BID NO: 42/2018

APPOINTMENT OF PROFESSIONAL SERVICE PROVIDER FOR AN AIRBORNE SURVEY TO ACQUIRE ACCURATE AERIAL PHOTOGRAPHY DATA, DIGITAL TERRAIN MODELLING DATA, ORTHO-PHOTOS AND LiDAR AERIAL SURVEY FOR THE CITY OF MBOMBELA

CLOSING DATE: 29 JUNE 2018 @11h00

NAME OF BIDDER: ____________________

BID PRICE: ________________________
# INDEX

<table>
<thead>
<tr>
<th>INDEX</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. General Conditions</td>
<td></td>
</tr>
<tr>
<td>1.1 Invitation to Bid</td>
<td>3 - 4</td>
</tr>
<tr>
<td>1.2 Notice to bidders</td>
<td>5</td>
</tr>
<tr>
<td>2. Special Conditions of the Bid</td>
<td>6 - 8</td>
</tr>
<tr>
<td>3. Terms of Reference (ToR) and project specifications</td>
<td>9 – 30</td>
</tr>
<tr>
<td>4. Specifications and Pricing Schedule</td>
<td>31</td>
</tr>
<tr>
<td>5. Pricing Schedule – Firm Prices</td>
<td>32</td>
</tr>
<tr>
<td>6. Declaration of interest</td>
<td>33-35</td>
</tr>
<tr>
<td>7. Preference Points Claim form in terms of the Preference Procurement Regulation Procurement Regulations 2017 (Purchases)</td>
<td>36-40</td>
</tr>
<tr>
<td>8. Declaration certificate for Local Production and Content</td>
<td>41-44</td>
</tr>
<tr>
<td>11. Certificate of independent bid determination</td>
<td>49-51</td>
</tr>
<tr>
<td>12. Authority to sign a bid</td>
<td>52-53</td>
</tr>
<tr>
<td>13. Certificate of authority for joint ventures</td>
<td>54</td>
</tr>
<tr>
<td>14. PPPFA: Preferential Point System</td>
<td>55</td>
</tr>
</tbody>
</table>

**ANNEXURE A**
Tax clearance certificate application form

**ANNEXURE B**
General conditions of contract
1. GENERAL CONDITIONS

1.1 INVITATION TO BID

QUALIFIED AND EXPERIENCE SERVICE PROVIDERS ARE HEREBY INVITED TO BID FOR SPECIALISED PROFESSIONAL SERVICES FOR THE CITY OF MBOMBELA

BID NUMBER: 42/2018  CLOSING DATE: 29 JUNE 2018  CLOSING TIME: 11:00

DESCRIPTION: APPOINTMENT OF PROFESSIONAL SERVICE PROVIDER FOR AN AIRBORNE SURVEY TO ACQUIRE ACCURATE AERIAL PHOTOGRAPHY DATA, DIGITAL TERRAIN MODELLING DATA, ORTHO-PHOTOS AND LiDAR AERIAL SURVEY FOR THE CITY OF MBOMBELA

The successful bidder will be required to fill in and sign a written Contract Form (MBD 7)

BID DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT

1 Nel Street
Main Entrance
Mbombela
1200

Bidders should ensure that bids are delivered timeously to the correct address. If the bid is late, it will not be accepted for consideration.

The bid box is generally open 24 hours a day, 7 days a week.

ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS – (NOT TO BE RE-TYPED)

THIS BID IS SUBJECT TO THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT

THIS BID WILL BE EVALUATED AND ADJUDICATED ACCORDING TO THE FOLLOWING CRITERIA:

1. Relevant specifications
2. Value for money
3. Capability to execute the contract
4. Compulsory certificates as specified in Terms of Reference
5. Professional body registration of key personal
6. Registration with South African Geomatics Council of key personal
7. Professional Indemnity insurance policy for the respondent not less than R 1 000 000.00 from a recognised institution
8. Terms of Reference and Project specifications
9. Equipment with certifications
10. Special Conditions of the BID

NB: NO BID WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE (see definition on MBD 4 attached)
THE FOLLOWING PARTICULARS MUST BE FURNISHED
(FAILURE TO DO SO MAY RESULT IN YOUR BID BEING DISQUALIFIED)

<table>
<thead>
<tr>
<th>Particular</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of Bidder</td>
<td>………………………………………………………………………………………..</td>
</tr>
<tr>
<td>Postal Address</td>
<td>………………………………………………………………………………………..</td>
</tr>
<tr>
<td>Street Address</td>
<td>………………………………………………………………………………………..</td>
</tr>
<tr>
<td>Telephone Number</td>
<td>………………………………………………………………………………………..</td>
</tr>
<tr>
<td>Cellphone Number</td>
<td>………………………………………………………………………………………..</td>
</tr>
<tr>
<td>Facsimile Number</td>
<td>………………………………………………………………………………………..</td>
</tr>
<tr>
<td>VAT Registration Number</td>
<td>………………………………………………………………………………………..</td>
</tr>
<tr>
<td>Has a Tax Clearance Certificate Been Submitted?</td>
<td>YES/NO</td>
</tr>
<tr>
<td>Are you the Accredited Representative in South Africa for the Goods/Services Offered by You?</td>
<td>YES/NO (IF YES ENCLOSE PROOF)</td>
</tr>
<tr>
<td>Signature of Bidder</td>
<td>………………………………………………………………………………………..</td>
</tr>
<tr>
<td>Date</td>
<td>………………………………………………………………………………………..</td>
</tr>
<tr>
<td>Capacity Under Which This Bid is Signed</td>
<td>………………………………………………………………………………………..</td>
</tr>
<tr>
<td>Total Bid Price</td>
<td>………………………………………………………………………………………..</td>
</tr>
<tr>
<td>Total Number of Item Offered</td>
<td>………………………………………………………………………………………..</td>
</tr>
</tbody>
</table>

ANY ENQUIRIES REGARDING THE BIDDING PROCEDURE MAY BE DIRECTED TO:

- **Municipality:** City of Mbombela
- **Department:** Supply Chain Management Division
- **Contact Person:** Nomsa Ndukuya
- **Tel:** 013 759-9052

ANY ENQUIRIES REGARDING TECHNICAL INFORMATION MAY BE DIRECTED TO:

- **Contact Person:** Corne Mc Gee
- **Tel:** 013 759 2182
- **Email:** corne.mcgee@mbombela.gov.za
BID NO: 42/2018

CLOSING DATE: 29 JUNE 2018

APPOINTMENT OF PROFESSIONAL SERVICE PROVIDER FOR AN AIRBORNE SURVEY TO ACQUIRE ACCURATE AERIAL PHOTOGRAPHY DATA, DIGITAL TERRAIN MODELLING DATA, ORTHO-PHOTOS AND LIDAR AERIAL SURVEY FOR THE CITY OF MBOMBELA

Bids are hereby invited from qualified and experienced service providers to supply specialised professional services for digital aerial photography and Lidar survey for the city of Mbombela.

It is compulsory that service providers download a copy of the bid document that will be available as from 15 June 2018 from the municipal website: www.mbombela.gov.za on the tenders and notices folder and e-Tender website: www.etenders.gov.za free of charge.

Completed bid documents and supporting documents which include, CSD summary report, B-BBEE Certificate and Tax clearance certificate (SARS Pin and Reference Number), together with the bid document must be sealed in an envelope clearly marked: “BID NO.: 42/2018, “APPOINTMENT OF PROFESSIONAL SERVICE PROVIDER FOR AN AIRBORNE SURVEY TO ACQUIRE ACCURATE AERIAL PHOTOGRAPHY DATA, DIGITAL TERRAIN MODELLING DATA, ORTHO-PHOTOS AND LIDAR AERIAL SURVEY FOR THE CITY OF MBOMBELA, CLOSING DATE: 29 JUNE 2018” with the name of the bidder shall be placed in the bid box at Mbombela Civic Centre at 1 Nel Street, Mbombela, before 11:00 on the closing date 00 Month 2018.

Bids received by telegram, fax or e-mail will not be considered. Late bids shall not be accepted or considered.

No briefing session shall be conducted for this tender. Technical enquiries may be directed to the project manager on the below contact details.

A preferential point system shall apply whereby this contract will be allocated to a bidder in accordance with the Preferential Procurement Policy Framework Act, No. 5 of 2000 and as defined in the conditions of bid in the bid document, read in conjunction with the Preferential Procurement Regulations, 2017, where 80 points will be allocated in respect of price and 20 points in respect of B-BBEE status level of contribution.

Procurement Enquiries : Nomssa Ndukuya (013) 759 9052
Technical Enquiries : C Mc Gee (013) 759 2182
Employer : Acting Municipal Manager, Mr N. Diamond
City of Mbombela
P. O. Box 45,
Mbombela, 1200

VISIT OUR WEBSITE – www.mbombela.gov.za

NB: the results of this bid will be published on council’s website as prescribed on section 75(1)(g) of the MFMA and section 23(c) of the SCM Regulations.
2. SPECIAL CONDITIONS OF THE BID

2.1 SUBMISSION OF TENDERS

The tender is to be made out on the tender form attached hereto, which must not be detached from this document, and the completed document, fully priced, extended and totalled, completed in all respects, signed and is to be sealed in an envelope which is to be enclosed and delivered in accordance with the instructions contained in the Letter of Invitation to Tender.

Proof of posting of a tender will not be accepted as proof of delivery to the appropriate place for the receipt of tender.

Tenders will be opened in public immediately after the advertised closing date and time.

2.2 TENDER DEPOSIT

Tender documents can be downloaded free of charge from the municipal website: www.mbombela.gov.za and e-Tender website: www.etenders.gov.za

2.3 ADJUDICATION OF TENDER

City of Mbombela will not be bound to accept the lowest or any tender and also reserves the right to cancel the tender when deemed necessary.

The tender will be adjudicated by the City of Mbombela in terms of the Preferential Procurement Policy Framework Act, no. 5 of 2000 and as defined in the conditions of bid in the bid document, read in conjunction with the preferential procurement regulations, 2017, where 80 points will be allocated in respect of price and 20 points in respect of B-BBEE status level of contribution.

2.4 COMPLETION OF TENDER DOCUMENTS

Tenders will only be considered on receipt of this tender document correctly completed with all insertions in black ink and signed.

