

ROADS & TRANSPORT DEPARTMENT

TRANSPORTATION PLANNING DIVISION



TENDER FOR THE INSTALLATION, MAINTENANCE OF INDUCTIVE LOOPS FOR AUTOMATIC TRAFFIC MONITORING SITES AND UPGRADING OF TRAFFIC MONITORING EQUIPMENT AND SOFTWARE WITHIN THE CITY OF TSHWANE, ON BASIS OF AS AND WHEN REQUIRED FOR A PERIOD OF THREE YEARS (36 MONTHS)

VOLUME 1

A Tender for Category 4CE/EB or higher CIDB registered Contractors

ISSUED BY:	PREPARED BY:
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Registered Name of Tenderer:	
Trading Name of Tenderer:	
Registration No. of Entity:	CoT Vendor No:
CIDB CRS Number (s):	CSD Number (s):
Contact Person:	
Tel. No:	E-Mail Address:
Cell No:	Fax No:

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PORTION 1: TENDER

PART T1: TENDER PROCEDURES

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T1.1 TENDER NOTICE AND INVITATION TO TENDER

RTD 07-2025/26

CITY OF TSHWANE ROADS AND TRANSPORT DEPARTMENT

Tender for the installation, maintenance of inductive loops for automatic traffic monitoring sites and upgrading of traffic monitoring equipment and software within the City of Tshwane, on basis of as and when required for a period of three years (36 months)

Tenders are hereby invited for the above tender.

Tenderers should have a CIDB contractor grading designation of **4CE/EB** or higher.

The tender documents will be available on the City of Tshwane and national treasury official website (www.tshwane.gov.za) or www.etenders.gov.za

Tenders will be evaluated based on the **80/20** Preference Point System will be applied to this tender.

A **COMPULSORY BRIEFING MEETING** with a representative of the Employer will take place at Sammy Marks Council Chamber, 1st Floor, Sammy Marks Square, cnr Lilian Ngoyi and Madiba Street, Pretoria **on the 13 October 2025 at 10h00.**

The lowest or any tender will not necessarily be accepted, and the Municipality reserves the right to accept any tender as a whole or in part or no tender.

Tenders must remain valid for a period of **90 days** after the closing date for the submission of tenders, during which period a tender may not be amended or withdrawn and may be accepted at any time by the Municipality.

The closing time for receipt of tenders is **10h00 on the 03 November 2025.** Tenders will be received on the closing date and time shown, must be enclosed in sealed envelopes bearing the applicable tender heading and reference number, as well as the closing time and due date, and must be addressed to the Divisional Head, Supply Chain Management, P O Box 1401, Pretoria, 0001 and must be submitted in the tender box situated at **Tshwane House, 320 Madiba Street, Pretoria, 0002.** Tenders will be opened at the latter address at the time indicated.

Only bidders registered on the central supplier database (CSD) and with a CSD number will be considered for this tender, as this is a requirement from the National Treasury.

“Note: Bidders are required to submit electronic copies of the bid by memory stick/USB flash drive together with the hard copy of the Bid/Proposals”.

ENQUIRIES:	Employers Agent:	Thubeni P. Ntakakaze
	Tel (Office):	012 358 4835
	E-Mail:	thubenin@tshwane.gov.za

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 City of Tshwane Metropolitan Municipality
C.1.2	Tender Documents	<u>Volume 1: Tender Document</u> THE TENDER Part T1: Tendering Procedures T1.1 – Tender Notice and Invitation to Tender T1.2 – Tender data T1.3 – Standard Conditions of Tender Part T2: Returnable documents T2.1 – List of returnable documents T2.2 – Returnable schedules THE CONTRACT Part C1: Agreements and contract data C1.1 – Form of offer and acceptance C1.2 – Contract data C1.3 – Form of guarantee C1.4 – Guarantee (Cash deposit) C1.5 – Health and safety agreement C1.6 - Application for a permit to Department of labour to do construction work C1.7 – Adjudicators contract Part C3: Scope of work C3 – Scope of work Part C4: Site information C4 – Site information <u>Volume 2: Tender Drawings</u>
C.1.3	Interpretation	Add 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	Agent: Thubeni P. Ntakakaze Address: 225 Madiba Street Tel: 012 358 4835 E-Mail: ThubeniN@Tshwane.gov.za

CLAUSE NUMBER	TENDER DATA
C.2.1 Eligibility	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 4CE/EB or higher class of construction work, are eligible to submit tenders. Joint Ventures are eligible to submit tenders provided that: - every member of a joint venture is registered with the CIDB within 21 days of the closing date of tenderers; - the lead partner has a contractor grading designation in the 3CE/EB or higher class of construction work; and - 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 4CE/EB 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.
C.2.2 Cost of Tendering	The employer will not compensate the tenderer for any costs incurred in attending interviews or making any submissions in the office of the employer.
C.2.5 Reference Documents	Add the following: Unless specified otherwise in this document, the following standards and conditions of contract will be applicable under this Contract: - The document <i>“Standard Specifications for Municipal Civil Engineering Works”, Third Edition, 2005</i> issued by the Divisional Head: Roads and Stormwater of the City of Tshwane. This document is obtainable free of charge on the website www.tshwane.gov.za. - The latest print version as current at 30 days before close of tenders of the document <i>“General Conditions of Contract for Construction Works 3rd Edition, 2015”</i> including corrections thereto as current at 30 days before close of tenders, as published by the <i>South African Institution of Civil Engineering</i>. The document may be purchased in hard copy from the <i>South African Institution of Civil Engineering</i> or may be purchased online as an electronic reference document in PDF format by following the relevant links on www.saice.org.za. The corrections may be downloaded from the SAICE website www.saice.org.za.
C.2.7 Briefing meeting	The arrangements for a compulsory briefing meeting are as stated in the tender notice and invitation to tender 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. Tender documents will be made available in the City of Tshwane website(www.tshwane.gov.za).
C.2.8 Seek clarification	Replace the clause with the following: <i>Request clarification of the tender documents, if necessary, by notifying the employer at least 7 (seven) working days before the closing time stated in the tender data.</i>
C.2.9 Insurance	Add the following to the clause

CLAUSE NUMBER	TENDER DATA
	<i>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.</i>
C.2.12 Alternative offers	Alternative tender offers will <u>not</u> be considered.
C.2.13 Submitting a tender offer	- The tender offer <u>shall be completed in non-erasable black ink</u> - Any entry made by the tenderer in the document which the tenderer desires to change, <u>shall not be erased or painted out.</u> A line shall be drawn through the incorrect entry and the correct entry shall be written above in <u>non-erasable black ink</u> and the <u>full signature</u> of the tenderer shall be placed next to the correction.
C.2.13.2	<u>Replace</u> the contents of the clause with the following: <i>Return all volumes of the tender document to the Employer after completion of the relevant sections of each volume in their entirety, either electronically (if they were issued in electronic format) or by writing in black ink.</i> <i>All volumes are to be left intact in original format and no pages shall be removed or re-arranged</i>
C.2.13.3	Parts of each tender offer communicated on paper shall be submitted as an original, plus a scanned copy in PDF format on a Memory stick/flash disc (USB). In addition to the hard copy submission, each tenderer is required to submit a scanned copy of the <u>fully completed and signed</u> tender submission document. This is to be on a flash disc (USB) attached to the original tender submission documents, adequately identifiable as belonging to the tenderer, be in PDF format scanned, and be in full colour.
C.2.13.4	<u>Add</u> the following to the clause <i>Only authorised signatories may sign the original and all copies of the tender offer where required.</i> <i>In the case of a ONE-PERSON CONCERN submitting a tender, this shall be clearly stated.</i> <i>In the case of a COMPANY submitting a tender, include a copy of a <u>resolution by its board of directors</u> authorising a director or other official of the company to sign the documents on behalf of the company.</i> <i>In the case of a CLOSE CORPORATION submitting a tender, include a copy of a <u>resolution by its members</u> authorising a member or other official of the corporation to sign the documents on each member's behalf.</i> <i>In the case of a PARTNERSHIP submitting a tender, <u>all the partners</u> 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 <u>proof of such authorisation</u> shall be included in the Tender.</i> <i>In the case of a JOINT VENTURE/CONSORTIUM submitting a tender, include <u>a resolution of each company</u> of the joint venture together with a <u>resolution by its members</u></i>

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	<i>authorising a member of the joint venture to sign the documents on behalf of the joint venture.</i> <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>
C.2.13.5	The identification details are: Tender/Reference: RTD 07 2025/26 Tender Description: Tender for the installation, maintenance of inductive loops for automatic traffic monitoring sites and upgrading of traffic monitoring equipment and software within the City of Tshwane, on basis of as and when required for a period of three years (36 months) Closing Time: 10:00 Closing Date: 03 November 2025 Each tender shall be enclosed in a sealed envelope, bearing the correct identification details and shall be submitted (HAND DELIVERED) at: Supply Chain Management Tshwane House 320 Madiba Street Pretoria CBD 0002 Please note that the tender box is open 24 hours. Please ensure that all required compliance documents are included upon submission as no additional documents will be requested from bidders after closing. BIDDERS MUST PLEASE ENSURE THAT THEY SIGN THE SUBMISSION REGISTER UPON HANDING IN THE DOCUMENTS.
C.2.13.9	Telephonic, telegraphic, telex, facsimile or e-mailed offers will <u>not</u> be accepted
C.2.13.10	Add the following sub- clause C.2.13.10: <i>Accept that all conditions, which are printed or written upon any stationery used by the Tenderer for the purpose of or in connection with the submission of a tender offer for this Contract, which are in conflict with the conditions laid down in this document shall be waived, renounced and abandoned.</i>
C.2.14	Information and data to be completed in all respects Add the following to the clause: <i>The Tenderer is required to enter information in the following sections of the document:</i> Section T2.2 : Returnable Schedules Section C1.1 : Form of Offer and Acceptance Section C1.2 : Contract Data (Part 2)

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	<i>Section C2.2 : Pricing Schedule</i> <i>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.</i> <i>The Tenderer shall complete and sign the Form of Offer prior to the submission of a Tender Offer.</i> <i>The Schedule of Deviations (if applicable) shall be signed by the successful Tenderer after acceptance by the Employer of the Tender Offer.</i> <i>Accept that failure on the part of the Tenderer to submit any one of the Returnable Documents listed in Part T2 – Returnable Documents within the period stipulated, shall be just cause for the Employer to consider the tender offer as being regarded as non-responsive.</i> <i>Accept that the Employer shall in the evaluation of tender offers take due account of the Tenderer's past performance in the execution of similar engineering 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. Satisfy the Employer and the Engineer as to his ability to perform and complete the Works timeously, safely and with satisfactory quality, and furnish details in Part T2 – Returnable Documents.</i> <i>Accept that submitting inferior and inadequate information relating to health and safety (as required in clause 2.23) shall be regarded as justifiable and compelling reasons not to accept the Tender Offer of the Tenderer scoring the highest number of tender evaluation points.</i>
C.2.15 Closing time	The closing time for submission of tender offers is stated in the tender notice and invitation to tender.
C.2.16 Tender offer validity	The tender offer validity period is 90 days. Add the following new clause
C.2.16.5	<i>If the tender validity period expires on a Saturday, Sunday or public holiday, the tender offer shall remain valid and open for acceptance until closure of business on the following working day.</i>
C.2.16.6	Add the following new clause: <i>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 Conditions 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</i>
C.2.18 Provide other material	The tenderer shall, when requested by the employer to do so, submit the names of all management and supervisory staff that will be employed to supervise the labour-

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	intensive portion of the works together with satisfactory evidence that such staff members satisfy the eligibility requirements.
C.2.19 Inspections, tests and analysis	Add the following at the end of the clause: <i>....or upon written request.</i>
C.2.20 Submit securities, bonds, policies, etc.	The tenderer is required to submit with his tender a letter of intent from an approved insurer undertaking to provide the performance bond to the format included in Section C1.3 of Part C1 Agreements and Contract Data of this document.
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.2.24 <i>Conditions Associated with the Granting of Preferences</i>	Add the following new clause <i>The Tenderer, undertakes to:</i> a) <i>engage one or more Targeted Enterprises / Targeted Labour in accordance with the provisions of the SANS 1914 as varied in the Procurement Section of the Scope of Works;</i> b) <i>deliver to the Employer, within 5 working days of being requested in writing to do so, a Targeted Enterprise Declaration Affidavit in respect of all Targeted Enterprises engaged at prime contract level to satisfy Contract Participation Goal requirements;</i> c) <i>accept the sanctions set out in the Scope of Works should such conditions be breached.</i>
2.25 <i>Canvassing and obtaining of additional information by tenderers</i>	Add the following new clause <i>The Tenderer shall not make any attempt either directly or indirectly to canvass any of the Employers' officials or the Employer's agent 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>
C2.26 <i>Prohibitions on awards to persons in service of the state</i>	Add the following new clause <i>The Employer is prohibited to award a tender to a person -</i> a) <i>who is in the service of the state; or</i> b) <i>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</i> c) <i>a person who is an advisor or consultant contracted with the municipality or municipal entity.</i> <i>In the service of the state means to be -</i> a) <i>a member of:-</i> <i>• any municipal council;</i> <i>• any provincial legislature; or</i> <i>• the National Assembly or the National Council of Provinces;</i> b) <i>a member of the board of directors of any municipal entity;</i> c) <i>an official of any municipality or municipal entity;</i> d) <i>an employee of any national or provincial department;</i> e) <i>provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999);</i>

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	f) a member of the accounting authority of any national or provincial public entity; or g) an employee of Parliament or a provincial legislature. 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.
C2.27 Awards to close family members of persons in the service of the state	Add the following new clause 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 F2.25), or has been in the service of the state in the previous twelve months, including - a) the name of that person; b) the capacity in which that person is in the service of the state; and c) the amount of the award. 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.
C2.28 Vendor registration	Add the following new clause The contractor will required registering as a supplier/ service provider on the City of Tshwane's vendor register before any payment can be done. 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. Vendor registration documents are available from the Procurement Advice Centre or can be downloaded from All parties of a joint venture or consortium submitting a tender shall comply with the requirements of this http://www.tshwane.gov.za/business/supplychain/vendor registration clause.
C2.29 Tax	Add the following new clause National Treasury SCM Instruction no. 7 of 2017/18 clause 4 application during SCM Processes state that: 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. 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 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

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C.3.1 Respond to requests from the tenderer C.3.1.1	The employer will respond to requests for clarification up to 7 (seven) working days before the tender closing time.
C.3.4 Opening of tender submissions	Upon request tenders will be opened immediately after the closing time for tenders. Bidders are also requested to refer to the City's website where the closing register will be published.
C.3.8 Test for responsiveness C.3.8.2	Add the following to the sub-clause: Failure on the part of the Tenderer to submit a tender offer as stipulated in clause C2.13 prior to the closing time as stipulated in clause C2.15 shall be just cause for the Employer to consider the tender offer as being non-responsive. Failure on the part of the Tenderer to submit any one of the returnable documents or certificates listed in clause C2.23 within the period stipulated shall be just cause for the Employer to consider the tender offer as being non-responsive.
C.3.9 Arithmetical errors, omissions and discrepancies	Replace the contents of the clause with the following: Check responsive tender offers for arithmetical errors, correcting them in the following manner: a) If a bill of quantities (or schedule of quantities or schedule of rates) applies and there is an error in the line-item total resulting from the product of the unit rate and the quantity, the unit rate shall govern and the line item total shall be corrected. b) Where there is an error in the total of the prices, either as a result of other corrections required by this checking process or in the tenderer's addition of prices, the corrected total of the prices shall govern. c) Where there is a discrepancy between the amount indicated in the Tenderer's tender offer and the corrected amount obtained after completing the above steps, the corrected amount shall govern. Notify a tenderer upon written request received after the closing date of tenders of all arithmetical errors made by that particular tenderer.
C.3.11 Evaluation of tender offers	Add the following new clause: Stages of Evaluation. The following stages of evaluation will be applicable for this tender Stage 1: Administrative Compliance Stage 2: Mandatory Requirements Stage 3: Preference Points System 80/20 1.1 STAGE 1: ADMINISTRATIVE COMPLIANCE All the bids will be evaluated against the administrative responsiveness requirements as set out in the list of returnable documents.

CLAUSE NUMBER	TENDER DATA		
	Compulsory Returnable Documentation (Submission of these are compulsory)	Submitted (YES or NO)	Checklist (Guide for Bidder and the Bid Evaluation Committee)
	a) To enable The City to verify the bidder's tax compliance status, the bidder must provide; • Tax compliance status PIN. - or • Central Supplier Database (CSD)		Tax status must be compliant before the award.
	b) A copy of their Central Supplier Database (CSD) registration; or indicate their Master Registration Number / CSD Number;		CSD must be valid.
	c) Confirmation that the bidding company's rates and taxes are up to date: Original or copy of Municipal Account Statement of the Bidder (bidding company) not older than 3 months and account must not be in arrears for more than ninety (90) days; or ,signed lease agreement or In case of bidders located in informal settlement, rural areas or areas where they are not required to pay Rates and Taxes a letter from the local councillor confirming they are operating in that area		Was a Municipal Account Statement or landlord letter provided for the bidding company? The name and / or addresses of the bidder's statement correspond with CIPC document, Address on CSD or Company profile? Are all payment(s) up to date (i.e. not in arrears for more than 90 days?
	d) In addition to the above, confirmation that all the bidding company's owners / members / directors / major shareholders rates and taxes are up to date: • Original or copy of Municipal Account Statement of all the South African based owners / members / directors / major shareholders not older than 3 months and the account/s may not be in arrears for more than ninety (90) days; or a signed lease agreement of owners / members / directors / major shareholders or In case of bidders located in informal settlement, rural areas or areas where they are not required to pay Rates and Taxes a letter from the local councillor confirming they are residing in that area		Was a Municipal Account Statement or landlord letter provided for the bidding company? The name and / or addresses of the bidder's statement correspond with CIPC document, Address on CSD or Company profile? Are all payment(s) up to date (i.e. not in arrears for more than 90 days?
	e) Duly Signed and completed MBD forms (MBD 1, 4, 5, 8 and 9) The person signing the bid documentation must be authorized to sign on behalf of the		All documents fully completed (i.e. no blank spaces)? All documents fully signed by (any director /

CLAUSE NUMBER	TENDER DATA		
	bidder. Where the signatory is not a Director / Member / Owner / Shareholder of the company, an official letter of authorization or delegation of authority should be submitted with the bid document. NB: Bidders must ensure that the directors, trustees, managers, principal shareholders, or stakeholders of this company, declare any interest in any other related companies or business, whether or not they are bidding for this contract. <u>See Question 3.14 of MBD 4. Failure to declare interest will result in a disqualification</u>		member / trustee as indicated on the CIPC document, alternatively a delegation of authority would be required? Documents completed in black ink (i.e. no "Tippex" corrections, no pencil, no other colour ink, or non-submission of the MBD forms, will be considered)?
	f) Audited Financial Statements for the most recent three (3) years or Audited Financial Statements from date of existence for companies less than three years old. NB: The bidder must submit signed audited annual financial statements for the most recent three years, or if established for a shorter period, submit audited annual financial statements from date of establishment. If the bidder is not required by law to prepare signed annual financial statements for auditing purposes, then the bidder must submit proof that the bidder is not required by law to prepare audited financial statements.		Applicable for tenders above R10m in conjunction with MBD 5) Are Audited financial statements provided (Audited financials must be signed by auditor) Or proof that the bidder is not required by law to prepare audited financial statements.
	g) Joint Ventures (JV) – (Only applicable when the bidder tenders as a joint venture) Where the bidder bids as a joint venture (JV), the required or relevant documents as per (a) to (f) above must be provided for all JV parties. In addition to the above the bidder must submit a Joint Venture (JV) agreement signed by the relevant parties. NB: It is a condition of this bid that the successful bidder will continue with the same Joint Venture (JV) for the duration of the contract		If applicable. JV agreement provided? JV agreement complete and relevant? Agreement signed by all parties? All required documents as per (i.e. a to f) must be provided for all partners of the JV.

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	unless prior approval is obtained from the City.		
	h) Bidder attended a compulsory briefing session where applicable		A compulsory briefing register must be signed by the bidder. Bidders will be disqualified should they fail to attend compulsory briefing session
	i) Pricing schedule (All items must be quoted for in pricing schedule and if not, all items are quoted the bidder will be disqualified). Unless the tender is awarded per item or per section where the bidder only quoted the items or sections, they are interested in.		Incomplete pricing schedule results in totals being incomparable. Bidder must be disqualified. Bidder will be disqualified should they make corrections on the price schedule without attaching a signature or initialising thereto. Bidder will be disqualified should they use tippex/ correction ink, on the price schedule.
1.2 MANDATORY REQUIREMENTS			
The following information is mandatory, failure to provide any of them, will render the bidder disqualified:			
Mandatory criteria		Supporting evidence	
CIDB Grading of 4CE/EB or higher		Valid CIDB grading certificate	
Company's Experience		At least one traffic monitoring or traffic signals installation or variable messaging signage installation or speed cameras installation related projects with appointment and completion letters; with client's name, contact person's details, description of works, value of work, appointment and completion dates of the project, are eligible to submit	

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		tenders. (FORM RD.D.3 EVALUATION SCHEDULE: tenderer's experience).
	Key staff/ Qualifications	Only those tenderers who can demonstrate that they will have in their full-time employ: i) The contracts manager with at least a National Diploma in Civil Engineering (NQF level 6) recognized by South African Qualifications Authority (SAQA). ii) The foreman with at least a N6 in Civil Engineering (NQF Level 5) recognized by SAQA. iii) The qualified electrician with red seal (NQF level 4). iv) Safety Officer with a Health and Safety Management Training Course qualification and be registered with South African Council for the Project and Construction Management Professions (SACPCMP).
1.3 PREFERENCE POINT SYSTEM The preferential point system used will be the 80/20 points system in terms of the Preferential Procurement Policy Framework Act, 2000 (Act 5 of 2000) Regulations 2022 • 80 points for price • 20 points for specific goals Add the following new clause: <i>The 80/20 preference point system for acquisition of services, works or goods up to Rand value of R50 million:</i> <i>The following formula must be used to calculate the points for price in respect of tenders with a Rand value below R50 million (all applicable taxes included):</i>		

CLAUSE NUMBER	TENDER DATA												
	$P_s = 80 \times \left[1 - \left(\frac{P_t - P_{min}}{P_{min}} \right) \right]$ Where P_s = Points scored for comparative price of tender or offer under consideration; P_t = Comparative price of tender or offer under consideration; and P_{min} = Comparative price of lowest acceptable tender or offer. - A maximum of 20 points may be awarded to a tenderer for the specific goal specified for the tender. - The points scored for the specific goal must be added to the points scored for price and the total must be rounded off to the nearest two decimal places. - Subject to section 2(1)(f) of the Act, the contract must be awarded to the tenderer scoring the highest points. 20 points for Specific goals (service provider to submit the certified copy of the specific goals). Refer to Table 1 below: <table><tr><th>Specific goals</th><th>80/20 preference point system</th><th>Proof of specific goals to be submitted</th></tr><tr><td>BB-BEE score of companies - Level 1 - Level 2 - Level 3 - Level 4 - Level 5 - Level 6 - Level 7 - Level 8 - Non-compliant </td><td> 8 Points 7 Points 6 Points 5 Points 4 Points 3 Points 2 Points 1 Point 0 Points </td><td>Valid Certified copy of BBBEE certificate. Sworn Affidavit for B-BBEE qualifying small enterprise or Exempt Micro Enterprises or CIPC BBBEE certificate.</td></tr><tr><td>EME and/ or QSE</td><td>2 Points</td><td>Valid Sworn affidavit for B-BBEE qualifying small enterprise or Exempt Micro Enterprises or CIPC BBBEE certificate</td></tr><tr><td>At least 51% of Women-owned companies</td><td>2 Points</td><td>Certified copy of Identity Document/s and proof of ownership (Sworn affidavit for B-BBEE qualifying small enterprise or Exempt Micro Enterprises,</td></tr></table>	Specific goals	80/20 preference point system	Proof of specific goals to be submitted	BB-BEE score of companies - Level 1 - Level 2 - Level 3 - Level 4 - Level 5 - Level 6 - Level 7 - Level 8 - Non-compliant	8 Points 7 Points 6 Points 5 Points 4 Points 3 Points 2 Points 1 Point 0 Points	Valid Certified copy of BBBEE certificate. Sworn Affidavit for B-BBEE qualifying small enterprise or Exempt Micro Enterprises or CIPC BBBEE certificate.	EME and/ or QSE	2 Points	Valid Sworn affidavit for B-BBEE qualifying small enterprise or Exempt Micro Enterprises or CIPC BBBEE certificate	At least 51% of Women-owned companies	2 Points	Certified copy of Identity Document/s and proof of ownership (Sworn affidavit for B-BBEE qualifying small enterprise or Exempt Micro Enterprises,
Specific goals	80/20 preference point system	Proof of specific goals to be submitted											
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At least 51% of Women-owned companies	2 Points	Certified copy of Identity Document/s and proof of ownership (Sworn affidavit for B-BBEE qualifying small enterprise or Exempt Micro Enterprises,											

CLAUSE NUMBER	TENDER DATA		
			CIPC registration or any other proof of ownership)
	At least 51% owned companies by People with disability	2 Points	Medical Certificate with doctor's details (Practice Number, Physical Address, and contact numbers) and proof of ownership (Sworn affidavit for B-BBEE qualifying small enterprise or Exempt Micro Enterprises, CIPC registration or any other proof of ownership
	At least 51% owned companies by Youth	2 Point	Certified copy of Identity Document/s and proof of ownership (Sworn affidavit for B-BBEE qualifying small enterprise or Exempt Micro Enterprises, CIPC registration or any other proof of ownership
	Local Economic Participation • City of Tshwane • Gauteng • National	4 Points 2 Points 1 Point	Municipal Account statement/Lease agreement.
C.3.13 Acceptance of Tender Offer	Tender offers will only be accepted if: - the tenderer has complied in full with all the eligibility criteria - the tenderer is able to provide proof of tax compliance status in terms of clause 4.2 of National Treasury SCM Instruction no.7 of 2017/18 - the tenderer submits a letter of intent from an approved insurer undertaking to provide the Performance Bond to the format included in Section C1.3 of this procurement document; - the tenderer is registered with the Construction Industry Development Board in an appropriate contractor grading designation. - the tenderer is not in arrears for more than 3 months with municipal rates and taxes and municipal service charges; - 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; - the tenderer has not: - abused the Employer's Supply Chain Management System; or - failed to perform on any previous contract and has been given a written notice to this effect. - 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		

CLAUSE NUMBER	TENDER DATA
	tender process and persons in the employ of the state are permitted to submit tenders or participate in the contract; i.) the tenderer is registered and in good standing with the compensation fund or with a licensed compensation insurer; j.) the employer is reasonably satisfied that the tenderer has in terms of the Construction Regulations, 2003, issued in terms of the Occupational Health and Safety Act, 1993, the necessary competencies and resources to carry out the work safely.
C.3.17 Copies of Contract	One signed copy of contract shall be provided by the Employer to the successful Tenderer.

T1.3 STANDARD CONDITIONS OF TENDER

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C.1 General

C.1.1 Actions

C.1.1.1 The Employer and each tenderer submitting a tender offer shall comply with these conditions of tender. In their dealings with each other, they shall discharge their duties and obligations as set out in C.2 and C.3, timeously and with integrity, and behave equitably, honestly and transparently, comply with all legal obligations and not engage in anticompetitive practices.

C.1.1.2 The Employer and the tenderer and all their agents and employees involved in the tender process shall avoid conflicts of interest and where a conflict of interest is perceived or known, declare any such conflict of interest, indicating the nature of such conflict. Tenderers shall declare any potential conflict of interest in their tender submissions. Employees, agents and advisors of the Employer shall declare any conflict of interest to whoever is responsible for overseeing the procurement process at the start of any deliberations relating to the procurement process or as soon as they become aware of such conflict, and abstain from any decisions where such conflict exists or recuse themselves from the procurement process, as appropriate.

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

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

C.1.1.3 The Employer shall not seek and a tenderer shall not submit a tender without having a firm intention and the capacity to proceed with the contract.

C.1.2 Tender Documents

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

C.1.3 Interpretation

C.1.3.1 The tender data and additional requirements contained in the tender schedules that are included in the returnable documents are deemed to be part of these conditions of tender.

C.1.3.2 These conditions of tender, the tender data and tender schedules which are only required for tender evaluation purposes, shall not form part of any contract arising from the invitation to tender.

C.1.3.3 For the purposes of these conditions of tender, the following definitions apply:

a) **conflict of interest** means any situation which:

- i) someone in a position of trust has competing professional or personal interests which make it difficult to fulfil his or her duties impartially;
- ii) an individual or organisation is in a position to exploit a professional or official capacity in some way for their personal or corporate benefit; or
- iii) incompatibility or contradictory interests exist between an employee and the organisation which employs that employee.

b) **comparative offer** means the price after the factors of a non-firm price and all unconditional discounts it can be utilised to have been taken into consideration;

c) **corrupt practice** means the offering, giving, receiving or soliciting of anything of value to influence the action of the Employer or his staff or agents in the tender process;

- d) **fraudulent practice** means the misrepresentation of the facts in order to influence the tender process or the award of a contract arising from a tender offer to the detriment of the Employer, including collusive practices intended to establish prices at artificial levels;

C.1.4 Communication and Employer's agent

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

C.1.5 Cancellation and re-invitation of tenders

C.1.5.1 An organ of state may, prior to the award of the tender, cancel the tender if-

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

C.1.5.2 The decision to cancel the tender must be published in the same manner in which the original tender invitation was advertised.

C.1.5.3 An Employer may only with the prior approval of the relevant treasury cancel a tender invitation for a second time.

C.1.6 Procurement procedures

C.1.6.1 General

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

C.1.6.2 Competitive negotiation procedure

C.1.6.2.1 Where the tender data require that the competitive negotiation procedure is to be followed, tenderers shall submit tender offers in response to the proposed contract in the first round of submissions. Notwithstanding the requirements of C.3.4, the Employer shall announce only the names of the tenderers who make a submission. The requirements of C.3.8 relating to the material deviations or qualifications which affect the competitive position of tenderers shall not apply.

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

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

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

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

C.1.6.3 Proposal procedure using the two stage-system

C.1.6.3.1 Option 1

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

C.1.6.3.2 Option 2

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

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

C.2 Tenderer's obligations

C.2.1 Eligibility

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

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

C.2.2 Cost of tendering

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

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

C.2.3 Check documents

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

C.2.4 Confidentiality and copyright of documents

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

C.2.5 Reference documents

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

C.2.6 Acknowledge addenda

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

C.2.7 Clarification meeting

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

C.2.8 Seek clarification

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

C.2.9 Insurance

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

C.2.10 Pricing the tender offer

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

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

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

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

C.2.11 Alterations to documents

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

C.2.12 Alternative tender offers

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

schedule that compares the requirements of the tender documents with the alternative requirements that are proposed.

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

C.2.12.3 An alternative tender offer may only be considered in the event that the main tender is the winning tender.

C.2.13 Submitting a tender offer

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

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

C.2.13.3 Submit the parts of the tender offer communicated on paper as an original plus the number of copies stated in the tender data, with an English translation of any documentation in a language other than English, and the parts communicated electronically in the same format as they were issued by the Employer.

C.2.13.4 Sign the original and all copies of the tender offer where required in terms of the tender data. The Employer will hold all authorized signatories liable on behalf of the tenderer. Signatories for tenderers proposing to contract as joint ventures shall state which of the signatories is the lead partner whom the Employer shall hold liable for the purpose of the tender offer.

C.2.13.5 Seal the original and each copy of the tender offer as separate packages marking the packages as "ORIGINAL" and "COPY". Each package shall state on the outside the Employer's address and identification details stated in the tender data, as well as the tenderer's name and contact address.

C.2.13.6 Where a two-envelope system is required in terms of the tender data, place and seal the returnable documents listed in the tender data in an envelope marked "financial proposal" and place the remaining returnable documents in an envelope marked "technical proposal". Each envelope shall state on the outside the Employer's address and identification details stated in the tender data, as well as the tenderer's name and contact address.

C.2.13.7 Seal the original tender offer and copy packages together in an outer package that states on the outside only the Employer's address and identification details as stated in the tender data.

C.2.13.8 Accept that the Employer will not assume any responsibility for the misplacement or premature opening of the tender offer if the outer package is not sealed and marked as stated.

C.2.13.9 Accept that tender offers submitted by facsimile or e-mail will be rejected by the Employer, unless stated otherwise in the tender data.

C.2.14 Information and data to be completed in all respects

Accept that tender offers, which do not provide all the data or information requested completely and in the form required, may be regarded by the Employer as non-responsive.

C.2.15 Closing time

C.2.15.1 Ensure that the Employer receives the tender offer at the address specified in the tender data not later than the closing time stated in the tender data. Accept that proof of posting shall not be accepted as proof of delivery.

C.2.15.2 Accept that, if the Employer extends the closing time stated in the tender data for any reason, the requirements of these conditions of tender apply equally to the extended deadline.

C.2.16 Tender offer validity

C.2.16.1 Hold the tender offer(s) valid for acceptance by the Employer at any time during the validity period stated in the tender data after the closing time stated in the tender data.

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

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

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

C.2.17 Clarification of tender offer after submission

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

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

C.2.18 Provide other material

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

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

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

C.2.19 Inspections, test and analysis

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

C.2.20 Submit securities, bonds and policies

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

C.2.21 Check final draft

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

C.2.22 Return of other tender documents

If so instructed by the Employer, return all retained tender documents within 28 days after the expiry of the validity period stated in the tender data.

C.2.23 Certificates

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

C.3 The Employer's undertakings

C.3.1 Respond to requests from the tenderer

C.3.1.1 Unless otherwise stated in the Tender Data respond to a request for clarification received up to five (5) working days before the tender closing time stated in the Tender Data and notify all tenderers who collected tender documents.

C.3.1.2 Consider any request to make a material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used to prequalify a tenderer to submit a tender offer in terms of a previous procurement process and deny any such request if as a consequence:

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

C.3.2 Issue addenda

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

C.3.3 Return late tender offers

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

C.3.4 Opening of tender submissions

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

C.3.4.2 Announce at the meeting held immediately after the opening of tender submissions, at a venue indicated in the tender data, the name of each tenderer whose tender offer is opened and, where applicable, the total of his prices.

C.3.4.3 Make available the record outlined in C.3.4.2 to all interested persons upon request.

C.3.5 Two-envelope system

C.3.5.1 Where stated in the tender data that a two-envelope system is to be followed, open only the technical proposal of valid tenders in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data and announce the name of each tenderer whose technical proposal is opened.

C.3.5.2 Evaluate functionality of the technical proposals offered by tenderers, then advise tenderers who remain in contention for the award of the contract of the time and place when the financial proposals will be opened. Open only the financial proposals of tenderers, who score in the functionality evaluation more than the minimum number of points for functionality stated in the tender data, and announce the score obtained for the technical proposals and the total price.

C.3.6 Non-disclosure

Not disclose to tenderers, or to any other person not officially concerned with such processes, information relating to the evaluation and comparison of tender offers, the final evaluation price and recommendations for the award of a contract, until after the award of the contract to the successful tenderer.

C.3.7 Grounds for rejection and disqualification

Determine whether there has been any effort by a tenderer to influence the processing of tender offers and instantly disqualify a tenderer (and his tender offer) if it is established that he engaged in corrupt or fraudulent practices.

C.3.8 Test for responsiveness

C.3.8.1 Determine, after opening and before detailed evaluation, whether each tender offer properly received:

- a) complies with the requirements of these Conditions of Tender,
- b) has been properly and fully completed and signed, and
- c) is responsive to the other requirements of the tender documents.

