include but not be limited to vibrators, screeds, concrete pump etc. in the event of a mechanical breakdown;~~
- ~~The Contractor shall clean all concrete and slurry upon completion of pours~~
- ~~Supply and application of concrete curing compounds/membranes, retardants or any other associated products required by the design drawings and specifications;~~
- ~~The decision to commence any concrete pour at risk of being affected by the weather or any other circumstances shall be solely the Contractor's decision, following consultation with CBGU JV, unless otherwise directed. The Contractor shall rectify any damage to concrete works caused by inclement weather where CBGU JV has not issued the Contractor with a direction~~
- ~~Provide a minimum of 5 working days' notice to CBGU JV supervision of the Contractor's intent to place concrete so that the order for concrete supply can be placed~~
- ~~CBGU JV reserves the right to schedule a number of pours in various work packages on any given day. Pour times may be subject to changes on the day and the Subcontractor shall be flexible to meet any program changes~~
- ~~Installation of post tensioned beams where required on the design drawings. The Contractor is to provide all blockouts, PT tendons, ducts, anchorages, grout tubes and the like. Below is a typical cross section of the PT arrangement;~~

Commented [KO40]: PR to review wording.

Commented [KO41]: Allow for m2 + agreed e/o allowance for form board etc.

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Commented [CR42]: Double up. Already discussed.

Commented [CR43]: Something like this should be included as well, we will need to monitor the concrete waste against planned quantities if we are supplying. There should also be something about providing pour records that include a theoretical and planned volume (checked by us)

Commented [RP44R43]: Agreed – will incorporate this back into the document. Pour record requirement will be on the contractor noted in my 2nd and 3rd dot point above

Commented [RP45R43]:

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Commented [CR46]: I thought we only had one?

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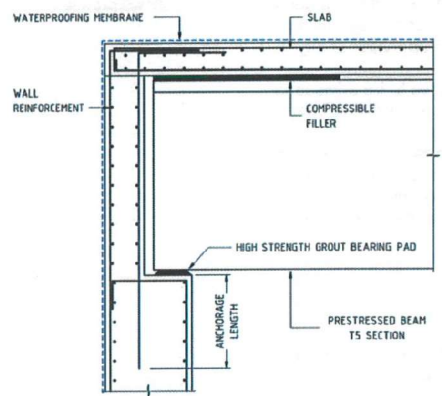
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Precast Deck Unit & Girder Installation

- Construction of high strength grout pads/pedestals/corbels to accommodate deck units/T-girders. Below is a typical cross section of the super – T arrangement



SUPER T GIRDER CONNECTION
CFAI F 190

- Provision of suitably experience labour & supervision for the landing of precast deck unit & girder units on high strength grout bearing pads, including the supply & application of epoxy (if required)
- Installation of elastomeric bearings (free issue by CBGU D&C JV) for & fixing of bearing attachment plates to deck units/beams
- Installation & removal of deck unit/T-girder support systems including jacks and wedges required & temporary walkways/handrails to facilitate access to the deck units/T-girders once installed
- Installation & grouting of hold down bolts/dowels, compressible fillers
- In-situ topping slabs, stitch pours, FC sheeting installation, denso tape, sealing of deck units/girders

Co-ordination & Logistics

- The Contractor shall attend & actively participate in weekly coordination meetings with CBGU JV to run through requirements for survey, craneage, concrete pumping, concrete supply, reinforcement supply, general deliveries & mobile plant.
- For the entirety of the works, CBGU JV will supply & operate craneage for all lifts required in and out of the station box. The Contractor is to liaise with the CBGU JV foreman for all required lifts and acknowledges that they will interface with other Contractors as necessary. The Contractor shall provide craneage for any unloading of deliveries of materials (including free issue by CBGU JV) as well as any other small lifts required within the station box (all plant must be within the construction load limits of design package 410-450)
- Provision of trained & competent dogmen/riggers for all required lifting activities undertaken buy the Contractor

Survey

Commented [KO47]: Confirm items provided by CBGU D&C JV in separate section

Commented [CR48]: Surely this will be an installation by a specialist contractor?