The following compulsory documentation must be attached in order for the bid to be considered for further evaluation:

- Copy of a valid tax clearance certificate
- Copy of a valid Tax Compliance Status (TCS) SARS PIN
- CSD Summary Report
- Original or certified copy of B-BBEE Certificate (points claim)
- Proof of company registration
- Certified copy of ID of all company directors
- Professional Indemnity insurance policy for the respondent not less than R 1 000 000.00 from a recognised institution
- Certificate of Registration with South African Geomatics Council (Old PLATO) for key personal
- Curriculum Vitae (CVs) of their key personnel and sub-Contractors to be involved in the Work, including where applicable detail of relevant professional registrations
- Details and specifications of the equipment to be used in the Work including where applicable calibration certificates (Note: Check expiry dates and the certificates must be from a reputable calibration organisation not older than one year)
- Provide a summary of at least five (5) similar assignments successfully completed in the last five (5) years. Bidders may also include sheets for current assignments that are at least fifty percent (50%) complete. References from all the Employers/Clients shall be provided for each of the projects submitted.
- Availability of the necessary Management, Equipment, Personnel and Financial resources to ensure completion of all Works within the allocated deadline
- Valid Air operating certificate and License, approved for a fixed wing aircraft, certified and approved under the SACAA (South African Civil Aviation Authority) regulations Part 135 for Aerial Survey Operations
- Valid Commercial Pilot license
- Description of approach and Methodology
- The bidder company must provide a Sample of a full frame Image (gsd of 0.1) with all metadata, IMU and GPS information. (Can be stored on a DVD)

2.5 TAXES AND DUTIES PAYABLE

Bidders shall allow in their tender for the payment and recovery of all taxes and other duties. No claims for additional payment in this respect will be considered. Prices and rates quoted shall be inclusive of Value Added Tax (VAT). VAT shall be recorded as a lump sum in the tender summary and the total inclusive of VAT carried to the Form of Tender.

2.6 WITHDRAWAL OF TENDER

In the event of the successful tender failing to execute the service in terms of this tender, the Municipality shall be entitled to cancel the contract summarily, in which event the Bidder shall be liable for any additional expense incurred by reason of the Municipality having to call for fresh tenders or having to accept any less favourable tender.

2.7 PERIOD OF VALIDITY OF TENDERS

The period of validity of tenders shall be 90 days as stated in the tender form and be calculated from the closing date for submission of tenders.

2.8 NOTICE OF BIDDERS

Should any additions or amendments to the document as issued to Bidders be deemed necessary prior to the date for submission of tenders, they will be issued to all interested Bidders in the form of Notices and will form part of the tender document.

The Notices to Bidders shall be completed where applicable by Bidders, signed, dated and returned with the tender documents.

2.9 PRICE

Bid prices will be regarded fixed and no additional cost will be added. Bid prices must be stated in South African currency. Bid prices must include disbursements and Vat. (if applicable)

2.10 DELIVERABLES & PENALTIES

Refer to the Terms of reference and project specification paragraph 3.

The Ortho-photos, LAS dataset and the DTM shall provide full coverage of the demarcated area, ±520019 Ha in the City of Mbombela. Should there be a need for additional area to be covered

The Ortho-photos, LAS dataset and the DTM shall be tiled and each file labelled according to the City of Mbombela grid layout.

Note: for detailed specifics on deliverables see paragraph 3.12 Submission to the City of Mbombela, of the Terms of reference and Project Specifications.
DESCRIPTION OF APPROACH AND METHODOLOGY

Provide a description of the approach, methodology, and work plan for performing the assignment. Explain your understanding of the objectives of the assignment as outlined in the Terms of Reference (TORs) and project specification, the technical approach, and the methodology to be adopted for implementing the tasks to deliver the expected output(s), and the degree of detail of such output with specific reference to the project area.

Please do not repeat/copy the TORs.

This description should include notes on the methods, procedures, and computer hardware and specialty software to be used for technical calculations.

Limit this section to ten (10) pages.

Penalty for misleading council with wrong information provided in the returnable schedules, and information provided in this Tender.

A penalty not less than an amount equal to the points allocated expressed as a percentage of the total points wrongly allocated to the Tendering Entity as a result of the wrong information provided by the Tendering Entity, multiplied by 1.25 of the total Tendered professional fees.

Penalty = (Points wrongly claimed as %) x 1.25 x (Tendered Professional Fees)

The Service Provision shall be completed within the Duration as indicated in the Tenderer’s programme submitted with this Tender, with the penalty of R10 000 of the cost per day delivered after the 1st day of the Final delivery date.

3. TERMS OF REFERENCE (TOR) AND PROJECT SPECIFICATIONS

3.1 DESCRIPTION

3.1.1 The purpose of these terms is to obtain accurate aerial survey information in the form of Aerial Photography data, Digital Terrain Modelling data, Ortho-photos and LiDAR Aerial Survey for the City of Mbombela.

3.2 OVERVIEW

3.2.1 The amalgamation of the Umjindi and Mbombela Local Municipalities has been finalized and is known as the City of Mbombela. City of Mbombela requires a high quality, accurate and up-to-date Airborne Digital Aerial Photography and Light Detection and Ranging (LiDAR) survey, covering the demarcated area in the City of Mbombela ± 536327 Ha.

3.2.2 City of Mbombela has older aerial survey information retrieved on different standards and qualities. Therefore, a standardized quality and accurate up-to-date Airborne Digital Aerial Photography and LiDAR survey is needed for planning, development and decision making.

3.3 PROGRAMME

3.3.1 Due to dense vegetation in the project area the Service Provider shall schedule the Aerial Survey Operation to be during the late winter months preferably end July – September 2018.
3.3.2 The Service Provider shall arrange his programme in such that it enables delivery of the resulting Airborne Digital aerial survey data/information by 30 November 2018. The Digital Aerial Photography and LiDAR survey will be done simultaneously.

3.3.3 The Service Provider shall submit with his tender a draft description of approach and methodology specified in the Tender Application in paragraph 3.4.2.3.

3.3.4 The demarcated area for this project in the City of Mbombela is outlined on the accompanying kmz file.

3.4 TENDER APPLICATION

3.4.1 The City of Mbombela is desirous of obtaining the services of a Professional Registered Service Provider with extensive experience in Airborne Digital Photography and LiDAR Surveys.

3.4.2 A Service Provider who will be selected should demonstrate in his Tender that they have:

(a) Extensive experience in both Airborne Digital Photography and LiDAR Surveys

(a) The availability of the necessary Management, Equipment, Personnel and Financial resources to ensure completion of all Works within the allocated deadline.

To comply with the preferences stated above, the Tenderer must provide the following details of his organization to demonstrate effectively his capabilities and capacity in this regard:

3.4.2.1 Curriculum Vitae

CVs of their key personnel and sub-Contractors to be involved in the Work, including where applicable detail of relevant professional registrations;

3.4.2.2 Contact Details of current and previous clients;

3.4.2.3 Description of Approach and Methodology

3.4.2.3.1 Provide a description of the approach, methodology, and work plan for performing the assignment.

3.4.2.3.2 Explain your understanding of the objectives of the assignment as outlined in the Terms of Reference (TORs), the technical approach, and the methodology to be adopted for implementing the tasks to deliver the expected output(s), and the degree of detail of such output with specific reference to the project area.

3.4.2.3.3 Please do not repeat/copy the TORs.

3.4.2.3.4 This description should include notes on the methods, procedures, and computer hardware and specialty software to be used for technical calculations.

3.4.2.3.5 Limit this section to ten (10) pages.
3.5 STANDARDS AND REGISTRATION

3.5.1 The Service Provider shall carry out the Airborne Digital Aerial Photography and LiDAR Survey in a professional manner in keeping with internationally accepted standards, using qualified and appropriate staff, of whom must be registered with South African Geomatics Council (SAGC) as a Geomatics practitioner in the Professional Surveyor category in terms of the Geomatics Profession Act (19 of 2013). The said person/s shall assume Professional responsibility for all deliverables.

3.5.2 Any surveying must be done in accordance with the THM11 of 2013 survey specifications and the Geomatics Profession Act (19 of 2013).

3.5.3 The survey platform will be a fixed wing aircraft, certified and approved under the SACAA (South African Civil Aviation Authority) regulations Part 135 for Aerial Survey Operations. Valid Air operating certificate and License, approved for a fixed wing aircraft, certified and approved under the SACAA must be submitted.

3.5.4 The Service Provider shall be responsible for arranging Flight Clearance and Temporary Air Service Permit prior to Mobilisation.

3.6 OWNERSHIP

3.6.1 All data, documents and reports produced by the Service Provider under the contract shall become the property of City of Mbombela upon completion of the services. The Service Provider shall not have any copyrights.

3.6.2 All the original data and raw data from the Digital Aerial Photography and LiDAR Survey including all digital aerial photography, digital terrain models (DTMs), Contours, Survey Controls, etc. shall vest with the City of Mbombela.

3.7 LOCATION OF THE WORKS

3.7.1 The site location is in the Mpumalanga Province where the City of Mbombela is located in the Ehlanzeni District Municipality.

3.7.2 The demarcated area for this project in the City of Mbombela is outlined on the accompanying kmz file.
3.8 ACQUISITION OF AERIAL IMAGERY

3.8.1 Sensor System Requirements

(a) Acquisition of the digital aerial imagery shall be from airborne platforms capable of meeting the minimum specified criteria. No Unmanned Aerial Vehicles (UAV) survey platform will be considered for this project.

(b) Only digital sensor systems which meet the requirements of these specifications, and as determined by appropriate sensor system documentation, certification and sample imagery submitted shall be used to acquire the digital aerial imagery. Where necessary, evidence must be supplied by the manufacturer.

3.8.1.1 Digital Sensor System Frame

The primary sensor must be constructed from a single robust frame to ensure geometrical integrity against pressure, temperature and operational vibration and turbidity over time.

3.8.1.2 Sensor Lens Protection

The digital sensor lenses must be protected for take-off and Landing of the aircraft.
3.8.3 Digital Sensor Shutter

(a) The sensor shutter shall ensure that light is transmitted simultaneously to all parts of the format when it is opened.

(b) The sensor shutter shall be of such a design that the operation of the shutter does not create disturbing vibrations.

3.8.4 Lens Distortion

The radial distortion and the asymmetry of the radial distortion shall be minimal and lens calibration results not older than one year shall be submitted.

3.8.5 Footprint Coverage

The digital sensor system shall be a full frame medium format metric system that provides imagery at a spatial resolution and flying height suitable for the City of Mbombela purposes.

3.8.6 Capture of Multi-Spectral Imagery

(a) The digital sensor system shall be able to simultaneously capture three spectral bands, namely red, green, blue, (RGB).

(b) There shall be minimal spectral overlap of the spectral bands.

3.8.7 Integration with GNSS/INS Systems

(a) The digital sensor system shall operate and be supplied with an integrated Dual frequency Global Navigation Satellite System (GNSS) and class A Inertial Navigation System (INS), which shall enable the gathering of a priori information about the exterior position and orientation of the imagery to assist with the aerial triangulation process and minimise ground control requirements following photogrammetric principals and guidelines.

(b) The GNSS antenna shall be approved by the International GNSS Service (IGS) and be suitable for geodetic quality carrier-phase multi-channel reception for at least GPS and GLONASS and installed in accordance with the Civil Aviation Authority (CAA) airframe modification requirements. Antenna should be located as close as possible to the digital imaging sensor, and also in a location to provide optimal GNSS signal quality and continuous reception in an appropriate, unobstructed location on the aircraft.

(c) The electrical phase centre of the GNSS antenna and the INS system shall be coordinated, surveyed by a Geomatics practitioner, registered with the South African Geomatics Council (SAGC) and bore-site calibrated to the image centre of the sensor to ensure a full lever arm implementation of all aerial survey calculations.
3.8.1.8 **Inertial Measurement Unit (IMU)**

The IMU shall be attached closely and rigidly to the imaging focal plane and the gyro-stabilised mount (if available) shall receive its orientation information from this same built-in IMU. The system shall relieve the operator from drift setting. Drift reference for the sensor mount shall be provided by the orientation system.

