



Ugu District Municipality

MSIKABA WATER SUPPLY SCHEME - PHASE 3A

UGU-07-1611-2022

**Upgrading of Bomela Pump Station & Construction of Nyandezulu
Elevated Reservoir and Booster Pump Station**

CIDB CONTRACTOR GRADING: 6CE OR HIGHER

COMPILED BY:

Ngcolosi Engineers

P.O. Box .1421

Manaba Beach

4276

Tel N^o: +27 039 312 0292

Email: admin@ngcolosi.co.za

ON BEHALF OF:

Ugu District Municipality

P O Box 33

PORT SHEPSTONE

4240

+27 39 688 5700

Dudu.Mgabhi@ugu.gov.za

Tender Closes: 12 August 2022

NAME OF TENDERER	
ADDRESS OF TENDERER	
TELEPHONE N^o	
FAX N^o	
TENDER SUM (for information only)	R _____

CHECK-LIST FOR TENDER SUBMISSION

The Tenderer is to indicate in the check-boxes provided that he has completed the required section of the tender document. Completion of this check-list will assist the Tenderer in ensuring that he has attended to all the required items for submission with this tender.

Page	Description	Completed		For office use		
		Yes	No	Yes	No	Comments
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	Contact Details					
	Tender Sum					
RD.5	Site Inspection Certificate – Site Information					
RD.6	Relevant Experience					
RD.9	Curriculum Vitae of Key Personnel					
RD.15	Schedule of Plant and Equipment					
RD.16	Schedule of Sources of Supply of Material					
RD.17	Proposed Sub-Contractors					
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Page	Description	Completed		For office use		
		Yes	No	Yes	No	Comments
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RD.38	Record of Addenda to Tender Document					
RD.39	Compulsory Enterprise Questionnaire					
RD.41	Declaration of Bidders' Past Supply Chain Management Practices					
RD.43	Declaration of Interest					
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VOLUME 1

TENDER

TENDERING PROCEDURES

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T1.1 TENDER NOTICE AND INVITATION TO TENDER**CIDB CONTRACTOR GRADING (6CE OR HIGHER)****Contract №: UGU-07-1611-2022**

Ugu DM invites Competent and experienced Tenderers for the construction of **Msikaba Water Supply Scheme Phase 3A: Upgrading of Bomela Pump Station & Construction of Nyandezulu Elevated Reservoir and Booster Pump Station, CONTRACT NO. UGU-07-1611-2022** at Nkosi Ndwalane Area situated approximately 10km west of Port Shepstone Town, including earthworks, building works, pipework, chambers, access road and drainage, fencing and associated mechanical, electrical and instrumentation works. The Mechanical Works will include the supply, installation and commissioning of steel pipework, valves, fittings, pumps, motors and general Mechanical Works. The Electrical and Instrumentation Works will include the supply, installation and commissioning of transformers, MCC Panels, PLC's, instrumentation and general Electrical Works.

Only Tenderers who are currently registered with the CIDB, or are registered prior to evaluation of tenders, on a CIDB grading equal to or higher than 6CE and above and those who satisfy the conditions stated in the tender data, are eligible to tender. It is a condition of this tender that the Civil Contractor Sub-Contracts with an Electrical Contractor having a CIDB grading equal to or higher than 4EP, who will undertake the Electrical and Instrumentation Works that forms a part of this tender. Should the Contractor elect to appoint a Mechanical Sub-Contractor, the Mechanical Contractor shall have a 4ME or higher CIDB grading.

Tender documents will be available from the Ugu District Municipality, 28 Connor Street, Port Shepstone, 4240 during office hours between 10h00 to 15h00 from **Tuesday, 12 July 2022 until Friday, 22 July 2022**. No documents will be distributed at the tender clarification meeting. A non-refundable document fee of **R 450.00** payable in cash only in favour of Ugu District Municipality is required on collection of the tender documents. Documents to be released in advance by emailing lordshare@ngcolosi.co.za, together with proof of payment. The bid will also be advertised on National Treasury's E Tender portal and Ugu District Municipality website and documents can be downloaded from the websites, free of charge.

Technical queries may be addressed to Mr. Lordshare Sihlahla of Ngcolosi Engineers via email only at lordshare@ngcolosi.co.za.

A compulsory clarification meeting with representatives of the Employer will take place at the **Provincial Road Intersection P55 & P200 (Gamalakhe / Izotsha Road Intersection) (30°46'51.71"S; 30°23'28.27"E)** approximately 10km west of Port Shepstone Town on **Friday, 22 July 2022 at 10h00**. **ALL-COVID-19 REGULATIONS WILL BE OBSERVED AT ALL TIMES.**

The closing time for receipt of tenders is not later than **12h00 on Friday, 12 August 2022**. Only tenders deposited in the official tender box by the closing time and date will be accepted.

Tenders, completed (**Original and 1 copy**) as prescribed, shall be sealed in an envelope marked "**MSIKABA WATER SUPPLY SCHEME - PHASE 3A**" and deposited in the official tender box in the foyer of Ugu District Municipality at 96 Marine Drive, Phase 2 Building, Oslo Beach.

Ugu District Municipality subscribes to the Preferential Procurement Regulations 2017, pertaining to the Preferential Procurement Policy Framework Act (PPPFA). The Regulation prescribes that in the case of designated sectors, where in the award of bids local production and content is of critical importance, only locally produced goods, services or works or locally manufactured goods, with a stipulated minimum threshold for local production and content will be considered.

A two-stage bidding process may be followed, where the first stage involves a minimum threshold for local production and content and the second stage be evaluated according to the sum of the award of points in respect of the tender value and the B-BBEE status of the contributor.

Local Content Minimum Threshold, functionality, Price and Preference will be used for evaluation. The 80/20 preferential point system will be applicable, with 80 points for price and 20 points for B-BBEE

Status Level, in terms of revised Preferential Procurement Regulation in effect from 01 April 2017, Gazette Notice No. 40553 dated 20 January 2017.

Minimum points of 60% must be obtained for functionality. Bids scoring below 60 % will not be evaluated further. The following will form the criteria utilized for functionality assessment:

- **Relevant Experience of Tenderer**
- **Experience of Key Personnel**
- **Construction Methodology and Preliminary Programme**
- **Financial Resources**
- **Quality Control and Environmental Management**
- **Construction Health & Safety Plan**

Preferential Points to be allocated as follows:

B-BBEE Status Level of Contributor	Number of Points 80/20 System
1	20
2	18
3	14
4	12
5	8
6	6
7	4
8	2
Non-Compliant Contributor	0

Tenderers shall take **note** of the following tender conditions:

- *Ugu District Municipality does not bind itself to accept the lowest or any tender.*
- *Tenders submitted are to remain valid for **90** days from the closing date for submission of tenders.*

Kindly note: Regulation 44 of Municipal Supply Chain Management Regulations states that the Municipality may not make any award to a person who is in the service of the state.

Dr. E.M.S Ntombela
Acting Municipal Manager
Ugu District Municipality

INVITATION TO BID – MBD 1

PART A

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE UGU DISTRICT MUNICIPALITY

BID NUMBER:	UGU-07-1611-2022	CLOSING DATE:	12 August 2022	CLOSING TIME:	12h00
DESCRIPTION	MSIKABA WATER SUPPLY SCHEME - PHASE 3A – Upgrading of Bomela Pump Station & Construction of Nyandezulu Elevated Reservoir and Booster Pump Station:				
THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (MBD7).					

BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT UGU DISTRICT MUNICIPALITY AT 96 MARINE DRIVE, PHASE 2 BUILDING, OSLO BEACH

SUPPLIER INFORMATION

NAME OF BIDDER					
POSTAL ADDRESS					
STREET ADDRESS					
TELEPHONE NUMBER	CODE		NUMBER		
CELLPHONE NUMBER					
FACSIMILE NUMBER	CODE		NUMBER		
E-MAIL ADDRESS					
VAT REGISTRATION NUMBER					
TAX COMPLIANCE STATUS	TCS PIN:		OR	CSD No:	
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE [TICK APPLICABLE BOX]	☐ Yes ☐ No		B-BBEE STATUS LEVEL SWORN AFFIDAVIT		☐ Yes ☐ No
[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/ SWORN AFFIDAVIT (FOR EMES & QSEs) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE]					
ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS / SERVICES / WORKS OFFERED?	☐ Yes ☐ No [IF YES ENCLOSE PROOF]		ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS/SERVICES / WORKS OFFERED?		☐ Yes ☐ No [IF YES, ANSWER PART B:3]
TOTAL NUMBER OF ITEMS OFFERED			TOTAL BID PRICE		R
SIGNATURE OF BIDDER			DATE		
CAPACITY UNDER WHICH THIS BID IS SIGNED					
BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO:			TECHNICAL INFORMATION MAY BE DIRECTED TO:		
DEPARTMENT	FINANCE		ENGINEER	Ngcolosi Engineers	
CONTACT PERSON	Mr. Tarulethu Mafungwa		CONTACT PERSON	Mr. Lordshare Sihlahla	
E-MAIL ADDRESS	Tarulethu.mafungwa@ugu.gov.za		E-MAIL ADDRESS	lordshare@ngcolosi.co.za	

PART B
TERMS AND CONDITIONS FOR BIDDING

1. BID SUBMISSION:

- 1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.
- 1.2. **ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED–(NOT TO BE RE-TYPED) OR ONLINE**
- 1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.

2. TAX COMPLIANCE REQUIREMENTS

- 2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.
- 2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VIEW THE TAXPAYER'S PROFILE AND TAX STATUS.
- 2.3 APPLICATION FOR THE TAX COMPLIANCE STATUS (TCS) CERTIFICATE OR PIN MAY ALSO BE MADE VIA E-FILING. IN ORDER TO USE THIS PROVISION, TAXPAYERS WILL NEED TO REGISTER WITH SARS AS E-FILERS THROUGH THE WEBSITE WWW.SARS.GOV.ZA.
- 2.4 FOREIGN SUPPLIERS MUST COMPLETE THE PRE-AWARD QUESTIONNAIRE IN PART B: 3.
- 2.5 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.
- 2.6 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.
- 2.7 WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.

3. QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS

- 3.1. IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)? ☐ YES ☐ NO
- 3.2. DOES THE ENTITY HAVE A BRANCH IN THE RSA? ☐ YES ☐ NO
- 3.3. DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA? ☐ YES ☐ NO
- 3.4. DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA? ☐ YES ☐ NO
- 3.5. IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION? ☐ YES ☐ NO

IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 2.3 ABOVE.

**NB: FAILURE TO PROVIDE ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID.
NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE.**

SIGNATURE		NAME (PRINT)	
CAPACITY		DATE	
NAME OF FIRM			

T1.2 Tender Data (Applicable to this Tender)

The Conditions of Tender applicable to this contract are the Standard Conditions of Tender as contained in Annexure F of the CIDB *Standard for Uniformity in Construction Procurement*, and as per Annexure F of the CIDB *Standardized Construction Procurement Documents for Engineering and Construction Works (August 2019)*. A copy of the Standard Conditions of Tender is provided herewith as an Appendix to T1.2. (Refer to T1.3 Standard Conditions of Tender).

The Tender Data makes several references to the Standard Conditions of Tender for details that apply specifically to this tender. **(The Tender Data shall have preference in the interpretation of any ambiguity or inconsistency between it and the Standard Conditions of Tender).**

Each item of Tender Data given below is cross-referenced to the relevant clause in the Standard Conditions of Tender to which it mainly applies.

Clauses Prefixed by C.1 highlight General obligations

Clauses Prefixed by C.2 highlight Tenderers obligations

Clauses Prefixed by C.3 highlight Employers undertaking

Clause No	Description
C.1	GENERAL
C.1.1	Actions
C.1.1.1	The Employer is Ugu District Municipality P O Box 33, Port Shepstone 4240 Telephone N°: 039 688 5700
C.1.2	Tender Documents The Tender Document issued by the Employer is a single volume comprising of: Part T1 Tendering Procedures T1.1 Tender Notice and Invitation to Tender T1.2 Tender Data Part T2 Returnables T2.1 List of Returnable Documents T2.2 Returnable Schedules Part C1 Agreements and Contract Data C1.1 Form of Offer and Acceptance C1.2 Contract Data C1.3 Forms of Security C1.4 Agreement in terms of the Occupational Health & Safety Act C1.5 Notification of Construction Work C1.6 Adjudicator's Agreement C1.7 Form of Guarantee (Materials on Site) Part C2 Pricing Data C2.1 Pricing instructions C2.2 Bill of Quantities Part C3 Scope of Work C3.1 Scope of Work Part C4 Site Information C4.1 Site Information Part C5 Drawings C5.1 Drawings

Clause №	Description
	Relevant Standard Specifications: a) "General Conditions of Contract for Construction Works – 3rd Edition 2015" 3rd Print edition issued by the South African Institution of Civil Engineering (Short title "General Conditions of Contract 2015" or "GCC 2015"). This document is obtainable separately, and Tenderers shall obtain their own copies. b) "SANS 1200 – Standardized Specification for Civil Engineering Construction". This document is obtainable separately, and Tenderers shall obtain their own copies. In addition, Tenderers are advised, in their own interest, to obtain their own copies of the following acts, regulations, and standards referred to in this document as they are essential for the Tenderer to get acquainted with the basics of construction management, the implementation of preferential construction procurement policies, and the participation of targeted enterprise and labour. (i) The Occupational Health and Safety Act No 85 and Amendment Act No 181 of 1993, and the Construction Regulations 2014 (Government Gazette No 37305 of 7 February 2014, Notice No R84). (ii) The Construction Industry Development Board Act No 38 of 2000 and the Regulations in terms of the CIDB Act 38/2000, Government Notice No 692 of 9 June 2004 and No 464 of 2 July 2013. (iii) The Preferential Procurement Policy Framework Act No 5 of 2000, and the Preferential Procurement Policy Framework Act Regulations (2017). (iv) SANS 1921:2004 – Construction and Management Requirements for Works Contract, Parts 1 to 3. (v) SANS 1914:2003 - Targeted Construction Procurement, Parts 1 to 6
C.1.4	The Employer's Agent is Ngcolosi Engineers, represented by: Name: Mr. Lordshare Sihlahla Address: No. 4 Wilkie Road Manaba Beach, 4276 Tel: 039 312 0292 Email: lordshare@ngcolosi.co.za
C.1.6.1	General Tenders that fail to meet the Eligibility requirements (C2.1), and/or the minimum Functionally requirements (C3.11.9), will not be considered for award and will not be evaluated in terms of C3.11.
C.2	TENDERER'S OBLIGATIONS
C.2.1	Eligibility Only those Tenderers who satisfy the following eligibility criteria are eligible to submit tenders: a) the Tenderer submits a Tax Status Pin issued by the South African Revenue Services and is Tax Compliant with SARS, has made arrangements to meet outstanding tax obligations; b) the Tenderer submits a letter of intent from an approved insurer undertaking to provide the Performance Guarantee to the format included in Part C1.3 of this procurement document; c) the Tenderer or any of its directors/shareholders is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector; d) the Tenderer has not: - abused the Employer's Supply Chain Management System; or - failed to perform on any previous contract and has been given a written notice to this effect;

Clause №	Description
	e) the Tenderer has completed the Declaration of Interest and the Compulsory Enterprise Questionnaire and there are no conflicts of interest which may impact on the Tenderer's ability to perform the contract in the best interests of the Employer or potentially compromise the tender process and persons in the employ of the state are permitted to submit tenders or participate in the contract; f) the Tenderer is registered and in good standing with the compensation fund or with a licensed compensation insurer; g) the Tenderer must submit a copy of a joint venture agreement (if applicable); h) Tenderers are required to submit a Bank Rating with this tender. Tenderers who receive a Bank Rating E, F, G, H will not be eligible to tender; i) the Tender offer is signed by a person authorised on behalf of the Tenderer; j) the Tenderer has completed and signed all returnable documents where relevant; k) the Tenderer has met the minimum number of evaluation points for functionality (quality), if applicable; l) the Employer is reasonably satisfied that the Tenderer has in terms of the Construction Regulations, 2014, issued in terms of the Occupational Health and Safety Act, 1993, the necessary competencies and resources to carry out the work safely. Additional Eligibility Criteria Furthermore, a Tenderer will only be eligible to submit a tender if: m) The Tenderer is a Civil Engineering Contractor with a minimum CIDB grading of 6CE or higher. n) the Tenderer has a Subcontract Agreement in place with a 4EP or higher Electrical Contractor, who will undertake the electrical and instrumentation Scope of Works that form a part of this tender o) The Electrical Sub-Contractor is registered with the Electrical Contracting Board of South Africa and their Contract's Manager/ Site Agent is a Competent Person as defined in Regulation 1 of the General Machinery Regulations 1988, or a person registered in a Professional category in terms of the Engineering Act 2000. p) Should the Contractor elect to enter into a Sub-Contract agreement with a Mechanical Contractor to carry out the Mechanical Scope of Works forming part of this tender, the Mechanical Contractor shall have a 4ME or higher CIDB grading. q) Only Tenderers scoring 60 points or more for Functionality will be considered eligible to tender; r) The Tenderer's health and safety professionals must be registered with SACPCMP; s) The Tenderer has met the minimum 30% Contract Participation Goals (CPG).
C.2.7	Clarification Meeting The arrangements for the compulsory clarification meeting are: Location: Provincial Road Intersection P55 & P200 (Gamalakhe / Izotsha Road Intersection) (30°46'51.71"S; 30°23'28.27"E) Date: Friday, 22 July 2022 Starting Time: 10h00 Tenderers must sign the attendance list in the name of the tendering entity. Addenda will only be issued to, and tenders will only be received from, those tendering entities appearing on the attendance list. ALL-COVID-19 REGULATIONS WILL BE OBSERVED AT ALL TIMES.
C.2.8	Accept that failure to request clarification on tender documents, in at least 5 working days prior to the closing time stated in the tender data, it shall be deemed that all matters in the tender documents are clearly understood. Accept that the Employer shall not be obligated to respond to any requests for clarification of tender documents submitted in less than 5 working days prior to the closing date.

Clause №	Description
C.2.11	Alterations to Documents No unauthorised alterations or additions shall be made to any portion of the Tender Document. Any unauthorised alterations, additions or notes will be ignored and only the text as per the Employer's original version will be adhered to. The tender document itself shall not have pages removed or be separated in any way. Should a tender document be submitted in any manner except as meets original sequence and item and as a bound document, it will be liable for rejection by the Employer.
C.2.12	Alternative Tender Offer
C.2.11.1	Unless otherwise stated in the tender data, submit alternative tender offers only if a main tender offer, strictly in accordance with all the requirements of the tender documents, is also submitted as well as a schedule that compares the requirements of the tender documents with the alternative requirements that are proposed.
C.2.11.2	Accept that an alternative tender offer must be based only on the criteria stated in the tender data or criteria otherwise acceptable to the employer.
C.2.11.3	An alternative tender offer must only be considered if the main tender offer is the winning tender.
C.2.13	Submitting a Tender Offer
C.2.13.3	Tender offers shall be submitted as an original only. No copies of the tender offer are required.
C.2.13.5	The Employer's address for delivery of Tender offers and identification details to be shown on each Tender offer package is as follows: Location of tender box: Ugu District Municipality Physical address: 96 Marine Drive, Phase 2 Building, Oslo Beach Identification details: Tender N°: UGU-07-1611-2022 MSIKABA WATER SUPPLY SCHEME - PHASE 3A Upgrading of Bomela Pump Station & Construction of Nyandezulu Elevated Reservoir and Booster Pump Station: Tenderers Name: Tenderers contact address:
C 2.15	The closing time for submission of Tender offers is 12h00 hours on Friday, 12 August 2022. Telephonic, telegraphic, telex, facsimile, late or emailed tender offers will not be accepted. The tenderer is to ensure that couriered/posted tenders are inserted into the tender box before the closing date and time.
C.2.16	Tender Offer Validity The Tender offer validity period is 90 (ninety) days from date of tender closing. If the tender validity expires on a weekend or public holiday, it shall remain valid until close of business on the next business day.

Clause №	Description
C.2.17	Clarification of Tender Offer after submission Clarification of a Tender Offer in response to a request to do so from the Employer during the evaluation of Tender Offers must be provided within two working days of the Employer's request, failing which, the Employer may regard the Tender Offer as being non-responsive and not eligible for award.
C.2.18	Provide other Material Should the Tenderer not provide the material, or a satisfactory reason as to why it cannot be provided, within two working days of the Employer's request, the Employer may regard the Tender Offer as being non-responsive and not eligible for award.
C.2.23	Certificates The tenderer is required to submit with his tender all certificates as listed under Part T2.2 – Returnable Documents. Failure to submit all this information will render the Tender non responsive and not eligible for ward.
C3	EMPLOYERS UNDERTAKING
C.3.1.1	Respond to requests from the Tenderer The Employer will respond to requests for clarification received up to 5 working days before the tender closing time stated in the Tender Data / Tender Notice and Invitation to Tender.
C.3.2	Issue of Addenda: The Employer will issue addenda until 5 working days before the tender closing time stated in the Tender Data, Tender Notice and Invitation to Tender.
C.3.4	Opening of Tenders The time and location for opening of the tender offers are: Time: 12h00 Date: Friday, 12 August 2022 Location of tender box: Ugu District Municipality Physical address: 96 Marine Drive, Phase 2 Building, Oslo Beach
C.3.11	Evaluation of tender <i>offers</i> .
C.3.11.1	Ugu District Municipality has adopted the tender evaluation methods and associated evaluation criteria and weightings that are specified in C3.11.3 to C3.11.9 below. The procedure for evaluation of responsive Tender Offers will be in accordance with the Ugu District Municipality's Supply Chain Management Policy document that was adopted by full Council with reference to the Participation and Conditions Pertaining to Preferential Procurement, the Preferential Procurement Policy Framework Act N° 5 of 2000, and the Preferential Procurement Policy Framework Act Regulations (2017).

Clause №	Description														
C.3.11.3	Scoring Functionality points														
	Tenders will be evaluated in two stages. Firstly, eligibility will be assessed, where after all responsive tenders will be for functionality. Tenders that do not meet the Eligibility Criteria, as stated under Clause C2.1 will be disqualified and not considered any further for tender award. Tenders that fail to achieve the minimum qualifying score for functionality, as stated under C3.11.9, will be disqualified and not considered any further for tender award. The remaining tenders will be evaluated in accordance with C.3.11.7 Method 2: Functionality, Price and Preference, using the 80/20 preference points system, as prescribed in the Preferential Procurement Regulations 5 and 6.														
C.3.11.7	Scoring tenders on price and preference														
	The financial offers of the remaining responsive tender offers will be scored using the following formula: Nfo = W₁ x A Where: Nfo = is the number of tender evaluation points awarded for the financial offer; W₁ = is the maximum possible number of tender evaluation points awarded for the financial offer, which in this case is 90; A = is a number calculated using Formula 2 and Option 2 in Table C.1 below: TABLE C.1 – FORMULAE FOR THE VALUE OF A <table><tr><th rowspan="2">FORMULA</th><th rowspan="2">BASIS FOR COMPARISON</th><th colspan="2">VALUE OF “A”</th></tr><tr><th>Option 1</th><th>Option 2</th></tr><tr><td>1</td><td>Highest price or discount</td><td>[1+(P-Pm) / Pm]</td><td>P/Pm</td></tr><tr><td>2</td><td>Lowest price or percentage commission/fee</td><td>[1-(P-Pm) / Pm]</td><td>Pm/P</td></tr></table> Pm = is the comparative offer which is the most favourable P = is the comparative offer of the tender under consideration	FORMULA	BASIS FOR COMPARISON	VALUE OF “A”		Option 1	Option 2	1	Highest price or discount	[1+(P-Pm) / Pm]	P/Pm	2	Lowest price or percentage commission/fee	[1-(P-Pm) / Pm]	Pm/P
FORMULA	BASIS FOR COMPARISON			VALUE OF “A”											
		Option 1	Option 2												
1	Highest price or discount	[1+(P-Pm) / Pm]	P/Pm												
2	Lowest price or percentage commission/fee	[1-(P-Pm) / Pm]	Pm/P												

C.3.11.9	Scoring Functionality		
Points for quality must be entered here by the Tenderer based on the following Quality Scorecard. Only Tenderers scoring 60% or more for quality will be considered eligible to tender. Tenderers should supply supporting information to prove points claimed where this is not available in other Returnable Schedules. <u>Total Score for Quality</u>			
	Criteria	Possible Full Points	Actual Points Obtained
C.3.11.9.1	Relevant Experience: For Main Civil Contractor related to Water Projects, water projects, pipelines and pumping equipment projects, including concrete water retaining structures (elevated concrete reservoirs – at least two minimum 250 KL completed), buildings, earthworks, access roads and stormwater, and including Mechanical and Electrical Works by a Sub-Contractor, applicable in past 12 years. (Tenderer to attach certified copy of the Final Completion Certificate on similar scope of Works and reference letters from clients). Completed two projects minimum 250 KL Water elevated concrete reservoirs (<i>minimum value of R 5.5 Million per Contract</i>): (5 scoring points per project) Completed one project minimum 250 KL Water elevated concrete reservoirs (<i>minimum value of R5.5 Million per Contract</i>): (5 scoring points per project) Completed zero project minimum 250 KL Water elevated concrete reservoirs (<i>minimum value of R5.5 Million per Contract</i>): (5 scoring points per project) (Refer to page TP.15)	10 5 0	S1 =
C.3.11.9.2	Relevant Experience: For Electrical Sub-Contractor related to transformers, MCC Panels, PLC's, instrumentation and general Electrical Works for Water or Wastewater Treatment Projects, undertaken as an Electrical Main or Sub-Contractor, applicable in past 12 years. Completed one (3) project (<i>minimum value of R 1.5 Million per Contract</i>): (5 scoring points per project) Completed two (2) project (<i>minimum value of R 1.5 Million per Contract</i>): (5 scoring points per project) Completed three (1) project (<i>minimum value of R 1.5 Million per Contract</i>): (5 scoring points per project) (Refer to page TP.16)	15 10 5	S2 =
C.3.11.9.3	Financial Resources: Bank Rating Grade A: 10 points Grade B: 8 points Grade C: 5 points	10	S3 =

	Grade D, E and non-submission leads to disqualification (Refer to page TP.16)		
C.3.11.9.4	Experience of Key Personnel: minimum relevant Civil Engineering Qualifications (minimum diploma) within a recognized accredited educational institution for the Construction Manager of the Company and the proposed Site Agent and Site Foreperson. Demonstrated experience (Minimum 10 years) on undertaken projects, for the Construction Manager of the Company and the proposed Site Agent and Site Foreperson on Water Projects, water projects, pipelines and pumping equipment projects, including concrete water retaining structures (elevated concrete reservoirs – at least two minimum 250 KL completed), concrete works and pump stations. The proposed team should be composed of the following: Construction Manager Site Agent Electrical Foreman Mechanical Foreman Health and Safety Officer (Registered with SACPCMP as a Safety Officer) (Refer to page TP.17)	20	S4a = S4b = S4c = S4d = S4e =
C.3.11.9.5	Quality Assurance Plan and Control Procedures: Requirements of the Plan: 1. Purpose 2. Quality control and inspections 3. Control testing 4. Quality assurance 5. Submittals (Refer to page TP.18)	5	S5 =
C.3.11.9.6	Previous Performance on similar Water Projects, water projects, pipelines and pumping equipment projects, including concrete water retaining structures (elevated concrete reservoirs – at least two minimum 250 KL completed), and pump station buildings Projects for Main Civil Contractor: (4 scoring points per project). Completed 1 Project (<i>* to be scored by Employer</i>) Completed 2 projects (<i>* to be scored by Employer</i>) Completed 3 projects (<i>* to be scored by Employer</i>) (Refer to page TP.18)	4 8 12	*S6a = *S6b = *S6c =
C.3.11.9.7	Previous Performance on similar Electrical and Instrumentation Projects for Water or Wastewater Treatment Works: (4 scoring points per project). Completed 1 Project (<i>* to be scored by Employer</i>) Completed 2 projects (<i>* to be scored by Employer</i>) (Refer to page TP.21)	4 8	*S7a = *S7b =
C.3.11.9.8	Method Statement / Approach Paper which includes the following: 1. Methodology and Approach		

	2. Time Management, Resources and Materials 3. Quality Management Plan 4. Risk Management and Safety Measures 5. Environmental Control Measures 6. Communication Management (Refer to page TP.23)	5	S8 =				
C.3.11.9.9	Preliminary Programme on Excel or Microsoft Project Programme to include: 1. Sequencing 2. Durations 3. Mile stones 4. Resources 5. Critical Path (1 point per requirement)	5	S9 =				
	Total Possible Points	100	Total Points Obtained =				
C.3.11.9.1	Criteria 1: Relevant Main Civil Contractor Experience applicable to past 12 years only: Maximum Score = 20						
Relevant Experience: For Main Civil Contractor related to Water Projects, water projects, pipelines and pumping equipment projects, including concrete water retaining structures (elevated concrete reservoirs – at least two minimum 250 KL completed), buildings, earthworks, access roads and stormwater, and including Mechanical and Electrical Works by a Sub-Contractor, applicable in past 12 years. (Tenderer to attach certified copy of the Final Completion Certificate on similar scope of Works and reference letters from clients). Completed two projects minimum 250 KL Water elevated concrete reservoirs (<i>minimum value of R 5.5 Million per Contract</i>): (5 scoring points per project) Completed two water projects (<i>minimum value of R 5 Million per Contract</i>): (2.5 scoring points per project) Completed two Pumping equipment and buildings, earthworks, access roads and stormwater, and including mechanical and electrical works by sub-contractor (<i>minimum value of R 5 Million per Contract</i>): (2.5 scoring		Project Value	Points	Score (S)			
Contract	Value				Reference		
					Name	Organisation	Tel No
					< R 5 million	0	
					R 5 – 10 million	2	
					>R10 – 15 million	3	
					> R15 million	4	
	Possible Full Points =				20		

					Actual Points Obtained S1 =		
Note: * Similar work (or Project) means successful construction of elevated concrete reservoirs – at least two minimum, 250 KL completed), applicable in past 12 years. (Tenderer to attach certified copy of the Final Completion Certificate on similar scope of Works and reference letters from clients). (minimum value of R 5 Million per Contract), as indicated in Section T2.2 Form B: Schedule of Relevant Experience (for Similar Work Undertaken). * The Tenderer will send the “Assessment of Performance” form (see example C.3.11.10) for the references listed above. Three replies will then be used to score Criteria 6: C.3.11.9.6.1 to C.3.11.9.6.3.							
C.3.11.9.2		Criteria 2: Relevant Electrical Sub-Contractor Experience applicable to past 12 years: Maximum Score = 15					
Relevant Experience: For Electrical Sub-Contractor related to transformers, MCC Panels, PLC's, instrumentation and general Electrical Works for Water or Wastewater Treatment Projects, undertaken as an Electrical Main or Sub-Contractor, applicable in past 12 years. Completed one (3) project (minimum value of R 1.5 Million per Contract): Completed two (2) project (minimum value of R 1.5 Million per Contract): Completed three (1) project (minimum value of R 1.5 Million per Contract):					Project Value	Points	Score (S)
Contract	Value	Reference					
		Name	Organisation	Tel No			
					< R5 million	0	
					R1.5 –3 million	1	
					>R3 – 4.5 million	2	
					> R4.5 million	3	
Possible Full Points =						15	
Actual Points Obtained S2 =							
Note: * Similar work (or Project) means successful construction of electrical and instrumentation engineering project/s related to water or wastewater treatment works, over the last 12 years (minimum value of R5 Million per Contract) including transformers, MCC Panels, PLC's, instrumentation and general Electrical Works, undertaken as an Electrical Main or Sub-Contractor, as indicated in Section T2.2 Form B: Schedule of Relevant Experience (for Similar Work Undertaken). * The Tenderer will send the “Assessment of Performance” form (see example C.3.11.10) for the references listed above. Three replies will then be used to score Criteria 7: C.3.11.9.7.1 to C.3.11.9.7.2.							
C.3.11.9.3		Criteria 3: Financial Resources (Bank Rating): Maximum Score = 13					
Score one of the ratings listed below as reflected on rating received – see Section F1 of T2.2.1					Points	Score (S)	

Bank Rating A – Undoubted for the amount of enquiry	10	
Bank Rating B – Good for the amount of enquiry	8	
Bank Rating C – Good for the amount quoted if applied strictly in the way of business	8	
Bank Rating D – Fair trade for the amount of enquiry	0	
Bank Rating E – Figures considered too high Bank Rating F – Financial Position Unknown Bank Rating G – Dishonour on records Bank Rating H – Frequently Dishonoured	Not eligible to tender	
Possible Full Points =	10	
Actual Points Obtained S3 =		

Note: Tenderers are to submit a copy of their bank rating in Section T2.2 Form L: Tenderer's Financial Standing.

C.3.11.9.4**Criteria 4: Experience of Key Personnel: Maximum Score = 20**

Proposed key Personnel	Experience	Points	Score (S)
Project Director/ Contracts Manager Name:	Approved Degree or Diploma in Civil Engineering	2	
	Years of appropriate experience (score one of the categories)	<5 5 to 10 >10	0 2 3
Site Agent / Project Manager (Note the Site Agent may be the same person as the Project Director) Name:	Approved Degree or Diploma in Civil Engineering	2	
	Years of appropriate experience (score one of the categories)	<3 3 to 5 5 to 10 >10	0 1 2 3
Electrical Supervisor / Foreman Name:	Approved Degree or Diploma in Electrical Engineering	2	
	Years of appropriate experience (score one of the categories)	<5 5 to 10 >10	0 1 2
Mechanical Foreman Name:	Trade Test Certificate	1	
	Years of appropriate experience (score one of the categories)	<5 5 to 10 >10	0 1 2
Health and Safety Officer Name:	Approved Diploma / NQF Level 5 (SAMTRAC) / equivalent certificate in Health and Safety and SACPCMP registration as per regulations	1	

	Years of appropriate experience (score one of the categories)	<1 1 to 3 >3	0 1 2	
Possible Full Points =			20	
Actual Points Obtained S4 =				

Note: * Curriculum Vitae to be attached in Section T2.2 Form C: Key Personnel.

* Years of appropriate experience means experience in the fields of concrete water retaining structures, buildings, earthworks, access roads and stormwater, and including mechanical and electrical works by a sub-contractor, as indicated in Section T2.2 Form B: Schedule of Relevant Experience (for Similar Work Undertaken).

* Certified copies of Degrees, Diplomas, Trade Tests to be attached if points are claimed.

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C.3.11.9.5 **Criteria 5: Quality Assurance Plan and Control Procedures:**
Maximum Score = 10 (Civil Contractor only)

Score one status as listed below	Points	Score (S)
ISO Accreditation	5	
Own Internal QA Plan	3	
None	0	
Possible Full Points =	5	
Actual Points Obtained S5		=

Note: * Attach current copy of ISO 9001:2015 Accreditation Certificate or copy of internal Quality Management System in Section T2.2 Form FF: Quality Assurance Plan and Quality Control Procedures.

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C.3.11.9.6 **Criteria 6: Performance on Three Similar Projects undertaken within the last 12 years: Maximum Score = 12 (Main Civil Contractor only)**

C.3.11.9.6.1 **PROJECT 1 – Evaluation Completed by Employer**

Note: * The project scored here will be selected and scored by the Employer from the five projects listed in Criteria 1 – Relevant Experience (Main Civil Contractor for Main Civil Contractor related to Water Projects, water projects, pipelines and pumping equipment projects, including concrete water retaining structures (elevated concrete reservoirs – at least minimum 250 KL completed), buildings, earthworks, access roads and stormwater).

* The Tenderer will submit “Assessment of Performance Form” (C.3.11.10) for all references listed in Criteria 1.

* The Employer will then complete these pages and scores will be based on the above Referee’s responses received.

Project Name: _____

Value of work carried out by Contractor: R_____

Detail of work carried out by Contractor: _____

Referee Name: _____		Organisation: _____	
Contact Details: _____			
Qualitative Statements as assessed by Referees (refer to returned forms C3.11.10)	Points	Score	
"Contractor's Management was adequate for the contract"			
"Contractor provided suitably qualified Site personnel"	Not true	0	
"Contractor complied with Health & Safety requirements"	Substantially fulfilled	1	
"Contractor's provided adequate resources for the contract"	Completely fulfilled	2	
"Contractor's communication and compliance to instructions was good"	(Score from returned reference sheet C.3.11.10)		
"Quality of work produced was to drawings and specification"			
"Contract was completed on time"			
Possible Full Points	14		
Actual Points Obtained S6a = (Total Score / 14 x 4)			

C.3.11.9.6.2	PROJECT 2 – Evaluation Completed by Employer		
Note: * The project scored here will be selected and scored by the Employer from the five projects listed in Criteria 1 – Relevant Experience (The project scored here will be selected and scored by the Employer from the five projects listed in Criteria 1 – Relevant Experience (Main Civil Contractor for Main Civil Contractor related to Water Projects, water projects, pipelines and pumping equipment projects, including concrete water retaining structures (elevated concrete reservoirs – at least minimum 250 KL completed), buildings, earthworks, access roads and stormwater).) * The Employer will send "Assessment of Performance Form" (C3.11.10) to two or more of the five references listed in Criteria 1. * The Employer will then complete these pages and scores will be based on the Referee's responses received.			
Project Name: _____			
Value of work carried out by Contractor: R_____			
Detail of work carried out by Contractor: _____			
Referee Name: _____		Organisation: _____	
Contact Details: _____			
Qualitative Statements as assessed by Referees (refer to returned forms C3.11.10)	Points	Score	
"Contractor's Management was adequate for the contract"			

"Contractor provided suitably qualified Site personnel"	Not true	0	
"Contractor complied with Health & Safety requirements"	Substantially fulfilled	1	
"Contractor's provided adequate resources for the contract"	Completely fulfilled	2	
"Contractor's communication and compliance to instructions was good"	(Score from returned reference sheet C.3.11.10)		
"Quality of work produced was to drawings and specification"			
"Contract was completed on time"			
Possible Full Points	14		
Actual Points Obtained S6b = (Total Score / 14 x 4)			

C.3.11.9.6.3**PROJECT 3 – Evaluation Completed by Employer**

Note:

- * The project scored here will be selected and scored by the Employer from the five projects listed in Criteria 1 – Relevant Experience (Main Civil Contractor for Water project scored here will be selected and scored by the Employer from the five projects listed in Criteria 1 – Relevant Experience (Main Civil Contractor for Main Civil Contractor related to Water Projects, water projects, pipelines and pumping equipment projects, including concrete water retaining structures (elevated concrete reservoirs – at least minimum 250 KL completed), buildings, earthworks, access roads and stormwater).
- * The Employer will send "Assessment of Performance Form" (C3.11.10) to two or more of the five references listed in Criteria 1.
- * The Employer will then complete these pages and scores will be based on the Referee's responses received.

Project Name: _____

Value of work carried out by Contractor: R_____

Detail of work carried out by Contractor: _____

Referee Name: _____

Organisation: _____

Contact Details: _____

Qualitative Statements as assessed by Referees (refer to returned forms C3.11.10)	Points	Score
"Contractor's Management was adequate for the contract"		
"Contractor provided suitably qualified Site personnel"	Not true 0	
"Contractor complied with Health & Safety requirements"	Substantially fulfilled 1	
"Contractor's provided adequate resources for the contract"	Completely fulfilled 2	

"Contractor's communication and compliance to instructions was good"	(Score from returned	
"Quality of work produced was to drawings and specification"	reference sheet C.3.11.10)	
"Contract was completed on time"		
Possible Full Points	14	
Actual Points Obtained S6c = (Total Score / 14 x 4)		

C.3.11.9.7 **Criteria 7: Performance on Two Similar Projects undertaken within the last 12 years:**
Maximum Score = 8 (Electrical Sub-Contractor only)

C.3.11.9.7.1 **PROJECT 1 (Electrical and Instrumentation) – Evaluation Completed by Employer**

Note:

- * The project scored here will be selected and scored by the Employer from the five projects listed in Criteria 2 – Relevant Experience (Electrical Sub-Contractor for Water or Wastewater Treatment Works)
- * The Employer will send "Assessment of Performance Form" (C3.11.10) to two or more of the five references listed in Criteria 2.
- * The Employer will then complete these pages and scores will be based on the Referee's responses received.

Project Name: _____

Value of work carried out by Contractor: R_____

Detail of work carried out by Contractor: _____

Referee Name: _____ Organisation: _____

Contact Details: _____

Qualitative Statements as assessed by Referees (refer to returned forms C3.11.10)	Points	Score
"Contractor's Management was adequate for the contract"	(Score from returned reference sheet C.3.11.10)	
"Contractor provided suitably qualified Site personnel"		
"Contractor complied with Health & Safety requirements"		
"Contractor's provided adequate resources for the contract"		
"Contractor's communication and compliance to instructions was good"		
"Quality of work produced was to drawings and specification"		
"Contract was completed on time"		
Possible Full Points	14	
Actual Points Obtained S7a = (Total Score / 14 x 4)		

C.3.11.9.7.2	PROJECT 2 (Electrical and Instrumentation) – Evaluation Completed by Employer	
Note: * The project scored here will be selected and scored by the Employer from the five projects listed in Criteria 2 – Relevant Experience (Electrical Sub-Contractor for Water or Wastewater Treatment Works) * The Employer will send “Assessment of Performance Form” (C3.11.10) to two or more of the five references listed in Criteria 2. * The Employer will then complete these pages and scores will be based on the Referee’s responses received.		
Project Name: _____ Value of work carried out by Contractor: R_____ Detail of work carried out by Contractor: _____ Referee Name: _____ Organisation: _____ Contact Details: _____		
Qualitative Statements as assessed by Referees (refer to returned forms C3.11.10)	Points	Score
“Contractor’s Management was adequate for the contract”	Not true 0 Substantially fulfilled 1 Completely fulfilled 2 (Score from returned reference sheet F.3.11.10)	
“Contractor provided suitably qualified Site personnel”		
“Contractor complied with Health & Safety requirements”		
“Contractor’s provided adequate resources for the contract”		
“Contractor’s communication and compliance to instructions was good”		
“Quality of work produced was to drawings and specification”		
“Contract was completed on time”		
Possible Full Points	14	
Actual Points Obtained S7b = (Total Score / 14 x 4)		

C.3.11.9.8	Criteria 8: APPROACH PAPER / METHODOLOGY
The approach paper must respond to the scope of work and outline the proposed approach / methodology including proposals for outsourcing (including details for the companies to be used), leading to the delivery of the construction deliverables listed in the scope of the works (Part C3). The approach paper should articulate what value add the tenderer will provide in achieving the stated objectives for the project. Tenderers must explain their understanding of the objectives, of the assignment and the Employer's stated and implied requirements, highlight the issues of importance, and explain the technical approach they would also include a project plan and programme which outlines processes, procedures and associated resources, indicates how risks will be managed and identifies what contribution can be made regarding value management. Tenderers must attach their approach papers to the page. The approach paper should not be longer than 6 pages. Score 5	
Weighing	Description
(Score 0)	No response / no documents submitted
Poor (Score 2)	The approach and / or methodology is poor / is unlikely to satisfy project objects or requirements. The tenderer has misunderstood certain aspects of the scope of work and does not deal with the critical aspects of the project. The programme is poor and has missed critical aspects.
Satisfactory (Score 3)	The approach is tailored to address the specific project objectives and methodology. The approach adequately deals with the critical characteristics of the project. The project plan and manner in which risk is to be managed etc is acceptable. The programme is adequate.
Good (Score 4)	The approach is tailored to address the specific project objectives and methodology and is sufficiently flexible to accommodate changes that may occur during execution. The project plan and approach to managing risk etc is tailored to the critical characteristics of the project. The programme is good and has allowed for all critical aspects.
Very Good (Score 5)	Besides meeting the "good" rating, the important issues are approached in an innovative and efficient way, indicating that the tenderer has outstanding knowledge of state-of-the-art approaches. The programme is well thought out and makes allowance for all the key risk areas. The approach paper details ways of improving the project outcomes and the quality of the outputs.

C.3.11.9.9	Criteria 9: PRELIMINARY PROGRAMME
The preliminary programme must respond to the scope of work and outline the sequencing and duration of the various activities and tasks related to the construction deliverables listed in the scope of the works (Part C3). Tenderers must attach their preliminary programme to the page. Programme to include: 1. Sequencing 2. Durations 3. Mile stones 4. Resources 5. Critical Path	
Weighing	Description
(Score 0)	No response / no documents submitted
Poor (Score 2)	The preliminary programme is poor / is unlikely to satisfy project objects or requirements. The tenderer has misunderstood certain aspects of the scope of work and does not deal with the critical aspects of the project. The programme is poor and has missed critical aspects.
Satisfactory (Score 3)	The preliminary programme is tailored to address the specific project objectives and methodology. The programme adequately deals with the critical characteristics of the project. The programme is adequate.
Good (Score 4)	The preliminary programme is tailored to address the specific project objectives and methodology and is sufficiently flexible to accommodate changes that may occur during execution. The programme is good and has allowed for all critical aspects.
Very Good (Score 5)	The preliminary programme is well thought out and makes allowance for all the key risk areas, indicating that the tenderer has a very good understanding and knowledge of the project objectives, scope and required completion timeframe.

C.3.11.10	Assessment of Performance Form				
<u>Assessment of Contractor's Performance by Independent Reference</u>					
(This form will be sent by the Employer to at least 2 of the references listed in each of the Criteria 1 and 2; C.3.11.9.1 and C.3.11.9.2 to obtain scores for Criteria 6 and 7 – Performance on Two Similar Projects undertaken in the last 12 years for the Main Civil and Electrical Sub-Contracts respectively.					
Please assess the Contractor (Name:) on his/her performance on the following Contract.					
Contract No.					
Name of Contract:			Year of execution:		
Contract value:		Employer:			
Contract duration:		Engineer:			
Referee's Position in Contract:					
Your assessment of the Contractor's performance in the following areas: (please tick one of the blocks on the right hand side)		Not true	Partially fulfilled	Substantially fulfilled	Completely fulfilled
"Contractor's Management was adequate for the contract"					
"Contractor provided suitably qualified Site personnel"					
"Contractor complied with Health & Safety requirements"					
"Contractor's provided adequate resources for the contract"					
"Contractor's communication and compliance to instructions was good"					
"Quality of work produced was to drawings and specification"					
"Contract was completed on time"					
Any other comments:					
Name of person completing this assessment form (Referee):					
ECSA Prof Reg. No: Representing firm:					
Please return by fax to: or e-mail to:					
Signature of Referee/Validator..... Date of Assessment:					

C.3.13	Acceptance of Tender Offer
	Tenderer Offers will only be accepted if, in addition to the conditions listed in the Standard Conditions of Tender, the Tenderer is judged to be Eligible in terms of Clause C2.1 as well as the items listed below. Tender Offers will only be accepted on condition that: (a) the tender offer is signed by a person authorized to sign on behalf of the Tenderer; (b) a Tax Status Pin is included with his tender indicating Tax Compliance with SARS; (c) Tenderer's declaration of compliance with the Occupational Health and Safety Act No 85 of 1993 and the Construction Regulations 2014 is included with his tender submission; (d) a Tenderer who submitted a tender as a Joint Venture has included an acceptable Joint Venture Agreement with his tender; (e) the Tenderer or a competent authorised representative of the Contractor who submitted the tender has attended the compulsory clarification meeting or site inspection; (f) the Contractor who submits the tender is registered with the CIDB in the stated Contractor grading designation; (g) the Tenderer, or any of its directors, is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector; (h) The tenderer has not: (i) abused the Employer's Supply Chain Management System; or (ii) failed to perform on any previous contract and has been given a written notice to this effect (i) The Tenderer has completed the Compulsory Enterprise Questionnaire, Declaration of Bidders' Past Supply Chain Management Practices and Declaration of Interest, and there are no conflicts of interest which may impact on the tenderer's ability to perform the contract in the best interests of the employer or potentially comprise the tender process; (j) The Tenderer or any of its principals, directors or managers is not employed in the service of the State or SAFDA. In the event that such principals are involved, official approval from the Executing Authority regarding the carrying out of remunerative work outside of the public service must be included in the tender submission; (k) The employer is satisfied that the Tenderer or any of his principals have not influenced the tender offer and acceptance by the following criteria: (i) Having offered, promised or given a bribe or other gift or remuneration to any person in connection with the obtaining or execution of this contract; (ii) Having acted in a fraudulent or corrupt manner in obtaining or executing this contract; (iii) Having approached an officer or employee of the employer or the employer's Agent with the objective of influencing the award of a contract in the Tenderer's favour; (iv) Having entered into any agreement or arrangement, whether legally or not, with any other person, firm or company to refrain from tendering for his contract or as to the amount of the tender to be submitted by either party; (v) Having disclosed to any other person, firm or company other than the employer, the exact or approximate amount of his proposed tender; (vi) The employer may, in addition to using any other legal remedies, repudiate the tender offer and acceptance and declare the Contract invalid should it have been concluded already. (l) The Tenderer acknowledged receipt of all addenda and alterations. Amendments and clarifications, according to the addenda, have been made and considered.

C3.17	Copies of Contract The Employer will provide the successful Tenderer with 1 (one) paper copy of the signed contract.
C.3.19.3	Code of Conduct and Local Labour The Tenderers shall make themselves familiar with their requirements of the following policies of Ugu District Municipality with regard to the recruitment of local labour. Item 4.10.1 of the Contract Data has reference.
C3.19.1	The additional Conditions of Tender are: Appeal Process In terms of Regulation 49 of the Municipal Supply Chain Management Regulations persons aggrieved by decisions or actions taken by the Municipality, may lodge an appeal within 14 days of the decision or action, in writing to the Municipality. In dealing with these appeals, the Municipal Manager will follow the following procedure: I. All appeals (clearly setting out the reasons for the appeal) and queries with regard to the decision of award are to be directed to: The Municipal Manager Ugu District Municipality 28 Connor Street Port Shepstone 4240 II. A copy of the appeal will be forwarded to the Chairperson of the Bid Adjudication Committee, who must provide a response in writing within seven working days. III. In the event that there are allegations made against third parties, they will also be given an opportunity, to respond to the allegations within seven days. IV. These responses will then be sent to the appellant for a reply within five working days. V. The appeal will be considered on these written submissions, unless the appeal authority is of the view that there is a need for oral submissions, in which case, the appellant will be notified of the date, place and time of such hearing.
C.3.19.2	Prohibition on awards to persons in the service of the state Clause 44 of the Supply Chain Management Regulations states that the Municipality or Municipal Entity may not make any award to a person: I. Who is in the service of the State; II. If that person is not a natural person, of which a director, manager, principal shareholder or stakeholder is a person in the service of the state; or III. Who is an advisor or consultant contracted with the municipality or a municipal entity. Should a contract be awarded, and it is subsequently established that Clause 44 has been breached, the Employer shall have the right to terminate the contract with immediate effect.
C.3.19.3	Subcontracting as Condition of Tender For contracts above R30 m, the 2017 PPPFA Regulations require organs of State to identify tenders, where it is feasible, to subcontract a minimum of 30% of the value of the contract to the following designated groups: (i) an EME or QSE; (ii) an EME or QSE which is at least 51% owned by black people; (iii) an EME or QSE which is at least 51% owned by black people who are youth; (iv) an EME or QSE which is at least 51% owned by black people who are women; (v) an EME or QSE which is at least 51% owned by black people with disabilities;

	(vi) an EME or QSE which is 51% owned by black people living in rural or underdeveloped areas or townships; (vii) a cooperative which is at least 51% owned by black people; (viii) an EME or QSE which is at least 51% owned by black people who are military veterans; or
C.3.19.4	Joint ventures and joint venture agreements Joint ventures are eligible to submit tenders provided that: (i) every member of the joint venture is registered with the CIDB; (ii) the Lead Member has a Contractor grading designation in the 6CE class of construction work; (iii) the combined Contractor grading calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a Contractor grading designation determined in accordance with the sum tendered for a CE class of construction work; (iv) when the joint venture is dissolved, the Lead Member will remain liable in terms of the Contract including for latent defects. The Lead Member shall be nominated in the returnable document and shall have at least a 6CE classification. The Lead Member accepts all liability in terms of the Contract and that this liability will continue for 10 years, after completion of the Contract. included in their tender is a letter from each of the proposed joint venture members stating their undertaking that in the event of the joint venture tender being successful, the said members will enter into a joint venture agreement, which shall be based on and comply with the CIDB Sample Joint Venture Agreement.
C.3.19.5	Claims arising after submission of tender Unless allowed for in the Contract, no claim for any extras arising out of any doubt or obscurity as to the true intent and meaning of anything shown on the Tender Drawings or contained in the Conditions of Contract, Scope of Work and Pricing Data, will be admitted by the Employer/ Employer's Agent after the submission of any tender and the Tenderer shall be deemed to have: 1) inspected the Tender Drawings and read and fully understood the Conditions of Contract, 2) read and fully understood the whole text of the Scope of Work and Pricing Data and thoroughly acquainted himself with the nature of the Works proposed and generally of all matters which may influence the Contract, 3) visited the site of the proposed Works, carefully examined existing conditions, the means of access to the site, the conditions under which the Works is to be done, and acquainted himself/herself with any limitations or restrictions that may be imposed by the Municipal or other Authorities in regard to access and transport of materials and equipment to and from the site and made the necessary provisions for any additional costs involved thereby, and 4) requested the Employer or his/her duly authorized agent to make clear the actual requirements of anything shown on the Tender Drawings or anything contained in the Scope of Work and Pricing Data, the exact meaning or interpretation of which is not clearly intelligible to the Tenderer. Before submission of any tender, the tenderer should check the number of pages, and if any are found to be missing or duplicated, or the figures or writing indistinct, or if the Pricing Data contain any obvious errors, the tenderer must apply to the Employer/Employer's Agent at once to have the same rectified, as no liability will be admitted by the Employer/Employer's Agent in respect of errors in any tender due to the foregoing.

T1.3: STANDARD CONDITIONS OF TENDER

(As per Annexure C of CIDB Standard for Uniformity in Engineering and Construction Works Contracts (Aug 2019))

C.1 General**C.1.1 Actions**

C1.1.1 The employer and each tenderer submitting a tender offer shall comply with these conditions of tender. In their dealings with each other, they shall discharge their duties and obligations as set out in C.2 and C.3, timeously and with integrity, and behave equitably, honestly and transparently, comply with all legal obligations and not engage in anticompetitive practices.

C1.1.2 The employer and the tenderer and all their agents and employees involved in the tender process shall avoid conflicts of interest and where a conflict of interest is perceived or known, declare any such conflict of interest, indicating the nature of such conflict. Tenderers shall declare any potential conflict of interest in their tender submissions. Employees, agents and advisors of the employer shall declare any conflict of interest to whoever is responsible for overseeing the procurement process at the start of any deliberations relating to the procurement process or as soon as they become aware of such conflict and abstain from any decisions where such conflict exists or recuse themselves from the procurement process, as appropriate.

Note: 1) A conflict of interest may arise due to a conflict of roles which might provide an incentive for improper acts in some circumstances. A conflict of interest can create an appearance of impropriety that can undermine confidence in the ability of that person to act properly in his or her position even if no improper acts result.

2) Conflicts of interest in respect of those engaged in the procurement process include direct, indirect or family interests in the tender or outcome of the procurement process and any personal bias, inclination, obligation, allegiance or loyalty which would in any way affect any decisions taken.

C1.1.3 The employer shall not seek and a tenderer shall not submit a tender without having a firm intention and the capacity to proceed with the contract.

C1.2 Tender Documents

The documents issued by the employer for the purpose of a tender offer are listed in the tender data.

C1.3 Interpretation

C1.3.1 The tender data and additional requirements contained in the tender schedules that are included in the returnable documents are deemed to be part of these conditions of tender.

C1.3.2 These conditions of tender, the tender data and tender schedules which are required for tender evaluation purposes, shall form part of any contract arising from the invitation to tender.

C1.3.3 For the purposes of these conditions of tender, the following definitions apply:

- a) conflict of interest means any situation in which:
 - i) someone in a position of trust has competing professional or personal interests which make it difficult to fulfil his or her duties impartially;
 - ii) an individual or tenderer is in a position to exploit a professional or official

capacity in some way for their personal or corporate benefit; or

- iii) incompatibility or contradictory interests exist between an employee and the tenderer who employs that employee.
- b) comparative offer means the price after the factors of a non-firm price and all unconditional discounts it can be utilised to have been taken into consideration;
- c) corrupt practice means the offering, giving, receiving or soliciting of anything of value to influence the action of the employer or his staff or agents in the tender process;
- d) fraudulent practice means the misrepresentation of the facts in order to influence the tender process or the award of a contract arising from a tender offer to the detriment of the employer, including collusive practices intended to establish prices at artificial levels;

C1.4 Communication and employer's agent

Each communication between the employer and a tenderer shall be to or from the employer's agent only, and in a form that can be readily read, copied and recorded. Communications shall be in the English language. The employer shall not take any responsibility for non-receipt of communications from or by a tenderer. The name and contact details of the employer's agent are stated in the tender data.

C1.5 Cancellation and Re-Invitation of Tenders

C1.5.1 An employer may, prior to the award of the tender, cancel a tender if-

- a) due to changed circumstances, there is no longer a need for the engineering and construction works specified in the invitation;
- b) funds are no longer available to cover the total envisaged expenditure; or
- c) no acceptable tenders are received.
- d) there is a material irregularity in the tender process.

C1.5.2 The decision to cancel a tender invitation must be published in the same manner in which the original tender invitation was advertised

C1.5.3 An employer may only with the prior approval of the relevant treasury cancel a tender invitation for the second time.

C1.6 Procurement procedures

C1.6.1 General

Unless otherwise stated in the tender data, a contract will, subject to C.3.13, be concluded with the tenderer who in terms of C.3.11 is the highest ranked or the tenderer scoring the highest number of tender evaluation points, as relevant, based on the tender submissions that are received at the closing time for tenders.

C1.6.2 Competitive negotiation procedure

C.1.6.2.1 Where the tender data require that the competitive negotiation procedure is to be followed, tenderers shall submit tender offers in response to the proposed contract in the first round of submissions. Notwithstanding the requirements of C.3.4, the employer shall

announce only the names of the tenderers who make a submission. The requirements of C.8 relating to the material deviations or qualifications which affect the competitive position of tenderers shall not apply.

- C.1.6.2.2 All responsive tenderers or at least a minimum of not less than three responsive tenderers that are highest ranked in terms of the evaluation criteria stated in the tender data shall be invited to enter into competitive negotiations based on the principle of equal treatment, keeping confidential the proposed solutions and associated information.

Notwithstanding the provisions of C.2.17, the employer may request that tenders be clarified, specified and fine-tuned in order to improve a tenderer's competitive position provided that such clarification, specification, fine-tuning or additional information does not alter any fundamental aspects of the offers or impose substantial new requirements which restrict or distort competition or have a discriminatory effect.

- C.1.6.2.3 At the conclusion of each round of negotiations, tenderers shall be invited by the employer to revise their tender offer based on the same evaluation criteria, with or without adjusted weightings. Tenderers shall be advised when they are to submit their best and final offer.

- C.1.6.2.4 The contract shall be awarded in accordance with the provisions of C.3.11 and C.3.13 after tenderers have been requested to submit their best and final offer.

- C.1.6.3 Proposal procedure using the two stage-system

C.1.6.3.1 Option 1

Tenderers shall in the first stage submit technical proposals and, if required, cost parameters around which a contract may be negotiated. The employer shall evaluate each responsive submission in terms of the method of evaluation stated in the tender data, and in the second stage negotiate a contract with the tenderer scoring the highest number of evaluation points and award the contract in terms of these conditions of tender.

C.1.6.3.2 Option 2

- C.1.6.3.2.1 Tenderers shall submit in the first stage only technical proposals. The employer shall invite all responsive tenderers to submit tender offers in the second stage, following the issuing of procurement documents.

- C.1.6.3.2.2 The employer shall evaluate tenders received during the second stage in terms of the method of evaluation stated in the tender data, and award the contract in terms of these conditions of tender.

C.2 Tenderer's obligations

C.2.1 Eligibility

C.2.1.1 Submit a tender offer only if the tenderer satisfies the criteria stated in the tender data and the tenderer, or any of his principals, is not under any restriction to do business with employer.

C.2.1.2 Notify the employer of any proposed material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used by the employer as the basis in a prior process to invite the tenderer to submit a tender offer and obtain the employer's written approval to do so prior to the closing time for tenders.

C.2.2 Cost of tendering

C.2.2.1 Accept that, unless otherwise stated in the tender data, the employer will not compensate the tenderer for any costs incurred in the preparation and submission of a tender offer, including the costs of any testing necessary to demonstrate that aspects of the offer complies with requirements.

C.2.2.2 The cost of the tender documents charged by the employer shall be limited to the actual cost incurred by the employer for printing the documents. Employers must attempt to make available the tender documents on its website so as not to incur any costs pertaining to the printing of the tender documents.

C.2.3 Check documents

Check the tender documents on receipt for completeness and notify the employer of any discrepancy or omission.

C.2.4 Confidentiality and copyright of documents

Treat as confidential all matters arising in connection with the tender. Use and copy the documents issued by the employer only for the purpose of preparing and submitting a tender offer in response to the invitation.

C.2.5 Reference documents

Obtain, as necessary for submitting a tender offer, copies of the latest versions of standards, specifications, conditions of contract and other publications, which are not attached but which are incorporated into the tender documents by reference.

C.2.6 Acknowledge addenda

Acknowledge receipt of addenda to the tender documents, which the employer may issue, and if necessary apply for an extension to the closing time stated in the tender data, in order to take the addenda into account.

C.2.7 Clarification meeting

Attend, where required, a clarification meeting at which tenderers may familiarize themselves with aspects of the proposed work, services or supply and raise questions. Details of the meeting(s) are stated in the tender data.

C.2.8 Seek clarification

Request clarification of the tender documents, if necessary, by notifying the employer at least five (5) working days before the closing time stated in the tender data.

C.2.9 Insurance

Be aware that the extent of insurance to be provided by the employer (if any) might not be for the full cover required in terms of the conditions of contract identified in the contract data. The tenderer is advised to seek qualified advice regarding insurance.

C.2.10 Pricing the tender offer

C.2.10.1 Include in the rates, prices, and the tendered total of the prices (if any) all duties, taxes except Value Added Tax (VAT), and other levies payable by the successful tenderer, such duties, taxes and levies being those applicable fourteen (14) days before the closing time stated in the tender data.

C.2.10.2 Show VAT payable by the employer separately as an addition to the tendered total of the prices.

C.2.10.3 Provide rates and prices that are fixed for the duration of the contract and not subject to adjustment except as provided for in the conditions of contract identified in the contract data.

C.2.10.4 State the rates and prices in Rand unless instructed otherwise in the tender data. The conditions of contract identified in the contract data may provide for part payment in other currencies.

C.2.11 Alterations to documents

Do not make any alterations or additions to the tender documents, except to comply with instructions issued by the employer, or necessary to correct errors made by the tenderer. All signatories to the tender offer shall initial all such alterations.

C.2.12 Alternative tender offers

C.2.12.1 Unless otherwise stated in the tender data, submit alternative tender offers only if a main tender offer, strictly in accordance with all the requirements of the tender documents, is also submitted as well as a schedule that compares the requirements of the tender documents with the alternative requirements that are proposed.

C.2.12.2 Accept that an alternative tender offer must be based only on the criteria stated in the tender data or criteria otherwise acceptable to the employer.

C.2.12.3 An alternative tender offer must only be considered if the main tender offer is the winning tender.

C.2.13 Submitting a tender offer

C.2.13.1 Submit one tender offer only, either as a single tendering entity or as a member in a joint venture to provide the whole of the works identified in the contract data and described in the scope of works, unless stated otherwise in the tender data.

C.2.13.2 Return all returnable documents to the employer after completing them in their entirety, either electronically (if they were issued in electronic format) or by writing legibly in non-

erasable ink.

- C.2.13.3 Submit the parts of the tender offer communicated on paper as an original plus the number of copies stated in the tender data, with an English translation of any documentation in a language other than English, and the parts communicated electronically in the same format as they were issued by the employer.
- C.2.13.4 Sign the original and all copies of the tender offer where required in terms of the tender data. The employer will hold all authorized signatories liable on behalf of the tenderer. Signatories for tenderers proposing to contract as joint ventures shall state which of the signatories is the lead partner whom the employer shall hold liable for the purpose of the tender offer.
- C.2.13.5 Seal the original and each copy of the tender offer as separate packages marking the packages as "ORIGINAL" and "COPY". Each package shall state on the outside the employer's address and identification details stated in the tender data, as well as the tenderer's name and contact address.
- C.2.13.6 Where a two-envelope system is required in terms of the tender data, place and seal the returnable documents listed in the tender data in an envelope marked "financial proposal" and place the remaining returnable documents in an envelope marked "technical proposal". Each envelope shall state on the outside the employer's address and identification details stated in the tender data, as well as the tenderer's name and contact address.
- C.2.13.7 Seal the original tender offer and copy packages together in an outer package that states on the outside only the employer's address and identification details as stated in the tender data.
- C.2.13.8 Accept that the employer will not assume any responsibility for the misplacement or premature opening of the tender offer if the outer package is not sealed and marked as stated.
- C.2.13.9 Accept that tender offers submitted by facsimile or e-mail will be rejected by the employer, unless stated otherwise in the tender data.
- C.2.14 Information and data to be completed in all respects
- Accept that tender offers, which do not provide all the data or information requested completely and in the form required, may be regarded by the employer as non-responsive.
- C.2.15 Closing time
- C.2.15.1 Ensure that the employer receives the tender offer at the address specified in the tender data not later than the closing time stated in the tender data. Accept that proof of posting shall not be accepted as proof of delivery.
- C.2.15.2 Accept that, if the employer extends the closing time stated in the tender data for any reason, the requirements of these conditions of tender apply equally to the extended deadline.
- C.2.16 Tender offer validity
- C.2.16.1 Hold the tender offer(s) valid for acceptance by the employer at any time during the

validity period stated in the tender data after the closing time stated in the tender data.

C.2.16.2 If requested by the employer, consider extending the validity period stated in the tender data for an agreed additional period with or without any conditions attached to such extension.

C.2.16.3 Accept that a tender submission that has been submitted to the employer may only be withdrawn or substituted by giving the employer's agent written notice before the closing time for tenders that a tender is to be withdrawn or substituted. If the validity period stated in C.2.16 lapses before the employer evaluating tender, the contractor reserves the right to review the price based on Consumer Price Index (CPI).

C.2.16.4 Where a tender submission is to be substituted, a tenderer must submit a substitute tender in accordance with the requirements of C.2.13 with the packages clearly marked as "SUBSTITUTE".

C.2.17 Clarification of tender offer after submission

Provide clarification of a tender offer in response to a request to do so from the employer during the evaluation of tender offers. This may include providing a breakdown of rates or prices and correction of arithmetical errors by the adjustment of certain rates or item prices (or both). No change in the competitive position of tenderers or substance of the tender offer is sought, offered, or permitted.

Note: Sub-Clause C.2.17 does not preclude the negotiation of the final terms of the contract with a preferred tenderer following a competitive selection process, should the Employer elect to do so.

C.2.18 Provide other material

C.2.18.1 Provide, on request by the employer, any other material that has a bearing on the tender offer, the tenderer's commercial position (including notarized joint venture agreements), preferencing arrangements, or samples of materials, considered necessary by the employer for the purpose of a full and fair risk assessment.

Should the tenderer not provide the material, or a satisfactory reason as to why it cannot be provided, by the time for submission stated in the employer's request, the employer may regard the tender offer as non-responsive.

C.2.18.2 Dispose of samples of materials provided for evaluation by the employer, where required.

C.2.19 Inspections, tests and analysis

Provide access during working hours to premises for inspections, tests and analysis as provided for in the tender data.

C.2.20 Submit securities, bonds and policies

If requested, submit for the employer's acceptance before formation of the contract, all securities, bonds, guarantees, policies and certificates of insurance required in terms of the conditions of contract identified in the contract data.

C.2.21 Check final draft

Check the final draft of the contract provided by the employer within the time available for the employer to issue the contract.

C.2.22 Return of other tender documents

If so, instructed by the employer, return all retained tender documents within twenty-eight (28) days after the expiry of the validity period stated in the tender data.

C.2.23 Certificates

Include in the tender submission or provide the employer with any certificates as stated in the tender data.

C.3 The employer's undertakings**C.3.1 Respond to requests from the tenderer****C.3.1.1 Unless otherwise stated in the tender Data, respond to a request for clarification received up to five (5) working days before the tender closing time stated in the Tender Data and notify all tenderers who collected tender documents.****C.3.1.2 Consider any request to make a material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used to prequalify a tenderer to submit a tender offer in terms of a previous procurement process and deny any such request if as a consequence:**

- a) an individual firm, or a joint venture as a whole, or any individual member of the joint venture fails to meet any of the collective or individual qualifying requirements;
- b) the new partners to a joint venture were not prequalified in the first instance, either as individual firms or as another joint venture; or
- c) in the opinion of the Employer, acceptance of the material change would compromise the outcome of the prequalification process.

C.3.2 Issue Addenda

If necessary, issue addenda that may amend or amplify the tender documents to each tenderer during the period from the date that tender documents are available until three (3) working days before the tender closing time stated in the Tender Data. If, as a result a tenderer applies for an extension to the closing time stated in the Tender Data, the Employer may grant such extension and, shall then notify all tenderers who collected tender documents.

C.3.3 Return late tender offers

Return tender offers received after the closing time stated in the Tender Data, unopened, (unless it is necessary to open a tender submission to obtain a forwarding address), to the tenderer concerned.

C.3.4 Opening of tender submissions**C.3.4.1 Unless the two-envelope system is to be followed, open valid tender submissions in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data. Tender submissions for which acceptable reasons for withdrawal have been submitted will not be opened.**

- C.3.4.2 Announce at the meeting held immediately after the opening of tender submissions, at a venue indicated in the tender data, the name of each tenderer whose tender offer is opened and, where applicable, the total of his prices, number of points claimed for its BBBEE status level and time for completion for the main tender offer only.
- C.3.4.3 Make available the record outlined in C.3.4.2 to all interested persons upon request.
- C.3.5 Two-envelope system
- C.3.5.1 Where stated in the tender data that a two-envelope system is to be followed, open only the technical proposal of valid tenders in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data and announce the name of each tenderer whose technical proposal is opened.
- C.3.5.2 Evaluate functionality of the technical proposals offered by tenderers, then advise tenderers who remain in contention for the award of the contract of the time and place when the financial proposals will be opened. Open only the financial proposals of tenderers, who score in the functionality evaluation more than the minimum number of points for functionality stated in the tender data, and announce the score obtained for the technical proposals and the total price and any points claimed on BBBEE status level. Return unopened financial proposals to tenderers whose technical proposals failed to achieve the minimum number of points for functionality.
- C.3.6 Non-disclosure
- Not disclose to tenderers, or to any other person not officially concerned with such processes, information relating to the evaluation and comparison of tender offers, the final evaluation price and recommendations for the award of a contract, until after the award of the contract to the successful tenderer.
- C.3.7 Grounds for rejection and disqualification
- Determine whether there has been any effort by a tenderer to influence the processing of tender offers and instantly disqualify a tenderer (and his tender offer) if it is established that he engaged in corrupt or fraudulent practices.
- C.3.8 Test for responsiveness
- C.3.8.1 Determine, after opening and before detailed evaluation, whether each tender offer properly received:
- a) complies with the requirements of these Conditions of Tender,
 - b) has been properly and fully completed and signed, and
 - c) is responsive to the other requirements of the tender documents.
- C.3.8.2 A responsive tender is one that conforms to all the terms, conditions, and specifications of the tender documents without material deviation or qualification. A material deviation or qualification is one which, in the Employer's opinion, would:
- a) detrimentally affect the scope, quality, or performance of the works, services or supply identified in the Scope of Work,
 - b) significantly change the Employer's or the tenderer's risks and responsibilities under

the contract, or

- c) affect the competitive position of other tenderers presenting responsive tenders, if it were to be rectified.

Reject a non-responsive tender offer, and not allow it to be subsequently made responsive by correction or withdrawal of the non-conforming deviation or reservation.

C.3.9 Arithmetical errors, omissions and discrepancies

C.3.9.1 Check responsive tenders for discrepancies between amounts in words and amounts in figures. Where there is a discrepancy between the amounts in figures and the amount in words, the amount in words shall govern.

C.3.9.2 Check the highest ranked tender or tenderer with the highest number of tender evaluation points after the evaluation of tender offers in accordance with C.3.11 for:

- a) the gross misplacement of the decimal point in any unit rate;
- b) omissions made in completing the pricing schedule or bills of quantities; or
- c) arithmetic errors in:
 - (i) line item totals resulting from the product of a unit rate and a quantity in bills of quantities or schedules of prices; or
 - (ii) the summation of the prices.

C.3.9.3 Notify the tenderer of all errors or omissions that are identified in the tender offer and either confirm the tender offer as tendered or accept the corrected total of prices.

C.3.9.4 Where the tenderer elects to confirm the tender offer as tendered, correct the errors as follows:

- a) If bills of quantities or pricing schedules apply and there is an error in the line item total resulting from the product of the unit rate and the quantity, the line item total shall govern and the rate shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line item total as quoted shall govern, and the unit rate shall be corrected.
- b) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the tenderer's addition of prices, the total of the prices shall govern and the tenderer will be asked to revise selected item prices (and their rates if bills of quantities apply) to achieve the tendered total of the prices.

C.3.10 Clarification of a tender offer

Obtain clarification from a tenderer on any matter that could give rise to ambiguity in a contract arising from the tender offer.

C.3.11 Evaluation of tender offers

The Standard Conditions of Tender standardize the procurement processes, methods and procedures from the time that tenders are invited to the time that a contract is

awarded. They are generic in nature and are made project specific through choices that are made in developing the Tender Data associated with a specific project.

Conditions of tender are by definition the document that establishes a tenderer's obligations in submitting a tender and the employer's undertakings in soliciting and evaluating tender offers. Such conditions establish the rules from the time a tender is advertised to the time that a contract is awarded and require employers to conduct the process of offer and acceptance in terms of a set of standard procedures.

The CIDB Standard Conditions of Tender are based on a procurement system that satisfies the following system requirements:	
Requirement	Qualitative interpretation of goal
Fair	The process of offer and acceptance is conducted impartially without bias, providing simultaneous and timely access to participating parties to the same information.
Equitable	Terms and conditions for performing the work do not unfairly prejudice the interests of the parties.
Transparent	The only grounds for not awarding a contract to a tenderer who satisfies all requirements are restrictions from doing business with the employer, lack of capability or capacity, legal impediments and conflicts of interest.
Competitive	The system provides for appropriate levels of competition to ensure cost effective and best value outcomes.
Cost effective	The processes, procedures and methods are standardized with sufficient flexibility to attain best value outcomes in respect of quality, timing and price, and least resources to effectively manage and control procurement processes.

The activities associated with evaluating tender offers are as follows:

- a) Open and record tender offers received
- b) Determine whether or not tender offers are complete
- c) Determine whether or not tender offers are responsive
- d) Evaluate tender offers
- e) Determine if there are any grounds for disqualification
- f) Determine acceptability of preferred tenderer
- g) Prepare a tender evaluation report
- h) Confirm the recommendation contained in the tender evaluation report

C.3.11.1 General

The employer must appoint an evaluation panel of not less than three persons conversant with the proposed scope of works to evaluate each responsive tender offer using the tender evaluation methods and associated evaluation criteria and weightings that are specified in the tender data.

C.3.12 Insurance provided by the employer

If requested by the proposed successful tenderer, submit for the tenderer's information the policies and / or certificates of insurance which the conditions of contract identified in the contract data, require the employer to provide.

C.3.13 Acceptance of tender offer

Accept the tender offer; if in the opinion of the employer, it does not present any risk and only if the tenderer:

- a) is not under restrictions, or has principals who are under restrictions, preventing participating in the employer's procurement;
- b) can, as necessary and in relation to the proposed contract, demonstrate that he or she possesses the professional and technical qualifications, professional and technical competence, financial resources, equipment and other physical facilities, managerial capability, reliability, experience and reputation, expertise and the personnel, to perform the contract;
- c) has the legal capacity to enter into the contract;
- d) is not; insolvent, in receivership, under Business Rescue as provided for in chapter 6 of the Companies Act No. 2008, bankrupt or being wound up, has his/her affairs administered by a court or a judicial officer, has suspended his/her business activities or is subject to legal proceedings in respect of any of the foregoing;
- e) complies with the legal requirements, if any, stated in the tender data; and
- f) is able, in the opinion of the employer, to perform the contract free of conflicts of interest.

C.3.14 Prepare contract documents

C.3.14.1 If necessary, revise documents that shall form part of the contract and that were issued by the employer as part of the tender documents to take account of:

- a) addenda issued during the tender period,
- b) inclusion of some of the returnable documents and

other revisions agreed between the employer and the successful tenderer

C.3.14.1 Complete the schedule of deviations attached to the form of offer and acceptance, if any.

C.3.15 Complete adjudicator's contract

Unless alternative arrangements have been agreed or otherwise provided for in the contract, arrange for both parties to complete formalities for appointing the selected adjudicator at the same time as the main contract is signed.

C.3.16 Registration of the award

An employer must, within twenty-one (21) working days from the date on which a contractor's offer to perform a construction works contract is accepted in writing by the employer, register and publish the award on the CIDB Register of Projects.

C.3.17 Provide copies of the contracts

Provide to the successful tenderer the number of copies stated in the Tender Data of the signed copy of the contract as soon as possible after completion and signing of the form of offer and acceptance.

C.3.18 Provide written reasons for actions taken

Provide upon request written reasons to tenderers for any action that is taken in applying these conditions of tender but withhold information which is not in the public interest to be divulged, which is considered to prejudice the legitimate commercial interests of tenderers or might prejudice fair competition between tenderers.



VOLUME 1

TENDER

RETURNABLE DOCUMENTS

T2.1 LIST OF RETURNABLE DOCUMENTS

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T2.2 Returnable Documents

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P.	Copies of Directors' / Members' Identity Documents	RD.32
Q.	Preferential Procurement Data	RD.33
R.	Method Statement / Approach Paper	RD.38
S.	Preliminary Programme and Cashflow	RD.39
T.	Record of Addenda to Tender Document	RD.40
U.	Compulsory Enterprise Questionnaire	RD.41
V.	Declaration of Bidders' Past Supply Chain Management Practices	RD.44
W.	Declaration of Interest	RD.46
X.	Joint Venture Agreement	RD.48
Y.	Current Commitments Schedule	RD.49
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PART 1 – AGREEMENT AND CONTRACT DATA

C1.1	Form of Offer	C1.1
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PART 2 – PRICING DATA

C2.2	Bill of Quantities	C2.2
C2.3	Summary of Bill of Quantities	C2.3

Failure to complete the forms as directed may lead to the Tender being rejected.

