



## **TENDER REFERENCE:** **ROC 04 2022/23**

**TENDER FOR APPOINTMENT OF CONTRACTORS FOR REPAIR, MAINTENANCE AND ANCILLARY WORK ON THE DISTRIBUTION WATER NETWORK FOR ALL 7 REGIONS FOR A PERIOD OF 3 YEARS, AS AND WHEN REQUIRED.**

### **VOLUME 1**

#### **A Tender for Category 6CE or higher CIDB Registered Contractors**

<b>ISSUED BY:</b>	<b>PREPARED BY:</b>
City of Tshwane Metropolitan Municipality Tshwane House 320 Madiba Street Pretoria 0002	<b>The Group Head</b> <b><u>Regional Operations and Coordination (ROC)</u></b> P O Box 440 PRETORIA 0001

Registered Name of Tenderer:	
Trading Name of Tenderer:	
Registration No. of Entity:	
Contact Person:	CoT Vendor No (Where Applicable):
Tel. No:	E-Mail Address:
Cell No:	Fax No:

**"NOTE: BIDDERS ARE REQUIRED TO SUBMIT ELECTRONIC COPIES OF THE BID EITHER BY MEMORY STICK/USB FLASH DRIVE/CD/DVD TOGETHER WITH THE HARD COPY OF THE BID/PROPOSALS"**

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PORTION 1: TENDER ROC 04\_2022/23

# PART T1: TENDER PROCEDURES

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## T1.1 TENDER NOTICE AND INVITATION TO TENDER

ROC 04 2022/23

CITY OF TSHWANE

REGIONAL OPERATIONS AND COORDINATION DEPARTMENT



**TENDER FOR APPOINTMENT OF CONTRACTORS FOR REPAIR, MAINTENANCE AND ANCILLARY WORK ON THE DISTRIBUTION WATER NETWORK FOR ALL 7 REGIONS FOR A PERIOD OF 3 YEARS, AS AND WHEN REQUIRED.**

Tenders are hereby invited for the above services.

PLEASE NOTE THAT THE TENDER DOCUMENTS ARE AVAILABLE FOR DOWNLOADING FROM THE NATIONAL TREASURY WEBSITE ([www.etenders.gov.za](http://www.etenders.gov.za)) AND THE CITY'S WEBSITE ([www.Cityoftshwane.gov.za](http://www.Cityoftshwane.gov.za)) .THE 90/10 PREFERENCE POINT SYSTEM WILL BE APPLIED TO THE TENDERS.

**ENQUIRIES:** Representative: Sibusiso Mabase  
Tel (Office): 012 358 1937  
E-Mail: SibusisoMa@tshwane.gov.za

A **COMPULSORY BRIEFING SESSION** with a representative of the Employer will take place in

**Venue:** 11 Johannes Ramokhoase Street  
Water Distribution Depot

**Date:** 12 August 2022

**Time:** 10:00

The closing time for receipt of bids is:

**Date:** 09 September 2022

**Time:** 10:00 am

Requirements for sealing, addressing, delivery, opening and assessment of tenders are stated in the Tender Data

The lowest or any bid will not necessarily be accepted, and the Municipality reserves the right to accept a bid as a whole or in part

Bids must remain valid for a period of 90 days after the closing date.

Ms Mmaseabata Mutlaneng  
**ACTING CITY MANAGER**

**NOTICE 03 OF 2022**

## T1.2 TENDER DATA

The conditions of tender are the Standard Conditions of Tender as contained in **Annexure C of Standard for Uniformity in Engineering and Construction Works Contracts Board Notice 423 Government Gazette No 42622 of 8 August 2019**, bound into Section T1.2

The Standard Conditions of Tender makes several references to the Tender Data. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the Standard Conditions of Tender to which it mainly applies.

CLAUSE NUMBER		TENDER DATA
C.1.1	Actions	The Employer is <b>City Of Tshwane Metropolitan Municipality</b>
C.1.2	Tender Documents	<p>Volume 1: <u>Tender Document</u></p> <p><b>THE TENDER</b></p> <p><b>Part T1: Tendering Procedures</b></p> <p>T1.1 Tender notice and invitation to tender</p> <p>T1.2 Tender data</p> <p><b>Part T2: Returnable documents</b></p> <p>T2.1 List of returnable documents</p> <p>T2.2 Returnable schedules</p> <p><b>THE CONTRACT</b></p> <p><b>Part C1: Agreements and contract data</b></p> <p>C1.1 Form of offer and acceptance</p> <p>C1.2 Contract data</p> <p>C1.3 – Form of guarantee</p> <p>C1.4 – Guarantee (Cash deposit)</p> <p>C1.5 – Health and safety agreement</p> <p>C1.6 – Adjudicators contract</p> <p><b>Part C3: Scope of work</b></p> <p>C3 Scope of work</p> <p><b>ANNEXURES</b></p>
C.1.3	Interpretation	<b>Add</b> the following new clause:
C.1.3.4		<i>The tender documents have been drafted in English. The contract arising from the invitation to tender shall be interpreted and construed in English</i>
C.1.4	Communication and Employer's Agent	<p>Agent: <b>Sibusiso Mabase</b></p> <p>Tel (Office): <b>012 358 1937</b></p> <p>E-Mail: <b>SibusisoMa@tshwane.gov.za</b></p>
C.2.1	Eligibility	<p>It is a mandatory requirement that tenderers <b>must submit</b> the following:</p> <ul style="list-style-type: none"> <li>Only those tenderers who are registered with the CIDB, or are capable of being so prior to the evaluation of submissions, in a contract grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a <b>6CE</b> or higher class of construction work, are eligible to submit tenders.</li> </ul> <p>Joint Ventures are eligible to submit tenders provided that:</p> <ul style="list-style-type: none"> <li>every member of a joint venture is registered with the CIDB within 10 days of the closing date of tenderers.</li> </ul>

CLAUSE NUMBER	TENDER DATA
	<ul style="list-style-type: none"> <li>• The combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor designation in accordance with the sum tendered for a <b>6CE</b> or higher class of construction work or a value determined in accordance with Regulation 25(1B) or 25(7A) of the Construction Industry Development Regulations.</li> <li>• Complete RD.D.1 (Relevant experience) and submit proof of relevant experience.</li> <li>• Submit a completed and signed returnable form RD.D.2 (Schedule of plant, equipment, machinery and personnel) in full and sign. Proof of ownership/lease agreement and proof of vehicle registration for vehicles listed in RD.D.2.</li> <li>• Submit Compensation for Occupational Injuries and Diseases Act (COIDA) letter of good standing</li> </ul> <p>Failure to submit the above documents will lead to disqualification. The bidder will not be evaluated further.</p>
C.2.2	<p>Cost of Tendering</p> <p>The employer will not compensate the tenderer for any costs incurred in attending interviews or making any submissions in the office of the employer.</p>
C.2.5	<p>Reference Documents</p> <p>The arrangements for a <b>compulsory</b> clarification meeting are as stated in the tender notice and invitation to tender</p> <p>Confirmation of attendance will be recorded on site in the attendance register to be signed by all tenderers. Addenda will be issued to, and tenders received from those tendering entities appearing on the attendance register.</p> <p>Tender documents will not be made available at the clarification meeting.</p>
C.2.7	<p>Clarification meeting</p> <p>Where applicable, details of the compulsory clarification meeting with a representative of the Employer are stated in the Tender Notice and Invitation to Tender (Section T1.1 of the document).</p> <p>Confirmation of attendance will be recorded on site in the attendance register to be signed by all tenderers and in the Site Inspection Certificate included in Section T2.2 of the Document.</p> <p>Tender documents will not be made available at the site visit and/or clarification meeting. Detail relating to the collection of tender documents is indicated in the Tender Notice and Invitation to Tender (Section T1.1 of the document).</p>
C.2.8	<p>Seek clarification</p> <p>Replace the contents of the clause with the following:</p> <p>“Request clarification of the tender documents, if necessary, by notifying the Employer’s Official or the Employer’s Agent, indicated in the Tender Notice and Invitation to Tender, in writing at least seven working days before the closing time stated in the foregoing tender notice and clause C2.15.”</p>
C.2.9	<p>Insurance</p> <p>Add the following to the clause</p> <p>“Accept that the submission of a Tender shall be construed as an acknowledgement by the Tenderer that he is satisfied with, where applicable, the insurance cover the Employer will affect under the contract.”</p>
C.2.11	<p>Alterations to documents</p> <p>Add the following to the clause:</p>

CLAUSE NUMBER	TENDER DATA
	<p>"In the event of a mistake having been made, it shall be crossed out in black ink pen and the corrected entry made above in black ink and shall be accompanied by the full signatures of the authorised signatories next to every correction.</p> <p>No correction fluid may be used. If correction fluid has been used, the tender as a whole will not be considered.</p> <p>The Municipality will reject the bid if corrections are not made in accordance with the above."</p>
C.2.13 Submitting a tender offer	Replace the contents of the clause with the following:
C.2.13.2	"Return all volumes of the tender document to the Employer after completion of the relevant sections of each volume in their entirety, by writing in black ink pen.
C.2.13.3	<p>Add the following to the clause:</p> <p><b>"Note: Bidders are required to submit electronic copies of the bid either by memory stick/USB flash drive/CD/DVD together with the hard copy of the Bid/Proposals"</b></p>
C.2.13.4	<p><b>Add</b> the following to the clause</p> <p><i>Only authorised signatories may sign the original and all copies of the tender offer where required.</i></p> <p><i>In the case of a <b>ONE-PERSON CONCERN</b> submitting a tender, this shall be clearly stated.</i></p> <p><i>In the case of a <b>COMPANY</b> submitting a tender, include a copy of a <b><u>resolution by its board of directors</u></b> authorising a director or other official of the company to sign the documents on behalf of the company.</i></p> <p><i>In the case of a <b>CLOSE CORPORATION</b> submitting a tender, include a copy of a <b><u>resolution by its members</u></b> authorising a member or other official of the corporation to sign the documents on each member's behalf.</i></p> <p><i>In the case of a <b>PARTNERSHIP</b> submitting a tender, <b><u>all the partners</u></b> shall sign the documents, unless one partner or a group of partners has been authorised to sign on behalf of each partner, in which case <b><u>proof of such authorisation</u></b> shall be included in the Tender.</i></p> <p><i>In the case of a <b>JOINT VENTURE/CONSORTIUM</b> submitting a tender, include a <b><u>resolution of each company</u></b> of the joint venture together with a <b><u>resolution by its members</u></b> authorising a member of the joint venture to sign the documents on behalf of the joint venture.</i></p> <p><b><u>Accept that failure to submit proof of authorisation to sign the tender shall result in the tender offer being regarded as non-responsive.</u></b></p>
C.2.13.5	<p>The identification details are:</p> <p>Tender Reference: ROC 04 2022/23</p> <p>Tender Description: TENDER FOR APPOINTMENT OF CONTRACTORS FOR REPAIR, MAINTENANCE AND ANCILLARY WORK ON THE DISTRIBUTION WATER NETWORK FOR ALL 7 REGIONS FOR A PERIOD OF 3 YEARS, AS AND WHEN REQUIRED.</p>

CLAUSE NUMBER	TENDER DATA
	<p>Closing Time: <b>10:00am</b></p> <p>Closing Date: <b>09 September 2022</b></p> <p>Each tender shall be enclosed in a sealed envelope, bearing the correct identification details and shall be placed in the tender box located at:</p> <p><b>AT THE ENTRANCE TSHWANE HOUSE (TENDER BOX) 320 MADIBA STREET PRETORIA 0002</b></p> <p>Please ensure that all required compliance documents are included upon submission as no additional documents will be requested from bidders after closing.</p> <p>Telephonic, telegraphic, telex, facsimile or e-mailed offers will <b>not be</b> accepted.</p>
C.2.13.9	Accept the tender offers submitted by facsimile or e-mail will be rejected by the employer, unless stated otherwise in the tender data.
C.2.14 Information and data to be completed in all respects	<p>Add the following to the clause:</p> <p>“The Tenderer is required to enter information in the following sections of the document:</p> <p>Section T2.2 : Returnable Schedules  Section T2.3 : Technical Schedules  Section C1.1 : Form of Offer and Acceptance  Section C1.2 : Contract Data (Part 2)  Section C2.2 : Bill of Quantities</p> <p>The above sections shall be signed by the Tenderer (and witnesses where required). Individual pages should only be initialled by the successful Tenderer and by the witnesses after acceptance by the Employer of the Tender Offer.</p> <p>The Tenderer shall complete and sign the Form of Offer prior to the submission of a Tender Offer.</p> <p>The Schedule of Deviations (if applicable) shall be signed by the successful Tenderer after acceptance by the Employer of the Tender Offer.</p> <p>Accept that the Employer shall in the evaluation of tenders take due account of the Tenderer’s past performance in executing for similar building works of comparable magnitude, and the degree to which he possesses the necessary technical, financial and other resources to enable him to complete the Works successfully within the contract period.</p> <p>Satisfy the Employer and Engineer as to his ability to perform and complete the Works timeously, safely and with satisfactory quality, by furnishing details in Part T2 – Returnable Documents.</p> <p>Accept that failure to provide the information and data required in the Returnable Documents, including the Technical Schedules shall result in a Tender Offer being regarded as non-responsive.</p> <p>Accept that the Employer is restricted in accordance with clause 5 (1) of the Construction Regulations, 2014, to only appoint a contractor whom he is satisfied has the necessary competencies and resources to carry out the work safely. Accept that submitting inferior and inadequate information relating to health and safety (as required in clause 2.23) shall</p>



CLAUSE NUMBER		TENDER DATA
		be regarded as justifiable and compelling reasons not to accept the Tender Offer of the Tenderer scoring the highest number of tender evaluation points.
C.2.15	Closing time	Details of the closing time for submission of tender offers are stated in the Tender Notice and Invitation to tender (Section T.1.1 of the document).
C.2.16	Tender offer validity	<b>Add</b> the following new clause:  Accept that should the Tenderer unilaterally withdraw his tender during the tender validity period, the Employer shall, without prejudice to any other rights he may have, be entitled to accept any less favourable tender for the Works from those received, or to call for fresh tenders, or to otherwise arrange for execution of the Works, and the Tenderer shall pay on demand any additional expense incurred by the Employer on account of the adoption of the said courses, as well as either the difference in cost between the tender withdrawn (as corrected in terms of clause 3.9 of the Condition of Tender) and any less favourable tender accepted by the Employer, or the difference between the tender withdrawn (as corrected and the cost of execution of the Works by the Employer as well as any other amounts the Employer may have to pay to have the Works completed
C.2.16.5		
C.2.16.6		The tenderer shall, when requested by the employer to do so, submit the names of all design, management and supervisory staff that will be employed to supervise the labour-intensive portion of the works together with satisfactory evidence that such staff members satisfy the eligibility requirements.
C.2.18	Provide other material C.2.18.1	Add the following to the clause:  "Accept that if requested, the Tenderer shall within 7 days of the date upon which he is requested to do so, submit a full report from his banker as to his financial standing. The Employer may, in its discretion, and subject to the provisions of Section 4(1)(d) of the State Tender Board Act 86 of 1968, condone any failure to comply with the foregoing condition.  Accept that the Employer or his agent reserves the right to approach the Tenderer's banker or guarantor(s) as indicated in the tender document, or the bankers of each of the individual members of any joint venture that is constituted for purposes of this Contract, with a view to ascertaining whether the required guarantee will be furnished, and for purposes of ascertaining the financial strength of the Tenderer or of the individual member of such venture."
C.2.19	Inspections, tests and analysis	Add the following at the end of the clause:  ....or upon written request.
C.2.23	Certificates	Refer to Part T2 of this procurement document for a list of the documents that are to be returned with the tender.
C.2.25	Canvassing and obtaining of additional information by tenderers	<i>Add the following new clause</i>  <i>The Tenderer shall not make any attempt either directly or indirectly to canvass any of the Employers' officials or the Employer's Project Coordinator and Deputy Directors (Regional Project Managers) in respect of his tender, after the opening of the tenders but prior to the Employer arriving at a decision thereon.</i>  <i>The Tenderer shall not make any attempt to obtain particulars of any relevant information, other than that disclosed at the opening of tenders.</i>
		Add the following new clause

CLAUSE NUMBER	TENDER DATA
C.2.26 <i>Prohibitions on awards to persons in service of the state</i>	<p>The Employer is prohibited to award a tender to a person -</p> <ol style="list-style-type: none"> <li>who is in the service of the state; or</li> <li>if that person is not a natural person, of which any director, manager, principal shareholder or stakeholder is a person in the service of the state; or</li> <li>a person who is an advisor or consultant contracted with the municipality or municipal entity.</li> </ol> <p>In the service of the state means to be -</p> <ol style="list-style-type: none"> <li>a member of:- <ul style="list-style-type: none"> <li>any municipal council;</li> <li>any provincial legislature; or</li> <li>the National Assembly or the National Council of Provinces;</li> </ul> </li> <li>a member of the board of directors of any municipal entity;</li> <li>an official of any municipality or municipal entity;</li> <li>an employee of any national or provincial department;</li> <li>provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999);</li> <li>a member of the accounting authority of any national or provincial public entity; or</li> <li>an employee of Parliament or a provincial legislature.</li> </ol> <p>In order to give effect to the above, the questionnaire for the declaration of interests in the tender of persons in service of state in part T2 of this procurement document must be completed.</p>
C.2.27 <i>Awards to close family members of persons in the service of the state</i>	<p><b>Add</b> the following new clause</p> <p><i>Accept that the notes to the Employer's annual financial statements must disclose particulars of any award of more than R2000 to a person who is a spouse, child or parent of a person in the service of the state (defined in clause C.2.25), or has been in the service of the state in the previous twelve months, including -</i></p> <ol style="list-style-type: none"> <li><i>the name of that person;</i></li> <li><i>the capacity in which that person is in the service of the state; and</i></li> <li><i>the amount of the award.</i></li> </ol> <p>In order to give effect to the above, the questionnaire for the declaration of interests in the tender of persons in service of state in part T2 of this procurement document must be completed.</p>
C.2.28 <i>Vendor registration</i>	<p><b>Add</b> the following new clause</p> <p><i>The contractor will be required to register as a supplier/ service provider on the City of Tshwane's vendor register before any payment can be done.</i></p> <p><i>If the tenderer is already registered as a vendor, it is required to record the vendor number in space provided on the cover page of this Tender document.</i></p> <p><i>Vendor registration documents are available from the Procurement Advice Centre or can be downloaded from <a href="http://www.tshwane.gov.za/procurement.cfm">http://www.tshwane.gov.za/procurement.cfm</a></i></p> <p><i>All parties of a joint venture or consortium submitting a tender shall comply with the requirements of this clause.</i></p>
C.2.29 <i>Tax</i>	<p><b>Add</b> the following new clause</p> <p><b><i>National Treasury SCM Instruction no. 7 of 2017/18 clause 4 application during SCM Processes state that:</i></b></p> <p><i>The designated official(s) must verify the tenderer's tax compliance status prior to the finalisation of the award of the tender or price quotation.</i></p>

CLAUSE NUMBER	TENDER DATA
	<p><i>Where the recommended tenderer is not tax compliant, the tenderer should be notified of their non-compliant status and the tenderer must be requested to submit to the municipality or municipal entity, within 7 working days, written proof from South African Revenue Services of their tax compliance status or proof from SARS that they have made an arrangement to meet their outstanding tax obligations. The proof of tax compliance status submitted by the tenderer to the municipality or municipal entity must be verified via the Central Supplier Database or eFiling</i></p> <p><i>Accept that the tenderer will be rejected if such tenderer fails to provide proof of tax compliance status in terms of clause 4.2 of National Treasury SCM Instruction no. 7 of 2017/18</i></p>
<p>C.2.30      B-BBEE Status Level of Contributor</p>	<p><b>Add</b> the following new clause</p> <p><i>A valid B-BBEE Verification Certificate from a Verification Agency accredited by the South African Accreditation System (SANAS) or a Registered Auditor approved by the Independent Regulatory Board of Auditors (IRBA) or an Accounting Officer as contemplated in the Close Corporation Act (CCA) must be submitted with this tender document</i></p> <p><i>In the case of a Joint Venture/Consortium a valid B-BBEE Status Level of Contributor certificate must be submitted by each individual party to the Joint Venture/Consortium.</i></p> <p><i>Failure by the tenderer to comply with this clause will result in the tenderer scoring 0 points for preference.</i></p>
<p>C.3.1      Respond to requests from the tenderer</p> <p>C.3.1.1</p>	<p>Replace the contents of the clause with the following:</p> <p>Respond to a request for clarification received up to five (5) working days before the Tender closing time stated in the Tender Data and notify all Tenderers who collected procurement documents within two (2) working days of the same date.</p>
<p>C.3.4      Opening of tender submissions</p>	<p>The time and location for the tender submissions and details of the tender opening are stated in the Tender Notice and Invitation to Tender (Section T1.1 of the document). Bid register will be made public on the City's website</p>
<p>C.3.11      Evaluation of tender offers</p>	<p><b><i>All tenderers who submitted responsive tenders will be evaluated.</i></b></p> <p>Method 1 will be used to evaluate all responsive tender offers in terms of Clause C.3.11.2 of the Standard Conditions of Tender and tender will be evaluated in 6 stages namely:</p> <p><b>1. STAGES OF EVALUATION</b></p> <p>Clearly outline the stages of evaluation applicable to the bid</p> <p><b>2. Stage 1: Administrative Compliance</b></p> <p><b>Stage 2: Local content and production</b></p> <p><b>Stage 3: Mandatory Requirements</b></p> <p><b>Stage 4: Preference Point System</b></p>

CLAUSE NUMBER	TENDER DATA										
	<p><b>2.1 STAGE 1: ADMINISTRATIVE COMPLIANCE</b></p> <ul style="list-style-type: none"> <li>All the proposals will be evaluated against the administrative responsiveness requirement as set out in the list of returnable documents Act</li> </ul> <p><b>2.2 STAGE 2: LOCAL CONTENT AND PRODUCTION</b></p> <p>i) In terms of the stipulated minimum threshold for local production and content for:</p> <ul style="list-style-type: none"> <li>Plastic pipes are 100%</li> <li>Valves, products, and actuators are 70%</li> </ul> <p>The City shall only accept the specifications which meets minimum threshold percentage requirements for local production and content as referred to in the Preferential. Procurement Regulations on Local Content and the relevant National Treasury designated sectors' circulars.</p> <p>ii)The bidder must clearly indicate as part of the bid submission the quantities of material and products to be supplied and the level of local content for each product. Should the bidder not be able to comply with the prescribed minimum threshold, an exemption received from the Department of Trade and Industry needs to be submitted with the bid to be considered for further evaluation. Bidders that do not comply with the above-mentioned requirements will be automatically disqualified.</p> <p>The following items in this table have a minimum threshold of 100% local content</p> <table> <tr> <th>Product for designation</th><th>Minimum Local Content</th></tr> <tr> <td>High density polyethylene (HDPE) pipes</td><td>100%</td></tr> <tr> <td>PVC pipes</td><td>100%</td></tr> </table> <table> <tr> <th>Product for designation</th><th>Minimum Local Content</th></tr> <tr> <td>valves</td><td>70%</td></tr> </table> <p><b>2.3 STAGE 3: MANDATORY REQUIREMENTS</b></p>	Product for designation	Minimum Local Content	High density polyethylene (HDPE) pipes	100%	PVC pipes	100%	Product for designation	Minimum Local Content	valves	70%
Product for designation	Minimum Local Content										
High density polyethylene (HDPE) pipes	100%										
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Product for designation	Minimum Local Content										
valves	70%										

CLAUSE NUMBER	TENDER DATA
	<p>Special disqualification criteria for the specific bid/project must be indicated, which could include non-submission of the following:</p> <ul style="list-style-type: none"> <li>• Valid certificate confirming that the bidder has CIDB grading of 6CE or higher</li> <li>• The Occupational Health and Safety Officer to be appointed for the project must have Occupational Health and Safety Certificate accredited by the SACPCMP board. (CV and Certificates must be provided)</li> <li>• Proof of Qualifications and with minimum three (03) years' experience (<i>Civil Engineering Technician NQF level 6</i>) (CV indicating <i>relevant experience</i> minimum three (03) years' experience <i>National Diploma from Technikon/University of Technology must be provided</i>)</li> <li>• Proof of Qualifications and experience (<i>Artisan Plumbers NQF level 3</i>) (CV indicating <i>relevant experience, drivers' licence with PDP and plumbing certificate/ Red seal must be provided</i>)</li> <li>• Proof of qualifications and minimum of (3) years' experience working with Steel pipes (Steel Welders Arc NQF level 3/Red Seal) (CV indicating relevant experience, drivers' licence with PDP and Steel Arc welders' certificate must be submitted)</li> <li>• Proof of qualifications and minimum of (3) years' experience welding HDPE pipes (HDPE Welders Fusion NQF level 3/Red Seal) (CV indicating relevant experience, drivers' licence with PDP and HDPE Fusion welders' certificate must be submitted)</li> <li>• Three (3) Appointment letters and complete certificate, where the bidder completed water reticulation projects pipe laying project or repair and maintenance water reticulation project must be submitted.</li> <li>• Owning/hiring of vehicle (Plumber's truck or LDV 1 Ton Bakkie suitable to load material; equipment and team consist of minimum of 4 personnel) Proof of ownership or rental/lease agreement must be provided.</li> </ul> <p>NB:</p> <p>Bidders must attach a bank guarantee letter not exceeding 6 months from a registered banking institution whether the bidder will be renting or leasing the vehicles.</p>

CLAUSE NUMBER	TENDER DATA
	<p>If hiring 8 or more vehicles submit R 6 million bank guarantee not exceeding 6 months</p> <p>If hiring 6 - 7 vehicles submit R 4 million bank guarantees not exceeding 6 months</p> <p>If hiring 4 - 5 vehicles submit R 2 million bank guarantees not exceeding 6 months</p> <ul style="list-style-type: none"> <li>• Owning/hiring of TLB machines, Hydraulic Excavator, Tipper truck must attach a proof of road worthy certificate from an accredited Vehicle Testing Station (VTS) as stated in Schedule 4 of the National Road Traffic Act No.93 of 1996, or from the manufacturer.</li> </ul> <p>NB:</p> <p>If owning the vehicles please attach vehicle registration document (registration numbers) and road worthy certificate, if hiring attach lease agreement with registration documents (registration numbers)</p> <ul style="list-style-type: none"> <li>• Owning/hiring of steel pipe welding equipment (generator shielded metal Arc welding and Gas welding Oxy)</li> <li>• Owning/hiring of HDPE Butt welding machine (welding range 315-630)</li> <li>• Owning/hiring of Butt weld machine (welding range 630-800)</li> <li>• Owning/hiring of Butt weld machine (welding range 700- 1000)</li> <li>• Owning/hiring of Walk behind roller compactor/plate compactor.</li> <li>• Owning/hiring of Motorised Heavy Duty Pipe Cutter (&gt; 50mm Dia).</li> <li>• Owning/hiring of Water pump. (75mm -100 mm) centrifugal Water Pump, with minimum pumping head of 28m</li> </ul> <p>NB:</p> <p>If owning attach list of items on the company letter head, if hiring attach lease agreement not older than 6 months</p> <p><b>2.4 STAGE 4: PREFERENCE POINT SYSTEM</b></p> <p>Indicate whether the preferential points to be used will be the 90/10 points system in terms of the Preferential Procurement Policy Framework Act, 2000 (Act 5 of 2000).</p> <ul style="list-style-type: none"> <li>• 90 points for price</li> <li>• 10 points for B-BBEE status (service provider to submit the certified copy of the B-BBEE level rating certificate).</li> </ul>

CLAUSE NUMBER	TENDER DATA
C.3.13 Acceptance of Tender Offer	<p>Tender offers will only be accepted if:</p> <ul style="list-style-type: none"> <li>a.) the tenderer complies with the eligibility criteria stated in clause C.2.1</li> <li>b.) the tenderer is able to produce an original Tax Clearance Certificate issued by the South African Revenue Service;</li> <li>c.) the tenderer is not in arrears for more than 3 months with municipal rates and taxes and municipal service charges;</li> <li>d.) the tenderer or any of its directors is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector;</li> <li>e.) the tenderer has not: <ul style="list-style-type: none"> <li>i) abused the Employer's Supply Chain Management System; or</li> <li>ii) failed to perform on any previous contract and has been given a written notice to this effect.</li> </ul> </li> <li>f.) the tenderer has completed the Compulsory Enterprise Questionnaire and there are no conflicts of interest which may impact on the tenderer's ability to perform the contract in the best interests of the employer or potentially compromise the tender process and persons in the employ of the state are permitted to submit tenders or participate in the contract;</li> <li>g.) the tenderer is registered and in good standing with the compensation fund or with a licensed compensation insurer;</li> </ul>
C.3.17 Copies of Contract	One signed copy of contract shall be provided by the Employer to the successful Tenderers.

# PART T2:      RETURNABLE DOCUMENTS

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## T2.1 LIST OF RETURNABLE DOCUMENTS

### RD.A RETURNABLE DOCUMENTS FOR TENDER EVALUATION PURPOSES

**Note:** *Failure to submit the applicable documents will result in the tender offer being disqualified from further consideration*

Document Name	Reference	Confirmation of Document Included (Tenders may use this column to confirm documents have been completed and included in the tender)
Form of offer and acceptance	Section C1.1	
MBD 4: Declaration of interest in tender of persons in service of state	Form RD.A.1	
MBD 8: Declaration of tenderer's past supply chain management practices	Form RD.A.2	
Tax Clearance Certificate	Form RD.A.3	

### RD.B RETURNABLE DOCUMENTS REQUIRED FOR PREFERENTIAL PROCUREMENT EVALUATION PURPOSES

**Note:** *Failure to submit the applicable documents will result in the tender offer being awarded 0 (zero) preference points*

Document Name	Reference	Confirmation of Document Included (Tenders may use this column to confirm documents have been completed and included in the tender)
Valid B-BBEE Status Level of Contributor Certificate		
MBD 6.1: Preference points claim form in terms of the Preferential Procurement Regulations, 2017	Form RD.B.1	
MBD 6.2: Declaration certificate for local production and content for designated sector	Form RD.B.2	

### RD.C ADDITIONAL RETURNABLE DOCUMENTS REQUIRED FOR TENDER EVALUATION PURPOSES

**Note:** *Failure to submit the applicable document will result in the Tenderer having to submit same upon request within 7 days and if not complied with, will result to the tender offer being disqualified from further consideration [See also clause 2.18 of the Standard Conditions of Tender]*

Document Name	Reference	Confirmation of Document Included (Tenders may use this column to confirm documents have been completed and included in the tender)
MBD 9: Certificate of independent tender determination	RD.C.1	
Record of services provided to organs of state	RD.C.2	

Document Name	Reference	Confirmation of Document Included (Tenders may use this column to confirm documents have been completed and included in the tender)
Status of concern submitting tender	RD.C.3	
Classification of business	RD.C.4	
MBD 5: Declaration for procurement above R10 million (all applicable taxes included)	RD.C.5	
Certificate of authority of signatory	RD.C.6	
Certificate of authority of signatory for joint ventures and consortia	RD.C.7	
Staff for labour intensive construction works	RD.C.9	
Proof of professional indemnity insurance	RD.C.10	

#### **RD.D    RETURNABLE DOCUMENTS REQUIRED FOR QUALITY EVALUATION PURPOSES**

**Note:**     *Failure to submit the applicable documents will result in the Tenderer receiving a 0 (zero) score for the applicable evaluation schedule.*

Document Name	Reference	Confirmation of Document Included (Tenders may use this column to confirm documents have been completed and included in the tender)
Evaluation Schedule: Tender's experience	RD.D.1	
Evaluation Schedule: Schedule of plant, equipment, machinery and personnel	RD.D.2	
Key Personnel	RD.D.4	
Curriculum vitae of key personnel	RD.D.5	
Technical Returnable schedules A and B	RD.D.6	

**RD.E OTHER DOCUMENTS THAT WILL FORM PART OF THE CONTRACT**

**Note:** *Failure to submit or fully complete the applicable documents will result in the tender offer being disqualified from further consideration*

Document Name	Reference	Confirmation of Document Included (Tenders may use this column to confirm documents have been completed and included in the tender)
Data provided by the contractor	Section C1.2	
Record of addenda to tender documents	RD.E.1	
Certificate confirming that bidder has CIDB grading 6CE or higher		
An organogram with all staff that will be assigned to the project		
Copies of Certified Qualifications of all staff to be assigned to the project		
Safety, health, Environmental management, and Quality plan (SHEQ) including Covid 19 safety plan.		
3 years audited financial statements		

## T2.2 RETURNABLE SCHEDULES

### FORM RD.A.1 MBD 4: DECLARATION OF INTEREST IN TENDER OF PERSONS IN SERVICE OF STATE

1. No bid will be accepted from persons in the service of the state<sup>1</sup>.
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. **In order to give effect to the above, the following questionnaire must be completed and submitted with 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, shareholder<sup>2</sup>) .....
  - 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? **YES / NO**
  - 3.8.1 If yes, furnish particulars. ....  
.....

<sup>1</sup> MSCM Regulations: "in the service of the state" means to be –

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

<sup>2</sup> 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? **YES / NO**
- 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? **YES / NO**
- 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? **YES / NO**
- 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. **YES / NO**
- 3.14.1 If yes, furnish particulars: ....

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

Full Name	Identity Number	State Employee Number

.....  
**Signature**

.....  
**Date**

.....  
**Capacity**

.....  
**Name of Bidder**

The undersigned, who warrants that he / she is duly authorized to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.	
<u>Person authorized to sign the tender:</u>	
Full name (in BLOCK letters):	_____
Signature:	_____
Date:	_____

**FORM RD.A.2 MBD 8: DECLARATION OF TENDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES**

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

Item	Question	Response	
4.1	Is the tenderer, any of its directors listed on the National Treasurer's database as a company or persons prohibited from doing business with the public sector? <b>(Companies for persons who are listed on this database were informed in writing of this restriction by the National Treasury after the audit alteram partem rule was applied)</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>
	If so, furnish particulars:		
4.2	Is the tenderer 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, 2004 (Act 12 of 2004)? <b>(To access this register, enter the National Treasury's website, <a href="http://www.treasury.gov.za">www.treasury.gov.za</a> , click on the icon "Register for Tender Defaulters" or submit your written request for a hard copy of the Register to facsimile number 012-326-5445)</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>
	If so, furnish particulars:		
4.3	Was the tenderer 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 <input type="checkbox"/>	NO <input type="checkbox"/>
	If so, furnish particulars:		

Item	Question	Response	
4.4	Does the tenderer 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 <input type="checkbox"/>	NO <input type="checkbox"/>
	If so, furnish particulars:		
4.5	Was any contract between the tenderer 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 <input type="checkbox"/>	NO <input type="checkbox"/>
	If so, furnish particulars:		

The undersigned, who warrants that he / she is duly authorized to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

Person authorized to sign the tender:

Full name (in BLOCK letters): \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



**FORM RD.A.3 MBD 2: TAX CLEARANCE CERTIFICATE REQUIREMENTS**

It is a condition of tender that the taxes of the successful tenderer must be in order, or that satisfactory arrangements have been made with South African Revenue Service (SARS) to meet the tenderer's tax obligations.

1. In order to meet this requirement tenderers are required to complete in full the form TCC 001 "Application for a Tax Clearance Certificate" and submit it to any SARS branch office nationally. The Tax Clearance Certificate Requirements are also applicable to foreign bidders / individuals who wish to submit bids.
2. SARS will then furnish the tenderer with a Tax Clearance Certificate that will be valid for a period of 1 (one) year from the date of approval.
3. **The original Tax Clearance Certificate or unique pin must be submitted together with the tender. Failure to submit the original and valid Tax Clearance Certificate will result in the invalidation of the tender. Certified copies of the Tax Clearance Certificate will not be acceptable.**
4. In tenders where Consortia / Joint Ventures / Sub-contractors are involved; each party must submit a separate Tax Clearance Certificate.
5. Copies of the TCC 001 "Application for a Tax Clearance Certificate" form are available from any SARS branch office nationally or on the website [www.sars.gov.za](http://www.sars.gov.za).
6. Applications for the Tax Clearance Certificates may also be made via e-Filing. In order to use this provision, taxpayers will need to register with SARS as e-Fileers through the website [www.sars.gov.za](http://www.sars.gov.za)

The undersigned, who warrants that he / she is duly authorized to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

Person authorized to sign the tender:

Full name (in BLOCK letters): \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**FORM RD.B.1 MBD 6.1: PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2017**

This preference form must form part of all tenders 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, TENDERERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT B-BBEE, AS PRESCRIBED IN THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017**

**1. GENERAL CONDITIONS**

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

- The 80/20 system for requirements with a Rand value of up to R50 000 000.00 (**all applicable taxes included**); and
- The 90/10 system for requirements with a Rand value above R50 000 000.00 (**all applicable taxes included**).

1.2 The value of this tender is estimated to *exceed* R50 000 000.00 and therefore the **90/10** system shall be applicable.

1.3 Preference points for this tender shall be awarded for:

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

1.3.1 The points for this tender are allocated as follows:

	<b>POINTS</b>
1.3.1.1 <b>PRICE</b>	90
1.3.1.2 <b>B-BBEE STATUS LEVEL OF CONTRIBUTION</b>	10
<b>Total points for Price, B-BBEE must not exceed</b>	<b>100</b>

1.4 Failure on the part of a tenderer to fill in and/or to sign this form and submit a B-BBEE Verification Certificate from a Verification Agency accredited by the South African Accreditation System (SANAS) or a Registered Auditor approved by the Independent Regulatory Board of Auditors (IRBA) or an Accounting Officer as contemplated in the Close Corporation Act (CCA) together with the tender, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.

1.5 Blank or incomplete particulars or insufficient documentary proof thereof, or failure to sign the declaration, will be construed to mean that the tenderer is not claiming preference points, in which case no points will be awarded for HDI.

**2. DEFINITIONS**

2.1 **all applicable taxes** include value-added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies.

2.2 **B-BBEE** means broad-based black economic empowerment as defined in Section 1 of the Broad-Based Black Economic Empowerment Act.

- 2.3 **B-BBEE Status Level of Contributor** means the B-BBEE status received by a measured entity based on its overall performance using the relevant scorecard contained in the Codes of Good Practice on Black Economic Empowerment, issued in terms of Section 9(1) of the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003).
- 2.4 **Broad-Based Black Economic Empowerment Act** means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003).
- 2.5 **comparative price** means the price after the factors of a non-firm price and all unconditional discounts that can be utilized have been taken into consideration.
- 2.6 **consortium or joint venture** means an association of persons for the purpose of combining their expertise, property, capital, efforts, skills, and knowledge in an activity for the execution of a contract.
- 2.7 **contract** means the agreement that results from the acceptance of a tender by an organ of state.
- 2.8 **EME** means any enterprise with an annual total revenue of R5 million or less.
- 2.9 **firm price** means the price that is only subject to adjustments in accordance with the actual increase or decrease resulting from the change, imposition, or abolition of customs or excise duty and any other duty, levy, or tax, which, in terms of the law or regulation, is binding on the contractor and demonstrably has an influence on the price of any supplies, or the rendering costs of any service, for the execution of the contract.
- 2.10 **functionality** means the measurement according to predetermined norms, as set out in the tender documents, of a service or commodity that is designed to be practical and useful, working or operating, taking into account, among other factors, the quality, reliability, viability and durability of a service and the technical capacity and ability of a bidder.
- 2.11 **non-firm prices** means all prices other than **firm** prices.
- 2.12 **person** includes a juristic person.
- 2.13 **rand value** means that total estimated value of a contract in South African currency, calculated at the time of tender invitations and includes all applicable taxes and excise duties.
- 2.14 **sub-contract** means the primary contractor's assigning or leasing or making out work to or employing another person to support such primary contractor in the execution of part of a project in terms of the contract.
- 2.15 **tender** 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, works or services works or goods, through price quotations, advertised competitive bidding processes or proposals.
- 2.16 **total revenue** bears the same meaning assigned to this expression in the Codes of Good Practice on Black Economic Empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act and promulgated in the Government Gazette on 9 February 2007.
- 2.17 **trust** means the arrangement through which the property of one person is made over or bequeathed to a trustee to administer such property for the benefit of another person.
- 2.18 **trustee** means any person, including the founder of a trust, to whom property is bequeathed in order for such property to be administered for the benefit of another person.
- 3. ADJUDICATION USING A POINT SYSTEM**
- 3.1 The tenderer obtaining the highest number of total points will be awarded the contract.

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

#### 4. POINTS AWARDED FOR PRICE

##### THE 80/20 OR 90/10 PREFERENCE POINT SYSTEM

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

**80/20**

**90/20**

$$P_s = 80 \left( 1 - \frac{P_T - P_{MIN}}{P_{MIN}} \right)$$

$$P_s = 90 \left( 1 - \frac{P_T - P_{MIN}}{P_{MIN}} \right)$$

Where

$P_s$  = Points scored for price of tender under consideration

$P_T$  = Rand value of tender under consideration

$P_{MIN}$  = Rand value of lowest acceptable tender

#### 5. POINTS AWARDED FOR B-BBEE STATUS LEVEL OF CONTRIBUTION

- 5.1 In terms of Regulation 5 (2) and 6 (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	8	16

4	5	12
5	4	8
6	3	6
7	2	4
8	1	2
Non-compliant contributor	0	0

- 5.2 Tenderers who qualify as EMEs in terms of the B-BBEE Act must submit a certificate issued by an Accounting Officer as contemplated in the CCA or a Verification Agency accredited by SANAS or a Registered Auditor. Registered auditors do not need to meet the prerequisite for IRBA's approval for the purpose of conducting verification and issuing EMEs with B-BBEE Status Level Certificates.
- 5.3 Tenderers other than EMEs must submit their original and valid B-BBEE status level verification certificate or a certified copy thereof, substantiating their B-BBEE rating issued by a Registered Auditor approved by IRBA or a Verification Agency accredited by SANAS.
- 5.4 A trust, consortium or joint venture, will qualify for points for their B-BBEE status level as a legal entity, provided that the entity submits their B-BBEE status level certificate.
- 5.5 A trust, consortium or joint venture will qualify for points for their B-BBEE status level as an unincorporated entity, provided that the entity submits their consolidated B-BBEE scorecard as if they were a group structure and that such a consolidated B-BBEE scorecard is prepared for every separate tender.
- 5.6 Tertiary institutions and public entities will be required to submit their B-BBEE status level certificates in terms of the specialized scorecard contained in the B-BBEE Codes of Good Practice.
- 5.7 A person will not be awarded points for B-BBEE status level if it is indicated in the tender documents that such a tenderer intends sub-contracting more than 25% of the value of the contract to any other enterprise that does not qualify for at least the points that such a tenderer qualifies for, unless the intended sub-contractor is an EME that has the capability and ability to execute the sub-contract.
- 5.8 A person awarded a contract may not sub-contract more than 25% of the value of the contract to any other enterprise that does not have an equal or higher B-BBEE status level than the person concerned, unless the contract is sub-contracted to an EME that has the capability and ability to execute the sub-contract.

## 6. TENDER DECLARATION

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

## 7. B-BBEE STATUS LEVEL OF CONTRIBUTION CLAIMED IN TERMS OF PARAGRAPHS 1.3.1.2 AND 5.1

7.1

B-BBEE Status of Contribution:

=

(Maximum of 10 or 20 points)

(Points claimed in respect of paragraph &.1 must be in accordance with the table reflected in paragraph 5.1 and must be substantiated by means of a B-BBEE certificate issued by a Verification Agency accredited by SANAS or a Registered Auditor approved by IRBA or an Accounting Officer as contemplated in the CCA.

## 8. SUB-CONTRACTING

8.1

Will any portion of the contract be sub-contracted?  
(delete which is not applicable)

YES	NO
-----	----

8.1.1

If YES, indicate:

Name of subcontractor	% to be subcontracted	B-BBEE status level of sub-contractor	Is the sub-contractor an EME (delete which is not applicable)	
			YES	NO
			YES	NO
			YES	NO

## 9. DECLARATION WITH REGARD TO COMPANY/FIRM

9.1

Name of FIRM:

9.2

VAT Registration number:

9.3

Company registration number:

9.4

Type of firm:

Partnership

One person business/sole trade

Close corporation

Company

(Pty) Limited

Small Medium Micro Enterprises


(Tick applicable box)

9.5

Describe principal business activities

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9.6 Company classification

Manufacturer

Supplier

Professional service provider

Other service providers, e.g., transporter etc.


(Tick applicable box)

9.7 Municipal information

Municipality where business is situated:

Registered account number:

Stand number:


9.8 Total number of years the firm has been in business

--

9.9 I/we, the undersigned, who warrants that he/she is duly authorized to do so on behalf of the company/firm certify that points claimed, based on the B-BBEE status level of contribution, indicated in paragraph 7 of the foregoing certificate, qualifies the company/firm for the preference(s) shown and I/we acknowledge that:

- i) The information furnished is true and correct.
- ii) The preference claimed is in accordance with the General Conditions as indicated in paragraph 1 of this form.
- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraph 7, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct.
- iv) If the B-BBEE status level of contribution has been claimed or obtained on a fraudulent basis or any conditions of contract have not been fulfilled, the purchaser may, in addition to any other remedy it may have-
  - a) disqualify the person. from the tender process;
  - b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct; and
  - c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation.
  - d) restrict the tenderer or contractor, its shareholders and directors, or only the shareholders and directors WHO acted on a fraudulent basis, 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 have been applied; and
  - e) forward the matter for criminal prosecution.

NAME:

(in BLOCK letters)

--

CAPACITY:  
(of authorized agent)

---

---

SIGNATURE:  
(of authorized agent)

---

---

SIGNED at \_\_\_\_\_ on this \_\_\_\_\_ day of \_\_\_\_\_

WITNESSES:  
(Full name in BLOCK letters and signature)

1.