3.8.1.9 **Radiometric Resolution of the Imagery**

The digital sensor system shall have the ability to capture imagery with a minimum 8 bit radiometric resolution for each spectral band (Panchromatic, RGB and Near Infrared).

3.8.1.10 **Radiometric Accuracy**

The individual digital images captured shall have a radiometric quality of a minimum of 8 bit unprocessed images that further enables the creation of processed RGB digital ortho-imagery.

3.8.1.11 **Radiometric Consistency**

(a) The individual digital images captured shall be processed per project area where radiometric consistency, across the project area, is required.

(b) Dodging of the imagery and colour balancing, shall be done only on specific written instruction by the City of Mbombela

(c) The radiometric accuracy shall be maintained over time to provide for a comparison of images from different epochs.

3.8.1.12 **Geometric Accuracy**

(a) The geometric accuracy of the calibrated apparent pixel co-ordinates shall be within 25% of the pixel size of the sensor, for each format of imagery and each lens system. True rectangularity of objects shall be maintained to within 25% of the pixel size of the sensor.

(b) The accuracy of the focal length of the digital sensor system shall be less than or equal to 1 micron.

(c) The maximum forward motion compensation permitted in the image plane shall not exceed 0.2% of the maximum number of pixel lines on the image, as calculated in the direction of flight.

3.8.1.13 **Calibration of Proposed Digital Sensor Systems**

(a) The digital sensor system shall be calibrated and tested in accordance with the manufacturers’ specifications and guidelines.

(b) Proof of such calibration shall be provided to the City of Mbombela prior to any work being undertaken.
(c) Digital sensor systems shall be evaluated to determine if they meet the bid specification, based on current technical descriptions and samples. The City of Mbombela shall, in their sole discretion, approve the use of a sensor or request to non-usage of any sensor when deficiencies in imagery attributable to the sensor are found to exist.

(d) It shall be certified that the camera lens cone and lens have not been disassembled nor adversely disturbed since calibration. Should any part of the camera that effects the calibration be disassembled or disturbed then a new calibration shall be made before further use.

3.8.2 Digital Imagery Acquisition

3.8.2.1 Coverage

(a) The entire area shall be stereoscopically covered within the usable portions of the images with a minimum of 60% forward overlap and 30% side overlap.

(b) In addition to (a), imagery coverage shall extend by at least 25% of the image size, across the direction of flight, over the edge of the area, parallel to the flight line.

3.8.2.2 Ground Sample Distance (GSD)

(a) The nominal GSD shall be 0.1m.

(b) The nominal GSD, shall not vary by more than 10% from that specified in 3.8.2.2 (a)

(c) The deviation from the limit specified in 3.8.2.2 (b) shall be permitted. In areas of extreme variation in terrain relief, provided that the lowest GSD shall not exceed 10%, as specified in 3.8.2.2 (a).

(d) All spectral bands shall be collected at the specified GSD.

3.8.2.3 Image Quality

(a) New imagery shall be quality-controlled to ensure acceptable image quality, correct colour representation, tonal values and definition of ground detail. Only imagery meeting the requirements of the quality check shall be accepted.

(b) In general, the imagery shall be a true reflection of the terrain at the time of exposure.

(c) All imagery shall be spectrally consistent across the whole project and be of a good quality.

(d) Small amounts of artefacts shall be acceptable if they are insignificant, i.e. they do not obscure objects or features. However, these should be only evident in localised areas. Any images with artefacts that obscure objects/features shall be rejected.

(e) The image shall be free from clouds and cloud shadows, fog, smog, fire, smoke, haze, light streaks, shadows, excessive snow and other blemishes.
(f) Contrast shall be consistent across the project area.

(g) There shall be no image smearing, blurring or ghosting even where this is localised.

(h) Colour bleeding shall not be detrimental to the image appearance.

(i) There shall be sufficient shadow and highlight detail to facilitate accurate image interpretation.

(j) There shall be no missing pixels in both the imagery and overviews.

(k) Poor image quality shall be sufficient grounds for rejection of imagery.

3.8.2.4 Flying Height

(a) Flying heights of the normal flight strips shall be determined, based on the ground height of the terrain.

(b) Flying heights of the cross-strips, including coastal, border, dam and other water body strips, shall be a mean of the heights of the normal flight strips, which they intersect.

(c) Flying height shall be maintained in accordance with the mission planning and the requirements stipulated in 3.8.2.4 (b).

(d) The departure from the predetermined flying height shall not exceed 5% of flying height above mean terrain, as specified in 3.8.2.4 (a)

(e) No deviation from the limit specified in 3.8.2.4 (d) shall be permitted without the prior written permission from the City of Mbombela.

3.8.2.5 Flight Lines

(a) Separate cross strips must be flown for each individual job.

(b) All strips shall be numbered in consecutive order, beginning at the northern boundary of the job. The numbering of the images shall begin with 0001 at the beginning of strip 1. The numbering shall commence at the northern edge of the job, with a consecutive numbering pattern to the southern edge of the job.

(c) Cross strips, including coastal, border, dam and other water body strips, shall be flown such that all the requirements of the applicable aerial triangulation adjustment software, with GNSS/IMU assisted air-stations, are satisfied.

(d) To facilitate aerial triangulation adjustment by avoiding tie points shadow, all cross strips in the mountainous areas, shall be flown at the similar time of a day as the normal strips, which they intersect.

(e) Care shall be exercised to ensure that flight lines are as straight and as parallel as possible.

(f) The maximum deviation of any strip, from the planned flight line, shall, not exceed 5% of the image size across flight direction.
(g) Each flight line shall be continuous and unbroken for its entire length over the area being imaged. No break in strip continuity shall be allowed.

(h) If images are rejected within a strip, or there is a break in the strip’s continuity, the entire strip shall be re-flown at a similar time of day to the adjoining strips. Care shall be exercised to ensure that the requirements of 3.8.2.5 (e) are satisfied.

(i) The first two and last two images of each strip shall be completely outside the area being imaged.

(j) Where the coastline, or a water body, forms a boundary for the area being imaged, additional strips shall be flown parallel to the coastline or water body such that the centre points fall well inland, and these strips shall be suitable for aerial triangulation and permit stereoscopic viewing.

(k) Images with more than 25% of their area covered by sea and large water bodies shall not be accepted.

(l) Where the border of the Republic of South Africa forms a boundary of the area being imaged, additional strips shall be flown.

(m) Imagery not adhering to the project specifications will need to be re-flown at no cost to the City of Mbombela.

(n) Imagery must be captured with a maximum 14 degree angle from the center of the lens projected to the ground to ensure full photogrammetric stereo viewing.

3.8.2.6 Sidelap

(a) Adjacent images of the east-west strips shall have an average sidelap of 30% of the image size across the flight direction and shall be within a range of 25% and 35%.

(b) Sidelap shall compensate for extreme terrain variations.

(c) Areas of extreme terrain relief where the specified sidelap cannot be maintained shall be covered by short auxiliary strips, flown between the main flight lines and parallel to them.

(d) In the instance of short auxiliary strips having been flown between the main strips, additional cross strips shall be flown, to satisfy the requirements of the bundle adjustment software.

3.8.2.7 Forward Overlap

(a) Forward overlap shall average 60% of the mean image size in the flight direction, and shall not be less than 55%.

(b) In addition to (a) forward overlap shall compensate for extreme terrain variations.

3.8.2.8 Crab

(a) While collecting digital aerial imagery, the camera shall be compensated for the crabbing of the aircraft, with a resultant error not exceeding ±5 degrees, as measured from the average line of flight, and the differential between any two successive exposures shall not exceed ±5 degrees.
3.8.2.9 Tilt

(a) Care shall be taken to keep the tilt of the camera to a minimum. Under no circumstances shall tilt exceed ±5 degrees for any image frame, as well as the relative difference in tilt between consecutive frames.

(b) The average tilt of images for the project area shall not exceed ±1 degrees.

3.8.2.10 Course Correction

(a) Corrections to the aircraft’s course between successive images shall not exceed 3 degrees.

3.8.2.11 Time of Day Considerations

(a) The solar altitude shall be at least 30 degrees

(b) For particular cases it may be necessary to place an upper limit on the solar altitude. Such requirements shall be specified by the City of Mbombela.

(c) The City of Mbombela shall accept imagery flown during the time intervals, before or after local noon, as indicated in Table below.

<table>
<thead>
<tr>
<th>HOURS BEFORE OR AFTER LOCAL NOON</th>
<th>Average Terrain</th>
<th>Very Mountainous Terrain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latitude South</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mid-Summer Jan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jan</td>
<td>4 ¼</td>
<td>2½</td>
</tr>
<tr>
<td>July</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mid-Summer Jan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jan</td>
<td>3½</td>
<td></td>
</tr>
<tr>
<td>July</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mid-Winter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>July</td>
<td>1¼</td>
<td></td>
</tr>
</tbody>
</table>

(d) Precautions shall be taken to minimise the effect of hot spots on the uniformity of the illumination.

3.8.2.12 GNSS and IMU Data Collection

(a) All imagery shall be flown with integrated GNSS and IMU. The ground and airborne GNSS data shall be collected, processed and submitted to the City of Mbombela, along with the IMU data files and final processed trajectory files.

(b) The GNSS receiver shall collect data for at least 30 minutes prior to capturing imagery to improve ambiguity resolution during GNSS post-processing.

(c) The GNSS PDOP and VDOP shall be <3 during acquisition of the imagery.

(d) The aircraft shall not bank excessively such that loss of lock on the GNSS signal required for continuous kinematic solution occurs at any stage during the image acquisition process. If loss of lock occurs during image acquisition, the current strip shall be aborted and sufficient GNSS data shall be acquired prior to further image acquisition to enable re-initialization of the baselines to the TrigNet base station network.

(e) Carrier-phase airborne multi-channel kinematic GNSS for at least GPS and GLONASS shall be acquired and used along with IMU measurements in processing trajectories. The proprietary/raw GNSS data shall be stored.
The IMU shall be capable of determining the absolute orientation (roll, pitch and yaw) and shall be proven to meet or exceed a post-processed accuracy in roll and pitch of 20° of arc and a post-processed accuracy in heading of 30° of arc.

Any failure of the IMU to accurately record orientation data shall be sufficient grounds for rejection of the affected strips.

3.8.3 Post-Acquisition Position and Orientation Processing and Accuracies

3.8.3.1 GNSS solution processing

(a) The positions of the GNSS air-stations shall be determined relative to the latest ITRF realisation of TrigNet and the South African Land Levelling datum for the horizontal and vertical components respectively.

(b) The GNSS antenna offset, in $dy$, $dx$ and $dHt$, relative to the camera principal point position, shall be applied entirely, on all three components, in the differential correction process.

(c) The ellipsoidal heights of the air stations, obtained after differential correction, shall be converted to orthometric heights, using the latest geoid model (currently SAGEOID2010).