I/We the undersigned do hereby certify as follows:

1. Inspection of Site and Examination of Site Data

1.1. I/We have inspected and examined the Site and its surroundings. (Not Applicable)

1.2. I/We have examined the Site Data made available by the Employer (Applicable).

2. Comprehension of Documents

2.1. I/We have acquainted myself/ourselves with the Tendering Procedures, General Conditions of Contract, Contract Data, Scope of Work, Site information, Drawings, and Specifications for the above Contract for which I/We have submitted this Tender.

2.2 I/We note that the UGU DISTRICT MUNICIPALITY is not bound to accept the lowest or any tender that may be received.

2.3 I/We note that the UGU DISTRICT MUNICIPALITY may for any reason withdraw this tender and re-tender without having to furnish any reason thereof.

Signature(s)

Name(s)

For the
Tenderer

(Name and address of organisation)

Name and
signature of
witness

Date _____

A. SITE INSPECTION CERTIFICATE – SITE INFORMATION

Given the current COVID-19 pandemic, there will be a compulsory clarification meeting with representatives of the Employer will take place at the **Provincial Road Intersection P55 & P200 (Gamalakhe / Izotsha Road Intersection) (30°46'51.71"S; 30°23'28.27"E)** approximately 10km west of Port Shepstone Town on **Friday, 22 July 2022 at 10h00. ALL-COVID-19 REGULATIONS WILL BE OBSERVED AT ALL TIMES.** The Contractor is welcome to visit site on his own accord and direct any queries they may have to the Engineer. Attached to the Tender Document is a CD which provides a presentation of the SOW and site pictures.

CERTIFICATE OF RECEIPT OF SITE INFORMATION

This is to certify that (*tenderer*)
 of (*address*)
 was represented by the person(s)
 named below at the compulsory meeting held for all tenderers at (*location*)
 on (*date*) starting at (*time*)

I / We acknowledge that the purpose of the meeting was to acquaint myself / ourselves with the site of the works and / or matters incidental to doing the work specified in the tender documents in order for me / us to take account of everything necessary when compiling our rates and prices included in the tender.

Particulars of person(s) attending the meeting:

Name: Signature:

Capacity: Date:

Name: Signature:

Capacity: Date:

Attendance of the above person(s) at the meeting is confirmed by the Employer's representatives, namely:

Name: Signature:

Capacity: Date:

Name: Signature:

Capacity: Date:

Ugu District Municipality SCM Stamp



B. RELEVANT EXPERIENCE / SCHEDULE OF SIMILAR WORK UNDERTAKEN

The Tenderer shall attach hereto the relevant experience for Water Projects, water projects, pipelines and pumping equipment projects, including concrete water retaining structures (elevated concrete reservoirs) for the main contractor, and for the electrical and instrumentation subcontractor.

The above information will be used to evaluate the following Functionality criteria under C.3.11.9.1 and C.3.11.9.2 in Section T1.2:

Criteria 1: Relevant Experience of the Main Civil Contractor related to Water Projects, water projects, pipelines and pumping equipment projects, including concrete water retaining structures (elevated concrete reservoirs – at least two minimum 250 KL completed), buildings, earthworks, access roads and stormwater, and including Mechanical and Electrical Works by a Sub-Contractor, applicable in past 12 years. (Tenderer to attach certified copy of the Final Completion Certificate on similar scope of Works and reference letters from clients).

Criteria 1: Relevant Experience of the Electrical Sub-Contractor related to transformers, MCC Panels, PLC's, instrumentation and general Electrical Works for Water or Wastewater Treatment Projects, undertaken as the Electrical main or Sub-Contractor, applicable in the past 12 years.

C. KEY PERSONNEL AND SCHEDULE

In terms of the Project Specification and the Conditions of Tender, unskilled workers may only be brought in from outside the local community if such personnel are not available locally.

The Tenderer shall list below the personnel which he intends to utilize on the Works, including key personnel which may have to be brought in from outside if not available locally.

CATEGORY OF EMPLOYEE	NUMBER OF PERSONS					
	KEY PERSONNEL, PART OF THE CONTRACTOR'S ORGANISATION		KEY PERSONNEL TO BE IMPORTED IF NOT AVAILABLE LOCALLY		UNSKILLED PERSONNEL TO BE RECRUITED FROM LOCAL COMMUNITY	
	HDI	NON-HDI	HDI	NON-HDI	HDI	NON-HDI
Project Director / Contracts Manager (Civil)						
Site Agent / Project Manager (Civil)						
Site Supervisor / Foreman: Civil						
Site Supervisor / Foreman: Electrical						
Site Supervisor / Foreman: Mechanical						
Health and Safety Officer						
Quality & Environmental Site Officer(s)						
Artisans and other Skilled workers						
Plant Operators						
Unskilled Workers						
Others:						

The Tenderer shall attach hereto the *curricula vitae*, in the form included hereafter, of the Project Director / Contracts Manager, the Site Agent / Project Manager, the Site Supervisor / Concrete Foreman and the Health and Safety Officer. The information is necessary for evaluation of the tender.

The above information will be used to evaluate **Criteria 4: Experience of Key Personnel** for Functionality under C.3.11.9.4 in Section T1.2.

SIGNATURE: **DATE:**
(of person authorised to sign on behalf of the Tenderer)

[illegible]

Certification:

I, the undersigned, certify that to the best of my knowledge and belief this data correctly describes me, my qualifications and my experience.

DATE _____

C. KEY PERSONNEL AND SCHEDULE (continued)

[illegible]

Certified copies of qualifications are to be attached to this schedule.

Certification:

I, the undersigned, certify that to the best of my knowledge and belief this data correctly describes me, my qualifications and my experience.

SIGNATURE OF THE INCUMBENT IN THE SCHEDULE

DATE _____

C. KEY PERSONNEL AND SCHEDULE (continued)

[illegible]

Certified copies of qualifications and relevant experience are to be attached to this schedule.

Certification:

I, the undersigned, certify that to the best of my knowledge and belief this data correctly describes me, my qualifications and my experience.

SIGNATURE OF THE INCUMBENT IN THE SCHEDULE

DATE

[illegible]

C. KEY PERSONNEL AND SCHEDULE (continued)

[illegible]

Certification:

I, the undersigned, certify that to the best of my knowledge and belief this data correctly describes me, my qualifications and my experience.

SIGNATURE OF THE INCUMBENT IN THE SCHEDULE

DATE _____

C. KEY PERSONNEL AND SCHEDULE (continued)

The details below refer to the Electrical Sub-Contractor's Representative who will be authorised to act as the Electrical Sub-Contractor's Representative:

FULL NAME: _____ AGE: _____

DURATION OF EMPLOYMENT WITH ELECTRICAL SUB-CONTRACTOR: _____

FULL TIME ON THIS CONTRACT: YES/NO

ATTEND ALL REGULAR SITE MEETINGS: YES/NO

QUALIFICATIONS OF ELECTRICAL SUB-CONTRACTORS REPRESENTATIVE: _____

DETAILS OF RELEVANT EXPERIENCE OF ELECTRICAL SUB-CONTRACTOR'S REPRESENTATIVE - PAST PROJECTS

YEAR	CONTRACT	CLIENT COMPANY	CLIENT NAME	TEL. NO.

D. SCHEDULE OF PLANT AND EQUIPMENT

The Tenderer must state below what plant and equipment will be available for the work should he be awarded the contract.

DESCRIPTION, SIZE, CAPACITY	YEAR OF MANUFACTURE	NUMBER

NB : After the award of the contract, the Contractor must satisfy the Engineer that all the above plant and equipment or equivalent plant and equipment will be on the site at all times when required. The Contractor shall maintain all plant and equipment in a good working order for the duration of the contract.

The Contractor also undertakes to bring onto the site, without additional costs to the Employer, any additional plant and equipment which, in the opinion of the Engineer, is necessary for completing the contract within the tendered contract period.

.....
SIGNATURE OF TENDERER

E. SCHEDULE OF SOURCES OF SUPPLY OF MATERIALS

The Tenderer shall list below the proposed type, source or trade name of the materials he wishes to use.

The acceptance of this tender shall not be construed as approval of all or any of the listed materials. Should any or all of the materials not be approved subsequent to acceptance of tender, this shall in no way invalidate this tender and the tendered unit rates for the various items of work shall remain final and binding.

MATERIAL	TYPE OR TRADE NAME	SOURCE
SAND (Concrete)		
SAND (Mortar)		
SAND (Bedding)		
STONE		
CEMENT		
STEEL PIPES		
uPVC PIPES		
HDPE PIPES		
VALVES		
PUMPS		
OTHER		
OTHER		
OTHER		

ELECTRICAL ITEM CONTINUE OVER THE NEXT PAGE

LIST OF SUB-CONTRACTORS AND SUPPLIERS – ELECTRICAL AND INSTRUMENTATION

The Suppliers name, BBB-EE rating and approximate value of work is to be completed for every item specified and which is applicable to this particular Contract and on which the Contract Sum was determined.

	SUB- CONTRACTOR/SUPPLIER	BBB-EE RATING	Value of Work
Cables			
Cable Glands			
Luminaires			
Type A			
Type AE			
Streetlight			
Conduit System			
Motor Control Centre			
Soft-starters			
Circuit Breakers			
Fire Detection and Intruder Alarm			
UPS			
PLC			
GPRS			
Earthing Bonding & Lightning Protection			
Other (Specify)			
a)			
b)			
c)			
d)			
e)			
f)			

NOTE: Under no circumstances will the Electrical Sub-Contractor be permitted to deviate from the materials specified unless agreed in writing, by the Engineer, prior to tender closing.

.....
SIGNATURE OF TENDERER

F. SCHEDULE OF PROPOSED SUB-CONTRACTORS

The Tenderer shall list below any Sub-Contractors he wishes to employ to carry out part(s) of the Work.

For construction related contracts, the service provider should ensure that a minimum % of the contract, as detailed below, is sub-contracted to qualifying previously disadvantaged companies within the approved emerging contractors' incubator project, within the area of jurisdiction of the municipality

Total value of the project (inclusive of VAT)	% of the Project to be sub-contracted	Maximum number of sub-contractors
> R10 000 000 < R 15 000 000	10 % of Total value of the project	2
> R15 000 000 < R 20 000 000	15 % of Total value of the project	3
> R20 000 000 < R 25 000 000	20 % of Total value of the project	4
> R25 000 000 < R 30 000 000	25 % of Total value of the project	5
> R30 000 000	30 % of Total value of the project	6

The acceptance of his tender shall not be construed as approval of all or any of the listed Sub-Contractors. Should any or all of the Sub-Contractors not be approved subsequent to acceptance of the tender, this shall in no way invalidate this tender. Furthermore, the tendered unit rates for the various items of work shall remain final and binding.

No.	PROPOSED SUB-CONTRACTORS	PART OR TYPE OF WORK	ADDRESS OF PROPOSED SUBCONTRACTOR	CONTACT DETAILS	VALUE OF WORK (R)
1					
2					
3					
4					
5					
6					
7					
TOTAL VALUE OF WORKS TO BE SUB-CONTRACTED					R

Bidders are requested to furnish certified copies of the proposed subcontractor's Company Registration Documents, copy of latest municipal statement, BEE Rating Certificate as well as certified copies of the owners' Identity Documents along with this tender.

SIGNED ON BEHALF OF TENDERER:

Electrical Sub-Contractor's Schedule of Information

COMPANY DETAILS

Name: _____

Address: (Street) _____

(Postal) _____

Telephone No: _____

Telefax No: _____

Cell No. _____

Type of Establishment (Company, Corporation etc.)

Years since Establishment under Present Management

STAFF (Please state number in each category)

LICENSED ELECTRICIANS _____

ARTISAN ELECTRICIANS _____

LABOURERS _____

TRANSPORT (Please state numbers and types of vehicles).

WORKSHOP FACILITIES

Please state if available:

YES

☐

NO

☐

Address of Workshops

INSTRUMENTS

(Please details all measuring, testing and commissioning instruments available)

MAINTENANCE FACILITIES

(Please state facilities available for providing 24 hour emergency service if required)

Cell No.

EXPERIENCE

The Electrical Sub-Contractor shall, in the schedule hereunder, list work of a similar nature to that called for in this Tender which has been executed by him during the recent years and which is at present being executed by him.

NOTE: If no similar work has been carried out, the above schedule is to be marked "Nil" by the Electrical Sub-Contractor.

PROJECT	CLIENT	VALUE	COMPLETION DATE

Number of years of relevant experience of the Tendering Firm years.

WORK IN HAND

(Please state brief details of all projects that are currently in progress)

PROJECT	CLIENT	VALUE	COMPLETION DATE

WORKMANSHIP

(Please state details of 3 projects where the quality of your workmanship can be inspected if necessary).

G. ALTERATIONS BY TENDERER

1. Should the Tenderer not be able to meet any requirement of the Tender Documents, he shall state below:

Qualifications to Tender

And set out details of the requirements which he cannot meet and his proposal.

Note: A qualified tender is a non-conforming tender and may be rejected.

2. Should the Tenderer have completed a full conforming tender but wishes in addition to submit an alternative offer, he shall state below.

Alternative Offer

And set out details of the items for which he proposes an alternative.

In both cases, the Tenderer may prepare the details under a covering letter and refer to them on this form.

Page or Item	Alteration Proposed by Tenderer

.....
SIGNATURE OF TENDERER

H. AUTHORITY OF SIGNATORY

Indicate the status of the tenderer by ticking the appropriate box hereunder. The tenderer must complete the certificate set out below for the relevant category.

A Company	B Partnership	C Joint Venture	D Sole Proprietor	E Close Corporation

A. Certificate for Company

I,, chairperson of the board of

....., hereby confirm that by resolution of the board

(copy attached) taken on 20....., Mr/Ms

acting in the capacity of, was authorised to sign all documents in connection with this tender for Contract No 36/2020 and any contract resulting from it on behalf of the company.

As witnesses:

1. Chairman:
2. Date:

B. Certificate for Partnership

We, the undersigned, being the key partners in the business trading as hereby

authorise Mr/Ms, acting in the capacity of, to sign all documents in connection with this tender for Contract No 36/2020 and any contract resulting from it on our behalf.

Name	Address	Signature	Date

Note: This certificate is to be completed and signed by all key partners upon whom rests the direction of the affairs of the Partnership as a whole.

C. Certificate for Joint Venture

We, the undersigned, are submitting this tender offer in Joint Venture and hereby

authorise Mr/Ms, authorised signatory of the company

....., acting in the capacity of lead

partner, to sign all documents in connection with this tender for UGU-07-1611-2022 and any contract resulting from it on our behalf.

This authorisation is evidenced by the attached power of attorney signed by legally authorised signatories of all the partners to the Joint Venture.

Name of Firm	Address	Authorising Name and Capacity	Authorising Signature
Lead Partner:			

D. Certificate for Sole Proprietor

I,, hereby confirm that I am the sole owner of the business trading as

As witnesses:

1. Sole Owner:

2. Date:

E. Certificate for Close Corporation

We, the undersigned, being the key members in the business trading as, hereby authorise Mr/Msacting in the capacity of, to sign all to sign all documents in connection with this tender for Contract No UGU-07-1611-2022 and any contract resulting from it on our behalf.

Name	Address	Signature	Date

Note: This certificate is to be completed and signed by all key partners upon whom rests the direction of the affairs of the Partnership as a whole.

I. CONTRACTOR'S HEALTH AND SAFETY DECLARATION

In terms of Clause 4(4) of the OHSA 1993 Construction Regulations 2014 (referred to as "the Regulations" hereafter), a Contractor may only be appointed to perform construction work if the Employer is satisfied that the Contractor has the necessary competencies and resources to carry out the work safely in accordance with the Occupational Health and Safety Act No 85 of 1993 and the OHSA 1993 Construction Regulations 2014.

To that effect a person duly authorised by the tenderer must complete and sign the declaration hereafter in detail.

Declaration by Tenderer

1. I the undersigned hereby declare and confirm that I am fully conversant with the Occupational Health and Safety Act No 85 of 1993 (as amended by the Occupational Health and Safety Amendment Act No 181 of 1993), and the OHSA 1993 Construction Regulations 2014.
2. I hereby declare that my company has the competence and the necessary resources to safely carry out the construction work under this contract in compliance with the Construction Regulations and the Employer's Health and Safety Specifications.
3. I hereby confirm that adequate provision has been made in my tendered rates and prices in the Bill of Quantities to cover the cost of all resources, actions, training and all health and safety measures envisaged in the OHSA 1993 Construction Regulations 2014, including the cost of the specific items listed in the tables hereafter.

TABLE 1: SAFETY PERSONNEL

PERSONNEL
Construction Supervisor
Construction Safety Officer
Health and Safety Representatives
Health and Safety Committee

TABLE 2: SAFETY EQUIPMENT (As applicable)

EQUIPMENT
Hard Hats
Safety Boots
Masks
Gloves
Personal Protective Equipment
Other items deemed necessary due to the nature of the contract/site

4. I hereby undertake, if my tender is accepted, to provide, before commencement of the works under the contract, a suitable and sufficiently documented Health and Safety Plan in accordance with Regulation 5(1) of the Construction Regulations, which plan shall be subject to approval by the Employer.
5. I confirm that copies of my company's approved Health and Safety Plan, the Employer's Safety Specifications as well as the OHSA 1993 Construction Regulations 2014 will be provided on site and will at all times be available for inspection by the Contractor's personnel, the Employer's personnel, the Engineer, visitors, and officials and inspectors of the Department of Labour.
6. I hereby confirm that, I will be liable for any penalties that may be applied by the Employer in terms of the said Regulations (Regulation 30) for failure on the Contractor's part to comply with the provisions of the Act and the Regulations.
7. I agree that my failure to complete and execute this declaration to the satisfaction of the Employer will mean that I am unable to comply with the requirements of the OHSA 1993 Construction Regulations 2014, and accept that my tender will be prejudiced and may be rejected at the discretion of the Employer.

SIGNATURE: DATE:
(of person authorised to sign on behalf of the Tenderer)

J. CONTRACTOR'S CERTIFICATE OF REGISTRATION WITH CIDB

The Tenderer shall attach hereto the Contractor's Certificate of Registration with CIDB or insert his CRS No. Failure to submit the certificate or number with the tender document will lead to the conclusion that the Tenderer is not registered with the CIDB and the tender offer will be deemed as not valid/incomplete. The certificate must be valid by close of tender.

K. CONTRACTOR'S COID REGISTRATION DETAILS

The Tenderer shall attach hereto their COID Registration details. Failure to submit the Letter of Good Standing (COID) with the tender document will lead to the conclusion that the Tenderer is not registered.

L. TENDERER'S FINANCIAL STANDING

In terms of the Tender Data the tenderer must obtain a bank rating from the Tenderer's bank.

To that end the Tenderer must provide with his tender a bank rating, certified by his banker, to the effect that he will be able to successfully complete the contract at the tendered amount within the specified time for completion and attach the documentation/rating certificate to this page.

Name of account holder: _____

Name of Bank: _____ Branch: _____

Account number: _____ Type of account: _____

Telephone number: _____ Facsimile number: _____

Name of contact person (at bank): _____

Failure to provide the required bank details and a certified bank rating with his tender, will lead to the conclusion that the Tenderer does not have the necessary financial resources at his disposal to complete the contract successfully within the specified time for completion. Tenderers who receive a Bank Rating $\leq D$ will be disqualified.

The Employer undertakes to treat the information thus obtained as confidential, strictly for the use of evaluation of the tender submitted by the Tenderer.

Note that the Tenderer should have a Bank Rating of C or above to be considered eligible to Tender. Tenderers with a Bank Rating of D and below will be disqualified.

SIGNATURE:
(of person authorised to sign on behalf of the Tenderer)

DATE:

M. FORM OF INTENT TO PROVIDE A PERFORMANCE GUARANTEE

The Tenderer must attach hereto a letter from the bank or financial institution with whom he has made the necessary arrangements, to the effect that the said bank or institution will be prepared to provide the required performance guarantee when asked to do so.

Only a Performance Guarantee in the format indicated in Section C5.1 will be accepted by the Employer.

N. TAX STATUS PIN

The Tenderer shall submit their 'Tax Status Pin' obtained from SARS.

Each party to a Consortium/Joint Venture/Sub-contractors must submit a separate Tax Status Pin.

Failure to submit a Tax Status Pin indicating Tax Compliance with SARS, will invalidate the tender.

TAX STATUS PIN No.

[Tax Status Pin obtained from SARS to be inserted here.]

O. COMPANY REGISTRATION CERTIFICATE AND SHAREHOLDING DETAILS

The Tenderer's Company Registration details are to be attached here, including shareholding details.

P. COPIES OF DIRECTORS' / MEMBERS' IDENTITY DOCUMENTS

Certified copies of Identity Documents of all Directors/Members of a Close Corporation are to be attached here.

MBD 6.1

Q. PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2017

This preference form must form part of all bids invited. It contains general information and serves as a claim form for preference points for Broad-Based Black Economic Empowerment (B-BBEE) Status Level of Contribution

NB: BEFORE COMPLETING THIS FORM, BIDDERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF B-BBEE, AS PRESCRIBED IN THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017.

1. GENERAL CONDITIONS

1.1 The following preference point systems are applicable to all bids:

- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and
 - the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).
- (a) The value of this bid is estimated to not exceed R50 000 000 (all applicable taxes included) and therefore the 80/20 preference point system shall be applicable;

1.2 Points for this bid shall be awarded for:

- (a) Price; and
- (b) B-BBEE Status Level of Contributor.

1.3 The maximum points for this bid are allocated as follows:

	POINTS
PRICE	80
B-BBEE STATUS LEVEL OF CONTRIBUTOR	20
Total points for Price and B-BBEE must not exceed	100

1.4 Failure on the part of a bidder to submit a B-BBEE Verification Certificate from a Verification Agency accredited by the South African Accreditation System (SANAS), or a Registered Auditor approved by the Independent Regulatory Board of Auditors (IRBA) or a sworn affidavit confirming annual turnover and level of black ownership in case of an EME and QSE together with the bid, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.

1.5 The purchaser reserves the right to require of a bidder, either before a bid is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the purchaser.

2. DEFINITIONS

- (a) **“all applicable taxes”** includes value-added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies;
- (b) **“B-BBEE”** means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;
- (c) **“B-BBEE status level of contributor”** means the B-BBEE status of an entity in terms of a code of good practice on black economic empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;
- (d) **“bid”** means a written offer in a prescribed or stipulated form in response to an invitation by an organ of state for the provision of goods or services, through price quotations, advertised competitive bidding processes or proposals;
- (e) **“Broad-Based Black Economic Empowerment Act”** means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (f) **“comparative price”** means the price after the factors of a non-firm price and all unconditional discounts that can be utilized have been taken into consideration;
- (g) **“consortium or joint venture”** means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract;
- (h) **“contract”** means the agreement that results from the acceptance of a bid by an organ of state;
- (i) **“EME”** means an Exempted Micro Enterprise as defines by Codes of Good Practice issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (j) **“Firm price”** means the price that is only subject to adjustments in accordance with the actual increase or decrease resulting from the change, imposition, or abolition of customs or excise duty and any other duty, levy, or tax, which, in terms of the law or regulation, is binding on the contractor and demonstrably has an influence on the price of any supplies, or the rendering costs of any service, for the execution of the contract;
- (k) **“prices”** includes all applicable taxes less all unconditional discounts;
- (l) **“functionality”** means the measurement according to predetermined norms, as set out in the bid documents, of a service or commodity that is designed to be practical and useful, working or operating, taking into account, among other factors, the quality, reliability, viability and durability of a service and the technical capacity and ability of a bidder;
- (m) **“non-firm prices”** means all prices other than “firm” prices;
- (n) **“person”** includes a juristic person;
- (o) **“QSE”** means a Qualifying Small Enterprise as defines by Codes of Good Practice issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (p) **“rand value”** means the total estimated value of a contract in South African currency, calculated at the time of bid invitations, and includes all applicable taxes and excise duties;
- (q) **“sub-contract”** means the primary contractor’s assigning, leasing, making out work to, or employing, another person to support such primary contractor in the execution of part of a project in terms of the contract;
- (r) **“total revenue”** bears the same meaning assigned to this expression in the Codes of Good Practice on Black Economic Empowerment, issued in terms of section 9(1) of the

Broad-Based Black Economic Empowerment Act and promulgated in the *Government Gazette* on 9 February 2007;

- (s) **“trust”** means the arrangement through which the property of one person is made over or bequeathed to a trustee to administer such property for the benefit of another person; and;
- (t) **“trustee”** means any person, including the founder of a trust, to whom property is bequeathed in order for such property to be administered for the benefit of another person.
- (u) **“proof of B-BBEE status level of contributor”** means:
 - 1) B-BBEE Status level certificate issued by an authorized body or person;
 - 2) A sworn affidavit as prescribed by the B-BBEE Codes of Good Practice;
 - 3) Any other requirement prescribed in terms of the B-BBEE Act;

3. POINTS AWARDED FOR PRICE

- 3.1 The bidder obtaining the highest number of total points will be awarded the contract.
- 3.2 Preference points shall be calculated after prices have been brought to a comparative basis taking into account all factors of non-firm prices and all unconditional discounts;
- 3.3 Points scored must be rounded off to the nearest 2 decimal places.
- 3.4 In the event that two or more bids have scored equal total points, the successful bid must be the one scoring the highest number of preference points for B-BBEE.
- 3.5 However, when functionality is part of the evaluation process and two or more bids have scored equal points including equal preference points for B-BBEE, the successful bid must be the one scoring the highest score for functionality.
- 3.6 Should two or more bids be equal in all respects, the award shall be decided by the drawing of lots.

4. POINTS AWARDED FOR PRICE

4.1 THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

A maximum of 80 or 90 points is allocated for price on the following basis:

$$\begin{array}{ccc}
 \mathbf{80/20} & \text{or} & \mathbf{90/10} \\
 \\
 P_s = 80 \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right) & \text{or} & P_s = 90 \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right)
 \end{array}$$

Where

- P_s = Points scored for price of bid under consideration
- P_t = Price of bid under consideration
- $P_{\min}$ = Price of lowest acceptable bid

5. POINTS AWARDED FOR B-BBEE STATUS LEVEL OF CONTRIBUTOR

- 5.1 In terms of Regulation 6 (2) and 7 (2) of the Preferential Procurement Regulations 2017, preference points must be awarded to a bidder for attaining the B-BBEE status level of contribution in accordance with the table below:

B-BBEE Status Level of Contributor	Number of points (90/10 system)	Number of points (80/20 system)
1	10	20
2	9	18
3	6	14
4	5	12
5	4	8
6	3	6
7	2	4
8	1	2
Non-compliant contributor	0	0

- 5.2 A bidder who qualifies as an EME in terms of the B-BBEE Act must submit a sworn affidavit confirming Annual Total Revenue and Level of Black Ownership.
- 5.3 A Bidder other than EME or QSE must submit their original and valid B-BBEE status level verification certificate or a certified copy thereof, substantiating their B-BBEE rating issued by a Registered Auditor approved by IRBA or a Verification Agency accredited by SANAS.
- 5.4 A trust, consortium or joint venture, will qualify for points for their B-BBEE status level as a legal entity, provided that the entity submits their B-BBEE status level certificate.
- 5.5 A trust, consortium or joint venture will qualify for points for their B-BBEE status level as an unincorporated entity, provided that the entity submits their consolidated B-BBEE scorecard as if they were a group structure and that such a consolidated B-BBEE scorecard is prepared for every separate bid.
- 5.6 Tertiary Institutions and Public Entities will be required to submit their B-BBEE status level certificates in terms of the specialized scorecard contained in the B-BBEE Codes of Good Practice.
- 5.7 A person will not be awarded points for B-BBEE status level if it is indicated in the bid documents that such a bidder intends sub-contracting more than 25% of the value of the contract to any other enterprise that does not qualify for at least the points that such a bidder qualifies for, unless the intended sub-contractor is an EME that has the capability and ability to execute the sub-contract.
- 5.8 A person awarded a contract may not sub-contract more than 25% of the value of the contract to any other enterprise that does not have an equal or higher B-BBEE status level than the person concerned, unless the contract is sub-contracted to an EME that has the capability and ability to execute the sub-contract.

6. BID DECLARATION

6.1 Bidders who claim points in respect of B-BBEE Status Level of Contribution must complete the following:

7. B-BBEE STATUS LEVEL OF CONTRIBUTOR CLAIMED IN TERMS OF PARAGRAPHS 1.4 AND 5.1

7.1 B-BBEE Status Level of Contributor: = (maximum of 10 or 20 points)

(Points claimed in respect of paragraph 7.1 must be in accordance with the table reflected in paragraph 5.1 and must be substantiated by means of a B-BBEE certificate issued by a Verification Agency accredited by SANAS or a Registered Auditor approved by IRBA or a sworn affidavit.

8. SUB-CONTRACTING

8.1 Will any portion of the contract be sub-contracted?
(Tick applicable box)

YES	☐	NO	☐
-----	--------------------------	----	--------------------------

8.1.1 If yes, indicate:

- i) What percentage of the contract will be subcontracted%
- ii) The name of the sub-contractor
- iii) The B-BBEE status level of the sub-contractor
- iv) Whether the sub-contractor is an EME or QSE

(Tick applicable box)

YES	☐	NO	☐
-----	--------------------------	----	--------------------------

- v) Specify, by ticking the appropriate box, if subcontracting with an enterprise in terms of Preferential Procurement Regulations, 2017:

Designated Group: An EME or QSE which is at least 51% owned by:	EME √	QSE √
Black people		
Black people who are youth		
Black people who are women		
Black people with disabilities		
Black people living in rural or underdeveloped areas or townships		
Cooperative owned by black people		
Black people who are military veterans		
OR		
Any EME		
Any QSE		

9. DECLARATION WITH REGARD TO COMPANY/FIRM

9.1 Name of company/firm:

9.2 VAT registration number:

9.3 Company registration number:

9.4 TYPE OF COMPANY/ FIRM

- ☐ Partnership/Joint Venture / Consortium
 - ☐ One person business/sole propriety
 - ☐ Close corporation
 - ☐ Company
 - ☐ (Pty) Limited
- [TICK APPLICABLE BOX]

9.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES

.....
.....
.....

9.6 COMPANY CLASSIFICATION

- ☐ Manufacturer
 - ☐ Supplier
 - ☐ Professional service provider
 - ☐ Other service providers, e.g. transporter, etc.
- [TICK APPLICABLE BOX]

9.7 MUNICIPAL INFORMATION

Municipality where business is situated:

Registered Account Number:

Stand Number:.....

9.8 Total number of years the company/firm has been in business:

9.9 I/we, the undersigned, who is / are duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the B-BBE status level of contributor indicated in paragraphs 1.4 and 6.1 of the foregoing certificate, qualifies the company/ firm for the preference(s) shown and I / we acknowledge that:

- i) The information furnished is true and correct;
- ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;
- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 6.1, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct;
- iv) If the B-BBEE status level of contributor has been claimed or obtained on a fraudulent

basis or any of the conditions of contract have not been fulfilled, the purchaser may, in addition to any other remedy it may have –

- (a) disqualify the person from the bidding process;
- (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
- (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
- (d) recommend that the bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted by the National Treasury from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and
- (e) forward the matter for criminal prosecution.

WITNESSES

1.

2.

.....
SIGNATURE(S) OF BIDDERS(S)

DATE:

ADDRESS

.....

.....

R. METHOD STATEMENT / APPROACH PAPER

The Tenderer shall attach a detailed method statement / approach paper for the implementation of the construction works for this Contract. The method statement / approach paper shall be in accordance with the information supplied in the Contract, requirements of the Project Specifications and with all other aspects of this Tender.

Method statements based on the scope of work and other information provided in the document which must briefly describe the following:

- (a) Construction procedures / methodology
- (b) Resources (personnel) to be used
- (c) Materials and plant to be used
- (d) Quality control measures
- (e) Storage of materials
- (f) Risk management
- (g) Health and Safety measures to be taken
- (h) Environmental control measures to be taken

The above information will be used to evaluate **Criteria 8: Method Statement / Approach Paper** for Functionality under C.3.11.9.8 in Section T1.2.

SIGNATURE:
(of person authorized to sign on behalf of the Tenderer)

DATE:

S. PRELIMINARY PROGRAMME AND CASHFLOW

The Tenderer shall attach a preliminary programme reflecting the proposed sequence and duration of the various activities comprising the work for this Contract. The programme shall be in accordance with the information supplied in the Contract, requirements of the Project Specifications and with all other aspects of this Tender.

Note: The programme must be based on the completion time as specified in the Contract Data. No other completion time that may be indicated on this programme will be regarded as an alternative offer, unless it is listed on Form G: Alterations by Tenderer, in the Returnable Schedules section and supported by a detailed statement to that effect, all as specified in the Tender Data.

The above information will be used to evaluate **Criteria 9: Programme** for Functionality under C.3.11.9.8 in Section T1.2.

SIGNATURE:
(of person authorized to sign on behalf of the Tenderer)

DATE:

T. RECORD OF ADDENDA TO TENDER DOCUMENT

We confirm that the following communications received from the Employer's Agent before the submission of this tender offer, amending the tender documents, have been taken into account in the tender offer

ADD №	DATE	TITLE OR DETAILS
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

*Attach additional pages if more space is required.

SIGNATURE: DATE:
(of person authorised to sign on behalf of the Tenderer)

U. COMPULSORY ENTERPRISE QUESTIONNAIRE

The following particulars must be furnished. In the case of a joint venture, separate enterprise questionnaires in respect of each partner must be completed and submitted.

Section 1: Name of Enterprise:

Section 2: VAT registration number, if any:

Section 3: CIDB registration number, if any:

Section 4: Particulars of sole proprietors and partners in partnerships

Name *	Identity Number *	Personal Income Tax Number *

* Complete only if sole proprietor or partnership and attach separate page if more than 3 partners

Section 5: Particulars of companies and close corporations

Company registration number

Close corporation number

Tax reference number

Section 6: Record in the services of the state

Indicate by marking the relevant boxes with a cross, if any sole proprietor, partner in a partnership or director, manager, principal shareholder or stakeholder in a company or close corporation is currently or has been within the last 12 months in the service of any of the following:

- | | |
|--|---|
| ☐ A member of any municipal council | ☐ an employee of any provincial dept. |
| ☐ A member of any provincial legislature | ☐ national or provincial public entity or |
| ☐ A member of the National Assembly or the National Council of Province | ☐ constitutional institution within the meaning of the Public Finance Management Act |
| ☐ A member of the board of directors of any Municipal entity | ☐ (Act 1 of 1999) |
| ☐ An official of any municipality or municipal Entity | ☐ a member of an accounting authority of any |
| | ☐ national or provincial public entity |
| | ☐ an employee of Parliament or a provincial legislature |

If any of the above boxes are marked, disclose the following:

Name of sole proprietor, partner, director, manager, principal shareholder or stakeholder	Name of Institution, public office, board or organ of state and position held	Status of service (tick appropriate column)	
		Current	Within last 12 months

* Insert separate page if necessary

Section 7: Record of spouses, children and parents in the service of the state

Indicate by marking the relevant boxes with a cross, if any spouse, child or parent of a sole proprietor, partner in a partnership or director, manager, principal shareholder or stakeholder in a company or close corporation is currently or has been within the last 12 months been in the service of any of the following:

- | | |
|--|---|
| ☐ A member of any municipal council | ☐ an employee of any provincial dept. |
| ☐ A member of any provincial legislature | ☐ national or provincial public entity or |
| ☐ A member of the National Assembly or the National Council of Province | ☐ constitutional institution within the meaning of the Public Finance Management Act |
| ☐ A member of the board of directors of any Municipal entity | ☐ (Act 1 of 1999) |
| ☐ An official of any municipality or municipal Entity | ☐ a member of an accounting authority of any |
| | ☐ national or provincial public entity |
| | ☐ an employee of Parliament or a provincial legislature |

Name of spouse, child or parent	Name of institution, public office, board or organ of state and position held	Status of service (tick appropriate column)	
		Current	Within last 12 months

* Insert separate page if necessary

The undersigned, who warrants that he/she is duly authorised to do so on behalf of the enterprise:

- (i) Authorises the Employer to obtain a tax clearance from the South African Revenue Services that my/our tax matters are in order;
- (ii) Confirms that neither the name of the enterprise nor the name of any partner, manager, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears on the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004;
- (iii) Confirms that no partner, member, director or other person, who wholly or partly exercises, or may exercise control over the enterprise appears, has within the last five years been convicted of fraud or corruption;
- (iv) Confirms that I/we are not associated, linked or involved with any other tendering entities submitting tender offers and have no other relationship with any of the tenderers or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest; and
- (v) Confirms that the contents of this questionnaire are within my personal knowledge and are to the best of my belief both true and correct.

Signed: _____ Date: _____

Name: _____ Position: _____

Enterprise Name: _____

V. DECLARATION OF BIDDERS' PAST SUPPLY CHAIN MANAGEMENT PRACTICES

1. This Municipal Bidding Document must form part of all bids invited.
2. It serves as a declaration to be used by municipalities and municipal entities in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.
3. The bid of any bidder may be rejected if that bidder, or any of its directors have:
 - a) abused the municipality's / municipal entity's supply chain management system or committed any improper conduct in relation to such system;
 - b) been convicted for fraud or corruption during the past five years;
 - c) wilfully neglected, reneged on or failed to comply with any government, municipal or other public sector contract during the past five years; or
 - d) been listed in the Register for Tender Defaulters in terms of Section 29 of the Prevention and Combating of Corrupt Activities Act (N° 12 of 2004).
4. In order to give effect to the above, the following questionnaire must be completed and submitted with the bid:

Item	Question	Yes	No
4.1	Is the bidder or any of its directors listed on the National Treasury's database as a company or person prohibited from doing business with the public sector? (Companies or persons who are listed on this database were informed in writing of this restriction by the National Treasury after the <i>audi alteran partem</i> rule was applied).	Yes	No
4.1.1	If so, furnish particulars:		
4.2	Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of Section 29 of the Prevention and Combating of Corrupt Activities Act (N° 12 of 2004)?	Yes	No
4.2.1	If so, furnish particulars:		
4.3	Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?	Yes	No
4.3.1	If so, furnish particulars:		

Item	Question	Yes	No
4.4	Does the bidder or any of its directors owe any municipal rates and taxes or municipal charges to the municipality / municipal entity, or to any other municipality / municipal entity, that is in arrears for more than three months?	Yes	No
4.4.1	If so, furnish particulars:		
4.5	Was any contract between the bidder and the municipality / municipal entity or any other organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	Yes	No
4.7.1	If so, furnish particulars:		

Certification

I, the undersigned (full name)
 certify that the information furnished on this declaration form is true and correct.

I accept that, in addition to cancellation of a contract, action may be taken against me should this declaration prove to be false.

.....
 Signature

.....
 Date

.....
 Position

.....
 Name of Bidder

W. DECLARATION OF INTEREST

1. No bid will be accepted from persons in the service of the state*.
2. Any person, having a kinship with persons in the service of the state, including a blood relationship, may make any offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof be awarded to persons connected with or related to persons in service of the state, it is required that the bidder or their authorised representative declare their position in relation to the evaluating/adjudicating authority and/or take an oath declaring his/her interest.
3. In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.

- 3.1 Full Name:
- 3.2 Identity Number:
- 3.3 Company Registration Number:
- 3.4 Tax Reference Number:
- 3.5 VAT Registration Number:
- 3.6 Are you presently in the service of the state*: Yes/No
- 3.6.1 If so, furnish particulars:
- 3.7 Have you been in the service of the state for the past twelve months? Yes/No
- 3.7.1 If so, furnish particulars:
- 3.8 Do you have any relationship (family, friend, other) with persons in the service of the uMgungundlovu District Municipality Yes/No
- 3.8.1 If so, furnish particulars
- 3.9 Are you aware of any relationship (family, friend, other) between bidder and any persons in the service of the state who may be involved with the evaluation and or adjudication of this bid? Yes/No
- 3.9.1 If so, furnish particulars
- 3.10 Are any of the company's director, managers, principle shareholders or stakeholders in service of the state: Yes/No
- 3.10.1 If so, furnish particulars
- 3.11 Are any spouse, child or parent of the company's director, managers, principle stakeholders or stakeholders in service of the state? Yes/No

3.11.1 If so, furnish particulars hereunder:

*MSCM Regulations: "in the service of the state" means to be –

- (a) a member of –
 - (i) any municipal council:
 - (ii) any provincial legislature: or
 - (iii) the national Assembly or the national Council of provinces:
- (b) a member of the board of directors of any municipal entity
- (c) an official of any municipality or municipal entity
- (d) an employee of any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act 1999 (Act N° 1 of 1999):
- (e) a member of the accounting authority of any national or provincial public entity: or
- (f) an employee of Parliament or a provincial legislature.

.....
Signature

.....
Date

.....
Position

.....
Name of Bidder

X. JOINT VENTURE AGREEMENT

The Tenderer must attach to this page a joint venture agreement, if applicable.

Z. CERTIFICATE OF INDEPENDENT BID DETERMINATION

1. This Municipal Bidding Document (MBD) must form part of all bids¹ invited.
2. Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).² Collusive bidding is a *pe se* prohibition meaning that it cannot be justified under any grounds.
3. Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:
 - a) take all reasonable steps to prevent such abuse;
 - b) reject the bid of any bidder if that bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and
 - c) cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.
4. This MBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.
5. In order to give effect to the above, the attached Certificate of Bid Determination (MBD 9) must be completed and submitted with the bid:

¹ Includes price quotations, advertised competitive bids, limited bids and proposals.

² Bid rigging (or collusive bidding) occurs when businesses, that would otherwise be expected to compete, secretly conspire to raise prices or lower the quality of goods and / or services for purchasers who wish to acquire goods and / or services through a bidding process. Bid rigging is, therefore, an agreement between competitors not to compete.

³ Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

(Bid Number and Description)

in response to the invitation for the bid made by:

(Name of Municipality / Municipal Entity)

do hereby make the following statements that I certify to be true and complete in every respect

I certify, on behalf of: _____ that:
(Name of Bidder)

1. I have read and I understand the contents of this Certificate;
2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign, the bid, on behalf of the bidder;
5. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
 - (a) has been requested to submit a bid in response to this bid invitation;
 - (b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
 - (c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder
6. The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However communication between partners in a joint venture or consortium³ will not be construed as collusive bidding.
7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
 - (a) prices;
 - (b) geographical area where product or service will be rendered (market allocation)
 - (c) methods, factors or formulas used to calculate prices;
 - (d) the intention or decision to submit or not to submit, a bid;

- (e) the submission of a bid which does not meet the specifications and conditions of the bid; or
- (f) bidding with the intention not to win the bid.
8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.
9. The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

.....
Signature

.....
Date

.....
Position

.....
Name of Bidder

AA. PROOF OF GOOD STANDING WITH MUNICIPAL ACCOUNTS

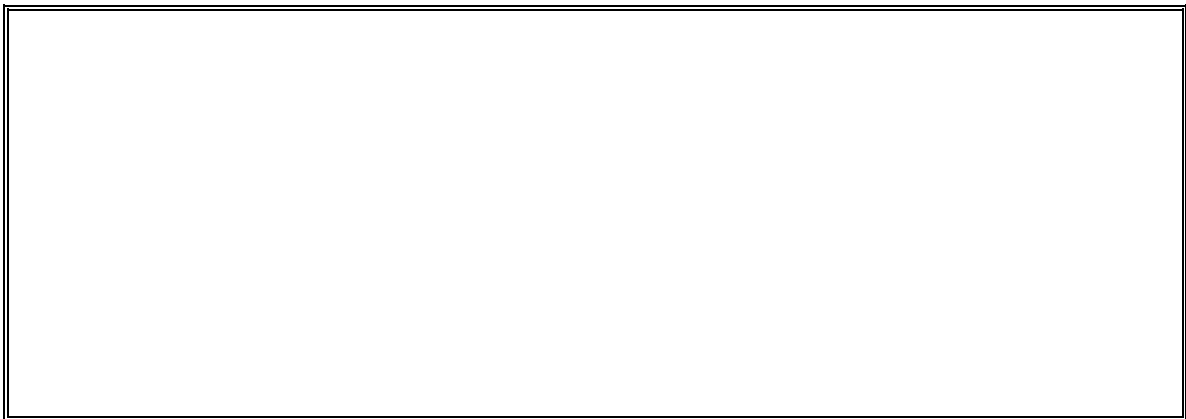
The tenderer is to affix to this page:

- Proof that they are not in arrears for more than 30 days with municipal rates and taxes and municipal service charges. The latest municipal account statement is to be attached.

Note:

1. Failure to affix such documentation as prescribed to this page shall result in this tender not being further considered for the award of the contract.
2. Should this tender be considered for award of the contract, based on proof of submission and should proof of such submission be found to be invalid, erroneous or inaccurate, the this tender will no longer be considered for the award of the contract.

Attach latest municipal account statement to this page.



SIGNATURE:
(of person authorized to sign on behalf of the Tenderer)

DATE:

MBD 6.2

**BB. DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT
FOR DESIGNATED SECTORS**

This Municipal Bidding Document (MBD) must form part of all bids invited. It contains general information and serves as a declaration form for local content (local production and local content are used interchangeably).

Before completing this declaration, bidders must study the General Conditions, Definitions, Directives applicable in respect of Local Content as prescribed in the Preferential Procurement Regulations, 2017, the South African Bureau of Standards (SABS) approved technical specification number SATS 1286:2011 (Edition 1) and the Guidance on the Calculation of Local Content together with the Local Content Declaration Templates [Annex C (Local Content Declaration: Summary Schedule), D (Imported Content Declaration: Supporting Schedule to Annex C) and E (Local Content Declaration: Supporting Schedule to Annex C)].

1. General Conditions

- 1.1. Preferential Procurement Regulations, 2017 (Regulation 8) make provision for the promotion of local production and content.
- 1.2. Regulation 8.(2) prescribes that in the case of designated sectors, organs of state must advertise such tenders with the specific bidding condition that only locally produced or manufactured goods, with a stipulated minimum threshold for local production and content will be considered.
- 1.3. Regulation 8.(4a) prescribes that where there is no designated sector, a specific bidding condition may be included, that only locally produced services, works or goods or locally manufactured goods with a stipulated minimum threshold for local production and content, will be considered.
- 1.4. Where necessary, for tenders referred to in paragraph 1.2 above, a two stage bidding process may be followed, where the first stage involves a minimum threshold for local production and content and the second stage price and B-BBEE.
- 1.5. A person awarded a contract in relation to a designated sector, may not sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the stipulated minimum threshold.
- 1.6. The local content (LC) expressed as a percentage of the bid price must be calculated in accordance with the SABS approved technical specification number SATS 1286: 2011 as follows:

$$LC = [1 - x / y] * 100$$

Where

x is the imported content in Rand

y is the bid price in Rand excluding value added tax (VAT)

Prices referred to in the determination of x must be converted to Rand (ZAR) by using the exchange rate published by South African Reserve Bank (SARB) at 12:00 on the date of advertisement of the bid as indicated in paragraph 4.1 below.

The SABS approved technical specification number SATS 1286:2011 is accessible on <http://www.thedti.gov.za/industrial/development/ip.jsp> at no cost.

- 1.7. A bid may be disqualified if this Declaration Certificate and the Annex C (Local Content Declaration: Summary Schedule) are not submitted as part of the bid documentation;

2. Definitions:

- 2.1. **“bid”** includes advertised competitive bids, written price quotations or proposals;
- 2.2. **“bid price”** price offered by the bidder, excluding value added tax (VAT);
- 2.3. **“contract”** means the agreement that results from the acceptance of a bid by an organ of state;
- 2.4. **“designated sector”** means a sector, sub-sector or industry that has been designated by the Department of Trade and Industry in line with national development and industrial policies for local production, where only locally produced services, works or goods or locally manufactured goods meet the stipulated minimum threshold for local production and content;
- 2.5. **“duly sign”** means a Declaration Certificate for Local Content that has been signed by the Chief Financial Officer or other legally responsible person nominated in writing by the Chief Executive, or senior member / person with management responsibility(close corporation, partnership or individual).
- 2.6. **“imported content”** means that portion of the bid price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the supplier or its subcontractors) and which costs are inclusive of the costs abroad, plus freight and other direct importation costs, such as landing costs, dock duties, import duty, sales duty or other similar tax or duty at the South African port of entry;
- 2.7. **“local content”** means that portion of the bid price which is not included in the imported content, provided that local manufacture does take place;
- 2.8. **“stipulated minimum threshold”** means that portion of local production and content as determined by the Department of Trade and Industry; and
- 2.9. **“sub-contract”** means the primary contractor’s assigning, leasing, making out work to, or employing another person to support such primary contractor in the execution of part of a project in terms of the contract.
3. The stipulated minimum threshold(s) for local production and content (refer to Annex A of SATS 1286:2011) for this bid is/are as follows:

<u>Description of services, works or goods</u>	<u>Stipulated minimum threshold</u>
Valves and Actuators	70%
Electrical Cables	90%
Steel Products and Components for Construction	100%
Pumps, medium voltage (MV) motors and associated accessories	70%
_____	_____ %
_____	_____ %

4. Does any portion of the goods or services offered have any imported content?

(Tick applicable box)

YES		NO	
-----	--	----	--

- 4.1 If yes, the rate(s) of exchange to be used in this bid to calculate the local content as prescribed in paragraph 1.6 of the general conditions must be the rate(s) published by SARB for the specific currency at 12:00 on the date of advertisement of the bid.

The relevant rates of exchange information is accessible on www.reservebank.co.za

Indicate the rate(s) of exchange against the appropriate currency in the table below (refer to Annex A of SATS 1286:2011):

Currency	Rates of exchange
US Dollar	
Pound Sterling	
Euro	
Yen	
Other	

NB: Bidders must submit proof of the SARB rate (s) of exchange used.

5. Where, after the award of a bid, challenges are experienced in meeting the stipulated minimum threshold for local content the dti must be informed accordingly in order for the dti to verify and in consultation with the AO/AA provide directives in this regard.

LOCAL CONTENT DECLARATION
(REFER TO ANNEX B OF SATS 1286:2011)

LOCAL CONTENT DECLARATION BY CHIEF FINANCIAL OFFICER OR OTHER LEGALLY RESPONSIBLE PERSON NOMINATED IN WRITING BY THE CHIEF EXECUTIVE OR SENIOR MEMBER/PERSON WITH MANAGEMENT RESPONSIBILITY (CLOSE CORPORATION, PARTNERSHIP OR INDIVIDUAL)

IN RESPECT OF BID NO.

ISSUED BY: (Procurement Authority / Name of Institution):

.....
NB

- 1 The obligation to complete, duly sign and submit this declaration cannot be transferred to an external authorized representative, auditor or any other third party acting on behalf of the bidder.
- 2 Guidance on the Calculation of Local Content together with Local Content Declaration Templates (Annex C, D and E) is accessible on <http://www.thdti.gov.za/industrialdevelopment/ip.jsp>. Bidders should first complete Declaration D. After completing Declaration D, bidders should complete Declaration E and then consolidate the information on Declaration C. Declaration C should be submitted with the bid documentation at the closing date and time of the bid in order to substantiate the declaration made in paragraph (c) below. Declarations D and E should be kept by the bidders for verification purposes for a period of at least 5 years. The successful bidder is required to continuously update Declarations C, D and E with the actual values for the duration of the contract.

I, the undersigned, (full names),

do hereby declare, in my capacity as

of(name of bidder entity), the following:

- (a) The facts contained herein are within my own personal knowledge.
- (b) I have satisfied myself that:
 - (i) the goods/services/works to be delivered in terms of the above-specified bid comply with the minimum local content requirements as specified in the bid, and as measured in terms of SATS 1286:2011; and
- (c) The local content percentage (%) indicated below has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above and the information contained in Declaration D and E which has been consolidated in Declaration C:

Bid price, excluding VAT (y)	R
Imported content (x), as calculated in terms of SATS 1286:2011	R
Stipulated minimum threshold for local content (paragraph 3 above)	
Local content %, as calculated in terms of SATS 1286:2011	

If the bid is for more than one product, the local content percentages for each product contained in

Declaration C shall be used instead of the table above.

The local content percentages for each product has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above and the information contained in Declaration D and E.

- (d) I accept that the Procurement Authority / Institution has the right to request that the local content be verified in terms of the requirements of SATS 1286:2011.
- (e) I understand that the awarding of the bid is dependent on the accuracy of the information furnished in this application. I also understand that the submission of incorrect data, or data that are not verifiable as described in SATS 1286:2011, may result in the Procurement Authority / Institution imposing any or all of the remedies as provided for in Regulation 14 of the Preferential Procurement Regulations, 2017 promulgated under the Preferential Policy Framework Act (PPPFA), 2000 (Act No. 5 of 2000).

SIGNATURE: _____

DATE: _____

WITNESS No. 1 _____

DATE: _____

WITNESS No. 2 _____

DATE: _____

[illegible]

The successful Tenderer will be required to submit the following:

CC. DECLARATION FOR PROCUREMENT ABOVE R10 MILLION (ALL APPLICABLE TAXES INCLUDED)

For all procurement expected to exceed R10 million (all applicable taxes included), bidders must complete the following questionnaire:

1 Are you by law required to prepare annual financial statements for auditing? * YES / NO

1.1 If yes, submit audited annual financial statements for the past three years or since the date of establishment if established during the past three years.

.....

.....

2 Do you have any outstanding undisputed commitments for municipal services towards any municipality for more than three months or any other service provider in respect of which payment is overdue for more than 30 days? * YES / NO

2.1 If no, this serves to certify that the bidder has no undisputed commitments for municipal services towards any municipality for more than three months or other service provider in respect of which payment is overdue for more than 30 days.

2.2 If yes, provide particulars.

.....

.....

.....

3 Has any contract been awarded to you by an organ of state during the past five years, including particulars of any material non-compliance or dispute concerning the execution of such contract? * YES / NO

3.1 If yes, furnish particulars

.....

.....

* Delete if not applicable

4 Will any portion of goods or services be sourced from outside the Republic, and, if so, what portion and whether any portion of payment from the municipality / municipal entity is expected to be transferred out of the Republic? * YES / NO

4.1 If yes, furnish particulars

.....

.....

CERTIFICATION

(Please use block capitals when completing the section below)

I, THE UNDERSIGNED (NAME)
CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM IS CORRECT.
I ACCEPT THAT THE STATE MAY ACT AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE.

SIGNATURE: DATE:
(of person authorized to sign on behalf of the Tenderer)

NAME:

POSITION:

* Delete if not applicable

DD. CENTRAL SUPPLIER DATABASE REGISTRATION

Name of Tenderer:
.....

Database Registration Number:
.....

No awards will be made to a tenderer who is not registered on the Central Supplier Database (CSD).

The establishment of a Central Supplier Database (CSD) will result in one single database to serve as the source of all supplier information for all spheres of government. The purpose of centralising government’s supplier database is to reduce duplication of effort and cost for both supplier and government while enabling electronic procurement processes.

Registration on the Central Supplier Database must be done online via the website:
<https://secure.csd.gov.za/>

SIGNATURE:
(of person authorized to sign on behalf of the Tenderer)

DATE:

EE. TENDERER'S FINANCIAL POSITION DECLARATION

In terms of the tender requirements, the tender shall not be insolvent, in receivership, bankrupt or being wound up, have their affairs administered by a court or judicial officer, have suspended their business activities, or be subject to legal proceedings;

To that effect a person duly authorised by the tenderer must complete and sign the declaration

hereafter in detail.

Declaration by Tenderer:

1. I hereby declare that my company shall not be insolvent, in receivership, bankrupt or being wound up, have their affairs administered by a court or judicial officer, have suspended their business activities, or be subject to legal proceedings during the time of tender.
2. I agree that my failure to complete and execute this declaration to the satisfaction of the Employer will mean that I am unable to comply with the requirements of the tender, and accept that my tender will be prejudiced and may be rejected at the discretion of the Employer.

SIGNATURE: DATE:
(of person authorised to sign on behalf of the Tenderer)

FF. QUALITY ASSURANCE PLAN AND CONTROL PROCUDURES

The Tenderer shall attach here a current copy of ISO 9001:2015 Accreditation Certificate or copy of internal Quality Management System, applicable for the implementation of the construction works for this Contract.

The above information will be used to evaluate **Criteria 5: Quality Assurance Plan and Control Procedures** for Functionality under C.3.11.9.5 in Section T1.2.

SIGNATURE:
(of person authorized to sign on behalf of the Tenderer)

DATE:



VOLUME 1

CONTRACT

PART 1:

AGREEMENT AND CONTRACT DATA

C1.1 Form of Offer and Acceptance	C 2
C1.2 Contract Data	C 7
C1.3 Form of Guarantee	C 15
C1.4 Agreement in Terms of Section 37(2) – OHS Act	C 18
C1.5 Notification of Construction Work	C 23
C1.6 Adjudicator's Agreement	C 25
C1.7 Forms of Guarantee for Unused / Unfixed Materials	C 29

C1.1 FORM OF OFFER AND ACCEPTANCE (Agreement)

Offer

The Employer, Identified in the Acceptance signature block, has solicited offers to enter into a contract in respect of the following works:

Tender № : UGU-07-1611-2022

Msikaba Water Supply Scheme Phase 3A: Upgrading of Bomela Pump Station & Construction of Nyandezulu Elevated Reservoir and Booster Pump Station:

The Tenderer, identified in the Offer signature block below, has examined the documents listed in the Tender Data and addenda thereto as listed in the Tender Schedules, and by submitting this Offer has accepted the Conditions of Tender.

By the representative of the Tenderer, deemed to be duly authorised, signing this part of this Form of Offer and Acceptance, the Tenderer offers to perform all of the obligations and liabilities of the Contractor under the Contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the Conditions of Contract identified in the Contract Data.

THE OFFERED TOTAL OF THE PRICES INCLUSIVE OF VALUE ADDED TAX IS

_____ Rand (in words); R _____ (in figures),

This offer may be accepted by the Employer by signing the Acceptance part of this Form of Offer and Acceptance and returning one copy of this document to the Tenderer before the end of the period of validity stated in the Tender Data, whereupon the Tenderer becomes the party named as the Contractor in the Conditions of Contract identified in the Contract Data.

Signature

Name

Capacity

For the Tenderer

(Name and address of organisation)

Name and
signature of
witness

Date _____

Acceptance

By signing this part of the Form of Offer and Acceptance, the Employer identified below accepts the Tenderer's Offer. In consideration thereof, the Employer shall pay the Contractor the amount due in accordance with the Conditions of Contract identified in the Contract Data. Acceptance of the Tenderer's Offer shall form an agreement between the Employer and the Tenderer upon the terms and conditions contained in this Agreement and in the Contract that is the subject of this Agreement.

The terms of the contract are contained in

Part 1 Agreement and Contract Data, (which includes this Agreement)

Part 2 Pricing Data

Part 3 Scope of Work

Part 4 Site Information (if applicable)

and drawings and documents or parts thereof, which may be incorporated by reference into Parts 1 to 4 above.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Tender Schedules as well as any changes to the terms of the Offer agreed by the Tenderer and the Employer during this process of offer and acceptance, are contained in the Schedule of Deviations attached to and forming part of this Agreement. No amendments to or deviations from said documents are valid unless contained in this Schedule, which must be duly signed by the authorised representative(s) of both parties.

The Tenderer shall within two weeks after receiving a completed copy of this Agreement, including the Schedule of Deviations (if any), contact the Employer's agent (whose details are given in the Contact Data) to arrange the delivery of any bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the Conditions of Contract identified in the Contract Data at, or just after, the date of this Agreement comes into effect. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this Agreement.

Notwithstanding anything contained herein, this Agreement comes into effect on the date when the Tenderer receives one fully completed original copy of this document, including the Schedule of Deviations (if any). Unless the Tenderer (now the Contractor) within five days after the date of such receipt notifies the Employer in writing of any reason why he cannot accept the contents of this Agreement, this Agreement shall constitute binding contract between the parties,

Signature(s)

Name(s)

Capacity

For the
Employer

(Name and address of organisation)

Name and
signature of
witness

Date _____

SCHEDULE OF DEVIATIONS

Notes:

1. The extent of deviations from the tender documents issued by the employer prior to the tender closing date is limited to those permitted in terms of the Conditions of Tender,
2. A Tenderer's covering letter shall not be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid become the subject of agreements reached during the process of offer and acceptance, the outcome of such agreement shall be recorded here,
3. Any other matter arising from the process of offer and acceptance either as a confirmation, clarification or change to the tender documents and which it is agreed by the Parties becomes an obligation of the contract shall also be recorded here,
4. Any change or addition to the tender documents arising from the above arrangements and recorded here shall also be incorporated into the final draft of the Contract,

1 Subject _____

Details _____

2 Subject _____

Details _____

3 Subject _____

Details _____

4 Subject _____

Details _____

5 Subject _____

Details _____

6 Subject _____

Details _____

7 Subject _____

Details _____

8 Subject _____

Details _____

By the duly authorised representatives signing this Schedule of Deviations, the Employer and the Tenderer agree to and accept the foregoing Schedule of deviations as the only deviations from and amendments to the documents listed in the Tender Data and addenda thereto as listed in the Tender Schedules, as well as any confirmation, clarification or change to the terms of the offer agreed by the Tenderer and the Employer during the process of offer and acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender documents and the receipt by the Tenderer of a completed and signed copy of this Agreement shall have any meaning or effect in the contract between the parties arising from this Agreement.

For the Tenderer:

Signature

Name

Capacity

(Name and address of organisation)

Name and
signature of
witness

Date _____

For the Employer:

Signature

Name

Capacity

(Name and address of organisation)

Name and
signature of
witness

Date _____

CONFIRMATION OF RECEIPT

The Tenderer (now Contractor), identified in the Offer part of this Agreement hereby confirms receipt from the Employer, identified in the Acceptance part of this Agreement, of one fully completed original copy of this Agreement, including the Schedule of Deviations (if any) today:

the (Day) of (Month) 20..... (Year)
at place)

FOR THE CONTRACTOR
Print clearly

Signature(s)

Name(s)

Capacity

Witness Signature

..... Date

C1.2 CONTRACT DATA**A. CONDITIONS OF CONTRACT**

The General Conditions of Contract for Construction Works Third Edition (2015), published by the South African Institution of Civil Engineering, is applicable to this Contract.

B. CONTRACT SPECIFIC DATA

Clause numbers refer to Clauses in the General Conditions of Contract for Construction Works (2015)

DESCRIPTION	CLAUSE	DETAILS
Non-working and special non-working days	5.8.1 & 5.1.1	Non-working days are Sundays. Special non-working days are the year-end break and public holidays
Defects Liability Period	1.1.1.13	12 months from the date of issue of the Certificate of Completion
Time for achieving Practical Completion (including non-working and special non-working days)	1.1.1.14 5.5.1	Employers Time for Completion is 12 months
Name of Employer	1.1.1.15	Ugu District Municipality
Address of Employer	1.2.1.2	Physical Address: Connor Street Port Shepstone 4240 Postal Address: P O Box 33 Port Shepstone 4240 Tel No: 039 688 5700 E-mail: Dudu.Mgabhi@ugu.gov.za
Name of Employers Agent	1.1.1.16	Ngcolosi Engineers
Contract Pricing Strategy	1.1.1.26	Re-measurement Contract
Address of Employers Agent	1.2.1.2	Physical Address: No. 4 Wilkie Road Manaba Beach 4276 Postal Address: P O Box 1421 Manaba Beach 4276 Tel No: 039 312 0292 Fax: 039 312 0291 E-mail: admin@ngcolosi.co.za
Documentation Required Before Commencement with Works Execution	5.3.1	- Health and Safety Plan (Refer to Clause 4.3) - Initial Programme (Refer to Clause 5.6) - Performance Guarantee (Refer to Clause 6.2) - Insurances (Refer to Clause 8.6)
Time to Submit Documentation Required Before Commencement with Works Execution	5.3.2	The time to submit the documentation required before commencement of Works execution is fourteen (14) days from the date that the Agreement, made in terms of the Form of Offer and Acceptance, comes into effect.

DESCRIPTION	CLAUSE	DETAILS
Time for Practical Completion	5.5.1 / 1.1.1.14	The time for achieving Practical Completion of the entire Works is Forty (40) weeks from the Commencement Date of the Contract, including the year-end break and allowance for lead time for pipe and valve supply.
Programme of Works	5.6.1	The contractor shall deliver his programme of work within fourteen (14) days from the Commencement Date. Note: Refer to Project Specifications regarding required format etc.
Non-Working days Year-end break	5.8.1	Sundays, Public Holidays 17/12/2022 to 02/01/2023 (both days included)
Amount of Penalty	5.13.1	The penalty for failing to complete the Works by the Due Completion Date shall be R 5,000.00 (exclusive of VAT) per day.
Latent Defect Period	5.16.3	10 years
Delivery of Security	6.2.1	The security to be provided by the Contractor shall be a Performance Guarantee of 10% of the contract sum (delivered within the time stated in 5.3.2 above), plus retention of 5% of the value of the Works. The liability of the Guarantee shall be up to the issue of the Certificate of Completion, when the Guarantee shall be returned to the Contractor. Retention monies shall be deducted at 10% per payment claim to a maximum of 5% of the value of Works.
Validity of Performance Guarantee	6.2.3	No expiry date to be specified
Duration of Guarantee	6.2.3	Until the date of issue of Certificate of Completion
Percentage allowances for dayworks	6.5.1.2.3	The percentage allowances to cover overhead charges for daywork which has not been included in the Daywork Schedule, are as follows: • 50% of the gross remuneration of workmen and foremen actually engaged in the daywork; • 15% on the net cost of materials actually used. No allowance will be made for work done, or for materials and equipment for which daywork rates have been quoted at tender stage.
Provisional Sums	6.6.1.2.1	Commission will not be paid if no percentage is stated by the Contractor.
Price Adjustment Factor	6.8.2	x = 0.10 a = 0.25 b = 0.25 c = 0.43 d = 0.07
Percentage advance on material not yet built into the Permanent Works	6.10.1.5	80 percent

DESCRIPTION	CLAUSE	DETAILS
Percentage Retention	6.10.3	10 percent
Limit of Retention Money	6.10.3	10 percent of the completed work, to a maximum of 10% of the contract value.
Insurance of the Works	8.6.1	Required
Insured Sum	8.6.1.1.1	Contract price
Insured Sum	8.6.1.1.2	The Value of Plant and materials supplied by the Employer to be included in the insurance sum is Nil.
Insured Sum	8.6.1.1.3	The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is Nil.
Special Risks Insurance	8.6.1.2	Required
Minimum Amount of Liability Ins	8.6.1.3	R 5,000,000.00 for each and every claim
Settlement of disputes to be by	10.5.2 & 10.7.1	Ad-hoc adjudication followed by Arbitration (following the Rules for Conduct of Arbitrations published by the Association of Arbitrators)
No of Adjudication Board Members	10.5.3	One
ADDITIONAL DATA		
Commencement Date	1.1.1.5	“Commencement date” means a date determined by the Employer and communicated to the Contractor at the “Site Handover Meeting”, which meeting is to take place within fourteen (14) days from the date that the Agreement, made in terms of the Form of Offer and Acceptance, comes into effect and such Commencement Date is to be within fourteen (14) days from the date of the Site Handover Meeting. “Site Handover Meeting” means a meeting arranged by the Engineer to communicate the Commencement Date to the Contractor, to instruct the Contractor to commence the execution of the Works on the Commencement Date as per Clause 5.3.1, to provide the Contractor with the necessary details and documentation to execute the Works and for the Employer to give the Contractor right of access to the Site, as per Clause 5.4.1.
Contractor's default in Payment to Labourers and Employees:	4.10.1	Any dispute between the Contractor and labourers, regarding delayed payment or default in payment of fair wages, if not resolved immediately, may compel the Employer to intervene. The Employer may, upon the Contractor defaulting payment, pay the moneys due to the workers not honoured in time, out of any moneys due or which may become due to the Contractor under the Contract.

DESCRIPTION	CLAUSE	DETAILS
	5.4	Access to site
	5.4.2	The access and possession of the site shall be exclusive to the Contractor. However, from time to time, the Contractor may be instructed by the Engineer to provide access to specific service providers (or shall not be exclusive to the Contractor?).
Adjudication	10.5.1	Dispute resolution shall be by standing adjudication.

C: DATA PROVIDED BY THE CONTRACTOR

COMPULSORY DATA	
GCC Ref Clause No	
1.1.1.9	The name of the Contractor:
1.2.1.2	The address of the Contractor: Physical: Postal: Tel No: Fax No: Email:
6.2.1	Security Security is to be provided as stipulated in the data provided by the Employer in sub-clause 6.2.1

D. CONTRACT PRICE ADJUSTMENT SCHEDULE

VARIATION IN COST OF SPECIAL MATERIALS: See Clause 6.8.3.

**To be completed by Tenderer*

*Special materials, items or portions of the Works concerned	*Method by which variations shall be determined	*Rate or Price for the base month

Period of validity of tender is ninety (90) days from closing date of tenders.

Signature:

On behalf of:

Date:

E. SPECIAL CONDITIONS OF CONTRACT

CLAUSE	CONTENTS	PAGE No.
3.2.3	SPECIFIC APPROVAL OF EMPLOYER REQUIRED	C 12
4.3	LEGAL PROVISIONS	C 12
5.8	NON-WORKING HOURS AND SPECIAL NON-WORKING DAYS	C 13
5.12	EXTENSION OF TIME FOR PRACTICAL COMPLETION	C 13
6.6	PROVISIONAL SUMS	C 13
6.8.2	PRICE ADJUSTMENT FACTOR	C 13
8.5	REPORTING OF ACCIDENTS	C 14
	TESTING AND COMMISSIONING	C 14
	PAYMENT FOR THE LABOUR-INTENSIVE COMPONENT OF THE WORKS	C 14
	LINKAGE OF PAYMENT FOR LABOUR INTENSIVE COMPONENT OF WORKS TO SUBMISSION OF PROJECT DATA	C 14
	APPLICABLE LABOUR LAWS	C 14
	METHOD SPECIFICATION	C 14
	GUIDELINES FOR THE IMPLEMENTATION OF L.I.C. INFRASTRUCTURE PROJECTS UNDER THE EXPANDED PUBLIC WORKS PROGRAMME	C 14
	CIVIL ENGINEERING INDUSTRY MINIMUM WAGE RATE	C 14

CLAUSE 3.2.3 – SPECIFIC APPROVAL OF THE EMPLOYER REQUIRED

Clause 3.2.3 Add the following sub-clauses:

3.2.3.1 "The Employers Agent shall not reduce the quality of the works without the written approval of the Employer".

3.2.3.2 "The Employers Agent shall not extend the due completion date without the written approval of the Employer".

CLAUSE 4.3 – LEGAL PROVISIONS

Clause 4.3.1 Add the following sub-clause:

4.3.1.1 The Occupational Health and Safety Act (1993) (OHS Act) shall apply. The Engineer's Representative shall be co-opted as a member of the Contractor's Safety Committee for the Works in accordance with Section 19 of the OHS Act. The Explosives Regulations Act 26 of 1956 and as amended shall apply.

Clause 4.3.2 Delete the words "If required"

CLAUSE 5.8 NON-WORKING HOURS AND SPECIAL NON-WORKING DAYS

The first paragraph is to be amended to read:

"None of the Works shall be executed except between 07:00 and 17:00 on Monday to Friday inclusive and 07:00 and 13:00 on Saturday of any week or on any non-working and special non-working days stated in the Contract Data unless"

Delete sub-clauses 5.8.1.2 and 5.8.1.3.

Clause 5.8.1 Community Liaison Officer (CLO)

The Ward Councillor in whose wards work is to be done will, collectively identify a Community Liaison Officer (CLO) for the project and make the person known to the Contractor within two days of being requested to do so. The Contractor will be required to enter into a written contract with the CLO that specifies:

- The hours of work and the wage rate of the CLO (**Current minimum wage prescribe is R 500.00 per day**).
- The duration of the appointment.
- The duties to be undertaken by the CLO which could include:
 - Assisting in all respects relating to the recruitment of local labour.
 - Acting as a source of information for the community and councillors on issues related to the contract.
 - Keeping the Contractor advised on community issues and issues pertaining to local security.
 - Assisting in setting up any meetings or negotiations with affected parties.
 - Keeping a written record of any labour or community issues that may arise.
 - Any other duties that may be required by the Contractor.

Responsibility for the identification of a pool of suitable labour shall rest with the CLO, although the Contractor shall have the right to choose from that pool. The Contractor shall have the right to determine the total number labourers required at any one time and this may vary during the contract.

The Contractor shall have the right to replace labour that is not performing adequately. Should such occasion arise, it must be done in consultation with the CLO.

The Contractor shall have the right to determine the total number of labourers required at any time, and this will vary through the duration of the contract

Local labour shall be paid in accordance with the Civil Engineering Industry minimum wage rate (Current minimum rate prescribe by the UGU District Municipality is **R199.26** per day or per task), and all statutory conditions of employment shall be met.

It is the contractor responsibility to pay the Community Liaison Officer for the entire duration of the contract. In the event that the contractor's work is not complete within the allowed duration, the community Liaison Officer shall still be paid for by the contractor until labour force is no longer required. This includes the penalty stage. The item has not been allowed for in the bill of quantities therefore the contractor must allow in his rates for the Community Liaison Officer.

CLAUSE 5.12 EXTENSION OF TIME FOR PRACTICAL COMPLETION

Clause 5.12.2.2 Add the following:

"Where these conditions are attributable solely to rainfall and the resultant stoppage of work, the Contractor may only make claim for an extension of time for completion where the Work items stopped were critical to the date for practical completion of the whole of the Works as indicated by the programme provided in terms of Clause 5.6.1 and the aggregated claims exceed the allowance to be made as described in the Table below."

Month	No. rain days lost	Month	No. rain days lost
January	4.0	July	2.0
February	4.0	August	2.0
March	3.0	September	2.0
April	2.0	October	3.0
May	2.0	November	4.0
June	2.0	December	4.0

CLAUSE 6.6 PROVISIONAL SUMS

Sub-Clause 6.6.1.2.2 - Delete the entire sub-clause.

CLAUSE 6.8.2 PRICE ADJUSTMENT FACTOR

Add sub-clause 6.8.2.1:

"The Price Adjustment Factor shall only be applicable to those contracts whose tender prices exceed R3 000 000.00".

Add sub-clause 6.8.2.2:

"Should a contract which would otherwise have been fixed price not be awarded within 120 calendar days of the date for receipt of tenders, then escalation as described below will become payable. The amount will be quantified using the standard formula from the General Conditions of Contract for Construction Works (GCC 2015), with the calculation based on the following:-

(1) The coefficients to be used with the indices shall be:-

$$x = 0,10 \quad a = 0,25 \quad b = 0,25 \quad c = 0,43 \quad d = 0,0,7$$

(2) The base month for indices shall be the month prior to the month for receipt of tender. The current month for indices shall be the month in which the tender is due for submission.

CLAUSE 8.5 REPORTING ACCIDENTS

Clause 8.5.1 Delete, in the second paragraph, "If required by the Employers Agent"

TESTING AND COMMISSIONING

Testing and commissioning of the works described in this contract shall be witnessed by the Employers Agent in the presence of a representative of the Employer.

PAYMENT FOR THE LABOUR-INTENSIVE COMPONENT OF THE WORKS

Payment for works identified in the Scope of Work as being labour-intensive shall only be made in accordance with the provisions of the Contract if the works are constructed strictly in accordance with the provisions of the Scope of Work. Any non-payment for such works shall not relieve the Contractor in any way from his obligations either in contract or in delict.

LINKAGE OF PAYMENT FOR LABOUR INTENSIVE COMPONENT OF WORKS TO SUBMISSION OF PROJECT DATA

The Contractor's payment invoices shall be accompanied by labour information for the corresponding period in a format specified by the employer. If the contractor chooses to delay submitting payment invoices, labour returns shall still be submitted as per frequency and timeframe stipulated by the Employer. The Contractor's invoices shall not be paid until all pending labour information has been submitted.

APPLICABLE LABOUR LAWS

The current Ministerial Determination (also downloadable at www.epwp.gov.za), Expanded Public Works Programmes, issued in terms of the Basic Conditions of Employment Act of 1997 by the Minister of Labour in Government Notice, shall apply to works described in the scope of work as being labour intensive and which are undertaken by unskilled or semi-skilled workers.

METHOD SPECIFICATION

Certain operations will be executed by Labour Intensive Construction methods and are indicated as L.I. in the Schedule.

GUIDELINES FOR THE IMPLEMENTATION OF L.I.C. INFRASTRUCTURE PROJECTS UNDER THE EXPANDED PUBLIC WORKS PROGRAMME

The tenderers should take note of the relevant requirements, of Government Gazette Notice 41904 dated 14 September 2018, regarding the following:

1. Basic conditions of employment.
2. Sourcing of labour in accordance with SANS 1914-5
3. Participation of targeted labour.
4. Use of local service providers
5. Reporting mechanisms and headings.

CIVIL ENGINEERING INDUSTRY MINIMUM WAGE RATE

The minimum wage for a general worker to perform a task or performing work on a working day basis, not exceeding 9 hours work per day, shall be remunerated at the current gazetted rate at the time of tender.

C1.3 FORMS OF GUARANTEE (ONLY FSB APPROVED GUARANTEE WILL BE ACCEPTED)

PRO-FORMA PERFORMANCE GUARANTEE

For use with the General Conditions of Contract for Construction Works, Third Edition, 2015 (GCC 2015).

GUARANTOR DETAILS AND DEFINITIONS

“Guarantor” means:

Physical address:

“Employer” means: **UGU DISTRICT MUNICIPALITY**

“Contractor” means:

“Engineer” means: **NGCOLOSI ENGINEERS**

“Works” means: **MSIKABA WATER SUPPLY SCHEME - PHASE 3A:**

Msikaba Water Supply Scheme Phase 3A: Upgrading of Bomela Pump Station & Construction of Nyandezulu Elevated Reservoir and Booster Pump Station: including earthworks, building works, pipework, chambers, access road and drainage, fencing and associated mechanical, electrical and instrumentation works. The Mechanical Works will include the supply, installation and commissioning of steel pipework, valves, fittings, pumps, motors and general Mechanical Works. The Electrical and Instrumentation Works will include the supply, installation and commissioning of transformers, MCC Panels, PLC's, instrumentation and general Electrical Works.

“Site” means:

“Contract” means: The Agreement made in terms of the Form of Offer and Acceptance and such amendments or additions to the Contract as may be agreed in writing between the parties.

