

PROJECT NO: ORTDM SCMU 14-21/22

APPOINTMENT OF SERVICE PROVIDER FOR SUPPLY AND DELIVERY OF PLUMBING MATERIALS AND EQUIPMENTS IN KSD REGION FOR 36 MONTHS

Prepared for:	Prepared by:
Water Services OR Tambo District Municipality Private Bag x 6043 UMTHATHA 5100	Water Services Provision OR Tambo District Municipality Private Bag x 6043 UMTHATHA 5100
Tel. No. (047) 501 6443	Tel. No. (047) 501 6492
NAME OF BIDDER:	
CSD SUPPLIER NO.:	
EMAIL ADDRESS:	
TENDER AMOUNT:	

PROJECT NO: ORTDM SCMU 14-21/22

APPOINTMENT OF SERVICE PROVIDER FOR SUPPLY AND DELIVERY OF PLUMBING MATERIALS AND EQUIPMENTS IN KSD REGION FOR 36 MONTHS

- INDEX -

TENDERING PROCEDURES

- T1.1 Tender Notice and invitation to tender
- T1.2 Tender Data

RETURNABLE DOCUMENTS

- T2.1 Forms of Offer and Acceptance
- T2.2 Contract Data

CONTRACT

Part 1: Agreements and Contract data

- C1.1 Forms of Offer and Acceptance
- C1.2 Contract Data

Part 2: Proposal and Methodology

C2.1 Proposal and Methodology

Part 3: Scope of Work (Terms of Reference)

C3 Scope of Work and Specification

Part 4: Financial Offer

C4.1 Pricing Schedule

APPOINTMENT OF SERVICE PROVIDER FOR SUPPLY AND DELIVERY OF PLUMBING MATERIALS AND EQUIPMENTS IN KSD REGION FOR 36 MONTHS

TENDERS ARE HEREBY INVITED FOR:

ORTDM SCMU 14-21/22: APPOINTMENT OF SERVICE PROVIDER FOR SUPPLY AND DELIVERY OF PLUMBING MATERIALS AND EQUIPMENTS FOR 36 MONTHS

To ensure that your proposal is not exposed to invalidation, documents are to be completed in accordance with the conditions and Tender rules contained in the Tender documents. Supporting documents must be sealed and externally endorsed CONTRACT ORTDM SCMU 14-21/22: APPOINTMENT OF SERVICE PROVIDER FOR SUPPLY AND DELIVERY OF PLUMBING MATERIALS AND EQUIPMENTS IN KSD REGION FOR 36 MONTHS and be submitted in the tender box, ground floor, OR Tambo District Municipality, Nelson Mandela Drive, OR Tambo House, Myezo, Umthatha, not later than the closing date and time as stated.

The following documents must be completed, signed (where applicable) and submitted as a complete set:

Document			
Number	Heading		
T1.1	Tender Notice and Invitation to Tender		
T1.2	Tender Data		
T2.1	List of Returnable Documents		
T2.2	Returnable Documents for tender evaluation		
	purpuses		
C1.1	Form of Offer and Acceptance		
C1.2	Contract Data		
C2.1	Proposal and Methodology		
C3	Scope of Work (Terms of Reference)		
C.4	Pricing Schedule		

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APPOINTMENT OF SERVICE PROVIDER FOR SUPPLY AND DELIVERY OF PLUMBING MATERIALS AND EQUIPMENTS IN KSD REGION FOR 36 MONTHS

T1 TENDERING PROCEDURES

- T1.1 Tender Notice and invitation to tender
- T1.2 Tender Data

APPOINTMENT OF SERVICE PROVIDER FOR SUPPLY AND DELIVERY OF PLUMBING MATERIALS AND EQUIPMENTS IN KSD REGION FOR 36 MONTHS

T1.1 TENDER NOTICE AND INVITATION TO TENDER

Tenders are hereby invited from suitably qualified and experienced service providers for APPOINTMENT OF SERVICE PROVIDER FOR SUPPLY AND DELIVERY OF PLUMBING MATERIALS AND EQUIPMENTS IN KSD REGION FOR 36 MONTHS

Project Number	Name and Description	Contract period	Briefing Session
ORTDM SCMU 14- 21/22	Appointment Of Service Provider For Supply And Delivery Of Plumbing Materials And Equipments In Ksd Region For 36 Months	36 Months	Date: 23 February 2022 Time: 11h00 Venue: Foyer, O.R Tambo District Municipality Offices, Myezo Park, Mthatha

A compulsory briefing/clarification meeting with representatives of the Municipality will take place on the aforementioned date(s), time(s) and venue(s).

THE MUNICIPALITY WILL NOT REPEAT ANY MATTERS ALREADY COVERED IN THE COMPULSORY BRIEFING MEETING TO BIDDERS WHO ARRIVE MORE THAN 10 MINUTES LATE TO THE MEETING, NOR WILL IT ALLOW SUCH BIDDERS TO COMPLETE THE ATTENDANCE REGISTER.

ANY BID RECEIVED FROM A BIDDER WHO DID NOT ATTEND THE BRIEFING MEETING AND SIGN THE ATTENDANCE REGISTER WILL NOT BE CONSIDERED AND WILL BE RETURNED TO THE BIDDER UNOPENED.

Bid documents may be downloaded on the e-Tender website (<u>www.etenders.gov.za</u>), alternatively at the O.R Tambo District website (<u>www.ortambodm.gov.za</u>) at no cost.

Bids must be completed in black ink, enclosed in a sealed envelope clearly marked with the "Tender number, tender name and description", and deposited in the Tender Box, Ground Floor, O. R. Tambo District Municipality Building, Nelson Mandela Drive, Myezo Park, Mthatha, Eastern Cape, not later than 12H00pm Friday, 18 March 2022.

It must be expressly understood that the Municipality accepts no responsibility for ensuring that bid submissions sent by courier or post, or delivered in any other way, are deposited in the Tender Box. It is therefore preferable for the bidder to ensure that its bid submission is placed in the Tender Box by its own staff or representative(s).

Tender submissions will be opened in public at 12h00pm on the tender closing date. Bids will be opened at the Supply Chain Management Unit, Ground Floor, O.R. Tambo House, Myezo, Mthatha.

The Municipality reserves the right not to accept the only or lowest priced tender or any tender at all, or to accept the whole or part of any tender.

THE BID WILL BE REJECTED IF THE BIDDER:

- Fails to complete fully the bid document or to provide the information requested, or to sign the bid at the appropriate spaces provided or next to errors, his/her/ its bid
- Is found to be a role player or commits criminal act/s including fraud, price rigging, corruption, collusion, or forgery. In the case of an award already made, the award or contract shall be terminated.
- Or any of its directors or those of the subcontractor or partner:
 - we municipal charges/ rates and is in arrears for more than three months, Where the bidder does not own the property, attach a valid lease agreement between the Lessee and the Lessor that indicates that the lessee is not responsible for property rates and a signed affidavit from the Lessor
 - had during the last five years failed to perform satisfactory on previous contract with municipality or municipal entity or organ of the state after written notice given to perform satisfactorily;
 - abused the supply chain management of the municipality or municipal entity or committed an improper conduct; and
 - has been listed in the register of tender defaulters, and
 - > is in the service of the state.
- Fails to submit CSD supplier number;
- Fails to submit SARS Tax Pin and/or Tax Clearance Certificate
- Fails to submit audited annual financial statements of the bidding entity (projects over R10 million);
- Fails to submit Joint Venture Agreement or Consortium Agreement, signed and initialled on each page (if applicable);

PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT NO 5, 2000 (PPPFA) POINTS WILL BE AWARDED AS FOLLOWS:-

The bids will be evaluated in three stages, namely:

- Stage 1- Compliance with the bid rules and all other requirements
- Stage 2- Functionality
- Stage 3- Price and BBBEE Points

Failure to supply the required information in stage 1 will compromise the bid. Only Bidders who score 60 points or more on stage 2 would be evaluated further and therefore eligible for the award.

Item We			
Stage 2 of Evaluation-Functionality	100		
Similar Projects	50		
Experience of the Project Team	20		
Methodology	15		
Locality	15		
Stage 3 of Evaluation- Price & B-BBEE	100		
Price	80		
B-BBEE	20		

Tenders may only be submitted on tender documentation issued. No late, faxed, e-mailed or other form of tender will be accepted.

ENQ: Mr L Mashiya, telephone number: 047 501 6492 or email: mashiyal@ortambodm.gov.za and All Supply Chain Management enquiries may be directed to Mr. S. Hopa, telephone number 047 501 6448 / 6449 or email: sakhiwoh@ortambodm.org.za.during office hours: Monday to Friday 08H00-13H00 and 13H30-16H30.

Joint Ventures will qualify for points for their BBBEE 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 BBBEE scorecard is prepared for every separate tender.

SW MKHIZE Municipal Manager

PROJECT NO: ORTDM SCMU 14-21/22

APPOINTMENT OF SERVICE PROVIDER FOR SUPPLY AND DELIVERY OF PLUMBING MATERIALS AND EQUIPMENTS IN KSD REGION FOR 36 MONTHS

T1.2 TENDER DATA

The conditions of tender are the **Standard Conditions of Tender** as contained in Annexure F of the 30 January 2009 edition of the **CIDB Standard for Uniformity in Construction Procurement**. The Standard Conditions of Tender Procurements make several references to the Tender Data for details that apply specifically to the Tender. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the standard conditions of Tender. Each item of data given below is cross-referenced to the clause in the Standard Conditions of Tender to which it mainly applies.

Please note that the word "Client" is used in this document and referred to as "Employer" in the Standard Conditions of Tender document.

Clause			
Number			
F.1	General		
F.1.1	The Client is:		
	O. R. Tambo District Municipality		
	Private Bag x 6043		
	Mthatha		
	5100		
F.1.2	The Tender documents issued by the Client comprise:		
	Tender		
	T1.1 Tender Notice and invitation to tender		
	T1.2 Tender Data		
	T2.1 List of Returnable Documents		
	T2.2 Returnable Documents for tender evaluation purposes		
	T2.3 Returnable Documents to be incorporated into the contract		
	Contract		
	Part 1 : Agreements and Contract data		
	C1.1 Forms of Offer and Acceptance		
	C1.2 Contract Data		
	Part 2 : Pricing Data		
	C2.1 Pricing Instructions		
	C2.2 Bill of Quantities		
	Part 3 : Scope and Specification of Work		
	C3.1 Project Specification		

F1.3 Interpretation 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 tender conditions. F.1.4 Communication: Communication with all stakeholders shall be through the O. R. Tambo Municipality's District Representative. Ccommunications shall be in the English language. The Employer shall not take any responsibility for non-receipt of communications from or by a tenderer Contact person: Mr.L Mashiya Tel: 047 501 6400 / 6492 F.1.5 The employer's right to accept or reject any tender offer		
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F.1.5.1 Reject or accept		
The employer may accept or reject any variation, deviation, tender offer, or alternative tender offer		
and may cancel the tender process and reject all tender offers at any time before the formation of		
contract. The employer shall not accept or incur any liability to a tenderer for such a cancellation at		
rejection, but will give written reasons for such action upon written request to do so.		
F.1.6 Procurement procedures		
a contract will, subject to F.3.13, be concluded with the tenderer who in terms of F.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.		
Tenderer's obligations		
Eligibility		
Only those tenders who are registered with CIDB and have in their employ management at		
supervisory staff satisfying the requirement of the scope of work for labour intensive competencies f		
supervisory and management staff are eligible to submit tenders.		
F.2.1.2 CIDB Grading		
No CIDB grading is required.		
F.2.2 Cost of tendering		
Accept that the Employer will not compensate the tenderers for any costs incurred in the preparation		
and submission of a tender offer, including the costs of any testing necessary to demonstrate the		
aspects of the offer satisfy requirements.		
F.2.3 Check documents		
Check the tender documents on receipt for completeness and notify the employer of any discrepan		
or omission.		
F.2.4 Confidentiality and copyright		
Treat as confidential all matters arising in connection with the tender. Use and copy the documen		
issued by the employer only for the purpose of preparing and submitting a tender offer in response		
the invitation.		
F.2.5 Reference documents		
Obtain, as necessary for submitting a tender offer, copies of the latest versions of standard		

	specifications, conditions of contract and other publications, which are not attached but which are		
	incorporated into the tender documents by reference.		
F2.6	Acknowledge Addenda		
	Acknowledge receipt of addenda to the tender documents, which the employer may issue, and if		
	necessary apply for an extension of the closing time	e stated in the tender data, in order to take the	
	addenda into account.		
F.2.7	The arrangements for a compulsory clarification meeting are:		
	Date: 23 February 2022	Location: O. R. Tambo District Municipality	
	Ground Floor Foyer		
	Starting time: 11h00 MTHATHA		
F.2.8	Seek clarification		
	Request clarification of the tender documents, if necessary, by notifying the employer at least five		
	working days before the closing time stated in the ten	der data.	
F2.10	Pricing the tender		
F.2.10.	Include in the rates, prices, and the tendered total of		
1	Added Tax (VAT), and other levies payable by the si		
	being those applicable 14 days before the closing time		
F.2.10.	Show VAT payable by the employer separately as an	addition to the tendered total of the prices.	
2			
F.2.10.	Provide rates and prices that are fixed for the duration		
3	except as provided for in the conditions of contract identified in the contract data.		
F.2.10.	State the rates and prices in South African Rand		
4			
F2.11	Alterations to documents		
	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		
<u> </u>	tender offer shall initial all such alterations. Erasures and the use of masking fluid are prohibited.		
F.2.12	Alternative tender offers		
	Alternative offers may be submitted only if a main tender offer, strictly in accordance with all the		
	requirements of the tender documents, is also submitted. The alternative tender offer is to be		
	submitted with the main tender offer together with a	·	
50.10	tender documents with the alternative requirements the		
F.2.13.	The Client's address for delivery of Tender offers	and identification details to be shown on each	
	Tender offer package are:		
	Location of Tender box: Tender Box, Ground Fl		
	Nelson Mandela Drive, Myezo Park, Mthatha, Eastern	•	
	Physical address: O. R. Tambo House, Nelson Man	*	
F.2.14	Information and data to be completed in all respect Accept that tender offers, which do not provide all the	e data or information requested completely and in	
	the form required, may be regarded by the employer a	as non-responsive.	
F.2.15	Closing time		
	The closing times for submission of Tenders are 12H		
F.2.15	Telephonic, telegraphic, telex, facsimile or e-mailed B	id offers will not be accepted.	

F.2.16	Tender offer validity The Tender offer validity period is 90 Days as stated in the tender data.
F.2.17	Clarification of tender offer after submission
	The tenderer shall 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.
F.2.18	Provide other material
	The tenderer shall, when requested by the Employer to do so, 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.
F2.20	Submit securities, bonds, policies
	Submit to the employer before formation of the contract, certificates of insurance required in terms of
	the conditions of contract identified in the contract data.
F.2.23	The tenderer is required to submit with his tender:
	Tax Clearance Certificates issued by SARS with pin code to verify tax status
	Valid Tax Verification issued by SARS Out till a spirit of Common to the spirit of Common till a spirit of Common til
	 Certified copies of the original Company documents issued by register of Companies. Certified copies of the original green bar-coded IDs of Members or directors
	Certified Copy of the B-BBEE Certificate or an original certified sworn affidavit of the B=BBEE
	status
	JV agreement in where applicable in CIDB format (signed and initialled on each page)
	 Proof of Registration with Central Supplier Database Proof of address with municipal services not owing more than 3 months
F.3	The employer's undertakings
F.3.1	Respond to requests from the tenderer
F.3.1.1	Respond to a request for clarification received up to five working days before the tender closing time
1.0.1.1	stated in the Tender Data and notify all tenderers who drew procurement documents.
F.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 seven 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 drew documents.
F.3.4	Opening of tender submissions
F.3.4.1	The employer shall 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.
F.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
L	

	total of his prices, preferences claimed and time for completion for the main tender offer only.
F.3.4.3	The client shall not be obliged to make available the record outlined in F.3.4.2 to any tenderer who fail
	to attend the tender opening.
F.3.6	Non-disclosure
	The alient shall not displace to tonderore, on to any other necessary not officially concerned with each
	The client shall 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
F 0.7	successful tenderer.
F.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.
F3.9	Arithmetical errors, omissions and discrepancies
F.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.
F.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 F.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.
F.3.9.3	Notify the tenderer of all errors or omissions that are identified in the tender offer and invite the
	tenderer to either confirm the tender offer as tendered or accept the corrected total of prices.
F.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.
F.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.

F3.11 Evaluation of tender offers

Replace the contents of the entire sub-clause with the following:

The procedure for evaluation of responsive tender offers will be method 2 of table F.1 of SANS 294: 2004. Financial offer & Preferences. The bid will be awarded to the bidder who has scored the highest points for price and preferences combined **BUT** the prerequisite will be to obtain at least **60%** of total points for quality (functionality), which will be explained in Second Stage below.

Nevertheless, O. R. Tambo District Municipality retains the right to accept or reject any bid.

C. First stage in evaluation: Compliance with Bid Rules and other Requirements

The bids will be checked to ensure that they comply with the bid rules and all other requirements of the project document. In particular the following documentation must be completed and/or included within the bid.

- The form of Offer and acceptance
- Tax documentation
- Certified company registration documents and ID of members
- Form C: Compulsory Enterprise Questionnaire
- Form D: Certificate of Authority for Signature
- Form E: Amendments, Qualifications and Alternatives
- Form H: Certificate of Good Standing
- Form I: Relevant experience
- Form J: Details of key staff and CVs
- Form M: Preference Points Claim Form in Terms of the Preferential Procurement Regulations 2011

Note:

- All information supporting the above forms such as Curricula Vitae of staff who will work on the project and their functions, details of ownership, relevant experience etc.
- · Addenda issued during the bid period, if any.
- The pricing schedule

Failure to supply the required information will compromise the bid

D. Second Stage in Evaluation: Quality / Functionality

Only bidders who score 60% or more on stage 1 will be evaluated further and therefore eligible for award.

The maximum score for functionality shall be 100, distributed as follows:

	Category of Quality / Functionality	Maximum tende evaluation poin provided
B1.1	Similar Projects	50
	Tenderer must have completed 5 or more similar projects of a total amount of R2 500 000.00. Copies of Completion Certificates or proof of such MUST be submitted with the bid. No points will be awarded where proof or Completion Certificates have not been submitted with the Bid.	50
	Tenderer must have completed 4 or more similar projects of a total amount of R2 000 000.00. Copies of Completion Certificates or proof of such MUST be submitted with the bid. No points will be awarded where proof or Completion Certificates have not been submitted with the Bid.	40
	Tenderer must have completed at least 3 similar projects of a total amount of R1 500 000.00. Copies of Completion Certificates or proof of such MUST be submitted with the bid. No points will be awarded where proof or Completion Certificates have not been submitted with the Bid.	30
	Tenderer must have completed at least 2 similar projects of a total amount of R1 000 000.00. Copies of Completion Certificates or proof of such MUST be submitted with the bid. No points will be awarded where proof or Completion Certificates have not been submitted with the Bid.	20
	Tenderer must have completed at least 1 similar projects of a total amount of R500 000.00Copies of Completion Certificates or proof of such MUST be submitted with the bid. No points will be awarded where proof or Completion Certificates have not been submitted with the Bid.	10
	Tenderer with no previous similar projects completed.	0
B1.2	Experience of Project Team	20
	Project Manager with certificate in computer literacy and 4 years' experience in similar projects	20
	Project Manager with certificate in computer literacy and 3 years' experience in similar projects	15
	Project Manager with certificate in computer literacy and 2 years' experience in similar projects	10
	Project with certificate in computer literacy and 1 years' experience in similar projects	5
	Tenderer failed to provide evidence of qualification and experience.be attached).	0
B1.3	Methodology	15
	Presentative methodology approach with works programme and Cash flow projections	15

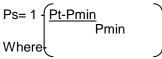
PROJECT NO: SCMU 14-21/22: APPOINTMENT OF SERVICE PROVIDERS FOR THE SUPPLY AND DELIVERY OF PLUMBING MATERIALS AND EQUIPMENT IN KSD REGION FOR 36 MONTHS

	Presentative method approach with works programme	10
	Presentative method approach	5
	Tenderer has submitted no method statement or cash flows and works programme	0
B1.4	Locality:	15
	Points will only be awarded for Locality only if a municipal bill or	
	lease agreement made out to the Tenderer have been submitted	
	with the Tender document. The municipal bill or lease	
	agreement older than 3 months will not be accepted from the date of closing of Tender	
	Bidders submitting a lease agreement / municipal bill within the OR Tambo District Municipality.	15
	Bidders submitting a lease agreement / municipal bill within the Eastern Cape	10
	Bidders submitting a lease agreement / municipal bill outside the Eastern Cape	0

STAGE 3: EVALUATION FOR PRICE AND PREFERENCE (80/20)

The procedure for Stage 3 of evaluation of responsive tenders is **Method 1**

a) PRICE: 80



Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration; and

Pmin = Price of lowest acceptable tender

The following table must be used to calculate the score out of 20 for BBBEE:

B-BBEE status level of contributor	Number of points
1	20
2	18
3	14
4	12
5	8
6	6
7	4
8	2
Non-compliant contributor	0

F.3.13 Acceptance of tender offer

F3.13.1 Accept the tender offer, if in the opinion of the employer, it does not present any unacceptable commercial 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, bankrupt or being wound up, has his affairs administered by a court or a judicial officer, has suspended his 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.
F3.13.2	Notify the successful tenderer of the employer's acceptance of his tender offer by completing and
	returning one copy of the form of offer and acceptance before the expiry of the validity period stated in
	the tender data, or agreed additional period. Providing the form of offer and acceptance does not
	contain any qualifying statements, it will constitute the formation of a contract between the employer
	and the successful tenderer as described in the form of offer and acceptance.
F.3.14	Notice to unsuccessful tenderers
	After the successful tenderer has acknowledged the employer's notice of acceptance, after written
	request, the employer will notify the tenderers that their tender offers have not been accepted in O.R
	Tambo District Municipality's website: www.ortambodm.org.za by listing the successful tender.
F.3.15	Prepare contract documents
	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,
	c) other revisions agreed between the employer and the successful tenderer, and
	d) The schedule of deviations attached to the form of offer and acceptance, if any.
F.3.16	Issue final contract
	Prepare and issue the final draft of the contract to the successful tenderer for acceptance as soon as
	possible after the date of the employer's signing of the form of offer and acceptance (including the
	schedule of deviations, if any).

PROJECT NO: ORTDM SCMU 14-21/22

APPOINTMENT OF SERVICE PROVIDERS FOR THE SUPPLY AND DELIVERY OF PLUMBING MATERIALS AND EQUIPMENTS IN KSD REGION FOR 36 MONTHS

T2 RETURNABLE DOCUMENTS

T.2. LIST OF RETURNABLE DOCUMENTS

PROJECT NO: ORTDM SCMU 14-21/22

APPOINTMENT OF SERVICE PROVIDERS FOR THE SUPPLY AND DELIVERY OF PLUMBING MATERIALS AND EQUIPMENT IN KSD REGION FOR 36 MONTHS

Returnable Documents (T2)

- **T2.1** List of Returnable Documents
- T2.2 Returnable Schedules

PROJECT NO: ORTDM SCMU 14-21/22

APPOINTMENT OF SERVICE PROVIDERS FOR THE SUPPLY AND DELIVERY OF PLUMBING MATERIALS AND EQUIPMENTS IN KSD REGION FOR 36 MONTHS

T2.1: LIST OF RETURNABLE DOCUMENTS

1. T.2.1. Returnable Documents Required for Tender Evaluation Purposes (T2.1)

Form 2.1.1	Ownership of Tenderer's Entity
Form 2.1.2	Municipal Bidding Documents (MBDs)
Form 2.1.3	Authority for Signatory
Form 2.1.4	Schedule of Work Carried Out by Tenderer
Form 2.1.5	Proposed Key Personnel
Form 2.1.6	Schedule of Infrastructure and Resources
Form 2.1.7	Financial References

2. T. 2.2. Other Documents Required for Tender Evaluation Purposes.

Form 2.2.1	Declaration of Good Standing regarding Tax.
Form 2.2.2	CV'S of Key Personnel to be used in this Project.