---

2.

---



## MBD 6.2

### DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS

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

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

#### 1. General Conditions

- 1.1 Preferential Procurement Regulations, 2017 (Regulation 8) make provision for the promotion of local production and content.
- 1.2 Regulation 8. (2) prescribes that in the case of designated sectors, organs of state must advertise such tenders with the specific bidding condition that only locally produced or manufactured goods, with a stipulated minimum threshold for local production and content will be considered.
- 1.3 Where necessary, for tenders referred to in paragraph 1.2 above, a two-stage bidding process may be followed, where the first stage involves a minimum threshold for local production and content and the second stage price and B-BBEE.
- 1.4 A person awarded a contract in relation to a designated sector, may not sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the stipulated minimum threshold.
- 1.5 The local content (LC) expressed as a percentage of the bid price must be calculated in accordance with the SABS approved technical specification number SATS 1286:2011 as follows:

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

Where

x is the imported content in Rand

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

Prices referred to in the determination of x must be converted to Rand (ZAR) by using the exchange rate published by South African Reserve Bank (SARB) on the date of advertisement of the bid as indicated in paragraph 3.1 below.

**The SABS approved technical specification number SATS 1286:2011 is accessible on [http://www.thedti.gov.za/industrial\\_development/ip.jsp](http://www.thedti.gov.za/industrial_development/ip.jsp) at no cost.**

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

#### 2. The stipulated minimum threshold(s) for local production and content (refer to Annex A of SATS 1286:2011) for this bid is/are as follows:

<u>Description of services, works or goods</u>	<u>Stipulated minimum threshold</u>
Appointment of contractors for repair, maintenance, and ancillary work on the distribution water network for all 7 regions, on an as and when required basis, for a period with effect from date of award until period of 3 years	<b>100%</b>
<ul style="list-style-type: none"> <li>• PVC pipes</li> <li>• High density polyethylene (HDPE) pipes</li> <li>• Valves</li> </ul>	<b>100%</b>
	<b>70%</b>

3. Des any portion of the goods or services offered have any imported content?

**(Tick applicable box)**

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

- 3.1 If yes, the rate(s) of exchange to be used in this bid to calculate the local content as prescribed in paragraph 1.5 of the general conditions must be the rate(s) published by SARB for the specific currency on the date of advertisement of the bid. The relevant rates of exchange information is accessible on [www.resbank.co.za](http://www.resbank.co.za) Indicate the rate(s) of exchange against the appropriate currency in the table below (refer to Annex A of SATS 1286:2011):

Currency	Rates of exchange
US Dollar	
Pound Sterling	
Euro	
Yen	
Other	

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

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

### LOCAL CONTENT DECLARATION

(REFER TO ANNEX B OF SATS 1286:2011)

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

**IN RESPECT OF BID NO. ROC 04 2022/23**

**ISSUED BY:** (Procurement Authority / Name of Institution): City of Tshwane

NB

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

I, the undersigned, ..... (full names), do hereby declare, in my capacity as ..... of ..... (name of bidder entity), the following:

- (a) The facts contained herein are within my own personal knowledge.
- (b) I have satisfied myself that:
  - (i) the goods/services/works to be delivered in terms of the above-specified bid comply with the minimum local content requirements as specified in the bid, and as measured in terms of SATS 1286:2011; and
- (c) The local content percentage (%) indicated below has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 3.1 above and the information contained in Declaration D and E which has been consolidated in Declaration C:

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

**If the bid is for more than one product, the local content percentages for each product contained in Declaration C shall be used instead of the table above.**

**The local content percentages for each product have been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 3.1 above and the information contained in Declaration D and E.**

- (d) I accept that the Procurement Authority / Institution has the right to request that the local content be verified in terms of the requirements of SATS 1286:2011.
- (e) I understand that the awarding of the bid is dependent on the accuracy of the information furnished in this application. I also understand that the submission of

incorrect data, or data that are not verifiable as described in SATS 1286:2011, may result in the Procurement Authority / Institution imposing any or all of the remedies as provided for in Regulation 14 of the Preferential Procurement Regulations, 2017 promulgated under the Preferential Policy Framework Act (PPPFA), 2000 (Act No. 5 of 2000).

**SIGNATURE:** \_\_\_\_\_

**WITNESS No. 1** \_\_\_\_\_

**WITNESS No. 2** \_\_\_\_\_

**DATE:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

SATS 1286.2011

## Annex C

### Local Content Declaration - Summary Schedule

(C1)	Tender No.
(C2)	Tender description:
(C3)	Designated product(s):
(C4)	Tender Authority:
(C5)	Tendering Entity name:
(C6)	Tender Exchange Rate:
(C7)	Specified local content %

ROC 04 2022/23

TENDER FOR APPOINTMENT OF CONTRACTORS FOR REPAIR, MAINTENANCE AND ANCILLARY WORK ON THE DISTRIBUTION WATER NETWORK FOR ALL 7 REGIONS FOR A PERIOD OF 3 YEARS, AS AND WHEN REQUIRED.

**NOTE: VAT TO BE EXCLUDED FROM ALL CALCULATIONS**

Pula

EU

GBP

		Calculation of local content						Tender summary			
Tender item no's	List of items	Tender price - each (excl VAT)	Exempted imported value	Tender value-net of exempted imported content	Imported value	Local value	Local content % (per item)	Tender Qty	Total tender value	Total exempted imported content	Total Imported content
(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)	(C16)	(C17)	(C18)	(C19)
4.1.1.1	Class 9										
4.1.1.1.1	DN 50 mm										
4.1.1.1.2	DN 63 mm										
4.1.1.1.3	DN 75 mm										
4.1.1.1.4	DN 90 mm										
4.1.1.1.5	DN 110 mm										
4.1.1.1.6	DN 125 mm										
4.1.1.1.7	DN 160 mm										
4.1.1.1.8	DN 200 mm										
4.1.1.1.9	DN 250 mm										
4.1.1.1.10	DN 315 mm										
4.1.1.1.11	DN 355 mm										
4.1.1.2.12	DN 400 mm										


(C20) Total tender value R 0

(C21) Total Exempt imported content R 0

(C22) Total Tender value net of exempt imported content R 0

(C23) Total Imported content R 0

(C24) Total local content R 0

(C25) Average local content % of tender

Signature of tenderer from Annex B

---

Date:

SATS 1286.2011

## Annex D

### Imported Content Declaration - Supporting Schedule to Annex C

(D1)	<b>Tender No.</b>	ROC 04 2022/23				<b>NOTE: VAT TO BE EXCLUDED FROM ALL CALCULATIONS</b>	
(D2)	<b>Tender description:</b>	TENDER FOR APPOINTMENT OF CONTRACTORS FOR REPAIR, MAINTENANCE AND ANCILLARY WORK ON THE DISTRIBUTION WATER NETWORK FOR ALL 7 REGIONS FOR A PERIOD OF 3 YEARS, AS AND WHEN REQUIRED.					
(D3)	<b>Designated Products:</b>						
(D4)	<b>Tender Authority:</b>						
(D5)	<b>Tendering Entity name:</b>						
(D6)	<b>Tender Exchange Rate:</b>	Pula		EU		GBP	

#### A. Exempted imported content

#### Calculation of imported content

#### Summary

Tender item no's	Description of imported content	Local supplier	Overseas Supplier	Foreign currency value as per Commercial Invoice	Tender Exchange Rate	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Tender Qty	Exempted imported value
------------------	---------------------------------	----------------	-------------------	--	----------------------	------------------------	--------------------------------	---	----------------------------	------------	-------------------------



(D7)	(D8)	(D9)	(D10)	(D11)	(D12)	(D13)	(D14)	(D15)	(D16)	(D17)	(D18)
(D19) Total exempt imported value										R 0	

**This total must correspond  
with Annex C - C 21**

B. Imported directly by the Tenderer				Calculation of imported content						Summary	
Tender item no's	Description of imported content	Unit of measure	Overseas Supplier	Foreign currency value as per Commercial Invoice	Tender Rate of Exchange	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Tender Qty	Total imported value
(D20)	(D21)	(D22)	(D23)	(D24)	(D25)	(D26)	(D27)	(D28)	(D29)	(D30)	(D31)

				<b>(D32) Total imported value by tenderer</b>						R 0	
<b>C. Imported by a 3rd party and supplied to the Tenderer</b>				<b>Calculation of imported content</b>						<b>Summary</b>	
<b>Description of imported content</b>	<b>Unit of measure</b>	<b>Local supplier</b>	<b>Overseas Supplier</b>	<b>Foreign currency value as per Commercial Invoice</b>	<b>Tender Rate of Exchange</b>	<b>Local value of imports</b>	<b>Freight costs to port of entry</b>	<b>All locally incurred landing costs &amp; duties</b>	<b>Total landed cost excl VAT</b>	<b>Quantity imported</b>	<b>Total imported value</b>
<i>(D33)</i>	<i>(D34)</i>	<i>(D35)</i>	<i>(D36)</i>	<i>(D37)</i>	<i>(D38)</i>	<i>(D39)</i>	<i>(D40)</i>	<i>(D41)</i>	<i>(D42)</i>	<i>(D43)</i>	<i>(D44)</i>
				<b>(D45) Total imported value by 3rd party</b>						R 0	
<b>D. Other foreign currency payments</b>				<b>Calculation of foreign currency payments</b>						<b>Summary of payments</b>	

Type of payment	Local supplier making the payment	Overseas beneficiary	Foreign currency value paid	Tender Rate of Exchange	Local value of payments
(D46)	(D47)	(D48)	(D49)	(D50)	(D51)
(D52) Total of foreign currency payments declared by tenderer and/or 3rd party					
<u>Signature of tenderer from Annex B</u>					
(D53) Total of imported content & foreign currency payments - (D32), (D45) & (D52) above					R 0
Date: _____					<b>This total must correspond with Annex C - C 23</b>

**SATS 1286.2011**

## Annex E

## Local Content Declaration - Supporting Schedule to Annex C

(E1)	<b>Tender No.</b>	<b>ROC 04 2022/23</b>		<b>NOTE: VAT TO BE EXCLUDED FROM ALL CALCULATIONS</b>
(E2)	<b>Tender description:</b>	<b>TENDER FOR APPOINTMENT OF CONTRACTORS FOR REPAIR, MAINTENANCE AND ANCILLARY WORK ON THE DISTRIBUTION WATER NETWORK FOR ALL 7 REGIONS FOR A PERIOD OF 3 YEARS, AS AND WHEN REQUIRED.</b>		
(E3)	<b>Designated products:</b>			
(E4)	<b>Tender Authority:</b>			
(E5)	<b>Tendering Entity name:</b>			

[illegible]

<b>(E9) Total local products (Goods, Services and Works)</b>		R 0

(E10)	<b>Manpower costs</b>	(Tenderer's manpower cost)	R 0
(E11)	<b>Factory overheads</b>	(Rental, depreciation & amortisation, utility costs, consumables etc.)	R 0
(E12)	<b>Administration overheads and mark-up</b>	(Marketing, insurance, financing, interest etc.)	R 0
<b>(E13) Total local content</b>			R 0

**This total must correspond with Annex C - C24**

Signature of tenderer from Annex B

ROC 04-2022/23 TENDER FOR APPOINTMENT OF CONTRACTORS FOR REPAIR, MAINTENANCE AND ANCILLARY WORK ON THE DISTRIBUTION WATER NETWORK FOR ALL 7 REGIONS FOR A PERIOD OF 3 YEARS, AS AND WHEN REQUIRED.

Date:

\_\_\_\_\_  
\_\_\_\_\_

**FORM RD.C.1 MBD 9: CERTIFICATION OF INDEPENDENT TENDER DETERMINATION**

1. This Municipal Bidding Document (MBD) must form part of all tenders<sup>1</sup> invited.
2. Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive tendering (or tender rigging)<sup>2</sup>. Collusive tendering is a *per 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 tender of any tenderer if that tenderer 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 tendering process or the execution of the contract.
4. This MDB will serve as a certificate of declaration that would be used by institutions to ensure that, when tenders are considered, reasonable steps are taken to prevent any form of tender-rigging.
5. In order to give effect to the above, the attached Certificate of Tender Determination must be completed and submitted with the tender.

---

<sup>1</sup> Includes price quotations, advertised competitive tenders, limited tenders and proposals.

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

**CERTIFICATE OF INDEPENDENT TENDER DETERMINATION**

I, the undersigned, in submitting the accompanying tender:

**ROC 04 2022/23 TENDER FOR APPOINTMENT OF CONTRACTORS FOR REPAIR, MAINTENANCE AND ANCILLARY WORK ON THE DISTRIBUTION WATER NETWORK FOR ALL 7 REGIONS FOR A PERIOD OF 3 YEARS, AS AND WHEN REQUIRED.**

in response to the invitation for the tender made by

**City of Tshwane Metropolitan Municipality**

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

I certify, on behalf of \_\_\_\_\_ that:  
(Name of tenderer)

1. I have read and understand the contents of this certificate;
2. I understand that the accompanying tender will be disqualified if this certificate is found not to be true and complete in every aspect;
3. I am authorized by the tenderer to sign this certificate, and to submit the accompanying tender, on behalf of the tenderer;
4. Each person whose signature appears on the accompanying tender has been authorized by the tenderer to determine the terms of, and to sign, the tender, on behalf of the tenderer;
5. For the purposes of this Certificate and the accompanying tender, I understand that the word "competitor"<sup>3</sup> shall include any individual or organization, other than the tenderer, whether or not affiliated with the tenderer who:
  - a. has been requested to submit a tender in response to this tender invitation, based on their qualifications, abilities or experience; and
  - b. could potentially submit a tender in response to this tender invitation, based on their qualifications, abilities or experience; and
  - c. provides the same goods and services as the tenderer and/or is in the same line of business as the tenderer.
6. The tenderer has arrived at the accompanying tender independently form, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium<sup>3</sup> will not be construed as collusive tendering.
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 services 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 tender;
  - e. The submission of a tender which does not meet the specifications and conditions of the tender; or
  - f. Tendering with the intention not to win the tender.

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



8. In addition, there have been no consultations, communications, agreements or arrangement with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this tender invitation relates.
9. The terms of the accompanying tender have not been, and will not be, disclosed by the tenderer, directly or indirectly, to any competitor, prior to the date and time of the official tender opening or to the awarding of the contract.
10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to tenders and contracts, tenders 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 form conduction 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.

The undersigned, who warrants that he / she is duly authorized to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

Person authorized to sign the tender:

Full name (in BLOCK letters): \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## FORM RD.C.2 RECORD OF SERVICES PROVIDED TO ORGANS OF STATE

Tenderers are required to complete this record in terms of the Supply Chain Management Regulations issued in terms of the Municipal Finance Management Act of 2003.

Include only those contracts where the tenderer identified in the signature block below was directly contracted by the employer. Tenderers must not include services provided in terms of a sub-contract agreement.

Where contracts were awarded in the name of a joint venture and the tenderer formed part of that joint venture, indicate in the column entitled "Title of contract for the service" that was in joint venture and provide the name of the joint venture that contracted with the employer. In the column for the value of the contract for the service, record the value of the portion of the contract performed (or to be performed) by the tender.

Complete the record or attach the required information in the prescribed tabulation

ALL SERVICES COMMENCED OR COMPLETED TO AN ORGAN OF STATE IN THE LAST FIVE YEARS				
	Organ of state, i.e. national or provincial department, public entity, municipality or municipal entity.	Title of contract for the service	Value of contract for service incl. VAT (Rand)	Date completed (State current if not yet completed)
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				

(Attach additional pages if more space is required.)

The undersigned, who warrants that he / she is duly authorized to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

Person authorized to sign the tender:

Full name (in BLOCK letters): \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

### FORM RD.C.3 STATUS OF CONCERN SUBMITTING TENDER

#### 1. General

State whether the tenderer is a company, a closed corporation, a partnership, a sole practitioner, a joint venture/consortium, or a co-operative

Public Company	<input type="checkbox"/>
Private Company	<input type="checkbox"/>
Closed Corporation	<input type="checkbox"/>
Partnership	<input type="checkbox"/>
Sole Proprietary	<input type="checkbox"/>
Joint Venture / Consortium	<input type="checkbox"/>
Co-operative	<input type="checkbox"/>

(Mark the appropriate option)

#### 2. Information to be provided

If the Tendering Entity is a:		Documentation to be submitted with the tender
1	<u>Closed Corporation</u> , incorporated under the Close Corporation Act, 1984, Act 69 of 1984	CIPRO CK1 or CK2 (Certified copies of the founding statement) and list of members
2	<u>Private Company</u> incorporated with share capital, under the companies Act, 1973, Act 61 of 1973 (Including Companies incorporated under Art 53 (b))	Certified copies of: a) CIPRO CM 1 - Certificate of Incorporation b) CIPRO CM 29 – Contents of Register of Directors, Auditors and Officers c) Shareholders Certificates of all Members of the Company, plus a signed statement of the Company's Auditor, certifying each Member's ownership/shareholding percentage relative to the total.
3	<u>Private Company</u> incorporated with share capital, under the companies Act, 1973, Act 61 of 1973 in which any, or all, <u>shares are held by another</u> Closed Corporation or company with, or without, share capital.	Certified copies of documents referred to in 1 and/or 2 above in respect of all such Closed Corporations and/or Companies
4	<u>Public Company</u> incorporated with share capital, under the companies Act, 1973, Act 61 of 1973 (Including Companies incorporated under Art 21)	A signed statement of the Company's Secretary confirming that the Company is a public Company.
5	<u>Sole Proprietary</u> or a <u>Partnership</u>	Certified copy of the Identity Document of: a) such Sole Proprietary, or b) Each of the Partners in the Partnership Certified copy of the Partnership agreement.

If the Tendering Entity is a:		Documentation to be submitted with the tender
6	<u>Co-operative</u>	CIPRO CR2 - Certified copies of Company registration document.
7	<u>Joint Venture / Consortium</u>	All the documents (as described above) as applicable to each partner in the joint venture / consortium as well as a certified copy of the joint venture / consortium agreement.

**Note:**

1. If the shares are held in trust provide a copy of the Deed of Trust (only the front page and pages listing the trustees and beneficiaries are required) as well as the Letter of Authority as issued by the Master of the Supreme Court wherein trustees have been duly appointed and authorised
2. Include a certified copy of the Certificate of Change of Name (CM9) if applicable.

3. Registered for VAT proposes in terms of the Value-Added Tax Act (89 of 1991)

Yes

☐

No

☐

(Make an X in the appropriate space)

REGISTRATION NO: \_\_\_\_\_

**FORM RD.C.4 CLASSIFICATION OF BUSINESS**

1. The Small Businesses are defined in the National Small Business Act, 1996 (Act 102 of 1996).
2. Information furnished with regard to the classification of Small businesses
  - (a.) Indicate whether the company/entity is defined as a small, medium or micro enterprise by the National Small Business Act.

YES	NO
-----	----

(Tick appropriate box)

- (b.) If the response to 2.(a.) is **YES**, the following must be completed:

- i. Sector/sub-sector in accordance with the Standard Industrial classification:

---

- ii. Size or class:

---

- iii. Total full-time equivalent of paid employees:

---

- iv. Total annual turnover:

---

- v. Total gross asset value (fixed property excluded):

---

(A schedule indicating the different sectors is attached to this form.)

- (c.) The tenderer should substantiate the information provided by submitting the following documentation:
  - i. A letter from the tenderer's auditor or an affidavit from the South African Police Services confirming the correctness of the abovementioned information,
  - ii. Company profile indicating the tenderer's staff compliment, and
  - iii. 3 year financial statement or since their establishment if established during the past 3 years.

## SCHEDULE OF SECTORS

SIZE OF CLASS	THE TOTAL FULL-TIME EQUIVALENT OF PAID EMPLOYEES	TOTAL TURNOVER	TOTAL GROSS ASSET VALUE (FIXED PROPERTY EXCLUDED)
<b>AGRICULTURE</b>			
Medium	100	R 5 mil	R 5 mil
Small	50	R 3 mil	R 3 mil
Very Small	10	R 500 000	R 500 000
Micro	5	R 200 000	R 100 000
<b>MINING AND QUARRYING</b>			
Medium	200	R 39 mil	R 23 mil
Small	50	R 10 mil	R 6 mil
Very Small	20	R 4 mil	R 2 mil
Micro	5	R 200 000	R 100 000
<b>MANUFACTURING</b>			
Medium	200	R 51 mil	R 19 mil
Small	50	R 13 mil	R 5 mil
Very Small	20	R 5 mil	R 2 mil
Micro	5	R 200 000	R 100 000
<b>ELECTRICITY, GAS &amp; WATER</b>			
Medium	200	R 51 mil	R 19 mil
Small	50	R 13 mil	R 5 mil
Very Small	20	R 5.1 mil	R 1.9 mil
Micro	5	R 200 000	R 100 000
<b>CONSTRUCTION</b>			
Medium	200	R 26 mil	R 5 mil
Small	50	R 6 mil	R 1 mil
Very Small	20	R 3	R 500 000
Micro	5	R 200 000	R 100 000
<b>RETAIL AND MOTOR TRADE &amp; REPAIR SERVICES</b>			
Medium	200	R 39 mil	R 6 mil
Small	50	R 19 mil	R 3 mil
Very Small	20	R 4 mil	R 600 000
Micro	5	R 200 000	R 100 000
<b>WHOLESALE TRADE, COMMERCIAL AGENTS AND ALLIED SERVICES</b>			
Medium	200	R 64 mil	R 10 mil
Small	50	R 32 mil	R 5 mil
Very Small	20	R 6 mil	R 600 000
Micro	5	R 200 000	R 100 000
<b>CATERING, ACCOMMODATION AND OTHER TRADE</b>			
Medium	200	R 13 mil	R 3 mil
Small	50	R 6 mil	R 1 mil
Very Small	20	R 5.1 mil	R 1.9 mil
Micro	5	R 200 000	R 100 000
<b>TRANSPORT, STORAGE &amp; COMMUNICATIONS</b>			
Medium	200	R 26 mil	R 6 mil
Small	50	R 13 mil	R 3 mil
Very Small	20	R 3 mil	R 600 000
Micro	5	R 200 000	R 100 000
<b>FINANCE &amp; BUSINESS SERVICES</b>			
Medium	200	R 26 mil	R 5 mil
Small	50	R 13 mil	R 3 mil
Very Small	20	R 3 mil	R 500 000
Micro	5	R 200 000	R 100 000
<b>COMMUNITY, SOCIAL AND PERSONAL SERVICES</b>			
Medium	200	R 13 mil	R 6 mil
Small	50	R 6 mil	R 3 mil
Very Small	20	R 1mil	R 600 000
Micro	5	R 200 000	R 100 000

**FORM RD.C.5**

**MBD 5: DECLARATION FOR PROCUREMENT ABOVE R10 MILLION (ALL APPLICABLE TAXES INCLUDED)**

1. The tenderer is required by law to prepare annual financial statements for auditing their audited annual financial statements:

- i) for the past three years; or  
ii) Since the establishment if established during the past three years.

Indicate whether these have been included in the tender:

YES	NO
-----	----

2. Does the tenderer have any undisputed commitments for municipal services towards a municipality or other service provider in respect of which payment is overdue for more than 30 days?

YES	NO
-----	----

If so, state particulars \_\_\_\_\_  
\_\_\_\_\_

3. Has any contracts been awarded to the tenderer by an organ of state during the past five years?

YES	NO
-----	----

If so, state particulars \_\_\_\_\_  
\_\_\_\_\_

4. Has there been any material non-compliance or dispute concerning the execution of such contract?

YES	NO
-----	----

If so, state particulars \_\_\_\_\_  
\_\_\_\_\_

5. Is any portion of the goods or services expected to be sourced from outside the Republic?

YES	NO
-----	----

If, so state what portion and whether any portion of payment from the municipality is expected to be transferred outside of the Republic.  
\_\_\_\_\_  
\_\_\_\_\_

The undersigned, who warrants that he / she is duly authorized to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

Person authorized to sign the tender:

Full name (in BLOCK letters): \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**FORM RD.C.6 CERTIFICATE OF AUTHORITY OF SIGNATORY**

**RESOLUTION** of a meeting of the \*Board of Directors/Members/Partners of

(Legally correct full name and registration number, if applicable, of the enterprise)

Held at: \_\_\_\_\_ (place)

On: \_\_\_\_\_ (date)

**RESOLVED** that:

1. The enterprise submits a tender to the Tshwane Metro Municipality in respect of the following project:

Tender Number:

**ROC 04 2022/23**

Tender Description:

**TENDER FOR APPOINTMENT OF CONTRACTORS FOR REPAIR, MAINTENANCE AND ANCILLARY WORK ON THE DISTRIBUTION WATER NETWORK FOR ALL 7 REGIONS FOR A PERIOD OF 3 YEARS, AS AND WHEN REQUIRED.**

2. \*Mr/Ms:

in \*his/her capacity as

and who will sign as follow:

Proof signature	Proof signature
-----------------	-----------------

be, and is hereby authorized to sign the tender, and any and all other documents and/or correspondence in connection with and relating to the tender for the enterprise mentioned above

NAME	CAPACITY	SIGNATURE

Note:

- \*Delete which is not applicable.
- IMPORTANT: This resolution must be signed by all the directors/members/ partners of the tendering enterprise.
- Should the number of directors/members/partners exceed the space available above, additional names and signatures must be supplied on a separate page.

Enterprise stamp



**FORM RD.C.7 CERTIFICATE OF AUTHORITY OF SIGNATORY FOR JOINT VENTURES AND CONSORTIA**

\*Joint venture/consortium name: \_\_\_\_\_

We, the undersigned, are submitting this tender in a \*joint venture/consortium and hereby authorize \*Mr/Ms  
\_\_\_\_\_ authorized signatory of the enterprise  
\_\_\_\_\_ acting in the capacity of lead partner

to sign the tender, and any and all other documents and/or correspondence in connection with and relating to the tender for the \*joint venture/consortium mentioned above.

Registered name of enterprise	Registration number	% of contract value	Address	Duly authorized signatory	Mark with (x) for lead partner

**Note:**

1. \*Delete which is not applicable.
2. IMPORTANT: This resolution must be signed by all the parties of the joint venture/consortium and every duly authorized signatory for each party to the joint venture/consortium must complete a Form RD.C.15.
3. Should the number of directors/members/partners exceed the space available above, additional names and signatures must be supplied on a separate page.

**FORM RD.C.9 STAFF FOR LABOUR INTENSIVE CONSTRUCTION WORKS**

The tenderer shall, submit the names of all management, design and supervisory staff that will be employed to design and supervise the labour-intensive portion of the works together with satisfactory documentary evidence that such staff members satisfy the eligibility requirements.

CATEGORY OF EMPLOYEE	NAME OF EMPLOYEE	NQF LEVEL	LABOUR INTENSIVE SKILLS PROGRAM UNIT STANDARD TITLES	DATE COMPLETED	YEARS EXPERIENCE
Designer					

***NQF 7 Unit Standard Required: Develop and Promote Labour Intensive Construction Strategies***

Administrator/ Site supervisor					
-----------------------------------	--	--	--	--	--

***NQF 5 Unit Standard Required: Manage Labour Intensive Construction Projects***

(Attach documentary proof to this page)

**FORM RD.C.10 PROOF OF PROFESSIONAL INDEMNITY INSURANCE**

The tenderer must provide proof of Professional Indemnity Insurance for at least R10-million per claim and the number of claims unlimited (refer to clause C1.2.2 Data Provided by the Employer).

1. Attach original or certified copy of Professional Indemnity Insurance to this page.
2. In the case of a joint venture / consortium parties must each attach original or certified copy of their Professional Indemnity Insurance.

# **RD.D.1: SCHEDULE OF TENDERER'S PREVIOUS SIMILAR EXPERIENCE**

**(The previous experience must be relevant to the technical specification.)**

EMPLOYER, CONTACT PERSON AND TELEPHONE NUMBER	DESCRIPTION OF CONTRACT	DATE STARTED	DATE COMPLETED	TOTAL CONTRACT AMOUNT
1 _____ (company or Client) _____ (contact person) _____ ( telephone)				
2 _____ (company or Client) _____ (contact person) _____ ( telephone)				
3 _____ (company or Client) _____ (contact person) _____ ( telephone)				

4 _____ (company or Client) <hr/> (contact person) <hr/> ( telephone)				
5 _____ (company or Client) <hr/> (contact person) <hr/> ( telephone)				
6 _____ (company or Client) <hr/> (contact person) <hr/> ( telephone)				
7 _____ (company or Client) <hr/> (contact person) <hr/> ( telephone)				

## RD.D.2 SCHEDULE OF PLANT, EQUIPMENT, MACHINERY AND PERSONELL SCHEDULE OF PLANT, EQUIPMENT, MACHINERY AND PERSONELL

The following are lists of major items of relevant resources that may be required from time to time during the execution of this contract. The tenderer must fill in the details in Schedule B. The tender further declares that all equipment/resources as furnished will be made available for this contract. The tenderer must demonstrate a tentative agreement/ quotation/similar which may be subject to this contract being awarded for items that will be hired. The CoT shall reserve a right to inspect the premises of the contractor to verify the furnished information.

### Schedule A: CoT's specific minimum requirements

### Schedule B: Tenderer's offer and guarantees. Must be filled in by tenderer/contractor

Failure to complete this form in full will result in the tenderer being disqualified.

Failure to meet the minimum requirements shall disqualify the tender.

Item	Description	Document proof to be submitted with the tender	Schedule A (CoT minimum requirements)	Schedule B (Tenderer's offer and guarantees)			
				Owned by Contract or	To be leased by the Contractor	Financial Undertaking	Total
1	Certified Artisan (Plumbers) to execute maintenance of water infrastructure.	CV proving 3 years working experience as a plumber on sewage networks and Certified copies of trade certificate (Plumbing)	5	Yes / No			
2	TLB 55 kw or more; wet + operator	Certified Copies of vehicle registration and or agreement to lease	1	Yes / No			
3	5-ton Hydraulic crane mounted truck with operator	Certified Copies of vehicle registration and or agreement to lease	1	Yes / No			
4	25ton Hydraulic Excavator	Certified Copies of vehicle registration and or agreement to lease	1	Yes / No			

Item	Description	Document proof to be submitted with the tender	Schedule A (CoT minimum requirements)	Schedule B (Tenderer's offer and guarantees)			
				Owned by Contract or	To be leased by the Contractor	Financial Undertaking	Total
5	Minimum 150mm Discharge water Pump and Motor, including Suction and Discharge Pipes; Wet	Certified Copies of vehicle registration and or agreement to lease	1	Yes / No			
6	Safety Officer with CV	CV and Certification accredited by SACPCNP	1	Yes / No			
7	Certified Welders with CV	CV indicating minimum 1 year of welding	1	Yes / No			

**NB: Where the tenderer does not meet the minimum requirements RD.D.2, the tenderer will be disqualified.**



**FORM RD.D.4 KEY PERSONNEL**

The tenderer shall list in the table below the key personnel to be engaged for this project.

**Note:** Form RD.D.5 must be complete for each person listed b

	PROPOSED POSITION	NAME	YEARS OF EXPERIENCE
1	Artisan (Plumber)		
2	Occupational Health and Safety Officer		
3	Welder		

**FORM RD.D.5 CURRICULUM VITAE OF KEY PERSONNEL**

**Note:** This form should be completed for each key person listed in Form RD.D.4

Name:		Date of birth:
Profession:		Nationality:
Qualifications:		
Professional membership:		
Name of employer (firm):		
Current position:		Years with firm:
Employment record: (list in chronological order starting with earliest work experience)		
Experience records pertinent to required service:		
Certification:		
I, the undersigned, certify that to the best of my knowledge and belief, this data correctly describes me, my qualifications and my experience.		
_____ (Signature of person named in schedule)		_____ Date:

The undersigned, who warrants that he / she is duly authorized to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

Person authorized to sign the tender:

Full name (in BLOCK letters):

Signature:

Date:

**FORM RD.D.5 CURRICULUM VITAE OF KEY PERSONNEL**

**Note:** This form should be completed for each key person listed in Form RD.D.4

Name:	Date of birth:
Profession:	Nationality:
Qualifications:	
Professional membership:	
Name of employer (firm):	
Current position:	Years with firm:
Employment record: (list in chronological order starting with earliest work experience)	
Experience records pertinent to required service:	
Certification:  I, the undersigned, certify that to the best of my knowledge and belief, this data correctly describes me, my qualifications and my experience.	
(Signature of person named in schedule)	Date:

The undersigned, who warrants that he / she is duly authorized to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

Person authorized to sign the tender:

Full name (in BLOCK letters):

Signature:

Date:

**FORM RD.D.5 CURRICULUM VITAE OF KEY PERSONNEL**

**Note:** This form should be completed for each key person listed in Form RD.D.4

<b>Name:</b>	<b>Date of birth:</b>
<b>Profession:</b>	<b>Nationality:</b>
<b>Qualifications:</b>	
<b>Professional membership:</b>	
<b>Name of employer (firm):</b>	
<b>Current position:</b>	<b>Years with firm:</b>
<b>Employment record:</b> (list in chronological order starting with earliest work experience)	
<b>Experience records pertinent to required service:</b>	
<b>Certification:</b>	
I, the undersigned, certify that to the best of my knowledge and belief, this data correctly describes me, my qualifications and my experience.	
_____ (Signature of person named in schedule)	_____ Date:

The undersigned, who warrants that he / she is duly authorized to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

Person authorized to sign the tender:

Full name (in BLOCK letters):

Signature:

Date:

**FORM RD.D.5 CURRICULUM VITAE OF KEY PERSONNEL**

**Note:** This form should be completed for each key person listed in Form RD.D.4

Name:		Date of birth:
Profession:		Nationality:
Qualifications:		
Professional membership:		
Name of employer (firm):		
Current position:		Years with firm:
Employment record: (list in chronological order starting with earliest work experience)		
Experience records pertinent to required service:		
Certification:		
I, the undersigned, certify that to the best of my knowledge and belief, this data correctly describes me, my qualifications and my experience.		
_____ (Signature of person named in schedule)		_____ Date:

The undersigned, who warrants that he / she is duly authorized to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

Person authorized to sign the tender:

Full name (in BLOCK letters):

Signature:

Date:

**FORM RD.D.5 CURRICULUM VITAE OF KEY PERSONNEL**

**Note:** This form should be completed for each key person listed in Form RD.D.4

Name:		Date of birth:
Profession:		Nationality:
Qualifications:		
Professional membership:		
Name of employer (firm):		
Current position:		Years with firm:
Employment record: (list in chronological order starting with earliest work experience)		
Experience records pertinent to required service:		
Certification:		
I, the undersigned, certify that to the best of my knowledge and belief, this data correctly describes me, my qualifications and my experience.		
_____ (Signature of person named in schedule)		_____ Date:

The undersigned, who warrants that he / she is duly authorized to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

Person authorized to sign the tender:

Full name (in BLOCK letters):

Signature:

Date:

**FORM RD.E.1 RECORD OF ADDENDA TO TENDER DOCUMENTS**

We confirm that the following communications received from the Employer before submission of this tender, amending or amplifying the tender documents, have been taken in account in this tender offer:

	DATE	REFERENCE	TITLE
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

The undersigned, who warrants that he / she is duly authorized to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

Person authorized to sign the tender:

Full name (in BLOCK letters): \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

# PORTION 2: CONTRACT

## PART C1: AGREEMENTS AND CONTRACT DATA

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## C1.1 FORM OF OFFER AND ACCEPTANCE

STAMP

### OFFER

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

**ROC 04 2022/23 TENDER FOR APPOINTMENT OF CONTRACTORS FOR REPAIR, MAINTENANCE AND ANCILLARY WORK ON THE DISTRIBUTION WATER NETWORK FOR ALL 7 REGIONS FOR A PERIOD OF 3 YEARS, AS AND WHEN REQUIRED.**

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 returnable 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.

This offer may be accepted by the employer by signing the acceptance part of this form of offer and acceptance and returning one copy of this document to the tenderer before the end of the period of validity stated in the tender data, whereupon the tenderer becomes the party named as the contractor in the conditions of contract identified in the contract data.

Acceptance of this offer will not guarantee that the tenderer will be invited to submit a price for any task order or be allocated any task order during the duration of the appointment. Invitation and allocation of task orders will be done solely at the discretion of the employer.

### **FOR AND ON BEHALF OF THE TENDERER:**

NAME:

(in BLOCK letters)

CAPACITY:

(of authorized agent)

SIGNATURE:

(of authorized agent)

SIGNED at

on this

day of

WITNESSES:

(Full name in BLOCK letters and signature)

1.

2.

## ACCEPTANCE

By signing this part of this form of offer and acceptance, the employer identified below accepts the tenderer's Offer. In consideration thereof, the employer shall pay the contractor the amount due in accordance with the conditions of contract identified in the contract data. Acceptance of the tenderer's offer shall form an agreement, between the employer and the tenderer upon the terms and conditions contained in this agreement and in the contract that is the subject of this agreement.

The terms of the contract, are contained in:

Part C1 Agreements and Contract Data

Part C3 Scope of Work

and drawings and documents or parts thereof, which may be incorporated by reference into Parts C1 to C3 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.

The tenderer shall within two weeks after receiving a letter of acceptance, contact the employer's agent (whose details are given in the contract data) to arrange the delivery of guarantees, proof of insurance and any other documentation to be provided in terms of the conditions of contract identified in the contract data. 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.

### **FOR AND ON BEHALF OF THE EMPLOYER:**

NAME:

(in BLOCK letters)

---

CAPACITY:

(of authorized agent)

---

SIGNATURE:

(of authorized agent)

---

SIGNED at

\_\_\_\_\_ on this \_\_\_\_\_ day of \_\_\_\_\_

WITNESSES:

(Full name in BLOCK letters and signature)

1. \_\_\_\_\_

2. \_\_\_\_\_

## SCHEDULE OF DEVIATIONS

### Notes:

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

4.1	Subject: _____
	Details: _____
4.2	Subject: _____
	Details: _____
4.3	Subject: _____
	Details: _____
4.4	Subject: _____
	Details: _____
4.5	Subject: _____
	Details: _____

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

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

**FOR AND ON BEHALF OF THE TENDERER:**

NAME:

(in BLOCK letters)

CAPACITY:

(of authorized agent)

SIGNATURE:

(of authorized agent)

SIGNED at

on this

day of

WITNESSES:

(Full name in BLOCK letters and signature)

1.

2.

**FOR AND ON BEHALF OF THE EMPLOYER:**

NAME:

(in BLOCK letters)

CAPACITY:

(of authorized agent)

SIGNATURE:

(of authorized agent)

SIGNED at

on this

day of

WITNESSES:

(Full name in BLOCK letters and signature)

1.

2.

## **C1.2 CONTRACT DATA**

#### **C1.2.1 GENERAL CONDITIONS OF CONTRACT**

The general conditions of contract applicable to this contract shall be **NEC3 Engineering and Construction Contract, 2013** as well as the Data provided by Employer.

Tenderers, contractors and subcontractors shall obtain their own copies of the document **NEC3 Engineering and Construction Contract 2013** for tendering purposes and for use for the duration of the contract and shall bear all expenses in this regard:

Engineering Contracting Strategies (ECS)

Telephone: 011 803 3008

E-Mail: [admin@ecs.co.za](mailto:admin@ecs.co.za)

Web: [www.ecs.co.za](http://www.ecs.co.za)

OR

Consulting Engineers South Africa (CESA)

Telephone: 011 463 2022

E-Mail: [general@cesa.co.za](mailto:general@cesa.co.za)

Web: [www.cesa.co.za](http://www.cesa.co.za)

OR

South African Institution of Civil Engineering (SAICE)

Telephone: 011 80505947 / 48 / 53

E-Mail: [civilinfo@saice.org.za](mailto:civilinfo@saice.org.za)

Web: [www.saice.org.za](http://www.saice.org.za)

## C1.2 Contract Data

### Part one - Data provided by the *Employer*

<b>Claus e</b>	<b>Statement</b>	<b>Data</b>
1	<b>General</b>	
	The <i>conditions of contract</i> are the core clauses and the clauses for Main Option	
		<b>B: Priced contract with schedule of rates</b>
	dispute resolution Option	<b>W1: Dispute resolution procedure</b>
	and secondary Options	
		<b>X1: Price adjustment for inflation</b>
		<b>X2: Changes in the law</b>
		<b>X5: Sectional Completion</b>
		<b>X7: Delay damages</b>
		<b>X13: Performance Bond</b>
		<b>X16: Retention</b>
		<b>Z: Additional conditions of contract</b>
	of the NEC3 Engineering and Construction Contract (August 2013) <sup>4</sup>	
10.1	The <i>Employer</i> is (Name):	<b>City of Tshwane</b> <b>P.O Box 423</b> <b>Pretoria</b> <b>0001</b>  <b>Represented by:</b> <b>Group Head</b> <b>Regional Operations and Coordination</b>

<sup>4</sup> Available from Engineering Contract Strategies Tel 011 803 3008, Fax 011 803 3009

<b>Claus e</b>	<b>Statement</b>	<b>Data</b>
	Address	<b>1<sup>st</sup> Floor Bothongo Plaza East 285 Francis Baard street Tshwane</b>
	Tel No.	<b>012 358 5210</b>
	Fax No.	<b>012 358 0790</b>
<b>10.1</b>	<b>The <i>Project Manager</i> is:</b>	<b>Sibusiso Mabase</b>
	Address	<b>Centurion Lyttelton Municipal Offices Cnr Rabie &amp; Basden Street Lyttelton</b>
	Tel	<b>012 358 1937</b>
	Fax	<b>N/A</b>
<b>10.1</b>	<b>The <i>Supervisor</i> is: (Name)</b>	<b>A person to be appointed by the <i>Employer</i>. Municipal inspectors from the City of Tshwane Regional Operations, water and sanitation sections will assist the <i>Supervisor</i> as may be necessary.</b>
	Address	<b>Of person appointed as supervisor for the specific project.</b>
	Tel No.	<b>N/A</b>
	Fax No.	<b>N/A</b>
	e-mail	<b>N/A</b>
<b>11.2(13)</b>	<b>The <i>works</i> are</b>	<b>The <i>works</i> are: ROC 04 2022/23 TENDER FOR APPOINTMENT OF CONTRACTORS FOR REPAIR, MAINTENANCE AND ANCILLARY WORK ON THE DISTRIBUTION WATER NETWORK FOR ALL 7 REGIONS FOR A PERIOD OF 3 YEARS, AS AND WHEN REQUIRED.</b>
<b>11.2(14)</b>	<b>The following matters will be included in the Risk Register</b>	<b>As prescribed per specific project/work.</b>
<b>11.2(15)</b>	<b>The <i>boundaries of the site</i> are</b>	<b>Latest boundaries of the specific CoT Regional Jurisdiction areas.</b>
<b>11.2(16)</b>	<b>The Site Information is in</b>	<b>The Scope of Works in Part C4 of the Document.</b>



<b>Claus e</b>	<b>Statement</b>	<b>Data</b>
11.2(19)	The Works Information is in	<b>The Scope of Work in Part C3 of the Document</b>
12.2	The <i>law of the contract</i> is the law of	<b>The Republic of South Africa subject to the jurisdiction of the Courts of South Africa.</b>
13.1	The <i>language of this contract</i> is	<b>English</b>
13.3	The <i>period for reply</i> is	<b>The period of reply, if not stated in the letter of appointment, shall be 14 days.</b>
<b>2</b>	<b><i>The Contractor's main responsibilities</i></b>	<b>The Contractor's liability, for Defects due to his design that are not listed on the Defects Certificate, is unlimited.</b>
<b>3</b>	<b><i>Time</i></b>	
11.2(3)	The <i>completion date</i> for the whole of the <i>works</i> and sections.	<b>The completion date for the whole of the works is 36 months subject to specific projects requirements, whichever is shorter. During this period the maintenance projects will be allocated to the contractor. The completion period for the specific project shall be specified by the deputy director.</b>
30.1	The <i>access date</i> is	
31.1	The <i>Contractor</i> is to submit a first programme for acceptance within	<b>When required to do so per specific project and the deadline for submission is no longer than <i>period of reply</i>.</b>
31.2	The <i>starting date</i> is.	
32.2	The <i>Contractor</i> submits revised programmes at intervals no longer than	<b>4 weeks.</b>
35.1	The <i>Employer</i> is willing to take over each project allocated on completion.	
42.2	The <i>defects date</i> is	<b>Maintenance work: <u>12 weeks</u> after the Completion date of the whole maintenance works per specific purchase order.</b>

<b>Claus e</b>	<b>Statement</b>	<b>Data</b>
43.2	The <i>defect correction period</i> is	<b>2 weeks for maintenance work, unless stated otherwise in the appointment letter.</b>
<b>5</b>	<b>Payment</b>	
50.1	The <i>assessment interval</i> is	<b>Minimum 2 weeks (for project schedule of a period of a month and more) or at the completion of each project.</b>
51.1	The <i>currency of this contract</i> is the	<b>South African Rand (R)</b>
51.2	The period within which payment is made is	<b>30 days from date of invoice, subject to the payment process and policy of the CoT Finance Department.</b>
51.4	The <i>interest rate</i> is	<b>Prime Bank Rate</b>
<b>6</b>	<b>Compensation events</b>	
60.1(13)	The <i>weather measurements</i> to be recorded for each calendar month are:	<b>the cumulative rainfall (mm)</b>

<b>Claus e</b>	<b>Statement</b>	<b>Data</b>
		<b>the number of days with rainfall more than 10 mm &amp; date</b>
		<b>the number of days with minimum air temperature less than 0 degrees Celsius</b>
		<b>the number of days with snow lying at 08:00 hours South African Time</b>
		<b>and these measurements:</b>
	The place where weather is to be recorded (on the Site) is:	<b>Site Office or point of supply for the specific site (mini-sub or transformer installation point)</b>
	The <i>weather data</i> are the records of past <i>weather measurements</i> for each calendar month which were recorded at:	<b>De Wildt</b>
	and which are available from:	<b>Weather SA</b>
60.1(13)	Assumed values for the ten-year return <i>weather data</i> for each <i>weather measurement</i> for each calendar month are:	<b>See attached schedule in Works Information paragraph 2.</b>
<b>7</b>	<b>Title</b>	<b>No data is required for this section of the <i>conditions of contract</i>.</b>
<b>8</b>	<b>Risks and insurance</b>	
84.2	The minimum limit of indemnity for insurance in respect of loss of or damage to property (except the <i>works</i> , Plant, Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the <i>Contractor</i> ) caused by activity in connection with this contract for any one event is	<b>R10 million.</b>

<b>Claus e</b>	<b>Statement</b>	<b>Data</b>
	The minimum limit of indemnity for insurance in respect of death of or bodily injury to employees of the <i>Contractor</i> arising out of and in the course of their employment in connection with this contract for any one event is	As set out in COIDA (WCA) as well as a group life insurance for at least three times the employee's total annual earnings.
84.1	The <i>Employer</i> provides these insurances from the Insurance Table	
	1 Insurance against:	Loss of or damage to the <i>works</i> , Plant and Materials.
	Cover / indemnity:	R10 million
	The deductibles are:	According to the Declaration Form from Insurance and Risk Management of CoT.
	2 Insurance against:	Liability for loss of or damage to property (except the <i>works</i> , Plant and Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the <i>Contractor</i> ) caused by activity in connection with this contract.
	Cover / indemnity	R10 million.
	The deductibles are	According to the Declaration Form from Insurance and Risk Management of CoT
9	<b>Termination</b>	There is no Contract Data required for this section of the <i>conditions of contract</i> .
10	<b>Data for main Option clause</b>	
A	Priced contract with bill of	
60.6	<i>The method of measurement is</i>	As indicated in the schedule of rates/quantities.