C.3.8.2 A responsive tender is one that conforms to all the terms, conditions, and specifications of the tender documents without material deviation or qualification. A material deviation or qualification is one which, in the Employer's opinion, would:

- a) detrimentally affect the scope, quality, or performance of the works, services or supply identified in the Scope of Work,
- b) significantly change the Employer's or the tenderer's risks and responsibilities under the contract, or
- c) affect the competitive position of other tenderers presenting responsive tenders, if it were to be rectified.

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

C.3.9 Arithmetical errors, omissions and discrepancies

- C.3.9.1** Check responsive tenders for discrepancies between amounts in words and amounts in figures. Where there is a discrepancy between the amounts in figures and the amount in words, the amount in words shall govern.
- C.3.9.2** Check the highest ranked tender or tenderer with the highest number of tender evaluation points after the evaluation of tender offers in accordance with C.3.11 for:
- a) the gross misplacement of the decimal point in any unit rate;
 - b) omissions made in completing the pricing schedule or bills of quantities; or
 - c) arithmetic errors in:
 - i) line item totals resulting from the product of a unit rate and a quantity in bills of quantities or schedules of prices; or
 - ii) the summation of the prices.
- C.3.9.3** Notify the tenderer of all errors or omissions that are identified in the tender offer and either confirm the tender offer as tendered or accept the corrected total of prices.
- C.3.9.4** Where the tenderer elects to confirm the tender offer as tendered, correct the errors as follows:
- a) If bills of quantities or pricing schedules apply and there is an error in the line item total resulting from the product of the unit rate and the quantity, the line item total shall govern and the rate shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line item total as quoted shall govern, and the unit rate shall be corrected.
 - c) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the tenderer's addition of prices, the total of the prices shall govern and the tenderer will be asked to revise selected item prices (and their rates if bills of quantities apply) to achieve the tendered total of the prices.

Consider the rejection of a tender offer if the tenderer does not correct or accept the correction of the arithmetical error in the manner described above.

C.3.10 Clarification of a tender offer

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

C.3.11 Evaluation of tender offers

The Standard Conditions of Tender standardize the procurement processes, methods and procedures from the time that tenders are invited to the time that a contract is awarded. They are generic in nature and are made project specific through choices that are made in developing the Tender Data associated with a specific project.

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

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

The activities associated with evaluating tender offers are as follows:

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

C.3.11.1 General

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

C.3.12 Insurance provided by the Employer

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

C.3.13 Acceptance of tender offer

Accept the tender offer, if in the opinion of the Employer, it does not present any unacceptable commercial risk and only if the tenderer:

- a) is not under restrictions, or has principals who are under restrictions, preventing participating in the Employer's procurement,
- b) can, as necessary and in relation to the proposed contract, demonstrate that he or she possesses the professional and technical qualifications, professional and technical competence, financial

resources, equipment and other physical facilities, managerial capability, reliability, experience and reputation, expertise and the personnel, to perform the contract,

- c) has the legal capacity to enter into the contract,
- d) is not insolvent, in receivership, under Business Rescue as provided for in chapter 6 of the Companies Act, 2008, bankrupt or being wound up, has his affairs administered by a court or a judicial officer, has suspended his business activities, or is subject to legal proceedings in respect of any of the foregoing,
- e) complies with the legal requirements, if any, stated in the tender data, and
- f) is able, in the opinion of the Employer, to perform the contract free of conflicts of interest.

C.3.14 Prepare contract documents

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

- a) addenda issued during the tender period,
- b) inclusion of some of the returnable documents, and
- c) other revisions agreed between the Employer and the successful tenderer.

C.3.14.2 Complete the schedule of deviations attached to the form of offer and acceptance, if any.

C.3.15 Complete adjudicator's contract

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

C.3.16 Registration of the award

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

C.3.16.2 After the successful tenderer has been notified of the Employer's acceptance of the tender, notify other tenderers that their tender offers have not been accepted.

C.3.17 Provide copies of the contracts

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

C.3.18 Provide written reasons for actions taken

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

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:

Contract: RTD 07 2025/26: Contract: Tender for the installation, maintenance of inductive loops for automatic traffic monitoring sites and upgrading of traffic monitoring equipment and software within the City of Tshwane, on basis of as and when required for a period of three years (36 months)

The Tenderer, identified in the Offer signature block below, has examined the documents listed in the Tender Data and addenda thereto as listed in the 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.

THE OFFERED TOTAL OF PRICES INCLUSIVE OF VALUE ADDED TAX IS

R

(in figures)

(in words)

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 including the Schedule of Deviations (if any) 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.

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 C2 Pricing Data;
- Part C3 Scope of Work;
- Part C4 Site Information; and
- Drawings and documents or parts thereof, which may be incorporated by reference into the above listed Parts.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Returnable 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 Form of Offer and Acceptance. No amendments to or deviations from said documents are valid unless contained in this Schedule.

The Tenderer shall within two weeks of receiving a completed copy of this agreement, including the Schedule of Deviations (if any), contact the Employer's agent (whose details are given in the Contract Data) to arrange the delivery of any securities, bonds, 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: _____

Part C1: Agreement and Contract Data

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

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C.1.2.1 GENERAL CONDITIONS OF CONTRACT

The general conditions of contract applicable to this contract shall be **General Conditions of Contract for Construction Works, Third Edition (2015)**, as well as the Data provided by Employer.

Tenderers, contractors and subcontractors shall obtain their own copies of the document **General Conditions of Contract for Construction Works, Third Edition (2015)** 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

Web: www.ecs.co.za

OR

Consulting Engineers South Africa (CESA)

Telephone: 011 463 2022

E-Mail: general@cesa.co.za

Web: www.cesa.co.za

OR

South African Institution of Civil Engineering (SAICE)

Telephone: 011 80505947 / 48 / 53

E-Mail: civilinfo@saice.org.za

Web: www.saice.org.za

C1.2.2 VARIATIONS AND ADDITIONS TO THE CONDITIONS OF CONTRACT

The following variations and additions to the **General Conditions of Contract for Construction Works, Third Edition (2015)**, shall apply to this contract:

CLAUSE / SUB-CLAUSE	DESCRIPTION	VARIATION / ADDITION
1.2.1	Delivery of notices	Add the following to the clause: 1.2.1.3 <i>Sent by facsimile, electronic or any like communication irrespective of it being during office hours or otherwise.</i>
1.2.3	Authority representatives of	Add the following to the clause: 1.2.3.1 <i>The Employer has authorised the Divisional Head: Transportation Planning Division to act on his behalf in respect of this Contract, save for such duties or functions:</i> 1.2.3.1.1 <i>which other holders of office ex officio execute on behalf of the Employer; or</i> 1.2.3.1.2 <i>for which the Divisional Head: Transportation Planning Division has no authority and the Employer's approval is required before execution thereof.</i>
4.3	Legal Provisions	Add the following new sub-clause: 4.3.3 <i>Wages and conditions of work:</i> i. <i>For conventional construction works the Basic Conditions of Employment Act of 1997 (Act No 75 of 1997) shall apply and the minimum employment conditions which will apply shall be guided by the Bargaining Council for the Civil Engineering Industry Collective Agreement as published from time to time.</i> ii. <i>The current Ministerial Determination (also downloadable at www.epwp.gov.za), Expanded Public Works Programs, issued in terms of the Basic Conditions of Employment Act of 1997 by the Minister of Labour in Government Notice R347, shall apply to the works described in the scope of works as being labour-intensive and which are undertaken by unskilled or semi-skilled workers.</i> Add the following new sub-clause: 4.3.4 <i>Notwithstanding any actions which the Employer may take, the Contractor accepts sole liability for due compliance with the relevant duties, obligations, prohibitions, arrangements and procedures imposed by the Occupational Health and Safety Act, 1993 (Act 85 of 1993), and all its regulations, including the Construction Regulations, 2014, for which he is liable as mandatory. By entering into this Contract it shall be deemed that the parties have agreed in writing to the above provisions in terms of Section 37(2) of the Act. The Contractor shall sign the Occupational Health and Safety Agreement</i>

CLAUSE / SUB-CLAUSE	DESCRIPTION	VARIATION / ADDITION
		<i>for Contract Work in the City of Tshwane Metropolitan Municipality included in section C1.5.</i>
		Add the following new sub-clause: 4.3.5 <i>The Employer retains an interest in all inquiries conducted under this Contract in terms of Section 31 and/or 32 of the Occupational Health and Safety Act, 1993 (Act 85 of 1993) and its Regulations following any incident involving the Contractor and/or Sub-Contractor and/or their employees. The Contractor shall notify the Employer in writing of all investigations, complaints or criminal charges which may arise pursuant to work performed under this Contract in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993) and Regulations.</i>
		Add the following new sub-clause: 4.3.6 <i>Contractor's Designer</i> <i>The Contractor and his designer shall accept full responsibility and liability to comply with the Occupational Health and Safety Act, 1993 (Act 85 of 1993) and the Construction Regulations, 2014 for the design of the Temporary Works and those part of the Permanent Works which the Contractor is responsible to design in terms of the Contract</i>
5.9.2	Further drawings and instructions	Add the following to the clause: <i>All instructions shall be in writing</i>
5.12	Extension of time for Practical Completion	Add the following new sub-clause 5.12.5 <i>Critical path provision</i> <i>A delay in so far as extension of time is concerned, will be regarded as a delay only if, on a claim by the Contractor in accordance with the General Conditions of Contract, the Employer's Agent rules that all progress on an item or items of work on the critical path of the approved programme for the execution of the Works by the Contractor, has been brought to a halt. Delays on normal working days only, based on a working week, of five normal working days, will be taken in account for the extension of time.</i>
		Add the following new sub-clause 5.12.6 <i>Extension of time due to abnormal rainfall</i> <i>Extension of time due to abnormal rainfall shall be determined by means of Method 1, if rainfall records and/or values derived from</i>

CLAUSE / SUB-CLAUSE	DESCRIPTION	VARIATION / ADDITION
		<i>rainfall records are supplied in the Scope of Work, otherwise Method 2 shall apply.</i> <u><i>Method 1: Rainfall formula method</i></u> <i>The rainfall records and/or values derived from rainfall records from a suitable rainfall station near the Site, which are supplied in the Project Specifications, shall be considered suitable for the determination of extension of time due to abnormal rainfall in accordance with this method.</i> <i>Extension of time arising from abnormal rainfall, shall be calculated separately for each calendar month or part thereof for the full period of completion of the Contract, including any extension thereof, in accordance with the rainfall formula given below:</i> $V = (N_w - N_n) + \frac{(R_w - R_n)}{X}$ <i>If V is negative and its absolute value exceeds N_n, then V shall be equal to minus N_n.</i> <i>If V is positive and greater than the number of calendar days in the calendar month under consideration, V shall be taken as equal to the number of calendar days in the relevant calendar month.</i> <i>The symbols shall have the following meaning:</i> V = Extension of time in calendar days in respect of the calendar month under consideration N_w = Actual number of days during the calendar month on which a rainfall of Y mm or more has been recorded. R_w = Actual rainfall in mm for the calendar month under consideration. N_n = Average number of days as derived from existing rainfall records, on which a rainfall of Y mm or more has been recorded for the calendar month. Rainfall records and/or the derived values of N_n will be provided in the Specifications. R_n = Average rainfall in mm for the calendar month, as derived from existing rainfall records. Rainfall records and/or the derived values of R_n will be provided in the Project Specifications. X = 20 unless otherwise provided in the Project Specifications Y = 10 unless otherwise provided in the Project Specifications <i>The total extension of time shall be the algebraic sum of the monthly totals for the period under consideration. However, if the grand total is negative the time for completion shall not be reduced on account</i>

CLAUSE / SUB-CLAUSE	DESCRIPTION	VARIATION / ADDITION
		<i>of abnormal rainfall. Extension of time for parts of a month shall be calculated by pro rata values of N_n and R_n being used.</i> <i>The factor $(N_w - N_n)$ shall be considered to represent a fair allowance for variations from the average number of days during which rainfall exceeds Y mm and wet conditions prevented or disrupted work.</i> <i>The factor $\frac{(R_w - R_n)}{X}$ shall be considered to represent a fair allowance for variations from the allowance for variations from the average number of days when wet conditions further to that allowed for the factor $(N_w - N_n)$, prevented or disrupted work during the calendar month.</i> <i>Accurate rain gauging shall be taken at a suitable point on Site and the Contractor shall, at his own expense, take all necessary precautions to ensure that the rain gauges cannot be interfered with.</i> <i>This formula does not take into account further on concurrent delays which could be caused by other abnormal climatic conditions such as floods, which have to be determined separately in accordance with Sub-Clause (42.5 Critical Path Provision) hereof.</i> <u>Method 2: Expected delay method</u> <i>The Contractor shall make provision in his programme for the execution of the Works, for an expected delay of "n" normal working days (based on a working week of five normal working days) due to normal rainfall, for which he will not receive any extension of time.</i> <i>Unless otherwise provided in the Project Specifications, the value of "n" shall be taken as equal to the tendered time for completion of the Works in months, rounded off to an integer.</i> <i>Extension of time during normal working days will be granted to the degree to which actual delays as determined in accordance with Sub-Clause (42.5 Critical Path Provision) hereof, exceed the number of "n" normal working days.</i> <i>The value of "n" does not take into account further or concurrent delays which are caused by other abnormal climatic conditions such as floods, which have to be determined separately in accordance with Sub-Clause (42.5 Critical Path Provision) hereof.</i>
6.1	Payment to Contractor	Add the following new sub-clause: 6.1.2 <i>Payment for works identified in the Scope of Work as being labour-intensive shall only be made in accordance with the provisions of the Contract if the works are constructed strictly in accordance with the provisions of the Scope of Work. Any non-payment for such works</i>

CLAUSE / SUB-CLAUSE	DESCRIPTION	VARIATION / ADDITION
		<i>shall not relieve the Contractor in any way of his obligations either in contract or in delict.</i> 6.1.3 <i>The Contractor's payment invoices shall be accompanied by labour information for the corresponding period in a format specified by the employer. If the Contractor chooses to delay submitting payment invoices, labour returns shall still be submitted as per frequency and timeframe stipulated by the employer. The Contractors invoices shall not be paid until all pending labour information has been submitted.</i>
		Add the following new sub-clause 6.1.3 <i>The Contractor shall be paid at Pretoria in the currency of the Republic of South Africa only at the Office of the Chief Financial Officer of the CITY OF TSHWANE, unless otherwise stated in the Data provided by Employer.</i>
6.2	Security	Add the following new sub-clause: 6.2.4 <i>As an alternative to a performance guarantee, the Contractor may deposit with the Employer a cash amount in a sum equal to the amount stated in the Data provided by Employer. All the provisions in respect of the guarantee apply mutatis mutandis to the cash deposit accept that the amount deposited will be repaid to the Contractor within 30 (thirty) days after the issue of the Certificate or Certificates of Completion in respect of the whole of the permanent works.</i>
8.6	Insurances	Replace clause 8.6 with the following: 8.6 Insurances 8.6.1 <i>Without limiting the Contractor's/Sub-contractor's obligation in terms of the Contract, the Employer will effect and maintain for the duration of the Contract until the issuing of the Final Approval Certificate, the following insurances in the name of the Contractor (including all Subcontractors whether nominated or otherwise):</i> 8.6.2 <i>The Employer's insurer will indemnify the Contractor/Sub-contractor against physical loss of or damage to any part of the Property Insured not exceeding the maximum contract value or the final contract value estimated at inception including free issue materials were applicable as stated in the Contract Data:</i> <i>a. Whilst in transit including loading and unloading whilst temporarily stored at any premises and route to or from the Contract Site within the Territorial Limits;</i> <i>b. From the time of unloading, dismantling or preparation at the Contract Site and thereafter until the Property Insured has been officially accepted by the Employer and becomes</i>

CLAUSE / SUB-CLAUSE	DESCRIPTION	VARIATION / ADDITION
		<i>his responsibility by means of a notice of completion certificate or similar evidence of legal transfer of risk;</i> c. <i>During the contractual defects liability or Maintenance Period which shall not exceed the period reflected in the Schedule but only so far as the Contractors and/or Sub-Contractors may be liable for such loss or damage under the defects liability or maintenance condition/s of the Insured Contract;</i> d. <i>Removal of debris;</i> e. <i>Surrounding property</i> f. <i>Work away;</i> g. <i>Off-site storage</i> h. <i>Temporary repairs;</i> i. <i>Contribution clause – marine;</i> j. <i>Escalation during Contract Period;</i> k. <i>Post loss escalation;</i> l. <i>Automatic reinstatement;</i> m. <i>Principals maintenance;</i> n. <i>Property taken over;</i> o. <i>Beneficial occupation;</i> p. <i>Escalation due to currency fluctuation;</i> q. <i>Manufacturers guarantees</i> 8.6.3 <i>The Employer's insurer will indemnify the Contractor/Sub-contractor against all sums for which the Contractor/Sub-contractor shall become legally liable towards third party claimants to pay for and in consequence of:</i> a. <i>Accidental death of or bodily injury to or illness or disease contracted by any person (excluding employees of the Contractor/Subcontractor);</i> b. <i>Accidental physical loss or damage to tangible property occurring during the Period of Insurance and arising out of or in connection with the performance of the Insured Contract at the Contract Site as defined in the Schedule. The minimum limit of indemnity for any one event is R10-million in respect of contracts with a contract value of up to R50-million (excluding VAT).</i> 8.7 <i>Insurance premium payable</i> <i>The Employer will pay the insurance premium for the works damage and public liability insurance cover. The insurance premium will be calculated based on the approved Capital Budget per financial year and the insurance premium will be charged out to the relevant departments by the Section: Insurance and Risk Management.</i> 8.8 <i>Additional insurance by the Employer</i> <i>The Employer shall be free to effect at his own cost any additional insurance, which he deems necessary in own interest to cover loss or damage not insured in terms of the insurance policies of Sub-Clause 35.1.1 of this Clause.</i>

CLAUSE / SUB-CLAUSE	DESCRIPTION	VARIATION / ADDITION
		8.9 <i>Additional insurance by the Contractor / Subcontractor</i> <i>The Contractor and Sub-contractor shall be free to effect and maintain at their own cost any additional insurance which the Contractor/Subcontractor deem necessary to cover damage, loss or injury not insured in terms of the insurance effected by the Employer's insurer. The cost of the additional insurance will be for the account of the Contractor/Subcontractor.</i> 8.10 <i>Contractor satisfied with insurance</i> <i>The submission of a tender shall be construed as acknowledgement by the Contractor that he is satisfied with the insurance cover affected by the Employer.</i> 8.11 <i>Contractor to observe conditions</i> <i>The Contractor shall give all notices and observe all conditions and requirements imposed by the relevant insurance policies, which shall be binding on the Contractor.</i> 8.12 <i>Contractor to insure</i> <i>The Contractor/Sub-contractor must obtain for the duration of the contract until the issuing of the Final Approval Certificate, the following insurance policies at an insurance company within 14 (fourteen) days of the notification of acceptance of the tender and must pay all premiums and supply proof thereof to the relevant Employer's Agent, 30 (thirty) days before the inception of the contract, that the policies have been taken out and that all premiums have been paid:</i> <i>a. All Risk Insurance cover with regard to all Plant and Materials and Equipment, owned, leased or hired by the Contractor that are used in the execution of the contract for the full replacement value thereof.</i> <i>b. Motor Vehicle and Liability Insurance cover indicating the registration numbers of the vehicles owned, leased or hired by the Contractor that are used in the execution of the contract to the amount of at least R10-million per claim with the number of claims unlimited.</i> <i>c. SASRIA cover for motor vehicles and Plant and Materials and Equipment owned, leased or hired by the Contractor that are used in the execution of the contract for the full replacement value thereof.</i> <i>d. In respect of Plant and Materials and Equipment and Motor Vehicles brought onto the Site by or on behalf of Subcontractors, the Contractor shall be deemed to have complied with the provisions of this Sub-Clause by ensuring that such Subcontractors have similarly insured such Plant and Materials and Equipment and Motor Vehicles.</i> <i>e. Proof must also be submitted that the Contractor complies with the conditions of the following legislation:</i>

CLAUSE / SUB-CLAUSE	DESCRIPTION	VARIATION / ADDITION
		- <i>Compensation for Occupational Injuries and disease, 1993</i> - <i>Unemployment Insurance Act, 1996</i> - <i>The Contractor shall in respect of the Site of the contract works appoint in writing a Section 16 appointee to meet the requirements of the Health and Safety Act, No 85 of 1993 as amended.</i>
	8.13	<i>The Employer's Agent involved must furnish the required insurance documentation 30 (thirty) days before the inception of the contract to the Section: Insurance and Risk Management.</i>
	8.14	<i>Reporting of incidents</i> <i>In the event of an occurrence, which is likely to give rise to a claim under the insurance policy affected by the Employer, the Contractor / Subcontractors and Employer's Agent will adhere to the following procedures:</i> a. <i>In addition to any statutory obligations and/or requirements contained in the General Conditions of Contract, the Contractor shall notify the Employer and the Employer's Agent of every occurrence within 48 (forty-eight) hours giving the circumstances, nature and an estimate of the loss or damage.</i> b. <i>The Employer's Agent will be responsible to complete and submit the relevant claim documentation for each incident within 30 (thirty) days after the incident occurred to the Section: Insurance and Risk Management. Should the incident be reported by the Employer's Agent more than 30 (thirty) days after the incident occurred to the Section: Insurance and Risk Management, the claim will only be considered if the claim documentation is accompanied by a letter from the relevant Group Head motivating the reason(s) for the late reporting of the incident, but the Employer's Agent must take note the Insurer might repudiate the loss if it is found that the insurers rights have been compromised as a result of the late reporting.</i> c. <i>The following documentation must be included with the claim documentation:</i> - <i>Photos of damages caused or suffered as proof or substantiation of the claims.</i> d. <i>In the event of Insured Property being damaged during the Contract Works beyond economical repair, the property must be safeguarded and be handed over to the Employer's insurer for salvage.</i> e. <i>The Section: Insurance and Risk Management will inform the Employer's insurer of the incident. The Contractor/Subcontractor shall afford all reasonable access to the Site to the Employer, the Employer's Agent, the Employer's insurers and/or representatives for the purpose of assessment of any loss or damage.</i>

CLAUSE / SUB-CLAUSE	DESCRIPTION	VARIATION / ADDITION
		8.15 Reporting of catastrophic incidents <i>In the event of an occurrence, which is likely to give rise to a claim, under the insurance policy effected by the Employer, with an estimated loss or damage of more than R250 000,00, the Contractor and the Employer's Agent will adhere to the following procedures:</i> <i>a. In addition to any statutory obligations and/or requirements contained in the General Conditions of Contract, the Contractor shall notify the Employer and the Employer's Agent of every occurrence within 24 (twenty-four) hours giving the circumstances, nature and an estimate of the loss or damage.</i> <i>b. The Employer's Agent must notify the Section: Insurance and Risk Management on the same day that the Contractor/Sub-contractor has notified the Employer's Agent of the incident.</i> <i>c. The Section: Insurance and Risk Management will notify the Employer's insurer of the incident. The Contractor/Sub-contractor shall afford all reasonable access to the Site to the Employer, the Employer's Agent, the Employer's insurers and/or representatives for the purpose of assessment of any loss or damage.</i> <i>d. The Employer's Agent will be responsible to complete and submit the relevant claim documentation for each incident within 30 (thirty) days after the incident occurred to the Section: Insurance and Risk Management. Should the incident be reported by the Employer's Agent more than 30 (thirty) days after the incident occurred to the Section: Insurance and Risk Management, the claim will only be considered if the claim documentation is accompanied by a letter from the relevant Strategic Executive Officer motivating the reason(s) for the late reporting of the incident. Should the relevant claim documentation not be submitted within 30 (thirty) days, the claim will be repudiated.</i> 8.16 Reporting of crime related incidents <i>All crime related incidents, losses or shortages irrespective of the value, must be reported within 24 (twenty-four) hours by the person who was involved or who has discovered the incident to the nearest South African Police Services (SAPS) station. The name of the Police Station, Investigation Officer and the Case number must be obtained and stated on the Contractor Claim Form. Should the incident not be reported to the SAPS, the claim will be repudiated.</i> 8.17 Claim documentation <i>The Employer's Agent must obtain all relevant information from the Contractor/Sub-contractor and complete the Contractor Claim Form, included in this report as Annexure B that is available on the Intranet. The project number must be stated on the Contractor Claim Form.</i>

CLAUSE / SUB-CLAUSE	DESCRIPTION	VARIATION / ADDITION
		<i>The Employer's Agent must submit with the Contractor Claim Form a detailed cost sheet indicating the estimate of the loss or damage.</i> <i>Any misrepresentation, misdescription or non-disclosure of material facts, at the option of the insurers, can result in claims submitted being declared null and void.</i> 8.18 Authorization of claim forms <i>It is imperative that a formally delegated official or his nominee of the Employer should authorize the Contractor Claim forms as proof of the appropriate authorization, verification and approval of claims submitted. The Group Head must provide an authorization letter to the Section: Insurance and Risk Management stating the names and the specimen signatures of the delegated official or his nominee within 30 (thirty) days from approval of this report by Council. Should the delegated official or his nominee not sign the relevant claim form, the claim will be repudiated as this may lead to inappropriate independent verification of the validity of claims, thereby increasing the risk of insurance fraud and consequent reputation damage to the Employer.</i> 8.19 Contractor to pay deductibles <i>Any claim in terms of the insurance affected by the Employer shall be subject to the Contractor being responsible for the payment of the amount stated in the Annexure to the Policies as being the deductible (first amount payable or Excess) as defined in the Certificate of Insurance issued by the Employer's insurer in terms of the Policy.</i> 8.20 Settlement of claims <i>All incidents reported to the Section: Insurance and Risk Management in respect of an occurrence, which is likely to give rise to a claim will be forwarded to the Employer's insurer who will take the necessary actions for the settlement of any such claims.</i> <i>The Contractor shall negotiate for the settlement of claims with the Employer or the Employer's insurer through the Section: Insurance and Risk Management. The Employer's Chief Financial Officer will authorize all settlements of claims.</i> <i>Should action for the settlement of any such claim to the satisfaction of the Employer's Agent not be taken by the Contractor/sub-contractor within 30 (thirty) days after receipt of such claim by the Contractor/sub-contractor, the Employer or the Employer's insurer may settle any such claim, after giving the Contractor notice of its intention to do so; provided that no such claim shall be settled by the Employer or the Employer's insurer without first consulting the Contractor/sub-contractor.</i> <i>The foregoing provisions of this Sub-Clause shall apply mutatis mutandis to any such claim received by the Contractor directly.</i>

C1.2.3 DATA PROVIDED BY THE EMPLOYER

CLAUSE/OPTION		DATA																							
1.1.1.13	The Defects Liability period is:	12 (twelve) months from the date of the Certificate of Completion.																							
1.1.1.14	The time for achieving Practical Completion is:	Due Completion Date is 36 months from Commencement Date																							
1.1.1.15	The name of the Employer is:	City of Tshwane Metropolitan Municipality.																							
1.1.1.26	The Pricing Strategy is:	Re-measurement Contract																							
1.2.1.2	The address of the Employer is:	Physical Address:	Capitol Towers North, 225 Madiba (Old Vermeulen) Street, Pretoria																						
		Postal Address:	P.O. Box 1409 PRETORIA 0001																						
		Facsimile:	012 358 7731																						
		E-Mail Address:	ThubeniN@Tshwane.gov.za																						
1.1.1.16	The name of the Employer's Agent is:	Thubeni Ntakakaze																							
1.2.1.2	The address of the Employer's Agent is:	Physical Address:	Capitol Towers North, 225 Madiba (Old Vermeulen) Street, Pretoria																						
		Postal Address:	P.O. Box 1409 PRETORIA 0001																						
		E-Mail Address:	ThubeniN@Tshwane.gov.za																						
3.1.3		The Employer's Agent is required to obtain approval of the Employer: ▪ for expenditure on the Contract to exceed the Contract Price; ▪ prior to the execution of any of the following duties of functions: <table><tr><th>CLAUSE</th><th>DUTY/FUNCTION</th></tr><tr><td>3.2.1</td><td>Nomination of person as Employer's Agent's Representative.</td></tr><tr><td>3.3.4</td><td>Authorization to Employer's Agent's Representative or any other person.</td></tr><tr><td>4.10.1</td><td>Approval to use the Site for any other purpose such as housing.</td></tr><tr><td>5.3.1</td><td>Delivery of the written notice to commence the execution of the works.</td></tr><tr><td>5.6.3</td><td>Approval of programme of construction.</td></tr><tr><td>5.7.2</td><td>Permission to carry out work by day and by night.</td></tr><tr><td>5.8.1.1</td><td>Approval to work on special non-working days and between sunset and sunrise.</td></tr><tr><td>5.9.7</td><td>Approval of Contractor's designs.</td></tr><tr><td>5.11</td><td>Suspension of progress of the Works.</td></tr><tr><td>5.13.2</td><td>Reduction of penalty for delay.</td></tr></table>		CLAUSE	DUTY/FUNCTION	3.2.1	Nomination of person as Employer's Agent's Representative.	3.3.4	Authorization to Employer's Agent's Representative or any other person.	4.10.1	Approval to use the Site for any other purpose such as housing.	5.3.1	Delivery of the written notice to commence the execution of the works.	5.6.3	Approval of programme of construction.	5.7.2	Permission to carry out work by day and by night.	5.8.1.1	Approval to work on special non-working days and between sunset and sunrise.	5.9.7	Approval of Contractor's designs.	5.11	Suspension of progress of the Works.	5.13.2	Reduction of penalty for delay.
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Part C1: Agreement and Contract Data

CLAUSE/OPTION		DATA	
		5.14.2	The issue of a Certificate of Practical Completion.
		5.14.4	The issue of a Certificate of Completion.
		5.16.1	The issue of a Final Approval Certificate.
		6.3.1	Variation Orders in respect of variations which are not small.
		6.6	Instruction to expend on Provisional and Prime Cost Sums.
		6.11	Adjustment of Preliminary and General allowances.
		7.8.1	Order to execute work of repair, etc., during the Defects Liability Period.
		7.8.2	Determination of value of repair work.
		8.2.2.2	Order to repair and make good damage arising from any excepted risk.
5.3.1	The documentation required before commencement with Works execution are:	• Health and Safety Plan (Refer to Clause 4.3); • Initial programme (Refer to Clause 5.6); • Security (Refer to Clause 6.2); • Proof that all contributions required in terms of the provisions of the Workman's Compensation Act (Act no 30 of 1941) as amended in 1993, 2002 have been paid (Refer to Cause 4.3.2); and • A certified copy of Unemployment Insurance Certificate, Act of 1996 (Refer to Clause 4.3.2).	
5.3.2	The time to submit the documentation required from the Commencement Date is:	14 .days	
5.8.1	The non-working days are:	Sundays	
	The special non-working days are:	• Annual builders holiday • Statutory public holidays	
5.13.1	The penalty for failing to complete the works is:	The penalty will be R1 000/day.	
5.14.1	Requirements for achieving Practical Completion	• All loops installations must be completed and tested. • Each loop must have an electrical compliance certificate issued by a competent person. • All electrical and electronic hardware and software equipment must be supplied, installed, configured and tested. • All such equipment (electrical and electronics) must have full warranty, licensing and software support documents. • All road surfaces, sidewalks and kerbing must be repaired. • Partial practical completion shall be given out for each station.	
5.16.3	The latent defect period is:	1 (one) Year	
6.1.3	Labour returns:	Labour returns will be submitted monthly .	
6.2.1	Type of security for due performance:	• Guarantee from approved financial institution or cash deposit. • The Form of Guarantee is to contain the wording of the pro forma document included as C1.3 or C1.4 contained herein.	
	Liability of performance guarantee/cash deposit	The liability of the guarantee shall be for R 200 000 for the entire contract term (3 years).	

CLAUSE/OPTION		DATA																		
6.2.2	Retention money guarantee	Not permitted.																		
6.8.2	Adjustment in rates and/or prices	- The value of the certificates issued shall be adjusted in accordance with the Contract Price Adjustment Schedule with the following values: <table border="1"> <thead> <tr> <th>Coefficient</th><th>Description</th><th>Value</th></tr> </thead> <tbody> <tr> <td>x</td><td>Portion not subject to adjustment</td><td>0.10</td></tr> <tr> <td>a</td><td>Labour</td><td>0.21</td></tr> <tr> <td>b</td><td>Civil Engineering Plant</td><td>0.27</td></tr> <tr> <td>c</td><td>Civil Engineering Materials</td><td>0.42</td></tr> <tr> <td>d</td><td>Fuel</td><td>0.10</td></tr> </tbody> </table> (Coefficients a, b, c and d must sum to one) - The area nearest the Site is Gauteng. - The base month is the month and year prior to the closing of the tender.	Coefficient	Description	Value	x	Portion not subject to adjustment	0.10	a	Labour	0.21	b	Civil Engineering Plant	0.27	c	Civil Engineering Materials	0.42	d	Fuel	0.10
Coefficient	Description	Value																		
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a	Labour	0.21																		
b	Civil Engineering Plant	0.27																		
c	Civil Engineering Materials	0.42																		
d	Fuel	0.10																		
6.8.3	Price adjustment for variations in the cost of special materials	Allowed																		
6.10.1.5	The percentage advance on materials not yet built into the Permanent Works is:	80% (Eighty percent)																		
6.10.3	Percentage retention is:	10% (Ten percent) of monthly payment certificate excluding VAT																		
	The limit of retention money is:	R150 000.00 excluding VAT																		
8.6	Insurance of the Works and Public Liability Insurance	The Employer shall arrange this insurance. A copy of the policy and the list of excesses may be obtained from Contractors All Risk and Liability Insurance Ms. Morongwa Mokoena (Tel: 012 358 1126) (morongwam@tshwane.gov.za) Mrs Ronett Marlow-Reid (Tel: 012 358 1131) (ronettm@tshwane.gov.za) Mr Lawrence Matjila (Tel: 012 358 1374) (lawrencem@tshwane.gov.za)																		
	The value of plant and materials supplied by the Employer to be included in the insurance sum is:	R 0 (zero).																		
	Responsibility for payment of deductibles in respect of Insurance of Works as well as Public Liability Insurance:	Deductibles are the responsibility of the Contractor.																		
	Construction Plant:	Contractor to insure. Policy to be approved by Employer.																		
10.5	Determination of disputes	Ad-hoc Adjudication Board.																		
10.5.3	Number of Adjudication Board members to be appointed:	One.																		

Part C1: Agreement and Contract Data

CLAUSE/OPTION		DATA
10.6	Disagreement with Adjudication Board's decision, refer matters to:	Court proceedings

C1.2.4 DATA PROVIDED BY THE CONTRACTOR

CLAUSE/OPTION		DATA		
1.1.1.9	The name of the Contractor is:			
1.2.1.2	The address of the Contract is:	• Physical Address:		
		• Postal Address:		
		• Fax to E-Mail:		
		• E-Mail Address:		
6.2.1	The security to be provided by the Contractor shall be one of the following:	Type of Security	Contractor's choice (Indicate "Yes" or "No")	
		Performance guarantee (10% (ten percent) of the Contract Sum, excluding contingencies and VAT)		
		Cash deposit (10% (ten percent) of the Contract Sum, excluding contingencies and VAT)		
6.5.1.2.3	The percentage allowance to cover profits and overhead charges for day works is:	_____ %. (Maximum of 15% will be allowed)		
6.8.3	Price adjustments for variations in the cost of special materials	The variation in cost of special materials is:		
		Type of material	Unit	Base Rate or Price

C1.3 FORM OF GUARANTEE

WHEREAS

The City of Tshwane Metropolitan Municipality
(hereinafter referred to as the "Council"),

enters into a Contract (No _____) with

(hereinafter referred to as the "Contractor")

for _____

AND WHEREAS in terms of the General Conditions of the Contract the Contractor is required to furnish an acceptable independent guarantee for the due and proper fulfilment by him of all his duties and obligations in terms of the said contract.