Commented [RP49R48]: Up for discussion at meeting. The deck unit/Super T installation will be no different to TMR bridges which all of these contractors have undertaken before. Suggest we leave this in the scope and iron out during tender evaluation

Commented [RP50R48]:

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- CBGU JV will provide the Contractor with survey control points datum points & initial set out & levels. The Contractor will give reasonable notice to CBGU JV of any survey set-out requirements to ensure fluency of the works: i.e. at least 24 hours in advance. Any damage or disturbance to the control points attributable to the Contractor shall be re-instated at the Contractor's expense. The Contractor shall actively participate in weekly coordination meetings with CBGU JV.
- The Contractor is to co-ordinate with the CBGU JV supplied Surveyor with regard to the survey requirements of the Contractor, and is responsible for the checking of the set out against the design drawings and must immediately inform the surveyor or CBGU JV Supervisor of any discrepancies prior to the works advancing;
- Check dimensions on site prior to installation - any discrepancies / variances to be advised to CBGU JV forthwith. It is the Contractor's responsibility to ensure that they are working from the latest CBGU JV supplied design drawings;
- All out of alignment or out of tolerance works shall be rectified at the expense of the Contractor;
- The Contractor shall assess the current drawings and details well in advance of the current work faces to highlight discrepancies and to notify CBGU JV of any missing or conflicting information. No delays will be considered for Contractor oversight in drawing assessment and planning;

Commented [K051]: Specify exactly what CBGU D&C JV will provide

4.1. QLD Government Policy Requirements

The QLD Government has adopted a number of policies applicable to the CRR Project. The CRR Project is the Queensland Governments highest priority infrastructure project and offers a prime opportunity to provide benefit to local communities in Queensland through:

- the use of local suppliers,
- employing a local workforce,
- training and upskilling of the local workforce, and
- using local manufacturers and businesses in the supply chain as promoted in the Queensland Procurement Policy

In addition to the Queensland Procurement Policy, the following Queensland Government Policies are also relevant for the CRR Project:

- Queensland Indigenous Procurement Policy,
- Queensland Charter for Local Content,
- Quality Assurance Policy,
- Queensland Government Building and Construction Training Policy,
- Queensland Government's Code of Practice for the Building and Construction Industry,
- Queensland Urban Design and Places Panel,
- Urban Design Outcomes for significant projects states code, and
- Building Information Modelling

Subcontractors and suppliers are required to meet the policy objectives and deliver outstanding outcomes for the Queensland community, particularly in the areas of employment, education and training.

4.2. On-Boarding

Contractors must comply with the Project to the On-Boarding Guidelines (refer specification list)

4.3. Dockets & Timesheets

The Contractor must provide, by the end of each shift provide hours of labour, plant and other resources used during the shift. This information must be submitted via Rover

The Contractor will be responsible for the receipt and checking of all concrete and reinforcement deliveries. Delivery dockets must be submitted by the end of each shift

5. PROGRAMME OF WORKS

The indicative dates for the individual site mobilisations are listed in the table below:

Location	Date of Access	Date of Completion
Stage 1 Works (Pre-TBM Works)	1/9/20	8/12/20
Stage 2 Works (Rest of underground primary structure)	8/12/20	20/12/22

Commented [CR52]: It would be good to include the synchro image that indicates the 3 stages of construction that make up Stage 2 (FOH, BOH and Shaft) and include start and completion dates for each element