“Contract Sum” means: The accepted amount inclusive of tax of R

Amount in words:

“Guaranteed Sum” means: The maximum aggregate amount of R

Amount in words:

“Expiry Date” means: **Date of Issue of Certificate of Completion in terms of Clause 5.14.4 of GCC 2015**

CONTRACT DETAILS

Engineer issues: Interim Payment Certificates, Final Payment Certificate and the Certificate Completion of the Works as defined in the Contract.

PERFORMANCE GUARANTEE

1. The Guarantor's liability shall be limited to the amount of the Guaranteed Sum.
2. The Guarantor's period of liability shall be from and including the date of issue of this Performance Guarantee and up to and including the Expiry Date or the date of issue by the Engineer of the Certificate of Completion of the Works or the date of payment in full of the Guaranteed Sum, whichever occurs first. The Engineer and/or the Employer shall advise the Guarantor in writing of the date on which the Certificate of Completion of the Works has been issued.
3. The Guarantor hereby acknowledges that:
 - 3.1 any reference in this Performance Guarantee to the Contract is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a suretyship;
 - 3.2 its obligation under this Performance Guarantee is restricted to the payment of money.
4. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 4.1 to 4.3:
 - 4.1 A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Engineer in an Interim or Final Payment Certificate has not been made in terms of the Contract and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 4.2;
 - 4.2 A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) days has elapsed since the first written demand in terms of 4.1 and the sum certified has still not been paid;
 - 4.3 A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract of the sum certified in 4.
5. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor undertakes to pay to the Employer the Guaranteed Sum or the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address calling up this Performance Guarantee, such demand stating that:
 - 5.1 the Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 5; or
 - 5.2 a provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Performance Guarantee is called up in terms of 5; and
 - 5.3 the aforesaid written demand is accompanied by a copy of the notice of termination and/or the provisional/final sequestration and/or the provisional liquidation court order.
6. It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 4 and 5 shall not exceed the Guarantor's maximum liability in terms of 1.
7. Where the Guarantor has made payment in terms of 5, the Employer shall upon the date of issue of the Final Payment Certificate submit an expense account to the Guarantor showing how all monies received in terms of this Performance Guarantee have been expended and shall refund the Guarantor any resulting surplus. All monies refunded to the Guarantor in terms of this Performance Guarantee shall bear interest at the prime overdraft rate of the Employer's bank

compounded monthly and calculated from the date payment was made by the Guarantor to the Employer until the date of refund.

8. Payment by the Guarantor in terms of 4 or 5 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.
9. Payment by the Guarantor in terms of 5 will only be made against the return of the original Performance Guarantee by the Employer.
10. The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer may deem fit and the Guarantor shall not have the right to claim his release from this Performance Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.
11. The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.
12. This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 2, where after no claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired.
13. This Performance Guarantee, with the required demand notices in terms of 4 or 5, shall be regarded as a liquid document for the purposes of obtaining a court order.
14. Where this Performance Guarantee is issued in the Republic of South Africa the Guarantor hereby consents in terms of Section 45 of the Magistrate's Courts Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate's Court of any district having jurisdiction in terms of Section 28 of the said Act, notwithstanding that the amount of the claim may exceed the jurisdiction of Magistrate's Court.

Signed at

Date

Guarantor's signatory (1)

Capacity

Guarantor's signatory (2)

Capacity

Witness signatory (1)

Witness signatory (2)

C1.4 AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT No 85 OF 2014



MSIKABA WATER SUPPLY SCHEME - PHASE 3A

Msikaba Water Supply Scheme Phase 3A: Upgrading of Bomela Pump Station & Construction of Nyandezulu Elevated Reservoir and Booster Pump Station:

WRITTEN AGREEMENT ON OCCUPATIONAL HEALTH AND SAFETY

In accordance with the provisions of Section 37(2) of the Occupational Health
and Safety Act 85 of 1993 entered into and between

UGU DISTRICT MUNICIPALITY
(hereinafter referred to as "the Employer")

and

.....
(hereinafter referred to as "the Mandatary")

.....
COID Registration Number

Whereas the Employer has entered into a contract and / or Purchase order with the Mandatary, in terms of which the Mandatary is to perform certain work and services for and on behalf of the Employer, subject to terms and conditions as contained in such contract and / or Purchase Order.

The parties have agreed that in respect of performance of the work the Mandatary shall be responsible for compliance with the Occupational Health and Safety Act and its regulations. The Employer and Mandatary accordingly enter in to this Agreement in terms of Section 37(2) of the OHS Act, the terms and conditions of which are set out hereunder.

1. Definitions

Unless inconsistent with the context, the expressions set forth below shall bear the following meanings:

1.1 Expressions which denote:

- 1.1.1 any gender shall include the other genders
- 1.1.2 a natural person shall include a juristic person and vice versa
- 1.1.3 the singular shall include the plural and vice versa

- 1.2 **Agreement** shall mean this document containing its terms and conditions as applicable to the parties thereto;
- 1.3 **Employer** shall mean the party as described on the face of this document;
- 1.4 **Employees** shall mean all Employees, servants, contractors, sub-contractors, agents, invitees and the like of the Mandatary;
- 1.5 **Mandatary** shall mean the party as described on the face of this document
- 1.6 **OHS Act** shall mean the Occupational Health and Safety Act 85 of 1993, as amended, together with all regulations thereto;
- 1.7 **Premises** shall mean all such Premises of the Employer, where the Mandatary and Employees perform work or render a service for and on behalf of the Employer
- 1.8 **Parties** shall mean the Employer and the Mandatary
- 1.9 **PPE** shall mean the personal protective equipment

2. WARRANTY OF COMPLIANCE

- 2.1 The Mandatary acknowledges that this Agreement constitutes an agreement in terms of Section 37(2) of the OHS Act, whereby all responsibility for health and safety matters relating to the work that the Mandatary and the Employees are to perform on the Premises shall be the obligation of the Mandatary
- 2.2 The Mandatary hereby undertakes to ensure that the health and safety of any other person on the premises is not endangered by the conduct and / or activities of the Employees whilst they are on the Premises
- 2.3 By entering into this agreement the Mandatary warrants that he is familiar with working conditions and agrees to the arrangements and procedures, as prescribed by the Employer and as provided for in terms of Section 37(2) of the OHS Act, for the purpose of compliance with the OHS Act.
- 2.4 The Mandatary shall also ensure that he complies with all relevant Labour Legislations including the Basic conditions of employment Act, the Labour Relations Act and any specific wage determination specific to his business activity.

3. MANDATARY AN EMPLOYER

The Mandatary shall be deemed to be the employer on his right whilst on

Employer's Premises. In terms of Section 16(1) of the OHS Act the Mandatary shall accordingly ensure that the requirements of the OHS Act are complied with by himself and / or his Chief Executive Officer.

4. LEGAL APPOINTMENTS

- 4.1 The Mandatary undertakes to make all statutory appointments as per the requirements of the OHS Act, in particular, 16(2) assignee and / or Construction Regulation 6(1).
- 4.2 The Mandatary warrants that all appointed persons are trained to understand their roles in terms of the OHS Act. The Mandatary shall further ensure that employees receive basic safety training to understand the hazards and risks associated with their work.

- 4.3 The Mandatary shall ensure that all work performed for and / or on behalf of the employer is performed under general supervision of a competent person who has been appointed in writing. Such appointed person shall be vested with full authority to strictly enforce the law.

5. ACCESS TO THE OHS-ACT

The mandatary shall ensure that his appointed responsible person has an updated copy of the OHS Act. The copy should be produce to the Employer's representative at all times if so required.

6. SAFETY FILE

The Mandatary shall ensure that a health and safety file is opened and kept on the premises, which shall include all documentation required in terms of the provisions of the OHS Act, including but not limited to

- 1) The COID certificate
- 2) Public liability cover
- 3) Safety Plans
- 4) Risk assessments and Safe work procedures
- 5) Names of responsible persons and their appointment letters
- 6) List of sub-contractors if any

7. MEDICAL EXAMINATIONS

The Mandatary shall ensure that all the Employees undergo routine medical examinations where these are necessary in terms of the working environment and that they are medically fit for the purposes of the work they are to perform.

8. INCIDENT REPORTING AND INVESTIGATION

All incidents referred to in Section 24 of the OHS Act shall be reported by the Mandatary to the Department of Labour and to the Employer. The Employer shall further be provided with copies of any written documentation relating to any incident.

9. PERSONAL PROTECTIVE EQUIPMENT

The Mandatary shall ensure that his responsible persons and the Employees are provided, free of charge, with adequate personal protective equipment (PPE) for the work they are required to perform. The PPE to be supplied should be in accordance with General Safety Regulation 2(1) of the OHS Act. The Mandatary shall ensure that his employees wear the PPE supplied to them at all times.

10. INTOXICATION NOT ALLOWED

No intoxicating substance of any form is allowed on the Premises. Any person suspected to be under influence of intoxicating substance shall not be allowed on site. Any person with prescribed medication shall notify the relevant responsible person and also advise him of the potential side effects.

11. FIRST AID AND EMERGENCY EQUIPMENT

- 11.1 The Mandatary shall ensure that, where more than five employees are employed at the Premises, a first aid box is made readily available as per General Safety Regulation 3(2). If the Mandatary employs more than 10 employees the Mandatary shall ensure that a certificated first aid provider is available. Provided that the Mandatary may enter into a written arrangement with the Employer for the provision of such first aid facilities.
- 11.2 The Mandatary shall further ensure that there is adequate supply of fire protection and emergency equipment, and employees are made familiar with fire precautions. at the Premises, which include fire alarm signals and emergency exits and that such precautions are adhered to.

12. PLANT, MACHINERY AND EQUIPMENT

- 12.1 The Mandatary shall ensure that all the plant, machinery, equipment and/or vehicles he may wish to utilize on the Premises is/are at all times of sound order and fit for the purpose for which it is intended, and that it complies with the requirements of Section 10 of the OHS Act.

- 12.2 In accordance with the provision of Section 10(4) of the OHS Act, the

Mandatary hereby assumes the liability, for taking the necessary steps to ensure that any article or substance that is erected or installed at the Premises, or manufactured, sold or supplied to or for the Employer, and which the Mandatary uses at work complies with all the prescribed requirements and will be safe and without risk to health when properly used.

13. NO USAGE OF THE EMPLOYER'S EQUIPMENT

The Mandatary hereby acknowledges that the Employees shall not be permitted to use any materials, machinery or equipment of the Employer unless the prior written consent of the employer has been obtained, in which case, the Mandatary shall ensure that only those persons authorized to make use of the same, have access thereto.

14. INDEMNITY BY MANDATARY

Notwithstanding the provisions of this Agreement, or any other contractual relationship as between the Employer and the Mandatary:

- 14.1 The Employer shall not be responsible for any loss, damage, injury or death, howsoever caused, to the Mandatary or to the Employees, and the Mandatary hereby indemnifies the Employer and holds the Employer harmless against all and any claims, losses, demands, liability, costs and expenses of whatsoever nature, which the Employer may, at any time sustain or incur arising out of the circumstances referred to herein; provided that such loss, damage, injury or death is not caused by the wilful action or omission or gross negligence of the Employer
- 14.2 The Mandatary hereby assumes liability for any loss or damage which is caused by the Mandatary's negligence, or through the negligence of any of the Employees, and the Mandatary hereby indemnifies the Employer for such loss or damage, whether caused by the Mandatary's breach of any of the terms of this Agreement, or by delict.
- 14.3 The Mandatary in pursuance of clause 14 undertakes to ensure that he carries the appropriate insurance cover, including third party public liability cover, the details of which shall be furnished to the Employer on demand.

15. CLARIFICATION

In the event that the Mandatary requires clarification of any of the terms or provisions of this Agreement, it should contact the appropriate and designated representative of the Employer, whose clarification in terms hereof shall be in writing.

16. DURATION OF AGREEMENT

This Agreement shall remain in force for any work performed by the Mandatary and/or any of his Employees at the Employer's premises.

17. HEADINGS

The headings as contained in this Agreement are for reference purposes only, and shall not be construed as having interpretative value in themselves, nor any indication as to the meaning of the contents of the paragraphs contained in this Agreement.

SIGNED AT _____ ON THE ____ DAY OF _____ YEAR _____

Name: _____
Name and Surname

Signature: _____
for and on behalf of the **Employer**
he being duly authorised

SIGNED AT _____ ON THE ____ DAY OF _____ YEAR _____

Name: _____
Name and Surname

Signature: _____
for and on behalf of the **Mandatary**
he being duly authorised

NB: Please ensure that each person signing this Agreement initials all pages

C1.5 NOTIFICATION OF CONSTRUCTION WORK

OCCUPATIONAL HEALTH AND SAFETY ACT, 1993

Regulation 3 of the Construction Regulations, 2014

1. (a) Name and postal address of principal contractor:

1. (b) Name and telephone number of principal contractor's contact person:

2. Principal contractor's compensation registration number: _____

3. (a) Name and postal address of client:

3. (b) Name and telephone number of client's contact person or agent:

4. (a) Name and postal address of designer(s) for this project:

4. (b) Name and telephone number of designer(s) contact person:

5. Name and telephone number of principal contractor's construction supervisor on site appointed in terms of regulation 6.(1).

6. Name/s of principal contractor's sub-ordinate supervisors on site appointed in terms of regulation 6.(2):

7. Exact physical address of the construction site or site office:

8. Nature of construction work:

9. Expected commencement date: _____

10. Expected completion date: _____

11. Estimated maximum number of persons on the construction site: _____

12. Planned number of contractors on the construction site accountable to principal contractor:

13. Name(s) of contractors already chosen:

Principal Contractor

Date

Client

Date

- This document is to be forwarded to the Department of Labour and the Ugu District Municipality prior to commencement of work on site.
- All principal contractors that qualify to notify must do so even if another principal contractor on the same site had done so prior to the commencement of work.

C1.6 ADJUDICATOR'S AGREEMENT

DISCLOSURE STATEMENT

Please note that words in italics within brackets are items which should be stated.

(Date)

Contract: MSIKABA WATER SUPPLY SCHEME - PHASE 3A– Contract No: UGU-07-1611-2022
Msikaba Water Supply Scheme Phase 3A: Upgrading of Bomela Pump Station & Construction of Nyandezulu Elevated Reservoir and Booster Pump Station:

Contractor:

Employer: UGU DISTRICT MUNICIPALITY

Engineer: NGCOLOSI ENGINEERS

Dear Sirs

I am willing and available to serve as (*ad-hoc / standing*) Adjudication Board Member in the above mentioned Contract.

In accordance with the General Conditions of Contract for Construction Works Adjudication Board Rules relating to disclosure statements by selected or nominated persons to the adjudication, I hereby state that:

I shall act with complete impartiality and know of nothing at this time, which could affect my impartiality.

I have had no previous involvement with this project.

I do not have any financial interest in this project.

I am not currently employed by the Contractor, Employer or Engineer.

I do not have any financial connections with the Contractor, Employer or Engineer.

I do not have or have not had a personal relationship with any authoritative member of the Contractor, Employer or the Engineer which could affect my impartiality.

I undertake to immediately disclose to the parties any changes in the above position which could affect my impartiality or be perceived to affect same.

Should there be any deviation from the foregoing statements, details shall be given.

I further declare that I am experienced in the work which is carried out under the Contract and in interpreting contract documentation.

Name in full:

Signature:

ADJUDICATION BOARD MEMBER AGREEMENT

This Agreement is entered into between:

Adjudication Board Member:

Name:

Physical address:

.....

.....

Postal address:

.....

.....

e-mail address: Fax number:

Telephone number: Mobile number:

Contractor:

Name:

Physical address:

.....

.....

Postal address:

.....

.....

e-mail address: Fax number:

Telephone number: Mobile number:

Employer:

Name: UGU DISTRICT MUNICIPALITY

Physical address: 28 Connor Street, Port Shepstone 4240

Postal address: P O Box 33 Port Shepstone 4240

Telephone number: 039 688 5700 Fax number: 039 682 2646

The Contractor and the Employer will hereinafter be collectively referred to as the Parties.

The Parties entered into a Contract for:

UGU DISTRICT MUNICIPALITY

MSIKABA WATER SUPPLY SCHEME - PHASE 3A

which provides that a dispute under or in connection with the General Conditions of Contract for Construction Works, Third Edition, 2015, must be referred to (*ad-hoc adjudication/standing adjudication*).

The undersigned natural person has been appointed to serve as Adjudication Board Member and together with the undersigned Parties agree as follows:

1. The Adjudication Board Member accepts to perform his duties in accordance with the terms of Contract, the General Conditions of Contract for Construction Works Adjudication Board Rules and this Agreement.
2. The Adjudicator undertakes to remain independent and impartial of the Contractor, Employer and Engineer for the duration of the Adjudication Board proceedings.
3. The Adjudication Board Member agrees to serve for the duration of the Adjudication Board proceedings.
4. The Parties may at any time, without cause and with immediate effect, jointly terminate this Agreement.
5. Unless the Parties agree, the Adjudication Board Member shall not act as arbitrator or representative of either Party in any subsequent proceedings between the Parties under the Contract. No Party may call the Adjudication Board Member as a witness in any such subsequent proceedings.
6. The standing Adjudication Board's duties shall end upon the Adjudication Board Member(s) receiving notice from the Parties of their joint decision to disband the Adjudication Board.
7. The Adjudication Board Member shall be paid in respect of time spent upon or in connection with the adjudication including time spent travelling:
 - (a) A monthly retainer of (*amount*)
for.....(*number*) of months, and/or
 - (b) A daily fee of (*amount*)
based on a (*number*) hour day, and or
 - (c) A hourly free of (*amount*), and/or
 - (d) A non-recurrent appointment fee of (*amount*)
which shall be accounted for in the final sums payable.
8. The Adjudication Board Member's expenses incurred in adjudication work shall be reimbursed at cost.

Upon submission of an invoice for fees and expenses to the Parties, the (*Contractor/Employer**) shall pay the full amount within 28 days of receipt of the invoice and he shall be reimbursed by the other party by half the amount so that the fees and expenses are borne equally by the Parties. Late payment

of such invoices shall attract interest at prime plus 3% points compounded monthly at the prime rate charged by the Adjudication Board Member's bank.

This Agreement is entered into by:

Contractor's signature:

Contractor's name:

Place:

Date:

Employer's signature

Employer's name: UGU DISTRICT MUNICIPALITY

Place:

Date:

Adjudication Board Member's signature:

Adjudication Board Member's name:

Place:

Date:

**Delete the inapplicable party*

C1.7 FORMS OF GUARANTEE

PRO-FORMA GUARANTEE (MATERIALS ON SITE)

GUARANTOR DETAILS AND DEFINITIONS

“Guarantor” means:

Physical address:

“Employer” means: **UGU DISTRICT MUNICIPALITY**

Physical address:

“Engineer” means: **NGCOLOSI ENGINEERS**

Physical address:

“Contractor” means:

Physical address:

“Contract” means: The Agreement made between the Employer and Contractor for construction of the works into which the materials or goods which are the subject of this Guarantee are to be incorporated.

“Guaranteed Sum” means: The maximum value of the materials or goods identified by the Engineer and named herein, which are to be considered by the Employer for advanced payment to the Contractor, while in an unused or unfixed condition, and whether stored on the Contract site or off the Contract site.

Amount in words:

“Expiry Date” means: **Date of Issue of Certificate of Completion in terms of Clause 5.14.4 of GCC 2015**

GUARANTEE

1. The purpose of this guarantee is to recompense the Employer in the event of the Employer's not acquiring legal ownership of the materials or goods, as identified by the Engineer, for whatever reason or the Employer being legally obliged to make payment to any third party or protect his ownership and quiet possession of the materials or goods.
2. The Guarantor's liability shall be to the amount of the Guaranteed Sum.
3. The Guarantor's period of liability shall be from and including the date of issue of this Guarantee up to and including the Expiry Date herein or the date of issue by the Engineer on behalf of the Employer of the Certificate of Completion of the Works in the Contract, or the date of payment of the Guaranteed Sum, whichever occurs first.
4. The Guarantor acknowledges that any reference in this Guarantee to the Contract is made for the purpose of convenience and shall not be construed as any intention to create an accessory obligation or a surety ship, and its obligation under this Guarantee is restricted to the payment of money.

5. Subject to the Guarantor's maximum liability referred to in the Guaranteed Sum, the Guarantor hereby undertakes to pay the Employer the sum certified by the Engineer as recompense to the Employer arising out of failure by the Contractor to effect transfer of ownership of any of the stated materials or goods to the Employer, for any reason whatsoever.
6. Payment by the Guarantor in terms of (5) shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.
7. The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer may deem fit and the Guarantor shall not have the right to claim his release from this Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.
8. This Guarantee is neither negotiable nor transferable and shall expire in terms of (3), whereafter no claims will be considered by the Guarantor.
9. This Guarantee, together with any of the required demand notices in terms of (6), shall be regarded as a liquid document for the purposes of obtaining a court order
10. Where this Performance Guarantee is issued in the Republic of South Africa the Guarantor hereby consents in terms of the Magistrate's Courts Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate's Court of any district having jurisdiction in terms of Section 28 of the said Act, notwithstanding that the amount of the claim may exceed the jurisdiction of Magistrate's Court.

Signed at

Date

Guarantor's signatory (1)

Capacity

Guarantor's signatory (2)

Capacity

Witness signatory (1)

Witness signatory (2)



VOLUME 1
CONTRACT
PART 2
PRICING DATA

CONTENTS

PARAGRAPH	PARAGRAPH TITLE	PAGE No.
C2.1	PRICING INSTRUCTIONS	PD 3
C2.2	BILL OF QUANTITIES	PD 5

C2.1 PRICING INSTRUCTIONS

1. The Tenderer is advised to check the number of pages and, should any be found to be missing or in duplicate or the figures or writing indistinct or the Bill of Quantities containing any obvious errors, the Tenderer must inform the Engineer at once and have it rectified. No liability whatsoever will be admitted in respect of errors due to the foregoing.

Should there be any doubt or obscurity as to the meaning of any particular item, the Tenderer must obtain an explanation of it, in writing, from the Engineer. No claims for extras arising from any such doubt or obscurity will be admitted after delivery of the tender.

2. The work is to be in accordance with the drawings, specifications and instructions and under the supervision and to the entire satisfaction of the Engineer.
3. The Bills of Quantities should be read in conjunction with the Conditions of Contract, the Special Conditions of Contract, the Specifications (Project, Standardised and Particular Specifications) and Drawings for the full intent and meaning of each clause or item. The quantities are measured generally in accordance with SANS 2100. The Schedule of Quantities shall be interpreted in accordance with the method of measurement set out in the Specifications except where variations are implied by the omission of items or by the actual wording of the items in the Schedule of Quantities. The quantities in the Schedule of Quantities are provisional. The Works as executed will be measured for payment in accordance with the Schedule of Quantities and under the items set forth therein, notwithstanding any custom to the contrary. In the event of any item to be measured not being reasonably covered by the above Schedule, then the Standard Method of Measurement described in Clause 6.7 of the General Conditions of Contract (2015) shall apply and the appropriate rate shall be negotiated between the Engineer and the Contractor.
4. The sum and unit prices to be inserted in the Bill of Quantities are to be the fully inclusive value of the work described under the several items, including all costs, expenses, overheads and profits which may be required in and for the construction of the work described, together with all general risks, liabilities, obligations and taxes (excluding Value Added Tax) set forth or implied in the documents on which the tender is based.
5. A sum or unit Price shall be entered against each item where provision is made for such pricing in the Schedule of Quantities whether quantities are stated or not and no two or more items can be bracketed together for a single price or rate. Items against which **N/A, left blank or –** is entered are to be considered as incomplete and will invalidate the tender. Items against which **NIL or zero (0)** is entered are to be considered to be fully priced and the tenderer will provide the items in question as specified at zero (0) or NIL price. Should there be any conflict between the unit of measurement of any item in the Bill and the unit in any applicable specification, the unit in the Bill shall take precedence.
6. Should there be any conflict between definitions or specifications covering any item, the order of precedence shall be as follows:
 - a. The project specification
 - b. Variations to a standardised or particular specification.
 - c. The standardised or particular specification.
7. Arithmetical errors :
 - Where there is a discrepancy between the amounts in figures and in words, the amount in words shall govern.
 - Where there is an error in the line item total resulting from the product of the unit rate and the quantity, the line item total shall govern and the rate shall be corrected. Where there is

an obviously gross misplacement of the decimal point in the unit rate, the line item total as quoted shall govern, and the unit rate shall be corrected.

- Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the Tenderers addition of prices, the total of the prices shall govern and the Tenderer will be asked to revise selected item prices and their rates to achieve the tendered total of the prices.

8. All unit prices, extensions and totals must be filled in, in BLACK INK. Failure to do so will render the tender as non-responsive.
9. No claim whatsoever will be allowed in respect of errors in pricing due to brevity of description of items which are fully described when read in conjunction with the relevant instruction.
10. The Tenderer is advised that, where trade or patent names are used in description of items in the Bill of Quantities, except in the case of nominated suppliers or sub-Contractors, it does not necessarily follow that these specific materials will be used.

The trade or patent names are inserted in the description only as a guide to the Tenderer and to make clear the type of material required. All or any of these items may be replaced at the Engineer's discretion by other similar and approved materials without affecting the Billed Unit Prices.

Where such a change involves a difference in the basic price of the item, the Contractor will be requested to submit a revised unit price before the order is placed and this will be subject to the approval and acceptance of the Engineer.

Where, however, a trade or patent name is used in the description of an item and the Tenderer offers an alternative material, the onus will be on the Tenderer to produce proof that his material offered is equal in all respects to the material used in the description.

11. The Tenderer is hereby advised that, while every endeavour has been made to ensure the correctness of the quantities and descriptions of all labour and materials in the Bill of Quantities, any errors (whether in excess or short of the actual quantity, or insufficiently or incorrectly described) will be adjusted on completion of the Contract by the Engineer. For this purpose, the entire contents of the Bill of Quantities are to be considered as provisional and therefore subject to re-measurement and adjustment in part or as a whole. All such adjustment will be based on, or pro rata to, the Schedule unit prices submitted by the Contractor. The Bill of Quantities is not necessarily correct for ordering purposes.
12. It is deemed that provision for head office overheads, consumables, stores, profit, etc., as well as all labour, material and plant costs, is made in the priced items of the measured Bill following the Preliminary and General Bill and that any increases and decreases in the measured quantities will correspondingly adjust for these charges.
13. The column headed 'CLAUSE' in the Bill of Quantities, where used, indicates specifications and/or clauses in which further information in respect of billed items can be obtained. This is meant as an aid to Tenderers but does not imply that the specifications or clauses referred to are the only sources of information in respect of these items and further information and explanations may be found elsewhere in the Contract Documents and on the Drawings.
14. It is deemed that all costs incurred by the Contractor to ensure conformity with the Environmental Management Specifications, is made in the priced items of the measured Bill following the Preliminary and General Bill and that any increases and decreases in the measured quantities will correspondingly adjust for these charges.

15. Those parts of the contract to be constructed using labour-intensive methods have been marked in the bill of quantities with the letters LI in a separate column filled in against every item so designated. The works, or parts of the works so designated are to be constructed using labour-intensive methods only. The use of plant to provide such works, other than plant specifically provided for in the scope of work, is a variation to the contract. The items marked with the letters LI are not necessarily an exhaustive list of all the activities which must be done by hand, and this clause does not over-ride any of the requirements in the generic labour intensive specification in the Scope of Works.
16. Payment for items which are designated to be constructed labour-intensively (either in this schedule or in the Scope of Works) will not be made unless they are constructed using labour-intensive methods. Any unauthorized use of plant to carry out work which was to be done labour-intensively will not be condoned and any works so constructed will not be certified for payment.
17. The Contractor will be required to prepare and submit monthly returns.

C2.2 BILL OF QUANTITIES

[illegible]

Client: UGU District Municipality
Project: Msikaba Water Supply Scheme, Phase 3A

Description: Upgrading of Bomela Pump Station, Construction of Nyandezulu Elevated Reservoir and Booster Pump Station

Contract No.: UGU-07-1611-2022

Item	Pay Ref	Description	Unit	BOQ Qty	Rate	Tender Amount
1.0	SABS 1200 A	SECTION 1: PRELIMINARY & GENERAL				
1.1	8.3	Fixed Charge Items Contractual Requirements	Sum	1		
1.2	8.3.1 PSAB	Establish Facilities on Site: Facilities for Engineer				
	3.1	i) Supply and erect name board on site	Sum	1		
	3.2	ii) Supply office desk and chair	Sum	1		
		iii) One survey assistant, equipment and materials	Sum	1		
1.3	8.3.2	Facilities for Contractor (a) Office and Storage Sheds (b) Workshop (c) Ablution & Latrine Facilities (d) Tools & Equipment (e) Water supply, electricity and communication (f) Dealing with Water on Site (g) Access Road to Site. Pricing to ensure adequate road signage for the proper control of traffic during construction on or near roads. (h) Plant (i) Setting out of works	Sum Sum Sum Sum Sum Sum Sum Sum Sum	1 1 1 1 1 1 1 1 1		
1.4	8.3.3	Other Fixed Charge Obligations (Tenderer to state) (a) (b) (b) Preparation of risk assessments, safe work procedures, the H&S file, the Health & Safety plan and other H&S matters that the contractor deems necessary. The sum shall include all fixed costs necessary in complying with the OHS Act (1993 as amended) and the Construction Regulations (2014) and the Ugu DM Health and Safety Specifications	Sum Sum Sum	1 1 1		
1.5			Sum	1		
1.6		Compliance with Environmental Management Plan	Sum	1		
1.7	8.3.4	Remove Contractors Site - Establishment on completion	Sum	1		
	8.4	Time Related Items				
1.8	8.4.1	Contractual Requirements	Weeks	40		
1.9	8.4.2.1	Facilities for ENGINEER i) Maintain name board ii) Office, toilets, electricity, water, etc. iii) Cellular phone call charges iv) Survey assistants v) Survey equipment & materials. vi) Two In-service Training student with minimum S2 Civil Diploma level as provided by the Engineer. Wages to be minimum R 1,500.00 per week per student.	Weeks Weeks Prov. Sum Weeks Weeks Prov. Sum	40 40 40 40 40 40	R 500.00	R 20,000.00
1.10	8.4.2.2	Facilities for CONTRACTOR Operate and maintain facilities on site for the duration of the construction period	Weeks	40	R 3,000.00	R 120,000.00
		Section 1: P & G Carried Forward				

Client: UGU District Municipality
Project: Msikaba Water Supply Scheme, Phase 3A

Description: Upgrading of Bomela Pump Station, Construction of Nyandezulu Elevated Reservoir and Booster Pump Station

Contract No.: UGU-07-1611-2022

Item	Pay Ref	Description	Unit	BOQ Qty	Rate	Bill Amount
		B/F				
1.11	8.4.3	Supervision for duration of Construction	Weeks	40		
1.12	8.4.4	Company & Head Office Overhead Costs	Weeks	40		
1.13	8.4.5	Other Time Related Obligations (Tenderer to state)				
		(a)	Weeks	40		
		(b)	Weeks	40		
		(b)	Weeks	40		
1.14		Updating and amending the risk assessments, safe work procedures, the project H&S file, the H&S plan, provision of protective clothing and any other H&S matters that the contractor deems necessary	Sum	1		
1.15		Full compliance with all H&S matters during the construction of the works under this contract	Sum	1		
1.16		Compliance with Environmental Management Plan	Sum	1		
1.17	8.8	Temporary Works				
1.17.1	8.8.2	Accommodation of traffic	Sum	1		
1.17.2	8.8.3	Protection of existing structures and fences (including temporary structures) until construction in the vicinity is complete	Sum	1		
1.17.2	8.8.4	<u>Existing Services</u> a) Supply or hire of specialized equipment for the detection of Electrical and Telkom cables b) Use of equipment under item 1.17.2 (a) above	Sum Day	1 7		
1.17.3	8.8.6	Excavate by hand in soft material to expose existing services for				
		a) Storm water pipes	m ³	25		
		a) Telkom Services	m ³	10		
		a) Electrical Cables	m ³	15		
		d) Watermains	m ³	50		
1.18	SABS 1200A	Sums Stated Provisionally By The Engineer				
1.18.1	8.5	(a) Quality Control Testing	Prov Sum	1	R 50,000.00	R 50,000.00
		(b) Contractors attendance, handling costs and charges on item (a)	%	R 50,000.00		
1.18.2		(c) Provisional sum for Community Liaison Officer	Prov Sum	1	R 100,000.00	R 100,000.00
		(d) Contractors attendance, handling costs and charges on item (c)	%	R 100,000.00		
		(e) Provisional Sum for Tools and Equipment to be supplied by the Contractor to the Client, with regard to the Client's specification.	Prov Sum	1	R 450,000.00	R 450,000.00
		(f) Contractors attendance, handling costs and charges on item (e)	%	R 450,000.00		
		Section 1: P & G Carried Forward				

Client: UGU District Municipality

Project: Msikaba Water Supply Scheme, Phase 3A

Description: Upgrading of Bomela Pump Station, Construction of Nyandezulu Elevated Reservoir and Booster Pump Station

Contract No.: UGU-07-1611-2022

Item	Pay Ref	Description	Unit	BOQ Qty	Rate	Bill Amount
1.18.3		(a) Appointment of a construction health and safety officer	Prov Sum	40	R 5,500.00	R 220,000.00
		(b) Contractors attendance, handling costs and charges on item 1.18.3 (a)	%	220,000.00		
1.18.4		(a) Appointment of a environmental control officer	Prov Sum	40	R 5,500.00	R 220,000.00
		(b) Contractors attendance, handling costs and charges on item 1.18.3 (a)	%	220,000.00		
	8.7	DAYWORKS				
1.18.5		Personnel during project working hours				
		(a) Unskilled labour	hrs	40		
		(b) Semi-skilled labour (Garge hand)	hrs	40		
		(c) Skilled labour (Artisan)	hrs	40		
		(d) Foreman	hrs	40		
1.18.6		Plant hire rates during project working hours				
		(a) TLB	days	5		
		(b) water tanker	days	5		
		(c) pressure tester	days	5		
		(d) generator & breakers	days	5		
		(e) 10m³ tipper truck	days	5		
		Section 1: P & G Carried Forward to Summary				

Client: UGU District Municipality

Project: Msikaba Water Supply Scheme, Phase 3A

Description: Upgrading of Bomela Pump Station, Construction of Nyandezulu Elevated Reservoir and Booster Pump Station

#REF!

ITEM No.	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SABS 1200 DA	SECTION 2: EARTHWORKS- PUMP HOUSE & CLEAR WELLS				
2.0		Site Clearance:				
2.1		Clear vegetation and trees of girth up to 1m	m ²	400		
	SABS 1200 DA 1988	Excavation:				
2.2	8.3.1(a)	Remove topsoil to nominal depth of 150 mm and stockpile	m ²	400		
2.3	8.3.1(b)	Bulk excavation in all material and use for backfill or embankments or dispose to designated disposal areas, as ordered to:				
2.3.1		Pumpstation	m ³	10		
2.4		Restricted excavation below bulk in all material and stockpile or dispose as ordered for:				
2.4.1		Pumpstation strip footings	m ³	4		
2.4.2		Reservoir inlet & outlet chambers	m ³	3		
2.5		EO item 2.2 to 2.4 for excavation in (PROV):				
2.5.1		Hard rock material	m ³	2		
2.5.2		Hard rock material without the use of explosives (where ordered by the Engineer)	m ³	3		
2.5.3		Boulders Class A	m ³	2		
2.5.4		Boulders Class B	m ³	1		
	SABS 1200 DB 1989	Excavation : Pipe Trenches				
2.6	8.3.2(a)	Excavate in all materials for trenches for pipes, 200mm dia or less, backfill and compact, incl for disposal of surplus / unsuitable material, for depths:				
2.6.1		Over and Up to 0,0m to 1,0m	m	20		
TOTAL CARRIED FORWARD						

Client: UGU District Municipality
Project: Msikaba Water Supply Scheme, Phase 3A
Description: Upgrading of Bomela Pump Station, Construction of Nyandezulu Elevated Reservoir and Booster Pump Station
#REF!

ITEM No.	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
2.6.2		1,0m to 2,0m	m	10		
2.7	8.3.2(b)	EO Item 2.6 for excavation in (PROV):				
2.7.1		Hard rock material	m³	2		
2.7.2		Hard rock material without the use of explosives	m³	1		
	SABS 1200 LB 1983	Provision of Bedding:				
2.8	8.2.1 PSLB 5.3	Selected from trenches, and/or other excavations including the need for screening or other treatment:				
2.8.1		Selected granular material	m³	2		
2.8.2		Selected fill material	m³	11		
2.9		Topsoiling and grassing to designated areas	m²	100		
2.10		5% cement stabilisation and compaction to 90% MOD AASHTO of selected fill under structures.	m³	35		
TOTAL CARRIED FORWARD						

Client: UGU District Municipality

Project: Msikaba Water Supply Scheme, Phase 3A

Description: Upgrading of Bomela Pump Station, Construction of Nyandezulu Elevated Reservoir and Booster Pump Station

#REF!

ITEM No.	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
		SECTION 2: CONCRETE WORKS				
2.11		CONCRETE WORKS: BOMELA PUMPSTATION				
2.11		Strength concrete Grade 15 MPa/19 mm:				
2.11.1		False floor	m³	2		
2.12	8.4.3	Strength concrete Grade 30 MPa/19 mm				
2.12.1		Foundations	m³	5		
2.12.2		Floor slab and pump plinths	m³	5		
2.12.3		Roof slab and ring beam	m³	10		
2.13	8.1.2.2	Reinforcement				
2.13.1	8.1.2.3	High tensile steel bars:				
2.13.2		12 mm and under	t	2		
2.13.3		16mm and over	t	1		
2.13.4		H/T Mesh (Ref 395) (floor slab)	m²	20		
	8.1.1	Formwork:				
2.14		Smooth vertical plane:				
2.14.1		Ring beam	m²	22		
2.15		Smooth vertical narrow widths not exceeding 300 mm wide to:				
TOTAL CARRIED FORWARD						

Client: UGU District Municipality

Project: Msikaba Water Supply Scheme, Phase 3A

Description: Upgrading of Bomela Pump Station, Construction of Nyandezulu Elevated Reservoir and Booster Pump Station

#REF!

ITEM No.	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
		SECTION 2: CONCRETE WORKS				
2.15.1		Roof slab	m	12		
2.15.2		Pump plinths	m	6		
2.15.3		200 mm x 100 mm deep cable duct in false floor, incl for sand fill and screeding	m	5		
2.15.4		Smooth horizontal shuttering to soffit of roof slab	m ²	20		
2.15.5		40 x 40 Chamfers to edges of pumpstation roof ring beam	m	70		
2.15.6		Form 150 mm x 100 mm deep drain in false floor	m	5		
		Grouting				
2.16		Grouting to machine bases using Prostruct 5-Star Grout or similar approved	m ³	0.1		
		Unformed surface finishes:				
2.17		Screed board finish to concrete floor	m ²	15		
2.18		Woodfloat finish to pump plinths	m ²	2		
2.19		Steel floated finish to roof slab & false floor	m ²	35		
2.20		Special, glass-like finish incl. polishing with cement to top of ring beam (230 mm wide) and supply two layers of 4-ply malthoid incl for all cutting and waste for full overlap at corners	m	18		
2.21		Form 20 mm dia half round drip channel in roof slab	m	20		
2.22		500 x 500 x 50 mm thick precast concrete paving slabs including for laying on 50 mm sand bed, cutting pointing and wastage	m	20		
2.23		DPM or similar approved under floor of pumpstation, including for ant poisoning	m ²	20		
2.24		Dig trenches, for drainpipe (up to 160 mm dia), backfill and compact (depth 1.0 m)	m	25		
2.25		Supply and lay 160 mm dia uPVC drain pipe (including bedding)	m	25		
TOTAL CARRIED FORWARD						

Client: UGU District Municipality

Project: Msikaba Water Supply Scheme, Phase 3A

Description: Upgrading of Bomela Pump Station, Construction of Nyandezulu Elevated Reservoir and Booster Pump Station

#REF!

ITEM No.	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
2.26		SECTION 2: BRICKWORK AND PLASTER				
		MSIKABA & NYANDEZULU PUMPSTATION				
2.26.1		230mm thick brickwork, one skin common brick with one skin face brick. Rates to include brickforce over door openings and louvres	m²	75		
2.26.2		As for Item 2.26.1 but with both skins in commons	m²	10		
2.26.3		Damp-proof course to joints between brickwork and concrete in approved bituminous sheeting, cut to the full width of the walls, incl. for laps and sealing at joints and angles	m²	11		
2.26.4		10 mm thick plaster to internal walls of pumpstation	m²	40		
2.26.5		Supply and form granolithic screed 25 - 75 mm thick to floors	m²	20		
2.27		Painting:				
2.27.1		Priming with alkali resistant primer and painting interior plaster or concrete surface in building with three coats of approved PVC latex type paint	m²	40		
2.27.2		Box out 200 mm x 200 mm openings in walls for pipes up to 150mm diameter	Nº	4		
TOTAL CARRIED FORWARD						

Client: UGU District Municipality

Project: Msikaba Water Supply Scheme, Phase 3A

Description: Upgrading of Bomela Pump Station, Construction of Nyandezulu Elevated Reservoir and Booster Pump Station

#REF!

ITEM No.	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
		SECTION 2: SUNDRIES				
		MSIKABA & NYANDEZULU PUMPSTATIONS				
2.28		Supply and install Galvanised transformer doors, prices of doors to incl for frames, butt hinges, door handles, hasp and staple:				
2.28.1		Size 2.700m x 1.830m fully louvred on each leaf with box out to suit crawl beam	N°	2		
2.29		Supply and Install Galvanised louvres:				
2.29.1		900 mm x 745 mm x 240 thick with vermin proof insect mesh and R10 burglar bars (incl building into brickwork)	N°	20		
	SABS 1200 HA 1984	Steelwork				
2.30		Supply and install 254 x 146 x 31 kg/m x 6,250 m long galvanised universal beam, complete with all fittings, holding bolts, stop bolt support bracket, etc, all as detailed on Drawings	N°	2		
2.31		Supply and deliver to site complete with all test certificates and operating instructions two tonne geared chain block with 2 m lift and matching crawl	N°	2		
2.32		Provisional sum for telemetry in accordance with the Employer's specifications, by nominated sub-contractor.			Sum	300,000.00
2.33		Allow for a Provisional Sum of R 800,000 for the supply and installation of pump station Mechanical and Electrical equipment by nominated sub-contractor.			Sum	800,000.00
2.34.1		Main Contractor's commission on item 2.32 & 2.33 above	%	1,100,000.00		
2.34.2		All pipework and valves(including a non-return valve and flow meter at discharge) for the pumpsets supplied under 2.33 above, and all suction and delivery pipework to and from the pumps terminating at flanges outside the pump station building all as shown on the tender drawings.	Sum	1		
2.34.3		Allow the Provisional Sum of R 70,000.00 for payment of independent inspectors appointed by the Engineer			Sum	70,000.00
2.35		Fencing:				
2.35.1		Supply and erect anti-intruder fencing constructed of razor mesh fencing and prestressed concrete posts as shown on Drawings	m	320		
2.35.2		Supply and erect double gate as shown on Drawings	N°	2		
TOTAL CARRIED FORWARD						

Client: UGU District Municipality

Project: Msikaba Water Supply Scheme, Phase 3A

Description: Upgrading of Bomela Pump Station, Construction of Nyandezulu Elevated Reservoir and Booster Pump Station

#REF!

ITEM No.	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
2.36		SECTION 2: SUNDRIES MSIKABA & NYANDEZULU PUMPSTATION Supply and delivery to site of the following plant and equipment, including storage, quality assurance, painting and insurance:				
2.36.1 a		Two centrifugal potable water pumps with a duty of 22 l/s x 20m head for Msikaba, in accordance with the specification - power rating 7.5 kW electric motor (low speed at 1455 rpm) and ETA 80-250 KSB pump or similar.	Sum	1		Rate Only
2.36.1b		Two centrifugal potable water pumps with a duty of 32 l/s x 195m head for Nyandezulu, in accordance with the specification - power rating 115 kW electric motor (low speed at 1455 rpm) and WKLn 100/9 KSB pump or similar.	Sum	1		Rate Only
2.36.2a		Two suitably sized motors to drive pumps supplied under item 2.36.1a, complete with couplings, guards, bedplates and holding down bolts.	Sum	1		Rate Only
2.36.2b		Two suitably sized motors to drive pumps supplied under item 2.36.1b, complete with couplings, guards, bedplates and holding down bolts.	Sum	1		Rate Only
2.36.3		All pipework and valves(including a non-return valves and flow meters at discharge) for the pumpsets supplied under 2.36.1 a, b and c above, and all suction and delivery pipework to and from the pumps terminating at flanges outside the pump station building all as shown on the tender drawings.	Sum	1		
2.36.4		All necessary permanent supports for the pipework and valves supplied under 2.36.3	Sum	1		
2.36.5		Six sets of suction and delivery pressure gauges – one set for each individual pumpset.	Sum	1		
2.36.6		2 x Wall mounted MCC, all as specified.	Sum	1		
2.36.7		Limit switches on the non-return/control valves on the pump delivery pipes	Sum	1		
TOTAL CARRIED FORWARD						

Client: UGU District Municipality

Project: Msikaba Water Supply Scheme, Phase 3A

Description: Upgrading of Bomela Pump Station, Construction of Nyandezulu Elevated Reservoir and Booster Pump Station

#REF!

ITEM No.	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
BROUGHT FORWARD						
2.37		Taking delivery, handling, erection, installation, final painting and quality assurance of the following plant and equipment, including transportation and accommodation for personnel:				
2.37.1		Six pumpsets supplied under Item 2.36.1 including for setting up bedplates and HD bolts.	Sum	1		
2.37.2		Six motors supplied under Item 2.36.2 including for setting up bedplates and HD bolts.	Sum	1		
2.37.3		Pipework and valves supplied under Items 2.36.3 and 2.36.4	Sum	1		
2.37.4		Pressure gauges supplied under Items 2.36.5	Sum	1		
2.37.5		Motor Control Center supplied under Item 2.36.6.	Sum	1		
2.37.6		Limit switches on non-returnsupplied under Item 2.36.7	Sum	1		
2.37.7		Allow for removal of the existing pumpsets and pipework as directed by the Engineer and deliver to the Employer's stores in Marburg.	Sum	1		
2.38		Supply, lay, fix and make-off ends of the following cables, including all necessary trenching and tagging and marking:				
2.38.1		Incoming power cabling from the Eskom transformer to the MCC	m	100		
2.38.2		Cabling between the MCC and the motors for the six pumpsets.	Sum	1		
2.38.3		Cabling between the MCC and the six no-flow micro/limit switches on the non-return valves.	Sum	1		
2.38.4		Cabling from the MCC to the internal and external lighting and all power points	Sum	1		
2.39		Commissioning, testing and adjusting the plant after completion of erection and installation, including transportation and accommodation for personnel and instructing Employer's staff as specified:				
2.39.1		All plant installed under Section 2.37 above.	Sum	1		
2.39.2		Supply and or Review Operating and Maintenance Instructions, as specified.	Sum	1		
SECTION 2: FOR PUMP STATION CARRIED FORWARD TO SUMMARY						

Client: UGU District Municipality

Project: Msikaba Water Supply Scheme, Phase 3A

Description: Upgrading of Bomela Pump Station, Construction of Nyandezulu Elevated Reservoir and Booster Pump Station

Contract No.: UGU-07-1611-2022

ITEM No.	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		SECTION 3: EARTHWORKS - 500m³ ELEVATED RESERVOIR				
	SABS 1200 5.1982	Site Clearance				
3.1.1	8.3.1(b)	Clear and grub vegetation and trees of girth up to 1m	m²	650		
	SABS 1200 DA1982	Excavation				
3.1.2	8.3.1 A	Remove topsoil to a nominal depth of 150mm, stockpile & maintain for further use	m²	300		
3.1.3	8.3.1(b)	Bulk Excavation in all materials and use for backfill or dispose to designated area as ordered				
3.1.3.1		Reservoir Column Foundations, including for backfill to finished ground level	m³	900		
3.1.3.2		Reservoir Inlet/Outlet Chamber	m³	20		
3.1.4	8.3.2(b)	Extra-over Item 3.1.3 for (provisional sum):				
3.1.4.1		Intermediate excavation	m³	100		
3.1.4.2		Hard rock excavation	m³	50		
3.1.5		Expose existing Pumpstation inlet and outlet pipe and chambers	m³	10		
	8.3.2(A)	Restricted Excavation				
3.1.6		Excavate for foundations in all materials and use as backfill or embankment or dispose, as ordered				
3.1.6.1		Reservoir and culvert	m³	100		
3.1.7	8.3.2(b)	Extra-over Items 3.1.6 for :				
3.1.7.1		Intermediate excavation	m³	10		
3.1.7.2		Hard rock excavation	m³	15		
		Embankments and Fill				
3.1.8		Import selected fill to use for embankments or as engineering fill under structures and compact to 96% Mod AASHTO	m³	100		
3.1.9		Allow the provisional sum of R25,000.00 for the Engineer's soil tests	Sum	1		R 25,000.00
3.1.10		Contractors attendance, handling costs and charges on item 3.1.9,% to cover all expenses	%			
	SABS 1200DB & 1200LB	Pipe Trenches				
3.1.13	8.3.2(A)	Excavate in all materials for trenches, backfill, compact, for pipes up to and including 250mm diameter:				
3.1.14.1		Depths up to 1,0m	m	25		
3.1.14.2		Depths from 1m to 2m	m	25		
3.1.14.3	8.3.2(B)	EO items 3.1.14.1 & 3.1.14.2 for excavation in (PROV):				
3.1.14.3.1		Intermediate material	m³	5		
3.1.14.3.2		Hard rock material	m³	5		
3.1.14.3.3		Hard rock material without the use of explosives	m³	3		
3.1.15	8.2.1	Provision of bedding from trench excavation and/or other excavations without the need for screening or other treatment				
3.1.15.1		Selected granular material	m³	10		
3.1.13.2		Selected fill material	m³	5		
3.1.13.3		Topsoiling and grassing to designated areas	m²	400		
3.1.13.4		Import G5 Material from commercial sources, 5% cement stabilisation and compaction to 95% MOD AASHTO in 200mm layers for columns foundations (PROV)	m³	80		
3.1.15.5		Mass Concrete, Strength concrete Grade 20 MPa/38mm, 300mm thick for columns foundations (PROV)	m³	20		
SUBTOTAL CARRIED FORWARD						

Client: UGU District Municipality

Project: Msikaba Water Supply Scheme, Phase 3A

Description: Upgrading of Bomela Pump Station, Construction of Nyandezulu Elevated Reservoir and Booster Pump Station

Contract No.: UGU-07-1611-2022

ITEM No.	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SUBTOTAL BROUGHT FORWARD						
	SABS 1200G	SECTION 3: CONCRETE WORK - 500m³ ELEVATED RESERVOIR				
3.2.1	1982 8.1.3	Concrete				
3.2.1.1	8.4.2	Blinding layer in 15mPa / 19mm concrete				
3.2.1.1.2		50mm minimum thickness	m²	50		
3.2.1.2	8.4.3	Strength concrete Grade 20 MPa/38mm:				
3.2.1.2.1		Mass filling where ordered	m³	25		
3.2.1.3	8.4.3	Strength concrete Grade 25 MPa/19mm:				
3.2.1.3.1		Bases , columns , ring beams and bracing beams	m³	110		
3.2.1.3.2		Inlet/Outlet Chamber floors and roof slabs	m³	12		
3.2.1.4	8.4.3	Strength concrete Grade 35 MPa/19mm: (Rate to include for the provision of test cubes and testing in an external lab)				
3.2.1.4.1		Floor slab and beams - reservoir	m³	38		
3.2.1.4.2		Wall - reservoir	m³	55		
3.2.1.4.3		Internal column and column head - reservoir	m³	3		
3.2.1.4.4		Roof ring beam and roof slab - reservoir	m³	28		
3.2.2	8.1.2	Reinforcement:				
3.2.2.1	8.3.1	Mild steel bars up to and including 16mm basic price (prov qty)	t	10		
3.2.2.2		High tensile steel bars 25mm dia, basic price (provisional qty)	t	18		
3.2.2.3		E.O.item 3.2.2.2 (prov qty) for bars of diameter				
3.2.2.3.1		10mm	t	2		
3.2.2.3.2		12mm	t	20		
3.2.2.3.3		16mm	t	30		
3.2.2.3.4		20mm	t	3		
3.2.2.3.5		High tensile welded Mesh (Ref 395)	m²	8		
3.2.3	8.1.1	Formwork:				
3.2.3.1	8.2.2	Smooth vertical plane to external exposed surfaces and internal surfaces of structure	m²	55		
3.2.3.2		Smooth vertical curved to external exposed surfaces and internal surfaces of structure	m²	415		
3.2.3.3		Smooth vertical curved to internal column and column head	m²	8		
3.2.3.4		Smooth vertical curved narrow widths				
3.2.3.4.1		Up to 150mm wide	m	36		
3.2.3.4.2		Up to 350mm wide	m	38		
3.2.3.4.3		Up to 450mm wide	m	225		
3.2.3.5	8.2.5	Smooth vertical narrow widths				
3.2.3.5.1		Up to 450mm wide	m	140		
3.2.3.5.2		Up to 500mm wide	m	115		
3.2.3.6		Smooth horizontal to soffits of floor slab	m²	127		
3.2.3.7		Smooth horizontal to soffits of roof slab	m²	110		
3.2.3.8		Smooth horizontal narrow widths				
3.2.3.8.1		Up to 450mm wide	m	105		
3.2.3.9		40mm x 40mm curved chamfer to ring beam and wall	m	160		
SUBTOTAL CARRIED FORWARD						

Client: UGU District Municipality

Project: Msikaba Water Supply Scheme, Phase 3A

Description: Upgrading of Bomela Pump Station, Construction of Nyandezulu Elevated Reservoir and Booster Pump Station

Contract No.: UGU-07-1611-2022

ITEM No.	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SUBTOTAL BROUGHT FORWARD						
3.2.3.10	8.2.6	Box out holes of area up to and including 0,2m ² for dephts up to and including	N°	2		
3.2.3.11		Box out holes of area up to and including 0,5m ² for dephts up to and including 0,25m	N°	2		
3.2.4		Grouting				
3.2.4.1		Grouting up of holes up to and including 0,2m ² for dephts not greater than 0,25m	N°	2		
3.2.5		Setting the following pipes and fittings to the designated lines and levels into or through concrete work including for forming formwork around the pipes and fittings (pipes measured elsewhere)				
3.2.5.1		Pipes up to and including 100mm dia	N°	4		
3.2.5.2		Pipes greater than 100mm dia and up to and including 250mm dia	N°	3		
3.2.6	8.5	Joints				
3.2.6.1		Special steel floated finish for sliding joints including dusting with neat cement and apply two coats of approved bitumeninous paint to top of roof ring beams	m ²	10		
3.2.7	8.4.4	Unformed surface finish				
3.2.7.1		Wood floated finish	m ²	45		
3.2.7.2		Steel floated finish (top of ring beam, radial fall on reservoir roof, inlet chamber roof slab, screed board finish to inlet/outlet chamber, special steel floated finish for sliding joint including dusting with neat cement and applying two coats of approved bitumeninous paint	m ²	270		
3.2.8	8.6	Precast concrete units				
3.2.8.1		Supply and install precast concrete slab 1450 square x 100mm thick including galvanised handgrips all as shown on Drg No.UGU-14-01/08. (Galvanised manhole cover and frame measured elsewhere)	N°	4		
3.2.9		Cleaning, disinfecting and sterilising reservoir and pipework before watertightness test	Sum	1		
3.2.10		Disinfecting reservoir and testing reservoir for watertightness and taking all precautions to ensure soundness of the structures in this respect	Sum	1		
SUBTOTAL CARRIED FORWARD						R 5,500.00

Client: UGU District Municipality

Project: Msikaba Water Supply Scheme, Phase 3A

Description: Upgrading of Bomela Pump Station, Construction of Nyandezulu Elevated Reservoir and Booster Pump Station

Contract No.: UGU-07-1611-2022

ITEM No.	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SUBTOTAL BROUGHT FORWARD						
		SECTION 3: METALWORK - 500m² ELEVATED RESERVOIR				
3.3.1		Supply and install complete hot dipped galvanised items including all anchors, bolts, nuts and washers. For details see Drg No.UGU-14-01/08				
3.3.1.1		Internal reservoir ladder	N°	1		
3.3.1.2		External reservoir ladder comprising of 2 No 5,90m overall length , 1No 7,245m overall length and 1No. 5,3m overall length	Sum	1		
3.3.1.3		Pipe brackets for upto 250mm dia pipes	N°	30		
3.3.1.4		Manhole covers and frames	N°	4		
3.3.1.5		Inlet/outlet chamber ladder, overall height 1.5m	N°	2		
3.3.1.6		3 No. Galvanised access hand hold stanchions suitably braced with knee and handrails	N°	3		
3.3.2		Roof ventilators				
3.3.2.1		Supply and install 100mm dia stainless steel double swan neck roof ventilators - see Drg No UGU-14-01/03-2.2	N°	4		
3.3.3		Reservoir Roof Rainwater Outlet				
3.3.3.1		Supply and install complete rainwater assembly as shown on Drg No UGU-14-01/03-2.2. Overall length of down pipe = 15m	N°	2		
3.3.4		Galvanised Handhold Stanchions				
3.3.4.1		Supply and install galvanised handhold stanchions bolted to concrete with 12mm dia stainless anchors with knee and handrails	m	38		
SUBTOTAL CARRIED FORWARD						

Client: UGU District Municipality

Project: Msikaba Water Supply Scheme, Phase 3A

Description: Upgrading of Bomela Pump Station, Construction of Nyandezulu Elevated Reservoir and Booster Pump Station

Contract No.: UGU-07-1611-2022

ITEM No.	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SUBTOTAL BROUGHT FORWARD						
		SECTION 3: PIPEWORK - 500m³ ELEVATED RESERVOIR				
3.4.1		150mm dia and smaller pipes and fittings to be Hot dipped galvanised, Pipes and fittings larger than 150mm dia to be 350 micron epoxy coated and lined. Supply , handle and install steel pipes and fittings. Rate to include for all gaskets , nuts , bolts and jointing material. Flanges to table 1600/3 SABS 1123				
		Pipes				
3.4.1.1		200mm dia x 5050mm long D/FL pipe	N°	4		
3.4.1.2		200mm dia x 4600mm long D/FL pipe	N°	4		
3.4.1.3		200mm dia x 4730mm long D/FL pipe	N°	3		
3.4.1.4		200mm dia x 1100mm long D/FL pipe	N°	1		
3.4.1.5		200mm dia x 9144mm long PE pipe. Rate to include for cutting to length to suit on site	N°	2		
3.4.1.6		200mm dia x 1190mm long D/FL pipe	N°	1		
3.4.1.7		200mm dia pipe x 370mm long F.O.E	N°	1		
3.4.1.8		200mm dia x 815mm long D/FL pipe	N°	1		
3.4.1.9		200mm dia puddle pipe D/FL x 2500mm long, puddle flange set 600mm from one end	N°	1		
3.4.1.10		200mm dia cast iron flange adaptor (steel/uPVC)	N°	2		
3.4.1.11		200mm dia x 1890mm long D/FL pipe	N°	1		
3.4.1.12		200mm dia x 150mm flanged tee, 250mm C/F	N°	1		
3.4.1.13		200mm dia pipe x 800mm long F.O.E	N°	1		
3.4.1.14		200mm dia x 480mm long D/FL pipe	N°	1		
3.4.1.15		200mm dia x 2500mm long D/FL pipe	N°	1		
		Air Valve Assembly:				
3.4.1.16		50mm dia screw on flange, galv	N°	1		
3.4.1.17		50mm dia barrel nipple, galv	N°	1		
3.4.1.18		50mm dia socket, galv	N°	1		
		Bends				
3.4.1.19		200mm x 90 deg D/FL bend 3 segments 230mm C/F	N°	6		
3.4.1.20		100mm x 90 deg D/FL bend 3 segments 195mm C/F	N°	1		
3.4.1.21		200mm x 90 deg FL/PE bend 3 segments 230mm C/F	N°	1		
3.4.1.22		150mm dia F.B.E., 90 deg bend, 250mm C/F	N°	1		
3.4.1.23		150mm x 45 deg F.O.E bend 195 mm C/F	N°	1		
		Reducers				
3.4.1.24		200mm to 100mm D/FL reducer 180 F/F	N°	1		
		Couplings / Flanges				
3.4.1.25		200mm dia VJ flange adaptor. PE to connect to 219.1mm OD pipe	N°	4		
3.4.1.26		200mm dia VJ coupling	N°	1		
		Stainless steel pipework				
3.4.2		Supply , handle and install Stainless Steel fittings grade 304L, wall thickness 3,7mm. All fittings to be pickled and passivated after welding (flanges to SABS 1123 table 1600/3). Stainless steel bolts and nuts to be coated with A nickle anti seize compound				
3.4.2.1		100mm dia x 1000mm long D/FL puddle pipe with central puddle collar	N°	1		
3.4.2.2		200mm dia x 855mm long D/FL puddle pipe with central puddle collar	N°	1		
3.4.2.3		200mm x 90 deg D/FL bend 3 segments 230mm C/F	N°	1		
3.4.2.4		100mm x 90 deg D/FL bend 3 segments 195mm C/F	N°	1		
3.4.2.5		200mm dia FL bellmouth 300mm F/F	N°	1		
3.4.2.6		200mm dia FL bellmouth 940mm F/F with puddle collar 135mm from bellmouth	N°	1		
		Valves				
3.4.3		Supply , handle and install SABS approved flanged wedge gate valves. Flanges to table 1600/3 SABS 1123. Rate to include all nuts , bolts , gaskets and jointing material.				
3.4.3.1		100mm dia Level Dex control valve 100 LX 1601	N°	1		
3.4.3.2		200mm dia F.B.E. wedge gate valve	N°	4		
3.4.3.3		200mm dia Meinecke Cosmos strainer	N°	2		
3.4.3.4		200mm dia flanged kent 4000 helix water meter	N°	2		
3.4.3.5		150mm dia F.B.E. wedge gate valve	N°	1		
3.4.3.6		50mm dia air valve (Vent-O-Mat RBx)or similar approved)	N°	1		
SUBTOTAL CARRIED FORWARD						

Client: UGU District Municipality

Project: Msikaba Water Supply Scheme, Phase 3A

Description: Upgrading of Bomela Pump Station, Construction of Nyandezulu Elevated Reservoir and Booster Pump Station

Contract No.: UGU-07-1611-2022

ITEM No.	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SUBTOTAL BROUGHT FORWARD						R -
		SECTION 3: SUNDRIES - 500m³ ELEVATED RESERVOIR				
3.5.1		Stone Covering				
3.5.1.1		75mm thick layer 38mm clean, washed crushed igneous stone on reservoir roof	m³	10		
3.5.2		Fencing				
3.5.2.1		Supply and erect anti intruder fencing constructed of razor mesh fencing and precast concrete posts as shown on Drg No. UGU-14-01/22	m	130		
3.5.2.2		Supply and erect double gate as shown on Drawings	N°	1		
3.5.3		Headwall / Drain				
3.5.3.1		Construct complete brick headwall including stone pitching as shown on Drg No. UGU-14-01/22	N°	1		
3.5.3.2		Supply and lay 250mm dia mPVC class 12 drain pipe	m	24		
3.5.4		Air Bricks				
3.5.4.1		Supply and build into openings in pipe culvert walls 230mm x 150mm louvred terracotta air bricks with plastic insect screens. Forming of openings measured under item no. 3.2.3.10	N°	4		
3.6		Connect into Existing Mains				
3.6.1		Connect to existing mains at Reservoirs	Sum	1		
3.7		Lightning				
3.7.1		Provision for supply and installation of lightning protection equipment for the Reservoir	Prov Sum	1	R 65,000.00	R 65,000.00
3.8		Locks				
3.8.1		Supply and install Master "Discus" high security lock code 370. "Keyed Alike" to Ugu specifications	N°	5		
3.9		Chambers:				
3.9.1		Inlet Chamber: (Refer to Dwg.)				
		i) Access lid (600x900 CI as by Besaans-du Plessis or similar) and frame complete with locking bar to be hot dip galvanized.	N°	1		
		ii) Supply materials and construct chamber complete. Rate to include for excavation and backfill, shuttering, 20MPa concrete, floor and roof slab, reinforcement, brickwork, plaster, step irons, ventilator finishing of concrete surfaces.As per drawing detail.	Sum	1		
3.9.2		Scour and Outlet Chamber				
		i) Access lid (600x900 CI as by Besaans-du Plessis or similar) and frame complete with locking bar to be hot dip galvanized.	N°	1		
		ii) Supply materials and construct chamber complete. Rate to include for excavation and backfill, shuttering, 20MPa concrete, floor and roof slab, reinforcement, brickwork, plaster, step irons, ventilator finishing of concrete surfaces.As per drawing detail.	Sum	1		
3.9.3		Scour and Overflow Chamber:				
		i) Access lid (600x900 CI as by Besaans-du Plessis or similar) and frame complete with locking bar to be hot dip galvanized.	N°	1		
		ii) Supply materials and construct chamber complete. Rate to include for excavation and backfill, shuttering, 20MPa concrete, floor and roof slab, reinforcement, brickwork, plaster, step irons, ventilator finishing of concrete surfaces.As per drawing detail.	Sum	1		
TOTAL FOR SECTION 3 CARRIED TO SUMMARY :						

Client: UGU District Municipality
Project: Msikaba Water Supply Scheme, Phase 3A
Description: Upgrading of Bomela Pump Station, Construction of Nyandezulu Elevated Reservoir and Booster Pump Station

Contract No.: UGU-07-1611-2022

ITEM No.	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
4	SABS 1200 DA	SECTION 4: EARTHWORKS- PUMP HOUSE & CLEAR WELLS				
4.1		Site Clearance:				
4.1.1		Clear vegetation and trees of girth up to 1m	m ²	400		
4.2	SABS 1200 DA 1988	Excavation:				
4.2.1	8.3.1(a)	Remove topsoil to nominal depth of 150 mm and stockpile	m ²	400		
4.2.2	8.3.1(b)	Bulk excavation in all material and use for backfill or embankments or dispose to designated disposal areas, as ordered to:				
4.2.3		Inlet & outlet chambers	m ³	20		
4.2.4		Pumpstation	m ³	25		
4.2.5		Restricted excavation below bulk in all material and stockpile or dispose as ordered for:				
4.2.6		Pumpstation strip footings	m ³	4		
4.2.7		Inlet & outlet chambers	m ³	3		
4.2.8		EO item 4.2.2 to 4.2.8 for excavation in (PROV):				
4.2.8.1		Hard rock material	m ³	2		
4.2.8.2		Hard rock material without the use of explosives (where ordered by the Engineer)	m ³	3		
4.2.8.3		Boulders Class A	m ³	2		
4.2.8.4		Boulders Class B	m ³	1		
4.3	SABS 1200 DB 1989	Excavation : Pipe Trenches				
4.3.1	8.3.2(a)	Excavate in all materials for trenches for pipes, 200mm dia or less, backfill and compact, incl for disposal of surplus / unsuitable material, for depths:				
		Over and Up to				
4.3.1.1		0,0m to 1,0m	m	20		
TOTAL CARRIED FORWARD						

Client: UGU District Municipality
Project: Msikaba Water Supply Scheme, Phase 3A
Description: Upgrading of Bomela Pump Station, Construction of Nyandezulu Elevated Reservoir and Booster Pump Station
Contract No.: UGU-07-1611-2022

ITEM No.	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
4.3.1.2		1,0m to 2,0m	m	10		
4.3.2	8.3.2(b)	EO Item 4.3.1.2 for excavation in (PROV):				
4.3.2.1		Hard rock material	m ³	2		
4.3.2.2		Hard rock material without the use of explosives	m ³	1		
4.4	SABS 1200 LB 1983	Provision of Bedding:				
4.4.1	8.2.1 PSLB 5.3	Selected from trenches, and/or other excavations including the need for screening or other treatment:				
4.4.1.1		Selected granular material	m ³	2		
4.4.1.2		Selected fill material	m ³	11		
4.5		Topsoiling and grassing to designated areas	m ²	100		
4.6		5% cement stabilisation and compaction to 90% MOD AASHTO of selected fill under structures.	m ³	35		
TOTAL CARRIED FORWARD						

Client: UGU District Municipality
 Project: Msikaba Water Supply Scheme, Phase 3A
 Description: Upgrading of Bomela Pump Station, Construction of Nyandezulu Elevated Reservoir and Booster Pump Station

Contract No.: UGU-07-1611-2022

ITEM No.	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
4.70		SECTION 4: CONCRETE WORKS				
		NYANDEZULU BOOSTER PUMPSTATION				
4.7.1		Strength concrete Grade 15 MPa/19 mm:				
4.7.1.1		False floor	m ³	2		
4.7.2	8.4.3	Strength concrete Grade 30 MPa/19 mm				
4.7.2.1		Foundations	m ³	5		
4.7.2.1		Floor slab and pump plinths	m ³	10		
4.7.2.3		Roof slab and ring beam	m ³	10		
4.7.3	8.1.2.2	Reinforcement				
4.7.3.1	8.1.2.3	High tensile steel bars:				
4.7.3.1.1		12 mm and under	t	2		
4.7.3.1.2		16mm and over	t	1		
4.7.3.2		H/T Mesh (Ref 395) (floor slab)	m ²	20		
4.8	8.1.1	Formwork:				
4.8.1		Smooth vertical plane:				
4.8.1.1		Ring beam	m ²	22		
4.8.2		Smooth vertical narrow widths not exceeding 300 mm wide to:				
TOTAL CARRIED FORWARD						

Client: UGU District Municipality
Project: Msikaba Water Supply Scheme, Phase 3A
Description: Upgrading of Bomela Pump Station, Construction of Nyandezulu Elevated Reservoir and Booster Pump Station

Contract No.: UGU-07-1611-2022

ITEM No.	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
4.8.2.1		Roof slab	m	12		
4.8.2.2		Pump plinths	m	6		
4.8.2.3		200 mm x 100 mm deep cable duct in false floor, incl for sand fill and screeding	m	5		
4.8.2.4		Smooth horizontal shuttering to soffit of roof slab	m ²	20		
4.8.2.5		40 x 40 Chamfers to edges of pumpstation roof ring beam	m	70		R 5,500.00
4.8.2.6		Form 150 mm x 100 mm deep drain in false floor	m	5		
4.9		Grouting				
4.9.1		Grouting to machine bases using Prostruct 5-Star Grout or similar approved	m ³	0.1		
4.10		Unformed surface finishes:				
4.10.1		Screed board finish to concrete floor	m ²	15		
4.10.2		Woodfloat finish to pump plinths	m ²	2		
4.10.3		Steel floated finish to roof slab & false floor	m ²	35		
4.10.4		Special, glass-like finish incl. polishing with cement to top of ring beam (230 mm wide) and supply two layers of 4-ply malthoid incl for all cutting and waste for full overlap at corners	m	18		
4.10.5		Form 20 mm dia half round drip channel in roof slab	m	20		
4.10.6		500 x 500 x 50 mm thick precast concrete paving slabs including for laying on 50 mm sand bed, cutting pointing and wastage	m	20		
4.11		DPM or similar approved under floor of pumpstation, including for ant poisoning	m ²	20		
4.12		Dig trenches, for drainpipe (up to 160 mm dia), backfill and compact (depth 1.0 m)	m	25		
4.13		Supply and lay 160 mm dia uPVC drain pipe (including bedding)	m	25		
TOTAL CARRIED FORWARD						

Client: UGU District Municipality
Project: Msikaba Water Supply Scheme, Phase 3A
Description: Upgrading of Bomela Pump Station, Construction of Nyandezulu Elevated Reservoir and Booster Pump Station

Contract No.: UGU-07-1611-2022

ITEM No.	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
4.14		SECTION 4: BRICKWORK AND PLASTER				
		NYANDEZULU BOOSTER PUMPSTATION				
4.14.1		230mm thick brickwork, one skin common brick with one skin face brick. Rates to include brickforce over door openings and louvres	m ²	75		
4.14.2		As for Item 4.14.1 but with both skins in commons	m ²	10		
4.14.3		Damp-proof course to joints between brickwork and concrete in approved bituminous sheeting, cut to the full width of the walls, incl. for laps and sealing at joints and angles	m ²	11		
4.14.4		10 mm thick plaster to internal walls of pumpstation	m ²	40		
4.14.5		Supply and form granolithic screed 25 - 75 mm thick to floors	m ²	20		
4.15		Painting:				
4.15.1		Priming with alkali resistant primer and painting interior plaster or concrete surface in building with three coats of approved PVC latex type paint	m ²	40		
4.15.2		Box out 200 mm x 200 mm openings in walls for pipes up to 150mm diameter	N ^o	4		
TOTAL CARRIED FORWARD						

Client: UGU District Municipality
Project: Msikaba Water Supply Scheme, Phase 3A
Description: Upgrading of Bomela Pump Station, Construction of Nyandezulu Elevated Reservoir and Booster Pump Station

Contract No.: UGU-07-1611-2022

ITEM No.	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
		SECTION 4: SUNDRIES				
4.16		NYANDEZULU BOOSTER PUMPSTATION				
4.16.1		Supply and install Galvanised transformer doors, prices of doors to incl for frames, butt hinges, door handles, hasp and staple:				
4.16.1.1		Size 2.700m x 1.830m fully louvred on each leaf with box out to suit crawl beam	N°	1		
4.16.2		Supply and Install Galvanised louvres:				
4.16.2.1		900 mm x 745 mm x 240 thick with vermin proof insect mesh and R10 burglar bars (incl building into brickwork)	N°	10		
4.17	SABS 1200	Steelwork				
	HA 1984					
4.17.1		Supply and install 254 x 146 x 31 kg/m x 6,250 m long galvanised universal beam complete with all fittings, holding bolts, stop bolt support bracket, etc, all as detailed on Drawings	N°	1		
4.17.2		Supply and deliver to site complete with all test certificates and operating instructions two tonne geared chain block with 2 m lift and matching crawl	N°	1		
4.18		Provisional sum for telemetry in accordance with the Employer's specifications, by nominated sub-contractor.	Sum	1	R 150,000.00	R 150,000.00
4.19		Allow for a Provisional Sum of R 450,000 for the supply and installation of pump station Mechanical and Electrical equipment by nominated sub-contractor.	Sum	1	R 450,000.00	R 450,000.00
4.20		Main Contractor's commission on item 4.18 & 4.19 above	%			
4.21		All pipework and valves(including a non-return valve and flow meter at discharge) for the pumpsets supplied under 6.19 above, and all suction and delivery pipework to and from the pumps terminating at flanges outside the pump station building all as shown on the tender drawings.	Sum			
4.22		Allow the Provisional Sum of R25,000.00 for payment of independent inspectors appointed by the Engineer	Prov. Sum	1	R 25,000.00	R 25,000.00
4.23		Fencing:				
4.23.1		Supply and erect anti-intruder fencing constructed of razor mesh fencing and prestressed concrete posts as shown on Drawings	m	60		
4.23.2		Supply and erect double gate as shown on Drawings	N°	1		
TOTAL CARRIED FORWARD						

Client: UGU District Municipality
Project: Msikaba Water Supply Scheme, Phase 3A
Description: Upgrading of Bomela Pump Station, Construction of Nyandezulu Elevated Reservoir and Booster Pump Station

Contract No.: UGU-07-1611-2022

ITEM No.	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
		SECTION 4: MECHANICAL & ELECTRICAL				
		NYANDEZULU BOOSTER PUMPSTATION				
4.24		Supply and delivery to site of the following plant and equipment, including storage, quality assurance, painting and insurance:				
4.24.1		Two centrifugal potable water pumps with a duty of 22 l/s x 20m head for Nyandezulu Elevated Reservoir Pumps, in accordance with the specification	Sum	1		
4.24.2		Two suitably sized motors to drive pumps supplied under item 4.24.1, complete with couplings, guards, bedplates and holding down bolts.	Sum	1		
4.24.3		All pipework and valves (including a non-return valve and flow meter at discharge) for the pumpsets supplied under 4.24.1 above, and all suction and delivery pipework to and from the pumps terminating at flanges outside the pump station building all as shown on the tender drawings.	Sum	1		
4.24.4		All necessary permanent supports for the pipework and valves supplied under 4.24.3	Sum	1		
4.24.5		Two sets of suction and delivery pressure gauges – one set for each individual pumpset.	Sum	1		
4.24.6		Wall mounted MCC, all as specified.	Sum	1		
4.24.7		Limit switches on the non-return/control valves on the pump delivery pipes	Sum	1		
4.25		150mm dia and smaller pipes and fittings to be Hot dipped galvanised, Pipes and fittings larger than 150mm dia to be 350 micron epoxy coated and lined.				
4.25.1		Supply , handle and install steel pipes and fittings. Rate to include for all gaskets , nuts , bolts and jointing material. Flanges to table 1600/3 SABS 1123	Sum	1		
TOTAL CARRIED FORWARD						

Client: UGU District Municipality
Project: Msikaba Water Supply Scheme, Phase 3A
Description: Upgrading of Bomela Pump Station, Construction of Nyandezulu Elevated Reservoir and Booster Pump Station

Contract No.: UGU-07-1611-2022

ITEM No.	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
BROUGHT FORWARD						
4.26		Taking delivery, handling, erection, installation, final painting and quality assurance of the following plant and equipment, including transportation and accommodation for personnel:				
4.26.1		Two pumpsets supplied under Item 4.26.1 including for setting up bedplates and HD bolts.	Sum	1		
4.26.2		Two motors supplied under Item 4.26.2 including for setting up bedplates and HD bolts.	Sum	1		
4.26.3		Pipework and valves supplied under Items 4.26.3 and 4.26.4	Sum	1		
4.26.4		Pressure gauges supplied under Items 4.26.5	Sum	1		
4.26.5		Motor Control Center supplied under Item 4.26.6.	Sum	1		
4.26.6		Limit switches on non-returnsupplied under Item 4.26.7	Sum	1		
4.26.7		Allow for removal of the existing pumpsets and pipework as directed by the Engineer and deliver to the Employer's stores in Marburg.	Sum	1		
4.27		Supply, lay, fix and make-off ends of the following cables, including all necessary trenching and tagging and marking:				
4.27.1		Incoming power cabling from the Eskom transformer to the MCC	m	100		
4.27.2		Cabling between the MCC and the motors for the two pumpsets.	Sum	1		
4.27.3		Cabling between the MCC and the two no-flow micro/limit switches on the non-return valves.	Sum	1		
4.27.4		Cabling from the MCC to the internal and external lighting and all power points	Sum	1		
4.28		Commissioning, testing and adjusting the plant after completion of erection and installation, including trans-portion and accommodation for personnel and instructing Employer's staff as specified:				
4.28.1		All plant installed under Section 4.26 above.	Sum	1		
4.28.2		Supply Operating and Maintenance Instructions, as specified.	Sum	1		
TOTAL FOR SECTION 4 CARRIED TO SUMMARY :						

Client: UGU District Municipality
Project: Msikaba Water Supply Scheme, Phase 3A
Description: Upgrading of Bomela Pump Station, Construction of Nyandezulu Elevated Reservoir and Booster Pump Station
Contract No.: UGU-07-1611-2022

ITEM No.	PAYMENT	DESCRIPTION	Unit	BOQ Qty	Rate	Amount		
5.0	SABS 1200 DA	SECTION 5: SUNDRIES						
		Connect into Existing Mains						
		Expose,and connect into existing flanged outlet at Bomela Reservoir and to the Bomela Pump station as detailed on drawing No. . Rate to include for suitable 250mm to 200 mm reducer to suit existing outlet pipes, 200mm isolation valve, 200mm flanged tee and 80m air valve with flanged tee to fit.					Sum	1
		Cleaning, disinfecting and sterilising reservoirs (1ML at Bomela Central and 2 x 1ML at Msikaba) and pipework before watertightness test					Sum	1
		Disinfecting reservoirs (1ML at Bomela Central and 2 x 1ML at Msikaba) and testing reservoir for watertightness and taking all precautions to ensure soundness of the structures in this respect					Sum	1
SECTION 5: FOR SUNDRIES CARRIED FORWARD TO SUMMARY								

Client: UGU District Municipality

Project: Msikaba Water Supply Scheme, Phase 3A

Description: Upgrading of Bomela Pump Station, Construction of Nyandezulu Elevated Reservoir and Booster Pump Station

Contract No.: UGU-07-1611-2022

SUMMARY PAGE

SECTION	DESCRIPTION	BILL AMOUNT
1	Preliminary & General	
2	Bomela Pump Station	
3	500 KL Nyandezulu Elevated Concrete Reservoir	
4	Nyandezulu Booster Pump Station	
5	Sundries	
SUB-TOTAL 1		
ADD 15% CONTINGENCY SUM		
SUB-TOTAL 2		
ADD 15% VAT		
TOTAL TO BE CARRIED TO FORM OF TENDER		

SIGNED: _____

DATE: _____

Witness 1: _____

DATE: _____

Witness 2: _____

DATE: _____



VOLUME 1

CONTRACT

PART 3

SCOPE OF WORKS

PART 3: SCOPE OF WORKS

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C3.1 STANDARD SPECIFICATIONS

The standard specifications on which this contract is based are the SABS 1200 Standard Specifications.