(d) All GNSS observation data, including event data shall be supplied in Receiver Independent Exchange (RINEX) format. See ftp://igscb.jpl.nasa.gov/igscb/data/format/rinex2.txt for documentation describing the format.

(e) A space delimited flat ASCII file, containing the information, as shown in Annexure B, shall also be supplied. The file naming convention shall be:

```
GNSS_INS_DATA.txt
```

(f) The data of the differentially corrected GNSS observed co-ordinates and IMU data, captured per image centre, shall be supplied in ASCII format and reported in the following order:

i. Strip number (in sequence). These strip numbers shall coincide with those shown on the flight plans.
ii. Image number (shall be unique per job) starting at 0001.
iii. Time stamp (seconds of week)
iv. Easting, in international metres (Transverse Mercator projection)
v. Northing, in international metres (Transverse Mercator projection)
vi. $H_{int}$ (orthometric height – international metres).
vn. Orientation parameters (omega, phi, kappa,).
ix. Date and time of exposure (yyyy/mm/dd, HH:mm:ss)
x. Standard deviation for position (separately for every component of position)

x. Standard deviation for orientation (separately for every component of orientation)
3.8.3.2 GNSS Accuracies Required

(a) The air-station co-ordinates shall be referenced to the same longitude of origin (Lo 31), as identified by the City of Mbombela.

(b) The air-station co-ordinates shall have absolute accuracies of better than or equal to 0.3 metres.

(c) The air-station co-ordinates shall have a relative accuracy, i.e., Standard Deviation between consecutive air stations, of better than or equal to 0.1 metres

3.8.4 Image Pre-processing

3.8.4.1 General

(a) Image processing software shall be used to produce output images from the raw image data that is stored on the in-flight data storage system during imagery acquisition. This processing phase is used to radiometrically and geometrically process the images.

(b) Processed, 8-bit, colour (RGB) and/or panchromatic imagery shall be supplied, radiometrically and geometrically corrected and compressed in accordance with paragraph 3.8.4.2, 3.8.4.3 and respectively, that is capable of being immediately absorbed into the current photogrammetric workflow at the City of Mbombela

3.8.4.2 Radiometric Processing

(a) The imagery shall be radiometrically corrected to compensate for any adverse effects of temperature, aperture or other radiometric factors.

(b) This process results in a set of intermediate images.

3.8.4.3 Geometric Processing

(a) The intermediate, radiometrically corrected images, shall be geometrically corrected for lens distortion and lens tilt in accordance with this standard.

(b) This process results in a set of calibrated images.

3.8.4.4 Image Compression

(a) Images shall be supplied in GeoTIFF and ECW format.

(b) The GeoTIFF images shall be compressed with a JPEG compression of Q=3 with tiles and a full set of overviews, as prescribed.

(c) The ECW images shall have a 25x compression factor, with tiles and a full set of overviews, as prescribed.
3.8.4.5 Image Orientation

(a) The resultant images must conform to the following requirements:

(b) Image orientation must at all times correspond to the IMU data as recorded during the image acquisition process.

(c) Image orientation must facilitate the use of a single camera file setup for further photogrammetric processing.

3.8.4.6 Image Naming Convention

(a) For all jobs flown the syntax of the image name shall be as follows for the RGB, CIR and Pan image respectively:

i) Quarter degree square_calendar year flown_strip number_photo number_RGB, e.g. JUNA11_2010_22_01_RGB

ii) Quarter degree square_calendar year flown_strip number_photo number_PAN, e.g. JUNA11_2010_22_01_PAN

3.8.5 Flight Plan Data

3.8.5.1 Flight plan Index

(a) The flight plans shall be supplied in digital .pdf format, with all detail clearly legible.

3.9 ORTHORECTIFICATION OF AERIAL IMAGERY

3.9.1 Ground Control Points

(a) All surveying must be done in accordance with the TMH11 of 2013 survey specification.

(b) The Service Provider shall establish a ground control survey network by means of a pre-mark signal construction methodology with the required density both horizontally and in level to ensure the resolutions and accuracies to provide a digital image pixel of the specified Ground Sample Distance (GSD) of 0.1m.

- X & Y: 2-5cm (Standard Deviation, relative and absolute)
- H: better than 5cm (Standard Deviation, relative and absolute)

(c) The survey coordinate system shall be Lo 31 System Hartebeesthoek94 Datum using the World Geodetic System 1984 (WGS84) as ellipsoid of reference and all heights shall be determined as orthometric heights.

(d) Ground Control will be based on the National Geodetic Network using Trigonometrical beacons, Town survey marks and bench marks to ensure maximum accuracy of data is achieved.

(e) The ground control will be done by a Geomatics Professional Engineering Surveyor registered in terms of the Geomatics Profession Act 2013 (Act No. 19 of 2013).
(f) A minimum of 95 Ground Control Point must be established for the area. Additional 4-5 Ground Control Point must be established at each of the following urban areas–
- Skukuza
- Berg-en-Dal
- Pretoriuskop

3.9.2 Ortho-Rectification Requirements

3.9.2.1 General

(a) Aerial Triangulation to be performed on a digital photogrammetric workstation or a softcopy mapping system.

(b) Images that are to be ortho-rectified shall be free from all camera lens distortions.

(c) All measurements of distance shall be expressed in meters.

(d) Interpolation/resampling shall be performed by Bilinear Interpolation or higher order methods.

(e) Accurate image orientation and DEM data is required during the ortho-rectification process.

(f) Robust photogrammetric methods must be used in the ortho-rectification process (rubber sheeting and other non-precise methods are not acceptable).

(g) There shall be no part of the rectified image where there is loss of image or data (i.e. no black or white surrounds).

(h) Ortho-rectified images shall be free from smearing.

(i) Ortho-rectified images shall be free from double imaging (ghosting).

3.9.2.2 Positional Accuracy

(a) All digitally acquired aerial imagery will be rectified and resampled to a GSD of 0.1m.

(b) The horizontal positional accuracy of the pixels constituting this imagery shall not exceed 0.5metres at the 95% confidence level

3.9.2.3 Geo-referencing and Projection

(a) Ortho-rectified images shall be geo-referenced on the Hartebeesthoek94 Datum (WGS84 reference ellipsoid) and the Gauss Conformal Projection, Lo 31.

(b) Ortho-rectified images shall be in the following format:
GeoTIFF and ECW files with Northings and Easting, and its accompanying World file (.tfw).
3.9.3 Mosaicking Requirements

3.9.3.1 General

(a) All measurements of distance shall be expressed in metres.

(b) Feathering on both sides of the seam line shall not exceed 5 pixels.

(c) Tonal balancing of adjoining images shall be performed.

(d) Seam lines should not be visible in the final mosaicked image.

(e) The final mosaicked images should be aesthetically pleasing.

3.9.3.2 Output

(a) The mosaicked images shall extend at least 150m beyond the specified grid boundary on all four sides. There shall be no part of the mosaicked image where there is loss of image or data (i.e. no black or white surrounds).

(b) The ground sample distance (GSD) of all mosaicked imagery shall be 0.1m.

(c) Imagery must be provided in GeoTIFF and ECW formats, as per section 3.8.4.4.

(d) The files shall contain information relating to the image that is embedded as keyed information in the header. The keyed information shall contain inter alia the datum, central meridian, mapping units, scale, tags giving the pixel size, and geo-referencing.

(e) The files must be cut to and named according to the City of Mbombela grid system, e.g. JUNA11

3.10 ACQUISITION OF LIDAR

(a) LiDAR raw point cloud data shall be recorded at an average density of 5 points per m² suitable for planning, development and decision making and accurate Digital Terrain Modelling.

(b) The Laser system beam power to be set in excess of 50% output factor.

(c) Scanning field not to exceed 40° or 20° either side of nadir.

(d) High precision in-flight GNSS and inertial data to be recorded. LiDAR system will have an Inertial Measurement Unit(IMU)

(e) The correct setting on the laser system should be set to enable maximum penetration of vegetation.
Classification of the airborne LiDAR is the classes Ground and Non-Ground.

LAS data set accompanied with a projection file, and the LAS tiles should be contiguous, not overlapping, and roughly 500 MB or less in size.

3.11 PRODUCTION OF ELEVATION DATA

3.11.1 DTM

(a) The ground LiDAR data must be converted to a digital terrain model (DTM) using bilinear interpolation methods. A DTM follows the ground level and does not include buildings or trees.

(b) The DTM file shall be of the same areas described above for the digital image files.

(c) The DTM data shall be to Lo 31 - Hartebeesthoek 94 Datum using the World Geodetic System 1984 (WGS84) as ellipsoid of reference and shall be in the format described below.

(d) The DTM should have 2m GSD/postings and a 15cm accuracy.

(e) The Contractor shall provide the DTM data to the City of Mbombela in a GeoTiff, DXF and ASCII file format.

3.11.2 Contours

(a) Contours shall be generated at 2 meter interval.

(b) The contours shall be represented as polylines at the correct elevation and presented in Shapefile, DWG and DXF formats.

3.12 SUBMISSION TO THE CITY OF MBOMBELA

3.12.1 Reports

3.12.1.1 Delivery note

(a) Delivery note containing the following information

i) To be compiled in A4 portrait format
ii) Company letterhead
iii) Company business address and contact details
iv) Page number
v) Date of delivery note
vi) Bid reference
vii) Date of awarding of bid
viii) Date range of imagery
ix) Date of delivery
x) Execute Summary

- General description of job,
- Overview of reports
• Data attached
• Equipment used – (Aircraft, Camera, IMU, Base stations, etc.)

xi) Noteworthy issues:
• Problems that were experienced, and how were they solved.
• General comment on weather and terrain.

xii) Deliverables
• List of digital media supplied, manufacturer, storage capacity, serial numbers and reference numbers
• List the Reports submitted
• List the Data files submitted
• Folder structure breakdown of the job as on the media submitted

xiii) Authorised signature of company representative.

3.12.1.2 Ground Control Survey Report

(a) A detailed report on the ground control survey reporting shall be submitted in digital format, as follows:
i) To be compiled in A4 portrait format
ii) Company letterhead
iii) Company business address and contact details
iv) Page Number
v) Report heading
vi) Date of report
vii) Bid reference
viii) Executive summary: Report on the following:
• Provide an overview of the project and the final processed data sets.
• List the coordinates in table form with descriptions – existing survey beacons and new survey beacons established
ix) Positioning: Report on the following:
• Methods and equipment used
• TrigNet base station names and published (ITRF) geographical coordinates used
• Computation of coordinates
• Range of positional accuracies achieved shall be reported
x) General: Report on the following:
• Description of the GCPs
xi) Noteworthy issues: Provide an insight into any issues / problems that were experienced during processing, and how they were solved.
xii) Authorised signature of company representative.

3.12.1.3 Airborne Positioning Survey Report

(a) A detailed report on the airborne positioning and orientation reporting shall be submitted in digital format, as follows:
i) To be compiled in A4 portrait format
ii) Company letterhead
iii) Company business address and contact details
iv) Page Number
v) Report heading
vi) Date of report
vii) Bid reference
viii) Executive summary: Report on the following:
• Provide an overview of the project and the final processed data sets.
• List the datasets in table form with the columns: Dataset ID, Date of Acquisition, Projects covered by the dataset, and Description/Flight Line(s) identification.
ix) Positioning: Report on the following:
• Methods and equipment used
• Antenna offset
• TrigNet base station names and published (ITRF) geographical coordinates used
• Computation of air-station coordinates
• Range of positional accuracies achieved shall be reported
• Exposure frequency due to terrain compensation
• Provide schematics indicating the trajectory
x) General: Report on the following:
• Description of the datasets
• Date of imagery of each strip flown
• Strips rejected and re-flown
• Dates and times of sessions
• The processing and
• The result.
xi) Noteworthy issues: Provide an insight into any issues/problems that were experienced during processing, and how they were solved. Note any rejected data and comment on the quality of the data.
xii) Final results: Provide the exterior orientation file with the exterior orientation parameters
xiii) Authorised signature of company representative

3.12.1.4 Imagery Post Processing Report

(a) A detailed report on the processing of the imagery from raw (binary) imagery to calibrated imagery shall be submitted in digital and hard copy format containing the following information:
i) To be compiled in A4 portrait format
ii) Company letterhead
iii) Company business address and contact details
iv) Page Number
v) Report heading
vi) Date of report
vii) Bid reference
viii) Date of processing
ix) Executive summary
x) Radiometric: Provide an overview of the radiometric processing undertaken
xi) Geometric: Provide an overview of the geometric processing undertaken
xii) Output Options: Provide an overview of the following output options for both the RGB and CIR deliverables:
   - Image format
   - Bit depth
   - Compression algorithm
   - Q factor
   - Tile size
   - Overviews (count)

xiii) Noteworthy issues: Provide an insight into any issues/problems that were experienced during processing, and how they were solved.

xiv) Authorised signature of company representative

3.12.1.5 Operations Report

A comprehensive operations report shall be submitted with delivery of the job, and shall contain the following information:

i) To be compiled in A4 portrait format

ii) Company letterhead

iii) Company business address and contact details

iv) Page Number

v) Date of report

vi) Bid reference

vii) Required Ground Sample Distance of job (GSD)

viii) Equipment Manifest, in tabular format containing the following information:
   - Aircraft Type
   - Aircraft Number
   - Pilot Name
   - Pilot Registration Number
   - Photographer / Operator

ix) Camera Details, in tabular format containing the following information:
   - Camera Type
   - Cone Number
   - Lens Details including Spectral Band and Serial Number
   - Camera Port hole Details
   - Filter Type
   - Filter Number
   - Camera Temperature Control
   - Camera Humidity Control
   - Navigation Sight Type
   - Interval meter
   - Exposure Meter

x) Job imagery information in tabular format under the following headings:
   - Strip No. (e.g. 01)
   - Image range (e.g. 0001 – 0048)
   - Altimeter setting: Outside temp (e.g. GPS Height; 2°)
   - Flight Altitude: Planned (e.g. 5200m)
   - Flight Altitude: Reading (e.g. 5210m)
   - Date of strip (e.g. 2010/02/28)
   - Strip start time (SA Standard time) (e.g. 11h55)
   - Strip finish time (SA Standard time) (e.g. 12h09)
   - Direction of flight (e.g. East-West)
3.12.1.6 Flight Index

A comprehensive flight index shall be submitted with delivery of the job, and shall contain the following information:

i) To be compiled in A4 portrait format  
ii) Company letterhead  
iii) Company business address and contact details  
iv) Date of report  
v) Bid Reference  
vi) Job imagery information in tabular format under the following headings:
   - Strip No. (e.g. 01)  
   - Image Range (e.g. 0001 - 0048)  
   - Date (e.g. 2010/02/28)  
   - GSD (e.g. 0.1m GSD)  
   - Direction of flight (e.g. East-West)  
   - Remarks (Applicable comments)  

vii) Authorised signature of company representative

3.12.1.7 Certificate of Lens/ Camera non disturbance

(a) A detailed affidavit stating that the camera, mount and lenses have not been disturbed in any way since the last calibration shall be submitted in digital format containing the following information.

(i) To be compiled in A4 portrait format  
(ii) Company letterhead  
(iii) Company business address and contact details  
(iv) Page Number  
(v) Date of affidavit  
(vi) Bid reference  
(vii) Camera Make, model and serial number,  
(viii) Lenses, and respective focal distances, spectral bands, and serial numbers  
(ix) Statement of non-disturbance  
(x) Date of last calibration  
(xi) Authorised signature of company representative.

3.12.2 Data to be submitted

3.12.2.1 Folder Structure

All data submitted shall be in the folder structure as required by the City of Mbombela on the storage device specified in the bid document.

(a) Raw data as retrieved from the sensor system before any conversion to a pre-processed format.

(b) Processed images, radiometrically and geometrically corrected;
(c) Ortho-rectified and mosaicked images as per the City of Mbombela grid series
(d) LiDAR Data
(e) DSM data
(f) All GNSS air-station/IMU data, including RINEX data
(g) PDF flight plan
(h) Mission Planning data
(i) Reports and Delivery in digital form
(j) A space delimited flat ASCII file containing:
   - Degree squares covered by the flight index/flightplans.
   - Area of the flight index/flightplan in square metres.
   - Date of imagery.
   - Scale of imagery.
   - Camera name and serial number.
   - Lens name and serial number.
   - Focal length.
   - Image format
     The naming convention to be Panel info.txt.
(k) A space delimited flat ASCII Panel Info file containing:
   - Each strip number
   - The images that occur on each strip
   - The date and time each strip was flown.
   - The height, latitude and longitude of the centre of each image flown.
(l) All other ancillary information considered as being relevant including restrictions and underlying jobs, sheets or photography shall be included in the imagery report.

3.12.2.2 Data Labelling

(a) All hardware / envelopes / packages shall be clearly labelled with the project name, collection date(s), contractor’s name and disk / package contents.
(b) All hard drives shall have an Inventory.txt file in the root directory listing the contents of the hard drive and having the remainder of the required information as the header to the file.
(c) The media for the deliverables shall be a portable hard drive with USB 3.0 capabilities. This drive is non-returnable. A copy of the data shall be retained by the contracting supplier until the receipt and acceptance thereof is acknowledged in writing by the City of Mbombela.
3.13 TECHNICAL EVALUATION CRITERIA
3.13.1 Evaluation Criteria of technical proposal

1. Overall conformity of the proposal with the Terms of Reference and Project Specifications
2. The Tenderer experience in the field of assignment
3. The adequacies of the proposed work plan and approach in responding to the Scope of works
4. The qualification and appropriate registration and competence of the key personnel for the assignment
5. Signed Curricula Vitae (CV’s) of the Tenderer’s key personnel. These personnel will be rated generally as follows:
   - Their education and professional qualifications, and
   - Experience in Digital Aerial Photography and LiDAR surveys especially large mountainous terrain

Any proposals will be disqualified scoring the following from the table below:
A 0 (zero) in any criteria area.
Minimum 48/70

<table>
<thead>
<tr>
<th>Description</th>
<th>Max Points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Technical Functionality Points</strong></td>
<td></td>
</tr>
<tr>
<td>Company competency and track record</td>
<td>Digital Aerial Photography and LiDAR Survey Project for a Large Urban/Rural/Natural areas similar to the demarcated area of the City of Mbombela ± 536327 Ha</td>
</tr>
<tr>
<td></td>
<td>• Number of similar projects successfully completed, 2 points for each appointment letter of project to a maximum of 10 points</td>
</tr>
<tr>
<td></td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Reputation with Clients - Written contactable references (with names and numbers) to verify experience, through a letter and a possible interview, on similar projects (project that included Urban/Man-made areas and Rural/Natural Areas and Vegetation coverages and topography Areas).</td>
</tr>
<tr>
<td></td>
<td>• 1 point per reference letter to a maximum of 5 points</td>
</tr>
<tr>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Resources available – Survey Platform and Equipment (owned or leased)</td>
<td>Aircraft that comply with Civil Aviation (CCA) requirements for aerial operations</td>
</tr>
<tr>
<td></td>
<td>• 1 point if Aircraft comply with CCA requirements.</td>
</tr>
<tr>
<td></td>
<td>• 1 point if CCA registration is in the Contactors name</td>
</tr>
<tr>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Camera and LiDAR Equipment with Calibration certificates</td>
</tr>
<tr>
<td></td>
<td>• 1 point for Aerial Camera Calibration certificate</td>
</tr>
<tr>
<td></td>
<td>• 1 point for LiDAR equipment Calibration certificate</td>
</tr>
<tr>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Project Implementation</td>
<td>Overall approach and Methodology Statement</td>
</tr>
<tr>
<td></td>
<td>• 1 point for Ground Control</td>
</tr>
<tr>
<td></td>
<td>• 1 point for Aerial Photography</td>
</tr>
<tr>
<td></td>
<td>• 1 point for LiDAR survey</td>
</tr>
<tr>
<td></td>
<td>• 5 points for statement to achieve the required accuracies in mountainous terrain</td>
</tr>
<tr>
<td></td>
<td>• 5 points for statement on Flying Height above mean Terrain</td>
</tr>
<tr>
<td></td>
<td>18</td>
</tr>
</tbody>
</table>
### Technical Functionality Points

<table>
<thead>
<tr>
<th>Key Personnel</th>
<th>38</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project Manager / Geomatics Professional (GPr)</strong></td>
<td></td>
</tr>
<tr>
<td>The incumbent should have at least 10 years overall project management experience in the Aerial Photography and LiDAR Survey projects</td>
<td></td>
</tr>
<tr>
<td>• 1 point for the first 5 years</td>
<td></td>
</tr>
<tr>
<td>• 1 points for every additional 5 years of Project Management, up to a maximum of 3 points</td>
<td></td>
</tr>
<tr>
<td>• 2 points for each Aerial Photography and LiDAR Project experience for a Large Urban/Rural/Natural areas similar to the demarcated area up to a maximum of 4 points</td>
<td></td>
</tr>
<tr>
<td>Registered in terms of the Geomatics Profession Act 2013 (Act No. 19 of 2013) as a Geomatics Professional (GPr) at the South African Geomatics Council (SAGC)</td>
<td></td>
</tr>
<tr>
<td><strong>Ground Control Surveyor / Geomatics Professional (GPr)</strong></td>
<td></td>
</tr>
<tr>
<td>The incumbent should have at least 10 years project experience in Engineering Survey projects including Ground Control Surveys for Large Aerial Photogrammetry project similar to the project area.</td>
<td></td>
</tr>
<tr>
<td>• 1 point for the first 5 years</td>
<td></td>
</tr>
<tr>
<td>• 1 points for every additional 5 years of experience, up to a maximum of 3 points</td>
<td></td>
</tr>
<tr>
<td>• 2 points for each Large Aerial Photography and LiDAR Project experience for a Large Urban/Rural/Natural areas similar to the demarcated area up to a maximum of 4 points</td>
<td></td>
</tr>
<tr>
<td>Registered in terms of the Geomatics Profession Act 2013 (Act No. 19 of 2013) as a Geomatics Professional (GPr) at the South African Geomatics Council (SAGC)</td>
<td></td>
</tr>
<tr>
<td><strong>Aerial Photogrammetry and LiDAR operator</strong></td>
<td></td>
</tr>
<tr>
<td>The incumbent should have at least 5 years project experience in Aerial Photogrammetry and LiDAR Survey project.</td>
<td></td>
</tr>
<tr>
<td>• 1 point for the first 5 years</td>
<td></td>
</tr>
<tr>
<td>• 1 points for every additional 5 years’ experience, up to a maximum of 2 points</td>
<td></td>
</tr>
<tr>
<td>Registered in terms of the Geomatics Profession Act 2013 (Act No. 19 of 2013) as a Geomatics Technologists (GTg) at the South African Geomatics Council (SAGC)</td>
<td></td>
</tr>
<tr>
<td><strong>LiDAR and Imagery Processing Specialist</strong></td>
<td></td>
</tr>
<tr>
<td>The incumbent should have at least 5 years project experience in Processing Aerial Photogrammetry and LiDAR Survey project.</td>
<td></td>
</tr>
<tr>
<td>• 1 point for the first 5 years</td>
<td></td>
</tr>
<tr>
<td>• 1 points for every additional 5 years’ experience, up to a maximum of 2 points</td>
<td></td>
</tr>
<tr>
<td>• 2 points for high level of skill to interpret the point cloud generated by the LiDAR data to derive the ground surface elevation</td>
<td></td>
</tr>
</tbody>
</table>

**Key Personnel** | 30

- 5 points for statement on low-lying urban areas as mean Terrain

**Project Schedule** | 1
4. SPECIFICATIONS AND PRICING SCHEDULE

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>QTY</th>
<th>UNIT PRICE</th>
<th>TOTAL PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPOINTMENT OF PROFESSIONAL SERVICE PROVIDER FOR AN AIRBORNE SURVEY TO ACQUIRE ACCURATE AERIAL PHOTOGRAPHY DATA, DIGITAL TERRAIN MODELLING DATA, ORTHO-PHOTOS AND LiDAR AERIAL SURVEY FOR THE CITY OF MBOMBELA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ground Control Survey</td>
<td></td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>Digital Photography</td>
<td></td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>Light Detection and Ranging (LiDAR)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Digital Elevation Model (DEM) and Contours</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortho-photographs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Excl. Vat</td>
<td></td>
<td>R</td>
<td></td>
</tr>
<tr>
<td>15% Vat</td>
<td></td>
<td>R</td>
<td></td>
</tr>
<tr>
<td>Total Incl. Vat</td>
<td></td>
<td>R</td>
<td></td>
</tr>
</tbody>
</table>
5. PRICING SCHEDULE – FIRM PRICES (PURCHASES)

NOTE: ONLY FIRM PRICES WILL BE ACCEPTED, NON-FIRM PRICES (INCLUDING PRICES SUBJECT TO RATES OF EXCHANGE VARIATIONS) WILL NOT BE CONSIDERED

IN CASE WHERE DIFFERENT DELIVERY POINTS INFLUENCE THE PRICING, A SEPARATE PRICING SCHEDULE MUST BE SUBMITTED FOR EACH DELIVERY POINT

Name of bidder………………………………………………... Bid number: 428/2018

Closing Time 11:00 on 29 JUNE 2018

OFFER TO BE VALID FOR 90 DAYS FROM THE CLOSING DATE OF BID.

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>QTY</th>
<th>DESCRIPTION</th>
<th>BID PRICE IN RSA CURRENTLY (INCLUDING VAT)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Required by
- At:
- Brand and model
- Country of origin
- Does the offer comply with specification? *YES/NO
- If not to specification, indicate deviation(s)
- Period required for delivery *Delivery: Firm/not firm
- Delivery basis (all delivery costs must be included in the bid price)

Note: All delivery costs must be included in the bid price, for delivery at the prescribed destination.

Any enquiries regarding the bidding procedure may be directed to:

General information – Nomsa Ndubuya or Technical information – Corne Mc Gee
P.O Box 45 P.O Box 45
Mbombela Mbombela
1200 1200
Tel: 013 759 9052 Tel: 013 759 2182
6. DECLARATION OF INTEREST

1. No bid will be accepted from persons in the service of the state¹.

2. Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the bidder or their authorised representative declare their position in relation to the evaluating/adjudicating authority.

3. In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.

3.1 Full Name of bidder or his or her representative:……………………

3.2 Identity Number: …………………………………………………………

3.3 Position occupied in the Company (director, trustee, shareholder²):…

3.4 Company Registration Number: ………………………………………

3.5 Tax Reference Number……………………………………………………

3.6 VAT Registration Number: ……………………………………………

3.7 The names of all directors / trustees / shareholders members, their individual identity Numbers and state employee numbers must be indicated in paragraph 4 below.

3.8 Are you presently in the service of the state? …………………………… YES / NO

3.8.1 If yes, furnish particulars……………………………………

……………………………………………………………………………

¹MSCM Regulations: “in the service of the state” means to be –
(a) a member of –
   (i) any municipal council;
   (ii) any provincial legislature; or
   (iii) the national Assembly or the national Council of provinces;
(b) a member of the board of directors of any municipal entity;
(c) an official of any municipality or municipal entity;
(d) an employee of any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999);
(e) a member of the accounting authority of any national or provincial public entity; or
(f) an employee of Parliament or a provincial legislature.

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

3.9 Have you been in the service of the state for the past twelve months? …… YES / NO

3.9.1 If yes, furnish particulars……………………………………

………………………………………………………………………………

3.10 Do you have any relationship (family, friend, other) with persons in the service of the state and who may be involved with the evaluation and or adjudication of this bid?…………………………………… YES / NO

3.10.1 If yes, furnish particulars.
3.11 Are you, aware of any relationship (family, friend, other) between any other bidder and any persons in the service of the state who may be involved with the evaluation and or adjudication of this bid?.................................................................................................................. YES / NO

3.11.1 If yes, furnish particulars

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

3.12 Are any of the company’s directors, trustees, managers, Principle shareholders or stakeholders in service of the state? YES / NO

3.12.1 If yes, furnish particulars.

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

3.13 Are any spouse, child or parent of the company's directors, trustees, managers, principle shareholders or stakeholders in service of the state? .................................................................................................................. YES / NO

3.13.1 If yes, furnish particulars.

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

3.14 Do you or any of the directors, trustees, managers, principle shareholders, or stakeholders of this company have any interest in any other related companies or business whether or not they are bidding for this contract. YES / NO

3.14.1 If yes, furnish particulars:

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

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

<table>
<thead>
<tr>
<th>Full Name</th>
<th>Identity Number</th>
<th>State Employee Number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Signature .................................................................

Date .................................................................

Capacity .................................................................

Name of Bidder .................................................................
7. PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2017

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


1. GENERAL CONDITIONS

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

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

1.3 The value of this bid is estimated not to exceed R50 000 000 (all applicable taxes included) and therefore the 80/20 system shall be applicable.

1.4 Preference points for this bid shall be awarded for:

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

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

<table>
<thead>
<tr>
<th>POINTS</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td>PRICE</td>
</tr>
<tr>
<td>20</td>
<td>B-BBEE STATUS LEVEL OF CONTRIBUTION</td>
</tr>
</tbody>
</table>

Total points for Price and B-BBEE must not exceed 100

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

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

2. DEFINITIONS

2.1 “all applicable taxes” includes value-added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies;

2.2 “B-BBEE” means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;

2.3 “B-BBEE status level of contributor” means the B-BBEE status received by a measured entity based on its overall performance using the relevant scorecard contained in the Codes of Good Practice on Black Economic Empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;
2.4 “bid” means a written offer in a prescribed or stipulated form in response to an invitation by an organ of state for the provision of services, works or goods, through price quotations, advertised competitive bidding processes or proposals;

2.5 “Broad-Based Black Economic Empowerment Act” means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);

2.6 “comparative price” means the price after the factors of a non-firm price and all unconditional discounts that can be utilized have been taken into consideration;

2.7 “consortium or joint venture” means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract;

2.8 “contract” means the agreement that results from the acceptance of a bid by an organ of state;

2.9 “EME” means any enterprise with annual total revenue of R5 million or less.

2.10 “Firm price” means the price that is only subject to adjustments in accordance with the actual increase or decrease resulting from the change, imposition, or abolition of customs or excise duty and any other duty, levy, or tax, which, in terms of the law or regulation, is binding on the contractor and demonstrably has an influence on the price of any supplies, or the rendering costs of any service, for the execution of the contract;

2.11 “functionality” means the measurement according to predetermined norms, as set out in the bid documents, of a service or commodity that is designed to be practical and useful, working or operating, taking into account, among other factors, the quality, reliability, viability and durability of a service and the technical capacity and ability of a bidder;

2.12 “non-firm prices” means all prices other than “firm” prices;

2.13 “person” includes a juristic person;

2.14 “rand value” means the total estimated value of a contract in South African currency, calculated at the time of bid invitations, and includes all applicable taxes and excise duties;

2.15 “sub-contract” means the primary contractor’s assigning, leasing, making out work to, or employing, another person to support such primary contractor in the execution of part of a project in terms of the contract;

2.16 “total revenue” bears the same meaning assigned to this expression in the Codes of Good Practice on Black Economic Empowerment, issued in terms of section 9(1) of the Broad Based Black Economic Empowerment Act and promulgated in the Government Gazette on 9 February 2007;

2.17 “trust” means the arrangement through which the property of one person is made over or be quieted to a trustee to administer such property for the benefit of another person; and

2.18 “trustee” means any person, including the founder of a trust, to whom property is bequeathed in order for such property to be administered for the benefit of another person.

3. ADJUDICATION USING A POINT SYSTEM

3.1 The bidder obtaining the highest number of total points will be awarded the contract.

3.2 Preference points shall be calculated after prices have been brought to a comparative basis taking into account all factors of non-firm prices and all unconditional discounts;

3.3 Points scored must be rounded off to the nearest 2 decimal places.

3.4 In the event that two or more bids have scored equal total points, the successful bid must be the one scoring the highest number of preference points for B-BBEE.
3.5 However, when functionality is part of the evaluation process and two or more bids have scored equal points including equal preference points for B-BBEE, the successful bid must be the one scoring the highest score for functionality.

3.6 Should two or more bids be equal in all respects, the award shall be decided by the drawing of lots.

4. POINTS AWARDED FOR PRICE

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

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

\[
Ps = 80 \left( 1 - \frac{Pt - P_{\text{min}}}{P_{\text{min}}} \right) \quad \text{or} \quad Ps = 90 \left( 1 - \frac{Pt - P_{\text{min}}}{P_{\text{min}}} \right)
\]

Where

\( Ps \quad = \quad \) Points scored for comparative price of bid under consideration

\( Pt \quad = \quad \) Comparative price of bid under consideration

\( P_{\text{min}} \quad = \quad \) Comparative price of lowest acceptable bid

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

5.1 In terms of Regulation 5 (2) and 6 (2) of the Preferential Procurement Regulations, preference points must be awarded to a bidder for attaining the B-BBEE status level of contribution in accordance with the table below:

<table>
<thead>
<tr>
<th>B-BBEE Status Level of Contributor</th>
<th>Number of points (80/20 system)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>18</td>
</tr>
<tr>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Non-compliant contributor</td>
<td>0</td>
</tr>
</tbody>
</table>

5.2 Bidders who qualify as EMEs in terms of the B-BBEE Act must submit a certificate issued by an Accounting Officer as contemplated in the CCA or a Verification Agency accredited by SANAS or a Registered Auditor. Registered auditors do not need to meet the prerequisite for IRBA’s approval for the purpose of conducting verification and issuing EMEs with B-BBEE Status Level Certificates.

5.3 Bidders other than EMEs must submit their original and valid B-BBEE status level verification certificate or a certified copy thereof, substantiating their B-BBEE rating issued by a Registered Auditor approved by IRBA or a Verification Agency accredited by SANAS.

5.4 A trust, consortium or joint venture, will qualify for points for their B-BBEE status level as a legal entity, provided that the entity submits their B-BBEE status level certificate.
5.5 A trust, consortium or joint venture will qualify for points for their B-BBEE status level as an unincorporated entity, provided that the entity submits their consolidated B-BBEE scorecard as if they were a group structure and that such a consolidated B-BBEE scorecard is prepared for every separate bid.

5.6 Tertiary institutions and public entities will be required to submit their B-BBEE status level certificates in terms of the specialized scorecard contained in the B-BBEE Codes of Good Practice.

5.7 A person will not be awarded points for B-BBEE status level if it is indicated in the bid documents that such a bidder intends sub-contracting more than 25% of the value of the contract to any other enterprise that does not qualify for at least the points that such a bidder qualifies for, unless the intended sub-contractor is an EME that has the capability and ability to execute the sub-contract.

5.8 A person awarded a contract may not sub-contract more than 25% of the value of the contract to any other enterprise that does not have an equal or higher B-BBEE status level than the person concerned, unless the contract is sub-contracted to an EME that has the capability and ability to execute the sub-contract.

6. BID DECLARATION

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

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

7.1 B-BBEE Status Level of Contribution: …….. = …….. (Maximum of 10 or 20 points)

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

8 SUB-CONTRACTING

8.1 Will any portion of the contract be sub-contracted? YES / NO

8.1.1 If yes, indicate:

(i) what percentage of the contract will be subcontracted? ……..%

(ii) the name of the sub-contractor? ……………………………

(iii) the B-BBEE status level of the sub-contractor?………………

(iv) whether the sub-contractor is an EME? YES / NO

9 DECLARATION WITH REGARD TO COMPANY/FIRM

9.1 Name of firm : …………………………………………………

9.2 VAT registration number : ………………………………………

9.3 Company registration number : …………………………………

9.4 TYPE OF COMPANY/FIRM

☐ Partnership/Joint Venture / Consortium
☐ One person business/sole propriety
☐ Close corporation
☐ Company
☐ (Pty) Limited

[TICK APPLICABLE BOX]

9.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES

............................................................................................................................
............................................................................................................................
............................................................................................................................
............................................................................................................................
............................................................................................................................
............................................................................................................................
............................................................................................................................
............................................................................................................................
............................................................................................................................
............................................................................................................................
............................................................................................................................
............................................................................................................................
............................................................................................................................
............................................................................................................................
............................................................................................................................
............................................................................................................................
............................................................................................................................
............................................................................................................................
............................................................................................................................
............................................................................................................................
............................................................................................................................
............................................................................................................................
............................................................................................................................
............................................................................................................................
.............................................................................................................................
9.6 COMPANY CLASSIFICATION

☐ Manufacturer
☐ Supplier
☐ Professional service provider
☐ Other service providers, e.g. transporter, etc.

[TICK APPLICABLE BOX]

9.7 MUNICIPAL INFORMATION

Municipality where business is situate....................................................................................

Registered Account Number..................................................................................................

Stand Number ........................................................................................................................

9.8 TOTAL NUMBER OF YEARS THE COMPANY/FIRM HAS BEEN IN BUSINESS? ........

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

(i) The information furnished is true and correct;

(ii) The preference points claimed are in accordance with the General Conditions as
indicated in paragraph 1 of this form.

(iii) In the event of a contract being awarded as a result of points claimed as shown in
paragraph 7, the contractor may be required to furnish documentary proof to the
satisfaction of the purchaser that the claims are correct;

(iv) If the B-BBEE status level of contribution has been claimed or obtained on a fraudulent
basis or any of the conditions of contract have not been fulfilled, the purchaser may, in
addition to any other remedy it may have –

(a) disqualify the person from the bidding process;

(b) recover costs, losses or damages it has incurred or suffered as a result of that
person’s conduct;

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

(d) restrict the bidder or contractor, its shareholders and directors, or only the
shareholders and directors who acted on a fraudulent basis, from obtaining
business from any organ of state for a period not exceeding 10 years, after the
audial te ram partem (hear the other side) rule has been applied; and

(e) forward the matter for criminal prosecution

WITNESSES:

1. ................................................. SIGNATURE(S) OF BIDDER(S)

2. ................................................. DATE:.............................................

ADDRESS:..................................................

40
8. DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT

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

Before completing this declaration, bidders must study the General Conditions, Definitions, Directives applicable in respect of Local Content as prescribed in the Preferential Procurement Regulations, 2017 and the South African Bureau of Standards (SABS) approved technical specification number SATS 1286:201x.

1. General Conditions

1.1. Preferential Procurement Regulations, 2017 (Regulation 8. (2) and 8. (4) Make provision for the promotion of local production and content.

1.2. Regulation 8.(2) prescribes that in the case of designated sectors, where in the award of bids local production and content is of critical importance, such bids must be advertised with the specific bidding condition that only locally produced goods, services or works or locally manufactured goods, meeting the stipulated minimum threshold for local production and content will be considered.

1.3. Regulation 8.(4) prescribes that where there is no designated sector, a specific bidding condition may be included, that only locally produced services, works or goods or locally manufactured goods with a stipulated minimum threshold for local production and content, will be considered.

1.4. Where necessary, for bids referred to in paragraphs 1.2 and 1.3 above, a two stage bidding process may be followed, where the first stage involves a minimum threshold for local production and content and the second stage price and B-BBEE.

1.5. A person awarded a contract in relation to a designated sector, may not sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the stipulated minimum threshold.

1.6. The local content (LC) as a percentage of the bid price must be calculated in accordance with the SABS approved technical specification number SATS 1286: 201x as follows:

\[
LC = 1 - \left( \frac{x}{y} \right) \times 100
\]

Where

\( x \): imported content
\( y \): bid price excluding value added tax (VAT)

Prices referred to in the determination of \( x \) must be converted to Rand (ZAR) by using the exchange rate published by the South African Reserve Bank (SARB) at 12:00 on the date, one week (7 calendar days) prior to the closing date of the bid as required in paragraph 4.1 below.

1.7. A bid will be disqualified if:

- the bidder fails to achieve the stipulated minimum threshold for local production and content indicated in paragraph 3 below; and.
- this declaration certificate is not submitted as part of the bid documentation.
2. Definitions

2.1. “bid” includes advertised competitive bids, written price quotations or proposals;

2.2. “bid price” price offered by the bidder, excluding value added tax (VAT);

2.3. “contract” means the agreement that results from the acceptance of a bid by an organ of state;

2.4. “designated sector” means a sector, sub-sector or industry that has been designated by the Department of Trade and Industry in line with national development and industrial policies for local production, where only locally produced services, works or goods or locally manufactured goods meet the stipulated minimum threshold for local production and content;

2.5. “duly sign” means a Declaration Certificate for Local Content that has been signed by the Chief Financial Officer or other legally responsible person nominated in writing by the Chief Executive, or senior member / person with management responsibility (close corporation, partnership or individual).

2.6. “imported content” means that portion of the bid price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the supplier or its subcontractors) and which costs are inclusive of the costs abroad, plus freight and other direct importation costs, such as landing costs, dock duties, import duty, sales duty or other similar tax or duty at the South African port of entry;

2.7. “local content” means that portion of the bid price which is not included in the imported content, provided that local manufacture does take place;

2.8. “stipulated minimum threshold” means that portion of local production and content as determined by the Department of Trade and Industry; and

2.9. “sub-contract” means the primary contractor’s assigning, leasing, making out work to, or employing another person to support such primary contractor in the execution of part of a project in terms of the contract.

3. The stipulated minimum threshold(s) for local production and content for this bid is/are as follows:

<table>
<thead>
<tr>
<th>Description of services, works or goods</th>
<th>Stipulated minimum threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Does any portion of the services, works or goods offered have any imported content? YES / NO

4.1 If yes, the rate(s) of exchange to be used in this bid to calculate the local content as prescribed in paragraph 1.6 of the general conditions must be the rate(s) published by the SARB for the specific currency at 12:00 on the date, one week (7 calendar days) prior to the closing date of the bid.
The relevant rates of exchange information is accessible on www.reservebank.co.za.

Indicate the rate(s) of exchange against the appropriate currency in the table below:

<table>
<thead>
<tr>
<th>Currency</th>
<th>Rates of exchange</th>
</tr>
</thead>
<tbody>
<tr>
<td>US Dollar</td>
<td></td>
</tr>
<tr>
<td>Pound Sterling</td>
<td></td>
</tr>
<tr>
<td>Euro</td>
<td></td>
</tr>
<tr>
<td>Yen</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

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

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

IN RESPECT OF BID NO: 42/2018 ISSUED BY CITY OF MBOMBELA

NB: The obligation to complete, duly sign and submit this declaration cannot be transferred to an external authorized representative, auditor or any other third party acting on behalf of the bidder.

I, the undersigned, ………………………..(full names),

do hereby declare, in my capacity as ……………………………………… (name of bidder entity), the following:

(a) The facts contained herein are within my own personal knowledge.

(b) I have satisfied myself that the goods/services/works to be delivered in terms of the above-specified bid comply with the minimum local content requirements as specified in the bid, and as measured in terms of SATS 1286.

(c) The local content has been calculated using the formula given in clause 3 of SATS 1286, the rates of exchange indicated in paragraph 4.1 above and the following figures:

<table>
<thead>
<tr>
<th>Bid price, excluding VAT (y)</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imported content (x)</td>
<td>R</td>
</tr>
<tr>
<td>Stipulated minimum threshold for Local content (paragraph 3 above)</td>
<td></td>
</tr>
<tr>
<td>Local content % as calculated in terms of SATS 1286</td>
<td></td>
</tr>
</tbody>
</table>

If the bid is for more than one product, a schedule of the local content by product shall be attached.

(d) I accept that the Procurement Authority / Municipality /Municipal Entity has the right to request that the local content be verified in terms of the requirements of SATS 1286.
(e) I understand that the awarding of the bid is dependent on the accuracy of the information furnished in this application. I also understand that the submission of incorrect data, or data that are not verifiable as described in SATS 1286, may result in the Procurement Authority / Municipal / Municipal Entity imposing any or all of the remedies as provided for in Regulation 13 of the Preferential Procurement Regulations, 2017 promulgated under the Policy Framework Act (PPPFA), 2000 (Act No. 5 of 2000).

| SIGNATURE:          | DATE: ___________ |
| WITNESS No. 1      | DATE: ___________ |
| WITNESS No. 2      | DATE: ___________ |
9. CONTRACT FORM - PURCHASE OF GOODS/WORKS

This form must be filled in duplicate by both the Successful Bidder / Service Provider (Part 1) and the Purchaser / City of Mbombela (Part 2). Both forms must be signed in the original so that the Successful Bidder / Service Provider and the Purchaser / City of Mbombela would be in possession of originally signed contracts for their respective records.

PART 1 (TO BE FILLED IN BY THE BIDDER)

1. I hereby undertake to supply all or any of the goods and/or works described in the attached bidding documents to (name of institution)…………………………. in accordance with the requirements and specifications stipulated in bid number…………………… at the price/s quoted. My offer/s remain binding upon me and open for acceptance by the purchaser during the validity period indicated and calculated from the closing time of bid.

2. The following documents shall be deemed to form and be read and construed as part of this agreement:

   (i) Bidding documents, viz
       - Invitation to bid;
       - Tax clearance certificate;
       - Pricing schedule(s);
       - Technical Specification(s);
       - Preference claims for Broad Based Black Economic Empowerment Status Level of Contribution in terms of the Preferential Procurement Regulations 2017;
       - Declaration of interest;
       - Declaration of bidder’s past SCM practices;
       - Certificate of Independent Bid Determination;
       - Special Conditions of Contract;
   (ii) General Conditions of Contract; and
   (iii) Other (specify)

3. I confirm that I have satisfied myself as to the correctness and validity of my bid; that the price(s) and rate(s) quoted cover all the goods and/or works specified in the bidding documents; that the price(s) and rate(s) cover all my obligations and I accept that any mistakes regarding price(s) and rate(s) and calculations will be at my own risk.

4. I accept full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on me under this agreement as the principal liable for the due fulfilment of this contract.

5. I declare that I have no participation in any collusive practices with any bidder or any other person regarding this or any other bid.

6. I confirm that I am duly authorised to sign this contract.

   NAME (PRINT) .........................................................
   CAPACITY ...........................................................
   SIGNATURE .........................................................
   NAME OF FIRM .....................................................
   DATE ...............................................................  

WITNESSES

1. ...............................  
2. ...............................  
DATE: ...............................
1. I……………………………………… in my capacity as………………………………………………….. accept your bid under reference number ………………dated…………………………for the supply of goods/works indicated hereunder and/or further specified in the annexure(s).

2. An official order indicating delivery instructions is forthcoming.

3. I undertake to make payment for the goods/works delivered in accordance with the terms and conditions of the contract, within 30 (thirty) days after receipt of an invoice accompanied by the delivery note.

<table>
<thead>
<tr>
<th>ITEMNO.</th>
<th>PRICE (ALL APPLICABLE TAXES INCLUDED)</th>
<th>BRAND</th>
<th>DELIVERY PERIOD</th>
<th>B-BBEE STATUS LEVEL OF CONTRIBUTION</th>
<th>MINIMUM THRESHOLD FOR LOCAL PRODUCTION AND CONTENT (if applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. I confirm that I am duly authorized to sign this contract.

SIGNED AT ............................................. ON .............................................

NAME (PRINT) .............................................

SIGNATURE .............................................

OFFICIAL STAMP .............................................

WITNESSES

1. .............................................

2. .............................................

DATE .............................................
## 10. DECLARATION OF BIDDER’S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

1. This Municipal Bidding Document must form part of all bids invited.

2. It serves as a declaration to be used by municipalities and municipal entities in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.

3. The bid of any bidder may be rejected if that bidder, or any of its directors have:
   - abused the municipality’s / municipal entity’s supply chain management system or committed any improper conduct in relation to such system;
   - been convicted for fraud or corruption during the past five years;
   - wilfully neglected, reneged on or failed to comply with any government, municipal or other public sector contract during the past five years; or
   - been listed in the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004).

4. In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.

<table>
<thead>
<tr>
<th>Item</th>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>Is the bidder or any of its directors listed on the National Treasury’s database as a company or person prohibited from doing business with the public sector? (Companies or persons who are listed on this database were informed in writing of this restriction by the National Treasury after the audi alteram partem rule was applied).</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4.1.1</td>
<td>If so, furnish particulars:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.2</td>
<td>Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)? (To access this Register enter the National Treasury’s website, <a href="http://www.treasury.gov.za">www.treasury.gov.za</a>, click on the icon “Register for Tender Defaulters” or submit your written request for a hard copy of the Register to facsimile number (012) 3265445).</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4.2.1</td>
<td>If so, furnish particulars:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.3</td>
<td>Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4.3.1</td>
<td>If so, furnish particulars:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.4</td>
<td>Does the bidder or any of its directors owe any municipal rates and taxes or municipal charges to the municipality / municipal entity, or to any other municipality / municipal entity, that is in arrears for more than three months?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4.4.1</td>
<td>If so, furnish particulars:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4.5 Was any contract between the bidder and the municipality / municipal entity or any other organ of state terminated during the past five years on account of failure to perform on or comply with the contract? | Yes ☐ | No ☐

4.5.1 If so, furnish particulars:

CERTIFICATION

I, THE UNDERSIGNED (FULL NAME)……………………………………………….. CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM TRUE AND CORRECT.

I ACCEPT THAT, IN ADDITION TO CANCELLATION OF A CONTRACT, ACTION MAY BE TAKEN AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE.

..................................................  ..................................................  
Signature  Date

..................................................  ..................................................  
Position  Name of Bidder
11. CERTIFICATE OF INDEPENDENT BID DETERMINATION

1 This Municipal Bidding Document (MBD) must form part of all bids¹ invited.

2 Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).² Collusive bidding is a *pe se* prohibition meaning that it cannot be justified under any grounds.

3 Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:

   a) take all reasonable steps to prevent such abuse;

   b) reject the bid of any bidder if that bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and

   c) cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.

4 This MBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.

5 In order to give effect to the above, the attached Certificate of Bid Determination (MBD 9) must be completed and submitted with the bid:

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

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

________________________________________________________________________

(Bid Number and Description)

in response to the invitation for the bid made by:

________________________________________________________________________

(Name of Municipality / Municipal Entity)

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

I certify, on behalf of:

________________________________________________________________________

(Name of Bidder)

that:

1. I have read and I understand the contents of this Certificate;

2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;

3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;

4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign, the bid, on behalf of the bidder;

5. For the purposes of this Certificate and the accompanying bid, I understand that the word “competitor” shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:

(a) has been requested to submit a bid in response to this bid invitation;
(b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
(c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder

6. The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However communication between partners in a joint venture or consortium⁴ will not be construed as collusive bidding.

7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:

(a) prices;
(b) geographical area where product or service will be rendered (market allocation)
(c) methods, factors or formulas used to calculate prices;
(d) the intention or decision to submit or not to submit, a bid;
(e) the submission of a bid which does not meet the specifications and conditions of the bid; or
(f) bidding with the intention not to win the bid.

8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.

9. The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.

⁴ Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.
10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

.................................................. ..................................................
Signature Date

.................................................. ..................................................
Position Name of Bidder
12. AUTHORITY TO SIGN A BID

1. COMPANIES AND CLOSE CORPORATIONS

a. If a Bidder is a COMPANY, a certified copy of the resolution by the board of directors, duly signed, authorising the person who signs this bid to do so, as well as to sign any contract resulting from this bid and any other documents and correspondence in connection with this bid and/or contract on behalf of the company **must be submitted with this bid**, that is, before the closing time and date of the bid.

b. In the case of a CLOSE CORPORATION (CC) submitting a bid, a resolution by its members, authorizing a member or other official of the corporation to sign the documents on their behalf, **shall be included with the bid**.

PARTICULARS OF RESOLUTION BY BOARD OF DIRECTORS OF THE COMPANY / MEMBERS OF THE CC

<table>
<thead>
<tr>
<th>Date Resolution was taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resolution signed by (name and surname)</td>
</tr>
<tr>
<td>Capacity</td>
</tr>
<tr>
<td>Name and surname of delegated Authorized Signatory</td>
</tr>
<tr>
<td>Capacity</td>
</tr>
<tr>
<td>Specimen Signature</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Full name and surname of ALL Director(s) / Member(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Is a CERTIFIED COPY of the resolution attached?</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>SIGNED ON BEHALF OF COMPANY / CC:</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATE:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PRINT NAME:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>WITNESS 1:</th>
</tr>
</thead>
<tbody>
<tr>
<td>WITNESS 2:</td>
</tr>
</tbody>
</table>
2. SOLE PROPRIETOR (SINGLE OWNER BUSINESS)

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

3. PARTNERSHIP

We, the undersigned partners in the business trading as ____________________ hereby authorize Mr/Ms ____________________ to sign this bid as well as any contract resulting from the bid and any other documents and correspondence in connection with this bid and/or contract for and on behalf of the abovementioned partnership.

The following particulars in respect of every partner must be furnished and signed by every partner:

<table>
<thead>
<tr>
<th>Full name of partner</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SIGNED ON BEHALF OF PARTNERSHIP: ____________________ DATE: __________

PRINT NAME: _______________________________________

WITNESS 1: ____________________ WITNESS 2: ____________________
13. CERTIFICATE OF AUTHORITY FOR JOINT VENTURES

This returnable schedule is to be completed by JOINT VENTURES

We, the undersigned, are submitting this tender offer in joint venture and hereby authorize Mr/Ms ________________________________ , the authorized signatory of the Company/Closed Corporation/Partnership (name) __________________________, acting in the capacity of lead partner, to sign all documents in connection with the tender offer and any contract resulting from it on our behalf.

<table>
<thead>
<tr>
<th>1. Name of firm (Lead partner)</th>
<th>Address</th>
<th>Tel. No.</th>
<th>Signature</th>
<th>Designation</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>2. Name of firm</th>
<th>Address</th>
<th>Tel. No.</th>
<th>Signature</th>
<th>Designation</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>3. Name of firm</th>
<th>Address:</th>
<th>Tel. No.</th>
<th>Signature</th>
<th>Designation</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>4. Name of firm</th>
<th>Address</th>
<th>Tel. No.</th>
<th>Signature</th>
<th>Designation</th>
</tr>
</thead>
</table>

NOTE: A copy of the Joint Venture Agreement showing clearly the percentage contribution of each partner to the Joint Venture, shall be appended to this Schedule.
### 14. PPPFA: Preferential Point System

**Supply Chain Policy Using 80/20 Preference Point System**

<table>
<thead>
<tr>
<th></th>
<th>Maximum Points to Be Allocated</th>
<th>Points Claimed by Bidder</th>
<th>Allocated Points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Price and Competence Goals</strong></td>
<td>80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Price</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SUB Total</strong></td>
<td>80</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Equity Promotion Goals</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B-BBEE Status Level of Contribution</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SUB Total</strong></td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>