Commented [RP53R52]: I'll look at this with Jamie

6. APPENDIX A – Package Specific Drawings

Drawing No	Title	Revision

7. APPENDIX B – Technical Specifications

Specification	Title	Revision

8. APPENDIX D – Other Documents & Forms

Specification	Title	Revision
CRRTSDSD-SH-PRD-CBGU-000001	On-Boarding Guideline	-
CBGU JV Subcontractor Pack ver1.2, 21 August 2019	Subcontractor Pack	
CBGU JV Subcontractor Pack ver1.2, 21 August 2019	Subcontractor Fuel Reporting	
CBGU JV Subcontractor Pack ver1.2, 21 August 2019	Subcontractor Environmental & People Data Report	
-	Safety Essentials – Electrical Work	-
-	Safety Essentials – Live Services	-
-	Safety Essentials – Live Traffic	-
-	Safety Essentials – Mobile Cranes & Lifting Operations	-
-	Safety Essentials – Mobile Plant	-
-	Safety Essentials – Temporary Works	-
-	Safety Essentials – Working at Heights	-

9. APPENDIX E – Subcontractor Quality Deliverables

Refer to attached document (Form CRRTSD-QA-FRM-CBGU-000001)

10. APPENDIX F – General Inclusion and Exclusions

A general list of inclusions and exclusions is listed in the table below: -

N O	I T E	PROVIDED BY CBGU	PROVIDED BY TENDERER	REMARKS
1	H E A L T H / S A F E T Y / E N V I R O N M E N T A N D S E C U R I T Y			
	H S E S S u p e r		X	Supervision of own personnel required at all times (excluding labour hire).

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v i s i o n			
	P r o j e c t I n d u c t i o n P r o g r a m	X	Induction provided by CBGU personnel. One day required. Tenderer to ensure attendance of all employees.
O t h e r I n d u c t i o n P r o g r a m		X	As required.



CBGU D&C JV

s			
Attendance at induction programs, tests, checks and examinations		X	
Construction indu		X	Prior to personnel attending site.



Contracting			
Initial appearance and closing of issue, Reissue and replacement		X	Provided by Tenderer in accord with CBGU requirements.
Pre-Mobi		X	Tenderer to pay for.



CBGU D&C JV

	l i s a t i o n M e d i c a l E x a m i n a t i o n			
	M e d i c a l F a c i l i t i e s a n d S e r v i c e s a t S i t e	X		
	F		X	Tenderer expected to provide their own firefighting

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i r e f i g h t i n g E q u i p m e n t a n d s e r v i c e s			equipment for their sheds/containers/works. CBGU to provide equipment to common areas.
S e c u r i t y o f f e n d e r e s s a c c i d e n t i e		X	



CBGU D&C JV

I	s a n d T e n d e r e r s i s t e m s			
	S e c u r i t y C h e c k a t G a t e s (I D b a d g e i s s u e s)	X		
	R e	X		Provide at cost to Subcontractor

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CBGU D&C JV

place ment for lost / dam- aged ID bad- ges			
Pro- vision of Rail Safety Work		X	As appropriate for works in/near rail corridor.



CBGU D&C JV

er c a r d			
V e r i f i c a t i o n o f C o m p e t e n c y (V O C) a s s e s s m e n t o f w o r k e r s p r i o r t o c o m m e n t		X	Contractor must provide an employer evidence declaration. CBGU will complete a supervisor observation

cement on site Required for a parallel earth moving plant operator s and other plant/ eq			
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X

Commented [CR54]: Should we not stipulate here the CBGU Plant Checks again

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plant prior to attending site, as specified			
		X	For example, high risk work licences and confined space training
Relevant and required licences are			



	el d b y T e n d e r e r p e r s o n n e l			
2	T E M P O R A R Y S I T E F A C I L I T I E S			
	F i r s t A i d F a c	X		

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	ilities on Site			
	Contributions and Amenities	X		
	On-site parking Areas	X		Only if pre-agreed. On-site parking will be <u>extremely</u> limited to 'essential' vehicles only

a f o r e s s e n t i a l s i t e v e h i c l e s o n l y			
G e n e r a l p a r k i n g f o r e m p l	X	On street parking not permitted	

Commented [CR55]: Should probably include a drawing highlighting the side streets that are prohibited near the station