FORM 2.1.1 OWNERSHIP OF THE TENDERER'S ENTITY

State whether the Tenderer is a company, a partnership, a person or a closed corporation by making an X in the appropriate space.

nnon.								
npany		Partner- ship		Persor	1			Close Corpo
	<u></u>			<u>l</u>			<u>-1</u>	
an X in the	e appropr	iate space)						
Inform	ation to	be provid	ed					
IF THE 1	ΓENDER	ER IS A COMI	PANY:					
Affix a ce	ertified co	py of the Certi	ficate of	Incorporation	and o	n the f	ollowin	g pag
List the [Directors	and each Dire	ctor's dat	e of appointr	nent			
							_	
							_	
							_	
							_	
(Attach	Certified	copies of ID'	S of the	Directors)				
•		•						
List the	Shareho	lders		,				
	Shareho				HDI	(Yes/ľ	No)*	
List the Name	Shareho	Iders % Share		e/Female	HDI	(Yes/ľ	No)*	
	Shareho				HDI	(Yes/ľ	No)* 	
	Shareho				HDI	(Yes/l	No)* 	
	Shareho				HDI	(Yes/l	No)* 	
	Shareho				HDI	(Yes/î	No)* 	
	Shareho				HDI	(Yes/î	No)* 	
	Shareho				HDI	(Yes/f	No)* 	
Name			Male	e/Female	HDI	(Yes/f	No)* 	
Name (Attach	Certified	% Share Copies of ID	Male S of Sha	e/Female		(Yes/f	No)* 	
Name (Attach	Certified	% Share	Male S of Sha	e/Female		(Yes/f	No)* 	

ist the partners and state each partner's share in the partnership					
Name	% Share	Male/Female	HDI (Yes/No)*		
(Attach Cert	ified Copies of ID	'S of Members of th	e Partnership)		
IF THE TENI	DERER IS A PERS	ON:			
Provide the f	ull name and qualifi	cations of the persor	า		
Name	% Share	Male/Female	HDI (Yes/No)*		
		Form on the following			
List the mem	bers and state eacl	h member's share in	the closed corporation		
Name	% Share	Male/Female	HDI (Yes/No)*		
		D'S of Members of to copy of recent munic	he CC cipal services account on		
	 OF TENDERER		 DATF		

Affix and Attach Relevant Documents Here (ck FORM)

FORM T 2.1.2. MUNICIPAL BIDDING DOCUMENTS

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF O.R. TAMBO DISTRICT MUNICIPALITY

MBD 1

PART A INVITATION TO BID

BID NUMBER:	ORTDM SCMU 14-21/				RCH 20:		CLOSING		12.00PM
DESCRIPTION:		ERVICE PROVIDERS FO		PPLY A	ND DEL	IVERY O	F PLUME	BING MATE	RIALS IN KSD
DESCRIPTION: REGION AND EQUIPMENT FOR 36 MONTHS									
BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT:									
DID NEG! GNOE DOCUMENTO MIXT DE DEI GONED IN THE DID DOX GNOXIED XIII									
TENDER BOX, GI	ROUND FLOOR, O.R. T	AMBO DISTRICT MUNI	CIPALITY E	BUILDING	G				
MYEZO PARK, NI	MYEZO PARK, NELSON MANDELA DRIVE								
MTHATHA									
EASTERN CAPE									
SUPPLIER INFOR	MATION								
NAME OF BIDDER	₹								
POSTAL ADDRES	S								
STREET ADDRES	S								
TELEPHONE NUM	1BER	CODE				NUMBE	R		
CELLPHONE NUM	/IBER								
FACSIMILE NUME	BER	CODE				NUMBE	R		
E-MAIL ADDRESS	i								
VAT REGISTRATION	ON NUMBER								
TAX COMPLIANCE	E STATUS	TCS PIN:				CSD No):		
B-BBEE STATUS	LEVEL	_			B-BBE	EE STATU	ıs _	_	
VERIFICATION CI		☐ Yes			LEVEL SWORN		ı ∟] Yes	
[TICK APPLICABL	E BOX]	□ No			AFFIDAVIT		No		
	US LEVEL VERIFICATION REFERENCE POINTS FO	ON CERTIFICATE/ SWC	ORN AFFID	AVIT (FC	R EME	S & QSE	s) MUST	BE SUBMIT	TED IN ORDER TO
QUALITIONTA	LI LICENOL I ONVIOTI	OK B-BBEEJ			ARE `	YOU A FO	REIGN		
ARE YOU THE AC						D SUPPL	IER FOR	R │ □Yes [□No
FOR THE GOODS	E IN SOUTH AFRICA /SERVICES	☐Yes ☐No			THE GOODS /SERVICES/WORKS		[IF YES, ANSWER PART B:3		
/WORKS OFFERE		[IF YES ENCLOSE PR	ROOF]			RED?		[120]	7.11.011.211.7111.210
TOTAL NUMBER	OF ITEMS OFFERED				TOTAL	. BID PRI	CE	R	
SIGNATURE OF B	IDDER								
OADAOITY LINDE	NAME OF THE PARTY				DATE				
SIGNED	R WHICH THIS BID IS								
BIDDING PROCE	OURE ENQUIRIES MAY	BE DIRECTED TO:		TECHN	IICAL IN	IFORMAT	TION MA	Y BE DIREC	TED TO:
DEPARTMENT		SCM Department		CONTACT PERSON		Mr. L. Mashiya			
CONTACT PERSO	N	Mr. Sakhiwo Hopa		TELEPHONE NUMBER		047 501 6492			
TELEPHONE NUM	IBER	047 501 6449		FACSIMILE NUMBER		N/A			
E-MAIL ADDRESS		sakhiwoh@ortambod	m.gov.za	E-MAIL	ADDR	ESS		mashiyal	@ortambodm.gov.za

PART B TERMS AND CONDITIONS FOR BIDDING

1.	BID SUBMISSION:					
1.1.	BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE ACCEPTED FOR CONSIDERATION.	CORRECT ADDRESS. LATE BI	DS WILL NOT BE			
1.2.	ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED-(NOT TO BE RE-TYPED).					
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.					
	TAX COMPLIANCE REQUIREMENTS					
2.1	BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIG	ATIONS.				
2.2	BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSO SARS TO ENABLE THE ORGAN OF STATE TO VIEW THE TAXP	ONAL IDENTIFICATION NUMB AYER'S PROFILE AND TAX ST	ER (PIN) ISSUED BY ATUS.			
2.3	APPLICATION FOR THE TAX COMPLIANCE STATUS (TCS) CIFILING. IN ORDER TO USE THIS PROVISION, TAXPAYERS WITHROUGH THE WEBSITE www.sars.gov.za .					
2.4	FOREIGN SUPPLIERS MUST COMPLETE THE PRE-AWARD QUE	STIONNAIRE IN PART B:3.				
2.5	BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TO	GETHER WITH THE BID.				
2.6	IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONSUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.		EACH PARTY MUST			
	WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERIA CSD NUMBER MUST BE PROVIDED.	ED ON THE CENTRAL SUPPLII	ER DATABASE (CSD),			
3.	QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS					
3.1.	IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFR	ICA (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 T	HE RSA?	☐ YES ☐ NO			
3.4.	DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA	۱?	☐ YES ☐ NO			
3.5.	IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION	ON?	☐ YES ☐ NO			
CON	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.					
SI	GNATURE OF BIDDER:					
CA	APACITY UNDER WHICH THIS BID IS SIGNED:					
D/	ATE:					

MBD 4

DECLARATION OF INTEREST

- 1. No bid will be accepted from persons in the service of the state¹.
 - 2. Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an 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.

3.		rder to give effect to the above, the following questionnaire must be completed and submitted the bid.
	3.1	Full Name of bidder or his or her representative:
	3.2	Identity Number:
	3.3	Position occupied in the Company (director, trustee, shareholder²):
	3.4	Company Registration Number:
	3.5	Tax Reference Number:
	3.6	VAT Registration Number:
	3.7	The names of all directors / trustees / shareholders members, their individual identity numbers and state employee numbers must be indicated in paragraph 4 below.
	3.8	Are you presently in the service of the state?
		3.8.1 If yes, furnish particulars
MSC	M Re	egulations: "in the service of the state" means to be –

- (a) a member of -
 - (i) any municipal council;
 - (ii) any provincial legislature; or
 - 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 No.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.

² Shareholder" means a person who owns shares in the company and is actively involved in the management of the company or business and exercises control over the company.

3.9	Have you been in the service of the state for the past twelve months? YES / NO
	3.9.1 If yes, furnish particulars
3.10	Do you have any relationship (family, friend, other) with persons in the service of the state and who may be involved with the evaluation and or adjudication of this bid?YES / NO
	3.10.1 If yes, furnish particulars
3.11	Are you, aware of any relationship (family, friend, other) between any other bidder and any persons in the service of the state who may be involved with the evaluation and or adjudication of this bid?
	3.11.1 If yes, furnish particulars
3.12	Are any of the company's directors, trustees, managers, principle shareholders or stakeholders in service of the state?
	3.12.1 If yes, furnish particulars
3.13	Are any spouse, child or parent of the company's directors, trustees, managers, principle shareholders or stakeholders in service of the state?
	3.13.1 If yes, furnish particulars
3.14	Do you or any of the directors, trustees, managers, principle shareholders, or stakeholders of this company have any interest in any other related companies or business whether or not they are bidding for this contract?

4. Full details of directors / trustees / members / shareholders.

Full name	Identity number	State employee number
_		
Signature		Date
Capacity		Name of Bidder

MBD 5

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:

NO.	QUESTION	ANSWER (TICK WHICH RESPONSE IS APPLICABLE)			
		YES	NO		
1.	Are you by law required to prepare annual financial statements?				
1.1	If yes, submit audited annual financial statements for the past three years or since the date of establishment if established during the last 3 years.				

NO.	QUESTION	ANSWER (TICK WHICH RESPONSE IS APPLICABLE)		
		YES	NO	
2.	Do you have any outstanding undisputed commitments for municipal services towards any municipality for more than 3 months or any other service provider in respect of which payment is overdue for more than 30 days?			
2.1	If no, this serves to certify that the bidder has no services towards any municipality for more than respect of which payment is overdue for more than	3 months or other service		
2.2	If yes, provide details:			

NO.	QUESTION	ANSWER (TICK WHICH RESPONSE IS APPLICABLE)		
		YES	NO	
3.	Has any contract been awarded to you by an organ of state during the past five years, including particulars of any material noncompliance or dispute concerning the execution of such contract?			
3.1	If yes, provide details:			
NO.	QUESTION	ANSWER (TICK WHICH RESPONSE IS		
		APPLICABLE) YES	NO	
4.	Will any portion of the goods of services be sourced from outside the Republic, and if so, what portion, and whether any portion of payment from the municipality is expected to be transferred outside of the Republic?			
4.1	If yes, provide details:	1		
	CERTIF	FICATION		
I THE	UNDERSIGNED (NAME)			
	Y THAT THE INFORMATION FURNISHED ON	THIS DECLARATION F	ORM IS CORRECT.	
LACC	EPT THAT THE STATE MAY ACT AGAINST	ME SHOULD THIS THE	S DECLARATION PROV	
BE FA		WE ONGOED THIS THE	o beceation i nov	
	Signature		Date	
	Donition		Nome of Didder	
	Position		Name of Bidder	

MBD 6.1

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).

1.2

- (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; or
- (b) The 80/20 preference point system will be applicable to this tender.
- 1.3 Points for this bid shall be awarded for:
 - (a) Price; and
 - (b) B-BBEE Status Level of Contributor.
- 1.4 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

- 1.5 Failure on the part of a bidder to submit proof of B-BBEE Status level of contributor together with the bid, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.
- 1.6 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) **"B-BBEE"** means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;
- (b) "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;
- (c) "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;
- (d) "Broad-Based Black Economic Empowerment Act" means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);

- (e) "EME" means an Exempted Micro Enterprise 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;
- (f) "functionality" means the ability of a tenderer to provide goods or services in accordance with specifications as set out in the tender documents.
- (g) "prices" includes all applicable taxes less all unconditional discounts;
- (h) "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;
- (i) "QSE" means a qualifying small business enterprise 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;
- "rand value" means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;

3. POINTS AWARDED FOR PRICE

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

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

$$Ps = 80\left(1 - \frac{Pt - P\min}{P\min}\right)$$
 or
$$Ps = 90\left(1 - \frac{Pt - P\min}{P\min}\right)$$

Where

Ps = Points scored for price of bid under consideration

Pt = Price of bid under consideration
Pmin = Price of lowest acceptable bid

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

4.1 In terms of Regulation 6 (2) and 7 (2) of the Preferential Procurement Regulations, 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. BID DECLARATION

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

B-BBE	EE STATUS LEVEL OF CONTRIBUTOR CLAIMED IN TERMS OF PAI	RAGRAPHS 1.	4 AND 4.1			
6.1 B	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 nd must be substantiated by relevant proof of B-BBEE status level of co		cted in paragraph			
SUB-C	SUB-CONTRACTING					
7.1 V	Vill any portion of the contract be sub-contracted?					
	(Tick applicable box)					
	YES NO					
7.1.1	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 Specify, by ticking the appropriate box, if subcontracting Preferential Procurement Regulations, 2017:					
Desi	gnated Group: An EME or QSE which is at last 51% owned by:	EME	QSE			
		\checkmark	$\sqrt{}$			
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					
Coope	Cooperative owned by black people					
Black	people who are military veterans					
	OR					
Any EN	ME					
Any Q	SE					
	I					
8.	DECLARATION WITH REGARD TO COMPANY/FIRM					
8.1	Name of company/firm:					
8.2	VAT registration number:					
8.3	Company registration number:					
8.4	TYPE OF COMPANY/ FIRM					
	□ Partnership/Joint Venture / Consortium □ One person business/sole propriety □ Close corporation □ Company □ (Pty) Limited [TICK APPLICABLE BOX]					

8.5	DE	DESCRIBE PRINCIPAL BUSINESS ACTIVITIES				
8.6	CO	MPANY	CLASSIFICATION			
	 - <i>Tro</i>	Supp Profe Othe	nfacturer lier ssional service provider r service providers, e.g. transporter, etc. ABLE BOX]			
8.7	MUNICIPAL INFORMATION					
	Municipality where business is situated:					
	Re	Registered Account Number:				
	Sta	Stand Number:				
8.8 Total number of years the comp			er of years the company/firm has been in business:			
8.9	cer par	tify that agraphs	ndersigned, who is / are duly authorised to do so on behalf of the company/firm, the points claimed, based on the B-BBE status level of contributor indicated in 1.4 and 6.1 of the foregoing certificate, qualifies the company/ firm for the s) shown and I / we acknowledge that:			
	i)	The info	ormation furnished is true and correct;			
	ii)		eference points claimed are in accordance with the General Conditions as indicated graph 1 of this form;			
	iii)	paragra	event of a contract being awarded as a result of points claimed as shown in aphs 1.4 and 6.1, the contractor may be required to furnish documentary proof to the ction of the purchaser that the claims are correct;			
	iv)	iv) If the B-BBEE status level of contributor has been claimed or obtained on a fraudulent be or any of the conditions of contract have not been fulfilled, the purchaser may, in additio 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;			

cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such

(c)

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.

WITNESS:	SIGNATURE(S) OF BIDDER(S)
1	DATE:
	ADDRESS:
2	

MBD 8

DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

- 1 This Municipal Bidding Document must form part of all bids invited.
 - 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.
 - 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. willfully 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 (No 12 of 2004).
 - In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.

ltem	Question	Yes	No
4.1	Is the bidder or any of its directors listed on the National Treasury's Database of Restricted Suppliers as companies or persons prohibited from doing business with the public sector?	Yes	No
	(Companies or persons who are listed on this Database were informed in writing of this restriction by the Accounting Officer/Authority of the institution that imposed the restriction after the <i>audi alteram partem</i> rule was applied).		
	The Database of Restricted Suppliers now resides on the National Treasury's website(www.treasury.gov.za) and can be accessed by clicking on its link at the bottom of the home page.		
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 (No 12 of 2004)? The Register for Tender Defaulters can be accessed on the National Treasury's website (www.treasury.gov.za) by clicking on its link at the bottom of the home page.	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 I THE IN CORRE	UNDERSIGNED (FULL NAME)	ERTIF AND	Y THAT
	PT THAT, IN ADDITION TO CANCELLATION OF A CONTRACT, AC AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE		IAY BE
	Signature Date	e	
	Position Name of	Bidde	r

MBD9

CERTIFICATE OF INDEPENDENT BID DETERMINATION

- 1 This Municipal Bidding Document (MBD) must form part of all bids¹ invited.
- 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). 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.
- 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 bidrigging.
- In order to give effect to the above, the attached Certificate of Bid Determination (MBD 9) must be completed and submitted with the bid:

MBD9

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:ORTDM SCMU 14-21/22: APPOINTMENT OF SERVICE PROVIDERS FOR THE SUPPLY AND DELIVERY OF PLUMBING MATERIALS AND EQUIPMENT FOR 36 MONTHS

in response to the invitation for the bid made by:

O.R. Tambo District Municipality

do hereby make the following statements that I certify to b	e true and complete in every respect:
I certify, on behalf of:	that:
(Name of Bidd	er)

- 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 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

MBD 9

- 6. The bidder has arrived at the accompanying quotation 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 this invitation; or
 - (f) submitting a bid 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 bid.
- 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

FORM 2.1.3 AUTHORITY FOR SIGNATORY

Signatories for companies must establish their authority by attaching to this form a copy of the relevant resolution by their Board of Directors, duly signed and dated.		
"By resolution of the Board of Directors taken		20
Mr /Ms		
has been duly authorized to sign all documents in conne	ection with Contract No	
and any Contract which may arise therefrom on behalf of	of (block capitals)	
DATE:		
SIGNATURE OF SIGNATORY:		
SIGNED ON BEHALF OF THE COMPANY BY MEI COOPERATION OR ENTERPRISE AS FOLLOWS;	MBERS OF THE COMPANY OF	R CLOSED

No	Member's Name	Capacity	% Shareholding	Signature

AFFIX COMPANY LETTER HEAD CERTIFYING THE ABOVE RESOLUTION ON THE FOLLOWING PAGE.

Affix Company letter here

FORM 2.1.4: SCHEDULE OF WORK CARRIED OUT BY TENDERER

Provide the following information on relevant previous experience (indicate specifically projects of similar or larger size and/or which is similar with regard to type of work. This information is material to the award of the Contract.

Description	Value in Rands	Year Completed	Client and Representative	Contact No

PLEASE PROVIDE PROJECTS RELATED TO APPOINTMENT OF SERVICE	
PROVIDER FOR THE HIRING OF PLANT AND EQUIPMENT FOR 36 MONTHS	S

Signature of the Tenderer:	
----------------------------	--

FORM 2.1.5 PROPOSED KEY PERSONNEL

The Tenderer shall list below the key personne1 (including first nominee and the second choice alternate), whom he proposes to employ on the project should his Tender be accepted, both at his headquarters and on the Site, to direct and for the execution of the work, together with their qualifications, experience, positions held and their nationalities.

No	Name	Qualification	Designation	HDI Status	PR Number

(Provide more details on the CV'S to attached as per form 2.2.5 in the returnable schedules)
Signature of the Tenderer:

FORM 2.1.6: SCHEDULE OF INFRASTRUCTURE AND RESOURCES

Provide information on the following:

Infrastructure and resources available Physical facilities and Buildings.

Description	Address	Area (m ²)

Equipment

Provide information on equipment and resources that you have available for this project.

Description:	Number of units
Description :	Number of units
Description:	Number of units

Size of enterprise and current workload What was your turnover in the previous financial year? -----What is the estimated turnover for your current financial year? ------List your current contracts and obligations Description Value (R) Start date **Duration Expected** completed date **Staffing Profile** Provide information on the staff that you have available to execute this contract (attach a separate list if the space provided is insufficient) Permanently employed staff: gender and race Number of staff

Temporary staff to be employed for the project : ge race	nder and Number of staff
Signature of the Tenderer :	

FORM 2.1.7 SCHEDULE OF PROPOSED SUBCONTRACTOR

The Tenderer shall, in accordance with the provisions of condition of tender, list below the subcontractors he proposes to employ for part(s) of the work.

The naming of any proposed sub consultant/s hereunder shall not be deemed to constitute a qualification of the Tender, and acceptance of a Tender shall not be construed as approval of any or all of the listed sub consultant/s, neither shall it in any way limit or detract from the powers of the Engineer and the obligations of the Contractor pertaining to subcontracting as stated in the Contract, nor shall it prevent the Tenderer from deviating In any way during the Contract from the list of proposed sub consultant/s hereunder if the Tender is accepted

If any or all of the sub consultant/s listed hereunder are not approved subsequent to acceptance of the Tender, it shall in no way invalidate the Tender or the Contract, and the Tendered unit rates for the respective items of work shall remain final and binding even if a sub consultant/s not listed below is approved by the Client.

Part or Type of Work	Proposed Sub- Contractor	Work Recently Executed by Subcontractor

Signature of	t the ī	Tenderer:	
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FORM 2.1.8: FINANCIAL REFERENCES

FINANCIAL STATEMENTS

I/We agree, if required, to furnish an audited copy of the latest set of financial statements together with my/our Directors' and Auditors' report for consideration by the Client.

DETAILS OF TENDERDING ENTITY'S BANK

I/We hereby authorise the Client/Engineer to approach all or any of the following banks for the purposes of obtaining a financial reference.

DESCRIPTION OF BANK DETAIL	BANK DETAILS APPLICABLE TO TENDERDER'S HEAD OFFICE
Name of bank	
Branch name	
Branch code	
Street address	
Postal address	
Name of manager	
Telephone number	()
Fax number	()
Account number	
TENDERDER'S TAX DE	<u>rails</u>
Tenderder's VAT vendor re	gistration number:
Tenderder's SARS tax refe	erence number:
Signature of the Tenderer	;

PROJECT NO: ORTDM SCMU 14-21/22

APPOINTMENT OF SERVICE PROVIDERS FOR THE SUPPLY AND DELIVERY OF PLUMBING MATERIALS AND EQUIPMENTS IN KSD REGION FOR 36 MONTHS

T. 2.2. Other Documents Required for Tender Evaluation Purposes.

Form 2.2.1	Certificate of Tenderers attendance at the clarification meeting.
Form 2.2.2	Declaration of Good Standing regarding Tax.
Form 2.2.3	CV'S of Key Personnel to be used in this Project.

FORM 2.2.1 CERTIFICATE OF TENDERER'S ATTENDANCE AT THE COMPULSORY SITE/CLARIFICATION MEETING

This is to certify that I,
Representative of (Tenderer)
Of(address)
Telephone number
Fax number (Visited and examined the Site)/ attended Clarification Meeting on (date)
In the company of (Engineer/Engineer's Representative)
TENDERDER'S REPRESENTATIVE: CLIENT'S REPRESENTATIVE:

FORM 2.2.2 DECLARATION OF GOOD STANDING REGARDING TAX

SOUTH AFRICAN REVENUE SERVICES	Bid No:	
	Closing Date:	
DECLARATION OF GOOD STANDING REG	SARDING TAX	
PARTICULARS		
Name of Taxpayer/Bidder:		
2. Trade Name:		
3. Identification Number: (If applicable)		
4. Company / Close Corporation registration number:		
5. Income Tax reference number:		
6. VAT registration number: (If applicable)		
7. PAYE employer's registration number: (If applicable)		
8. Monetary value of bid:		
DECLARATION		
I,		
(i) Have been satisfied in terms of the relevant Acts; or		
(ii) That suitable arrangements have been made with the Receiver of Revenue, to satisfy them.*		
SIGNATURE CAPACITY	DATE	
PLEASE NOTE:* The declaration (ii) cannot be made unless formal arrangements have been made with the Receiver of Revenue with regard to any outstanding revenue/outstanding tax returns.		

FORM 2.2.3 CV'S OF KEY PERSONNEL TO BE USED IN THIS PROJECT.

Provide two paged CV of Each key Personnel to be used in this project.

Attach certified copies of the following to the CV;

- ID
- Highest Qualification.
- Certification

(Affix the CV's and Attachments in a form of a booklet to the following Page.)

PROJECT NO: SCMU 14-21/22:	APPOINTMENT OF SERVICE PROVIDERS FOR THE SUPPLY AND DELIVERY OF PLUMBING MATERIALS AND EQUIPM.	ENT
	IN KSD REGION FOR 36 MONTHS	

Attach CV Booklet on this Page

PROJECT NO: ORTDM SCMU 14-21/22

APPOINTMENT OF SERVICE PROVIDER FOR SUPPLY AND DELIVERY OF PLUMBING MATERIALS AND EQUIPMENTS IN KSD REGION FOR 36 MONTHS

PART 1

C1 CONTRACT DATA

C1 AGREEMENT AND CONTRACT DATA

PROJECT NO: ORTDM SCMU -----

APPOINTMENT OF SERVICE PROVIDER FOR SUPPLY AND DELIVERY OF PLUMBING MATERIALS AND EQUIPMENTS IN KSD REGION FOR 36 MONTHS

AGREEMENT AND CONTRACT DATA (C2)

- C1.1 Form of offer and acceptance
- C1.2 Contract Data

PROJECT NO: ORTDM SCMU -----

APPOINTMENT OF SERVICE PROVIDER FOR SUPPLY AND DELIVERY OF PLUMBING MATERIALS FOR 36 MONTHS

C. 1. FORM OF OFFER AND ACCEPTANCE

PART 1: FORM OF OFFER

The Employer, identified in the Acceptance signature block, has solicited offers to enter into a contract for the procurement of: APPOINTMENT OF SERVICE PROVIDER FOR SUPPLY AND DELIVERY OF PLUMBING MATERIALS AND EQUIPMENTS IN KSD REGION FOR 36 MONTHS. 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 PRI		
Rand (in		
and returning one copy of this docume	ent to the Tenderer before th	tance part of this Form of Offer and Acceptance e end of the period of validity stated in the Tender Contractor in the Conditions of Contract identified
Signature:	Date:	
Name:		
Capacity:		
For the Tenderer:		
(Tenderder's address) Name &		
Signature of		
Witness	Date	

PART B: ACCEPTANCE (To be completed by the Employer)

By signing this part of this Form of Offer and Acceptance, the Employer identified below accepts the Tenderder'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 C1	Agreements and Contract Data, (which includes this Agreement)
Part C2	Pricing Data
Part C3	Scope of Work
Part C4	Site Information

and drawings and documents or parts thereof, which may be incorporated by reference into Parts 1 to 6 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 Contract 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 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 Contractor) within five days of 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 a binding contract between the parties.

Signature:	Date:
Name:	
Capacity	
For the Employer	
	(Name and address of organisation)
Name & Signature of Witness	Date

OR TAMBO DISTRICT MUNICIPALITY APPOINTMENT OF SERVICE PROVIDER FOR SUPPLY AND DELIVERY OF PLUMBING MATERIALS AND EQUIPMENTS IN KSD REGION FOR 36 MONTHS

C1.2 CONTRACT DATA

CONTRACT SPECIFIC DATA

The following contract specific data are applicable to this Contract as per the **GOVERNMENT PROCUREMENT: GENERAL CONDITIONS OF CONTRACT (GCC)** issued by National Treasury of the Republic of South Africa.

The meaning of "purchaser" in the GCC shall have the same meaning as "Employer"

Compulsory Data

Clause 1.21

The name of the Employer is O.R Tambo District Municipality. Clause 7

Deed of Guarantee is not applicable on this Contract. Clause 8

All pre-bidding testing or trial tests are not applicable. Clause 10

The works shall be completed within 36 months after the signing of the contract Clause 11

The service provider shall have an Indemnity cover of not less than R3 million. Clause 16.3

Payments shall be made promptly by the purchaser, but in no case later than thirty (30) days after submission of an invoice or claim by supplier.

Clause 17

Prices offered by the service provider shall be fixed for a period of 24 months and no escalation will be accepted.

Clause 49.3

Disputes will be settled through arbitration.

Signature of the Tenderer:

PROJECT NO: ORTDM SCMU 14-21/22

APPOINTMENT OF SERVICE PROVIDER FOR SUPPLY AND DELIVERY OF PLUMBING MATERIALS AND EQUIPMENTS IN KSD REGION FOR 36 MONTHS

PART 3

C3 SCOPE OF WORK (TERMS OF REFERENCE)

C.3 SPECIFICATIONS AND SCOPE OF WORKS

PROJECT NO: ORTDM SCMU 14-21/22

APPOINTMENT OF SERVICE PROVIDER FOR SUPPLY AND DELIVERY OF PLUMBING MATERIALS AND EQUIPMENTS IN KSD REGION FOR 36 MONTHS

Closing Date: 18 MARCH 2022

C3.1 SPECIFICATIONS

GENERAL

SCOPE 1.1

This specification covers the design, manufacture, construction and installation of uPVC (unplasticised polyvinyl chloride) and MPVC (modified unplasticised polyvinyl chloride) pressure pipes, fittings and joints suitable for conveying natural or potable water. Clauses referring specifically to uPVC are classified as PART I and Clauses referring specifically to MPVC are classified as PART II. All other Clauses refer to both types.