NOW THEREFORE we the undersigned _____

(full names of authorized agent(s))

and acting in my/our capacity as _____

and _____

and as such duly authorized thereto, do hereby bind the said _____

(hereinafter referred to as the "Guarantor") as surety and co-principal Debtor *in solidum* for the sum of

R _____ (_____)

for the due and proper fulfilment by the Contractor of all or any of his duties and obligations in terms of the said Contract. The guarantee shall not be interpreted as accessory to the contract between Council and the Contractor.

The Guarantor further undertakes, in the event of the Contractor failing duly and properly to fulfil any of his duties and obligations in terms of the said Contract, or if the Contractor is placed under provisional liquidation or in the event of termination of the Contract by the Council in terms of the General Conditions of Contract, to pay to the Council the said sum of

R _____ (_____)

or such portion thereof as may be required by the Council, immediately upon receiving written demand from the Council which written demand shall be addressed to the Guarantor at (*domicilium* address)

The Guarantor further hereby renounces the benefits of the legal exceptions:

Exceptio non numerate pecuniae

Exception non causa debiti

Beneficium de duobus vel pluribus reis debendi

Beneficium ordinis deu excussionis

Beneficium divisionis

and all other defence which could be pleaded against the validity of this guarantee, with the meaning and effect of which it declares itself to be fully acquainted.

This undertaking shall remain in full force and effect up to and including the date of issue of the Certificate of Completion, as provided for in the General Conditions of Contract, unless the Guarantor is advised in writing by the Council of his intention to institute claims, and the particulars thereof, in which event this guarantee shall remain in full force and effect until all such claims have been paid or liquidated. Notwithstanding the aforesaid, the Council may at its' sole discretion elect to have the amount provided for under this guarantee, paid out directly to it in the case of breach of contract by the Contractor by giving the Guarantor written notice to that effect, notwithstanding the fact that the Council may decide not to institute any further legal action against the Contractor.

This document is not negotiable or transferable.

FOR AND ON BEHALF OF THE BANKER/INSURER:

BANKER/INSURER:

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. _____

ANNEXURE

List of institutions from which contract /deposit guarantees can be accepted:

1. ABSA Bank
2. Capitec Bank
3. Credit Agricole Indosuez (South Africa Branch)
4. Development Bank of South Africa
5. FirstRand Bank
6. ING Bank N.V. (South Africa Branch)
7. Investec Bank
8. Landbank
9. National Housing Finance Co.
10. Nedcor Bank
11. South African Reserve Bank
12. Standard Bank
13. AIG South Africa
14. Credit Guarantee Insurance Co
15. Emerald Insurance Company
16. Federated Employers Mutual Assurance Co
17. Global Insurance Company
18. Guardrisk Insurance Company
19. Hannover Re:
20. Home Loan Guarantee Company
21. Lion of Africa Insurance Company
22. Metropolitan Life
23. Metropolitan Odyssey Ltd
24. MUA Insurance
25. Mutual & Federal Insurance Company
26. Rand Mutual Assurance Company
27. Regent Insurance Company
28. SA Eagle Insurance Company
29. Lombard Insurance.

C1.4 GUARANTEE (CASH DEPOSIT)

Contract:

Description of Contract:

Employer:

CITY OF TSHWANE METROPOLITAN MUNICIPALITY

Contractor:

I/We, the undersigned, deposit herewith ¹cash / a bank certified cheque, in the amount of

as surety for the due performance of the Contract by the abovementioned Contractor, and for all losses, damages and expenses that may be suffered or incurred by the Employer as a result of non-performance of the Contract by the Contractor.

The amount thus deposited shall at the sole discretion of the above Employer be utilised and appropriated in the manner it deems fit which shall include but not be limited to the set off of claims upon occurrence of any one or more of the following events:

- (a) the Contractor being placed under provisional liquidation or committing any one or more of the acts of insolvency as provided for in the Insolvency Act, 1936 (Act 24 of 1936);
- (b) failure to comply with the conditions of the contract by the contractor; or
- (c) if the contract is terminated.

A letter received from the Employer stating that any one or more of the aforementioned has occurred shall be sufficient notice to effect appropriation of such deposit. A certificate under the hand of the Employer's Agent as defined under the contract described above reflecting the amount of damages shall for all purposes be deemed to be sufficient to proof to do a set off of claims

The deposit shall, subject to the above, be returned to the Contractor on the issue of the Completion Certificate in terms of the Contract, unless the Employer has utilised and / or appropriated the monies as provided for above.

¹ Delete which is not applicable

Part C1: Agreement and Contract Data

FOR AND ON BEHALF OF THE CONTRACTOR:

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.

C1.5 HEALTH AND SAFETY AGREEMENT

Article of Agreement in terms of Section 37(2) of the Occupational Safety Act, 1993 between

CITY OF TSHWANE
(Hereinafter referred to as the "EMPLOYER")

AND

Herein represented by _____ in his/her capacity as _____ duly authorised by
virtue of a resolution dated _____, attached hereto Annexure A, of the said
_____ (herein after referred to as the "CONTRACTOR")

WHEREAS the CONTRACTOR is the mandatory of the EMPLOYER as contemplated in an agreement in respect of

RTD 07-2025/26: Tender for the installation, maintenance of inductive loops for automatic traffic monitoring sites and upgrading of traffic monitoring equipment and software within the City of Tshwane, on basis of as and when required for a period of three years (36 months)

AND WHEREAS section 37 of the Occupational Health and Safety act, 1993 (Act 85 of 1993), hereinafter referred to as the "ACT"), imposes certain powers and duties upon the EMPLOYER.

AND WHEREAS the parties have agreed to enter into an agreement in terms of section 37(2) of the ACT.

NOW THEREFORE the parties agree as follows:

- (a) The CONTRACTOR undertakes to acquaint the appropriate officials and employees of the CONTRACTOR with all relevant provisions of the ACT and the regulations promulgated in terms thereof.
- (b) The CONTRACTOR undertakes that all relevant duties, obligations and prohibitions imposed in terms of the ACT and Regulations will be fully complied with. Provided that should the EMPLOYER prescribe certain arrangements and procedures, that same shall be observed and adhered to by the CONTRACTOR, his officials and employees. The CONTRACTOR shall bear the onus of acquainting himself/herself/itself with such arrangements and procedures.
- (c) The CONTRACTOR hereby accepts sole liability for such due compliance with the relevant duties, obligations, prohibitions, arrangements and procedure, if any, imposed by the ACT and Regulations and the EMPLOYER expressly absolves the EMPLOYER from itself being obliged to comply with any of the aforesaid duties, obligations, prohibitions, arrangements and procedure as the case may be.

Part C1: Agreement and Contract Data

- (d) The CONTRACTOR agrees that any duly authorised officials of the EMPLOYER shall be entitled, although not obliged, to take such steps as may be necessary to ensure that the CONTRACTOR has complied with the undertakings as more fully set out in paragraphs 1 and 2 above, which steps may include, but shall not be limited to, the right to inspect any appropriate site or premises occupied by the CONTRACTOR, or to inspect any appropriate records held by the CONTRACTOR or to take such steps it may deem necessary to remedy the default of the CONTRACTOR at the cost of the CONTRACTOR.
- (e) The CONTRACTOR shall be obliged to report forthwith to the EMPLOYER any investigations, complaint or criminal charge which may arise as a consequence of the provisions of the ACT and Regulations, pursuant to work performed in terms of this agreement, and shall, on written demand, provide full details in writing of such an investigation, complaint or criminal charge as the case may be

FOR AND ON BEHALF OF THE CONTRACTOR:

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.

C1.6 ADJUDICATOR'S AGREEMENT

This agreement is made on the _____ day of _____ between:

_____ (name of company / organisation)

of _____

_____ (address) and

_____ (name of company / organisation)

of _____

_____ (address) (the

Parties) and

_____ (name of Adjudicator)

of _____

_____ (address) (the

Adjudicator).

Disputes or differences may arise/have arisen¹ between the Parties under a Contract dated _____ and known as _____

and these disputes or differences shall be/have been² referred to adjudication in accordance with the CIDB Adjudication Procedure, (hereinafter called "the Procedure") and the Adjudicator may be or has been requested to act.

IT IS NOW AGREED as follows:

- 1 The rights and obligations of the Adjudicator and the Parties shall be as set out in the Procedure.
- 2 The Adjudicator hereby accepts the appointment and agrees to conduct the adjudication in accordance with the Procedure.
- 3 The Parties bind themselves jointly and severally to pay the Adjudicator's fees and expenses in accordance with the Procedure as set out in the Contract Data.
- 4 The Parties and the Adjudicator shall at all times maintain the confidentiality of the adjudication and shall endeavour to ensure that anyone acting on their behalf or through them will do likewise, save with the consent of the other Parties which consent shall not be unreasonably refused.
- 5 The Adjudicator shall inform the Parties if he intends to destroy the documents which have been sent to him in relation to the adjudication and he shall retain documents for a further period at the request of either Party.

¹ Delete as necessary

² Delete as necessary

Part C1: Agreement and Contract Data

SIGNED

by: _____

Name: _____

who warrants that he / she is duly authorised to sign for and on behalf of the first Party in the presence of

Witness: _____

Name: _____

Address: _____

Date: _____

SIGNED

by: _____

Name: _____

who warrants that he / she is duly authorised to sign for and behalf of the second Party in the presence of

Witness: _____

Name: _____

Address: _____

Date: _____

SIGNED

by: _____

Name: _____

the Adjudicator in the presence of

Witness: _____

Name: _____

Address: _____

Date: _____

Contract Data

1	The Adjudicator shall be paid at the hourly rate of R _____ in respect of all time spent upon, or in connection with, the adjudication including time spent travelling.
2	The Adjudicator shall be reimbursed in respect of all disbursements properly made including, but not restricted to: (a) Printing, reproduction and purchase of documents, drawings, maps, records and photographs. (b) Telegrams, telex, faxes, and telephone calls. (c) Postage and similar delivery charges. (d) Travelling, hotel expenses and other similar disbursements. (e) Room charges. (f) Charges for legal or technical advice obtained in accordance with the Procedure.
3	The Adjudicator shall be paid an appointment fee of R _____. This fee shall become payable in equal amounts by each Party within 14 days of the appointment of the Adjudicator, subject to an Invoice being provided. This fee will be deducted from the final statement of any sums which shall become payable under item 1 and/or item 2 of the Contract Data. If the final statement is less than the appointment fee the balance shall be refunded to the Parties.
4	The Adjudicator is/is not ¹ currently registered for VAT.
5	Where the Adjudicator is registered for VAT it shall be charged additionally in accordance with the rates current at the date of invoice.
6	All payments, other than the appointment fee (item 3) shall become due 7 days after receipt of invoice, thereafter interest shall be payable at 5% per annum above the Reserve Bank base rate for every day the amount remains outstanding.

¹ Delete as necessary

PART C2: PRICING DATA

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C2.1 PRICING INSTRUCTIONS

1. General

- 1.1 This section provides the tenderer with guidelines and requirements with regard to the completion of the Price Schedule. The Schedule **shall to be completed in black ink** and the tenderer is referred to the Tender Specifications in regard to the correction of errors.
- 1.2 The Price Schedule shall be read with all the documents which form part of this Contract.
- 1.3 The following words shall have the meanings hereby assigned to them:

Unit:	The unit of measurement for each item of work in terms of the Specifications and the Project Specifications.
Quantity:	The number of units of work for each item.
Rate:	The payment per unit of work at which the tenderer tenders to do the work.
Amount:	The product of the quantity and the rate tendered for an item.
Lump sum:	An amount tendered for an item, the extent of which is described in the Price Schedule, the Specifications and the Project Specifications, but the quantity of work of which is not measured in any units.
- 1.4 Reference shall be made to the General and Special Conditions of Contract regarding Provisional and Prime Costs Sums.
- 1.5 Work reserved for Labour Intensive construction methods will be numbered with a prefix “LI” in the Price Schedule to distinguish them from the conventional construction works. Such work shall be constructed using local labour who is temporarily employed in terms of the project specification.

2. Pay Items

- 2.1 Descriptions in the Price Schedule are abbreviated and comply generally with those in the Standard Specifications. The measurement and payment clause of each Standard Specification, read together with the relevant clauses of the Scope of Work, set out what ancillary or associated activities are included in the rates for the operations specified. Should any requirements of the measurement and payment clause of the applicable Standard Specification, or the Scope of Work, conflict with the terms of the Price Schedule, the requirements of the Standard Specification or Scope of Work, as applicable, shall prevail.
- 2.2 The item numbers appearing in the Price Schedule refer to the corresponding item number in the standard specifications or as amended in the Scope of Work. In the latter case, the item number is prefixed with the letter “B”. The same applies to new clauses added to the standard specifications.
- 2.3 Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance is made for waste.
- 2.4 The quantities set out in the Price Schedule are the estimated quantities of the Works, but the Contractor will be required to undertake whatever quantities may be directed by the Engineer from time to time. The Contract Price for the completed contract shall be computed from the actual quantities of work done, valued at the relevant unit rates and prices.

2.5 The units of measurement described in the Price Schedule are metric units. Abbreviations used in the Price Schedule are as follows:

mm	=	millimetre	h	=	per hour
m	=	metre	kg	=	kilogram
km	=	kilometre	t	=	ton (metric = 1000kg)
m ²	=	square metre	no	=	number
m ² .pass	=	square metre pass	sum	=	sum
ha	=	hectare	MN	=	mega newton
m ³	=	cubic meter	MN.m	=	mega newton metre
m ³ .km	=	cubic meter kilometre	PC sum	=	prime cost sum
ℓ	=	litre	prov sum	=	provisional sum
kℓ	=	kilolitre	%	=	percent
MPa	=	mega pascal	kW	=	kilowatt
V	=	volt	KVA	=	kilo volt ampere
A	=	ampere	R/only	=	rate only
month	=	per month	pe	=	per establishment
day	=	per day	pm	=	per person per month
pd	=	per person per day	p	=	per person
ph	=	per person per hour			

3. Rates

3.1 The prices and rates to be inserted in the Price Schedule are to be full inclusive prices for the work described under the several items. Such prices and rates shall cover all costs and expenses that may be required in and for the execution of the work described, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the documents on which the tender is based, as well as overhead charges and profit. Reasonable prices shall be inserted as these will be used as a basis for assessment of payment for additional work that may have to be carried out.

3.2 **A price or rate is to be entered against each item in the Price Schedule, if no quantity is given then ignore the item.**

An item against which no price is entered or where a word or phrase such as “included” or “provided elsewhere” will be accepted as a rate of nil (R0,00) having been entered against such items and covered by the other prices or rates in the Schedule.

Any work executed to which such a pay item applies, shall be measured under the appropriate items in the Price Schedule and valued at a rate of nil (R0,00). The rate of nil shall be valid irrespective of any change in the quantities during the execution of the Contract.

3.3 The Tenderer shall fill in a rate against all items where the words “rate only” appears in the amount column.

3.4 Except where rates only are required, the Tenderer shall insert all amounts to be included in his total tendered price in the “Amount” column and show the corresponding total tendered price.

3.5 The tenderer shall not group together a number of items and tender one rate for such group of items.

- 3.6 All rates and sums of money quoted in the Price Schedule shall be in Rands and whole cents. Fractions of a cent shall be discarded.
- 3.7 All prices and rates entered in the Price Schedule must be **excluding VAT**. VAT will be added last on the summary page of the Price Schedule.
- 3.8 Should excessively high unit prices be tendered, such prices may be of sufficient importance to warrant rejection of a tender by the Employer.

All items must be priced. Incomplete sections shall not be considered.

4. Corrections of entries made by tenderer

Any entry made by the Tenderer in the Price Schedule, forms, etc., which the tenderer desires to change, **shall not be erased or painted out. A line shall be drawn through the incorrect entry and the correct entry shall be written above in black ink and the full signature of the Tenderer shall be placed next to the correction.**

C2.2 PRICING SCHEDULE

Pricing Schedule; The quantities set out in the Pricing Schedule are indicative quantities on past contracts and will only be used to provide a method to evaluate the bids and is not a true reflection of the actual expected quantities of the Works, but the Contractor will be required to undertake whatever quantities may be directed by the Engineer from time to time.

THE QUANTITIES IN THE PRICING SCHEDULE ARE ONLY AN ESTIMATE AND WILL ONLY BE USED TO EVALUATE THE TENDERS.

CIDB rating required for category 4CE/EB or higher registered contractors.

Award

The tender will be awarded to one service provider.

All items must be priced. Incomplete sections shall not be considered.

ITEM	LI	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SERIES 0		GENERAL				
Section 001		General Requirements and Charges				
001.01		Preliminary and General Charges				
B001.01.01		Fixed charges (R 200 000.00 Max)	Amount	200000	-	
001.02		Locating Existing Services	m ³	15		
001.03	LI	Excavate by hand to expose existing services and backfill	m ³	5		
001.04		Compliance with the Occupational Health and Safety Act and applicable regulations				
001.04.01		Provision of a Health and Safety Plan	month	36		
001.04.02		Provision of a Health and Safety File	month	36		
001.04.04		Provision of a safety officer-	month	36		
001.04.05		Health and safety training	month	3		
001.04.06		Provision of personal protective clothing and equipment	Per worker/ month	11		
001.04.07		Provision of safety fences, signs and barricades	Per site/ Month	36		
TOTAL CARRIED FORWARD						

Signature of person authorised to sign the tender:	Date

ITEM		DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
001.04.08		Other obligations				
B001.04.08.01		Traffic Accomodation as per SARTSM Vol 2 Chapter 13	km	10		
B001.06		Provision of Site Security				
B001.06.01		On-Site Security	pm	36		
B001.06.02		Nighttime Lighting	h	240		
B001.07		Making use of approved sub-contractor				
B001.07.01		Making use of sub-Contractor	-	Prov Sum	R1 000 000.00	R1 000 000.00
B001.07.02		Percentage on item B001.07.01 for charges & profit (10% Max)	R1 000 000.00	%		
TOTAL CARRIED TO SUMMARY						

Signature of person authorised to sign the tender:	Date

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD					
SERIES 0	GENERAL				
B002.05	Provision of software and hardware equipment for Traffic Monitoring				
B002.05.01	GPRS modem programmed for the City of Tshwane APN for every traffic monitoring site	no	30		
B002.05.02	Manual traffic counting video recorder with stand or similar (See C3.4.1.3)	no	2		
B002.05.03	Configuration and set-up of site data base	Lump Sum	1		
B002.05.04	Software, equipment and support (Supply, repairs add Installation)				
B002.05.04.01	Eight lanes traffic monitoring logger with all terminals and cables and connectors (See Table 1 in C3.4.1.4)	no	24		
B002.05.04.02	Remote automated data extraction software license. for eight lanes traffic monitoring logger with GPRS Support	no	1		
B002.05.04.03	Data management and reporting software license for eight lanes traffic monitoring logger	no	1		
B002.05.04.04	Field Software for data extraction for eight lanes traffic monitoring logger	no	1		
B002.05.04.05	The updating of GPRSTel server license (See C3.4.1.3)	no	2		
B002.05.04.06	Updating of a TelDialer software license (See C3.4.1.3)	no	2		
B002.05.04.07	Updating of a TrafBase software license (See C3.4.1.3)	no	2		
B002.05.04.08	Video traffic recording and monitoring software license (See C3.4.1.3)	no	2		

B002.05.04.09	Upgrading of a MoniCar software license (See C3.4.1.3)	no	2		
B002.05.04.10	Training, support and updates of all software for 36 months	Lump sum	1		
B002.05.04.11	Steel/ Minitanic Housing Box (steel sheet metal) with 70mm disc padlocks	no	15		
B002.05.04.12	Repair of RAKTEL 1010, Tel 2RT, Raktel 2000, Raktel 4000	m	40		
B002.05.04.13	Terminals and cables and connectors for Raktel (See Table 1 in C3.4.1.4)	no	40		
B002.05.04.14	Stick-on loop 2,5 x 1 m (5 m feeder) Includes 8 x 4m rolls for feeder	no	60		
B002.05.04.15	Additional feeder length	no	300		
B002.05.04.15	Additional feeder rolls (per 4m)	no	60		
B002.05.04.16	Tally counters	no	100		
TOTAL CARRIED TO SUMMARY					

Signature of person authorised to sign the tender:	Date

ITEM	LI	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SERIES 1		ANCILLARY WORK				
Section 101		Site Clearing and Grubbing				
101.01		Clearing and grubbing				
101.01.01		Strips				
101.01.01.01	LI	<i>Width indicated (up to 50m wide road reserve)</i>	m²	600		
101.01.02	LI	Areas not classified as strips	m²	200		
101.02		Cutting and removing large trees with a girth -				
101.02.01	LI	exceeding 1m and up to and including 2m	no	2		
101.03		Grubbing and the removal of the stumps and roots of large trees with girth -				
101.03.01	LI	exceeding 1m and up to and including 2m	no	2		
TOTAL CARRIED FORWARD						

Signature of person authorised to sign the tender:	Date

TOTAL BROUGHT FORWARD						
101.05		Removal and disposal of specific elements				
101.05.01		Concrete kerbing / kerbing combinations	m	50		
101.05.02		Concrete or brick elements (reinforced or unreinforced)				
101.05.02.01	LI	230mm brickwork	m ²	20		
101.05.02.02	LI	115mm brickwork	m ²	20		
101.05.02.04		Concrete elements (unreinforced)	m ³	5		
101.05.02.05		Concrete elements (reinforced)	m ³	5		
101.05.03		Asphalt surfacing	m ²	5		
B101.05.04	LI	Interlocking / non-interlocking paving blocks	m ²	30		
TOTAL CARRIED TO SUMMARY						

Signature of person authorised to sign the tender:	Date

ITEM	LI	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SERIES 1		ANCILLARY WORK				
Section 102:		Accommodation of Traffic				
102.01		Accommodation of traffic and maintenance of bypasses	m	1,500		
102.09		Traffic lights	prov sum	1		
TOTAL CARRIED FORWARD						

Signature of person authorised to sign the tender:	Date

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SERIES 1	ANCILLARY WORK				
Section B107	Dayworks				
B107.01	Labour during normal working hours				
B107.01.01	Unskilled labour	h	1		
B107.01.02	Semi-skilled labour	h	1		
B107.01.03	Skilled labour	h	1		
B107.02	Extra-over item B107.02 for charges and overheads				
B107.02.01	Unskilled labour	%	10		
B107.02.02	Semi-skilled labour	%	10		
B107.02.03	Skilled labour	%	10		
B107.03	Construction Plant				
B107.03.01	Concrete floor saw cutter	h	1		
B107.03.02	230mm angle grinder	h	1		
B107.03.03	Wacker trench rammer	h	1		
B107.03.04	500 litres portable water tank	h	1		
B107.03.05	500 W portable floodlight (2 x 900lm) with tripod adjustable stand	h	1		
B107.03.06	Utility locating equipment	h	1		
TOTAL CARRIED FORWARD					

Signature of person authorised to sign the tender:	Date

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD					
B107.03.08	Concrete Mixer (250 litre)	h	1		
B107.04	Transport of Construction Plant				
B107.04.01	Flatbed truck (2 - 4 ton)	km	1		
TOTAL CARRIED FORWARD					

Signature of personm authorised to sign the tender:	Date

ITEM	LI	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SERIES 2		EARTHWORKS				
Section 202		Trenching				
202.01		Trench excavation				
B202.01.01	LI	Up to 0,3m wide				
B202.01.02	LI	Up to 0,5m deep	m ³	190		
202.03		Excavations outside the normal trench profile	m ³	144		
TOTAL CARRIED FORWARD						

Signature of person authorised to sign the tender:	Date

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SERIES 9	QUALITY CONTROL				
Section 903	Testing and Issuing Certificates				
B903.01	Provision for testing of traffic monitoring sites				
B903.01.01	Loop Testing (Analogue megger insulation test)	no	28		
B903.01.02	Digital Multimeter testing	no	28		
B903.01.06	Documentation, testing and Certification	no	28		
TOTAL CARRIED FORWARD					

Signature of person authorised to sign the tender:	Date

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SERIES 9	Construction of Traffic Monitoring Sites				
Section 904	Automatic Traffic Monitoring Sites				
B904.01	Automatic Traffic Monitoring Sites				
B904.01.01	Constructon of a complete 2 lane Traffic Monitoring sites Automatic 2 loops per lane with GPS coordinates (See Annexure 4)	no	10		
B904.01.02	Constructon of a complete 3 lane Traffic Monitoring sites Automatic 2 loops per lane with GPS coordinates (See Annexure 4)	no	5		
B904.01.03	Constructon of a complete 4 lane Traffic Monitoring sites Automatic 2 loops per lane with GPS coordinates (See Annexure 4)	no	20		
B904.01.04	Constructon of a complete 5 lane Traffic Monitoring sites Automatic 2 loops per lane with GPS coordinates (See Annexure 4)	no	5		
B904.01.05	Constructon of a complete 6 lane Traffic Monitoring sites Automatic 2 loops per lane with GPS coordinates (See Annexure 4)	no	5		
B904.01.06	Constructon of a complete 8 lane Traffic Monitoring sites Automatic 2 loops per lane with GPS coordinates (See Annexure 4)	no	5		
B904.01.07	Installation of housing gulley	no	60		
B904.01.08	Placing of ducting in junction boxes (between 2 and 3 per station)	no	100		
B904.01.09	Concrete Housing Base (see diagram 6)	no	10		
B904.01.10	Building of a complete automatic traffic monitoring housing manhole with two bollards (see diagram 7)	no	14		
B904.01.11	Repair of one loop per lane	no	10		

B904.01.12	Repair of two loops per lane	no	10		
B904.02	Power supply				
B904.02.01	50W Mono/Poly crystalline solar power supply clamped to the three-meter-high (See 3.4.1.3.2)	no	18		
B904.02.02	50W Mono/Poly crystalline solar power supply clamped to the existing street light pole (See 3.4.1.3.2)	no	12		
B904.02.03	Connection and testing of stations	no	24		
TOTAL CARRIED FORWARD					

Signature of person authorised to sign the tender:	Date

SUMMARY OF PRICING SCHEDULE

SECTION	DESCRIPTION	AMOUNT
SERIES 0	GENERAL	
001	General Requirements and Charges	
002	Office Accommodation	
SERIES 1	ANCILLARY WORK	
101	Site Clearing and Grubbing	
102	Accommodation of Traffic	
B107	Dayworks	
SERIES 9	QUALITY CONTROL	
903	Testing	
904	Construction of Traffic Monitoring Sites	
TOTAL SCHEDULE OF PRICES		

Signature of person authorised to sign the tender:	

DESCRIPTION	AMOUNT
TOTAL OF SCHEDULED PRICES	
Add 10.00% for contingencies	
SUBTOTAL	
Add 15.00% VAT	
CONTRACT PRICE CARRIED FORWARD TO FORM OF OFFER	

Signature of person authorised to sign the tender:	Date

PART C3: SCOPE OF WORKS

C3.1 DESCRIPTION OF WORKS

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SCOPE OF WORKS FOR THE PROVISION OF TRAFFIC MONITORING SERVICES (CONSTRUCTION)

C3.1 DESCRIPTION OF WORKS

C3.1.1 Employers Objectives

The employer's objectives of this project is the provision of traffic monitoring system by the contractor to the employer within the City of Tshwane (CoT) borders. Traffic monitoring is undertaken with the purpose of measuring and collecting various traffic and vehicle characteristics, such as traffic counts, operating speeds and axle or wheel loads (CoT currently does not classify). These characteristics are mainly intended for use in the management, planning and design of the road networks and infrastructure. They are also generally used to project long and short term traffic trends; Average Daily Traffic (ADT) to Annual Average Daily Traffic (AADT).

C3.1.2 Overview of the works

The project covers the installation and repairs of inductive loops, traffic monitoring equipment housing manhole/ concrete blocks for automatic traffic monitoring sites within the CoT borders. It also covers the supply, delivery and connecting traffic monitoring equipment and its peripherals, and commissioning of traffic monitoring sites. Contractors are to take cognisance of a fact that there must be absolute minimal disruptions to traffic flow during the construction, therefore construction of automatic traffic monitoring sites shall be carried out at night from 18:00pm till 6:00 am when traffic is quite during weekdays. Construction may also be carried out on weekends during the off-peak periods, and that will be agreed on between the employer and the contractor.

The provision of traffic monitoring system covers the following:

- a) Traffic monitoring site assessments.
- b) Installation and repairs of inductive loops. Construction of the traffic monitoring equipment housing manhole, or concrete base for the automatic traffic monitoring sites. Site GPRS coordinates.
- c) 150W monocrystalline solar panel with charge control and mounting poles.
- d) Supply, delivery and installation of:
 - Eight lanes traffic monitoring logger and with computer software, terminals and connectors.
 - Repairs of Raktel 1010 and Raktel 4010.
 - Updating of computer software and licenses to the latest version registered to the employer including training, to be installed on employer's computers.
 - 360W single output battery chargers for 12V batteries (3 stages), with cables.

Part C3: Scope of Works

- 70 mm disc pad locks (standard opening key)
- Stick on loops.
- Type M1 video used for manual traffic monitoring.

In order to supply traffic logging equipment, manual traffic monitoring video cameras and software licenses, the contractor (either solely or Joint Venture) cannot necessarily be the manufacturer of equipment and may source equipment from one or more manufacturers with the software.

For the construction of traffic monitoring sites, the contractor must have a level 4 CE/EB CIDB or higher grading and must have experience in the field of construction including amongst others installation of loops cables and electrical installations in general and need to provide the employer with a CV of related work with the relevant clients. All drawings and specifications are supplied in this specification.

Currently the employer has 102 traffic monitoring sites that requires repair works (see Annexure 3, Table 1), it is envisaged other new monitoring sites will be constructed as part of this contract. Installations and repairs of inductive loops for traffic and construction of a concrete block for traffic monitoring sites together with the supply and delivery of traffic monitoring equipment (see Table 1, page 27 and 28) and its peripherals will be carried out as and when required basis for a period of three years (36 months). The traffic monitoring system when ordered by the employer from the contractor shall be delivered to 225 Madiba Street, Office A320 Capitol Towers North, Pretoria Central.

C3.1.3 Extent of the works

Conventional and labour-intensive construction method will be used.

The following construction activities are to be executed.

- a) Site establishment
- b) Setting out of works
- c) Accommodation of traffic
- d) Cutting and installing of loops and feeder slots
- e) Installing junction boxes (Gulley)
- f) Trenching, ducting and backfilling
- g) Pulling cable (see Annexure 1, Table 1 for diameter preferred diameter size)
- h) Construction of a concrete base, foundation.

Part C3: Scope of Works

- i) Earth system
- j) Clearing, cleaning site and repair of sidewalks
- k) Testing and documentation
- l) Regular maintenance

The project will comprise of the repair of 102 traffic monitoring sites, construction of other new traffic monitoring sites within the City of Tshwane borders which will be proclaimed by the employer during the project, see Annexure 3; and supply delivery of traffic monitoring equipment. The project will comprise of the installation, maintenance of inductive loops for automatic traffic monitoring sites and upgrading of traffic monitoring equipment and software within the City of Tshwane, on basis of as and when required for a period of three years (36 months)

Supply and delivery and installation of:

- a) Traffic logging equipment and its peripherals.
- b) Computer software and licenses registered to the employer including training,
- c) Batteries
- d) Steel sheet housing with 20W solar panel with charge control covered with mounting bracket fixed on top.
- e) Stick on loops.
- f) Type M1 video used for manual traffic monitoring.
- g) Tools
- h) Padlocks

The above deliverables shall meet the required specification as explained in Table 3.

The extent of the works is not exhaustive and shall not limit the work to be carried out by the contractor under this contract. The extent and scope of the work to be carried out as part of the contract can change, due to changes to the priority of certain portions of the work, as determined by the client, changes to budgetary constraints or emergency works that must be completed. Indicative quantities of each type of work are also given in the schedule of prices and will be confirmed with actual calculations on site during construction.

C3.1.4 Compulsory Performance Standard

- a) The successful bidder is to submit Performance Guarantees and all insurance documents within 14-days upon formal request to do so
- b) The successful bidder is to commence with physical work within 7-days upon receipt of a works order
- c) The successful bidder is to submit works program within 3-days upon receipt of a works order
- d) The successful bidder is to always achieve at least 90% performance compliance with the works program.

- e) The successful bidder is to correct sub-standard and/or poor quality work within 7-days upon receipt of a formal notice to do so
- f) The successful bidder is to effect any contractual remedies within 7-days upon receipt of a formal notice to do so

City of Tshwane reserves a right to terminate the contract in terms of the provisions of the **General Conditions of Contract for Construction Works, Third Edition (2015)** should the successful bidder at any stage of the contract fail to adhere to any of the above stated compulsory Performance Standards and further reserves the right to instruct the contractor in the other area to carry out work in the affected area.

C3.1.5 Location of the works

The monitoring sites are located at various location within the City of Tshwane boundaries, mostly on numbered routes. See Annexure 3, Table 1 on page 129.

C3.1.6 Temporary works

Temporary works including site offices and traffic accommodation shall be done according to the contract specifications and drawings. It is the obligation of the contractor upon completion of the works to make good of the site to the satisfaction of the engineer.

Contract: RTD 07 2025/26: Tender for the installation, maintenance of inductive loops for automatic traffic monitoring sites and upgrading of traffic monitoring equipment and software within the City of Tshwane, on basis of as and when required for a period of three years (36 months)

Part C3: Scope of Works

C3.2 ENGINEERING

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C3.2.4 Drawings – Prepared by the Employer 8

C3.2.5 Design procedures (Drawing prepared by the Contractor) 8

C3.2.1 Design services and activity matrix

- a) The employer is responsible for the design of the permanent works as reflected in these 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 employer in the compilation of the as-built drawings.

Works design responsibilities per stage are as follows:

Concept, feasibility and overall process Employer

Basic engineering and detail layouts to tender stage..... Employer

Final design to approve for construction stage..... Employer

Temporary works Contractor

Preparation of as built drawings Contractor

C3.2.2 Employer's design

The employer is responsible for the design of the permanent works as reflected in the contract documents unless otherwise stated. It is the responsibility of the contractor to design the temporary works and ensure their compatibility with the permanent works. The contractor shall measure and keep all records required for the preparation of as built drawings and submit the records to the employer on completion of each work allocation including the project pictures. The information shall be supplied in a format approved by the employer at the commencement of the project.

Roadway including all lanes: Arrange adequate traffic control and lane closure, determination of site position, marking of site, construction of site, cutting of groves, placing of loop cables and feeders, sealing of saw cuts, excavation of trenches (off road), placing of pull boxes (gully), placing of ducts, construction of housing manhole/ housing plinth (concrete block, 25 MPa), Documentation and testing.

Materials required for the construction of traffic monitoring site.

- a) Loop cable
- b) Sealant
- c) Ducts

- d) 9 mm stone aggregate and sand from commercial source
- e) Cement in pockets (Cem11A – 32.5N)
- f) Standard face brick with a nominal compressive strength of 12 MPA.
- g) Manhole cover fitted with 20WA solar panel with a charge control covered in a mounting bracket.
- a) 90 Ø mm galvanised end threaded elbow pipe with locknut and endcap.
- b) Earth wire

Loop width requirements are indicated in Annexure 1, Table 1 typical loop dimension.