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o y e s (o f f i t e)			
T e n d e r e r ' s i t e o f f i c e s a n d s t o r a g e c o n t a		X	<u>Any facilities required to be agreed and suitable locations determined.</u>



CBGU D&C JV

i n e r s			
S t o r a g e f o r H a z a r d o u s C h e m i c a l s , S u b s t a n c e s a n d M a t		X	

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	e r i a l s			
3	S I T E U T I L I T I E S			
	E l e c t r i c a l - 2 4 O v e r m a i n s s u p p l y	X		at site office only
	E l e c t		X	

Commented [CR56]: Surely we're providing this?

r i c a l - 4 1 5 v 3 p h a s e s u p p l y			
	P o r t a b l e p o w e r S u p p l y	X	
	P o t a b l e W a	X	at site offices only

	t e r			
	N o n - p o t a b l e C o n s t r u c t i o n W a t e r (a t t e s i g n a t e d t a k e o f	X		

	f p o i n t s)			
	F l o o d / S e c u r i t y L i g h t i n g	X		
	P o r t a b l e T a s k L i g h t i n g		X	

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4	P L A N T , E Q U I P M E N T , T O O L S , M A T E R I A L S			
	A l l r e q u i r e d T o o l s , T e		X	

I	Temporary Materials and Consumables			
	All required Plant and E		X	

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q u i p m e n t a n d c o n s u m a b l e s			
S e r v i c i n g a n d m a i n t e n a n c e o f T e n		X	Servicing to be performed within designated <u>and</u> <u>agreed</u> areas only

	d e r e r s p l a n t a n d E q u i p m e n t			
	O n s i t e r e f u e l i n g		X	
	T r a n s p o r t o f p		X	

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Plant, equipment and materials			
Concrete	X		
Reinforcement	X		Chairs supplied by CBGU JV. Tenderer to provide tie wire <u>and spacers</u>
Dra	X		



CBGU D&C JV

	in a g e C a s t i n l t e m s			
	P r e - c a s t C o n c r e t e E l e m e n t s	X		
	P o s t T e n s i o	X		

2

	mining equipment			
	Free Draining Granular Material	X		
	Structural	X		

	I S t e e l			
5	C O N S T R U C T I O N S I T E S E R V I C E S - G E N E R A L			
	A c c e s s a n d w o r	X	X	CBGU JV to provide <u>single staircase and alimak</u> access <u>point</u> into station box. <u>Tenderer</u> to provide all other access requirements for works

Commented [CR57]: We should include a drawing indicating location of alimak and stairs, as well as tower crane and locations available for concrete pumps

2

	kin g s c a f f o l d i n g a n d p l a t f o r m s			
	S u r v e y C o n t r o l p o i n t s	X		
	S e t o		X	



CBGU D&C JV

u t o f t h e T e n d e r e r , s w o r k s			
p e r m i t t o w o r k (P T W) S y s t e m	X		No working in a harness, as a primary means of fall prevention, is permitted
W a s t e	X	X	CBGU JV to provide a single waste bin & steel bin. Tenderer to dispose off all other waste off site

Commented [CR58]: Timber skip?

2



	R e m o v a l a n d D i s p o s a l			
	T r a f f i c C o n t r o l - F r e e w a y	X		
	T r a f f i c C o n	X		

I	Control - Local Roads			
	Traffic Control Flagger necessary for works		X	Must be qualified

2



CBGU D&C JV

f e m o v e m e n t o f p l a n t a n d e q u i p m e n t			
U n l o a d i n g , H a n d l i n g a n d	X	X	CBGU JV supplied cranes for all general lifts, precast install etc. within station box. Tenderer to provide craneage for unloading of deliveries etc on surface.



	L o a d i n g a t S i t e			
	C l e a n u p o f t h e W o r k s		X	

Russo, Paul

From: Russo, Paul
Sent: Thursday, 10 June 2021 4:47 PM
To: Abeya, Adrian; Church, Rory
Subject: RE: What engineering /coordination work is Heinrich not doing? and that we are?