1.2 **REFERENCES**

The following Standard Specifications, Codes of Practice and Regulations are referred to and shall apply as specified hereinafter. The latest issues shall apply: for the supply of valves."

CKS 146

_	CADC CO.	_	Charles and since fittings up to 450 mm persional bare
	SABS 62:	:	Steel pipes and pipe fittings up to 150 mm nominal bore
	SABS 135	:	ISO Metric black bolts, screws and nuts
	SABS 136	:	ISO Metric precision hexagon-head bolts, screws and nuts
	SABS 226	:	Water taps
	SABS 227	:	Burnt clay masonry units
	SABS 280	:	Hole location in fencing posts and droppers
	SABS 308	:	Cutback bitumen
	SABS 457	:	Wooden posts and droppers for fences
	SABS 471	:	Portland cement
	SABS 509	:	Malleable cast iron pipe fittings
	SABS 533	:	Black polyethylene pipes for the conveyance of liquids
	SABS 546		Cast iron fittings for fibre-cement pressure pipes
	SABS 558		Cast iron surface boxes and manhole and inspection covers and frames
	SABS 626		Portland blastfurnace cement
	SABS 675	:	Zinc-coated fencing wire (plain and barbed)
	SABS 676	:	Reinforced concrete pressure pipes
	SABS 719	:	Electric welded low carbon steel pipes for aqueous fluids
	SABS 763	•	:Hot-dip (galvanized) zinc coatings
	SABS 802		Bituminous aluminium paint
	SABS 920	:	Steel bars for concrete reinforcement
	SABS 952		Polyethylene sheet
	SABS 974	:	Rubber joint rings
	SABS 986		Precast reinforced concrete culverts
	SABS 1024	:	Welded steel fabric for concrete reinforcement
	SABS 1024 SABS 1083		
		:	Aggregates from natural sources
	SABS 1090	:	Sand for plaster and mortar
	SABS 1117		Plastic wrappings for the protection of steel pipelines
	SABS 1130	:	Glass fibre reinforcing material for pipe wrapping
	SABS 1136		Cold-applied bitumen primer for steel pipeline protection
	SABS 1137	:	Hot-applied bitumen for steel pipeline protection
	SABS 1138	:	Cold-applied coal tar primer for steel pipeline protection
	SABS 1139	:	Hot-applied coal tar enamel for steel pipeline protection
	SABS 1149	:	Flat and taper steel washers
	SABS 1200	:	Standardized specification for civil engineering construction
	SABS 1217	:	Production of painted and powder-coated steel pipes
	SABS 1223	:	Fibre-cement pressure pipes and couplings
	SABS 044	:	Code of practice for welding
	SABS 0102	:	The structural design and installation of precast concrete pipelines
	SABS 0121	:	Cathodic protection of buried and submerged structures
	SABS Method 85		:Liquid limit of fines in aggregate
	SABS Method 85	52	:Plastic limit and plasticity index of fines in aggregate SABS Method 853
			:Linear shrinkage of fines in aggregate
	SABS Method 85	53	:Linear shrinkage of fines in aggregate
	CKS 1/16		Gates steel with tubular frames

Gates, steel with tubular frames

CKS 229 Chain link wire fencing (diamond mesh) CKS 244 Wire mesh for industrial screening

CKS 280 **Padlocks** BS-CP 2010 **Pipelines**

BS 143: Malleable cast iron and cast copper alloy screwed pipe fittings for steam,

air, water, gas and oil

BS 1740 Wrought steel pipe fittings

Cast iron flanged pipes and flanged fittings BS 2035

Class I arc welding of ferritic steel pipe work for carrying fluids

BS 2633 BS 2815 Compressed asbestos fibre jointing

Flanges and bolting for pipes, valves and fittings BS 4504

BS 5500 Unfired fusion welded pressure vessels

Tubular polyethylene film for use as protective sleeving for buried iron BS 6076

pipes and fittings Pipelines

BS 8010

SIS 055900 Pictorial surface preparation standards for painting steel surfaces

(Swedish)

API 1104 Standard for welding pipelines and related facilities (American Petroleum

Institue)

Res/P/U4 Pamphlet: Preliminary Information (Shell Chemicals UK Ltd)

Act 85/1993 Occupational Health and Safety act (as amended) Act 26/1956 :Explosives act and regulations (as amended) Act 103/1977 National building regulations and building standards

3. **MATERIALS**

- 3.1 Pipes and fittings
- 3.1.1 Steel pipes, specials and couplings
- 3.1.1.1 Steel pipes, specials and flexible couplings shall conform to the "Department of Water Affairs" Standard Specification DWS1130.
- 3.1.1.2 Linings and coatings to steel pipes and specials shall conform to the "Department of Water Affairs" Standard Specification DWS1131.
- 3.1.2 Prestressed concrete pipes and specials
- 3.1.2.1 Non-cylinder type prestressed concrete pipes and specials shall conform to the "Department of Water Affairs Standard Specification "PCP-N".
- 3.1.2.2 Embedded steel-cylinder type and lined steel-cylinder type prestressed concrete pipes and specials shall conform to the "Department of Water Affairs" Standard Specification "PCP-C".

3.1.3 Reinforced concrete pipes

Reinforced concrete pressure pipes shall conform to SABS 676.

Fibre-cement pipes and fittings 3.1.4

- 3.1.4.1 Fibre-cement pressure pipes and couplings shall conform to SABS 1223.
- 3.1.4.2 Cast iron fittings shall conform to SABS 546.

3.1.5 Galvanized steel pipes and fittings

3.1.5.1 Galvanized steel pipes shall conform to SABS 62, medium and heavy thicknesses.

3.1.5.2 Steel fittings shall be galvanized heavy weight fittings and shall conform to

3.1.6 Cast-iron pipes and fittings

Cast-iron pipes and fittings shall be flanged and shall conform to BS 2035.

3.1.7 Polyethylene pipes

Polyethylene pipes shall conform to SABS 533.

3.1.8 Flanges

Except where specified to the contrary elsewhere in the documents, all flanges shall be steel-plate for welding and shall conform to BS 4504. Should the required flange size fall beyond the range of BS 4504, mating dimensions shall be in accordance with ISO standard 7005 with thicknesses adequate to withstand closed - end test pressure. Flanges of 125 mm NB and larger shall have a minimum pressure rating of 1 MPa, with flat joint faces machine finished to a roughness value of 12,5 micrometres and with weld preparations in accordance with BS 2633, fig. 39 or 40. Weld preparation in accordance with fig. 41 shall be acceptable for flanges 100 mm NB and smaller.

3.1.9 Bolts, nuts and washers

- 3.1.9.1 Bolts and nuts shall conform to SABS 135 or SABS 136. Bolts shall be of sufficient length for at least two screw threads to protrude from the nut when assemblies are fully tightened.
- 3.1.9.2 Washers shall be of appropriate material and dimensions shall conform to SABS 1149.

3.1.10 Gaskets

Gaskets for flanged joints shall be of compressed asbestos fibre to BS 2815 Grade "A" and full faced with a minimum thickness of 3 mm. For pressures up to and including 1,6 MPa cloth-inserted rubber may be used.

SABS 471 SABS 626 SABS 664 SABS 831	: : :	Portland cement (ordinary, rapid-hardening and sulphate-resisting) Portland blastfurnace cement Cast iron gate valves for water works Portland cement 15 and rapid-hardening Portland cement 15
SABS 974	:	Rubber joint rings for water, sewer and drainage systems, Part 1
SABS 936 SABS 966	:	Spheroidal Graphite Iron Castings Components of Unplasticised Polyvinyl Chloride (uPVC) Pressure Pipe Systems for potable water.
SABS 1200	:	Standard specification for civil engineering construction: Section DB : Pipe Trenches Section L : Medium-pressure pipelines, Clause 7,3 standard hydraulic pipe test
		Section LB : Bedding
SABS 1283	:	Unplasticised polyvinyl chloride (uPVC) pressure pipes and couplings for cold water services in underground mining.
SABS 0102	:	The selection of pipes for buried pipelines Part I : General Part III : Semi-flexible pipes

SABS 0112 The installation of polyethylene and unplasticized polyvinyl chloride pipes

Compressed asbestos fibre jointing. BS 1832

BS 3505 Unplasticised polyvinyl chloride pressure pipes for cold

potable water.

BS 4504 . Circular flanges for pipes, valves and fittings.

Specification for steel flanges Section 3.1 Section 3.2 Specification for cast iron flanges

BS 4865 Dimensions of gaskets for flanges to BS 4504.

Specification for non-metallic flat gaskets. Part 1

Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water BS 6920

DIN 8061 A1:1991 Unplasticised polyvinyl chloride pipes: General quality requirements and testing

Plastic pipes for the transport of fluids: determination of ISO 1167

the resistance to internal pressure.
Plastics determination of viscosity number and limiting ISO 1628

viscosity number. Part 2: PVC resins.

Pipes and fittings made of unplasticised polyvinyl chloride for water supply ISO 4422

specifications

Quality systems: ISO 9002 Model for quality assurance in

production and installation.

R55 1993: Requirements for MPVC pressure pipes. **JASWIC**

HEALTH AND SAFETY 1.3

Safety precautions to avoid risk to health and safety of the public and all employees, and to prevent damages to the works and private property, must be observed at all times.

SECTION 2: MATERIALS

2.1 **GENERAL**

uPVC pipes and post formed bends shall be made of unplasticised polyvinyl chloride manuractured in accordance with SABS 966. For MPVC, the material shall be an alloy or compound of unplasticised polyvinyl chloride. The alloy or compound shall consist substantially of unplasticised polyvinyl chloride resin to which shall be added only those materials necessary to facilitate the production of sound durable pipes and bends to this specification. The unplasticised polyvinyl chloride resin shall have a "K"-value of not less than 66 when tested in accordance with ISO 174. All additives shall be uniformly dispersed. None of these additives shall be used, separately or together, in quantities sufficient to constitute a toxic, organoleptic or microbial growth hazard, impair the fabrication or welding properties of the product or impair conformance with the chemical and physical properties specified in this specification. The use of the manufacturer's own reprocessable material produced during the manufacturing and testing of products conforming to this specification is permissible. No reprocessable nor recyclable material obtained from external sources shall be used.

2.2 SOFTENING POINT 2.2.1 PARTI: uPVC

The Vicat softening point of the pipe material, when measured in accordance with SABS 966 shall not be lower than 76°C in the case of pipes and not lower than 72°C in the case of fittings.

2.2.2 PART II: MPVC

The Vicat softening point of the pipe material, when measured in accordance with SABS 966 shall not be lower than 80°C.

2.3. COLOUR

2.3.1 PARTI: uPVC

The colour of the pipe shall be light blue in line with SABS 966 paragraph 3.1.6.

2.3.2 PART II: MPVC

The colour of the pipe shall be dark blue.

2.4 QUALITY CONTROL

The manufacturer must have a quality control system in accordance with ISO 9002.

2.5 RUBBER SEALING RINGS

The rubber sealing rings shall comply with the requirements of SABS 974 Part

2.6 FLANGE GASKETS

Gaskets for flanged joints shall be in one piece, full face for Type A (flat face) flange facings for use with flanges complying with BS 4504. The dimensions of gaskets shall comply with BS 4865. The gasket shall be of compressed fibre (chrysotile asbestos) with a suitable binder, 3 mm thick to comply with BS 1832. For pressures up to and including 1,6 MPa, fabric inserted rubber, 3mm thick may be used.

Note:

- (a) Where gaskets come into contact with potable water then materials shall comply with BS 6920, Part I.
- (b) Gaskets shall be protected from unnecessary exposure of ultraviolet radiation, light and ozone.

2.7 FITTINGS AND VALVES

2.7.1 For sizes up to 250 mm diameter

Fittings such as pressure bends, adaptors and double sockets for sizes up to 250 mm shall be manufactured from either uPVC or MPVC pipes, as applicable, to suit the relevant pipe classes. All other fittings in this size range shall be manufactured from Spheroidal Graphite Iron (SG Iron) and shall be bitumen dipped. All the above-mentioned fittings shall use the same rubber ring joint as used in the straight uPVC or MPVC pipe.

2.7.2 For sizes larger than 250 mm

For sizes larger than 250 mm all fittings must be fabricated in steel and must be provided with plain ends. All steel fittings must be painted on both the inside and the outside with an epoxy based paint to a dry film thickness of 300 micrometres. Flexible couplings shall be used to connect steel fittings and plain ended pipes.

2.7.3 Valves

Valves shall be selected to be suitable for the duty required and shall comply with the Department's Specification DWS 2510. SG Iron Gate valves shall be manufactured in accordance with SABS 664 with socket ends for uPVC or MPVC piping, as applicable, up to 200 mm diameter. For larger pipes flanged valves shall be used with the appropriate flanged adapters. Valves shall be mounted vertically with feet grouted in a concrete base.

SECTION 3: MANUFACTURE OF PIPES AND COUPLINGS

3.1 PIPES: PART I: uPVC

uPVC pressure pipes shall be manufactured in accordance with the requirements of SABS 966. The factory shall be accredited in accordance with ISO 9002. The standard effective length shall be 6 metres which shall exclude the integral rubber ring joint.

Outside diameters listed, are constant for all classes of a given size and shall be measured on the barrel of the pipe. There shall be seven classes as shown in Table 3.1.1 (the required class will be specified by the Engineer):

Table 3.1.1: Classes of uPVC Pipe

Class	Maximum wor	Maximum working pressure at 25° C						
	kPa	Head of water (m)						
4	400	40						
6	600	60						
9	900	90						
12	1200	120						
16	1600	160						
20	2000	200						
25	2500	250						

Nominal sizes shall be as shown in Table 3.1.2 (the required size will be specified by the Engineer).

PROJECT NO: ORTDM SCMU 14-21/22 APPOINTMENT OF SERVICE PROVIDER FOR SUPPLY AND DELIVERY OF PLUMBING MATERIALS AND EQUIPMENTS IN KSD REGION FOR 36 MONTHS

Nominal			Wall Th	Wall Thickness (mm)												
Size (mm)	Diameter	Diameter (mm)		Class 4 Class 6			Class 9		Class 12		Class 16		Class 20		Class 25	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
16	16.0	16.3											1.5	1.9		
20	20.0	20.3									1.5	1.9	1.9	2.3		
25	25.0	25.3							1.5	1.9	1.9	2.3	2.3	2.8		
32	32.0	32.3					1.5	1.9	1.8	2.2	2.4	2.9	2.9	3.4		
40	40.0	40.3			1.5	1.9	1.8	2.2	2.3	2.8	3.0	3.5	3.7	4.3		
50	50.0	50.3			1.8	2.2	2.2	2.7	2.8	3.3	3.7	4.3	4.6	5.3		
63	63.0	63.3			1.9	2.3	2.7	3.2	3.6	4.2	4.7	5.5	5.8	6.7		
75	75.0	75.3	1.5	1.9	2.2	2.7	3.2	3.8	4.8	5.0	5.6	6.5	6.9	8.0		
90	90.0	90.3	1.8	2.2	2.7	3.1	3.9	4.5	5.1	5.9	6.7	7.8	8.2	9.5		
110	110.0	110.4	1.8	2.2	2.6	3.1	3.9	4.5	5.1	5.9	6.7	7.8	8.2	9.5	10.0	11.5
125	125.0	125.4	2.0	2.4	3.0	3.5	4.4	5.1	5.8	6.7	7.6	8.8	9.3	10.8	11.4	13.1
140	140.0	140.5	2.3	2.6	3.3	3.9	4.9	5.7	6.5	7.5	8.5	9.8	10.4	12.0	12.7	14.6
160	160.0	160.5	2.6	3.1	3.8	4.4	5.6	6.5	7.4	8.6	9.7	11.2	11.9	13.7	14.6	16.8
180	180.0	180.6	2.9	3.4	4.2	4.9	6.3	7.3	8.3	9.6	10.9	12.6	13.4	15.5	16.4	18.9
200	200.0	200.6	3.1	3.7	4.7	5.3	7.0	8.1	9.2	10.6	12.1	14.0	14.9	17.2	18.2	20.9
225	225.0	225.7	3.5	4.1	5.2	6.0	7.9	9.1	10.3	11.9	13.6	16.7	16.7	19.3	20.5	23.6
250	250.0	250.8	3.9	4.5	5.9	6.8	8.7	10.1	11.5	13.3	15.1	17.4	18.6	21.4	22.7	26.1
280	280.0	280.9	4.4	5.1	6.6	7.6	9.8	11.5	12.9	14.9	16.9	19.5				
315	315.0	316.0	5.0	5.8	7.4	8.6	11.0	12.7	14.5	16.7	19.0	21.9				
355	355.0	356.0	5.3	6.5	8.4	9.7	12.4	14.3	16.3	18.8	21.4	24.7				
400	400.0	401.0	6.3	7.3	9.4	10.9	14.0	16.1	18.4	21.2	24.1	27.6				
450	450.0	451.0	7.1	8.2	10.6	12.2	15.7	18.1	20.7	23.9		1				
500	500.0	501.0	7.9	9.1	11.8	13.6	17.4	20.1	22.9	26.5						
550	560.0	561.0	8.8	10.2	13.2	15.2	19.5	22.5								
630	630.0	631.0	10.0	11.5	14.8	17.1	21.9	25.3								

PROJECT NO: ORTDM SCMU 14-21/22 APPOINTMENT OF SERVICE PROVIDER FOR SUPPLY AND DELIVERY OF PLUMBING MATERIALS AND EQUIPMENTS IN KSD REGION FOR 36 MONTHS

3.2 PIPES: PART II: MPVC

MPVC pressure pipes shall be manufactured in accordance with the requirements of Jaswic specification No. R55. The factory shall be accredited in accordance with ISO 9002. The standard effective length shall be 6 metres which shall exclude the integral rubber ring joint. Outside diameters listed, are constant for all classes of a given size and shall be measured on the barrel of the pipe. There shall be six classes as shown in Table 3.2.1 (the required class will be specified by the engineer):

Table 3.2.1 Classes of MPVC pipe

Class	Maximum working pressure at 25° C							
	kPa	Head of water (m)						
6	600	60						
9	900	90						
12	1200	120						
16	1600	160						
20	2000	200						
25	2500	250						

Nominal sizes shall be as shown in Table 3.2.2 (the required size will be specified by the Engineer):

Table 3.2.2: Nominal sizes and wall thickness for MPVC pipes.

Nominal	ominal Size Diameter (mm) (mm)		Wall Thickness (mm)												
Size															
(mm)															
			Class 6		Class 9		Class 12		Class 16		Class 20		Class 25		
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	
50	50.0	50.2	1.5	1.7	1.5	1.7	1.7	1.9	2.2	2.4	2.7	3.0	3.3	3.6	
63	63.0	63.2	1.5	1.7	1.6	1.8	2.1	2.3	2.7	3.0	3.4	3.8	4.1	4.5	
75	75.0	75.3	1.5	1.7	1.9	2.1	2.5	2.8	3.2	3.5	4.0	4.4	4.9	5.4	
90	90.0	90.3	1.8	2.0	2.2	2.4	3.0	3.3	3.9	4.3	4.8	5.3	5.9	6.5	
110	110.0	110.4	2.2	2.4	2.7	3.0	3.6	4.0	4.7	5.2	5.8	6.4	7.2	7.9	
122	122.0	122.3	2.4	2.6	3.0	3.3	4.0	4.4	5.2	5.7	6.5	7.2	8.0	8.8	
125	125.0	125.4	2.5	2.8	3.1	3.4	4.1	4.5	5.4	6.0	6.6	7.3	8.2	9.0	
140	140.0	140.5	2.8	3.1	3.5	3.9	4.6	5.1	6.0	6.6	7.4	8.1	9.1	10.0	
160	160.0	160.5	3.2	3.5	4.0	4.4	5.2	5.7	6.9	7.6	8.5	9.4	10.4	11.5	
177	177.0	177.6	3.5	3.9	4.4	4.8	5.8	6.4	7.7	8.5	9.4	10.3	11.5	12.7	
180	180.0	180.6	3.6	4.0	4.4	4.9	5.9	6.5	7.8	8.6	9.5	10.5	11.7	12.9	
200	200.0	200.6	3.9	4.3	4.9	5.4	6.5	7.2	8.6	9.5	10.6	11.7	13.0	14.3	
225	225.0	225.7	4.4	4.9	5.5	6.1	7.3	8.0	9.6	10.6	11.9	13.1	14.7	16.2	
250	250.0	250.8	4.9	5.4	6.1	6.7	8.1	8.9	10.7	11.8	13.2	14.5	16.3	17.9	
280	280.0	280.9	5.5	6.1	6.9	7.6	9.1	10.0	12.0	13.2	14.8	16.3	18.2	20.0	
315	315.0	316.0	6.2	6.8	7.7	8.5	10.2	11.2	13.4	14.8	16.6	18.3			
355	355.0	356.0	7.0	7.7	8.7	9.6	11.5	12.7	15.2	16.7	18.7	20.6			
400	400.0	401.0	7.8	8.6	9.8	10.8	12.9	14.2	17.1	18.8	21.1	23.2			
450	450.0	451.0	8.9	9.8	11.0	12.1	14.6	16.1	19.2	21.1	23.7	26.1			
500	500.0	501.0	9.8	10.8	12.2	13.4	16.2	17.8	21.3	23.4	26.4	29.0			
550	550.0	551.0	11.0	12.1	13.5	12.1	17.8	19.6	23.4	25.7					
630	630.0	631.0	12.5	13.8	15.4	16.9	20.4	22.5	26.9	29.6					

PROJECT NO: ORTDM SCMU 14-21/22 APPOINTMENT OF SERVICE PROVIDER FOR SUPPLY AND DELIVERY OF PLUMBING MATERIALS AND EQUIPMENTS IN KSD REGION FOR 36 MONTHS

SECTION 4: DESIGN CONSIDERATIONS

4.1 CLASSIFICATION: PART I: uPVC

4.1.1 Pipes of Nominal Diameter up to 630 mm

Pipes of nominal diameter up to 630 mm are classified according to the maximum working pressure at 25 degrees C as given in Table 3.1.1.

The design engineer, who is qualified to judge the conditions of laying and operational suitability of the pipes, must decide the class of pipe to be used, in relation to the hydraulic design pressure (which must include surge overpressure) and other conditions of laying and operation he has determined.

The Engineer shall also take into account the effect of all possible external loads.

4.1.2 Couplings

The coupling shall form an integral part of the pipe and each pipe shall have one plain end and one socket-end. At the socket-end the joint shall be integrally moulded into the pipe. In order to retain the same hoop stress after belling the pipe wall shall be thickened accordingly in the vicinity of the joint. The wall thickness shall conform to the appropriate values given in Table 3.1.2 and the wall thickness of integral pipe-end sockets shall not be less than 1,6 mm or the value obtained from the following formula, whichever is the greater:

e (mm) = pd/(2S-p) where: d is the average inside diameter of the main body of the socket, in millimetres;

S is the design stress for uPVC pipes in kilopascals and shall be 10 000 kPa;

p is the numerical value of the maximum working pressure of the pipe of which the socket forms a part, in kilopascals.

The rubber seal ring must be designed to ensure a watertight joint under low or high pressure operation. It must be a precision injection moulded ring, manufactured to the requirements of SABS 974 and it must be factory fitted with a plastic retaining ring.

4.1.3 Design Stress

A design stress of 10 MPa for Pipe sizes up to and including 90 mm and a design stress of 12,5 MPa for pipe sizes of 110 mm and larger must be used to calculate the wall thickness, based on a 50 year strength of at least 25 MPa, giving a minimum safety factor of 2.5 and 2.0 respectively.

4.1.4 Resistance to Hydrostatic Pressure (ISO /DIS 4422 Part 2)

When tested in accordance with ISO 1167, using the combinations of test temperatures and induced stresses given in Table 4.1.4; the pipe shall not fail in less than the time specified.

2 Table 4.1.4: Resistance of uPVC pipes to hydrostatic pressure

Test Temperature degrees C	Induced Stress MPa	Time h
20 20 20	42 35 32	1 100 1000
60	12.5	1000

4. CLASSIFICATION: PART II: MPVC

4.2.1 Pipes of Nominal Diameter up to 630 mm

Pipes of nominal diameter up to 630 mm are classified according to the maximum working pressure at 25 degrees C as given in Table 3.2.1.

The design engineer, who is qualified to judge the conditions of laying and operational suitability of the pipes, must decide the class of pipe to be used, in relation to the hydraulic design pressure (which must include surge overpressure) and other conditions of laying and operation he has determined.

The Engineer shall also take into account the effect of all possible external loads.

4.2.2 Couplings

The coupling shall form an integral part of the pipe and each pipe shall have one plain end and one socket-end. At the socket-end the joint shall be integrally moulded into the pipe. In order to retain the same hoop stress after belling the pipe wall shall be thickened accordingly in the vicinity of the joint. The wall thickness shall conform to the appropriate values given in Table 3.2.2 and the wall thickness of integral pipe-end sockets shall not be less than 1,5 mm or the value obtained from the following formula, whichever is the greater:

e (mm) = pd/(2S-p) where

d is the average inside diameter of the main body of the socket, in millimeters;

S is the design stress for MPVC pipes in kilopascals and shall be 18 000 kiloPascals;

p is the numerical value of the maximum working pressure of the pipe of which the socket forms a part, in kilopascals.

The rubber seal ring must be designed to ensure a watertight joint under low or high pressure operation. It must be a precision injection moulded ring, manufactured to the requirements of SABS 974 and it must be factory fitted with a plastic retaining ring.

4.2.3 Design Stress

A design stress of 18 MPa must be used to calculate the wall thickness, based on a 50 year strength of at least 25 MPa, giving a safety factor of 1,4.

4.2.4 Resistance to Hydrostatic Pressure (ISO /DIS 4422 Part 2)

When tested in accordance with ISO 1167, using the combinations of test temperatures and induced stresses given in Table 4.2.4, the pipe shall not fail in less than the time given. When a pipe is tested to faillure at 20□C or 60□C (at a time longer than 1000 h) the mode of failure shall be of a ductile nature with signs of swelling and stress whitening. (JASWIC R 55/1994, SABS 966 Part II - Draft Specification).