Although not bound nor issued with this document, the following Parts of the Standard specifications shall form part of this contract:

SABS 1200	A	:	General
SABS 1200	AB	:	Engineers Office
SABS 1200	C	:	Site Clearance
SABS 1200	D	:	Earthworks
SABS 1200	DB	:	Earthworks (Pipe Trenches)
SABS 1200	DM	:	Earthworks (Roads and sub grade)
SABS 1200	GA	:	Concrete (Small works)
SABS 1200	L	:	Medium Pressure Pipelines
SABS 1200	LB	:	Bedding (Pipes)
SABS 1200	LE	:	Storm water Drainage
SABS 1200	ME	:	Sub Base
SABS 1200	MF	:	Base
SABS 1200	MM	:	Ancillary Roadwork's
SABS 1200	GK	:	Gabions and Pitching
SABS 1200	MH	:	Asphalt Base and Surfacing
SABS 1200	MK	:	Kerbing and Channelling

The following SANS specifications are also referred to in this document and the contractor is advised to obtain them from Standards South Africa (a division of SABS) in Pretoria.

SANS 10396: 2003: Implementing Preferential Construction Procurement Policies using Targeted Procurement Procedures

SANS 1914-1 to 6 (2002) : Targeted Construction Procurement

SANS 1921 – 1 (2004) : Construction and Management Requirements for Works Contracts
Part 1: General Engineering and Construction Works and where accommodation of traffic is involved:

SANS 1921-2 (2004): Construction and Management Requirements for Works Contracts; and
Part 2: Accommodation of Traffic on Public Roads Occupied by the Contractor.

C5.2 PROJECT SPECIFICATIONS**STATUS**

The Project Specification, consisting of two parts, forms an integral part of the contract and supplements the Standard Specifications.

Part A contains a general description of the works, the site and the requirements to be met.

Part B contains variations, amendments and additions to the Standardized Specifications and, if applicable, the Particular Specifications.

In the event of any discrepancy between a part or parts of the Standardized or Particular Specifications and the Project Specification, the Project Specification shall take precedence.

In the event of a discrepancy between the Specifications, (including the Project Specifications) and the drawings and / or the Bill of Quantities, the discrepancy shall be resolved by the Engineer before the execution of the work under the relevant item.

A: GENERAL

PS-1 PROJECT DESCRIPTION

The UGU District Municipality seeks to provide a safe and reliable source of potable water supply to the rural community of Kwa-Dweshula Tribal Authority. The Msikaba and Surrounding area Settlement is located within the Nsimbini Area of the KwaMavundla Traditional Area (Hibiscus Coast Municipality), approximately 8 km northwest of Shelly Beach on the KwaZulu-Natal Lower South Coast.

The Water Supply Area lies within the Traditional Authorities of Mavundla and Ndwalane which consists of the following wards, within the Hibiscus Coast Municipality:

- Msikaba (Ward 3)
- Nyandezulu (Ward 24)
- Nkulu (Ward 25)
- Qinabout (Ward 26)
- Nositha (Ward 27)

The Msikaba Project Area consists of 5388 households (HH). This figure is obtained from household counts on ortho-photo maps (2011 images). In addition there are other facilities in the area such as primary schools and Rural Health Centres.

The road network consists of mainly dirt (gravel) roads. Main bridges are of good quality and usually passable. The UGU District Municipality intends to correct the anomalies within the the Traditional Authorities of Ndwalane and render it functional by construction of the following under **Msikaba Water Supply Scheme Phase 3A: Upgrading of Bomela Pump Station & Construction of Nyandezulu Elevated Reservoir and Booster Pump Station: CONTRACT NO. UGU-07-1611-2022**:

- Upgrading of Bomela Pump Station
- 0.5ML Nyandezulu Elevated Concrete Reservoir,
- Nyandezulu Elevated Reservoir Pump Station, including Eskom Power Supply application.

Under this Contract UGU-07-1611-2022, UGU District Municipality is inviting tenders for the **Project Name: Msikaba Water Supply Scheme Phase 3A: Upgrading of Bomela Pump Station & Construction of Nyandezulu Elevated Reservoir and Booster Pump Station.**

The scope of works to be undertaken under this Contract includes but is not limited to the following:

- Setting out the reservoir.
- Site clearing and landscaping for access to the reservoir site.
- Bulk excavation for the reservoir and pump station.

- 200mm bulk gravity main (1km) from Msikaba Reservoirs to tie onto the existing 300mm steel pipe at Betania,
- blank off on sections outside the peripheral of the Betania supply zone to feed the same existing reticulation by gravity,
- Expose and connect into existing flanged outlet at Bomela North Reservoir, at Bomela Reservoir and to the Bomela Pump station. Rate to include for suitable 250mm to 200 mm reducer to suit existing outlet pipes, 200mm isolation valve, 200mm flanged tee and 80m air valve with flanged tee to fit.
- Construction of 0.5ML Nyandezulu Elevated Concrete Reservoir,
- Construction of Nyandezulu Elevated Reservoir Pump Station, including Eskom Power Supply application and installation of pump sets.
- Tie-in to the existing high level supply and isolate high pressure areas, to be supplied from the existing ground reservoir.
- Assess and refurbish Mechanical and Electrical equipment for Nyandezulu / Msikaba Pump Station kept at Marburg Workshop.
- Installation of Mechanical and Electrical equipment for Nyandezulu / Msikaba Pump Station.
- Cleaning, disinfection, water tightness testing for the reservoir.
- Fencing.

PS-2.1 Description of Site

The Msikaba and Surrounding area Settlement is located within the Nsimbini Area of the KwaMavundla Traditional Area (Hibiscus Coast Municipality), approximately 8 km northwest of Shelly Beach on the KwaZulu-Natal Lower South Coast.

The Water Supply Area lies within the Traditional Authorities of Mavundla and Ndwalane which consists of the following wards, within the Hibiscus Coast Municipality:

- Msikaba (Ward 3)
- Nyandezulu (Ward 24)
- Nkulu (Ward 25)
- Qinabout (Ward 26)
- Nositha (Ward 27)

The Msikaba Project Area consists of 5388 households (HH). This figure is obtained from household counts on ortho-photo maps (2011 images). In addition there are other facilities in the area such as primary schools and Rural Health Centres.

The road network consists of mainly dirt (gravel) roads. Main bridges are of good quality and usually passable.

PS-2 CONSTRUCTION AND MANAGEMENT REQUIREMENTS

PS-2.1 General

The Contractor is referred to SANS 1921: 2004 parts 1, 2, 3 and 5: Construction and Management Requirements for Works Contracts. This specification shall be applicable to the contract under consideration and the Contractor shall comply with all requirements relevant to the project.

Certain aspects however require further attention as described hereafter.

PS-2.2 Quality Assurance (QA) (SANS 1921 – 1: 2004 clause 4.4)

The Contractor will be solely responsible for the production of work that complies with the Specifications to the satisfaction of the Engineer. To this end it will be the full responsibility of the Contractor to institute an appropriate Quality Assurance (QA) system on site. The Engineer will audit the Contractor's quality assurance (QA) system on a regular basis to verify that adequate independent checks and tests are being carried out and to ensure that the Contractor's own control is sufficient to identify any possible quality problems which could cause a delay or failure.

The Contractor shall ensure that efficient supervisory staff, the required transport, instruments, equipment and tools are available to control the quality of his own workmanship in accordance with his QA-system. His attention is drawn to the fact that it is not the duty of the Engineer or the Engineer's representative to act as foreman or surveyor.

PS-2.3 Management and disposal of water (SANS 1921 – 1: 2004 clause 4.6)

The Contractor shall pay special attention to the management and disposal of water and storm water on the site. It is essential that all completed works or parts thereof are kept dry and properly drained. Claims for delay and for repair of damage caused to the works as a result of the Contractor's failure to properly manage rain and surface water, will not be considered.

PS-2.4 Disposal of spoil or surplus material (SANS 1921 – 1: 2004 clause 4.10)

The Contractor shall dispose all surplus and unsuitable material in designated spoil areas within 0,5 km from the site as pointed out to the Contractor.

PS-2.5 Testing (SANS 1921 – 1: 2004 clause 4.11)**PS-2.5.1 Process control**

The Contractor shall arrange for all tests required for process control to be done by a laboratory acceptable to and approved by the Engineer.

The Contractor may establish his own laboratory on site or he may employ the services of an independent commercial laboratory. Whatever method is used, the Contractor must submit the results of tests carried out on materials and workmanship when submitting work for acceptance by the Engineer. The costs for these tests shall be deemed to be included in the relevant rates and no additional payment will be made for testing as required.

PS-2.5.2 Acceptance control

The process control test results submitted by the Contractor for approval of materials and workmanship may be used by the Engineer for acceptance control. However, before accepting any work, the Engineer may have further control tests carried out by a laboratory of his choice. The cost of such additional tests will be covered by a provisional sum provided in the schedule of quantities, but tests that failed to confirm compliance with the specifications, will be for the account of the Contractor.

PS-2.6 Survey Beacons (SANS 1921 – 1: 2004 clause 4.15)

The Contractor shall take special precautions to protect all permanent survey beacons or pegs such as bench-marks, stand boundary pegs and trigonometrically

beacons, regardless whether such beacons or pegs were placed before or during the execution of the Contract. If any such beacons or pegs have been disturbed by the Contractor or his employees, the Contractor shall have them replaced by a registered land surveyor at his own cost.

PS-2.7 Existing Services (SANS 1921 – 1: 2004 clause 4.17)

The Contractor shall make himself acquainted with the position of all existing services before any excavation or other work likely to affect the existing services is commenced. The Contractor will be held responsible for any damage to known existing services caused by or arising out of his operations and any damage shall be made good at his own expense. Damage to unknown services shall be repaired as soon as possible and liability shall be determined on site when such damage should occur.

PS-2.8 Management of the environment (SANS 1921 – 1: 2004 clause 4.19)

The Contractor shall pay special attention to the following:

(a) Natural Vegetation

The Contractor shall confine his operation to as small an area of the site as may be practical for the purpose of constructing the works. The natural vegetation, grassing and other plants shall not be disturbed other than in areas where it is essential for the execution of the work or where directed by the Engineer. The Contractor shall demarcate a servitude area during construction and do snake protection on the pipeline servitude.

(b) Fires

The Contractor shall comply with the statutory and local fire regulations. He shall also take all necessary precautions to prevent any fires. In the event of fire the Contractor shall take active steps- to limit and extinguish the fire and shall accept full responsibility for damages and claims resulting from such fires which may have been caused by him or his employees.

PS-2.9 Overhaul

No payment will be made for overhaul on this contract unless provision is made therefore in specific items.

PS-2.10 Security

The Contractor shall provide security watchmen for the contract as he deems fit at no extra cost for the Employer. The Contractor must ensure that all his employees as well as the employees of his subcontractors are able to identify themselves as members of the construction team. The Contractor shall ensure that the employees are protected from snakes during construction and shall keep anti-venom on site at all times in case of an attack.

PS-3 CONSTRUCTION PROGRAMME**PS-3.1 Preliminary programme**

The Contractor shall include with his tender a preliminary programme on the prescribed form to be completed by all Tenderers. The programme shall be in the form of a simplified bar chart with sufficient details to show clearly how the works will be performed within the time for completion as stated in the Contract Data.

Tenderers may submit tenders for an alternative Time for Completion in addition to a tender based on the specified Time for Completion. Each such alternative tender shall include a preliminary programme similar to the programme above for the execution of the works, and shall motivate his proposal clearly by stating all the financial implications of the alternative completion time.

The Contractor shall be deemed to have allowed fully in his tendered rates and prices as well as in his programme for all possible delays due to normal adverse weather conditions and special non-working days as specified in the Special Conditions of Contract, in the Project Specifications and in the Contract Data.

PS-3.2 Programme in terms of Clause 12 of the General Conditions of Contract

It is essential that the construction programme, which shall conform in all respects to Clause 12 of the General Conditions of Contract, be furnished within the time stated in the Contract Data. The preliminary programme to be submitted with the tender shall be used as basis for this programme. The Contractor's attention is also drawn to clause 40.3 of the General Conditions of Contract 2004.

PS-4 SITE FACILITIES AVAILABLE**PS-4.1 Contractor's camp site and depot (SANS 1921 – 1: 2004 clause 4.14)**

The Contractor is responsible to provide a suitable site for his camp and to provide accommodation for his personnel and labourers. If the Employer can make any specific site available to the Contractor, such site will be pointed out to the Contractor.

PS-4.2 Accommodation of Employees

No housing is available for the Contractor's employees and the Contractor shall make his own arrangements to house his employees and to transport them to site. No informal housing or squatting will be allowed.

The Contractor shall provide the necessary ablution facilities at his camp site and the site of the works for the use of his employees. Chemical toilets only will be allowed where temporary facilities have to be provided.

PS-4.3 Power supply, water and other services

The Contractor shall make his own arrangements concerning the supply of electrical power, water and all other services. No direct payment will be made for the provision of electricity, water and other services unless provision is made in the schedule of quantities. The cost thereof shall be deemed to be included in the rates and amounts tendered for the various items of work for which these services are required, or in the Contractor's preliminary and general items as the case may be.

PS-5 SITE FACILITIES REQUIRED

PS-5.1 Facilities for the required by the Engineer are as per items in the bill of quantities or stated herein.

PS-6 REQUIREMENTS FOR ACCOMMODATION OF TRAFFIC**PS-6.1 General**

The Contractor will be responsible for the safe and easy passage of public traffic past and on sections of roads of which he has occupation or where work has to be done near traffic.

PS-6.2 Basic Requirements

The travelling public shall have the right of way on public roads, and the Contractor shall make use of approved methods to control the movement of his equipment and vehicles so as not to constitute a hazard on the road.

The Contractor shall ensure that all road signs, barricades, delineators, flagmen and speed controls are effective and that courtesy is extended to the public at all times.

Failure to maintain road signs, warning signs or flicker lights, etc, in a good condition shall constitute ample reason for the Engineer to suspend the work until the road signs, etc, have been repaired to his satisfaction.

The Contractor may not commence constructional activities affecting existing roads before adequate provision has been made to accommodate traffic in accordance with the requirements of this document and the South African Road Traffic Signs Manual.

The Contractor shall construct and maintain all temporary drainage works necessary for temporary deviations.

PS-6.3 Payment

The Contractor's tendered rates for the relevant items in the Bill of Quantities shall include full compensation for all possible additional costs which may arise from this, and no claims for extra payment due to inconvenience as a result of the modus operandi will be considered.

PS-7 OCCUPATIONAL HEALTH AND SAFETY (SANS 1921 – 1: 2004 clause 4.14)**PS-7.1 General statement**

It is a requirement of this contract that the Contractor shall provide a safe and healthy working environment and to direct all his activities in such a manner that his employees and any other persons, who may be directly affected by his activities, are not exposed to hazards to their health and safety. To this end the Contractor shall assume full responsibility to conform to all the provisions of the Occupational Health and Safety Act No 85 and Amendment Act No 181 of 1993, and the OHSA 1993 Construction Regulations 2014 issued on 18 July 2003 by the Department of Labour.

For the purpose of this contract the Contractor is required to confirm his status as mandatory and employer in his own right for the execution of the contract by entering into an agreement with the Employer in terms of the Occupational Health and Safety Act in the form as included in SECTION C 1.3 (F 4): FORMS TO BE COMPLETED BY SUCCESSFUL TENDERER.

PS-7.2 Health and Safety Specifications and Plans to be submitted at tender stage

(a) Employer's Health and Safety Specification

The Employer's Health and Safety Specification will be included in the tender documents as part of the Project Specifications.

The following items will require special attention

1. Loading and transporting of Hard rock and boulder type material to spoil and fill.
2. Carry and placing of fencing material.
3. Operating of plant within the community area.
4. Protection of existing water mains
5. Protecting pedestrians and local traffic from the work area
6. Blasting of hard rock excavations.
7. Providing protective clothing for activities on site.
8. Walking and working on steep sections of the pipeline route.
9. Snake protection for labourers during construction.
10. Only within the prescribed servitude shall the workers be allowed to work and walk, especially in the mountain steep section.

(b) Tenderer's Health and Safety Plan

The Tenderer shall submit with his tender his own documented Health and Safety Plan he proposes to implement for the execution of the work under the contract. His Health and Safety Plan must at least cover the following:

- (i) a proper risk assessment of the works, risk items, work methods and procedures in terms of Regulations 7 to 28;
- (ii) Pro-active identification of potential hazards and unsafe working conditions;
- (iii) Provision of a safe working environment and equipment;
- (iv) Statements of methods to ensure the health and safety of subcontractors, employees and visitors to the site, including safety training in hazards and risk areas (*Regulation 5*);
- (v) monitoring health and safety on the site of works on a regular basis, and keeping of records and registers as provided for in the Construction Regulations;
- (vi) details of the Construction Supervisor, the Construction Safety Officers and other competent persons he intends to appoint for the construction works in terms of Regulation 6 and other applicable regulations; and
- (vii) Details of methods to ensure that his Health and Safety Plan is carried out effectively in accordance with the Construction Regulations 2014.

The Contractor's Health and Safety Plan will be subject to approval by the Employer, or amendment if necessary, before commencement of construction work. The Contractor will not be allowed to commence work, or his work will be suspended if he had already commenced work, before he has obtained the Employer's written approval of his Health and Safety Plan.

Time lost due to delayed commencement or suspension of the work as a result of the Contractor's failure to obtain approval for his safety plan, shall not be used as a reason to claim for extension of time or standing time and related costs.

PS-7.3 Cost of compliance with the OHSA Construction Regulations

The rates and prices tendered by the Contractor shall be deemed to include all costs for conforming to the requirements of the Act, the Construction Regulations and the Employer's Health and Safety Specification as applicable to this contract. Should the Contractor fail to comply with the provisions of the Construction Regulations, he will be liable for penalties as provided in the Construction Regulations and in the Employer's Health and Safety Specification.

Items that may qualify for remuneration will be specified in the Safety Specifications included or in the Project specifications.

PS-8 ADVERSE WEATHER CONDITIONS

- In terms of Clause SCC 42.3 of the Special Conditions of Contract, extension of time will be considered for **abnormal rainfall**. The numbers of days per month on which work is expected not to be possible as a result of **normal rainfall**, and for which the Contractor shall make provision in his tendered rates, prices and programme, are listed in Table PS-8.1 below. Only the number of days lost as a result of adverse weather conditions, exceeding the number of days listed in Table PS 8.1, will qualify for consideration of extension of time.
- During the execution of the Works, the Engineer's Representative will certify a day lost due to abnormal rainfall and adverse weather conditions only if no work was possible on the relevant working day on any item which is on the critical path according to the latest approved construction programme; or if less than 30% of the work force and plant on site could work during that specific working day.
- extension of time as a result of abnormal rainfall and adverse weather conditions shall be calculated monthly being equal to the number of working days certified by the Engineer's Representative as lost due to rainfall and adverse weather conditions, less the number of days allowed for as in Table PS-8.1, which could result in a negative figure for certain months. The total extension of time as a result of abnormal climatic conditions for which the Contractor may apply, shall be the cumulative algebraic sum of the monthly extensions. Should the sum thus obtained be negative, the extension of time shall be taken as nil."

- TABLE PS-8.1: EXPECTED NUMBER OF WORKING DAYS LOST PER MONTH DUE TO NORMAL RAINFALL

MONTH	Expected number of working days lost as result of normal rainfall
JANUARY	*5
FEBRUARY	5
MARCH	4
APRIL	1
MAY	1
JUNE	1
JULY	1
AUGUST	1
SEPTEMBER	2
OCTOBER	3
NOVEMBER	4
DECEMBER	5
TOTAL	32 days

(Based on information obtained from the Weather Bureau, Department of Environment Affairs, Margate. The average monthly rainfall figures quoted, are included for information only, and shall be used as a guideline when taking into consideration calculation of extension of time. The number of working days lost for December and January allows for the builders' holidays from 16 December to 5 January.). If an extension of time is granted, the Engineer may, at his entire discretion, grant such extension.

B: AMENDMENTS TO THE STANDARD AND PARTICULAR SPECIFICATIONS**INTRODUCTION**

The following variations and additions to the SABS 1200 Standard Engineering Specification will be valid. The prefix "PS-B" indicates an amendment to Part B, "PS-C" to Part C, etc.

PS-A GENERAL**PS-A.1 WIND BLOWN MATERIAL**

The Contractor shall ensure that dust or other windblown material from the site does not affect adjoining properties nor cause hazardous conditions on the site, and shall make allowance in the rate tendered under Part A: P & G Time related, for sweeping, sprinkling with water or other measures necessary to fulfil this requirement.

PS-A.2 PROGRESS PHOTOGRAPHS

No provisional sum has been included in the schedule of quantities for the development of progress photos.

PS-A.3 PROVIDE AS-BUILT PLANS

The Tenderer shall note in his sum for de-establishment from site must be included in the Schedule of Quantities an item covering the submission of as-built data.

The Contractor shall supply the Engineer with:

- (a) A list of surveyed co-ordinates and levels of cable ducts and all services proved during the contract.
- (b) A list of surveyed invert and cover levels, and co-ordinates of all catch pits and manholes constructed or modified during the course of the contract.
- (c) Final platform levels

A hard copy as well as a disk with a dxf. file will be required.

Any information in the possession of the Contractor which is necessary for the Engineer's Representative to complete his "as built" records must be submitted to the Engineer before a final payment certificate and certificate of completion will be issued.

PS-C SITE CLEARANCE**PS-C.1 SCOPE**

The work required under this section is for the clearing and grubbing of the reservoir sites and 2m wide along the pipeline route and 10m wide along the steep sections of the pipe. The cost of moving of loose boulders and cutting of trees and removal of tree stumps must be included in the rate for clearing.

PS-C.2 DISPOSAL OF MATERIAL (SUB-CLAUSE 3.1)

Disposal of surplus or unsuitable materials will be done by the Contractor at disposal areas to be indicated by the Engineer. All costs related to this activity shall be deemed to be included in the rate.

PS-C.3 EXISTING FENCES

Where the route of the pipeline traverses existing fences these shall be carefully uplifted, if required, and reinstated during the course of activities in that specific areas. Where an uplifted fence interferes with the security of what it controls a temporary fence shall be installed and operated to the satisfaction of the Engineer or his Representative. The cost of the above must be included in the rate for clearing.

PS-D EARTHWORKS**PS-D.1 STOCKPILE AREAS**

All unsuitable excavated material shall be spoiled to tip. No stockpile handling and overhaul shall be paid under this Contract.

PS-D.2 EARTHWORKS: GENERAL

All earthworks quantities are to be determined on site and agreed between the Contractor and the Engineer. All material excavated from site shall be (a) carted to tip, or (b) re-used on site as fill. It is anticipated that the in-situ soil conditions are of adequate strength to avoid the need to undertake subgrade improvements. The Engineer shall determine which of the above 2 options are to be carried out should unfavourable formation conditions arise. All fill material to be re-used shall, however, be suitable for fill and shall not be contaminated by any organic matter. Tenderers are to note that the unit of measurement for bulk excavation in all material to fill, spoil and rock fill areas shall be the cubic metre (m³), and that the rate tendered shall be inclusive of all work or operations as is defined in SABS 1200 D of the "Standard Engineering Specification.

PS-D.3 TOLERANCES

Clause D.3 shall be amended to read as follows:-

The allowable tolerances shall be -

- (a) the design angle ± 2 degrees for the angle of the cut or fill slope;
- (b) not less than the design width, nor more than 300 mm greater than the design width for the transverse horizontal embankment width at any level; and
- (c) For the formation, the Contractor will be required to place level pegs longitudinally at 5 m intervals on the platform construction contract and elevation tolerances shall be taken on a section of the works. (When a portion of the works is less than 500 m² one tolerance reading per 10 m² shall be taken).

In any section the average of the elevations taken shall be such that the average thickness of the succeeding layer or layers above the formation shall be not less than that specified/nor greater than that specified plus 20 mm.

The standard deviation of the differences between the actual and design levels shall not be greater than 50 mm.

PS-D.4 MATERIALS - CLASSES OF EXCAVATION (Sub-clause 3.1.2)

The excavation of materials will be classified as follows for purposes of measurement and payment:

No intermediate material classification applies to this project.

Rock: Materials found in ledges or masses in its original position which in the opinion of the Engineer would have to be loosened by blasting or by pneumatic tools, or by wedges and hammers if excavated by hand.

Naturally occurring boulders or detached pieces of material conforming to the above definition will not be classified as rock unless they exceed 0,125 m³ in volume.

Topsoil: The upper layer of soil which in the opinion of the Engineer is capable of sustaining vegetation growth.

PS-D.5 EXPLOSIVES (Sub-clause 5.1.1.3)

In addition to the terms of Sub-Clause 5.1.1.3, explosives are to be used only with the written permission of the Engineer. Care is to be taken that no damage is done to existing Works and precautions are to be taken to prevent blasted material being thrown about. The size of charges is to be minimum necessary.

The Contractor will be responsible for all costs incurred in obtaining the necessary permits and displaying all the compulsory warning notices.

Any damage caused to buildings, other existing works, or to the surrounding rock formation will be the responsibility of the Contractor.

Furthermore, the Engineer may, at any time, disallow the further use of Explosives. In this instance, the Contractor shall, without additional cost to the Employer, complete the excavation using other approved methods of excavation.

PS-D.6 FREEHAUL (Sub-clauses 5.2.6 and 8.3.1)

The free haul distance for the purpose of this Contract shall be a 5,0km (Five kilometres) radius.

PS-DB EARTHWORKS FOR TRENCHES**PS-DB.1 COMPACTION OF TRENCHES**

Further to clause DB.5.6.7, Tenderers are to note that in all cases the compaction of the trench bottom and the trench backfill shall be to 95% Mod. A.A.S.H.T.O.

An extra-over item has **not** been included in the Schedule of Quantities and Tenderers shall include for these costs under the relevant excavate and backfill items.

PS-DB.2 EXCAVATION FOR OPEN DRAINS

The excavation for open drains will be measured as cubic meter (m³) and can be lined or unlined. The rate tendered shall include for all labour and plant to excavate the drain in soft material, trim to the correct profile and grade, to compact the drain.

PS-DB.3 SHORING AND DEWATERING (Sub-clause 4.2 and 5.1.2)

In addition to the terms of Sub-clauses 4.2 and 5.1.2 of SABS 1200 DB, any work destroyed or damaged due to inadequate precautions being taken against rain, flood, seepage or ingress of water of any kind, shall be repaired to the satisfaction of the Engineer. The Contractor shall be responsible for the entire cost of any remedial works necessary.

Furthermore, whenever there exists, in the opinion of the Engineer, any reasonable danger that backfilled trenches or other work may be damaged by flood waters, he may order whatever measure he considers necessary, inter alia:

- a) Earth or rock walls in trenches.
- b) Temporary works to re-route existing water courses.
- c) Acceleration of the Contractor's programme to minimize risk.

No provision has been made for separate payment for any shoring, dewatering or anti-erosion measures. The unit rate for excavation shall cover all costs involved in keeping the excavation safe and free from water.

PS-DB.4 FENCES THAT INTERSECT OR ADJOIN A TRENCH

The costs of tunneling, protecting, maintaining and repairs necessitated by damage caused to existing fences, walls and any units by the Contractor must be included in the tendered rates for excavation measured under Sub-clause 8.3.2 of SABS 1200 DB.

PS-DB.5 CONSTRUCTION (Clause 5)

No extension of time or additional payment for any inconvenience, extra costs or delays arising due to degree of difficulty of work will be allowed or paid to

the Contractor.

Where no specific item is scheduled to cover an activity or to compensate for any inconvenience or delay, all costs involved must be built in to the tendered rates for excavation, measured under sub-clause 8.3.2 of SABS 1200 DB.

PS-DB.6 EXISTING SERVICES THAT INTERSECT OR ADJOIN A TRENCH (Sub-clause 5.1.4)

The works involved in locating and exposing existing water pipes, sewers, storm water pipes, concrete lined channels and drain box culverts, electric cables, fibre optic units, ducts, kerbs, channels, stand connections and various pipes and services that intersect a trench will not be measured separately. The costs of exposing these services, tunneling, replacement, removing, closing off, protecting, maintaining and repairs necessitated by damage caused by the Contractor must be included in the tendered rates for excavation measured under SABS 1200 A sub-clause 8.8.4.

PS-DB.7 EXCAVATION (TRENCHES FOR PIPES) (Sub-clause 5.4)

Unless otherwise permitted in writing by the Engineer, not more than **250** metres of trench shall be opened in advance of pipe laying and backfilling operations. Furthermore, no trench may be left open over extended periods.

PS-DB.8 DISPOSAL OF EXCAVATION MATERIAL (Sub-clause 5.6.3 and 5.6.4)

The Contractor shall dispose of excess material to an area designated by the Engineer. All these costs will be carried by the Contractor. Free haul is 5.0km.

PS-DB.8 BACKFILL MATERIALS

PS-DB.8.1 Deficiency of Backfill Material (Sub-clause 5.6.5)

No payment will be made for additional backfill material in the trenches due to over break, etc. The Contractor must allow for such costs in the tendered rates for excavation measured under sub-clause 8.3.2 of SABS 1200 DB.

PS-DB.8.2 Deficiency of Backfill Material in Road Reserves and Road Crossings.

No payment will be made for the selection and or importation of additional backfill material to meet the material specification in road crossings. The Contractor must allow for such costs in the tendered rates for compaction in road reserves measured under sub-clause 8.3.3.3 and according to sub-clause 8.3.6 of SABS 1200 DB. The Contractor must also allow in his rate for any testing which might be done on layer works.

PS-DB.9 MEASUREMENT AND PAYMENT (Sub-clause 8.1.2)

PS-DB.9.1 PIPE TRENCH LENGTHS (Sub-clause 8.1.2)

Notwithstanding the terms of Sub-clause 8.1.2, the trench excavation will be measured by volume. The contractor shall include in the rate for the additional excavation required for any removal of boulders and vegetation plus the 100 mm to be allowed for bedding materials.

PS-DB.9.2 EXCAVATION (Sub-clause 8.3.2)

Delete payment sub-clause 8.3.2 (b) (I), i.e. for the purposes of measurement and payment, material other than hard rock, will not be separately classified.

Payment for excavation will be as follows:

50% of the rate tendered for excavation items upon completion of the excavation, a further 30% upon completion of the backfilling and compaction, and the remaining 20% upon the completion of the re- instatement, disposal of any surplus and unsuitable material, reinstatement of paving, cleaning of area according to the Engineer satisfaction, and the testing results of the bedding compaction and densities have been handed over to the Engineer if required by Engineer.

PS-DB.9.3 ACCOMMODATION OF TRAFFIC (Sub-clause 8.3.7)

Facilities for the accommodation of traffic during the construction must be provided by the Contractor. The cleaning and repairing of any surfaces worked on, damaged or spoiled on as stated in **SABS 1200 DB Sub-clauses 5.9.5, 5.9.6 and 5.7.2** will be on the cost of the Contractor. No additional payment will be made for these facilities, and the cost thereof will be regarded as being included in the tendered rates for trench excavation.

PS-G CONCRETE**PS-G 1 CEMENT (Clause 3.2.1)**

All OPC (Ordinary Portland Cement) to be used shall conform with SABS 471. A blended mix with up to 25 % PFA (Pulverized-fly ash) or slagment shall only be used following the written approval of the Engineer.

PS-G 2 STORAGE OF CEMENT (Clause 3.2.3)

A first-in-first out circulation shall be followed to ensure that no cement for (i) reinforced concrete shall be older than 3 months from the date of manufacture and ii) mass concrete shall be older than 6 months from the date of manufacture.

PS-G 3 CONCRETE FINISHES (Clause 4.5.2)

Concrete against which earth will be backfilled will be finished rough. All exposed concrete surfaces shall be finished smooth to degree of accuracy II.

PS-G 3.1 Rubbed surface finish

Where a rubbed surface is specified or scheduled the surface shall first be treated as a smooth finish as specified in SABS 1200 G 5.2.1 b)

After sufficient time has elapsed to allow the mortar to set the surface shall be saturated by water. Rubbing shall then be carried out with a medium coarse carborundum stone and a small amount of mortar until all forms marks, projections and irregularities are removed and a uniform surface obtained.

Leaving the paste produced by the rubbing in place, rubbing shall be continued with a fine carborundum stone and water. Rubbing shall be continued until the entire surface is of a

smooth even texture and uniform color. After the final rubbing the surface shall be washed down to remove surplus paste and powder.

PS-G 3.2 Cement Screeding (Sub-Clause 5.5.10.2)

Cement screeding shall consist of three parts of sand to one part cement. The final level shall be finished to definite slopes (where required, i.e. roofs, galleys, etc.) and in no case shall the thickness be less than 20 mm)

PS-G 3.3 Unformed surface finished (Sub-clause 5.5.10.2)

PS-G 3.3.1 Wood-floated finish

Where wood floating is specified or scheduled, the surface shall first be given a finish as specified in Sub-Clause 5.5.10.1 of SABS 1200G and, after the concrete has hardened sufficiently, it shall be floated to a uniform surface free of trowel marks. The screeded surface shall be wood-floated, either by hand or machine, only sufficiently to produce a uniform surface free from screed marks.

PS-G3.3.2 Steel-floated finish

Where steel floating is specified or scheduled, the surface shall be treated as specified in PSG3.3.1 except that, when the moisture film has disappeared and the concrete has hardened sufficiently to prevent laitance from being worked to the surface, the screed surface shall be steel-trowel under firm pressure to produce a dense, smooth, uniform surface free from trowel marks.

PS-G 4 HOLES, CHASES AND FIXING BLOCKS (Clause 5.3)

Substitute the contents of the clause with:

a) General

Holes, recesses and boxed-out openings shall be allowed in concrete structures, as specified, for the subsequent installation of mechanical equipment and/or pipe work.

b) Preparation of openings for the installation of equipment

Before commencing the positioning in holes of any pipes/specials the Contractor shall:

- i) Remove all shuttering and boxing remaining in the holes;
- ii) Make any alternations required to the position and shape of the holes;
- iii) Thoroughly clean the sides of the holes so as to obtain a satisfactory bond surface for the new concrete; and
- iv) Free all surfaces of the pipes/specials of all coatings, and thoroughly scrape and clean the pipes/specials
- v) Apply a wet-to-dry concrete adhesive (similar to Epidermix 344 from ABE) immediately before grouting.

c) Grouting of voids

The concrete ingredients shall be mixed and placed as dry as possible to obtain a dense, waterproof concrete. Where a watertight seal is required, the concrete shall be carefully worked around the puddle flange, if any, and the pipe barrel or body of the special, and shall be vibrated in layers so as to obviate any falling away from pipe/specials surface of the concrete already placed. The whole shall, when set, form a dense, homogeneous, and waterproof mass. A spare vibrator with an independent power source shall be kept in readiness to ensure continuity of placing in the event of the breakdown of the duty vibrator.

Smooth formwork that has been suitably strengthened for use with a vibrator shall be provided for facing the concrete around each pipe/special.

PS-G 5 PIPES AND CONDUITS EMBEDDED IN CONCRETE (Clause 5.4)

Except with the written approval of the Engineer, no pipes other than those shown on the drawings shall be embedded in concrete, and the approval of the Engineer for the position of all services to be embedded shall be obtained before concreting commences. The clear space between pipes of any kind embedded in reinforced concrete and the clear space between such pipes and reinforcement shall not at any point be less than:

- i) 40 mm or,
- ii) 5 mm plus the maximum size of coarse aggregate, whichever is the greater.

PS-G 6 WATERTIGHT CONCRETE (Clause 5.5.11)

PSG 6.1 Construction joints

a) General

Construction joints in the reinforced concrete walls shall consist only of horizontal joints. If under abnormal conditions a vertical construction joint is unavoidable it may only be constructed with the approval of the Engineer.

Construction joints shall only be placed at intervals shown on the drawings or as directed by the Engineer. The exact position of construction joints shall be marked on the formwork in order to obtain truly horizontal joints.

A sealant using an approved PVC water stop (water bar) shall be placed as specified at the construction joints.

b) Preparation of Surface

Prior to placing any further concrete the joint must be clean, damp and free of laitance. During the period when the concrete has set but is still green all loose material shall be removed, without disturbing the aggregates, by light brushing. Where this is not possible, or if the concrete has already set, the surface film shall be removed by mechanical means appropriate to the degree of hardness of concrete so as to expose the aggregate over the entire surface and leave a sound, irregular surface.

c) Length of water stops

The length of water stops shall determine beforehand and the correct length shall be provided. Should there be any surplus length of water stop at any intermediate level, the surplus shall be rolled up and tied back to eliminate any damage to the water stop. All water stops shall be butt-jointed before placing any concrete as no lapping of water stops will be allowed.

d) Jointing of Water stops

At intersections the standard intersection pieces must be used when jointed. At the intersections, and when an insufficient length has been provided, jointing may only be done as prescribed by the supplier. This will be done using heat weld equipment as well as jigs for an accurate and square joint. The joint will be tested by flexing (not folding) the water stop several times. The joint should stay intact.

In the event of jointing not being performed to the Engineer's satisfaction, Engineer may, at his sole discretion, instruct the Contractor to employ a Specialist Contractor to joint the water stops all at the cost of the Contractor.

e) Securing water stop when placing concrete

Water stops are to be installed in such a way as to ensure they are held in their correct position whilst the concrete is placed. Before placing any concrete the water stop shall be inspected to ensure that the water stop is sound. The concrete must be thoroughly compacted around the waterstops to ensure that no porous areas remain.

PS-G 6.2. Ferrule Cup Holes

No system leaving holes passing through the walls will be permitted. Ferrules shall be of the permanent sacrificial type.

Holes forming in reinforced concrete walls during the fixing of formwork shall be repaired on the waterside face with an approved epoxy or non-shrink grout. On the dry face the holes left in the concrete shall be repaired with 1:3 cement-sand mortar. All grouting material shall be thoroughly punned in.

PS-G 7 MEASUREMENTS**PS-G 7.1 Concrete**

The unit rate shall cover the cost of the design of the mix, the provision of aggregates, sand and Portland cement, mixing, testing, placing, compacting, the forming of stop-ends and unforeseen construction joints, striking-off or levelling as applicable, and curing and repairing where necessary.

PS-GA SABS 1200 GA: CONCRETE (Small Works)**PS-GA 1 GENERAL****PS-GA 1.1 Supervision**

During the whole or any time that the placing of concrete is being carried out, the concreting operation shall be under the direct supervision of a suitably qualified civil engineer or other experienced person acceptable to the Engineer. The engineer or Engineer representative must be notified of all pour to be taken at least 2 days in advances. No pouring of concrete may occur in the absence of the Engineer or representative unless authorized in writing. Test cubes sample must be taken for all pours completed on site.

PS-GA 1.2 Records

The Contractor shall maintain written records and provide the following information:

- a) Date on which each section was constructed and time taken to place,
- b) daily weather conditions, and
- c) nature of samples and dates on which they were taken.

PS-GA 2 CEMENT (Sub-clause 3.2)**PS-GA 2.1 Applicable Specification (Sub-clause 3.2.1)**

Unless special cement is specified for a particular application, the cement shall be Portland cement or rapid-hardening Portland cement and shall comply with the requirements of SABS 471.

PS-GA 2.2 Storage of Cement (Sub-Clause 3.2.3)

Cement which is stored on Site shall be kept under cover that provides adequate protection against moisture and other factors which may promote deterioration.

When the cement is supplied in 50 kg pockets, the pockets shall be closely and neatly stacked to a height not exceeding 12 pockets and arranged so that they can be used in the order in which they were delivered to the Site.

Storage of cement in bulk in silos or similar containers shall be permitted, provided that the cement drawn for use is measured by mass and not by volume.

Cement shall not be kept in storage for longer than 6 weeks without the Engineer's permission.

PS-GA 3 ADMIXTURES (Sub-clause 3.5)

Admixtures may only be used in the concrete mix subject to the conditions of Sub-clause 3.5.1 of SABS 1200 G being complied with. Product specification of all admixtures must be provided to the Engineer for approval.

PS-GA 4 COVER (Sub-clause 5.1.3)

The minimum cover of concrete over reinforcement shall be as shown on the drawings. Where this is not indicated, the minimum cover shall not be less than 50mm in normal cases.

PS-GA 5 **DURABILITY (Sub-clause 5.5.1.5)**

For concrete surfaces in contact with the ground and with water, the minimum cover shall be 50 mm and 75 mm respectively.

The concrete mix to be used in water retaining structures shall have a water/cement ratio not exceeding 0.5.

With the local sands available, and to ensure workability, plasticizing admixtures of approved manufacture shall be used in preference to increasing the cement content.

PS-GA 6 STRENGTH CONCRETE (Sub-clause 5.5.1.7)

The required concrete strengths are indicated in the Schedule of Quantities together with aggregate size. No payment of concrete will be made if no test results are submitted.

PS-GA 7 READY MIX CONCRETE

The use of ready mix concrete will be permitted. The quality control will be carried out on Site as for Site mixed concrete. Mixed design, admixture, slagment, aggregate used must be submitted to the Engineer for approval.

PS-GA 8 CONCRETE SURFACES

Except where otherwise specified or detailed, surfaces of concrete shall be screeded to a plane uniform surface.

PS-GA 9 PIPES AND CONDUITS EMBEDDED IN CONCRETE

Except with the written approval of the Engineer, no pipes other than those shown on the drawings shall be embedded in concrete, and the approval of the Engineer for the position of all services to be embedded shall be obtained before concreting commences. The clear space between pipes of any kind embedded in reinforced concrete and the clear space between such pipes and reinforcement, shall not at any point be less than:

- a) 40 mm, or
- b) 5 mm plus the maximum size of coarse aggregate, whichever is the greater.

PS-GA 10 GROUTING OF PIPES/SPECIALS THROUGH WELL WALLS

Where entries for pipes/specials have been provided in the well walls, the Contractor shall:

- a) Remove all shuttering and boxing remaining in the holes,
- b) Make any alterations required to the position and shape of the holes,
- c) Thoroughly clean the sides of the holes so as to obtain a satisfactory bond surface for the new concrete, and
- d) Free all surfaces of the pipes/specials of all coatings, and thoroughly

scrape and clean the pipes/specials.

After accurately positioning the pipes/specials in their respective holes, the Contractor shall fix the pipes/specials in the holes. Immediately before grouting is carried out by the placing of concrete around the pipes, the surface of the existing concrete shall be saturated with water.

The concrete ingredients shall be mixed and placed as dry as possible to obtain a dense, waterproof concrete. Where a watertight seal is required, the concrete shall be carefully worked around the puddle flange, if any, and the pipe barrel or body of the special, and shall be vibrated in layers so as to obviate any falling away from pipe/special surfaces of the concrete already placed. The whole shall, when set, form a dense, homogeneous and waterproof mass. A spare vibrator with an independent power source shall be kept in readiness to ensure continuity of placing in the event of the breakdown of the duty vibrator.

Smooth formwork that has been suitably strengthened for use with a vibrator, shall be provided for facing the concrete around each pipe/special.

Payment for the boxing out of holes/forming of voids, as specified in Sub-clause 8.2.4 of SABS 1200 GA, shall also include for the grouting up afterwards of voids formed for the later installation of a pipe. Tenderers are to allow for all costs incurred by the grouting operation in their unit rates.

Furthermore, where pipes/specials are to be cast into concrete, the pipe must be so cast that it is within 5 mm of the detailed position in plan and elevation. The pipe/special must be so cast that a spirit level placed across either end would show a deviation from the plane in which it should have been cast of not more than 1 mm.

PS-GA 11 UNIFORMED CONCRETE SURFACES (Sub-clause 5.4.8)**PS-GA 11.1 Wood-Floated Finish**

Where steel floating is specified or scheduled, the surface shall be given a finish as specified in Sub-clause 5.4.8.1 of SABS 1200 GA and, after the concrete has hardened sufficiently, it shall be floated to a uniform surface free of trowel marks. The screeded surface shall be wood – floated, either by hand or machine, only sufficiently to produce a uniform surface free from screed marks.

PS-GA 11.2 Steel – Floated Finish

Where steel floating is specified or scheduled, the surface shall be treated as specified in PSGA 11.1 except that, when the moisture film has disappeared, the screeded surface shall be steel-trowelled under firm pressure to produce a dense, smooth, uniform surface free from trowel marks.

PS-LB SABS 1200 LB: BEDDING**PS-LB 1 SELECTED GRANULAR MATERIAL (Sub-clause 3.1)**

The selected granular material to be used must comply with the specification (which may entail obtaining the material from a commercial source).

PS-LB 2 SELECTED FILL MATERIAL (Sub-clause 3.2)

Notwithstanding the terms of sub-clause 3.2., the selected fill material is not to contain lumps and stones of diameter exceeding 13 mm. It is envisaged therefore that the Contractor will either have to obtain the selected fill material from a commercial source or from a borrow pit outside the area of the Works or, alternatively, will have to select and screen suitable material obtained from the trench excavations.

The rate tendered for selected fill material must therefore allow for all costs involved in whatever alternative is chosen for the provision of selected fill material.

PS-LB 3 SOURCE OF BEDDING MATERIAL (Sub-clause 3.4)

The Contractor shall be responsible for providing suitable bedding material, either from the excavated material or from an approved borrow pit or commercial source.

Where suitable bedding material is not available from the excavated material or from an approved borrow pit within the free haul distance of 5.0 km radius, the Contractor must obtain suitable bedding material from a commercial or other approved source.

No additional payment for haul will be authorized or made to the Contractor for bedding materials obtained from borrow pits or commercial sources irrespective of costs or distance from the Site.

PS-LB 4 CONTRACTOR REQUIRED TO EXCAVATE SELECTIVELY Sub-clause 3.4.1)

Notwithstanding, the requirements of Sub-clause 3.7 of SABS 1200 DB and Sub-clause 3.4.1 of SABS 1200 LB regarding use of selective methods of excavating, the Contractor shall use selective methods of excavating and shall provide and use plant that will enable him to avoid burying or contaminating material that is suitable and is required for bedding.

PS-LB 5 DETAILS OF BEDDING (Sub-clause 5.1.2)

Class C bedding is required for pipelines, unless otherwise indicated on the drawings.

PS-LB 6 MEASUREMENT AND PAYMENT**PS-LB 6.1 Sub-clause 8.1.3**

Notwithstanding the provisions of Sub-clause 8.1.3, the volume of bedding materials shall be computed from:

- a) The dimensions of the trench as specified under the Project Specification dealing with Earthworks (Pipe Trenches) and the actual dimensions of the pipe.
- b) The depth of bedding and selected fill blanket as specified.
- c) The volume of the void formed by the pipe shall be subtracted from these computations.
- d) No payment will be made for any bedding material required to backfill overbreak beyond the widths or depths specified.

No separate payment will be measured for bedding material. The supply and placing of bedding shall be indicated in the contractor's rate for the supply and laying of pipes and fittings.

PS-L SABS 1200 L: MEDIUM PRESSURE PIPELINES**PS-L 1 GENERAL (Sub-clause 3.1)**

Unless otherwise detailed on the drawings or in the Schedule of Quantities, all pipes shall be as follows:

PIPE DIAMETER (mm)	MATERIAL	FITTINGS
Less than 65 mm	HDPE	Plasson or similar
65 to 200mm	uPVC	Cast Iron
65 to 200mm	Galvanized Iron	Flanged or similar

The Class of pipe shall be as stated in the Schedule of Quantities.

PS-L 2 DEPTH AND COVER (Sub-clause 5.1.4)

Water mains shall be laid to the lines and levels on the drawings, or where no levels are given, shall be so laid, in road verges and in all other places of the pipeline **the minimum cover, from the finished surface level to the top of the pipe level is 800 mm.** Under carriageways, water mains shall be laid horizontal, and so that the minimum cover is 1 000 mm, the change to the cover under the carriageway from the verge being effected as specified in Sub-clause 5.1.4.2 of SABS 1200 L. Where pipes cross other pipes, roads, etc., a greater degree of accuracy (particularly in the vertical plane) than is permitted under Clause 6 (Tolerances) of SABS 1200 L will be required to be achieved and the Contractor must therefore allow for this in carrying out his work. No additional payment will be made for complying with this requirement.

Payment for trench excavation for mains will be on the basis of the trench depth specified regardless of local variations adopted by the Contractor.

PS-L 3 DISINFECTION OF POTABLE WATER PIPELINES AND RESERVOIR

The disinfection of the potable water pipelines and reservoir is to be undertaken by the Contractor. Each pipe is to be cleaned by rodding and brushing and reservoir walls and floor shall be brushed internally to remove all traces of sediment and other foreign matter. The reservoir and pipes are then to be individually filled with a solution of calcium hypochlorite and water with solution strength of 0.5 g/litre. The solution shall be allowed to stand in the pipeline and reservoir for not less than 24 hours.

PS-L 4 TEST PRESSURE (Sub-clause 7.3.1.2)

Notwithstanding the provisions of Sub-clause 7.3.1.2, the test pressure for field testing shall be 1.5 times the rated class of pipe, e.g. the test pressure for Class "C" pipe class 16 shall be test at 24 bars.

PS-L 5 FLANGES

Unless otherwise stated in the Schedule of Quantities or on the drawings, all flanges are to be drilled in accordance with SABS 1123 Table 1600/3 or 2500/3 for a working pressure of 1.6 MPa (160m) and 2.5 MPa (250m) respectively.

PS-L 6 CUT/CONNECTING INTO EXISTING PIPE

The cutting into existing mains to install specials, fittings, etc, shall be measured and paid for by the number of various nominal diameters and types of pipe into which connections are to be made. Only one unit per connection shall be measured regardless of the number of branches.

The rate tendered shall include for isolating the supply, dewatering, cutting into pipes, reaming of pipes, welding, bolts, washers, nuts, packings, installation of fittings and any work necessary to complete the new connection. The rate shall allow for liaising with the officers of the Local Authority and for carrying out the work outside normal working hours if necessary.

PS-L 7 STANDARD DRAWINGS

Certain drawings referred to in SABS 1200 L has been superseded with the new standard drawings, appearing either at the back of this document or in the Contract drawings. Where the drawings are referred to in SABS 1200 L, the corresponding superseding detail shall apply.

PS-L 8 SUPPLY, LAYING AND BEDDING OF VALVES, SPECIALS AND FITTINGS (Sub-clause 8.2.2 and 8.2.3)

In addition to the provisions of Sub-clause 8.2.2 and 8.2.3, the rates tendered for the supply, laying and bedding of valves and specials shall allow for the following:

- a) **Where a connection is to be made into an existing pipe, Tenderers are to include in their rates for the additional cost of providing short collar or other joints required to enable the connection to be made.**

- b) Tenderers are to include in their rate for the additional cost of providing short collar joints for valves and the required Class to Class triplex couplings for specials.

PS-L 9**CI SPECIALS**

Whereas all effort has been made to determine accurate information concerning the location and diameter of existing pipelines, it is envisaged that some changes to the items measured may be necessary.

Tenderers are therefore informed that the locations and diameters of the existing pipelines are to be ascertained by exposing the existing pipes at connection points prior to ordering of CI specials will be ordered.

The work detailed above is to be executed in good time to allow for delivery of materials. No additional payment will be made for exposing existing services to determine fittings required or for any additional costs incurred by the Contractor in executing the above works other than allowed for under Preliminary and General.

PS-L 10**DOUBLE AIR VALVES FOR WATERWORKS (IF ANY)**

Double air valves are to be Vosa Fig 6854 Class 16, 50 mm valves or similar approved. The necessary flanged connection piece suitable for use with the hydrant tee is to be provided with the valve and Tenderers are to include for all materials necessary to complete the valve installation as detailed.

PS-L 11**SINGLE AIR VALVES FOR WATERWORKS (IF ANY)**

Single air valves are to be Vosa Fig 7564 Class 16, 25 mm valves or similar approved. The necessary screwed inlet pipe suitable for use with the saddle is to be provided with the valve and Tenderers are to include for all materials necessary to complete the valve installation as detailed.

PS-L 12**CORROSION PROTECTION (Sub-clause 3.9)**

All underground saddles, cast iron detachable and flanged joints and galvanized fittings together with their bolts shall be protected by means of either an approved protective paste, then wrapped with three layers of an approved impregnated tape, or other means of inhibiting corrosion approved by the Engineer. In addition, at the time of installation of valves, in the pipeline, external bolts and flanges used in the assembly of the gate valve, hydrant, reflux valve or air valve shall be similarly protected against corrosion.

The price tendered and paid for laying and coupling of pipes and fittings shall include for the provision of corrosion protection as specified.

PL – PUMPS, STEEL PIPES, FITTINGS, COATINGS AND LININGS

1. SCOPE

This specification supplements and where applicable supersedes the standard specification SABS 1200 L. Where this specification is in conflict with SABS 1200 L, the terms of this specification are to take precedence.

The specification covers the particular requirements relating to the manufacture and supply of continuously and fusion bonded epoxy coated steel pipes and fittings.

Pipes of 500 mm OD and above shall be suitable for butt-welding, and pipes below 500 mm OD shall be flanged.

2. INTERPRETATIONS

2.1 Supporting Specifications

The following standards and codes of practice are referred to in this specification:

API	5L	Specification for Line Pipe
API	1104	Standard for Welding Pipelines and Related Facilities
BS	534	Specification for Steel Pipes, fittings and specials for water, gas & sewage
BS	2815	Specification for compressed asbestos fibre jointing
SABS	62	Steel pipes (Parts I and II)
SABS	455	Covered electrodes for the manual arc welding of carbon & carbon manganese steels.
SABS	471	Portland Cement (Ordinary, rapid hardening and Sulphate-resisting)
SABS	719	Electric welded low carbon steel pipes for aqueous fluids (ordinary duties)
SABS	1083	Aggregates from natural sources
SABS	1200L	Civil Engineering Construction : Medium Pressure Pipelines
SABS	1123	Standard specification for steel pipe flanges
SABS	1217	The production of painted and powder-coated steel pipes
SABS	1344	Medium duty solvent detergent
SABS	1365	Solvent degreasers containing chlorinated hydrocarbons
SIS	0559 00	Pictorial surface preparation standards for painting steel surfaces

3. MATERIALS

3.1 General

The pipe and fittings described hereunder are longitudinally or spirally welded steel pipe coated with fusion bonded epoxy powder coating.

3.2 Steel Pipe

3.2.1 Steel

Steel from which pipes are to be manufactured shall comply with Clause 3 of SABS 719 for Grades A,B and C and with Tables 3.1 and 4.1 of API STD 5L for grades X46, X52, X56 and higher grades of steel.

The thickness and grade of steel for pipe to be provided under this contract shall be as described in the Schedule of Quantities.

The Contractor shall, if so requested by the Engineer, provide certificates covering the chemical analysis and physical properties of the actual steel used in the manufacture of the pipes.

3.2.2 Manufacture

All pipes larger than 165 mm outside diameter shall be manufactured in accordance with SABS 719 and smaller diameter pipes in accordance with SABS 62.

3.2.3 Outside Diameter and Wall Thickness

Outside diameters of pipes shall be as described in SABS 719

The permissible tolerances on OD both at pipe ends and on the body of pipes shall be as described in Tables 3A and 3B of SABS 719.

For purposes of application of these tables, pipes under this contract are to be joined by steel plate flanges (welded).

Notwithstanding the requirements of Clause 4.1.3 of SABS 719, nominal wall thickness shall be as described in the Schedule of Quantities, subject to the tolerances allowed under SABS 719.

3.2.4 Welds

All welds shall meet the requirements of SABS 719 and in addition shall be free of all undercuts, sharp protrusions, blowholes and discontinuity.

3.2.5 End Preparation

All pipes shall have their ends finished for butt-welding in accordance with SABS 719 Clause 4.1.5 which is quoted as follows:

Pipe Ends – Pipe ends shall be clean cut, free from burrs and acceptably square to the axis of the pipe.

Ends prepared for welding shall not deviate from square ness to the axis of the pipe by more than the appropriate of the following :

- Pipes of outside diameter not exceeding 500 mm : 1,5 mm
- Larger pipes : 3 mm

The tolerance on the outside diameter of all pipe ends shall be ± 1.6 mm over the first 150 mm and $\pm (0.005D + 1)$ mm over the body of the pipe where D = nominal pipe diameter.

3.2.6 Preparation of Pipes for Coating

Prior to the application of any lining or coating, each pipe shall comply with the following:

3.2.6.1 Weld splatter shall have been removed by chipping or grinding to a smooth surface flush with the surrounding steel.

3.2.6.2 Weld seams shall have a smooth contour, free from sharp edges, protrusions and undercuts.

3.2.6.3 Sharp edges and protrusions shall have been removed by grinding to a smooth radius of curvature of not less than 3 mm.

3.2.6.4 All pipes for coatings shall be in rust condition A to C of Swedish Standard SIS 05 5900. Pipes in rust condition D will be rejected.

3.2.7 Length of Pipes

The Contractor may supply pipes in any standard length to minimize his total costs. 6 m Pipe lengths are, however, preferred. In placing orders for pipes, contractors shall allow for pipe required to manufacture all specials (bends, tees, etc.) and for all wastage. The contractor shall not be extra for fitting if the shorter lengths of pipes are used (Less than 6m lengths)

3.2.8 Marking

All pipes shall be clearly marked in characters not less than 40 mm in height in durable yellow paint on a durable black background at a point close to one end of each pipe, with the following:-

- Contract Number
- Nominal diameter
- Plate thickness
- Grade of steel
- Pipe number

Steel pipes fabricated from material other than Grade B steel are in addition to be marked externally with 50 mm wide bands of enamel paint, (traffic yellow), both at the quarter and mid-points of the pipe as follows:-

Grade C Steel -	one band
Grade X42 Steel	- two bands
Grade X46 Steel	- three bands
Grade X52 Steel	- four bands

Grade B Steel Pipes shall not be marked with painted bands.

3.2.9 Testing of Pipes

Sampling for testing and testing of pipes shall be strictly in accordance with Clauses 6 and 7 respectively of SABS 719. Non-destructive testing shall be as given in 3.2.4 if required by the Engineer.

All pipes shall be hydraulically tested.

The hydraulic test pressure shall be as described in above or Clause 4.2.4 of SABS 719.

Acceptance criteria shall be as described in Clause 6.2 of SABS 719. The results of all tests carried out, reflecting the relevant pipe number, shall be provided to the Engineer in writing.

4 PLANT

4.1 Handling and Rigging

The plant and rigging equipment used for the handling of pipes shall be such that no pipe shall be overstressed during any operation.

In the transportation, loading and unloading of pipes, the Contractor shall at all times operate and maintain an adequate fleet of vehicles to ensure that pipes or their protective linings and coatings are not damaged. In particular, the use of excavation equipment for handling of pipes will not be permitted.

Coated pipes shall be moved with the use of padded slings of width sufficient to prevent damage to the coating. Chain slings, hooks, wire ropes, rope slings without canvas covers, composition belt slings with protruding rivets and any other equipment liable to damage the coating shall not be used. Slings shall be suitably rated for the loads to be handled and in good condition. The use of deteriorating and frayed slings is prohibited.

All pipes are to be lifted and handled with the aid of a "spreader" lifting beam. Special care shall be taken to ensure that no damages occur to pipes or coatings as a result of pipes sliding on or hitting adjacent pipes. The dragging or skidding of pipes and specials in contact with the ground shall not be permitted.

Whenever pipes are stacked, or otherwise stockpiled, or are transported, use shall be made of suitable resilient material as dunnage which shall not disintegrate or deteriorate when exposed to the elements for prolonged periods or under loads from adjacent pipes. Pipes shall be stacked with a minimum clearance of 50 mm between adjacent pipe walls and a minimum of 200 mm clear of the ground.

All PVC-pipe work as well as the rubber sealing rings in pipe couplings shall be protected from the elements to prevent deterioration of the pipe work.

Pipes shall be stacked with sufficient supports to prevent permanent longitudinal deflections. Pipes shall also be stacked in a manner that limits loading on lower layers of pipes. Any pipe showing permanent ovality as a result of surcharge loading will be rejected.

Pipes will be retested for electrical insulation and other defects after delivery to site and all such defects shall be repaired by the Contractor at his expense.

4.2 Welding Machines

All welding machines shall be of proper capacity and in good condition for the welds being undertaken.

4.3 Plant General

The Engineer shall have the right to order the immediate removal from the factory or site of any plant which he may deem to be unsatisfactory for the proper execution of the work. The Contractor shall obtain satisfactory plant to replace that removed without delay.

5 SUPPLY AND FABRICATION OF SPECIALS

The Contractor shall fabricate all specials and fittings indicated in the Schedule of Quantities in accordance with Clause 4 of BS 534. The equipment and processes to be used for the fabrication and testing of specials shall be subject to the approval of the Engineer.

5.1 Coating and Lining of Specials

These shall be as for the pipeline. All flanges shall be DENSO wrapped after installation.

6 WATER PUMP STATION SPECIFICATIONS

6.1 Buildings

1. Lifting Equipment

Where any pump, motor, valve or any other item to be installed does not exceed 100kg each:

- One I-beam to be mounted centrally above pumps and motors
- A suitably sized Crawl trolley to be mounted to I beam.
- A suitably sized chain block
- Suitably placed I-bolts opposite each pump and motor set to be affixed to the walls for rigging purposes
- SWL (Safe Working Load) to be indicated on the I-beams.

Where any pump, motor, valve or any other item to be installed exceeds 100kg each:

- Two I-beams required- one each centrally above pumps and motors or a traverse gantry.
- A suitably sized Crawl trolley with traverse chain to be mounted to I beam
- A suitably sized chain block.
- Suitably placed I-bolts opposite each pump and motor set to be affixed to the walls for rigging purposes

Note: I-beams to protrude at least one metre outside pump station door and fitted with stop block or any other method to prevent trolley to run off beam

2. Cable ducts:

All cables from MCC to motors and pumps shall be laid in channels in the floor and filled with a light screed. No cables laid in cable racks on top of the floor will be permitted.

3. Floors:

Floors to be sloped to allow water to run into a drain situated along the wall opposite MCC. Provision must also be made for drainage from each pump set to run into the drain along the wall to drain to the outside.

4. Handrails:

Where required, all handrails to be hot-dipped galvanized mild steel.

5. Doors:

- Doors to be of galvanized mild steel or mild steel Hammerite coated. Double doors to be specially made to accommodate protruding I-beam.
- A locking device to be fitted to protect the pad or moon lock from vandalism
- Locking device design to be approved by Ugu.

6. Ventilation:

- Pump station to be properly ventilated and done in such a way to prevent entry through vandalism.
- No windows allowed.
- Screens made of hot-dipped galvanised expanded metal or wire mesh to be fitted across the ventilation on the inside. Apertures not to exceed 12mmx12mm.

7. Potable water taps:

One tap to be installed inside the pump station.

8. Roof:

Roof to be constructed of reinforced concrete and properly sealed.

6.2 Mechanical Equipment**1. Valves**

Where Butterfly valves are not suited for the application the Vosa or similar approved wedge gate valves are to be installed.

Suction: Where a single suction pipe enters a pump station a valve to be installed inside and close to the wall and one valve before each pump set with a spool piece between the pump and valve.

Delivery: A non-return valve to be installed on the delivery side of the pump followed by a gate valve before the common manifold. Spool pieces to be installed between valves and pumps. A valve to be also installed on the pumping main inside the pump station close to the wall.

2. Butterfly valves

Butterfly valves of 150mm and above must be operated by means of a gearbox.

3. Gate valves

All valves to be anti-clockwise closing

4. Non-return valves:

Valves to be Vosa or similar approved.

5. Pump and Motor Base-plates:

Base plates to be manufactured of 10mm Hot-dipped galvanised mild steel with strengthening ribs with access holes to easily reach nuts at the bottom. Lugs with jacking bolts for motor alignment to be welded to the base plate.

6. Pipes

All pipes to be suitably sized. Material – Hot-dipped galvanized

7. Gaskets

Gaskets to be ring type – klinger 80, 3mm thick.

8. Bolts

Bolts to be galvanized and lubricated with a non-seize agent.

6.3 Electrical Equipment

1. Motors

All motors to be EFF 1 Premium efficiency, H Class, IP 66 rated from Eskom approved manufacturers.

All motors to be controlled by Star/Delta starters

2. Panels

The MCC panel to be 3Cr12 stainless steel, wall mounted with all cable entries at the bottom.

The MCC panel to be powder coated standard electrical colour (orange).

Each cubical door to be lockable.

3. Preferred Equipment

All contactors, overload relays, control push buttons and indicating lamps and selector switches to be Telemecanique or similar approved.

Control timers, relays and phase failure relays to be Omron or similar approved.

Hour, volt and ammeters to be AC Dynamics or similar approved.

4. Requirements

Isolation of each pump panel shall be by means of a three-phase circuit breaker/isolator with door interlock.

Control voltage to be 220v AC.

Each pump panel shall have a start, emergency stop and reset push buttons on the cubicle door.

Each pump panel shall have a run/stop, overload trip and no flow indication lamp.

Each pump panel shall be fitted with an ammeter.

Each pump panel shall be fitted with a continuous hour meter, resettable hour meter and pump start counter.

Star/Delta contactors must be electrically and mechanically interlocked.

Liquid level relays to be Omron 8 pin or similar approved.

Each pump must have individual no flow protection.

No flow switches to be electronic and shall be type EGE SN450/1-A4-WR2 (230VAC) or similar approved.

All wiring and components to be clearly numbered and labelled.

Control wiring to be terminated with bootlace lug ferrules.

Each control circuit must be interlocked by a phase failure relay.

Field wiring from MCC to be contained in concrete trenches covered with umgeni sand with a light screed over it.

Cables to be ECC.

In the case of dry well pump stations below ground level, probes to be installed for flood warning.

Controls shall have facilities to accommodate the telemetry system i.e.

- A potential contact on the run contactor to indicate pump run on the telemetry system.
- Potential free contacts on the overload relays for trip indication.
- Potential free contacts for no flow trip indication.
- Potential free contacts for Auto/Manual.
- Potential free contacts for duty selection.
- Connection for dry well alarming.

All external and telemetry wiring to be terminated on din rail.

7 MEASUREMENT AND PAYMENT

7.1 General

Measurement and payment shall be per linear meter of piping supplied ex-factory and delivered and off-loaded on site.

7.2 Specials (SABS 1200 L Clause 8.2.2)

Measurement and payment shall be by number supplied ex-factory and delivered to site and offloaded on site as described in the Schedule of Quantities.

The following provision has been made in the Schedule of Quantities for gusseted bend:

7.2.1 Bend over 5° up to and including 30° - one mitre joint

7.2.2 Bend over 30° up to and including 60° - two mitre joints

7.2.3 Bend over 60° up to and including 90° - three mitre joints.

7.3 Corrosion Protection (SABS 1200L Clauses 8.2.7 and 8.2.15)

Notwithstanding the provisions of Clause 8.2.7 and 8.2.15 of SABS 1200L, all pipes and specials shall be protected against corrosion as described in this Specification.

All costs associated with provision of corrosion protection to specials and fittings and reinstatement of coating and lining at specials and elsewhere along the pipeline are to be included in the respective rates for supply of pipes and specials etc.

C3.3 PARTICULAR SPECIFICATIONS**Occupational Health and Safety**

 Ugu District Municipality Distrik Munisipaliteit Umasipala Wesifunda	DOCUMENT INFORMATION		
	Document Type		Originator
	Safety Plan		Occupational Health & Safety Officer
	Activity		Project Name
HSE (Health, Safety and Environment)			
DOCUMENT CHANGE RECORD			
Rev	Date	Section (s) change (d)	Description of Revision
			

PREPARED BY	REVIEWED BY	APPROVED BY	CLIENT REPRESENTATIVE
	SITE AGENT	CONTRACTS MANAGER	PROJECT ENGINEER

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ANNEXURES

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1 Introduction

Purpose and Scope

This document describes the procedure upon which the COMPANY shall comply with the requirements set out in the client's Health and Safety Specification.

This document defines the Management System that is implemented by the COMPANY for the management of Health and Safety on the project, which includes ensuring subcontractor compliance with the same standards.

The aim of this document is to present the safety aspects that will be controlled and managed on the project.

2 Reference Documents

- Occupational Health and Safety Act, (Act No. 85 of 1993)
- Compensation for Occupational Injury and Diseases Act.
- Client Health and Safety Specification.
- Construction Regulations 2003.
- The Construction Kit. (CD)

3 Definitions

The following definitions will apply to the Safety Management Plan, acronyms given hereunder shall apply:

Construction / Building Work (as defined by the Occupational Health and Safety Act: Construction Regulations 2014):

Means any work in connection with –

- a) The erection, maintenance, alteration, renovation, repair, demolition or dismantling of or an addition to a building or any similar structure;
- b) The installation, erection, dismantling or maintenance of a fixed plant where such work includes the risk of a person falling;
- c) The construction, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system or any similar civil engineering structure; or
- d) The moving of earth, clearing of land or making of an excavation or work on any similar type of work.

Hazard Identification and Risk Assessment and Risk Control (HRA)

Means a documented plan, which identifies hazards, assesses the risks and detailing the control measures and safe working procedures, which are to be used to mitigate and control the occurrence of hazards and risks during construction or operation phases.

Site

Means the area in the possession of the Contractor for the construction of the works. Where there is no demarcated boundary it will include all adjacent areas, which are reasonably required for the activities for the Contractor, and approved for such use by the Engineer and/or client.

The Act

Means, unless the context indicates otherwise, the Occupational Health and Safety Act, 1993 (ACT NO. 85 of 1993) and Regulations promulgated there under. (OHSA)

Hazard

Means a source of or exposure to danger (source which may cause injury or damage to persons, or property)

Risk

Means the probability or likelihood that a hazard can result in injury or damage.

Contractor's Responsible Person / s

Means any person appointed in writing by the Contractor to supervise construction or building work. The appointment shall be as required by the OHSA which shall stipulate health and safety responsibilities, area of responsibility and the proposed duration of the project.

Hazardous Chemical Substance (HCS)

Means any toxic, harmful, corrosive, irritant or asphyxiant substance, or a mixture or substances for which an occupational exposure limit is prescribed, or an occupational exposure limit is not prescribed, but which creates a hazard to health.

Construction Plant (TEM)

Encompasses all types of plant including but not limiting to, cranes, piling frames, boring machines, excavators, dewatering equipment and road vehicles with or without lifting equipment.

Contractor

Means "subcontractor".

Health and Safety Program

Encompasses The COMPANY safety planning spreadsheet.

Health and Safety Plan (HSP)

The content of this document which will be made available on site for inspection by an inspector, Technical Officer, Agent, subcontractor, employee, registered employee organization, health and safety representative, or member of the health and safety committee.

Health and Safety File

Describes the safety file holding all records on health and safety for the project, which shall be available at all times for evaluation, and copy of which will be forwarded to the client upon completion of the project.

4 Responsibilities**4.1 Notification of Intention to Commence Construction Work**

The Provincial Director of the Department of Labour shall be notified by the appointed safety consultant to the COMPANY, immediately upon receipt of the Letter of Acceptance of project commencement in accordance with the following requirements:

- The demolition of a structure exceeding a height of 3 meters; or
- The use of explosives to perform construction work; or
- The dismantling of fixed plant at a height greater than 3 meters; or
- The work exceeds 30 days or will involve more than 300 person days of construction work; and
- Includes excavation work deeper than 1 meter; or
- Includes working at a height greater than 3 meters above ground or a landing.

A copy of the notification letter to the Provincial Director shall be forwarded to client for their records and shall be made available to an Inspector, Project Engineer or employee.

4.2 Assignment of Contractor's Responsible Persons to Supervise Health and Safety on Site

The Contracts Manager and Site Agent shall ensure copies of all the appointment letters of the responsible persons appointed on site will be made available to the client and that all legal appointments shall be conducted in accordance with the requirements set out in the **OHSA** and Client specifications.

The above shall also be imposed upon all subcontractors.

4.3 Safety Officer Appointment

A part-time Health and Safety consultant shall be appointed upon commencement of the project.

The safety officers shall be tasked with monthly inspections of the site, the results of which shall be forwarded to the client or his appointed representative.

4.4 Risk Assessment Competent Person

The Project Manager shall appoint a competent person in writing at commencement of the project to control the risk assessment process on site. A copy of the risk assessment appointment is attached with duties and responsibilities defined. **(Annexure E)**

4.5 Competency for Contractor's Responsible Persons

The Project Manager acknowledges that all management personnel (responsible for health and safety) shall undergo a half-day Health and Safety Management Course, which is to be arranged and conducted by the appointed safety consultant prior to commencement of activities on site.

4.6 Health and Safety Representatives

At least one (1) Health and Safety Representative shall be nominated, elected and trained to carry out his / her functions in his / her area of responsibility. This will include areas where less than fifty (50) employees are engaged in activity. Employees elected shall be designated in writing for a specific area and period of time.

The designated persons shall conduct monthly inspections within their area of responsibility, the records shall be kept for auditing and that deviations recorded are reported to the responsible supervisor within the designated persons area so that appropriate action can be taken.

The designated person/s shall be permitted to participate in the Health and Safety Committee Meetings.

5 Objectives and targets

- Compliance with the COMPANY Health and Safety Policy.
- Everyone is responsible for organizing accident prevention at his or her own level on site.
- Safety training is important.
- Prevention.
- Working safely ensures your job.
- The COMPANY management commits itself to the objectives and targets.
- Disabling Injury Frequency Rate (DIFR) of 2.0 or less.
- 90% compliance on monthly Health and Safety Audits.
- Compliance with the legal requirements set out in the Occupational Health and Safety Act, Act 85 of 1993, (OHSA) and Regulations.
- Compliance with the Client's Safety Specification for Construction.

6 Planning and Procedures

The procedures to be used for the project are to be in accordance with the Safety Manual in use in the COMPANY under the guidance of the appointed safety consultant.

The sub-headings covered under the Safety Manual are as follows:

- Administration
- Appointments
- Safety Committees
- Registers, checklists and permits
- Incident Management
- Emergency Planning
- Contractors
- Risk Assessments

- Audits
- Hazardous substance control
- Training
- Mining Requirements
- Roads Requirements
- Planning

7 Implementation of the Occupational Health and Safety Specification

The COMPANY is committed to implementing client specific safety specification on the project and is committed see that this forms an integral part of the project. It is our intention to make this specification part of other Contractors and Suppliers operating procedures.

8 Application of the Health and Safety Specification

8.1 Compensation of Occupational Injuries and Diseases Act, Act No. 130 of 1993 (COIDA)

The letter of good standing will be available on site for reference purposes as proof of good standing. The COMPANY shall ensure all Contractors also comply with the above requirements defined in the COIDA.

8.2 Occupational Health and Safety Policy

The COMPANY Health and Safety Policy is attached for reference purposes.
(Annexure A)

8.3 Hazard Identification Risk Assessment

The Contract Manager shall ensure the Site Agent shall prior to the commencement of any construction work perform Hazard Identification, and the assessed risks shall form part of the health and safety plan applied on site.

A copy of the HRA shall be made available for viewing to the client.

The Site Agent shall ensure that all HRA's conducted will be conveyed to all personnel and contractors through the site training program and that these training sessions will be presented by the competent person regarding the hazard and related work procedures before any work commences.

The HRA Team that will be established will comprise members as follows:

- Health and Safety Representative(s),
- Health and Safety Committee Member(s)
- Management Representative / Site Agent

Attached in the form of **Annexure C and D**, the Hazardous Task Identification and (HTI) and format of the Risk Assessment (RA) is included.

Method statements form part of the Risk Process and will conducted in accordance with the Risk Process described above.

Based on the activities carried out on all projects Hazard Investigation and Risk Assessments (HRA's) will be done. Examples of which are:

- Site Establishment
- Demolition works
- Excavation
- Concrete works
- Lifting operations
- Hand held tools
- Motorized Equipment
- Working at heights

8.4 Health and Safety Committee

The Project shall convene a health and safety committee meeting monthly. All members required to be in attendance shall be notified of such meeting by means of a formal agenda.

The Site Agent shall ensure an attendance register and minutes are kept for auditing purposes, and that a copy of the minutes be circulated to all members in attendance well before convening the next meeting and within 7 days, a copy of the minutes will be forwarded to the project engineer.