Hi Adrian,

Engineering/administrative tasks which Heinrich is not doing

- Concrete pour records. We have an engineer who is present on site for the duration of all concrete pours and who completes the pour record
- Regarding note (d) below, there is no mark up on a program depicting the date, schedule number etc. for reinforcement required. This is purely completed by phone conversation directly with IPR (Heinrich's steel supplier) & Ross. Adding to this, we are liaising directly with Peikko (Heinrich's coupler supplier) and coordinating the delivery of the bars from Peikko to site which should not be our job
- We do not have a regular submission (I have not seen one to date) of a program of some sort. While I understand this is done sporadically at a high level, CBGU engineers are maintaining their own program (which we would do anyway) based on their assessment of progress on site. Rocktown submitted a program regularly which allowed us to properly plan upcoming deliveries, concrete etc.
- Regarding note (v), while Heinrich are providing a pre-pour checklist, this is usually provided less than an hour prior to the pour. There is no prior notice given for CBGU to adequately provide notice to the PIC/DA for onsite inspections. The reliance is solely on our engineers to foresee these requirements.
- In general, we need someone who we can contact other than Ross (their site manager who is busy with site issues) to organise temporary works designs, manage orders etc. Whether this is specifically Jeff or Laurie we just need to know.

Rory,

Have you got anything else to add?

Attachment ③ - Implementing scope management procedures

Regards

Paul Russo
Project Engineer



91 Leopard Street, Woolloongabba, QLD 4102, Australia
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E Paul.Russo@cbgujv.com.au

From: Abeya, Adrian <Adrian.Abeya@cbgujv.com.au>

Sent: Thursday, 20 May 2021 5:49 PM

To: Church, Rory <Rory.Church@cbgujv.com.au>; Russo, Paul <Paul.Russo@cbgujv.com.au>

Subject: What engineering /coordination work is Heinrich not doing? and that we are?

- ▲ (c) reinforcement schedules will be provided to the Contractor for review. Review comments to 48 hours of receiving schedules in order for CBGU D&C JV to direct the supplier to proceed. Should the Contractor fail to comply with this condition, any cost incurred (such as waiting program delays etc) will be borne by the Contractor.
- (d) Program and co-ordinate for the supply of reinforcement and other associated materials for in sufficient time for scheduling and delivery in advance of the programmed Works. This may be the construction program depicting date, time and quantity of materials required. The Contractor for any cost incurred by failure to comply with these notice periods;
- ▲ (f) All reinforcement deliveries are to be received, checked, unloaded and landed at work from Confirmation of receipt of delivery is to be submitted to CBGU D&C JV via signed schedule work day. The Contractor has allowed for minor alterations to the bars if required;
- (g) notify CBGU D&C JV within 48 hours of any reinforcement delivery that doesn't match the required design. Any additional reinforcement required that is not a detailed design item (e.g. saddle bars, splices due to errors in placing) are to be detailed by the Contractor and supplied by the Contractor and installed by the Contractor at the Contractor's cost.
- (r) comply with the CBGU D&C JVs pre-pour checklists and the supervisor will be required to inspections as per the Contractor's request. Works must be substantially complete at this time not be more than minor Works and final cleaning happening at inspection time;

- (t) manage the entirety of the concrete pour process. This includes co-ordinating the timely delivery with CBGU D&C JV supervisory personnel, specifying concrete agitator release times. Any delay incurred by CBGU D&C JV in excess of 60mins from the time of arrival of the concrete agitator will be back charged to the Contractor;
- (u) Maintain a concrete pour record noting the delivery times, slumps, strengths, temperature, etc, ensuring the concrete is placed within the required parameters stipulated by the CBGU D&C JV test plan. The contractor will collect all delivery documentation and collate information into a delivery documentation must be provided to CBGU D&C JV at the end of each shift;
- (v) adherence to CBGU D&C JV's concrete pre-pour procedure for all elements in the permanent structure
 - (i) Contractor's engineer & foreman are to inspect the works and complete CBGU D&C JV inspection checklist to ensure conformity of the works to the technical documents;
 - (ii) Contractor to organise inspection with CBGU D&C JV engineer & foreman after inspection complete;
 - (iii) Contractor & CBGU D&C JV to organise inspection with D.A. 24 hours prior to placement. Concrete orders will not be confirmed until this inspection has been completed.