PROJECT NO: ORTDM SCMU 14-21/22 APPOINTMENT OF SERVICE PROVIDER FOR SUPPLY AND DELIVERY OF PLUMBING MATERIALS AND EQUIPMENTS IN KSD REGION FOR 36 MONTHS

Table 4.2.4 Resistance of pipes to hydrostatic pressure

Test Temperature degrees C	Induced Stress MPa	Time h
20	40	1
20	35	100
20	32	1000
60	12.5	1000

4.3 PIPE DESIGN

4.3.1 General

Buried pipelines carrying water under pressure are subjected to two main categories of loadings:

- (a) Internal pressures consisting of the known operating pressures (positive and negative) and water hammer overpressures and is dealt with by hydraulic design.
- (b) External loadings which include the mass of the backfill above the pipe and any vertical moving load, and is dealt with by the structural design.

4.3.2 Dimensions

The nominal internal diameter, external diameter, wall thickness of pipes and tolerances shall be in accordance with Tables 3.1.2 and 3.2.2 of this Specification. The effective length of the pipe, excluding the integral socket joint, shall be 6 meters unless otherwise ordered by the Employer.

4.3.3 General Appearance and Finish

Both the inner and outer surfaces of pipes shall be smooth and free from grooving, blistering and other deleterious defects. A plain end of a pipe shall be clean cut and shall be externally chamfered (at an angle of approximately 15 degrees) to half the wall thickness of the pipe. Both ends of a pipe shall be free from chips and rough edges and shall be square to the axis of the pipe.

4.3.4 Hydraulic data

Hydraulic data shall be based upon the standard Colebrook-White formula. Colebrook White's effective surface roughness k shall be as follows to provide for all local head-losses:

PROJECT NO: ORTDM SCMU 14-21/22 APPOINTMENT OF SERVICE PROVIDER FOR SUPPLY AND DELIVERY OF PLUMBING MATERIALS AND EQUIPMENTS IN KSD REGION FOR 36 MONTHS

- k = 0,025 mm for discharge mains with a relatively small number of fittings;
- k = 0,100 mm for distribution pipelines with all types of reticulation fittings; and economic flow velocities shall be between 1 m/s and 3 m/s.

Flow velocities in excess of 1 metre / second can lead to the formation of water hammer conditions and the relevant calculations should be made in order to determine the suitability of the selected pipe pressure class.

4.3.5 Marking

The following information shall appear in legible and durable printing on each pipe at intervals of lengths not exceeding 2 m:

- (a) The manufacturer's name or trade mark
- (b) material uPVC or MPVC as applicable
- (c) the class of pipe
- (d) the nominal size of the pipe
- (e) the batch identification

PROJECT NO: ORTDM SCMU 14-21/22 APPOINTMENT OF SERVICE PROVIDER FOR SUPPLY AND DELIVERY OF PLUMBING MATERIALS AND **EQUIPMENTS IN KSD REGION FOR 36 MONTHS**

OR TAMBO DISTRICT MUNICIPALITY

PROJECT NO: ORTDM SCMU 14-21/22

APPOINTMENT OF SERVICE PROVIDER FOR SUPPLY AND DELIVERY OF PLUMBING MATERIALS AND EQUIPMENTS IN KSD REGION FOR 36 MONTHS

Closing Date: 18 MARCH 2022

C3.2 SCOPE OF WORKS

1. INTRODUCTION

The provision of water services is the responsibility of Water Service Authority. The Water Services Act (No. 108 of 1997) has also defined a Water Services Provider as an institution who is responsible for the operation and maintenance of the water services infrastructure that supplies water to the end consumer.

O R Tambo district Municipality (ORTDM) is the Water Service Authority and a Water Service Provider; this is in terms of the Municipal Structures Act 118 of 1998. In order to fulfil this responsibility, ORTDM is required to repair leaking or burst water pipes, unblock sewers and any other related tasks that require planned and unplanned action.

In responding to this, the District is putting out these terms of reference to acquire services from Providers with necessary skills and experience to supply and deliver Plumbing material for a period of 36 months.

2. THE PURPOSE OF THE PROJECT

The purpose of the project is to acquire services of a competent supplier or service provider that will supply and deliver plumbing material and equipment in order to assist the municipality in rendering operation and maintenance of water services function within its jurisdiction. The supplier will be located within King Sabatha Dalindyebo LM. The appointment will be for the period of 36 months and this will be based on a call down system/ method. This means that successful bidder/s will be requested by the municipality to supply the plumbing materials and equipment as and when required by the municipality through an official purchase order.

3. PROJECT BRIEF

The services that are required will be for the 36 months period at an agreed rate and will be based on the call down system/ method (services to be rendered when required). A mechanism in this regard will be developed on the communication and consultation with the provider when the necessary services are required. The suppliers are required to supply SABS or ISO approved materials and failure to comply will result to discontinuation of the contract. OR Tambo District Municipality will not be held liable for any Health & Safety related accidents or incidents as a result of negligence on the part of the successful Bidder. OR Tambo District Municipality reserves the right to cancel the contract at any stage should the successful Bidder not comply

with what is deemed reasonable performance efficiency. No work may start without an official order notification for supply that will be required from the service provider. (Except after hours – official order to be provided within 3 working days). The suppliers are expected to carry a stock in their stores with a minimum stock levels of 5 days. The municipality will on an ad-hoc basis visit the stores of the successful suppliers to ensure compliance with this requirement. In case the supplier has ran out of stock or is required to supply specialized fittings it will be required of him to supply the required material or fittings within 36 hours and failure to meet that time, the municipality reserve the right to source the supply by itself to any other supplier.

5. METHODOLOGY

The Supplier or Service Providers must demonstrate the capacity to execute the required service. The company to show how the daily reporting are will be handled, what evidence will accompany the invoicing showing work done. Staff that will be involved in executing the service and their roles, the controls that will be put in place to ensure the value for money.

6. PROJECT MANAGEMENT

The project will be managed by the General Manager of OR Tambo District Municipality. The service provider is expected to provide a designated individual to perform the project management task and contractual management. The person should demonstrate the necessary capability to carry the task including competency in word and excel spreadsheet.

7. DELIVERABLES/OUTPUTS

The key deliverable/ output for the project are the supply and delivery of plumbing material and equipment for operation and maintenance of water services infrastructure within OR Tambo District Municipality as and when required.

SUBMISSION OF TENDERS

Please submit tenders before 18 MARCH 2022

Tenders must be placed in a sealed envelope and clearly marked: "APPOINTMENT OF SERVICE PROVIDER FOR THE SUPPLY AND DELIVERY OF PLUMBING AND EQUIPMENTS IN KSD REGION IN KSD REGION FOR 36 MONTHS" and placed in the tender box, ground floor, OR Tambo District Municipality, Nelson Mandela Drive, OR Tambo House, Myezo, Umthatha, 5099 or to be posted to reach the Municipal manager, Private Bag X6043, Mthatha 5099 by no later than 18 MARCH 2022 when tenders will be opened publically in the venue to be announced.

PLEASE NOTE THE FOLLOWING:

- Tenders will be adjudicated in terms of Council's Supply Chain Management Policy.
- The Council of the O.R. Tambo District Municipality does not bind itself to accept the lowest or any tender and late tenders, tenders by fax or e-mail will not be accepted.
- An original Tax Clearance Certificates issued by SARS
- Certified copies of the original Company documents issued by register of Companies.
- Certified copies of the original green bar-coded IDs of Members or directors
- Certified Copy of the B-BBEE Certificate
- JV agreement in where applicable in CIDB format (signed and initialed on each page
- Proof of Registration with Central Supplier Database

Proof of address with municipal services not owing more than 3 moths

For any queries regarding this tender, feel free to contact the General Manager, Mr L Mashiya at telephone number 047-501-6502 during normal office hours.

OR TAMBO DISTRICT MUNICIPALITY

PROJECT NO: ORTDM SCMU 18 MARCH 2022

APPOINTMENT OF SERVICE PROVIDER FOR SUPPLY AND DELIVERY OF PLUMBING MATERIALS IN KSD REGION FOR 36 MONTHS

PART 4

C4 FINANCIAL OFFER

C.4.2 PRICING SCHEDULE

APPOINTMENT OF SERVICE PROVIDER FOR SUPPLY AND DELIVERY OF PLUMBING MATERIALS AND EQUIPMENTS FOR 36 MONTHS

ITEM NO	PAYMENT REFERENCE NO	ITEM DESCRIPTION NO	UNITY	QUANTITY	AMMOUNT TOTAL
1		HDPE PIPE			
	1.1	Supply and delivery of approved SABS or ISO rated; HDPE piping to a class 16			
	1.1	(a) 16 dia	roll	1	R
		(b) 20 dia	roll	1	R
		(c) 25 dia	roll	1	R
		(d) 32 dia	roll	1	R
		(e) 40 dia	roll	1	R
		(f) 50 dia	roll	1	R
		(g) 63 dia	30m roll	1	R
		(h) 75 dia	30m roll	1	R
		(i) 90 dia	30m roll	1	R
		(j) 110 dia	30m roll	1	R
				Subtotal	R
		Supply and delivery of approved SABS or ISO rated; HDPE piping			
	1.2	to a class 20			R
		(a) 16 dia	roll	1	R
		(b) 20 dia	roll	1	R
		(c) 25 dia	roll	1	R
		(d) 32 dia	roll	1	R
		(e) 40 dia	roll	1	R
		(f) 50 dia	roll	1	R
		(g) 63 dia	30m roll	1	R
		(h) 75 dia	30m roll	1	R
		(i) 90 dia	30m roll	1	R
		(j) 110 dia	30m roll	1	R
				Subtotal	R
	1.3	Supply and delivery of approved SABS or ISO rated; HDPE fittings: Male Adaptors (Unidelta)			
		(a) 110mm	ea	1	R
		(b) 90mm	ea	1	R
		(c) 75mm	ea	1	R
		(d) 63mm	ea	1	R

	(e) 50mm	ea	1 1	R
	(f) 40mm	ea ea	1	R
	(g) 32mm	ea	1	R
	(h) 25mm	ea	1	R
	(i) 20mm	ea ea	1	R
	(j) 15mm	ea	1	R
	<u> </u>	Ca	Subtotal	R
	Supply and delivery of approved		Subtotal	K
	SABS or ISO rated; HDPE			
	fittings: Straight Coupling			
1.4	(Unidelta)			
	(a) 110mm	ea	1	R
	(b) 90mm	ea	1	R
	(c) 75mm	ea	1	R
	(d) 63mm	ea	1	R
	(e) 50mm	ea	1	R
	(f) 40mm	ea	1	R
	(g) 32mm	ea	1	R
	(h) 25mm	ea	1	R
	(i) 20mm	ea	1	R
	(j) 15mm	ea	1	R
			Subtotal	R
	Supply and delivery of approved			
	SABS or ISO rated; HDPE			
4.5	SABS or ISO rated; HDPE fittings: Female Adaptor			
1.5	SABS or ISO rated; HDPE fittings: Female Adaptor (Unidelta)			
1.5	SABS or ISO rated; HDPE fittings: Female Adaptor (Unidelta) (a) 110mm	ea	1	R
1.5	SABS or ISO rated; HDPE fittings: Female Adaptor (Unidelta) (a) 110mm (b) 90mm	ea	1	R
1.5	SABS or ISO rated; HDPE fittings: Female Adaptor (Unidelta) (a) 110mm (b) 90mm (c) 75mm	ea	1	R R
1.5	SABS or ISO rated; HDPE fittings: Female Adaptor (Unidelta) (a) 110mm (b) 90mm (c) 75mm (d) 63mm	ea ea ea	1 1 1	R R R
1.5	SABS or ISO rated; HDPE fittings: Female Adaptor (Unidelta) (a) 110mm (b) 90mm (c) 75mm (d) 63mm (e) 50mm	ea ea ea ea	1 1 1	R R R
1.5	SABS or ISO rated; HDPE fittings: Female Adaptor (Unidelta) (a) 110mm (b) 90mm (c) 75mm (d) 63mm (e) 50mm (f) 40mm	ea ea ea ea	1 1 1 1	R R R R
1.5	SABS or ISO rated; HDPE fittings: Female Adaptor (Unidelta) (a) 110mm (b) 90mm (c) 75mm (d) 63mm (e) 50mm (f) 40mm (g) 32mm	ea ea ea ea ea	1 1 1 1 1	R R R R R
1.5	SABS or ISO rated; HDPE fittings: Female Adaptor (Unidelta) (a) 110mm (b) 90mm (c) 75mm (d) 63mm (e) 50mm (f) 40mm (g) 32mm (h) 25mm	ea ea ea ea ea ea	1 1 1 1 1 1	R R R R R R R
1.5	SABS or ISO rated; HDPE fittings: Female Adaptor (Unidelta) (a) 110mm (b) 90mm (c) 75mm (d) 63mm (e) 50mm (f) 40mm (g) 32mm (h) 25mm (i) 20mm	ea ea ea ea ea ea ea	1 1 1 1 1 1 1	R R R R R R R R
1.5	SABS or ISO rated; HDPE fittings: Female Adaptor (Unidelta) (a) 110mm (b) 90mm (c) 75mm (d) 63mm (e) 50mm (f) 40mm (g) 32mm (h) 25mm	ea ea ea ea ea ea	1 1 1 1 1 1 1 1	R R R R R R R R
1.5	SABS or ISO rated; HDPE fittings: Female Adaptor (Unidelta) (a) 110mm (b) 90mm (c) 75mm (d) 63mm (e) 50mm (f) 40mm (g) 32mm (h) 25mm (i) 20mm	ea ea ea ea ea ea ea	1 1 1 1 1 1 1	R R R R R R R R
1.5	SABS or ISO rated; HDPE fittings: Female Adaptor (Unidelta) (a) 110mm (b) 90mm (c) 75mm (d) 63mm (e) 50mm (f) 40mm (g) 32mm (h) 25mm (i) 20mm	ea ea ea ea ea ea ea	1 1 1 1 1 1 1 1	R R R R R R R R
1.5	SABS or ISO rated; HDPE fittings: Female Adaptor (Unidelta) (a) 110mm (b) 90mm (c) 75mm (d) 63mm (e) 50mm (f) 40mm (g) 32mm (h) 25mm (i) 20mm (j) 15mm Supply and delivery of approved SABS or ISO rated; HDPE	ea ea ea ea ea ea ea	1 1 1 1 1 1 1 1	R R R R R R R R
1.5	SABS or ISO rated; HDPE fittings: Female Adaptor (Unidelta) (a) 110mm (b) 90mm (c) 75mm (d) 63mm (e) 50mm (f) 40mm (g) 32mm (h) 25mm (i) 20mm (j) 15mm Supply and delivery of approved SABS or ISO rated; HDPE fittings: Tee (Unidelta)	ea ea ea ea ea ea ea	1 1 1 1 1 1 1 1 Subtotal	R R R R R R R R R
	SABS or ISO rated; HDPE fittings: Female Adaptor (Unidelta) (a) 110mm (b) 90mm (c) 75mm (d) 63mm (e) 50mm (f) 40mm (g) 32mm (h) 25mm (i) 20mm (j) 15mm Supply and delivery of approved SABS or ISO rated; HDPE fittings: Tee (Unidelta) (a) 110mm	ea ea ea ea ea ea ea	1 1 1 1 1 1 1 1	R R R R R R R R R R R R
	SABS or ISO rated; HDPE fittings: Female Adaptor (Unidelta) (a) 110mm (b) 90mm (c) 75mm (d) 63mm (e) 50mm (f) 40mm (g) 32mm (h) 25mm (i) 20mm (j) 15mm Supply and delivery of approved SABS or ISO rated; HDPE fittings: Tee (Unidelta) (a) 110mm (b) 90mm	ea ea ea ea ea ea ea	1 1 1 1 1 1 Subtotal	R R R R R R R R R R R R R R R R R R R
	SABS or ISO rated; HDPE fittings: Female Adaptor (Unidelta) (a) 110mm (b) 90mm (c) 75mm (d) 63mm (e) 50mm (f) 40mm (g) 32mm (h) 25mm (i) 20mm (j) 15mm Supply and delivery of approved SABS or ISO rated; HDPE fittings: Tee (Unidelta) (a) 110mm (b) 90mm (c) 75mm	ea	1 1 1 1 1 1 1 1 Subtotal	R R R R R R R R R R R R R R R R R R R
	SABS or ISO rated; HDPE fittings: Female Adaptor (Unidelta) (a) 110mm (b) 90mm (c) 75mm (d) 63mm (e) 50mm (f) 40mm (g) 32mm (h) 25mm (i) 20mm (j) 15mm Supply and delivery of approved SABS or ISO rated; HDPE fittings: Tee (Unidelta) (a) 110mm (b) 90mm (c) 75mm (d) 63mm	ea e	1 1 1 1 1 1 1 1 Subtotal	R R R R R R R R R R R R R R R R R R R
	SABS or ISO rated; HDPE fittings: Female Adaptor (Unidelta) (a) 110mm (b) 90mm (c) 75mm (d) 63mm (e) 50mm (f) 40mm (g) 32mm (h) 25mm (i) 20mm (j) 15mm Supply and delivery of approved SABS or ISO rated; HDPE fittings: Tee (Unidelta) (a) 110mm (b) 90mm (c) 75mm	ea e	1 1 1 1 1 1 1 1 Subtotal	R R R R R R R R R R R R R R R R R R R

		(g) 32mm	ea	1	R
		(h) 25mm	ea	1	R
		(i) 20mm	ea	1	R
		(j) 15mm	ea	1	R
				Subtotal	R
2		UPVC PIPE			
	2.1	Supply and delivery of approved SABS or ISO rated; UPVC piping class 12			
	4 .1	(a) 32 dia	6m length		R
		(a) 40 dia	6m length	1	R
		(b)50 dia	6m length	1	R
		(c) 63 dia	6m length	1	R
		(d) 75 dia	6m length	1	R
		(e) 90 dia	6m length	1	R
		(f) 110 dia	6m length	1	R
		(g) 125 dia	6m length	1	R
		(h) 160 dia	6m length	1	R
		(i) 200 dia	6m length	1	R
		(j) 315 dia	6m length	1	R
		(k) 400 dia	6m length	1	R
		(I) 405 dia	6m length	1	R
		(m) 455 dia	6m length	1	R
		(n) 605 dia	6m length	1	R
		(k) 800 dia	6m length	1	R
<u></u>				Subtotal	R
	2.2	Supply and delivery of approved SABS or ISO rated; UPVC piping class 16			
		(a) 32 dia	6m length	1	R
		(b) 40 dia	6m length	1	R
		(c) 50 dia	6m length	1	R
		(d) 63 dia	6m length	1	R
		(e) 75 dia	6m length	1	R
		(f) 90 dia	6m length	1	R
		(g) 110 dia	6m length	1	R
		(h) 125 dia	6m length	1	R
		(i) 140 dia	6m length	1	R
		(j) 160 dia	6m length	1	R
		(k) 200 dia	6m length	1	R
		(l) 250 dia	6m length	1	R
		(m) 315 dia	6m length	1	R
		(n) 355 dia	6m length	1	R

		(o) 400 dia	6m length	1	R
		(p) 405 dia	6m length	1	R
		(Q) 605 dia	6m length	1	R
		(R) 800 dia	6m length	1	R
			<u> </u>	Subtotal	R
	2.2	Supply and delivery of approved SABS or ISO rated; UPVC piping class 20			
		(a) 40 dia	6m length	1	R
		(b)50 dia	6m length	1	R
		(c) 63 dia	6m length	1	R
		(d) 75 dia	6m length	1	R
		(e) 90 dia	6m length	1	R
		(f) 110 dia	6m length	1	R
		(g) 125 dia	6m length	1	R
		(h) 160 dia	6m length	1	R
		(i) 200 dia	6m length	1	R
		(j) 315 dia	6m length	1	R
		(k) 400 dia	6m length	1	R
		(h) 160 dia	6m length	1	R
		(i) 200 dia	6m length	1	R
		(j) 315 dia	6m length	1	R
		(k) 400 dia	6m length	1	R
		(I) 605 dia	6m length	1	R
		(m) 800 dia	6m length	1	R
·				Subtotal	R
		MPVC PIPE			
	3.2	Supply and delivery of approved SABS or ISO rated; MPVC piping class 25			
		(a) 40 dia	6m length	1	R
		(b)50 dia	6m length	1	R
		(c) 63 dia	6m length	1	R
		(d) 75 dia	6m length	1	R
		(e) 90 dia	6m length	1	R
		(f) 110 dia	6m length	1	R
		(g) 125 dia	6m length	1	R
		(h) 160 dia	6m length	1	R
		(i) 200 dia	6m length	1	R
		(j) 315 dia	6m length	1	R
		(k) 400 dia	6m length	1	R
ı		<u> </u>	<u> </u>	Subtotal	R
4		Plasson Fitings			

	4.1.	SINGLE SADDLES (PN 16)			
		Supply and delivery of approved SABS or ISO rated; saddles blue and black coding			
		(f) 110 x 2"dia	ea	1	R
		(g) 125 x 2" dia	ea	1	R
		(h) 160 x 2"dia	ea	1	R
		(i) 200 x 2"dia	ea	1	R
				Subtotal	R
		Supply and delivery of Plasson Compresion fittings SABS or ISO approved; blue and black coding for saddles			
		SINGLE SADDLES (PN 16)			R
	4.1.2	(a) 20 x 1 "	ea	1	R
		(b) 25 x 1"	ea	1	R
		(c) 33 x 1"	ea	1	R
		(d) 50 x 1"	ea	1	R
		(e) 63 x 1"	ea	1	R
		(g) 75 x 1"	ea	1	R
		(h) 90 x 1"	ea	1	R
		(i) 110 x 1"	ea	1	R
		(j) 125 x 1"	ea	1	R
		(k) 160 x 1"	ea	1	R
		(I) 200 x 1"	ea	1	R
				Subtotal	R
	4.1.3	DOUBLE SADDLES (PN 16)			
		Supply and delivery of approved SABS or ISO rated; saddles blue and black coding			
		(a) 75 dia	ea	1	R
		(b) 90 dia	ea	1	R
		(c) 110 dia	ea	1	R
				Subtotal	R
5	5.1.1	COMPRESSION FEETINGS (PN 16)			
		Supply and delivery of Plasson Compresion Couplings SABS or ISO approved; blue and black coding			
		Plasson straight coupling			
		(a) 20 dia	ea	1	R
		(b) 25 dia	ea	1	R
		(c) 32 dia	ea	1	R
		(d) 40 dia	ea	1	R

	(e) 50 dia	ea	1	R
	(f) 63 dia	ea	1	R
	(g) 90 dia	ea	1	R
	(h) 110 dia	ea	1	R
	(i) 160 dia	ea	1	R
1			Subtotal	R
	Supply and delivery of Plasson			
	Compression fittings SABS or			
5.1.2	ISO approved; blue and black			
	coding for Plasson Female			
	Adapters (a) 20×15 dia		1	D
		ea	1	R R
	(b) 20 x 20 dia (c) 25×20 dia	ea	-	R
	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	ea	1	
	(d) 25 x 25 dia (e) 32×25 dia	ea	1	R
	(f) 32 x 32 dia	ea	1	R R
	(g) 32×25 dia	ea	1	
	(h) 40×32 dia	ea	1	R
		ea	1	R
	(i) 40 x 40 dia	ea	1	R
	(j) 50 x 50 dia	ea	1	R
	(k) 50×75 dia	ea	1	R
	(l) 50×90 dia	ea	1	R
	(m) 50×110 dia	ea	1	R
	(n) 63 X 63 dia	ea	1	R
	(o) 75 X 75 dia	ea	1	R
	(p) 90 X 90 dia	ea	1	R
	(q) 100×63 dia	ea	1	R
	(r) 100×50 dia	ea	1	R
	(s) 100×40 dia	ea	1	R
	(t) 100×32 dia	ea	1	R
	(u) 100×25 dia	ea	1	R
	(v) 100×20 dia	ea	1	R
	(w) 110 X 90 dia	ea	1	R
	(x) 110 X 110 dia	ea	1	R
<u> </u>			Subtotal	R
	Supply and delivery of Plasson			
5.1.3	Compression fittings SABS or ISO approved; blue and black			
5.1.3	coding for Plasson Male			
	Adapters			
	(a) 20 x 20 dia	ea	1	R
	(b) 25 x 20 dia	ea	1	R
	(c) 25 X 25 dia	ea	1	R
	(d) 32 x 25 dia	ea	1	R