Members of the committee shall include the following and are not limited to:

- Safety Consultant. (When available)
- Contractor's site representative. (Supervisory level)
- Contractor's site representatives. (Operating level)
- Project Engineer nominated representative. (Co-opted status)

8.5 Health and Safety Training

Training of personnel is a legal requirement and a necessity and is acknowledged as such. The Training Planning Matrix shall be provided upon request.

8.5.1 Induction Training

Induction training shall be attended with the Client as well as The COMPANY Induction program requirements and records of attendance kept to prove the same.

The COMPANY Induction format is attached for reference purposes.
(Annexure E)

8.5.2 Awareness Training

Weekly awareness training shall be conducted using the COMPANY Toolbox Talk documents, which shall be conducted by the site supervisors. **(Annexure F)**

8.5.3 Competency

Training identified through the Risk Assessment Process and conducted through this process shall be kept on file as proof of competency and training. (This may include operators)

8.5.4 First Aid and Health & Safety Representative Training

All safety representatives elected and designated, including first aiders, shall be trained should they not already be in possession of a valid certificate of training proving competence.

8.6 General Record Keeping

The Site Agent shall ensure that all the Health and Safety records, required by both the Occupational Health and Safety Act, 85 of 1993 and Regulations are kept for reference purposes and auditing.

Further to the requirements set out above, the Site Agent will also maintain records that may be defined through the risk assessment process, for auditing purposes.

In accordance with the requirements set out in the Construction Regulations 2014 and the requirement set out in Client Specification the Site Agent shall ensure that a copy of all Health and Safety records generated during the course of construction, be handed over to the Project Engineer upon completion of construction.

8.6.1 Statistics

The Site Agent shall ensure injury and incident records (Near Hits, First Aid, Medical cases, Disabling Lost Time Incidents), training etc. referred to above are kept on site. All documents shall be made available to the client for inspection including the Department of Labour's Inspectors as required by the Occupational Health and Safety Act, 85 of 1993.

The statistics formula as listed below shall be adhered to.

DIFR (Disabling Injury Frequency Rate) $\frac{\text{DI's} \times 1,000,000}{\text{Man-hours}}$

DISR (Disabling Injury Severity Rate) $\frac{\text{Days Lost} \times 1,000}{\text{Man-hours}}$

8.6.2 General Inspection, Monitoring and Reporting

The COMPANY shall comply with the requirements set out by the client. We have attached a safety management plan upon which the dates of inspections and training and awareness will be entered, conducted and monitored.

The COMPANY shall keep all records of inspections and investigations undertaken during the contract for the specified legal period as defined in the OHS Act and Regulations.

8.6.3 Internal Audits

Internal audits shall be conducted a minimum once per month by the project engineer, as well as the appointed safety consultant.

The Results shall be tabled and discussed at the Health and Safety Committee meetings.

The Audits to be conducted by the appointed safety consultant shall be conducted on the audit schedule attached as per **Annexure G**.

Records of the audits shall be forwarded to the Project Engineer and shall be filed on site for reference purposes.

8.7 Incentives

No incentive scheme is being identified unless required by the client.

8.8 Penalties

Non-compliance with the client safety specifications can result in work stoppages and possible expulsion from site until the problem has been remedied including costs.

8.9 Emergency Procedures

The Site Agent shall make available to the Project Engineer a detailed Emergency Plan to tie into the evacuation plan already in place on the client's premises.

8.9.1 First Aid Box and Contents

The Site Agent shall ensure that all working areas are adequately provided with first aid attendants whether there are fifty (50) employees or less engaged on the contract. The First Aid attendant shall be trained in accordance with the requirements set out in the OHSA with recognized and accredited service providers as defined above.

Proof of training attended (certificate) shall be attached to the written acceptance of appointment. It will be the first aid attendant's responsibility to ensure the contents of the first aid boxes are monitored and inspections recorded on the contents of the first aid box register.

The first aid box shall be adequately stocked by The COMPANY at all times and will be accessible to all.

8.9.2 Accident and Incident Reporting and Investigation

Should accident investigation need to be conducted, the Project Manager shall appoint a competent person in writing to conduct the said investigation. The procedure to be followed will be in accordance with the OHSA requirement on the Annexure 1 – Recording and Investigation of Incident form.

The Site Agent shall ensure that the results of all investigations are communicated to the employees engaged through incident recall and prescribed meetings. The Site Agent shall ensure that the investigations are kept for record purposes in accordance with the prescribed requirements set out in the OHSA and the company specific procedures.

Should there be an incident; the Project Engineer shall be notified within 48-hours if required by the client, of the occurrence. It is acknowledged that the client reserves the right to participate in all investigations into accidents or incidents.

8.10 Hazards and Potentially Hazardous Situations

The Site Agent shall ensure that all other contractors or contractors are warned of hazardous or potentially hazardous situations, which may prevent them from effectively performing their duties, which includes the placement of adequate warning signs.

8.11 Personal Protective Equipment and Clothing

The COMPANY shall comply with OHSA requirements to provide PPE.

The Site Agent shall through the Risk Assessment process identify the specific PPE needs per activity and then issue the PPE accordingly. (Reference to the OHSA General Safety Regulation 2 – Employer to provide Personal Protective Equipment)

Should PPE be lost or stolen, then the employee will be issued with a new set of PPE.

Should PPE be worn out or damaged, the user shall return the worn or damaged PPE and will be issued with a replacement set. Training in the use of this shall be provided. Overalls and hardhats shall be identifiable. (Principal Contractor different from the contractors)

PPE shall be provided to visitors as well.

8.12 Safety Signage

The Site Agent in conjunction with the appointed safety consultant shall assess the Health and Safety Signage requirement in conjunction with the Risk Assessments conducted and will place the signage at strategic positions on the site works.

The COMPANY shall also maintain the signage to ensure its effectiveness at all times and under all conditions. Signage, which cannot be repaired, shall be replaced.

8.13 Permits

- The COMPANY shall ensure that access to site works is restricted to construction personnel.
- All attempts will be made to restrict spectator access.
- Access to the site shall be by the Project Engineers (Clients) authorization on the prescribed form. (Permits and ID cards shall be issued by the client)
- Special permits for hot work and isolation permits shall be applied for to the Project Engineer prior to commencing with the activity.

8.14 Contractors and Suppliers

The Site Agent shall enter into an Agreement with Mandatary in terms of Section 37(2) of the Occupational Health and Safety Act, 85 of 1993, with all contractors appointed by The COMPANY is entered into.

The Contracts Manager will ensure the contractors are issued with the Client Safety Specification where reasonably practicable including any the COMPANY contractor pack for the project, should they not be contained in the Client Safety Specification.

The COMPANY shall assist and ensure the contractors engaged comply with all of these requirements and adhere to the requirements set out in the OHSA.

Contractors will be stopped from working in the event of unsafe conditions and activities being observed.

All contractors shall be covered by the COMPANY Safety Plan and will be issued the same.

9 Health and Safety in Practice

9.1 Excavations

The Site Agent shall ensure that all activities involving excavations, shoring, dewatering or drainage, a safe working procedure is submitted to the project engineer for approval prior to work commencing. Excavation work exceeding the specified depth as stipulated in the OHSA regulations, shall comply with the following requirements:

- (a) The excavations are inspected before the shift starts, after heavy rain (inclement weather) and after any major condition which may affect the excavations stability and the findings are to be recorded and kept;
- (b) All excavations regardless of the depth shall be adequately barricaded to prevent persons falling into the excavation;
- (c) The safe working procedure shall be communicated to all employees who may be effected by the work; and
- (d) The safe working procedures shall be enforced and maintained by the appointed excavation supervisor at all times.
- (e) For high-risk activities, all personnel working in the excavation shall be attached by means of a lifeline.
- (f) Material excavated shall be removed from the point of excavation.
- (g) Ensure stability of adjoining structures.

9.2 Demolition

No demolition work is being envisaged on this project.

9.3 Explosives and Blasting

Blasting activities are envisaged on this project. The contractor shall comply with the relevant/necessary legislature for explosive use. The contractor must provide a safety plan which adequately reflects how this activity will take place. The procedures to be followed during blasting as well as barricading to restrict access during blasting must be submitted for the Engineers approval. The protection of the public from injury, damage to property including livestock must be submitted for the Engineers approval. No blasting activities may take place with the consent or present of the Engineer representative. The contractor shall provide adequate signage as well as notification during blasting. The community, tribal authority, schools, clinic and other affected member of the public must be notified at least 3 days prior to blasting.

9.4 Stacking of Materials and Housekeeping

The Site Agent shall ensure that all stacking will be supervised by a person competent to supervise over the activities, and that clearly defined and allocated storage areas are provided for and identified, and that materials being stored within this area are stacked in accordance with sound stacking principles of sort-by-sort,

access to be maintained, level surface, and the height will not exceed three times the base width.

Housekeeping shall be maintained in accordance with the client requirements at all times.

Hazardous Chemical Substances

The Site Agent shall ensure the necessary training and information regarding the use and storage of HCS is provided, and that the use and storage of HCS is carried out as prescribed by the HCS Regulations.

Furthermore, the Site Agent shall ensure that all chemicals brought to site have a Material Safety Data Sheet (MSDS) and the users are made aware of the Occupational hazards and precautions that need to be taken when using the chemical.

The First Aider shall be made aware of the MSDS and how to treat HCS incidents appropriately.

Access to all HCS records shall be afforded to the project engineer at all times.

9.4.1 Fuel / Diesel

- Bulk storage areas shall be demarcated, secured and sign posted with the relevant warning pictograms.
- Bulk storage areas shall be bunded.
- Re-fuelling shall be conducted in designated re-fuelling areas only.
- Spill-kits shall be available at all times in these designated areas.
- The surface of the bunded areas and walls shall be of impermeable material.
- The bunded area shall be sloped towards a collection pit.

9.5 Asbestos

No asbestos is to be used on this Project.

9.6 Plant and Machinery

9.6.1 Construction Plant

- All plant shall comply with the OHS Act requirements in relation to operation and maintenance thereof.
- Service and maintenance of the vehicles shall be of a high standard at all times.
- All plant shall subject to design be fitted with back-up alarms and audible indicating devices.
- The COMPANY shall ensure that all construction plants moving parts are adequately protected.
- Pre-start inspections shall be conducted on all motorized equipment daily, deviations of such inspections shall be recorded.
- Construction plant identified for use shall be operated by a trained and authorized operator.
- All construction plant shall be operated under the direct supervision of a person competent to identify potential hazards in the work he is

conducting.

- Work involving the use of construction plant shall be conducted in accordance with an approved Risk Assessment.
- The Site Agent shall ensure all operators are equipped with the necessary PPE namely; safety shoes, overall, safety glasses, and gloves.
- Plant shall be fitted with an extinguisher where practicable.
- Washing shall be conducted in the designated washing areas.

The COMPANY shall ensure the all equipment moving to and from site is adequately secured, and that all contractors abide by this requirement.

Transport of Personnel

- Safe vehicular transport shall be provided for personnel working on the project to the workplace, which shall include proper seating, side restraints and cover.
- No personnel shall be permitted to travel on any plant or equipment on the site works.
- Road safety principles shall be adhered to on and off site.

9.6.2 Vessels under Pressure (VuP) or Gas Bottles

The COMPANY shall ensure they comply at all times with the requirements of Vessels under Pressure Regulations, with specific reference to the following:

- Ensuring all Equipment owned and hired-in Vessels under pressure, comply with the 36-month pressure vessel inspection, and a certificate of testing is available on site.
- Ensuring that all personnel who shall use this equipment are competent and trained.
- Ensuring the users of this equipment are issued with the required PPE.
- Ensuring the area is adequately identified as a noise area and warnings are posted.
- Ensuring daily pre-start inspections are carried out on all the equipment and the findings recorded.
- Ensuring the correct fire prevention and fighting equipment is available at all times.
- Noise levels where possible shall be kept within reasonable operating norms.

9.6.3 Fire Equipment

The Site Agent shall ensure the following all fire equipment to be used on site comply with the following:

- Extinguishers shall be placed in positions to ensure fast and easy access is maintained at all times.
- Placement of all extinguishers shall be depicted with the required pictograms.
- Extinguishers shall be serviced once annually, and after discharge or visible signs of depressurization.
- The Site Agent shall ensure all employees are adequately trained in the

safe use of the extinguishers.

- The Site Agent shall ensure a person is appointed to inspect the extinguishers on a monthly basis and the results of which are to be entered into a register designed for that purpose.

9.6.4 Hired Plant and Machinery

The Site Agent shall ensure the following criteria is adhered to when considering hired plant and machinery:

- Only approved hire companies shall supply equipment to the site.
- Hired plant shall be checked for safety compliance prior to being accepted for use on site.
- Should hired equipment be accompanied by an operator, The COMPANY shall ensure that the operators competency be verified and the operator undergo an induction training session.
- The Site Agent shall ensure the operators of hired plant attend weekly toolbox talks in conjunction with The COMPANY site personnel.
- The Site Agent shall ensure that all operators are equipped with the required PPE before commencing work on site.

9.6.5 Scaffolding / Working at heights / Fall Protection

Work involving scaffolding and work at heights shall comply with the requirements set out in the Construction regulations 2003 pertaining to these activities with reference to the SABS 085 code of practice.

Fall protection planning shall be done in conjunction with the risk assessment process.

All scaffolds shall be erected under the control of a person trained and appointed to conduct such scaffold erection.

9.6.6 Falsework / Formwork for Structures

Work involving scaffolding and work at heights shall comply with the requirements set out in the Construction regulations 2003 pertaining to these activities with reference to the SABS 085 code of practice.

9.6.7 Lifting Machinery and Tackle

The Site Agent shall ensure that the use of Lifting Machinery and Tackle is done in accordance with the requirements of the Regulations, which include but is not limited to the following:

- Lifting machinery and tackle to be used on site shall be marked with the Maximum Mass Load (MML), which is the safe limit in which the equipment may be used.
- Inspections on Lifting Machines and Lifting Tackle shall be inspected once per month on the register provided and the findings recorded.
- Daily pre-start checks shall also be conducted on all Lifting Machinery and Tackle.

- Records shall be kept of all lifting machinery and tackle inspections and Load Tests.
- Load tests shall be conducted a minimum of once per annum, and a certificate of compliance shall be kept on record.
- A valid logbook shall be maintained for all lifting machinery, which will comply with a minimum six-monthly service and maintenance.
- Lifting machinery shall be operated under supervision at all times with a trained banksman who shall inspect all tackle before each lift.
- All lifting equipment operators shall be trained once every two years and a copy of such training shall be attached to the appointment, which is to be made on site.
- The Operators shall be tested for medical fitness.

9.6.8 Ladders and Ladder Work

The following requirements shall be complied with regarding Ladders and Ladder work:

- Ladders shall be clearly numbered, and inspected on the register provided.
- A competent person shall be identified and appointed as the ladder inspector.
- Where aluminium ladders cannot be used, then wooden ladders shall be straight grained, unpainted to allow for proper inspection of the grain for cracking.
- Ladders shall be secured at the top and chocked at the base to prevent slipping.
- Where chocking of the base is not possible, then the user shall ensure that the ladder is held in position by another employee when ascending the ladder.
- Ladders shall be inspected a minimum once per month by the person appointed as the ladder inspector.
- Proper storage shall be provided for all ladders when not in use.

9.6.9 General Machinery

In accordance with General Machinery Regulation 2(1), The COMPANY shall:

- Ensure a competent person be appointed as defined in the above clause from the Occupational Health and Safety Act, 85 of 1993 and Regulations, to service and maintain all machinery in use on site.
- The COMPANY shall appoint additional competent persons to assist the competent person mentioned above in accordance with General Machinery Regulation 2(7)(a), as and when required.
- The COMPANY shall ensure that records are maintained of all services conducted.

9.6.10 Lighting and Power

The Site Agent shall ensure lighting circuits and power circuits are fitted with suitable earth leakage systems in accordance with the client, which will include the following activities:

- Earth leakage system will be tested monthly.

- Malfunctions shall be repaired immediately or replaced.
- Lighting shall be so positioned as not to interfere with construction activities.

9.6.11 Portable Electrical Tools / Explosive Power Tools

The Site Agent shall ensure the following procedure is adhered to regarding Portable Electrical Tools and Explosive Powered tools:

- Minimum compliance with legislation.
- Only competent persons shall be permitted to conduct routine and monthly inspections on the equipment.
- Persons competent to inspect the equipment shall be appointed in writing.
- Persons who are trained to operate such equipment shall be appointed and shall be the only authorized person to operate the equipment.
- The Site Agent shall ensure operation of the equipment is in accordance with the approved Risk Assessment and Safe Working Procedure set out.
- All users shall undergo regular awareness training to ensure compliance.
- The Site Agent shall ensure the required PPE and clothing is provided and maintained.

9.6.12 Public Health and Safety

In the interests of public safety, The COMPANY shall ensure that all persons who may be affected by the work being conducted on site are informed and kept aware of the dangers, which may arise from the work being conducted on site.

This awareness shall be in the form of posters and inductions for visitors to site and warning signs.

9.6.13 Night Work

Night work shall only be conducted upon approval of the project engineer, with the same safety standard being applied for these activities as with day work activities.

Facilities for Safe Keeping / eating areas

The COMPANY shall ensure that adequate facility is provided for the personnel on site. The area shall be provide the following:

- Sufficient seating;
- Seating under cover;
- Protected change room;
- Toilets.
- Hand wash facility.
- Potable water.

No food preparation shall be conducted on site and designated eating areas will be made to allow adequate seating.

Waste bins shall be strategically placed and cleared regularly.

ANNEXURE C (Risk Assessment)

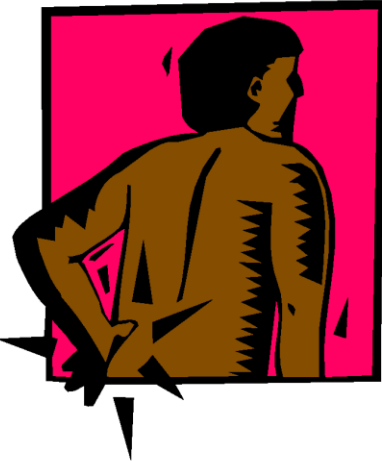
(Audit Schedule)

HAZARDOUS TASK IDENTIFICATION (HTI)													
Ser no:	INFORMATION REQUIRED	DETAILS								SIGNATURE	Key Table		
1	Name of contract:										0=	NONE	
2	Date prepared:										1=	LOW	
3	Prepared by:										2=	MEDIUM	
4	Name of person approving:										3=	HIGH	
Risk Assessment (RA) Code	LIST OF ALL STANDARD TASKS	What is the future potential that this task can cause further....								Total Score	Rating	Doc Required	
		Is it a new or unusual task?	Is it a dangerous task?	Personal injury	Health risk	Impact on the environment	Property damage	Fire	Has the task caused previous injury / loss?				Yes = 3 / No = 0
RA-1	Site clearing - manual labour & small tools	1	1	1	1	1	1	1	0	7	LOW RISK	MST	
RA-2	Site clearing - using mechanical means									0	LOW RISK	MST	
RA-3	Site establishment - FSM erection / dismantling									0	LOW RISK	MST	
RA-4	Site establishment - Container store / office offload									0	LOW RISK	MST	
RA-5	Excavations - using manual labour									0	LOW RISK	MST	
RA-6	Excavations using motorised plan									0	LOW RISK	MST	
RA-7	Excavations - working inside < 1.5 metres									0	LOW RISK	MST	
RA-8	Excavations - working inside > 1.5 metres									0	LOW RISK	MST	
RA-9	Batching plants - erection / dismantle									0	LOW RISK	MST	
RA-10	Batching plants - general working and operation									0	LOW RISK	MST	
RA-11	Concrete mixing - using manual labour									0	LOW RISK	MST	
RA-12	Concrete mixing - using mechanical means									0	LOW RISK	MST	
RA-13	Concrete pours - using lifting machinery (Cranes etc)									0	LOW RISK	MST	
RA-14	Concrete pours - using motorised plant (dumpers etc)									0	LOW RISK	MST	
RA-15	Concrete pours - using mechanical pump									0	LOW RISK	MST	
RA-16	Lifting Equipment - Tower crane erection / dismantle									0	LOW RISK	MST	
RA-17	Lifting Equipment - Tower crane operation									0	LOW RISK	MST	
RA-18	Lifting Equipment - Mobile crane operation									0	LOW RISK	MST	
RA-19	Lifting Equipment - Telescopic handler operation									0	LOW RISK	MST	
RA-20	Lifting Equipment - Forklift operation									0	LOW RISK	MST	
RA-21	Lifting Equipment - using lifting tackle									0	LOW RISK	MST	
RA-22	Formwork - general erection / dismantling									0	LOW RISK	MST	
RA-23	Formwork - lifting and placing large panels									0	LOW RISK	MST	
RA-24	Formwork - work on support decks									0	LOW RISK	MST	
RA-25	Scaffolding - erect / dismantle small scaffolds < 2 m									0	LOW RISK	MST	
RA-26	Scaffolding - erect / dismantle large scaffolds > 2 m									0	LOW RISK	MST	
RA-27	Scaffolding - use of mobile scaffolds									0	LOW RISK	MST	
RA-28	Scaffolding - dismantling of scaffolding									0	LOW RISK	MST	
RA-29	Demolition - using small electric breakers									0	LOW RISK	MST	
RA-30	Demolition - using compressed air breakers									0	LOW RISK	MST	
RA-31	Demolition - using motorised mechanical means									0	LOW RISK	MST	
RA-31	Demolition - using explosives / blasting operations									0	LOW RISK	MST	
RA-33	Trades - Brickwork operations									0	LOW RISK	MST	
RA-34	Trades - Plastering operations									0	LOW RISK	MST	
RA-35	Trades - Painting operations									0	LOW RISK	MST	
RA-36	Trades - Ceiling operations									0	LOW RISK	MST	
RA-37	Trades - Roofing installations									0	LOW RISK	MST	
RA-38	Trades - glazing installations									0	LOW RISK	MST	
RA-39	Trades - Tiling operations									0	LOW RISK	MST	
RA-40	Trades - carpentry (Doors / windows)									0	LOW RISK	MST	
RA-41	Trades - Metal work (Doors / windows)									0	LOW RISK	MST	
RA-42	Trades - Steel erection									0	LOW RISK	MST	
RA-43	Trades - plumbing									0	LOW RISK	MST	



SCHEDULE A

TOOLBOX TALKS			
TALK NO:	16	DATE:	
TALK TOPIC:	LIFTING MATERIALS BY HAND	SITE:	
TALK PRESENTED BY:			



Lift
correctly

TALK CONTENT / DISCUSSION
HOW DO I LIFT EQUIPMENT SAFELY WITHOUT INJURING MY BACK? 1. Stoop and bend the knees. 2. Keep your back straight. 3. Lift using the leg muscles. 4. Push upward with the load. 5. If the load is on a table, slide the load to the edge until you can get a firm grip under the load, and then proceed to lift as above. 6. If the load requires two or more persons to lift, then ensure the load is lifted on one side first and then the other, Ensure someone gives the command to lift so the lift occurs simultaneously. 7. Where it is practical to use a trolley, do so as it will safe guard against unnecessary injury.

ATTENDANCE				
NAME:	SIGN:		NAME:	SIGN:

1. (a) Name and postal address of principal Contractor:

.....

.....

.....

(b) Name and telephone number of principal Contractor's contact person:

.....

.....

2. Principal Contractor's compensation registration number:

.....

3. (a) Name and postal address of Client:

.....

.....

.....

(b) Name and telephone number of Client's contact person or agent:

.....

.....

4. (a) Name and postal address of designer(s) for the project:

.....

.....

.....

(b) Name and telephone number of designer's contact person:

.....

.....

5. Name and telephone number of principal Contractor's construction supervisor on site
appointed in terms of regulations 6 (1):

.....

.....

6. Name/s of principal Contractor's sub-ordinate supervisors on site appointed in terms of
regulation 6 (2):

.....

7. Exact physical address of the construction site or site office:

.....
.....
.....

8. Nature of the construction work:

.....
.....
.....
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.....
.....
.....

9. Expected commencement date:

.....

10. Expected completion date:

.....

11. Estimated maximum number of persons on the construction site:

.....

12. Planned number of Contractors on the construction site accountable to principal Contractor:

.....

13. Name(s) of Contractors already chosen:

.....
.....
.....
.....
.....

.....
Principal Contractor.....
Date.....
Client.....
Date

- *This document is to be forwarded to the Office of the Department of Labour **prior to commencement of work** on site.*
- ***All Principal Contractors** that qualify to notify must do so even if another Principal Contractor on the Same site had done so prior to the commencement of work.*

SCHEDULE B**FORM OHS1: OCCUPATIONAL HEALTH AND SAFETY****1. HEALTH AND SAFETY POLICY**

- (a) Can a copy of current health and safety policy including procedures for risk assessment be supplied. Yes ☐ No ☐
- (b) Please give full reasons, on a separate sheet, if the health and safety policy cannot be provided

2. HEALTH AND SAFETY ADVICE

Do you

- (a) Employ a full time health and safety advisor? Yes ☐ No ☐
- (b) Use the services of a health and safety consultant? Yes ☐ No ☐
- (c) Have access to the services of a health and safety group? Yes ☐ No ☐

3. ACCIDENT AND INCIDENT STATISTICS

- (a) Have any dangerous occurrences been reported within the last three years? Yes ☐ No ☐

If Yes, please give brief details:

- (b) Has any employee or persons under your control been fatally injured at work within the last three years? Yes ☐ No ☐

If Yes, please give brief details:

TENDERER:

SCHEDULE C**FORM OHS2: OCCUPATIONAL HEALTH AND SAFETY :
STATEMENT BY CONTRACTOR**

I, duly authorised to represent

.....
(Company Name)

in my capacity as

hereby confirm that I accept full and exclusive responsibility for compliance by myself and all persons who perform work for me with the provisions of the Occupational Health and Safety Act, No. 85 of 1993 (as amended) and all regulations promulgated from time to time, whilst performing work on

.....

.....

.....

I confirm that all employees who perform work on the site shall be properly trained to do this in a manner which is safe and without risk to health and safety to themselves and others in the vicinity and undertake to have our activities adequately supervised in the interest of health and safety.

TENDERER:

SCHEDULE D
RECORDS TO BE KEPT ON SITE

ITEM	CR	RECORD TO BE KEPT	RESPONSIBLE PERSON
1	3(3)	Notification to Provincial Director – Schedule A Available on site	Principal Contractor
2.	4(3)	Copy of Principal Contractor's Health & Safety Plan Available on request	Client (Consultant)
3.	5(6)	Copy of Principal Contractor's Health & Safety Plan As well as each Contractor's Health & Safety Plan Available on request	Principal Contractor
4.	5(7)	Health & Safety File opened and kept on site (including all documentation-required i.t.o. OHSA & Regulations) Available on request	Contractor
5.	5(8)	Consolidated Health & Safety File handed to Client on completion of Construction work. To include all documentation required i.t.o. OHSA & Regulations and records of all drawings, designs, materials used and similar information on the structure.	Principal Contractor
6.	5(9)	Comprehensive and Updated List of all Contractors on site, the agreements between the parties and the work being done Included in Health & Safety file and available on request	Principal Contractor
7.	6(7)	Keep record on the Health & safety File of the input by Construction Safety Officer [CR 6 (6)] at design stage or on the Health & Safety Plan	Contractor
8.	7(2)	Risk Assessment Available on site for inspection	Contractor
9.	7(9)	Proof of Health & Safety Induction Training	Every Employee on site
10.	8(3)	Construction Supervisor [CR 6 (1)] has latest updated version of Fall Protection Plan [CR 8 (1)]	Contractor
11.	9(2)(b)	Inform Contractor in writing of dangers and hazards relating to construction work	Designer of Structure
12.	9(3)	All drawings pertaining to the design of structure On site available for inspection	Contractor
13.	9(4)	Record of inspection of the structure [First 2 years – once every 6 months, thereafter yearly]	Owner of Structure
14.	9(5)	Maintenance records – safety of structure Available on request	Owner of Structure
15.	10(1)(d)	Drawings pertaining to the design of formwork/support work structure Kept on site, available on request	Contractor
16.	11(3)(h)	Record of excavation inspection On site available on request	Contractor
17.	15(11)	Suspended Platform inspection and performance test records	Contractor

		Kept on site available on request	
18.	17(8)(c)	Material Hoist daily inspection entered and signed in record book kept on the premises	Contractor
19.	17(8)(d)	Maintenance records for Material Hoist Available on site	Contractor
20.	18(9)	Records of Batch Plant maintenance and repairs On site available for inspection	Contractor
21.	19(2)(g)(ii)	Issuing and collection of cartridges and nails or studs (Explosive Powered Tools) recorded in register – recipient signed for receipt as well as return	Contractor
22.	21(1)(d)	Findings of daily inspections (prior to use) of Construction Vehicles and Mobile Plant	Contractor
23.	22(d)	Record of temporary electrical installation inspections [once a week] and electrical machinery [daily before use] in a register and kept on site	Contractor

SCHEDULE E**OCCUPATIONAL HEALTH AND SAFETY: AUDIT SYSTEM****1. ADMINISTRATIVE & LEGAL REQUIREMENTS**

Section/ Regulation	Subject	Requirements	1.1.1.2
Construction. Regulation 3	Notice of carrying out Construction work	Department of Labour notified Copy of Notice available on Site	
General Admin. Regulation 3	Copy of OH&S Act (Act 85 of 1993)	Updated copy of Act & Regulations on site Readily available for perusal by employees	
COID Act Section 80	Registration with Compensation. Insurer	Written proof of registration / Letter of good standing available on Site	
Construction. Regulation 4 & 5(1)	OH&S Specification & Plan	H&S Specification received from Client OH&S plan developed: Updated regularly	
Section 8(2)(d) and Construction. Regulation 6	Hazard Identification & Risk Assessment	Hazard Identification carried out/Recorded Risk Assessment and Plan drawn up/Updated Risk Assessment Plan available on Site Employees/Subcontractors informed/trained	
Section 16(2)	Assigned duties (Managers)	Responsibility of complying with the OH&S Act assigned to other person/s by CEO.	
Construction. Regulation 5(2)	Designation of Person Responsible on Site	Competent person appointed in writing as Construction Supervisor	
Construction. Regulation 5(5)(a)	Designation of Subordinate Person	Competent person appointed in writing as Sub-ordinate Construction Supervisor	
Section 17 & 18	Designation of Occupational Health & Safety Representatives	More than 20 employees - one OH&S Representative, one additional OH&S Rep. for each 50 employees or part thereof. Designation in writing, period and area of responsibility specified. Meaningful OH&S Rep. reports. Reports actioned by Management.	
Section 19 & 20	Occupational Health & Safety Committee/s	OH&S Committee/s established. Members appointed in writing. Meetings held monthly. Minutes kept. Actioned by Management.	
Section 37	Agreement with Mandataries (Subcontractors)	Written agreement with Subcontractors. List of Subcontractors displayed. Proof of Registration with Compensation Insurer/Letter of Good Standing Construction Work Supervisor designated Written arrangements concerning OH&S Reps & OH&S Committee Written arrangements regarding First Aid	
Construction. Regulation 7	Fall Prevention & Protection	Competent person appointed to draw up and supervise the Fall Protection Plan Proof of appointees competence available on	

Section/ Regulation	Subject	Requirements	1.1.1.2
		Site Risk Assessment carried out for work at heights Fall Protection Plan drawn up/updated Available on Site	
Construction. Regulation 8	Roof work	Competent person appointed to plan & supervise Roof work. Proof of appointees competence available on Site Risk Assessment carried out Roof work Plan drawn up/updated Roof work inspect before each shift. Inspection register kept Employees medically examined for physical & psychological fitness. Written proof available	
Construction. Regulation 9	Structures	Information re. the structure being erected received from the Designer including: - geo-science technical report where relevant - the design loading of the structure - the methods & sequence of construction - anticipated dangers / hazards / special Measures to construct safely Risk Assessment carried out Method statement drawn up All above available on Site Structures inspected before each shift. Inspections register kept	
Construction. Regulation 10	Formwork & Support work	Competent person appointed in writing to supervise erection, maintenance, use and dismantling of Support & Formwork Design drawings available on site Risk Assessment carried out Support & Formwork inspected: - before use/inspection - before pouring of concrete - weekly whilst in place - before stripping/dismantling. Inspection register kept	
Construction. Regulation 11	Scaffolding	Competent persons appointed in writing to: - erect scaffolding (Scaffold Erector/s) - act as Scaffold Team Leaders - inspect Scaffolding weekly and after inclement weather (Scaffold Inspector/s) Written Proof of Competence of above appointees available on Site Copy of SABS 085 available on Site Risk Assessment carried out Inspected weekly/after bad weather. Inspection register/s kept	
Construction. Regulation 12	Suspended Scaffolding	Competent persons appointed in writing to: - erect Susp.scaffolding (Scaffold Erector/s) - act as Susp.scaffolding Team Leaders	

Section/ Regulation	Subject	Requirements	1.1.1.2
		- inspect Susp.scaffolding weekly and after inclement weather (Scaffold Inspector/s) Risk Assessment conducted - Certificate of Authorization issued by a registered professional Engineer available on Site/copy forwarded to the Department of Labour - The following inspections of the whole installation carried out by a competent person - after erection and before use - daily prior to use. Inspection register kept - The following tests to be conducted by a competent person: - load test of whole installation and working parts every 12 months - hoisting ropes/hooks/load attaching devices quarterly. Tests log book kept - Employees working on Susp.Scaffold medically examined for physical & psychological fitness. Written proof available	
Construction. Regulation 13	Excavations	Competent person/s appointed in writing to supervise and inspect excavation work Written Proof of Competence of above appointee/s available on Site Risk Assessment carried out Inspected: - before every shift - after any blasting - after an unexpected fall of ground - after any substantial damage to the shoring - after rain. Inspections register kept Method statement developed where explosives will be/ are used	
Construction. Regulation 14	Demolition Work	Competent person/s appointed in writing to supervise and control Demolition work Written Proof of Competence of above appointee/s available on Site Risk Assessment carried out Engineering survey and Method Statement available on Site Inspections to prevent premature collapse-e carried out by competent person before each shift. Inspection register kept	
Construction. Regulation 16	Materials Hoist	Competent person appointed in writing to inspect the Material Hoist Written Proof of Competence of above appointee available on Site. Materials Hoist to be inspected weekly by a competent person. Inspections register kept.	
Construction. Regulation 17	Caissons & Cofferdams	Competent person appointed in writing to supervise, control & inspect the construction, installation/dismantling of caissons/coffer dams	

Section/ Regulation	Subject	Requirements	1.1.1.2
		Written Proof of Competence of above appointee available on Site Risk Assessment carried out To be inspected daily by a competent person. Inspections register kept	
Construction. Regulation 18	Explosive Powered Tools	Competent person appointed to control the issue of the Explosive Powered Tools & cartridges and the service, maintenance and cleaning. Register kept of above Empty cartridge cases/nails/fixing bolts returns recorded Cleaned daily after use	
Section/ Regulation	Subject	Requirements	1.1.1.2
Construction. Regulation 19	Batch Plants	Competent person appointed to control the operation of the Batch Plant and the service, maintenance and cleaning. Register kept of above Risk Assessment carried out Batch Plant to be inspected weekly by a competent person. Inspections register kept	
Construction. Regulation 20/ Mine Health & Safety Act (29 of 1996)	Tunnelling	Complying with Mines Health & Safety Act (29 of 1996) Risk Assessment carried out	
Construction. Regulation 21/ Driven Machinery Regulations 18 & 19	Cranes & Lifting Machines Equipment	Competent person appointed in writing to inspect Cranes, Lifting Machines & Equipment Written Proof of Competence of above appointee available on Site. Cranes & Lifting tackle identified/numbered Register kept for Lifting Tackle Log Book kept for each individual Crane Inspection: - All cranes - daily by operator - Tower Crane/s - after erection/6monthly - Other cranes - annually by comp. person - Lifting tackle(slings/ropes/chain slings etc.) - 3 monthly Risk Assessment carried out	
Construction. Regulation 22/ Electrical Machinery Regulations 9 & 10/ Electrical Installation Regulations	Inspection & Maintenance of Electrical Installation & Equipment (including portable electrical tools)	Competent person appointed in writing to inspect/test the installation and equipment. Written Proof of Competence of above appointee available on Site. Inspections: - Electrical Installation & equipment inspected after installation, after alterations and quarterly. Inspection Registers kept Portable electric tools and lights and extension leads identified/numbered. Monthly visual inspection by User/Issuer/Store man. Register kept.	

Section/ Regulation	Subject	Requirements	1.1.1.2
Construction. Regulation 2 Diving Regulations	Water Environments	Competent person appointed in writing to supervise diving operations and ensure maintenance, statutory inspection and testing by an Approved Inspection Authority of equipment used Written Proof of Competence of above appointee available on Site Proof of registration of all divers present on site available Risk Assessment carried out Diving Manual produced. Available on Site Record of Voice Communications kept Diving Operations record kept Each Diver keeps- a personal logbook. Entries countersigned by the Diving Supervisor Decompression tables available on Site Records of any Decompression illness kept Certificate of Manufacture of any Compression Chamber or Diving Bell in use available on Site	
Construction. Regulation 30/ General Safety Regulation 8(1)(a)	Designation of Stacking & Storage Supervisor.	Competent Person/s with specific knowledge and experience designated to supervise all Stacking & Storage Written Proof of Competence of above appointee available on Site	
Construction. Regulation 31/ Environmental Regulation 9	Designation of a Person to Co-ordinate Emergency Planning And Fire Protection	Person/s with specific knowledge and experience designated to co-ordinate emergency contingency planning and execution and fire prevention measures Emergency Evacuation Plan developed: - Drilled/Practised - Plan & Records of Drills/Practices available on Site Fire Risk Assessment carried out All Fire Extinguishing Equipment identified and on register. Inspected weekly. Inspection Register kept Serviced annually	
Construction. Regulation 32/ General Safety Regulation 3	First Aid	Every workplace provided with sufficient number of First Aid boxes. (Required where 5 persons or more are employed) First Aid freely available Equipment as per the list in the OH&S Act. One qualified First Aider appointed for every 50 employees. (Required where more than 10 persons are employed) List of First Aiders and Certificates Name of person/s in charge of First Aid box/es displayed. Location of F/Aid box/es clearly indicated. Signs instructing employees to report all Injuries/illness including first aid injuries	
Construction.	Personal Safety	PS-E Risk Assessment carried out	

Section/ Regulation	Subject	Requirements	1.1.1.2
Regulation 33/ General Safety Regulation 2	Equipment (PS-E)	Items of PS-E prescribed/use enforced Records of Issue kept Undertaking by Employee to use/wear PS-E	
Construction. Regulation 34/ General Safety Regulation 9	*Inspection & Use of Welding/Flame Cutting Equipment	Competent Person/s with specific knowledge and experience designated to Inspect Electric Arc, Gas Welding and Flame Cutting Equipment Written Proof of Competence of above appointee available on Site Equipment identified/numbered and entered into a register Equipment inspected monthly. Inspection Register kept	
Construction. Regulation 35/ Hazardous Chemical Substances (HCS)	*Control of Storage & Usage of HCS	Competent Person/s with specific knowledge and experience designated to Control the Storage & Usage of HCS Written Proof of Competence of above appointee available on Site Risk Assessment carried out Register of HCS kept/used on Site	
Section/ Regulation	Subject	Requirements	1.1.1.2
Construction. Regulation 36/Vessels under Pressure Regulations	Vessels under Pressure (VUP)	Competent Person/s with specific knowledge and experience designated to supervise the use, storage, maintenance, statutory inspections & testing of VUP's Written Proof of Competence of above appointee available on Site Risk Assessment carried out Certificates of Manufacture available on Site Register of VUP's on Site Inspections & Testing by Approved Inspection Authority (AIA): - after installation/re-erection or repairs - every 36 months. - Register/Log kept of inspections, tests. Modifications & repair	
Construction. Regulation 37	Construction Vehicles & Earth Moving Equipment	Operators/Drivers appointed to: - Carry out a daily inspection prior to use - Drive the vehicle/plant that he/she is competent to operate/drive Written Proof of Competence of above appointee available on Site Record of Daily inspections kept	
Construction. Regulation 38/ General Safety Regulation 13D	Inspection of Ladders	Competent person appointed in writing to inspect Ladders Ladders inspected at arrival on site and monthly thereafter. Inspections register kept	
Construction. Regulation 39/ General Safety Regulation 13B	Ramps-	Competent person appointed in writing to Supervise the erection & inspection of Ramps- . Inspection register kept	

C3.4 LIST OF DRAWINGS AND DETAILS

The drawings issued to tenders as part of the tender documents must be regarded as provisional and preliminary for the tenderer's benefit to generally assess the scope of work. The drawings may be issued as a separate book of drawings or else bound in as part of this document.

The work shall be carried out in accordance with the latest available revision of the drawings approved for construction (AFC)

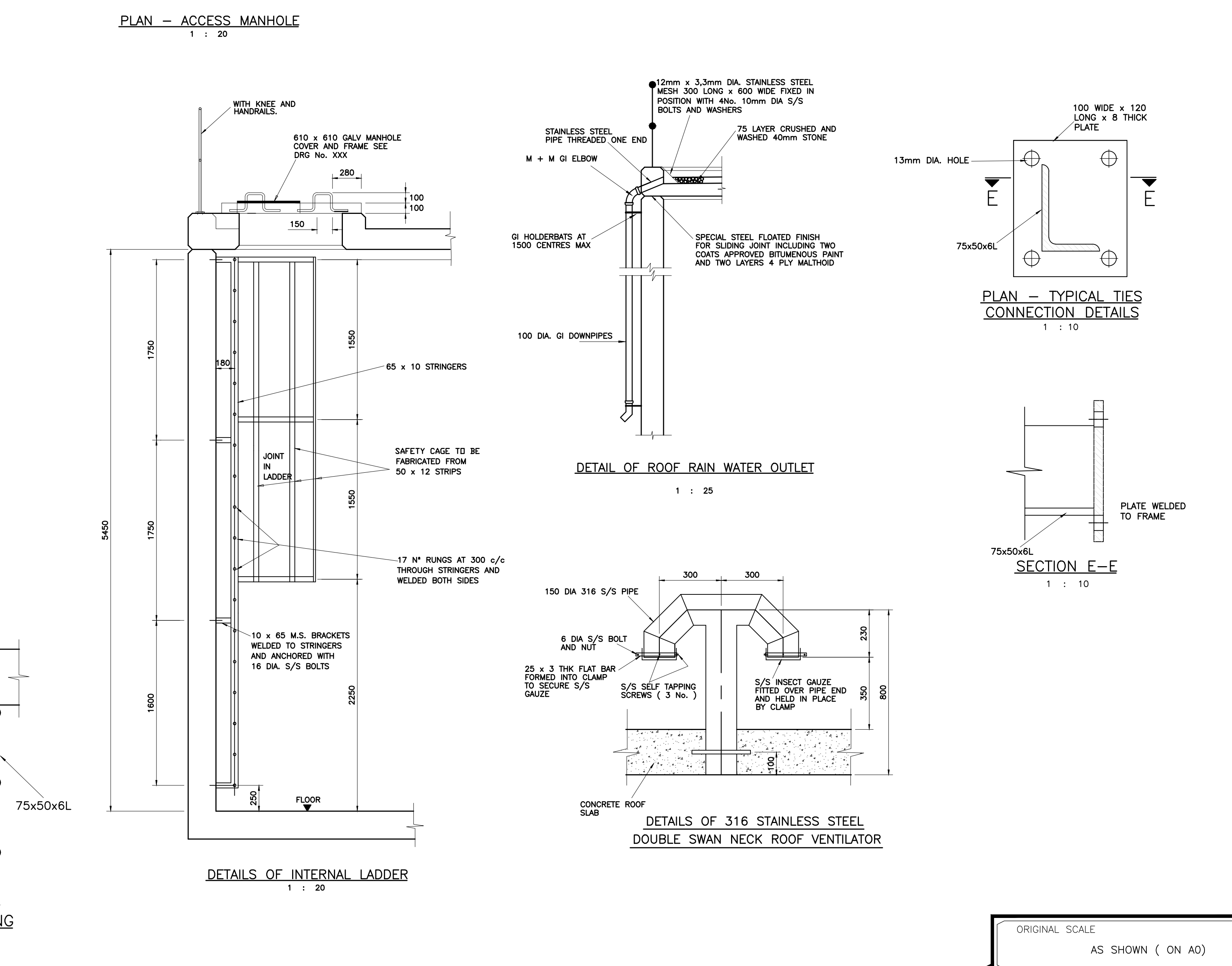
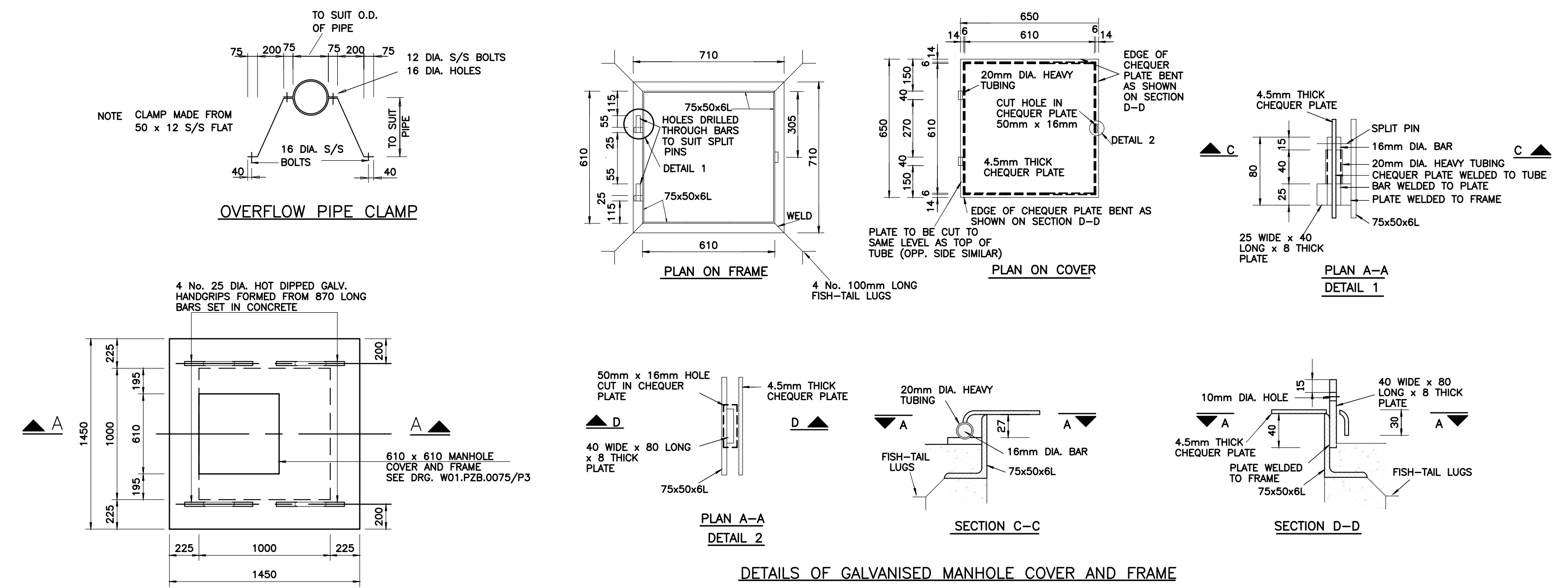
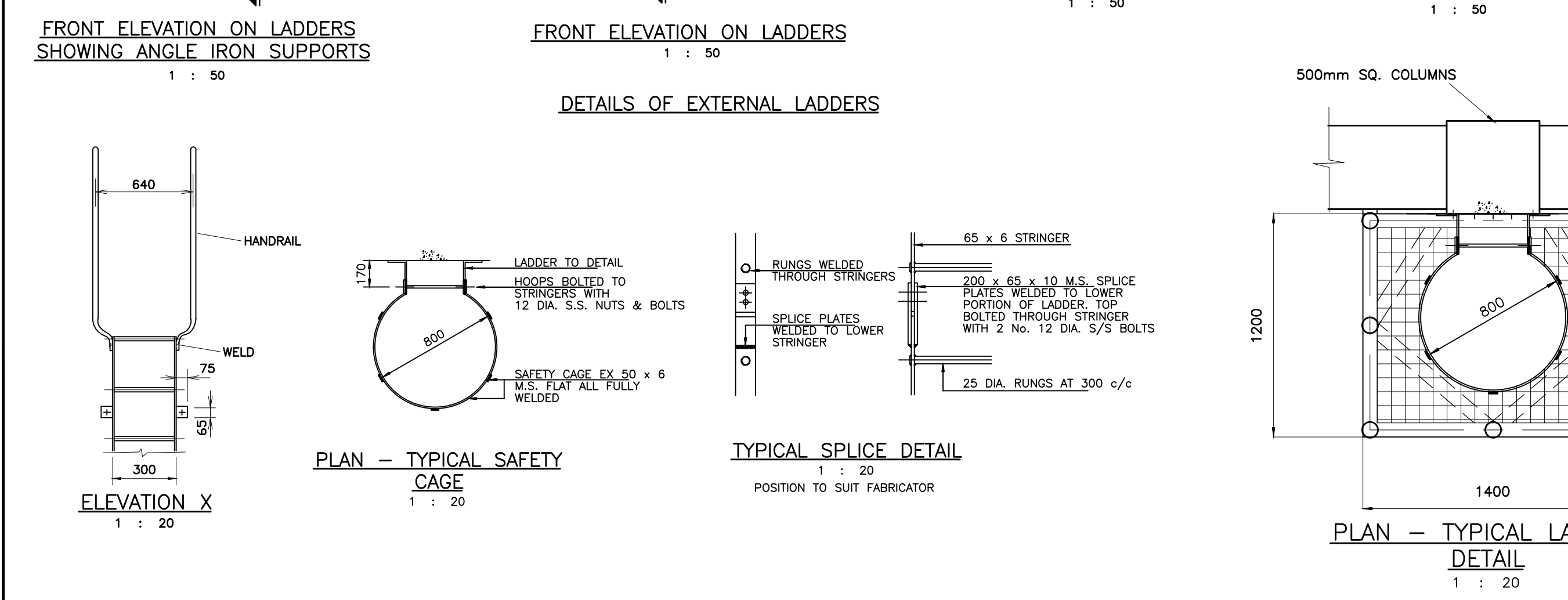
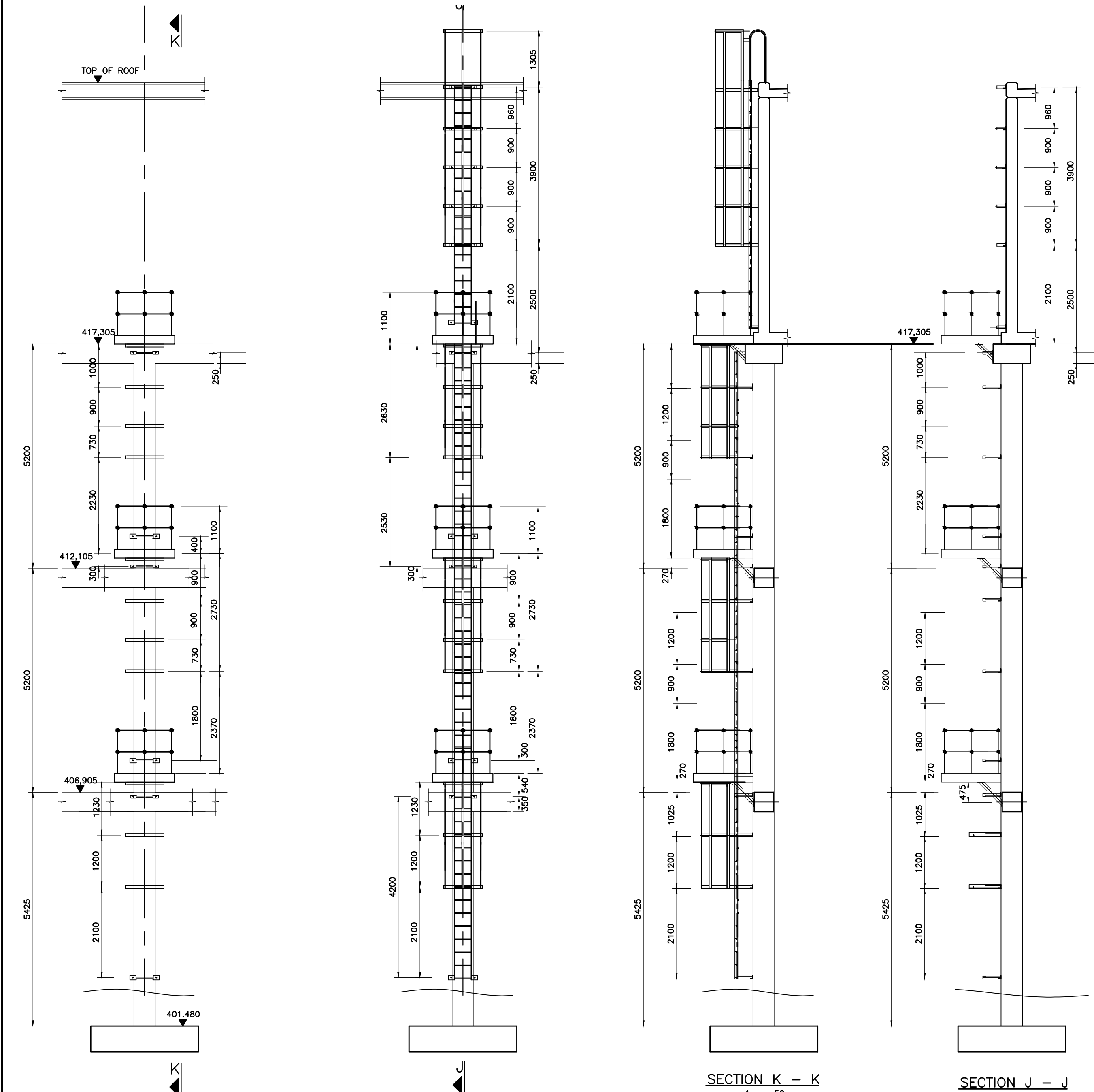
At commencement of the contract, the Engineer shall deliver to the Contractor copies of the AFC drawings and any instructions required for the commencement of the works. From time to time thereafter during the progress of the works, the Engineer may issue further drawings for construction purposes as may be necessary for adequate construction, completion and defects correction of the works.

Drawings issued separately are listed in the Book of Drawings. Drawings issued as part of this volume are listed hereafter.

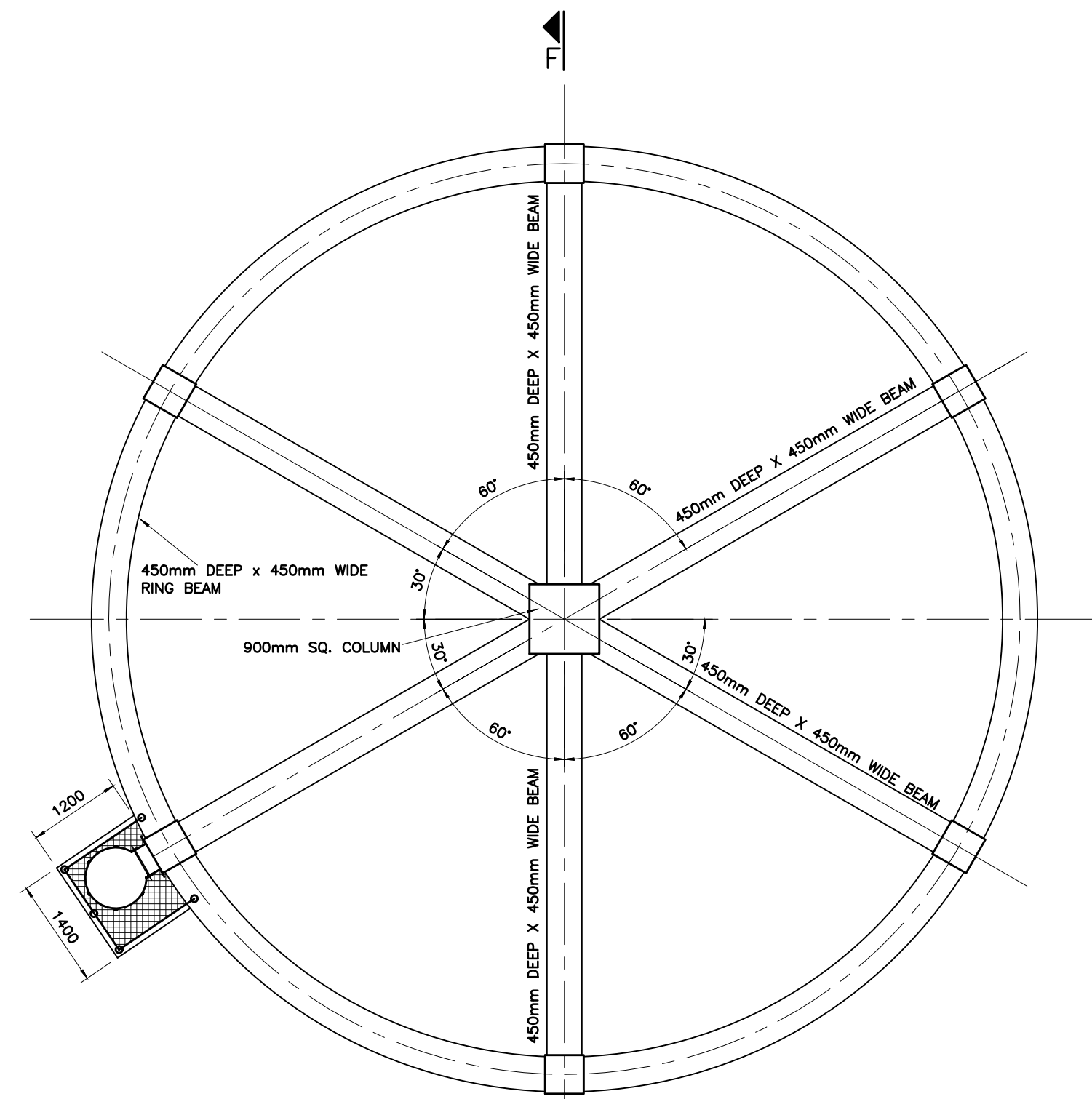
All drawings and specifications and copies thereof remain the property of the Employer, and the Contractor shall return all drawings and copies thereof to the Employer at the completion of the contract.

LIST OF DRAWINGS:

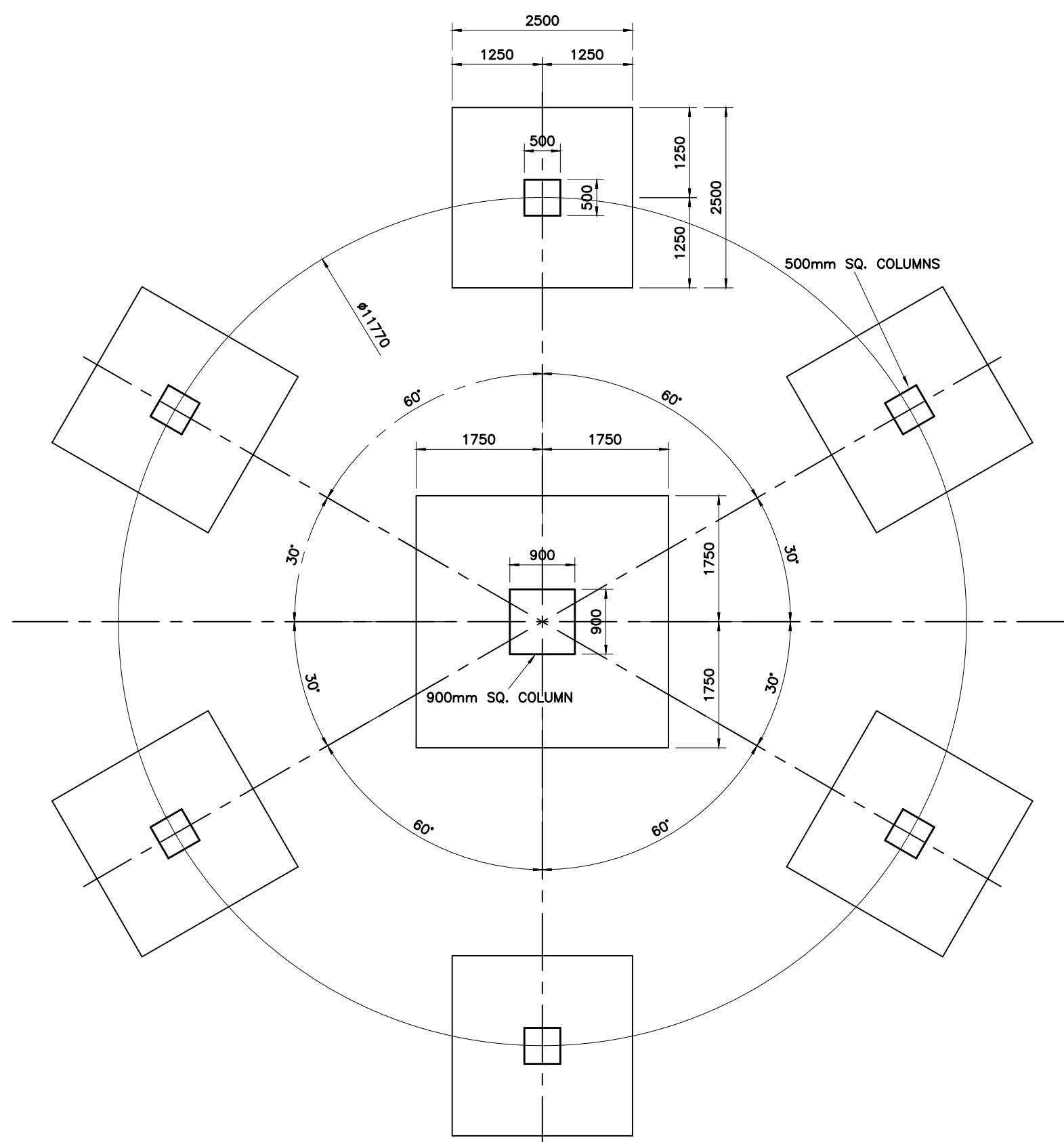
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UGU-12-01/1.1	PROPOSED 0.5 ML NYANDEZULU ELEVATED RESERVOIR GENERAL ARRANGEMENTS
UGU-12-01/1.2	PROPOSED 0.5 ML NYANDEZULU ELEVATED RESERVOIR GENERAL DETAILS
UGU-12-01/03-1.3	PROPOSED 0.5 ML NYANDEZULU ELEVATED RESERVOIR R.C. DETAILS
UGU-12-01/03-1.4	PROPOSED 0.5 ML NYANDEZULU ELEVATED RESERVOIR R.C. DETAILS
UGU-12-01/03-1.5	PROPOSED 0.5 ML NYANDEZULU ELEVATED RESERVOIR R.C. DETAILS
UGU-12-01/03-1.6	PROPOSED 0.5 ML NYANDEZULU ELEVATED RESERVOIR R.C. DETAILS
UGU-12-02/1.1	PROPOSED 0.5 ML NYANDEZULU ELEVATED RESERVOIR INLET PIPEWORK DETAILS
UGU-12-02/1.2	PROPOSED 0.5 ML NYANDEZULU ELEVATED RESERVOIR OVERFLOW PIPEWORK DETAILS
UGU-12-02/1.3	PROPOSED 0.5 ML NYANDEZULU ELEVATED RESERVOIR OUTLET PIPEWORK DETAILS
UGU-12-02/03-1.1	PROPOSED 0.5 ML NYANDEZULU ELEVATED RESERVOIR SITE LAYOUT
UGU-12/02/03-1.12	PROPOSED PUMP STATION AT NYANDEZULU ELEVATED RESERVOIR SITE
UGU-12/02/04	ADDITIONAL PUMPSETS FOR BOMELA PUMP STATION LAYOUT
W01.PZB.0265-02-015	1.5 ML BOMELA NORTH RESERVOIR POINT SKETCHES



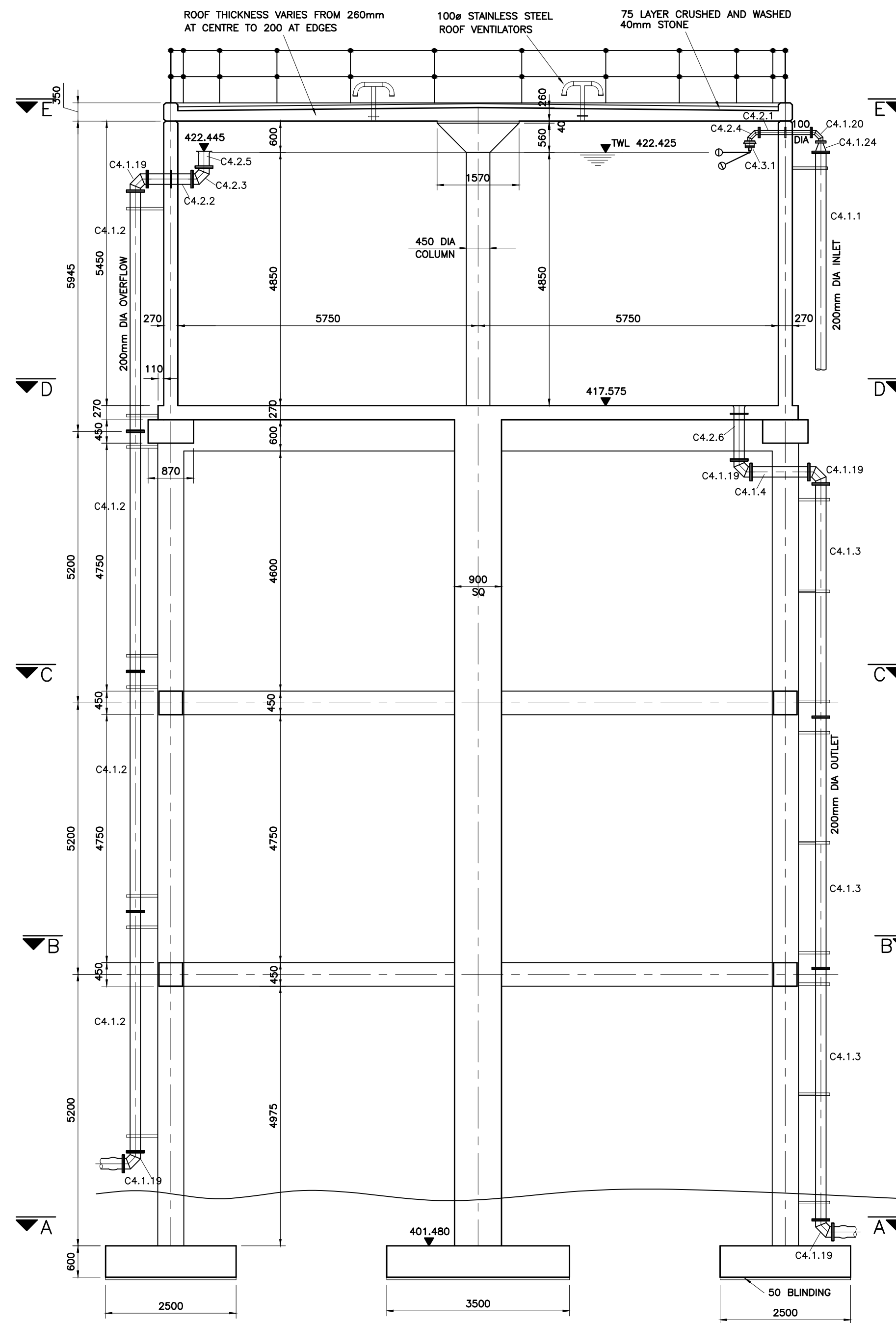
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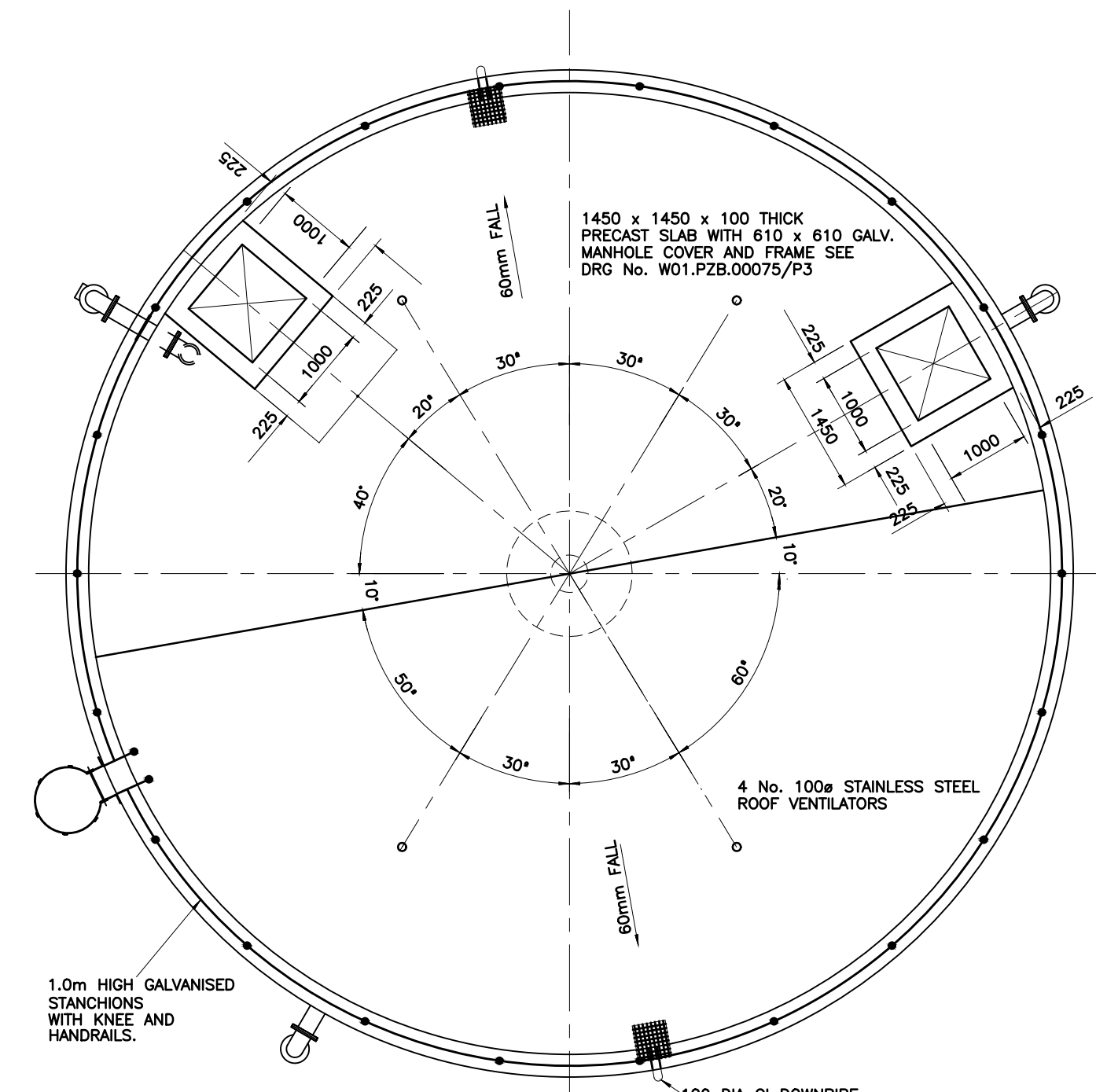
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SECTIONAL PLAN C - C SIMILAR



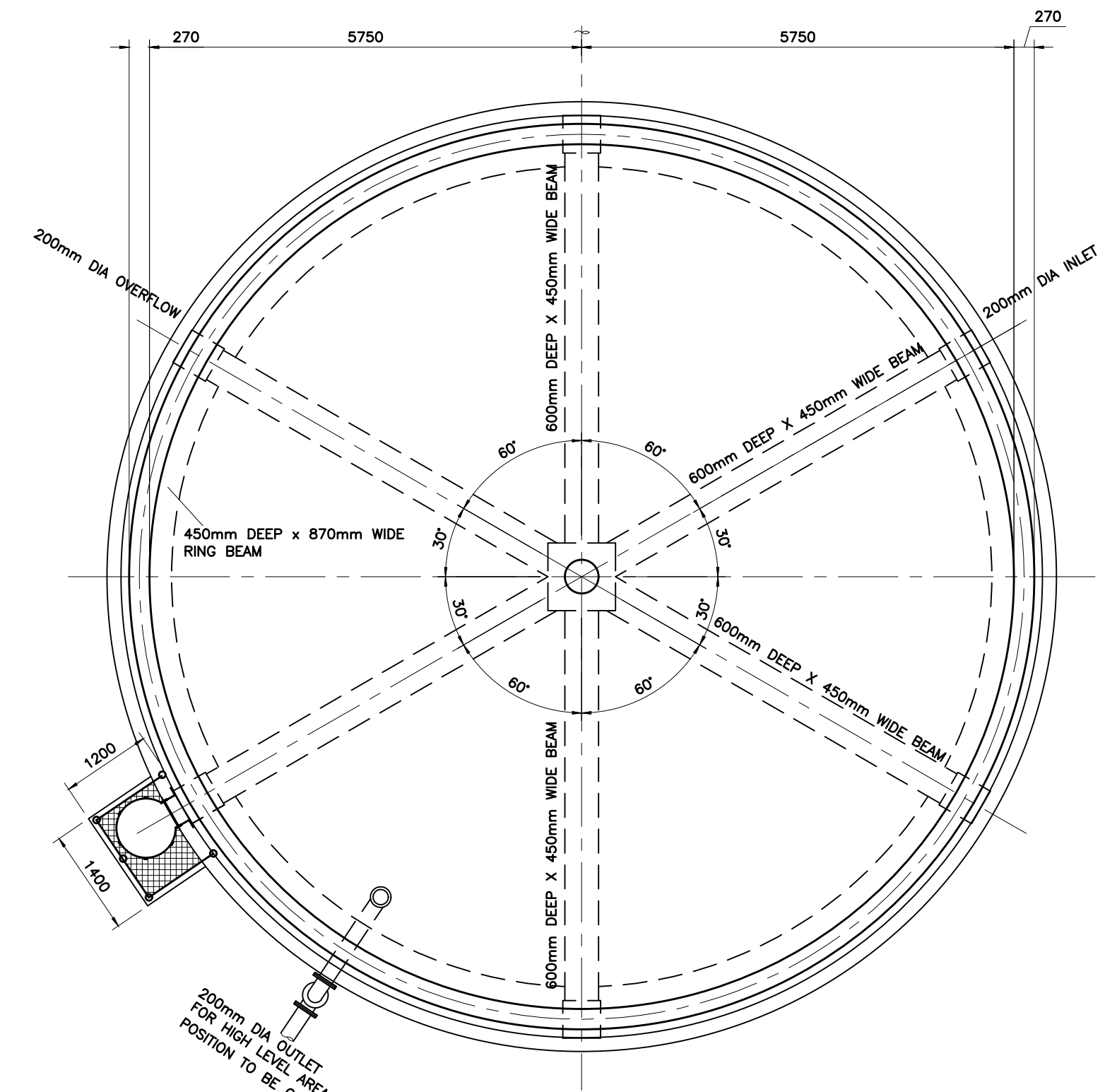
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SECTION F - F
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ROOF PLAN E - E
1 : 50



SECTIONAL PLAN D - D
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DRG. No.	REFERENCE DRAWINGS
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0	ISSUED FOR TENDER	07/22	T.B.
1	REVISIONS	DATE	CHKD APPRV

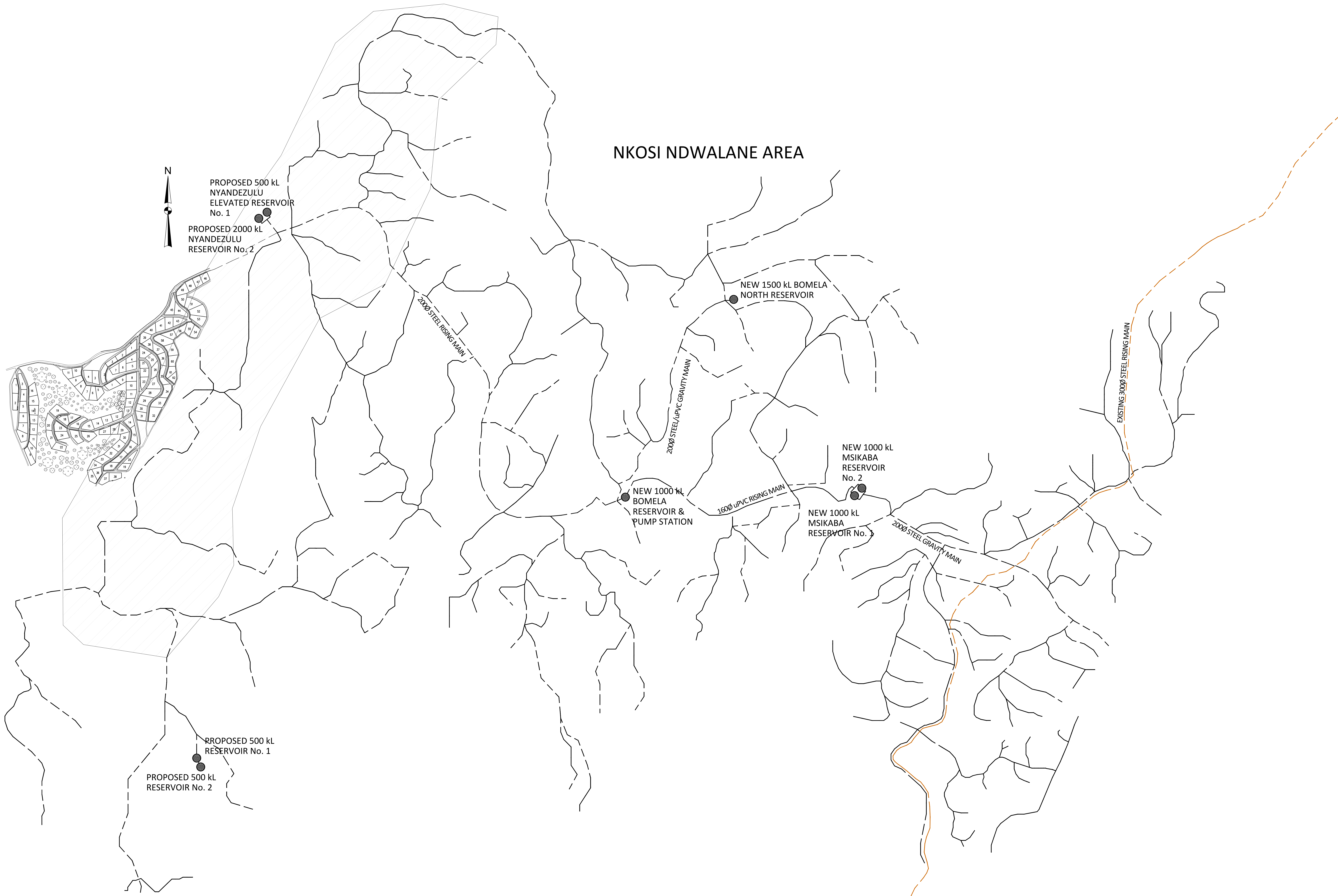
DESIGNED	W. TARUME (PR. ENG)
CHECKED	T. BHENGU
DRAWN	T. BURKE
CHECKED	W. TARUME (PR. ENG)
PROJ. ENGINEERS	T. BHENGU (PR. TECH. ENG) W. TARUME (PR. ENG)

NGCOLOSI CONSULTING ENGINEERS
TEL: (039) 312 0292 FAX: (039) 312 0291 E-mail: administration@ngcolosi.co.za P.O. Box 1421 Marabath Beach 4276
APPROVED : T. Bhengu 09m Tech. Eng 0200701000
DATE

CLIENT PLANNING APPROVED : OPERATION & MAINTENANCE APPROVED : SYSTEMS APPROVED : PROJECT MANAGEMENT UNIT APPROVED :	MECHANICAL & ELECTRICAL APPROVED : LEGAL APPROVED : AUXILIARY APPROVED :
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PROJECT/DRAWING TITLE
UGU DISTRICT MUNICIPALITY MSIKABA WATER SUPPLY SCHEME PHASE 3 PROPOSED 0,5MI NYANDEZULU ELEVATED RESERVOIR GENERAL ARRANGEMENT

ORIGINAL SCALE	AS SHOWN (ON A0)
ALT. DRW. No.	CONTRACT No. UGU-07-1611-2022
SHT. No. 1 OF 2	PROJECT No. -
DRAWING No. UGU-12-01 / 1.1	REVISION 0



0	FOR TENDER	07/7/2022	W.T.	T.B.	
P	FOR INFORMATION PURPOSES ONLY	03/02/2021	W.T.	T.B.	
△	REVISIONS	DATE	CHK	APP	

DESIGNED	W. TARUME
CHECKED	T. BHENGU
DRAWN	A. BURKE
CHECKED	W. TARUME
PROJECT ENGINEER	W. TARUME

NGCOLOSI CONSULTING ENGINEERS

TEL: (039) 312 0291
FAX: (039) 312 0292
E-mail: admin@ngcolosi.co.za

PO BOX 1421
MANABA BEACH
MARGATE
4276

APPROVED :
T. BHENGU
(Pr. Tech. Eng 200870300)

CLIENT

PLANNING APPROVED :
OPERATION & MAINTENANCE APPROVED :
SYSTEMS APPROVED :
PROJECT MANAGEMENT UNIT APPROVED :

MECHANICAL & ELECTRICAL APPROVED :
LEGAL APPROVED :
AUXILIARY APPROVED :

PROJECT

MSIKABA WATER SUPPLY
PHASE 3

DRAWING TITLE

NYANDEZULU HIGH LEVEL
SUPPLY AREA

COPY & USE OF THIS DRAWING IS RESERVED BY
NGCOLOSI CONSULTING ENGINEERS

SCALE:
N.T.S.