Regards

Adrian Abeya

Senior Contracts Administrator



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 E Adrian.Abeya@cbgujv.com.au

**Cross River Rail – Tunnel and Stations
Contract Direction**

Contract No: Q80379-WG-WC-20321
Direction Number: 01



Date of this direction	18/05/2021
Direction to be completed/complied with by:	21/5/21

To

Contractor Name	Heinrich Constructions Pty Ltd
Attention:	Hoss Heinrich & Jeff Bedsor
Teambinder details	Refer teambinder mail / correspondence
'Child' project name	Q80379- Woolloongabba Station
Contract description	Q80379-WG-WC-20321- Woolloongabba Station - FRP Stage 2,3,4 & 7 - Primary Underground & Above Ground Structure Works

Direction:

In accordance with clause 34 of the Contract, CBGU D&C JV directs the Contractor to undertake Dayworks and provide all necessary labour to complete the welding of U-bars to internal wall 22 on B9 slab (only), inclusive of a welding inspection by a qualified welding inspector as per AS1554. CBGU JV estimate a total of 5 manhours required for welding.

CBGU D&C JV will provide the following:

- Reinforcement required for welding

The above works are to be undertaken in accordance with the Daywork Rates in Annexure D – Pricing Schedule, Table AD.2 (Daywork Rates). Dayworks records must:

- Include details of work location, activity performed, quantity completed;
- Show start and finish times and deduct time for non-working times and downtime;
- Daywork records must only be signed by Rory Church or Paul Russo

Site Contacts:

Rory Church – Senior Project Engineer – 0421 566 111

Paul Russo – Project Engineer – 0417 247 069

Authorised at CBGU D&C JV by:	Chris Russell	
Date:	19/05/2021	

The Contract Conditions apply to this direction.

To the extent that any part of this direction imposes on the Contractor a higher or greater requirement, standard, quality, level of service, staffing level, quantum or scope than any other part of the Contract, unless the context otherwise expressly requires or CBGU D&C JV otherwise determines, the higher or greater requirement, standard, quality, level of service, staffing level, quantum or scope prevails.

The Contractor acknowledges that the Contractor will have no entitlement arising under or in connection with this direction unless it is authorised and signed by the CBGU D&C JV project manager who is authorised to sign and date this direction.

Attachment ⑤ - Identify and document scope management issues

Russo, Paul

From: Russo, Paul
Sent: Tuesday, 13 April 2021 2:21 PM
To: Joseph Barker
Cc: John McCaughey; Purcell, Joel; Tresider, Warren; Ivory, Aaron; Eustace, David; Wiese, Mark
Subject: FW: Rocktown Close-Out Items
Attachments: 210413 Rocktown Punch List.xlsx; RT Punch List.zip

Hi Joe,

Following an on-site inspection today, we have added 3 items to the punch list which need to be closed out as soon as possible to prevent delays to Heinrich constructing the internal walls behind W29.

7) There is insufficient cover to the top 4 couplers on W18. RT are to propose an appropriate remedial action for input into NCR. It also appears that in several locations the couplers have moved during the pour which may pose a congestion issue for the next steelfixer.