	(e) 32 X 32 dia	ea	1	R
	(f) 40 x 32 dia	ea	1	R
	(g) 40 X 40 dia	ea	1	R
	(h) 50 x 40 dia	ea	1	R
	(i) 50 X 50 dia	ea	1	R
	(j) 50×75 dia	ea	1	R
	(k) 50×90 dia	ea	1	R
	(l) 50×110 dia	ea	1	R
	(m) 63 x 50 dia	ea	1	R
	(n) 63 X 63 dia	ea	1	R
	(o) 75 X 63 dia	ea	1	R
	(p) 75 X 75 dia	ea	1	R
	(q) 90 X 75 dia	ea	1	R
	(r) 90 X 90 dia	ea	1	R
	(s) 100×63 dia	ea	1	R
	(t) 100×50 dia	ea	1	R
	(u) 100×40 dia	ea	1	R
	(v) 100×32 dia	ea	1	R
	(w) 100×25 dia	ea	1	R
	(x) 100×20 dia	ea	1	R
	(y) 110 X 90 dia	ea	1	R
	(z) 110 X 110 dia	ea	1	R
			Subtotal	R
	Supply and delivery of Plasson			
1	Compression fittings SARS or			
- 4 4	Compression fittings SABS or			
5.1.4	ISO approved; blue and black			
5.1.4	ISO approved; blue and black coding for Plasson Reducing			
5.1.4	ISO approved; blue and black coding for Plasson Reducing Coupling	ea	1	R
5.1.4	ISO approved; blue and black coding for Plasson Reducing Coupling (a) 20 - 16 dia	ea ea	1	R R
5.1.4	ISO approved; blue and black coding for Plasson Reducing Coupling (a) 20 - 16 dia (b) 25 - 20 dia	ea	1	R
5.1.4	ISO approved; blue and black coding for Plasson Reducing Coupling (a) 20 - 16 dia (b) 25 - 20 dia (c) 32 - 20 dia	ea ea	1	R R
5.1.4	ISO approved; blue and black coding for Plasson Reducing Coupling (a) 20 - 16 dia (b) 25 - 20 dia (c) 32 - 20 dia (d) 32 - 25 dia	ea ea ea	1 1 1	R R R
5.1.4	ISO approved; blue and black coding for Plasson Reducing Coupling (a) 20 - 16 dia (b) 25 - 20 dia (c) 32 - 20 dia (d) 32 - 25 dia (e) 40 - 25 dia	ea ea ea ea	1 1 1	R R R
5.1.4	ISO approved; blue and black coding for Plasson Reducing Coupling (a) 20 - 16 dia (b) 25 - 20 dia (c) 32 - 20 dia (d) 32 - 25 dia (e) 40 - 25 dia (d) 40 - 32 dia	ea ea ea ea	1 1 1 1	R R R R
5.1.4	ISO approved; blue and black coding for Plasson Reducing Coupling (a) 20 - 16 dia (b) 25 - 20 dia (c) 32 - 20 dia (d) 32 - 25 dia (e) 40 - 25 dia (d) 40 - 32 dia (e) 50 - 32 dia	ea ea ea ea ea	1 1 1 1 1	R R R R R
5.1.4	ISO approved; blue and black coding for Plasson Reducing Coupling (a) 20 - 16 dia (b) 25 - 20 dia (c) 32 - 20 dia (d) 32 - 25 dia (e) 40 - 25 dia (d) 40 - 32 dia (e) 50 - 32 dia (f) 50 - 40 dia	ea ea ea ea ea ea	1 1 1 1 1 1	R R R R R R R
5.1.4	ISO approved; blue and black coding for Plasson Reducing Coupling (a) 20 - 16 dia (b) 25 - 20 dia (c) 32 - 20 dia (d) 32 - 25 dia (e) 40 - 25 dia (d) 40 - 32 dia (e) 50 - 32 dia (f) 50 - 40 dia (g) 63 - 40 dia	ea ea ea ea ea ea ea	1 1 1 1 1 1 1	R R R R R R R R
5.1.4	ISO approved; blue and black coding for Plasson Reducing Coupling (a) 20 - 16 dia (b) 25 - 20 dia (c) 32 - 20 dia (d) 32 - 25 dia (e) 40 - 25 dia (d) 40 - 32 dia (e) 50 - 32 dia (f) 50 - 40 dia (g) 63 - 40 dia (h) 63 - 50 dia	ea ea ea ea ea ea ea	1 1 1 1 1 1 1 1	R R R R R R R R R R
5.1.4	ISO approved; blue and black coding for Plasson Reducing Coupling (a) 20 - 16 dia (b) 25 - 20 dia (c) 32 - 20 dia (d) 32 - 25 dia (e) 40 - 25 dia (d) 40 - 32 dia (e) 50 - 32 dia (f) 50 - 40 dia (g) 63 - 40 dia (h) 63 - 50 dia (i) 75 - 50 dia	ea e	1 1 1 1 1 1 1 1	R R R R R R R R R R R
5.1.4	ISO approved; blue and black coding for Plasson Reducing Coupling (a) 20 - 16 dia (b) 25 - 20 dia (c) 32 - 20 dia (d) 32 - 25 dia (e) 40 - 25 dia (d) 40 - 32 dia (e) 50 - 32 dia (f) 50 - 40 dia (g) 63 - 40 dia (h) 63 - 50 dia (i) 75 - 63 dia	ea	1 1 1 1 1 1 1 1 1	R R R R R R R R R R R
5.1.4	ISO approved; blue and black coding for Plasson Reducing Coupling (a) 20 - 16 dia (b) 25 - 20 dia (c) 32 - 20 dia (d) 32 - 25 dia (e) 40 - 25 dia (d) 40 - 32 dia (e) 50 - 32 dia (f) 50 - 40 dia (g) 63 - 40 dia (h) 63 - 50 dia (i) 75 - 50 dia (k) 90 - 63 dia	ea e	1 1 1 1 1 1 1 1 1 1	R R R R R R R R R R R R R
5.1.4	ISO approved; blue and black coding for Plasson Reducing Coupling (a) 20 - 16 dia (b) 25 - 20 dia (c) 32 - 20 dia (d) 32 - 25 dia (e) 40 - 25 dia (d) 40 - 32 dia (e) 50 - 32 dia (f) 50 - 40 dia (g) 63 - 40 dia (h) 63 - 50 dia (i) 75 - 50 dia (k) 90 - 63 dia (l) 90 - 75 dia	ea e	1 1 1 1 1 1 1 1 1 1	R R R R R R R R R R R R R R R
5.1.4	ISO approved; blue and black coding for Plasson Reducing Coupling (a) 20 - 16 dia (b) 25 - 20 dia (c) 32 - 20 dia (d) 32 - 25 dia (e) 40 - 25 dia (d) 40 - 32 dia (e) 50 - 32 dia (f) 50 - 40 dia (g) 63 - 40 dia (h) 63 - 50 dia (i) 75 - 50 dia (k) 90 - 63 dia	ea e	1 1 1 1 1 1 1 1 1 1	R R R R R R R R R R R R R

5.1.5	Supply and delivery of Plasson fittings SABS or ISO approved : Plasson Reducing Tee			
	(b) 25 x 20 dia	ea	1	R
	(c) 32 x 25 dia	ea	1	R
	(d) 40 x 32 dia	ea	1	R
	(e) 50 x 40 dia	ea	1	R
	(f) 63 x 50 dia	ea	1	R
	(g) 75 x 63 dia	ea	1	R
	(h) 90 x 75 dia	ea	1	R
	(i) 110 x 90 dia	ea	1	R
		Subt	otal	R
5.1.6	Supply and delivery of Plasson 90° Equal Elbow SABS or ISO approved; blue and black coding			
	(a) 20 dia	ea	1	R
	(b) 25 dia	ea	1	R
	(c) 32 dia	ea	1	R
	(d) 40 dia	ea	1	R
	(e) 50 dia	ea	1	R
	(f) 63 dia	ea	1	R
	(g) 75 dia	ea	1	R
	(h) 90 dia	ea	1	R
	(i) 110 dia	ea	1	R
		Subt	otal	R
5.1.7	Supply and delivery of VJ Coupling SABS or ISO approved			
	(a) 600 - 620mm	ea	1	R
	(b) 550-570mm	ea	1	R
	(c) 450 - 470mm	ea	1	R
	(d) 250 - 264mm	ea	1	R
	(e) 315 - 328mm	ea	1	R
	(f) 550 - 630mm	ea	1	R
	(g) 426 - 436mm	ea	1	R
	(h) 344 - 360mm	ea	1	R
	(i) 109 - 128mm	ea	1	R
	(j) 98 - 118mm	ea	1	R
	(k) 74 - 90mm	ea	1	R
	(I) 72 - 85mm	ea	1	R
	(m) 235 - 252mm	ea	1	R
	(n) 160 - 170mm	ea	1	R
	(o) 40 - 50mm	ea	1	R
	(p) 88 - 103mm	ea	1	R
	(q) 132 - 154mm	ea	1	R
	(r) 159 - 182mm	ea	1	R

	(s) 150 - 170mm	ea	1	R
	(v) 577 - 587mm	ea	1	R
	(w) .(a) 600 - 614mm	ea	1	R
5.1.7.1	(b) 59-73mm	ea	1	R
	(c)72-85mm	ea	1	R
	(d) 74-90mm	ea	1	R
	(e) 88-103mm	ea	1	R
	(g) 108-128mm	ea	1	R
	(k) 192-209mm	ea	1	R
	(I) 218-235mm	ea	1	R
	(m) 235-252mm	ea	1	R
	(n) 271-289mm	ea	1	R
	(o) 286-304mm	ea	1	R
	(p) 302-318mm	ea	1	R
	(g) 315-332m	ea	1	R
	(r)334-350mm	ea	1	R
	(s) 344-360mm	ea	1	R
	(t) 374-391mm	ea	1	R
	(u) 391-407mm	ea	1	R
	(v) 417-437mm	ea	1	R
	(w) 444-460mm	ea	1	R
	(x) 477-493mm	ea	1	R
	(y) 494-510mm	ea	1	R
	(z). (a) 518-534mm	ea	1	R
5.1.7.2	(b) 556-572mm	ea	1	R
	(c) 600-614mm	ea	1	R
	(d) 630-650mm	ea	1	R
	(e) 700-74mm	ea	1	R
	(f) 700-784mm	ea	1	R
	(g) 700-816mm	ea	1	R
	•	Subt	otal	R
	Supply and delivery of Stepped VJ Coupling			
5.1.8	SABS or ISO approved (a) C368:C401109 - 188mm			Г.
	(a) C368:C401109 - 188mm	ea	1	R
	(c) 150 - 170mm	ea	1	R
	, ,	ea	1	R
	(d) 48-58x72-85mm (e) 59-73x88-103mm	ea	1	R
	()	ea	1	R
	(f) 59-78x108-128mm (g) 72-85x88-103	ea	1	R
	(g) 72-85x88-103 (h) 72-85x108-128mm	ea	1	R
	(i) 74-90x88-103mm	ea	1	R
		ea	1	R
	(j) 74-90x108-128mm	ea	1	R
	(k) 88-103x98-118mm (l) 88-103x132-154mm	ea	1	R
	(1) 00-103x132-134111111	ea	1	R

	(m) 98-118x108-128mm	ea	1	R
	(n) 108-128x132-154mm	ea	1	R
	(o) 132-154x159-182mm	ea	1	R
	(p) 132-154x192-209mm	ea	1	R
	(q) 150-170x192-209mm	ea	1	R
	(r) 150-170x192-209mm	ea	1	R
	(s) 159-182x192-209mm	ea	1	R
	(t) 159-182x218-235mm	ea	1	R
	(u) 180-194x192-209mm	ea	1	R
	(v) 180-194x218-235mm	ea	1	R
	(w) 192-209x215-235mm	ea	1	R
5.1.8.1	(a) 205-222x235-252mm	ea	1	R
	(b) 218-235x260-274mm	ea	1	R
	(c) 218-235x271-289mm	ea	1	R
	(d) 235-252x250-267mm	ea	1	R
	(e) 235-252x271-289mm	ea	1	R
	(f) 235-252x315x332mm	ea	1	R
	(g) 250-267x286-304mm	ea	1	R
	(h) 250-267x315-332mm	ea	1	R
	(i) 260-274x315-332mm	ea	1	R
	(j) 271-289x315-332mm	ea	1	R
	(k) 286-304x302-318mm	ea	1	R
	(I) 286-304x315-332mm	ea	1	R
	(m) 302-318x315-332mm	ea	1	R
	(n) 302-318x344-360mm	ea	1	R
	(o) 315-332x374-360mm	ea	1	R
	(p) 315-332x374-391mm	ea	1	R
	(q) 344-360x391-407mm	ea	1	R
	(c) 344-360x417-437mm	ea	1	R
	(s) 344-360x417-437mm	ea	1	R
	(o) 344-360x444-460mm	ea	1	R
	(t) 391-407x417-437mm	ea	1	R
	(u) 391-407x444-460mm	ea	1	R
	(v) 391-407x494-510mm	ea	1	R
	(a) 401-417x444-460mm	ea	1	R
	(b) 417-437x444-460mm	ea	1	R
	(c)417-437x494-510mm	ea	1	R
	(d) 444-460x458-474mm	ea	1	R
	(e)444-460x494-510mm	ea	1	R
	(f) 494-510x528-534mm	ea	1	R
	(g) 600-614x611-624mm	ea	1	R
	(h) 711-738mm	ea	1	R
		Subt	otal	R
5.1.9	Supply and delivery of Short Collars Class 16 SABS or ISO approved			

	ı	T	1	1	
		(a) 800mm	ea	1	R
		(b) 600mm	ea	1	R
		© 450mm	ea	1	R
		(d) 400mm	ea	1	R
		(e) 350mm	ea	1	R
		(f) 300mm	ea	1	R
		(g) 250mm	ea	1	R
		(h) 150mm	ea	1	R
		(j) 140mm	ea	1	R
		(k) 125mm	ea	1	R
		(I)100mm	ea	1	R
		(m) 90mm	ea	1	R
		(n) 50mm	ea	1	R
		(o) 63mm	ea	1	R
		(p) 50mm	ea	1	R
			Subt	otal	R
		Supply and delivery of Plasson Male End plug			
	5.1.10	SABS or ISO approved			
	3.1.10	(a) 20 dia	ea	1	R
		(b) 25 dia	ea	1	R
		(c) 32 dia		1	R
		(d) 40 dia	ea	1	R
			ea	1	R
		(e) 50 dia (f) 63 dia	ea	1	R
			ea	1	R
		(g) 75 dia	ea		R
		(h) 90 dia	ea	1	R
		(i) 110 dia	ea		
	1	T	Subt	otai	R
6		PVC REPAIR FITTINGS			
		Supply and delivery of PVC Repair Couplings			
	6.1.1	SABS or ISO approved; blue and black coding			
		(a) 40 mm dia	ea	1	R
		(b) 50mm dia	ea	1	R
		(c) 63 dia	ea	1	R
		(b) 75 dia	ea	1	R
		(d) 90 dia	ea	1	R
		(e) 110 dia	ea	1	R
		(f) 125 dia	ea	1	R
		(g) 160 dia	ea	1	R
		(h) 200 dia	ea	1	R
	1	1 \ /	Subt	otal	R
1					L

6.1.2	Supply and delivery of PVC Male Adaptor SABS or ISO approved; blue and black coding			
	(a) 20 x 20 dia	ea	1	R
	(b) 25 x 20 dia	ea	1	R
	(c) 25 X 25 dia	ea	1	R
	(d) 32 x 25 dia	ea	1	R
	(e) 32 X 32 dia	ea	1	R
	(f) 40 x 32 dia	ea	1	R
	(g) 40 X 40 dia	ea	1	R
	(h) 50 x 40 dia	ea	1	R
	(i) 50 X 50 dia	ea	1	R
	(j) 50×75 dia	ea	1	R
	(k) 50×90 dia	ea	1	R
	(I) 50×110 dia	ea	1	R
	(m) 63 x 50 dia	ea	1	R
	(n) 63 X 63 dia	ea	1	R
	(o) 75 X 63 dia	ea	1	R
	(p) 75 X 75 dia	ea	1	R
	(q) 90 X 75 dia	ea	1	R
	(r) 90 X 90 dia	ea	1	R
	(s) 100×50 dia	ea	1	R
	(t) 100×40 dia	ea	1	R
	(u) 100×32 dia	ea	1	R
	(v) 100×25 dia	ea	1	R
	(w) 100×20 dia	ea	1	R
	(x) 110 X 90 dia	ea	1	R
	(y) 110 X 110 dia	ea	1	R
	(z) 125 X 125 mm dia	ea	1	R
	(aa) 160 X 160 mm dia	ea	1	R
	(ab) 200 X 200 mm dia	ea	1	R
		Subt	otal	
6.1.3	Supply and delivery of PVC Female Adaptor SABS or ISO approved; blue and black coding			
	(a) 40 X 40 mm dia	ea	1	R
	(b) 50 X 50 mm dia	ea	1	R
	(c) 63 X 63 mm dia	ea	1	R
	(b) 75 X 75 mm dia	ea	1	R
	(d) 90 X 90 mmdia	ea	1	R
	(e) 110 X 110 mm dia	ea	1	R
	(f) 125 X 125 mm dia	ea	1	R
	(g) 160 X 160 mm dia	ea	1	R
	(h) 200 X 200 mm dia	ea	1	R
		Subt	otal	R

	6.1.4	Supply and delivery of Fire Hydrants and Fitting SABS or ISO approved			
					R
		Hydrant Stand	ea	1	R
		Fire Hydrant Valve	ea	1	R
		Fire Hydrant Heads	ea	1	R
	Г		Subt	otal	
	6.1.5	Supply and delivery of Water Meters SABS or ISO approved			
		15mm	ea	1	R
		20mm	ea	1	R
		25mm	ea	1	R
		32mm	ea	1	R
		40mm	ea	1	R
		150mm	ea	1	R
		200mm	ea	1	R
			Subt	otal	R
	6.1.5	EQUIPMENT			
		(a)Generator	ea	1	R
		(b)Bosh Drill	ea	1	R
		(c)Extension Cord (25m×4.0mm)	ea	1	R
		(d)Jack hammer	ea	1	R
		(e)6m step ladder	ea	1	R
		(f)Peaks	ea	1	R
		(g)Shovels	ea	1	R
		(h)Wheelbarrow	ea	1	R
		(i)Steel Disc	ea	1	R
		(j)Concrete Disc	ea	1	R
		(k)4mm to 16mm Steel Bits	ea	1	R
		(I)4mm to 16mm concrete bits	ea	1	R
		(m)Hack saw Blades	ea	1	R
		(n)Steel rods	ea	1	R
		(o)Concrete Disc grinder 230mm	ea	1	R
		(p)Steel Disc 230mm	ea	1	R
		(q)Nylon cutter roll	ea	1	R
		(r)Grass cutting machine (husqarvanar/still)	ea	1	R
		(t) 24"Pipe Wrench	ea	1	R
		(s) 36"Pipe Wrench	ea	1	R
		(u) Complete Set of Plumbing tool Box	ea	1	R
		(v)2 Stroke brake oil	ea	1	R
			Subt	otal	R
7	7.1.1	SEWER PIPES			
		Supply maincore multi-layer sewer and drain pipes (Maincore 100 kpa)			

Subtotal R Subtotal R Subtotal R Subtotal R		(a) 110 dia		6m 1	R
Supply maincore multi-layer sewer and drain pipes (Maincore 200 kpa)			-	Subtotal	R
7.1.2 pipes (Maincore 200 kpa) (a) 110 dia 6m			S	ubtotal	R
Supply maincore multi-layer sewer and drain pipes (Maincore 400 kpa)	7.1.2				
7.1.3 Supply maincore multi-layer sewer and drain pipes (Maincore 400 kpa)		(a) 110 dia	6m	1	R
(a) 110 dia			S	ubtotal	R
(b) 160 dia 6m 1 R (c) 200 dia 6m 1 R (d) 250 dia 6m 1 R Subtotal R 7.1.4 Supply Heavy duty 300 Kpa Supradur Solid wall Sewer pipes (class 34) (a) 110 dia 6m 1 R (b) 160 dia 6m 1 R (c) 200 dia 6m 1 R (d) 250 dia 6m 1 R (d) 315 dia 6m 1 R (d) 315 dia 6m 1 R (e) 355 dia 6m 1 R (g) 500 dia 6m 1 R (h) 100 dia 6m 1 R	7.1.3				
C 200 dia		(a) 110 dia	6m	1	R
Column C		(b) 160 dia	6m	1	R
Supply Heavy duty 300 Kpa Supradur Solid wall Sewer pipes (class 34) R		(c) 200 dia	6m	1	R
R		(d) 250 dia	6m	1	R
(a) 110 dia			S	ubtotal	R
(b) 160 dia 6m 1 R (c) 200 dia 6m 1 R (d) 250 dia 6m 1 R (d) 250 dia 6m 1 R (d) 315 dia 6m 1 R (e) 355 dia 6m 1 R (f) 400 dia 6m 1 R (g) 500 dia 6m 1 R 7.1.5 Supply and Delivery of SABS approved sewage fittings R (a) Water Cistern ea 1 R (b)110mm Gully head ea 1 R (c)110mm Gully trap ea 1 R (d) 110mm Sewer bend white surface ea 1 R (f)110 sewer socket yellow underground ea 1 R (g) 160X45mm white surface ea 1 R (h) 160X45mm yellow underground surface ea 1 R (i) 110 sewer socket white surface ea 1 R (i) 110 sewer socket white surface ea 1 R (i) 110 sewer socket white surface ea 1 R (i) 110 sewer socket white surface ea 1 R (i) 110 sewer socket white surface ea 1 R (i) 110 sewer socket white surface ea 1 R (i) 110 sewer socket white surface ea 1 R (i) 110 sewer socket white surface ea 1 R (i) 110 mm Rubber plug ea 1 R (ii) 110 mm Rubber plug ea 1 R	7.1.4	, , ,			R
(c) 200 dia 6m 1 R (d) 250 dia 6m 1 R (d) 315 dia 6m 1 R (e) 355 dia 6m 1 R (f) 400 dia 6m 1 R Subtotal R Subtotal R Subtotal R (a) Water Cistern ea 1 R (b)110mm Gully head ea 1 R (c)110mm Gully trap ea 1 R (d) 110mm Sewer bend white surface ea 1 R (e) 110mm sewer bend yellow underground ea 1 R (f)110 sewer socket yellow underground ea 1 R (h) 160X45mm white surface ea 1 R (h) 160X45mm yellow underground surface ea 1 R (i)110 sewer socket white surface ea 1 R (j) Heavy duty Sewer drain rods ea 1 R (k) 150mm Rubber plug ea		(a) 110 dia	6m	1	R
(d) 250 dia 6m 1 R (d) 315 dia 6m 1 R (e) 355 dia 6m 1 R (f) 400 dia 6m 1 R Subtotal R Subtotal R 7.1.5 Supply and Delivery of SABS approved sewage fittings R (a) Water Cistern ea 1 R (b)110mm Gully head ea 1 R (c)110mm Gully trap ea 1 R (d) 110mm Sewer bend white surface ea 1 R (e) 110mm sewer bend yellow underground ea 1 R (f)110 sewer socket yellow underground ea 1 R (f)110 sewer socket white surface ea 1 R (h) 160X45mm yellow underground surface ea 1 R (h) 160X45mm yellow underground surface ea 1 R (i) Heavy duty Sewer drain rods ea 1 R (i) Heavy duty Sewer drain rods<		(b) 160 dia	6m	1	R
(d) 315 dia 6m 1 R (e) 355 dia 6m 1 R (f) 400 dia 6m 1 R Subtotal R 7.1.5 Supply and Delivery of SABS approved sewage fittings R (a) Water Cistern ea 1 R (b) 110mm Gully head ea 1 R (c) 110mm Gully trap ea 1 R (d) 110mm Sewer bend white surface ea 1 R (e) 110mm sewer bend yellow underground ea 1 R (f)110 sewer socket yellow underground ea 1 R (g) 160X45mm white surface ea 1 R (h) 160X45mm yellow underground surface ea 1 R (i)110 sewer socket white surface ea 1 R (j) Heavy duty Sewer drain rods ea 1 R (k) 150mm Rubber plug ea 1 R (l) 110 mm Rubber plug ea 1 R		(c) 200 dia	6m	1	R
(e) 355 dia 6m 1 R (f) 400 dia 6m 1 R (g) 500 dia 6m 1 R Subtotal R 7.1.5 Supply and Delivery of SABS approved sewage fittings R (a) Water Cistern ea 1 R (b)110mm Gully head ea 1 R (c)110mm Gully trap ea 1 R (d) 110mm Sewer bend white surface ea 1 R (e) 110mm sewer bend yellow underground ea 1 R (f)110 sewer socket yellow underground ea 1 R (h) 160X45mm white surface ea 1 R (i) 160X45mm yellow underground surface ea 1 R (i) 110 sewer socket white surface ea 1 R (i) Heavy duty Sewer drain rods ea 1 R (i) 110mm Rubber plug ea 1 R (i) 110 mm Rubber plug ea 1 R		(d) 250 dia	6m	1	R
(f) 400 dia 6m 1 R (g) 500 dia 6m 1 R Subtotal R 7.1.5 Supply and Delivery of SABS approved sewage fittings R (a) Water Cistern ea 1 R (b)110mm Gully head ea 1 R (c)110mm Gully trap ea 1 R (d) 110mm Sewer bend white surface ea 1 R (e) 110mm sewer bend yellow underground ea 1 R (f)110 sewer socket yellow underground ea 1 R (h) 160X45mm white surface ea 1 R (i)10 sewer socket white surface ea 1 R (i)10 sewer socket white surface ea 1 R (i) Heavy duty Sewer drain rods ea 1 R (i) Heavy duty Sewer drain rods ea 1 R (i) 110mm Rubber plug ea 1 R (i) 110 mm Rubber plug ea 1 R		(d) 315 dia	6m	1	R
(g) 500 dia 6m 1		(e) 355 dia	6m	1	R
T.1.5 Supply and Delivery of SABS approved sewage fittings R R		(f) 400 dia	6m	1	R
7.1.5 Supply and Delivery of SABS approved sewage fittings (a) Water Cistern (b)110mm Gully head (c)110mm Gully trap (d) 110mm Sewer bend white surface (e) 110mm sewer bend yellow underground (f)110 sewer socket yellow underground (g) 160X45mm white surface (e) 1 R (h) 160X45mm yellow underground surface (i) 110 sewer socket white surface (ii) 110 sewer socket white surface (iii) 110 sewer socket w		(g) 500 dia	6m	1	R
(a) Water Cistern ea 1 R (b)110mm Gully head ea 1 R (c)110mm Gully trap ea 1 R (d) 110mm Sewer bend white surface ea 1 R (e) 110mm sewer bend yellow underground ea 1 R (f)110 sewer socket yellow underground ea 1 R (g) 160X45mm white surface ea 1 R (i)110 sewer socket white surface ea 1 R (i)110 sewer socket white surface ea 1 R (i) Heavy duty Sewer drain rods ea 1 R (k) 150mm Rubber plug ea 1 R (l) 110mm Rubber plug ea 1 R (m) 110 Bora ea 1 R			S	ubtotal	R
(b)110mm Gully head ea 1 R (c)110mm Gully trap ea 1 R (d) 110mm Sewer bend white surface ea 1 R (e) 110mm sewer bend yellow underground ea 1 R (f)110 sewer socket yellow underground ea 1 R (g) 160X45mm white surface ea 1 R (i)110 sewer socket white surface ea 1 R (j) Heavy duty Sewer drain rods ea 1 R (k) 150mm Rubber plug ea 1 R (l) 110mm Rubber plug ea 1 R (m) 110 Bora ea 1 R	7.1.5				R
(c)110mm Gully trap (d) 110mm Sewer bend white surface (e) 110mm sewer bend yellow underground (e) 110mm sewer bend yellow underground (f)110 sewer socket yellow underground (g) 160X45mm white surface (h) 160X45mm yellow underground surface (i)110 sewer socket white surface (i) Heavy duty Sewer drain rods (k) 150mm Rubber plug (l) 110mm Rubber plug (m) 110 Bora ea 1 R		(a) Water Cistern	ea	1	R
(d) 110mm Sewer bend white surface ea 1 R (e) 110mm sewer bend yellow underground ea 1 R (f)110 sewer socket yellow underground ea 1 R (g) 160X45mm white surface ea 1 R (h) 160X45mm yellow underground surface ea 1 R (i)110 sewer socket white surface ea 1 R (j) Heavy duty Sewer drain rods ea 1 R (k) 150mm Rubber plug ea 1 R (l) 110mm Rubber plug ea 1 R (m) 110 Bora ea 1 R		(b)110mm Gully head	ea	1	R
(e) 110mm sewer bend yellow underground ea 1 R (f)110 sewer socket yellow underground ea 1 R (g) 160X45mm white surface ea 1 R (h) 160X45mm yellow underground surface ea 1 R (i)110 sewer socket white surface ea 1 R (j) Heavy duty Sewer drain rods ea 1 R (k) 150mm Rubber plug ea 1 R (l) 110mm Rubber plug ea 1 R (m) 110 Bora ea 1 R		(c)110mm Gully trap	ea	1	R
(f)110 sewer socket yellow underground ea 1 R (g) 160X45mm white surface ea 1 R (h) 160X45mm yellow underground surface ea 1 R (i)110 sewer socket white surface ea 1 R (j) Heavy duty Sewer drain rods ea 1 R (k) 150mm Rubber plug ea 1 R (l) 110mm Rubber plug ea 1 R (m) 110 Bora ea 1 R		(d) 110mm Sewer bend white surface	ea	1	R
(g) 160X45mm white surface ea 1 R (h) 160X45mm yellow underground surface ea 1 R (i)110 sewer socket white surface ea 1 R (j) Heavy duty Sewer drain rods ea 1 R (k) 150mm Rubber plug ea 1 R (l) 110mm Rubber plug ea 1 R (m) 110 Bora ea 1 R		1 ` ′	ea	1	
(h) 160X45mm yellow underground surface ea 1 R (i)110 sewer socket white surface ea 1 R (j) Heavy duty Sewer drain rods ea 1 R (k) 150mm Rubber plug ea 1 R (l) 110mm Rubber plug ea 1 R (m) 110 Bora ea 1 R		(f)110 sewer socket yellow underground	ea	1	
(i)110 sewer socket white surface ea 1 R (j) Heavy duty Sewer drain rods ea 1 R (k) 150mm Rubber plug ea 1 R (l) 110mm Rubber plug ea 1 R (m) 110 Bora ea 1 R		(g) 160X45mm white surface	ea	1	R
(j) Heavy duty Sewer drain rods ea 1 R (k) 150mm Rubber plug ea 1 R (l) 110mm Rubber plug ea 1 R (m) 110 Bora ea 1 R		• • • • • • • • • • • • • • • • • • • •			
(k) 150mm Rubber plug ea 1 R (l) 110mm Rubber plug ea 1 R (m) 110 Bora ea 1 R					
(I) 110mm Rubber plug ea 1 R (m) 110 Bora ea 1 R					
(m) 110 Bora ea 1 R		, ,			
		,,			
		,			