SHEET
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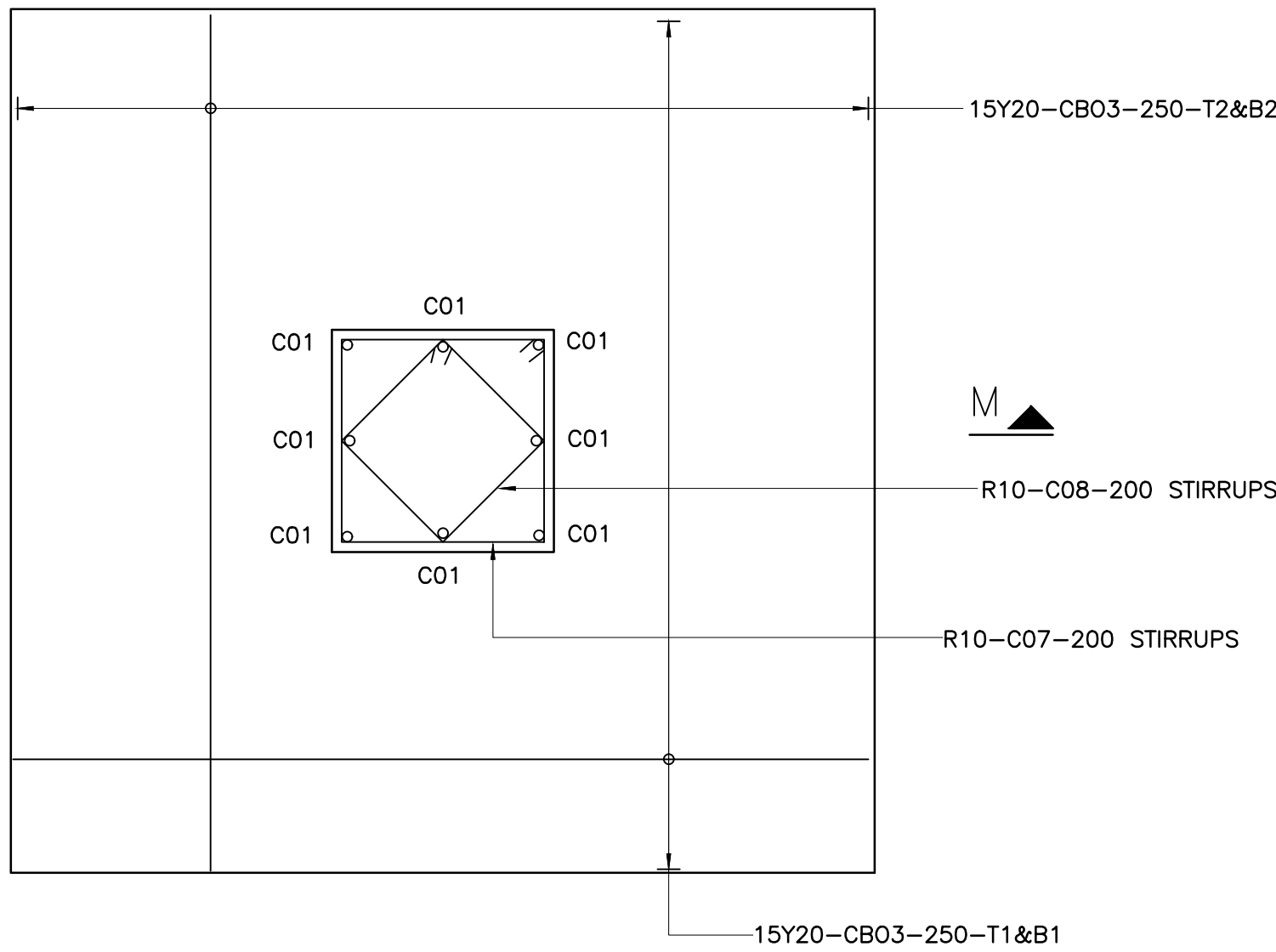
CONTRACT No.
UGU - 07 - 1611 - 2022

PROJECT No.
UGU-11-02

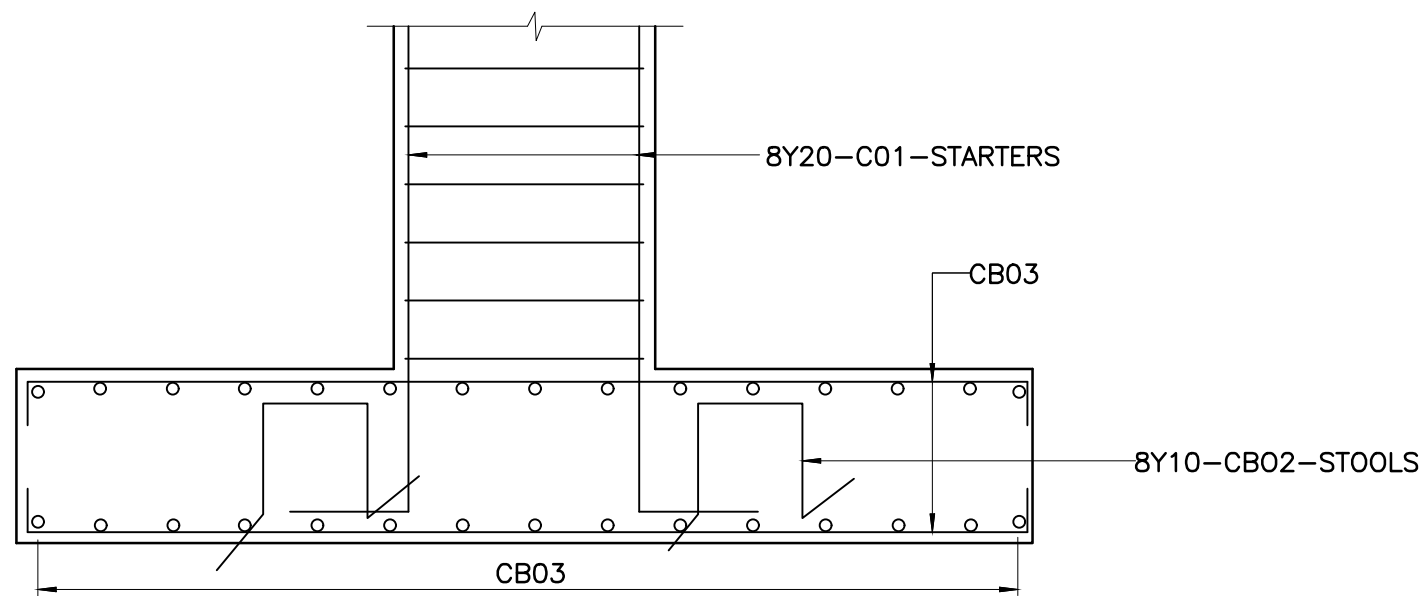
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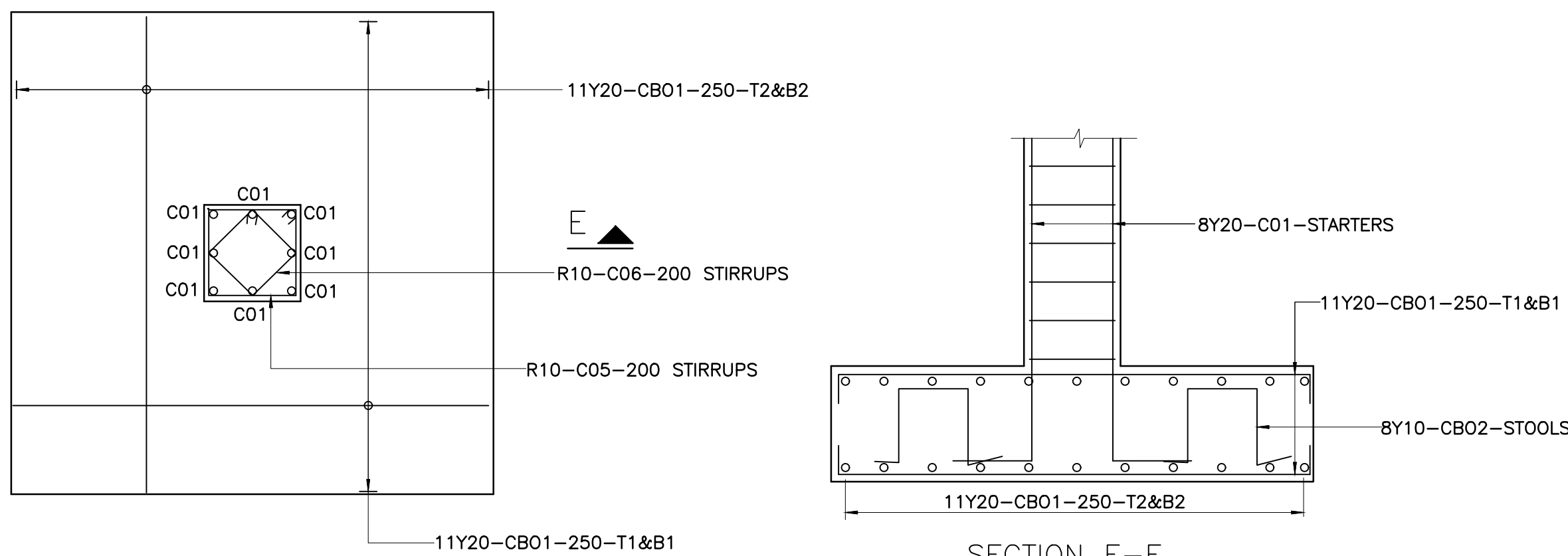
- NOTES:
- 1.CONCRETE GRADE 35A/19 MPa FOR RESERVOIR FLOOR, WALLS AND ROOF, ELSEWHERE GRADE 30/19.
 - 2.LENGTH OF VERTICAL BARS TAKES INTO ACCOUNT THE PROVISION OF A 150mm KICKER
 - 3.LAPS ARE IN ACCORDANCE WITH S.A.B.S. 0144 – 1978 AND ARE TO BE STAGGERED WHEREVER POSSIBLE
 - 4.UNLESS SPECIFICALLY SHOWN OTHERWISE ALL CONCRETE COVER TO BE 40mm
 - 5.BEND OR CUT BARS FOULING PIPES AND OPENINGS OFF-CUTS OF 500mm OR MORE TO BE USED TO TRIM AROUND OPENINGS
 - 6.ABBREVIATIONS AS PER S.A.B.S. 0144 – 1978



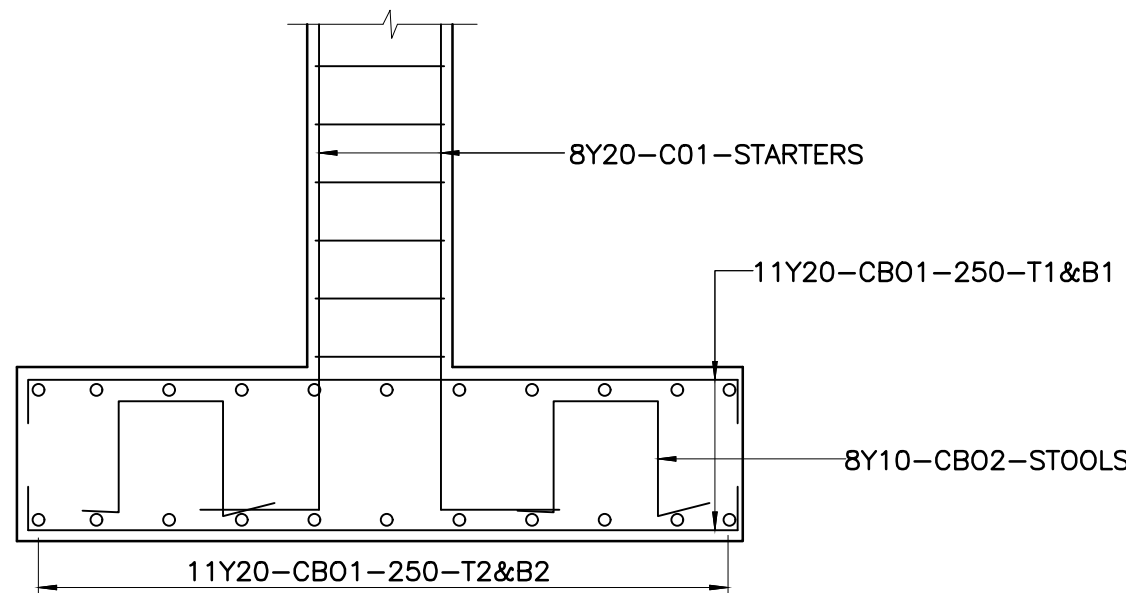
CETRE COLUMN BASE
(1 No. OFF)
SCALE 1:25



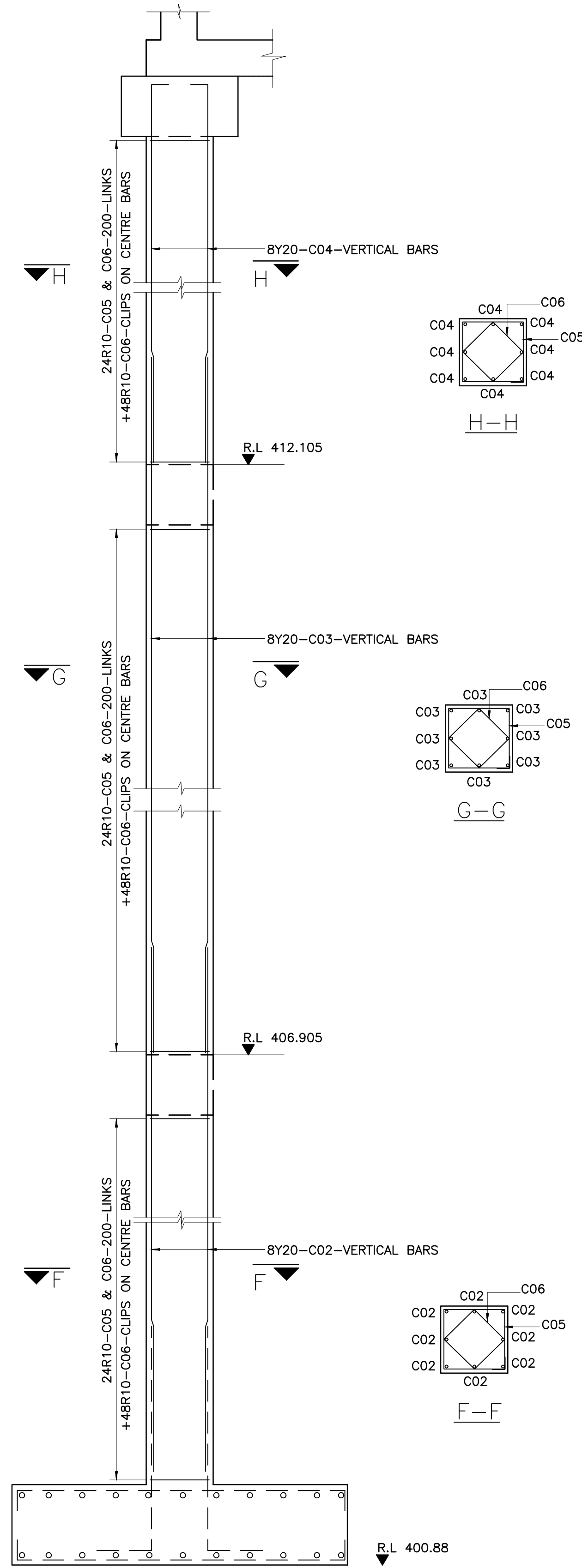
SECTION M-M
SCALE 1:25



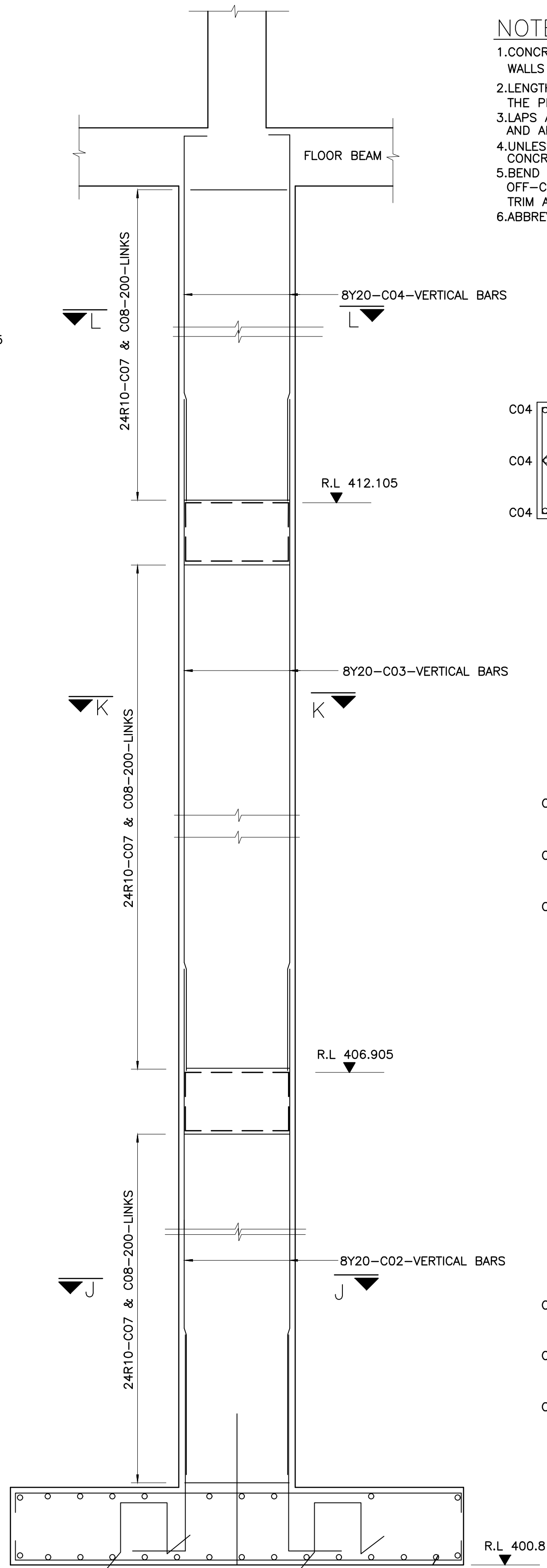
COLUMN BASES
(6 No. OFF)
SCALE 1:25



SECTION E-E
SCALE 1:25



TYPICAL SECTION OF 500 SQ. COLUMNS
(6 No. OFF)
SCALE 1:25



TYPICAL SECTION OF 900 SQUARE COLUMN
(1 No. OFF)
SCALE 1:25

DRG. No.	REFERENCE DRAWINGS

REVISIONS	DATE
0 FOR TENDER PURPOSES ONLY	07/22

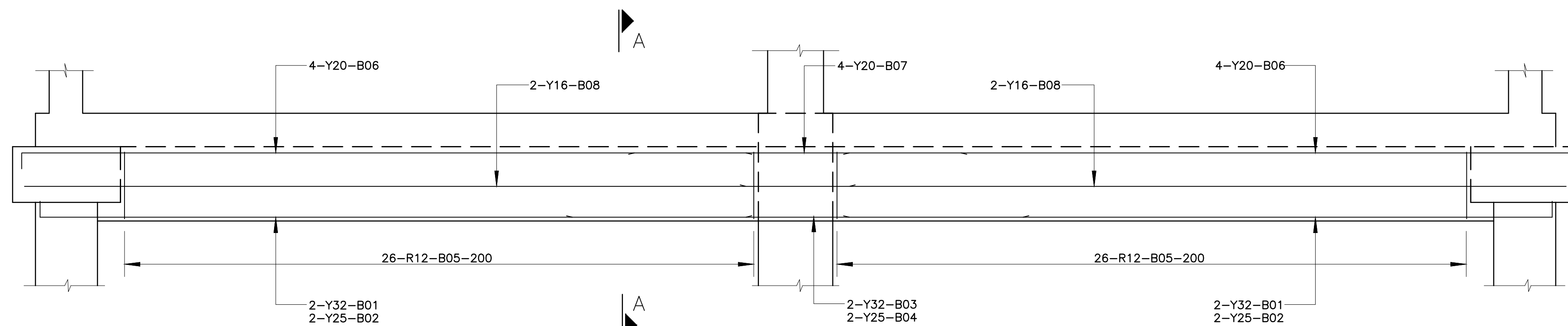
DESIGNED	W. TARUME (PR. ENG.)
CHECKED	T. BHENGU
DRAWN	T. BURKE
CHECKED	W. TARUME (PR. ENG.)
PROJ. ENG.	T. BHENGU (PR TECH. ENG)

NGCOLOSI CONSULTING ENGINEERS	No. 4 Vilike Road Mombasa Beach 4276
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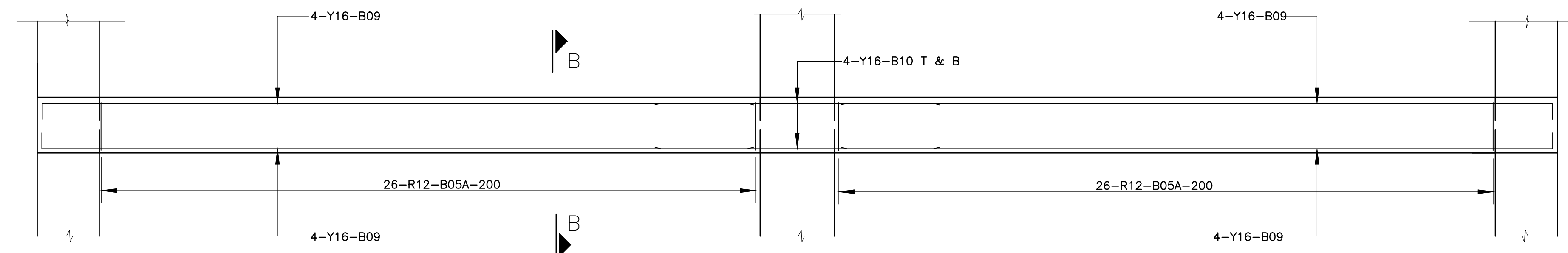
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---	--

PROJECT/DRAWING TITLE
UGU DISTRICT MUNICIPALITY
MSIKABA WATER SUPPLY SCHEME PHASE 3
PROPOSED 0,5MI NYANDEZULU ELEVATED RESERVOIR
R.C. DETAILS (SHEET 1 OF 4)

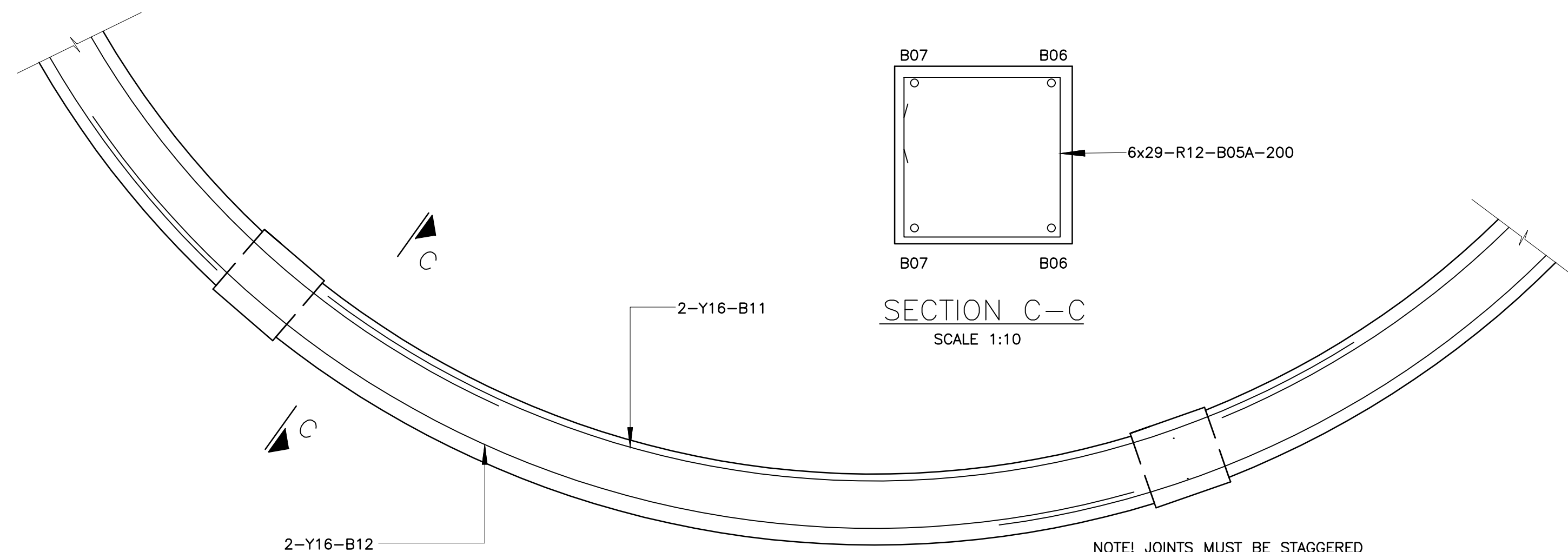
ORIGINAL SCALE AS SHOWN	
ALT. DWG. No.	CONTRACT No. UGU-07-1611-2022
SHT. No.	OF PROJECT No.
DRAWING No. UGU/12/01/03-1.3	REVISION 0



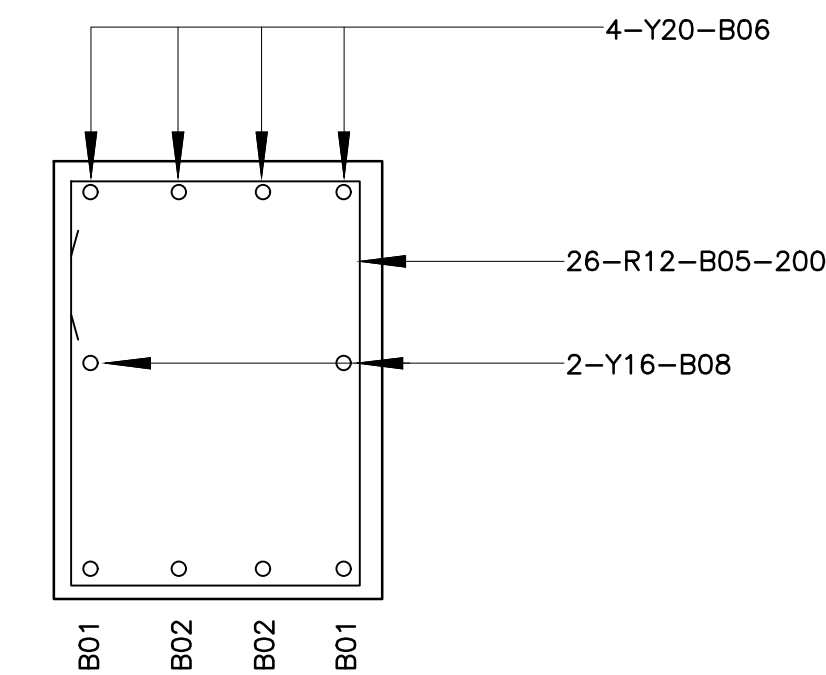
TYPICAL SECTION OF FLOOR BEAM
600 DEEP x 450 WIDE
(3 No. OFF)



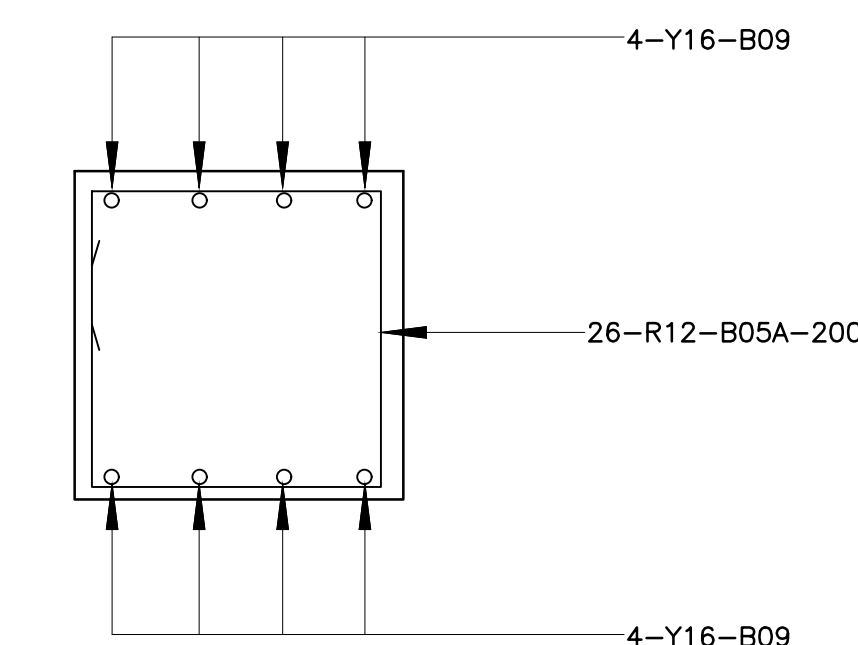
TYPICAL SECTION OF BRACING BEAM
450 DEEP x 450 WIDE
(6 No. OFF)
SCALE 1:25



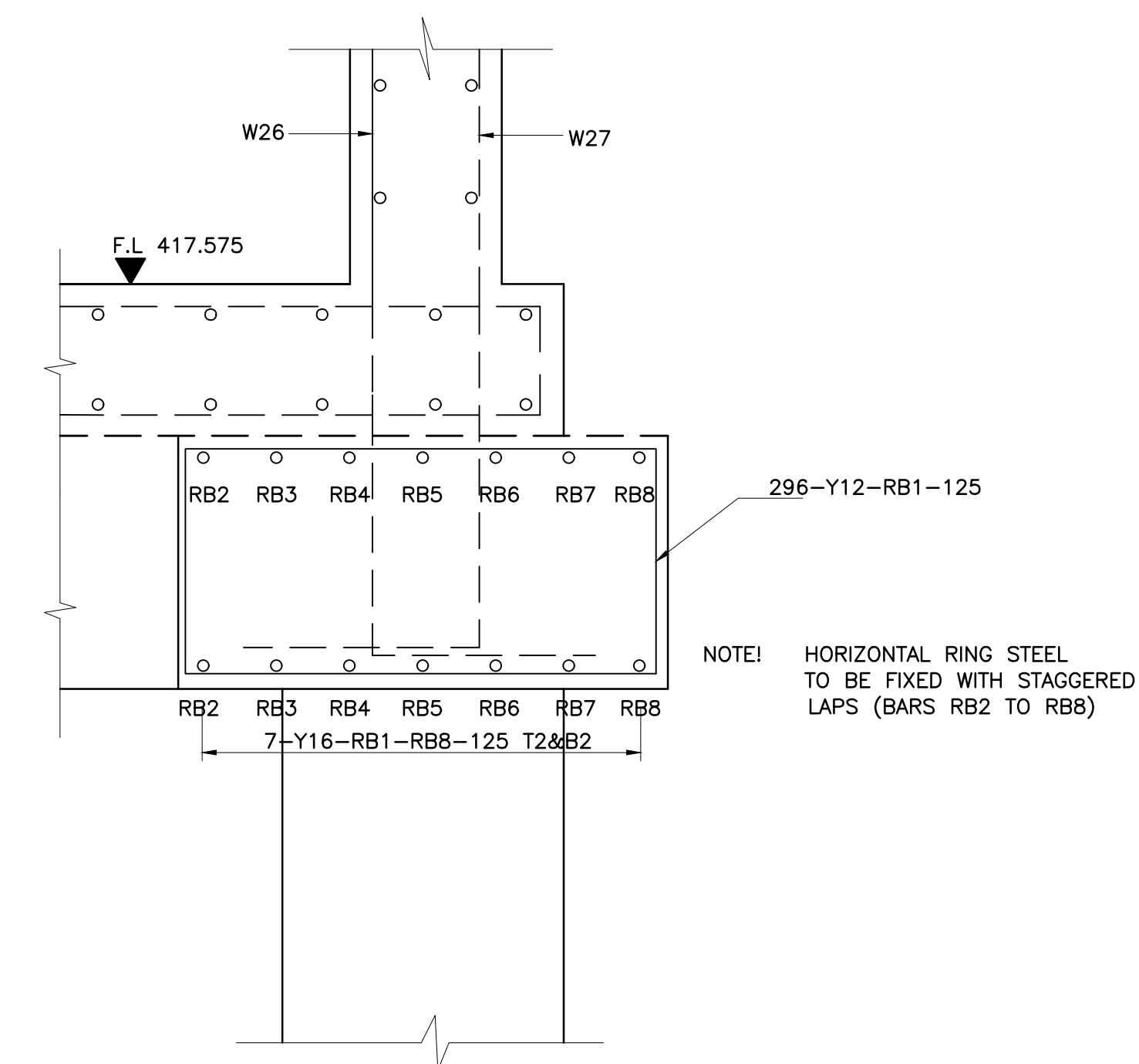
PART PLAN ON CIRCULAR BRACING BEAM
450 DEEP x 450 WIDE
(2 No. OFF)
SCALE 1:25



SECTION A-A
SCALE 1:10



SECTION B-B
SCALE 1:10



TYPICAL SECTION OF FLOOR RING BEAM
SCALE 1:10

NOTES:

- 1.CONCRETE GRADE 35A/19 MPa FOR RESERVOIR FLOOR, WALLS AND ROOF, ELSEWHERE GRADE 30/19.
- 2.LENGTH OF VERTICAL BARS TAKES INTO ACCOUNT THE PROVISION OF A 150mm KICKER
- 3.LAPS ARE IN ACCORDANCE WITH S.A.B.S. 0144 - 1978 AND ARE TO BE STAGGERED WHEREVER POSSIBLE
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- 5.BEND OR CUT BARS FOULING PIPES AND OPENINGS OFF-CUTS OF 500mm OR MORE TO BE USED TO TRIM AROUND OPENINGS
- 6.ABBREVIATIONS AS PER S.A.B.S. 0144 - 1978

ORIGINAL SCALE

AS SHOWN

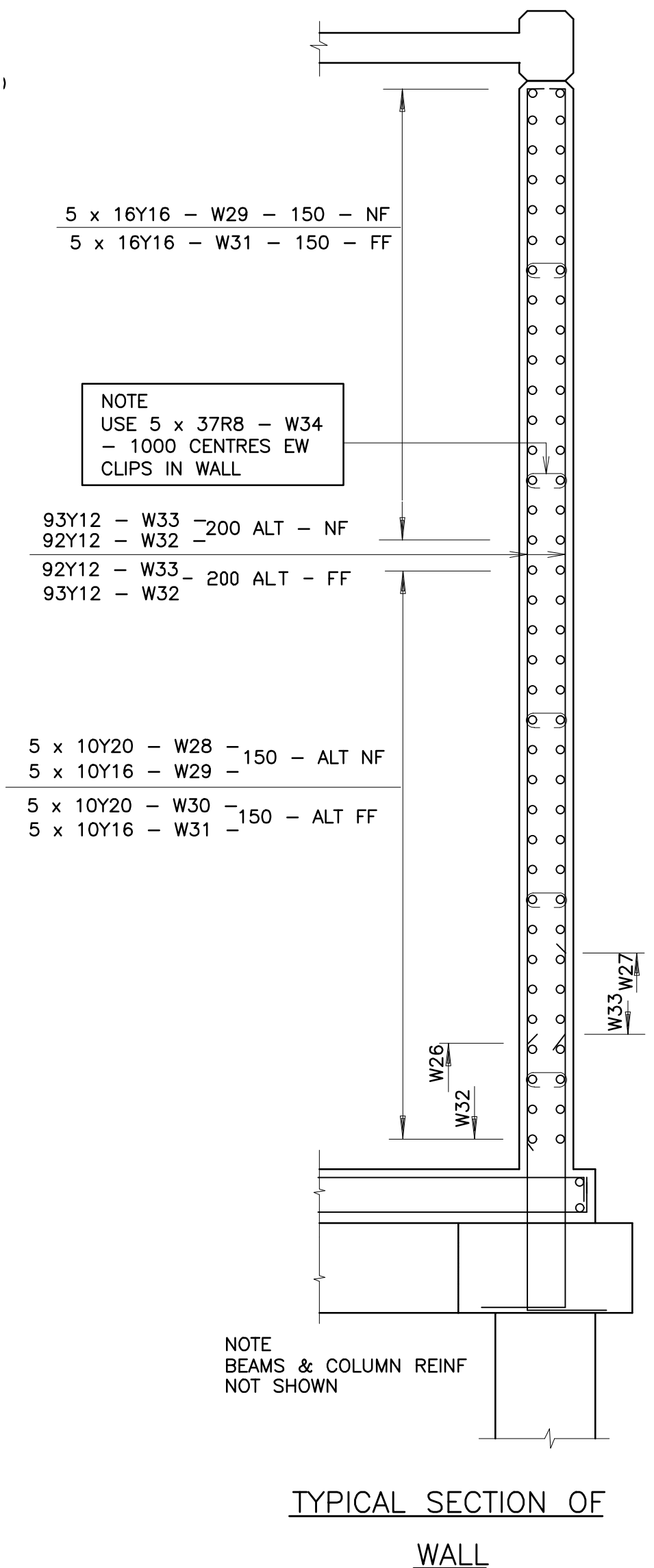
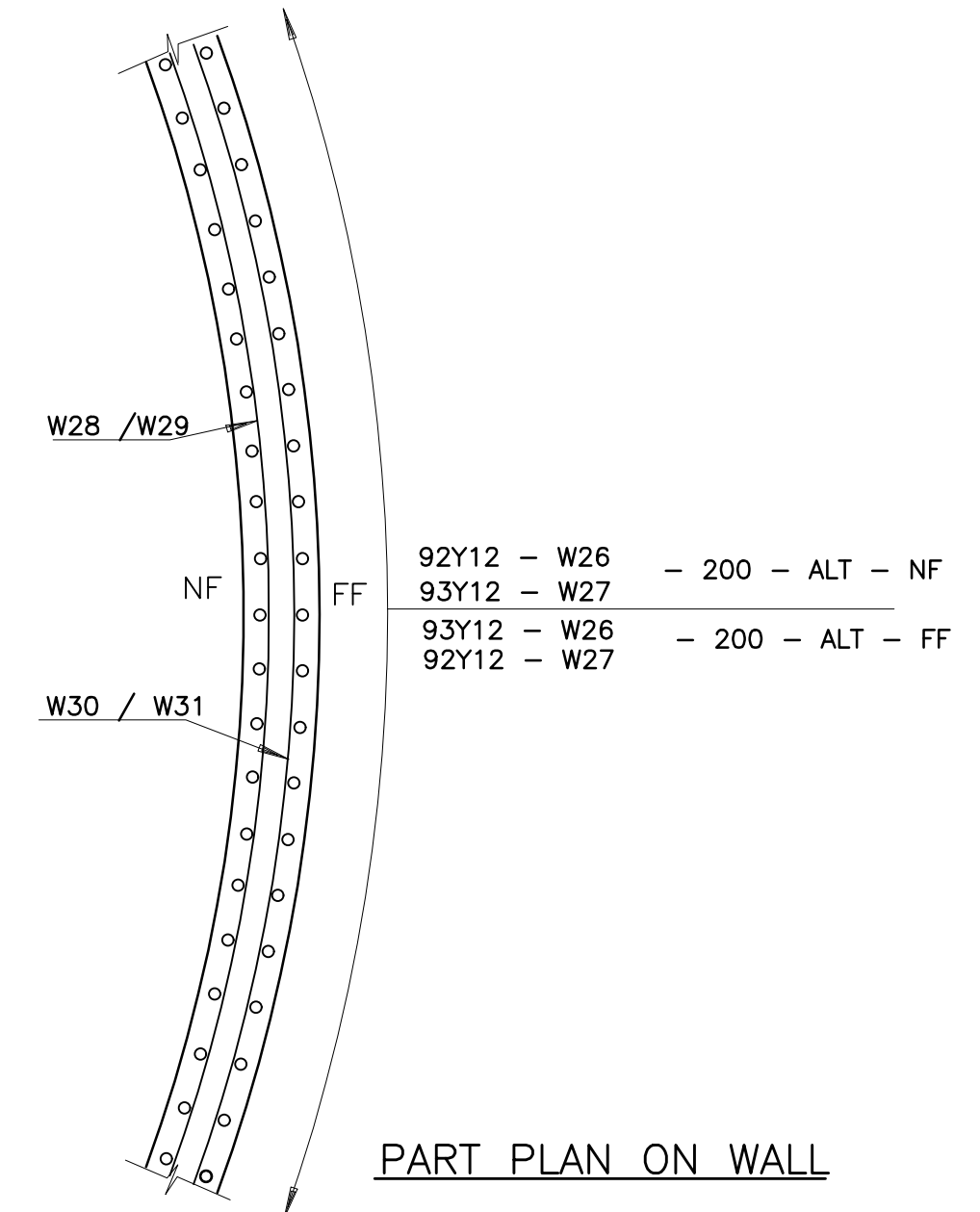
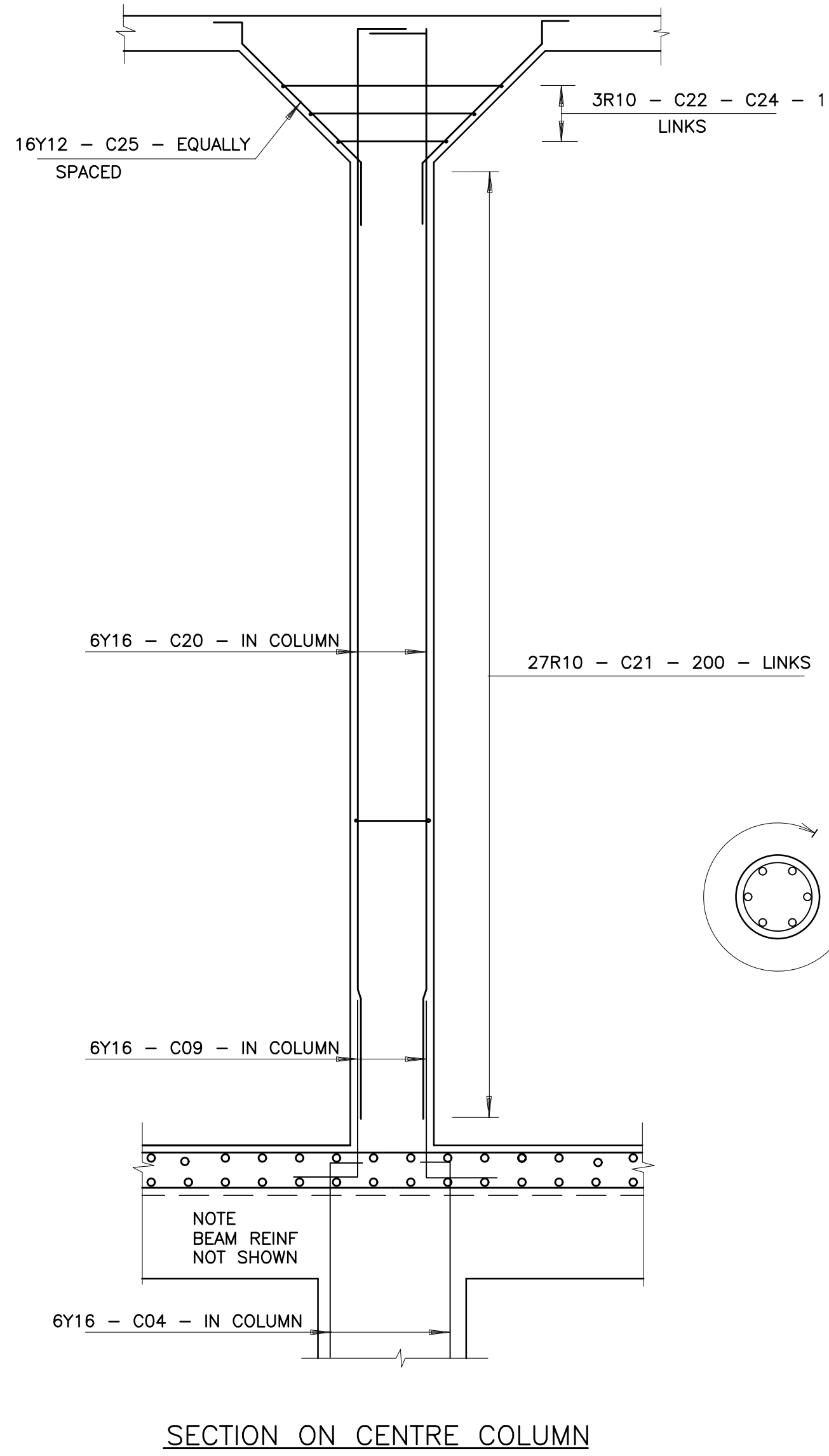
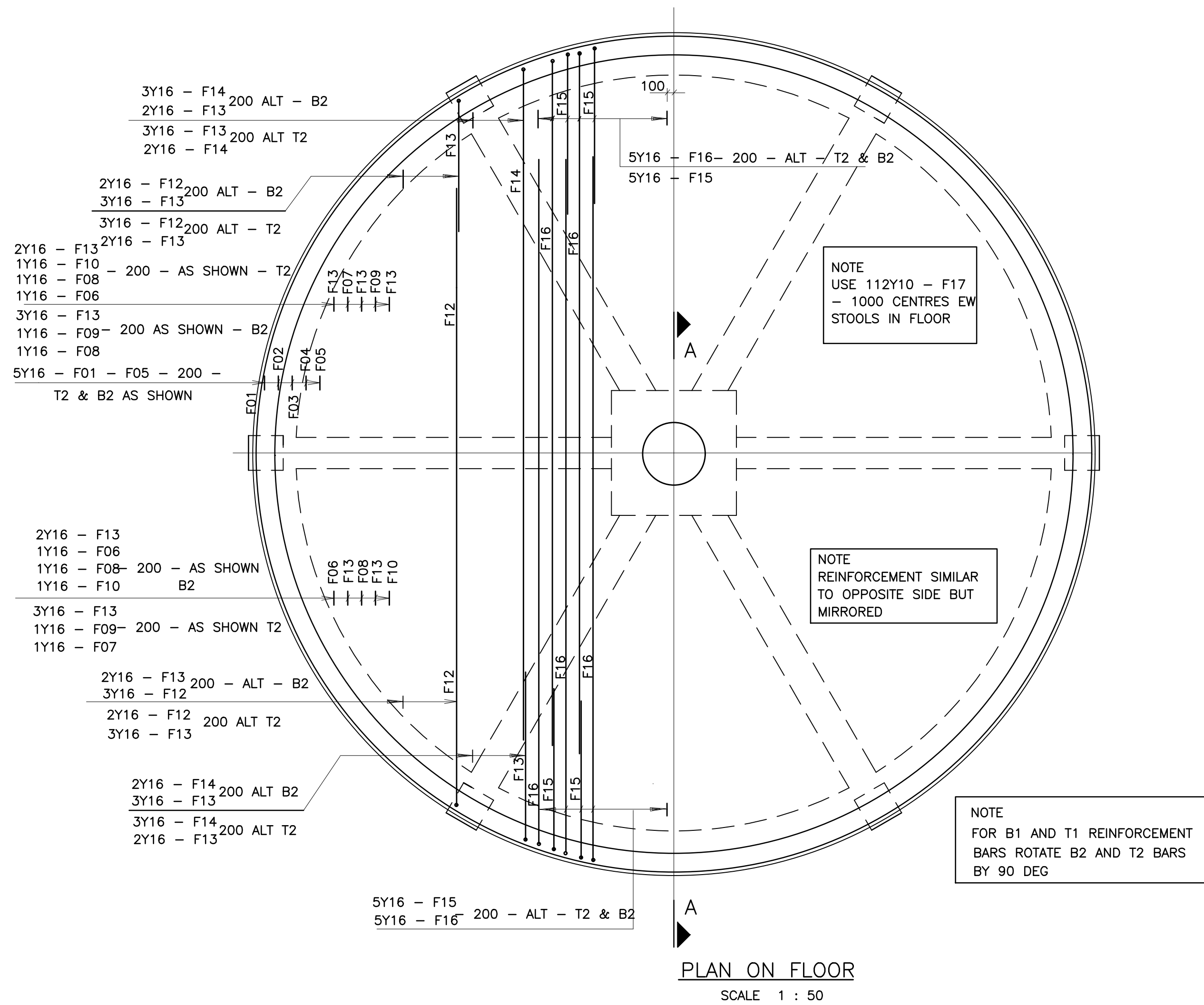
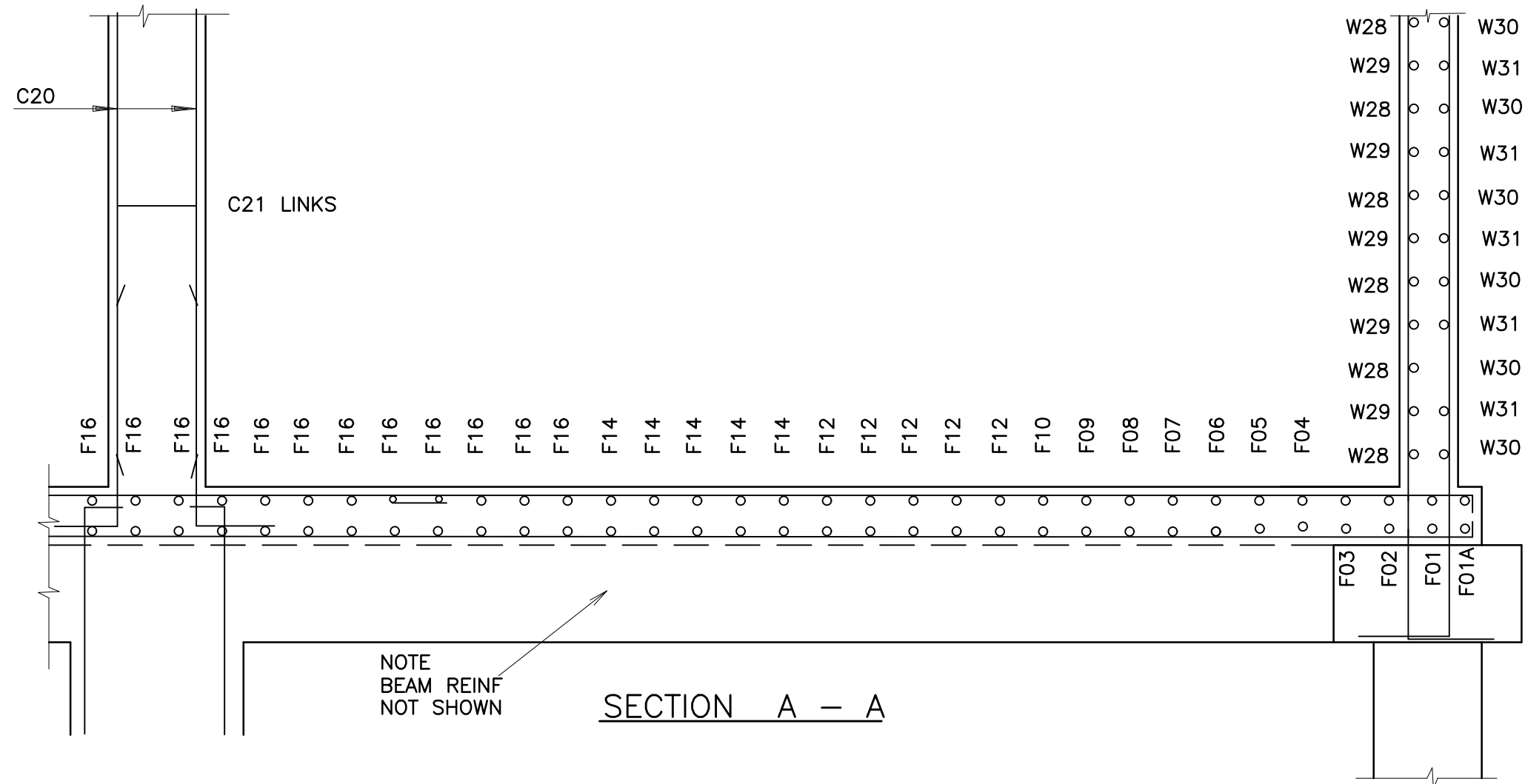
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	UGU-07-1611-2022
SHT. No.	OF
	PROJECT No.
DRAWING No.	REVISION
UGU/12/01/03-1.4	0

DRG. No.	REFERENCE DRAWINGS
0	FOR TENDER PURPOSES ONLY
REVISIONS	DATE
DESIGNED	W. TARUME (PR. ENG.)
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CHECKED	W. TARUME (PR. ENG.)
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CLIENT PLANNING APPROVED : OPERATION & MAINTENANCE APPROVED : SYSTEMS APPROVED : PROJECT MANAGEMENT UNIT APPROVED :	MECHANICAL & ELECTRICAL APPROVED : LEGAL APPROVED : AUXILIARY APPROVED :
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PROJECT/DRAWING TITLE
UGU DISTRICT MUNICIPALITY
MSIKABA WATER SUPPLY SCHEME PHASE 3
PROPOSED 0,5MI NYANDEZULU ELEVATED RESERVOIR
R.C. DETAILS (SHEET 2 OF 4)



- NOTES:**
- 1.CONCRETE GRADE 35A/19 MPa FOR RESERVOIR FLOOR, WALLS AND ROOF, ELSEWHERE GRADE 30/19.
 - 2.LENGTH OF VERTICAL BARS TAKES INTO ACCOUNT THE PROVISION OF A 150mm KICKER
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 - 6.ABBREVIATIONS AS PER S.A.B.S. 0144 - 1978

DRG. No.		REFERENCE DRAWINGS		0		FOR TENDER PURPOSES ONLY		07/22		DATE	
DESIGNED		W. TARUME (PR. ENG.)		CHECKED		T. BHENGU		DRAWN		T. BURKE	
CHECKED		T. BHENGU		DRAWN		T. BURKE		CHECKED		W. TARUME (PR. ENG.)	
PROJ. ENG.		T. BHENGU (PR. TECH. ENG.)		APPROVED		T. Bhengu (Pr. Tech. Eng.)		DATE			

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4276

CLIENT		MECHANICAL & ELECTRICAL	
PLANNING	APPROVED	APPROVED	
OPERATION & MAINTENANCE	APPROVED	LEGAL	APPROVED
SYSTEMS	APPROVED	AUXILIARY	APPROVED
PROJECT MANAGEMENT UNIT	APPROVED		

PROJECT/DRAWING TITLE	
UGU DISTRICT MUNICIPALITY	
MSIKABA WATER SUPPLY SCHEME PHASE 3	
PROPOSED 0,5MI NYANDEZULU ELEVATED RESERVOIR	
R.C. DETAILS (SHEET 3 OF 4)	

ORIGINAL SCALE		AS SHOWN	
ALT. DWG. No.	CONTRACT No.	UGU-07-1611-2022	
SHT. No.	OF	PROJECT No.	
3	4		
DRAWING No.		REVISION	
UGU/12/01/03-1.5		0	

31Y16 - R49
94Y16 - R50
63Y16 - R51 100 - ALT - B1
ON MR 2990

NOTE
ADDITIONAL BARS FOR
OPPOSITE OPENING SIMILAR

(2 + 2) Y16 - R63
T1 & B1 ADD. BARS
(2 + 2) Y12 - R65
T & B - STITCHING BARS

(2 + 2) Y16 - R64
T2 & B2 - ADD. BARS

A

B

B

PLAN ON ROOF SLAB
SHOWING BOTTOM REINF.
SCALE 1 : 50

94Y12 - R81 100 - T1 ON MR 2990
94Y12 - R82

2Y12 - R67 IN UPSTAND
2Y12 - R68 IN UPSTAND
(6/8)Y12 - R66 - 200 - LINKS
(3/5)Y12 - R66 - 200 - LINKS
(6/8)Y12 - R66 - 200 - LINKS

NOTE
BARS FOR UPSTAND AROUND
OPENING SIMILAR FOR OPPOSITE
ONE

NOTE
USE
6R8 - R69 - 1000 - ON MR 1000
12R8 - R70 - 1000 - ON MR 2000
19R8 - R71 - 1000 - ON MR 3000
25R8 - R72 - 1000 - ON MR 4000
31R8 - R73 - 1000 - ON MR 5000
STOOLS IN ROOF SLAB

3 x 5Y12 - R52 - 300 - T2
(STRAIGHT SPRUNG INTO POSITION)

4 x 4Y12 - R53 - 300 - T2
(STRAIGHT SPRUNG INTO POSITION)

5 x 3Y12 - R54 - R58 - 300 - T2

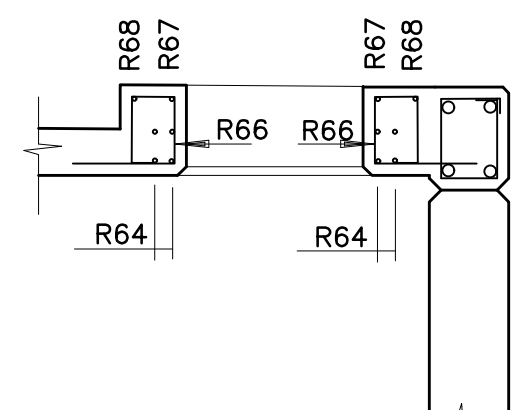
3 x 2Y12 - R59 - R62 - 300 - T2

7Y12 - R74 - R80 - 160
T1

NOTE
USE BAR MARKS R74 -
R80 - AS SHOWN BUT
ROTATE 90 DEG. FOR
T2 LAYER

6Y12 - R74 - R79 - 160 - T1

PLAN ON ROOF SLAB
SHOWING TOP REINF.
SCALE 1 : 50



SECTION B - B

NOTE
25mm COVER TO
T1 BARS

5 x 2Y16 - R84 - AS SHOWN
188Y12 - R83 - 200 - LINKS
ON MR 5885

5 x 2Y16 - R85 - AS SHOWN

SECTION A - A
SCALE 1 : 25

NOTES:

- 1.CONCRETE GRADE 35A/19 MPa FOR RESERVOIR FLOOR, WALLS AND ROOF, ELSEWHERE GRADE 30/19.
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- 6.ABBREVIATIONS AS PER S.A.B.S. 0144 - 1978

ORIGINAL SCALE
AS SHOWN

ALT. DWG. No.	CONTRACT No.
SHT. No.	PROJECT No.
4 OF 4	UGU-07-1611-2022
DRAWING No.	REVISION
UGU/12/01/03-1.6	0

DESIGNED	W. TARUME (PR. ENG.)
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DRAWN	T. BURKE
CHECKED	W. TARUME (PR. ENG.)
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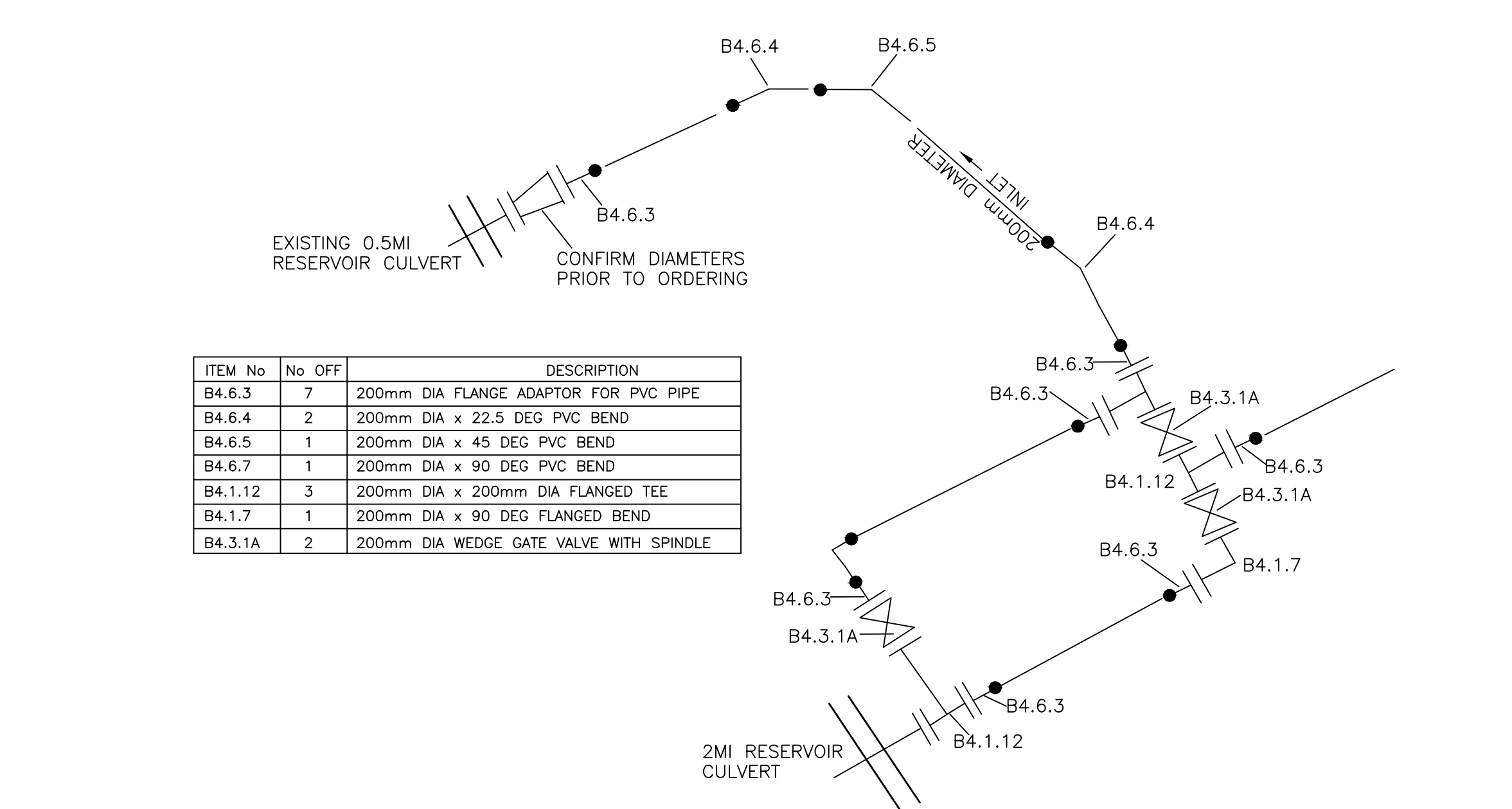
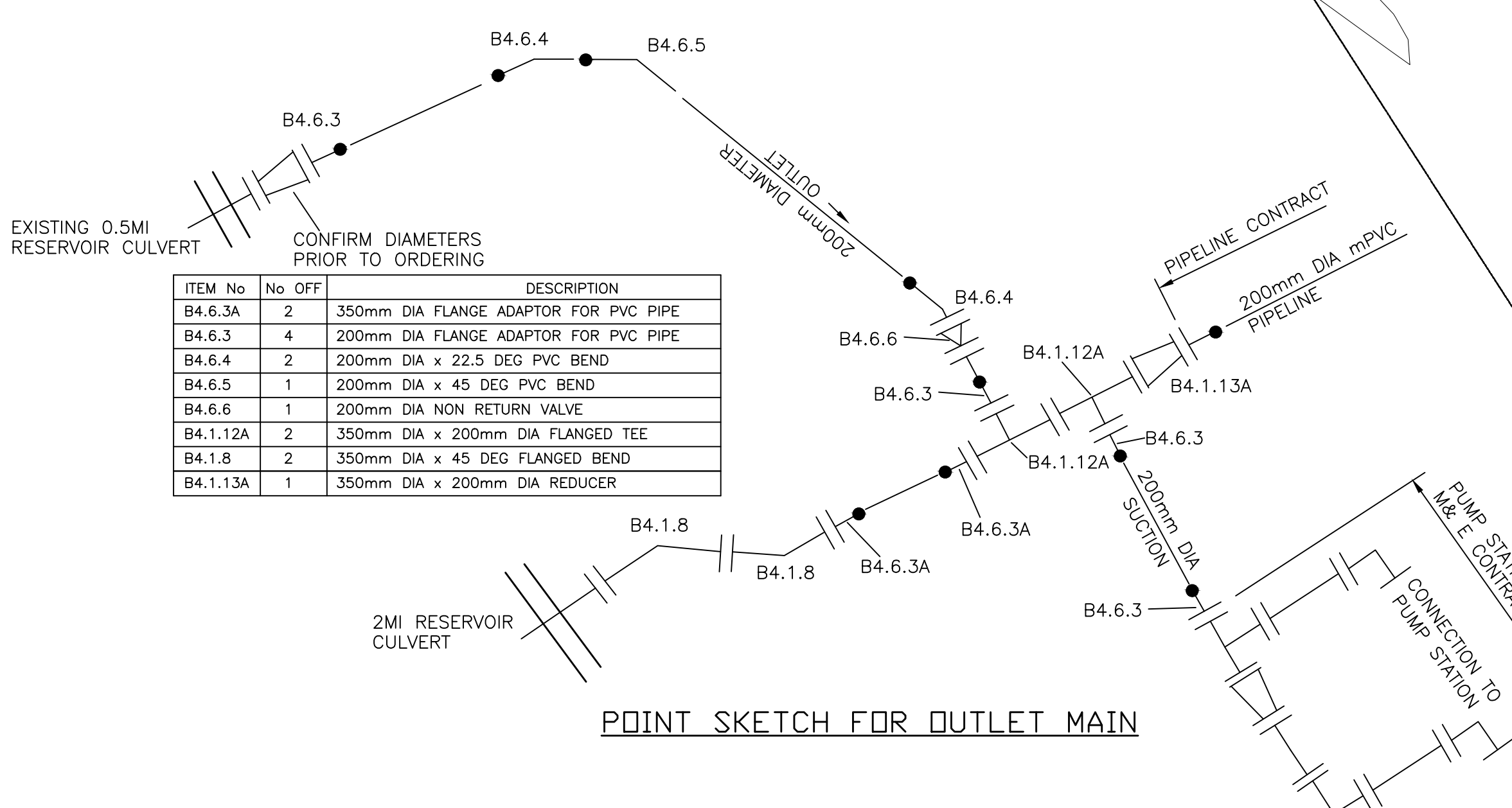
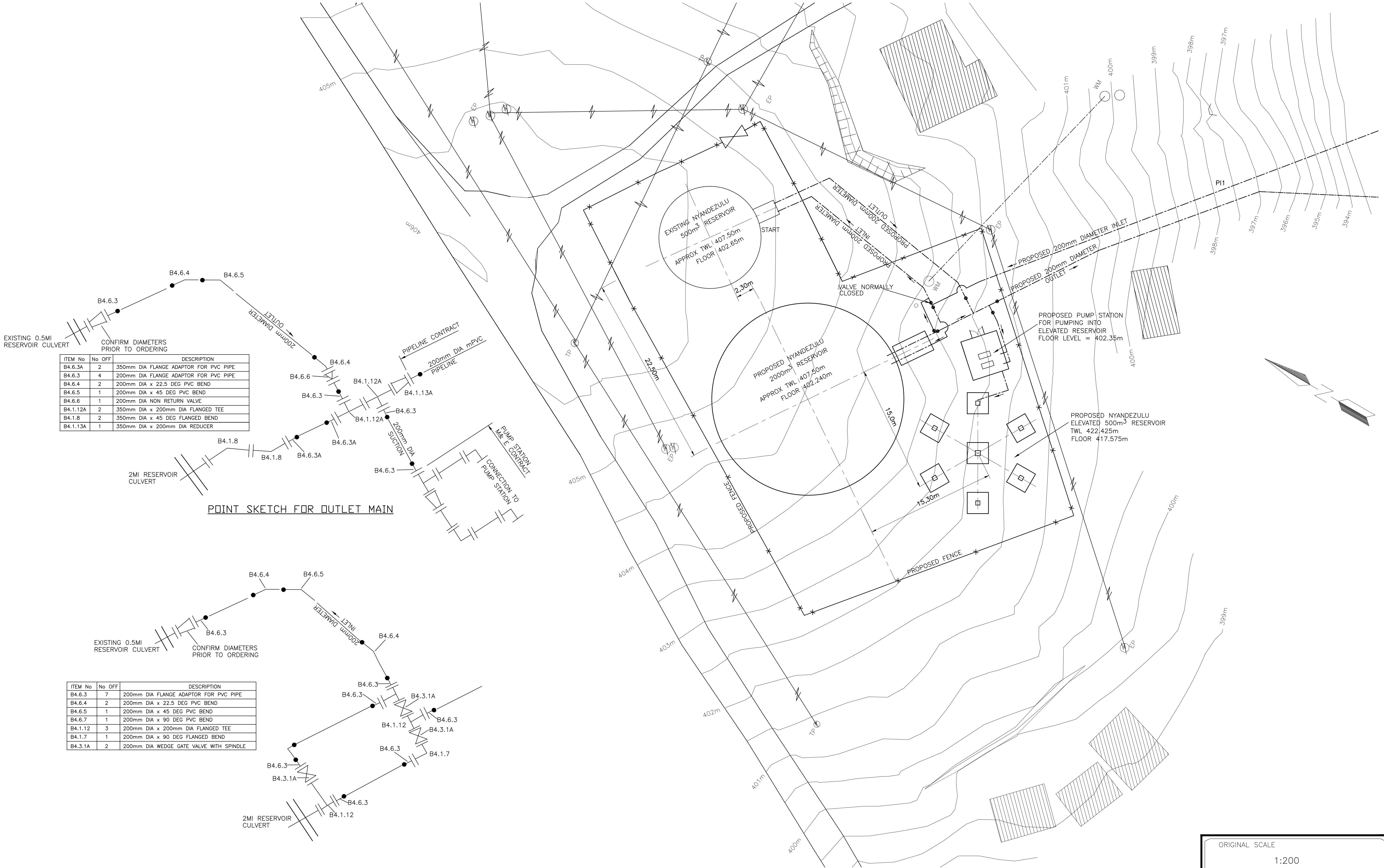
No.4
Wilkie Road
Mandisa Beach
4276

APPROVED :
T. Bhengu (Pr. Tech. Eng)
DATE

CLIENT	MECHANICAL & ELECTRICAL
PLANNING	APPROVED :
OPERATION & MAINTENANCE	LEGAL
APPROVED :	APPROVED :
SYSTEMS	AUXILIARY
APPROVED :	APPROVED :
PROJECT MANAGEMENT UNIT	
APPROVED :	

PROJECT/DRAWING TITLE
UGU DISTRICT MUNICIPALITY
MSIKABA WATER SUPPLY SCHEME PHASE 3
PROPOSED 0,5MI NYANDEZULU ELEVATED RESERVOIR
R.C. DETAILS (SHEET 4 OF 4)

DRG. No. REFERENCE DRAWINGS



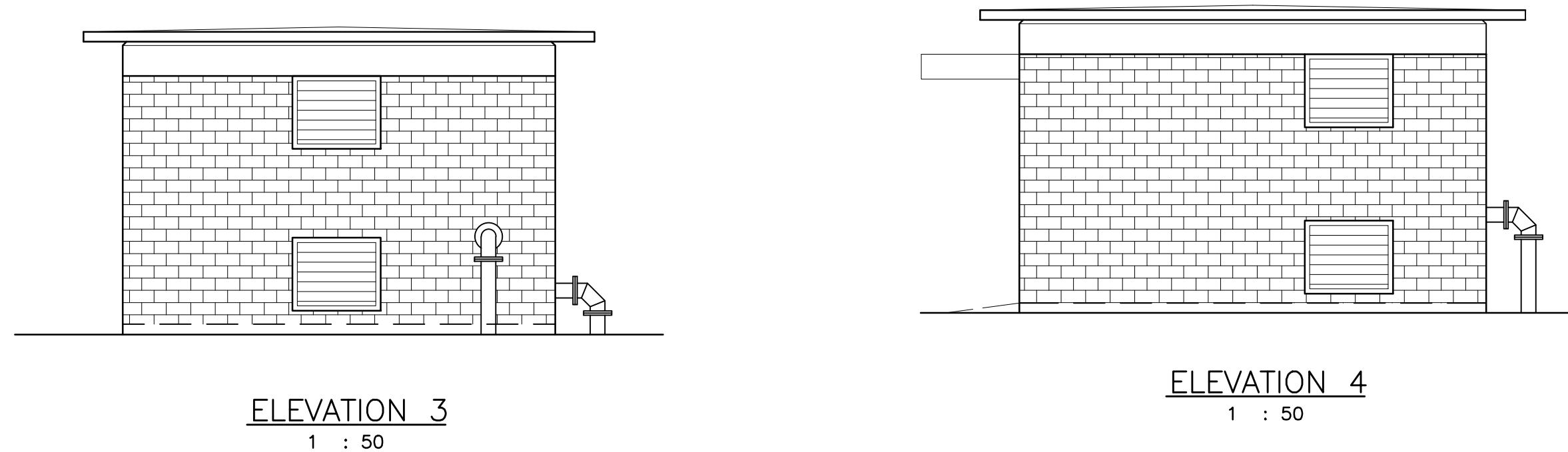
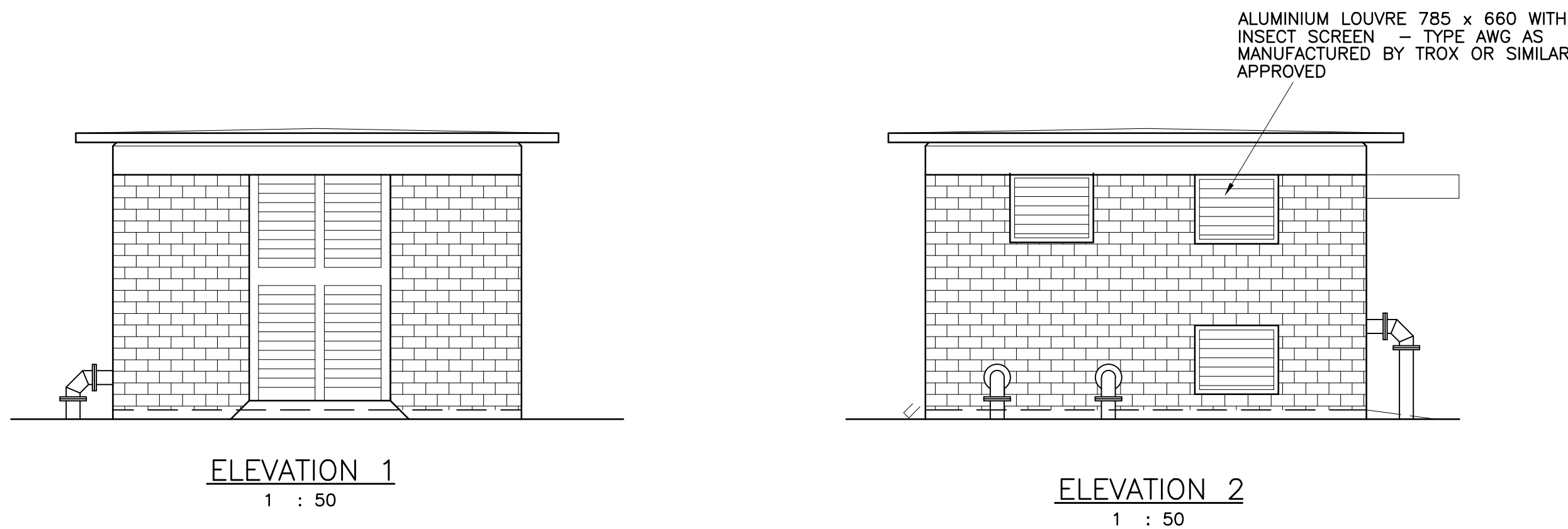
DESIGNED	TARUME. W; PR. ENG.
CHECKED	T. BHENGU
DRAWN	T. BURKE
CHECKED	T. BHENGU
PROJ. ENG.	T. BHENGU (PR TECH. ENG)