8) We have found numerous couplers which are exposed to have significant ingress of slurry/concrete, some without any caps at all. CBGU have been rectifying localised locations of these however RT need to expose all remaining couplers for the B9 internal walls (on W29 and on the B9 slab floor) to clean out the threads as required. There are numerous instances where the concrete needs to be scabbled back further to identify the location of the coupler

9) Missing couplers in B8 suspended slab to internal walls. We are confirming the rectification procedure in this instance and will advise asap. The internal wall elevations shows the bar extending from the internal walls into the B8 suspended slab, in addition to typical slab-to-wall and wall-to-wall details on drawings CRRTSD-410-0450-DRG-RBGT-1470-134051 and -134052. Acknowledged that this has been missed from all parties – Mesh & Bar, schedule review, steel delivery and at numerous quality inspections however this does not preclude the requirement for reinforcement in this area.

Can you please advise when RT will have workers in this week to rectify the above?

Give me a call if there's any queries.

Regards

Paul Russo
Project Engineer



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E Paul.Russo@cbgujv.com.au

From: Russo, Paul
Sent: Monday, 12 April 2021 1:49 PM
To: Joseph Barker <Joseph.Barker@rocktown.net.au>
Cc: Kissane, Annabelle <Annabelle.Kissane@cbgujv.com.au>; Ivory, Aaron <Aaron.Ivory@cbgujv.com.au>; Wiese, Mark

<Mark.Wiese@cbgujv.com.au>

Subject: FW: Rocktown Close-Out Items

Hi Joe,

Could you please provide an update on the attached punch list items?

Regards

Paul Russo

Project Engineer



91 Leopard Street, Woolloongabba, QLD 4102, Australia

T +0417 247 069 **M** 0417 247 069

E Paul.Russo@cbgujv.com.au

From: Kissane, Annabelle <Annabelle.Kissane@cbgujv.com.au>

Sent: Monday, 12 April 2021 7:24 AM

To: Russo, Paul <Paul.Russo@cbgujv.com.au>

Subject: FW: Rocktown Close-Out Items

FYI

From: Kissane, Annabelle

Sent: Monday, 22 March 2021 4:08 PM

To: Joseph Barker <Joseph.Barker@rocktown.net.au>

Cc: John McCaughey <John.McCaughey@rocktown.net.au>; danny mcgrath <danny.mcgrath@rocktown.net.au>; Wiese, Mark <Mark.Wiese@cbgujv.com.au>; Clarke, Sophie <Sophie.Clarke@cbgujv.com.au>; Rykiert, Patrick <Patrick.Rykiert@cbgujv.com.au>; Purcell, Joel <Joel.Purcell@cbgujv.com.au>; Pettet, Phillip <Phillip.Pettet@cbgujv.com.au>; Eustace, David <David.Eustace@cbgujv.com.au>; Ivory, Aaron <Aaron.Ivory@cbgujv.com.au>

Subject: RE: Rocktown Close-Out Items

Hi Joe,

Please see attached punch list for stage 1 rectifications, noting, there is some outstanding ECR reports on there. Could Rocktown please work through these items, attached close out photos and update the status in the spreadsheet?

Thanks,
Annabelle

From: Joseph Barker <Joseph.Barker@rocktown.net.au>

Sent: Monday, 22 March 2021 8:08 AM

To: Kissane, Annabelle <Annabelle.Kissane@cbgujv.com.au>

Cc: John McCaughey <John.McCaughey@rocktown.net.au>; danny mcgrath <danny.mcgrath@rocktown.net.au>; Wiese, Mark <Mark.Wiese@cbgujv.com.au>; Clarke, Sophie <Sophie.Clarke@cbgujv.com.au>

Subject: Rocktown Close-Out Items

Hi Annabelle,

As discussed last Friday, can you please send through a list of items to be rectified and closed out by Rocktown at Woolloongabba Station. Danny will arrange for a crew to attend site early this week.

Thanks.

Joseph Barker
Project Engineer
Rocktown Pty Ltd
311 Earnshaw Rd, Northgate, 4013
Ph. 0419 688 503
joseph.barker@rocktown.net.au