8	Galvanized pipes			
		S	ubtotal	R
	(x) 2500L water tank	ea	1	R
	(w) tank stand	ea	1	R
	(v) 50mm bablem valve	ea	1	R
	(u) 800x800m galv.Fabricated manhole cover H/D lockable	ea	1	R
	lockable	ea	1	R
	(t) 1x1m golv. Fabricated manhole cover H/D	Ja	'	
	(s) 1.5x1.5 galv. Fabricated manhole cover H/D lockable	ea	1	R
	(r) concrete lid	ea	1	R
	(q) concret slab 1m	ea	1	R
	(p) concrete slab 1.5m	ea	1	R
	(o) concrete manhole ring 1.5m x500	ea	1	R
	(n) concrete manhole ring 1m x 250	ea	1	R
	(m) cast iron manhole lid & frame square	ea	1	R
	(I) cast iron manhole lid & frame round	ea	1	R
	(k)15mm x 100m white composite pipe	ea	1	R
		Ja		
	(j) 22mm x 100m white composite pipe	ea	1	R
	(i) 30mm bidem blanket	ea	1	R
	(h) 110mm 6m drainage pipe	ea	1	R
	(g) 150mm suction hose P/M	ea	1	R
	(f) 100mm suction hose P/M	ea	1	R
	(e) 75mm suction hose P/M	ea	1	R
	(d) 150mm layflat pipe P/m	ea	1	R
	(c) 100mm layflat pipe P/M	ea	1	R
	(b) 75mm layflat pipe P/M	ea	1	R
7.1.5.	(a) water pump ETP150	ea	1	R
	(y) water pump ETP100	ea	1	R
	(x) water pump ETP75	ea	1	R
	(w) 100mm perrot female fitting	ea	1	R
	(v) 100mm perrot male fitting	ea	1	R
	(u) standpipe complete	ea	1	R
	(t) 5L pipe lubricant	ea	1	R
	(s) Crusher dust load	ea	1	R
	(r) Plungers	ea	1	R
	(q)110mmBora	ea	1	R
	(p)Rod Handle	ea	1	R

8.1.1	Supply and delivery of approved SABS or ISO rated Galvanized piping to the following 6 meter lengths			R
	(a) 25 dia	ea	1	R
	(b) 32 dia	ea	1	R
	(c) 40 dia	ea	1	R
	(d) 50 dia	ea	1	R
	(e) 65 dia	ea	1	R
	(f) 80 dia	ea	1	R
	(g) 100 dia	ea	1	R
	(h) 150 mm dia	ea	1	R
	(i) 200 mm dia	ea	1	R
		S	ubtotal	R
8.2.1	Galvanized pipe fiittings			
	Supply and delivery of Galvanized fittings SABS or ISO approved : Galvanized Sockets			
	(a) 20 mm sockets	ea	1	R
	(b) 32 mm sockets	ea	1	R
	(c) 40 mm sockets	ea	1	R
	(d) 50 mm sockets	ea	1	R
	(e) 65 mm sockets	ea	1	R
	(f) 80mm sockets	ea	1	R
	(g) 100 mm sockets	ea	1	R
8.2.2	Supply and delivery of Galvanized fittings SABS or ISO approved : Galvanized Union Sockets	3	ubtotal	R
	(a) 20 mm Union Sockets	ea	1	R
	(b) 25 mm Union Sockets	ea	1	R
	(c) 32 mm Union Sockets	ea	1	R
	(d) 40 mm Union Sockets	ea	1	R
	(e)50 mm Union Sockets	ea	1	R
	(f) 65 mm Union Sockets	ea	1	R
	(g) 80 mm Union Sockets	ea	1	R
	(h) 100 mm Union Sockets	ea	1	R
			ubtotal	R
8.2.3	Supply and delivery of Galvanized fittings SABS or ISO approved : Galvanized 90° elbows (Threaded F/F sockets)			
	(a) 20 mm	ea	1	R
	(b) 25 mm	ea	1	R

		(c) 32 mm	ea	1	R
		(d) 40 mm	ea	1	R
		(e) 50 mm	ea	1	R
		(f) 65 mm	ea	1	R
		(g) 80 mm	ea	1	R
		(h) 100 mm	ea	1	R
		(II) 100 IIIII		ubtotal	R
			T	abtotai	11
	8.2.4	Supply and delivery of Galvanized fittings			
		SABS or ISO approved : Galvanized 90° elbows (Threaded m/m)			
			00	1	R
		(a) 20 mm	ea	1	R
		(b) 25 mm	ea	1	
		(c) 32 mm	ea	1	R
		(d) 40 mm	ea	1	R
		(e) 50 mm	ea	1	R
		(f) 65 mm	ea	1	R
		(g) 80 mm	ea	1	R
		(h) 100 mm	ea	1	R
		T	S	ubtotal	R
9		ACCESSORIES			
		Supply and delivery of Accessories with			
		SABS or ISO approved; blue and black			
	9.1	coding			
		(a) Galvanized Backing Ring 50 mm	ea	1	R
		(b) Galvanized Backing Ring 63 mm	ea	1	R
		(c) Galvanized Backing Ring 75 mm	ea	1	R
		(d) Galvanized Backing Ring 90 mm	ea	1	R
		(e) Galvanized Backing Ring 110 mm	ea	1	R
		(f) Galvanized Backing Ring 125 mm	ea	1	R
		(g) Galvanized Backing Ring 160 mm	ea	1	R
		(h) Galvanized Backing Ring 200 mm	ea	1	R
		(i) Galvanized Backing Ring 250 mm	ea	1	R
		(j) Galvanized Backing Ring 315 mm	ea	1	R
			S	ubtotal	R
		Supply and delivery of Accessories with			
	9.2	SABS or ISO approved; blue and black			
		coding			
		(a) Gaskets for QRD Stub 50 mm	ea	1	R
		(b) Gaskets for QRD Stub 63 mm	ea	1	R
		(c) Gaskets for QRD Stub 75 mm	ea	1	R
		(d) Gaskets for QRD Stub 90 mm	ea	1	R
		(e) Gaskets for QRD Stub 110 mm	ea	1	R
		(f) Gaskets for QRD Stub 160 mm	ea	1	R

		(g) Gaskets for QRD Stub 200 mm	ea	1	R
			S	ubtotal	R
	9.3	Supply and delivery of Accessories with SABS or ISO approved; blue and black coding			
		(a) Bolts and Nuts for Backing Rings M16 X 60	ea	1	R
		(b) Bolts and Nuts for Backing Rings M16 X 70	ea	1	R
		(c) Bolts and Nuts for Backing Rings M16 X 80	ea	1	R
		(c) Bolts and Nuts for Backing Rings M16 X 115	ea	1	R
		(c) Bolts and Nuts for Backing Rings M16 X 125	ea	1	R
1		T	S	ubtotal	R
10		Supply and delivery of Brass fittings SABS or ISO approved : gate valve			R
	10.1	(a) 25 dia	ea	1	R
		(b) 32 dia	ea	1	R
		(c) 40 dia	ea	1	R
		(d) 50 dia	ea	1	R
		(e) 65 dia	ea	1	R
		(f) 75 dia	ea	1	R
-			S	ubtotal	R
	10.2	Supply and delivery of Brass fittings SABS or ISO approved : Brass BB Tap: Heavy Duty			R
		(a) 20 dia	ea	1	R
		(b) 20 dia PVC Tap	ea	1	R
			S	ubtotal	R
	10.3	Supply and delivery of Brass fittings SABS or ISO approved : Dole Valve			R
		(a) 20 dia	ea	1	R
		• • •		ubtotal	
					TOTAL
	10.4	Supply and delivery of Brass fittings SABS or ISO approved : None Return Valve: Flap Gate			
		(a) 05 dia		4	R
		(a) 25 dia	ea	1	R
		(b) 40 dia	ea	1	R
		(c) 50 dia	ea	1	R
		(d) 65 dia	ea	1	R
			S	ubtotal	R

		T			
		Complete and delivering of Dance (fighters OADO and			
	10.5	Supply and delivery of Brass fittings SABS or ISO approved : Brass Float Valve & Ball			
	10.0	(a) 25 dia	ea	1	R
		(b) 40 dia	ea	1	R
		(c) 50 dia	ea	1	R
		(0) 30 dia		ubtotal	R
	10.6	Balam valve		astotai	
	1010	(a) 20 mm dia	ea	1	R
		(b) 25 mm dia	ea	1	R
		(c)32 mm dia	ea	1	R
		(d) 40 mm dia	ea	1	R
		(e) 50 mm dia	ea	1	R
		1/-/	S	ubtotal	R
		Owner by and delivery of Oaksania at fittings			
	10.7	Supply and delivery of Galvanised fittings SABS or ISO approved : Galvanised Elbow 90			
		degrees			R
		(a) 20 dia	ea	1	R
		(b) 32 dia	ea	1	R
		(c) 50 dia	ea	1	R
		(0) 00 aid		ubtotal	R
				ubtotai	K
	10.8	Supply and delivery of Brass fittings SABS or ISO approved : Klambon Coupling			
		(a) 25 dia	ea	1	R
		(b) 32 dia	ea	1	R
		(c) 40 dia	ea	1	R
		(d) 50 dia	ea	1	R
		(e) 65 dia	ea	1	R
			S	ubtotal	R
		Supply and delivery of fittings SABS or ISO approved : Galvanised Pipe TEE (100 mm			
11		long)			R
	11.1	(a) 25 dia	ea	1	R
		(b) 32 dia	ea	1	R
		(c) 40 dia	ea	1	R
		(d) 50 dia	ea	1	R
		(e) 65 dia	ea	1	R
		(f) 80 dia	ea	1	R
			S	ubtotal	R
	11.2	Supply and delivery of Galvanized Pipe TEE , SABS or ISO approved :			
		(a) 20 dia X 1000 mm	ea	1	R
		(b) 25 dia X 1000 mm	ea	1	R

	(c) 40 dia X 1000 mm	ea	1	R
	(d) 50 dia X 1000 mm	ea	1	R
-		S	ubtotal	R
11.3	Supply and delivery of galvanized SABS or ISO approved : Galvanized Reducing Socket			
	(a) 32 x 25 dia	ea	1	R
	(b) 40 x 32 dia	ea	1	R
	(c) 50 x 40 dia	ea	1	R
	(d) 65 x 50 dia	ea	1	R
	(e) 80 X 65 dia	ea	1	R
-		S	ubtotal	R
11.4	Supply and delivery of Galvanised fittings SABS or ISO approved : Galvanised Reducing Bush			
	(a) 32 x 25 dia	ea	1	R
	(b) 40 x 32 dia	ea	1	R
	(c) 50 x 40 dia	ea	1	R
	(d) 65 X 50 dia	ea	1	R
	(e) 80 X 65 dia	ea	1	R
		S	ubtotal	R
11.5	Supply and delivery of Galvanised fittings SABS or ISO approved : Galvanised Equal Tee			R
	(a) 20 dia	ea	1	R
	(b) 32 dia	ea	1	R
	(c) 40 dia	ea	1	R
	(d) 50 dia	ea	1	R
	(e) 65 dia	ea	1	R
•		S	ubtotal	R
11.6	Supply and delivery of Galvanised fittings SABS or ISO approved : Galvanised Reducing Tee			
	(a) 20 x 15 dia	ea	1	R
	(b) 25 x 20 dia	ea	1	R
	(c) 32 x 25 dia	ea	1	R
	(d) 40 x 32 dia	ea	1	R
	(e) 50 x 40 dia	ea	1	R
	Subtotal		R	
11.7	Supply and delivery of Galvanised fittings SABS or ISO approved : Galvanised Nipple			R
11.7	(a) 20 dia	ea	1	R
	(b) 32 dia	ea	1	R
	(b) oz ula	c a	ı	11

		(c) 40 dia	ea	1	R
		(d) 50 dia	ea	1	R
			S	ubtotal	R
12	12.1	Supply and delivery of Brass fittings SABS or ISO approved : Rainger coupling			
		(a) 65 -75 dia	ea	1	R
		(b) 75- 110 dia	ea	1	R
		(c) 110-160 dia	ea	1	R
		(d) 110 -159 dia	ea	1	R
		(e) 159-209 dia	ea	1	R
		(f) 209-410 dia	ea	1	R
			S	ubtotal	R
	12.2	Supply and delivery of Galvanized fittings SABS or ISO approved : Plugs (Male stop end)			
		(a) 15 dia	ea	1	R
		(b) 20 dia	ea	1	R
		(c) 25 dia	ea	1	R
		(d) 32 dia	ea	1	R
		(e) 40 dia	ea	1	R
		(f) 50 dia	ea	1	R
		(g) 65 dia	ea	1	R
		(h) 80 dia	ea	1	R
			S	ubtotal	R
13	13.1	Supply and delivery of Copper Fittings SABS approved; Adapters with Male thread			
		(a) 15 dia	ea	1	R
		(b) 22dia	ea	1	R
		1.437		ubtotal	R
	13.2	Supply and delivery of Copper Fittings SABS approved; Adapters with Female thread			
		(a) 22 x 15 dia	ea	1	R
		(b) 15 X 15 dia	ea	1	R
		(c) 22 x 22 dia	ea	1	R
				ubtotal	R
	13.3	Supply and delivery of Copper Fittings SABS approved; Male Straight Coupling			
-+		(a) 15 dia	ea	1	R
\dashv		(b) 22 dia	ea	1	R

	13.4		ply and delivery of Copper Bends SA roved;	ABS				
		(a) 2	22mm		ea	1		R
		(b) 1	15 mm		ea	1		R
					S	ubtota	al	R
	13.5		oply and delivery of Copper Fittings S pproved; Adapters with Female/ Fem Bend					R
		(a) 2	22 mm		ea	1		R
		(a) 1	15 mm		ea	1		R
					S	ubtota	al	R
	13.6	Sup	oply and delivery of Copper Fittings S approved; Female Straight Coupling					
		(a) 1	15 dia		ea	1		R
		(b) 2	22 dia		ea	1		R
					S	ubtota	al	R
14		Su	oply and delivery of Polly Corp pipe s approved	SABS				
		(a) 1	15 dia		ea	1		R
		(b) 2	22 dia		ea	1		R
					Subtotal F		R	
15		Aggregates Sand						
	15	1	(a) Sand - fine	m	3	1	R	
	10	· ·	(b) Sand -coarse	m		1	R	
			(c) Isabhunge				R	
	1				Sub	total	R	
	15	.2	Stone (Hard igneous rocks, soft milestones and sand stone					
			(a) Stone - 12.5 mm	m	3_	1	R	
			(b) Stone - 13.2 mm	m	3	1	R	
			(c) Stone - 19 mm	m	3	1	R	
			(d) Stone - 25 mm	m	3	1	R	
			(e) Stone - 37.5mm	m	3	1	R	
	1		(f) Stone - 50 mm	m	3	1	R	
			(g) Stone - 63 mm	m	3	1	R	
	1		(h)Interlocking paving blocks	no			R	
	1		(i) Cement	501		1	R	
	1		(j) Durra slarry	251		1	R	
	1		(k) Hand clean 100 ml	ea		1	R	
	-		(I) PVC soap 100 ml	ea		1	R	
	1		(m)Hand broom	no		_	R	
			(n) Pad lock - 16 mm	ea	a	1	R	

	(o) Nails 2 "(pkt)	ea	1	R
	(p) Nails 4" (pkt)	ea	1	R
	(q)Nails 6" (pkt)	ea	1	R
	(r) Micro sheeting	Sheets	1	R
	(s) Filter Fabric	roll	1	R
	(t) Reinforced steel bars Y12	ea	1	R
	(u)10mm Gland Packing	ea	1	R
	(v)12mm Gland Packing	ea	1	R
	(w)16mm Gland Packing	ea	1	R
	(x)20mm Gland Packing	ea	1	R
	(y)382 mm Chain Saw	ea	1	R
	(z) Welded Mesh Fabric (ref 245)			
	6m X 2.4m sheet	sheet	1	R
	(aa) Y Standard 1.8	ea	1	R
	(ab) Plastic taps 20mm	ea		R
	(ac)20mm stand pipe	ea		R
	(ad) 10 000L Jojo tank	ea	1	R
	(ae) 5 000L Jojo tank	ea	1	R
	(af)Cement Bricks 230 mm	ea	1	R
	(ag) Manhole rings 250mm	ea		R
	(ah) Manhole rings 500mm	ea		R
	(ai) Manhole rings 1000mm	ea		R
		Sub	total	
	Supply Heavy duty 300 Kpa	Sub	total	
15.3	Supply Heavy duty 300 Kpa Supradur Solid wall Sewer pipes	Sub	total	
15.3	Supply Heavy duty 300 Kpa Supradur Solid wall Sewer pipes (class 34)	Sub	total	
15.3	Supradur Solid wall Sewer pipes (class 34)			R
15.3	Supradur Solid wall Sewer pipes (class 34) (a) 110 dia	6m	1 1	R R
15.3	Supradur Solid wall Sewer pipes (class 34) (a) 110 dia (b) 160 dia	6m 6m	1	R
15.3	Supradur Solid wall Sewer pipes (class 34) (a) 110 dia (b) 160 dia (c) 200 dia	6m 6m 6m	1 1 1	R R
15.3	Supradur Solid wall Sewer pipes (class 34) (a) 110 dia (b) 160 dia (c) 200 dia (d) 250 dia	6m 6m	1 1	R
15.3	Supradur Solid wall Sewer pipes (class 34) (a) 110 dia (b) 160 dia (c) 200 dia	6m 6m 6m 6m	1 1 1	R R R
15.3	Supradur Solid wall Sewer pipes (class 34) (a) 110 dia (b) 160 dia (c) 200 dia (d) 250 dia (d) 315 dia	6m 6m 6m 6m 6m	1 1 1 1	R R R
15.3	Supradur Solid wall Sewer pipes (class 34) (a) 110 dia (b) 160 dia (c) 200 dia (d) 250 dia (d) 315 dia (e) 355 dia	6m 6m 6m 6m 6m	1 1 1 1 1 1 1	R R R R
15.3	Supradur Solid wall Sewer pipes (class 34) (a) 110 dia (b) 160 dia (c) 200 dia (d) 250 dia (d) 315 dia (e) 355 dia (f) 400 dia	6m 6m 6m 6m 6m 6m	1 1 1 1 1 1	R R R R R
15.3	Supradur Solid wall Sewer pipes (class 34) (a) 110 dia (b) 160 dia (c) 200 dia (d) 250 dia (d) 315 dia (e) 355 dia (f) 400 dia (g) 500 dia	6m 6m 6m 6m 6m 6m 6m	1 1 1 1 1 1 1	R R R R R R R
15.3	Supradur Solid wall Sewer pipes (class 34) (a) 110 dia (b) 160 dia (c) 200 dia (d) 250 dia (d) 315 dia (e) 355 dia (f) 400 dia (g) 500 dia (h) 145-155mm (i) 157-163mm	6m 6m 6m 6m 6m 6m 6m	1 1 1 1 1 1 1	R R R R R R R
15.3	Supradur Solid wall Sewer pipes (class 34) (a) 110 dia (b) 160 dia (c) 200 dia (d) 250 dia (d) 315 dia (e) 355 dia (f) 400 dia (g) 500 dia (h) 145-155mm (i) 157-163mm (j) 165-176mm	6m 6m 6m 6m 6m 6m 6m ea ea	1 1 1 1 1 1 1 1	R R R R R R R R R
15.3	Supradur Solid wall Sewer pipes (class 34) (a) 110 dia (b) 160 dia (c) 200 dia (d) 250 dia (d) 315 dia (e) 355 dia (f) 400 dia (g) 500 dia (h) 145-155mm (i) 157-163mm	6m 6m 6m 6m 6m 6m 6m ea	1 1 1 1 1 1 1 1 1	R R R R R R R R R R R
15.3	Supradur Solid wall Sewer pipes (class 34) (a) 110 dia (b) 160 dia (c) 200 dia (d) 250 dia (d) 315 dia (e) 355 dia (f) 400 dia (g) 500 dia (h) 145-155mm (i) 157-163mm (j) 165-176mm (k) 174-183mm	6m 6m 6m 6m 6m 6m 6m ea ea	1 1 1 1 1 1 1 1 1 1	R R R R R R R R R R R R
15.3	Supradur Solid wall Sewer pipes (class 34) (a) 110 dia (b) 160 dia (c) 200 dia (d) 250 dia (d) 315 dia (e) 355 dia (f) 400 dia (g) 500 dia (h) 145-155mm (i) 157-163mm (j) 165-176mm (k) 174-183mm (l) 179-189mm	6m 6m 6m 6m 6m 6m 6m ea ea ea	1 1 1 1 1 1 1 1 1 1	R R R R R R R R R R R R R
15.3	Supradur Solid wall Sewer pipes (class 34) (a) 110 dia (b) 160 dia (c) 200 dia (d) 250 dia (d) 315 dia (e) 355 dia (f) 400 dia (g) 500 dia (h) 145-155mm (i) 157-163mm (j) 165-176mm (k) 174-183mm (l) 179-189mm (m) 188-199mm	6m 6m 6m 6m 6m 6m 6m ea ea ea ea	1 1 1 1 1 1 1 1 1 1 1	R R R R R R R R R R R R R R
15.3	Supradur Solid wall Sewer pipes (class 34) (a) 110 dia (b) 160 dia (c) 200 dia (d) 250 dia (d) 315 dia (e) 355 dia (f) 400 dia (g) 500 dia (h) 145-155mm (i) 157-163mm (j) 165-176mm (k) 174-183mm (l) 179-189mm (m) 188-199mm (n) 195-205mm	6m 6m 6m 6m 6m 6m 6m ea ea ea ea ea	1 1 1 1 1 1 1 1 1 1 1 1	R R R R R R R R R R R R R R R
15.3	Supradur Solid wall Sewer pipes (class 34) (a) 110 dia (b) 160 dia (c) 200 dia (d) 250 dia (d) 315 dia (e) 355 dia (f) 400 dia (g) 500 dia (h) 145-155mm (i) 157-163mm (j) 165-176mm (k) 174-183mm (l) 179-189mm (m) 188-199mm (n) 195-205mm (o) 202-212mm	6m 6m 6m 6m 6m 6m ea ea ea ea ea ea	1 1 1 1 1 1 1 1 1 1 1 1 1	R R R R R R R R R R R R R R R R R

	(s) 248-257mm	ea	1	R
	(t) 258-268mm		1	R
	(u) 281-291mm	ea ea	1	R
	· ` '			R
	(v) 294-304mm	ea	1	R
	(w) 304-314mm	ea	1	
	(x) 310-320mm	ea	1	R
	(y) 320-330mm	ea	1	R
	(z) (a)327-337mm	ea	1	R
	(b) 342-352mm	ea	1	R
	(c) 353-363mm	ea	1	R
15.4	supply and delivery of approved SABS or ISO rated: double door	Subtota		R
	water check valves(non return)		4	R
	(a) 50mm	ea	1	R
	(b) 65mm	ea	1	R
	(c) 80mm	ea	1	R
	(d) 100mm	ea	1	R
	(e) 125mm	ea	1	R
	(f) 150mm	ea	1	R
	(g) 200mm	ea	1	R
	(h)250mm	ea	1	R
	(i) 300mm	ea	1	R
		Subtota	al	R
15.5	supply and delivery of Equlibrium float valve			
	(a)50mm	ea	1	R
	(b) 80mm	ea	1	R
	© 100mm	ea	1	R
	(d) 150mm	ea		R
		subtota	al	R
15.5	supply and delivery of butterfly valve water nickel plated			
	(a) 50mm	ea	1	R
	(b) 65mm	ea	1	R
	© 80mm	ea	1	R
	(d) 100mm	ea	1	R
	(e)125mm	ea	1	R
	(f) 150mm	ea	1	R
	(g) 200mm	ea	1	R
	(h) 250mm	ea	1	R
		Subtota	al	R
15.6	supply and delivery of ventomat			
	(a) 25mm	ea	1	R
	(b)50mm	ea	1	R

	(c) 80mm	ea	1	R
	(d) 100mm	ea	1	R
	(e) 150mm	ea	1	R
	(f) 200mm	ea	1	R
	(1) 200111111	Subtota	l	R
	Supply and delivery of flanged		<u> </u>	
15.7	Gate valve			
	(a) 50mm	ea	1	R
	(b) 80mm	ea	1	R
	(c) 100mm	ea	1	R
	(d)150mm	ea	1	R
	(e) 200mm	ea	1	R
		Subtota	al	R
15.8	supply and delivery of Ystrainer			
	(a) 50mm	ea	1	R
	(b) 65mm	ea	1	R
	(c) 80mm	ea	1	R
	(d) 100mm	ea	1	R
	(e) 125mm	ea	1	R
	(f) 150mm	ea	1	R
	(g) 200mm	ea	1	R
	(h) 250mm	ea	1	R
	(i)300mm	ea	1	R
		Subtota	al	R
15.9	supply and delivery of RSV Gate			
15.9	valve socketed			
	(a) DN40-50	ea	1	R
	(b) DN50-63	ea	1	R
	(c) DN65-75	ea	1	R
	(d) DN80-90	ea	1	R
	(e) DN100-110	ea	1	R
	(f) DN150-160	ea	1	R
	(g) DN200-200	ea	1	R
	(h) DN250-250	ea	1	R
	(i)DN300-315	ea	1	R
		Subtota	al	R
	Supply and delivery of RSV Gate			
15.10	valve Flanged			
	(a) DN50	ea	1	R
	(b) DN80	ea	1	R
	© DN100	ea	1	R
	(d) DN150	ea	1	R
	(e) DN200	ea	1	R
l				1
	(f) DN250	ea	1	R

	(h) DN350	ea	1	R
		Subtota	al	R
15.11	supply and delivery of bulk water meters	_		
	(a) Flanged bulk water meter T16 50mm	ea	1	R
	(b) Flanged bulk water meter T16	Ca		
	80mm	ea	1	R
	(c) Flanged bulk water meter T16	ea	1	R
	(d) Flanged bulk water meter T16			
	150mm	ea	1	R
		Subtotal	•	R
15.12	supply and delivery of pressure pipe			
	(a) 50mm	ea	1	R
	(b) 63mm	ea	1	R
	(c) 75mm	ea	1	R
	(d) 90mm	ea	1	R
	(e) 110mm	ea	1	R
	(f)125mm	ea	1	R
	(g) 140mm	ea	1	R
	(h) 160mm	ea	1	R
	(i) 200mm	ea	1	R
	(j) 250mm	ea	1	R
	(k) 315mm	ea	1	R
	(I) 355mm	ea	1	R
	(m) 400mm	ea	1	R
	(n) 500mm	ea	1	R
		Subtota	al	R
	supply and delivery of Ultra Clamp Cascade			
15.13	(a) 45-55mm	ea	1	R
	(b) 59-67mm	ea	1	R
	(c) 69-76mm	ea	1	R
	(d) 75-83mm	ea	1	R
	(e) 87-93mm	ea	1	R
	(f) 95-104mm	ea	1	R
	(g) 104-113mm	ea	1	R
	(h) 113-120mm	ea	1	R
	(i) 121-130mm	ea	1	R
	(j) 126-136mm	ea	1	R
	(k) 136-142mm	ea	1	R
	(I) 145-155mm	ea	1	R
	(m) 157-163mm	ea	1	R

	(n) 165-176mm	ea	1	R
	(o) 174-183mm	ea	1	R
	(p) 179-189mm	ea	1	R
	(g) 188-199mm	ea	1	R
	(r) 195-205mm	ea	1	R
	(s) 202212mm	ea	1	R
	(t) 218-118mm	ea	1	R
	(u) 229-238mm	ea	1	R
	(v) 236-245mm	ea	1	R
	(w) 248-257mm	ea	1	R
	(x) 258-268mm	ea	1	R
	(y) 271-281mm	ea	1	R
	(z) (a) 281-291mm	ea	1	R
15.13.1	(b) 294-304mm	ea	1	R
13.13.1	(c) 304-314mm	ea	1	R
	(d) 310-320mm	ea	1	R
	(e) 320-330mm		1	R
	(f) 327-337mm	ea	1	R
		ea	1	R
	(g) 342-352mm (h) 353-363mm	ea	1	R
	(11) 333-36311111	ea		
		Subtota	31	R
	Supply and delivery of Cascade			
	Saddle			
15.14		ea	1	R
15.14	Saddle	ea ea	1	R R
15.14	Saddle (a) 45-55mm		 	
15.14	Saddle (a) 45-55mm (b) 59-67mm	ea	1	R
15.14	Saddle (a) 45-55mm (b) 59-67mm (c) 69-76mm	ea ea	1	R R
15.14	Saddle (a) 45-55mm (b) 59-67mm (c) 69-76mm (d) 75-86mm	ea ea ea	1 1 1	R R R
15.14	Saddle (a) 45-55mm (b) 59-67mm (c) 69-76mm (d) 75-86mm (e) 87-93mm (f) 95-104mm (g) 104-113mm	ea ea ea ea	1 1 1 1	R R R R R
15.14	Saddle (a) 45-55mm (b) 59-67mm (c) 69-76mm (d) 75-86mm (e) 87-93mm (f) 95-104mm (g) 104-113mm (h) 113-120mm	ea ea ea ea	1 1 1 1	R R R R R R
15.14	Saddle (a) 45-55mm (b) 59-67mm (c) 69-76mm (d) 75-86mm (e) 87-93mm (f) 95-104mm (g) 104-113mm (h) 113-120mm (i) 121-130mm	ea ea ea ea ea	1 1 1 1 1	R R R R R R R R
15.14	Saddle (a) 45-55mm (b) 59-67mm (c) 69-76mm (d) 75-86mm (e) 87-93mm (f) 95-104mm (g) 104-113mm (h) 113-120mm (i) 121-130mm (j) 126-136mm	ea ea ea ea ea ea	1 1 1 1 1 1 1 1	R R R R R R R R R
15.14	Saddle (a) 45-55mm (b) 59-67mm (c) 69-76mm (d) 75-86mm (e) 87-93mm (f) 95-104mm (g) 104-113mm (h) 113-120mm (i) 121-130mm (j) 126-136mm (k)136-142mm	ea ea ea ea ea ea ea	1 1 1 1 1 1 1 1 1	R R R R R R R R R R R
15.14	Saddle (a) 45-55mm (b) 59-67mm (c) 69-76mm (d) 75-86mm (e) 87-93mm (f) 95-104mm (g) 104-113mm (h) 113-120mm (i) 121-130mm (j) 126-136mm (k)136-142mm (l) 145-155mm	ea	1 1 1 1 1 1 1 1	R R R R R R R R R R R
15.14	Saddle (a) 45-55mm (b) 59-67mm (c) 69-76mm (d) 75-86mm (e) 87-93mm (f) 95-104mm (g) 104-113mm (h) 113-120mm (i) 121-130mm (j) 126-136mm (k)136-142mm (l) 145-155mm (m)157-163mm	ea	1 1 1 1 1 1 1 1 1 1 1	R R R R R R R R R
15.14	Saddle (a) 45-55mm (b) 59-67mm (c) 69-76mm (d) 75-86mm (e) 87-93mm (f) 95-104mm (g) 104-113mm (h) 113-120mm (i) 121-130mm (j) 126-136mm (k)136-142mm (l) 145-155mm (m)157-163mm (n) 165-176mm	ea e	1 1 1 1 1 1 1 1 1 1	R R R R R R R R R R R R R R
15.14	Saddle (a) 45-55mm (b) 59-67mm (c) 69-76mm (d) 75-86mm (e) 87-93mm (f) 95-104mm (g) 104-113mm (h) 113-120mm (i) 121-130mm (j) 126-136mm (k)136-142mm (l) 145-155mm (m)157-163mm (n) 165-176mm (o) 174-183mm	ea e	1 1 1 1 1 1 1 1 1 1 1 1 1	R R R R R R R R R R R R R R R R R R R
15.14	Saddle (a) 45-55mm (b) 59-67mm (c) 69-76mm (d) 75-86mm (e) 87-93mm (f) 95-104mm (g) 104-113mm (h) 113-120mm (i) 121-130mm (j) 126-136mm (k)136-142mm (l) 145-155mm (m)157-163mm (n) 165-176mm (o) 174-183mm (p) 179-189mm	ea e	1 1 1 1 1 1 1 1 1 1 1 1	R R R R R R R R R R R R R R R R R R
15.14	Saddle (a) 45-55mm (b) 59-67mm (c) 69-76mm (d) 75-86mm (e) 87-93mm (f) 95-104mm (g) 104-113mm (h) 113-120mm (i) 121-130mm (j) 126-136mm (k)136-142mm (l) 145-155mm (m)157-163mm (n) 165-176mm (o) 174-183mm (p) 179-189mm (q) 188-199mm	ea e	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	R R R R R R R R R R R R R R R R R R R
15.14	Saddle (a) 45-55mm (b) 59-67mm (c) 69-76mm (d) 75-86mm (e) 87-93mm (f) 95-104mm (g) 104-113mm (h) 113-120mm (i) 121-130mm (j) 126-136mm (k) 136-142mm (l) 145-155mm (m) 157-163mm (n) 165-176mm (o) 174-183mm (p) 179-189mm (q) 188-199mm (r) 195-205mm	ea e	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	R R R R R R R R R R R R R R R R R R R
15.14	(a) 45-55mm (b) 59-67mm (c) 69-76mm (d) 75-86mm (e) 87-93mm (f) 95-104mm (g) 104-113mm (h) 113-120mm (i) 121-130mm (j) 126-136mm (k)136-142mm (l) 145-155mm (m)157-163mm (n) 165-176mm (o) 174-183mm (p) 179-189mm (q) 188-199mm (r) 195-205mm (s) 202212mm	ea e	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	R R R R R R R R R R R R R R R R R R R
15.14	(a) 45-55mm (b) 59-67mm (c) 69-76mm (d) 75-86mm (e) 87-93mm (f) 95-104mm (g) 104-113mm (h) 113-120mm (i) 121-130mm (j) 126-136mm (k) 136-142mm (l) 145-155mm (m) 157-163mm (n) 165-176mm (o) 174-183mm (p) 179-189mm (q) 188-199mm (r) 195-205mm (s) 202212mm (t) 218-228mm	ea e	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	R R R R R R R R R R R R R R R R R R R
15.14	(a) 45-55mm (b) 59-67mm (c) 69-76mm (d) 75-86mm (e) 87-93mm (f) 95-104mm (g) 104-113mm (h) 113-120mm (i) 121-130mm (j) 126-136mm (k)136-142mm (l) 145-155mm (m)157-163mm (n) 165-176mm (o) 174-183mm (p) 179-189mm (q) 188-199mm (r) 195-205mm (s) 202212mm	ea e	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	R R R R R R R R R R R R R R R R R R R

	(w) 248-257mm	ea	1	R
	(x) 258-268mm	ea	1	R
	(y) 271-281mm	ea	1	R
	(z) (a) 294-304mm	ea	1	R
15.14.1.	(b) 304-314	ea	1	R
10.14.1.	(c) 310-320mm	ea	1	R
	(d) 320-330mm	ea	1	R
	(e) 327-337mm	ea	1	R
	(g) 342-352mm	ea	1	R
	(h) 353-363mm	ea	1	R
	(11) 555 56511111	Subtot		R
15.14	Supply and delivery of PVC Sewer & Drain Fitting(Equal Junction 45 degrees)	Cubiot		T.
	(a) 110mm	ea	1	R
	(b) 160mm	ea	1	R
	(c) 200mm	ea	1	R
		Subtot	al	R
15.15	Supply and delivery of PVC Sewer & Drain Fitting(Kimberley Socket)			
	(a) 110mm	ea	1	R
	(b) 160mm	ea	1	R
	(c) 200mm	ea	1	R
		Subtot	al	R
15.16	Supply and delivery of PVC Sewer & Drain Fitting(SD Long Radius Bend)	Subtot	al	R
15.16	Supply and delivery of PVC Sewer & Drain Fitting(SD Long Radius	Subtot ea	al 1	R R
15.16	Supply and delivery of PVC Sewer & Drain Fitting(SD Long Radius Bend)		T	
15.16	Supply and delivery of PVC Sewer & Drain Fitting(SD Long Radius Bend) (a) 110mm	ea	1	R
15.16	Supply and delivery of PVC Sewer & Drain Fitting(SD Long Radius Bend) (a) 110mm (b) 160mm	ea ea	1 1	R R
15.16	Supply and delivery of PVC Sewer & Drain Fitting(SD Long Radius Bend) (a) 110mm (b) 160mm (c) 200mm	ea ea ea	1 1 1	R R R
15.16	Supply and delivery of PVC Sewer & Drain Fitting(SD Long Radius Bend) (a) 110mm (b) 160mm (c) 200mm (d) 250mm	ea ea ea ea	1 1 1	R R R
15.16	Supply and delivery of PVC Sewer & Drain Fitting(SD Long Radius Bend) (a) 110mm (b) 160mm (c) 200mm (d) 250mm (e) 315mm	ea ea ea ea ea	1 1 1 1	R R R R
15.16	Supply and delivery of PVC Sewer & Drain Fitting(SD Long Radius Bend) (a) 110mm (b) 160mm (c) 200mm (d) 250mm (e) 315mm (f) 355mm	ea ea ea ea ea ea	1 1 1 1 1 1	R R R R R
15.16	Supply and delivery of PVC Sewer & Drain Fitting(SD Long Radius Bend) (a) 110mm (b) 160mm (c) 200mm (d) 250mm (e) 315mm (f) 355mm	ea ea ea ea ea ea	1 1 1 1 1 1	R R R R R R
	Supply and delivery of PVC Sewer & Drain Fitting(SD Long Radius Bend) (a) 110mm (b) 160mm (c) 200mm (d) 250mm (e) 315mm (f) 355mm (g) 400mm Supply and delivery of PVC Sewer	ea ea ea ea ea ea	1 1 1 1 1 1	R R R R R R
	Supply and delivery of PVC Sewer & Drain Fitting(SD Long Radius Bend) (a) 110mm (b) 160mm (c) 200mm (d) 250mm (e) 315mm (f) 355mm (g) 400mm Supply and delivery of PVC Sewer & Drain Fitting(Rodding Eye)	ea ea ea ea ea Subtot	1 1 1 1 1 1	R R R R R R
	Supply and delivery of PVC Sewer & Drain Fitting(SD Long Radius Bend) (a) 110mm (b) 160mm (c) 200mm (d) 250mm (e) 315mm (f) 355mm (g) 400mm Supply and delivery of PVC Sewer & Drain Fitting(Rodding Eye) (a) 110mm	ea ea ea ea ea Subtot	1 1 1 1 1 1 al	R R R R R R R R R R R R R R R R R R R
	Supply and delivery of PVC Sewer & Drain Fitting(SD Long Radius Bend) (a) 110mm (b) 160mm (c) 200mm (d) 250mm (e) 315mm (f) 355mm (g) 400mm Supply and delivery of PVC Sewer & Drain Fitting(Rodding Eye) (a) 110mm	ea ea ea ea ea Subtot	1 1 1 1 1 1 al	R R R R R R R R R R R R R R R R R R R

	(b) 200mm	ea	1	R
	(c) 250mm	ea	1	R
	(0) = 0000000	Subtota		R
15.19	Supply and delivery of female Elbow 518			
	(a) 16x1/2	ea	1	R
	(b) 16x3/4	ea	1	R
	© 20x1/2	ea	1	R
	(d) 25x1/2	ea	1	R
	(e) 25x3/4	ea	1	R
	(f) 25x1/2	ea	1	R
	(g) 32x1/2	ea	1	R
	(h)32x1/4	ea	1	R
	(i) 32x1	ea	1	R
	(j) 32x1.1/4	ea	1	R
	(k) 40x3/4	ea	1	R
	(I) 40x1	ea	1	R
	(m) 40x1.1/4	ea	1	R
	(n) 50x2	ea	1	R
	(o) 63x1.1/2	ea	1	R
	(p) 63x2	ea	1	R
	(q) 63x2.1/2	ea	1	R
	® 75x2	ea	1	R
	(s) 75x2.1/2	ea	1	R
	(t) 75x3	ea	1	R
	(u) 90x3	ea	1	R
	(v) 90x4	ea	1	R
	(w) 110x3	ea	1	R
	(x) 110x4	ea	1	R
		Subtota	al	R
15.20	Supply and delivery of male adaptor 518			
	(a) 16x3/8"	ea	1	R
	(b) 16x1/2"	ea	1	R
	© 16x3/4"	ea	1	R
	€ 20x3/4"	ea	1	R
	(f) 20x1/2"	ea	1	R
	(g) 20x1"	ea	1	R
	(h) 25x1/2"	ea	1	R
	(i) 32x3/4"	ea	1	R
	(j) 32x1/2"	ea	1	R
	(k)32x1"	ea	1	R
	(l) 32x1.1/4"	ea	1	R
	(m) 32x1.1/2"	ea	1	R
	(n) 40x1"	ea	1	R

(a) 40x1.1/4" ea (b) 40x1.1/2" ea (c) 40x1.1/2" ea (d) 40x1.1/2" ea (e) 40x1.1/2" ea (f) 40x1.1/2" ea (t) 40x2" ea (u) 50x1" ea (v) 50x1.01/2" ea (v) 50x1.01/2" ea (x) 63x1.1/4" ea (y) 63x1.1/2" ea (c) 75x2" ea (d) 75x2" ea (d) 75x2.1/2" ea (d) 75x2.1/2" ea (e) 90x2" ea (f) 90x2.1/2" ea (g) 90x3" ea (h) 90x4" ea (i) 110x2" ea (i) 110x4" ea (i) 110x4" ea (i) 110x4" ea (i) 110x4" ea (i) 12x1/4"x16 ea (c) 20x1/2"x25 ea (d) 20x3/4"x20 ea (d) 20x3/4"x20 ea (d) 20x3/4"x20 ea (d) 32x1/2"x32 ea (f) 32x1/2"x32 ea (h) 32x3/4"x32 ea (i) 32x1/2"x32 ea (i) 32x1.1/4x32 ea (k) 40x1.1/4x40 ea (l) 40x1.1/4x40 ea (l) 50x1.1/4"x50 ea (o) 50x1.1/2"x50 ea (o) 50x1.1/2"x50 ea (o) 50x1.1/2"x50 ea	1	R
(q) 40x1" ea		R
(a) 40x1.1/4" ea (b) 40x1.1/2" ea (t) 40x2" ea (u) 50x1" ea (v) 50x1.01/2" ea (w) 50x2.01/2" ea (x) 63x1.1/4" ea (y) 63x1.1/2" ea (z) (a) 75x2" ea (b) 75x2.1/2" ea (c) 75x3" ea (d) 75x2.1/2" ea (f) 90x2.1/2" ea (g) 90x2" ea (f) 90x2.1/2" ea (g) 90x3" ea (h) 90x4" ea (i) 110x2" ea (k) 110x4" ea (k) 110x4" ea (b) 16x13/4"x16 ea (c) 20x1/2"x20 ea (d) 20x3/4"x20 ea (f) 25x1/2"x25 ea (g) 32x1/2"x32 ea (h) 32x3/4"x32 ea (h) 32x3/4"x32 ea (i) 32x1/2"x32 ea (j) 32x1/2"x32 ea (j) 32x1/2"x32 ea (j) 32x1/2"x32 ea (j) 32x1/4x32 ea (j) 32x1.1/4x32 ea (k) 40x1.1/4x40 ea (m) 40x1.1/2"x40 ea (m) 50x1.1/4"x50 ea	1	R
(s) 40x1.1/2" ea (t) 40x2" ea (u) 50x1" ea (v) 50x1.01/2" ea (w) 50x2" ea (x) 63x1.1/4" ea (y) 63x1.1/2" ea (z) (a) 75x2" ea (b) 75x2.1/2" ea (d) 75x2.1/2" ea (d) 75x2.1/2" ea (e) 90x2" ea (f) 90x2" ea (f) 90x2" ea (g) 90x3" ea (h) 90x4" ea (i) 110x2" ea (i) 110x2" ea (j) 110x3" ea (k) 110x4" ea (b) 16x13/4"x16 ea (c) 20x1/2"x20 ea (d) 20x3/4"x20 ea (d) 20x3/4"x20 ea (f) 25x1/2"x25 ea (g) 32x1/2"x32 ea (g) 32x1.1/4x32 ea (g) 32x1.1/4x40 ea (m) 40x1.1/2"x40 ea (m) 50x1.1/4"x50 ea	1	R
(t) 40x2" ea (u) 50x1" ea (v) 50x1.01/2" ea (w) 50x2" ea (x) 63x1.1/4" ea (y) 63x1.1/2" ea (z) (a) 75x2" ea (b) 75x2.1/2" ea (c) 75x2.1/2" ea (d) 75x2.1/2" ea (d) 75x2.1/2" ea (e) 90x2" ea (f) 90x2.1/2" ea (g) 90x3" ea (h) 90x4" ea (i) 110x2" ea (i) 110x2" ea (ii) 110x4" ea (ii) 110x4" ea (b) 16x13/4"x16 ea (c) 20x1/2"x20 ea (d) 20x3/4"x20 ea (d) 20x3/4"x20 ea (f) 25x1/2"x25 ea (g) 32x1/2"x32 ea (h) 32x3/4"x32 ea (i) 32x1/2"x32 ea (j) 32x1.1/4x32 ea (k) 40x1.1/4x40 ea (m) 40x1.1/2"x40 ea (n) 50x1.1/4"x50 ea	1	R
(u) 50x1" ea (v) 50x1.01/2" ea (w) 50x2" ea (x) 63x1.1/4" ea (y) 63x1.1/2" ea (z) (a) 75x2" ea (b) 75x2.1/2" ea (c) 75x3" ea (d) 75x2.1/2" ea (d) 75x2.1/2" ea (e) 90x2" ea (f) 90x2.1/2" ea (g) 90x3" ea (h) 90x4" ea (i) 110x2" ea (i) 110x4" ea (k) 110x4" ea Sul 15.21 Supply and delivery of female tee 515 (a) 16x1/2"x16 ea (b) 16x13/4"x16 ea (c) 20x1/2"x20 ea (d) 20x3/4"x20 ea (d) 20x3/4"x20 ea (f) 25x1/2"x25 ea (g) 32x1/2"x32 ea (g) 32x1/2"x32 ea (h) 32x3/4"x32 ea (i) 32x1/2"x32 ea		R
(v) 50x1.01/2" ea (w) 50x2" ea (x) 63x1.1/4" ea (y) 63x1.1/2" ea (z) (a) 75x2" ea 15.20.1 (b) 75x2.1/2" ea (d) 75x2.1/2" ea (d) 75x2.1/2" ea (e) 90x2" ea (f) 90x2.1/2" ea (g) 90x3" ea (h) 90x4" ea (i) 110x2" ea (k) 110x4" ea Sul 15.21 Supply and delivery of female tee 515 (a) 16x1/2"x16 (b) 16x13/4"x16 ea (c) 20x1/2"x20 ea (d) 20x3/4"x20 ea (e) 25x1/2"x25 ea (f) 25x1"x25 ea (g) 32x1/2"x32 ea (h) 32x3/4"x32 ea (i) 32x1/2"x32 ea (i) 32x1/2"x32 ea (i) 32x1.1/4x32 ea (k) 40x1.1/4x40 ea (m) 40x1.1/2"x40 ea (n) 50x1.1/4'x50 ea (n) 50x1.1/4'x50 ea (n) 50x1.1/4'x50 ea (n) 50x1.1/4'x50 ea (n) 50x1.1/2x50 ea	1	R
(w) 50x2" ea (x) 63x1.1/4" ea (y) 63x1.1/2" ea (z) (a) 75x2" ea (c) 75x3" ea (d) 75x2.1/2" ea (e) 90x2" ea (f) 90x2.1/2" ea (g) 90x3" ea (h) 90x4" ea (i) 110x2" ea (j) 110x3" ea (k) 110x4" ea (k) 110x4" ea (s) 16x13/4"x16 ea (c) 20x1/2"x20 ea (d) 20x3/4"x20 ea (e) 25x1/2"x25 ea (f) 32x1/2"x32 ea (h) 32x3/4"x32 ea (h) 32x3/4"x32 ea (k) 40x1.1/4x40 ea (m) 40x1.1/2"x40 ea (m) 50x1.1/4"x50 ea (n) 50x1.1/4"x50 ea	1	R
(x) 63x1.1/4" ea (y) 63x1.1/2" ea (z) (a) 75x2" ea (575x3" ea (d) 75x2.1/2" ea (e) 90x2" ea (f) 90x2.1/2" ea (g) 90x3" ea (h) 90x4" ea (i) 110x2" ea (k) 110x4" ea (k) 110x4" ea (k) 110x4" ea (s) 16x13/4"x16 ea (c) 20x1/2"x20 ea (d) 20x3/4"x20 ea (e) 25x1/2"x25 ea (f) 32x1/2"x32 ea (h) 32x3/4"x32 ea (i) 32x1.1/4x32 ea (k) 40x1.1/2"x40 ea (m) 40x1.1/2"x40 ea (m) 40x1.1/2"x40 ea (n) 50x1.1/4x50 ea (n) 50x1.1/2x50 ea	1	R
(y) 63x1.1/2" ea (z) (a) 75x2" ea (b) 75x2.1/2" ea (c) 75x3" ea (d) 75x2.1/2" ea (e) 90x2" ea (f) 90x2.1/2" ea (g) 90x3" ea (h) 90x4" ea (i) 110x2" ea (j) 110x3" ea (k) 110x4" ea (k) 110x4" ea (b) 16x13/4"x16 ea (c) 20x1/2"x20 ea (d) 20x3/4"x20 ea (f) 25x1/2"x25 ea (g) 32x1/2"x32 ea (h) 32x3/4"x32 ea (i) 32x1/2"x32 ea (j) 32x1.1/4x32 ea (k) 40x1.1/4x40 ea (m) 40x1.1/2"x40 ea (n) 50x1.1/4x50 ea (n) 50x1.1/4x50 ea	1	R
(z) (a) 75x2" ea 15.20.1 (b) 75x2.1/2" ea (c) 75x3" ea (d) 75x2.1/2" ea (e) 90x2" ea (f) 90x2.1/2" ea (g) 90x3" ea (h) 90x4" ea (i) 110x2" ea (j) 110x3" ea (k) 110x4" ea (k) 110x4" ea (l) 15.21 Supply and delivery of female tee 515 (a) 16x1/2"x16 ea (b) 16x13/4"x16 ea (c) 20x1/2"x20 ea (d) 20x3/4"x20 ea (e) 25x1/2"x25 ea (f)25x1"x25 ea (g) 32x1/2"x32 ea (h) 32x3/4"x32 ea (i) 32x1"x32 ea (j) 32x1.1/4x32 ea (k) 40x1"x40 ea (m) 40x1.1/2"x40 ea (n) 50x1.1/4'x50 ea	1	R
15.20.1 (b) 75x2.1/2" ea	1	R
(c) 75x3" ea (d) 75x2.1/2" ea (e) 90x2" ea (f) 90x2.1/2" ea (g) 90x3" ea (h) 90x4" ea (i) 110x2" ea (j) 110x3" ea (k) 110x4" ea (k) 110x4" ea Sul 15.21 Supply and delivery of female tee 515 (a) 16x1/2"x16 ea (b) 16x13/4"x16 ea (c) 20x1/2"x20 ea (d) 20x3/4"x20 ea (d) 20x3/4"x20 ea (e) 25x1/2"x25 ea (f)25x1"x25 ea (g) 32x1/2"x32 ea (h) 32x3/4"x32 ea (i) 32x1/2"x32 ea (j) 32x1.1/4x32 ea (k) 40x1"x40 ea (l) 40x1.1/4x40 ea (m) 40x1.1/2"x40 ea (n) 50x1.1/4"x50 ea (o) 50x1.1/2x50 ea	1	R
(d) 75x2.1/2" ea		
(e) 90x2" ea (f) 90x2.1/2" ea (g) 90x3" ea (h) 90x4" ea (i) 110x2" ea (j) 110x3" ea (k) 110x4" ea Sui 15.21 Supply and delivery of female tee 515 (a) 16x1/2"x16 ea (b) 16x13/4"x16 ea (c) 20x1/2"x20 ea (d) 20x3/4"x20 ea (e) 25x1/2"x25 ea (f)25x1"x25 ea (f)25x1"x25 ea (g) 32x1/2"x32 ea (h) 32x3/4"x32 ea (i) 32x1"x32 ea (j) 32x1.1/4x32 ea (k) 40x1"x40 ea (m) 40x1.1/2"x40 ea (n) 50x1.1/4"x50 ea (o) 50x1.1/2x50 ea (o) 50x1.1/2x50 ea	1	R
(f) 90x2.1/2" ea (g) 90x3" ea (h) 90x4" ea (i) 110x2" ea (j) 110x3" ea (k) 110x4" ea (k) 110x4" ea Sul 15.21 Supply and delivery of female tee 515 (a) 16x1/2"x16 ea (b) 16x13/4"x16 ea (c) 20x1/2"x20 ea (d) 20x3/4"x20 ea (e) 25x1/2"x25 ea (f)25x1"x25 ea (g) 32x1/2"x32 ea (h) 32x3/4"x32 ea (i) 32x1/2"x32 ea (j) 32x1.1/4x32 ea (k) 40x1"x40 ea (l) 40x1.1/4x40 ea (m) 40x1.1/2"x40 ea (n) 50x1.1/4"x50 ea (o) 50x1.1/2x50 ea	1	R
(g) 90x3" ea (h) 90x4" ea (i) 110x2" ea (j) 110x3" ea (k) 110x4" ea Sul 15.21 Supply and delivery of female tee 515 (a) 16x1/2"x16 ea (b) 16x13/4"x16 ea (c) 20x1/2"x20 ea (d) 20x3/4"x20 ea (d) 20x3/4"x20 ea (e) 25x1/2"x25 ea (f)25x1"x25 ea (g) 32x1/2"x32 ea (h) 32x3/4"x32 ea (i) 32x1/2"x32 ea (j) 32x1.1/4x32 ea (j) 32x1.1/4x32 ea (k) 40x1"x40 ea (m) 40x1.1/2"x40 ea (n) 50x1.1/4"x50 ea (o) 50x1.1/2x50 ea	1	R
(h) 90x4" ea (i) 110x2" ea (j) 110x3" ea (k) 110x4" ea Sul 15.21 Supply and delivery of female tee 515 (a) 16x1/2"x16 ea (b) 16x13/4"x16 ea (c) 20x1/2"x20 ea (d) 20x3/4"x20 ea (d) 20x3/4"x20 ea (e) 25x1/2"x25 ea (f)25x1"x25 ea (g) 32x1/2"x32 ea (h) 32x3/4"x32 ea (i) 32x1"x32 ea (j) 32x1.1/4x32 ea (k) 40x1"x40 ea (l) 40x1.1/4x40 ea (m) 40x1.1/2"x40 ea (n) 50x1.1/4"x50 ea (o) 50x1.1/2x50 ea	1	R
(i) 110x2" ea (j) 110x3" ea (k) 110x4" ea Sui 15.21 Supply and delivery of female tee 515 (a) 16x1/2"x16 ea (b) 16x13/4"x16 ea (c) 20x1/2"x20 ea (d) 20x3/4"x20 ea (d) 20x3/4"x25 ea (f)25x1/2"x25 ea (f)25x1/2"x25 ea (g) 32x1/2"x32 ea (h) 32x3/4"x32 ea (i) 32x1/x32 ea (j) 32x1.1/4x32 ea (k) 40x1"x40 ea (l) 40x1.1/4x40 ea (m) 40x1.1/2"x40 ea (n) 50x1.1/4"x50 ea (o) 50x1.1/2x50 ea	1	R
(i) 110x3" ea (k) 110x4" ea Sul 15.21 Supply and delivery of female tee 515 (a) 16x1/2"x16 ea (b) 16x13/4"x16 ea (c) 20x1/2"x20 ea (d) 20x3/4"x20 ea (e) 25x1/2"x25 ea (f)25x1"x25 ea (g) 32x1/2"x32 ea (h) 32x3/4"x32 ea (i) 32x1"x32 ea (j) 32x1.1/4x32 ea (k) 40x1"x40 ea (l) 40x1.1/4x40 ea (m) 40x1.1/2"x40 ea (n) 50x1.1/4"x50 ea (o) 50x1.1/2x50 ea		R
(k) 110x4" ea Supply and delivery of female tee 515 (a) 16x1/2"x16 ea (b) 16x13/4"x16 ea (c) 20x1/2"x20 ea (d) 20x3/4"x20 ea (e) 25x1/2"x25 ea (f)25x1"x25 ea (g) 32x1/2"x32 ea (h) 32x3/4"x32 ea (i) 32x1"x32 ea (j) 32x1.1/4x32 ea (k) 40x1"x40 ea (l) 40x1.1/4x40 ea (m) 40x1.1/2"x40 ea (n) 50x1.1/4"x50 ea (o) 50x1.1/2x50 ea	1	R
Supply and delivery of female tee 515		R
15.21 Supply and delivery of female tee 515	1	R
(a) 16x1/2"x16 ea (b) 16x13/4"x16 ea (c) 20x1/2"x20 ea (d) 20x3/4"x20 ea (e) 25x1/2"x25 ea (f)25x1"x25 ea (g) 32x1/2"x32 ea (h) 32x3/4"x32 ea (i) 32x1"x32 ea (j) 32x1.1/4x32 ea (j) 40x1.1/4x40 ea (m) 40x1.1/2"x40 ea (n) 50x1.1/2"x50 ea (o) 50x1.1/2x50 ea	btotal	R
(b) 16x13/4"x16 ea (c) 20x1/2"x20 ea (d) 20x3/4"x20 ea (e) 25x1/2"x25 ea (f)25x1"x25 ea (g) 32x1/2"x32 ea (h) 32x3/4"x32 ea (i) 32x1"x32 ea (i) 32x1.1/4x32 ea (j) 32x1.1/4x32 ea (k) 40x1"x40 ea (l) 40x1.1/2"x40 ea (m) 40x1.1/2"x40 ea (n) 50x1.1/4"x50 ea (o) 50x1.1/2x50 ea		
(c) 20x1/2"x20 ea (d) 20x3/4"x20 ea (e) 25x1/2"x25 ea (f)25x1"x25 ea (g) 32x1/2"x32 ea (h) 32x3/4"x32 ea (i) 32x1"x32 ea (j) 32x1.1/4x32 ea (k) 40x1"x40 ea (l) 40x1.1/4x40 ea (m) 40x1.1/2"x40 ea (n) 50x1.1/4"x50 ea (o) 50x1.1/2x50 ea	1	R
(d) 20x3/4"x20 ea (e) 25x1/2"x25 ea (f)25x1"x25 ea (g) 32x1/2"x32 ea (h) 32x3/4"x32 ea (i) 32x1"x32 ea (j) 32x1.1/4x32 ea (k) 40x1"x40 ea (l) 40x1.1/4x40 ea (m) 40x1.1/2"x40 ea (n) 50x1.1/4"x50 ea (o) 50x1.1/2x50 ea	1	R
(e) 25x1/2"x25 ea (f)25x1"x25 ea (g) 32x1/2"x32 ea (h) 32x3/4"x32 ea (i) 32x1"x32 ea (j) 32x1.1/4x32 ea (k) 40x1"x40 ea (l) 40x1.1/4x40 ea (m) 40x1.1/2"x40 ea (n) 50x1.1/2"x50 ea (o) 50x1.1/2x50 ea		R
(f)25x1"x25 ea (g) 32x1/2"x32 ea (h) 32x3/4"x32 ea (i) 32x1"x32 ea (j) 32x1.1/4x32 ea (k) 40x1"x40 ea (l) 40x1.1/4x40 ea (m) 40x1.1/2"x40 ea (n) 50x1.1/4"x50 ea (o) 50x1.1/2x50 ea	1	R
(f)25x1"x25 ea (g) 32x1/2"x32 ea (h) 32x3/4"x32 ea (i) 32x1"x32 ea (j) 32x1.1/4x32 ea (k) 40x1"x40 ea (l) 40x1.1/4x40 ea (m) 40x1.1/2"x40 ea (n) 50x1.1/4"x50 ea (o) 50x1.1/2x50 ea		_
(g) 32x1/2"x32 ea (h) 32x3/4"x32 ea (i) 32x1"x32 ea (j) 32x1.1/4x32 ea (k) 40x1"x40 ea (l) 40x1.1/4x40 ea (m) 40x1.1/2"x40 ea (n) 50x1.1/4"x50 ea (o) 50x1.1/2x50 ea	1	R
(i) 32x1"x32 ea (j) 32x1.1/4x32 ea (k) 40x1"x40 ea (l) 40x1.1/4x40 ea (m) 40x1.1/2"x40 ea (n) 50x1.1/4"x50 ea (o) 50x1.1/2x50 ea	1 1	R R
(j) 32x1.1/4x32 ea (k) 40x1"x40 ea (l) 40x1.1/4x40 ea (m) 40x1.1/2"x40 ea (n) 50x1.1/4"x50 ea (o) 50x1.1/2x50 ea	1 1 1	
(k) 40x1"x40 ea (l) 40x1.1/4x40 ea (m) 40x1.1/2"x40 ea (n) 50x1.1/4"x50 ea (o) 50x1.1/2x50 ea	1 1 1 1	R
(I) 40x1.1/4x40 ea (m) 40x1.1/2"x40 ea (n) 50x1.1/4"x50 ea (o) 50x1.1/2x50 ea	1 1 1 1 1	R R
(m) 40x1.1/2"x40 ea (n) 50x1.1/4"x50 ea (o) 50x1.1/2x50 ea	1 1 1 1 1 1	R R R
(m) 40x1.1/2"x40 ea (n) 50x1.1/4"x50 ea (o) 50x1.1/2x50 ea	1 1 1 1 1 1 1	R R R
(n) 50x1.1/4"x50 ea (o) 50x1.1/2x50 ea	1 1 1 1 1 1 1 1	R R R R
(o) 50x1.1/2x50 ea	1 1 1 1 1 1 1 1	R R R R R
	1 1 1 1 1 1 1 1 1	R R R R R R R
N /	1 1 1 1 1 1 1 1 1	R R R R R R R
	1 1 1 1 1 1 1 1 1 1	R R R R R R R R R
	1 1 1 1 1 1 1 1 1 1 1	R R R R R R R R R R R R R
(s) 63x2"x63 ea	1 1 1 1 1 1 1 1 1 1 1 1	R R R R R R R R R R R R R R
(t) 63x2.1/2"x63 ea	1 1 1 1 1 1 1 1 1 1 1 1 1	R R R R R R R R R R R R R
(q) 63x1.1/4"x63 ea (r) 63x1.1/2"x63 ea	1 1 1 1 1 1 1 1 1	R R R R R R R R R

	(u) 75x2"x75	ea	1	R
	(v) 75x2.1/2"x75	ea	1	R
	(w) 75x3"x75	ea	1	R
	(x) 90x2.1/2"x90	ea	1	R
	(y) 90x3"x90	ea	1	R
	(z) (a) 90x4"x90	ea	1	R
15.21.1	(b) 110x3"x110	ea	1	R
10.21.1	(c) 110x4"x110	ea	1	R
	(c) 11004 2110	Subtota	1	R
15.22	Supply and delivery of female adaptor 601	Gustote		
	(a) 16x1/2"	ea	1	R
	(b) 16x3/4"	ea	1	R
	© 20x1/2"	ea	1	R
	(d) 20x3/4"	ea	1	R
	€ 20x1"	ea	1	R
	(f) 25x1/2"	ea	1	R
	(g) 25x3/4"	ea	1	R
	(h) 25x1"	ea	1	R
	(i) 32x1/2"	ea	1	R
	(j) 32x3/4"	ea	1	R
	(k) 32x1"	ea	1	R
	(I) 32x1.1/4"	ea	1	R
	(m) 40x1"	ea	1	R
	(n) 40x1.1/4"	ea	1	R
	(o) 40x1.1/2"	ea	1	R
	(p) 50x1.1/4"	ea	1	R
	(q) 50x1.01/2"	ea	1	R
	® 50x2"	ea	1	R
	(s) 63x1.1/4"	ea	1	R
	(t) 63x2"	ea	1	R
	(u) 63x2.1/2"	ea	1	R
	(v) 75x2"	ea	1	R
	(w) 75x2.1/2"	ea	1	R
	(x) 75x3"	ea	1	R
	(y) 90x2"	ea	1	R
	(z)(a) 90x2.1/2"	ea	1	R
15.22.1	(b) 90x3"	ea	1	R
	© 90x4"	ea	1	R
	(d) 110x3"	ea	1	R
		Subtota	al	R
15.23	Supply and delivery of Clamp Saddle with reinforcing steel ring & PVC saddles 503			
	(a) 63x1/2"	ea	1	R

	(b) 63x3/4"	ea	1	R
	© 63x1"	ea	1	R
	(d) 63x1.1/2"	ea	1	R
	€ 63×1.1/4"	ea	1	R
	(f) 75x3/4"	ea	1	R
	(h) 75x1"	ea	1	R
	(i) 75x1.1/4"		1	R
	(j) 75x1.1/2"	ea	1	R
	· •	ea		R
	(k) 75x2"	ea	1	
	(I) 90x1/2"	ea	1	R
	(m) 90x3/4"	ea	1	R
	(n) 90x1"	ea	1	R
	(o) 90x1.1/4"	ea	1	R
	(p) 90x1.1/2"	ea	1	R
	(q) 90x2"	ea	1	R
	(r)110x1/2"	ea	1	R
	(s) 110x3/4"	ea	1	R
	(t) 110x1"	ea	1	R
	(u) 110x1.1/4"	ea	1	R
	(v) 110x1.1/2"	ea	1	R
	(w)110x2"	ea	1	R
	(x) 110x3"	ea	1	R
		• • • •		l n
		Subtota	<u>ll</u>	R
	supply and delivery of clamp	Subtota		K
15.24	supply and delivery of clamp saddle with reinforcing steel ring	Subtota		K
15.24	supply and delivery of clamp saddle with reinforcing steel ring and PVC Saddle 505	Subtota	1	K
15.24	saddle with reinforcing steel ring	ea	1	R
15.24	saddle with reinforcing steel ring and PVC Saddle 505			
15.24	saddle with reinforcing steel ring and PVC Saddle 505 (a) 140x1"	ea	1	R
15.24	saddle with reinforcing steel ring and PVC Saddle 505 (a) 140x1" (b) 140x1.1/4" (c) 140x1.1/2"	ea ea	1 1	R R
15.24	saddle with reinforcing steel ring and PVC Saddle 505 (a) 140x1" (b) 140x1.1/4"	ea ea ea	1 1 1	R R R
15.24	saddle with reinforcing steel ring and PVC Saddle 505 (a) 140x1" (b) 140x1.1/4" (c) 140x1.1/2" (d) 140x2"	ea ea ea ea	1 1 1	R R R
15.24	saddle with reinforcing steel ring and PVC Saddle 505 (a) 140x1" (b) 140x1.1/4" (c) 140x1.1/2" (d) 140x2" (e) 140x2.1/2"	ea ea ea ea ea	1 1 1 1	R R R R
15.24	saddle with reinforcing steel ring and PVC Saddle 505 (a) 140x1" (b) 140x1.1/4" (c) 140x1.1/2" (d) 140x2" (e) 140x2.1/2" (f) 140x3" (g) 160x1"	ea ea ea ea ea ea	1 1 1 1 1	R R R R R
15.24	saddle with reinforcing steel ring and PVC Saddle 505 (a) 140x1" (b) 140x1.1/4" (c) 140x1.1/2" (d) 140x2" (e) 140x2.1/2" (f) 140x3"	ea ea ea ea ea ea	1 1 1 1 1 1	R R R R R R
15.24	saddle with reinforcing steel ring and PVC Saddle 505 (a) 140x1" (b) 140x1.1/4" (c) 140x1.1/2" (d) 140x2" (e) 140x2.1/2" (f) 140x3" (g) 160x1" (h) 160x1.1/4" (i) 160x1.1/2"	ea ea ea ea ea ea ea ea	1 1 1 1 1 1 1	R R R R R R R R
15.24	saddle with reinforcing steel ring and PVC Saddle 505 (a) 140x1" (b) 140x1.1/4" (c) 140x1.1/2" (d) 140x2" (e) 140x2.1/2" (f) 140x3" (g) 160x1" (h) 160x1.1/4" (i) 160x1.1/2" (j)160x2"	ea ea ea ea ea ea ea ea	1 1 1 1 1 1 1	R R R R R R R R R R
15.24	saddle with reinforcing steel ring and PVC Saddle 505 (a) 140x1" (b) 140x1.1/4" (c) 140x1.1/2" (d) 140x2" (e) 140x2.1/2" (f) 140x3" (g) 160x1" (h) 160x1.1/4" (i) 160x1.1/2" (j)160x2" (k) 160x3"	ea e	1 1 1 1 1 1 1 1 1	R R R R R R R R R R R
15.24	saddle with reinforcing steel ring and PVC Saddle 505 (a) 140x1" (b) 140x1.1/4" (c) 140x1.1/2" (d) 140x2" (e) 140x2.1/2" (f) 140x3" (g) 160x1" (h) 160x1.1/4" (i) 160x1.1/2" (j)160x2" (k) 160x3" (l) 200x1.1/4"	ea ea	1 1 1 1 1 1 1 1	R R R R R R R R R R R R R R R R R R R
15.24	saddle with reinforcing steel ring and PVC Saddle 505 (a) 140x1" (b) 140x1.1/4" (c) 140x1.1/2" (d) 140x2" (e) 140x2.1/2" (f) 140x3" (g) 160x1" (h) 160x1.1/4" (i) 160x1.1/2" (j)160x2" (k) 160x3" (l) 200x1.1/4" (m) 200x1.1/2"	ea e	1 1 1 1 1 1 1 1 1 1	R R R R R R R R R R R R R
15.24	saddle with reinforcing steel ring and PVC Saddle 505 (a) 140x1" (b) 140x1.1/4" (c) 140x1.1/2" (d) 140x2" (e) 140x2.1/2" (f) 140x3" (g) 160x1" (h) 160x1.1/4" (i) 160x1.1/2" (j)160x2" (k) 160x3" (l) 200x1.1/4" (m) 200x1.1/2" (n) 200x2"	ea e	1 1 1 1 1 1 1 1 1 1 1	R R R R R R R R R R R R R R R
15.24	saddle with reinforcing steel ring and PVC Saddle 505 (a) 140x1" (b) 140x1.1/4" (c) 140x1.1/2" (d) 140x2" (e) 140x2.1/2" (f) 140x3" (g) 160x1" (h) 160x1.1/4" (i) 160x1.1/2" (j)160x2" (k) 160x3" (l) 200x1.1/4" (m) 200x1.1/2" (n) 200x2" (o)200x3"	ea e	1 1 1 1 1 1 1 1 1 1 1 1	R R R R R R R R R R R R R R R R R
15.24	saddle with reinforcing steel ring and PVC Saddle 505 (a) 140x1" (b) 140x1.1/4" (c) 140x1.1/2" (d) 140x2" (e) 140x2.1/2" (f) 140x3" (g) 160x1" (h) 160x1.1/4" (i) 160x1.1/2" (j)160x2" (k) 160x3" (l) 200x1.1/4" (m) 200x1.1/2" (n) 200x2" (o)200x3" (p) 200x4"	ea e	1 1 1 1 1 1 1 1 1 1 1 1 1	R R R R R R R R R R R R R R R R R R
15.24	saddle with reinforcing steel ring and PVC Saddle 505 (a) 140x1" (b) 140x1.1/4" (c) 140x1.1/2" (d) 140x2" (e) 140x2.1/2" (f) 140x3" (g) 160x1" (h) 160x1.1/4" (i) 160x1.1/2" (j)160x2" (k) 160x3" (l) 200x1.1/4" (m) 200x1.1/2" (n) 200x2" (o)200x3" (p) 200x4" (q) 225x1.1/4"	ea e	1 1 1 1 1 1 1 1 1 1 1 1 1 1	R R R R R R R R R R R R R R R R R R R
15.24	saddle with reinforcing steel ring and PVC Saddle 505 (a) 140x1" (b) 140x1.1/4" (c) 140x1.1/2" (d) 140x2" (e) 140x2.1/2" (f) 140x3" (g) 160x1" (h) 160x1.1/4" (i) 160x1.1/2" (j)160x2" (k) 160x3" (l) 200x1.1/4" (m) 200x1.1/2" (n) 200x2" (o)200x3" (p) 200x4"	ea e	1 1 1 1 1 1 1 1 1 1 1 1 1	R R R R R R R R R R R R R R R R R R

1 1	(t) 225x3"	ea	1	R
	(u) 225x4"	ea	1	R
	(v) 250x1.1/4"	ea	1	R
	(w) 250x1.1/2"	ea	1	R
	(x) 250x2"	ea	1	R
	(y) 250x3"	ea	1	R
	(z)(a) 250x4"	ea	1	R
15.24.1	(b) 315x1.1/4"	ea	1	R
10.24.1	(c) 315x1.1/2"	ea	1	R
	(d) 315x2"	ea	1	R
	(e) 315x3"	ea	1	R
	(f) 315x4"	ea	1	R
	(1) 01004	Subtota	1	R
15.25	Supply and delivery of approved SABS or ISO rated coupling 510 (dxd)	Cubicit		N .
	(a) 16x16	ea	1	R
	(b) 20x20	ea	1	R
	© 25x25	ea	1	R
	(d) 32x32	ea	1	R
	€ 40x40	ea	1	R
	(f) 50x50	ea	1	R
	(g) 63x63	ea	1	R
	(h) 75x75	ea	1	R
	(i) 90x90	ea	1	R
	(j) 110x110	ea	1	R
		Subtota	al	R
15.25	Supply and delivery of approved SABS or ISO rated :Tee 514 (dxdxd)			
	(a) 16x16x16	ea	1	R
	(b) 20x20x20	ea	1	R
	(c) 25x25x25	ea	1	R
	(d) 32x32x32	ea	1	R
	(e) 40x40x40	ea	1	R
	(f) 50x50x50	ea	1	R
	(g) 63x63x63	ea	1	R
	(h) 75x75x75	ea	1	R
	(i) 90x90x90	ea	1	R
	(j) 110x110x110	ea	1	R
		Subtotal		R
15.26	Supply and delivery of approved SABS or ISO rated : Elbow-90 dgrees 513 dxd			
	(a) 16x16	ea	1	R

1 1	(b) 20x20	ea	1	R
	© 25x25	ea ea	1	R
	(d) 32x32	ea ea	1	R
	€ 40x40		1	R
		ea		R
	(f) 50x50	ea	1	
	(g) 63x63	ea	1	R
	(h) 75x75	ea	1	R
	(i) 90x90	ea	1	R
	(j) 110x110	ea	1	R
		Subtota	al	R
15.27	Supply and delivery of approved SABS or ISO rated: Reducing coupling 512 dxd			
	(a) 20x16	ea	1	R
	(b) 25x20	ea	1	R
	© 32x20	ea	1	R
	(d) 32x25	ea	1	R
	€ 40x25	ea	1	R
	(f) 40x32	ea	1	R
	(g) 50x25	ea	1	R
	(h) 50x32	ea	1	R
	(i) 50x40	ea	1	R
	(j) 63x25	ea	1	R
	(k) 63x32	ea	1	R
	(I) 63x40	ea	1	R
	(m) 63x50	ea	1	R
	(n) 75x50	ea	1	R
	(o) 75x63	ea	1	R
	(p) 90x63	ea	1	R
	(q) 90x75	ea	1	R
	® 110x75	ea	1	R
	(s)110x90	ea	1	R
		Subtota	al	R
15.28	supply and delivery of VJ Flange Adaptors			
	(a) 48-58mm	ea	1	R
	(b) 59-78mm	ea	1	R
	(c)72-85mm	ea	1	R
	(d) 74-90mm	ea	1	R
	(e) 88-103mm	ea	1	R
	(f) 98-103mm	ea	1	R
	(g) 108-128mm	ea	1	R
	(h)132-154mm	ea	1	R
	(i)150-170mm	ea	1	R
	(j)159-182mm	ea	1	R

	(k)192-209mm	ea	1	R
	(I)218-235mm	ea	1	R
	(m)235-252mm	ea	1	R
	(n)271-289mm	ea	1	R
	(o)286-304mm	ea	1	R
	(p)302-318mm	ea	1	R
	(q)315-332mm	ea	1	R
	(r)334-350mm	ea	1	R
	(s)344-360mm	ea	1	R
	(t) 374-391mm	ea	1	R
	(u)391-407mm	ea	1	R
	(v)417-437mm	ea	1	R
	(w)444-460mm	ea	1	R
	(x)477-493mm	ea	1	R
	(y)494-510mm	ea	1	R
	(z) (a) 518-534mm	ea	1	R
15.28.1	(b) 556-572mm	ea	1	R
	(c)600-614mm	ea	1	R
	(d) 630-650mm	ea	1	R
Percentage mark-up on items approved by the client or his representative with attached invoices for materials.			%	
SUBTOTAL				R
15% VAT				
TOTAL TO FORM TENDER				

NB: Annual price escalations will be allowable and fixed to CPI plus 1,5% annually only BOQ listed items of this tender document.