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Office No. 7 Stevson House Cnr Mandela & Alken Street Port Shepstone				
APPROVED: T. Bhengu (Pr. Tech. Eng 200870360) DATE				

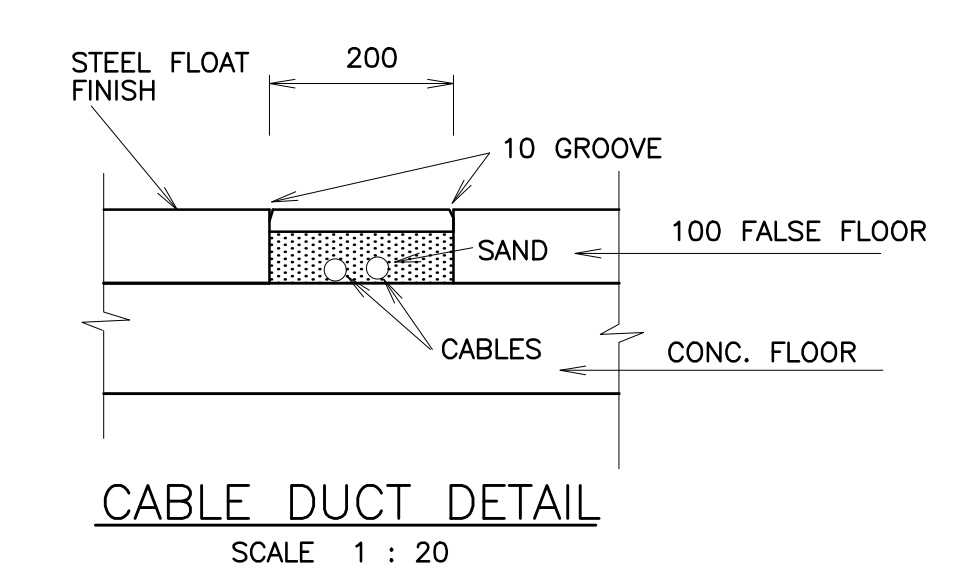
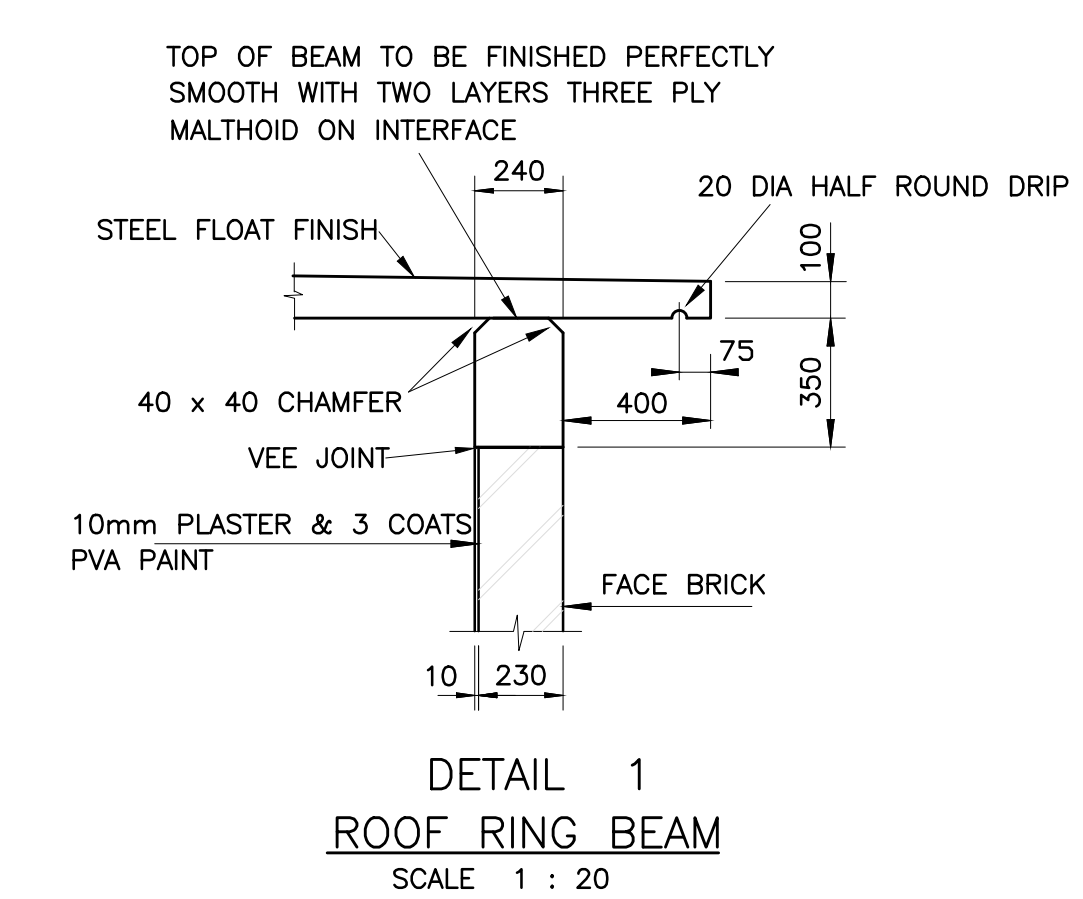
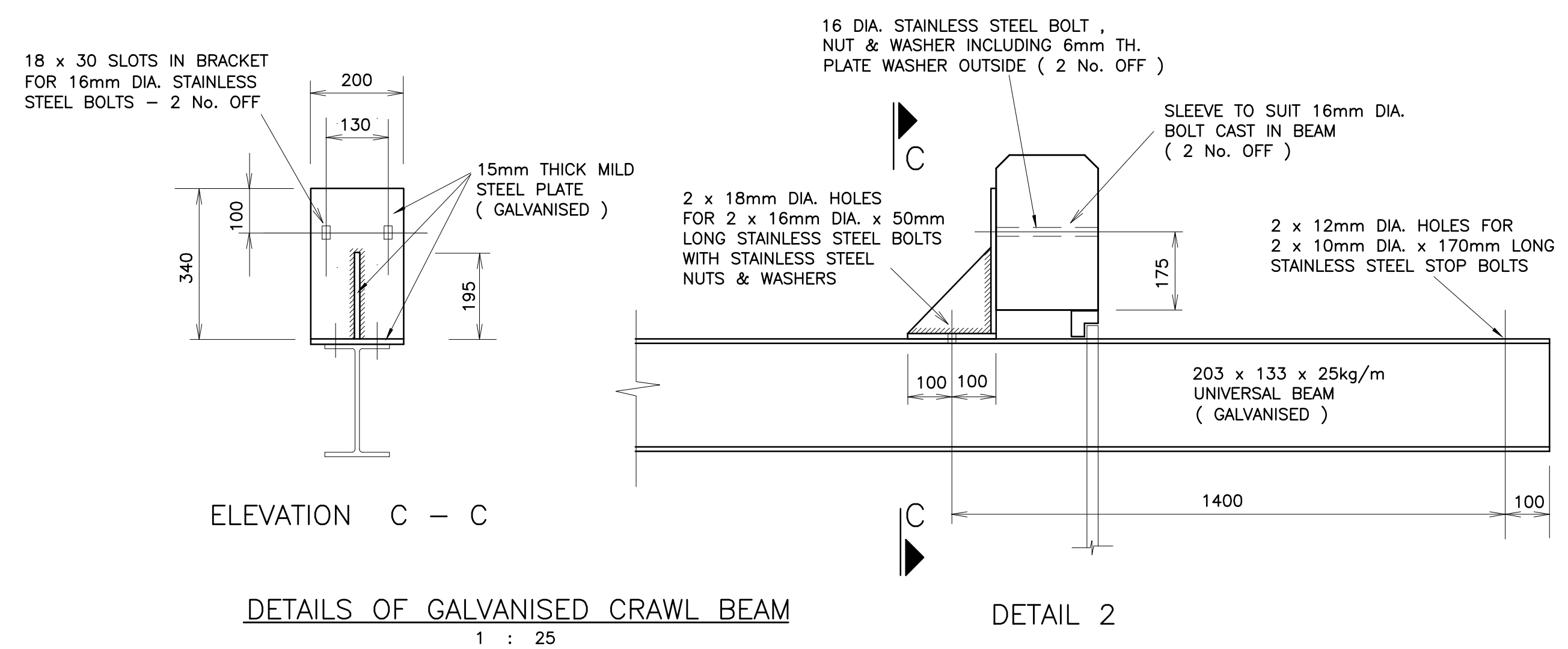
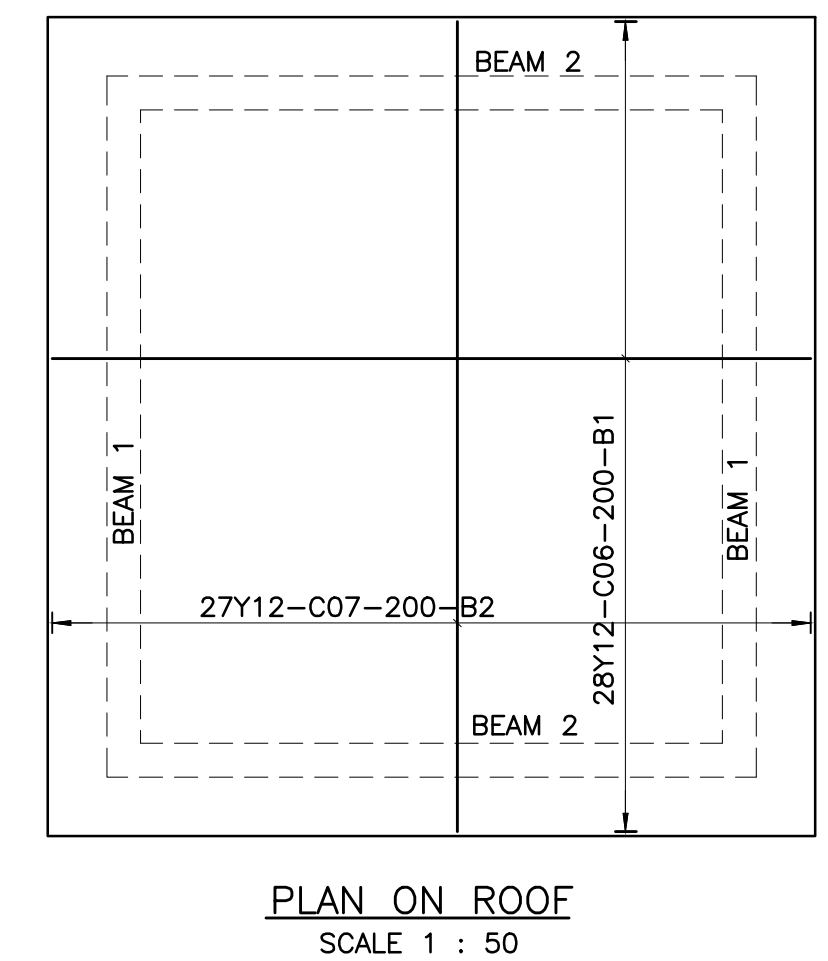
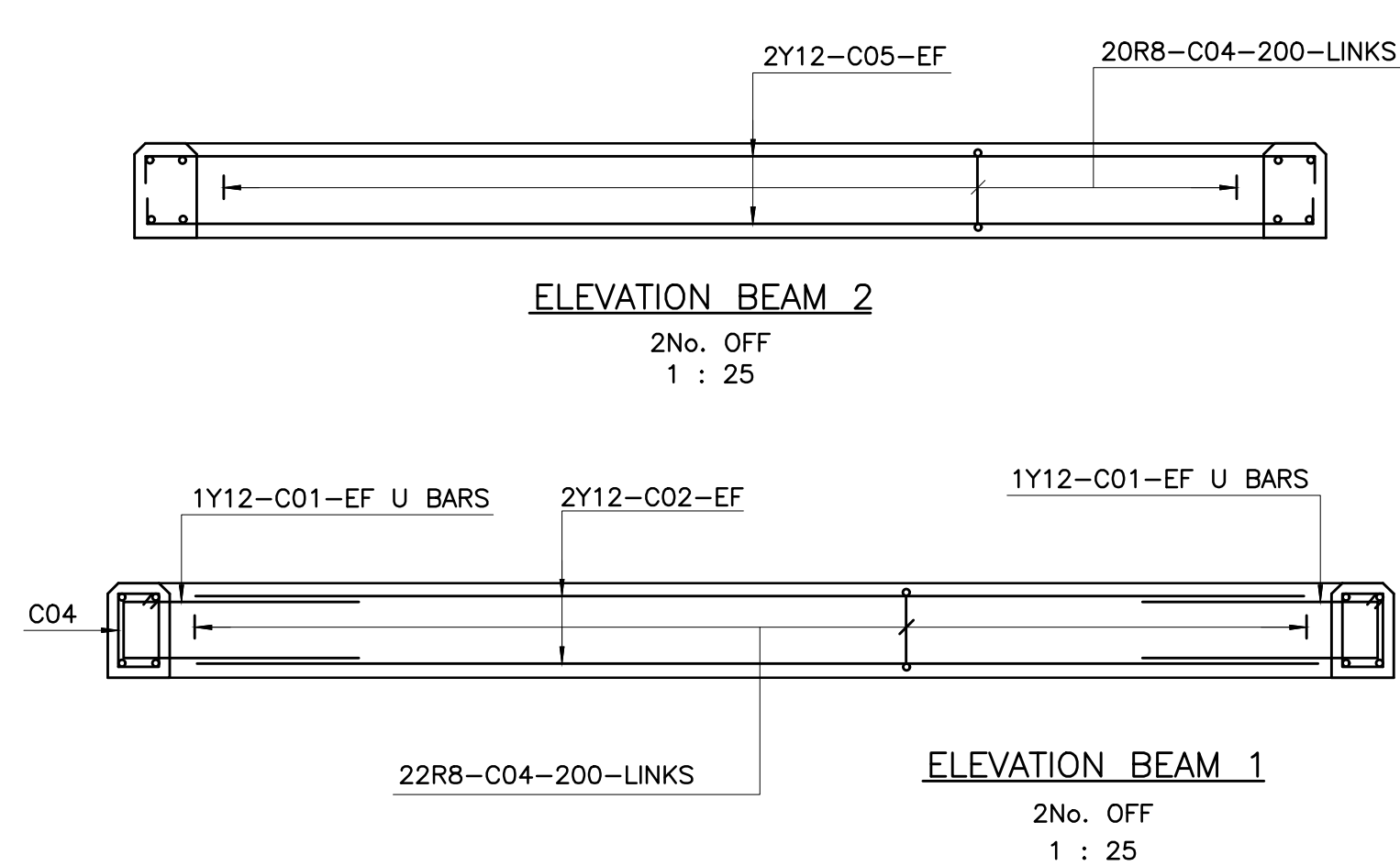
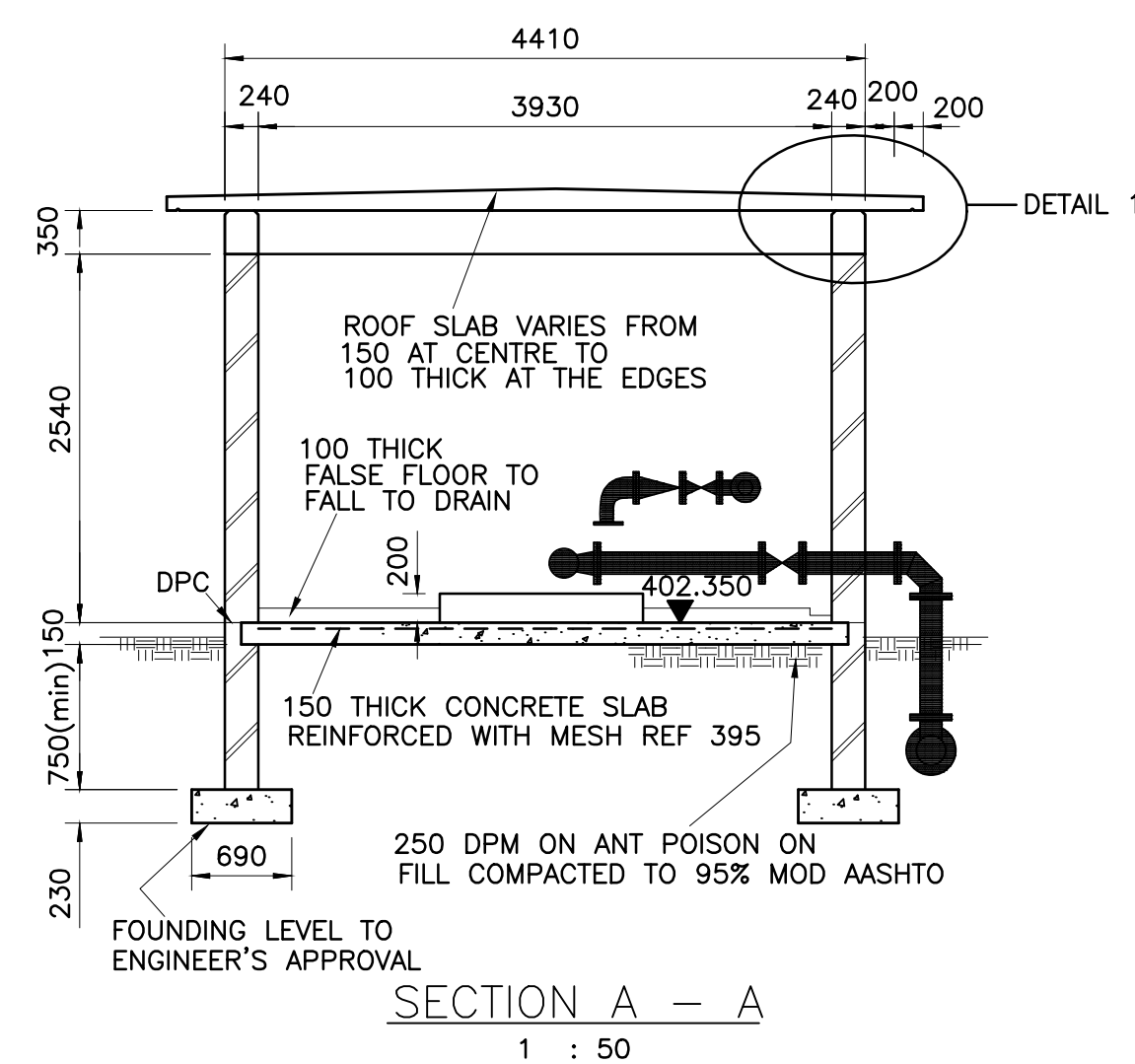
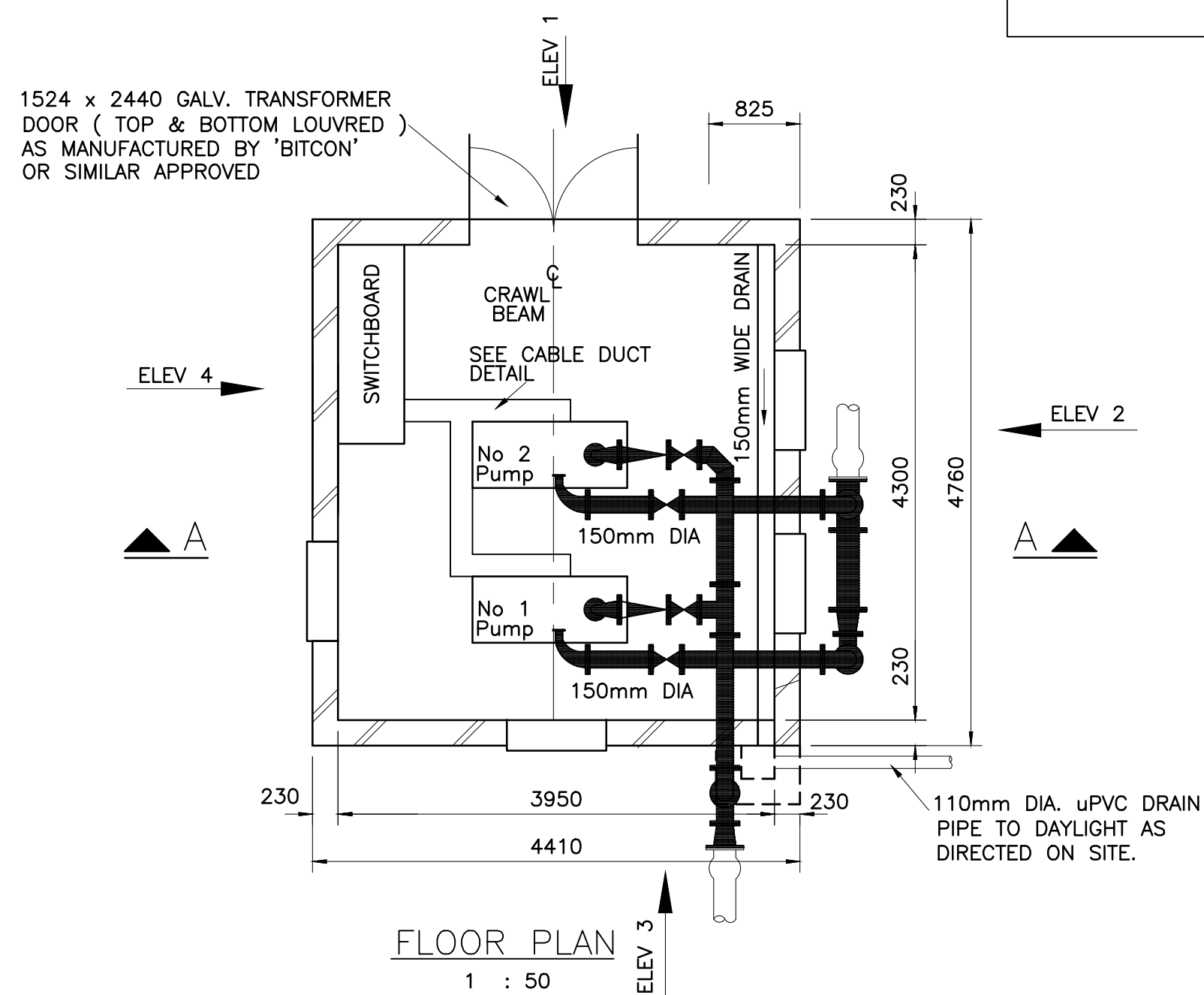
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APPROVED: _____	APPROVED: _____
OPERATION & MAINTENANCE	LEGAL
APPROVED: _____	APPROVED: _____
SYSTEMS	AUXILIARY
APPROVED: _____	APPROVED: _____
PROJECT MANAGEMENT UNIT	
APPROVED: _____	

PROJECT/DRAWING TITLE	
UGU DISTRICT MUNICIPALITY MSIKABA WATER SCHEME PROPOSED 2MI RESERVOIR AND 0.5MI ELEVATED RESERVOIR AT NYANDEZULU SITE LAYOUT	

ORIGINAL SCALE	
1:200	
ALT. DWG. No.	CONTRACT No.
UGU-07-1611-2022	
SHT. No.	OF
PROJECT No.	
DRAWING No.	REVISION
UGU/12/02/03-1.1	0



- NOTES**
1. ALL EXPOSED SHARP CONCRETE EDGES TO BE CHAMFERED 20 x 20
 2. CONCRETE GRADE 25Mpa/19mm
 3. MIN. 350mm SQUARE OPENINGS TO BE PROVIDED FOR PIPES THROUGH BRICK WALLS AT POSITIONS DETERMINED BY ENGINEER.
 4. PUMP SUCTION AND DELIVERY PIPEWORK SHOWN HATCHED TO BE SUPPLIED AND INSTALLED BY M & E CONTRACTOR



0	ISSUED FOR TENDER	07/22	CHKD	APPRV
△	ONLY REVISIONS MARKED THUS △ ARE VALID			

DESIGNED	TARUME, W
CHECKED	T. BHENGU
DRAWN	T. BURKE
CHECKED	T. BHENGU
PROJ. ENG.	T. BHENGU (PR TECH. ENG)

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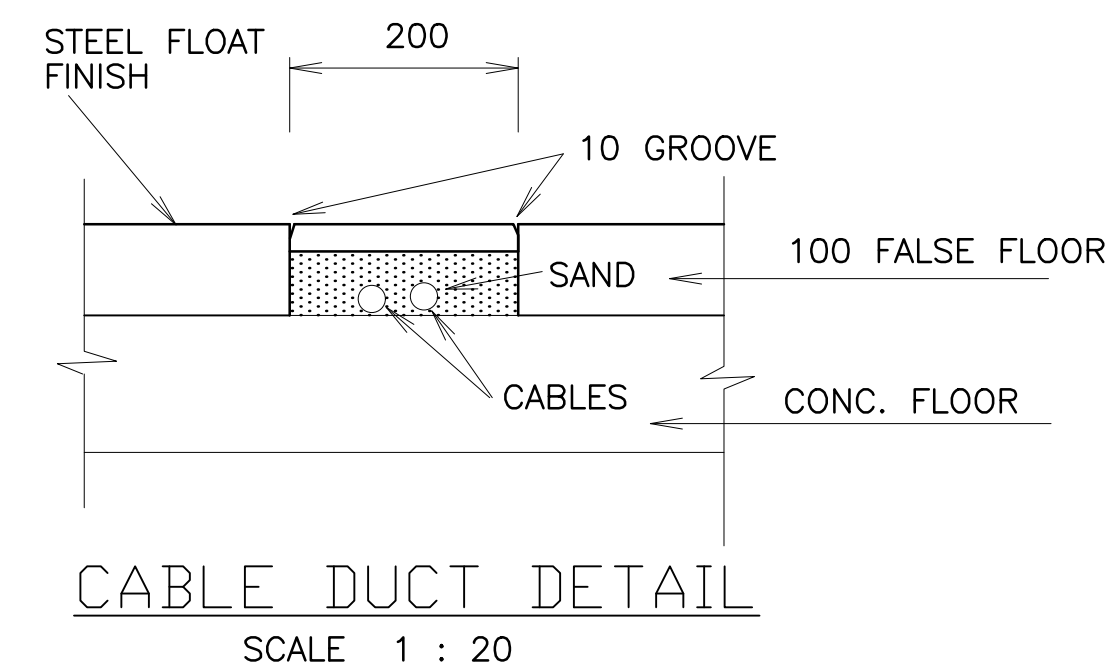
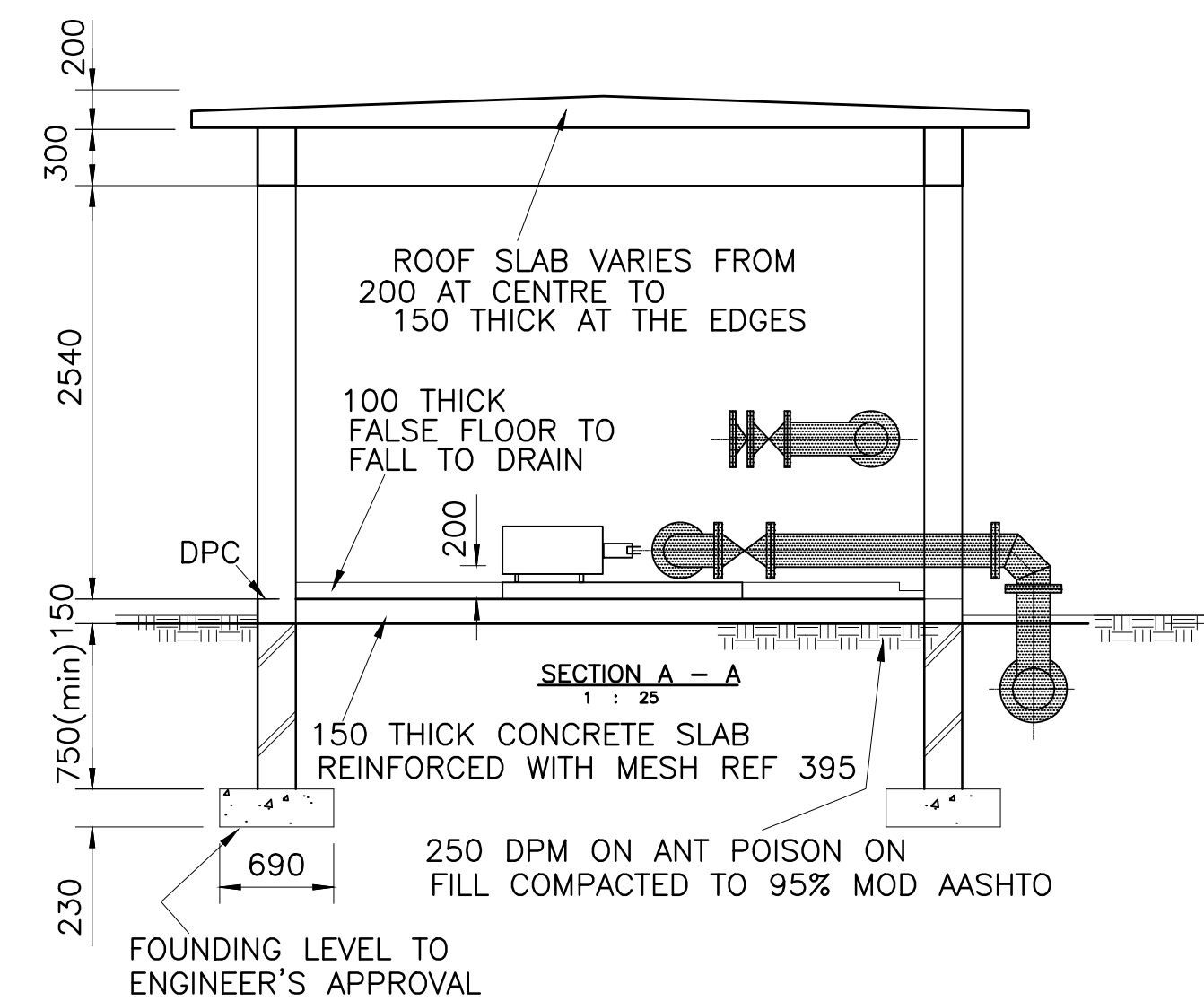
APPROVED : T. Bhengu (Pr. Tech. Eng 2008/0300) DATE

No. 4 Wilkie Road Manaba Beach 4276

CUSTOMER	MECHANICAL & ELECTRICAL
PLANNING	APPROVED : _____
OPERATION & MAINTENANCE	LEGAL
APPROVED : _____	APPROVED : _____
SYSTEMS	AUXILIARY
APPROVED : _____	APPROVED : _____
PROJECT MANAGEMENT UNIT	APPROVED : _____
APPROVED : _____	

PROJECT/DRAWING TITLE
UGU DISTRICT MUNICIPALITY
MSIKABA WATER SCHEME
PROPOSED PUMP STATION AT NYANDEZULU RESERVOIR SITE

ORIGINAL SCALE	1:200
ALT. DWG. No.	CONTRACT No. UGU-07-1611-2022
SHT. No. OF	PROJECT No.
DRAWING No. UGU/11/02/03-1.12	REVISION 0

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SECTION	APPROVED
PLANNING	
SYSTEMS	
AUXILIARY	
MECHANICAL & ELECTRICAL	
LEGAL	
PROJECT MANAGEMENT UNIT	
OPERATION & MAINTENANCE	

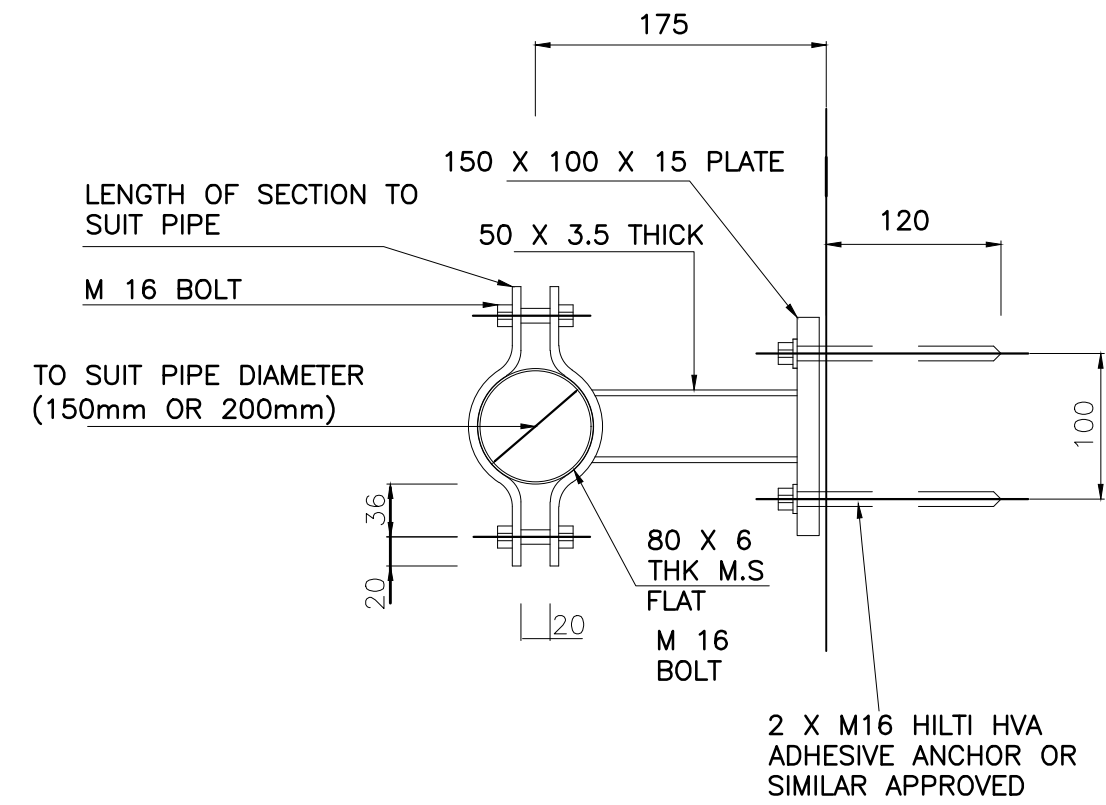
PROJECT/DRAWING TITLE

UGU DISTRICT MUNICIPALITY

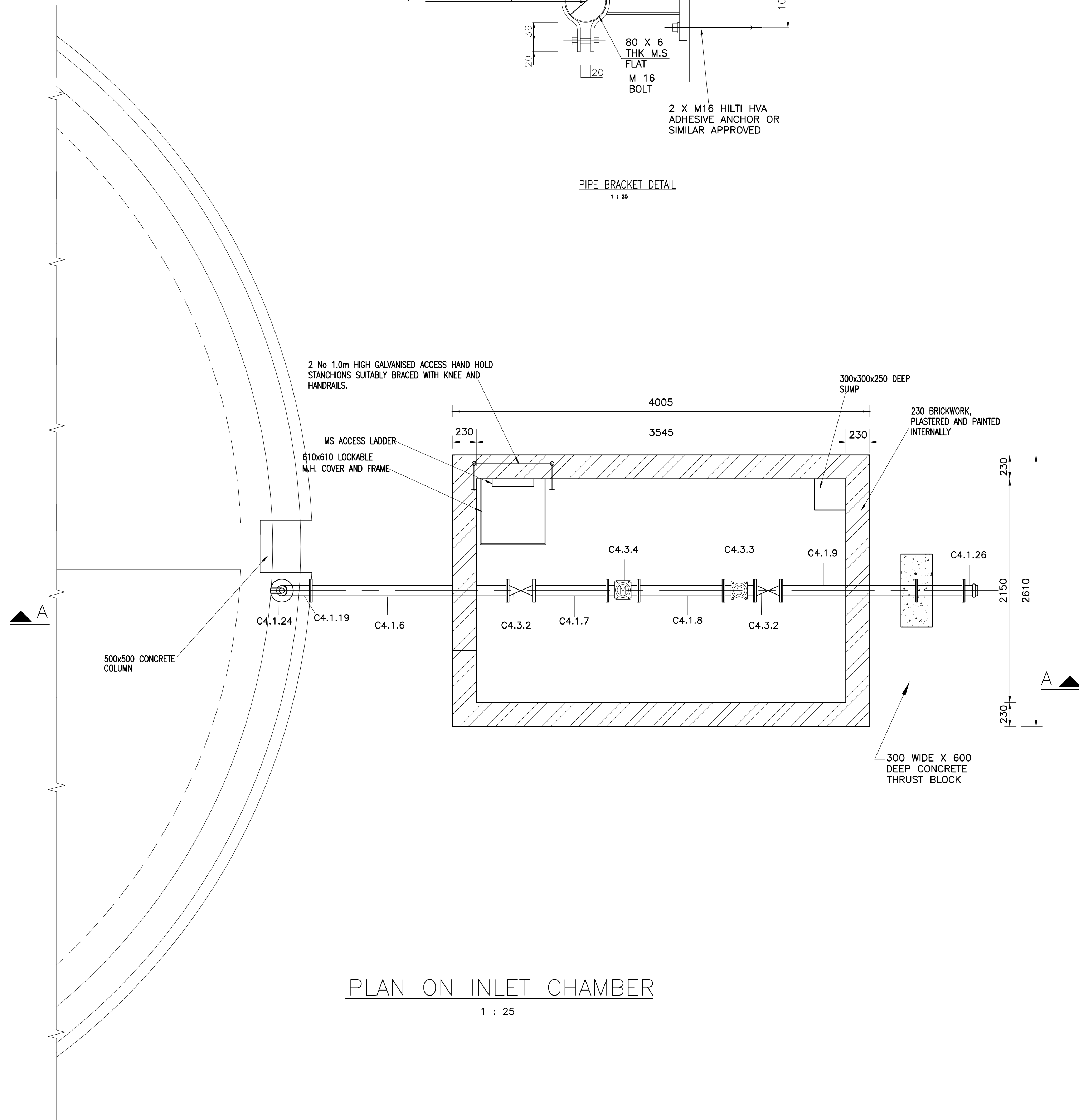
MSIKABA WATER SCHEME

ADDITIONAL PUMPSETS FOR BOMELA PUMP STATION LAYOUT

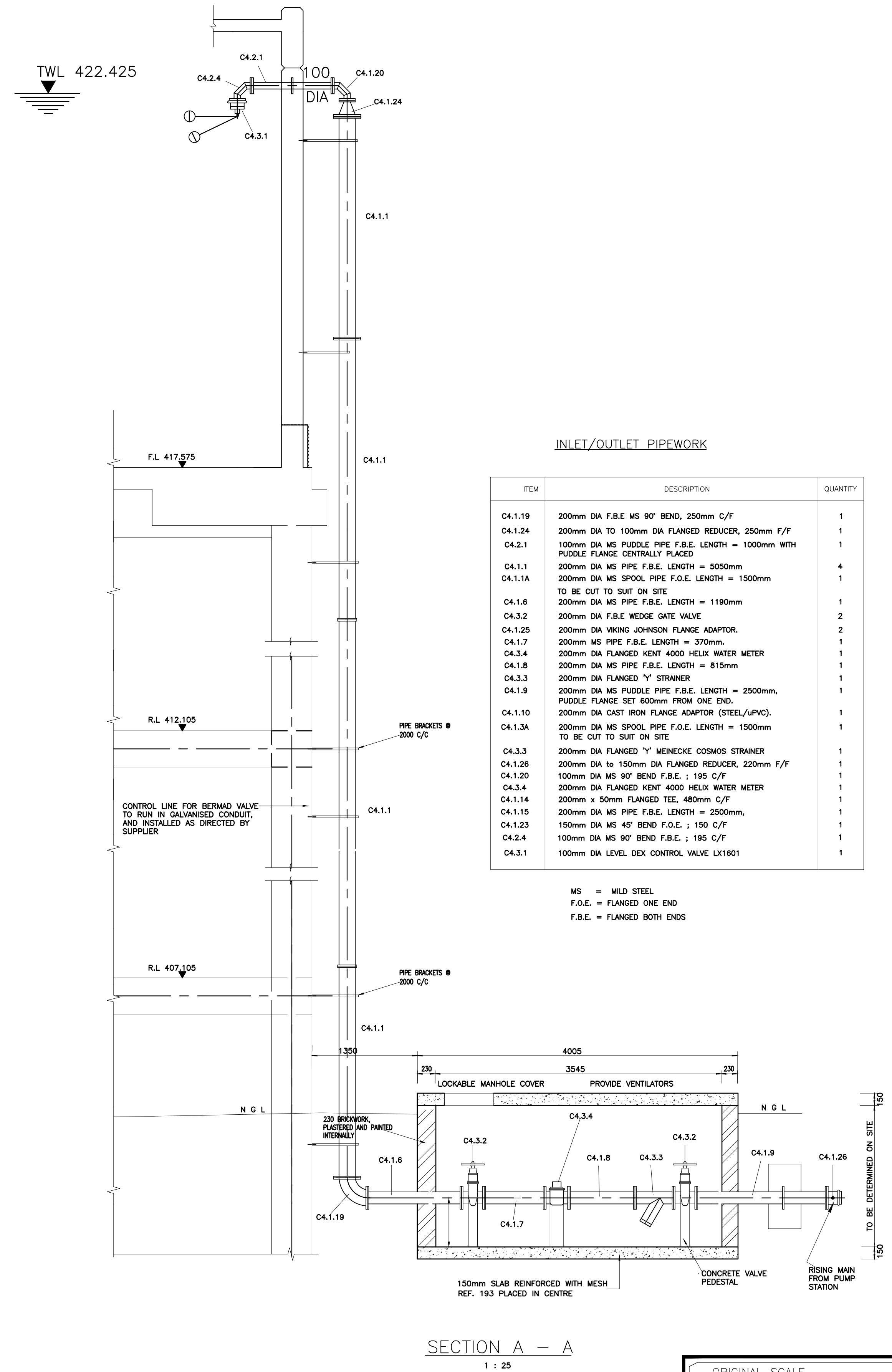
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1:25	
ALT. DWG. No.	CONTRACT No.
	UGU-07-1611-2022
SHT. No.	PROJECT No.
OF	
DRAWING No.	
UGU/12/02/04	
REVISION 0	



PIPE BRACKET DETAIL
1 : 25



PLAN ON INLET CHAMBER
1 : 25



INLET/OUTLET PIPEWORK

ITEM	DESCRIPTION	QUANTITY
C4.1.19	200mm DIA F.B.E MS 90° BEND, 250mm C/F	1
C4.1.24	200mm DIA TO 100mm DIA FLANGED REDUCER, 250mm F/F	1
C4.2.1	100mm DIA MS PUDDLE PIPE F.B.E. LENGTH = 1000mm WITH PUDDLE FLANGE CENTRALLY PLACED	1
C4.1.1	200mm DIA MS PIPE F.B.E. LENGTH = 5050mm	4
C4.1.1A	200mm DIA MS SPOOL PIPE F.O.E. LENGTH = 1500mm TO BE CUT TO SUIT ON SITE	1
C4.1.6	200mm DIA MS PIPE F.B.E. LENGTH = 1190mm	1
C4.3.2	200mm DIA F.B.E WEDGE GATE VALVE	2
C4.1.25	200mm DIA VIKING JOHNSON FLANGE ADAPTOR.	2
C4.1.7	200mm MS PIPE F.B.E. LENGTH = 370mm.	1
C4.3.4	200mm DIA FLANGED KENT 4000 HELIX WATER METER	1
C4.1.8	200mm DIA MS PIPE F.B.E. LENGTH = 815mm	1
C4.3.3	200mm DIA FLANGED "Y" STRAINER	1
C4.1.9	200mm DIA MS PUDDLE PIPE F.B.E. LENGTH = 2500mm, PUDDLE FLANGE SET 600mm FROM ONE END.	1
C4.1.10	200mm DIA CAST IRON FLANGE ADAPTOR (STEEL/uPVC).	1
C4.1.3A	200mm DIA MS SPOOL PIPE F.O.E. LENGTH = 1500mm TO BE CUT TO SUIT ON SITE	1
C4.3.3	200mm DIA FLANGED "Y" MEINECKE COSMOS STRAINER	1
C4.1.26	200mm DIA to 150mm DIA FLANGED REDUCER, 220mm F/F	1
C4.1.20	100mm DIA MS 90° BEND F.B.E. ; 195 C/F	1
C4.3.4	200mm DIA FLANGED KENT 4000 HELIX WATER METER	1
C4.1.14	200mm x 50mm FLANGED TEE, 480mm C/F	1
C4.1.15	200mm DIA MS PIPE F.B.E. LENGTH = 2500mm,	1
C4.1.23	150mm DIA MS 45° BEND F.O.E. ; 150 C/F	1
C4.2.4	100mm DIA MS 90° BEND F.B.E. ; 195 C/F	1
C4.3.1	100mm DIA LEVEL DEX CONTROL VALVE LX1601	1

MS = MILD STEEL
F.O.E. = FLANGED ONE END
F.B.E. = FLANGED BOTH ENDS

SECTION A - A
1 : 25

0	FOR TENDER PURPOSE ONLY	07/07/22	W.T.	T.B
REVISIONS	DATE	CHKD	APPRV	
ONLY REVISIONS MARKED THUS ARE VALID				

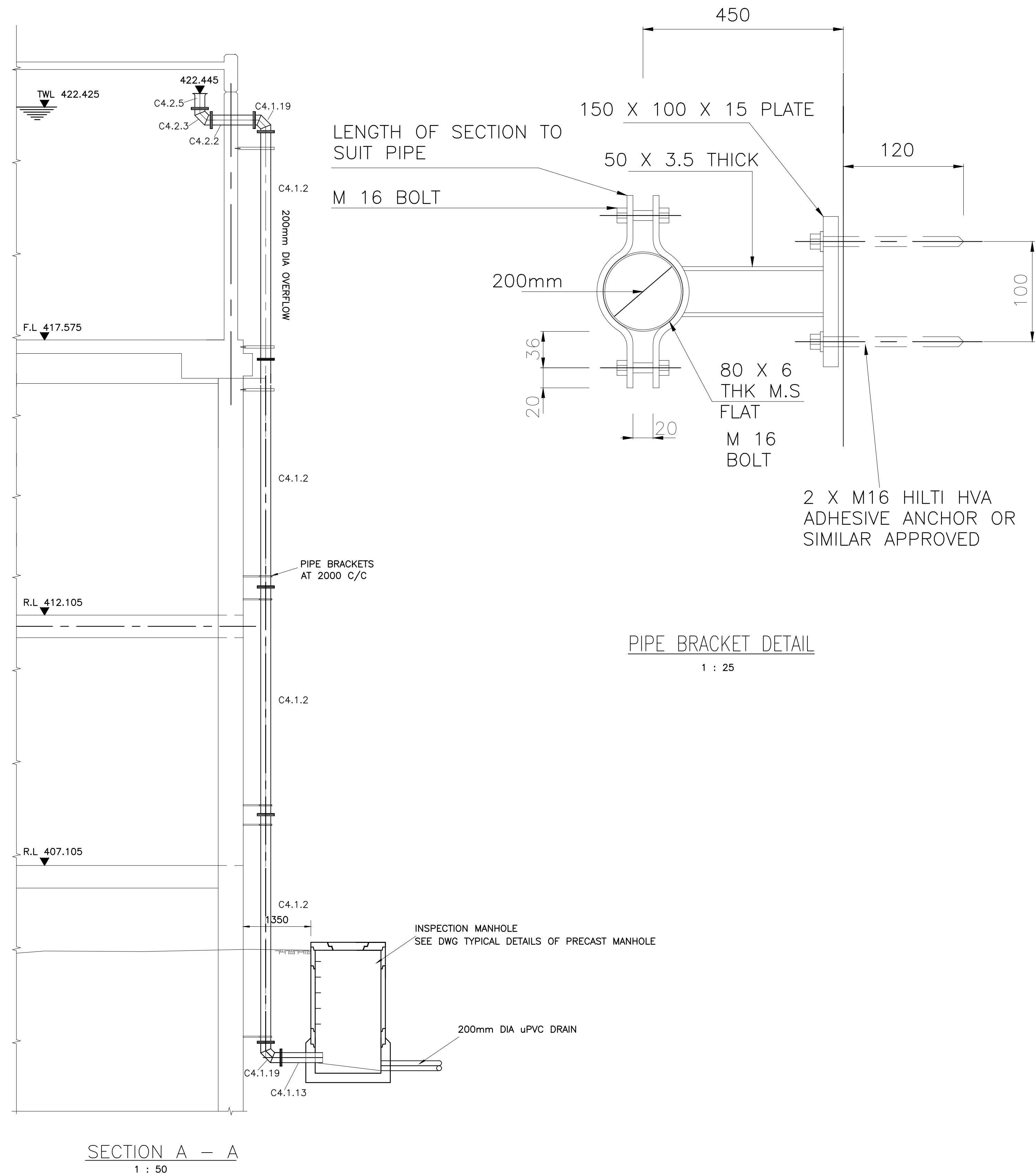
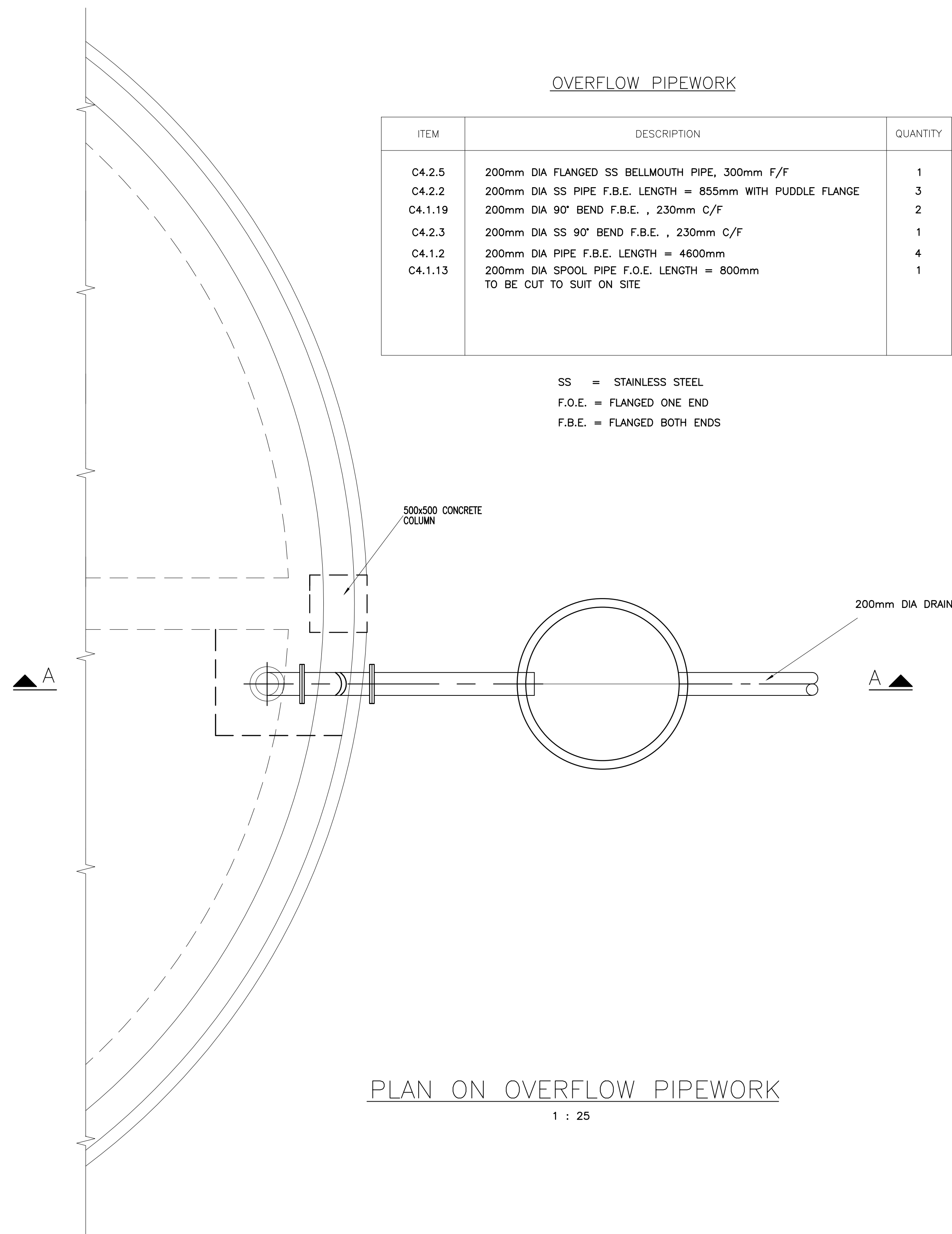
DESIGNED	W. TARUME (PR. ENG)
CHECKED	T. BHENGU
DRAWN	T. BURKE
CHECKED	W. TARUME (PR. ENG)
PROJ. ENG.	T. BHENGU (PR TECH. ENG)

NGCOLOSI CONSULTING ENGINEERS	No. 4 Witkie Road Manaba Beach 4276
TEL: (039) 312 0292 FAX: (039) 312 0291 E-mail: administration@ngcolosi.co.za P.O. Box 1421 Manaba Beach 4276	APPROVED: T. Bhengu (Pr. Tech. Eng) 2008/09/01

CLIENT PLANNING APPROVED: _____ OPERATION & MAINTENANCE APPROVED: _____ SYSTEMS APPROVED: _____ PROJECT MANAGEMENT UNIT APPROVED: _____	MECHANICAL & ELECTRICAL APPROVED: _____ LEGAL APPROVED: _____ AUXILIARY APPROVED: _____
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PROJECT/DRAWING TITLE	UGU DISTRICT MUNICIPALITY MSIKABA WATER SUPPLY SCHEME PHASE 3 NEW 0.5 ML NYANDEZULU ELEVATED RESERVOIR INLET PIPEWORK DETAILS
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ORIGINAL SCALE AS SHOWN	
ALT. DWG. No. -	CONTRACT No. UGU-07-1611-2022
SHT. No. 1	OF 3
DRAWING No. UGU-12-02/1.1	REVISION 0



								DESIGNED	W. TARUME (PR. ENG)
								CHECKED	T. BHENGU
								DRAWN	T. BURKE
								CHECKED	W. TARUME (PR. ENG)
DRG. No.	REFERENCE DRAWINGS	0	ISSUED FOR TENDER	07/22	W.T.	T.B.		PROJ. ENG.	T. BHENGU (PR TECH. ENG)
		△	REVISIONS	DATE	CHKD	APPRV			

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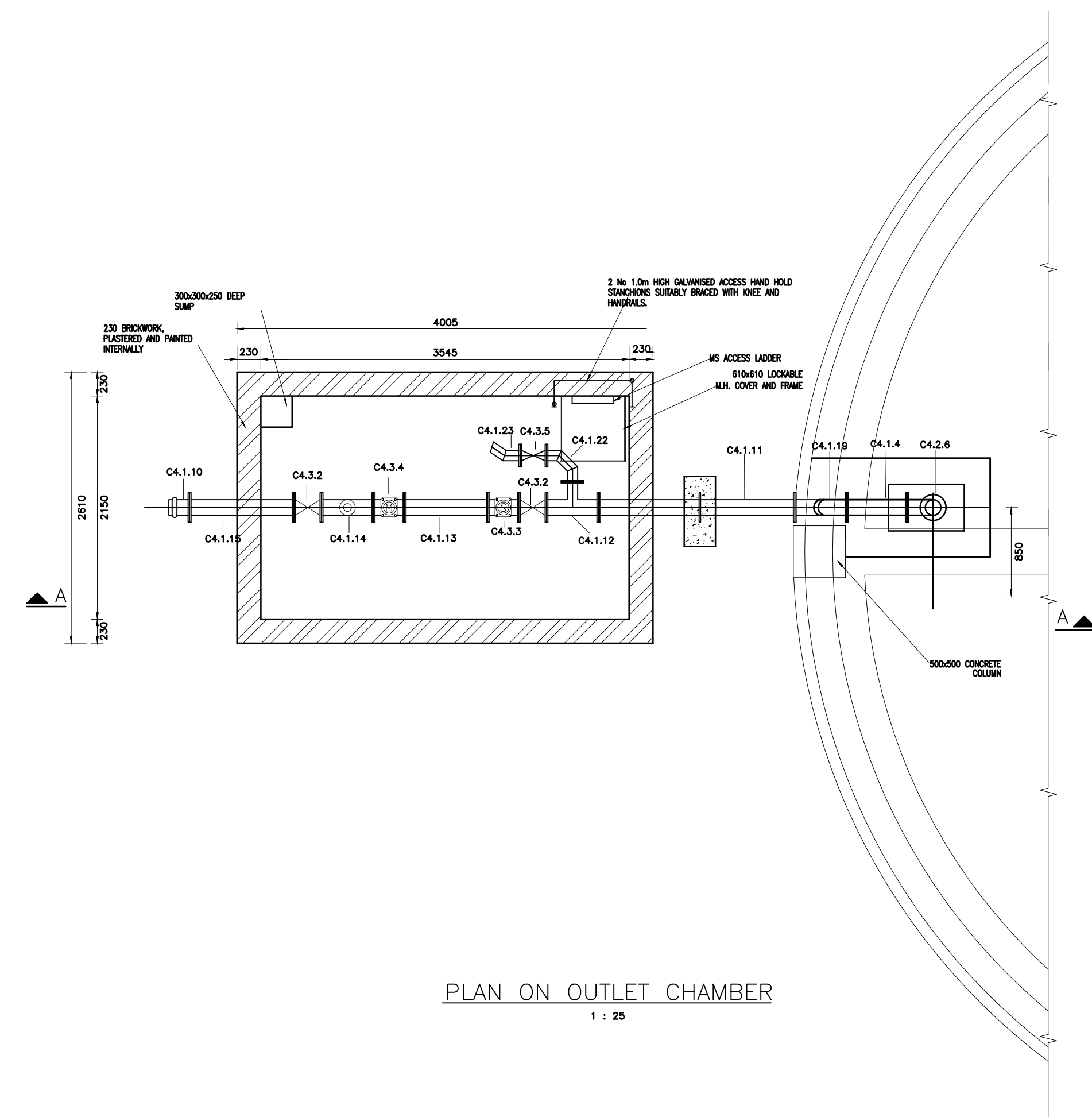
APPROVED: T. Bhengu (Pr. Tech. Eng) DATE: 08/07/2022

CLIENT	MECHANICAL & ELECTRICAL
PLANNING	APPROVED: _____
OPERATION & MAINTENANCE	APPROVED: _____
SYSTEMS	APPROVED: _____
PROJECT MANAGEMENT UNIT	APPROVED: _____
	APPROVED: _____

PROJECT/DRAWING TITLE

**UGU DISTRICT MUNICIPALITY
MSIKABA WATER SUPPLY SCHEME PHASE 3
NEW 0.5 ML NYANDEZULU ELEVATED RESERVOIR
OVERFLOW PIPEWORK DETAILS**

ORIGINAL SCALE AS SHOWN (ON A0)	
ALT. DRW. No.	CONTRACT No. UGU-07-1611-2022
SHT. No. 2	OF 3
DRAWING No. UGU-12-02 / 1.2	REVISION 0



OUTLET PIPEWORK		
ITEM	DESCRIPTION	QUANTITY
C4.1.19	200mm DIA F.B.E MS 90° BEND, 250mm C/F	4
C4.1.10	200mm DIA CAST IRON FLANGE ADAPTOR (STEEL/UPVC).	1
C4.1.19	200mm DIA F.B.E MS 90° BEND, 250mm C/F	3
C4.1.4	200mm DIA MS PIPE F.B.E. LENGTH = 580mm WITH PUDDLE FLANGE CENTRALLY PLACED	1
C4.1.3	200mm DIA MS PIPE F.B.E. LENGTH = 6000mm	3
C4.1.3A	200mm DIA MS SPOOL PIPE F.O.E. LENGTH = 1500mm TO BE CUT TO SUIT ON SITE	1
C4.1.11	200mm DIA MS PIPE F.B.E. LENGTH = 1890mm WITH PUDDLE FLANGE CENTRALLY PLACED	1
C4.1.12	200mm x 150mm FLANGED TEE, 250mm C/F	1
C4.3.2	200mm DIA F.B.E WEDGE GATE VALVE	2
C4.3.3	200mm DIA FLANGED "Y" MEINECKE COSMOS STRAINER	1
C4.3.5	150mm DIA F.B.E WEDGE GATE VALVE	1
C4.1.13	200mm MS PIPE F.O.E. LENGTH = 800mm.	2
C4.3.4	200mm DIA FLANGED KENT 4000 HELIX WATER METER	1
C4.1.14	200mm x 50mm FLANGED TEE, 480mm C/F	1
C4.1.15	200mm DIA MS PIPE F.B.E. LENGTH = 2500mm,	1
C4.1.22	150mm DIA MS 90° BEND F.O.E. ; 250 C/F	1
C4.1.23	150mm DIA MS 45° BEND F.O.E. ; 150 C/F	1

MS = MILD STEEL
F.O.E. = FLANGED ONE END
F.B.E. = FLANGED BOTH ENDS

DESIGNED	W. TARUME (PR. ENG)
CHECKED	T. BHENGU
DRAWN	T. BURKE
CHECKED	W. TARUME (PR. ENG)
PROJ. ENG.	T. BHENGU (PR TECH. ENG)

NGCOLOSI
CONSULTING ENGINEERS

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APPROVED : _____
I. Ihengwu, civ. Tech. Eng. DATE _____

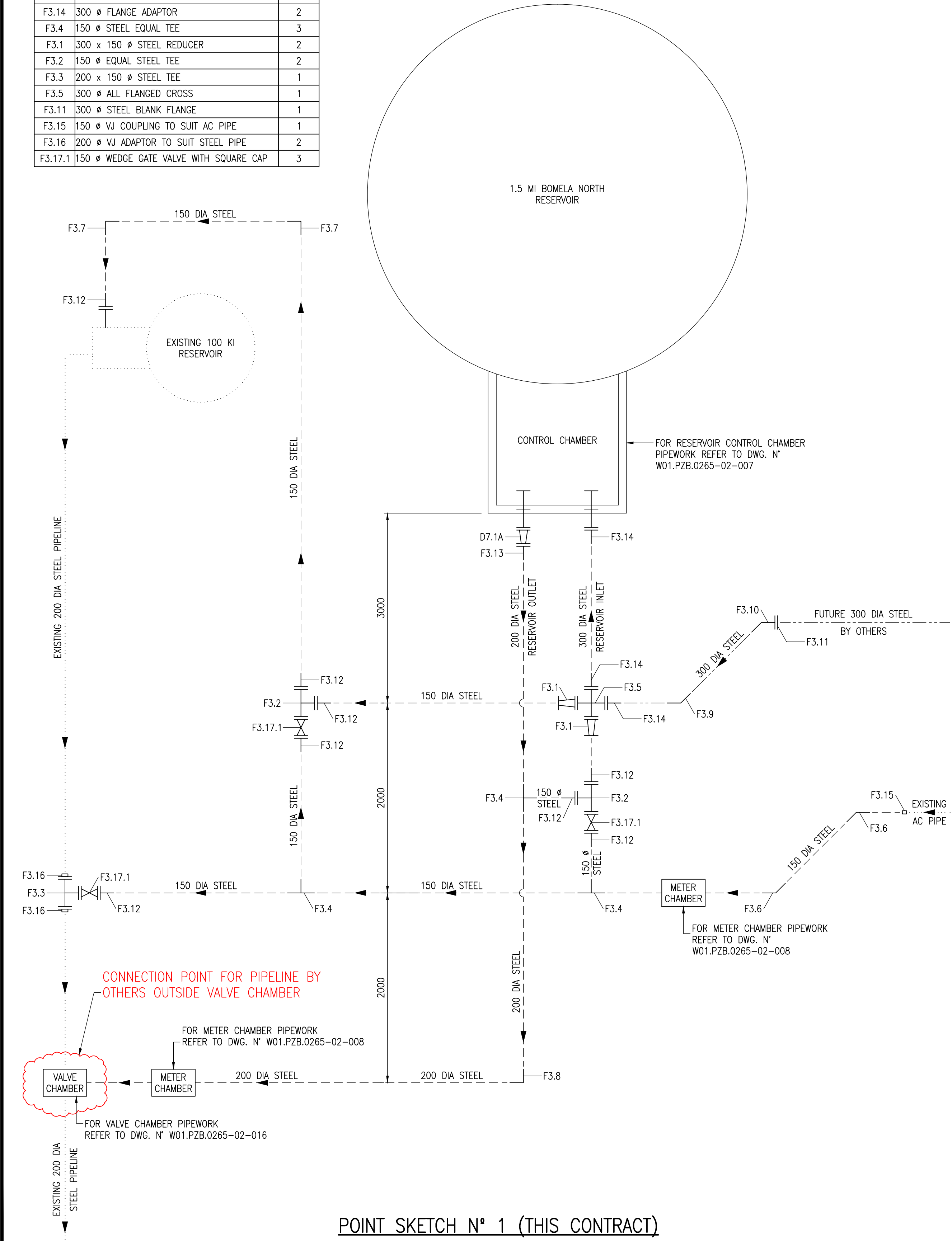
CLIENT	
PLANNING	MECHANICAL & ELECTRICAL
APPROVED : _____	APPROVED : _____
OPERATION & MAINTENANCE	LEGAL
APPROVED : _____	APPROVED : _____
SYSTEMS	AUXILIARY
APPROVED : _____	APPROVED : _____
PROJECT MANAGEMENT UNIT	
APPROVED : _____	

PROJECT/DRAWING TITLE

UGU DISTRICT MUNICIPALITY
UMSIKABA WATER SUPPLY SCHEME PHASE 3
NEW 0.5 ML NYANDEZULU ELEVATED RESERVOIR
OUTLET CHAMBER & PIPEWORK DETAILS

ORIGINAL SCALE	
AS SHOWN (ON A0)	
ALT. DRW. No.	CONTRACT No. UGU-07-1611-2022
SHT. No. 3 OF 3	PROJECT No. —
DRAWING No. UGU-12-02 / 1.3	
REVISION 	

ITEM N°	DESCRIPTION	N° OFF
D7.1A	300 x 200 Ø STEEL REDUCER, FL/PE	1
F3.6	150 Ø x 45° STEEL BEND, PE	2
F3.7	150 Ø x 90° STEEL BEND, PE	2
F3.8	200 Ø x 90° STEEL BEND, PE	1
F3.9	300 Ø x 45° STEEL BEND, PE	1
F3.10	300 Ø x 45° STEEL BEND, FL/PE	1
F3.12	150 Ø FLANGE ADAPTOR	8
F3.13	200 Ø FLANGE ADAPTOR	1
F3.14	300 Ø FLANGE ADAPTOR	2
F3.4	150 Ø STEEL EQUAL TEE	3
F3.1	300 x 150 Ø STEEL REDUCER	2
F3.2	150 Ø EQUAL STEEL TEE	2
F3.3	200 x 150 Ø STEEL TEE	1
F3.5	300 Ø ALL FLANGED CROSS	1
F3.11	300 Ø STEEL BLANK FLANGE	1
F3.15	150 Ø VJ COUPLING TO SUIT AC PIPE	1
F3.16	200 Ø VJ ADAPTOR TO SUIT STEEL PIPE	2
F3.17.1	150 Ø WEDGE GATE VALVE WITH SQUARE CAP	3

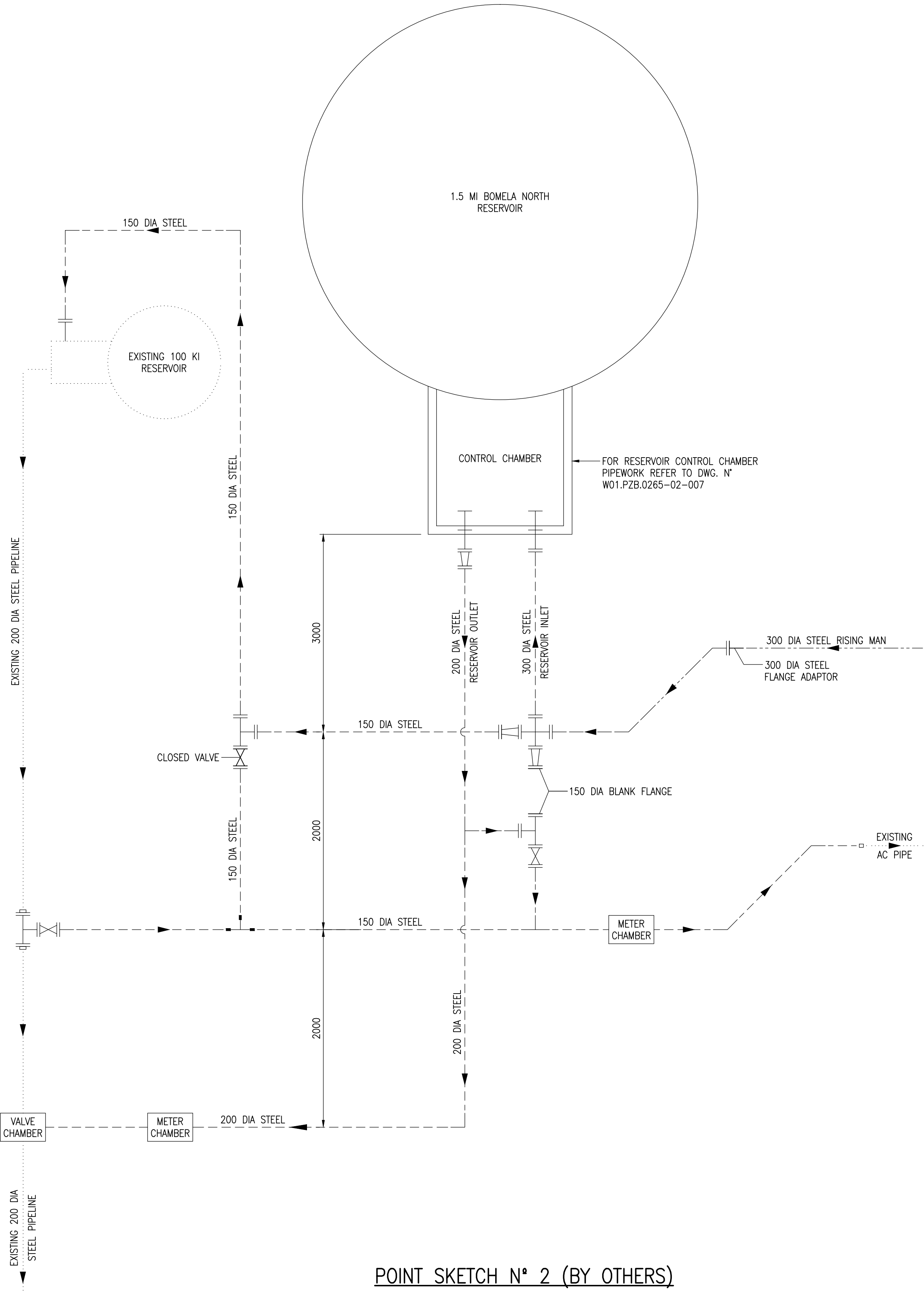


POINT SKETCH N° 1 (THIS CONTRACT)

(INLET/OUTLET PIPEWORK FROM 100 KI AND 1500 KI RESERVOIRS
PRIOR TO CONSTRUCTION OF 300 DIAMETER STEEL RISING MAIN)

LEGEND:

- EXISTING PIPELINES
- PIPEWORK TO BE UNDERTAKEN BY RESERVOIR CONTRACTOR
- PIPEWORK TO BE UNDERTAKEN BY PIPELINE CONTRACTOR



POINT SKETCH N° 2 (BY OTHERS)

(INLET/OUTLET PIPEWORK FROM 100 KI AND 1500 KI RESERVOIRS
AFTER CONSTRUCTION OF 300 DIAMETER STEEL RISING MAIN)

DRG. No.	REFERENCE DRAWINGS
W01.PZB.0265-02-001	PROJECT PLAN
W01.PZB.0265-02-002	SITE PLAN
W01.PZB.0265-02-003	GENERAL ARRANGEMENT
W01.PZB.0265-02-004	GENERAL DETAILS (SHEET 1 OF 2)
W01.PZB.0265-02-005	GENERAL DETAILS (SHEET 2 OF 2)
W01.PZB.0265-02-006	CONTROL CHAMBER CONCRETE WORK
W01.PZB.0265-02-007	CONTROL CHAMBER PIPEWORK
W01.PZB.0265-02-008	METER CHAMBER
W01.PZB.0265-02-009	RC DETAILS OF WALL
W01.PZB.0265-02-010	RC DETAILS OF FLOOR, COLUMNS AND UNDER-DRAIN BOX
W01.PZB.0265-02-011	RC DETAILS OF ROOF - BOTTOM STEEL
W01.PZB.0265-02-012	RC DETAILS OF ROOF - TOP STEEL
W01.PZB.0265-02-013	RC DETAILS OF CONTROL CHAMBER
W01.PZB.0265-02-014	BENDING SCHEDULES
W01.PZB.0265-02-016	FENCING AND VALVE CHAMBER DETAILS
	STANDARD DRAWINGS (BOUND IN CONTRACT DOCUMENT)

NOTES:
1. ALL DIMENSIONS AND MEASUREMENTS IN MILLIMETERS (mm).

1	PIPEWORK ITEM NUMBERS CHANGED	OCT. 2015	S.G	D.H
REV	DESCRIPTION	DATE	REV BY	CHKD

DESIGNED	T. PANDITHER	02/2012		
DRAWN	S. GIRDHARY	02/2013		
CHECKED	N. MKANDLA	02/2013		

APPROVED :	
PROJECT PRINCIPAL	: NOEL MKANDLA
SIGNATURE	:
DATE (DD/MM/YYYY)	:



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Fax: (033) 328 1007
Email: pietermaritzburgwater@rhdhv.com

CLIENT	
UGU DISTRICT MUNICIPALITY WATER SERVICES AUTHORITY	
96 MARINE DRIVE OSLO BEACH PORT SHEPSTONE 4240 TEL : (039) 688 5700 FAX : (039) 682 4820 e-mail: info@ugu.gov.za	

APPROVED	SIGNATURE	DATE
WATER SERVICES AUTHORITY		
AUXILIARY SERVICE		
ELECTRICAL & MECHANICAL		
WATER CONSERVATION & DEMAND MANAGEMENT		
OPERATIONS SERVICES WATER		
OPERATIONS SERVICES SEWER		

PROJECT/DRAWING TITLE	
MSIKABA WATER SUPPLY PHASE 1	
1,5 MI BOMELA NORTH RESERVOIR POINT SKETCHES	

SCALE	SHEET
NTS	1 OF 1
CONTRACT No.	PROJECT No.
UGU-07-1130-2012	W01.PZB.000265

DRAWING No.	REV
W01.PZB.0265-02-015	1



VOLUME 1

SCOPE OF WORKS

C3.5

ENVIRONMENTAL MANAGEMENT PROGRAMME

C3.5

ENVIRONMENTAL MANAGEMENT PROGRAMME

MSIKABA WATER SUPPLY SCHEME

PHASE 3A

EXECUTIVE SUMMARY

In effort to provide service delivery and improve or providing basic services, the Ugu District Municipality has embarked on improving the portable water supply for the rural communities of KwaNdwalande and KwaMavundla Tribal Authorities. These rural areas are demarcated as ward 3, 24, 25, 26 and 27; all within the jurisdiction of the district municipality of Ugu but specifically within the local municipality of Hibiscus Coast.

Rural communities have over the years submerged under the previous government who by design were sidelined from the benefits enjoyed in the urban areas. This has deprived the communities exist in poor standards of living and underestimation of the human rights. Presently, the government through Ugu District Municipality is engaging in projects like this one to improve the health conditions by providing clean portable drinking water.

As highlighted above, KwaMavundla and KwaNdwalande are both rural villages that are within the Tribal Authorities and that are differently demarcated in terms of ward.

Ugu District Municipality has, in effort to meet these needs contracted Ngcolosi Consulting Engineers to design and obtain permits from all relevant stakeholders for the implementation of the project. Part of the task is to conduct Environmental Impact Assessment thereby obtain authorisation. This is due to the National Environmental Management Act (107/1998): Environmental Impact Assessment Regulations, 2014, promulgated in terms of sections 24(5) of the National Environmental Management Act (Act 107 of 1998) in GNR 385. According to this regulation any development of construction that affects the river flow system or wetlands is subject to authorisation by competent authorities of which Department of Agriculture, Environmental Affairs and Rural Development are part of. In order to fulfil the obligations and requirements by this Regulation Isolendalo Environmental Consulting have been appointed by Ngcolosi Consulting Engineers to undertake this and assist in obtaining the Environmental Authorisation. Part of the EIA is the drawing up of Environmental Management Programme previously known as Environmental Management Plan. This documents therefore pertains Environmental Management Programme that this proposed project shall abide by, inclusive of conditions as indicated or read with the Environmental Authorisation issued.

Therefore, this EMPr seek to guide and advice contractors on site on what and how to handle different situations during construction and what measures shall be in place should something wrong as determined by Environmental Authorisation.

It shall be known though that this document (EMPr) is just a guidance under which the proposed construction shall follow.

1A. INTRODUCTION

The Ugu District Municipality has identified the need to provide the basic portable water services to rural communities of Msikaba and the surrounding. The proposed development is identified as an activity that may not have major negative impacts on the environment. As in terms of NEMA S28, a Duty of Care and Remediation an Environmental Management Programme (EMPr) was constructed which will define environmental measures and procedures to prevent, minimize and mitigate adverse impacts and to ensure compliance with applicable environmental standards during both construction and operation of the road.

The EMPr was compiled a comparative assessment was carried out of published EMPr, whilst site-specific conditions and new information that has come to light were also incorporated.

This EMPr will define necessary mitigation measures environmental monitoring plan and institutional measures to be taken. This document aims to be a guideline document for construction water reticulation and pipelines at Msikaba. This project is aimed and providing a basic water supply to rural communities as specified in the scope of work by Ngcolosi Consulting Engineers.

1B THE ENVIRONMENTAL PROCESS

In accordance with the Integrated Environmental Management Guidelines published by the Department of Environmental Affairs & Tourism (DEAT) in 1992, the purpose of an Environmental Management Programme (EMPr) is "to describe how negative environmental impacts will be managed, rehabilitated or monitored and how positive impacts will be maximised". It is a detailed plan of action prepared to organise and coordinate environmental mitigation, rehabilitation and monitoring so that positive impacts are enhanced, and negative impacts and damage to the environment are avoided, minimised or rectified where required.

The objectives of the EMPr are to:

- Provide a pro-active, feasible and practical working tool to enable the measurement and monitoring of environmental performance on site.
- Ensure that the construction and operational phases of the project continues within the principles of Integrated Environmental Management.
- Detail specific actions deemed necessary to assist in mitigating the environmental impact of the project.
- Ensure that the safety recommendations are complied with.