<b>Claus e</b>	<b>Statement</b>	<b>Data</b>
<b>11</b>	<b>Data for Option W1</b>	
W1.1	The <i>Adjudicator</i> is (Name)	<b>In the event that a first dispute is referred to adjudication, the referring Party at the same time applies to the South African Institution of Civil Engineering or any other relevant representative body to appoint an <i>Adjudicator</i>. All disputes are handled without transgressing stipulations from the MFMA and other relevant legislation for Local Government.</b>
	Address	
	Tel No.	
	Fax No.	
	e-mail	
W1.2(3)	The <i>Adjudicator nominating body</i> is:	
	If no <i>Adjudicator nominating body</i> is entered, it is	<b>The South African Institution of Civil Engineering or any other relevant representative body.</b>
W1.4(2)	The <i>tribunal</i> is:	<b>Arbitration</b>
W1.4(5)	The <i>arbitration procedure</i> is	<b>The Rules of the Association of Arbitrators</b>

<b>Claus e</b>	<b>Statement</b>	<b>Data</b>
	The place where arbitration is to be	<b>Pretoria</b>
	The person or organisation who will choose an arbitrator - if the Parties cannot agree a choice or - if the arbitration procedure does not state who selects an arbitrator, is	<b>Arbitrator to be mutually agreed by the Parties</b>  <b>The Association of Arbitrators</b>
<b>12</b>	<b>Data for secondary Option clauses</b>	
<b>X1</b>	<b>Price adjustment for inflation</b>	
X1.1(a)	Tenderers are required to register with SEIFSA (Steel and Engineering Industries Federation of South Africa) and obtain periodic SEIFSA rates for various categories applicable to this contract. Contractors and Subcontractors shall obtain their own copies (at their own cost) of the SEIFSA rates documents for contract management purposes and for use for the duration of the Contract. City of Tshwane or its representative may request	
	Prices/Rates tendered shall remain fixed for every 12 months of the contract. The first 12 months is the rates as they are tendered while the second and third 12 months are calculated using SEIFSA index stated below.	
	Thereafter the proportions used to calculate the Price Adjustment Factor are:	
X1.1(c)	<b>For Material price calculation:</b>	
	1.00 linked to the index in	Table C-3(a) of the SEIFSA Index
	0.00	Table O of the SEIFSA Index
	0.00	Table L-1 of the SEIFSA Index
X1.1(c)	<b>For Unit Rates and hourly tariff calculation;</b>	

<b>Claus e</b>	<b>Statement</b>	<b>Data</b>
	0.70 linked to the index in	Table C-3(a) [field force] of the SEIFSA Index
	0.20 linked to the index in	Table P of the SEIFSA Index (Plant and Machinery before installation)
	0.10	Table L-1 (freight cost) of the SEIFSA Index
	The indices are those prepared by Steel and Engineering Association of South Africa.	
<b>X2</b>	<b>Changes in the law</b>	<b>No data is required for this Option</b>
<b>X7</b>	<b>Delay damages</b>	
X7.1	Delay damages for Completion of the <i>works</i> are	<p><b>Projects with planned execution period shorter or equal to one month and not capital projects: R1000.00 per day.</b></p> <p><b>Projects with planned execution period between one and three months and not capital projects: R2000.00 per day.</b></p> <p><b>Capital projects and any other projects with planned execution longer than three months: R2500.00 per day.</b></p> <p><b>The reimbursement to the employer is in a form of credit note against the invoice of the specific project.</b></p>
<b>X13</b>	<b>Performance bond</b>	
X13.1	The amount of the performance bond	<b>Retention (See also clause Z3)</b>
<b>X16</b>	<b>Retention</b>	
X16.1	The <i>retention free amount</i> is	<b>R0.00.</b>
	The <i>retention percentage</i> is	<b>N/A</b>
<b>Z</b>	<b>Additional conditions of contract</b>	
	The <i>additional conditions of contract</i>	

<b>Claus e</b>	<b>Statement</b>	<b>Data</b>
Z1	Compensation Events	<b>The provisions of 60.1(5) do not apply to this contract.</b>
Z2	Insurance policies	<b>Replace Clause 85.2 with the following: “Insurance policies arranged by the Contractor/Sub-contractor to include a waiver by the Insurers of their subrogation rights against the Employer except where there is fraud.”</b>
Z3	<b>X13 Performance Bond (Secondary option X13)</b>	<p>Add:</p> <p>X13.2</p> <p>Should the contractor not comply with the terms and conditions of this contract and/or appointment under this contract, he shall be warned in writing by the employer or the regional representative of his failure to perform. As a result of three warning letters being provided under the same contract, the employer shall have the sole right to take one or more of the steps against the contractor:</p> <ol style="list-style-type: none"> <li>terminate the contract between the contractor and the employer for the remainder of the contract period.</li> <li>suspend the contractor for the remaining period of the contract. The contractor shall qualify to bid for the same contract with the same scope of works but only after the contract for which he was suspended has expired.</li> <li>If the performance bond clause is applied, the retention amount for the specific project for which the clause is applied or the total retention amount already withheld by CoT for other projects, whichever is higher, shall be forfeited.</li> <li></li> </ol>



<b>Claus e</b>	<b>Statement</b>	<b>Data</b>
		ALL decisions made shall be recommended and implemented by the Project Manager. The Group Head: Regional Operations and Coordination Department shall approve such recommendation prior to implementation. The recommendation(s) will be processed through supply chain management process.
<b>Z4</b>	<b>91 Reasons for Termination</b>	<p><i>Add the following to clause 91.2:</i></p> <ul style="list-style-type: none"> <li>• The contractor may not refuse any work allocated to them other than for the following reasons: <ul style="list-style-type: none"> <li>a. the works are not according to the works information and there is no rate tendered for in the contract data or the new rate (provided by CoT) is not market related,</li> <li>b. the contractor does not have capacity to provide the works using the new scope which is not part of the contract.</li> </ul> </li> <li>• If the contractor refuses work for any other reason, such refusal is noted and can be used as a reason for non-performance and ultimately termination of this contract.”</li> </ul>
<b>Add</b>		

## **CITY OF TSHWANE**

DEPARTMENT NAME: ROC: WATER AND SANITATION

CONTRACT NO: ROC 04 2022/23

FOR

**TENDER FOR APPOINTMENT OF CONTRACTORS FOR REPAIR, MAINTENANCE AND ANCILLARY  
WORK ON THE DISTRIBUTION WATER NETWORK FOR ALL 7 REGIONS FOR A PERIOD OF 3 YEARS,  
AS AND WHEN REQUIRED.**

### **PART C2 PRICING DATA**

C2.1 PRICING INSTRUCTIONS

C2.2 BILL OF QUANTITY

## **C2.1 PRICING INSTRUCTIONS**

- 1 The General Conditions of Contract, the Contract Data, the Specifications (including the Project Specifications) and the Drawings shall be read in conjunction with the Bill of Quantities.
- 2 The Bill comprises items covering the Contractor's profit and costs of general liabilities and of the construction of Temporary and Permanent Works.  
Although the Bidder is at liberty to insert a rate of his own choosing for each item in the Bill, he should note the fact that the Contractor is entitled, under various circumstances, to payment for additional work carried out and that the Engineer is obliged to base his assessment of the rates to be paid for such additional work on the rates the Contractor inserted in the Bill.  
Clause 8 of each Standardized Specification, and the measurement and payment clause of each Particular Specification, read together with the relevant clauses of the Project Specifications, all set out which ancillary or associated activities are included in the rates for the specified operations.
- 3 Descriptions in the Bill of Quantities are abbreviated and may differ from those in the Standardized and Project Specifications. No consideration will be given to any claim by the Contractor submitted on such a basis. The Bill has been drawn up generally in accordance with the latest issue of Civil Engineering Quantities <sup>5</sup>. Should any requirement of the measurement and payment clause of the appropriate Standardized or Project Specification(s) be contrary to the terms of the Bill or, when relevant, to the Civil Engineering Quantities, the requirement of the appropriate Standardized, Project, or Particular Specification as the case may be, shall prevail.
- 4 Unless stated to the contrary, items are measured net in accordance with the Drawings without any allowance having been made for waste.
- 5 The amounts and rates to be inserted in the Bill of Quantities shall be the full inclusive amounts to the Employer for the work described under the several items. Such amounts shall cover all the costs and expenses that may be required in and for the construction of the work described, and shall cover the costs of all general risks, profits, taxes (but excluding value-added tax), liabilities and obligations set forth or implied in the documents on which the Bid is based.
- 6 The quantities set out in the schedule of quantities are only approximate quantities. The quantities of work finally accepted and certified for payment, and not the quantities given in the schedule of quantities, will be used to determine payments to the contractor.
- 7 **A price or rate is to be entered against each item in Schedule of Quantities, whether the quantities are slated or not. An item against which no price is entered will lead to the bid being non-responsive**
- 8 The quantities of work as measured and accepted and certified for payment in accordance with the Conditions of Contract, and not the quantities stated in the Bill of Quantities, will be used to determine payments to the Contractor. The validity of the Contract shall in no way be affected by differences between the quantities in the Bill of Quantities and the quantities certified for payment.

**Ordering of materials** are not to be based on the Bill of Quantities, but only on information issued for construction purposes.

- 9 For the purposes of this Bill of Quantities, the following words shall have the meanings hereby assigned to them:

Included	:	The word "included" means the rates of the item/s where included is stated are priced under other items elsewhere in the schedule of quantities.
Unit	:	The unit of measurement for each item of work as defined in the Standardized, Project or Particular Specifications
Quantity	:	The number of units of work for each item
Rate	:	The payment per unit of work at which the Bidder bids to do the work

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<sup>5</sup> The standard system of measurement of civil engineering quantities published by the South African Institution of Civil Engineers.

Amount : The quantity of an item multiplied by the bidded rate of the (same) item  
Sum : An amount bidded for an item, the extent of which is described in the Bill of Quantities, the Specifications or elsewhere, but of which the quantity of work is not measured in units

10 The units of measurement indicated in the Bill of Quantities are metric units. The following abbreviations may appear in the Bill of Quantities:

mm	=	millimetre
m	=	metre
km	=	kilometre
km-pass	=	kilometre-pass
m <sup>2</sup>	=	square metre
m <sup>2</sup> -pass	=	square metre-pass
ha	=	hectare
m <sup>3</sup>	=	cubic metre
m <sup>3</sup> -km	=	cubic metre-kilometre
kW	=	kilowatt
kN	=	kilonewton
kg	=	kilogram
t	=	ton (1 000 kg)
%	=	per cent
MN	=	meganewton
MN-m	=	meganewton-metre
PC Sum	=	Prime Cost Sum
Prov Sum	=	Provisional Sum

## 11 PRELIMINARY, GENERAL AND SITE ESTABLISHMENT (No CPA on this item will be considered)

### 11.1 Provision

Provision is made in the Bill of Quantities for lump sums to cover the Contractor's cost to supply, erect commission, maintain and eventually demolish and remove site facilities, plant, tools, and equipment, and for the Contractor to comply with any other obligations of a preliminary and general nature in terms of the contract. The sum tendered in the Bill of Quantities for any preliminary and general item shall cover the Contractor's direct and overhead costs, profit, and all other costs for the provision of the item and/or compliance with the obligations, liabilities, risks and requirements associated with the item.

### 11.2 Payment for Fixed Cost Items

The sum tendered for these items will be paid in equal instalments over the contract period, the amount remaining after every instalment being re-calculated to arrive at equal instalments per month for the contractual period remaining.

### 11.3 Payment for Time-related Items

The sum tendered for these items will be paid in equal instalments over the contract period, the amount remaining after every instalment being re-calculated to arrive at equal instalments per month for the contractual period remaining. The total sum subject to recalculation will be adjusted according to the Adjusted Contract Period at the time when Certification of Payment is due.

### 11.4 Payment for Value-related Items

The sum tendered for these items will be paid in equal instalments over the contract period, the amount remaining after every instalment being re-calculated to arrive at equal instalments per month for the

contractual period remaining. The total sum subject to recalculation will be adjusted according to the Adjusted Contract Sum at the time when Certification of Payment is due.

## **12 DAY LABOUR, PLANT HIRE AND HAULAGE**

Tenderers must state their (wet) rates, in the relevant section of the Bill of Quantities, for day labour, plant hire and haulage. Plant hire and Day labour rates are to be shown as hourly rates for the various categories of labour set out in the Schedule.

No work is to be carried out as a charge to day labour, plant hire or haulage without prior written authorization of the Engineer and claims for such activities will not be paid without such authorizations.

Rates (wet rate) must include for the use of Contractor's small tools and equipment and must be inclusive of Contractor's overheads and profit.

## **C2.2 BILL OF QUANTITY**

ITEM. N°	PAYM. REF	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT RATE	AMOUNT
1.	CTSSMC EW	<b>SERIES 1: GENERAL REQUIREMENTS AND CHARGES</b>				
1.1	B001.04	<b>Compliance with the Occupational Health and Safety Act and applicable regulations</b>				
1.1.1		Implementation of a Health and Safety Plan	Lump Sum/per project	6		
1.1.2		Provision and implementation of a Health and Safety file	Lump Sum/per project	6		
1.1.3		Provision of construction supervisors	Per month/ per project	108		
1.1.4		Provision of a safety officer (full-time)	Per month /per project	108		
		<b>TOTAL SCHEDULE 1 CARRIED FORWARD TO SUMMARY</b>				

ITEM. N°	PAYM. REF	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT RATE	AMOUNT
Total brought forward						
<b>2.</b>	<b><u>SABS</u></b>	<b>SERIES 2:</b>				
	<b>1200C</b>	<b>SITE CLEARANCE</b>				
<b>2.1</b>	<b>PSC8.2.1</b>	-				
		<b>Clear and Grub</b>	m <sup>2</sup>	50		
<b>2.2</b>	<b>8.2.2</b>	-				
		<b>Remove and grub large trees and tree stumps with girth between:</b>				
2.2.1		0.1 - 1m, i.e. max. Ø 320mm	no	10		
2.2.2		1 - 2m, i.e. max. Ø 640mm	no	10		
2.2.3		2 - 3m i.e. max. Ø 955mm	no	10		
<b>2.3</b>	<b>PSC8.2.5.1</b>	<b>Take down and/or replace existing fences:</b>				
2.3.1	PSC8.2.5.1	<u>Take down existing fences regardless of height</u>				
		<u>or type:</u>				
2.3.1.1		Wire Mesh fences complete	m	10		
2.3.1.2		Steel Palisade fence	m	100		
2.3.1.3		Brick work (up to 230mm thick) fences	m	150		
2.3.1.4		Pre-fabricated concrete fences complete	m	150		
2.3.2	PSC8.2.5.2	<u>Re-erect fences regardless height and type:</u>				
2.3.2.1		Wire Mesh fences complete	m	100		
2.3.2.2		Steel Palisade fences complete	m	100		
2.3.2.3		Brick fences complete (new) 230mm width, face brick (brick cost at R1200/1000 bricks), 2.1 m high (plastered and painted if order to do so). Plaster cement: sand = 1: 4	m	1		
2.3.2.4		Pre-fabricated concrete fences complete (Painted if ordered).	m	100		

<b>Total carried forward</b>	
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ITEM. N°	PAYM. REF	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT RATE	AMOUNT
<b>Total brought forward</b>						
<b>3</b>	<b>SANS 1200DB PS10 PS12</b>	<b>SERIES 3: EARTHWORKS - PIPE TRENCHES</b>				
<b>3.1</b>	<b>8.3.1</b>	<b>Site Clearance:</b>				
3.1.1	8.3.1.a	Clear vegetation & trees of girth up to 1m, to a width of 2m (only were directed in writing)	m	100		
<b>3.2</b>		<b>Excavation:</b> <u>Excavate in all materials for trenches backfill, compact and dispose of surplus material.</u>				
3.2.1		<u>Excavate in all materials (SOFT) for trenches</u> <u>Hand Excavation:</u>				
3.2.1.1		Trench for pipe:40mm up to and including 200mm				
3.2.1.1.1		(i) 0m to 1m deep	m	500		
3.2.1.1.2		(ii) 0m to 2m deep	m	500		
3.2.1.1.3		(iii) 0m to 3m deep	m	500		
		<u>Machine Excavation:</u>				
3.2.1.2		Trench for pipe:40mm up to and including 1000mm				
3.2.1.2.1		(i) 0m to 1m deep	m	500		
3.2.1.2.2		(ii) 0m to 2m deep	m	500		
3.2.1.2.3		(iii) 0m to 3m deep	m	500		
<b>Total carried forward</b>						

Total brought forward					
3.2.2	8.3.2.a2	<u>Backfill, compact 93% Mod AASHTO, and dispose of surplus/unsuitable material finish to a smooth finish.</u>			
3.2.2.1		<u>Hand Excavation:</u> Trench for pipe:40mm up to and including 200m			
3.2.2.1.1		(i) 0m to 1m deep	m	100	
3.2.2.1.2		(ii) 0m to 2m deep	m	100	
3.2.2.1.3		(iii) 0m to 3m deep	m	100	
3.2.2.2	8.3.2.a.2.2	<u>Machine Excavation:</u> Trench for pipe:40mm up to and including 1000mm			
3.2.2.2.1		(i) 0m to 1m deep	m	100	
3.2.2.2.2		(ii) 0m to 2m deep	m	100	
3.2.2.2.3		(iii) 0m to 3m deep	m	100	
3.3	8.3.2.b	Bedding <b>Extra-over items 8.3.2.a for (Provisional):</b>			
3.3.1		Hard rock excavation, including <u>concrete</u>	m <sup>3</sup>	10	
3.4	8.3.2.c	<b>Excavate and dispose unsuitable material from trench bottom (Provisional)</b>	m <sup>3</sup>	10	
3.5	8.3.3	<b>Excavation Ancillaries:</b>			
3.5.1	8.3.3.1	<u>Make up deficiency in backfill material:</u>			
3.5.1.1	8.3.3.1.a	from other necessary excavations on site.	m <sup>3</sup>	10	
3.5.1.2	8.3.3.1.b	By importation from commercial sources (G7)	m <sup>3</sup>	10	
3.6	8.3.3	<b>Overhaul (PSDA5.2.6 &amp; PS9.8)</b> (All haulage = freehaul)	m <sup>3</sup>	0	Included
3.7	8.3.4	<b>Particular Items:</b>			
3.7.1	8.3.4.a	<u>Shore trench</u> Permanent shoring ordered by Eng (Sacrificial)	m	10	
3.7.2	8.3.4.b	<u>Temporary works: Control water inflow</u>			
3.7.2.1	8.3.4.b1	Provide equipment (Each incident)	Sum	10	

3.7.2.2	8.3.4.b2	Operate and maintain	Hr	10		
3.7.2.3	8.3.4.b3	Remove equipment (Each incident)	Sum	10		
<b>Total carried forward</b>						
<b>Total brought forward</b>						
<b>3.8</b>	<b>8.3.5</b>	<b>Existing Services that Intersect or Adjoin a Pipe Trench:</b>				
3.8.1	8.3.5.a	<u>Services that intersect a trench:</u>				
3.8.1.1	8.3.5.a.1	Cables	no	30		
3.8.1.2	8.3.5.a.2	Water mains	no	30		
3.8.1.3	8.3.5.a.3	Sewer lines	no	30		
3.8.1.4	8.3.5.a.4	Stormwater pipes	no	30		
3.8.2	8.3.5.b	<u>Services that adjoin a trench:</u>				
3.8.2.1	8.3.5.b.1	Cables	m	30		
3.8.2.2	8.3.5.b.2	Water lines	m	30		
3.8.2.3	8.3.5.b.3	Sewer lines	m	30		
3.8.2.4	8.3.5.b.4	Stormwater pipes	m	30		
<b>3.9</b>	<b>8.3.6</b>	<b>Extra Over 8.3.2: Finishing</b>				
	PSDB	<u>Reinstate surfaces complete with all</u>				
3.9.1	8.3.6.1	<u>courses:</u>				
3.9.1.1	8.3.6.a	Gravel on shoulders (G7 Min, 75 mm thick)	m <sup>2</sup>	30		
3.9.1.2	8.3.6.b	Asphalt 35mm thick or more (match existing).	m <sup>2</sup>	30		
3.9.1.3	8.3.6.c	Paving to match existing	m <sup>2</sup>	30		
3.9.1.4	8.3.6.d	Kerbing	m <sup>2</sup>	30		
<b>3.10</b>	<b>8.3.7</b>	<b>Accommodation of traffic -Included in other rates.</b>				
3.11	1200LB	<b><u>BEDDING (PIPES)</u></b>				
3.11.1	8.2	Bedding				
3.11.2	8.2.2	Supply only of Bedding by Importation				
3.11.3	8.2.2.2	<i>From borrow pits by Contractor</i>				
3.11.4	8.2.2.2.a	Selected granular material:	m <sup>3</sup>	100		
3.11.5	8.2.2.3	<i>From commercial sources:</i>				
3.11.6			m <sup>3</sup>	100		

	8.2.2.3.a	Selected granular material: washed river sand				
		<b>TOTAL SCHEDULE 3 CARRIED FORWARD TO SUMMARY</b>				

ITEM. N°	PAYM. REF	DESCRIPTION	UNIT	ESTIMATE D QUANTITY	UNIT RATE	AMOUNT
<b>4</b>	<b>SABS</b>	<b>SERIES 4:</b>				
	<b>1200L</b>	<b>MEDIUM-PRESSURE PIPELINES</b>				
<b>4.1</b>	<b>8.2.1</b>	<b>Supply, lay and bed pipes complete with couplings on Class C bedding:</b>				
4.1.1	8.2.1.a	<u>uPVC test and disinfect:</u>				
4.1.1.1		<i>Class 9:</i>				
4.1.1.1.1		DN 50 mm	m	1		
4.1.1.1.2		DN 63 mm	m	1		
4.1.1.1.3		DN 75 mm	m	1		
4.1.1.1.4		DN 90 mm	m	1		
4.1.1.1.5		DN 110 mm	m	1		
4.1.1.1.6		DN 125 mm	m	1		
4.1.1.1.7		DN 160 mm	m	1		
4.1.1.1.8		DN 200 mm	m	1		
4.1.1.1.9		DN 250 mm	m	50		
4.1.1.1.10		DN 315 mm	m	50		
4.1.1.1.11		DN 355 mm	m	50		
4.1.1.2.12		DN 400 mm	m	50		
4.1.1.2		<i>Class 12:</i>				
4.1.1.2.1		DN 50 mm	m	1		
4.1.1.2.2		DN 63 mm	m	1		
4.1.1.2.3		DN 75 mm	m	1		
4.1.1.2.4		DN 90 mm	m	1		
4.1.1.2.5		DN 110 mm	m	1		
4.1.1.2.6		DN 125 mm	m	1		

		<b>Total brought forward</b>				
4.1.1.2.7		DN 160 mm	m	1		
4.1.1.2.8		DN 200 mm	m	1		
4.1.1.2.9		DN 250 mm	m	50		
4.1.1.2.10		DN 315 mm	m	50		
		-				

		<b>Total carried forward</b>				
		<b>Total brought forward</b>				
4.1.3	8.2.1.c	<p><b>Steel pipes:</b> All steel pipes to SABS 719 Medium / Heavy class. Include for BSP threaded pipes (to SABS 62) if required (0-150Ø). All steel pipes and fittings to have a minimum wall thickness of 4,5 mm all flanges to be to SABS 1123 (1600/3) - Flanges measured elsewhere in bill. Fasteners and Flanges to be painted with two liberal coats of approved bituminous anti corrosion paint.</p> <p><i>Corrosion protection: Powder coated Final surface shall be smooth, glossy and uniform Before powder coating, clean the surface - sand blast to Sa 3 Cl. 10.2 Primer: to manufacturer's specification Materials: Powder coating - High build Epoxy (SABS 1217 Type 2): DFT: 300 to 500 micron - Polyurethane (SABS 1578) on G.I DFT:50 to 100 micron</i></p> <p><i>Alternative corrosion protection:</i></p> <p>Hot-dipped galvanized to SABS ISO 1461 and SABS EN 10240.</p>				
4.1.3.1		DN 40 mm	m	1		
4.1.3.2		DN 50 mm	m	1		
4.1.3.3		DN 65 mm	m	1		
4.1.3.4		DN 80 mm	m	1		
4.1.3.5		DN 100 mm	m	1		
4.1.3.6		DN 125 mm	m	1		
4.1.3.7		DN 150 mm	m	1		
4.1.3.8		DN 200 mm	m	1		
4.1.3.9		DN 250 mm	m	50		
4.1.3.10		DN 300 mm	m	50		
4.1.3.11		DN 350 mm	m	50		

4.1.3.12		DN 400 mm	m	50		
4.1.3.13		DN 500 mm	m	50		
4.1.3.14		DN 550 mm	m	50		
4.1.3.15		DN 600 mm	m	50		
4.1.3.16		DN 700 mm	m	50		
<b>Total carried forward</b>						

<b>Total brought forward</b>						
4.1.4	8.2.1.d	<u>High Density Polyethylene Pressure pipe (HDPE) SANS ISO 4427 PE 100 PN12,5 HDPE pipes (including all fittings and couplings)</u>				
4.1.4.1		32mm dia PN16	m	50		
4.1.4.2		40mm dia PN16	m	50		
4.1.4.3		50mm dia PN16	m	50		
4.1.4.4		63mm dia PN12.5	m	50		
4.1.4.4		110mm dia PN 12.5	m	50		
4.1.4.5		160mm dia PN12.5	m	50		
4.1.4.6		200mm dia PN12.5	m	50		
4.1.4.7		250mm dia PN 12.5	m	50		
4.1.4.8		315 mm dia PN 12.5	m	50		
4.1.4.9		355mm dia PN 12.5	m	50		
4.1.4.10		400mm dia PN 12.5	m	50		
4.1.4.11		500mm dia PN 12.5	m	50		
4.1.4.12		630mm dia PN 12,5	m	50		
4.1.4.13		700mm dia PN 12.5	m	50		
4.1.4.14		800mm dia PN 12,5	m	50		
4.1.4.15		1000mm dia PN 12.5	m	50		
4.2	8.2.4	<b>Extra-over Item 8.2.1 for cutting of the pipe and the supplying and fixing of extra couplings:</b> Supply, Install & Finish installation - Suitable Cast Iron, Mild steel (minimum wall thickness of 4,5 mm) & uPVC fittings				

		<p>for coupling onto pipes. Complete with bolts, nuts, gaskets, seals &amp; corrosion protection.</p> <p>If flanged: drilled to SABS 1123(1600/3)</p> <p>Boss flanges: drilled to SABS 1123(1600/4)</p> <p>If screwed: BSP thread</p> <p>Bolts: Stainless steel grade 304</p> <p>Fasteners and Flanges to be painted with two liberal coats of approved bituminous anti corrosion paint.</p> <p><i>Corrosion protection: Powder coated</i></p> <p>Final surface shall be smooth, glossy, and uniform</p> <p>Before powder coating, clean the surface - sand blast to Sa 3 Cl. 10.2</p> <p>Primer: to manufacturer's specification</p> <p>Materials: Powder coating</p> <p>High build Epoxy (SABS 1217 Type 2): DFT: 300 to 500 <i>micron</i></p> <p>- Polyurethane (SABS 1578) on G.I DFT:50 to 100 <i>micron</i></p>				
		<b>Total carried forward</b>				
		<b>Total brought forward</b>				
4.2.1	8.2.4.a.	<p><i>Alternative corrosion protection:</i></p> <p>Hot-dipped galvanized to SABS ISO 1461 and SABS EN 10240.</p> <p><u>Extra over 8.2.1.c for steel pipes</u></p>				
4.2.1.1	8.2.4.a.1	<p><i>Flanges (also Boss) complete with all fasteners, gaskets and appurtenances. (Painted as above for corrosion protection).</i></p>				
4.2.1.1.1		DN 40 mm	no.	1		
4.2.1.1.2		DN 50 mm	no.	1		
4.2.1.1.3		DN 65 mm	no.	1		
4.2.1.1.4		DN 80 mm	no.	1		
4.2.1.1.5		DN 100 mm	no.	1		
4.2.1.1.6		DN 125 mm	no.	1		



4.2.1.1.7		DN 150 mm	no.	1		
4.2.1.1.8		DN 200 mm	no.	1		
4.2.1.1.9		DN 250mm	no.	30		
4.2.1.1.10		DN 300mm	no.	30		
4.2.1.1.11		DN 350mm	no.	30		
4.2.1.1.12		DN 400 mm	no.	30		
4.2.1.1.13		DN 500 mm	no.	30		
4.2.1.1.14		DN 550 mm	no.	30		
4.2.1.1.15		DN 600 mm	no.	30		
4.2.1.1.16		DN 40 mm Blank flange	no.	1		
4.2.1.1.17		DN 50 mm Blank flange	no.	1		
4.2.1.1.18		DN 65 mm Blank flange	no.	1		
4.2.1.1.19		DN 80 mm Blank flange	no.	1		
4.2.1.1.20		DN 100 mm Blank flange	no.	1		
4.2.1.1.21		DN 125 mm Blank flange	no.	1		
4.2.1.1.22		DN 150 mm Blank flange	no.	1		
4.2.1.1.23		DN 200 mm Blank flange	no.	1		
4.2.1.1.24		DN 250 mm Blank flange	no.	30		
4.2.1.1.25		DN 300 mm Blank flange	no.	30		
4.2.1.1.26		DN 350 mm Blank flange	no.	30		
4.2.1.1.27		DN 400 mm Blank flange	no.	30		
4.2.1.1.28		DN 500 mm Blank flange	no.	30		
4.2.1.1.29		DN 550 mm Blank flange	no.	30		
4.2.1.1.30		DN 600 mm Blank flange	no.	30		
		<b>Total carried forward</b>				
		<b>Total brought forward</b>				
4.2.1.2	8.2.4.a.2	<i>G.I. Sockets (to SABS 62) BSP threaded.</i>				
4.2.1.2.1		DN 40 mm	no.	1		
4.2.1.2.2		DN 50 mm	no.	1		
4.2.1.2.3		DN 65 mm	no.	1		
4.2.1.2.4		DN 80 mm	no.	1		
4.2.1.2.5		DN 100 mm	no.	1		
4.2.1.2.6		DN 125 mm	no.	1		
4.2.1.2.7		DN 150 mm	no.	1		
4.2.1.3	8.2.4.a.2	<i>G.I. 90-degree Bends (to SABS 62) BSP threaded</i>				
4.2.1.3.1		DN 40 mm	no.	1		

4.2.1.3.2		DN 50 mm	no.	1		
4.2.1.3.3		DN 65 mm	no.	1		
4.2.1.3.4		DN 80 mm	no.	1		
4.2.1.3.5		DN 100 mm	no.	1		
4.2.1.3.6		DN 125 mm	no.	1		
4.2.1.3.7		DN 150 mm	no.	1		
4.2.1.4	8.2.4.a.2	<i>G.I. reducers (to SABS 62) BSP threaded</i>				
4.2.1.4.1		DN 40 mm	no.	1		
4.2.1.4.2		DN 50 mm	no.	1		
4.2.1.4.3		DN 65 mm	no.	1		
4.2.1.4.4		DN 80 mm	no.	1		
4.2.1.4.5		DN 100 mm	no.	1		
4.2.1.4.6		DN 125 mm	no.	1		
4.2.1.4.7		DN 150 mm	no.	1		
<b>Total carried forward</b>						
4.2.1.5	8.2.4.a.3	<b>Total brought forward</b> <i>Welding of joints complete</i> (Refer Part Spec PPR5)				
4.2.1.5.1		DN 40 mm	no.	1		
4.2.1.5.2		DN 50 mm	no.	1		
4.2.1.5.3		DN 65 mm	no.	1		
4.2.1.5.4		DN 80 mm	no.	1		
4.2.1.5.5		DN 100 mm	no.	1		
4.2.1.5.6		DN 125 mm	no.	1		
4.2.1.5.7		DN 150 mm	no.	1		
4.2.1.5.8		DN 200 mm	no.	1		
4.2.1.5.9		DN 250 mm	no.	50		

4.2.1.5.10		DN 300 mm	no.	50		
4.2.1.5.11		DN 350 mm	no.	40		
4.2.1.5.12		DN 400 mm	no.	50		
4.2.1.5.13		DN 500 mm	no.	50		
4.2.1.5.14		DN 550 mm	no.	40		
4.2.1.5.15		DN 600 mm	no.	60		
4.2.1.5.16		DN 700 mm	no.	50		
4.2.1.6		<u>Extra over Item 8.2.1.c</u> <u>Internal protective mortar lining in steel pipes to</u> <u>Engineer's approval</u> Contractor to state type of system for lining: ..... ..... ..... If ordered by Engineer in writing.				
4.2.1.6.1		DN 200 mm (Lining thickness.....mm)	no.	1		
4.2.1.6.2		DN 250 mm (Lining thickness.....mm)	no.	1		
4.2.1.6.3		DN 300 mm (Lining thickness.....mm)	no.	1		
4.2.1.6.4		DN 350 mm (Lining thickness.....mm)	no.	1		
4.2.1.6.5		DN 400 mm (Lining thickness.....mm)	no.	1		
4.2.1.6.6		DN 500 mm (Lining thickness.....mm)	no.	1		
4.2.1.6.7		DN 550 mm (Lining thickness.....mm)	no.	1		
4.2.1.6.8		DN 600 mm (Lining thickness.....mm)	no.	1		
4.2.1.6.9		DN 700 mm (Lining thickness.....mm)	no.	1		
		<b>Total carried forward</b>				
		<b>Total brought forward</b>				
4.2.2	8.2.4.b	<u>Coupling Type Flange Adaptors: PN16</u> <u>to SABS 1123 (1600/3) to fit pipe.</u> to SABS 1123 (1600/3), step pipe and adapt to different types of material (Coupling) (Ex-Steel Metals Contracting or similar approved)				
4.2.2.1		DN 50mm	no.	1		
4.2.2.2		DN 80mm	no.	1		
4.2.2.3		DN 100mm	no.	1		
4.2.2.4		DN 125mm	no.	1		
4.2.2.5		DN 150mm	no.	1		

4.2.2.6		DN 175mm	no.	1		
4.2.2.7		DN 200mm	no.	1		
4.2.2.8		DN 225mm	no.	1		
4.2.2.9		DN 250mm	no.	1		
4.2.2.10		DN 300mm	no.	1		
4.2.2.11		DN 350mm	no.	1		
4.2.2.12		DN 400mm	no.	1		
4.2.2.13		DN 50mm - restrained	no.	1		
4.2.2.14		DN 80mm - restrained	no.	1		
4.2.2.15		DN 100mm - restrained	no.	1		
4.2.2.16		DN 125mm - restrained	no.	1		
4.2.2.17		DN 150mm - restrained	no.	1		
4.2.2.18		DN 175mm - restrained	no.	1		
4.2.2.19		DN 200mm - restrained	no.	1		
4.2.2.20		DN 225mm - restrained	no.	1		
4.2.2.21		DN 250mm - restrained	no.	40		
4.2.2.22		DN 300mm - restrained	no.	40		
4.2.2.23		DN 350mm - restrained	no.	40		
4.2.2.24		DN 400mm - restrained	no.	50		
<b>Total carried forward</b>						
4.2.3	8.2.4.c	<b>Total brought forward</b> <u>Coupling Type Step Flange Adaptors: PN 16</u> to SABS 1123 (1600/3), step pipe and adapt to different types of material (Coupling) (Ex-Steel Metals Contracting or similar approved)				
4.2.3.1		80 x 100 (3" x 4")	no.	1		
4.2.3.2		80 x 100 (3.5" x 4")	no.	1		
4.2.3.3		100 x 100 (OD to OD varies)	no.	1		
4.2.3.4		100 x 125	no.	1		
4.2.3.5		125 x 125 (OD to OD varies)	no.	1		
4.2.3.6		125 x 150	no.	1		
4.2.3.7		150 x 150 (OD to OD varies)	no.	1		

4.2.3.8		175 x 200	no.	1		
4.2.3.9		200 x 200 (OD to OD varies)	no.	1		
4.2.3.10		200 x 225	no.	1		
4.2.3.11		225 x 250	no.	1		
4.2.3.12		250 x 250 (OD to OD varies)	no.	40		
4.2.3.13		300 x300 (OD to OD varies)	no.	40		
4.2.3.14		350 x 350 (OD to OD varies)	no.	50		
4.2.3.15		350 x 400	no.	50		
4.2.3.16		400 x 400 (OD to OD varies)	no.	50		
4.2.4	8.2.4.d	<u>Hydrant Tee: C.I Flanged to SABS 1123 (1600/3), complete with all fasteners, gaskets &amp; appurtenances</u>				
4.2.4.1		DN 75 mm	no.	1		
4.2.4.2		DN 90 mm	no.	1		
4.2.4.3		DN 110 mm	no.	1		
4.2.4.4		DN 160 mm	no.	1		
4.2.4.5		DN 200 mm	no.	1		
4.2.4.6		DN 250 mm	no.	60		
4.2.5	8.2.4.e	<u>Hydrant Tee: (Flanges measured separately)</u>				
4.2.5.1		DN 315 mm	no.	50		
4.2.5.2		DN 355 mm	no.	50		
4.2.5.3		DN 400 mm	no.	50		
		<b>Total carried forward</b>				
		<b>Total brought forward</b>				
4.2.6	8.2.4.f	<u>Reducers: (Flanges measured separately)</u> <u>Range of diameters:</u>				
4.2.6.1		DN 50 mm to 150 mm	no.	1		
4.2.6.2		DN 150 mm to 300 mm	no.	1		
4.2.6.3		DN 300 mm to 400 mm	no.	1		
4.2.6.4		DN 400 mm to 550 mm	no.	1		
4.2.6.5		DN 550 mm to 700 mm	no.	1		
4.2.7	8.2.4.g	<u>PVC to AC:</u>				
4.2.7.1		DN 315 mm x DN 340 mm	no.	1		
4.2.7.2		DN 355 mm x DN 450 mm	no.	1		

4.2.8	8.2.4.h	<u>Tee:</u>				
4.2.8.1	8.2.4.h.1	<i>Equal Tee: (C.I. Flanged / Unflanged)</i>				
4.2.8.1.1		DN 40 mm	no.	1		
4.2.8.1.2		DN 50 mm	no.	1		
4.2.8.1.3		DN 65 mm	no.	1		
4.2.8.1.4		DN 80 mm	no.	1		
4.2.8.1.5		DN 100 mm	no.	1		
4.2.8.1.6		DN 125 mm	no.	1		
4.2.8.1.7		DN 150 mm	no.	1		
4.2.8.1.8		DN 200 mm	no.	1		
4.2.8.1.9		DN 250 mm	no.	1		
4.2.8.1.10		DN 300 mm	no.	1		
4.2.8.1.11		DN 350 mm	no.	1		
4.2.8.1.12		DN 400 mm	no.	1		
4.2.8.1.13		DN 500 mm	no.	1		
4.2.8.1.14		DN 550 mm	no.	1		
4.2.8.1.15		DN 600 mm	no.	1		
4.2.8.1.16		DN 700 mm	no.	1		
<b>Total carried forward</b>						
<b>Total brought forward</b>						
4.2.8.2		<i>Unequal Tee:( C.I. Flanged / Unflanged)</i>				
4.2.8.2.1		DN 40 mm	no.	1		
4.2.8.2.2		DN 50 mm	no.	1		
4.2.8.2.3		DN 65 mm	no.	1		
4.2.8.2.4		DN 80 mm	no.	1		
4.2.8.2.5		DN 100 mm	no.	1		
4.2.8.2.6		DN 125 mm	no.	1		
4.2.8.2.7		DN 150 mm	no.	1		
4.2.8.2.8		DN 200 mm	no.	1		
4.2.8.2.9		DN 250 mm	no.	1		
4.2.8.2.10		DN 300 mm	no.	1		

4.2.8.2.11		DN 350 mm	no.	1		
4.2.8.2.12		DN 400 mm	no.	1		
4.2.8.2.13		DN 500 mm	no.	1		
4.2.8.2.14		DN 550 mm	no.	1		
4.2.8.2.15		DN 600 mm	no.	1		
4.2.8.2.16		DN 700 mm	no.	1		
4.2.9	8.2.4 g	<u>Bends</u>				
4.2.9.1		<i>uPVC long radius bend Class 16</i>				
4.2.9.1.1		<i>90 degrees</i>				
4.2.9.1.1.1		DN 50	no.	1		
4.2.9.1.1.2		DN 63	no.	1		
4.2.9.1.1.3		DN 75	no.	1		
4.2.9.1.1.4		DN 90	no.	1		
4.2.9.1.1.5		DN 110	no.	1		
4.2.9.1.1.6		DN 125	no.	1		
4.2.9.1.1.7		DN 160	no.	1		
4.2.9.1.1.8		DN 200	no.	1		
4.2.9.1.1.9		DN 250	no.	30		
	<b>Total carried forward</b>					
		<b>Total brought forward</b>				
4.2.9.1.2		<i>45 degrees</i>				
4.2.9.1.2.1		DN 50	no.	1		
4.2.9.1.2.2		DN 63	no.	1		
4.2.9.1.2.3		DN 75	no.	1		
4.2.9.1.2.4		DN 90	no.	1		
4.2.9.1.2.5		DN 110	no.	1		
4.2.9.1.2.6		DN 125	no.	1		
4.2.9.1.2.7		DN 160	no.	1		
4.2.9.1.2.8		DN 200	no.	1		
4.2.9.1.2.9		DN 250	no.	30		
4.2.9.1.3		<i>22,5 degrees</i>				

4.2.9.1.3.1		DN 50	no.	1		
4.2.9.1.3.2		DN 63	no.	1		
4.2.9.1.3.3		DN 75	no.	1		
4.2.9.1.3.4		DN 90	no.	1		
4.2.9.1.3.5		DN 110	no.	1		
4.2.9.1.3.6		DN 125	no.	1		
4.2.9.1.3.7		DN 160	no.	1		
4.2.9.1.3.8		DN 200	no.	1		
4.2.9.1.3.9		DN 250	no.	30		
4.2.9.1.4		<i>11,25 degrees</i>				
4.2.9.1.4.1		DN 50	no.	1		
4.2.9.1.4.2		DN 63	no.	1		
4.2.9.1.4.3		DN 75	no.	1		
4.2.9.1.4.4		DN 90	no.	1		
4.2.9.1.4.5		DN 110	no.	1		
4.2.9.1.4.6		DN 125	no.	1		
4.2.9.1.4.7		DN 160	no.	1		
4.2.9.1.4.8		DN 200	no.	1		
4.2.9.1.4.9		DN 250	no.	30		
	<b>Total carried forward</b>					
		<b>Total brought forward</b>				
4.2.9.2		<i>Steel bend specials, flanges measured separately</i>				
4.2.9.2.1		<i>90 degrees</i>				
4.2.9.2.1.1		DN 40 mm	no.	1		
4.2.9.2.1.2		DN 50 mm	no.	1		
4.2.9.2.1.3		DN 65 mm	no.	1		
4.2.9.2.1.4		DN 80 mm	no.	1		
4.2.9.2.1.5		DN 100 mm	no.	1		
4.2.9.2.1.6		DN 125 mm	no.	1		
4.2.9.2.1.7		DN 150 mm	no.	1		
4.2.9.2.1.8		DN 200 mm	no.	1		
4.2.9.2.1.9		DN 250 mm	no.	1		



4.2.9.2.1.10	DN 300 mm	no.	1		
4.2.9.2.1.11	DN 350 mm	no.	1		
4.2.9.2.1.12	DN 400 mm	no.	1		
4.2.9.2.1.13	DN 500 mm	no.	1		
4.2.9.2.1.14	DN 550 mm	no.	1		
4.2.9.2.1.15	DN 600 mm	no.	1		
4.2.9.2.1.16	DN 700 mm	no.	1		
4.2.9.2.2	<b>0 - 90 degrees</b>				
4.2.9.2.2.1	DN 40 mm	no.	1		
4.2.9.2.2.2	DN 50 mm	no.	1		
4.2.9.2.2.3	DN 65 mm	no.	1		
4.2.9.2.2.4	DN 80 mm	no.	1		
4.2.9.2.2.5	DN 100 mm	no.	1		
4.2.9.2.2.6	DN 125 mm	no.	1		
4.2.9.2.2.7	DN 150 mm	no.	1		
4.2.9.2.2.8	DN 200 mm	no.	1		
4.2.9.2.2.9	DN 250 mm	no.	1		
4.2.9.2.2.10	DN 300 mm	no.	1		
4.2.9.2.2.11	DN 350 mm	no.	1		
4.2.9.2.2.12	DN 400 mm	no.	1		
4.2.9.2.2.13	DN 500 mm	no.	1		
4.2.9.2.2.14	DN 550 mm	no.	1		
4.2.9.2.2.15	DN 600 mm	no.	1		
4.2.9.2.2.16	DN 700 mm	no.	1		
<b>Total carried forward</b>					
<b>Total brought forward</b>					
4.2.9.3	<i>Steel manifold specials with up to 4 branches onto main steel section of All arrangements. Flanges measured separately</i>				
4.2.9.3.1	DN 80 mm	no.	1		
4.2.9.3.2	DN 100 mm	no.	1		
4.2.9.3.3	DN 125 mm	no.	1		
4.2.9.3.4	DN 150 mm	no.	1		
4.2.9.3.5	DN 200 mm	no.	1		
4.2.9.3.6	DN 250 mm	no.	1		
4.2.9.3.7	DN 300 mm	no.	1		
4.2.9.3.8	DN 350 mm	no.	1		

4.2.9.3.9	DN 400 mm	no.	1		
4.2.9.3.10	DN 500 mm	no.	1		
4.2.9.3.11	DN 550 mm	no.	1		
4.2.9.3.12	DN 600 mm	no.	1		
4.2.9.3.13	DN 700 mm	no.	1		
4.2.10	<u>Saddle clamp:</u> Complete with bolts, nuts, flat gaskets, stiffened ring. Include drilling hole to DN of fitting Ø. Suitable Polypropylene Copolymer Compression fittings and specials for coupling of HDPE pipes: BSP Threaded (approved by the Engineer in writing). Include for painting bolts with bituminous corrosion resisting paint:				
4.2.10.1	DN 50 mm	no.	1		
4.2.10.2	DN 63 mm	no.	1		
4.2.10.3	DN 75 mm	no.	1		
4.2.10.4	DN 75 mm	no.	1		
4.2.10.5	DN 90 mm	no.	1		
4.2.10.6	DN 110 mm	no.	1		
4.2.10.7	DN 125 mm	no.	1		
4.2.10.8	DN 160 mm	no.	1		
4.2.10.9	DN 200 mm	no.	1		
4.2.10.10	DN 250 mm	no.	30		
4.2.10.11	DN 300 mm	no.	30		
<b>Total carried forward</b>					
<b>Total brought forward</b>					
4.2.11	<u>Extra over item 8.2.1.d:</u> <u>Suitable HDPE Compression Fittings</u> <u>fittings:</u> Suitable Polypropylene Copolymer Compression fittings and specials for coupling of HDPE pipes: BSP Threaded (approved by the Engineer in writing):				
4.2.11.1	<i>90° Elbow with threaded male offtake:</i>				
4.2.11.1.1	DN 15	no.	1		

4.2.11.1.2		DN 20	no.	1		
4.2.11.1.3		DN 25	no.	1		
4.2.11.1.4		DN 32	no.	1		
4.2.11.2		<i>90° Elbow:</i>				
4.2.11.2.1		DN 15	no.	1		
4.2.11.2.2		DN 20	no.	1		
4.2.11.2.3		DN 25	no.	1		
4.2.11.2.4		DN 32	no.	1		
4.2.11.3		<i>90° Tee with threaded male offtake:</i>				
4.2.11.3.1		DN 15	no.	1		
4.2.11.3.2		DN 20	no.	1		
4.2.11.3.3		DN 25	no.	1		
4.2.11.3.4		DN 32	no.	1		
4.2.11.4		<i>End cap:</i>	no.	1		
4.2.11.4.1		DN 15	no.	1		
4.2.11.4.2		DN 20	no.	1		
4.2.11.4.3		DN 25	no.	1		
4.2.11.4.4		DN 32				
<b>Total carried forward</b>						
<b>Total brought forward</b>						
4.2.11.5		Adapter: Male				
4.2.11.5.1		DN 15	no.	1		
4.2.11.5.2		DN 20	no.	1		
4.2.11.5.3		DN 25	no.	1		
4.2.11.5.4		DN 32	no.	1		
<b>4.3</b>	<b>8.2.5</b>	<b>Supply and Place Pipes, Valves &amp; Specials</b>				
		Supply, Install & Finish installation -				
		Suitable Cast Iron, Mild steel (minimum wall				

		<p>thickness of 4,5 mm) &amp; uPVC fittings for coupling onto pipes. Complete with bolts, nuts, gaskets, seals &amp; corrosion protection. If flanged: drilled to SABS 1123(1600/3) Boss flanges: drilled to SABS 1123(1600/4) If screwed: BSP thread Bolts: Stainless steel grade 304 Pipes to SABS 62</p> <p><i>Corrosion protection: Powder coated</i> Final surface shall be smooth, glossy and uniform Before powder coating, clean the surface - sand blast to Sa 3 Cl. 10.2 Primer: to manufacturer's specification Materials: Powder coating - High build Epoxy (SABS 1217 Type 2): DFT: 300 to 500 micron - Polyurethane (SABS 1578) on G.I DFT:50 to 100 micron</p> <p><i>Alternative corrosion protection:</i> Hot-dipped galvanized to SABS ISO 1461 and SABS EN 10240.</p>				
		<b>Total carried forward</b>				
		<b>Total brought forward</b>				
4.3.1	8.2.5.a	<u>Resilient seal gate valve non rising spindle with stem cap, flanges drilled to SABS1123 (1600/3) Anti-Clockwise closing.</u>				
4.3.1.1		DN 40mm	no.	1		
4.3.1.2		DN 50mm	no.	1		
4.3.1.3		DN 80mm	no.	1		
4.3.1.4		DN 100mm	no.	1		
4.3.1.4		DN 125mm	no.	1		

4.3.1.5		DN 150mm	no.	1		
4.3.1.6		DN 200mm	no.	1		
4.3.1.7		DN 250mm	no.	1		
4.3.1.8		DN 300mm	no.	1		
4.3.1.9		DN 350mm	no.	1		
4.3.1.10		DN 400mm	no.	1		
4.3.2	8.2.5.b	Valve (temporary) supplied under item 8.2.5.a regardless of type and size.	no.	1		
4.3.3	8.2.5.c	<u>Wedge gate valve non rising spindle with stem cap, flanged drilled to SABS 1123 (1600/3) Anti-Clockwise closing</u>				
4.3.3.1		ND 350 mm	no.	1		
4.3.3.2		ND 400 mm	no.	1		
4.3.3.3		ND 450 mm	no.	1		
4.3.3.4		ND 600 mm	no.	1		
<b>Total carried forward</b>						
<b>Total brought forward</b>						
4.3.4	8.2.5.d	<u>Non return Valves (Flanged): PN16</u>				
		Flanges drilled to SABS1123 (1600/3)				
4.3.4.1		DN 40 mm	m	1		
4.3.4.2		DN 50 mm	m	1		
4.3.4.3		DN 65 mm	m	1		
4.3.4.4		DN 80 mm	m	1		

4.3.4.5		DN 100 mm	m	1		
4.3.4.6		DN 125 mm	m	1		
4.3.4.7		DN 150 mm	m	1		
4.3.4.8		DN 200 mm	m	1		
4.3.4.9		DN 250 mm	m	1		
4.3.4.10		DN 300 mm	m	1		
4.3.4.11		DN 350 mm	m	1		
4.3.4.12		DN 400 mm	m	1		
4.3.4.13		DN 500 mm	m	1		
4.3.4.14		DN 550 mm	m	1		
4.3.4.15		DN 600 mm	m	1		
4.3.4.16		DN 700 mm	m	1		
4.3.5	8.2.5.e	<u>Brass fullway gate valve to SABS 776, Class 6</u> <u>Female: Complete</u>				
4.3.5.1		ND 32 mm	no.	1		
4.3.5.2		ND 50 mm	no.	1		
4.3.5.3		ND 65 mm	no.	1		
4.3.5.4		ND 80 mm	no.	1		
<b>Total carried forward</b>						
<b>Total brought forward</b>						
4.3.6	8.2.5.f	<u>Air Valves</u>				
4.3.6.1		ND 25 (2511) - screwed.	no.	1		
4.3.6.2		ND 50 (2511) - screwed.	no.	1		
4.3.6.3		ND 80(2501) flanged drilled-SABS1123(1600/3).	no.	1		
4.3.6.4		ND 100(2501) flanged drilled-SABS1123(1600/3).	no.	1		
4.3.7	8.2.5.g	<u>Fire Hydrant valve</u>				
4.3.7.1		Below Ground level Type	No.	1		

4.3.7.2		Above Ground level Type	No.	1		
4.3.8	8.2.5.h	<u>Rubber Lock gate seal or similar approved</u> Supply and install complete, to fit onto Resilient Seal Gate Valve stem cap.	no	1		
4.3.9	8.2.5.i	<u>Pressure Gauge</u> Supply & install complete, to fit onto G I pipe Complete with couplers & fasteners. Pressure Gauge: DN 15 mm	no.	1		
4.3.10	8.2.5.j	<u>Scour valve fittings &amp; Specials</u> - All flanges to SABS1123(1600/3). All pipes and fittings be G.I., pipes to SABS 763 M.S. wall thickness: 4,5 mm, galvanized complete with all fasteners, gaskets & appurtenances. ND100 G.I. pipe, flanged, 500mm long. <i>Scour Tee:</i>	no.	1		
4.3.10.1		ND 80 mm	no.	1		
4.3.10.2		ND 100 mm	no.	1		
4.3.10.3		ND 125 mm	no.	1		
4.3.10.4		ND 150 mm	no.	1		
<b>Total carried forward</b>						
<b>Total brought forward</b>						
4.3.10.5		ND 200 mm	no.	1		
4.3.10.6		ND 250 mm	no.	1		
4.3.10.7		ND 300 mm	no.	1		
4.3.10.8		ND 350 mm	no.	1		
4.3.10.9		ND 400 mm	no.	1		
4.3.11	8.2.5.l	<u>Fittings for Air Valves:</u> M.S. wall thickness: 4,5 mm, galvanized				

4.3.11.1	8.2.5.I.1	complete with all fasteners, gaskets & appurtenances. Complete as detailed <i>DN25:</i>	no.	1		
4.3.11.2	8.2.5.I.1	<i>DN50:</i>	no.	1		
4.3.11.3	8.2.5.I.1	<i>DN80:</i>	no.	1		
4.4	8.2.13	<b>Valve &amp; Hydrant Chambers, for:</b> Supply, construct, and finish chamber complete with all appurtenances and requirements, for: including pad locks & keys, depth up to 1.8m, for:				
4.4.1	8.2.13.a	<u>Isolating valve Chamber:</u> <i>Subjected to traffic - vehicles.</i>				
4.4.1.1		Nominal Bore $\leq$ 200mm	no	1		
4.4.1.2		<i>Not subjected to traffic - vehicles</i> Nominal Bore $\leq$ 200mm	no	1		
4.4.2	8.2.13.b	<u>Air valve Chamber:</u> For ND 25mm & ND 50mm	no	1		
4.4.2.1		For ND 80mm	no.	1		
4.4.3	8.2.13.c	<u>Scour valve Chamber:</u>				
4.4.3.1		Nominal Bore 100mm	no.	1		
<b>Total carried forward</b>						
4.5	PSL8.2.15	<b>Total brought forward</b> <b>Special Wrapping (seal tape Lay flat or similar approved in writing)</b> To suppliers' specifications				
4.5.1	PSL8.2.15.a	<u>Buried Flanges</u>				
4.5.1.1		DN 50 to DN 150	no.	1		
4.5.1.2		DN 150 to DN 200	no.	1		
4.5.1.3		DN 300 to DN 600	no.	50		



4.5.2	PSL8.2.15.b	Ductile iron dismantling joint coupling: Buried.				
4.5.2.1		DN 50 to DN 150	no.	1		
4.5.2.2		DN 150 to DN 200	no.	1		
4.5.2.3		DN 300 to DN 600	no.	50		
4.5.3	PSL8.2.15.c	<u>Buried steel Pipes:</u> Only were directed by the Engineer in writing.				
4.5.3.1		DN 50 - DN 100	m	1		
4.5.3.2		DN 100 - DN 200	m	1		
4.5.3.3		DN 200 - DN 300	m	1		
4.5.3.4		DN 300 - DN 675	m	50		
		<b>TOTAL SCHEDULE 4 CARRIED FORWARD TO SUMMARY</b>				

ITEM. N°	PAYM. REF	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT RATE	AMOUNT
<b>Total brought forward</b>						
<b>5</b>	<b>Part. Spec.</b>	<b>SERIES 5</b>				
		<b>MAINTENANCE AND REPAIR ON WATER NETWORK</b>				
	<b>PPR &amp; SANS 1200L</b>					
<b>5.1</b>	<b>PPR 2</b>	<b>REPAIR</b> Repair of Steel water main by burst pipe clamp for DN pipe: Temporary to be replaced the following day				
5.1.1		DN 100 mm	no.	25		
5.1.2		DN 125 mm	no.	25		
5.1.3		DN 150 mm	no.	25		
5.1.4		DN 200 mm	no.	25		
5.1.5		DN 250 mm	no.	25		
5.1.6		DN 300 mm	no.	25		
5.1.7		DN 350 mm	no.	25		
5.1.8		DN 400 mm	no.	25		
5.1.9		DN 500 mm	no.	25		
5.1.10		DN 550 mm	no.	25		
5.1.11		DN 600 mm	no.	25		
5.1.12		DN 700 mm	no.	25		

Total carried forward						
Total brought forward						
<b>5.2</b>	<b>PPR 3</b>	<b>Cut out section of steel pipe and replace with DN pipe:</b>				
5.2.1		DN 100 mm	m	25		
5.2.2		DN 125 mm	m	25		
5.2.3		DN 150 mm	m	25		
5.2.4		DN 200 mm	m	25		
5.2.5		DN 250 mm	m	25		
5.2.6		DN 300 mm	m	25		
5.2.7		DN 350 mm	m	25		
5.2.8		DN 400 mm	m	25		
5.2.9		DN 500 mm	m	25		
5.2.10		DN 550 mm	m	25		
5.2.11		DN 600 mm	m	25		
5.2.12		DN 700 mm	m	25		
<b>5.3</b>	<b>PPR 4</b>	<b>Cut out section of uPVC pipe and replace with DN pipe Class 12:</b>				
5.3.1		DN 110 mm	m	25		
5.3.2		DN 125 mm	m	25		
5.3.3		DN 160 mm	m	25		
5.3.4		DN 200 mm	m	25		
5.3.5		DN 250 mm	m	25		
5.3.6		DN 315 mm	m	25		
5.3.7		DN 355 mm	m	25		
5.3.8		DN 355mm	m	25		
Total carried forward						
Total brought forward						
<b>5.4</b>	<b>PPR 5</b>	<b>Cut out section of Fibre Cement pipe and replace with Class 12 uPVC or steel:</b>				
5.4.1		DN 125 mm	m	25		
5.4.2		DN 150 mm	m	25		
5.4.3		DN 200 mm	m	25		
5.4.4		DN 200 mm	m	25		
5.4.5		DN 250 mm	m	25		

5.4.6		DN 300 mm	m	25		
5.4.7		DN 350 mm	m	25		
5.4.8		DN 400 mm	m	25		
5.4.9		DN 450 mm	m	25		
5.4.10		DN 500 mm	m	25		
5.5	PPR 6	<b>Cut out section of HDPE pipe and replace with DN pipe Class 16: Complete with HDPE compression fittings or similar approved in writing by Engineer.</b>				
5.5.1		40 mm dia PN 16	m	25		
5.5.2		50 mm dia PN 16	m	25		
5.5.3		63 mm dia PN 16	m	25		
5.5.4		110 mm dia PN 16	m	25		
5.5.5		160 mm dia PN 16	m	25		
5.5.6		200mm dia PN 16	m	25		
5.6	PPR7	Repair of HDPE pipes (including supplying of HDPE Class 12.5, fittings and couplings or butt welding/emulsion or similar approved in writing by the Engineer)				
5.6.1		315-630 mm PN16	m	18		
5.6.2		630-800mm PN 16	m	18		
5.6.3		700-1000mm PN 16	m	18		
	<b>Total carried forward</b>					
5.7	PPR 8	<b>Total brought forward Repair or maintain flanged joint for DN pipe: (Leak Repair)</b>				
5.7.1		DN 40 mm	no.	25		
5.7.2		DN 50 mm	no.	25		
5.7.3		DN 65 mm	no.	25		
5.7.4		DN 80 mm	no.	25		
5.7.5		DN 100 mm	no.	25		
5.7.6		DN 125 mm	no.	25		
5.7.7		DN 150 mm	no.	25		
5.7.8		DN 200 mm	no.	25		

5.7.9		DN 250 mm	no.	25		
5.7.10		DN 300 mm	no.	25		
5.7.11		DN 350 mm	no.	25		
5.7.12		DN 400 mm	no.	25		
5.7.13		DN 550 mm	no.	25		
5.7.14		DN 600 mm	no.	25		
5.8	PPR 9	<b>Repair leak at hydrant regardless of type</b>	no	10		
5.9	PPR 11	<b>Leak repair by approved coupling</b> Including laying, cutting, welding, jointing, coupling and all other necessary appurtenances.				
5.9.1		DN 40 mm	no.	25		
5.9.2		DN 50 mm	no.	25		
5.9.3		DN 80 mm	no.	25		
5.9.4		DN 100 mm	no.	25		
5.9.5		DN 125 mm	no.	25		
5.9.6		DN 150 mm	no.	25		
5.9.7		DN 200 mm	no.	25		
5.9.8		DN 250 mm	no.	25		
5.9.9		DN 300 mm	no.	25		
5.9.10		DN 350 mm	no.	25		
5.9.11		DN 400 mm	no.	25		
5.9.12		DN 550 mm	no.	25		
5.9.13		DN 600 mm	no.	25		
<b>Total carried forward</b>						
<b>Total brought forward</b>						
5.10	PPR 13	<b>MAINTENANCE</b> <b>Removal and replacement of valves and air valves</b>				
5.10.1		<u>Removal:</u>				
5.10.1.1		<i>Valves regardless of type:</i>				
5.10.1.1.1		DN 40mm	no.	25		
5.10.1.1.2		DN 50 mm	no.	25		
5.10.1.1.3		DN 80mm	no.	25		
5.10.1.1.4		DN 100mm	no.	25		

5.10.1.1.5	DN 125mm	no.	25		
5.10.1.1.6	DN 150mm	no.	25		
5.10.1.1.7	DN 200mm	no.	25		
5.10.1.1.8	DN 250 mm	no.	25		
5.10.1.1.9	DN 300 mm	no.	25		
5.10.1.1.10	DN 350 mm	no.	25		
5.10.1.1.11	DN 400 mm	no.	25		
5.10.1.1.12	DN 450 mm	no.	5		
5.10.1.1.13	DN 600 mm	no.	5		
5.10.1.2	<i>Replacement:</i>				
5.10.1.2.1	DN 40mm	no.	25		
5.10.1.2.2	DN 50mm	no.	25		
5.10.1.2.3	DN 80mm	no.	25		
5.10.1.2.4	DN 100mm	no.	25		
5.10.1.2.5	DN 125mm	no.	25		
5.10.1.2.6	DN 150mm	no.	25		
5.10.1.2.7	DN 200mm	no.	25		
5.10.1.2.8	DN 250 mm	no.	25		
5.10.1.2.9	DN 300 mm	no.	25		
5.10.1.2.10	DN 350 mm	no.	25		
5.10.1.2.11	DN 400 mm	no.	25		
5.10.1.2.12	DN 450 mm	no.	5		
5.10.1.2.13	DN 600 mm	no.	5		
<b>TOTAL SCHEDULE 5 CARRIED FORWARD TO SUMMARY</b>					

ITEM. N°	PAYM. REF	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT RATE	AMOUNT
		<b><u>Total brought forward</u></b>				
<b>6</b>	<b>PPR14</b>	<b>SERIES 6:</b>				
		<b>DAY WORKS</b>				
		<b><u>(On written instruction by the Engineer only)</u></b>				
<b>6.1</b>		<b>Day works Labour</b>				
		<b>Small working unit scheduled:</b>				
		Consist of a plumber and 2 labour complete with all hand tools such as picks, shovels, protective clothing, etc, work under the auspices of a designated representative from the Employer	day	120		
<b>6.2</b>		<b>Plant Hire: Wet Rates on Site</b>				
6.2.1		<u>Tipper truck (specify capacity)</u>				
6.2.1.1		Tipper truck 5m <sup>3</sup>	hr	24		
6.2.3		<u>LDV (1 Ton Bakkie)</u>	hr	24		
6.2.4		<u>TLB 4WD (Tractor Loader Backhoe)</u>				
		<u>smooth blade</u>				
		(.....m <sup>3</sup> bucket) (specify type.....)	hr	24		
6.2.5		<u>Compactor</u>				
6.2.5.1		Walk behind Vibrating Roller (.....kg)	hr	120		
		Wacker (model / type.....)	hr	100		
6.2.6		<u>HDPE Butt Welding Machine</u>				
6.2.6.1		Welding range 315-630mm	hr	24		
6.2.6.2		Welding range 630-800mm	hr	24		
6.2.6.3		Welding range 700-1000mm	hr	24		
		<b><u>Total carried forward</u></b>				

Total brought forward						
6.2.7		<u>Steel Pipe Welding Machine</u>				
6.2.7.1		Generator Shielded Metal arc	hr	24		
6.2.7.2		Gas Welding oxy	hr	24		
6.2.8		<u>Miscellaneous</u>				
6.2.8.2		Dewatering pump with 40mm and over outlet complete with hoses and fittings	hr	200		
6.2.8.3		Pave breakers with hoses, moils, etc.	hr	100		
TOTAL SCHEDULE 6 CARRIED FORWARD TO SUMMARY						

SUMMARY OF SCHEDULES		AMOUNT
SERIES 1	GENERAL	R
SERIES 2	SITE CLEARANCE	R
SERIES 3	EARTHWORKS - PIPE TRENCHES	R
SERIES 4	MEDIUM-PRESSURE PIPELINES	R
SERIES 5	MAINTENANCE AND REPAIR ON WATER NETWORK	R
SERIES 6	DAY WORKS	R
	SUB-TOTAL	R
	15% VAT	R
	TOTAL	R



### **ESCALATION**

- THE QUANTITIES IN THE BOQ ARE ESTIMATES ONLY AND THE CITY RESERVES THE RIGHT TO EITHER INCREASE OR DECREASE THE QUANTITIES.
- THE VALUE OF THE TENDER IS FOR EVALUATION PURPOSES AND NOT NECESSARILY THE TOTAL VALUE OF THE TENDER.

#### **PERIOD ONE (01)**

- BID PRICE(S) MUST BE FIXED FOR THE 12 MONTHS AFTER THE WORK HAS STARTED THE AFTER THE BASE MONTH WITH BASE MONTH BEING ONE MONTH PRIOR TO CLOSING OF BID

#### **PERIOD TWO (02)**

- BID PRICE(S) IS/ARE SUBJECT TO ESCALATION OF CPI FOR THE FOLLOWING 12 MONTHS AFTER THE WORK HAS STARTED WITH THE BASE MONTH BEING THE 12<sup>th</sup> MONTH OF PERIOD ONE (01),

#### **PERIOD THREE (03)**

- BID PRICE(S) IS/ARE SUBJECT TO ESCALATION OF CPI AFTER THE WORK HAS STARTED FOR THE REMAINING PERIOD WITH THE BASE MONTH BEING THE 12<sup>th</sup> MONTH OF PERIOD TWO (02)

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Signature of person authorised to sign bid documents

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Name in block letters

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Designation

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Date

## 06\_Part C3\_Scope of works

### REGIONAL OPERATIONS AND COORDINATION

#### BID NAME

**TENDER FOR APPOINTMENT OF CONTRACTORS FOR REPAIR, MAINTENANCE AND ANCILLARY  
WORK ON THE DISTRIBUTION WATER NETWORK FOR ALL 7 REGIONS FOR A PERIOD OF 3 YEARS,  
AS AND WHEN REQUIRED.**

#### BID NUMBER

**ROC 04 2022/23**

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### **1. INTRODUCTION AND PURPOSE**

The Regional Operations and Coordination which consists of 7 regions, Water distribution sub-section is responsible for the repair and maintenance of water reticulation network pipelines. This water distribution network helps the City of Tshwane to distributes portable water to 1 136 876 households where 16.4% are informal dwellings. The water distribution network is made up of main water pipeline feeders which consists of materials which are not maintained by Supply Chain Management stores. The purpose of this project is to appoint a panel of service providers on an *As and When* basis to enable the regional Operations and Coordination to repair all existing water pipelines within the required norms and standards.

### **2. BACKGROUND**

- The main aim of this project is to appoint a panel of minimum 7 service providers to assist the Regional Water Distribution teams to be able to maintain existing water network and reduce the water loss within CoT areas. The regional operations maintenance teams come across different types and different sizes of existing pipelines as and when they are called out to resolve water leaks.
- The project will be implemented to cover all 7 regions from Region 1 – 7 in the City of Tshwane Metropolitan Municipality.
- Looking at the requirements of the Regions and the importance of the project, it is proposed to appoint a maximum 7 service providers for the for repair, maintenance and ancillary work on the distribution

water network on an as and when required basis, for a period with effect from date of award until period of 3 years. This will assist in keeping the project under a reasonable budget and to offer flexibility. Service providers may be allocated 1 region upon appointment:

- Region 1
  - Region 2
  - Region 3
  - Region 4
  - Region 5
  - Region 6
  - Region 7
- 
- In the event where less service providers are qualifying, it is proposed to appoint a panel of minimum 4 service providers for the for repair, maintenance and ancillary work on the distribution water network on an as and when required basis, for a period with effect from date of award until period of 3 years. This will assist in keeping the project under a reasonable budget and to offer flexibility. Service providers may be allocated 2 regions upon appointment and the pairing can be as follows:
    - Region 1
    - Region 3 & 7
    - Region 4 & 2
    - Region 6 & 5

**NB: In the event where less service providers are qualifying; The City reserves the right to allocate the qualifying bidders to any region**

- The following will be the stakeholders to this project:
  1. Regional Operations and Coordination-ROC Department
  2. Supply Chain Management
  3. Group Finance
  4. Appointed external Contractor for project
- ROC, Water and Sanitation sections will benefit from this project in terms of achieving service delivery obligations.

### 3. PROJECT SCOPE

## **C.1. DESCRIPTION OF THE WORKS**

### **C1.1. COT'S OBJECTIVES**

The Contractor will be required to execute the work as described in C3.1.2 and C3.1.3, above, on an as-and-when-required basis. Specific repair, installation and maintenance activities will become necessary, and the Employer will request action and the Engineer will instruct the contractor to execute the work under tendered items.

### **C1.2. OVERVIEW OF THE WORKS**

The work to be executed under this contract comprises mainly the **Repair, Maintenance and Ancillary Work on the Water Network**, in the City of TSHWANE within a fixed period as specified in the Contract Data.

### **C1.3. EXTENT OF WORKS**

The work will be on the existing, live, water network and therefore all reasonable effort will be required to keep the disruption of supply to a minimum. The Contractor will be required to maintain good relations with the affected communities through proper and timeous communication, execution, and completion of the work.

**The Works to be carried out by the Contractor under this Contract comprise mainly of the following:**

- (a) Repairs and Maintenance of existing water infrastructure components complete with appurtenances
- (b) Removal of existing water infrastructure components complete with appurtenances (where required).
- (c) Installation of existing water infrastructure components complete with appurtenances (where required).
- (d) Traversing roads and other infrastructure by means of trenchless technology methods, and normal cut and cover.
- (e) Corrosion protection of pipes and specials.
- (f) Exercising the necessary care and superintendence to assure safety to the Contractor's staff, the Engineer's staff and the public.
- (g) Back filling and compaction of excavated trenches / holes.
- (h) Restore asphalt surfacing, Kerbs, paving, surfaces and structures caused by work under this contract.
- (i) Finishing and clearing areas neatly.
- (j) Conducting all necessary administrative actions as required, i.e., works orders, way leaves, contacting the necessary officials, liaison with other departments such as the Metro Police, Telkom.

On an *as-and-when-required* basis, the Contractor will be required to attend to work on the scope of work as described in the Scope of Works. Work will inevitably be on the existing water network, hence reasonable care will be required to assure the absolute minimum disruption to services, especially water services, to affected entities. To this end, the Contractor will be required to liaise with affected authorities regarding work that will impact on services.

The Contractor shall be required to abide by the norms and standards of the City as far as Installation, Repair, Maintenance and Ancillary Work on the Water Network is concerned. Approximate quantities of each type of work are given in the Bills of Quantities.

### **C1.4. LOCATION OF THE WORKS**

The Works are located within the boundaries of the City of TSHWANE:

- Region 1
- Region 2
- Region 3
- Region 4
- Region 5
- Region 6
- Region 7

### **C1.5. BASIS OF THE WORKS**

The Contractor shall provide the Engineer /Employer with an effective means of contacting his nominated (in writing) responsible person(s) for the duration of the contract. A dedicated direct Post Office line must be

available, for the duration of the Contract. A mobile phone shall be provided to this nominated responsible person with adequate battery capacity to ensure that a continuous service will be available on a 24 (twenty-four) hour basis for the duration of the Contract.

(a) **Instruction to Commence:**

The Contractor will be instructed to proceed with work. This instruction may be verbal or in writing depending on the circumstances. However, the Contractor shall obtain a job card and/or purchase order as soon as possible on the first working day after the instruction was issued.

(b) **Work:**

Contractor to respond. Contractor to arrange construction way leaves with the relevant service owner and/or local authority. Notice to Engineer and property owners in writing (2-day notice period) that work will commence in their immediate area. In case of water disruption at least 24 hours and when the media is required to inform affected parties or consumers, then 14 days. Refer to clause C3.2.4.5 (p). Physical work to commence within 2 hours of a work instruction or earlier. In case of unavoidable delays or problems causing the works not to be completed, the Contractor shall make an arrangement with the Engineer or his authorized staff for temporary measures until the work can be completed to the required standard and quality. Please note the penalty shall be applied to trenches open for longer than 7 days. If trenches are to be open longer than 7 days, the Contractor shall backfill the trench on day number 7 and excavate and backfill to complete the work at his own cost. It is important to note that the Contractor shall maintain good communication to the Engineer or his authorized staff members at all times to aid in avoiding problems, frustrations, damage, danger, etc. At all times, the Contractor shall have a competent person in charge of work. Specials to be arranged timeously to avoid unnecessary open trenches.

(i) **Procedure:**

1. Instruction for work to commence (job card and/or purchase order).
2. Contractor to arrange construction way leaves with the relevant service owner and local authority.
3. Written advice (delivered and signed for) to water consumer of water disruption (24-hour advance notice).
4. The relevant authority (region) to receive advance notice (24 hours) of water to be closed off (by the local authority).
5. The relevant authority (region) to check all the required materials to execute the work instructions successfully before closing the water for repairs.

(ii) **Methodology (All completed within 15 days):**

- The Contractor to expose the water infrastructure.
- He shall assess and measure components required and shall close trench as soon as possible and not leave trench open for longer than required but not longer than 7 days.
- Components shall be ordered for installation. The Engineer's authorized representative to be afforded the opportunity to inspect specials once manufactured and corrosion protection completed before dispatch to site.
- Inspection by the Engineer's authorized representative
- Contractor to backfill, compact, reinstate surfaces to the satisfaction of the Engineer or his authorized representative. The Contractor to maintain a photographic record of before and after work.

(c) **Commissioning and Testing:**

Contractor to prove his work to the Engineer or his authorized staff. Upon successful completion and approval of work by the Engineer or his authorized staff, the Contractor may submit a claim for work done, the claim will be assessed, due payment will be certified for work done to rates and amounts in the contract.

(d) **Workmanship Guarantee:**

No retention will be retained for work done, with exception of work of a single instruction with work duration equal or exceeding a period of 3 months, a 12 months' performance guarantee should be issued by the service provider.

(e) **Job Cards**

The Contractor must complete a Job Card for each job he is required to do. This Job Card is presently used by the City of TSHWANE but may be amended from time to time. The Job Cards must be completed correctly and in full detail. Incomplete or incorrectly completed Job Cards will not be accepted and will be treated as an incomplete Job Card and rejected as non-received Job Cards. No payment will be made until such time as the Job Cards have been corrected/revised and resubmitted, and accepted by the Engineer as correctly completed. The Job Card consists primarily of technical information of the actual work activity and this information is required by the Council. A "Material List", etc., which must be attached to each Job Card irrespective of whether materials were used or not.

(f) **Allocation of Work:**

No work shall be done by the Contractor until such time as the Engineer or his authorized staff has notified the Contractor and a job card, location and description of the envisaged work has been given. The job card has a unique reference number and constitutes authority for the Contractor to proceed with the work. No payment will be made for work done without first obtaining the necessary Job card.

(g) **Invoices:**

All invoices submitted for payment are to indicate the following:

- No. of item from schedule of prices, which payment is to be made.
- Date of work done.
- Date of invoice.
- Job card no.'s relevant to invoice.

(h) **Work not up to Standard:**

Should the work be deemed unsatisfactory, the Engineer, or any one of his authorized representatives reserves the right to hold back payment until the work is deemed satisfactory. The Engineer or his authorized staff shall inform the contractor of the problem and the contractor shall rectify work immediately. Should the work not be re-done or is of an unacceptable standard, the cost to re-do the work shall be deducted from money due to the Contractor or paid by the Contractor.

(i) **Penalty for delayed / late completion:**

Should the work at a location not be completed to the satisfaction of the Engineer, within the time prescribed and no reasons beyond the control of the Contractor can be motivated, the Engineer may impose a penalty as stated in the Contract Date.



At all times the Contractor shall liaise with the affected communities and authorities regarding disruption to services. Ample written notice shall be given by the Contractor to affected communities and authorities prior to disruption.

**(j) Emergency Repairs / Work:**

- Work that is required / ordered in an incident where the **environment / health and or safety of the public are at risk.**
- Work that is to be completed immediately.
- Work that is required / ordered to **restore the normal functioning of services (especially water services)** to the public.
- Work that is required for the protection of property and/or interests belonging to the City of TSHWANE or property and/or interests belonging to the public.

**(k) Non-emergency Repairs / Work:**

- Work that is required / ordered in an incident where the environment / health and or safety of the public, are not at risk.
- Work to be completed within three days
- Work that is required / ordered to do maintenance or improve the normal functioning of services (especially water services) to the public.

**Penalties shall be charged for poor quality of work, damage, negligence or unfinished work which may result in losses or extra expenses to the city. In such cases, the city shall recover the full cost suffered, that includes labour, water loss, materials, transport, equipment depreciation and third-party liability claims plus a minimum of 10% administration costs from the service provider. The water loss cost estimate shall be determined by the city and the highest applicable tariff will apply of the affected service.**

## **C2. ENGINEERING**

### **C2.1 DESIGN**

- (a) The Employer is responsible for the design of the permanent Works as reflected in the Contract Documents unless otherwise stated.
- (b) The Contractor is responsible for the design of the temporary Works and their compatibility with the permanent Works.
- (c) The Contractor shall supply all details necessary to assist the Engineer in the compilation of the as-built drawings.

### **C2.2. COT'S DESIGN**

As per C1.3.

### **C2.3. CONTRACTOR'S DESIGN**

Where contractor is to supply the design of designated parts of the permanent Works or temporary Works, he shall supply full working drawings supported by a professional engineer's design certificate.

### **C2.4 DRAWINGS**

The Contractor shall ensure that accurate as-built records are kept of all infrastructure installed or relocated during the contract. The position of pipe bends, junction boxes, duct ends and all other underground infrastructure shall be given by either co-ordinates, or stake value and offset. Where necessary, levels shall also be given. A marked-up set of drawings shall also be kept and updated by the Contractor. This information shall be supplied to the Engineer's Representative on a regular basis.

All information in possession of the Contractor, required by the Engineer and/or the Engineer's Representative to complete the as built/record drawings, must be submitted to the Engineer's Representative before a Certificate of Completion will be issued.

The Drawings prepared by the Employer for the permanent Works are listed and bound in a separate volume/bound at the back of this volume. The Employer reserves the right to issue amended and/or additional drawings during the Contract.

### **C2.5 DESIGN PROCEDURE**

#### **C2.5.1 TRENCHLESS TUNNELLING / CUT AND COVER WHEN TRAVERSING ROADS**

All busy streets shall be traversed with trenchless means; i.e. directional drilling. The Contractor shall obtain the directive on method of road crossing from the Engineer or his authorised representative.

#### **C2.5.2. REINSTATE SURFACES**

##### **(a) Interlocking Block and Paving Slabs**

Footways (interlocking block or paving slabs or tar) shall be reinstated by the Contractor. Wherever possible, the existing blocks/slabs shall be cleaned and re-used. Prior to final reinstatement, blocks/slabs/tar which have been taken up shall be stacked in a safe manner without restriction to vehicular or pedestrian traffic. Blocks/slabs/tar around meter boxes shall be finished level with the

meter box top. The method of placement of blocks/slabs/tar shall be as described in the Code of Practice SANS 1200MJ.

(b). Grassed Areas

Grassed areas shall be reinstated by the Contractor.

**C2.5.3. COVER OVER NEW MAINS**

The minimum cover to all new mains shall be 1000mm except under roadways where the cover shall be 1200mm. The minimum cover for communication pipes under roadways and in verges shall be 900mm.

**C2.5.4. FLUSHING OF MAIN PIPELINES AND COMMUNICATION PIPES**

(a) Mains

On satisfactory completion of hydrostatic checking all mains shall be flushed with potable water supplied by the Council. The quantity of water used for flushing and the duration of flushing for the various mains shall be recorded by the Contractor.

The Contractor shall ensure that the water used for flushing is disposed of in an approved manner without causing damage, nuisance or injury.

(b) Communication Pipes

When a new communication pipe is laid, the connection to the water main must be completed first and thereafter the connection to the meter box. The valve in the meter box must be closed and the water main and the new communication pipe must be recharged with water. The section of the new main must be flushed and each communication pipe must be flushed and immediately connected to the consumer's section of the communication pipe.

The Contractor shall be liable for the cost of cleaning pressure control valves to geysers, flush valves and similar devices and for any work of a like kind required to restore a consumer's service within 24 hours, if this work arises out of a failure to follow the aforesaid construction and flushing procedure. Any scale from old pipework (domestic) shall be for the private owners account. The Contractor to liaise with the land owner in this regard.

**C2.5.5. RETURN OF MATERIALS**

All old valves and hydrants, valve covers, hydrant covers, meter boxes and all scrap metal shall be returned by the Contractor to the Depot that ordered the work. Written proof by the Contractor is required and must be confirmed by an authorised official.

It must be noted that the items issued to the contractor will be signed for by the contractor, and inspected on site that they have been installed. Any component that is not used, is to be returned to the stores within 3 days of issuing, if not installed. Failure to return the components will lead to the cancellation of the contract and theft charges being pressed against the contractor.

**C2.5.6. LABOUR-BASED CONSTRUCTION METHODS**

The Contractor must take into consideration that the following works may only be constructed using labour-based construction methods:

(a) Excavation to expose existing services

- (b) Hand excavation for valves
- (c) Backfilling of excavation
- (d) Reinstatement of all surfaces

Where Contractors propose to use additional labour-based methods, the methods must be stated as well as the activities. It will reflect positively on the Contractor's tender if he should use more labour-based methods.

### **C3. CONSTRUCTION**

#### **C3.1 WORKS SPECIFICATIONS**

##### **C3.1.1 Applicable SANS 1200 Standardized Specifications**

The following SANS 1200 Standardized Specifications for civil engineering construction are applicable:

1200 C	Site Clearance
1200 DB	Earthworks (Pipe Trenches)
1200 LB	Bedding (Pipes)

The term "project specification" must be replaced by "scope of works" wherever it appears in these standardized specifications.

##### **C3.1.2. Particular Specifications**

The following Particular Specifications for work not covered by the SANS 1200 Standardized Specifications are also included hereunder:

PPR	:	Maintenance and Repair (including appurtenant items) on Water Network
OHS	:	Occupational Health and Safety

##### **C3.1.3. City of Tshwane Standard Specifications for Municipal Civil Engineering Works (CTSSMCEW)**

The following Particular Specifications for City of Tshwane Specification for Municipal Civil Engineering Works (CTSSMCEW) is not covered by the SANS 1200 Standardized Specifications are also included hereunder:

**B001.04** : Compliance with Occupational Health and Safety Act and applicable regulation

##### **C3.1.4. Variations and Additions to the SANS 1200 Standardized Specifications**

Variations and additions to the following SANS 1200 Standardized Specifications listed in C3.4.1 are given in section C3.4.6.

##### **C3.2.4 Permits and wayleaves**

The City of Tshwane (Engineer) shall be responsible to obtain all the wayleave required for this Contract where necessary.

##### **C3.2.5 Features requiring special attention.**

###### **(a) Site maintenance**

During progress of the work and upon completion thereof, the Site of the Works shall be kept and left in a clean and orderly condition. The Contractor shall store materials and equipment for which he is responsible in an orderly manner, and shall keep the Site free from debris and obstructions.

###### **(d) Telecommunication**

It is a specific requirement of the Contract that the Contracts Manager and his Site Representative have mobile phones available and switched on 24 hours of everyday, in order for the Contractor to be reachable by the Engineer's staff. Rates and amounts tendered must include for this.

**(e) Access to properties**

The Contractor shall organise the work to cause the least possible inconvenience to the public and to the property owners adjacent to or affected by the work, and except as hereunder provided, shall at all times provide and allow pedestrian and vehicular access to properties within or adjoining or affected by the area in which he is working. In this respect the Contractor's attention is drawn to Clause 17.1 of the Conditions of Contract.

If, as a result of restricted road reserve widths and the nature of the work, the construction of bypasses is not feasible, construction shall be carried out under traffic conditions to provide access to erven and properties.

Notwithstanding a foregoing, the Contractor may, with the prior approval of the Engineer (which approval shall not be unreasonably withheld), make arrangements with and obtain the acceptance of the occupiers of erven and properties to close off part of a street, road, footpath or entrance temporarily, provided that the Contractor duly notifies the occupiers of the intended closure and its probable duration, and reopens the route as punctually as possible. In addition, the Contractor shall be required to apply to and obtain the necessary Traffic Administration consent at least 21 days prior to the closing of any road. Where possible, such streets, roads, footpaths and entrances shall be made safe and reopened to traffic overnight.

Such closure shall not absolve the Contractor from his obligations under the Contract to provide access at all times. Barricades, traffic signs, drums and other safety measures appropriate to the circumstances shall be provided by the Contractor to suit the specific conditions.

A certificate of completion shall not be issued for a specific task until the owner of the property concerned, or an authorized representative, has signed an approval of the reinstated condition of the property.

**(f) Existing residential areas**

Electricity and water supply interruptions in existing residential areas shall be kept to a minimum. The Engineer's approval shall be obtained prior to such interruptions and residents shall be notified in writing at least 24 hours but not more than 48 hours in advance. Supplies shall be normalised by 16:00 on the same day.

**(g) Employment of local labour (*Example only*)**

It is the intention that this Contract should make maximum use of the local labour force that is presently underemployed. To this end the Contractor shall limit the utilisation on the Contract of non-local employees to that of key personnel only and to employ and train local labour to the extent necessary for the execution and completion of this Contract.

The Contractor shall fill in the form entitled Key Personnel in the Forms to be completed by the Bidder. The data stated on the above-mentioned form will be strictly monitored during the Contract period and any deviations there from shall be subject to the prior approval of the Engineer, which approval shall not be unreasonably withheld.

The employment of casual labour will be done in co-operation with community leaders and local structures. The bidder shall ensure that all remuneration paid to employees is in line with the relevant sectorial determination in terms of the Basic Conditions of Employment Act, No 75 of 1997, as determined by the Department of Labour.

**(h) Monthly statements and payment certificates**

The statement to be submitted by the Contractor in terms of Clause 49 of the Conditions of Contract shall be prepared by the Contractor at his own cost, strictly in accordance with the standard payment certificate prescribed by the Engineer, in digital electronic computer format. The Contractor shall, together with a copy of the digital electronic computer file of the statement, submit two (2) A4 size paper copies of the statement.

For the purposes of the Engineer's payment certificate, the Contractor shall subsequently be responsible, at his own cost, for making such adjustments to his statement as may be required by the Engineer for the purposes of accurately reflecting the actual quantities and amounts which the Engineer deems to be due and payable to the Contractor in the payment certificate.

The Contractor shall, at his own cost, make the said adjustments to the statement and return it to the Engineer within three (3) normal workings days from the date on which the Engineer communicated to

the Contractor the adjustments required. The Contractor shall submit to the Engineer five (5) sets of A4 size paper copies of such adjusted statement, together with a copy of the electronic digital computer file thereof.

Any delay by the Contractor in making the said adjustments and submitting to the Engineer the requisite copies of the adjusted statement for the purposes of the Engineer's payment certificate will be added to the times allowed to the Engineer in terms of Subclause 49.4 of the Conditions of Contract to submit the signed payment certificate to the Employer and the Contractor. Any such delay will also be added to the period in which the Employer is required to make payment to the Contractor.

**(i) Construction in restricted areas**

Working space is sometimes restricted. The construction method used in these restricted areas largely depends on the Contractor's Plan. Notwithstanding, measurement and payment will be strictly according to the specified cross-sections and dimensions irrespective of the method used, and the rates and prices tendered will be deemed to include full compensation for any difficulties encountered by the Contractor while working in restricted areas. No extra payment nor any claim for payment due to these difficulties will be considered.

**(j) Notices, signs, barricades and advertisements**

All notices, signs and barricades, as well as advertisements, may be used only if approved by the Engineer. The Contractor shall be responsible for their supply, erection, maintenance and ultimate removal and shall make provision for this in his tendered rates.

The Engineer shall have the right to instruct the Contractor to move any sign, notice or advertisement to another position, or to remove it from the Site of the Works if in his opinion it is unsatisfactory, inconvenient or dangerous.

**(k) Workmanship and quality control**

The onus to produce work that conforms in quality and accuracy of detail to the requirements of the Specifications and Drawings rests with the Contractor, and the Contractor shall, at his own expense, institute a quality control system and provide suitably qualified and experienced engineers, foremen, surveyors, materials technicians, other technicians and technical staff, together with all transport, instruments and equipment to ensure adequate supervision and positive control of the Works at all times. The cost of supervision and process control, including testing carried out by the Contractor, will be deemed to be included in the rates tendered for the related items of work.

The Contractor's attention is drawn to the provisions of the various Standardized Specifications regarding the minimum frequency of testing required. The Contractor shall, at his own discretion, increase this frequency

Where necessary to ensure adequate control.

On completion and submission of every part of the work to the Engineer for examination and measurement, the Contractor shall furnish the Engineer with the results of the relevant tests, measurements, levels and pictorial evidence to demonstrate the achievement of compliance with the Specifications.

**(l) Work in servitude**

Where the Contractor is required to work within a servitude not belonging to the COT, he shall make all necessary arrangements with the owner of such servitude to obtain permission for access and the right to work. The Contractor shall not permit his workmen and labourers to use the servitude as a temporary right-of-way and shall carry out the work expeditiously and with minimum inconvenience to the occupiers and to owners of adjacent property.

The Contractor shall take all necessary precautions for the protection of buildings and property.

Topsoil shall be kept segregated and all gardens, fences, paths, etc shall be reinstated to their former conditions.

Where acquisition of servitude has not been finalised it may not be possible to obtain continuity of work. The Contractor will be required temporarily to omit such sections until instructed that the work may proceed.



No extra payment will be made to the Contractor should it become necessary to omit sections and return to them later. It is not intended, however, that the Contractor should be called upon to return to the Site after all other sections of the Contract have been completed and the Contractor has removed his plant and equipment.

**(m) Free haul and overhaul and dumping**

No overhaul shall apply to any items in the Contract. All rates quoted shall be inclusive of all haulage costs, all transport and dumping fees. Thus, all haulage shall be considered as free haul.

It is not permissible for waste material simply to be thrown away. All surplus or unsuitable material shall be disposed of on a site to be provided by the Contractor. The authority within whose boundaries the site is located, must approve such site, and the dumping must comply with all statutory and municipal regulations.

Dumping rates: Must be allowed for in the rates and amounts tendered

**(o) Advertisement in the media and warning to customers**

When the number of consumers affected by a shut-down is such that issuing notices to individual consumers as provided hereunder is impracticable the Engineer will arrange any media advertisements necessary to warn the public of any extensive shut down of supply necessary, in his opinion, for the proper execution of the works. The Contractor must, however, give at least 14 (fourteen) days' notice to the Engineer of his requirements in this respect.

**The Contractor shall give all consumers affected at least 24 hours' notice in writing of his proposals in regard to every planned interruption of water supply necessary for the execution of his work.** Failure to do so will result in the suspension of work for a period as determined by the Engineer.

**(p) Consumer complaints**

Save in respect of the liability arising from the General Conditions, the Contractor's responsibility in respect of no water or poor pressure complaints arising out of the execution of the contract shall be limited to ensuring that an adequate cold-water supply exists to the complainant's property.

The Contractor shall not be required to carry out any plumbing work within private property unless instructed by the Engineer. However, should it be found that damage on private property is due to Contractors actions or lack of actions (e.g., flushing) the contractor shall do, or have remedial work done, at his own cost and to the satisfaction of property owners.

**(q) Co-ordinated construction and responsibility**

The Contractor shall be required to co-ordinate his work to accommodate others, especially members of the public and homeowners as well as other contractors for the duration of this contract.

(f) The Engineer shall, simultaneous with granting any extension of time in terms of this clause, revise the Due Completion Date of the Contract to reflect an extension of time having been granted in respect of wet climatic conditions, to the extent of the algebraic sum of all the "V" values for all the preceding months of the Contract, less the aggregate of the "Nn" values for the remaining (unexpired) months of the Contract (viz less aggregate of the potential maximum negative "V" values for the remaining Contract Period). Thus, provided that where such period is negative, the Due Completion Date shall not be revised.

(g) Any extension of time in respect of wet climatic conditions granted in terms of this clause shall not be deemed to take into account delays experienced by the Contractor in repairing or reinstating damage to or physical loss of the Works arising from the occurrence of abnormal climatic conditions. Extension of time in respect of any such repairs or reinstatement regarding damage shall be the subject of a separate application for extension of time in accordance with the provisions of Clause 42 and Clause 48 of the Conditions of Contract.

**C3.3**

**PLANT AND MATERIALS**



### **C3.3.1 Plant and materials supplied by the employer**

- (a) **Materials**  
The contractor should make provision for all required material. The purchase invoice of the material should be provided to CoT for all material purchased. The service provider will have a provision 10% markup on purchase price of the material.
- (b) **Tools / Plant:**  
It is a specific requirement on this Contract that all tools and plant be provided by the Contractor at his own cost and shall be deemed to be included in the rates tendered.

### **C3.3.2 Materials, samples and shop drawings**

- (a) **Samples**  
Materials or works which do not conform to the approved samples submitted in terms of Subclause 23.4 of the Conditions of Contract will be rejected. The Engineer reserves the right to submit samples to tests to ensure that the material represented by the sample meets the specification requirements.  
The costs of any such tests conducted by or on behalf of the Engineer, the results of which indicate that the samples provided by the Contractor do not conform to the requirements of the Contract, shall, in accordance with the provisions of Sub clause 23.7 of the Conditions of Contract, be for the Contractor's account.

## **C3.4. CONSTRUCTION EQUIPMENT**

### **C3.4.1. Requirements for equipment**

The Contractor shall provide all equipment necessary for completing the Works.

### **C3.4.2 Equipment provided by the employer**

The Employer will not make any equipment available on this Contract.

## **C3.5. EXISTING SERVICES**

### **C3.5.1 General**

The Contractor must familiarize himself with the various standard regulations of the relevant Authorities and act accordingly, e.g., Construction way leaves, etc.

### **C3.5.2. Known services**

It is to be noted that work will be done adjacent to or traversing existing services. Prior to commencement of any work in the aforesaid affected area, the Contractor shall take the necessary precautions that the existing services will not be damaged.

As the above work will be done in already developed areas, special care must be taken to keep the disturbance of the functioning of the existing facilities or services to a minimum.

All excavation to be done by hand except if approved otherwise by the Engineer. The use of mechanical excavators is restricted or prohibited in the vicinity of overhead power lines. The Contractor should assume that excavation by hand will be required at these points and should allow for this in the schedule of rates for excavation.

The Contractor shall take special care when excavating the trenches, when the trenches are open, or when carrying out any work under the Contract, not to damage any existing water mains, sewers, cables or other underground services or to disturb the stability of any poles or towers supporting power lines, telegraph and telephone wires, etc. He shall be solely responsible for the protection of all such services and for any claims for damages arising there from.

The Contractor shall ascertain the exact position and type of service from the relevant authorities. Construction way leaves shall be obtained by the Contractor before any work commences.

Before any excavation is carried out within close proximity of an existing service the Contractor appointed to carry out the work shall notify the owner of the service and the Inspector that the excavation is to be done and ascertain and comply with any conditions that have been imposed. No trench excavation shall be carried out within 5m of the service until the service has been exposed and protected to the satisfaction of the owner.

Excavation work above, below and in the vicinity of the underground services shall be undertaken in accordance with the requirements of the owner of the service and whether excavated by hand or with the use of excavating machinery, shall be paid at the schedule rate for trench excavation.

The Contractor shall be liable for any damage that may occur to any pipe, sewer, cable, etc., and shall immediately notify the Engineer of any such damage. The Engineer will arrange for the damage to be repaired by the owner of the damaged services and the cost of such repairs shall be deducted from any monies due to the Contractor.

No Blasting without written approval by the Engineer. For blasting in the proximity of existing buildings, approved horizontal and vertical blasting mats are to be used to prevent flying debris. The cost of these protective measures shall be included in the rates for excavation. All approaches to the blast must be given to oncoming traffic and to residents in the neighborhood. All damage or claims due to blasting shall be for the Contractors account.

### **C3.5.3 Damage to existing services**

The Contractor is responsible for immediately reporting any damage to existing services or work to the relevant Authority (also in writing). The Engineer must be informed as soon as possible, but no later than 24 hours after the damage has been identified.

The Contractor shall be responsible for all damage to services, should such services be damaged due to actions and or lack of actions.

### **C3.6. VARIATIONS AND ADDITIONS TO SANS 1200 STANDARDIZED SPECIFICATIONS AND PARTICULAR SPECIFICATIONS**

SANS 1200 C : Site clearance  
SANS 1200 DB : Earthworks (pipe trenches)  
SANS 1200 LB : Bedding (pipe trenches)

The following variations and additions to the SANS 1200 Standardized Specifications referred to above apply to this Contract. The prefix PS indicates an amendment to SANS 1200. The letters and numbers following these prefixes respectively indicate the relevant Standardized Specification and clause numbers in SANS 1200 to which the variation or addition thereto applies.

#### **PSC SITE CLEARANCE**

#### **PSC8 MEASUREMENT AND PAYMENT**

#### **PSC8.2 SCHEDULED ITEMS**

##### **PSC8.2.1 Clear and grub**

Change the unit of measurement from ha/m/km to ..... Unit: m<sup>2</sup>

##### **PSC8.2.5 Take down and/or replace existing fences.**

##### **PSC8.2.5.1 Take down existing fences.**

Change to unit of measurement to ..... Unit: m

##### **PSC8.2.5.2 Re-erect / erection of fences ..... Unit: m**

*ADD THE FOLLOWING CLAUSE:*

"The rate shall cover the cost of clearing the surface, doing necessary excavations, transport, handing, backfilling, re-erection of fences including all materials to restore the fences to its original condition at least. The surface around shall be made good to the satisfaction of the Engineer.

In case of a brick fence, a new fence shall be built where damaged or disturbed. Provision shall be made in the schedule of quantities. Mortar (Cement: Sand = 1: 5) plaster 15mm thick (Cement: Sand = 1: 4) measured by volume. Painted with two or more coats of similar approved, colour, to match existing / adjoining surface."

**PSC8.2.8 Demolish and remove structures/buildings and dismantle steelwork, etc:**

**ADD THE FOLLOWING:**

- (a) Manholes ..... Unit: No
- (b) Concrete slab ..... Unit: No
- (c) Hawker Sheds ..... Unit: m<sup>2</sup>
- (d) Brick structures .....Unit: m<sup>2</sup>
- (e) Kerbs .....Unit: m
- (f) Concrete Walkway .....Unit: m<sup>2</sup>
- (g) Segmented Paving .....Unit: m<sup>2</sup>

Topsoil and lawn removal and reinstatement are included for in tendered rates."

**PARTICULAR SPECIFICATION**

**PM MATERIALS**

**PM1 SCOPE**

This specification details the specific requirements for the City of Tshwane with regard to Materials associated with the Works.

**PM2 GENERAL**

All materials incorporated in the Works shall be the best of their respective kinds, new, sound and undamaged and shall conform strictly with the appropriate South African Standard Specifications (S.A.N.S.) or British Standard Specifications (B.S.) and any amendments thereto. Samples of material to be used upon the Works not drawn from the Council's stores are, when required, to be submitted to the Engineer for his approval by the Contractor at his own cost. Any material which is not of the standard of the sample so submitted and approved or in the opinion of the Engineer is unsuitable for the purpose for which it is to be used will be ordered by the Engineer to be rejected. Upon delivery to site and again before being built into the Works all material is to be examined by the Contractor and any defective or damaged material is to be set aside for inspection by the Engineer's Representative who shall, under the Engineer's direction, determine whether the material is to be rejected. The Contractor shall at his own cost, immediately remove material which has been rejected and replace it with material complying with the Specification.

The Bidder shall complete the schedule giving particulars of the materials he intends to supply and shall submit any further details required to clarify or illustrate his bid.

**PM2 DELAY DUE TO SUPPLY OF MATERIAL**

The Contractor shall ensure that the work is not delayed, due to the lack of materials on the site of the works, by placing orders with suppliers for the materials required under this Contract as soon as possible after the acceptance of this tender. The ordering of material must be done with the approval of the Engineer.

The Contractor shall, by producing copies of written orders or written enquiries for supplies, prove to the satisfaction of the Engineer that any delay occasioned by non-availability of materials has been caused by the inability of suppliers to supply and not by his own lack of timely ordering or lack of exhaustive enquiry or supplies, before any extensions of the Contract time shall be allowed due to such delays.

**PM4 STEEL PIPES AND FITTINGS**

**Inspection at factory** - The Contractor or the Manufacturer on his behalf shall carry out the necessary inspection and testing to ensure that the materials employed and the finished product complies with the requirements of these Specification.

The Engineer or his representative will carry out periodic inspections of pipes and fittings during manufacture and testing. The Contractor or Manufacturer shall give adequate notice of intention to test, and no pressure test carried out in the absence of the Inspector shall be recognised unless the Inspector

in reply to the notice indicates that he will not witness the tests and authorises them to be carried out in his absence.

**Manufacture and testing** - Steel pipes shall be plain ended and prepared for field welding except where spigot and socket, flanges or flexible couplings are specifically called for. Steel pipes shall be in accordance with SABS 719.

**Fittings:**

**a) Screwed Tubes and Related Pipe Fittings**

Screwed tubes shall conform with S.A.N.S. 763 medium class and shall be galvanised.

Screwed pipe fittings shall conform with S.A.N.S. 763 (light weight) and shall be galvanised. The outlets of tees and crosses are specified in accordance with S.A.N.S. 763.

**b) Flanges**

Unless otherwise specified, flanges shall conform with SANS 1123 Table 1600/3, unless otherwise shown for the corresponding nominal imperial bore. They shall be machined flat and drilled off centres. Hydrant flanges, referred to as "FH", shall comply with the dimensions and drilling specified for 3½" diameter Table D flanges, i.e. they shall be 203mm diameter with 4 No. 17,5mm diameter holes at 165,1mm P.C.D. Flange faces shall be protected from rust by an approved composition. Bolts and nuts shall comply with SANS 135 and shall be grade 304 Stainless Steel.

**PM5**

**uPVC PIPES AND FITTINGS**

uPVC pipes to SANS 966

uPVC pipes to SANS 1283/1982

**Fittings**

The standard jointing which will fit onto uPVC and piping. The jointing system will be used on the high-impact uPVC pipes. This system is mainly used for conditions where maintenance is a problem such as in central business areas.

The jointing system joins onto all uPVC fittings and Gate valves with ends manufactured to SANS 966. These fittings are only manufactured up to 250mm dia. and all larger pipes up to 400mm dia. connect with plain ended steel manufactured fittings connected with Couplings.

**Construction**

With the exception of high-impact uPVC pipes with Victaulic jointing all other pipes require anchor blocks at bends, valves and at end caps. UPVC pipes must not be used at temperatures exceeding 60 degrees centigrade. Padding and bedding must be a fine selected material with no stones or pebbles larger than approximately 6mm. Backfilling adjacent to pipes must be properly compacted with hand-rammers up to the crown of the pipe. Small plate compactors may be used on the backfill of the 300 mm padding layer.

**PM6**

**JOINTING MATERIAL**

All pipes are to be supplied with one coupling per pipe of the same material as the pipe. All valves and fittings are to be supplied without couplings or jointing material, unless otherwise specified. The jointing material for valves and fittings is scheduled separately and is to comply with the following requirements:

**PM6.1**

**Plain ended joints**

All materials used in the manufacture of couplings shall comply with the relevant S.A.N.S. or B.S. specifications. Couplings shall be capable of withstanding test pressures equal to or greater than the test pressures applicable to the class of pipe for which they are intended. All couplings used shall be subject to the approval of the Engineer.

Long and short collar C.I. detachable joints, suitable for use with fibre cement pipes, shall be of robust construction and shall be protected against corrosion. C.I. detachable joints shall be supplied complete with rubber rings and galvanized bolts and nuts. Long collar C.I. joints shall be tapped the specified B.S.P. thread. F.C. couplings shall be supplied complete with rubber rings.

Couplings without central register, shall be used with steel pipes or larger diameter uPVC pipes were called for.

Where special couplings to join plain ended steel pipe to fibre cement pipe are called for, they shall be either of the following:

- (a) Couplings without central register with one end sized for steel pipe and the other end sized for fibre cement pipe.
- (b) Short collar C.I. couplings for use with fibre cement pipes or F.C. couplings as called for, complete with steel sleeves of suitable dimensions welded to the pipes; the rate quoted shall include for welding the sleeves to the pipes.

**PM6.2      Flanged joints**

Insertion rings shall be of rubber to B.S. 2494 Class C or D, 3mm thick, cut to suit the flanges specified in Clause 3.8 of this Specification. Bolts and nuts of the sizes specified are to conform with S.A.N.S. 61 and be screwed B.S.W. thread, with hexagon heads and nuts.

**PM6.3      Screwed joints**

Ends of screwed pipe and fittings shall be to SANS 1109 male ends being screwed taper and female ends parallel thread.

**PM7          CAST IRON PIPES AND FITTINGS**

C.I. fittings having plain ends and flanges shall comply with S.A.N.S. 546 except that flanges shall be provided as called for in the Bill of Quantities.

**PM8          SCREWED TUBES AND RELATED PIPE FITTINGS**

Screwed tubes shall conform with S.A.N.S. 763 medium class, and shall be galvanised. Screwed pipe fittings shall conform with S.A.N.S. 763 (light weight) and shall be galvanised. The outlets of tees and crosses are specified in accordance with S.A.N.S. 763.

**PM9          FIRE HYDRANTS**

Fire hydrants shall be approved Above and underground type hydrants complying with B.S.750 as far as it is not superseded by any special requirements of this Contract.

The direction of rotation of the spindle shall be anti-clockwise for closing when viewed from above.

**PM10        VALVES**

For Gate valves, Air Valves and Butterfly Valves refer to relevant Particular Specifications. Only valves of proven quality manufactured by an approved manufacturer will be accepted.

Lifting Eyes - a lifting eye at the top of the valve body, where the combined mass of the valve bypasses and actuator exceeds 75 kg.

Mounting feet - Valves with a nominal bore of 450mm and greater used are to be provided with stainless steel jacking screws.

Testing of Valves: Test Certificates - A test certificate shall be provided with each valve in which it is certified that the valve has been inspected and tested and that it complies with the specification. Where an independent inspector may be appointed by the Employer to witness the testing, the inspector must also sign the test certificate.

At least three working days written notice must be given of the date and time of the test. In the event that the valve(s) to be tested are not ready the Employer reserves the right to deduct any fruitless inspection costs from moneys due to the Contractor.

In General Corrosion Protection of Valves (Unless specifically specified)- The cleaning and corrosion protection of the valves must be carried out at the factory prior to dispatch to the Site. Non-ferrous metal or stainless-steel surfaces must not be painted. The protection to be applied must comply with the following:

Material to be protected	Surface Preparation	Coating	Coating Thickness
Steel or Cast Iron:	Shot blast to Sa3, & Chemical treatment.	3 Coats High Build Epoxy for underwater use.  <i>Alternatively</i>  Fusion Bonded epoxy powder coated, applied by electrostatic spray.	DFT min 250 µm. DFT max 400 µm.   DFT min 300 µm. DFT max 500 µm. Full chemical cure
Material to be protected	Surface Preparation	Coating	Coating Thickness
Galvanized Steel:	Degrease & Abrade	1 Coat 2-pack epoxy primer. 1 Coat Epoxy for underwater.	DFT min 150 µm. DFT max 250 µm.

After erection on site all valves must be cleaned, and the paintwork refurbished where necessary to restore the condition to that at the time of leaving the factory.

#### PM11 SADDLES

Saddles are to be suitable for use with water pipes to S.A.N.S. 286 or S.A.N.S. 946 as called for. They shall be of approved manufacture, complete with bolts, nuts and rubber gaskets and shall be tapped the specified B.S.P. thread.

#### PM12 STOPCOCKS

Stopcocks are to conform with S.A.N.S. 226 and be screwed female B.S.P. thread. They shall be clockwise closing.

#### PM14 C.I. COVERS, FRAMES AND STEP IRONS

All cast iron covers and frames supplied by the Contractor shall be from an approved manufacturer, comply with S.A.N.S. 558 and be coated by immersion in a hot bath of suitable bituminous compound.

Covers shall be attached to the frames or boxes as shown hereafter and shall have the following letters embossed thereon:

TYPE OF COVER	ATTACHMENT	LETTERING
Manhole Covers	Loose	
Hydrant Boxes	Chain	F.H.
Valve Boxes	Hinge	B.M.
Air valve boxes	Chain	A.V.
Meter Boxes	Hinge	METER
Pressure Relief Valve Boxes	Hinge	P.R.V

**PM15 PRESSURE GAUGES**

Pressure gauges shall comply with B.S. 1780. They shall be screwed 3/8" B.S.P. thread or metric equivalent and shall have dials calibrated in Bars over the required range of head.

**PM16 FERRULES**

The materials and workmanship employed in the manufacture of ferrules shall be of a standard equal to that specified in S.A.N.S. 226 for stop cocks or to the appropriate British Standard Specification. Ferrules shall be manufactured of gunmetal, brass or equal. Swivelling outlets shall be screwed female B.S.P. thread and inlets shall be screwed male B.S.P. taper thread. The ferrule shall incorporate an integral isolating device.

**PM17 H.D.P.E. PIPES AND FITTINGS**

The SANS ISO 4427 of 1996 specification will be applicable.

**PM18 PROTECTION AND TESTING OF STEEL PIPES**

The Steel Pipes must be lined externally with bitumen wrapped fiberglass coating and internally with cement mortar. The lining must be applied in the following thickness:

***Mortar Lining***

PIPE O.D. (mm)		THICKNESS OF LINING (mm)		
From	Up to and including	Nominal	Minimum	Maximum
168	Up to 324	8	6	11
324	Up to 610	10	8	13
610	Up to 1620	12	10	16

**.1.1.1.1** Length of Lining - *Pipes with flanged ends, the ends of the linings shall be slightly rounded to prevent the linings of the pipes to be jointed from touching.*

**.1.1.1.2** *Pipes are to be butt-welded insitu, the lining shall terminate 40mm back from the end of each pipe and shall be chamfered at approximately 85 degrees to the pipe wall in order to form a dovetail joint for the insitu repair to the lining after the welding is completed.*

**.1.1.1.3** *For pipes that are to be sleeve jointed and filled welded, the spigot end shall be lined to the end of the pipe and finished off square to the pipe. The sleeve end shall have the lining finished approximately 60mm from the end of the sleeve with a chamfer at 85 degrees to the pipe wall.*



**Testing - Radiographic Testing in the Field** - 10% of all welds made in the field shall be tested radiographically by an independent specialist firm. The welds to be tested shall be selected by the Engineer or his representative. The standard of acceptance shall be in accordance with API Standard 1104. All costs of testing and retesting will be borne by the Contractor.

**Joint protection on Steel Pipes** - Joints on steel pipes must be protected using densotherm tape or approved equivalent. The work must be done strictly according to the specifications of the supplier. After thoroughly cleaning the pipe, removing all loose scale and other coatings, the entire surface to be wrapped must be primed and allowed to dry. Apply tape by wrapping spirally around pipe in two layers. (Minimum thickness 3mm and overlap 100mm)

## **PV VALVES**

### **PV1 CORROSION PROTECTION**

<b>Material to be protected</b>	<b>Surface Preparation</b>	<b>Coating</b>	<b>Coating Thickness</b>
Steel or Cast Iron:	Shot blast to Sa3, & Chemical treatment.	3 Coats High Build Epoxy for underwater use.  <i>Alternatively</i>  Fusion Bonded epoxy powder coated, applied by electrostatic spray.	DFT min 250 µm. DFT max 400 µm.   DFT min 300 µm. DFT max 500 µm. Full chemical cure
Galvanized Steel:	Degrease & Abrade	1 Coat 2-pack epoxy primer. 1 Coat Epoxy for underwater.	DFT min 150 µm. DFT max 250 µm.
Galvanized Steel:	Degrease & Abrade	1 Coat 2-pack epoxy primer. 1 Coat Epoxy for underwater.	DFT min 250 µm. DFT max 400 µm.

### **PV2 GATE VALVES**

#### **PV2.1 Type**

Gate valves shall be double flanged, resilient or wedge type, with a non-rising spindle. The gate shall be completely clear of the waterway in the fully open position and capable of withstanding the nominal pressure and test pressures from both sides.

#### **PV2.2 Specification**

Manufactured in accordance with SANS 664 and SANS 191.

#### **PV2.3 Operation**

The valve shall be able to withstand and to open and close satisfactorily under the specified flow rate and pressure. All gate valves shall be of the 'anti - clockwise-closing' type.



**PV2.4 Resilient Seal Gate valves** (ND 50mm Ø to ND 400mm Ø)

**PV2.4.1 Body, Gearbox & Guides**

The body shall be of sufficient strength to withstand stresses and distortion of operation (including testing) and gearing. The valve gearbox (if required) shall be supported by its own brackets and not be fitted to the valve's stuffing box.

Gate guides shall be deep and offer support in all positions without protruding into the flow path.

The rubber shall accurately fit the body guide profile to allow smooth operation of the gate without shudder.

**PV2.4.2 Gate**

Gates, encapsulated in rubber, shall be manufactured to assure drop tightness in both directions over the whole specified pressure range (including testing).

**PV2.5 Wedge Gate valves** (ND 350mm Ø to ND 1200mm Ø)

**PV2.5.1 Body, Gearbox & Guides**

The body shall be of sufficient strength to withstand stresses and distortion of operation (including testing) and gearing. The valve gearbox (if required) shall be supported by its own brackets and not be fitted to the valve's stuffing box.

Channel guides on the body shall be as deep and as long as possible as necessary to support and minimize shudder of the gate. Over-travel shall not be allowed in the opening and closing.

**PV2.6 Material**

**PV2.6.1 Valve Components**

a) Resilient Seal Gate Valve (ND 50mm - 300mm Ø)

Pressure Ratings:

1000 kPa

1600 kPa

2500 kPa

Hydraulic test:

Structural = 1.5 x Pressure Rating

Seat = Pressure Rating

Component	Material
Body	SG Iron
Gate	SG Iron, Coated Vulcanized EPDM
Bonnet & Stuffing Box	SG Iron
Stem	Stainless Steel Grade 304
Stem Nut	Bronze (Gunmetal)
Stem Bush	Plastic (Nylon)
Bush / Stem Stuffing Box Seals	Nitrile
Profile Scraper Ring	Nitrile
Friction Ring	Plastic
Hand Wheel / Stem Cap	SG Iron
External Fasteners	Steel to SABS 135
Internal Fasteners	Steel to SABS 135

b) Wedge Gate Valve (ND 350mm - 1200mm Ø)

Pressure Ratings:

1000 kPa (ND 350mm - 1200mm Ø)

1600 kPa (ND 350mm - 1000mm Ø)

Hydraulic test:

Structural = 1.5 x Pressure Rating

Seat = Pressure Rating

Component	Material
Body	SG Iron / Ductile Iron
Gate	Ductile Iron with EPDM rubber coat
Seat & Gate Ring	Bronze (Gunmetal)
Bonnet & Stuffing Box	Ductile Iron – epoxy coated internal and external.
Stem	Stainless Steel
Stem and Yoke Nut	Bronze (Gunmetal)
Gate Nut	Bronze (Gunmetal)
Thrust Bearings	Polyamid.
Seals	EPDM/NBR Rubber
Hand Wheel / Stem cap	Ductile Iron
External Fasteners	Stainless steel
Internal Fasteners	Stainless Steel

**PV3 AIR RELEASE AND VACUUM CONTROL VALVES (CYLINDER FLOAT TYPE)**

**PV3.1 Type**

Air release or vacuum break valves shall be of the compact single chamber type with solid cylindrical polyethylene floats in a tubular stainless-steel housing with fusion bonded epoxy powder coated mild steel ends secured by means of stainless-steel tie rods.

The valve shall have an integral surge alleviation mechanism which shall operate automatically to limit transient pressure rise or shock induced by closure due to high velocity air discharge or the subsequent re-joining of separated water columns. The limitation of pressure rise must be achieved by deceleration of approaching water prior to valve closure. Relief mechanisms that act subsequent to valve closure cannot react in the low millisecond time span required and are therefore unacceptable. Discharge of pressurized air shall be controlled by the seating and unseating of a small orifice on a natural rubber seal affixed to the control float.

The intake/discharge orifice area shall be equal to the nominal size of the valve, e.g., a 200mm (8") valve shall have a 200mm (8") intake/discharge orifice.

The valve construction shall be proportioned with regard to material strength characteristics, so that deformation, leaking or damage of any kind does not occur when it is tested to 1.5 times the designed working pressure.

The valve design shall incorporate an over pressure safety feature that will fail without an explosive effect, such as is normally the case when highly compressed air is released suddenly. The feature shall consist of easily replaceable components such as gaskets, seals or the like.

**PV3.2 Functional requirements:**

The required valves shall provide any of the functions, or combination of functions, described below and as specified in the schedule of quantities.

⇒ **Pipeline filling**

Uninterrupted high volume air discharge through the large orifice.

⇒ **Pipeline draining or Column Separation**

Uninterrupted high volume air intake through the large orifice.

⇒ **Pipeline full and operating**

Discharge of entrained pressurized air through the small orifice.

⇒ **Rapid Filling/Column Separation**

The valve must incorporate an integral surge alleviation mechanism which will automatically dampen surge pressures due to rapid air discharge or the subsequent re-joining of separated water columns.

All valve functions shall be housed in a single valve chamber.

**PV3.3**      **Body**

Tubular stainless-steel housing with fusion bonded epoxy powder coated mild steel ends secured by means of stainless steel tie rods.

**PV3.4**      **Float**

Solid cylindrical polyethylene floats. Hollow spherical floats are not acceptable.

**PV3.5**      **Seat & Drainage**

Large orifice sealing shall be effected by the flat face of the control float seating against a nitrile rubber 'o' ring housed in dovetail groove circumferentially surrounding the large orifice. The large orifice seal shall be of a dynamic type, adjusting automatically to the pressure exerted on it to reduce wear on the seal.

For maintenance purposes, it must be possible to drain the valve.

**PV3.6**      **Maintenance**

The eventual configuration shall be such that the air valve can be isolated for maintenance purposes.

**PV3.7**      **Material** (ND 50mm - 200mm Ø)

**Pressure Ratings:**

1600 kPa (PN 16)  
2500 kPa (PN25)  
4000 kPa (PN40)

**Hydraulic test:**

Structural = 1.5 x Pressure Rating

Seat = Pressure Rating

Component	Material
Upper Body Flange	Mild steel fusion bonded epoxy

Lower Body Flange	Mild steel fusion bonded epoxy.
Barrel	Stainless Steel – 304
Barrel Seals	Compressed Fibre Gasket
Internal Seals	O ring (Nitrile)
Top Cover	Aluminium / Stainless Steel / ABS Plastic
Anti-Shock Orifice	HDPE
Floats	HDPE
Baffle Spacers	PVC
Nozzles	Stainless Steel
Nozzle Seats	Natural Rubber 4
Baffle Plates	Stainless Steel – 304
Tie Rods	Stainless Steel – 304
Internal Fasteners	Stainless Steel – 304
External Fasteners	Stainless Steel – 304

## PV4 CONTROL VALVES – PRESSURE REDUCING (PRV)

### PV4.1 General

The upstream pressure of this type of valve can vary from the full static head in the pipeline to the minimum head under maximum anticipated flow.

Closing – the valve shall have a linear flow velocity reduction to reduce pressure surges. Alternatively, the closing cycle shall be inversely proportional to the increase in dynamic pressure.

Surge relief / surge oppression capability will be a major advantage, since exceeding the design pressure shall not be allowed.

### PV4.2 Material (ND 50mm - 400mm Ø)

#### Pressure Ratings:

1600 kPa (PN 16)

2500 kPa (PN 25)

#### Hydraulic test:

Structural = 1.5 x Pressure Rating

Seat = Pressure Rating

### C 3.7.4

Component	Material
Body	SG Iron / Ductile Iron
Bonnet Cover	SG Iron / Ductile Iron
Bearing Disc	SG Iron
Cover and drain plugs	High tensile brass
Cover Body and Diaphragm seal	O Ring NBR – Nitrile Butadiene Rubber
Diaphragm	Nylon Reinforced
Diaphragm Washer	Stainless Steel
Shaft	Stainless Steel
Inner Spring	Spring Steel
Needle Valve	Manufacturers standard supply
Cock Valve	Manufacturers standard supply
Filter	Manufacturers standard supply
Pressure Reducing Pilot Valve	Manufacturers standard supply
Pressure Relief Pilot Valve	Manufacturers standard supply

Pressure Gauge	Manufacturers standard supply
External Fasteners	Stainless Steel
Internal Fasteners	Stainless Steel

#### **PV4.3 Compatibility**

Pressure reducing control valves shall be compatible with loggers, controllers, control software, modems, and other necessary appurtenances, with:  
Loggers / control equipment nominated in writing. The Contractor to assure compatibility before commencement with any work on the contract.  
Items proposed by the Tenderer (thus no specification in the Project Specification).

#### **PV6 NON-RETURN VALVES**

##### **PV6.1 General**

The purpose of the non-return valve is to prevent reverse flow. Should reverse flow however occur, closure shall be quick but without slam.

For maintenance purposes, doors, discs and seals must be removable without removing the valve body. Non-return valves shall be of the swing-check type.

##### **PV6.2 Materials**

###### Pressure Ratings:

1600 kPa (PN 160)

###### Hydraulic test:

Structural = 1.5 x Pressure Rating

Seat = Pressure Rating

Component	Material
Body	SG Iron / Cast Steel
Cover	SG Iron / Cast Steel
Hinge	SG Iron / Cast Steel
Hinge Shaft	Stainless Steel
Stopper	Hard Rubber
Seat	Stainless Steel
Cover Seal	O Ring (Nitrile rubber)
External Fasteners	Steel (Hot dip Galvanised)
Internal Fasteners	Stainless Steel
Clack Plate	Steel

#### **PV7 SAFETY RELIEF VALVE**

##### **PV7.1 General**

The safety relief valve shall be adjustable to release pressure beyond the set point. Pressure release shall be such that it poses no danger to personnel or equipment and assets. The pressure relief valve shall be isolated with a gate valve, for maintenance purposes. It shall be possible for valves to be vented to remove pressure build-up.

## PV7.2 Material

### Pressure Ratings:

1030 Kpa  
2060 Kpa  
4130 Kpa  
6200 Kpa  
10340Kpa

### Hydraulic test:

Structural = 1.5 x Pressure Rating  
Seat = Pressure Rating

Component	Material
Body	SG Iron / Carbon Steel / Ductile Iron
Disc	Stainless Steel
Stem	Stainless Steel
Spring	Alloy Steel
Fasteners: Screws & Nuts	Stainless Steel
Seals	Suppliers Specification

## PE1 SETTING OUT

The Contractor is responsible for the setting out **PC CONCRETE, BRICKWORK ETC.**

## PE EXCAVATIONS

of the works as well as checking and verifying the Bench Marks and reference levels. Any discrepancy must be reported to the Engineer immediately.

Water mains in townships are generally not pegged and are to be set out at the appropriate distance from stand pegs. Before excavation is commenced sight rails shall be erected at all points where existing or proposed services determine the depth and at intervals as necessary to ensure that the required depths are provided. Boning rods for use with the sight rails shall be accurately made to the various lengths required.

## PE2 EXCAVATION

**Excavation measured will be either soft or rock.** No intermediate excavation will be paid. Boulder excavation will only be paid if it is included in the schedule of quantities. Where boulder excavation is not included in the schedule of quantities the Contractor will be paid under the Item for rock excavation. Rock will be defined as material removed by blasting or jack hammers. Before commencing excavation, the Contractor shall remove from the surface of the area to be excavated all debris, rubble, rubbish, coarse vegetation and any other material not suitable for backfilling. Such material is to be disposed of by the Contractor to the approval of the Engineer.

The excavation shall be carried out in the positions and to the lines and levels shown on the drawings, or as directed by the Engineer.

In depositing spoil from the excavations care shall be taken not to damage trees, fences, buildings or property. Excavated material shall be kept trimmed up as closely as possible to the trench, but a footway 300mm wide shall be maintained between the edge of the trench and the spoil.

Across cultivated land, farmland, residential property and other similar places or where directed by the Engineer the top soil shall be removed, stacked separately and subsequently replaced at the top of the trench.

Where excavations are carried out in paved roads and footpaths or in the line of kerbs and channels, the Contractor shall remove and place on one side of the trench, apart from other spoil, all road material, paving material, kerbs and channels.

Sandy soil, fine gravel, similar material free from heavy clay and stones shall be considered to be fine material.

All fine material which are encountered in the excavations shall be kept separate from the rest of the excavated material for use in refilling around the pipes. If due to the negligence of the Contractor, such material should become contaminated with stones, clay or other material so as to render it unsuitable for refilling around the pipes, the Contractor shall replace it with approved fine material and remove the surplus excavated material from the site all at his own expense.

**Trench width:** Minimum 600mm, DN plus 2 x 250mm. The Contractor will not be paid for over excavation.

**Backfilling** – Shall be to 93% Mod AASHTO density (TRH14) if not stated otherwise in the schedule of quantities.

**Maintenance** - The Contractor shall be responsible for making good all effects which may arise for a period of twelve months from the date of completion or handing over to the Engineer. Should any subsidence occur subsequently of the replaced tarmac or other surfaces where the Contractor has excavated, the making good shall be done at the Contractor's expense.

### PE3 **BOTTOMS OF TRENCHES**

The bottoms of trenches in loose or soft ground shall be well rammed and consolidated before pipes or bedding are laid. Should the presence of ground water make it impossible to provide a stable bottom, the Contractor, if instructed by the Engineer, shall introduce a 150mm thick layer of 20mm concrete aggregate to form a firm foundation to the bedding.

Should the Contractor excavate the trenches to greater depth than necessary he shall refill the bottom of the trench with fine material or soilcrete which shall be thoroughly consolidated and trimmed to correct grades before laying the pipes, all at the Contractor's expense.

The bottoms of water main trenches shall be taken out true to line and the floor of the trench boned in and trimmed to even grades so as to provide an even support for the pipe along its whole length when laid directly on the trimmed trench floor.

### PE4 **OBSTRUCTION OF STREETS**

The Contractor shall not occupy or obstruct by his operations roads or streets for a width of more than 5 metres.

When the excavations are carried across streets at least 4 metres of carriageway and 1,2 metres of the footpath on either side shall be left clear for vehicular and pedestrian traffic. The partial obstruction which is thus permitted shall not continue for more than fourteen days in any one case.

The Contractor shall obtain the consent of the Engineer in writing before closing any road to vehicular traffic but in every case a footpath shall be left clear.

Where house connections have to be laid across a street those connections located between adjacent cross-streets shall be completed before those in another block are commenced.

In order to cause minimum interference to traffic, construction in any one street shall be confirmed to a length of two blocks or 300 metres, whichever is the lesser, unless the Engineer shall give his permission to additional lengths being under construction at the same time.

### PE5 **EXCAVATION BY MACHINE**

Where in the opinion of the Engineer the use of excavation machinery may cause damage to services and improvements on public or private property or may cause undue inconvenience to the service authorities or property owners the Contractor shall excavate by means of hand labour.

Where moving existing services or new mains at the Contractor's request to facilitate machine excavation would result in additional cost to the Council such alteration in position if agreed to by the Engineer will only be permitted on the written undertaking by the Contractor to bear the additional costs involved.

The Contractor's methods of excavation shall at all times be subject to the approval of the Engineer.

**PE6** **TIMBERING, SHORING AND SLOPING**

The Contractor shall be responsible for the safety of all excavations, and shall, at his own cost, take all measurements required to secure this end, either by timbering or shoring. The Engineer may direct the alteration of any timbering or shoring which he considers to be impeding the work.

Where the Contractor considers that, for the protection of the new work or efficient execution of the work, it is necessary that supports or timber be left in, no extra price shall be paid to the Contractor, the cost of such leaving in being deemed to be included in the prices given in the Bill of Quantities for excavation. The removal of any support or timber will be entirely at the responsibility of the Contractor and he shall have no claim for the protection and safety of the work on the grounds that the Engineer has not directed that such material shall be left in.

Timber used in the construction, that the Engineer may direct to be left in as an integral part of the finished work, shall not be removed, but will be paid for, and a price for any such material left in must be inserted by the tenderer in the Bill of Quantities.

***Trenches to be shored which is deemed dangerous. Shoring shall be deemed to be included in rates tendered unless specifically provided for in the schedule of quantities.***

**PE7** **SLIPS, FALLS, ETC.**

The Contractor shall be responsible for making good any fall of earth or rock due to careless or insufficient support, or due to rains, floods, wind or other causes, and at his own cost shall refill any cavities so formed as required by the Engineer.

**PE8** **BLASTING**

No blasting shall be undertaken without the written consent of the Engineer. Before blasting commences all properties in the vicinity shall be inspected by the Contractor and the Engineer or his representative and a record (including photographic) shall be made of all defects in the buildings. A Photographic record shall be kept for at least 3 years after such blasting.

The Contractor shall conform to all government and other regulations respecting blasting and the handling and storage of explosives and shall make his own arrangements for the supply, transport and storage of all explosives.

All blasting shall be done under the control of persons holding blasting certificates from accredited institutions.

Only light charges shall be used for blasting. Approved hoop iron mats or other suitable means shall be used to prevent flying debris and all approaches to the blast shall be guarded by men with red flags. Sufficient warning shall be given to oncoming traffic to enable it to pull up to a safe distance from the blast. Householders in the immediate vicinity shall be warned of the intention to blast immediately prior to the firing of the shots.

The Contractor shall in all cases be entirely responsible for any damage whatsoever caused by blasting operations and shall indemnify the Council in respect thereof and settle all claims resulting therefrom and make good any damage at his own expense.

**PE9** **SOILCRETE BACKFILLING**



Where directed by the Engineer, excavations shall be backfilled with soilcrete. Soilcrete shall consist of 1-part cement to 12 parts of selected soil, with a moisture content such that a handful of the mixture when squeezed tightly in the hand just binds without crumbling or dripping moisture. The soilcrete shall be thoroughly mixed to ensure even distribution of cement and water throughout the mass, and compacted with power rammers in layers not exceeding 300mm uncompacted thickness.

## PE10 **DISPOSAL OF SURPLUS MATERIAL**

During the construction of the works any material from the excavations that is not required for refilling shall be removed without delay.

As each excavation is refilled the surplus spoil, bricks and other rubble or waste matter shall be removed, the surface restored, and the site left clean.

Surplus spoil, rubble and waste matter shall be deposited in borrow pits, except where the Contractor is instructed by the Engineer to stockpile surplus spoil for use by the Council. The surfaces of such dumps shall be left in a tidy condition on completion of the work.

The Contractor shall be entirely responsible for deciding whether or not excavated material is surplus to that required for refilling and reinstatement of the works. Should it be necessary to reclaim material previously disposed of in order to complete the works, the transport and labour required for such reclamation shall be provided by the Contractor at his own cost.

## PE11 **REINSTATEMENT OF SURFACES**

The foundations of all roadways, pavements, dished crossings, etc., disturbed by the excavations shall before being reinstated to their original state and to correct levels and grades as soon as possible.

**The Contractor shall be responsible for reinstating lawned areas.** In these cases the top 300mm of the trench shall be refilled with sifted topsoil before the sods are replaced or grass planted.

The surrounding lawned area shall be broomed clear of all small stones, earth and other foreign material and this together with the reinstated area shall be watered and if necessary rolled and cut so as to re-establish the lawn as soon as possible.

**Leave the site in a neat state** - Apart from the reinstatement of specific surfaces as defined above, the Contractor shall leave the area of the excavations and any adjoining areas disturbed or damaged by his activities in a clean and orderly state. He shall remove all traces of concrete, surplus stone, sand cement and other materials from the site of the works, remove all coarse vegetation from sidewalks and rake all sidewalks so that they are free of loose stones and provide a reasonable walking surface. The surface of refilled excavation in unsurfaced roads and sidewalks shall be neatly rounded off so that the surface along the centre line of the excavation is nowhere more than 75mm above the surrounding ground.

**Where the Contractor fails to carry out the reinstatement and general cleaning up, the work will be undertaken by the Council at the Contractor's expense.**

### PE11.1 **Reinstate Asphalt**

#### **a. Reinstatement of Roadway**

All premix taken up in roadways shall be reinstated by the Contractor to a depth similar to the existing premix with a minimum depth of 35mm. No batch of premix shall be placed where the temperature of the mix falls below 100°C. Unless instructed by the Engineer all premix is to be reinstated by the Contractor.

#### **b. Reinstatement of Footways / Pavements**

All patches (around meter boxes, valve and hydrant boxes etc.), as well as trenches in footways, shall be reinstated by the Contractor to a depth of 35mm using cold premix. Premix patches around the boxes shall be to the correct line and slope of the surrounding surface to avoid pounding of water.

**c. Testing of Premix**

The compacted density of premix in roadways and footways shall be a minimum of 93% of Marshall density.

**d. Maintenance**

All premix surfaces which have subsided 10mm or more within 6 months of completing the said surfaces, must be reinstated to the satisfaction of the Engineer, and shall be re-reinstated in accordance with this Specification. This shall be to the Contractor's account.

**PE11.2 Reinstatement of Concrete Paved Surfaces:**

Footways consisting of interlocking blocks, paving slabs or bricks shall be reinstated by the Contractor. Wherever possible, the existing blocks, slabs or bricks shall be cleaned and re-used.

Prior to final reinstatement, blocks slabs or bricks which have been taken up shall be stacked in a safe manner without restriction to vehicular or pedestrian traffic. Blocks, slabs or bricks around meter boxes, valve boxes, and hydrant boxes shall be finished to the correct line and slope of the surrounding surface. Where filler spaces are left between the paving blocks and boxes, these spaces must be filled with a 1:3 mixture of cement-plaster sand and finished with a wooden float.

The filler spaces shall not be greater than 25% of the paving block. If the space is greater, then a paving block must be cut to fit.

Additional interlocking blocks, paving slabs or bricks required to complete the reinstatement, over and above those taken up and stacked shall be provided by the Contractor – payment shall be made under “new” paving or in the absence of relevant rates/items in the schedule of quantities, paid as dayworks.

If, however, in the opinion of the Engineer, additional blocks, slabs or bricks are necessary as a result of the Contractor not having exercised due care in the recovery of blocks, slabs or bricks the cost of such additional blocks, slabs or bricks shall be for the Contractor's account.

**PE11.3 Reinstatement Of Various Surfaces**

The Contractor will be responsible for the reinstatement of the following surfaces, and no payment will be made for the following type of surfaces:

- (a) Soil No extra payment
- (b) Grassed No extra payment

**PE11.4 Reinstatement of Kerbing**

Where kerbing has been removed, it shall be cleaned and stacked in a safe manner without restriction to vehicular or pedestrian traffic. The Contractor shall replace the kerbing to line and level. Payment will be per measured lineal metre, which will include for the removal, cleaning, re-laying and any incidentals to complete the work, including all hauching with concrete, jointing etc.

**PPL PIPELAYING, JOINTING AND TESTING OF PIPES AND PIPE FITTINGS**

**PPL1 SUPPLY OF MATERIAL**

The Contractor shall be responsible for stacking, handling, transporting, laying and jointing of all pipes, fittings, specials etc. In addition, the Contractor shall take delivery of certain items to be supplied by the Council, and shall be responsible for their installation.

**PPL2 PIPELAYING**

All pipes and fittings are to be laid true to line, level and position as indicated on the drawings or directed by the Engineer and shall be uniformly supported throughout their length except at joint holes. Every pipe and fitting are to be cleaned out before laying and at all times except when pipe laying is actually

in progress the end of the last pipe laid is to be fitted with a cap or plug to prevent the entry of water or loose material. Cut pipes shall be used only where permitted by the Engineer or where required to join to fittings. Should the Engineer not be satisfied with the care taken by the Contractor in cleaning out the pipework and excluding foreign material, the Engineer shall have the right to order the Contractor to scour out the pipelines to the satisfaction of the Engineer at the Contractor's expense.

All pipes shall be uniformly supported throughout their length either on the undisturbed trench bottom or on compacted earth bedding of uniform depth. In the case of coupled joints, the trench shall be refilled to the mid-height of the pipe, except at joints, to maintain the pipework in correct alignment for inspection and approval by the Engineer or his representative. Thereafter the trench shall be refilled as specified.

Where pipes and fittings are too heavy to permit lifting by means of manual labour, fabric slings shall be used in all handling operations. Pipes, fitting and valves shall not be dragged or rolled over the ground. Care shall be taken in handling pipework so that bumping during handling is reduced to a minimum.

No metal tools or heavy objects shall be permitted unnecessarily to come into contact with pipework, and, in the case of epoxy coated pipework, the Contractor shall not permit his workmen to walk on the pipework.

Trenches shall be kept drained and free from water at all times. If any pipe should move after having been laid in the trench due to flotation because of flooding of the trench or any other cause, the pipe shall be lifted from the trench, cleaned and examined for damage. After examination all damage to the pipe shall be repaired or the pipe replaced as the Engineer may direct and to his satisfaction. Thereafter the pipe shall be relaid and jointed at no additional cost to the Council.

**PPL3**      **UPVC and FIBRE CEMENT PIPES**

Where UPVC or fibre cement pipes have to be cut, the cut end shall be dressed off square and turned down to the correct external diameter for the detachable joint by means of a special turning tool made by the pipe manufacturers and to be supplied by the Contractor. Prior to jointing the ends of the pipes shall be thoroughly cleaned.

The pipes shall be jointed by means of the approved couplings from the manufacturer or short or long collar types of coupling in accordance with the jointing instruction of the pipe manufacturer so as to leave a gap of 5mm to 10mm between the pipe ends. On completion of the joint, the metal work shall be painted with two coats of bituminous paint.

**PPL4**      **CAST IRON PIPES AND FITTINGS**

Cutting, trimming or welding of cast iron pipes will not be permitted. Jointing of such pipework by means of flanges shall be as described in these Specifications, except that the flange faces need not be painted with bituminous paint. All flexible joints shall be achieved with short collar cast iron flexible couplings unless otherwise specified.

**PPL5**      **SCREWED STEEL PIPEWORK**

Where screwed and socketed steel pipes have to be cut, the cut end shall be dressed off square, have all burrs removed and screwed B.S.P. taper thread or its metric equivalent. Prior to jointing, the threads shall be cleaned and coated with approved jointing compound. The pipes and fittings shall be brought into correct alignment and the joints screwed well home. Tightness of the joints must be obtained by means of screwing only and caulking of the threads will not be allowed except where specifically permitted by the Engineer. Care is to be taken to avoid damage to the surface of pipes and fittings.

**PPL6**      **CONCRETE BEDDING AND PROTECTION:**

Where in the opinion of the Engineer the pipes are likely to be damaged due to great depth of refill, traffic loads, soil erosion and the like, the pipes shall on the instruction of the Engineer be bedded on concrete screed or partly or fully encased as shown on the drawings, or protected in such other manner as the Engineer may order.

**PPL7** **REINSTATEMENT OF DAMAGED PIPES, COATINGS AND LININGS**

If, for any reason, pipes, coatings or linings are damaged during the tenure of this contract, the Contractor shall at his own cost, and at the sole discretion of the Engineer, either replace or repair such pipes to the approval of the Engineer.

**PPL8** **ALTERATIONS TO EXISTING WORK**

All alterations to existing work shall be carefully planned in consultation with the Engineer to minimise inconvenience to the public, and the Engineer's approval shall be obtained before commencing alterations.

The Contractor shall give every consumer whose supply will be interrupted timely notice of the proposed time and probable duration of the interruption.

Where valves and/or fittings or assemblies have to be inserted into an existing main the following procedure shall be followed:

Fibre cement mains shall be exposed between the couplings on either side of the proposed alteration and the length of pipe determined. A replacement length incorporating the alteration shall be pre-assembled to the required length, allowing about 10mm clearance on either side.

The terminal couplings shall then be removed, the existing main lifted and the replacement length laid, using short collar cast iron flexible couplings or couplings approved by the Engineer.

Steel mains shall be exposed over a length sufficient to install the alteration. A length corresponding to the overall length of the alteration to be inserted shall be cut out of the main, allowing about 12mm clearance on either side. Burrs shall be removed and the alteration inserted, using Johnson type flexible couplings.

Where existing pipes have to be recovered, they shall be carefully exposed and disconnected to avoid damage. Damaged ends shall be reconditioned, and the pipes cleaned fit for re-use. Recovered pipes shall remain the property of the Council and shall be stacked adjacent to the trench for removal by the Council.

**PPL9** **BUILDING IN PIPEWORK**

Where pipework is to pass through or be set into concrete work, any external coating on the portion of pipe within the concrete work shall be removed, and the surface thoroughly cleaned.

The pipework shall be set into exact position in the shutters before the concrete is placed and the concrete thoroughly compacted and worked around the pipework. Alternatively, at the discretion of the Engineer and at no extra cost unless specifically provided for in the Bill of Quantities, holes may be left in the concrete into which the pipework shall be set, whereupon the space around the pipework shall be caulked with mortar having just sufficient water to ensure cohesion and water tightness and thereafter the caulking shall be properly cured. Pipework for final alignment may only be built into concrete by the alternative method.

**PPL10** **THRUST, ANCHOR AND SUPPORT BLOCKS**

Except where plain ends are to be jointed by field welding, concrete thrust blocks to the shape and where valves and/or fittings or assemblies have to be inserted into an existing main the following procedure shall be followed:

Fibre cement mains shall be exposed between the couplings on either side of the proposed alteration and the length of pipe determined. A replacement length incorporating the alteration shall be pre-

assembled to the required length, allowing about 10mm clearance on either side. The terminal couplings shall then be removed, the existing main lifted and the replacement length laid, using short collar cast iron flexible couplings, or fitting approved by the Engineer.

## **PPL11      TESTING, DISINFECTING AND SCOURING**

This clause must be read in conjunction with clause 5.10 of SANS 1200L. Before trenches are filled in over joints, all pipelines are to be hydraulically tested by the Contractor to a pressure fixed by the Engineer, but not exceeding 75% of the pipe test pressure at the factory. All such tests are to be carried out in the presence of the Engineer at such times and in such sections as the Engineer may direct. The Engineer shall be given not less than three days' notice of readiness to test.

The Contractor shall provide the force pumps, pressure gauge, all necessary tools and fittings and the labour required for testing. He shall ensure that all valves in the section under the test are properly secured and closed and that no pipe or fitting will move.

The section to be tested shall be filled with water, care being taken that all air is expelled. The test pressure shall then be applied slowly by means of the force pump and shall be maintained by continuous pumping for at least 30 minutes or such longer period as may be necessary to permit thorough examination of all joints and fittings. There shall be no perceptible leak throughout the whole length under test and the amount of water pumped into the pipeline to maintain the test pressure shall not exceed one litre per hour per 10mm diameter of pipe per kilometre of length being tested. Any defect revealed by the test shall be made good and the section shall be re-tested until a satisfactory test is obtained.

The length of pipe laid but not satisfactorily tested shall not exceed 600 metres, except with the permission of the Engineer.

Should the Engineer not be satisfied with the care taken by the Contractor in cleaning out the pipework before laying and excluding foreign material, the Contractor shall, after completion of testing, scour out the pipelines to remove foreign matter to the satisfaction of the Engineer and thereafter disinfect the pipelines by filling them with heavily chlorinated water containing not less than 10 p.p.m. (parts per million by weight) of available chlorine, which shall be kept in the pipe for 24 hours. The Contractor shall provide the necessary chlorine (Chlorine gas, chlorinated lime, calcium hypochlorite or other approved compound), all plant equipment and labour required to introduce the chlorine into the pipelines and do everything necessary for disinfecting the pipelines and refilling them with potable water. On completion of disinfecting the pipelines shall be scoured out, using at least twice the volume of water contained in the pipework.

On completion the pipelines shall be left full.

Only potable water obtained from an approved source shall be used for filling, testing, disinfecting and scouring the pipelines.

## **PPL12      WORK ON LIVE MAINS**

The Council will provide guidance and assistance of a practical nature for the Contractor in matters related to the closing down and recharging of the existing water system when it is necessary for him to work on the system.

The Contractor shall give 24 hours written notice to the Engineer of his intention to operate on the live water system, stating fully the proposed plan for isolating, draining, cutting, connecting, recharging and opening up the mains.

The Contractor shall also provide each affected consumer with at least 24 hours written notice in advance of his intention to close the system down. The total period of shut down including drainage and re-charging may not exceed 4 hours. All such work must be carried out between the hours of 8 a.m. and 4 p.m. The extent and frequency of the shutdown must be to the satisfaction of the Engineer. Included in the reasons for a shut-down as required by the Contractor will be the cutting out or installing of a valve or fitting, the cutting and plugging of a main, the installation of temporary mains or connections, and so on.

## **PPR MAINTENANCE AND REPAIR (INCLUDING APPURTENANT ITEMS) ON WATER NETWORK**

### **PPR1 SCOPE**

This portion refers to the repair work on existing water infrastructure components maintenance, repairs or replacement or working on such water services infrastructure within the ambit of the Contract. All rates or amounts tendered shall include for opening and closing the water network complete with all measures as per the specification in this document.

### **PPR2 REPAIR OF STEEL WATER MAIN BY BURST PIPE CLAMP**

Repair of steel water main by Burst Pipe Clamp for DN pipe \_\_\_\_\_ Unit: No.  
The scheduled rates must cover the excavation, cleaning of the pipe, fitting of the clamp(s), backfilling, and reinstatement of the surface, return of scrap material, removing and disposal of surplus spoil, the clearing of site and any incidentals necessary for the completion for the work.  
Payment will be made according to pipe diameter.

### **PPR3 CUT OUT SECTION OF STEEL PIPE & REPAIR**

Cut out section of steel pipe and replace for DN pipe \_\_\_\_\_ Unit: m  
The scheduled rates must include for the excavation, two pipe cuts, removing the section of pipe, replace the section with new pipe, weld the two joints 180 degrees on the top half, fit two couplings, backfilling, reinstating the surface, remove surplus soil, remove scrap material, the clearing of site and any incidentals, pipes and couplings necessary for the completion of the work  
Payment will be made on the measured distance between the two pipe cuts, related to the nominal diameter of the pipe.

### **PPR4 CUT OUT SECTION OF uPVC PIPE & REPAIR**

Cut out section of uPVC pipe and replace with DN pipe class \_\_\_\_\_ Unit: m  
The scheduled rates must include for the excavation, two pipe cuts, removing the section of pipe, replace the section with new pipe, couplings, backfilling, reinstating the surface, remove surplus soil, remove scrap material, the clearing of site and any incidentals, pipes and couplings necessary for the completion of the work.  
Payment will be made on the measured distance between the two pipe cuts, related to the nominal diameter of the pipe.

### **PPR5 CUT OUT SECTION OF FIBRE CEMENT PIPE & REPAIR**

Cut out section of fibre cement pipe and replace with DN pipe class \_ Unit: m  
The scheduled price for the replacement of a length of asbestos cement pipe shall include the excavation, removal of pipe, fitting of new pipe, fixing of couplings, backfilling, reinstatement of the surface, removal of scrap, removal and disposal of surplus spoil, clearing of site and any incidentals, pipes and couplings necessary for the completion of the work.  
Payment will be on the measured length of pipe installed, related to the nominal pipe diameter of the pipe.

### **PPR6 CUT OUT SECTION OF HDPE PIPE & REPAIR**

Cut out section of HDPE pipe and replace with DN pipe class \_\_\_\_\_ Unit: m  
Complete with HDPE compressing fittings.  
The scheduled price for the replacement of a length of HDPE pipe shall include the excavation, removal of pipe, fitting of new pipe, fixing of couplings, backfilling, reinstatement of the surface, removal of scrap,



removal and disposal of surplus spoil, clearing of site and any incidentals, pipes and couplings necessary for the completion of the work.

Payment will be on the measured length of pipe installed, related to the nominal pipe diameter of the pipe.

**PPR7**

**REPAIR HDPE PIPES (using butt welding/emulsion)**

Repair HDPE pipes (including all fittings and couplings or butt welding/emulsion – approved in writing by the engineer) should be done according to SABS ISO 4427 PE100 Class PN 12.5

Repair of HDPE pipe by butt welding/emulsion and replace with DN pipe class \_\_\_\_ Unit: m

Complete with HDPE compressing fittings.

The scheduled price for the replacement of a length of HDPE pipe shall include the excavation, removal of pipe, welding pipes together, fitting of new pipe, fixing of couplings, backfilling, reinstatement of the surface, removal of scrap, removal and disposal of surplus spoil, clearing of site and any incidentals, pipes and couplings necessary for the completion of the work.

Payment will be on the measured length of pipe installed, related to the nominal pipe diameter of the pipe.

**PPR8**

**REPAIR / MAINTAIN FLANGED JOINT (LEAKING)**

Repair or maintain flanged joint for DN pipe \_\_\_\_ Unit: No.

The rate shall cover all costs to repair a flanged joint: expose/uncover, clean as below, temporary measures, strip, quote, all transport, assemble after repairs (new seals, new fasteners if needed, new gaskets etc), install, test and commission, proof to the Engineer or his representative, etc, as specified herewith:

The flanges shall be bolted together using the following method:

- a) Flanged joints - a full face gasket or a ring gasket must be used. The joint faces must be cleaned with a wire brush, scraper or old hack saw blade.
- b) All traces of the old gasket must be removed as well as any gasket compound, if previously used.
- c) Examine the general condition of the joint facings. They should not show any evidence of deep scratches, severe corrosion or erosion, or warping, if any of these conditions are evident, they must not be used.
- d) With the gasket in place on the one flange, bring up the mating flange. Every effort should be made to spring the mating flange parallel to the other with the edges in line. The use of bolts to spring faces parallel, must be avoided.
- e) The stud nuts should be snugged-up just enough to let the flange find its seat. When seated, with uniform clearance all around, the stud nuts are then snugged-up following the correct sequence. Insert the remaining bolts. They must then be heavily lubricated and the correct tightening sequences must be strictly adhered to.
- f) DO NOT snug-up the bolts on first go round. Using an impact wrench, set at approximately ½ the final torque for the first go round, including the hard-to-reach bolts.
- g) Paint all fasteners with two coats of approved bituminous corrosion resisting paint to manufacturers' specification.
- h) Wrap flanged joints with layflat or similar approved (measured separately).

**PPR 9**

**REPAIR LEAK AT HYDRANT**

Repair leak at Hydrant regardless of type \_\_\_\_ Unit: no

Leaks from hydrants are generally derived from two sources, either from the stuffing box or from the

outlet, and shall be repaired as follows:

- (a) Leak from the stuffing box, shall be repacked as discussed earlier in the specifications,
- (b) Where the leak emanates from the outlet, the bonnet must be removed, and the jumper and washer inspected for wear, distortion and deformity. If found to be defective, a new jumper with washer must be installed. If the jumper and seat is in order a new washer must be fitted and the stuffing box must be repacked.
- (d) The hydrant will only be replaced if the seat has been damaged which will allow water to leak past.

Payment will be made per hydrant repaired (each). The rate tendered shall include for all cost to repair hydrant regardless of type as above specified.

**PPR11      LEAK REPAIR BY APPROVED COUPLING**

Leak repair by approved coupling      \_\_\_ Unit: No

The rate shall cover all costs to repair a leak using a coupling complete with all appurtenances, fasteners, gaskets, seals etc. Paint all fasteners with two coats of approved bituminous corrosion resisting paint to manufacturers specification. Wrap flanged joints with layflat or similar approved (measured separately).

**PPR13      REMOVAL AND REPLACEMENT OF VALVES AND AIR VALVES**

Removal and replacement of valves and air valves for DN Unit: No

(Distinction shall be made between removal and replacement)

The rate shall be per diameter of valve. The valve shall be exposed (excavate or uncover). The valve shall be removed.

**The rate shall cover all costs to expose/uncover, remove valve, temporary measures, all transport, commission, proof to the Engineer or his representative, etc.**



#### **C4. MANAGEMENT OF THE WORKS**

##### **C4.1 Generic Specifications**

The SANS 1200 Standardized Specifications applicable.

##### **C4.2. Time for Completion of Ordered Work as-and-when-ordered**

Due to the *as-and-when-required* nature of this Contact, by tendering on this Contract, the Tenderer undertakes to:

- a. Respond to do work ordered within response times.
- b. Utilize qualified staff for the relevant work under consideration (e.g. a qualified plumber to do plumbing work and at least one qualified plumber shall form part of each work team). Proof of appropriate qualification to be submitted to the Engineer if requested.
- c. Utilize the correct type and quantity of resources to complete the work **AS EXPEDIENTLY AS POSSIBLE**.
- d. Maintain a high technical standard of work.
- e. Accept intervention by the City of TSHWANE if it is necessary **in the opinion of the Engineer** in order to expedite work, restore safety / health, correct technically unacceptable work, or complete work left incomplete or unattended by the Contractor.
- f. Complete work / tasks in the agreed time period.

##### **C4.3. Response Times**

**"Response time"** - refers to the time period from the notification by the Engineer to the Contractor for work to be done, and the time taken by the Contractor to respond and be on site (work location) and be in a position to commence with the work. At the time of the notification from the Engineer, a Control Number and the work location will be given. The prescribed response time on this contract shall be:

<b>Emergency Repairs / Work</b>	<b>:</b>	<b>within 2 hours from order Beit verbal / written</b>
<b>Non-emergency Repairs / Work</b>	<b>:</b>	<b>within 24 hours Beit verbal / written</b>

in addition to the penalty stated in the Contract Data the following will be applicable for failure to respond on time:

<b>Emergency Repairs / Work</b>	<b>:</b>	<b>R1 500,00 per hour after the stipulated 2hrs</b>
<b>Non-emergency Repairs / Work</b>	<b>:</b>	<b>R 800,00 per hour after the standard 24hrs</b>

In the event that late response is a recurring incident, it is up to the discretion of the **Group Head: Regional Operational and Coordination to determine if the contract will be continued or terminated**. The notification can be per telephone or mobile phone and confirmed in writing.

In cases of Emergency Repairs / Work the Engineer or his staffs are unable to contact the Contractor through the communication system described in this contract, and within one hour of trying to do so, he may order the Work from others. In such case, a penalty of R1500,00 can be applied. All monies due to penalties can be deducted from monies due to the Contractor.

Penalties shall be charged for poor quality of work, damage, negligence or unfinished work which may result in losses or extra expenses to the municipality. In such cases, the municipality shall recover the full cost suffered, that includes labour, water loss, materials, transport, equipment depreciation and third-party liability claims plus a minimum of 15% administration costs from the service provider. The water loss cost estimate shall be determined by the municipality and the highest applicable tariff will apply of the affected service.

A penalty of the same incident should not occur more than once, otherwise the Engineer will cease to order

##### **C4.4. Poor Performance**

Poor performance by the Contractor will be viewed in a very serious light. Should the Engineer be of the opinion that the Contractor is not performing to conditions as per the Contract, the Engineer may:

- A Put Contractor on terms,
- b Add resources from City of TSHWANE,
- c Order work from other contractors,
- d Cease to order work from the Contractor,
- e Cancel the Contract and recall the Performance Guarantee to recover losses / damage and to conduct work until a new contractor is appointed.

Recovery costs due to poor performance by the Contractor will include a surcharge of 50% over and above the costs to rectify the losses / damage.

#### **C4.5. WORKS ORDER**

The Contractor shall respond to an instruction to conduct work ordered immediately. When such work is ordered verbally, it is the explicit responsibility of the Contractor to obtain a written works order within 24 hours during the working week and within 48 hours over weekends. Without a written works order, the Contractor works at his own risk. The works order must be approved by the person authorized by the Engineer. The works order will have a unique reference number, but the format may vary according to circumstances and the nature of the work.

## **C5. HEALTH AND SAFETY**

### **CONTENTS**

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#### **5.1 DOCUMENT PURPOSE AND INTENT**

The specifications contained in this document relate to the occupational health and safety requirements pertaining to the associated works of the aforementioned client so as to ensure the occupational health and safety of person on the following contract:

Compliance to the Occupational Health and Safety Act (Act 85 of 1993) and the Regulations shall not be limited to the specifications and definitions contained in this document.

A comprehensive, documented Health and Safety Plan is to be drawn up by the Principal Contractor, based on the results of Health and Safety Risk Assessments conducted by him/her, and the specifications provided by the Client, and presented to the Senior Health and Safety Officer of the Client for approval prior to commencement of work. Monitoring of compliance on site shall be to the requirements of the OHS Act and Regulations as well as the contents of the H&S Plan(s) of the Principal Contractor and Contractors.

<b>PRINCIPAL CONTRACTOR RECEIPT</b>	
Received by	:
Name	:
Signature	:
Date	:
Capacity	:

## 5.2 APPLICATIONS AND INTERPRETATION

This document is to be read and understood in conjunction with the following, inter alia:

- Occupational Health and Safety Act (Act 85 of 1993).
- All regulations published in terms of the Occupational Health and Safety Act.
- Construction Regulations, 2014.
- SANS codes referred to by the Occupational Health and Safety Act.
- Contract Documents
- Basic Conditions of Employment Act (Act 75 of 1997)

## ABBREVIATIONS

<b>OHS</b>	:	Occupational Health and Safety
<b>CEO</b>	:	Chief Executive Officer
<b>CR</b>	:	Construction Regulations
<b>HCS</b>	:	Hazardous Chemical Substances
<b>MSDS</b>	:	Material Safety Data Sheet
<b>AIA</b>	:	Approved Inspection Authority
<b>HBA</b>	:	Hazardous Biological Agents
<b>OEL</b>	:	Occupational Exposure Limit
<b>SANS</b>	:	South African National Standards
<b>HIRA</b>	:	Hazards Identification and Risk Assessment
<b>EEP</b>	:	Emergency Evacuation Plan

## Definitions

The following definitions from the Occupational Health and Safety Act are listed as follows:

### Chief Executive Officer

In relation to a body corporate or an enterprise conducted by the State, means the person who is responsible for the overall management and control of the business of such body corporate or enterprise.

### Danger

Means anything that may cause injury or damage to persons or property.

### Employee

Means, subject to the provisions of Subsection (2), any person who is employed by or works for any employer and who receives or is entitled to receive any remuneration or who works under the direction or supervision of an employer or any other person.

**Employer**

Means, subject to the provisions of Subsection (2), any person who employs or provides work for any person or remunerates that person or expressly or tacitly undertakes to remunerate him, but excludes a labour broker as defined in Section 9(1) of the Labour Relations Act, 1953 (Act No. 28 of 1956).

**Hazard**

Means a source of or exposure to danger.

**Healthy**

Means free from illness or injury attributable to occupational causes.

**Machinery**

Means any article or combination of articles assembled, arranged or connected and which is used or intended to be used for converting any form of energy to performing work, or which is used or intended to be used, whether incidental thereto or not, for developing, receiving, storing, containing, confining, transforming, transmitting, transferring or controlling any form of energy.

**Medical Surveillance**

Means a planned programme of periodic examination (which may include clinical examinations, biological monitoring or medical tests) of employees by an occupational health practitioner or, in prescribed cases, by an occupational medicine practitioner.

**Plant**

Includes fixtures, fittings, implements, equipment, tools and appliances, and anything which is used for any purpose in connection with such plant.

**Properly Used**

Means used with reasonable care, and with due regard to any information, instruction or advice supplied by the designer, manufacturer, importer, seller or supplier.

**User**

In relation to plant or machinery, means the person who uses plant or machinery for his own benefit or who has the right of control over the use of plant or machinery, but does not include a lessor of, or any person employed in connection with, the plant or machinery.

**Reasonably Practicable**

Means practicable having regards to:

- (a) the severity and scope of the hazard or risk concerned,
- (b) the state of knowledge reasonably available concerning that hazard or risk and of any means to remove or mitigate that hazard or risk.
- (c) The availability and suitability of means to remove or mitigate that hazard or risk; and
- (d) The cost of removing or mitigating that hazard or risk in relation to the benefits deriving there from.

**Risk**

Means the probability that injury or damage will occur.

**Safe**

Means free from any hazard.

**Standard**

Means any provision occurring:

- (a) in a specification, compulsory specification, code of practice or standard method as defined in Section 1 of the Standards Act, 1993 (Act No. 29 of 1993);  
OR

- (b) in any specification, code or any other directive having standardization as its aim and issued by an institution or organization inside or outside the Republic which, whether generally or with respect to any particular article or matter and whether internationally or in any particular country or territory, seeks to promote standardization.

The following definitions from the Construction Regulations are listed as follows:

**Agent**

Means any person who acts as a representative for a client.

**Competent Person**

Means any person having the knowledge, training, experience and qualifications specific to the work or task being performed:

Provided that where appropriate qualifications and training are registered in terms of the provisions of the South African Qualifications Authority Act, 1995 (Act No. 58 of 1995), these qualifications and training shall be deemed to be the required qualifications and training.

**Construction**

Means any work in connection with:

- (a) the erection, maintenance, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure;
- (b) the installation, erection, dismantling, or maintenance of a fixed plant where such work includes the risk of a person falling;
- (c) the construction, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system or any similar civil engineering structure; OR
- (d) the moving of earth, clearing of land, the making of an excavation, piling or any similar type of work.

**Contractor**

Means an employer, as defined in Section 1 of the Act, who performs construction work and includes principal contractors.

Means the identification and documenting of existing or expected hazards to the health and safety of persons, which are normally associated with the type of construction work being executed or to be executed.

**Health and Safety File**

Means a file, or other record in permanent form, containing the information required as contemplated in these regulations.

**Health and Safety Plan**

Means a documented plan, which addresses hazards, identified and includes safe work procedures to mitigate, reduce or control the hazards identified.

**Health and Safety Specification**

Means a documented specification of all health and safety requirements pertaining to the associated works on a construction site, so as to ensure the health and safety of persons.

**Method Statement**

Means a document detailing the key activities to be performed in order to reduce as reasonably as practicable the hazards identified in any risk assessment.

**Principal Contractor**

Means an employer, as defined in Section 1 of the Act who performs construction work and is appointed by the client to be in overall control and management of a part of or the whole of a construction site.

**Hazards Identification and Risk Assessment**

Means a program to determine any risk associated with any hazard at a construction site, in order to identify the steps to be taken to remove, reduce or control such hazard.

### 5.3 NOTIFICATION OF CONSTRUCTION WORK

- The principal Contractor shall notify by registered mail, the Provincial Director of the Department of Labour (depending on the province, via nearest Labour Centre to the construction site of concern), before commencing with construction work, of the intended work in the form of **Annexure 2** of the Construction Regulations.
- A copy of the completed **Annexure 2** of the Construction Regulations, as well as proof of notification shall be included in the Health and Safety Plan. (Proof of fax or proof of hand delivery)
- A copy of the completed **Annexure 2** is to be kept on site by the principal Contractor. (Health and Safety file)

### 5.4 APPLICATION FOR WORK PERMIT WHERE APPLICABLE (See exemption in government notice of July 2015)

**3.6.3.1.1** A client who intends to have construction work carried out, must at least 30 days before that work is to be carried out apply to the provincial director in writing for a construction work permit to perform construction work if the intended construction work will-

- (a) exceed 180 days;
- (b) will involve more than 1800 person days of construction work; or
- (c) the works contract is of a value equal to or exceeding thirteen million rand or Construction Industry Development Board (CIDB) grading level 6.

**3.6.3.1.2** An application contemplated in 4.1 must be done in a form similar to **Annexure 1**.

### 5.5 LEGAL DOCUMENTATION/APPOINTMENTS

The following documents must be provided in the Health and Safety File:

- ◆ Health and Safety Plan signed by CEO.
- ◆ Letter of good standing with the Compensation Commissioner, Federated Employers or similar insurer.
- ◆ Health and Safety Organogram (or table), outlining the Health and Safety Team, as well as the appointment(s) they have under the Act and Regulations (reference to specific section/regulation applicable to appointment)
- ◆ The competency of each member of the Health and Safety Team and that of legal appointees must be provided and should include knowledge, training, experience & qualifications specific to the work or task being performed (CV and copies of qualifications).

Signed copies of the following legal appointments must be provided in the Health and Safety File (see table 1 below)

Table 1:

APPOINTMENT	OHS-ACT / REGULATION REFERENCE
Section 16.2 appointment	Section 16.2
Health and Safety Representative (if necessary)	Section 17
Health and Safety Committee members (if necessary)	Section 19
Incident Investigator	GAR 8(2)
First Aiders (Include training certificates)	GSR 3
Basic Fire Fighters	ERW 9 & CR 29
Risk Assessor	HCS (Incl. Asbestos & Lead); CR 9 (1)

The following information must be provided in the Health and Safety File.

- ▲ Indicate the estimated number of employees to be working on site.
- ▲ Indicate the expected number of contractors to be appointed by the Principal Contractor.

The following Competent Persons, where applicable, shall be appointed in writing by the Principal Contractor, prior to any work being carried out, and shall adhere to the requirements of the specific sub-regulations.

The Competency of each of these appointed competent persons must be provided and should include knowledge, training, experience and qualifications specific to the appointment (CV and Copies of qualifications).

**The table below (table 2) indicates the some of the legal appointments in terms of Construction Regulation (CR) but contractors should by no means be limited to these indications.**

Table 2:

APPOINTMENT	OHS-ACT/REGULATION REFERENCE
Construction Manager	CR 8 (1)
Construction Supervisor	CR 8 (7)
Assistant Construction Supervisor	CR 8 (8)
Fall Protection Competent Person	CR 10 (1,a)
Excavation Work Competent Person	CR 13(1,a)
Construction Vehicle and Mobile Plant Competent Person	CR 23 (1)(d,i)
Electrical Installation Competent Person	CR 24 ©
Fire Equipment Inspector	CR 29 (h)
Fire Equipment Usage: Trained Personnel	CR 29 (i)
Confined Spaces Competent Person	GSR (5)
Safety Officer	CR 8(5)
General Machinery Competent Person	GMR 2 (1)
Lifting Machines Operators	DMR 18(11)

- No work involving any of the listed appointments may be performed without the knowledge and approval of an appointed competent person.
- The competent person shall be responsible to determine the level of supervision required for each activity.
- The agent must be informed of any changes made to the above appointments.
- The agent reserves the right to require from any contractor at any stage to appoint a full or part time construction health and safety officer.

## 5.6 GENERAL DUTIES OF PRINCIPAL CONTRACTOR

- ♦ The principal contractor will be responsible for co-operation between all contractors to ensure compliance to the OHS –Act and Regulations on site.
- ♦ To ensure the above, the Principal Contractor must carry out the following and provide proof of such in his H&S plan:
  - Provide health and safety specifications to Contractors.
  - Appoint Contractors in writing.
  - Proof that Contractors H&S Plan has been approved, implemented and maintained.
  - Proof that Contractors are registered with the Compensation Commissioner or similar insurer.
  - Proof that Contractors made provision for the cost of Health and Safety measures during the construction process.
  - A comprehensive & updated list of all contractors on site, also indicating the type of work being done.
  - Copies of Section 37(2) agreements with the relevant contractors.
  - **Present OHS File to Senior Health and Safety Officer of the City OF TSHWANE prior to commencement with the intended construction work.**
  - **Obtain Certificate of Compliance with Occupational Health and Safety Act, 1993 and its regulations issued by the Senior Health and Safety Officer of the City OF TSHWANE, prior to commencement with the construction work as appointed by the City OF TSHWANE.**

## 5.7 SUPERVISION OF CONSTRUCTION WORK




- ▲ The City of TSHWANE or an agent appointed by the City must be informed if the Construction Work Manager/Supervisor is also appointed as a Construction Manager/Supervisor for another site.
- ▲ Construction site shall NOT be left unsupervised at any given time.

## 5.8 HAZARD IDENTIFICATION RISK ASSESSMENT (HIRA)

- Risk assessments of all required activities shall form an integral part of the Health and Safety plan.
- After the hazard has been identified, reviewed and assigned a risk designation/rating, it will be necessary to determine what controls (measures) are necessary to eliminate, reduce or minimize the risks associated with the hazard.

**Note:** Control measures may be implemented with the following **hierarchy of control as a guideline**.

Hierarchy of Control	
<div style="text-align: center;"> <p>Most effective (High level)</p>  <p>Least effective (Low level)</p> </div>	<b>Elimination:</b> remove the hazard completely from the workplace or activity
	<b>Substitution:</b> replace a hazard with a less dangerous one (e.g. a less hazardous chemical)
	<b>Redesign:</b> making a machine or work process safer (e.g. raise a bench to reduce bending)
	<b>Isolation:</b> separate people from the hazard (e.g. safety barrier)
	<b>Administration:</b> putting rules, signage or training in place to make a workplace safer (e.g. induction training)
	<b>Personal Protective Equipment (PPE):</b> Protective clothing and equipment (e.g. gloves, hats)

- All risk assessments shall be conducted in terms of an acceptable methodology covering at least the elements frequency, likelihood and consequence, prior to commencement of work, according to the provisions of CR 9 (1, a-e) and should cover at least the following:
  - Movement of construction vehicles
  - All work near overhead power lines and underground cables
  - Locating underground cables/existing services (**permission to be obtain with relevant authority**)
  - Hand or manual excavation of trenches (**permission to be obtain with relevant authority**)
  - Mechanical excavation of trenches (**permission to be obtain with relevant authority**)
  - All work carried out inside trenches, including compacting, pipe laying, backfilling etc.
  - Temporary stockpiling and removal of excavated material
  - Transporting material
  - Cutting into existing sewage line
  - All work carried out from scaffolding
  - Exposure to raw sewerage (see paragraph 19)
  - All work carried out on live electrical installations
  - Welding in confined spaces
  - Working at heights
  - Cladding
  - Stripping of existing roof sheets or other material
  - Piling
  - Formwork/Support work
  - Demolition work
  - Working with hand tools
  - Working with portable electrical tools

- All health hazards that can be present during any of the above activities and should include individual dusts, gases, fumes, vapours, noise, extreme temperatures, illumination, vibration and ergonomic hazards due to any of the above activities.
- The above list is by no means exhaustive and should not be limited to these activities but must cover all activities that forms part of the said construction work. Each activity must be split down to individual tasks and all associated hazards identified and listed in the risk assessment. This ensures that critical tasks and subsequent critical hazards are not missed.
- The risk assessment to be included in the H&S Plan must clearly indicate:
  - The methodology used to do the risk assessments.
  - Breakdown of processes and activities covered.
  - High risks anticipated.
- All risk assessments are to be conducted by a competent person as appointed under paragraph 5 of this document. The plan must include a declaration in this regard or the risk assessment must contain the signature(s) of this appointed persons.
- Risk assessments are to be handed to the agent prior to commencement of work.
- The agent reserves the right to stop any work if such work is not conducted in terms of the recommendations of the risk assessment.
- Risk assessments are to cover safety as well as health hazards.

## 5.9 SAFE WORK PROCEDURES

Safe Work Procedures are to form part of the Hazard Identification and Risk Assessment and must be compiled for all the activities to be undertaken by the Principal Contractor or a Contractor appointed by the Principal Contractor who.

The safe work procedures must address the following elements:

- ▲ The work method to be followed to conduct work safely
- ▲ Mitigation of identified risks
- ▲ Reducing and controlling risks and hazards that have been identified
- ▲ Responsibilities of competent persons
- ▲ Required personal protective equipment
- ▲ Correct equipment / tools/ machinery to be used
- ▲ Reference to relevant registers to be completed
- ▲ Reference to applicable risk assessment

The following tables (table 3 and 4) provides information on all factors to be taken into account when the Risk Assessments and Safe Work Procedures are compiled:

Table 3:

Physical	Chemical	Biological	Mechanical	Psycho-social
Noise	Liquids	Insects	Guards	Stress
Vibration	Dusts	Fungi	Hand tools	Work pressure
Ionizing radiation	Fumes	Bacteria	Machinery	Monotony
Non-ionizing radiation	Fibers	Viruses		Unsociable hours
Health and cold	Mists			Ergonomical:
Electricity	Gases			• Posture
Pressure	Vapours			• Movement
				• Repetitive tasks

Table 4:

System	Stress	Disease (symptoms)
Musculoskeletal	Lifting/loads Repetitive strain Abnormal postures Whole body vibration	Muscular pain syndromes Teno*/ "synovitis +B-ursitis Osteoarthritis
Sensory	Noise	Hearing loss
Skin	Cement (chromates), rubber Thinners, epoxies Tar, pitch Solar radiation	Allergic contact dermatitis Irritant contact dermatitis Acne, Skin cancer Kerasotes, cancer
Respiratory	Silica Asbestos Spray paints, woods, epoxies Irritant dusts, welding fumes Organic Solvents	Silicosis, TB Asbestosis, Cancer Asthma Bronchitis Headaches, Dizziness, Cancer
Psychosomatic	Physical stress Psychosocial stress	Head aches Depression Fatigue Substance abuse
Nervous System	Lead Organic solvents	Peripheral and central neuropathy Headaches, Dizziness, Mood disorder, Dementia, Cancer

## 5.10 SAFETY OF PUBLIC/PEDESTRIANS

Access to the construction site must be cordoned off as much as possible in all work areas.

All excavations are to be fenced/barricaded to prevent access by public / pedestrians.

Work must be planned in such a manner as to ensure that the minimum number of trenches are left open after hours or during weekends.

## 5.11 FALL PROTECTION

- Contents of the fall protection plan must cover all the requirements as stated in sub-regulation CR8.
- The fall protection plan is to be handed to the agent before work commences.
- The level of supervision is to be stated in the fall protection plan.
- Medical certificates, work near edges, presence of dew, dangerous walking areas etc. should be addressed in the fall protection plan.

## 5.2 REGISTERS

- Examples of the registers listed below must be provided in the Health and Safety Plan.
- All registers must be available at the site offices at all times for inspection by the agent.
- The list of registers to be kept is by no means exhaustive and the H&S Plan should list all the registers that are applicable and at what frequency they are going to be maintained, see table below (table 5):.

Table 5:

ACTIVITY	FREQUENCY
FORM WORK / SUPPORT WORK	Daily, prior to any shift
EXCAVATION WORK	Daily, prior to any shift, after rain or blasting or after unexpected fall of ground
MATERIAL HOIST	Daily
CRANE(S) LOGBOOK	As per DMR 18
CONSTRUCTION VEHICLES AND MOBILE PLANT	Daily
TEMPORARY ELECTRICAL INSTALLATION	Weekly
STACKING	Weekly
FIRE EXTINGUISHERS	Bi- Monthly
ABLUTION FACILITIES	Weekly
LADDERS	Weekly
INCIDENT REGISTER IN TERMS OF GAR 9	As Required
FALL PROTECTION EQUIPMENT	Daily
PORTABLE ELECTRICAL TOOLS	Weekly
FIRE FIGHTING EQUIPMENT	Monthly

### 5.13 TRAINING

Each Health and Safety Plan shall indicate the following regarding training:

- Name and contents of the following training courses which have to be conducted:
  - ▲ Induction Training
  - ▲ Training regarding hazards identified and any corrective measures in place
  - ▲ Training regarding all applicable regulations
  - ▲ Specific training regarding applicable competencies
- Attendance registers must be kept as proof of training provided
- Method of informing visitors and other persons entering the site of hazards prevalent on site.
- Method of providing personal protective equipment to visitors and non-employees.
- An example of ID training card for each employee (if used).
- Methodology to be used in the issuing and communication of written instructions/safe work procedures.

#### 5.13.1 Health and Safety Induction

Managers or supervisors are required to provide safety orientation to new employees or existing employees who are moving to a new position or a new worksite. Safety induction may include the following:

- Induction and discussion of the company's health and safety philosophy and employee safety responsibilities
- Discussion and distribution of the health and safety employee training material and issues included
- Discussion about safety policies as they relate to the employee's work setting
- Procedures to follow when working alone
- Review of reporting procedures for work-related injuries and accidents
- Review of emergency procedures for reporting accidents and gaining medical treatment
- Documentation of training
- Communicate risks associated with injuries potentially arising out of violence in the workplace

- Communicate the risk factors associated with injuries potentially arising out of the physical demands of the job
- Review evacuation procedures in case of a fire or an emergency

## **5.14 GENERAL REQUIREMENTS**

### **(a) Personal Protective Equipment**

The procedures for issuing and control over PPE shall be indicated in the Health and Safety Plan, as well as the enforcement for the wearing or use thereof.

### **(b) Hired Plant**

The responsibility for the safe condition and use of all hired plant shall be that of the Principal Contractor.

### **(c) Transport of Employees**

Transport of employees shall be carried out in terms of the National Road Ordinances.  
The Health and Safety Plan shall detail the arrangements and methods of the transportation of workers.

### **(d) Signs**

The Principal Contractor shall indicate in his Health and Safety Plan the arrangements regarding the posting of danger signs.

### **(e) Medical Surveillance (Certificates of fitness)**

The Principal Contractor shall include in his Health and Safety File valid copies of all employees who work on construction site.

### **(f) Site Visitors Register**

- A site visitor's register is to be kept on site and steps are to be taken to ensure that all visitors sign the visitors' register before entering the site.
- A NOTICE should also be provided directing all visitors to report to the site either a construction manager or construction Health and Safety officer.

## **5.15 HAZARDOUS CHEMICAL SUBSTANCES (including Asbestos and Lead)**

**In addition to the requirements in the HCS Regulations, the principal contractor must provide proof in the H&S Plan that:**

- ▲ Material Safety Data Sheets (MSDS's) of the relevant materials/hazardous chemical substances are available prior to use by the contractor. Mention should be made how the principal contractor is going to act according to special/unique requirements made in the relevant MSDS's. All MSDS's shall be available for inspection by the agent at all times.
- ▲ Risk assessments are done at least once every two years.
- ▲ Exposure monitoring is done according to Occupational Exposure Sampling Strategy Manual (OESSM) and by an AIA and that the medical surveillance programme is based on the outcomes of the exposure monitoring.
- ▲ How records are going to be kept safe for the stipulated period of 30 years.
- ▲ How the relevant HCS's are being/going to be controlled by referring to:

- Limiting the amount of HCS
- Limiting the number of employees
- Limiting the period of exposure
- Substituting the HCS
- Using engineering controls
- Using appropriate written work procedures
  
- ▲ The correct PPE is being used.
- ▲ HCS are stored and transported according to SABS 072 and 0228.
- ▲ Training with regards to these regulations was given.
- ▲ The H&S plan should make reference to the disposal of hazardous waste on classified sites and the location thereof (where applicable).

#### **5.16 ASBESTOS**

Should asbestos be identified as a hazard whilst work is carried out, the following must be included in the health and safety plan:

- Notification to the Provincial Director in writing, prior to commencement of asbestos work.
- Proof of a structured medical surveillance programme, drawn up by an occupational medicine practitioner.
- Proof that an occupational health practitioner carried out an initial health evaluation within 14 days after commencement of work.
- Copies of the results of all assessments, exposure monitoring and the written inventory of the location of the asbestos at the workplace.
- Only proof that medical surveillance has been conducted and not the actual records itself since these areas of confidential nature.
- How records are going to be kept safe for the stipulated period of 40 years.
- Proof that asbestos demolition (if applicable) is going to be done by a registered asbestos contractor and provide proof that a plan of work for such demolition is submitted to an Approved Asbestos Inspection Authority 30 days prior to commencement of the demolition.
- Provide proof that the plan of work was approved by the asbestos AIA and submitted to the provincial director 14 days prior to commencement of demolition work together with the approved standardized procedures for demolition work.

#### **5.17 LEAD**

Besides the requirements listed under par. 15 should lead be identified as a hazard at the workplace, the following must be included in the health and safety plan or as soon as its available:

- Proof that an occupational health practitioner carried out an initial health evaluation within 14 days after commencement of work.
- Copies of the results of all assessments, exposure monitoring and the written inventory of the location of the lead at the workplace.
- Only proof that medical surveillance has been conducted and not the actual records since these are of a confidential nature.
- How records are going to be kept safe for the stipulated period of 40 years.

#### **5.18 NOISE INDUCED HEARING LOSS**

Where noise is identified as a hazard the requirements of the NIHL regulations must be complied with and the following must be included/ referred to in the Health and Safety Plan:

- Proof of training with regards to these regulations.
- Risk assessment done within 1 month of commencement of work.
- That monitoring carried out by an AIA and done according to SANS 083.

- Medical surveillance programme established and maintained for the necessary employees.
- Control of noise by referring to:
  - Engineering methods considered
  - Admin control (number of employees exposed) considered
  - Personal protective equipment considered/decided on

- Describe how records are going to be kept for at least 30 years.

## **5.19 LIGHTING**

Where poor or lack of illumination is identified as a hazard the lighting regulations must be complied with and the following must be included in the H&S Plan:

- How lighting will be ensured/ provided where daylight is not sufficient and / or after hours are worked.
- Planned maintenance programme for replacing luminaries.
- Proof of illumination levels of artificial illumination equipment.

## **5.20 HAZARDOUS BIOLOGICAL AGENTS (HBA)**

Because of the possible exposure of workers to raw sewage, the H&S Plan shall include details of the following:

- The conducting of Risk Assessment specifically aimed at exposure to HBA which shall include the following:
  - Nature and dose of HBA
  - Where HBA may be present and in what physical form
  - The nature of work or process
  - Steps in the event of failure of control measures
  - The effect of the HBA
  - The period of exposure
  - Control measures to be implemented
- Monitoring of exposure of workers shall be conducted to establish whether any worker is infected with an HBA associated with working or being exposed to raw sewage, in terms of the following:
  - By an occupational medical practitioner
  - Before entering the site to establish the worker's baseline
  - During the period of the contract the risk assessment indicate possible exposure
  - After completion of the contract
- Medical surveillance records should be kept by an occupational health practitioner.
- Indication on how all records of assessment, monitoring; etc. will be kept, taking into account that records have to be kept for a period of 40 years.
- How exposure to HBA is to be controlled.
- The provision of personal protective equipment.
- What information and training is to be provided to employees regarding the following:
  - The contents of these regulations.
  - Potential risks to health.
  - Control measures to be implemented.
  - The correct use and maintenance of personal protective equipment.
  - The results of the risk assessment.

## **5.21 ACCIDENT/INCIDENT MANAGEMENT**



The Principal Contractor shall be responsible for reporting all accidents/incidents, personnel injuries, casualties, property damage and fires to City OF TSHWANE Senior Health and Safety Officer and to the Department of Labour.

**Investigation and Reporting shall be implemented as follows:**

In the event of fatal accidents, medical cases and serious injuries, the investigation will be carried out by the Construction Safety Officer, Construction Site Manager, Client's Senior Health and Safety Officer and the Inspector of the Department of Labour.

The incident/accident must be reported in writing within 24 hours to the Client's Project Manager.

- All events involving fire and/or damages to property, plant and equipment, shall be reported in writing within 24 hours to the Client's Project Manager;
- Where a near-miss is recorded, it shall be reported and investigated and appropriate corrective actions taken to prevent re-occurrence;
- In case of a Lost Workday Case, the Client shall be informed within 1 hour of the injury and an investigation will be scheduled via the Client's Occupational Health and Safety Section.
- First Aid cases shall be recorded. All the First Aid cases must be reported to the control room immediately and shall be investigated to determine the root cause and to put corrective actions in place.
- Monthly Safety Reports shall be kept by the Principal Contractor in the OHS File.
- Accidents shall be reported using the Accident/Incident Report Form (Annexure 1);
- Any engineering review or investigation committee shall be in accordance with legal requirements;
- Incident reporting and investigation shall be in accordance with Section 24 of OHS Act and in terms of General Administrative Regulations 8 and 9, as well as Client Procedures.

## **5.22 EMERGENCY EVACUATION PLAN (EEP)**

It is the responsibility of the Principal Contractor to ensure that an Emergency Evacuation Plan is compiled, and that its management and employees familiarize themselves with the emergency procedures that apply to the construction site or where a construction work is performed. All Emergency Contact Details applicable to the area where the construction work is performed, shall be included in the EEP

These procedures will give personnel all information on the actions to be taken in case of an emergency.

The EEP shall at least include the following steps:

When an emergency condition exists or upon hearing the "Alarm", every Supervisor shall ensure the following:

- All work is stopped at once;
- All equipment is shut down;
- All employees are evacuated to a pre-determined assembly point;
- A roll call is taken to ensure every employee is accounted for;
- No one is permitted to return until notification has been received from a control officer or construction manager that it is safe to do so.

## **5.23 WORK PERMIT SYSTEM**

A work permit authorizes specific works to be conducted in a restricted area. This serves as record that steps have been taken to ensure safe working conditions in the area. For this specific work, the Principal Contractor shall strictly adhere to City OF TSHWANE's work permit system and other relevant procedures if applicable.

Application for work permits shall be made 24 hours before commencement of the work activities.

An authorized receiver will request a work permit from a certified issuer before doing any work in a restricted area. City OF TSHWANE's Project Management will obtain all third-party permits. If the work contemplated involves any change, addition or deletion in the facility, the work will be coordinated between the City's Project Management Operations Team and the Principal Contractor.

## **5.24 WASTE MANAGEMENT AND ENVIRONMENTAL CONSERVATION**

The Principal Contractor shall ensure reduction, as far as is reasonably practicable, of waste that is generated during our daily activities by ensuring proper housekeeping, consideration for reuse where practicable, proper handling,



transporting and disposal. Management of waste and environmental conservation will be done in line with relevant by laws of local authority and national legislation.

The organisation shall manage wastes and preserve the environment in consideration of the following principle where applicable:

- Consideration shall be given to ways of avoiding waste at the initial planning stages of all projects,
- Consideration shall be incorporated into purchasing of products where design and production systems are aimed at waste minimisation,
- Existing sources of waste will be identified and opportunities for reduction or recycling will be evaluated,
- Environmental impact assessment shall be conducted prior to commencement of every project where indigenous plants such as trees will be preserved at all costs,
- Modification of processes to preserve the environment and to reduce wastes shall be evaluated and implemented where necessary,
- Substitution of material to eliminate a waste source shall be considered.

**NB: Generally, the Principal Contractor shall strive to a principle of Reduce, Reuse and Recycle where possible.**

## **5.25 HOUSEKEEPING**

The Principal Contractor shall ensure good housekeeping is maintained on a construction site.

The following key points to be applied:

- Cable management: strap hooks or rubber ties for hanging cables and hoses shall be provided to keep access ways clean and tidy;
- All loose material shall be stored in a clean and tidy manner;
- Scrap bins shall be situated near work area and cleaned regularly (City OF TSHWANE to be notified)
- Skips should be situated in strategic locations and cleaned regularly (City OF TSHWANE to be notified);
- Scaffolding platforms shall be kept clear of debris, with all material stored in suitable containers;
- Housekeeping problems shall be identified and actioned on a daily basis as part of the inspection responsibility of the individual Supervisor.

## **5.26 HEALTH AND SAFETY AUDITS AND INSPECTIONS**

### **Internal Audits**

The Principal Contractor shall ensure that Health and Safety Audit is conducted for all activities at regular intervals.

Auditing shall be performed with the use of standard checklists and audit protocols and shall define corrective actions needed. Non-Conformities highlighted during the audit shall be prioritized and corrective action implemented.

The basic purpose of audits is to assess the reliability, efficiency and effectiveness of the various components of the Health and Safety Management System.

### **External Audits**

External audits shall be conducted at least on monthly basis.

The following external audits shall be done:

- City OF TSHWANE appointed Agent and/or,
- City OF TSHWANE' Senior Health and Safety Officer,
- Department of Labour (as and when an Inspector of D.O.L wish to visit the site).

### **Health and Safety Inspections**

Health and Safety inspections shall be conducted regularly by the Principal Contractor's appointed personnel and a summary report shall be included in the weekly progress meeting.

Inspection report shall include the following:

- A list of all safety inspections and related activities performed during the previous weeks worked;

- A register of violations observed to include the names and control numbers of all employees involved with each violation;
- Description of corrective actions taken to prevent a recurrence of all violations observed.

A root cause analysis program shall be implemented to identify the visible and underlying causes of deficiency. If the findings point to Health and Safety Management System failure, then the system shall be modified to eliminate the deviations or shortcomings.

The following prescribed documentation will be completed by the Health and Safety Representative/Health and Safety Officer/Construction Manager/Supervisor allocated for the specific area:

- Self-Assessment shall be done once a week;
- Daily deviation inspection sheet (Log Sheet);
- Job Observations (Once a month on Supervision);
- Plant inspections to be conducted daily.

All these documentations will be forwarded to the Construction Manager of the Principal Contractor and shall be included in the monthly report for the Client.

#### Scaffolding Inspections

A reliable inspection document must be used and shall provide the basic checklist for scaffold inspections. The inspection certificate number must correspond with the handover number. The top section of the inspection register is to indicate the location of the scaffold, date of inspection, faults found during inspections, date corrected and signature of the inspector.

The second section of the form indicates the items which must be inspected according to SANS 10085. If any scaffold deviates from these guidelines, the green tag must be removed and rectified immediately. SANS 10085-1:2004 shall be made available for review at Supervision and Management.

A modification sheet shall be filled in by the Inspector/Supervisor on that specific scaffolding and shall be signed by the Client' representative.

A copy of the modification sheet will stay in the book and the original will be kept by the Client.

Scaffolds must be inspected within a seven (7) day period, after heavy rain or inclement weather or when suspicion of tampering arises.

A scaffold shall NOT at any given time pass the inspection interval.

**NB: Scaffolds shall ONLY be erected and inspected by a competent person**

## 5.27 COVID 19 HEALTH AND SAFETY SPECIFICATIONS

### Background

Coronavirus Disease 2019 (COVID-19) is a respiratory disease caused by the SARS-CoV-2 virus. To reduce the impact of COVID-19 outbreak conditions on businesses, workers, customers, and the public, it is important for all employers to plan now for COVID-19. COVID-19 is characterized by Symptoms which can be mild, moderate, severe or fatal.

The legislation governing workplaces in relation to COVID-19 is the Occupational Health and Safety Act, Act 85 of 1993, as amended, read with the Hazardous Biological Agents Regulations. Section 8 (1) of the Occupational Health and Safety (OHS) Act, Act 85 of 1993, as amended, requires the employer to provide and maintain as far as is reasonably practicable a working environment that is safe and without risks to the health of employees. Specifically, section 8(2)(b) requires steps such as may be reasonably practicable to eliminate or mitigate any hazard or potential hazard before resorting to Personal Protective Equipment (PPE). However, in the case of COVID-19, a combination of controls is required, although the main principle is to follow the hierarchy of controls.

While engineering and administrative controls are considered more effective in minimizing exposure to SARS-cov-2, PPE may also be needed to prevent certain exposures. While correctly using PPE can help prevent some exposures, it should not take the place of other prevention strategies.

Therefore it is important for the Contractor to:

- Ensure that COVID 19 Risk Assessment (COVID 19 Health and Safety Plan) is conducted and submitted to the Client prior to the commencement of the construction work, it must be in line with the Client COVID 19 Health and Safety Specification.

- The Contractor must appoint COVID 19 Compliance Manager, in this case the safety officer to ensure that all necessary COVID 19 safety precautions are implemented to prevent the spread.

#### Training and awareness:

- The Contractor must ensure that all employees are inducted on COVID19 contractor risk assessment to prevent the spread.
- The Contractor must ensure that the employees are trained on COVID 19 to prevent the spread of the virus, training records must be kept in the Safety File.
- COVID-19 Direction on Health and Safety in the Workplace Government Gazette dated 29 April 2020, must be used as guideline and be customized to specific construction site.
- The Contractor must provide workers with information that raises awareness in any form or manner, including where reasonably practicable leaflets and notices placed in conspicuous places in the workplace informing workers of the dangers of the virus, the manner of its transmission, the measures to prevent transmission such as personal hygiene, social distancing, use of cloth masks, cough etiquette and where to go for screening or testing if presenting with symptoms.

#### Hand Hygiene:

- The Contractor must provide adequate facilities for the washing of hands with soap and clean water on each construction site.
- The Contractor must provide 70% alcohol-based hand sanitizers at strategic points of the construction site.
- The Contractor must paper towels to dry hands after hand washing. Cleaning and Disinfecting surfaces:
- The Contractor must take measures to ensure that all work surfaces and equipment are disinfected before work begins, regular during the working period and upon completion the work.
- The Contractor must ensure frequently cleaning and disinfecting objects and surfaces that are touched regularly particularly in areas of high use such as shared tools, taps, ablution facilities, hand rails light switches, eating and change room areas, shared construction vehicles, etc. using appropriate disinfecting solutions such clean water, soap and bleach
- In area/s where a person was tested positive for COVID-19, an incident-based risk assessment approach, as specified in the Department of Employment and Labour's Direction and the Department of Health's Guideline need to be followed.
- If the individual merely passed through the construction site without touching anything and without spending much time in face-to-face communication with other employees, then simple manual surface cleaning measures would be appropriate.
- However, if the individual spent a considerable amount of time in the construction site, touched and handled many objects, equipment and surfaces and had close contact with several fellow workers, then more comprehensive manual surface cleaning of the environment would be warranted.
- The Department of Health does not endorse or require 'deep cleaning' that involves fumigation, demisting or fogging. Nor does the Department of Health require such a 'certificate of cleaning'.
- The Contractor shall ensure that only the affected area of the construction site that would be closed for cleaning and disinfection not closing the entire construction site.

#### Social Distancing:

- The Contractor must ensure minimal contact between workers and as far as practicable that there is a minimum of 1,5 meter distance between workers while they are working. Employees are aware to maintain social distance when working.
- The Contractor must ensure that social distancing measures are implemented through supervision of both the construction site and in the common areas outside the workplace, through queue control or within the workplace, these measures may include dividing the workers into groups or staggering break times to avoid the concentration of workers in common areas.
- The Contractor must ensure that where the minimum distance is impossible employees must always be instructed to wear cloth mask/FFP1/2 mask or reducing the number of workers present in the construction site at any time to achieve the required social distancing.
- The Contractor must ensure that employees working in offices are provided with physical barriers placed between work their workstations

#### COVID 19 Personal Protective Equipment (PPE)

- The Contractor must ensure that every worker is provided with two cloth masks to be worn when in workplace or public which comply with the requirement set out in the guideline issued by Department of Trade, Industry and Competition.
- The main benefit of everyone wearing a cloth mask is to reduce the amount of virus droplets being coughed up by those with infection and transmitted to others and to surface that others may touch.
- Every Contractor must ensure that workers are informed, instructed, trained and informed as to the correct use of cloth mask.
- The Contractor must ensure to issue face shield/visors where applicable as double protection.

#### Point of entry screening

- The Contractor must identify the screening area for each construction site.
- The Contractor must ensure that the daily point of entry screening is conducted when entering construction site by a person nominated by the Contractor.
- The Contractor must ensure that all employees and visitors are screened and only those with all clear will be given clearance to carry on with construction work.
- The Contractor must ensure that during the screening a 1.5 m distance is maintained and FFP1/2 mask to be worn by a nominated person.
- The Contractor must ensure that the screening person is trained.
- The Contractor must ensure that a bottle of sanitizer is available at the screening area.
- The Contractor must ensure that the thermal device is provided during the screening process.
- The Contractor must ensure that all employees complete a COVID 19 Questionnaire which will be used to screen potential risk personnel entering the construction site.

#### Symptomatic employees

- The Contractor must ensure that any person who ticks YES to one or more symptoms will be sent home and be advised to seek testing by a healthcare provider.

- The Contractor must ensure that employees who are sick with continuous cough, sore throat, difficulty breathing, or a high temperature in the workplace will be encouraged to stay home.
- The Contractor must ensure that the positive tested COVID 19 case, the employee is on paid sick leave in terms of section 22 of BCEA or if the employee's sick leave is exhausted, the Contractor shall apply for an illness benefit.
- The Contractor must ensure that employees confirmed to have COVID 19 will be managed in line with National Department of Health COVID 19 guidelines.
- The Contractor must isolate the worker with confirmed COVID case and issued him/her with FFP2 or surgical mask, arrange for the worker to be transported for further medical examination or testing, in a manner that does not place other workers or members of the public at risk
- The Contractor must ensure that the driver who is transporting the Person under Investigation is provided with surgical mask or FFP2 mask.
- The Contractor must assess the risk of transmission, disinfect the work area and refer those workers who may be at risk for screening to prevent possible transmission.
- The Contractor must advise the Communicable Disease Centre (CDC) so that other contacts be identified and be investigated
- The Contractor must ensure that tested positive for COVID 19 is not discriminated in terms of Employment Equity Act no. 55 of 1998.
- The Contractor must ensure that if there is evidence that the worker contracted COVID 19 as a result of occupational exposure, lodge a claim for compensation in terms of the Compensation for Occupational Injuries and Diseases Act no. 130 of 1993.
- The Contractor must ensure that if a worker has been diagnosed with COVID 19 and isolated in accordance with the National Department of Health Guidelines, a Contractor may only allow a worker to return to work on the following conditions, the worker has undergone a medical evaluation confirming that the worker has been tested negative for COVID 19.

#### Recommended Best Practice

- The Contractor must ensure that vulnerable and 60 years old workers are identified and received a special measure for their protection.
- The Contractor must ensure that for communication strategy Microsoft Team, ZOOM or Skype or cell phones are used to prevent the spread of COVID 19 virus.
- The Contractor must ensure to keep the workplace well ventilated by natural or mechanical means to reduce the SARS – CoV – 2 viral loads.

#### Emergency Numbers

- Corona virus (COVID-19) 24-Hour Hotline number:0800 029 999
- Corona virus (COVID-19) WhatsApp Number: 0600 12 3456

## **PART C6 SITE INFORMATION**

### **SITE INFORMATION**

#### **1. NATURE OF GROUND AND SUBSOIL CONDITIONS**

Since the work will be done in various regions within the City of TSHWANE, the soil conditions will vary. All possible soil conditions are not described in this document. The Contractor shall be deemed to have satisfied themselves of the general and the extreme cases and must allow for those in their tender rates. No claim for additional payment for bad or difficult soil conditions will be considered. Information on ruling soil conditions might be obtained from local municipal officials. This information will be an indication but will still not give the Contractor reason for claim if incorrect. For the purposes of the Contract it will be deemed that, prior to submitting his Bid, the Contractor acquainted himself fully with the information and data provided within the geotechnical report made available for inspection by bidders during the bidding period and, subject to the provisions of the Conditions of Contract, the Contractor shall have no claim against the Employer in respect of geotechnical or subsurface conditions encountered during the course of the Contract.

### 3. DELIVERABLES

The successful bidder must submit a comprehensive project schedule that clearly indicates the deliverable milestones, costs, time frames, delivery dates and progress reports

### 4. STAGES OF EVALUATION

Clearly outline the stages of evaluation applicable to the bid

**Stage 1: Administrative Compliance**

**Stage 2: Mandatory Requirements**

**Stage 3: Local Content and Production**

**Stage 4: Preference Point System**

#### STAGE 1: ADMINISTRATIVE COMPLIANCE

- All the proposals will be evaluated against the administrative responsiveness requirement as set out in the list of returnable documents Act

#### STAGE 2: LOCAL CONTENT AND PRODUCTION

Local content and production

i) In terms of the stipulated minimum threshold for local production and content for:

- Plastic pipes are 100%
- Valves, products, and actuators are 70%

The City shall only accept the specifications which meets minimum threshold percentage and requirements for local production and content as referred to in the Preferential Procurement Regulations on Local Content and the relevant National Treasury designated sectors' circulars.

ii) The bidder must clearly indicate as part of the bid submission the quantities of material and products to be supplied and the level of local content for each product. Should the bidder not be able to comply with the prescribed minimum threshold, an exemption received from the Department of Trade and Industry needs to be submitted with the bid to be considered for further evaluation. Bidders that do not comply with the above-mentioned requirements will be automatically disqualified.

The following items in this table have a minimum threshold of 100% local content

Product for designation	Minimum Local Content
High density polyethylene (HDPE) pipes	100%
PVC pipes	100%

Product for designation	Minimum Local Content
valves	70%

#### STAGE 3: MANDATORY REQUIREMENTS



Special disqualification criteria for the specific bid/project must be indicated, which could include non-submission of the following:

- Valid certificate confirming that the bidder has CIDB grading of 6CE or higher
- The Occupational Health and Safety Officer to be appointed for the project must have Occupational Health and Safety Certificate accredited by the SACPCMP board. (CV and Certificates must be provided)
- Proof of Qualifications and with minimum three (03) years' experience (Civil Engineering Technician NQF level 6) (CV indicating relevant experience minimum three (03) years' experience National Diploma from Technikon/University of Technology must be provided)
- Proof of Qualifications and experience (Artisan Plumbers NQF level 3) (CV indicating relevant experience, drivers' licence with PDP and plumbing certificate/ Red seal must be provided)
- Proof of qualifications and minimum of (3) years' experience working with Steel pipes (Steel Welders Arc NQF level 3/Red Seal) (CV indicating relevant experience, drivers' licence with PDP and Steel Arc welders' certificate must be submitted)
- Proof of qualifications and minimum of (3) years' experience welding HDPE pipes (HDPE Welders Fusion NQF level 3/Red Seal) (CV indicating relevant experience, drivers' licence with PDP and HDPE Fusion welders' certificate must be submitted)
- Three (3) Appointment letters and complete certificate, where the bidder completed water reticulation projects pipe laying project or repair and maintenance water reticulation project must be submitted.
- Owning/hiring of vehicle (Plumber's truck or LDV 1 Ton Bakkie suitable to load material; equipment and team consist of minimum of 4 personnel) Proof of ownership or rental/lease agreement must be provided.

NB:

Bidders must attach a bank guarantee letter not exceeding 6 months from a registered banking institution whether the bidder will be renting or leasing the vehicles.

If hiring 8 or more vehicles submit R 6 million bank guarantee not exceeding 6 months

If hiring 6 - 7 vehicles submit R 4 million bank guarantees not exceeding 6 months

If hiring 4 - 5 vehicles submit R 2 million bank guarantees not exceeding 6 months

- Owning/hiring of TLB machines, Hydraulic Excavator, Tipper truck must attach a proof of road worthy certificate from an accredited Vehicle Testing Station (VTS) as stated in Schedule 4 of the National Road Traffic Act No.93 of 1996, or from the manufacturer.

NB:

If owning the vehicles please attach vehicle registration document (registration numbers) and road worthy certificate, if hiring attach lease agreement with registration documents (registration numbers)



- Owning/hiring of steel pipe welding equipment (generator shielded metal Arc welding and Gas welding Oxy)
- Owning/hiring of HDPE Butt welding machine (welding range 315- 630)
- Owning/hiring of Butt weld machine (welding range 630-800)
- Owning/hiring of Butt weld machine (welding range 700- 1000)
- Owning/hiring of Walk behind roller compactor/plate compactor.
- Owning/hiring of Motorised Heavy Duty Pipe Cutter (> 50mm Dia).
- Owning/hiring of Water pump. (75mm -100 mm) centrifugal Water Pump, with minimum pumping head of 28m

NB:

If owning attach list of items on the company letter head, if hiring attach lease agreement not older than 6 months

#### **STAGE 4: PREFERENCE POINT SYSTEM**

Indicate whether the preferential points to be used will be the 90/10 points system in terms of the Preferential Procurement Policy Framework Act, 2000 (Act 5 of 2000)

- 90 points for price
- 10 points for B-BBEE status (service provider to submit the certified copy of the B-BBEE level rating certificate).

#### **5. VALIDITY PERIOD**

The validity period for the tender after closure is 90 days.

#### **6. PRICING SCHEDULE**

For pricing schedule, ***refer to Annexure 1.***

#### **7. MARKET ANALYSIS**

The City of Tshwane reserves the right to conduct a market analysis. Should the City exercise this option, where a service provider offers a price that is deemed not to be viable to supply goods or services as required, written confirmation will be made with the service provider to determine if it will be able to deliver on the price. If a service provider confirms that it cannot, the service provider will be disqualified based on being non-responsive. If the service provider confirms that it can deliver, a tight contract to mitigate the risk of non-performance will be entered into with the service provider. Further action on failures by the supplier to deliver will be handled in terms of the contract, including performance warnings and listing on the database of restricted suppliers.

The City of Tshwane further reserves the right to negotiate a market-related price with the service provider that scored the most points. If the service provider does not agree to a market-related price, the City reserves the right to negotiate a market-related price with the service provider that scored the second-most points. If the service provider that scored the second-most points does not agree to a market-related price, the City will negotiate a market-related price with the service provider that scored the third-most points. If a market-related price is not agreed, the City reserves the right to cancel the tender.

#### **8. OCCUPATIONAL HEALTH AND SAFETY**

## **General Notification**

This document forms an integral part of the Contract Specification and, in particular, shall constitute the Client's (City of Tshwane.) Occupational Health & Safety Specification, as required by the Construction Regulations, 2014, as promulgated under the Occupational Health and Safety Act (Act no. 85 of 1993).

This 'Health and Safety Specifications' document is governed by the "Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), hereinafter referred to as 'The Act'. Notwithstanding this, cognizance should be taken of the fact that no single Act or its set of Regulations can be read in isolation. Furthermore, although the definition of Health and Safety Specifications stipulates 'a documented specification of all health and safety requirements pertaining to associated works on a construction site, so as to ensure the health and safety of persons', it is required that the entire scope of the Labour legislation, including the Basic Conditions of Employment Act be considered as part of the legal compliance system. With reference to this specification document this requirement is limited to all health and safety issues pertaining to the site of the project as referred to here-in. Due to the wide scope and definition of construction work, every project activity and site will be different, and circumstances and conditions may change even on a daily basis. Therefore, due caution is to be taken by the Principal Contractor when drafting the Health and Safety Plan based on these Health and Safety Specifications. Prior to drafting the Health and Safety Plan, and in consideration of the information contained here-in, the contractor shall set up a Risk Assessment Program to identify and determine the scope and details of any risk associated with any hazard at the site, in order to identify the steps needed to be taken to remove, reduce or control such hazard. This Risk Assessment and the steps identified will be the basis or point of departure for the Health and Safety Plan. The Health and Safety Plan shall include documented 'Methods of Statement' (see definitions under Construction Regulations) detailing the key activities to be performed in order to reduce as far as practicable, the hazards identified in the Risk Assessment.

### **1.1. Overview on OHS specification framework and contractor management process**

#### **1.1.1. Definition of Terms**

- I. Client-Means any person for whom construction work is performed and or undertaken (City of Tshwane for the purposes of this project)
- II. Construction site means a workplace where a construction work is being performed
- III. Construction supervisor means a competent person responsible for supervising construction activities on a construction site.
- IV. Competent person means a person who –
  - a) Has in respect of the work or task to be performed the required knowledge, training and experience and where applicable, qualifications, specific to that work or task: Provided that where appropriate qualifications and training are registered in terms of the provision of the National Qualification

Framework Act 2000 (Act 67 of 2000), those qualifications and that training must be regarded as the required qualification and training and

b) Is familiar with the Act.

- V. Principal Contractor-Means an employer, as defined by Section 1 of the OHSACT who performs construction work and is appointed by the client to be in overall control and management of the construction site and works
- VI. Agent-Means a competent person who acts as a representative for a client in this case MIH Projects.
- VII. Occupational Health and Safety Specification- Means a documented specification of all Health and Safety requirements pertaining to the associated works on a construction site so as to ensure the health and safety of persons working ,visiting, passing, staying and working close to the construction site and or other applicable areas such as the site camp
- VIII. Risk-means the probability that injury or damage may occur
- IX. Hazard-means a source of or exposure to danger

### **1.1.2. Introduction**

In terms of the Construction Regulation 5 (1) of the OHS ACT, the client is required to compile an Occupational Health and Safety Specification for an intended project. This specification has an objective to ensure that the principal contractor entering into a contract with the client achieves and maintain an acceptable level of Occupational Health and Safety performance and compliance.

This document forms an integral part of the contract between the client and the principal contractor.

The Principal Contractor and its Contractors shall furthermore implement any reasonably practicable means to ensure compliance to this Occupational Health and Safety Specification and any other applicable legislation on their organization and/or activities performed by or for them

Compliance with this document does not absolve the principal contractor from complying with any other minimum legal requirement and the principal contractor remains responsible for the health and safety of his employees, those of his mandatories as well as any person coming on site or on adjacent properties as far as it relates to the protect activities.

### **1.1.3. City of Tshwane's commitment to Occupational Health and Safety Management**

City of Tshwane is committed to responsible occupational health, safety management. This commitment is essential to protect the environment, employees, mandatories, visitors and provide a work environment conducive to health and safety. Principal Contractors and their Contractors shall demonstrate their commitment and concern by:

- Ensuring that decisions and practices affecting occupational health and safety performance are consistent with the issued specification;
- Ensuring adequate resources are made available for the effective implementation of occupational health and safety control and mitigation measures;
- Participating in hazard identification and risk assessments and design safety reviews;

- Communicating occupational health and safety management processes, strategies and control measures with all levels of employees, contractor and/or visitors;
- Ensuring visible leadership at all sites;
- Promoting and enforcing the use of correct types of Personal Protective Equipment (PPE);
- Reporting and investigation of incidents and accidents and ensuring actions are identified and implemented to prevent similar types of incidents reoccurring;
- Participating in Client audits and meetings and ensuring required actions are implemented within reasonable time frames on the site/project;
- Recognizing and commending safe work practices and coaching employees who require guidance;
- Applying and enforcing consequence management from deviations and transgressions off/from compliance to this OHS Specification noted and/or observed, where applicable;
- Carrying out safety observations, implement corrective and preventative actions and giving immediate feedback;
- Encouraging employee participation in the formulation of work instructions and safety rules.

#### **1.1.4. Scope**

This is a project specific Occupational Health and Safety Specification that addresses the reasonable and foreseeable, risks, exposures and aspects of Occupational Health and Safety as affected by the repair, maintenance and ancillary work on the distribution water network,

The specification will provide the requirements that the principal contractor and other contractors will have to comply with in order to reduce the risk associated with the above-mentioned project and that may lead to incidents causing injury and/or ill health to a level as low as reasonably practicable and possible.

#### **1.1.5. Omissions from OHS Specification**

Where any omission from the OHS Specification is identified, applicable legal requirements will constitute the minimum standard for compliance to the relevant omission. The responsibility will be on the Principal Contractor to provide assurance to City of Tshwane on compliance to the applicable legal requirements related to the activity / task / process.

#### **1.1.6. Change or Review of Specifications**

Any changes identified or need of review of this OHS specification either by the Client or the Specification, approved changes and revisions will be done after communication between the two parties. A cost analysis on the implementation of the proposed changes / revisions will be calculated through a collaborative processes between City of Tshwane and the Principal Contractor – where the approved changes and/or revisions has no cost implication for

the Principal Contractor the Principal Contractor will be required to accept the approved changes / revisions and ensure implementation within the OHS Plan.

#### **1.1.7. Preparation and Submission of safety file**

The Principal Contractor will prepare a safety file containing the processes / procedures and templates to be applied during the project period for the scope of work. The Principal Contractor will be evaluated during the contract period against the submitted safety file.

At a minimum the safety file shall contain the following documentation:

1. Scope of work to be performed;
2. Public Liability
3. Personnel list (Principal Contractor employees);
4. OH&S Policy and other procedures;
5. Updated copy of the Occupational Health and Safety Act (Act no. 85 of 1993) and its Regulations.
6. Updated copy of the Compensation for Occupational Injuries and Diseases Act (Act no. 130 of 1993) and its Regulations;
7. Proof of valid registration and good standing with the Compensation Commissioner or another licensed Insurer;
8. OHS Plan agreed with City of Tshwane.
9. Agreement with Mandatory in terms of Section 37(1) &2 of the OHS Act.
10. Approved risk assessments, review and monitoring plans and safe work procedures (method statements);
11. A list of contractors (sub-contractors) including copies of the agreements between the parties and the type of work being done by each contractor;
12. Designs and/or drawings;
13. All written designations and appointments for project scope of work (CV and competency copies);
14. Management structure (inclusive of OH&S responsibility & meeting structure);
15. Induction training and site OHS rules;
16. Occupational health and safety training matrix / plan;
17. Arrangements with contractors and/or mandatories;
18. The following registers (as applicable to contract scope of work):
  - Accident and/or incident notifications, investigation & control register;
  - Occupational health and safety representatives inspection register;
  - Construction vehicles and mobile plan inspections;
  - Daily inspections templates of vehicles, plant and other equipment by the operator, driver and/or user;
  - Daily inspections templates of excavations by competent person;

- Toolbox talks pro-forma;
- Designer's inspections and structures record template;
- Inspection template of electrical installations (including inspection of portable electrical tools, electrical equipment and other electrical appliances);
- First-aid box content template;
- Record of first-aid treatment template;
- Fire equipment inspection and maintenance template;
- Record of hazardous chemical substances template kept and used on site;
- Machine safety inspections template (including machine guards, lock-outs etcetera);
- Inspection templates for lifting machines and –tackle (including daily inspections by drivers/operators);
- Inspections templates of structures;
- Templates of issuing of Personal Protective Equipment;
- Monthly reporting and recording of statistics templates;
- Keeping of any other record in terms of applicable legislation falling within the scope of OHS Legislation applicable to the project and the Principal Contractor / Contractor's activities and organization.
- Emergency preparedness and response programmes;

#### **1.1.8. Evaluation of Safety file**

City of Tshwane will conduct an initial inspection and evaluation of the Principal Contractor's OHS file for approval purposes to commence work. The Principal Contractor is required to submit the OHS file within 5 days after receiving the induction training from City of Tshwane. City of Tshwane will allocate 3 days to evaluate the file and to give feedback on the evaluation report of the file to the contractor. If the file has not been approved, the contractor shall ensure that the outstanding documents are submitted in the file for re-evaluation within 3 working days. If the OHS file cannot be approved, a report will be submitted to the evaluation committee for re-evaluation. The approval letter from City of Tshwane must be kept in the OHS file and any letter issued concerning the evaluation of the file. Principal Contractors are required to achieve at least 80% (Eighty Per cent) compliance on the entire safety file documentation to obtain approval by City of Tshwane

#### **1.1.9. Principal Contractor engagement phase**

The Principal Contractor shall commence with the construction work after approval of the safety file. The following processes will be applied to the Principal Contractors on a monthly basis for the duration of the contractual period:

- Monthly Compliance Assessments;
- Site Inspections;

- Progress meetings;
- Contractor forum meetings held at City of Tshwane
- Incident Investigations (where applicable).

#### **1.1.10. Project close-out and submission of consolidated Health & Safety File**

On completion of each project the Principal Contractor shall submit all documentation required for the consolidated safety file to City of Tshwane in an auditable format within 5 days of project completion. It is the responsibility of the Principal Contractor to deliver the consolidated safety file to the relevant City of Tshwane offices. At a minimum, the safety file will contain the following records:

1. Approval letter by City of Tshwane on contents of Health and Safety file including Health and Safety Management plan;
2. Scope of work performed;
3. OH&S Policy and other procedures;
4. Copy of the Occupational Health and Safety Act (Act no. 85 of 1993) and its Regulations;
5. Proof of registration and good standing with the Compensation Commissioner or another licensed Insurer;
6. OHS plan agreed with City of Tshwane including the underpinning risk assessment(s) and method statements;
7. A list of contractors (sub-contractors) including copies of the agreements between the parties and the type of work done by each contractor; (if applicable)
8. Notifications of new projects /extension of scope received;
9. Designs and/or drawings;
10. Occupational health and safety committee meeting agenda and minutes;
11. Copies of written designations and appointments (CV and competency copies);
12. Management structure (inclusive of OH&S responsibility & meeting structure);
13. Induction training conducted and site OH&S rules;
14. Occupational health and safety training provided;
15. Arrangements with contractors and/or mandatories;
16. Description of security measures;
17. Occupational health and safety rules and procedures applied during contract period;
18. The following registers:
  - Accident and/or incident register;
  - Occupational health and safety representatives inspections;
  - Construction vehicles and mobile plan inspections;
  - Daily inspections of vehicles, plant and other equipment by the operator, driver and/or user;

- Daily inspections of excavations by competent person;
- Toolbox talks conducted;
- Designer's inspections and structures records;
- Inspections of electrical installations (including inspection of portable electrical tools, electrical equipment and other electrical appliances);
- First-aid box content inspections;
- Record of first-aid treatment;
- Fire equipment inspection and maintenance records;
- Record of hazardous chemical substances kept and used on site;
- Ladder inspections;
- Machine safety inspections (including machine guards, lockouts, etcetera);
- Inspections for lifting machines and –tackle (including daily inspections by drivers/operators);
- Issue registers for Personal Protective Equipment;
- Monthly reporting and recording of statistics reports;
- Keeping of any other record in terms of applicable legislation falling within the scope of OHS Legislation applicable to the project and the Principal Contractor / Contractor's activities and organization.
- All other applicable records;
- Emergency preparedness and response programmes;
- Investigation and reporting of incidents and/or accidents (internal to Client and Department of Labour / Compensation Commissioner).

## **1.2. OHS Specification Requirements**

### **1.2.1. General Requirements of Health and Safety Plan**

#### **1.2.1.1. General**

Construction Regulation 7 (1) stipulates that the principal contractor must provide and demonstrate to the client a suitable sufficiently documented and coherent site-specific health and Safety Plan, based on the client's documented Health and Safety Specification contemplated in Regulation 5(1) (b), which plan must be applied from the date of commencement of and for the duration of the construction and which must be reviewed and updated by the principal contractor as work proceeds.

It will be expected from the Contractor to include in his safety plan method statements on how to accomplish the requirements relating to the Construction Regulations, 2014 and related incorporated standards and regulations.

Contractors should describe how their safety management systems will work and what control procedures they plan on using to ensure safety on the construction site

The following generic aspects should be covered in the Safety plan:



- What administrative procedures the Contractor envisages to use in the implementation and maintenance of the safety plan with reference to the construction site
- How continuous assessment of the safety plan will be assessed and implemented with respect to construction site
- What control systems the Contractor envisages to implement on site to support his safety program
- How the Contractor will ensure that he adheres to the construction regulations in respect of competent persons for appointments
- What external resources the Contractor envisages on using to ensure successful implementation and sustainability of the safety plan
- What training to employees the Contractor envisages and how he would go about to execute it
- The Contractor should indicate which competent persons he plans on employing

The Principal Contractor shall supply a detailed Health and Safety Plan for review by the Client, prior to site mobilization, to ensure compliance with the Construction Regulations, 2014. Mobilization shall be dependent upon the acceptance and approval of the Contractor's Health and Safety Management Plan by the Client.

#### **1.2.2. Outline of Health and Safety Plan**

The Contractor's Health and Safety Plan prepared in accordance with this specification shall consist of at least the following sections and sub-sections:

1. Purpose and Scope of Plan,
2. Risk Assessment,
  - a. Forms of Risk Assessment,
  - b. Methodology of Risk Assessment,
  - c. Elements of Risk Assessment,
    - i. Scope of assessment,
    - ii. Risks Identified,
    - iii. Risk Analysis,
    - iv. Risk Evaluation,
    - v. Risk Treatment (safe working procedures)
    - vi. Monitoring and reviewing,
3. Resources,
  - a. Health and Safety Staffing Organogram,
  - b. Supervisors, Inspectors and Issuers,
  - c. Employees,
  - d. Subcontractors inclusive of their scope of work and their core resources,
  - e. Training,
  - f. Plant,

- g. Vehicles,
    - h. Equipment
4. Materials,
  - a. Temporary Materials
  - b. Permanent Materials
5. Categories of Work
6. Implementation of Health and Safety Plan,
  - a. Administrative systems,
  - b. Training,
  - c. Reporting,
  - d. Monitoring,
  - e. Inspections,
7. Auditing,
  - a. Internal audits,
  - b. Follow-up audits,
8. Financial Aspects,
9. Emergency procedures and response

### **1.2.3. Risk Assessment**

#### **1.2.3.1. General**

This section of the specification provides guidelines for the Contractor in preparation of risk assessments in order to ensure compliance with Regulation 9 of the Construction Regulations, 2014. According to SANS 31000:2009, Risk is the overall process of risk identification, risk analysis, and risk evaluation. This section highlights the principles related to the preparation of suitable and sufficient risk assessments. Contractor Staff intending to prepare risk assessments should be trained and suitably experienced in the application envisaged.

A suitable and sufficient risk assessment is an assessment which:

- Accounts for risks that are likely to arise during the construction of the Works,
- Enables the development and implementation of systems to manage the risks,
- Remains valid for a reasonable period of time,
- Provides a basis for training of employees, and
- Improves working procedures and introduce long term controls.

The requirements of the Construction Regulations will not be satisfied by a single risk assessment exercise that holds good for all time. The risk assessment process on the Works is an ongoing process.

The objectives of risk assessments are to:

- Identify the risks that are mostly in need of reduction,

- Identify the various options for achieving such reduction,
- Identify the risks that require careful ongoing management, and
- Identify the nature of the required ongoing attention.

#### **1.2.3.2. Forms of Risk Assessment**

In order to ensure compliance with the Construction Regulations, the Contractor will be required to carry out the following three forms of risk assessment:

#### **1.2.3.3. Risk assessments**

The Contractor will be required to carry out a risk assessment before the commencement of construction activities on the Works. This “baseline” or “datum” risk assessment will form part of the Contractor’s Health and Safety Plan. The risks and hazards to which persons, plant, vehicles and facilities may be exposed during the construction of the Works should be identified and evaluated. Measures to reduce or control these risks or hazards should be defined during this assessment. The effectiveness of the measures defined and the baseline risk assessment prepared shall be monitored and reviewed from time to time to ensure that it remains relevant and accurate.

#### **1.2.3.4. Issue based risk assessments**

The Contractor will be required to carry out separate risk assessments during construction of the Works when methods and procedures are varied, for example when:

- Designs are amended,
- New machines are introduced,
- Plant is periodically cleaned and maintained,
- Plant is started-up or shut-down,
- Systems of work change or operations alter,
- Incidents or near-misses occur, or
- Technological developments invalidate prior risk assessments.

#### **1.2.3.5. Continuous risk assessments**

The Occupational Health and Safety Act specifically requires that employers shall provide and maintain working environments that are safe and without risk to health. The general awareness of hazards needs to be raised as work ethic to maintain a safe and risk-free environment on an ongoing basis. This is achieved by continuous risk assessments, the most important form of risk assessment that takes place as an integral part of day-to-day management.

Examples of continuous risk assessments include:

- Regular audits,
- Maintaining general hazard awareness,
- Pre-work risk assessment

#### **1.2.3.6. Methodology for the Preparation of Risk Assessments**

The Contractor shall in the preparation of risk assessments, follow the following general principles:

- Employ a team of suitably qualified individuals with appropriately varied and relevant experience in risk assessment,
- The appointed risk assessor shall lead the risk assessment,
- Provide the team with background data, scope of work, potential hazards and underlying causes, and
- Where necessary employ experts for complex risk assessments and aspects of risk assessments that require experiential judgment,
- Institute an ongoing system of identifying aspects of the work that require risk assessment, and
- Conduct risk assessments in workshops of the team or by individual members of the team under guidance of the leader as appropriate to the situation.

#### **1.2.3.7. Elements of a Risk Assessment**

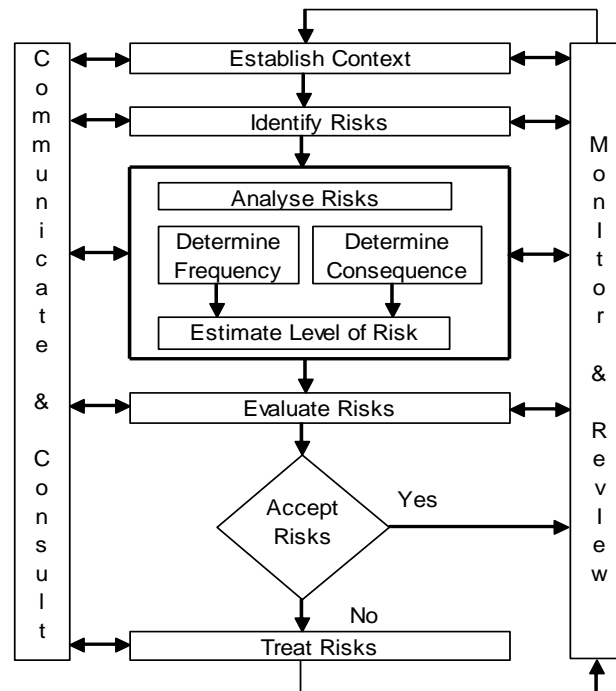
##### **General**

The process of carrying out a risk assessment consists of a number of well-defined steps. These steps improve decision-making by providing a greater understanding of the risks and their impacts. The main steps or elements of the risk assessment process are as follows:

- 1) Consider scope and nature of risks involved, determine purpose and physical and legal bounds of assessment and define risk evaluating criteria,
- 2) Systematically identify risks,
- 3) Analyze risks with regard to causes, likelihood of occurrence and possible consequences against the background of existing controls and its effectiveness,
- 4) Evaluate risks in terms of pre-established criteria to determine need and priority for attention,
- 5) Treat risks through a process of risk elimination, substitution, controlling risk at source, risk mitigation such as training and as far as risk remains, provide personal protective equipment (PPE),

- 6) Monitor and review progress and performance in terms of management system, and
- 7) Communicate and consult.

The following items form the continuing process of the risk assessment as indicated in Figure 1, below.



**Figure 1: Risk Management Process**

The Contractor shall ensure that the risk assessment compiled as part of his Health and Safety Plan contains at least these items. Refer to Baseline Risk Assessment for more clarity.

#### 1.2.3.8. Risk Identification

The Contractor should regard this step of the risk assessment as the most important. Subsequent analysis and evaluation of risks and the development of risk control measures are wasted if the risks or hazards on the Works are not carefully identified.

The Contractor should bear the following principles in mind when identifying the risks:

- i) Systematically address all risks or hazards on the Works,
- ii) Review all aspects of the work, but consider only those that have a potential to cause harm,
- iii) Rank the risks identified in order of importance and then use appropriately advanced techniques to deal with major risks,
- iv) Deal mainly with major risks and don't obscure these with unimportant information, especially minor risks,

- v) Address what actually happens in the workplace during the work activity
- vi) Consider all persons that may be affected,
- vii) Highlight those groups and individuals who may particularly be at risk, and
- viii) Review the adequacy and effectiveness of existing safety controls and measures

### 1.2.3.9. Risk Analysis

In this step, the Contractor will be required to analyze the risks identified by determining each risks frequency and magnitude or severity of the consequence of the risk or hazard.

The frequency of occurrence of a hazard may be expressed as the number of times that it may occur in year, decade, lifetime, century, or longer period, according to comparative human experience. The magnitude of the likely consequence of a hazard may be expressed in terms of the degree of incapacitation, number of people or costs involved. The frequency of occurrence of a hazard and the magnitude of its consequence may be compounded as the risk that it poses as shown in the “risk matrix” in Figure 2 below.

Frequency of Occurrence of Hazard	Severity of Consequences of Potential Hazard					
	1 Medically treatable injury	1 Compensable injury	10 Compensable injuries	1 Permanently disabling injury	1 Fatality	10 Fatalities
Frequent; 1 or more occurrences per year	Medium	High	Very high	Severe	Severe	Severe
Several times during a career; 0.1 occurrences per year	Medium-low	Medium	High	Very high	Severe	Severe
Unlikely, but possible during a career; 0.01 occurrences per year	Low	Medium-low	Medium	High	Very high	Severe
Very unlikely during a career; 0.001 occurrences per year	Low	Low	Medium-low	Medium	High	Very high
Barely credible; 0.0001 occurrences per year	Low	Low	Low	Medium-low	Medium	High

**Figure 2: Compounded Risk Matrix**

The columns in the table represent the likely consequence of the hazard and the rows, the frequency of occurrence. The scales for both quantities represent consistent progressions, able they qualitative. The risks evidently range from low to severe. Note that diagonals in the matrix represent the risks of the identified hazards, taking the effectiveness of controls into consideration.

The table represents a typical risk matrix that need not necessarily be adopted by the Contractor. The Contractor may use an alternative risk matrix provided that it is approved as part of his Health and Safety Plan.

### 1.2.3.10. Risk Evaluation

In this step the Contractor will be required to compare the risks found during the analysis process with similar risks previously experienced for the purpose of deciding how to treat the risk. A useful systematic approach for this purpose is as follows:

- If the assessed risk exceeds similar risks that have occurred in the past and that are considered to be unacceptable, the assessed risk will require treatment depending upon its magnitude as discussed in Section 4.4.5, or
- If the assessed risk exceeds similar historical risks that are acceptable, treatment of the assessed risk will depend on the extent by which it exceeds the historical risks, or

- If the assessed risk is less than historical risks that are unacceptable, treatment of the assessed risk will depend on the extent by which it is less than the historical risks, or
- If the assessed risk is less than historical risks that are acceptable, the assessed risk would also be acceptable and would not require any treatment.

#### **1.2.3.11. Risk Treatment**

The contractor must select one or more options of modifying risks, and implementing those options. The option(s) selected must be covered in the safety plan and be followed as prescribed. Reference can be made to SANS31000:2009 for different risk treatment options. SANS 31000:2009, clause 5.5.3 may be consulted in preparing and implementing risk treatment plans.

#### **1.2.3.12. Reporting and Recording**

The Contractor shall ensure that the risk assessment process is recorded in the form of a report and included in his Health and Safety Plan. The report should be easily accessible to the Contractor's employees, their representatives, to inspectors, the Employer or his Safety Agent and the Engineer. The essential contents of the report should be as follows:

- Objectives and expected outcomes,
- Description of the Works under assessment,
- Summary of context of study
- Composition of risk assessment team, (including qualifications and relevant experience),
- Approach used to systematically identify risks,
- Identified risks (ranked in order of priority),
- Method adopted for assessing frequencies and consequences of risks,
- Consequences (ranked in order of magnitude),
- Identification of individuals and groups who may be affected by major hazards and risk and who may especially be at risk,
- Basis for defining safety standards to be achieved,
- Contractor's resources devoted to risk assessment,
- Actions proposed to reduce unacceptably high risks,
- Review effectiveness of existing safety measures to control risks, and
- Implementation of programme of selected treatments (including controls to manage unacceptably high risks).

#### **1.2.3.13. Monitoring and Review**

The contractor must indicate in the safety plan the monitoring and review plan to be used during the project

#### **1.2.3.14. Communication and Consultation**



The Contractor will be required to communicate and consult with internal and external stakeholders during each step of the risk assessment process. Stakeholders will include the Employer and his Safety Agent, the Engineer and the Contractor's employees and consultants.

#### **1.2.4. Resources**

##### **1.2.4.1. General**

In this section of his Health and Safety Plan, the Contractor will be required to state how he intends to comply with the requirements of the Occupational Health and Safety Act, 85 of 1993 and all its Regulations and related incorporated standards with regards to the resources and facilities intended for use on the project

The Contractor shall provide in his Health and Safety Plan his intended Staffing Organogram for the construction work. The organogram should include those inspectors, supervisors and issuers as envisaged in the Construction Regulations, 2014 required for the construction work and any additional supervisory staff members as the Contractor (having taken the scope into account) considers necessary.

Copies of the supervisory staffs' curriculum vitae or portfolio of evidence and their appointment letters should be appended to the Contractor's Health and Safety Plan.

The Contractor's Health and Safety Plan should in addition cover at least the following aspects:

- The number of unskilled, semi-skilled and skilled (including Foreman, Charge hands, Artisans, Operators, Drivers, Clerks, Store man and Team Leaders) employees he intends employing on the Works,
- The health and safety training to be provided to the Contractor's employees,
- The programme of the health and safety training,
- Systems for the review of the effectiveness of the training provided, and
- Systems to determine further training requirements throughout the construction period.

Pro-forma letters of appointment for the various inspectors, supervisors and issuers as contemplated in the Construction Regulations, 2014 are included in Annexure 1 to this specification for use by the Contractor. The Contractor shall ensure that he includes in his Health and Safety Plan the appointment letters for all his inspectors, supervisors and issuers appointed for the Works.

The Contractor may make other additional legal appointments that are applicable to the project.

#### **1.2.5. Subcontractors**

The Contractor shall with reference to the use of subcontractors on the Works and without limiting his obligations, cover at least the following matters in his Health and Safety Plan:

- The steps intended to ensure that his Subcontractors prepare, implement and maintain Health and Safety Plans,

- How health and safety information will be made available to his Subcontractors when changes are brought about to the design,
- How he intends determining that his Subcontractors are registered and in good standing with the compensation fund or with a licensed compensation insurer prior to the commencement of the Works,
- How he intends determining if his Subcontractors have made provision in their tenders for the cost of health and safety measures during the construction of the Works,
- How he intends satisfying himself on the competencies and resources of Subcontractors he intends appointing, and
- How he intends ensuring that his Subcontractors perform risk assessments prior to commencing their respective portions of the Works.

#### **1.2.6. Competencies**

The Contractor shall establish if a person is competent to perform a certain duty or be appointed in a certain capacity by requesting all candidates to supply the required certificates of competency. Where certificates of competencies cannot be delivered, the Contractor shall request a portfolio of evidence from the respective candidates.

Contractors should do enquiries at the South African Qualifications Authority (SAQA) relating to the qualifications required for appointment of competent persons.

#### **1.2.7. Physical and Psychological Fitness**

Where required by the Occupational Health & Safety Act and its regulations the contractor shall ensure that his employees are in possession of a valid medical certificate of fitness to work in such an environment.

In terms of the Construction Regulations 2014, Regulation 7(8) stipulates that the Contractor shall ensure that all his or her employees have valid medical certificate of fitness specific to the work to be performed and issued by an occupational health practitioner in the form of Annexure 3.

#### **1.2.8. Plant, Vehicles and Equipment**

##### **1.2.8.1. Cranes**

This section of the specification shall be read in conjunction with the provisions of the Driven Machinery Regulations, 1988.

The Contractor shall with reference to Regulation 22: Cranes, of the Construction Regulations, 2003 and without limiting his obligations, cover at least the following matters in his Health and Safety Plan:

- How will environmental factors be taken into account in respect to the use of cranes,
- What systems he intends using to ensure the safety of all cranes in use,
- How he intends maintaining cranes in use,

- What tests will be performed to establish the safety of all cranes in use,
- What safety procedures and precautions are envisaged to ensure the safe operation of all cranes in use,
- How he will document the design, testing, maintenance and inspections of all cranes in use, and
- The contractor shall proof compliance of the Driven Machinery Regulation, 1988, with reference to the lifting machinery and tackle being used.

#### **1.2.8.2. Construction vehicles and mobile plant**

The Contractor shall with reference to Regulation 23: Construction vehicles and mobile plant of the Construction Regulations, 2014, and without limiting his obligations, cover at least the following matters in his Health and Safety Plan:

- How he intends ensuring that construction vehicles and mobile plant are:
  - Of acceptable design and construction,
  - Maintained and in good working order,
  - Used according to design specifications, and
  - Are protected from falling into excavations, water or areas lower than the working surfaces,
- How he intends ensuring that workers are trained, authorised and physically fit to operate construction vehicles and mobile plant,
- What traffic arrangements and safety precautions will be implemented to ensure safe operation of construction vehicles and mobile plant on the Works, and
- How he intends safeguarding employees against construction vehicles and mobile plant moving on the site.

#### **1.2.9. Electrical Installation and Machinery on project sites**

This section of the specification shall be read in conjunction with the provisions contained in the Electrical Installation Regulations, 1992.

The Contractor shall with reference to Regulation 24: Electrical Installation and machinery on construction sites of the Construction Regulations, 2014, and without limiting his obligations, cover at least the following matters in his Health and Safety Plan:

- How he intends safeguarding employees against electrical cables or apparatus under, over or on site, and
- How he will ensure that electrical installations are of adequate strength to withstand working conditions on a construction site.

#### **1.2.10. Ladders**

The Contractor shall with reference to Regulation 13A of the General Safety Regulations and without limiting his obligations, cover at least the following matters in his Health and Safety Plan:

- How he intends ensuring that ladders used are safe and constructed of materials approved for its intended use, and
- What precaution will be made to ensure the stability of ladders in use?
- How he intends to ensure that the Ladders are maintained

#### **1.2.11. Materials**

In this section of his Health and Safety Plan, the Contractor will be required to state how he intends to comply with the requirements of the Occupational Health and Safety Act, 1993 and all its regulations and related incorporated standards with regards to the design, supply, storage and erection of materials used for the temporary and permanent Works.

#### **1.2.12. Personnel Safety Equipment and Facilities**

The Contractor shall comply with Section 2 of the General Safety Regulations, and shall in particular provide all necessary personnel protective equipment for his personnel for the duration of the project period. To this end the Contractor shall without limiting his obligations indicate in his Health and Safety Plan:

- Identify training requirements in the Contractors Training plan in the use and maintenance of personal protective equipment,
- The type of personnel safety equipment he will provide,
- How he intends issuing it to his employees, and
- How he will maintain the personnel safety equipment issued.

#### **1.2.13. First Aid, Emergency Equipment and Procedures**

The Contractor shall comply with Section 3 of the General Safety Regulations regarding first aid, emergency equipment and procedures.

#### **1.2.14. Hazardous Chemical Substances**

The Contractor will be required to adhere to the Regulations for Hazardous Chemical Substances 1995 as amended in the handling and storage cement of and other hazardous chemical substances.

The Contractor must discuss the following in detail in his safety plan in respect of each hazardous chemical substance that will be used in the works:

- Storage of substance
- Handling of substance
- Protective clothing and other devices to be used while handling the substance
- Medical surveillance.

#### **1.2.15. Earthworks**

The Contractor shall, without limiting his obligations, cover at least the following matters in his Health and Safety Plan under this category of work:

#### **1.2.16. Excavation work**

Contractors will be required to adhere to Construction Regulation 13: Excavation work, of the Construction Regulations, 2014.

The Contractor must discuss the following in detail in his safety plan:

- How will the Contractor establish the stability of ground prior to excavations,
- What steps will the Contractor follow to ensure that bolstering, shoring and bracing is sufficient to ensure the safety of the excavation, and
- What steps will the Contractor follow to ensure the equipment used to safeguard an excavation is sufficient and safe?
- What steps will he implement in case of emergency (e.g. to prevent people from being buried under the trench if it falls)

#### **1.2.17. Implementation of Contractors' Health and Safety Plan**

The Contractor shall describe in his Health and Safety Plan how he intends implementing his plan.

The Contractor shall indicate the methods he intends using to ensure accurate record keeping of all critical elements identified in his risk assessment and covered in his Health and Safety Plan.

The Contractor shall indicate how inspections will be carried out, how shortcomings will be addressed, how he intends to review the safety plans, how he would train staff and how he would implement the findings and recommendations of audits or inputs of employees.

#### **1.2.18. Administrative Systems**

The Contractor shall comply with Section 9 of the General Administrative Regulations, 1996. The Contractor's administrative system shall without limiting his obligations, cover the following:

- Upkeep of a safety file on site,
- Maintenance of his Health and Safety plan,
- Procedures to follow for the appointment of competent persons,
- Procedures to follow for notifications,
- Injury on duty [IOD] administration,
- Recording of minutes of safety meetings,
- Recording of checklists,
- Safe keeping of checklists, and
- Inspections.

The Contractor shall in particular ensure that at least one copy of the Occupational Health and Safety Act, 1993 and its Regulations as amended is available on site for every 20 employees employed.

#### **1.2.19. Incident Management**

The Contractor shall develop an incident management procedure that will address how he intends to manage the incident/accidents on site. The procedure must explain how will the reporting, recording and investigation will be done and provide templates of forms and documentation to be used. The procedure must be in compliance with General Administrative Regulations, of Occupational Health and Safety Act.

#### **1.2.20. Reporting Systems**

All incidents must be reported to the Client/Safety agent and to the Labor Inspector. The Contractor shall comply with Section 8 of the General Administrative Regulations of the OHS Act

#### **1.2.21. Recording and investigation**

All incidents must be recorded in the form of annexure 1 and be kept for a period of at least three years. All incidents must be investigated and investigated within 7 days from the date of the incident. The Contractor shall comply with Section 9 of the General Administrative Regulations of the OHS Act

#### **1.2.22. Training**

The Contractor shall train all his employees in accordance with the requirements of section 13 of the Occupational Health and Safety Act, 1993. The Contractor shall ensure that every employee is informed of the following:

- The hazards of any work he has to perform or plant machinery or equipment he is permitted to use, and
- The precautionary measures which should be taken regarding the above.

The Contractor shall, without limiting his obligations, indicate in his Health and Safety Plan how he intends:

- Identifying the training needs of the personnel he intends employing, and
- Implementing the training identified
- What proof of induction training will be carried by his employees (e.g. laminated type identification card).

#### **1.2.23. General induction Training**

All members of the contractor's management as well as all the people appointed as responsible for Occupational Health and Safety in terms of the OHS Act, Construction Regulations and other Regulations are required to attend a general safety Induction.

All employees of the principal contractor and other contractors must be in possession of proof of Induction Training.

All subsequent and newly appointed employees must also be subjected to the Induction Training as soon as possible after the appointment but prior to start work on site.

#### **1.2.24. Site Specific Induction Training**

The principal contractor will be required to prepare the Task based Induction training based on the risk assessment for the contract work and train all employees who will be involved in the selected task. All employees must have a proof of such training and copies in the Safety File

#### **1.2.25. Other Training**

1. All operators, drivers and users of construction vehicles and mobile plants must be in possession of a valid proof of training and where applicable licenses and proof of competency
2. All employees in jobs requiring training in terms of the OHS Act and Regulations must be in possession of valid proof of training.
3. Awareness must be done in a form of Toolbox Talks for all employees in order to promote safety culture

#### **1.2.26. Notices and Signs**

The following notices and signs are, where applicable, compulsory on the construction site as well as the contraction yards.

<b>Area/Activity where construction sign is needed</b>	<b>Notice or sign required in</b>
Display of notices and signs	General Safety Regulation 2b
Entry	General Safety Regulation 2 (c)
First Aid	General Safety Regulation 3 (6)
Toilets and Change rooms	Facilities Regulation 2(5).4 (2) (f)
Hazardous and Chemical Storage area	General Safety Regulation 4 (8) (i) and (ii)

Machinery	General Machinery Regulation 9
Prohibition of smoking and eating or drinking at workplaces where high risk substances are stored or handled	Facilities Regulation 7

#### 1.2.27. Safety Meetings

The Contractor shall conduct at least one formal safety meeting in 3 months with his employees to ensure safety awareness and shall maintain appropriate records of attendance and meeting content. Such records shall be included in the safety file. Such meetings shall address at least the following:

- Accident / safety incidents
- Hazardous conditions
- Hazardous materials / substances
- Job or work projections
- Work procedures
- Protective clothing / equipment
- Housekeeping
- General safety topics

#### 1.2.28. Inspections and Monitoring

The Contractor shall be required to inspect each workplace prior to works commencing to ensure that all protective equipment is in place and that by entering the workplace no person will be exposed to any hazard which could affect his health or safety. The Contractor shall without limiting his obligations, indicate the following in his Health and Safety Plan:

- The inspection and monitoring procedures he intends employing to determine the safety of workplaces, and
- Who will be responsible for the checking of each workplace at the commencement of each shift.

The Contractor shall include in his Health and safety Plan all the checklists he intends using during the inspection and monitoring of the implementation of his Health and Safety Plan.

The Contractor can expect inspections of the works by any of the following parties:

- The Client or his Safety Agent,
- Department of Labor Inspector

In addition to site inspections performed by the Client or his safety agent they shall also do audits and assess the safety situation at the works and investigate incidents. Follow-up inspections will be performed to ensure compliance to recommendations done.

The Client, Safety Agent or his representative may stop the work at any time under the following conditions:



- If the Contractor is not compliant with his Health and Safety Plan
- Imminent threat to the health and safety of any person on site
- Continuous non-conformance to corrective action requests.

Inspections by the Labor Inspector or his representative will be random and the purpose would be to investigate complaints received by the Inspector or to investigate serious incidents.

Labor Inspector may issue prohibition notices to stop the activities at the works until the situation investigated has been resolved or he may issue an improvement notice whereby the Contractor will have a period to rectify any hazard identified by the inspector.

#### **1.2.29. Auditing**

##### **Audits by Client or Safety agent**

The audits contemplated in regulation 5 of the Construction Regulations, 2014 will be carried out by the client or its representative

The Contractor will ensure that the same arrangement detailed above be implemented with his Sub Contractors to ensure his compliance with the Construction Regulations.

The audits described above only constitutes part compliance by the Employer or the Safety Agent with regulation 5.(1)(o) of the Construction Regulations, 2014.

The Client or Safety Agent will be entitled to carry out audits or follow-up audits, as the case may be, at any time during the project period provided that:

- i) The audit or follow-up audit are carried out during ordinary working hours, and
- ii) The Employer or Safety Agent gives the Contractor at least 24 hours' notice of his intention to carry out such audits.

The Contractor's employees indicated in Section 9.1 will be present during any audit carried out by the Client or his Safety Agent.

#### **3.8. COVID 19 HEALTH AND SAFETY SPECIFICATIONS**

##### **Background**

Coronavirus Disease 2019 (COVID-19) is a respiratory disease caused by the SARS-CoV-2 virus. To reduce the impact of COVID-19 outbreak conditions on businesses, workers, customers, and the public, it is important for all employers to plan now for COVID-19. COVID-19 is characterized by Symptoms which can be mild, moderate, severe or fatal.

The legislation governing workplaces in relation to COVID-19 is the Occupational Health and Safety Act, Act 85 of 1993, as amended, read with the Hazardous Biological Agents Regulations. Section 8 (1) of the Occupational Health and Safety (OHS) Act, Act 85 of 1993, as amended, requires the employer to provide and maintain as far as is reasonably practicable a working environment that is safe and without risks to the health of employees. Specifically, section 8(2)(b) requires steps such as may be reasonably practicable to eliminate or mitigate any hazard or potential hazard before resorting to Personal Protective Equipment (PPE). However, in the case of COVID-19, a combination of controls is

required, although the main principle is to follow the hierarchy of controls.

While engineering and administrative controls are considered more effective in minimizing exposure to SARS-cov-2, PPE may also be needed to prevent certain exposures. While correctly using PPE can help prevent some exposures, it should not take the place of other prevention strategies.

Therefore it is important for the Contractor to:

- Ensure that COVID 19 Risk Assessment (COVID 19 Health and Safety Plan) is conducted and submitted to the Client prior to the commencement of the construction work, it must be in line with the Client COVID 19 Health and Safety Specification.
- The Contractor must appoint COVID 19 Compliance Manager, in this case the safety officer to ensure that all necessary COVID 19 safety precautions are implemented to prevent the spread.

Training and awareness:

- The Contractor must ensure that all employees are inducted on COVID19 contractor risk assessment to prevent the spread.
- The Contractor must ensure that the employees are trained on COVID 19 to prevent the spread of the virus, training records must be kept in the Safety File.
- COVID-19 Direction on Health and Safety in the Workplace Government Gazette dated 29 April 2020, must be used as guideline and be customized to specific construction site.
- The Contractor must provide workers with information that raises awareness in any form or manner, including where reasonably practicable leaflets and notices placed in conspicuous places in the workplace informing workers of the dangers of the virus, the manner of its transmission, the measures to prevent transmission such as personal hygiene, social distancing, use of cloth masks, cough etiquette and where to go for screening or testing if presenting with symptoms.

Hand Hygiene:

- The Contractor must provide adequate facilities for the washing of hands with soap and clean water on each construction site.
- The Contractor must provide 70% alcohol-based hand sanitizers at strategic points of the construction site.
- The Contractor must provide paper towels to dry hands after hand washing. Cleaning and Disinfecting surfaces:
- The Contractor must take measures to ensure that all work surfaces and equipment are disinfected before work begins, regular during the working period and upon completion the work.
- The Contractor must ensure frequently cleaning and disinfecting objects and surfaces that are touched regularly particularly in areas of high use such as shared tools, taps, ablution facilities, handrails light switches, eating and change room areas, shared construction vehicles, etc. using appropriate disinfecting solutions such as clean water, soap and bleach

- In area/s where a person was tested positive for COVID-19, an incident-based risk assessment approach, as specified in the Department of Employment and Labour's Direction and the Department of Health's Guideline need to be followed.
- If the individual merely passed through the construction site without touching anything and without spending much time in face-to-face communication with other employees, then simple manual surface cleaning measures would be appropriate.
- However, if the individual spent a considerable amount of time in the construction site, touched and handled many objects, equipment and surfaces and had close contact with several fellow workers, then more comprehensive manual surface cleaning of the environment would be warranted.
- The Department of Health does not endorse or require 'deep cleaning' that involves fumigation, demisting or fogging. Nor does the Department of Health require such a 'certificate of cleaning'.
- The Contractor shall ensure that only the affected area of the construction site that would be closed for cleaning and disinfection not closing the entire construction site.

#### Social Distancing:

- The Contractor must ensure minimal contact between workers and as far as practicable that there is a minimum of 1,5meter distance between workers while they are working. Employees are aware to maintain social distance when working.
- The Contractor must ensure that social distancing measures are implemented through supervision of both the construction site and in the common areas outside the workplace, through queue control or within the workplace, these measures may include dividing the workers into groups or staggering break times to avoid the concentration of workers in common areas.
- The Contractor must ensure that where the minimum distance is impossible employees must always be instructed to wear cloth mask/FFP1/2 mask or reducing the number of workers present in the construction site at any time to achieve the required social distancing.
- The Contractor must ensure that employees working in offices are provided with physical barriers placed between work their workstations

#### COVID 19 Personal Protective Equipment (PPE)

- The Contractor must ensure that every worker is provided with two cloth masks to be worn when in workplace or public which comply with the requirement set out in the guideline issued by Department of Trade, Industry and Competition.
- The main benefit of everyone wearing a cloth mask is to reduce the amount of virus droplets being coughed up by those with infection and transmitted to others and to surface that others may touch.
- Every Contractor must ensure that workers are informed, instructed, trained and informed as to the correct use

of cloth mask.

- The Contractor must ensure to issue face shield/visors where applicable as double protection.

#### Point of entry screening

- The Contractor must identify the screening area for each construction site.
- The Contractor must ensure that the daily point of entry screening is conducted when entering construction site by a person nominated by the Contractor.
- The Contractor must ensure that all employees and visitors are screened and only those with all clear will be given clearance to carry on with construction work.
- The Contractor must ensure that during the screening a 1.5 m distance is maintained and FFP1/2 mask to be worn by a nominated person.
- The Contractor must ensure that the screening person is trained.
- The Contractor must ensure that a bottle of sanitizer is available at the screening area.
- The Contractor must ensure that the thermal device is provided during the screening process.
- The Contractor must ensure that all employees complete a COVID 19 Questionnaire which will be used to screen potential risk personnel entering the construction site.

#### Symptomatic employees

- The Contractor must ensure that any person who ticks YES to one or more symptoms will be sent home and be advised to seek testing by a healthcare provider.
- The Contractor must ensure that employees who are sick with continuous cough, sore throat, difficulty breathing, or a high temperature in the workplace will be encouraged to stay home.
- The Contractor must ensure that the positive tested COVID 19 case, the employee is on paid sick leave in terms of section 22 of BCEA or if the employee's sick leave is exhausted, the Contractor shall apply for an illness benefit.
- The Contractor must ensure that employees confirmed to have COVID 19 will be managed in line with National Department of Health COVID 19 guidelines.
- The Contractor must isolate the worker with confirmed COVID case and issued him/her with FFP2 or surgical mask, arrange for the worker to be transported for further medical examination or testing, in a manner that does not place other workers or members of the public at risk
- The Contractor must ensure that the driver who is transporting the Person under Investigation is provided with surgical mask or FFP2 mask.
- The Contractor must assess the risk of transmission, disinfect the work area and refer those workers who may be at risk for screening to prevent possible transmission.

- The Contractor must advise the Communicable Disease Centre (CDC) so that other contacts be identified and be investigated
- The Contractor must ensure that tested positive for COVID 19 is not discriminated in terms of Employment Equity Act no. 55 of 1998.
- The Contractor must ensure that if there is evidence that the worker contracted COVID 19 as a result of occupational exposure, lodge a claim for compensation in terms of the Compensation for Occupational Injuries and Diseases Act no. 130 of 1993.
- The Contractor must ensure that if a worker has been diagnosed with COVID 19 and isolated in accordance with the National Department of Health Guidelines, a Contractor may only allow a worker to return to work on the following conditions, the worker has undergone a medical evaluation confirming that the worker has been tested negative for COVID 19.

#### Recommended Best Practice

- The Contractor must ensure that vulnerable and 60 years old workers are identified and received a special measure for their protection.
- The Contractor must ensure that for communication strategy Microsoft Team, ZOOM or Skype or cell phones are used to prevent the spread of COVID 19 virus.
- The Contractor must ensure to keep the workplace well ventilated by natural or mechanical means to reduce the SARS – CoV – 2 viral loads.

#### Emergency Numbers

- Corona virus (COVID-19) 24-Hour Hotline number:0800 029 999
- Corona virus (COVID-19) WhatsApp Number: 0600 12 3456

# ANNEXURE 1 LEGAL APPOINTMENTS TEMPLATES

Attention: (*Assistant Construction Manager's Name*)

## **APPOINTMENT OF THE ASSISTANT CONSTRUCTION MANAGER IN TERMS OF CONSTRUCTION REGULATION 8(2)**

I, (*contractor's name*) hereby appoint you (*assistant construction manager's name*) as the assistant manager responsible for (*site address*) to carry out the construction work of (*description of construction work and area of responsibility*).

In terms of this appointment you are required to ensure that all construction work performed under your supervision is carried out as follows:

1. By persons suitably trained and competent to do such work;
2. That all persons are aware and understand the hazards attached to the work being carried out;
3. That the required risk assessments are carried out;
4. That precautionary measures are identified and implemented;
5. That discipline is enforced at the construction site at all times;
6. That all identified statutory requirements are met; and
7. That any other interest in terms of health and safety with respect to the responsible area is met.
8. You will accept the duties of the Construction manager in his absence.

You are required to report any deviations of the above-mentioned instruction to (**construction manager's name**) and in his absence to the contractor's representative.

This appointment is valid from (**date**) to the completion of the stipulated construction work.

You shall submit a written weekly report or any non-compliance with the Construction Regulations, 2014.

\_\_\_\_\_  
Contractor's Representative full name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

.....  
.....

Kindly confirm your acceptance of this appointment by completing the following:

I, (**assistant construction manager**) understand the implications of the appointment as detailed above and confirm my acceptance.

\_\_\_\_\_  
Assistant construction Manager

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Attention: (**Safety Officer's Name**)

## **APPOINTMENT OF THE CONSTRUCTION HEALTH AND SAFETY OFFICER IN TERMS OF CONSTRUCTION REGULATION 8(5)**

I, (*contractor's name*) hereby appoint (*safety officer's name*) as the Construction Health and Safety Officer responsible for (*site address*) to manage all the health and safety issues as required in terms of the Act by establishing a health and safety program with elected health and safety Representatives.

You shall ensure that all the requirements in terms of the Act and in particular in terms of the Construction Regulations, 2014 are met. You shall also ensure that all appointed sub-contractors comply with the requirements as stipulated in the Construction Regulations, 2014.

You shall further ensure that all records, registers and required lists are maintained and shall stop construction work upon identifying any non-compliance by any contractor; this includes stopping any work should the competency of the person carrying out such work be questionable.

This appointment is valid from (*date*) to the completion of the stipulated construction work.

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Contractor's Representative full name	Signature	Date
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.....

Kindly confirm your acceptance of this appointment by completing the following:

I, (*construction health and safety officer's name*) understand the implications of the appointment as detailed above and confirm my acceptance.

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Construction Health & Safety Officer's full name	Signature	Date
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Attention: (*Construction Vehicle and Mobile Plant Inspector*)

## **APPOINTMENT OF THE CONSTRUCTION VEHICLE AND MOBILE PLANT INSPECTOR IN TERMS OF CONSTRUCTION REGULATION 23(1) (d)**

I, (*contractor's name*) hereby appoint (*construction vehicles and mobile plant inspector's name*) as the construction vehicles and mobile plant inspector responsible for (*site address*) to inspect on a daily basis all construction vehicles and mobile plant, as per the provided checklist.

You shall ensure that when becoming aware of any health and safety hazards in respect to construction vehicles and mobile plant that these hazards are reported in writing to the Construction Health and Safety Officer and Construction supervisor, and the necessary precautionary measures are taken and enforced.



You shall further ensure that the requirements of the Construction Regulations, 2014 are at all times met.

This appointment is valid from (*date*) to the completion of the stipulated construction work.

Contractor's Representative full name	Signature	Date
.....		

Kindly confirm your acceptance of this appointment by completing the following:

I, (*construction vehicles and mobile plant inspector's full name*) understand the implications of the appointment as detailed above and confirm my acceptance.

Construction vehicles and mobile plant Inspector's full name	Signature	Date
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Attention: (*Sub-Contractor's Name*)

#### **APPOINTMENT OF SUB-CONTRACTOR IN TERMS OF THE CONSTRUCTION REGULATION 7(c)**

I, (*contractor's name*) hereby appoint (*sub-contractor's name*) as the sub-contractor responsible for (*site address*) to carry out the construction work of (*description of construction work*).

You shall ensure that you meet all the requirements in terms of the Act and in particular in terms of the section 37(2) agreement and the Construction Regulations, 2014. You shall also ensure that all contractors appointed by yourself and reporting to you comply with the requirements as stipulated in the Construction Regulations, 2003.

You shall also ensure that all the information and specifications to ensure that the construction work is carried out in a safe manner are carried over to all contractors appointed and reporting to you.

You shall further ensure that all records, registers and required lists are maintained and that all persons appointed to carry out tasks as stipulated by these regulations are competent and have the necessary resources to complete their tasks effectively in such a manner that health and safety is not in any manner compromised.

This appointment is valid from (*date*) to the completion of the stipulated construction work.  
You shall submit a written weekly report on all shortfalls that have not been met in terms of these regulations.

\_\_\_\_\_  
Contractor's Representative full name      Signature      Date

Kindly confirm your acceptance of this appointment by completing the following:

I, (*sub-contractor's name*) understand the implications of the appointment as detailed above and confirm my acceptance.

\_\_\_\_\_  
Sub-Contractor's Representative full name      Signature      Date

Attention: (*Construction Manger's Name*)

**APPOINTMENT OF THE CONSTRUCTION MANAGER IN TERMS OF  
CONSTRUCTION REGULATION 8(1)**

I, (*contractor's name*) hereby appoint (*construction manager's name*) as the Manager responsible for (*site address*) to carry out the construction work of (*description of construction work and area of responsibility*).

In terms of this appointment, you are required to ensure that all construction work performed under your supervision is carried out as follows:

1. By persons suitably trained and competent to do such work;
2. That all statutory appointments have been completed;
3. That, where required, health and safety committees are established and that meetings are accordingly held;
4. That all persons are aware and understand the hazards attached to the work being carried out;
5. That the required risk assessments are carried out;
6. That precautionary measures are identified and implemented;
7. That discipline is enforced at the construction site at all times;
8. That all identified statutory requirements are met; and
9. That any other interests in terms of health and safety with respect to the responsible area is met.
10. You will in writing delegate your duties to the Assistant Construction Supervisor while absent from site.

You are required to report any deviations of the above-mentioned instructions to (*contractor's name*). This appointment is valid from (*date*) to the completion of the stipulated construction work. You shall submit a written weekly report on all shortfalls that have not been met in terms of these regulations.

\_\_\_\_\_  
Contractor's Representative full name      Signature      Date

Kindly confirm your acceptance of this appointment by completing the following:

I, (*construction manager*) understand the implications of the appointment as detailed above and confirm my acceptance.

\_\_\_\_\_  
Construction Manager's full name      Signature      Date

Attention: (*Excavation Work Supervisor's Name*)

**APPOINTMENT OF THE EXCAVATION WORK SUPERVISOR IN TERMS OF  
CONSTRUCTION REGULATION 13 (1)(a)**

I, (*contractor's name*) hereby appoint (*excavation work supervisor's name*) as the excavation work supervisor responsible for (*site address*) to supervise and carry out all the necessary inspections in terms of all excavation work as per the provided checklist.

You shall ensure that when becoming aware of any health and safety hazards in respect to excavation work that that these hazards are reported in writing to the Construction Health and Safety Officer and Construction supervisor, and the necessary precautionary measures are taken and enforced.

You shall further ensure that the requirements of the Construction Regulations are at all times met. This appointment is valid from (*date*) to the completion of the stipulated construction work.

\_\_\_\_\_  
Contractor's representative full name      Signature      Date

Kindly confirm your acceptance of this appointment by completing the following:

I, (*excavation work supervisor's full name*) understand the implications of the appointment as detailed above and confirm my acceptance.

---

Excavation Work Supervisor full name      Signature

---

Date

Attention: (*Ladder Inspector's Name*)

**APPOINTMENT OF THE LADDER INSPECTOR IN TERMS OF THE GENERAL  
SAFETY REGULATION 13(A)**

I, (*contractor's name*) hereby appoint (*ladder inspector's name*) as the ladder inspector responsible for (*site address*) to manage ladders on site. You should inspect the ladders as per the checklist at least once a week.

You shall ensure that when becoming aware of any health and safety hazards in respect to ladders that these hazards are reported in writing to the Construction Health and Safety Officer and Construction supervisor and the necessary precautionary measures are taken and enforced.

You shall further ensure that the requirements of the Construction Regulations, 2003 are at all times met.

This appointment is valid from (*date*) to the completion of the stipulated construction work.

---

Contractor's representative full name      Signature

---

Date

Kindly confirm your acceptance of this appointment by completing the following:

I, (*ladder inspector's full name*) understand the implications of the appointment as detailed above and confirm my acceptance.

---

Ladder inspector's full name

---

Signature

---

Date

Attention: *(Risk Assessor's Name)*

**APPOINTMENT OF THE CONSTRUCTION SITE RISK ASSESSOR IN TERMS OF  
CONSTRUCTION REGULATION 9(1)**

I, *(contractor's name)* hereby appoint *(risk assessor's name)* as the construction site risk assessor responsible for *(site address)* to carry out risk assessments prior to the commencement of construction work and any other risk assessment that may be required for the duration of the construction work.

You shall ensure that all risks are identified and analyzed and that safe working procedures are drafted and implemented to reduce, mitigate or controls the hazards that were identified.

You will at least use the risk evaluation program with the provided checklists.

This appointment is valid from *(date)* to the completion of the stipulated construction work.

\_\_\_\_\_  
Contractor's representative full name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Kindly confirm your acceptance of this appointment by completing the following:

I, *(construction site risk assessor's name)* understand the implications of the appointment as detailed above and confirm my acceptance.

\_\_\_\_\_  
Construction site Risk Assessor

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Attention: *(Stacking and Storage Supervisor's Name)*

**APPOINTMENT OF THE STACKING AND STORAGE SUPERVISOR IN TERMS OF  
CONSTRUCTION REGULATION 28 (a)**

I, *(contractor's name)* hereby appoint *(stacking and storage supervisor's name)* as the stacking and storage supervisor responsible for *(site address)* to manage all stacking and storage on site.

You shall inspect all new stacking and thereafter as often as needed according to the checklist.

You shall ensure that when becoming aware of any health and safety hazards in respect to stacking and storage that these hazards are reported in writing to the Construction Health and Safety Officer and Construction supervisor, and the necessary precautionary measures are taken and enforced.

You shall further ensure that the requirements of the Construction Regulations are at all times met. On identifying any shortfalls or hazards convey such information in writing to the construction supervisor.

This appointment is valid from *(date)* to the completion of the stipulated construction work.

\_\_\_\_\_  
Contractor's Representative full name      Supervisor      Date

Kindly confirm your acceptance of this appointment by completing the following:

I, *(stacking and storage supervisor's full name)* understand the implications of the appointment as detailed above and confirm my acceptance.

\_\_\_\_\_  
Stacking and Storage Supervisor's      Signature      Date

#### Attention: First Aider

#### OCCUPATIONAL HEALTH AND SAFETY ACT (ACT 85 OF 1993), GENERAL SAFETY REGULATIONS 3(4) – FIRST AIDER

I, \_\_\_\_\_, having been appointed as contemplated in Section 16(2) of the Occupational Health and Safety Act (85 of 1993), hereby appoint you, \_\_\_\_\_, as First Aider for the \_\_\_\_\_.

---

#### RESPONSIBILITIES

1. Ensure you inspect the contents of the first aid box at least once per month.
2. Ensure all dressing undertaken is recorded on the treatment register.
3. Ensure deviations noted are reported to your supervisor.
4. Ensure the necessary signage is placed to define first aid box placement and responsible first aider's name.

Kindly confirm your acceptance of this appointment and understanding of the duties involved by signing this legal appointment.

Yours faithfully

---

### **SECTION 16 (2) APPOINTEE**

I accept the appointment as set out above and confirm my understanding of the duties involved.

Signed: \_\_\_\_\_

Date: \_\_\_\_\_

### **Attention: Safety Representative**

### **OCCUPATIONAL HEALTH AND SAFETY ACT (ACT 85 OF 1993)**

### **SECTION 17 – HEALTH AND SAFETY REPRESENTATIVE**

I, \_\_\_\_\_, having been appointed as contemplated in Section 16(2) of the Occupational Health and Safety Act (85 of 1993), hereby appoint you, \_\_\_\_\_, as Health and Safety Representative, as contemplated in Section 17 of the Occupational Health and Safety Act (85 of 1993).

You are hereby appointed from \_\_\_\_\_ until  
\_\_\_\_\_ as a Health and Safety Representative for the following project:  
\_\_\_\_\_

### **RESPONSIBILITIES**

1. Review the effectiveness of the Health and Safety measures within your area of responsibility;
2. Assess the potential hazards to the Health and Safety of the employees at the workplace;
3. Investigate the causes of incidents and all complaints from the employees relating to their Health and Safety;

4. Inspect the workplace and report on such inspection, and the aspects mentioned in (1), (2) and (3) above, to the employer;
5. Participate in the investigations into incidents, in your designated area as contemplated in Section 18 of the Occupational Health and Safety Act (85 of 1993).

Kindly confirm your acceptance of this appointment and understanding of the duties involved by signing this legal appointment.

Yours faithfully

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#### **SECTION 16 (2) APPOINTEE**

I accept the appointment as set out above and confirm my understanding of the duties involved.

Signed: \_\_\_\_\_

Date: \_\_\_\_\_

## **ANNEXURE 2 IDENTIFIED HEALTH AND SAFETY HAZARDS**

### **Identified Hazards**

In terms of Regulation 9 (1) (a) of the Construction Regulations 2003 the following hazards anticipated with the scope of work have been identified.

**NOTE:** The list of potential hazards is by no means intended to be all inclusive and is not limited to this list, and it remains the responsibility of the Contractor to identify all possible hazards with regards to his scope of work and to put measures in place to mitigate, reduce or control these hazards.

### **Potential Hazards**

1. Commissioning of new installations



2. Confined space entry
3. Demolition/breaking into existing structures
4. Excavation shoring / brazing
5. Excavations been flooded during rainy season
6. Explosives
7. Hazardous material handling / storage / management
8. Heat stress
9. Loading and off-loading vehicles
10. Manual handling of materials
11. Plant and equipment integrity
12. Public and traffic safety
13. Requirements for plant isolations
14. Safe usage and storage of Oxygen, Acetylene and LPG cylinders
15. Scaffolding
16. Stacking and storage of equipment / materials
17. Tie-ins into existing equipment
18. Usage of compressed air and equipment
19. Working in operational areas
20. Working on live electrical installations / sub-stations / MCC rooms
21. Working on moving equipment.

# **ANNEXURE 3 ACKNOWLEDGEMENT OF RECEIPT OHS SPECIFICATION**

**Acknowledgement of receipt of OHS Specification:**

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Name of Designer/Contractor

I, the undersigned, hereby acknowledge that I have obtained copies of OHS Specification and confirm full compliance to the conclusion of project or construction work.

Signed at .....on this ..... Day of.....20.....

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Signature of Designer /Contractor Manager

-----  
Date

-----  
Signature of Contractor Supervisor

-----  
Date

Witness 1 ..... Witness 2 .....

	<p><b>City of Tshwane: Regional Operations and Coordination</b></p> <p><b>Baseline Risk Assessment document</b></p>
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**PROJECT INFORMATION:**

<b>CONTRACT NR:</b>	<b>LOCATION:</b> Tshwane Wide	<b>SCOPE OF WORK: TENDER FOR APPOINTMENT OF CONTRACTORS FOR REPAIR, MAINTENANCE AND ANCILLARY WORK ON THE DISTRIBUTION WATER NETWORK FOR ALL 7 REGIONS FOR A PERIOD OF 3 YEARS, AS AND WHEN REQUIRED.</b>
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**RISK RATING AND ABBREVIATIONS:**

Risk Rating	Abbreviations
15-25 EXTREME	O= OCCUPATIONAL
8 - 14 HIGH	H = HEALTH
4 - 7 MEDIUM	S=SAFETY
1 - 3 LOW	

**RISKS CONSEQUENCES AND PROBABILITY:**

RISKS	CONSE- QUENCES	PROBABILITY				
		Almost Certain	Likely	Possible	Unlikely	Almost Impossible
		5	4	3	2	1
<b>OHS</b> Multiple fatalities, or significant irreversible effects to >50 persons Serious, long term environmental impairment of ecosystem function Very serious impact on quality of product/service. Definite loss of customer or discontinuation of contract with service provider	5	25	20	15	10	5
<b>OHS</b> Single fatality and/or severe irreversible disability to one or more persons Serious medium term environmental effects Serious impact on quality of product / Probable loss of customer or discontinuation of contract with service provider	4	20	16	12	8	4

RISKS		CONSEQUENCES	PROBABILITY				
			Almost Certain	Likely	Possible	Unlikely	Almost Impossible
			5	4	3	2	1
<b>OHS</b>	Moderate irreversible disability or impairment (<30%) to one or more persons. Moderate, short-term effects but not affecting ecosystem function Moderate impact on quality of product / Possible loss of customer or discontinuation of contract with service provider	3	15	12	9	6	3
<b>OHS</b>	Objective but reversible disability requiring hospitalization Minor effects on biological or physical environment Minor impact on quality of product / Minor impact on relationship with customer or service provider	2	10	8	6	4	2
<b>OHS</b>	No medical treatment required. Limited damage to minimal area of low significance Limited impact on quality of product / Minimal impact on relationship with customer or service provider	1	5	4	3	2	1