The loops installation works is in accordance with this specification as listed below, taking cognisance of the particular requirements of the City of Tshwane.

- a) CoT Standard Specifications for Municipal Civil Engineering Works; and
- b) Tshwane City Engineers specifications
- c) City of Tshwane Standard Drawings for Roads and Storm Water
- d) Technical Methods for Highways (TMH3)
- e) Technical Methods for Highways (TMH8)

C3.2.3 Design brief

No design responsibility rest with the Contractor except for the design of the temporary works and their compatibility with the permanent Works

C3.2.4 Drawings – Prepared by the Employer

City of Tshwane Standard Drawings for Roads and Storm Water will be supplied to contractor by the employer to use during the project.

The drawings included in this specification in a form of diagrams must be regarded as provisional and preliminary for the tenderer's benefit to generally assess the scope of work. The work shall be carried out in accordance with the latest available revision of the drawings approved for construction.

C3.2.5 Design procedures (Drawing prepared by the Contractor)

Where the contractor is required to prepare any drawings for the purpose of this contract, they shall be prepared as specified below and in accordance with any further requirements specified by the employer.

The contractor shall submit to the employer for his review one paper print of each drawing prepared by him.

The standard of detailing and the quality of the print shall be the same as those of the drawings supplied to the contractor under the contract. The drawings shall be compiled in the official language of the contract.

Accepted drawings shall form an integral part of the contract documents, and any drawing not accepted and signed shall not be permitted on the site of works for construction purposes, neither shall it be used to manufacture any item. Notwithstanding the approval and/or acceptance and signing of the drawings, the contractor shall take full responsibility for all details, discrepancies, omissions, errors, etc, in respect of the said drawings as well as the consequences thereof.

The Contractor shall submit only fully completed drawings in accordance with this specification and shall not be entitled to claim for delays resulting from the submission of incomplete drawings. The Employer shall require a period of up to four weeks, depending on circumstances, for reviewing the complete drawing(s).

The Contractor will be supplied with one complete set of drawings for recording "as-built" information. Any information in the possession of the Contractor which is necessary for the Employer's Representative to complete his record drawings must be submitted to the Employer's Representative before a Certificate of Completion will be issued.

Only figured dimensions shall be used and drawings shall not be scaled unless so instructed by the Employer. The Employer will supply any figured dimensions which may have been omitted from the drawings.

C3.3 PROCUREMENT

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C3.3.1 Preferential procurement procedures

C3.3.1.1 Requirements

The City of Tshwane (CoT) has a mandate and responsibility to fight poverty, build clean, healthy, safe, and sustainable communities. To achieve this, the City adopted an Integrated Poverty Reduction and Community Development Strategy which requires all departments to cooperate and contribute towards poverty reduction through employing EPWP participants on projects. Therefore, Transportation Planning Division is committed to utilize participants that are registered on the City of Tshwane Central Database on all projects. The aim is to ensure commitment by each contractor on a project to utilize 100% of its personnel of the EPWP Central Database in order to enhance poverty alleviation and the uplifting of participants.

The successful contractor appointed will have to request labour from the EPWP Office that will do a random selection from the Central Database. Hundred percent of all personnel on a project must be appointed from the Central Database provided by the EPWP Office. The idea is to place beneficiaries in the correct or appropriate project roles/occupations to help them achieve income capacity and/or to equip them through skills development. The contractor must provide data about the number of beneficiaries required, qualifications, type of placement/occupation and gender before the project starts.

C3.3.1.1.1 Employment of unskilled and semi-skilled labour in Labour Intensive Construction works”

1. Requirements for the sourcing and engagement of labour
 - a) Unskilled and semi-skilled labour required for the execution of all labour-intensive works shall be sourced from the EPWP Office
 - b) The guideline pay rate will be as set by the CIDB/ SAFCEC Gazetted rates
 - c) Tasks by the Contractor must be such that:
 - the average worker completes 5 tasks per week in 40 hours or less; and
 - the weakest worker completes 5 tasks per week in 55 hours or less.
 - d) The Contractor must revise the time taken to complete a task whenever it is established that the time taken to complete a weekly task is not within the requirements of “c”.
 - e) The Contractor shall endeavour to ensure that the expenditure on the employment of temporary workers is in the following proportions:
 - 60% women;
 - 20% youth who are between the ages of 18 and 35; and
 - 2% persons with disabilities.
2. Specific provisions pertaining to SANS 1914-5
 - a) Definitions

Targeted labour: Unemployed persons who are employed as local labour on the project.

b) Contract participation goals

- There is no specified contract participation goal for the contract. The contract participation goal shall be measured in the performance of the contract to enable the employment provided to targeted labour to be quantified.
- The wages and allowances used to calculate the contract participation goal shall, with respect to both time-related and task rated workers, comprise all wages paid and any training allowance paid in respect of agreed training programmes.

c) Terms and conditions for the engagement of targeted labour

Further to the provisions of clause 3.3.2 of SANS 1914-5, written contracts shall be entered into with targeted labour.

d) Variations to SANS 1914-5

- The definition for net amount shall be amended as follow:

Financial value of the contract upon completion, exclusive of any value added tax or sales tax which the law requires the employer to pay the contractor.

- The schedule referred to in Clause 5.2 of SANS 1914-5 shall in addition reflect the status of targeted labour as women, youth and persons with disabilities and the number of formal training provided to targeted labour.

3. Training of targeted labour

- a) The contractor shall provide all the necessary on-the-job training to targeted labour to enable such labour to master the basic work techniques required to undertake the work in accordance with the requirements of the contract in a manner that does not compromise worker health and safety.
- b) The cost of the formal training of targeted labour must be included on the total of the prices.
- c) The contractor shall do nothing to discourage targeted labour from participating in training programmes organised for this project and shall take all reasonable steps to ensure that each beneficiary is provided with 6 days of formal training if the beneficiary is employed for 6 months or more.
- d) An allowance equal to 100 % of the task rate or daily rate shall be paid by the contractor to workers who attend formal training, in terms of “c)” above.

The proof of compliance with the requirements must be provided by the contractor to the employer prior to submission of the final payment certificate.

C3.3.1.2 Resource standard pertaining to targeted procurement

Not applicable.

C3.3.2 Subcontracting

C3.3.2.1 Scope of mandatory subcontract works

The contractor is to identify and present to the Employer the works to be subcontracted to specialist subcontractors.

C3.3.2.2 Specialist subcontractors/suppliers

The Contractor is required to maximize the use of suitably qualified local subcontractors from the beneficiary community first, before procuring services from non-local subcontractors.

C3.3.2.3 Subcontracting procedures

The contractor will be required to conclude with the subcontractor a formal written agreement, giving details of inter alia the working arrangements, programme, payment, workmanship, etc. A copy of this agreement must be submitted to the employer for approval.

C3.3.2.4 Attendance on subcontractors

The contractor is responsible for work carried out on his behalf by any of its subcontractors (selected or otherwise). The employer will not liaise directly with such subcontractors, and all problems relating to payments, programming, workmanship, etc. shall be resolved between the subcontracting parties.

C3.4 CONSTRUCTION, MONITORING EQUIPMENT SUPPLY AND DELIVERY

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C3.4.1 Work Specifications

C3.4.1.1 Applicable standards

The applicable standard specifications shall be Technical Methods for Highways (TMH 3), Specifications for the Provision of Traffic and Weigh-in-Motion Monitoring Services, Committee Draft 2 Mar 2018, issued by the committee of transport officials (COTO).

Tenderers, contractors and subcontractors shall obtain their own copies of the document TMH 3 Specifications for the Provision of Traffic and Weigh-in-Motion Monitoring Services, for tendering purposes and for use for the duration of the Contract from the National Department of Transport Office, 151 corner Bosman and Struben Street, Pretoria Central and shall bear all expenses in this regard.

The other applicable standard specifications shall be the document **Standard Specifications for Municipal Civil Engineering Works, Third Edition 2005**, issued by the Employer.

Tenderers, contractors and subcontractors shall obtain their own copies of the document **Standard Specifications for Municipal Civil Engineering Works, Third Edition 2005**, for tendering purposes and for use for the duration of the Contract from the Procurement Advice Centre, C de Wet Centre, 175 DF Malan Drive, Pretoria West and shall bear all expenses in this regard. Also freely available in electronic (pdf) format at:

http://www.tshwane.gov.za/sites/business/Tenders/AdditionalInformation/CTMM_Civil_Specification_2005.zip.

The **Standard Specifications for Municipal Civil Engineering Works, Third Edition 2005** have been written to cover all types of municipal civil engineering works and it may therefore cover work not applicable to this contract.

The **Particular Specifications** together with the **Drawings** and **Bill of Quantities** clearly indicate the sections of the Standard Specifications which apply to this contract.

C3.4.1.2 Applicable national and international standards

TMH 3

TMH8

C3.4.1.3 Particular/generic specifications

The Employer's Pre-construction Health and Safety Specification (included in this document), Annexure 2.

C3.4.1.3.1 Generic Specification

01 Scope

This specification establishes general requirements for activities which are to be executed.

02 Precedence

Where this specification is in conflict with any other standard or specification referred to in the Scope of Works to this Contract, the requirements of this Contract, the requirements of this specification shall prevail.

03 Cutting loops and feeder slots

- a) Acquire the official site plans.
- b) Mark out the required loop and feeder locations. Always start at the lane furthest from the instrument housing position.
- c) Use a chalk line and/or straight edge to mark the saw-cuts. Use aerosol or a wax marker crayon to ensure that the lines are clearly visible during cutting (especially during wet cutting).
- d) Saw cut the loops and feeder slots to the required width and depth (normally 8.5 mm width and 35mm depth). The saw-cut dimensions are determined by loop and feeder wire requirements. Enough room must be left to allow for minimum 20mm sealant coverage.
- e) Feeders leaving the road edge (exiting the pavement edge), see diagram 1. When sawing the feeder saw-cut all the way to the road edge, the last part of the cut should be made deeper (as far as the blade will lower). Allow the feeders to drop freely when excavating under the roadway at the side of the pavement. This will prevent unnecessary strain on the cables and provide protection.

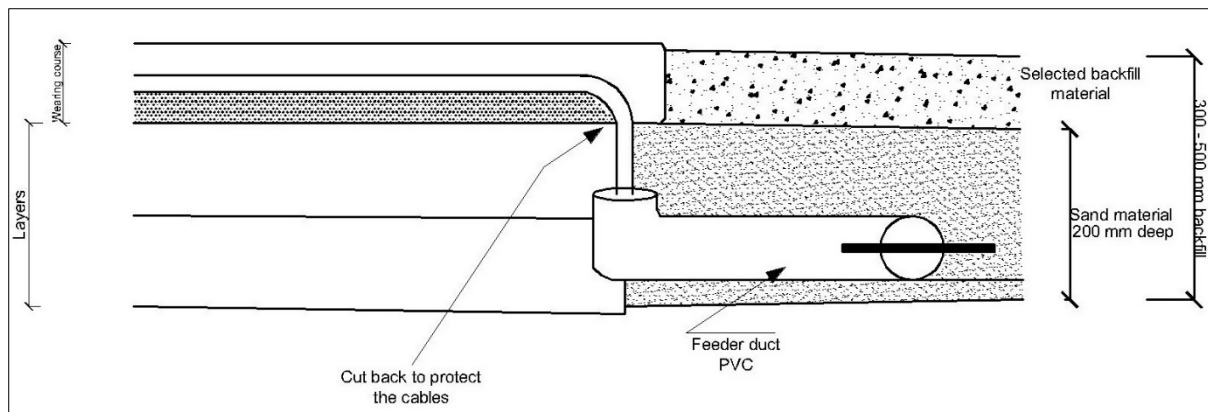


Diagram 1 – Feeder protection

- f) Saw-cut corners should normally be made at right angles. The sharp corner where the loop wire winds over should be removed with a chisel (Diagram 2). Remove all the debris and sharp material from the corners and grooves. Use a power washer to clean out the grooves and blow the excess water out with a blower and/or compressed air.
- g) All saw-cuts should be made completely dust and particle free. Use a suitable blower or compressed air to remove dust and loose particles. The saw-cuts should be dried out before application of sealant.
- h) Cover the edges of the saw-cuts with tape (duct tape 50mm) to prevent spillage.

04 Installing the loop cables

Care should be taken when handling the cables on site to prevent damage to the insulation of the cables. When laying out the feeder pair for twisting no stones or other sharp objects should be able to come into contact with the cable.

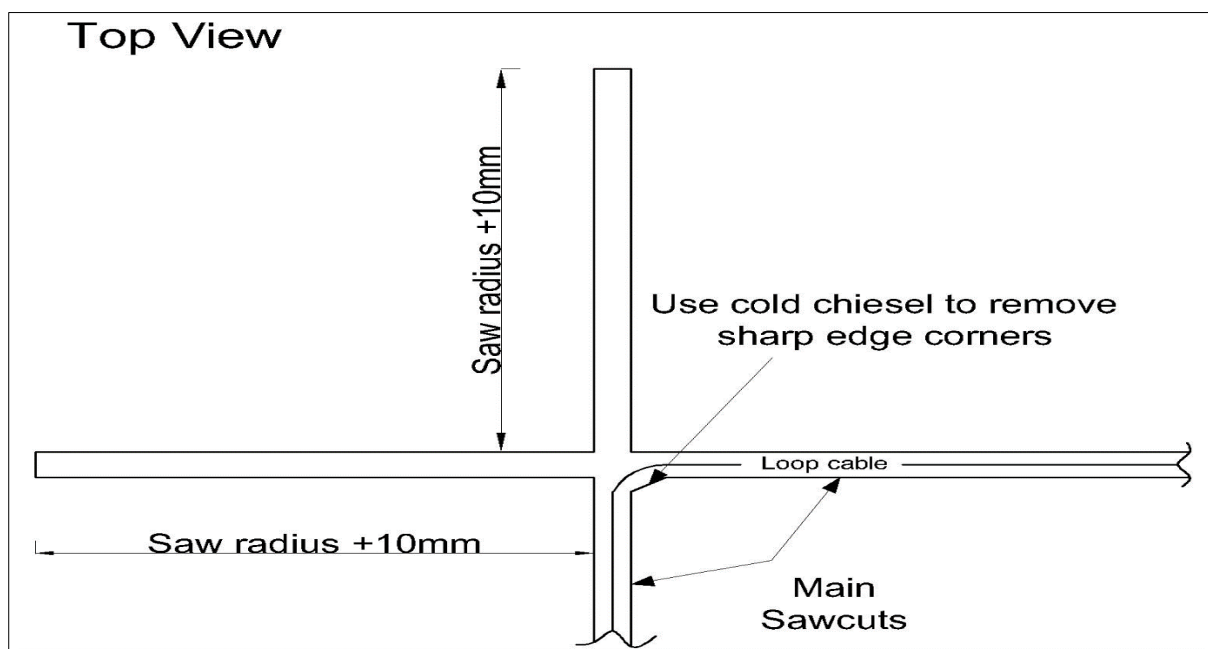


Diagram 2 – Loop corners

When working near traffic the cable must be kept away from the traffic lanes and the cables should be protected from workmen's feet (do not step on the cable). No joints on loops and feeder will be allowed. Remove sharp edged corners as shown in diagram 2.

- a) Measure out the total required length of a loop plus the feeder. A 1m x 3m 3-turn loop and 20m feeder will require $((1+1+3+3) \times 3 + 20 \times 2) + 2\text{m (slack)} = 66\text{m}$ total loop wire. Feed out 20 + 1m (one half of the feeder) and start to place the loop wire.

Part C3: Scope of Works

- b) Wind the loop cables 3 turns from the bottom of saw cut; do not apply to much tension, allow the wire to fit loosely on the bottom of the saw-cuts. Use a rounded blunt (wooden) instrument to place the wire. Do not use sharp tools such as screwdrivers as they may damage the insulation of the loop wire. Short lengths (20mm) of “polycord” (closed cell cord) may be used to keep the wire at the bottom of the saw-cuts. Allow for sufficient sealant coverage.
- c) Temporarily tape the feeder at the entry corner of the loop.
- d) Twist the feeder wire the desired number of turns (minimum 15 per meter). To twist the feeder clamp the two end wire in the chuck of a battery powered drill of which the speed can be controlled. Slowly twist the feeder with the drill. It is important to hold the end where the feeder enters the loop still. (two people’s work). Do not over twist.
- e) Place the feeder into its slot. If the feeder has to cross an adjacent lane temporarily roll the feeder and place at a secure position.
- f) Place the cable markers on the end of the feeder and document the loop number and position.
- g) Measure the total loop resistance, insulation resistance and induced voltage before sealing the grooves. Any damage to the wire could become visible before closing the grooves. In doing the insulation measurements make sure that an adequate local earth point is available. Install an earth spike.
- h) Apply the loop sealant as per specification. Do not over or under fill (see diagram 3).

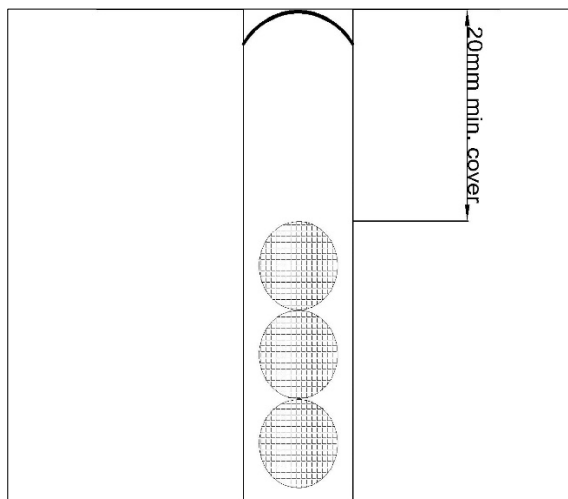


Diagram 3 – Sealant Cover

- i) Allow the sealant to dry properly before opening the lane to traffic. Opening prematurely will cause the loss of sealant from the grooves.
- j) Remove the masking tape from the surface before opening the lane to traffic.

05 Installing junction boxes (Gulley)

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- a) Junction boxes are used to assist with storing of extra/ reserve in case there will be shortage at the plinth.
- b) All cable ducts terminate in junction boxes. A variety of prefabricated junction boxes are available.
- c) The junction box has an open bottom and is placed on clean crushed rock that forms a sump for natural water to drain into (see diagram 4 and 5).

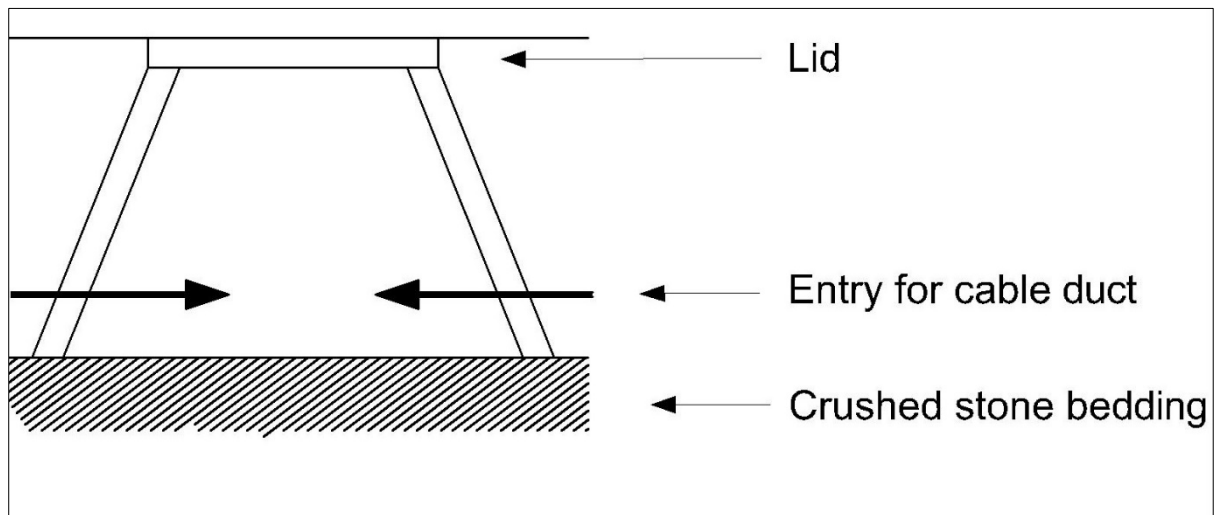


Diagram 4 – Junction box

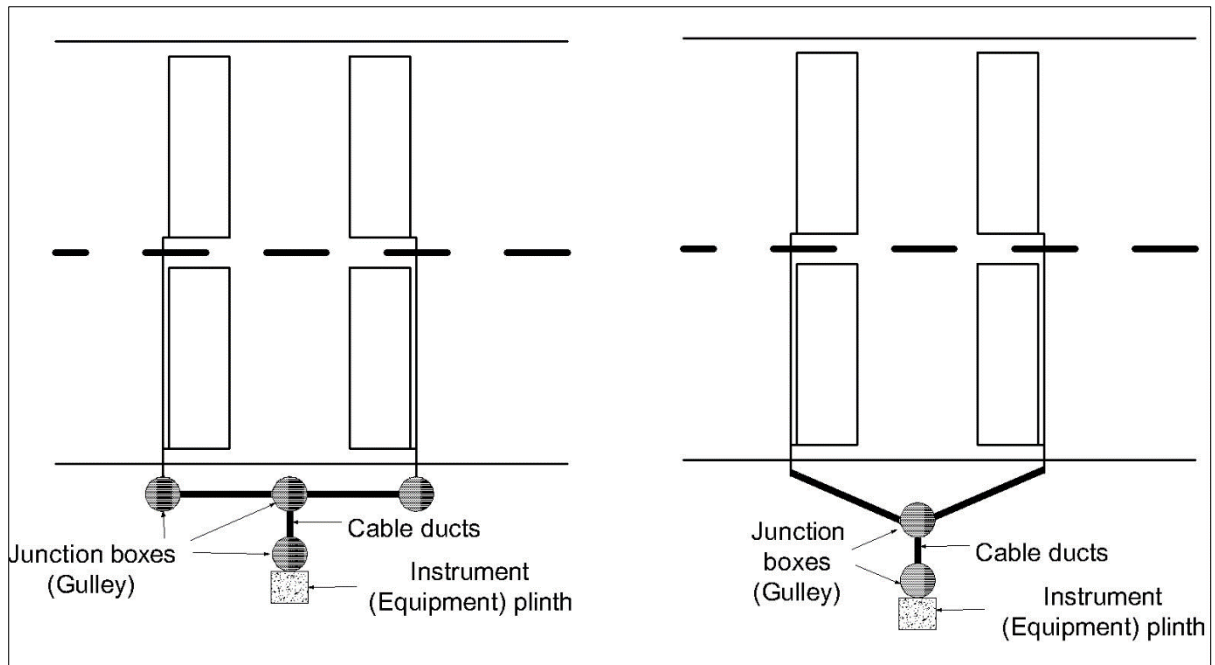


Diagram 5 – Junction box positioning

06 Trenching and ducting

- a) All trenches shall have a minimum depth of 500 mm and have adequate width to accommodate the required number of ducts. Trenches must be fitted with the appropriate cable ducts.

- b) When backfilling, make sure that no stones are within direct contact with cable ducts. Use a stone free selected backfill for the first 200 mm covering the ducts. Compact the backfill in at least two stages (stage one on the selected backfill and stage two after final fill). To compact use a hand-held or small mechanical plate compactor.
- c) Recommendations for cable ducts:
 - For 8 feeders, 50mm diameter with a 3mm wall thickness.
 - All ducts must be provided with pull-trough wire.
 - Do not allow sharp bends.
 - At each change of direction a junction box must be provided.
 - Mark and map the position of all junction boxes and cable routes.
- d) Provide marker tape to protect cable ducts when trenches need to be opened for maintenance.

07 Pulling cable

- a) Do not force the cable when pulling the cable through the ducts. This could damage the insulation of the wires.
- b) Pull slowly to avoid cable burn.
- c) Do not pull excessive distances (over 20m). Rather provide extra junction boxes if long distances have to be covered.
- d) Always leave a pull-wire for later maintenance
- e) Leave at least 1500mm of cable ends at the instrument-housing end before cutting off the excess wire.

08 Providing instrument housing (concrete block) foundation

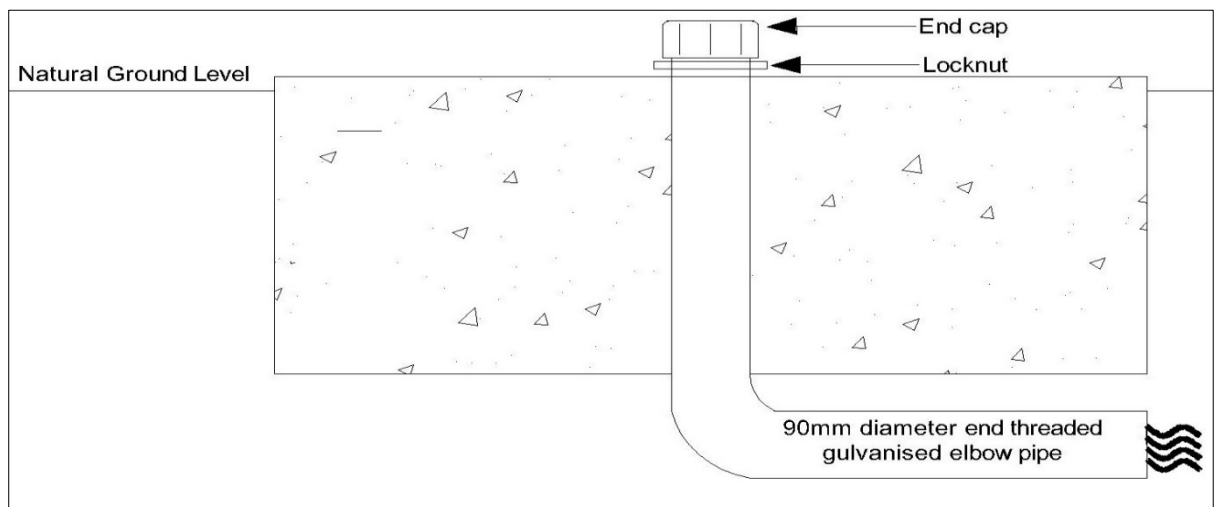
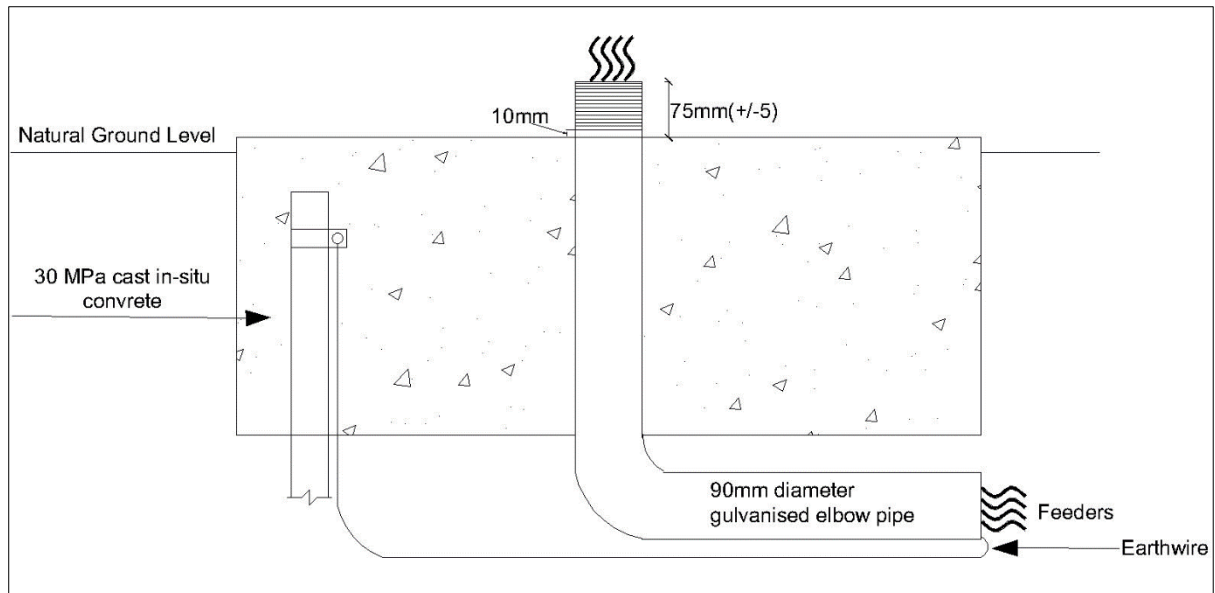
- a) The housing is attached to a concrete (30 MPa) concrete block (plinth) when in use (see diagram 6).
- b) The sensor feeders are stowed in the pipe running through the block, when not in use.
- c) The pipe is fitted with a lock nut and sealing (end) cap.
- d) The housings used for shall have an opening in the bottom for the pipe to go through.
- e) The housing is then secured by the locknut and leveled with four adjustment screws that thread through the bottom of the housing. The equipment housing is secured to the plinth with caged bolts that have been cast in the concrete base (plinth).

09 Earth system

- a) Drive a 12mm Φ (nominal) copper earth spike at least 1m into the ground directly below the concrete block area, tightly secure (clamp and solder) the earth wire to the spike and pour the concrete over the spike. Use copper earth wire of a minimum cross section of 5 mm².

Part C3: Scope of Works

- b) Ensure that enough earth wire feeds from under the mounting block to be routed into the instrument housing (as for the loop feeders allow for minimum of 1,5m slack inside the instrument housing).



Contract: RTD 07 2025/26: Tender for the installation, maintenance of inductive loops for automatic traffic monitoring sites and upgrading of traffic monitoring equipment and software within the City of Tshwane, on basis of as and when required for a period of three years (36 months)

Part C3: Scope of Works

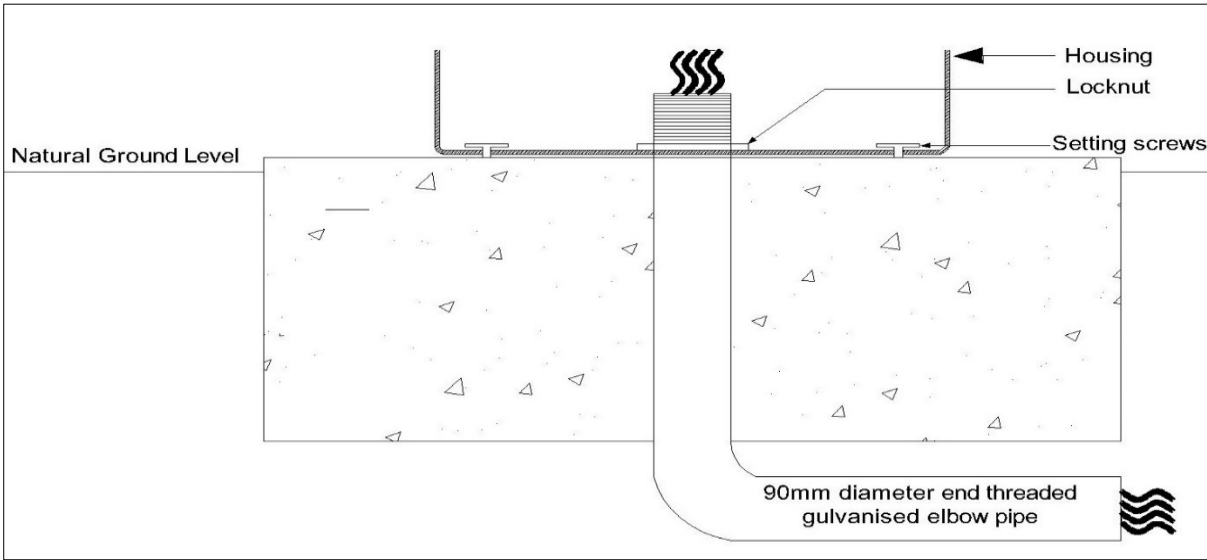
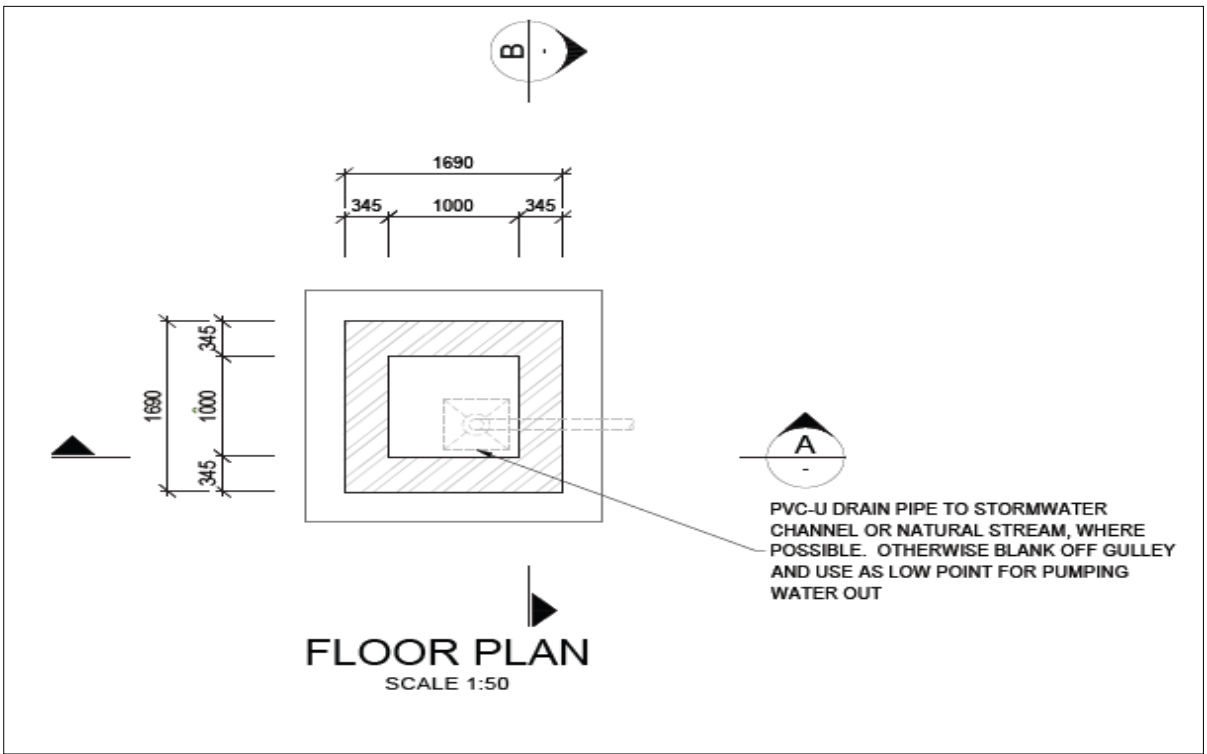


Diagram 6 – Automatic traffic monitoring site housing base

10 Providing automatic traffic monitoring equipment housing manhole



Contract: RTD 07 2025/26: Tender for the installation, maintenance of inductive loops for automatic traffic monitoring sites and upgrading of traffic monitoring equipment and software within the City of Tshwane, on basis of as and when required for a period of three years (36 months)

Part C3: Scope of Works

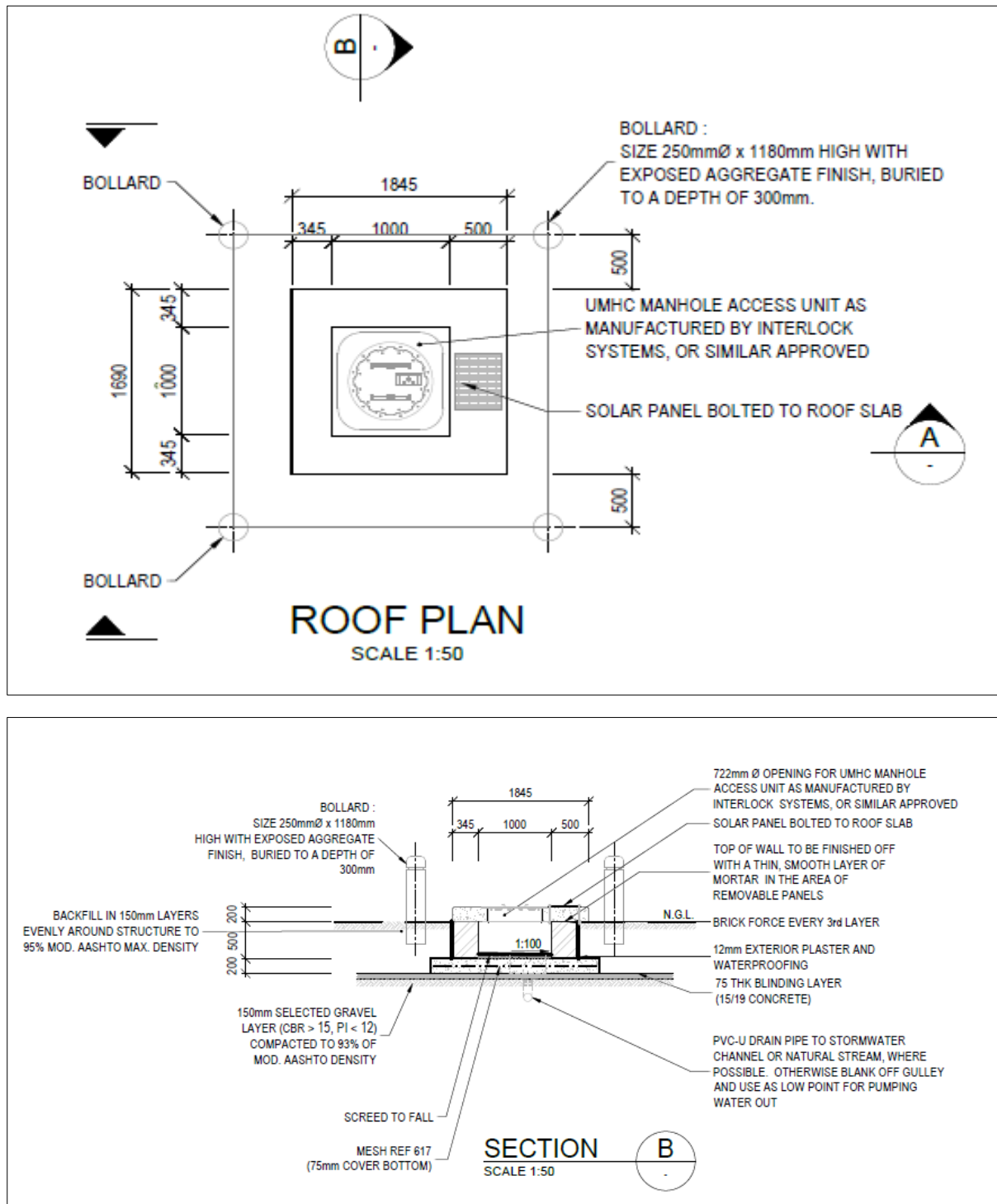


Diagram 7 – Automatic traffic monitoring equipment housing manhole

11 Providing equipment housing manhole

- Use 150mm selected gravel layer (cbr > 15, pi < 12) compacted to 93% of MOD. AASHTO density for base layer.

- b) Use BPVC-U drainpipe to stormwater channel or natural stream, where possible. Otherwise, blank off gulley and use as low point for pumping water out.
- c) Use Mesh Ref 617 (75mm for Cover Bottom)
- d) Concrete for slabs to be class 25/19 MPa
- e) Bricks to have a characteristic compressive strength of 14 MPa (Engineering Bricks)
- f) Use brick force on every 3rd layer.
- g) Apply 12mm exterior plaster and waterproof.
- h) Top of wall to be finished off with a thin, smooth layer of mortar around removable panels.
- i) 722mm $\varnothing$ opening for umhc manhole access unit as manufactured by interlock systems, or similar approved
- j) Bollard: size 250mm $\varnothing$ x 1180mm high with exposed aggregate finish, buried to a depth of 300mm.

12 Clearing and cleaning site

The following procedure should be followed when clearing and cleaning a site:

- a) Remove all masking tape from the road surface.
- b) Complete the backfilling and level off the trenches.
- c) Cover and map all the junction boxes and cable routes.
- d) Remove all excess material and waste.

13 Installing over or near existing loops

- a) An old loop under or near a new loop influences the loop output, therefore it is important to destroy the old loop completely before installing the new loop.
- b) Cut completely through the old loop in at least two positions per side.

14 Regular maintenance

- a) A one-year warranty on the work done will be acceptable. Regular maintenance should form part of an appropriate Quality System and a minimum of two maintenance visits annually must be undertaken.
- b) During maintenance visits the following should be checked and rectified:
- c) Loops, feeders (sealant) and pavement must be inspected for cracks. Any cracks must be filled with an approved viscous sealant.
- d) Disconnect the loops from any equipment and check the continuity and resistance to earth (insulation resistance) (Ω and $M\Omega$). Repair (replace) a loop that fails the specification values including the replacement of the earth wire where it is missing or it has been damaged.
- e) Check and repair trench erosion.
- f) Check and repair feeder exits. No bare wires are allowed.

- g) Clean and clear a site of any weed and unwanted plant growth.
- h) Lubricate all hinges, locks and pipe threats.
- i) In the case of secondary stations installation keep the locking cap and thread well-greased to prevent rusting.
- j) Check for the presence of vermin, termites, bees or any other unwanted contamination of the instrument housing. Remove if present; take care not to use corrosive chemicals that can damage the electronics.
- k) Check on any geometric changes such as lane markings or road alterations.

C3.4.1.3.2 Traffic monitoring equipment, software and power supply specification

01 Software

Licences updating

The following software licenses shall be updated and installed on employer's server, other computers and field laptops to be indicated by the employer at the employer's address.

- a) Renewal of GPRSTel server software license.
- b) Renewal of a TelDialer software license.
- c) Renewal of a TrafBase software license.
- d) Renewal of a MoniCar software license.
- e) Renewal of TelWin software license.

New software licenses

The following software shall be supplied and installed on employer's server, other computers and field laptops to be indicated by the employer at the employer's address.

- a) Remote automated data extraction software with GPRS Support
 - For communicating with the traffic loggers remotely, configuring loggers, automated data extraction, database population, real time traffic viewing and uploads to data management and reporting software and support for GPRS modems; with an application that runs in the background on the system PC and enables the field modems to establish connections on GPRS (using employer's sim cards to be supplied during installation). To be installed on employer's computers.
- b) Data management and reporting Software
 - For validating, storing and managing traffic information as collected by traffic logging equipment. Must produce the traffic information in original, spreadsheet or pdf format and traffic reports. To be installed on employer's computers.

c) Field Software for data extraction

- For communicating with the traffic loggers, configuring loggers, data extraction, database population and traffic file information viewing and uploads to data management and reporting software. To be installed on employer's field laptops.

d) Video traffic recording and monitoring software

- For camera setup and recordings of all the user defined events, especially 12 hours traffic counts. To be installed on employer's field laptops.

e) Support and training

- Configuration and setup of site database
- A demonstration must be held to the CoT personnel who will be working on the system.

f) Video traffic recording and monitoring software

g) Configuration and setup of site database

f) Support and training

- Configuration and setup of site database
- A demonstration must be held to the CoT personnel who will be working on the system.

02 Traffic monitoring equipment and tools

The traffic monitoring equipment in Table 1 below must be supplied and installed at the newly constructed automatic traffic monitoring site, the other items that do not form part of automatic traffic monitoring system must be delivered to the employer's address.

Table 1

No.	Item	Specification
1	Eight lanes traffic monitoring logger	Capable of detecting traffic volumes, vehicle lengths and speeds; supply together with its terminal(s) and connectors. The traffic logger must be usable on 1 to 8 lanes' road and be used remotely and onsite.
2	Communication	GPRS modem programmed for Tshwane APN with external antennae and cable set. To use the employer's sim cards
3	Battery charger	360W single output battery chargers for 12V batteries (3 stages), with cables.
4	Housing	Minitanic (steel sheet metal) boxes 400 X300 x 300 (3mm thickness), installed with solar panel on top.

Part C3: Scope of Works

No.	Item	Specification
5	Locks	70 mm disc pad locks (standard opening key)
6	Stick on loops	Bituthene stick-on loop 2,5 x 1 m (5 m feeder) Includes 8 x 4m Bituthene rolls for feeder
		Additional feeder length
		Additional Bituthene feeder rolls (per 4m)
7	Manual Traffic Counting Video Recorder	10 FPS+ 640 x 480 resolution or higher. Color only NOT mono with one or more of the following output format; MP4, AVI, WMV, 3GP, ASF, H264, MKV, TS, MOV.
		Mounting stand, 20 ft height or more, scene distance 40 – 500 ft rigid.

02 Power supply

Solar panel with charge control and mounting

- 150 W monocrystalline solar panel mounted on a galvanized steel pole, tilted towards north.

Charge controller

- Current 20A minimum
- Voltage 14.6V for a 12 V battery

Mounting

- 76mm Ø, 3.5-meter-high galvanized steel free-standing pole, buried 0.5m deep; mounting the solar panel; the pole must be earthed with copper clad steel; OR
- Street light pole mount; mounting the solar panel on the existing street light pole but having its independent electric source from the panel itself down the pole and into the unit box. The pole must be earthed with copper clad steel
- Only stainless-steel brackets are required to secure the panel to the street light pole and galvanized steel pole.

The entry point to the electronic equipment must be protected by a correctly rated surge protection device(s).

C3.4.2 Plant and materials

C3.4.2.1 Plant and materials supplied by the employer

The employer will not supply any plant and / or materials.

C3.4.2.2 Materials, samples and shop drawings

The contractor shall at his own cost, supply all samples that may be required. Material or work not conforming to the approved samples shall be rejected. The employer reserves to himself the right to submit samples to any tests to ensure that the material represented by the sample conforms to the requirements of the specifications.

The recommendations of the manufacturers of patented materials must be strictly adhered to regarding the use, mixing, application, fastening, etc. thereof except when otherwise instructed in writing by the employer.

Where proprietary materials are specified it is to indicate the quality or type of materials or articles required, and where the terms "or other approved", "or approved equivalent", or "similar approved" are used in connection with proprietary materials or articles, it is to be understood that the approval shall be at the sole discretion of the employer.

C3.4.2.2.1 Traffic monitoring site construction materials

Loop wire and sealant must be approved by the employer before use. No borrow pits for backfilling material are provided. Where material cannot be obtained from cut on the works, the contractor will be responsible to obtain the material required for the fill. No haul or over-haul will be paid on this material and haul and over-haul shall therefore be allowed for in the rates tendered by the contractor.

C3.4.2.2.2 Aggregate for Concrete

The crushed stone and aggregate to be used in the concrete base must be approved by the employer before it may be used.

C3.4.2.2.3 Water for concrete and construction purposes

No natural water from rivers, streams, boreholes, pans, dams or irrigation canals shall be used for concrete, or compaction purposes. Only suitably purified (drinking quality) water shall be used.

The contractor must make adequate provision in his tender for all negotiations and procurement of water for construction activities and all related costs will be deemed to be included in his tendered rates.

C3.4.2.2.4 Spoil material

The contractor shall make his own arrangements for the provision of a suitable place off the site for the disposal of material obtained from excavations, clearing, foundation excavations, ducting and cable offcuts etc. The rates in the schedule of quantities shall include all costs or fees payable to cover the disposal at the dumping site. The rates must allow for haul as no haul will be payable.

C3.4.2.2.5 Cement for concrete

Cement shall comply with the relevant requirements of SANS 50197 - 1:2000.

The cement used for the construction of concrete base must be approved by the employer prior to construction.

The cement used on this contract for stabilisation purposes shall be CEM II 32.5 N.

C3.4.3 Construction equipment

C3.4.3.1 Requirements for equipment

The construction methods adopted and plant and equipment used shall be at the discretion of the contractor. Provided always that the construction methods adopted and plant used by the contractor are appropriate in respect to the nature of the Works to be executed and the standards to be achieved in the contract.

All equipment and vehicles used by the Contractor shall be roadworthy at all times and all drivers and operators shall be in possession of valid drivers' licences and physical health certificate to operate the plant or equipment.

The Minimum Plant and Equipment that will be required for the project are:	QTY
a) 3HP/18HP concrete floor saw cutter	2
b) 5 KVA generator	1
c) 230mm angle grinder	1
d) Wacker trench rammer	1
e) 500 litres portable water tank	1
f) 2 ton flatbed bakkie	1
g) 500 W portable floodlight (2 x 900lm) with tripod adjustable stand	2
h) Utility locating equipment	1
i) Concrete Mixer (250 litre)	1

C3.4.3.2 Equipment provided by the employer

No equipment will be provided by the Employer.

C3.4.4 Existing Services

C3.4.4.1 Known services

- a) All known services are indicated on the wayleaves. The positions of existing services shown on the wayleave layout drawings are given in good faith and no guarantee can be given that:
- these services actually are in the approximate positions indicated.
 - that these are the only services in the vicinity, and
 - that the nature and description of these services are correct.
- b) The contractor shall locate and establish the actual position any existing services on site before starting the construction.
- c) Payment will not be made for any inconvenience caused to the contractor in regard to any services crossing the site or any authority working on any such service, nor will any delays caused by such works be accepted as a basis for claiming an extension of time for completing the works. All communications with owners of services and their work teams must take place in conjunction with the employer or his representative.

C3.4.4.2 Treatment of existing services

- a) Before the contractor commences operations, he must discuss with and have the approval of the employer, authority or owner concerned regarding the method he proposes to use for relocating or safe-guarding any services and existing works he may encounter during construction. Treatment of existing services shall be as per the employers instructions following the agreed methods.
- b) Prior to the commencement of works on site, the contractor shall invite for inspection and guidance, such concerned authority or owner of his intention to work close to an identified service, 48hrs in advance before commencing with works on site.

C3.4.4.3 Use of detection equipment for the location of underground services

- a) The contractor shall be responsible to locate and safeguard any existing service or works he may encounter during construction and shall obtain clearance from the employer, before commencing work in the proximity of existing services or works.

C3.4.4.4 Damage to services

- a) The contractor shall be responsible for any damage to such existing services and works in the execution of this contract and shall reimburse the employer, authority or the owner concerned for any repairs required and for damages.
- b) The contractor shall be responsible for immediately notifying the employer regarding any damage caused to public services and existing works.

C3.4.4.5 Reinstatement of services and structures damaged during construction

- a) Any alteration to public services shall be carried out by the authority concerned unless the contractor is instructed otherwise.
- b) The contractor shall provide the necessary assistance during any operations necessary in connection with the removal, alteration or safeguarding of any public service.

C3.4.5 Site establishment

C3.4.5.1 Services and facilities provided by the employer

C3.4.5.1.1 Water Supply

The contractor shall make his own arrangement for portable and construction water. No natural water from rivers, streams, boreholes, pans, dams or irrigation canals shall be used for concrete mix. Only drinking quality purified water shall be used. The contractor must make adequate provision in his tender for all negotiations and procurement of water for construction activities and all related costs will be deemed to be included in his tendered rates.

C3.4.5.1.2 Ablution Facilities

The Contractor shall, at each construction area, provide sufficient portable chemical latrine units. The Latrine units shall be serviced daily and kept in a hygienic and orderly state to the approval of the employer. No separate payment shall be made for this requirement and the costs thereof shall be deemed to be included in the rates billed for the contractor's time-related obligations.

C3.4.5.2.5 Cellular Telephone

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It is a requirement of the contract that the contractor shall equip his site agent(s) with a cellular telephone to allow for effective communication between the contractor's supervisory personnel and the employer's supervisory staff. All costs associated with the provision of cellular telephones for the contractor's personnel shall be deemed to be included in rates billed for time-related charges.

C3.4.6 Site usage

C3.4.6.1 Access to properties

The contractor shall organise the work in such a manner as to cause the least possible inconvenience to the public and to the property owners adjacent to or affected by the work included in this contract. If, as a result of restricted road reserve widths and the nature of the works, the construction of bypasses is not feasible, construction shall be carried out under traffic conditions in order to provide access to the erven and properties.

The contractor may, with the approval of the Employer, make arrangements with the occupiers of the affected erven and properties to close off a portion of a street, road, footpath or entrance temporarily, provided the contractor duly notifies the occupiers of the intended closure and its probable duration and shall, as punctually as possible, re-open the route at the prescribed time. Where possible, the road shall be made safe and re-opened to traffic overnight. Any such closure shall be made by arrangement between the contractor and the occupiers and shall not absolve the Contractor from his obligations under the contract to provide access at all times. Barricades, traffic signs and drums shall be provided by the Contractor to suit the specific conditions.

Note: No payment items have been scheduled separately for any work required to ensure compliance = with the above-mentioned. The Contractor must note that the rates and prices tendered shall be deemed to include full compensation for any additional work required to construct the works as specified and to maintain access, and that no extra payment will be made, nor will any claim for payment for these difficulties be considered.

C3.4.6.2 Existing residential areas

Access to the adjacent residential areas shall be maintained at all times, as shall access to individual houses.

Electricity and water supply interruptions to existing residential areas shall be kept to a minimum. Whenever it is necessary to interrupt these supplies, the Employer's approval shall first be obtained. The affected residents shall then be notified in writing at least 24 hours, but not more than 48 hours in advance. Supplies shall be normalised by 16h00 on the same day.

Cognisance shall be taken by the contractor of the possibility of residents from the adjacent residential areas having access, whether authorised or not, to the works. It is strongly emphasised that under no circumstances shall any claims be considered for delays or disruptions as a result of the presence of residents from the adjacent occupied areas.

C3.4.7 Alterations, additions, extensions and modifications to existing works

The contractor is required to tie into the existing road, storm water, water and sewer reticulation networks at specific points as indicated on the drawings.

C3.4.8 Inspection of adjoining properties

The contractor will be required to inspect adjacent buildings and properties with the owners and representatives of local authorities before commencing with the works that have the potential to damage surrounding buildings and property. The Contractor will take photos of such building elements prior to commencement of construction works.

C3.4.9 Services for construction purposes

Water, electricity, and telephone facilities are available in the vicinity of the site, and the contractor shall, at his own expense, be responsible for all the connections to the available facilities, as well as for the distribution of the water and electricity required for construction and domestic use. The distribution of water and electricity shall be carried out in accordance with the applicable laws and regulations.

The contractor shall make his own arrangements with the appropriate authority to obtain water, electricity, sanitation and communication connections.

No separate payment will be made for the distribution and consumption of water and electricity, the cost of which will be deemed to be included in the tendered rates.

C3.4.11 Site selection

The following two important criteria that must be taken into account when selecting a site for electronic traffic monitoring stations purposes using traffic data loggers. Site selection work shall not be measured and paid for directly and compensation for the work involved in site selection shall be deemed to be covered by the rates tendered and paid for the various items of work included under the contract.

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Part C3: Scope of Works

C3.4.11.1 Traffic behaviour

When relying on parameters such as vehicle length and axle spacing to correctly classify the vehicle types, uninterrupted (uniform) traffic flow is required. Stop start flow will compromise the classification accuracy. Proper lane demarcation must also be present allowing only one normal traffic stream per lane.

C3.4.11.2 Pavement conditions

Good quality pavement is a prerequisite for long term stability of loop installations and repairs. Shallow saw cuts will result in premature loop failures. Avoid cracks.

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C3.5 MANAGEMENT

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C3.5.1 Management of the works

C3.5.1.1 Applicable SANS 1921 standards

None

C3.5.1.2 Particular / generic specifications

C3.5.1.2.1 Corrections and amendments to the Standard Specifications

None

C3.5.1.2.2 Variations and Additions to the Standard Specifications

The following references from, and variations and additions to the Standard Specifications will be valid for this Contract.

The clauses and pay items in this portion of the Particular Specifications are numbered "B" followed by a number corresponding to the number of the relevant clause or pay item in the Standard Specifications. New clauses and pay items not covered by clauses or pay items in the Standard Specifications, if included here, are also designated "B" followed by a number. These numbers follow on the last clause or pay item number used in the relevant section of the Standard Specifications.

SERIES 0: GENERAL

SECTION 001: GENERAL REQUIREMENTS AND CHARGES

Add the following pay item:

Item	Unit
B001.04.08 Other obligations	
B001.04.08.01 Traffic Accomodation as per SARTSM Vol 2 Chapter 13	km

The tendered rate shall include full compensation for the provision traffic accommodation equipment and tools and for the setting out at each construction site according to SARTSM Volume 2 Chapter 13 before construction commences, and for the removal of equipment and tools after construction.

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Item B001.06: Provision of site security

Add the following pay item:

Item		Unit
B001.06	Provision of site security	
B001.06.01	On site security	pm
B001.06.02	Night time lighting	h

The sums tendered shall include full compensation for the appointment of security officers and night time lighting. Payment shall be made in monthly instalments, upon proof of payment to the security officers.

Item		Unit
B001.07	Making use of Approved sub-contractors	
B001.07.01	Making use of sub-Contractor	—
B001.07.02	Percentage on item B001.07.01 for charges & profit (10% Max)	%

(The unit of additional payment shall be a percentage as given in the Pricing Schedule, restricted to a maximum of 10%. The contractor shall submit a minimum of 3 quotations to the employer for approval before commencement of work). The subcontractor quotations must meet the employer's approval.

SECTION 002: PROVISION OF FACILITIES ON SITE

Item B002.03: Provision of software and hardware equipment for Traffic Monitoring

Add the following pay item:

Item		Unit
B002.05	Provision of software and hardware equipment for Traffic Monitoring	

Part C3: Scope of Works

B002.05.01 GPRS modem programmed for the City no
 of Tshwane APN for every traffic monitoring
 site

The tendered rate shall include full compensation for acquiring the GPRS modem, programming to the City of Tshwane APN, installation and testing connection on each traffic monitoring site.

Add the following item:

Item	Unit
B002.05.02 Intersection manual traffic counting video recorder with stand or similar (See C3.4.1.3)	no

The tendered rate shall include full compensation for acquiring and delivery to the client's address. All related certificates shall be included in the tendered rates.

Add the following item:

Item	Unit
B002.05.03 Configuration and set-up of site data base	Lump sum

The tendered rate shall include full compensation for the configuration of the server by an IT professional of a computer engineer. The rate shall include all overheads, administration costs, travelling and all other related disbursements.

Add the following item:

Item	Unit
B002.05.04 Software, equipment and support (Supply and install)	
B002.05.04.01 Eight lanes traffic monitoring logger (See C3.4.1.3)	no

The tendered rate shall include full compensation for acquiring and delivery to automated traffic monitoring site by the technician for full installation and testing.

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Add the following item:

Item		Unit
B002.05.04.02	Remote automated data extraction software license for eight lanes traffic monitoring logger with GPRS Support	no

The tendered rate shall include full compensation for acquiring, installation by the IT professional on the employer's server computer and a licence fee. The rate shall also include callouts for support and all relevant disbursements and travelling costs.

Add the following item:

Item		Unit
B002.05.04.03	Data management and reporting software license for eight lanes traffic monitoring logger	no

The tendered rate shall include full compensation for acquiring, installation by the IT professional on the employer's server computer and a licence fee. The rate shall also include callouts for support and all relevant disbursements and travelling costs.

Add the following item:

Item		Unit
B002.05.04.04	Field Software for data extraction for eight lanes traffic monitoring logger	no

The tendered rate shall include full compensation for acquiring, installation by the IT professional on the employer's filed laptops and a licence fee. The rate shall also include callouts for support and all relevant disbursements and travelling costs.

Add the following item:

Item		Unit
B002.05.04.05	The updating of GPRSTel server license (See C3.4.1.3)	no

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The tendered rate shall include full compensation for acquiring, installation by the IT professional on the employer's server computer and a licence fee. The rate shall also include callouts for support and all relevant disbursements and travelling costs.

Add the following item:

Item		Unit
B002.05.04.06	Updating of a TelDialer software license	no
	(See C3.4.1.3)	

The tendered rate shall include full compensation for acquiring, installation by the IT professional on the employer's server computer and a licence fee. The rate shall also include callouts for support and all relevant disbursements and travelling costs.

Add the following item:

Item		Unit
B002.05.04.07	Updating of a TrafBase software license	no
	(See C3.4.1.3)	

The tendered rate shall include full compensation for acquiring, installation by the IT professional on the employer's server computer and a licence fee. The rate shall also include callouts for support and all relevant disbursements and travelling costs.

Add the following item:

Item		Unit
B002.05.04.08	Video traffic recording and monitoring software (See C3.4.1.3)	no

The tendered rate shall include full compensation for acquiring and installation by the IT professional on employer's field laptops. A licence fee shall be included in the tendered rates.

Add the following item:

Item		Unit
B002.05.04.09	Upgrading of a MoniCar software license (See C3.4.1.3)	no

The tendered rate shall include full compensation for acquiring and installation by the IT professional on employer's computers. A licence fee shall be included in the tendered rates.

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Part C3: Scope of Works

Add the following item:

Item		Unit
B002.05.04.10	Training, support and updates of all software for 36 months	no

The tendered rate shall include full compensation for comprehensive training of all software to the employer's selected officials who will work on the software. The rate shall also include callouts for support and all relevant disbursements and travelling costs.

Add the following item:

Item		Unit
B002.05.04.11	Steel/ Minitanic Housing Box (steel sheet metal) with 70mm disc padlocks	no

The tendered rate shall include full compensation for acquiring and delivery to the automated traffic monitoring site by the technician for full erection.

Add the following item:

Item		Unit
B002.05.04.12	Repair of RAKTEL 1010, Tel 2RT, Raktel 2000, Raktel 4000	no

The tendered rate shall include full compensation for acquiring and delivery to automated traffic monitoring site by the technician for full installation and testing.

Add the following item:

Item		Unit
B002.05.04.13	Terminals and cables and connectors for Raktel (See Table 1 in C3.4.1.4)	no

The tendered rate shall include full compensation for acquiring and delivery to automated traffic monitoring site by the technician for full installation and testing.

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The tendered rate shall include full compensation for collecting from client's address, diagnosing, repairs and delivery to automated traffic monitoring site by the technician for full installation and testing.

Item		Unit
B002.05.04.14	Stick-on loop 2,5 x 1 m (5 m feeder) Includes 8 x 4m rolls for feeder	no

The tendered rate shall include full compensation for acquiring and delivery to the client's address.

Add the following item:

Item		Unit
B002.05.04.15	Additional feeder length	m

The tendered rate shall include full compensation for acquiring and delivery to the client's address.

Add the following item:

Item		Unit
B002.03.04.16	Additional feeder rolls (per 4m)	no

The tendered rate shall include full compensation for acquiring and delivery to the client's address.

Add the following item:

Item		Unit
B002.03.04.17	Tally counters	no

The tendered rate shall include full compensation for acquiring and delivery to the client's address.

SERIES 1: ANCILLARY WORK

SECTION 101: SITE CLEARING AND GRUBBING

101.05: Removal and disposal of specific elements

Add the following item:

Item		Unit
B101.05.04	Interlocking / non-interlocking paving blocks	m ²

The tendered rate shall include full compensation for uplifting, demolishing, removing, transporting and the disposal of material to a dumping site.

SECTION B107: DAYWORKS

01 SCOPE

02 GENERAL

03 MEASUREMENT AND PAYMENT

01 SCOPE

This section covers the listing of Dayworks items in accordance with Conditions of Contract Clause 40, for the use in determining payment for work which cannot be quantified in specific units in the schedule of quantities, or work ordered by the engineer during construction period which was not foreseen at bid stage and for which applicable rate exist in the schedule of quantities.

02 GENERAL

No Dayworks shall be undertaken unless written authorization has been obtained from the Engineer.

03 MEASUREMENT AND PAYMENT

Item	Unit
B107.01 Labour during normal working hours	
B107.01.01 Unskilled labour	hour (h)
B107.01.02 Semi-skilled labour	hour (h)
B107.01.03 Skilled labour	hour (h)
B107.02 Extra-over item B107.01 for charges and overheads	
B107.02.01 Unskilled labour	percentage (%)
B107.02.02 Semi-skilled labour	percentage (%)
B107.02.03 Skilled labour	percentage (%)
B107.03 Construction Plant	
B107.03.01 (Plant type size / capacity indicated)	hour (h)
B107.04 Transport of Construction Plant	
B107.04.01 (Transport type size / capacity indicated)	kilometre (km)

The Contractor is also referred to Clause 6.5 of the Conditions of Contract regarding Dayworks.

Personnel during normal working hours

The unit rate for item B107.01 shall be the hour for the labourer. The labour charges to be reimbursed under the Dayworks item B107.01 in the Schedule of Quantities shall be the actual amount of wages paid to labourers, (but no foreman), employed on Dayworks with the authorisation of the Engineer. The labour charges will be paid only for the time that the workmen are actually so employed on Dayworks.

Leave pay, bonuses, subsistence, allowances, employer's contribution to medical schemes and provident funds and the like shall not be included in the above-mentioned labour charges, but will be deemed to be covered by the percentage rate tendered by the Contractor against item B107.02 scheduled for this purpose under Dayworks in the Schedule of Quantities.

The unit rate for item B107.02 shall be the percentage extra over for the labourer. This percentage rate shall also be deemed to allow for the use of small tools, supervision, insurances, overhead expenses, transport of workmen, housing and feeding (if the liability of the contractor), profit and any other expenses in connection with workmen employed on Dayworks and shall also include for everything else covered under the allowance as stated in Clause 6.5.1.2.3 of the Conditions of Contract.

Construction Plant

The unit rate for item B107.03 shall be the hour for the item of plant. The rates tendered for the hire of plant shall be applicable only to plant that the Contractor has on the site and shall be total all-inclusive unit prices which shall include, inter alia for all fuel and lubricants; for the wages of operators, equipment and everything else necessary; for all depreciation, maintenance and repair costs; for overhead expenses, profit and for everything in accordance with Clause 6.5 of the General Conditions of Contract.

The rates shall be paid only for the time that the plant is actually working on the Dayworks as authorised by the Engineer.

Transport of Construction Plant

The unit rate for item B107.04 shall be the hour for the kilometre distance that the vehicle travelled for transporting plant. The billed rate for item B107.04 shall include full compensation for the cost of the vehicle

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including fuel, maintenance, depreciation and running costs and all costs related to the loading and unloading of the plant onto and off the vehicle.

SERIES 2: EARTHWORKS

SECTION 202: TRENCHING

Add the following section

Item		Unit
202.01	Trench excavations	
B202.01.01	Up to 0,3m wide	
B202.01.01.01	Up to 0,5m deep	cubic metre (m ³)

The unit of measurement for the above items under B202.01 shall be the cubic metre of backfilled gravel and sand material compacted to 93% of MOD. AASHTO density, and the quantity shall be calculated from the authorized dimensions of the various trenches. The tendered rate shall also include overhaul of the backfill material from the commercial source to the site, compaction and testing of density.

SERIES 9: QUALITY CONTROL

SECTION 903: TESTING AND ISSUING CERTIFICATES

Add the following item:

Item		Unit
B903.01	Provision for testing of traffic monitoring sites	
B903.01.01	Loop testing using analogue megger insulation test.	no

The tendered rate shall include full compensation for running and conducting tests using analogue megger insulation tests on inductive loops and earth wire. The rate shall cover all costs for relevant disbursements and travelling.

Add the following item:

Item		Unit
B903.01.02	Multimeter testing	no

The tendered rate shall include full compensation for running and conducting tests using multimeter tests on inductive loops. The rate shall cover all costs for relevant disbursements and travelling.

Add the following item:

Item		Unit
B903.01.03	Documentation, testing and certification	no

The tendered rate shall include full compensation for test results and certification of testing and compliance to the relevant standards. The rate shall also include printing, paper, ink and delivery of documentation to the client's address.

SERIES 9: CONSTRUCTION OF TRAFFIC MONITORING SITES

SECTION 904: AUTOMATIC TRAFFIC MONITORING SITES

The rates tendered for pay item 904.01 must include nighttime allowance and overtime when completing Section 904 under Pricing Schedule since the items are for the works that will be carried out at night, outside the normal working hours, beginning from 18:00 pm till 6:00 am.

Add the following item:

Item		Unit
B904.01	Automatic Traffic Monitoring Sites	
B904.01.01	Construction of a complete 2 lane Automatic Traffic Monitoring Sites 2 loops per lane with GPS coordinates	no

The tendered rate shall include the full compensation for setting out, cutting of road surface, blowing out dust, laying of inductive loops, sealing of loops, excavation of a trench, placing of ducting, pulling and numbering of inductive loops. The rate shall also include repair to sidewalks and kerbing. The rate shall also cover the full cost of construction material, delivery and quality control. The rate applies to the 2 lanes Automatic Traffic Monitoring site.

Add the following item:

Item		Unit
B904.01.02	Construction of a complete 3 lane Automatic Traffic Monitoring Sites 2 loops per lane with GPS coordinates	no

The tendered rate shall include the full compensation for setting out, cutting of road surface, blowing out dust, laying of inductive loops, sealing of loops, excavation of a trench, placing of ducting, pulling and numbering of inductive loops. The rate shall also include repair to sidewalks and kerbing. The rate shall also cover the full cost of construction material, delivery and quality control. The rate applies to the 3 lanes Automatic Traffic Monitoring site.

Part C3: Scope of Works

Add the following item:

Item		Unit
B904.01.03	Construction of a complete 4 lane Automatic Traffic Monitoring Sites 2 loops per lane with GPS coordinates	no

The tendered rate shall include the full compensation for setting out, cutting of road surface, blowing out dust, laying of inductive loops, sealing of loops, excavation of a trench, placing of ducting, pulling and numbering of inductive loops. The rate shall also include repair to sidewalks and kerbing. The rate shall also cover the full cost of construction material, delivery and quality control. The rate applies to the 4 lanes Automatic Traffic Monitoring site.

Add the following item:

Item		Unit
B904.01.04	Construction of a complete 5 lane Automatic Traffic Monitoring Sites 2 loops per lane with GPS coordinates	no

The tendered rate shall include the full compensation for setting out, cutting of road surface, blowing out dust, laying of inductive loops, sealing of loops, excavation of a trench, placing of ducting, pulling and numbering of inductive loops. The rate shall also include repair to sidewalks and kerbing. The rate shall also cover the full cost of construction material, delivery and quality control. The rate applies to the 5 lanes Automatic Traffic Monitoring site.

Add the following item:

Item		Unit
B904.01.05	Construction of a complete 6 lane Automatic Traffic Monitoring Sites 2 loops per lane with GPS coordinates	no

The tendered rate shall include the full compensation for setting out, cutting of road surface, blowing out dust, laying of inductive loops, sealing of loops, excavation of a trench, placing of ducting, pulling and numbering of inductive loops. The rate shall also include repair to sidewalks and kerbing. The rate shall also cover the full cost of construction material, delivery and quality control. The rate applies to the 6 lanes Automatic Traffic Monitoring site.

Add the following item:

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Item		Unit
B904.01.06	Construction of a complete 8 lane Automatic Traffic Monitoring Sites 2 loops per lane with GPS coordinates	no

The tendered rate shall include the full compensation for setting out, cutting of road surface, blowing out dust, laying of inductive loops, sealing of loops, excavation of a trench, placing of ducting, pulling and numbering of inductive loops. The rate shall also include repair to sidewalks and kerbing. The rate shall also cover the full cost of construction material, delivery and quality control. The rate applies to the 8 lanes Automatic Traffic Monitoring site.

Add the following item:

Item		Unit
B904.01.07	Placing of a junction box	no

The tendered rate shall include the full compensation for setting out, placing and finishing of a junction box (gully). The rate shall also cover the full cost of construction material, delivery, quality control and all relevant disbursements.

Add the following item:

Item		Unit
B904.01.08	Placing of ducting in junction boxes (between 2 and 3 per station)	no

The tendered rate shall include the full compensation for setting out, placing and finishing of ducting. The rate shall also cover the full cost of construction material, delivery, quality control and all relevant disbursements.

Add the following item:

Item		Unit
B904.01.09	Concrete Housing Base (See Diagram 6)	no

The tendered rate shall include the full compensation for setting out, construction, installing earth wire, galvanised pipe with end cap, backnut and finishing of a concrete housing base. The rate shall also cover the full cost of construction material, delivery, quality control and all relevant disbursements.

Add the following item

Item		Unit
B904.01.10	Building of a complete automatic traffic monitoring housing manhole with two bollards (see diagram 7)	m ³

The tendered rate shall include the full compensation for setting out and building of a complete automatic traffic monitoring housing manhole with two bollards. The rate shall also cover the full cost of construction material, delivery, quality control and all relevant disbursements.

Add the following item:

Item		Unit
B904.01.11	Repair of one loop per lane	no

The tendered rate shall include the full compensation for setting out, cutting of road surface, blowing out dust, laying of inductive loops, sealing of loops, excavation of a trench, placing of ducting, pulling and numbering of replaced inductive loops. The rate shall also include repair to sidewalks and kerbing. The rate shall also cover the full cost of construction material, delivery and quality control.

Add the following item:

Item		Unit
B904.01.12	Repair of two loops per lane	no

The tendered rate shall include the full compensation for setting out, cutting of road surface, blowing out dust, laying of inductive loops, sealing of loops, excavation of a trench, placing of ducting, pulling and numbering of replaced inductive loops. The rate shall also include repair to sidewalks and kerbing. The rate shall also cover the full cost of construction material, delivery and quality control.

Add the following item:

Item		Unit
B904.02	Power supply	
B904.02.01	150 W monocrystalline solar power supply clamped to the 3.5-meter-high stainless-steel pole. (see 3.4.1.3.2)	no

The tendered rate shall include the full compensation erection of a galvanized-steel pole, clamping of solar panel, power supply and connection to the equipment housing.

Item		Unit
B904.02	Power supply	
B904.02.02	150 W monocrystalline solar power supply clamped to the existing street light pole (see 3.4.1.3.2)	no

The tendered rate shall include the full compensation for clamping of solar panel to the existing street light pole and power supply and connection to the equipment housing.

Add the following item:

Item		Unit
B904.02.03	Connection and testing	no

The tendered rate shall include the full compensation for execution of all processes relating to testing of all power supply (electrical and solar) connection and issuing of compliance certificate.

C3.5.1.3 Planning and Programming

The Contractor shall submit within the period stated in the Contract Data a suitable and realistic construction programme for the consideration of the Engineer. The programme shall be in the form of a Gantt chart and shall include the following details:

- A work breakdown structure, identifying the major activity groups.
- For each activity group further details shall be provided with regard to the scheduled start and end dates of individual activities.
- The linkages between activities shall be clearly indicated and the logical network upon which the programme is based shall be separately submitted to the engineer if requested. Any constraints shall be classified as being time-related or resource-related.
- The critical path(s) shall be clearly indicated and floats on non-critical activities shall be shown.
- The Contractor shall indicate the working hours per day, night, week and month allowed for in the programme.
- Where relevant the Contractor shall state the production rates for key activities e.g. earthworks. etc.

- The dates when in order to construct the Works in accordance with his programme the Contractor will need materials and other things to be provided by the Employer.
- For each activity a statement of how the Contractor plans to do the work identifying the principal equipment and other resources which he plans to use.
- The execution of the work must be programmed in such a manner as to limit disruption to passing traffic and residents to a minimum.

Together with the programme as detailed above the Contractor shall submit to the Engineer a cash flow projection, indicating projected monthly invoice amount. The cash flow projection shall be updated at monthly intervals to reflect actual payments to date and anticipated further payments.

The programme will be reviewed at the monthly site meetings at which the Contractor shall provide sufficient detail that will allow the comparison of completed work per activity that has fallen behind. The updated programme shall be submitted to the Engineer at least two days prior to the monthly meetings.

If the programme has to be revised by reason of the Contractor falling behind his programme he shall produce a revised programme showing how he intends to regain lost time in order to ensure completion of the Works within the time for completion as defined in Clause 5.5 of the General Conditions of Contract or any granted extension of time. Any proposal to increase the tempo of work must be accompanied by positive steps to increase production by providing more labour and plant on site or by using the available labour and plant on site in a more efficient manner.

Failure on the part of the Contractor to submit the programme or to work according to the programme or revised programmes shall be sufficient reason for the Engineer to take steps as provided in Clause 5.7 of the General Conditions of Contract.

The approval by the Engineer of any programme shall have no contractual significance other than that the Engineer will be satisfied that the work is carried out according to such programme and that the Contractor undertakes to carry out the work in accordance with the programme. It shall not limit the right of the Engineer to instruct the Contractor to vary the programme if required by circumstances. The Contractor is also referred to Clause 5.6 of the General Conditions of Contract when drawing up his programme.

C3.5.1.4 Sequence of the works

Any software used for planning and programming must be fully compatible with the Windows 365 operating system and Microsoft Project 2024 or latest versions. When submitting his programme the contractor shall submit one hard copy in A1 paper size and a soft copy.

No requirements. Due to access requirement for the adjacent properties the contractor may need to employ half-width construction methods. The contractor needs to provide his proposed work sequence with his programme.

C3.5.1.5 Software application for programming

Programmes submitted electronically must be done on Microsoft Project 2013 or similar compatible software.

C3.5.1.6 Methods and procedures

Refer to the Standardised Specifications, as amended in the variations and additions, and the Particular Specifications, as applicable.

C3.5.1.7 Quality plans and control

The onus to produce work which 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 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 costs of all supervision and process control, including testing thus carried out by the contractor shall 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 that will be required for process control. The contractor shall, at his

own discretion, increase this frequency where necessary to ensure adequate control.

On completion of every part of the work and submission thereof to the engineer for examination, the contractor shall furnish the engineer with the results of all relevant tests, measurements and levels to indicate compliance with the specifications.

The contractor shall engage the services of an approved independent testing laboratory for all the testing of all the materials and all the quality testing of layer works, to ensure that his work conforms to the specifications.

The contractor shall at his own cost, supply all samples that may be required. Material or work not conforming to the approved samples shall be rejected. The engineer reserves the right to submit samples to any tests to ensure that the material represented by the sample conforms to the requirements of the specifications.

No separate payment will be made for such testing by an approved independent laboratory, the costs +Fof which will be deemed to be included in the contractor's tendered rates for the various items of work requiring testing in accordance with the specifications.

C3.5.1.8 Environment

All efforts and measures are to be incorporated to minimize the effect of the following:

- Dust
- Noise
- Pollution of streams
- Inconvenience of the public

C3.5.1.9 Accommodation of traffic on public roads occupied by the contractor

The following contain the Employer's general requirements for accommodating the traffic during construction:

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

- Failure to maintain road signs warning signs etc. in a good condition shall constitute ample reason for the Engineer to bring the works to a stop until the road signs etc. have been repaired to his satisfaction.
- The Contractor may not commence constructional activities before adequate provision has been made to accommodate traffic in accordance with the requirements of this document and the South African Road Traffic Signs Manual Volume 2 Chapter 13.
- The Contractor shall submit proposals in connection with directional signs to the Engineer for approval prior to construction.
- Sufficient signage shall be provided erected and relocated as necessary by the Contractor to reroute traffic onto the deviations.
- The Contractor shall make adequate provision for access to residents particularly in the morning when residents are going to work and, late in the afternoon when residents are returning from work.

Refer to the Standardised Specifications, as amended in the variations and additions, and the Particular Specifications, as applicable.

C3.5.1.10 Other contractors on site

The contractor need to accommodate other contractor on site and need to liaise and agree their programme and coordinate their activities.

C3.5.1.11 Testing, completion, commissioning and correction of defects

Refer to the Standardised Specifications, as amended in the variations and additions, and the Particular Specifications, as applicable.

C3.5.1.12 Recording of weather

The Contractor shall erect an effective rainfall gauge on each site of the works and record the daily rainfall figures in the site diary. The site diary shall be handed to the Employer's representative for his signature no later than 10 days after rain that is considered to justify an extension of time occurs.

Extension of time due to abnormal rainfall shall be determined by means of Method 1 where rainfall records and/or values derived from rainfall records are supplied in the Scope of Work otherwise Method 2 shall apply. Method 1 and 2 are defined and described in the Contract Data.

In the case where Method 2 applies the following is applicable:

- Extension of time resulting from abnormal rainfall or other forms of inclement weather for items on the critical path of the programme shall be calculated according to the requirements of Method 2 (Critical-path method). The value of “n” working days per calendar month as specified in this clause shall be two (2) working days. If no abnormal rainfall or other inclement weather periods occur during a specific calendar month (or months), the n-values as specified shall not be taken as accumulating over the contract period. If the n-days allowed for in the programme of work are not taken up by standing time due to abnormal rainfall or inclement weather conditions. They will fall away and will not be considered in extension of time claims which may arise later during the contract period.
- A working day, or portion thereof, shall be considered as lost when the engineer agrees that no work could have been undertaken on any item falling within the critical path. The contract extension of time arising from inclement weather shall be agreed upon between the engineer’s and the contractor’s representatives. The days upon shall be recorded in the minutes of the monthly site meetings.

Extension of time due to abnormal rainfall for the purposes of this contract shall be determined by means of Method 1. The rainfall records at Rainfall Station, Pretoria University Proefplaas 05134651 for the period 1991 to 2024 reproduced in the accompanying table and the monthly averages, Rn and Nn, for this period, shall for the purpose of this Contract be taken as normal rainfall.

MONTH	Rn	Nn	MONTH	Rn	Nn
January	123.8	4.0	July	0.8	0.0
February	108.5	3.0	August	3.2	0.0
March	105.4	3.0	September	12.2	0.0
April	39.1	1.0	October	56.2	2.0
May	14.3	0.0	November	90.9	5.0
June	4.5	0.0	December	120.2	6.0
			TOTAL	679.2	24.0

Records of rain days will be recorded in the minutes of the monthly site meeting.

C3.5.1.13 Format of communications

No press statements are allowed without the prior written approval of the Employer.

Contractual communication will flow between the Contractor and Engineer as normally required. Normal routine matters should as far as possible be resolved on site between the Contractor's Agent and Engineer's Representative.

All site correspondence, site instructions, requests for inspections, etc. will be recorded in an A4 triplicate book to be provided by the Contractor and to be kept in the site office.

All site correspondence need to be signed by both parties to acknowledge receipt.

C3.5.1.14 Key personnel

The contractor needs to submit a schedule of key personnel with contact details to be employed on site. The schedule should include as a minimum, the contracts manager, qualified electrician with red seal, safety officer and a foreman. Minimum requirements for key personnel are as follows:

- i) The contracts manager must have at least a National Diploma in Civil Engineering (NQF level 6) recognized by South African Qualifications Authority (SAQA) with minimum 1 year of experience in contracts management of inductive loops installation for various Intelligent Transport Systems and construction experience.
- ii) The foreman must have at least a N6 in Civil Engineering (NQF Level 5) recognized by SAQA with minimum 1 year of experience in supervision of projects of construction and in inductive loops installation for various Intelligent Transport Systems and construction experience.
- iii) The qualified electrician with red seal (NQF level 4) recognized by South African Qualifications Authority (SAQA) with minimum 2 years of experience in inductive in loops installation for various Intelligent Transport Systems and construction projects experience.

- iv) Safety Officer must have a Health and Safety Management Training Course qualification, and be registered with South African Council for the Project and Construction Management Professions (SACPCMP) with minimum 1-year relevant experience.

The level of representation at the meetings shall be of such a nature as to permit that decisions be taken.

C3.5.1.16 Forms of contract administration

Standard forms for the contract administration purposes shall be provided by the Employer's Agent.

C3.5.1.17 Daily records

The Contractor will be required to keep and maintain the following daily records:

1. Resources on site (labour and plant) clearly distinguishing between local labour and own resources.
2. Site diary stipulating the activities conducted for that day
3. Weather conditions.
4. Daily work output
5. Plant breakdown and reasons for breakdown

The daily records are to be noted in a separate A4 sized triplicate book to be provided by the Contractor and kept in the site office of the Employer's Agent.

C3.5.1.18 Bonds and guarantees

The original guarantee plus one copy is to be submitted to the Employer's Agent at the address given in the Contract Data. The guarantee will be released upon the issue of the Certificate of Completion of the entire works.

C3.5.1.29 Payment certificates

The statement to be submitted by the contractor in terms of the general conditions of contract shall be prepared in accordance with the standard payment certificate prescribed by the engineer and shall consist of at least one set of A4-sized paper copies.

Contract: RTD 07 2025/26: Tender for the installation, maintenance of inductive loops for automatic traffic monitoring sites and upgrading of traffic monitoring equipment and software within the City of Tshwane, on basis of as and when required for a period of three years (36 months)

Part C3: Scope of Works

Acceptable proof of ownership must be provided before any advance payment of materials on site will be included in the payment certificate.

All costs resulting from the preparation and submission of the statements shall be borne by the contractor.

C3.5.1.20 Permits

The contractor shall obtain all relevant permits as required by law including a construction work permit and all wayleaves from Service Providers with services within the road servitude.

C3.5.1.21 Proof of compliance with law

The contractor shall, upon request from the Engineer or Employer, provide proof of compliance with the various laws applicable to this contract.

C3.5.1.22 Insurance provided by the employer

A copy of the policy and the list of excesses may be obtained from

Contractors All Risk and Liability Insurance:

Mrs Morongwa Mokoena

Tel: 012 358 1126

E-Mail: morongwam@tshwane.gov.za

Room 123

HB Phillips Building

C/O Francis Baard and Bosman Street, Pretoria

C3.5.2 Health and safety

C3.5.2.1 Health and safety requirements and procedures

The Particular Specification in this document are applicable to Health and Safety aspects on this contract.

The Employer's Pre-construction Health and Safety Specification

C3.5.2.2 Protection of the public

The Employer will produce a pamphlet for distribution, informing the adjacent residents of the commencement of construction and that all people should stay away from the construction site.

C3.5.2.3 Barricades and lighting

The Contractor need to erect and maintain the necessary signs, notices and barricades at strategic points on the boundaries to inform people of the dangers of the construction site.

C3.5.2.4 Traffic control on roads

The Contractor need to ensure that disruption of traffic on public roads is kept to essential minimum, that entrances to private properties are accessible at all times, and that all barriers, road signs, etc. are maintained continuously.

C3.5.2.5 Measures against disease and epidemics

The contractor shall act appropriately to prevent the spread of diseases and epidemics amongst its employees, whether they form part of his permanent workforce or local labour.

C3.5.2.6 Environmental Protection

General

The Contractor shall ensure that no damage whatsoever is caused as a result of his operations or otherwise by his workmen in the areas adjacent to the site. The movement of plant and workmen shall be restricted to the construction areas and essential access routes. The Contractor's workmen will not be permitted in any area which may be designated by the Employer as "Restricted". Details of the restricted areas shall be issued to the successful tenderer.

Within the Site the Contractor shall take steps to protect all property, landscaping, vegetation and soil not directly affected by the Works and shall ensure that no avoidable damage or disturbance is caused, and that no erosion is allowed to occur.

Where work is done in residential areas, contractor must ensure that there are measures on site to control the noise levels.

Protected Areas

The Engineer shall identify certain areas within the vicinity which are to be protected. Any instance of damage to these areas shall make the Contractor liable to a fine per protected area which will be deducted from the following payment certificate.

Solid waste

Disposal of solid waste other than to the municipal facility will not be allowed.

Liquid waste

No polluted affluent or other liquid of any nature shall be discharged or allowed to run into any watercourse, in contravention of the Water Act. The handling and disposal of these liquids shall not allow these liquids to enter the ground water system. All such liquids are to be transported off site and disposed off in a manner agreed with the Engineer.

Fire Hazards

No fires may be lit except if approved by the Engineer and in properly prepared facilities approved by the Engineer. Fires shall be kept small and appropriate to their function. The Contractor shall ensure that the fire risk on and near the site is reduced to a minimum and shall take immediate and effective steps to extinguish any fire that may break out. All costs relating to damage by fire caused by the contractor will be for the contractors cost.

Contamination by cement

The Contractor shall take care when dealing with cement, especially near ground and surface watercourses. Any, even slight, contamination of watercourses by cementitious material is prohibited. The use of cement must be controlled with respect to the above and surplus concrete must be removed from site.

Reinstatement of scarred areas

All scarred areas, borrow and spoil areas, cut and fill slopes, all temporary haul and access roads and tracks and any other areas where the vegetation has been removed and or damaged, shall be reinstated to restore the area as nearly as possible to its original state. Such reinstatement shall include the removal of refuse, debris, construction infrastructure and materials, the scarifying of all hardened surfaces, the replacement and spreading of unused material, the correction of drainage deficiencies to provide free drainage, the flattening of cut and fill slopes and the shaping and trimming of surfaces, all as necessary or as directed by the Engineer.

ANNEXURE 1

PARTICULAR SPECIFICATIONS

This part of the project specifications contains comprehensive additional specifications for matters not covered by the Standard Specifications.

The following works are covered under this part of the Project Specifications:

SECTION 610 (300): CONDITIONS OF AUTOMATED TRAFFIC MONITORING SITES

SECTION 20300: LABOUR AND TRAINING REQUIREMENTS

CONTENTS

301 AUTOMATIC TRAFFIC MONITORING SERVICES

302 MONITORING SITE

303 MONITORING SITE LOCATION

304 EXISTING MONITORING SITES

305 ROAD GEOMETRY REQUIREMENTS

306 DETECTION CAPABILITIES

307 ENVIRONMENTAL CONDITIONS

308 TRAFFIC DETECTOR LOOP INSTALLATION

309 CHART OF THE MAIN INSTALLATION STEPS

310 INSTALLATION PARAMETERS (REQUIRED SPECIFICATIONS)

311 CONFIGURATION

301 Automatic traffic monitoring services

Automatic traffic monitoring services include the use of electronic equipment for the monitoring of traffic flow. These services also include the monitoring of traffic flow characteristics, such as traffic volumes (counts) and speeds. A loop detecting technology may be used for automatic traffic monitoring, as it complies with the functional and accuracy specifications of TMH 3. Type C1 is a preferred traffic monitoring system with vehicle

and speed detection but without axle and single/dual tire detection. This system provides for the monitoring of characteristics such as traffic volumes, vehicle lengths and speeds but not the number of axles, axle spacing and tire configuration. This system has a relatively high level of vehicle detection and a medium to low level of vehicle classification accuracy, and where axle data are not required (TMH 8; 4.3).

302 Monitoring site

A single location of a roadway whereby all the lanes of traffic are monitored as specified by the employer is a monitoring site. The monitoring site must include all the roadways and lanes on the specific site (up to a maximum of 32 lanes per site). In the City of Tshwane borders, the maximum number of lanes is 8. Whereby a road is a dual carriageway, both carriageways are included in a single monitoring site despite the distance between both carriageways. In cases where the monitoring is performed at an intersection or interchange, all the roadways at the intersection or interchange must be included as part of the site (unless specified otherwise by the employer).

On a road with paved shoulders, the system must be extended to include the paved shoulders (see Annexure C). When the shoulders are narrow, to such an extent that vehicles travelling on the shoulder effectively form part of the traffic on the adjacent lane, the vehicles will be included as part of the traffic in the lane. When the shoulders are wide, to the extent that it effectively operates as a separate lane, it must be defined as a separate lane of the roadway and its set of loops must be constructed. The decision to define a shoulder as a lane must be agreed to by the employer and the contractor.

303 Monitoring site location

Where a completely new site is required, the employer will specify a road section on which traffic monitoring site must be constructed. However, the contractor is responsible for selecting the exact construction location of the monitoring site (that do not apply to the existing sites). The contractor is responsible for ensuring that the roadway at the site complies with the requirements as in this specification (see Annexure A).

The employer may avail the information that can be used by the contractor for the selection of the construction location of the monitoring site. The contractor will however, be responsible for ensuring that the provided data is correct and that the selected location fully complies with the requirements specified in this chapter.

In the selection of the construction site, consideration must be given to the probability that the roadway may deteriorate to such an extent that it may not comply with the requirements specified in this specification during the required period of observations. Should location of construction of the monitoring site be in a state of deterioration, the employer and contractor must choose another location where the monitoring site will be constructed.

304 Existing monitoring sites

Where an existing monitoring site is available on a road section, preference must be given to the re-construction of such a site. The contractor must therefore investigate the suitability of such a site in terms of the following requirements:

- i. The inductive loops must be in a good condition and covered properly in sealant when conducting a visual inspection. Do Megs and ohms testing to check if the inductive loops are still in good condition.
- ii. If the contractor finds a site to fail testing, the existing loops must be removed and new loops must be installed and covered with sealant. The contractor must follow this specification when doing re-construction.

305 Road geometry requirements

The site may not be located at a position where the accuracy of the monitoring can be affected by factors such as the following:

- i. Acceleration and deceleration caused by any permanent or temporary obstructions on the road. Such acceleration may occur near to intersections, interchanges, railway crossings, steep gradients, sharp curves, no-overtaking lines or any other obstructions that may result in speed changes along the road.
- ii. Stopping on the site or on the shoulder (including queue formation at a downstream location).

306 Detection capabilities

The traffic monitoring systems must have the following detection:

- i. *Vehicle detection.* The system must be able to detect all vehicles, other than animal-drawn vehicles and bicycles, which are travelling on the roadway or on the paved shoulders of the roadway and crossing the monitoring site.
- ii. *Vehicle differentiation.* The system must be able to differentiate between closely following vehicles, but must be able to detect vehicle-trailer combinations.
- iii. *Vehicle straddling.* The system must be able to detect vehicles straddling over two lanes of traffic and assign such a vehicle to one of the two lanes. A vehicle is considered to be straddling when it touches or crosses the lane marking separating two adjacent lanes (in either the same or in opposite directions).

- iv. *Vehicle categories (classes or types)*. The system must be able to detect categories (classes or types) of vehicles as specified in this specification.

The system must also have the following additional detection capabilities:

- i. The system must be capable of measuring the speed of each vehicle travelling over the monitoring site.
The system must also be capable of detecting whether a vehicle has stopped on the monitoring site.

307 Environmental conditions

It must be possible to install pavement sensors in or on all types of concrete and asphalt pavements found within the City of Tshwane borders. When monitoring is required on a gravel road, it must also be possible to install the sensors in or on the gravel pavement.

The system must be able to operate without degradation under ambient temperatures in the range between -10°C to +60°C, a relative humidity in the range of 0 to 90% (not condensing) and during adverse weather conditions (including rain, hail, snow and ice).

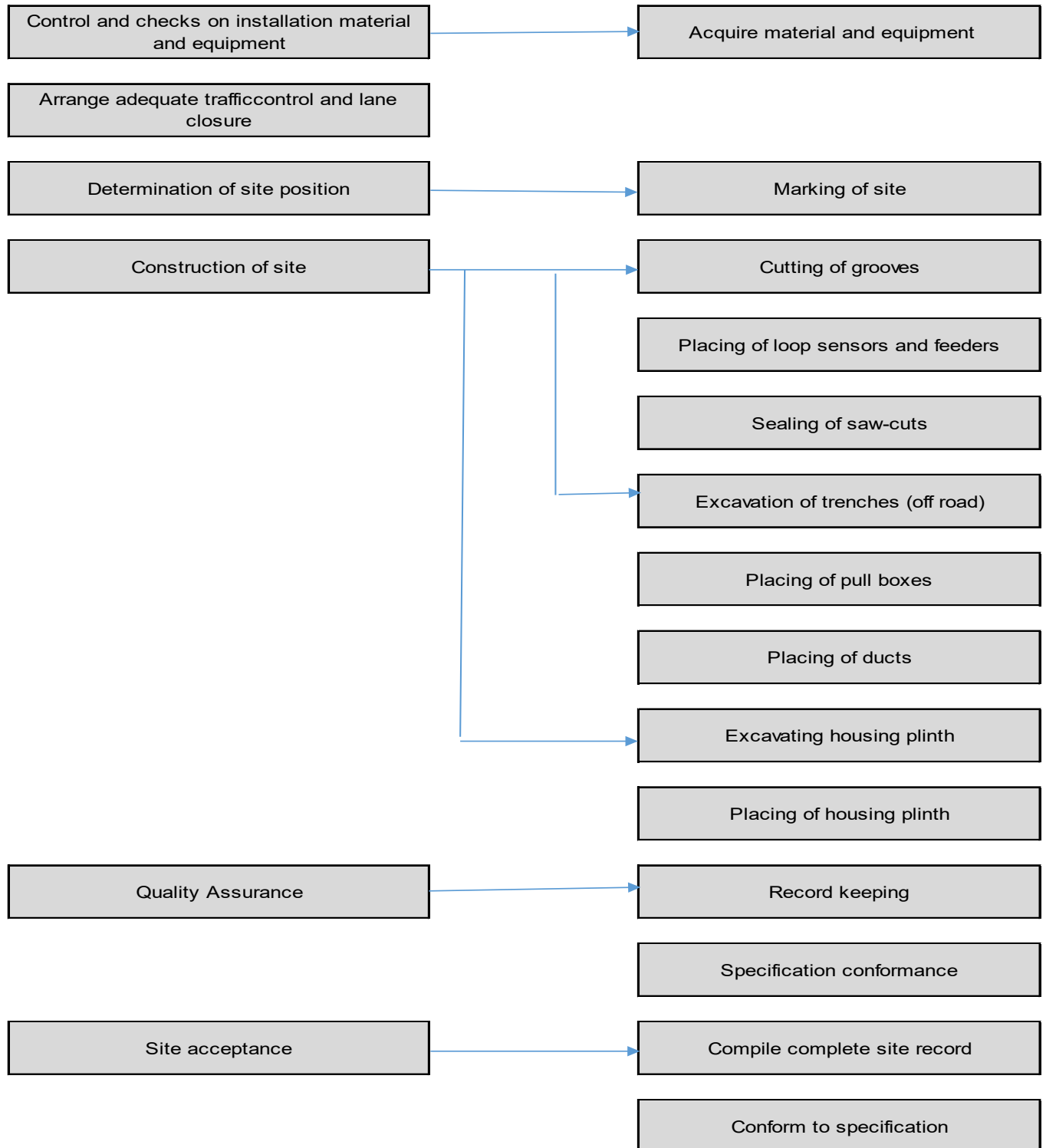
Any sensors that are installed on the road pavement must be able to operate without degradation or loss of sensitivity under road-surface temperatures in the range between -10° C to +80° C and a relative humidity in the range of 0 to 100%. These include sensors that are supported by the pavement and which may be affected by the pavement modulus of elasticity that could vary with temperature.

The monitoring system and sensors must be protected against, or must be insensitive to adverse effects that may be caused by vermin, moisture, water, ice, fuel, oil, salt, dust, electrical power spikes, as well as any external electrical or magnetic fields.

308 Traffic Detector Loop Installation

All installations should be carried out according to local safety regulations. Working on the road is an extremely dangerous exercise and the safety of both the public and the workers should be secured at all times. City of Tshwane's guidelines on how to accommodate traffic on various types of roads must be used. The work area must be properly demarcated and protected from traffic. When working with a partial road closure extreme care must be taken that workers don't accidentally step into the lanes carrying traffic.

309 Chart of the main installation steps



310 Installation Parameters (required specifications)

i. Loop wire

A 1,5mm² multi-stranded wire with cross-linked insulation of, either polyethylene or polypropylene is a common wire type to use. The total resistance of the loop plus the lead-in feeder must be less than 6Ω (six ohm). It has to be within 10% the theoretical value as determined by the wire type, diameter and total length. When longer feeders are needed thicker (lower gauge) wire should be selected. Refer to Table 1 as a guide for resistance values.

Resistance to ground must be greater than 100MΩ (one hundred mega ohm) measured with a 500-volt DC megohm-meter. (I.e. for the loop plus total length of feeder). Avoid loosely sheathed cable, as they are difficult to encapsulate. Avoid large outside diameter wire (6mm is a maximum), as they require wider saw-cuts.

Table 1

Diameter (mm)	Square mm	Standard Wire Gauge inch	Wire Number	American Wire Gauge or B&S inch	Resistance Guide
	Nominal		(AWG Gauge)		Ohm/ meter
0,81	0,50	0,0360	20	0,0320	0,0341
1,02	0,82	0,0480	18	0,0403	0,0219
1,29	1,30	0,0640	16	0,0508	0,0130
1,63	2,00	0,0800	14	0,0641	0,00854
1,80	2,60	0,0920	13	0,0720	0,00676
2,05	3,30	0,1040	12	0,0808	0,00540
2,59	5,29	0,1280	10	0,1019	0,00340

The preferred cable diameter shall be 1.63 mm or any available between 1.29 mm and 1.80 mm.

ii. Loop feeder

Where possible the loop and the lead-in feeder must be of the same length (without a splice). The feeders must be twisted at least 15 turns per meter. The feeder must be twisted from the loop edge to the instrument. Saw-cut width must allow for the twisted cable thickness. Maximum feeder length allowed is 100 m.

iii. Induced voltage

Induced voltage should not be visible over the loops. (When a Voltmeter is connected over the loop wire ends and also connected between any loop wire and earth.)

iv. Loop sealant

Loop sealants should totally encapsulate the wire to provide maximum protection. Loop sealants must remain flexible over the range of required environmental conditions. A typical recommended sealant is Detector Loop Sealant 5000 (or approved equivalent). When using a hot applied sealant check that the loop and feeder wire can withstand the applied heat when sealing the grooves.

v. Saw-cuts

Pavement thickness should allow for cuts of at least 35mm depth cuts 4.5mm wide. The width of cut is determined by the diameter of loop wire used. The critical thickness is the size of the twisted feeder. Wire must fit loosely in the saw-cuts (slots). Parallel saw-cuts must be further than 100mm apart to avoid possible pavement failure.

vi. Cable ducts

Make provision for sufficient cable duct diameter to eliminate the possibility of cable burn when pulling the cables through. All ducts should be fitted with pull through wire. Cable ducts are essential for easier maintenance. Provide separate ducts for signal, power and communication cables.

vii. Trenching

All trenches should be at least 500 mm deep at all places. Care should be taken not to damage cable ducts when back filling the trenches. Keep rocks away from the ducts. First cover the duct with stone free selected material before completely filling the trenches. The use of marker tape is recommended to avoid accidental un-earthing of ducts in the future.

viii. Connection to mains power

All connections to mains power must adhere to City of Tshwane regulations.

ix. Connection to solar power

All connections to solar power must adhere to City of Tshwane regulations.

x. Housing plinths

All concrete used should have a strength of 30 MPa or higher. Lead ducts (kick-pipes) should be placed correctly. They should terminate within the bottom of the housing footprint and exit in the correct direction (towards sensors and utilities). Caged bolts should be correctly positioned in the concrete to line-up with the instrument housing mounting holes.

311 Configuration

1. Loop configuration

The actual dual loop configuration per single lane as shown in Annexure B must be constructed. No plus axle or weigh in motion (WIM) detectors for City of Tshwane.

2. Loop numbering

Loops must be clearly tagged with robust tight fitting secure wire labels (ring type). Table 2 is the following loop numbering system recommended for dual loops:

Table 2

Loop A	Upstream loop
Loop B	Downstream loop
Loop C	Upstream loop
Loop D	Downstream loop
Loop E	Upstream loop
Loop F	Downstream loop
Loop G	Upstream loop
Loop H	Downstream loop
Loop I	Upstream loop
Loop J	Downstream loop
Loop K	Upstream loop
Loop L	Downstream loop
Loop M	Upstream loop
Loop N	Downstream loop
Loop O	Upstream loop
Loop P	Downstream loop

Suggested lane numbering convention:

Lane 1: The slow lane of the northbound or eastbound direction shall be lane 1. Then the adjacent lanes are then sequentially numbered.

SECTION 20300 LABOUR AND TRAINING REQUIREMENTS

CONTENTS

20301 SCOPE

20302 DEFINITIONS

20303 ENGAGEMENT OF LOCAL LABOUR

20304 TERMS AND CONDITIONS FOR EMPLOYMENT OF TEMPORARY WORKERS

20305 CONTRACTUAL REQUIREMENTS

20306 LIAISON OFFICER

20307 TRAINING REQUIREMENTS

20308 FORMAL TRAINING

20309 MEASUREMENT AND PAYMENT

20301 SCOPE

The specification sets out the requirements relating to labour and the provision of training.

20302 DEFINITIONS

The definitions given in the conditions of contract, the Contract Data and the Works Specifications, together with the following additional definitions shall, unless the context dictates otherwise, apply:

‘Key Personnel’ means all contract managers, site agents, materials and survey technicians, trainers, supervisors, foremen, skilled plant operators and the like, and all other personnel in the permanent employ of the Contractor or subcontractor who possess special skills and/or who play key roles in the Contractor’s or subcontractor’s operation.

‘Labourer’ means a worker statutorily defined as employees in the Basic Conditions of Employment Act, 1997, who is temporarily or permanently employed by the Contractor and subcontractors to perform prescribed work on this Contract. ‘Labour’ means labourers or workers.

‘Labour Register’ means the list of available Local Labourers compiled by the Liaison Officer in accordance with the results of his negotiations with the Contractor and the Local Community subsequent to the awarding of the Contract.

‘Local Labourer’ means a worker who is normally permanently residing in the target area(s) as defined by the Employer in the Project Specifications and who is available to be temporarily employed by the Contractor and subcontractors to perform prescribed tasks that form part of the Works.

‘Targeted Labour’ means the Local Labourers, who are defined as the target group for the Contract as normally permanently residing in the target area(s) as defined by the Employer in the Project Specifications. It is incumbent on individuals defined as Targeted Labour to demonstrate their claims to such residency on the basis of identification and association with and recognition by members of the community residing within the target area. It is incumbent on individuals to provide evidence of qualifying for the target groups.

‘Worker’ for the purposes of this specification means any person, not being one of the Contractor’s key personnel, nor any key personnel of any subcontractor, who is engaged by the Contractor, a subcontractor or the Employer and paid on an hourly paid basis to participate in the execution of any part of the contract works and shall include unskilled labour, semi-skilled and skilled labour, artisans, clerical workers and the like.

‘Workforce’ means the aggregate body comprising of all workers and shall, unless the context dictates otherwise, include the workforces of the Contractor and all subcontractors.

20303 ENGAGEMENT OF LOCAL LABOUR

The temporary workforce shall, as far as practically possible, and with the exception of key personnel, be recruited/selected from the local communities living in close proximity to the project.

Prior to the award of the Contract, the Employer shall, at his own cost, take all necessary actions to advertise within the local communities of the fact that the Contract will provide temporary employment opportunities and preference will be given to the use of the Local Labour on this Contract. Labourers and workers of the local

community required by the Contractor shall be recruited/chosen from a Labour Register and appointed for work to enable the Contractor to comply with the specific minimum target value set for the Contract Participation Goal (CPG) for the Contract. Labourers and workers of the Local community who are engaged by other employers in paid positions of employment shall not be eligible for inclusion in the Labour Register.

a) Employment of Local Labourers

The Contractor shall adhere to the principles set out in Section 5.3 of The Policy Framework on the Recruitment of Expanded Public Works Programme (EPWP) Beneficiaries (2017) when sourcing targeted labour workers (EPWP beneficiaries).

b) Selection of Local Labourers

The Contractor shall advise the Engineer in writing of the various categories of Local Labourers required for construction and the number of Local Labourers required in each category, together with the personal attributes which he considers desirable that each category of Local Labourers shall possess, taking due cognizance of the provisions of the Contract relating to Training.

The Contractor shall make his selection of Local Labourers from the applicants in the Labour Register, taking due cognizance of his requirements for the workforce and the provisions of the Contract in regard to the provision of Training to the workforce and in accordance with the following principles:

- i. No potential Local Labourer shall be precluded from being employed by the Contractor on the execution of the Works by virtue of his lack of skill in any suitable operation forming part of the Works unless:
All available vacancies have been or can be filled by labourers who already possess suitable skills; or

The completion period allowed in the Contract, or the remaining portion of the Contract period

(as the case may be) is insufficient to facilitate the creation of the necessary skills;
- ii. Preference shall be given to the long-term unemployed and single heads of households;
- iii. The Contractor shall, in so far as is reasonably practicable, accommodate the applicants' expressed preferences regarding the types of work for which they are selected;

- iv. The selection process shall make provision for, but shall not be limited to, the inclusion in the Labour Register of disabled Local Labourers who are deemed capable to perform selected tasks, youths who are older than sixteen but not older than twenty-six years and women.

After making his selection, the Contractor shall advise the Engineer thereof in writing, and the Engineer has the right to call a meeting with the Local Community for the purpose of ratifying the Contractor's selection. The Contractor shall attend such meeting and where reasonably required, shall motivate his selection. Should the Engineer or the Local Community make reasonable objection to the selection of any particular applicant by the Contractor, the Contractor shall not employ such applicant and shall select another suitable applicant acceptable to the Engineer and the Local Community as a replacement of the rejected applicant, in order to finalize the composition of the workforce.

The provisions of clause 20304 shall apply in respect of the selection of additional or replacement members of the workforce as may be necessary from time to time for the execution and completion of the Works.

20304 TERMS AND CONDITIONS OF EMPLOYMENT FOR TEMPORARY WORKERS

The statutory Department of Labour Government Notice No. R204 of 2 March 2001: Basic Conditions of Employment Act (No. 75 of 1997): Sectoral Determination 2: Civil Engineering Sector, South Africa as amended shall apply in respect of any employer or employee associated with the contract.

The Contractor shall conduct his own negotiations regarding wages and salaries, conditions of employment, working conditions, transport arrangements, disciplinary procedures, dispute resolution procedures and other matters relating to the employment of temporary workers. The Contractor shall supply the Employer, where instructed, written details of the terms and conditions applicable to the employment and remuneration of temporary workers.

a) Employment

All temporary workers (Local Labourers) who are employed for work to be executed in terms of the Contract, shall be employed by the Contractor in accordance with the abovementioned statutory legislation conditions which are consistent with and not less favourable than those set out below.

Part C3: Scope of Works

- 1) Engagement of the Local Labourers shall be of temporary nature for a period not exceeding the duration of the Contract. The duration of the employment of the Local Labourers shall nevertheless be as long as possible.
- 2) The Contractor shall in respect of every temporary worker employed by him in terms of the Contract, pay in full all amounts as may be due and payable in terms of the Workmen's Compensation Act.
- 3) At the earliest opportunity the Contractor shall give notice to the temporary workers of the termination of the project on which they are engaged, provided always that such notice shall not be less than one week.
- 4) Any temporary worker may be summarily dismissed by the Contractor for any of the following reasons:
Being under the influence of alcohol or drugs whilst on the site;
Theft of any materials, plant, tools and equipment;
Gross insubordination;
Any wilful or grossly negligent act or omission which constitutes a threat to person or property;
Any other reason with which the Engineer may agree that it warrants summary dismissal.
The dismissal of a temporary worker shall be effected in accordance with the applicable statutory requirements.
- 5) Where required in terms of the Contract, the Contractor shall provide transport to and from the site for the Local Labourers in a suitable vehicle complying with all the necessary safety requirements.
- 6) When a temporary worker presents himself for work but is prevented from commencing or proceeding with, or completing a task due to circumstances beyond the control of the Contractor (e.g. inclement weather) the temporary worker shall not be entitled to payment. If however, the temporary worker is unable to commence or proceed with or complete his task due to reasons within the control of the Contractor, the temporary worker shall be entitled to full payment, although he has not commenced or proceeded with or completed his task.
- 7) The Contractor shall enter into a written agreement with each temporary worker engaged by him in terms of the Contract. The conditions of employment of the temporary worker and his rate of remuneration shall be set out fully and clearly in the agreement, and the provisions of the agreement shall be strictly in accordance with the statutory legislation.

b) Remuneration

Payment of salaries and wages shall comply with all statutory requirements. The Contractor shall make available to the Employer on demand and at all reasonable times, copies of all such statements and any other records as the Employer may request, for the purposes of validating the accuracy of payments made to temporary workers.

c) Transporting of Local Labourers

The Contractor shall provide satisfactory and suitable scheduled daily return transport for the labourers recruited in the local community between agreed assembly points in the residential area of the local community and the areas on the Site where the labourers or groups of labourers have to report for the various tasks allotted to them. A Prime Cost Sum is provided in the pay item specified and included in the Bill / Schedule of Quantities to cover the cost of transporting Local Labourers.

20305 CONTRACTUAL REQUIREMENTS

a) Legislation

The Contractor shall comply with the following relevant legislation:

- Basic Conditions of Employment Amendment Act, 2018 or latest
- Labour Relations Amendment Act, 2002 or latest
- Employment Equity Act, Amendment 2005 or latest
- Occupational Health and Safety Act, Amendment 2008 or latest
- Compensation for Occupational Injuries and Diseases Act, Amendment 2010 or latest
- Skills Development Act, Amendment 2009 or latest

The onus shall be on the Contractor to ensure that all statutory requirements applicable to the employment of Labour are observed.

b) Labour content

The Labour content (LC) of the Contract shall be determined according to the formula:

$$LC = \frac{\sum_{i=1}^N \text{Value of wages and allowances of labourers}}{1}$$

The total Rand value of the Labour content, expressed as a percentage of the total Contract Price / Award Value of the Contract, exclusive of VAT and allowances for contingencies and escalation, shall be defined as the Labour Content Percentage.

Tenderers shall provide details of the magnitude and composition of their proposed Labour workforce for the contract by completing and submitting the Schedule of Labour Content in T2.2 : Returnable Schedules with their tenders. Details of all hourly paid labour personnel offered by the Contractor as permanent staff, acquired/hired and subcontractor's labour employed on the Contract shall be given.

c) Targeted Labour

The South African National Standard Specification SANS 1914-4 : 2002 Targeted Construction Procurement : Part 4 : Participation of Targeted Enterprises and Targeted Labour (Local Resources) and SANS 1914-5 : 2002 Targeted Construction Procurement : Part 5 : Participation of Targeted Labour makes provision defining targeted labour, weightings for different subcategories, for factors and additional requirements to be specified to suit a particular contract.

The Contractor shall engage targeted labour directly in the performance of the contract to the extent such that the monetary value of such engagements, expressed as a percentage of the net amount of the Contract Price / Award Value of the contract, is not less than the Contract Participation Goal provided for in the Contract. Details for Targeted Labour and the minimum Contract Participation Goals set by the Employer for the Contract are set out in C3.3: Procurement of the Scope of Work.

d) Records and reporting

The Contractor's Labour Content performance will be measured monthly in order to monitor the extent to which he is striving to reach the specific minimum target value set for the Contract Participation Goal (CPG) provided in the Contract. The Contractor shall prepare and attach to his payment certificates, in a form approved by the Employer, a schedule which lists the names, identity numbers, nationality, gender, trade/occupation, period of employment, employment number, wage rate, and allowances payable in respect of Labour, including the Rand value of wages and allowances paid, both on a cumulative basis and over the period for which payment is claimed.

The completed forms shall accompany the Contractor's monthly claim presented to the Engineer for payment of certified completed work. The Employer reserves the right to delay payments due to the Contractor should the Contractor fail to provide any item of required documentation to the approval of the Engineer.

The Contractor shall, on completion of the contract, and as a pre-requisite event to the release of any retention money in terms of the conditions of contract, provide the Engineer with independently audited documentary evidence of the total amount actually paid to the workforce and the number of workers days generated during the contract.

20307 TRAINING REQUIREMENTS

Where training is specified in the Contract, the Contractor shall implement a formal training programme in which the various skills required for the execution and completion of the works are imparted to the workers, and where applicable, subcontractors engaged therein, in a programmed and progressive manner. Workers shall be trained progressively throughout the duration of the contract in the various stages of a particular type of work.

All Training shall take place during normal working hours and the Contractor shall make adequate allowance in his programme of work to accommodate the Training to be provided in terms of the Contract and shall ensure that the workers are available at the appropriate times to undergo such Training.

The Contractor shall submit with his tender full details of the formal training which he intends to implement on the Contract. Details of the proposed Training shall be provided on Schedule of Proposed Training in T2.2 : Returnable Schedules and shall include the following:

- i) The name of the training institution and course programme.
- ii) Each type of training and course content synopsis.
- iii) The manner in which the training is to be delivered.

The cost of the Training in accordance with the Contractor's Schedule of Proposed Training programme shall not exceed the sums provided for Training in the relevant pay items in the Bill / Schedule of Quantities.

The Contractor's Training schedule shall be subject to the approval of the Engineer, and the Contractor shall, if so instructed by the Engineer, alter or amend the Training schedule and its contents to suit changing conditions on the Site and changes in the Contractor's programme of work.

a) Training of Local and other Labourers

Depending on the requirements of the Contract the Training shall make provision for on-site hands-on Training, courses presented in-house by the Contractor, and selected courses presented by institutions accredited by the Construction, Education and Training Authority (CETA) or other institution recognized by the Department of Labour and the Employer.

Each Labourer shall receive basic instruction and on-site hands-on training for the category of work required to be executed by him/her.

An approved number of Local Labourers chosen by the Contractor in conjunction with the Engineer shall attend in-house courses conducted by trainers in the employ of the Contractor in accordance with the approved Training programme to satisfy the need for trained Labourers on the Site.

Where formal training is specified in the Contract, Local Labourers with the required aptitude shall be nominated by the Contractor, and subject to the approval of the Engineer, shall attend approved formal training courses presented by accredited institutions and considered essential for the execution of the Works.

For this purpose the Contractor shall submit a selection of courses from known training institutions accredited by the Construction, Education and Training Authority (CETA) or other institution recognized by the Department of Labour and the Employer from which the Engineer will choose the courses to be attended by the nominated and approval Local Labourers.

b) Training for Emerging Contractors

The Contractor shall closely monitor the performance of the principals of Emerging Contractors in the execution of their subcontracts and shall identify those who, in his opinion, display the potential to benefit from formal Training provided for in the Contract, and when required by the Engineer, the Contractor shall make recommendations in this regard. The final list of candidates will be decided on between the Contractor and the Engineer.

Where required, Emerging Contractors engaged by the Contractor shall receive training and guidance according to an approved formal training programme which comprises both management skills and business development skills.

Details of the proposed Training of Emerging Contractors shall be submitted in the Schedule of Proposed Training in Returnable Schedules.

If so directed, the Contractor shall alter or amend the formal training programme and its contents to suit changing conditions on Site and changes in the Contractor's programme of work.

c) Labourers remunerated during training

All Local and other Labourers employed by the Contractor shall be remunerated in respect of the time spent undergoing formal training. Payment for Labourers in respect of training periods during which no productive work is executed, shall be reimbursed to the Contractor as provided for in Pay item in the Bill / Schedule of Quantities.

d) Non-compliance

If at any stage the Engineer notifies the Employer in writing that the Contractor is not complying with the requirements of the Contract in respect of the training to be provided to Local and other Labourers and to the Emerging Contractors, then the Employer is entitled to appoint competent firms or persons to conduct the specified training at the Contractor's expense and the amounts paid to such firms or persons will be deducted from the Contractor's payment..

The Contractor shall be obliged to make Local and other Labourers and other employees available for Training when so required by the Engineer.

20308 FORMAL TRAINING

a) General

The formal skills training programme to be implemented by the Contractor shall comply with the following minimum standards:

Part C3: Scope of Works

- a. Be accredited by the Construction, Education and Training Authority (CETA) or other institution recognized by the Department of Labour, as being appropriate for this project.
- b. Be delivered by suitably qualified and experienced trainers accredited to do so.
- c. Be delivered in the modules as described in the table below. The modules listed are those considered applicable to most civil engineering projects and shall serve as a guide only for planning purposes. The actual training needs, training agency and programme shall be agreed with the Engineer prior to implementation.

COURSE	DURATION (Days)	MAX TRAINEES/COURSE	NO OF TARGET GROUP
Construction automatic traffic monitoring site	5	5	Labourers
SHE Representative	5	5	Labourers

The Contractor shall be responsible for the provision of everything necessary for the delivery of the skills training programme, including the following:

- a. Sufficient skilled, competent and accredited trainers to deliver the training programme to all workers in accordance with the training programme;
- b. A suitably furnished venue (if required);
- c. Transport of the workers (as necessary);
- d. Tools, equipment and teaching aids;
- e. Stationery and all other necessary materials.

All members of the workforce will initially receive training in the module: Road safety for construction workers followed by training in the various work activity modules depending on the activities for which they will be

employed. Each worker employed must be given the opportunity of completing at least one of the work activity modules during the initial training period, with further training being given on merit.

The Contractor shall keep comprehensive records of the training given to each worker as well as the nature and number of work tasks executed by the worker and whenever required shall provide copies of such records to the Engineer.

The Contractor shall, in so far as it is reasonable and practical taking due and cognizance of the nature of the works to be executed at any given time, use trained workers on those aspects of the works for which they have been trained.

b) Accredited training and attendance

Only qualified trainers employed by training agencies that are accredited by the Construction, Education and Training Authority (CETA), or other institution recognized by the Department of Labour shall deliver all training. Accredited training refers to both the trainers as well as to the training material. Certificates affirming the successful participation in the various courses shall be presented to each attendant.

The Contractor shall facilitate in the delivery of training, by instructing and motivating the hired local labour, supervisors and subcontractors regarding attendance and participation.

All training shall take place within normal working hours, or as agreed with the trainees.

c) Supervisors

Attention shall be given to the formal and informal training of supervisors.

Candidates having the potential to become supervisors shall be selected from amongst the workforce and be given additional formal and informal training as outlined above. This selection will take place only once the initial skills training has been completed and workers have been given sufficient opportunity to prove their worth.

d) Training records and certificates

The Contractor shall keep comprehensive records of the formal training given to each Labourer and principal of the Emerging Contractor and whenever required, shall provide copies of such records to the Engineer. At the successful completion of each course each participant shall be issued with a certificate indicating the course contents as proof of attendance and completion.

e) Labour / Training Agent

The Contractor shall appoint a Labour / Training Agent, subject to the written approval of the Engineer. The Labour / Training Agent shall be on the Site at all times when Local and other Labourers are executing work allotted to them. The Labour / Training Agent shall report in writing to the Engineer on a daily basis on the work executed by the Local and other Labourers in the employ of the Contractor, the quality of the work, the progress, and all other information that the Engineer may require. The Labour / Training Agent shall also be responsible for those aspects of training which are assigned to him in the Contract.

f) Training centre

If so specified in the Contract, a suitable on site Training centre shall be provided by the Contractor to the to the satisfaction of the Engineer. The Training centre shall comply with the specifications for site offices as specified in the Specifications. Measurement and payment of the Training centre and the required equipment shall be as specified in the Project Specifications.

ANNEXURE 2

PARTICULAR SPECIFICATIONS: THE CLIENT EMPLOYER'S PRE-CONSTRUCTION HEALTH AND SAFETY SPECIFICATION

1. INTRODUCTION AND BACKGROUND

1.1 Background

The Construction Regulations to the Occupational Health and Safety Act (Act 85 of 1993) which were promulgated in July 2003 place the onus on the Employer (defined as the Client in terms of the Construction Regulations) to prepare a pre-construction health & safety (H&S) specification, highlighting all risks not successfully eliminated during design.

1.2 Purpose of the Pre-construction Health and Safety (H&S) Specification

The purpose of the pre-construction H&S specification is to assist with the achievement of compliance with the OHS Act, and in particular with the Construction Regulations, so as to reduce incidents and injuries on the project. The pre-construction specification enables Tenderers to make adequate financial provisions in their tenders to cover the H&S requirements of the project and thereafter, for the Contractor and its sub-contractors to use as the basis for the preparation of the construction phase H&S plan.

The pre-construction specification sets out the basic requirements to be met by the Contractor and all sub-contractors so that the H&S of all persons potentially at risk may receive a priority at least equal to the other facets of the project such as the standard of workmanship, costs, programme, environment, etc.

1.3 Status of the Pre-construction Health and Safety Specification

The Client's H&S specification will form an integral part of the contract, and Tenderers are required to use it during the tender phase for pricing the preparation a project-specific construction phase H&S plan prior to commencing any work and for pricing the costs of ensuring compliance thereto during the entire construction phase. Tenderers shall forward a copy of the H&S specification to all other persons or organisations who may be preparing to submit prices to the Tenderer during their bidding phase so that they can also price for preparing their own H&S plans relating to their individual operations and for complying with the H&S requirements during the construction phase.

Notwithstanding the fact that the Client's pre-tender H&S specification does not identify all of the H&S risks that may be encountered on the project, Tenderers are required to take cognisance of all potential H&S risks that may be evident from the tender documents namely the conditions of contract, tender drawings, technical specifications and schedules of quantities, and to make the requisite provisions in their tenders for dealing with all of them.

2. HEALTH AND SAFETY SPECIFICATION

2.1 Scope

This health and safety (H&S) specification is the Client's H&S specification prepared in accordance with Clause 4(a) of the Construction Regulations. It covers the requirements for eliminating and mitigating incidents and injuries during the construction phase of the project. The specification addresses legal compliance, hazard identification and risk assessment, risk control, and promoting a health and safety culture amongst those working on the project. The specification also makes provision for the protection of those persons other than employees of the Principal Contractor and Contractors.

2.2 Interpretations

2.2.1 Application

This specification is a compliance document drawn up in terms of South African legislation and will therefore be binding on the Contractor. It must be read in conjunction with all of the other contract documentation and also with all the relevant statutory documents. This specification is not intended to over-ride, or in any way to amend, the statutory/regulatory documents and, in the event of there being any conflict, the legislation will take precedence.

2.2.2 Definitions

The definitions as listed in the Occupational Health & Safety Act 85/1993 and Construction Regulations (July 2003) shall apply to this H&S specification. More specifically, where used in this H&S specification, "Principal Contractor" means the Contractor, "Contractor" means sub-contractors to the Principal Contractor, and "Client" means the Employer or his/her duly appointed Agent.

2.3 Minimum Administrative Requirements

2.3.1 Notification of Intention to Commence Construction Work

On receipt of the Client's notification of award of the contract and, in any event before any construction work commences, the Principal Contractor shall notify the Provincial Director of the Department of Labour in writing of the intention to undertake construction work. Annexure A to the Construction

Regulations must be used for that purpose and a copy of that form is attached as Annex A to this specification. A copy of the completed notification must be forwarded to the Client and to the Employer and a copy shall be attached to the H&S plan. The addresses of the nine Provincial Directors of the Department of Labour are given in Clause 1 of the General Administrative Regulations to the OHS Act.

2.3.2 Assignment of the CEO's Responsibility For Health and Safety on Site

In terms of Section 16 of the Act, the CEO's of the Client, the Employer, the Principal Contractor and all other Contractors shall make the requisite assignments of their responsibilities in writing prior to commencement of work on site. It is noted that, in a large organisation, the CEO may decide to assign his responsibilities to a line manager who may in turn assign his responsibilities to another line manager and so on. Annex B to this specification comprises forms which may be used for these assignments. Copies of the completed forms shall be attached to the H&S plan.

2.3.3 Appointment of the Construction Supervisor

The Principal Contractor's CEO (or his duly assigned employee) shall appoint (in writing) a full time competent person to supervise the construction work. One or more competent persons may also be appointed (in writing) to assist the appointed construction supervisor should the Principal Contractor deem it necessary or desirable. The Principal Contractor's and the Contractors' competent persons for the various roles shall fulfil the criteria as defined the Construction Regulations. Copies of these appointments, together with proof of competence of the individuals concerned, shall be attached to the H&S plan. Proof of competencies shall take cognisance of the definition of a "competent person" as set out in the Construction Regulations and may comprise CV's and written motivations/recommendations by the persons' direct report.

2.3.4 Compensation of Occupational Injuries and Diseases Act 130 of 1993 (COIDA)

The Principal Contractor shall, prior to commencing work on site, submit a letter of good standing with its Compensation Insurer to the Client and to the Employer as proof of registration. All other Contractors shall submit their proof of registration to the Principal Contractor before they commence work on site. Copies of these documents shall be attached to the H&S plan.

2.3.5 Occupational Health and Safety Policy

The Principal Contractor and all other Contractors shall submit to the Client and to the Employer, a copy of their organisation's H&S Policy signed by their Chief Executive Officer. Each policy must include a description of the organisation and state the H&S objectives and how they will be achieved and implemented by the organisation. Copies of these policies shall be attached to the H&S plan.

2.3.6 Health and Safety Organogram

The Principal Contractor shall submit an organogram, outlining the H&S site management structure including those of all other Contractors. In cases where appointments have not been made, the organogram shall reflect the intended positions, and the names shall be filled in as and when the appointments are made. The organogram shall be updated whenever there are any changes in the site management structure and/or personnel. A copy shall be attached to the H&S plan.

2.3.7 Health and Safety Representative(s)

The Principal Contractor and all other Contractors shall, after due consultation with the parties concerned, ensure that an H&S Representative is appointed in writing as soon as there are 20 persons employed on a site. Additional H&S Representatives are required once the workforce exceeds 50 persons. Annex C may be used for this purpose and copies of the appointments are to be attached to the H&S plan. Each H&S Representative(s) is to be trained to carry out their respective functions and must carry out regular inspections, keep records, and report all findings to the responsible person forthwith, and also at the next H&S meeting. Copies of these documents are to be kept in the Project H&S File.

2.3.8 Health and Safety Committees

Provided that two or more Safety Representatives have been designated, the Principal Contractor shall ensure that one or more Safety Committees are established and that H&S committee meetings are held at least monthly and that minutes are kept on record. Meetings must be convened and chaired by the Principal Contractor's Construction Supervisor. All of the Principal Contractor's and other Contractors' responsible persons and H&S Representatives shall attend the monthly H&S meetings. Contractors shall also have their own internal H&S committees as required in terms of the OHS Act and copies of their agendas and minutes of their meetings shall be forwarded to the Principal Contractor on a monthly basis. Copies of all H&S committees' agendas and minutes are to be kept in the Project H&S File.

2.3.9 Health & Safety Audits, Monitoring and Reporting

The Client shall conduct monthly H&S audits of the construction work operations including a full audit of physical site activities as well as an audit of the administration of H&S. The Principal Contractor is obligated to conduct similar audits on all Contractors that they have appointed. Detailed reports of the audit findings shall be reported on at all levels of project management meetings/forums. Copies of all audit reports shall be kept in the Project H&S File.

2.3.10 Emergency Procedures

The Principal Contractor shall prepare a detailed emergency procedure prior to commencement of work on site and it shall be included in, and form part of, the H&S plan. The procedure shall be updated whenever changes occur and it shall detail the emergency response plans. The emergency procedures shall not be limited to, but shall include, the following key elements:

- List of key competent personnel on site;
- Details of the nearest emergency services, including their physical addresses and phone numbers;
- Actions or steps to be taken in the event of each specific type of emergency;
- Information on hazardous materials/situations that may be encountered on site.

Emergency procedures shall include, but shall not be limited to, fire, spills, accidents to employees, use of hazardous substances, bomb threats, and major incidents/accidents.

A contact list of all service providers (Fire Department, Ambulance, Police, Medical and Hospital, etc) must be maintained and be readily available to site personnel at all times that there are persons on site i.e. it must not be located in an area which may be inaccessible outside of normal working hours.

The Principal Contractor shall advise the Client and the Employer in writing forthwith, and thereafter at the project and H&S meetings, of any emergencies that occurred, together with a record of the action taken. Copies of all reports on emergencies shall be kept in the Project H&S File.

2.3.11 Accident / Incident Reporting and Investigation

Each Injury that occurs is to be categorised into first aid, medical, disabling, or fatal and must be reported on the prescribed form (refer Annex D). The Principal Contractor must document in its construction phase H&S plan how it will handle each of these categories of injury. When reporting injuries to the Client, these aforementioned categories shall be used. All injuries shall be investigated by the Principal Contractor, with a report being forwarded to the Client forthwith. All Contractors have to report on the four categories of injuries to the Principal Contractor at least monthly. The Principal Contractor must report all injuries to the Client in the form of a detailed injury report at least monthly and copies of these reports shall be kept in the Project H&S File.

2.3.12 General Record Keeping

The Principal Contractor and all Contractors shall keep and maintain H&S records to demonstrate compliance with this specification, the approved H&S plan, the OHS Act, and the Regulations. The Principal Contractor shall ensure that all records of incidents/accidents, training, inspections, audits, etc. are kept in the Project H&S File stored in a suitable place on site. The Principal Contractor must ensure that every Contractor opens its own H&S file, maintains the file, makes it available to the Principal Contractor and other authorised persons on request and sends copies of the relevant documentation to the Principal Contractor.

The Principal Contractor shall maintain an up to date register of each Contractor engaged in construction work on site giving the Contractors' name and the Responsible Persons' contact details and the number of employees on site. As these details may be subject to frequent change, the register must be updated at least weekly. The register is to be available for inspection.

2.3.13 Project H&S File

The Principal Contractor shall prepare, and update on at least a monthly basis, a properly indexed H&S file for the project. This file will evolve during the construction phase and is to be handed over to the Client on completion of the construction work on site. The Project H&S File shall contain:

- The names and addresses and contact details of the Principal Contractor
- The names and addresses of all other Contractors that worked on the project, copies of their agreements with the Principal Contractor and the type of work that each one is carrying/has carried out
- The original and all subsequent versions/revisions of the H&S plan and the annexures and appendices thereto
- All information specifically called for in the OHS Act and the Construction Regulations and this specification and any other pertinent information relating to H&S on the project that is considered relevant.
- The geo-science report, design loadings of the structure(s) and methods and sequence of construction issued to the Principal Contractor by the Employer and/or the Client.
- The safe work procedures developed by the Principal Contractor and all other Contractors.
- Details of any special or unusual materials forming part of the completed works.
- All relevant information concerning the completed works. This information shall comprise the record/'as built' drawings prepared by the Employer, copies of which will be issued to the Principal Contractor for inclusion in the File, and the operating and maintenance instructions and all relevant information relating to any unusual or special features of the completed works that could affect

H&S of the end users. When compiling this data, consideration must be given to all information that may be relevant to possible future alterations and/or demolition of all or part of the works.

2.4 HEALTH AND SAFETY INDUCTION, TRAINING AND EQUIPMENT

2.4.1 H&S Induction, Awareness and Competency

Induction of Site Personnel

The Principal Contractor shall ensure that all site personnel, including those of all other Contractors, undergo risk-specific H&S induction training before starting work. A record of attendance at every induction session shall be kept in the Project H&S File. A suitable venue must be made available by the Principal Contractor to accommodate this training.

Awareness of Site Personnel

The Principal Contractor shall ensure that periodic „toolbox talks“ take place on site. These talks should deal with risks relevant to the construction work at hand. All Contractors shall conduct „toolbox“ talks at least once per week with their own employees. A record of attendance at each „toolbox talk“ shall be kept in the Project H&S File.

Competency of Site Personnel

All competent persons shall have the knowledge, experience, training, and qualifications specific to the work they have been appointed to supervise, control and/or carry out. This will have to be assessed on a regular basis by, for example, periodic H&S audits, progress meetings, etc. The Principal Contractor will be responsible for ensuring that only competent Contractors are appointed to carry out construction work.

Public and Site Visitor Health & Safety

Both the Client and the Principal Contractor have a duty in terms of the OHS Act to do all that is reasonably practicable to prevent members of the public and site visitors from being adversely affected by the construction activities.

The Principal Contractor shall ensure that every person working on or visiting the site, as well as the public in general, shall be made aware of the dangers likely to arise from site activities, including the

precautions to be taken to avoid or minimise those dangers. Appropriate H&S notices and signs shall be posted up, but this shall not be the only measure taken.

Site visitors must be briefed on the hazards and risks they may be exposed to and what measures are in place or should be taken to control these hazards and risks. A record of these inductions/briefings shall be kept in the Project H&S File.

2.4.2 First Aid Boxes and First Aid Training

The Principal Contractor and all other Contractors shall appoint First Aider(s) in writing. All Contractors with more than 10 employees shall have a trained, certified First Aider on site at all times. The appointed First Aider(s) are to be sent for accredited first aid training. Copies of the valid First Aid certificates for each First Aider are to be kept in the Project H&S File. The Principal Contractor shall provide an on-site First Aid Station with First Aid facilities, including first aid boxes adequately stocked at all times. All Contractors with more than 5 employees shall supply their own first aid box(es).

2.4.3 Occupational Health and Hygiene

Exposure of workers to occupational health hazards and risks is very common in any work environment, especially in construction. Occupational exposure is a major problem and the Principal Contractor must ensure that proper health and hygiene measures are put in place to prevent exposure by any person to hazards such as inhalation, ingestion, absorption, and noise induction. Some of the more common occupational hazards to be considered are cement dust, sun exposure, and noise. In addition, the ergonomic issues relating to repetitive and/or strenuous body and limb movements must be considered and ameliorated wherever possible. Stress due to tight project schedules has been shown to adversely affect construction workers and this shall be taken into account when planning and managing work schedules. The preventative and/or the amelioration measures shall be addressed in the H&S plan by way of safe work procedures which are to be followed.

2.4.4 Alcohol and other Drugs

Alcohol and drug/other substance abuse have been shown to be a problem in the construction industry. No alcohol or other drugs will be allowed on site. No person may be under the influence of alcohol or any other drugs while on the construction site. Any person on prescription drugs must inform his/her superior, who shall in turn report this to the Principal Contractor forthwith. Any person suffering from any illness/condition that may have a negative effect on his/her safety performance must report this

to his/her superior, who shall in turn report this to the Principal Contractor forthwith. Any person suspected of being under the influence of alcohol or other drugs must be sent off site immediately, to report back the next day for a preliminary inquiry. A full disciplinary procedure must be followed by the employer concerned and details of the disciplinary action taken must be forwarded to the Principal Contractor for his records.

2.4.5 Personal Protective Equipment (PPE) and Clothing

The Principal Contractor shall ensure that all workers are issued with, and wear, hard hats, safe footwear and overalls and specific PPE wherever such equipment is identified in the SWP's as being necessary for particular tasks. The Principal Contractor and all other Contractors shall make provision for, and keep adequate quantities of, SABS approved PPE on site at all times. The Principal Contractor shall clearly outline in the H&S plan the procedures to be taken when PPE or clothing is lost, stolen worn out, or damaged. This procedure applies to all Contractors, as they are all Employers in their own right.

2.4.6 Fire Extinguishers and Fire Fighting Equipment

The Principal Contractor and all other relevant Contractors shall provide adequate, regularly serviced fire fighting equipment located at strategic points on site, specific to the classes of fire likely to occur. The appropriate notices and signs must be posted up as required.

2.4.7 Occupational Health and Safety (OHS) Signage

The Contractor shall provide adequate on-site H&S signage including, but not limited to, 'no unauthorised entry', 'report to site office', 'site office', 'beware of overhead work', 'hard hat area'. Signage shall be posted up at all entrances to site as well as on site in strategic locations e.g. access routes, stairways, entrances to structures and buildings, scaffolding, and other potential risk areas/operations.

2.5 PRELIMINARY HAZARD IDENTIFICATION AND RISK ASSESSMENT AND PROGRESS HAZARD IDENTIFICATION AND RISK ASSESSMENT

The Principal Contractor and all other Contractors shall cause a hazard identification to be performed by a competent person(s) before commencement of their respective construction work, and the assessed risks (**including Covid-19 risk assessment**) shall be documented in the construction phase H&S plan to be submitted for discussion with, and subsequent approval by, the Client. The risk assessments must include:

- A list of all hazards identified as well as potentially hazardous tasks to be carried out;
- A documented risk assessment based on the list of hazards and tasks;
- A set of safe working procedures (method statements) to eliminate, reduce and/or control the risks assessed;
- Details of the PPE and clothing to be worn;
- A monitoring and review procedure of the risk assessments to be carried out on a monthly basis, whenever variation orders are issued or changes made, and whenever the risks change.

The Principal Contractor shall ensure that all other Contractors are informed, instructed and trained, by a competent person regarding all hazards, risks, and the related safe work procedures before any work commences and thereafter at regular intervals if the risks change and/or if new risks are identified **(including amongst others mask wearing at all times by everyone on site, washing hands regularly/ applying a hand sanitizer and observing social distancing to reduce the spread of Covid-19).**

The Principal Contractor shall be responsible for ensuring that all persons who could be negatively affected by its operations are informed and trained according to the hazards and risks and are conversant with the safe work procedures, control measures, and other related rules such as the „tool box talk“ strategy that is to be implemented.

The Principal Contractor shall immediately notify all other Contractors as well as the Client of any hazardous or potentially hazardous situations that may arise during performance of construction activities.

The Principal Contractor shall keep records as per Clause 9 of the Hazardous Chemical Substances Regulations.

All of the above are to be documented in the H&S plan.

2.6 PERMITS

Permits may be required for certain activities and these are not limited to but may include the following:

- ◆ Use of Explosives and Blasting
- ◆ Work for which a fall prevention plan is required
- ◆ Removal of asbestos materials.
- ◆ Disposal of (old type) fire detectors with radioactive elements.
- ◆ Decanting/handling of Ammonia.

If and where applicable, the Employer will issue to the Principal Contractor, permits and log books (which log books shall thereafter be kept up to date by the Principal Contractor), for the following installations:

- ◆ Boilers
- ◆ MV switchgear and chambers/rooms
- ◆ MV switchgear outdoor yards
- ◆ Lifts

All of the above are to be documented in the H&S plan.

2.7 SPECIFIC PROJECT REQUIREMENTS

2.7.1 Formwork and Support Work

Support work in river bed and is subject to floods which could wash away/undermine the support work.

2.7.2 Excavation Work

Protection of the top of the excavations to prevent persons falling in shall be addressed. A safety net is to be installed to catch any stones or other loose material from falling onto persons who may be working in the excavations.

Trenching up to 3.5 metres deep is to be carried out and the material is saturated and there is a high water table so close shoring may be required.

2.7.3 Construction Vehicles and Mobile Plant

The Principal Contractor shall ensure that all persons in its employ, all Contractors, and all those that are visiting the site are aware and comply with the site speed restriction(s). Separate vehicle and pedestrian access routes shall be provided, maintained, controlled, and enforced.

The Principal Contractor and all relevant Contractors shall inspect and keep records of inspections of the construction plant used on site. Only authorised/competent persons are to use machinery under proper supervision.

The Principal Contractor shall ensure that all hired plant and machinery used on site is safe for use. The Principal Contractor shall ensure that operators hired with machinery are competent and that certificates are kept on site in the health & safety file. All relevant Contractors must ensure the same.

2.7.4 Warning signs

The Principal Contractor shall erect and maintain the necessary signs, notices and barricades at strategic points on the boundaries to inform people of the dangers of the construction site.

2.7.5 Construction Welfare Facilities

The Principal Contractor shall supply hand washing facilities, soap, toilet paper, and hand drying material. Waste bins must be strategically placed and emptied regularly. Safe, clean storage areas must be provided for workers to store personal belongings and personal protective equipment. Workers shall not be exposed to hazardous materials/substances while eating.

2.7.6 General Machinery

The Principal Contractor and relevant Contractors shall ensure compliance with the Driven Machinery Regulations, which include inspecting machinery regularly, appointing a competent person to inspect and ensure maintenance, issuing PPE or clothing, and training those who use machinery

2.7.7 Transport of Workers

The Principal Contractor and other Contractors shall not:

Transport persons together with goods or tools unless there is an appropriate area or section to store them;

Transport persons in a non-enclosed vehicle, e.g. truck; there must be a proper canopy (properly covering the back and top) with suitable sitting area. Workers shall not be permitted to stand or sit at the edge of the transporting vehicle.

Transport workers in bakkies unless they are closed/covered and have the correct number of seats for the passengers.

FINANCIAL PROVISION FOR HEALTH AND SAFETY

Tenderers (including those sub-contractors and/or suppliers who are preparing prices/quotations for submission to the main Tenderer) must ensure that they make adequate financial provision in their tenders for full compliance with the OHS Act, the Regulations thereto and this H&S specification. Financial provision shall therefore be made by each Tenderer for, inter alia, the following:

- ◆ Carrying out and documenting risk assessments of all work to be carried out under the contract.
- ◆ Preparation of safe work procedures for all work to be carried out under the contract.
- ◆ Preparation of an H&S plan, discussing it with the Client, and then amending it as agreed.
- ◆ Preparation for and conducting “toolbox talks” with relevant employees.
- ◆ Induction and training as and where required.
- ◆ Preparation of a Project H&S File.
- ◆ Regular updating of all of the foregoing.
- ◆ Provision of PPE and protective clothing for employees
- ◆ Complying with all H&S requirements for the duration of the contract.

To enable the Client to be appraised of the allowances that Tenderers have made for H&S in their tenders, so that he/she can fulfil his/her obligations in terms of Clause 4 (h) of the Construction Regulations, the following H&S items have been included in the Schedules of Quantities and must be individually priced:

- ◆ Fixed Charge Item for the preparation of risk assessments, safe work procedures, the project H&S File, the H&S plan, the provision of PPE and protective clothing, and any other H&S matters that the contractor deems necessary.

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- ◆ Fixed Charge Item for completing and checking the Project H&S File and handing over to the Client on completion of the works.
- ◆ Time Related Item for updating and amending the risk assessments, safe work procedures, the project H&S
- ◆ File, the H&S plan, the provision of PPE and protective clothing and any other H&S matters that the contractor deems necessary.
- ◆ Time Related Item for full compliance with all H&S matters during the construction of the works under the contract.

Failure by a Tenderer to submit realistic prices for the scheduled H&S items may prejudice his tender.

GUIDELINES FOR THE PREPARATION OF A TYPICAL H&S PLAN

Annex E contains certain information to give an indication as to what could be included in an H&S plan for a typical project. That information does not form part of the H&S specification for this particular project as it is just a basic outline and it must be adapted and expanded to suit the actual structure of the contractor's organisation and also the specific nature of the project.

Enclosures: Annex A – Notification of Construction Work

Annex B – CEO and Management Assignment

Annex C – Appointment of H&S Representative

Annex D – Recording of Incident

Annex E – Guidelines for the Preparation of a Typical H&S Plan

ANNEX A (to H&S specification)

To: The Provincial Director, Department of Labour

Annexure A

OCCUPATIONAL HEALTH AND SAFETY ACT, 1993

Regulation 3 of the Construction Regulations, 2003

NOTIFICATION OF CONSTRUCTION WORK

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

.....

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

.....

2. Principal contractor's compensation registration number:

.....

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

.....

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

.....

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

.....

- (b) Name and telephone number of designer's contact person:

.....

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

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-
6. Name/s of principal contractor's sub-ordinate supervisors on site appointed in terms of regulation 6(2):
-
7. Exact physical address of the construction site or site office:
-

ANNEX A –cont. (to H&S specification)

8. Nature of the construction work:
-
-
-
1. Expected commencement date:
-
2. Expected completion date:
-
11. Estimated maximum number of persons on the construction site:
-
12. Planned number of contractors on the construction site accountable to principal contractor:
-
13. Name(s) of contractors already chosen:
-
-
-
-

.....

.....

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Part C3: Scope of Works

Principal Contractor

Date

.....

.....

Client

Date

- THIS DOCUMENT IS TO BE FORWARDED TO THE OFFICE OF THE DEPARTMENT OF LABOUR **PRIOR TO COMMENCEMENT** OF WORK ON SITE.
- **ALL PRINCIPAL CONTRACTORS** THAT QUALIFY TO NOTIFY MUST DO SO EVEN IF ANOTHER PRINCIPAL CONTRACTOR ON THE SAME SITE HAD DONE SO PRIOR TO THE COMMENCEMENT OF WORK.

ANNEX B (to H&S specification)

CEO ASSIGNMENT IN TERMS OF SECTION 16(2) OF THE OHSA (ACT 85 OF 1993)

Section 16 of the Act states:

Every chief executive officer shall, as far as is reasonably practicable, ensure that the duties of his employer as contemplated in this Act, are properly discharged.

Without derogating from his responsibility or liability in terms of sub-section (1), a chief executive officer may assign any duty contemplated in the said sub-section, to any person under his control, which person shall act subject to the control and directions of the chief executive officer.

The provisions of sub-section (1) shall not, subject to the provisions of section 37, relieve an employer of any responsibility of liability under this Act.

For the purpose of sub-section (1) the head of department of any department of State shall be deemed to be the chief executive of that department.

I, (full name of CEO)do hereby assign my duties

in respect of the overall management and control of.....

to (full name of Appointee).....

in his/her capacity as.....

to ensure that the duties of the employer are carried out as contemplated in the Act and the Regulations as amended for.....

(division/area/region/premises/project(s)).

Signature:

Date:

Designation: Chief Executive Officer

Kindly confirm your acceptance of this appointment by completing the following:

ACCEPTANCE OF ASSIGNATION

I, hereby accept this assignation and confirm that I am conversant with the requirements of the OHS Act and regulations as amended and agree to carry out the duties as set out for the employer.

NOTE : Your Attention is Drawn to regulation General Administrative Regulation 5 and Sections 8, 9, 13, 17, 18, 19, 20 and 37 of the Occupational Health and Safety Act No. 85 of 1993, attached hereto.

Signature:

Date:.....

Designation:

ANNEX B – cont. (to H&S specification)

MANAGEMENT ASSIGNMENT OF DUTIES IN TERMS OF SECTION 16 (2) OF THE OHSA (ACT 85 of 1993)

Section 16 of the Act reads:

- (1) Every chief executive officer shall as far as is reasonably practicable ensure that the duties of his employer as contemplated in this Act, are properly discharged.
- (2) Without derogating from his responsibility or liability in terms of sub-section (1), a chief executive officer may assign any duty contemplated in the said sub-section, to any person under his control, which person shall act subject to the control and directions of the chief executive officer.
- (3) The provisions of sub-section (1) shall not, subject to the provisions of section 37, relieve an employer of any responsibility or liability under this Act.
- (4) For the purpose of sub-section (1) the head of department of any department of State shall be deemed to be the chief executive of that department.

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I, (Appointee's full name)

Representing in my capacity as the 162(2) assigned person being responsible for the overall management and control of

do hereby assign all my duties as contemplated in Section 16(2) of the Act to in his/her capacity as

and vested with the duty of ensuring the employer complies with the provisions of the Act subject to my control and directions in respect of.....

officeconstruction site(s)/all projects under his/her control.

NOTE: Your attention is drawn to Regulation General Administrative Regulations 5 and Sections 8, 9, 13, 17, 18, 19, 20 and 37 of the Occupational Health and Safety Act No. 85 of 1993

(Full name of alternate)..... will be the Responsible Person in Charge in the Absence of the above Appointee.

Signature:

Date:.....

Designation:.....

Kindly confirm your acceptance of this appointment by completing the following:

ACCEPTANCE OF ASSIGNATION

I,..... hereby accept this assignation and confirm that I am conversant with the requirements of the OHS Act and regulations as amended and agree to carry out the duties as set out for the employer.

NOTE : Your Attention is Drawn to regulation General Administrative Regulation 5 and Sections 8, 9, 13, 17, 18, 19, 20 and 37 of the Occupational Health and Safety Act No. 85 of 1993, attached hereto.

Signature:.....

Date:.....

Designation:

ANNEX C (to H&S specification)

APPOINTMENT OF HEALTH AND SAFETY REPRESENTATIVE IN TERMS ON SECTION 18 OF THE OHSA

(ACT 85 OF 1993)

(APPOINTEE'S NAME).....

I, (Appointer's full name)..... being an employee of (name of Contractor's organisation) and, having been appointed as (area of responsibility e.g. Responsible Person for the construction of X on site Y), hereby appoint you (Appointee's full name) in terms of Section 17 of the OHSA as the Health and Safety Representative for (area of responsibility)

In terms of this appointment your functions are as follows:

- To represent your employee electorate's interests in terms of occupational health and safety.
- To carry out health and safety inspections of your workplace as designated above prior to each appropriate health and safety committee meeting.
- To serve on the appropriate health and safety committee.
- To bring to the attention of your supervisor any deviations from the safe work procedures any other matters regarding health and safety that come to your attention at any time.

The dates and times of the health and safety committee meetings will be determined by the committee(s). You should attend all meetings of the health and safety committee on which you serve.

You will be required to undergo Health and Safety Representative training in order to ensure that you can complete your tasks successfully.

Your appointment is valid from (start date) to (end date)

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.....

Appointer's Signature

Date

Kindly confirm your acceptance of this appointment by completing the following:

ACCEPTANCE

I, (Appointees full name) understand the implications of the appointment as detailed above and confirm my acceptance.

.....

.....

Appointee's Signature

Date

ANNEX D (to the H&S Specification)

OCCUPATIONAL HEALTH AND SAFETY ACT, 1993

(Act No. 85 of 1993)

Regulation 9 of the General Administrative Regulations

Recording and Investigation of Incidents

A. RECORDING OF INCIDENT

1. Name of employer

.....

.....

2. Name of affected person

.....

Part C3: Scope of Works

3. Identity number of affected person
.....

4. Date of incident

5. Time of incident

6. Part of body affected Head or neck Eye Trunk Finger Hand
 Arm foot Leg Internal Multiple

7. Effect on person Sprains or strains Confusion or wounds Fractures Burns Amputation
 Electric shock Asphyxiation Unconsciousness Poisoning Occupational Disease

8. Expected period of disablement 0-13 days 2-4 weeks >4 – 16 Weeks >16 – 52 weeks >52 weeks or permanent disablement Killed

9. Description of occupational disease
.....

10. Machine/process involved/type of work performed/exposure**
.....
.....
.....
.....

3. Was the incident reported to the Compensation Commissioner and the Provincial Director?

Yes No

12. Was the incident reported to the police?*

Yes No

13. SAPS office and reference.....

* to be completed in case of a fatal incident.

** in case of a hazardous chemical substance, indicate substance exposed to.

ANNEX D cont. (to the H&S Specification)

B. INVESTIGATION OF THE ABOVE INCIDENT BY A PERSON DESIGNATED

THERE TO

1. Name of investigator.....

2. Date of investigation.....

3. Designation of investigator.....

4. Short description of incident.....

.....

.....

.....

5. Suspected cause of incident

.....

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Part C3: Scope of Works

.....

.....

6. Recommended steps to prevent a recurrence

.....

.....

.....

.....

.....

Signature of Investigator

.....

Date

REGULATION 9 OF THE GENERAL ADMINISTRATIVE REGULATIONS

RECORDING AND INVESTIGATION OF INCIDENTS

C. ACTION TAKEN BY EMPLOYER TO PREVENT THE RECURRENCE OF A SIMILAR INCIDENT

.....

.....

.....

.....

.....

.....

.....

Signature of Employer

.....

Date

D. REMARKS BY HEALTH AND SAFETY COMMITTEE

Remarks

.....

.....

.....

.....

Signature of Chairman of Health and Safety Committee

Date

ANNEX E (to the H&S Specification)

E GUIDELINES FOR THE PREPARATION OF A TYPICAL H&S PLAN

The following information is purely a guideline and is presented in order to give an indication as to what could be included in an H&S plan for a typical project. This information does not form part of the H&S specification for this particular project as it is just a basic outline and it must be adapted and expanded to suit the actual structure of the contractor's organisation and also the specific nature of the project.

E.1 INTRODUCTION

Give any background information believed to be relevant to H&S on the project.

Give a brief description of the contents of the H&S plan.

E.2 SAFETY OBJECTIVES FOR THE PROJECT

List all goals in terms of safety that should be achieved on this project. Examples could be:

- Training of employees in respect of safety and creation of accountability.
- Creation of a working environment with high safety awareness.
- Avoidance of all accidents.
- Compliance with all legal requirements.

E.3 ADMINISTRATION

Some examples of the administration tasks to be performed in terms of the H&S plan could be:

- Notification of the Department of Labour of work to be done once the letter of acceptance has been received and before commencement of construction.
- Assignment of H&S responsibilities by the CEOs.
- Appointment of the construction supervisor for the project.
- Appointment of a safety officer(s) and safety committee(s).
- Compilation of a list of all emergency telephone numbers.
- Keeping of records of site safety statistics.
- Maintenance of an up-to-date project H&S file in which all H&S records are kept.
- Carrying out of monthly safety audits.
- Compilation of the Project H&S File and what will be in it and when and why it will be updated.

E.4 RISK ASSESSMENTS

List the various types of work activities to be carried out and set up risk assessment forms for each of these. The outcome from the risk assessment forms must be a set of safe working procedures to ensure safety and protection of health from the hazards identified. This planned set of safe working procedures will then form the basis of staff and visitors' H&S training.

Some standard risk assessment forms and safe work procedures for various construction activities have been developed by SAFCEC and SAFCEC members have access to them from their web site. Additional forms will need to be drawn up for activities not covered by the standard forms.

Details of these risk assessments and all safe work procedures must be attached as Appendices to the H&S plan, however a list of all risk assessments must be given in this section of the H&S plan.

E.5 TRAINING

Induction Training (General and job-specific)

- All employees who will work on the site, including sub-contractors' employees, and all visitors to site must undergo H&S induction training and must sign for it and must carry proof that they have received this training.
- Details of job-specific induction training to be carried out.
- Detail aspects in the plan in terms of general, as well as for job-specific training that will be given and how the training will be done.
- On-going Training
- Give details of any additional training (if any) that will be given to employees.

Some guidelines for "toolbox talks" covering various construction activities have been developed by SAFCEC and SAFCEC members have access to them from their web site. Additional procedures will need to be drawn up for activities not covered by the guidelines.

E.6 HOUSEKEEPING ON SITE

State what steps will be taken to minimise H&S risks on site through good house keeping practice, such as:

- Lighting.
- Ventilation.
- Stacking and storage practices.
- Management of waste products and the removal thereof.
- General tidiness of site.

E.7 PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING

State what will be issued to, and worn by site staff, for example:

- Hard hats
- Steel toe safety shoes
- Overalls
- Gloves
- Eye protection
- Reflective jackets

E.8 FIRST AID

State that a first aid box/es will be adequately stocked in terms of the OHSA requirements. State that an adequately trained (in first aid skills) member of staff in terms will be on site at all times. Describe details of first aid training that will be given (if any).

E.9 SAFETY AUDITS/ EVALUATIONS

State how monthly safety audits / evaluations will be done and by whom.

State that the H&S plan will be a "living" document in that it will be improved and updated as when changes occur and as the project progresses.

E.10 SAFE WORK PROCEDURES

List all safe work procedures and attach copies of them as Appendices.

E.11 PROJECT H&S FILE

Provide a list of contents.

ANNEXURE 3

Table 1

No	Station Name	Station No.	Location	No	Station Name	Station No.	Location
1	Amandasig	049	Between R80 and Heninrich	15	Van Der Hoff	050	Between D.F Malan and Benade
2	R 566	085	Between Onderstepoort(M35) and Klerksoord	16	Bremer	058	North of the Tunnel
3	Rosslyn		Between Doreen and Hardie Muller	17	Mansfield	079	Between van Rensburg and D.F Malan
4	Doreen		Between R566 and Van Niekerk	18	Voortrekker	002	Prinshof - Permanent Station
5	Rachel De Beer	027	Between M1 and Koos de la Rey	19	Soutpansberg	001	
6	Bon Accord	046	Between Lintvelt and Bon Accord	20	Gordon	062	Between Weaving and Woodlands
7	Lavender (east)	036	Between Braam Pretorius and Zambesi	21	C.R Swarts	047	Between Hardie Muller Circle & Lawrence
8	Leavender (west)	066	Between Braam Pretorius and Zambesi	22	Micheal Brink	043	Between Bloubokkie and Blesbok
9	Lavender (wonderboom)	084	Between Voortrekker and Paul Kruger	23	Folwer	021	Between 3 rd Street and Span Street
10	Braam Pretorius	041	Between Lavender and Elizabeth Street	24	Trouw	022	
11	Zambesi (west)	082	Between Lavender and Elizabeth Street	25	Baviaansport	053	Between Moloto and Sandspruit

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Part C3: Scope of Works

12	Zambesi (east)	032	Between Breed and Calliandra Street	26	Stormvoel	035	Between Baviaanspoort and Bluegum
13	DF Malan (PPC)	131	Between PPC access and Moot Street	27	Lynette	065	Between Anna Wilson and N1
14	DF Malan (North)	071	Between Fred Nicholous and Minaber Street	28	Pretoria road	060	Between Cussonia and Cresswell
29	Dykor		Between Pretoria Rd. and Moreleta Road	44	Union Building	051	Between Fountains Circle and R21
30	Cussonia	074	Between Meiring Naude and Maiana	45	Charles	028	Between Rupert and Pienaar Temporal
31	Waltloo	025	Between Kuit and Alwyn	46	Ashlea Gardens	048	Between N1 and Matroosberg
32	Watermeyer		Between Stamvrug and Nina Street	47	Lunwood (Ox)	038	Between Kings Highway and Ox
33	Kwaggasrand	080	Between Rod and Valk	48	Schoeman	114	Between Orient and Hill
34	Mitchell	023	Between Buitekant Street & Court Street	49	Pretorius	115	Between Orient and Hill
35	Soutter		Between Buitekant Street & Court Street	50	Hans Strijdom	026	Between Koeoesnek and Danie Joubert N1
36	Transoranje		Between and Morkel Street and N4 East	51	Attebury W/E	033	Between Maenlyn Access and N1
37	Quagga	045	Between Rod and Maunde	52	Attebury E/W	034	Between Maenlyn Access and N1
38	Laudium	083	Between R55 and Jewel Street	53	Attebury (faerie Glen)		Between Hans Strijdom & Cliffendale
39	Eeufees	055	Between N14 and Voortrekker Monument	54	Atterbury (Pretorius Park)		Between Eros & Olympus Street

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Part C3: Scope of Works

40	Christina De Wit	069	Between Kloofsig and Fountain Entrance	55	General Botha	052	Between Atterbury and Seren
41	Paul Kruger	040	Between Boom Street and Malherbe	56	Garsfontein	039	Between Issie Smuts and Windsor
42	Church (Showgrounds)	044	Between D.F Malan and Retief	57	Wapadrant	024	Between Cura Ave & Meadow
43	Salvokop	070	Between Jan Smuts & Klawer	58	Wierda Park		Between Gerhard and Lenchen
59	Nelson Mandela	029	Between Fountains Circle and Harmony Street	73	Jean Lane North (M34)	004	Between Gerhard and Lenchen
60	Fountains	072	Between Fountains Entrance and Fountains Circle	74	Nellmapius 1		Between John Vorster and Luton Street
61	George Storra	056	Between Fountains Circle and Totius	75	Pirre Van Ryneveld		Between Nellmapius(M35) & Typhoon Street
62	Boeing	054	Between Hanstrijdom & Alandale Ebenhaezer	76	John Vorster Extension		Between Hendrik Verwoerd and Heuwel (Zwartkop)
63	Rubenstein	068	Between Kariogs and Rutgers	77	Uitsig	125	Between Rooihuiskral and Kestrel
64	Rigel	037	Between Nossob and N1	78	Rietspruit	121	Between Yen and Rooihuiskraal
65	Meiring Naude	075	Between Cussonia and CSIR entrance	79	Nellmapius 2	119	Between Old JHB Rd and Olievenhoutbosch
66	Vom Hagen	090		80	Main	118	Between Nellmapius and Irene Country Club
67	John Vorster North	067	Between N1 North and Akkerboom	81	Goedehoop	117	Between Nellmapius and 10th street

Contract: RTD 07 2025/26: Tender for the installation, maintenance of inductive loops for automatic traffic monitoring sites and upgrading of traffic monitoring equipment and software within the City of Tshwane, on basis of as and when required for a period of three years (36 months)

Part C3: Scope of Works

68	Ruimte	073	Between Piet Hugo and Willem Botha	82	Staatsartillerie		
69	Hendrik Verwoed North	076	Between West Street and Embankment	83	Justice Mahomed		
70	Hendrik Verwoed (Hippo)	077	Between John Vorster and Hippo	84	Rissik		
71	John Vorster South	078	Between Logan and Marco Polo	85	R21 Nelson Mandela	116	Between Fountains circle and R21
72	Jean Lane South	081	Between Lenchen Avenue and South Street				

ANNEXURE 4 – SAMPLE LOOP LAYOUTS

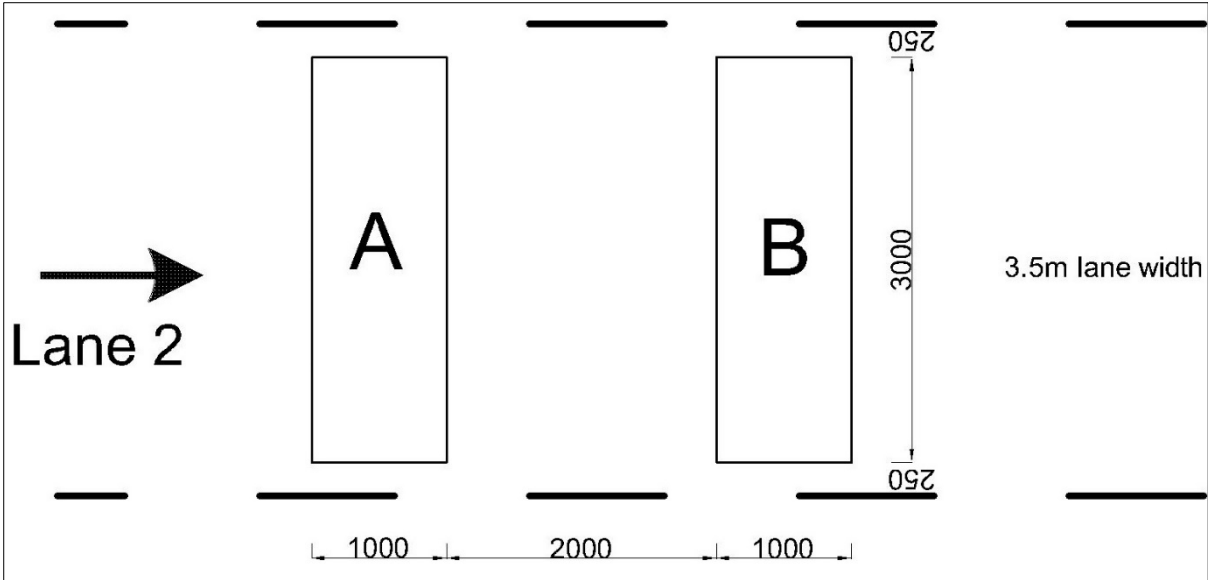


Figure 1 - Typical loop dimension for one lane

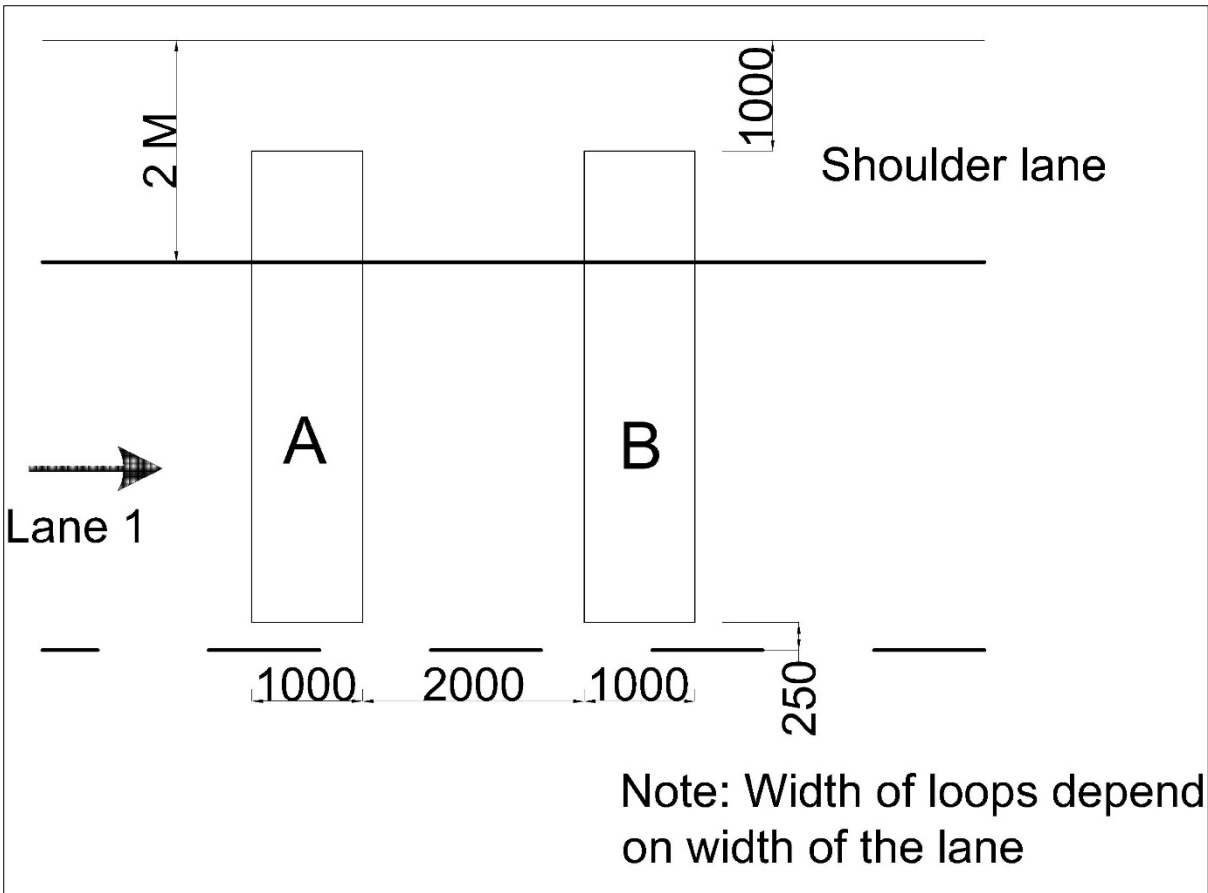
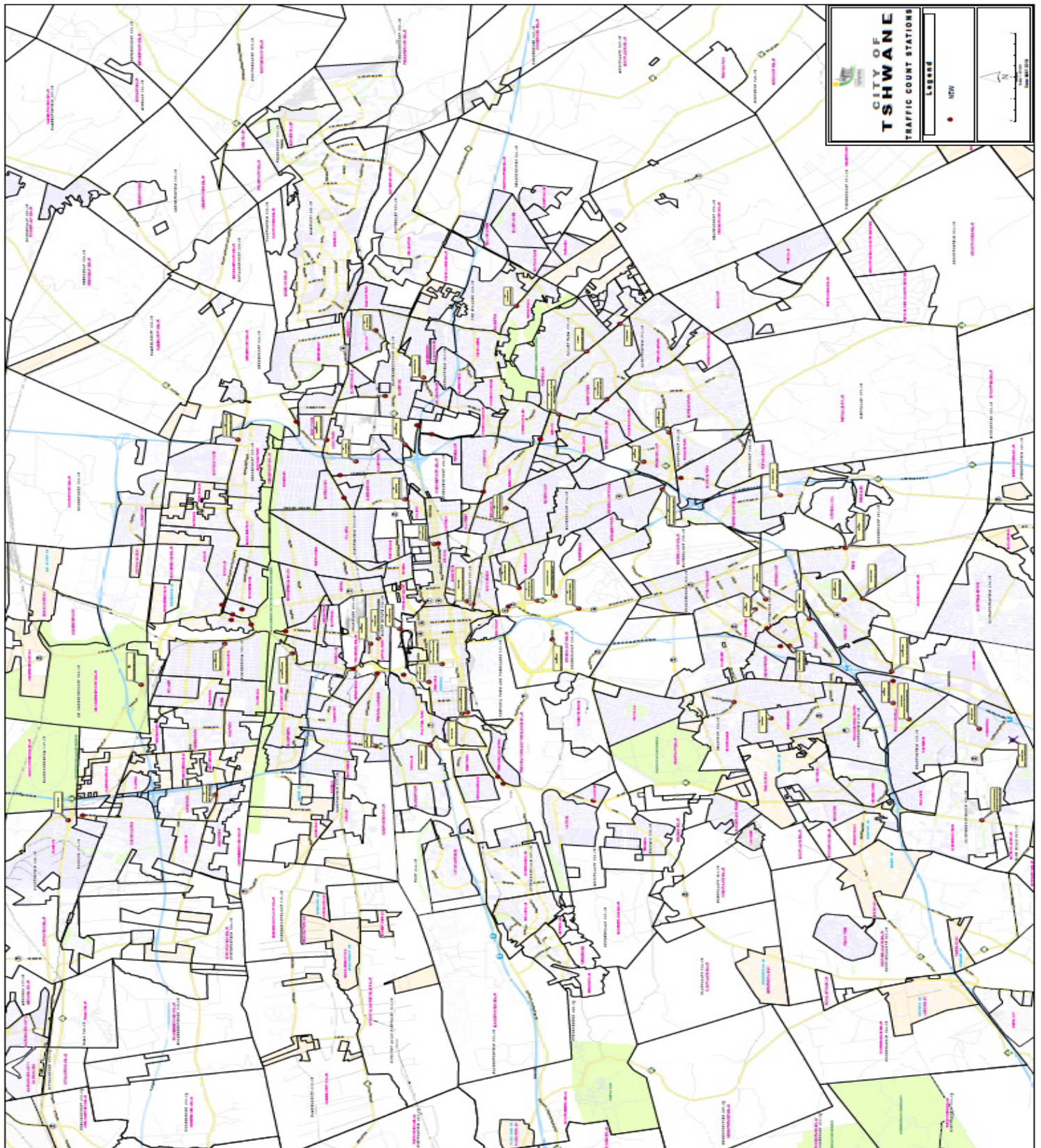


Figure 2: Typical loop dimensions for one lane with a shoulder lane

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Part C3: Scope of Works

ANNEXURE 5 – LOCATIONS OF EXISTING AUTOMATIC TRAFFIC MONITORING SITES



PART C4: SITE INFORMATION

C4.1 LOCALITY PLAN

The locality plan shows the extended area within which the project is situated. The exact locations and the traffic monitoring sites are shown in Table 1 of this section.



Part C4: Site Information

Table 1

No	Station Name	Station No.	Location	No	Station Name	Station No.	Location
1	Amandasig	049	Between R80 and Heninrich	15	Van Der Hoff	050	Between D.F Malan and Benade
2	R 566	085	Between Onderstepoort (M35) and Klerksoord	16	Bremer	058	North of the Tunnel
3	Rosslyn		Between Doreen and Hardie Muller	17	Mansfield	079	Between van Rensburg and D.F Malan
4	Doreen		Between R566 and Van Niekerk	18	Voortrekker	002	Prinshof - Permanent Station
5	Rachel De Beer	027	Between M1 and Koos de la Rey	19	Soutpansberg	001	
6	Bon Accord	046	Between Lintvelt and Bon Accord	20	Gordon	062	Between Weaving and Woodlands
7	Lavender (east)	036	Between Braam Pretorius and Zambesi	21	C.R Swarts	047	Between Hardie Muller Circle & Lawrence
8	Leavender (west)	066	Between Braam Pretorius and Zambesi	22	Micheal Brink	043	Between Bloubokkie and Blesbok
9	Lavender (wonderboom)	084	Between Voortrekker and Paul Kruger	23	Folwer	021	Between 3 rd Street and Span Street
10	Braam Pretorius	041	Between Lavender and Elizabeth Street	24	Trouw	022	
11	Zambesi (west)	082	Between Lavender and Elizabeth Street	25	Baviaansport	053	Between Moloto and Sandspruit
12	Zambesi (east)	032	Between Breed and Calliandra Street	26	Stormvoel	035	Between Baviaanspoort and Bluegum
13	DF Malan (PPC)	131	Between PPC access and Moot Street	27	Lynette	065	Between Anna Wilson and N1
14	DF Malan (North)	071	Between Fred Nicholous and Minaber Street	28	Pretoria road	060	Between Cussonia and Cresswell
29	Dykor		Between Pretoria Rd. and Moreleta Road	44	Union Building	051	Between Fountains Circle and R21

Part C4: Site Information

No	Station Name	Station No.	Location	No	Station Name	Station No.	Location
30	Cussonia	074	Between Meiring Naude and Maiana	45	Charles	028	Between Rupert and Pienaar Temporal
31	Waltloo	025	Between Kuit and Alwyn	46	Ashlea Gardens	048	Between N1 and Matroosberg
32	Watermeyer		Between Stamvrug and Nina Street	47	Lunwood (Ox)	038	Between Kings Highway and Ox
33	Kwaggasrand	080	Between Rod and Valk	48	Schoeman	114	Between Orient and Hill
34	Mitchell	023	Between Buitekant Street & Court Street	49	Pretorius	115	Between Orient and Hill
35	Soutter		Between Buitekant Street & Court Street	50	Hans Strijdom	026	Between Koeoesnek and Danie Joubert N1
36	Transoranje		Between Morkel Street and N4 East	51	Attebury W/E	033	Between Maenlyn Access and N1
37	Quagga	045	Between Rod and Maunde	52	Attebury E/W	034	Between Maenlyn Access and N1
38	Laudium	083	Between R55 and Jewel Street	53	Attebury (faerie Glen)		Between Hans Strijdom & Cliffendale
39	Eeufees	055	Between N14 and Voortrekker Monument	54	Atterbury (Pretorius Park)		Between Eros & Olympus Street
40	Christina De Wit	069	Between Kloofsig and Fountain Entrance	55	General Luis Botha	052	Between Atterbury and Seren
41	Paul Kruger	040	Between Boom Street and Malherbe	56	Garsfontein	039	Between Issie Smuts and Windsor
42	Church (Show grounds)	044	Between D.F. Malan and Retief	57	Wapadrant	024	Between Cura Ave & Meadow
43	Salvokop	070	Between Jan Smuts & Klawer	58	Wierda Park		Between Gerhard and Lenchen
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Part C4: Site Information

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71	John Vorster South	078	Between Logan and Marco Polo	85	R21 Nelson Mandela	116	Between Fountains circle and R21
72	Jean Lane South	081	Between Lenchen Avenue and South Street				

Other new locations will be determined by the client and such new locations will be communicated to the contractor before the commencement of the works.