This EMPr, which forms an integral part of the contract documents, informs the land owner as to his duties in the fulfilment of the project objectives, with particular reference to the prevention and mitigation of environmental impacts

caused by construction and operational activities associated with the project. This is to include any rehabilitation and landscape processes work which is needed post-construction and which would be carried out by the contractor or specialist subcontractor who he may appoint to do such rehabilitation work. The provisions of the EMP are binding on the Contractor during the contract period and the landowner in the operational phase.

Any environmental issues that are identified during or after construction will be addressed in consultation with the environmental consultant. As such it should be viewed as a dynamic document that may require updating or revision where necessary.

All activities and earthworks associated with construction and reticulation of services will be undertaken in accordance with SABS 1200 standards, which deal with guidelines for civil engineering and general construction works.

2. LEGISLATION

Environmental legislation applicable to the formulation of an EMP includes but is not restricted to the following:

- Atmospheric Pollution Prevention Act (Act No. 45 of 1965)
- Environment Conservation Act (Act No. 73 of 1989)
- National Environment Management Act (Act No. 107 of 1998)
- Integrated Management Act (IEM)
- National Water Act (Act No. 36 of 1998)
- National Environmental Management: Biodiversity Act, 2004 (Act 10 of 2004).
- The National Heritage Resources Act (Act No 25 of 1999 as amended)
- Development Facilitation Act (Act No 67 of 1995).
- National Environmental Management; Biodiversity Act, 2004 (Act 10 of 2004).
- Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983)
- South African Constitution Act (Act No. 107 of 1998), including the Bill of Rights (Chapter 2, Section 24).
- In terms of the above, all regulations framed there under and amendments there to.
- The relevant Municipal Bylaws.

3. PARTIES INVOLVED

Project Manager / Engineer (PM / E)

The Project Manager / Engineer is the administrator of the project acting as an agent of the main line department (DAEA & RD). The engineer is responsible for all direct communication with the contractor.

Contractor (CT)

This refers to the main contractor(s) appointed by the client for the construction of the Project, or portion of the Project. The main contractor(s) are required to adhere to the EMPr and are responsible to ensure that all sub-contractors, suppliers and staff appointed by them also adhere to the EMPr.

All Staff

All workers employed by the contractor or developer, persons involved with activities related to the project, or persons present or visiting the construction area, including permanent, contract, or casual labour and informal traders.

Environmental Control Officer (ECO)

An individual nominated by the developer to act on behalf of a Contractor in matters concerning the day-to-day implementation of the EMPr, and for liaison with the DAEA & RD, Municipality, EKZNW and DWAF and the public and owners or managers of properties affected by construction.

DAEA & RD

The Compliance Officer appointed by the KZN Department of Agriculture and Environmental Affairs to this project.

Local Community

People residing or present in the region and near the construction activities, including the owners and/or managers of land affected by construction, workers on the land, and people in nearby towns and villages.

Public

Any individual or group concerned with or affected by the Project and its consequences, including the local community, local, regional, and national authorities, investors, workforce, customers, consumers, environmental interest groups, and the general public.

Environmental Control Officer / Monitoring

An Environmental Control Officer (ECO) must be appointed in terms of Section 34 (b) and (d) of GN R. 385 of 21 April 2006, who will inspect this development on a regular basis during the construction and rehabilitation phases, and will advise DAEA & RD and anyone acting in accordance with the Record of Decision (e.g. developers, contractors etc.). In addition, anyone acting in accordance with the Record of Decision (e.g. developers, contractors etc.) would have to comply with the EMPr. Furthermore anyone acting in accordance with the Record of Decision (e.g. developers, contractors etc.) would need to sign an acknowledgement form, which will form part of the contractual agreements between individuals acting in accordance with the Record of Decision (e.g. developers) and the contractors to ensure compliance with the conditions and requirements of the EMPr.

4. PROJECT DETAILS**Location and Development parameters**

Please refer to scope of work document by the Engineer.

5. RECORD KEEPING

Copies of any Authorisation or EMPr required for specific construction activities shall be kept on site and made available for inspection by visiting officials from the employer or relevant environmental departments.

The Project Manager will monitor the Contractor's adherence to the approved impact prevention procedures and shall issue the Contractor a notice of non-compliance whenever transgressions are observed. The Contractor must document the nature and magnitude of any non - compliance in a designated register, the action taken to correct the non-conformance, the actions taken to mitigate its effects and the results of those actions. Any non-conformance shall be documented and reported to the Project Manager in a monthly report.

The Contractor shall also record all complaints received regarding activities on the construction site pertaining to the environment, and the response noted with the date and the action taken. These records shall also be submitted to the Project Manager in the monthly report.

6. COMPLIANCE AND PENALTIES

The duration over which the Contractor's controls shall be in place cover the construction period of the project as well as the limited time after the contract completion in the General Conditions of Contract, and the project specifications, as the defects liability period.

The landowner/contractor is deemed not to have complied with the EMP if:

- Within the boundaries of the site, site extensions and access roads there is evidence of contravention of clauses;
- Environmental damage occurs due to negligence;
- The contractor fails to comply with corrective or other instructions issued by the Project Manager or Engineer or Environmental Control Officer within a specified time frame;
- The contractor fails to respond adequately to complaints from the public or local community

The Contractor shall act immediately after a notice of non-compliance is received, and correct the cause for the issuing of the notice. Application of a penalty clause will apply for incidents of non-compliance. The penalties imposed per incident or violation will be as follows:

Incident / Violation	Penalty
Failure to stockpile material correctly	R 1 000
Pollution of water bodies	R 5 000
Failure to control Stormwater runoff	R 1 500
Failure to provide adequate sanitation	R 5 000
Unauthorised clearing / removal of vegetation	R 5 000
Failure to provide adequate waste disposal facilities and services	R 15 000
Failure to reinstate disturbed areas within specified time period	R 3 000
Failure to rehabilitate disturbed areas within 3 months of completion	R 5 000
Any other contravention of the environmental specification	R 1 000

The imposition of such a penalty shall not preclude the relevant provincial authority from applying an additional penalty in accordance with statutory powers.

Failure to redress the cause shall be reported to the relevant authority for them to deal with the transgression, as deemed fit. The polluter-pays principle applies.

The “polluter-pays” principle provides that “the costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimizing further pollution, environmental damage or adverse health effects must be paid for by those responsible for harming the environment. NEMA imposes a duty of care on every person who causes, has caused or may cause significant pollution or degradation of the environment is authorised by law or cannot reasonably be avoided, NEMA requires that the pollution must be minimised and rectified.

Furthermore NEMA makes provision for damages to be awarded by the courts where loss or damage has occurred as a result of a contravention of certain environmental statutes. For example, offences under the National Water Act No. 36 of 1965 and the Environmental Conservation Act No. 73 of 1989 may result in penalties being imposed in terms of NEMA. Importantly, NEMA provides for the liability on conviction of employees, managers, agents and directors for any offences resulting from the failure to take all the reasonable steps that were necessary under the circumstances to prevent the commission of an offence.

7. AMENDMENTS TO THE EMPr

Any major issues not covered in the EMPr as submitted, will be addressed as addend to this EMPr, and submitted for approval prior to completion.

The EMPr is a living document and is subject to change from time to time in consultation with DAEA & RD. Any amendments to the EMPr will require approval from DAEA & RD. A confirmation letter from DAEA & RD approving the amendments to the EMPr will be attached as addenda.

8. ENFORCING THE EMPr

The Contractor and the landowner have a responsibility to ensure that all those people involved in the project are aware of and familiar with the environmental requirements for the project (this includes sub-contractors, casual labour, etc.). The EMPr shall be part of the terms of reference for all contractors, sub-contractors and suppliers. All contractors, sub-contractors and suppliers have to give some assurance that they understand the EMPr and that they will undertake to comply with the conditions therein. All senior and supervisory staff members shall familiarise themselves with the full contents of the EMPr. They shall know and understand the specifications of the EMPr and shall be able to assist other staff members in matters relating to the EMPr. On completion of construction, the EMPr shall be part of the terms of reference for the owner and shall be made available to all ongoing contractors entering the property.

9. SIGNING OF THE EMPr

The acknowledgement form at the back of the approved EMPr is to be signed by the landowner and all the Contractors. All the Contractors employees, especially the machine and equipment operators, are to be made aware of the conditions as contained in the EMPr and the contractual conditions relating to the environment, as contained in the contract document.

10. CONCLUSION

It is the view of the Environmental Consultant that the preferred activity (The Proposed water reticulation for basic portable water supply) will NOT have any major geophysical, biophysical or socio-economic environmental impacts, provided the recommendations regarding the mitigation and rehabilitation measures presented in this EMPr are adhered to. The Environmental Consultants believes that the proposed development will have strong social benefits and help to maximize both the need and desirability of development to the applicant and the surrounding community.

11. PROCEDURE

11.1 Pre-construction Phase

The requirements of the EMPr will be discussed at professional team meetings in order to understand the environmental content of the document. The requirements of the EMPr must be incorporated into any tender/contract documents by way of specific clauses that convey the impact and mitigation required. These clauses are to be agreed between the responsible professional members of the team and the environmental consultant.

11.2 The Construction Phase: Responsibilities and General Matters

Miscellaneous environmental matters and the relationships between the Contractors, ECO and the other members of the professional team are outlined in this section.

11.3 The Contractor

The Contractors must comply at all times with the requirements of the EMPr and must acknowledge in writing by signing the acknowledgement form that they will abide by the contents of EMPr. Copies of the signed acknowledgement form are to be forwarded to Environmental Consultants.

11.4 The Land Owner

The landowner must be in overall charge of the contract, the Contractor/s and the adjudication of the EMPr requirements. The landowner can delegate the daily controls on site to a project manager or similar responsible person, when necessary.

11.5 The Environmental Control Officer (ECO)

The landowner must appoint an independent ECO for the purpose of ensuring that the environmental conditions as outlined in this EMPr are implemented by the Contractor.

Other environmental site-related issues will be monitored and reported on by the ECO as and when they may arise.

The ECO is to have access to the site at all times, for the purpose of inspections to ensure that the environmental conditions of the EMPr are being implemented and adhered to. The ECO must report on the environmental aspects of the contract to the responsible person / Project Manager at agreed intervals.

The Contractors must have access to the ECO via the landowner for advice on the environmental aspects of the contract and any other associated information. The need for any deviations or variations in the environmental conditions must be reported to the Project Manager and the ECO prior to these being undertaken.

12. Environmental Management Programme

The provisions of this EMPr are binding on the Applicant during the life of the project, thus until decommissioning and closure. As the decommissioning and closure phases are not anticipated, the EMPr shall be binding on any authority to which responsibility has been delegated to, until such time that the DAEA & RD or applicable environmental authority has formally absolved the Municipality from its responsibilities in terms of this EMPr. It is essential that the EMPr requirements be carefully studied, understood, implemented, and adhered to at all time. To the EMPr requirements, each aspect related to the EMPr has been addressed in the table below. Each action within the EMPr is supported by the priority of when the specific action will need to be implemented. Each of these aspects is briefly described below for ease of reference.

13. Activity

This section highlights the various aspects or impacts related with the project i.e the Applicant / Contractor's activities that will interact with the environment.

14. Management/Mitigation Measures

This section in the table indicates the actions required to either prevent and / minimize the potential impacts on the environment that is associated with the project

15. Responsibility

The section indicates the party responsible for implementing the environmental measures and action plans laid out in the EMPr. Formal responsibilities are necessary to ensure that key procedures are executed.

16. Frequency/Timing

This section indicated when and/how often the actions for that specific aspect must be implemented and /or monitored.

Table of abbreviations used below:

Abbreviation	Meaning
C	Contractor
E	Engineer
PM	Project Manager
ECO	Environmental Control Officer
EMPr	Environmental Management Programme
EA	Environmental Authorisation

A. PRE-CONSTRUCTION PHASE

Activity	Management / Mitigation	Responsibility	Frequency / Timing
A1 - Legislation, permits, agreements and EA requirements	In all instances, Site Owner, Developer, Service Providers, Contractors and Project Managers must remain in compliance with relevant local and national legislation. The supreme law of the land is "The Constitution of the Republic of South Africa" which states: "Every person shall have the right to an environment which is not detrimental to his or her health or well being". Laws applicable to protection of the environment in terms of Environmental Management (and relating to construction activities) include but are not restricted to those listed in section 2 above.	All	Prior to moving onto site, during construction and during operation

	a. The approved Environmental Management Programme (EMPr) must be kept on site and made available to the Interested and Affected Parties on request. b. In case the activity is managed off-site, each official and / or worker operating on site must be educated about the Environmental Management Programme (EMPr) and made aware of his/her responsibilities. c. Soil erosion prevention measures and soil erosion control measures must be implemented during construction of the project, particularly in the steeper areas of the site. d. Unnecessary removal of ground cover vegetation must be prevented. Where indigenous vegetation has been cleared beyond the construction footprint, appropriate measures must be taken to ensure that the disturbed area is rehabilitated and re-vegetated with locally appropriate indigenous. e. Alien invasive plant species within the road reserves and affected footpaths must be removed and must be disposed off appropriately. Monitoring and control programmes must be put in place until natural vegetation is well established. f. Topsoil must be stockpiled separate from the subsoil for use in rehabilitation processes. Stockpiles must be positioned away from watercourses or storm water drains to prevent soil from eroding directly into the watercourse, drain or adjacent wetlands. g. The working area is to be clearly demarcated and all construction work is to be kept within the demarcated area. h. Any inference with the natural hydrological functioning of the area, including construction of structures across the river and other natural drainage systems, must be carefully monitored and must be in accordance with specifications of the Department of Water Affairs and Forestry (DWAF). i. A copy of the authorization must be kept at the premises where the activity will be carried on. The authorization must be produced to any authorized official of the Department who requests	All	Ongoing
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	to see it and must be made available for inspection by any employee or agent of the holder of the authorization who works or undertakes work at the premises.	C & PM	At all times
A2 - Access to site <i>Sound environmental principles must be followed</i>	A2.1 Routing		
	a. The Contractor will have to ascertain the existing condition of the access road and repair accordingly should damage occur due to construction of water reticulation and pipeline.	ECO, C & PM	Prior to moving onto site and during construction
	b. Access route must be clearly defined with white stakes/painted rocks and disturbance outside these areas is not permitted.		
	c. The Contractor must take into account any limitations identified and recommendations made during the environmental studies when deciding on an access route to the construction site.		
	d. The location of all underground services and servitudes must be identified and confirmed before construction commences.		
	e. Choice of access routes must take into account minimum disturbance to residents and businesses neighbouring the site.		
	f. A working corridor must be determined to avoid excess trampling and damage to the site.		
	A.2.3 Survey Points	E	During surveys and preliminary investigations
	a. Marking of survey points must be done with the Engineers approval.		
	b. Vegetation clearing and disturbance must be kept to a minimum during the survey operations, taking into account the high C-Plan irreplaceability values of the site.	PM / ECO	
	A3.1 Layout & Location	E / C / PM / ECO	

A3 – Setting up the construction camp <i>Careful planning of the construction camp can ensure that time and costs associated with environmental management and rehabilitation are reduced (It is recommended that any disturbances which may take place commence only after the first spring flush so that any indigenous vegetation can be relocated for rehabilitation.)</i>	a. Choice of site for the Contractor's camp requires the engineer's permission and must take into account the location of local residents and / or ecologically sensitive areas, including flood zones and slip / unstable zones. A site plan must be submitted to the Engineer for approval. The construction camp must preferably be positioned on previously disturbed area.		During surveys and preliminary investigations and prior to moving onto site
	b. If the Contractor chooses to locate the campsite on private land, he must get prior permission from both the Engineer and the landowner.		
	c. The size of the construction camp must be minimized (especially where natural vegetation or grassland has had to be cleared for its construction).		
	d. The construction camp must be properly fenced and secured. It must be kept in a clean and orderly state at all times. This will deter rodents and other fauna from entering the camp.	E / C / PM	During site establishment and ongoing weekly inspections
	e. The construction camp must be located on a level area at least 50m from any watercourse, wetland or water supply. The position of the camp must be ratified by the Engineer and the Environmental Control Officer.	E / C / PM / ECO	During site establishment
	f. The Contractor's camp may not be situated in a flood plain or on slopes greater than 1:3.		
	g. The construction camp must be fenced with a 1.8m high bonnox (or similar type) fence.		
	h. The Contractor must attend to the drainage of the campsite to avoid sheet erosion and / or standing water.	E / C / PM / ECO	During site establishment
	A3.2 Ablutions		
	a. Where water borne sewage is not available, temporary chemical toilets must be provided by a company approved by the Engineer. These toilets must be made available to all staff, and must be no closer than 50m from any watercourse. Such facilities, which shall comply with local authority regulations, shall be maintained in a clean and hygienic condition. Their use shall be strictly enforced. They shall be positioned in an appropriate place.	PM / C / ECO	During set-up

	b. The construction of a "long-drop" is forbidden.	E / PM / C	Ongoing
	c. There shall be a minimum of 1 toilet for every 20 workers and these must be situated no further than 100m from the work front.		
	d. Under no circumstances may open areas or the surrounding bush or degraded and built up areas be used as a toilet facility.		
	A3.3 Provision for Camp Waste Disposal		
	a. Bins and / or skips shall be provided at convenient intervals for the disposal of waste within the camp. The bins must be covered to prevent wind-blown rubbish and scavenging by people and animals.	PM / C / ECO	During site set-up and ongoing
	b. Bins should have liner bags for efficient and safe disposal of waste.		Ongoing
	c. At least three rubbish bins must be located at the construction camp for the collection of waste.		
	d. Recycling and the provision of separate waste receptacles for different types of waste should be encouraged. Where possible, plastics, paper, glass and cans should be separated from other domestic waste for recycling. If waste is to be recycled, appropriately labelled waste receptacles must be made available.		
	e. Any potentially hazardous containers must be punctured or disabled prior to disposal.		
A4 – Establishing Equipment Lay-Down & Storage Areas <i>Storage areas can be hazardous, unsightly and can cause environmental pollution if not designed and managed carefully.</i>	A4.1 – General Substances and Materials		
	a. Choice of location for equipment lay-down and storage areas must take into account prevailing winds, distances to water bodies, general on-site topography and water erosion potential of the soil. These areas must be located within previously disturbed areas for this project. Impervious surfaces must be provided where necessary.	PM / E / C / ECO	During site set-up
	b. Fire prevention and fire fighting facilities must be present at all storage facilities.		
	c. Storage areas must be secure so as to minimise the risk of crime. They must be safe from access by children and animals etc.		

<i>Hazardous substances are those that are potentially poisonous, flammable, carcinogenic, or toxic. Some examples are: diesel, petrol, oil, bitumen, cement, solvent based paints, lubricants, explosives, drilling fluids, pesticides, herbicides, LPG.</i>	d. Equipment lay-down and storage areas must be designated, demarcated and fenced.	PM / E / C / ECO	
	A4.2 –Hazardous Substances and Materials		
	a. It is very important that the proximity of other developments e.t.c is taken into account when deciding on storage areas for hazardous substances or materials. The areas must be suitably signed, fenced and access controlled.		
	b. These storage facilities must be on an impermeable surface that is protected from the ingress of storm water from surrounding areas in order to ensure that accidental spillage does not pollute local soil or water resources. The Contractor shall submit a method statement to the Engineer and ECO for approval.		
	c. Material Safety Data Sheets (MSDSs) shall be readily available on site for all chemicals and hazardous substances to be used on site. Where possible and available, MSDSs must additionally include information on ecological impacts and measures to minimize negative environmental impacts during accidental releases or escapes.		Ongoing
	d. Staff dealing with these materials / substances must be aware of their potential impacts and follow the appropriate safety measures. The Contractor must ensure that its staff is made aware of the health risks associated with any hazardous substances used and has been provided with the appropriate protective clothing / equipment in case of spillages or accidents and have received the necessary training.		During construction
	e. All concrete mixing must take place on a designated, impermeable surface.		
	f. No vehicles transporting concrete may be washed on site.		
	g. No vehicles transporting, placing or compacting cement or any other bituminous product may be washed on site		
	h. Lime and other powders must not be mixed during excessively windy conditions.		

	i. All substances required for vehicle maintenance and repair must be stored and sealed containers until they can be disposed of / removed from the site.		
	j. Hazardous substances / materials are to be transported in sealed containers or bags.		
A5 – Education of site staff on general and environmental conduct <i>These points need to be made clear to all staff on site before the project begins</i>	A5.1 – Education		
	a. Ensure that all site personnel have a basic level of environmental awareness training. The Contractor must submit a proposal for this training to the ECO for approval. Topics to be covered must include: • What is meant by “environment”; • Why the environment needs to be protected and conserved; • How construction activities can impact the environment; • What can be done to mitigate against such impacts; • Awareness of emergency and spills response provisions; • Social responsibility during construction e.g. being considerate to local residents. It is the contractor’s responsibility to provide the site foreman with no less than 1 hour’s environmental training and to ensure that the foreman has sufficient understanding to pass this information onto the construction staff.	PM / C / ECO	During staff induction and ongoing
	b. Staff operating equipment shall be adequately trained and sensitised to any potential hazards associated with their tasks	PM / E / C / ECO	During staff induction, followed by ongoing monitoring
	c. Translators are to be used where necessary.		
	d. The Engineer / ECO must be on hand to explain more difficult / technical issues and to answer questions which may be raised.		
	e. Construction workers must be made aware that they are not to make excessive noise e.g. shouting, hooting.		

	f. The use of pictures and real-life examples is encouraged as these tend to be more easily remembered. g. Use should be made of environmental awareness posters on site. h. No operator shall be permitted to operate critical items of mechanical equipment without having been trained by the Contractor and certified competent by the Project Management. i. All employees must undergo the necessary safety training and wear the necessary protective clothing at all times. j. The need for a "clean site" policy also needs to be explained to the construction workers.		
	A5.2 – Worker conduct on site a. A general regard for the social and ecological well being of the site and adjacent areas is expected of the site staff. Workers need to be made aware of the following rules: b. No alcohol / drugs to be present on site, no vehicles or machinery are to be operated whilst under the influence of alcohol or drugs. c. Prevent excessive noise to minimise disturbances to local residents. d. No firearms allowed on site or in vehicles transporting staff to / from the site (unless used by security personnel). e. No unsocial behaviour will be permitted. f. Bringing pets onto site is forbidden. g. Construction staff are to make use of facilities provided for them, as opposed to ad-hoc alternatives (e.g. fires for cooking, the use of surrounding bush as a toilet facility is strictly forbidden) h. No fires to be permitted on site. Encourage the use of gas-operated cookers for preparation of food on site. i. Trespassing on private / commercial properties adjoining the site is forbidden.	PM / C	During staff induction, followed by ongoing monitoring

	j. Only pre-approved security staff and workers shall be permitted to live on the construction site.		
	k. No worker may be forced to do work that is potentially dangerous or for what he / she is not trained to do.	PM / C	Prior to moving onto the site and ongoing
	l. The staff conduct rules are described in a separate table of Rules (Section F of the EMP). This is aimed at providing staff with the basic information regarding worker conduct on site)	PM / C	Prior to moving onto the site and ongoing
A6 – Social Impacts	A6.1 Public Participation		
<i>It is important to take notice of the needs and wishes of those living or working adjacent to the site. Failure to do so can cause disruption to work and increase cost in the form of delays</i>	a. All Interested and Affected Parties (IAPs) must be contacted in order to inform them of the starting date of construction and the proposed duration. IAPs must be notified of the construction process and the manner to which it will be implemented via public notices.	E / PM/ C	Prior to moving onto the site and ongoing
	b. Open liaison channels must be established between the site owner, the developer, operator, the contractors and Interested and Affected Parties (IAPs) such that any queries, complaints or suggestions can be dealt with quickly and by the appropriate person(s). These people would usually have been identified by the environmental consultant that was assigned to the project (during Scoping). If this wasn't the case, the IAPs can be identified as those that live close by the site, work close to the site, will have their services / infrastructure affected by the project, have a general interest in the project, and / or the ward Councillor in which the construction is taking place.	E / PM	Prior to moving onto site and ongoing
	c. Should the construction staff be approached by members of the public or other stakeholders, they must assist them in locating the Engineer / Contractor, or provide them with a number on which they may contact the Engineer / Contractor.	C / PM / E	Monthly

	d. The conduct of the construction staff when dealing with the public or other stakeholders shall be in a manner that is polite and courteous at all times. Failure to adhere to this requirement may result in the removal of staff from the site by the Engineer.	C / PM / E	
	e. Adequate designated parking must be provided for site staff and visitors.	C / PM	Prior to moving on site
	f. A complaints register must be kept on site. IAPs need to be made aware of the existence of the complaints book and the method of communication available to them. Details of complaints must be incorporated into the audits as part of the monitoring process. This must be in carbon copy format, with numbered pages.	C / PM / ECO	Ongoing
	A6.2 Noise Impacts		
	a. Construction vehicles / machines are to be fitted with standard silencers prior to the beginning of construction.	E / PM / C	During surveys and Prelim Investigations and site set up.
	b. Construction workers must be made aware of not creating unnecessary noise such as hooting and shouting,	PM / C	During site set up and ongoing.
	c. Equipment that is fitted with noise reduction facilities (e.g. side flaps, silencers etc) will be used as per operating instructions and maintained properly during site operations.	PM / C	During site set up
	A.6.3 Visual Impacts		
	a. Storage facilities, elevated tanks and other temporary structures on site must be located such that they have as little visual impact on local residents as possible.	PM / C / ECO	Ongoing – more frequently during dry and windy conditions
	b. Lighting on the construction site must be pointed downwards and away from oncoming traffic and nearby houses.	E / PM / C / ECO	During set up and ongoing
	c. Special attention must be given to the screening of highly reflective materials on site.	PM / E / C / ECO	During site set up.

A7 – Dust / Air / Light pollution <i>Establishment of the camp site, and related temporary works can reduce air quality</i>	a. Vehicles travelling along access roads must adhere to speed limits to avoid creating excessive dust.	PM / C	Throughout the duration of the project
	b. Camp construction / haulage road construction – areas that have been stripped of vegetation must be dampened periodically to avoid excessive dust.	ECO / C / E	During site set up
	c. The Contractor must make alternative arrangements (other than fires) for cooking and / or heating requirements. LPG gas cookers may be used provided that all safety regulations are followed.	PM / C	Throughout the duration of the project
A8 Soil Erosion <i>The stripping of vegetation during preliminary activities on site greatly increases the risk of soil erosion.</i>	A.8.1 Conservation of Valuable Soil Resources		
	a. The time that stripped areas are left open to exposure must be minimised wherever possible. Care must be taken to ensure that lead times are not excessive.	PM / C / E / ECO	Throughout the duration of the project.
	b. Wind screening and storm water control must be undertaken to prevent soil loss from the site. It is recommended that gabion mattresses are placed at culvert inlets and outlets as erosion control measures.	E / PM / C / ECO	Throughout the duration of the project
	c. Procedures that are in place to conserve topsoil during the construction phase of the project are to be applied to the set up phase, i.e. topsoil is to be conserved while providing access to the site and setting up the camp.	E / PM / C / ECO	Throughout the duration of the project
	d. Topsoil stripped from the construction camp and other construction areas must be stockpiled away from any potential disturbances.	E / PM / C / ECO	Throughout the duration of the project
A9 Stormwater <i>Serious financial and environmental impacts can be caused by unmanaged storm water.</i>	A.9.1 Stormwater Damage Prevention		
	a. To prevent storm water damage, the increase in storm water runoff resulting from the construction activities must be estimated and the drainage system assessed accordingly. A drainage plan must be submitted to the Engineer for approval and must include the location and design criteria of any temporary stream crossings.	E / ECO / PM	During surveys and preliminary investigations.
	b. During site establishment, storm water culverts and drains are to be located and covered with metal grids to prevent blockages if deemed necessary by the Engineer.	E	During site establishment

	c. Temporary cut off drains and berms may be required to capture storm water and promote infiltration.	ECO / E	During site set up.
A.10 Water Quality <i>Incorrect disposal of substances and materials and polluted run-off can have serious negative effects on groundwater quality.</i>	A.10.1 Maintenance of Water Quality		
	a. Storage areas that contain hazardous substances must be bunded with an approved impermeable liner.	E / PM / ECO	During site set up.
	b. Spills in bunded areas must be cleaned up, removed and disposed of safely from the bunded area as soon after detection as possible to minimise pollution risk and reduced bunding capacity.	E / ECO / C / PM	
	c. A designated, bunded area is to be set aside for vehicle washing and maintenance. Materials caught in this bunded area must be disposed of to a suitable waste disposal site or as directed by the Engineer.		
	d. Provision must be made during set up for all polluted run off to be treated to the Engineers approval before being discharged into the storm water system. Any waste that cannot be treated to acceptable standards on site must be treated and disposed by a licensed treatment company.		During site set up, to be monitored weekly
A.11 Conservation of the Natural Environment <i>Alien plant encroachment is particularly damaging to natural habitats and is often</i>	A.11.1 Fauna and Flora		
	a. No vegetation may be cleared without prior permission from the ECO / Engineer.	E / ECO	During site set up, and ongoing.
	b. Care must be taken to avoid the introduction of alien plant species to the site and surrounding areas.	ECO / C	Ongoing in camp site, haulage areas.

<i>associated with disturbance to the soil during construction activities. Care must be taken to conserve existing plant and animal life on and surrounding the site considering the sites high C-Plan irreplaceability value.</i>	c. The site falls within an area, which has an irreplaceability value of >0-0.002 according to Ezemvelo KZN Wildlife's Conservation Plan, which means that there is unlikely to be any biodiversity concern with regards to upgrading the existing Mjila Access Track, and the fact that the site is already transformed, extreme care must be taken to preserve the surrounding natural vegetation and fauna found on site.		
A.12 Set up of Waste Management	A.12.1 Waste Management		
	a. The contractor is responsible for the internal collection of refuse and for transporting it to a registered landfill site once every week; unless a service agreement is entered into between the contractor and the municipality.	C	During site set up
	b. The excavation and use of rubbish pits is forbidden.	PM / ECO / C	During site set up
	c. Burning of waste is forbidden ¹ .		
	d. A fenced area must be allocated for waste sorting and storage prior to removal.	C / PM / ECO	During site set up and on going
	e. Individual skips for different types of waste (e.g. 'household' type refuse, building rubble, etc.) must be provided.		
	A.13.1 Protection of Cultural Environment		
A.13 Cultural Environment	Prior to the commencement of construction, all staff need to know what possible archaeological or historical objective of value may look like, and to notify the Engineer / Contractor should such an item be uncovered.	ECO / PM / C	During site set up and ongoing.

¹ A possible exception to this may be that the alien invasive vegetation, which is removed from the site, should be burned to prevent the spread of the plants.

	If any artefacts or graves are uncovered during construction, all work on site is to cease and AMAFA as well as the ECO is to be notified for comment. Construction may only commence once approval by AMAFA is granted.		
A.14 Safety and Security	A.14.1 Fencing / Demarcation		
	a. Potentially hazardous areas such as trenches / storage areas are to be demarcated and clearly marked.	PM / C / ECO	Ongoing.
	A.14.2 Lighting		
	a. Lighting on the construction campsite is to be set out to provide maximum security and to enable policing of the site, without creating a visual nuisance to local residents or businesses.	PM / C / ECO	Ongoing
	A.14.3 Risks Associated with Materials on Site		
	a. Material stockpiles or stacks, such as pipes must be stable and well secured to avoid collapse and possible injury to site workers / local residents.		
	b. Flammable materials must be stored as far as possible from adjacent residents / businesses.		
	c. Fire fighting equipment must be present on site at all times as per OHSA.		
	d. Obstruction to drivers' line of sight due to stockpiles and stacked materials must be avoided, especially at intersections and sharp corners.		
	e. No materials are to be stored in unstable or high-risk areas such as in floodplains or on steep slopes.		
	f. All IAPs must be notified in advance of any known potential risks associated with the construction site and the activities on it. Examples of these are stringing of power lines, blasting, earthworks / earthmoving machinery on steep slopes above houses / infrastructure, risk to residences along haulage roads / access routes.		

B. CONSTRUCTION PHASE

This pertains to all environmental impacts associated with construction and is not limited to the land on which the Project is to be located. It includes the site footprint, construction campsites, access roads and tracks, as well as any other area affected or disturbed by construction activities. The EMPr (particularly the specifications for rehabilitation) is relevant for all areas disturbed during construction. Furthermore, the EMPr must take into account all secondary impacts on the local community and the public. *(It is recommended that any disturbances, which may take place, commence only after the first spring flush so that any indigenous vegetation can be relocated for rehabilitation.)*

Activity	Management / Mitigation	Responsibility	Frequency / Timing
B1 – Access to the site	B1.1 Maintenance of the access		
	a. The access to the site will need to be upgraded to an acceptable standard during construction (i.e. such that large amounts of dust are not generated and there is no unwarranted damage caused to construction vehicles).	PM / E	Initial set up and ongoing
	b. Contractors shall ensure that access roads are maintained in good condition by attending to potholes, corrugations and storm water damages as soon as these develop.	E / C / ECO	Establish at setup
	c. There needs to be adequate drainage of water underneath the access roads (both during construction & in operation). This can be done through a culvert / water diversion system.	PM / E / ECO	When necessary
	d. During construction, any dirt access roads could potentially be surfaced with a compacted gravel layer (shale) in order to allow for the increase in vehicular traffic on these roads. A chemical stabilizer could be added to assist with the surface binding and reduce the dust produced by vehicular traffic on the road.	PM / C	When necessary

	e. It is recommended that entry and exit points to the proposed development are clearly marked and designed in such a way as to allow for good line of sight and traffic viewing (allowing a 100m – 150m line of site on both sides of the access). Convex mirrors should be placed on opposite sides of the entry/exit points to allow motorists exiting the development to see oncoming vehicles. These are intended to minimize potential incidents of vehicles collision.		
	f. Any large trees or foliage that blocks entry / exit visibility should be removed (with prior permission from the ECO) to increase traffic visibility.	PM / E / ECO	
	g. Unnecessary compaction of soil by heavy vehicles must be avoided; construction vehicles must be restricted to demarcated access, haulage routes and turning areas.	PM / C / ECO	Ongoing, and specifically after heavy rains
	h. The gravel-wearing course must be 150mm thick compacted to 93% Mod AASHTO.	PM / E / C / ECO	Ongoing
	i. The maximum gradient to be 12%	PM / E / C / ECO	Ongoing
	j. All pipe and causeway crossings to be constructed as per KwaZulu-Natal Department of transport's Standards.	PM / E / C / ECO	Ongoing
	k. All pipe crossings must have headwalls constructed as per KwaZulu-Natal Department of Transport's standards.	PM / E / C / ECO	Ongoing
	l. The road reserve width must be 20m. Only short sections of 10m will be acceptable provided drainage is adequate.	PM / E / C / ECO	Ongoing

	m. All encroachments, i. e. Waterpipe crossings, accesses etc, to be addressed during construction and complied with as per KwaZulu-Natal Department of Transport's standards.	PM / E / C / ECO	Ongoing
	n. All road related signage and road safety items to be attended to during construction as per KwaZulu-Natal Department of Transport standards.	PM / E / C / ECO	
	o. The bell mouth onto Main Road must be surfaced as per the KwaZulu-Natal Department of Transport's standards.	PM / E / C / ECO	
	p. Should construction signs be placed at the beginning of the project indicating who is constructing the road and the Municipality that it falls within. Approval must be sought from the KwaZulu-Natal Department of Transport for the installation of the signage. Should signage be placed without approval from the Department, it will be removed.	PM / E / C / ECO	
	r. Machine / vehicle operators must receive clear instructions to remain within demarcated access routes. Movement of heavy-duty vehicles and vehicles not connected with work in progress must be restricted to the construction zone in order to control related impacts such as damage in the construction zone, compaction of soil, damage to vegetation and noise pollution.	E / C / PM	Ongoing, and specifically after heavy rains
	s. Person and vehicle access must be restricted during construction so as to control access to otherwise potential dangerous excavations and materials.	E / PM / C	Ongoing, and specifically after heavy rains

B.2 Maintenance of Construction Camp	B.1.2 Haulage Roads		
	a. Contractors shall ensure that all side and mitre drains as well V Drains and scour check walls on access and haul roads are functioning properly and are well maintained.	C / PM / E / ECO	Ongoing, and specifically after heavy rains
	B.2.1 Surfaces		
	a. The Contractor must monitor and manage drainage of the campsite.	PM / C / ECO	Weekly inspection
	b. Run-off from the campsite must not discharge into neighbours' properties.		
	B.2.2 Ablutions		
	a. Chemical toilets are to be maintained in a clean state on a regular basis and must be moved to ensure that they adequately service the work areas.	PM / ECO	Ongoing
	b. The Contractor is to ensure that open areas or the surrounding bush are not being used as a toilet facility.	PM / C / ECO	Weekly
	B.2.3 Camp Waste Disposal		
	a. The Contractor shall ensure that all litter is collected from the work and camp areas daily. The construction area must be cleared of litter, debris (e.g. Cement packets, bitumen residues etc) and other domestic waste on completion of the day's work.	PM / C / ECO	Ongoing
	b. Bins and / or skips must be emptied regularly and waste must be disposed of at a registered landfill site. Waybills for all such disposal are to be kept by the Contractor for review by the Engineer / ECO.	PM / C / ECO	Daily
	b. A registered chemical waste company is to be used to remove waste from chemical toilets on site.	PM / C / ECO	Weekly / As needed
	B.2.4 Eating Areas		

	a. Eating areas must be regularly serviced and cleaned to ensure the highest possible standards of hygiene and cleanliness.	E / PM / C	Weekly monitoring
	b. All litter throughout the site must be picked up on a daily basis and placed in the bins provided.	E / PM / C	Ongoing monitoring
	B.2.5 Housekeeping		
	a. The Contractor shall ensure that his camp and working areas are kept clean and tidy at all times.	PM / C	Ongoing
B.3 Staff Conduct	B.3.1 Environmental Education and Awareness		
	a. The Contractor must monitor the performance of the construction workers to ensure that the points relayed during their induction have been properly understood and are being followed. If necessary, the ECO and / or a translator should be called to the site to further explain aspects of environmental or social behaviour that are unclear.	PM / C / ECO	Ongoing
	B.3.2 Worker Conduct on Site		
	a. The rules that are explained in the worker conduct section (see section a.5.2 of this EMP) must be followed at all times. Non-compliance of these rules could result in the removal of workers by the contractor.	PM / C / ECO	Ongoing
B4 – Dust / Air Pollution <i>Main causes of air pollution are dust particles from vehicle movements and stockpiles, vehicle emissions and fires</i>	B.4.1. Dust & Air Pollution		
	a. Vehicles travelling to and from the construction site must adhere to the speed limits so as to avoid producing excessive dust. A speed limit of 30 km/h must be adhered to on the construction site.	E / C / PM	As directed by Engineer
	b. Limiting construction operational hours from 07h00 and 17h00 will reduce congestion and disturbance in surrounding areas and minimize road deterioration and consequent dust creation.	E / C / PM	As directed by Engineer

	c. Access points and other cleared surfaces must be dampened whenever necessary and especially in dry and windy conditions to avoid excessive dust.	PM / C	Ongoing
	d. Vehicles and machinery are to be kept in good working order and to meet the manufacturer's specifications for safety, fuel consumption etc. Should excessive emissions be observed, the Contractor is to have the equipment seen to as soon as possible.	PM / C / ECO	Ongoing
	e. Stockpiles may cause dust and so must be managed in accordance with the guidelines in Materials Management.	PM / C / E	Ongoing
	f. If dust is unavoidable, screening will be required utilising wooden supports and shade cloth.	E / PM / C	Ongoing
	g. Stockpiles not used in three (3) months after stripping must be seeded to prevent dust and erosion.	E / PM / ECO	Ongoing
B5 – Soil Erosion	B.5.1 Topsoil Stripping and Stockpiling		
	a. Excavated soil must be deposited in a landfill site. Soil disturbance will be minimized by establishing the extent of the construction site (pre-construction) and clearly demarcating this on the site layout plans. No construction personnel or vehicles may leave the demarcated areas except when authorised to do so by the Project Manager.	PM / C / ECO	As each activity is completed.
	b. Erosion prevention measures must be implemented: Berms, sand bags and hessian sheets may be used to contain all sediment whilst energy dissipaters must be constructed at all outflow points. The site must be monitored weekly for any sign of off-site siltation. All exposed earth must be rehabilitated promptly with suitable vegetation to protect the soil.	E / PM / C / ECO	Ongoing
	B.5.2 Exposed Surfaces		

	a. Side tipping of soil and excavated materials shall not be permitted – all spoil material shall be exposed of as directed by the Engineer.	E / C / PM	As directed by the Engineer
	b. Storm water control and wind screening must be undertaken to prevent soil loss from the site.	E / ECO / PM	As directed by the Engineer
	c. There must be no offsite impacts of stormwater. A general rule is that the stormwater velocity eddies on the site must be the same as the predevelopment area.	E / ECO / PM / C	As directed by the Engineer
	d. In areas where steep slopes are excavated, erosion control measures need to be initiated and these may include the planting of indigenous vegetation at short intervals to prevent the formation of gullies.	E / ECO / PM / C	As directed by the Engineer
	f. The Storm Water Management Plan must be developed, provided and implemented by the engineer. Drainage must be controlled to ensure that runoff from the access road will not lead to erosion and offsite pollution of any water resources along the road. The storm water drainage system must not be contaminated by other waste sources generated during construction phases of the development. The temporary toilet facilities must not be allowed to enter the storm water drainage system. Waste from these facilities must be collected by the service provider and disposed of at a permitted waste disposal site. These facilities must be regularly serviced and would be managed according to the service plan developed by the Engineer.	PM / E / C / ECO	Ongoing and as directed by the Engineer

	g. Battering of all banks shall be such that cut and fill embankments are no steeper than previous natural slopes unless otherwise permitted by the Engineer. Cut and fill embankments steeper than previous ground levels shall be re-vegetated immediately on completion of trimming or shall be protected against erosion using bio-engineered stabilisation measures.	PM / E / C / ECO	Ongoing and as directed by the Engineer
	h. If cut and fill earthworks are required, these must be limited to the minimum necessary for the proposed development. Cut and fill banks must not be sloped steeper than 1: 1.5. All fill must be well compacted in layers on placement and must not be loose end-tipped. No cut or fill slope must exceed 2.5 m vertical height. All earthworks must be vegetated as soon after completion of construction as is practically possible with locally sourced indigenous vegetation where possible.	E / PM	Directed by the Engineer
	i. All embankments, unless otherwise directed by the Engineer, shall be protected by a cut off drain to prevent water from cascading down the face of the embankment and causing erosion.	E / C / ECO	Directed by the Engineer
B6 – Storm Water	B6.1 General Principles		
<i>Construction activities frequently result in diversion of natural water flow resulting in concentration of flow and an increase in the erosive potential of the water</i>	a. The Contractor shall not in any way modify nor damage the banks or beds of streams, rivers, wetlands, other open water bodies and drainage lines adjacent to or within the designated area, unless required as part of the construction project specification. Where such disturbance is unavoidable, modification of water bodies must be kept to a minimum in terms of: removal of riparian vegetation; and opening of the stream channel.	E/ PM / ECO	As surface becomes exposed

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	b. Earth, stone and rubble is to be properly disposed of so as not to obstruct natural pathways over the site. i.e. these materials must not be placed in storm water channels, drainage lines or rivers.	E / PM / ECO / C	Ongoing
	c. The use of high velocity storm water pipelines must be avoided in favour of open, high friction, semi-permeable channels wherever feasible.	E / PM	Ongoing
	d. Stormwater outfalls must be designed to reduce flow velocity and avoid stream bank and soil erosion.	E / PM	Ongoing
	e. A number of smaller storm water outfall points must be constructed rather than a few large outfall points.	E / PM / ECO / C	Regular monitoring, ongoing
	f. The provisions of the National Water Act 36 of 1998 shall be complied with at all times.	PM / C / E / ECO	
	g. The Contractor is to ensure that impediments to natural water flow is avoided during construction, or is temporarily diverted.		
	h. There must be a periodic checking of the site's drainage system to ensure that the water flow is unobstructed.		
	B.6.2 Un-channelled Flow		
	a. During construction un-channelled flow must be controlled to avoid soil erosion.	PM / C / E / ECO	Ongoing monitoring
	b. Where surface runoff is concentrated (e.g. along exposed tracks), flow must be slowed by contouring.	E / ECO / PM	Ongoing
c. Rock Bolsters are to be placed across the invert of drains susceptible to erosion for every 2m vertical drop.	PM / C / E / ECO	Ongoing	
B7 – Water	B7.1 Water Quality		

<i>Water quality is affected by the incorrect handling of substances and materials.</i> <i>Soil erosion and sediment is also detrimental to water quality.</i> <i>Mismanagement of polluted run-off from vehicle and plant washing and wind dispersal of dry materials into rivers and watercourses are detrimental to water quality.</i>	a. The Department of Water Affairs and Forestry and the ECO as well as other emergency contact numbers provided by the Municipality must be contacted in order to deal with spillages and contamination. The Contractor is to compile a list of emergency contact numbers to refer to in order to deal with fire, spillages and contamination of land and aquatic environments.	PM / E	Ongoing monitoring
	b. Every effort must be made to ensure that any chemicals or hazardous substances do not contaminate the soil or ground water on site.	PM / E / ECO	Ongoing monitoring / as the work progresses
	c. Care must be taken to ensure that runoff from vehicle or plant washing does not enter surface or ground water. Vehicles and machinery may only be cleaned at a designated place at the construction camp.		
	d. Mixing / decanting of all chemicals and hazardous substances must take place either on a tray or on an impermeable surface.	PM / E / C	
	e. Contaminated wastewater must be managed by the site manager to ensure existing water resources on the site are not contaminated. All wastewater from general activities in the camp shall be collected and removed from the site for appropriate disposal at a licensed commercial facility.	PM / C / ECO	
	f. Site staff shall not be permitted to use any watercourse or natural water source adjacent to or within the designated site for the purposes of bathing, washing of clothing or for any construction related activities. Municipal water (or another source approved by the Engineer) should instead be used for all activities such as washing of equipment or disposal of any type of waste, dust suppression, compacting etc.	PM / C / ECO	

	g. Dewatering of vessels, tanks, etc is to take place in a controlled manner. No uncontrolled release of water shall be allowed onto the site area. Water wastage must be kept to a minimum and where possible water must be recycled. In the event of a problem occurring during dewatering, it must be stopped immediately until rectification of the problem. All taps must be maintained in good working order. It is not acceptable to have dripping taps or taps left open.	PM / C / ECO	
	B7.2 Water Supply		
	a. Use of natural fountains, springs and adjoining river water for water provision is strictly prohibited.	E / PM / ECO	
	b. Ensure that the existing potable water source is maintained for domestic use during construction.	E / PM	
B8 – Conservation of the Natural Environment	B8.1 Fauna and Flora		
	a. The Contractor is to check that vegetation clearing has the prior permission of the E / ECO. Vegetation that is removed is to be replanted and excavation is to be kept to a minimum. Removal of indigenous trees needs to be authorized by the Department of Water Affairs and Forestry.	ECO / PM / E / C	Ongoing monitoring / as the work progresses
	b. Development infrastructure must be screened wherever possible from ecologically sensitive areas to reduce the human disturbance factor.	C / PM / ECO	
	c. Alien vegetation encroachment onto the site as a result of construction activities must be controlled during construction. Immediate re-vegetation of stripped areas and removal of aliens by weeding must take place.	ECO / PM / E	
	B8.2 Geology		

	a. In the event of excavation, the material that is removed must be separated into topsoil and subsoil. The top 150mm would be considered topsoil and must be stockpiled separately.	PM / C / ECO	Ongoing monitoring
	b. In the event of infilling, replacement of subsoil must precede the topsoil replacement, and all material must be well compacted.		
	B8.3 Stream Crossings		
	A design plan must be submitted to DWAF before construction may commence.	E / ECO	Prior to commencement of construction
B9 – Materials Management	B9.1 Stockpile Management		
	a. Stockpiles must not be situated such that they obstruct natural water pathways.	PM / C / ECO	Ongoing monitoring
	b. Stockpiles must not exceed two (2) metres in height unless otherwise permitted by the Engineer or be left for longer than three (3) months.	PM / C / ECO / E	Ongoing monitoring
	c. If stockpiles are exposed to windy conditions or heavy rains, they must be covered either by vegetation or cloth, depending on the duration of the project. Stockpiles may further be protected by the construction of berms or low brick walls around their bases.	PM / C / E / ECO	Ongoing monitoring
	d. Stockpiles must be kept clear of weeds and alien vegetation growth by regular weeding.		
	B9.2 Handling of Hazardous Materials		
	a. Cement, bitumen and other potential environmental pollutants must be mixed on an impermeable surface with special provisions for storm water management.	E / PM / C / ECO	Ongoing

	b. All empty containers must be removed from the site for appropriate disposal at a licensed commercial facility.		
	c. No vehicles transporting concrete or bitumen to the site may be washed on site.		
	d. No vehicles transporting, placing or compacting asphalt or any other bituminous product may be washed on site.		
	e. Lime and other powders must not be mixed during excessively windy conditions.		
	f. All substances required for vehicle maintenance and repair must be stored in sealed containers until they can be disposed of / removed from the site.		
	g. Hazardous substances / materials are to be transported in sealed containers or bags.		
	h. Spraying of herbicides / pesticides must not take place under windy conditions and must comply with OHSA specs and other chemical handling laws.		
	j. The Contractor is to outline a method statement for the dealing of accidents / spillages of hazardous materials. This statement must be handed to the Engineer as well as to DWAF should the incident occur near to or in a water body.		
	B9.3 Sourcing construction materials		
	a. Wherever possible, materials that have been produced locally must be used for the construction of the site camp (e.g. bricks, window frames, etc)	E / C / PM	Ongoing monitoring
B10 – Waste Management	B10.1 On-site Waste Management		

<i>Definition; "Refuse" refers to all construction waste (such as rubble, cement, bags, timber, cans etc)</i>	a. The Contractor shall ensure that all refuse is collected from the camp and work areas daily.	PM / ECO	Monitored weekly and at the start of the builders holidays
	b. All material used for construction and maintenance must be removed from the site after construction or maintenance work.	PM / ECO	Ongoing
	c. Refuse must be placed in the designated skips / bins which must be regularly emptied. These must remain within demarcated areas and must be covered to prevent wind-blown rubbish and scavenging by people and animals.	PM / C / ECO	Ongoing
	d. In addition to the waste facilities within the construction camp, provision must be made for waste receptacles to be placed at intervals along the work front.	ECO / PM / C	Ongoing
	e. Littering on site is forbidden and the site shall be cleared of litter at the end of each working day.	ECO / PM	Ongoing
	f. Recycling is to be encouraged by providing separate receptacles for different types of waste and making sure that staff are aware of their uses.	ECO / PM	Ongoing
	B.10.2 Waste Disposal		
	<i>Non – hazardous waste</i>		
	a. All waste must be removed from the site and transported to a registered landfill site.	E / PM / ECO	At least 24 hours prior to the activity
	b. Waybills proving disposal at each site shall be provided by the Engineers.	E / PM / C / ECO	Ongoing
	c. Any construction rubble shall be disposed of at registered disposal sites.	PM / E / C / ECO	Ongoing

	d. Waste from chemical toilets must be disposed of regularly and in a responsible manner by a registered waste contractor. Care must be taken to avoid contamination of soils and water, pollution and nuisance to adjoining areas.	PM / ECO	Ongoing
	Hazardous Waste		
	a. Contaminated water associated with construction activities must be contained in separate bermed areas and must not be allowed to enter into the natural drainage system.	PM / C / ECO	Ongoing
	c. Chemical waste must be stored in appropriate containers and disposed of at licensed disposal facilities.	PM / C	Ongoing
	d. Soil that is contaminated with, e.g. cement, bitumen, petrochemicals or paint must be disposed of at a registered hazardous landfill site.	PM / ECO / C	Ongoing
	e. A sump must be created for concrete waste. This is to be de-sludged regularly and the cement waste is to be removed to a tip site as approved by the local authority.	E / PM / ECO	At least 24 hours prior to the activity taking place.
B.11 Social Impacts <i>Regular communication between the Contractor and the IAPs is important for the duration of the contract.</i>	B.11.1 Disruption of Infrastructure and Services		
	a. Contractors activities and movement of staff is to be restricted to designated construction areas.	PM / C	Ongoing
	b. Should the construction staff be approached by members of the public or other stakeholders, they must assist them in locating the Engineer or Contractor, or provide a number on which they may contact the Engineer or Contractor.	E / PM / C	Monthly

	c. The conduct of the construction staff when dealing with the public or stakeholders shall be in a manner that is polite and courteous at all times. Failure to adhere to this requirement may result in the removal of staff from the site by the Engineer.	E / PM / C	
	d. Disruption of access for local residents must be minimised and must have the consent of the Engineer.	E / PM / ECO	
	e. The Contractor is to inform neighbours in writing of disruptive activities at least 24 hrs beforehand. This can take place by way of leaflets placed in the post boxes giving the Engineers and Contractor's details or other method approved by the Engineer.	PM / C / ECO / E	
	f. Drivers of construction vehicles must exercise care when travelling to and from the site specifically when travelling through villages – a maximum speed limit of 40km/h must be adhered to. Drivers of construction vehicles must be considerate of other road users. They are to be especially careful at narrow sections and water crossings or where livestock is being herded.	PM / C	
	B.11.2 Visual Impacts		
	a. Lighting on the construction site must be pointed downwards and away from oncoming traffic and nearby houses.	E / PM / ECO	Ongoing / As required
	b. The site must be kept clean to minimise the visual impact of the site.	PM / C / ECO	As required
	c. If screening is being used, this must be moved and re-erected as the work front progresses.		
	B.11.3 Noise		
	a. Machinery and vehicles are to be kept in good working order for the duration of the project to minimise noise nuisance to neighbours.	PM / C / ECO	Ongoing

	b. Notice of particularly noisy activities must be given to residents / businesses adjacent to the construction site. Examples of these include: noise generated by jackhammers; blasting; drilling; dewatering pumps.	PM / C / ECO	Ongoing
	c. Noisy activities must be restricted to the times given in the Project Specification or General Conditions of Contract.	PM / C	Ongoing
	B.11.4 Communication with Interested and Affected Parties (IAPs)		
	a. The Engineer and Contractor are responsible for ongoing communication with those people that are interested / affected by the project.	PM / C / E / ECO	Ongoing
	b. A complaints register must be housed at the site office. This must be in carbon copy format, with numbered pages. Any missing pages must be accounted for by the Contractor. This register is to be tabled during monthly site meetings.		
	c. IAPs need to be made aware of the existence of the complaints book and the methods of communication available to them.		
	d. Queries and complaints are to be handled by: - documenting details of such communications; - submitting these for inclusion in the complaints register; - bringing issues to the Engineers attention immediately; - taking remedial action as per Engineer's instruction.		
	e. Selected staff are to be made available for formal consultation with IAPs in order to: explain the construction process; answer questions.		

B12 – Cultural Environment	a. Should any archaeological sites or items of historical or archaeological value, including old stone foundations, tools, clay ware, jewellery, remains, fossils, graves etc be uncovered during construction, their existence must be reported to the ECO and AMAFA, an archaeological study may be required.	PM / C / ECO / E	Ongoing
	b. If any artefacts are uncovered the Research and Professional Services Division of AMAFA must be contacted and work must be stopped immediately. AMAFA's head office is in Ulundi and a satellite office is located in Pietermaritzburg. Contact: Weziwe Tshabalala – tel: (033) 394 6543; fax : (033) 342 6097 or Barry Marshall fax: (035) 870 2054, PO Box 523, Ulundi, 3838.	PM / C / ECO	Ongoing

C. POST-CONSTRUCTION

Activity	Management / Mitigation	Responsibility	Frequency / Timing
C.1 Construction Camp	C.1.1 Construction Camp Rehabilitation		
	a. All structures comprising the construction camp are to be removed from site.	E / PM / C / ECO	Project completion.
	b. The area that previously housed the construction camp is to be checked for spills of substances such as oil, paint and fuels, etc. and these must be cleaned up.		
	c. All hardened surfaces within the construction camp area must be ripped, all imported materials removed, and the area shall be top-soiled and re-grassed using the guidelines set out in the re-vegetation specification that is attached to this document.		
	d. The Contractor must arrange the cancellation of all temporary services.		
C2 – Vegetation	C.2.1 Landscaping		

	a. All disturbed areas or areas, which have been engineered for the purpose of the development, are to be rehabilitated with indigenous vegetation, which must be sourced from surrounding areas where possible. This will aid in preventing erosion within the site.		
C3 – Land Rehabilitation	C.3.1 Land Rehabilitation		
	a. Excavated soil and soil disturbance – excavated soil not used in the development must be disposed of in a landfill site. Soil disturbance will be minimized by establishing the extent of the construction site (pre-construction) and clearly demarcated in on-site layout plans. No construction personnel or vehicles may leave the demarcated areas except when authorized to do so by the Project Manager. Surfaces are to be checked for waste products from activities such as concreting and asphaltting and cleared in a manner approved by the engineer.	E / PM / C / ECO	Project Completion
	b. Rehabilitation must be executed in such a manner that surface runoff will not cause erosion of disturbed areas during and after rehabilitation.	E / PM / C / ECO	Project Completion
	c. All areas to be vegetated that comprise surfaces hardened due to construction activities are to be ripped and imported material thereon removed.	PM / C / ECO	
	d. All rubble is to be removed from the site to an appropriate disposal site as approved by the Engineer. Burying of rubble on site is prohibited.		
	e. The site is to be cleared of all litter.		
	f. All embankments are to be trimmed, shaped and re-planted to the satisfaction of the Engineer.	E / PM / C / ECO	

	g. Surfaces are to be checked for waste products from activities such as concreting or asphaltting and cleared in a manner approved by the Engineer.	E / PM / C / ECO	
	h. All trimmed and / or compacted areas must be left rough to facilitate binding of topsoil and vegetation.	E / PM / C	
	i. The Contractor is to check that all watercourses are free from building rubble, spoils materials and waste materials.	E / PM / C / ECO	
C4 – Materials and Infrastructure	C.4.1 Removal of Barriers, Remediation of Damage		
	a. All material used for building and maintenance must be removed from site after construction or maintenance.	PM / C / ECO	As completed
	b. All leftover building materials must be removed from the site.	PM / C / ECO	On completion
	c. The Contractor must repair any damage that the construction works has caused to adjacent areas.	PM / C / ECO	Continually as necessary
	d. Fences, barriers and demarcations associated with the construction phase are to be removed from the site unless stipulated otherwise by the Engineer.	PM / E / C	On completion
	e. All residual topsoil stockpiles must be removed to registered landfill sites or spread on site as directed by the Engineer.	PM / E / C	On completion
	f. All areas where temporary services were installed are to be rehabilitated to the satisfaction of the Engineer and ECO.	PM / E / ECO / C	On completion
C5 – General	C.5.1 General Remediation		

	a. Temporary road works must be closed and access across these blocked.	E / PM / C	On completion of the construction and maintenance phases
	b. All areas where temporary services including the borrow pit are to be rehabilitated to the satisfaction of the Engineer and ECO.	E / PM / C / ECO	On completion of the construction and maintenance phases
	c. A Meeting is to be held on site between the Engineer, ECO, and the Contractor to approve all remediation activities and to ensure that the site has been restored to a condition approved by the Engineer and ECO.		

D. OPERATIONAL PHASE

Activity	Management / Mitigation	Responsibility	Frequency / Timing
D1 – Vegetation / Landscape Management	a. All rehabilitated areas will need to be maintained and re-seeded with local indigenous vegetation where necessary on a regular basis. This would need to be undertaken by the local municipality.	The local Municipal Authority	Ongoing
D2 – Noise Control	a. There is not expected to be a great deal of noise resulting from the development. Noise would be emitted by vehicles during the construction and operational phases however this would be within the acceptable limits.		
D3 – Traffic / Transport	a. Appropriate signage indicating where water pipes cross the access roads shall be installed.		
	b. Hazardous substance spills from vehicles, e.g. oils, grease etc, will have to be monitored and cleaned up on discovery. This would be the responsibility of the local municipality.		
D 5.3 Storm water Management	a. The storm water management system for the development needs to be implemented and maintained on a regular basis as directed by the engineer. This would be the responsibility of the local municipality's engineer.		
	b. All storm water attenuation measures must be monitored on an annual basis through a general environmental audit.		
D 5.6. Solid Waste / Refuse Removal	a. Waste removal generated through maintenance must be undertaken by the Local Municipality waste removal services as and when required. However, the following measures must form part of the general management of the site: • Monitoring of solid waste removal • Disposal of hazardous substances (i.e. paint) in an approved manner.		

D 5.5 - Sewerage	a. Portable toilet facilities must be provided for maintenance workers and serviced and maintained as and when necessary by a registered waste disposal company.		
D6 - Soil Erosion	a. The following measures need to form part of the management of the site: • Monitoring storm water exit points. • Fill in and re-vegetated eroded areas. • Regularly maintain storm water structure to maintain effectiveness.		
	b. Community and users of the road must be encouraged to use the upgraded road and not create alternative roads and paths.		
D7 – Management of the Development	a. The reservoirs and reticulation system must be maintained by the municipality regularly.		
D8 - Compliance with Record of Decision and other planning regulations and specifications	a. All conditions and designs stipulated by the Engineer (see Appendices D for the Technical Report) and ECO must be strictly adhered to by all members of the development team during all phases of the development. National and Local regulations pertaining to the construction of roads must also be adhered to.	E / C / PM / ECO / The local Municipal Authority	Project Completion

E. DECOMMISSIONING PHASE

The objective of providing guidelines during the decommissioning phase is to prevent structures from being left to deteriorate and look unsightly. It is imperative that non-functional structures be removed as soon as possible, and that the site be rehabilitated as soon as possible. If non-functional structures are not needed anymore, and not removed, it must be maintained that they will be used to prevent the environmental degradation of the site.

The local authority is responsible for ensuring the access road is properly maintained at all times.

F. STAFF CONDUCT CONTROL AND INFORMATION SHEET

	<u>ALL STAFF MUST OBEY THE FOLLOWING RULES:</u>
1	DO NOT leave the construction site untidy and strewn with rubbish that will attract animal pests.
2	DO NOT bring your pets to the construction site.
3	DO NOT trespass on private properties not linked to the project.
4	DO NOT carry a weapon on the construction site or in the vehicles transporting workers to and from the construction site.
5	DO NOT set fires unnecessarily.
6	DO NOT cause any unnecessary disturbing noise at the construction camp/site or at any designated worker collection/drop off points.
7	DO NOT drive a construction-related vehicle under the influence of alcohol.
8	DO NOT exceed the national speed limits on public roads or exceed the recommended speed limits in this management plan (where applicable) whilst driving a construction vehicle.

9	DO NOT drive a vehicle that is generating excessive noise (noisy vehicles must be reported and repaired as soon as possible).
10	DO NOT litter along the roadsides, including both public and private roads.
11	DO NOT remove or destroy vegetation at the construction camp/construction site without the prior consent of the Project Manager and Environmental Control Officer.
12	DO NOT tamper with, destroy or remove vegetation from any areas that have been fenced off or marked.
13	DO NOT pollute watercourses, whether flowing or not.

11. STORM WATER MANAGEMENT PLAN

The Management of Storm Water & Sediment

During Construction

As far as possible, all storm water contaminated with silt and soil fines must be prevented from entering watercourses by the installation of diversion beams and containment bunds. Clean storm water must be diverted away from contaminated storm water at construction sites so that the mixing of the two does not take place. Trapped sediment resulting from the containment of storm water must be drummed for disposal at contaminated waste sites. No silt, soil fines, cement, bitumen, petroleum products domestic waste or any other waste products must be allowed to disperse into the surrounding areas adjacent to the construction camp or the construction sites.

Post-construction

A storm water management system must detail how the storm water will be managed in accordance with the requirements of the Municipal Engineer's Department. Appropriate drainage mechanisms also need to be constructed along the access servitudes to minimise damage to the servitudes and control storm water flow.

12. OTHER IDENTIFIED IMPACTS & POTENTIAL MITIGATION MEASURES

Socio-Economic Impacts

N/A

Conservation of the Natural Environment

Add relevant information

The C-Plan system of conservation areas has been designed to secure the full extent of biodiversity (pattern and process) in KwaZulu-Natal (Goodman 2002), which the EKZNW C-Plan product. The project, which is ongoing as new information is accumulated, identifies and ranks land areas of conservation value according to indices that reflect their importance in terms of biodiversity. The concept of Irreplaceability is used to determine the conservation value of land in KwaZulu-Natal. Irreplaceability is an index assigned to a parcel of land to indicate the importance of that land area to achieving regional conservation targets for biodiversity. Biodiversity, in this case, reflects both the distribution of critical species (pattern) as well as the ecological mechanisms that maintain and generate the patterns (process) such as animal migration, plant dispersal, pollination and fire disturbance. Areas of particularly high priority are land parcels of high Irreplaceability that are also vulnerable to transformation

processes that threaten biodiversity (e.g. agriculture, forestry, urbanisation, heavy alien plant infestations). The scale at which the conservation planning process is undertaken is coarse ("planning units" are grids of 1km x 1km) but serves to highlight land areas in the province that are considered important and that will require further investigation before any development may proceed. Irreplaceability ranges from 0 (not important) to 1 (critically important).

Irreplaceability value – 0

Where a planning unit has an irreplaceability value of 0, all biodiversity features recorded here are conserved to the target amount, and there is unlikely to be a biodiversity concern with the development of the site (Goodman, undated).

Irreplaceability value – 1

These planning units are referred to as totally irreplaceable and the conservation of the features within them is critical to meet conservation targets. A full EIA will be required and, depending on the nature of the proposal, unlikely to be granted (Goodman, undated).

Irreplaceability value > 0 but < 1

Some of these planning units are required to meet biodiversity conservation targets. If the value is high (e.g. 0.9) then most units are required (few options available for alternative choices). If the value is low, then many options are available for meeting the biodiversity targets.

13. ACKNOWLEDGEMENT FORM

Record of signatures providing acknowledgment of being aware of and committed to complying with the contents of this Environmental Management Programme (EMPr), which relates to the environmental mitigation measures for the project outlined below, and the environmental conditions contained in the civil and other construction contract documents.

PROJECT NAME:

THE PROPOSED CONSTRUCTION OF MSIKABA WATER SUPPLY SCHEME PHASE 3A, UGU DISTRICT MUNICIPALITY
KWAZULU-NATAL.

DEVELOPER / PROPONENT:

Signed: Date:

PROJECT MANAGER:

Signed: Date:

CONTRACTOR:

Signed: Date:

ENVIRONMENTAL CONTROL OFFICER

Signed: Date:



VOLUME 1

CONTRACT

PART 4

SITE INFORMATION

PART C4: SITE INFORMATION

C4.1 LOCALITY PLAN

The Locality Plan is provided overleaf.

- The site can be accessed as follows: From Port Shepstone, travel due south along R61, off-ramp at **Shelly Beach off-ramp** and travel due west along Izotsha Road for approximately 8km

The water supply scheme is indicated on the Drawing No. **UGU-11-02/PH3/0.1**. The access to the site will be arranged by the Engineer. The Msikaba and Surrounding area Settlement is located within the Nsimbini Area of the KwaMavundla Traditional Area (Hibiscus Coast Municipality), approximately 8 km northwest of Shelly Beach on the KwaZulu-Natal Lower South Coast (Coordinates are approximately 30°45'12.85"S; 30°19'24.28"E).

The Water Supply Area lies within the Traditional Authorities of Mavundla and Ndwalane which consists of the following wards, within the Hibiscus Coast Municipality:

- Msikaba (Ward 3)
- Nyandezulu (Ward 24)
- Nkulu (Ward 25)
- Qinabout (Ward 26)
- Nositha (Ward 27)

The Msikaba Project Area consists of 5388 households (HH). This figure is obtained from household counts on ortho-photo maps (2011 images). In addition there are other facilities in the area such as primary schools and Rural Health Centres.

The road network consists of mainly dirt (gravel) roads. Main bridges are of good quality and usually passable.

Should the contractor require to construct access tracks during the construction period, he will be required to rehabilitate the sites of the tracks after the contract. The costs of provision of the access tracks will be deemed to be included in the rates of scheduled items.



Fig 1: Locality Plan (Google Earth, 2020)

C4.2 SITE CONDITIONS

Subsoil investigations have been undertaken at the vicinity of the water supply scheme. Test results and reports are available upon request. No responsibility is taken by the Employer as a result of any deductions made by the tenderer /contractor from observation and interpretation of the test results.

Tenderers are to satisfy themselves as to the nature of excavations to be encountered. In doing this, tenderers may carry out further investigations at their own cost. Should these investigations require visiting site and disturbing the site, the tenderers should seek approval from the Engineer to carry out such investigations.



VOLUME 1

PART 5

FORMS OF SECURITY

PART 5: FORMS OF SECURITY

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C5.3 FORMS OF SECURITIES**FORMS FOR COMPLETION BY THE CONTRACTOR**

THE FOLLOWING FORMS ARE TO BE COMPLETED BY THE CONTRACTOR AFTER THE TENDER HAS BEEN AWARDED TO THE SUCCESSFUL TENDERER

Form	Page
Form of guarantee	F 2 – F 3
Health and Safety	F 4 – F 5

The forms will be completed by Contractor who will be instructed to do so in the Form of Acceptance. The completed forms will become part of the contract.

The forms of guarantee are a pro forma document. An original document, from a financial institution, with the same text will be provided by the Contractor within the stated in the Contract Data. Only a Bank or Approved Insurance Company or Guarantee Corporation is acceptable as Guarantor.

PERFORMANCE GUARANTEE**Employer:** *(name and address)*.....

.....

.....

Contract No:*(Contract title)***WHEREAS**

(Hereinafter referred to as "the Employer") entered into, on the day of 20.....,

a Contract with

(Hereinafter called "the Contractor") for *(CONTRACT TITLE)*

..... at

AND WHEREAS it is provided by said Contract that the Contractor shall provide the Employer with security by way of a guarantee for the due and faithful fulfillment of the Contract by the Contractor;**AND WHEREAS**(hereinafter referred to as the Guarantor) has/have at the request of the Contractor, agreed to give such security;**NOW THEREFORE WE,** do hereby guarantee to the Employer under renunciation of the benefits of division and excursion the due and faithful performance by the Contractor of all the terms and conditions of the said Contract, subject to the following conditions:

1. The Employer shall, without reference and/or notice to me/us, have complete liberty of action to act in any manner authorised and/or contemplated by the terms of the said Contract, and/or to agree to any modifications, variations, alterations, directions or extensions of the Due Completion Date of the Works under the said Contract, and that its rights under this guarantee shall in no way be prejudiced nor our liability hereunder be affected by reason of any steps which the Employer may take under such Contract, or of any modification, variation, alterations of the Due Completion Date which the Employer may make, give, concede or agree to under the said Contract.
2. The Employer shall be entitled, without reference to us, to release any securities held by it, and to give time to or compound or make any other arrangement with the Contractor.
- This guarantee shall remain in full force and effect until the issue of the Final Approval Certificate, unless we are advised in writing by the Employer before the issue of the said Certificate of his intention to institute claims, and the particulars thereof, in which event this guarantee shall remain in full force and effect until all such claims have been paid or liquidated.

However, upon receipt by us of an authenticated copy of the Certificate of Completion in terms of the Contract, the amount of liability shall be reduced by 50%, which shall be in force until the issue of the Final Approval Certificate at expiry of the Defects Liability Period

- My/Our total liability in terms hereof shall be limited to the sum of R
(in words)
(10 % of the tender sum) which amount I/we agree to hold at your disposal.

5. I/We declare that I/we, on behalf of the Guarantor, waive the legal exceptions available to a guarantor and undertake to pay the said amount or such portion thereof as may be demanded, immediately on receipt of a written demand from you.

A certificate under your hand shall be sufficient and satisfactory evidence as to the amount of the Guarantor's liability for the purpose of enabling provisional sentence or any similar relief to be obtained against the Guarantor.

6. I/We hereby choose domicilium citandi et executandi for all purposes arising hereof at
.....

7. This guarantee is neither negotiable nor transferable, and must be surrendered to the Guarantor in the event of the full amount of the Guarantee being paid to the Employer.

IN WITNESS WHEREOF this guarantee has been executed by us aton this
..... day of20.....

Signature:

Duly authorized to sign on behalf of: (*Guarantor*)
.....

Address
.....

As witnesses:

1.
2.

AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT No 85 OF 1993

THIS AGREEMENT is made between

(Hereinafter called the EMPLOYER) of the one part, herein represented by:

.....
in his capacity as:

AND:

(Hereinafter called the CONTRACTOR) of the other part, herein represented by

.....
in his capacity as:

duly authorized to sign on behalf of the Contractor.

WHEREAS the CONTRACTOR is the Mandatary of the EMPLOYER in consequence of an agreement between the CONTRACTOR and the EMPLOYER in respect of;

Msikaba Water Supply Scheme Phase 3A: Upgrading of Bomela Pump Station & Construction of Nyandezulu Elevated Reservoir and Booster Pump Station, CONTRACT NO. UGU-07-1611-2022.

AND WHEREAS the EMPLOYER and the CONTRACTOR have agreed to enter into an agreement in terms of the provisions of Section 37(2) of the Occupational Health and Safety Act No 85 of 1993, as amended by OHSA Amendment Act No 181/1993 (hereinafter referred to as the ACT);

NOW THEREFORE the parties agree as follows:

1. The CONTRACTOR undertakes to acquaint the appropriate officials and employees of the CONTRACTOR with all relevant provisions of the ACT and the regulations promulgated in terms thereof.
2. The CONTRACTOR undertakes to fully comply with all relevant duties, obligations and prohibitions imposed in terms of the ACT and Regulations: Provided that should the EMPLOYER have prescribed certain arrangements and procedures that same shall be observed and adhered to by the CONTRACTOR, his officials and employees. The CONTRACTOR shall bear the onus of acquainting himself/herself/itself with such arrangements and procedures.
3. The CONTRACTOR hereby accepts sole liability for such due compliance with the relevant duties, obligations, prohibitions, arrangements and procedures, if any, imposed by the ACT and Regulations, and the CONTRACTOR expressly absolves the EMPLOYER and the Employer's CONSULTING ENGINEERS from being obliged to comply with any of the aforesaid duties, obligations, prohibitions, arrangements and procedures in respect of the work included in the contract.
4. The CONTRACTOR agrees that any duly authorized officials of the EMPLOYER shall be entitled, although not obliged, to take such steps- as may be necessary to ensure that the CONTRACTOR has complied with his undertakings as more fully set out in paragraphs 1 and 2 above, which steps- may include, but shall not be limited to, the right to inspect any appropriate site or premises occupied by the CONTRACTOR, or to take such steps- it may deem necessary to remedy the default of the CONTRACTOR at the cost of the CONTRACTOR.
5. The CONTRACTOR shall be obliged to report forthwith to the EMPLOYER any investigation,

complaint or criminal charge which may arise as a consequence of the provisions of the ACT and Regulations, pursuant to work performed in terms of this agreement, and shall, on written demand, provide full details in writing of such investigation, complaint or criminal charge.

Thus signed at for and on behalf of the **CONTRACTOR**

on this the day of 20.....

SIGNATURE:

NAME AND SURNAME:

CAPACITY:

WITNESSES: 1.

2.

Thus signed at for and on behalf of the **EMPLOYER** on this

the day of 20.....

SIGNATURE:

NAME AND SURNAME:

CAPACITY:

WITNESSES: 1.

2.

PRO FORMA NOTIFICATION FORM IN TERMS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT 1993, CONSTRUCTION REGULATIONS 2014

[This form must be completed and forwarded, prior to commencement of work on site, by all Contractors that qualify in terms of Regulation 3 of the Construction Regulations 2014, to the office of the Department of Labour]

1. (a) Name and postal address of Contractor:
-
- (b) Name of Contractor's contact person:
- Telephone number:
2. Contractor's compensation registration number:
3. (a) Name and postal address of client:
-
- (b) Name of client's contact person or agent:
- Telephone number.....
4. (a) Name and postal address of designer(s) for the project:
-
- (b) Name of designer's contact person:
- Telephone number.....
5. Name of Contractor's construction supervisor on site appointed in terms of Regulation 6(1): Telephone number:
6. Name/s of Contractor's sub-ordinate supervisors on site appointed in terms of regulation 6(2).
.....
7. Exact physical address of the construction site or site office:
-
8. Nature of the construction work:
-
9. Expected commencement date:
10. Expected completion date:
11. Estimated maximum number of persons on the construction site:
12. Planned number of subcontractors on the construction site accountable to Contractor:
13. Name(s) of subcontractors already chosen:
.....
.....

SIGNED BY:

CONTRACTOR:..... DATE:.....

CLIENT: DATE:

C5.4: FORM OF ADJUDICATORS APPOINTMENT**AGREEMENT WITH ADJUDICATOR**

This agreement is made on the.....day of 20..... between the Employer
 (name of company / organization).....
 of (address).....
and the
 Contractor
 (name of company / organization)
 of (address).....

 (hereinafter called **the Parties**)

and

(name).....
 of (address)

 (hereinafter called **the Adjudicator**)

Disputes or differences may arise/have arisen* between the Parties under a Contract No
 for (contract title)
 and these disputes or differences shall be/have been* referred to adjudication in accordance with the
 CIDB Adjudication Procedure, (hereinafter called "**the Procedure**") and the Adjudicator may be or has
 been requested to act.
 (* Delete as necessary)

IT IS NOW AGREED as follows:

3. The rights and obligations of the Adjudicator and the Parties shall be as set out in the Procedure.
4. The Adjudicator hereby accepts the appointment and agrees to conduct the adjudication in accordance with the Procedure.
5. The Parties bind themselves jointly and severally to pay the Adjudicator's fees and expenses in accordance with the Procedure as set out in the Contract Data.
6. The Parties and the Adjudicator shall at all times maintain the confidentiality of the adjudication and shall endeavour to ensure that anyone acting on their behalf or through them will do likewise, save with the consent of the other Parties which consent shall not be unreasonably refused.
7. The Adjudicator shall inform the Parties if he intends to destroy the documents which have been sent to him in relation to the adjudication and he shall retain documents for a further period at the request of either Party.

SIGNED by:.....
(Signature):**Name:**
who warrants that he/ she is
duly authorized to sign for and
on behalf of the **First Party** in
the presence of.....
(Signature):**Name:**
who warrants that he/ she is
duly authorized to sign for
and on behalf of the **Second
Party** in the presence of.....
(Signature):**Name:**
the **Adjudicator** in the
presence of.....
Witness: (Signature)**Name:**

Address:

.....

.....

Date:

.....
Witness: (Signature)**Name:**

Address:

.....

.....

Date:

.....
Witness: (Signature)**Name:**

Address:

.....

.....

Date: