ANNEXURE 1 SPECIFICATION

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1. SPECIFICATION OF THE WORK OR PRODUCTS OR SERVICES REQUIRED

This section will cover the technical capabilities, constraints, and other specific performance required of the product or services to accomplish the supply and delivery of Permanent way maintenance tools.

1.1. TECHNICAL SPECIFICATION

1.1.1. NATURE OF WORK

This The work entails the Supply and delivery of Permanent way maintenance tools in the Gauteng Region on an "as and when" required basis for a period of twelve (12) months This is to assist the department to carry out routine maintenance which will ensure the track stays in a standard conditions and defects are minimized which will improve safe passage of trains and mitigate potential incidents and train delays. The Permanent way maintenance tools shall be classified as follows:

A) SIGNALLING FLAG

B) LED SIGNALLING LANTERN

C) WHISTLE

D) LIGHTWEIGHT PUSH TROLLEY

E) TWO WHEEL RAIL TRANSPORTERS

F) RAIL CARRYING ROLLER

G) TRACK GAUGE

H) MAGNETIC OUTDOOR DIGITAL THERMOMETER

I) MEASURING WHEEL

J) RAILWEAR MEASURING DEVICE

K) FOLDING WOODEN RULER

L) NON-CONDUCTIVE MEASURING TAPE

M) BALLAST FORK

N) HYDRAULIC RAIL BENDER

O) HYDRAULIC TRACK JACK

P) SLEDGEHAMMER

Q) ROUND NOUSE SHOVEL

R) PICKS

S) PICK HANDLE

T) ADJUSTABLE WRENCH

U) PLIERS

V) WORKING FLOOD LIGHTS

W) TRACK SQUARE

X) SLASHER

Y) RAIL TONG

Z) SLEEPER TONG

1.1.2. SPECIFICATIONS AND SAMPLES:

1.1.2.1. Signalling flags

- Standard description:

- Rail signalling flags, with buttonhole for inserting the wooden handle and two tapes for assuring them during work, including wooden handle of 90cm (length). Red banner with buttonhole on both ends for inserting rods, including 90cm (length) rods for fixing the red banner to ground.

1.1.2.2. LED signalling lanterns

- Standard description:

- Signalling lantern with white light with sliding red and green filters and sliding ON/OFF Morse button. In the back it is equipped with a convenient pedestal to be able to support it vertically over flat surfaces. The reduced size and weight makes it easily transportable and requires small storage space.

1.1.2.3. Whistles

- Standard description:

- Metal whistle used by railway personnel, with a a string/chain,
  it emits a sharp trill, audible even at great distance.

1.1.2.4. Lightweight push trolley

- Standard description:

- Light metal constructed push trolley designed for transporting railway materials on track. It has a corrugated anti-slip platform which makes the equipment strong and lightweight. On the platform there are some attacks to connect more trolleys by means of a tow bar, the trolley has steel wheels, keyed on roller bearings and a special plastic bushing. Rail to rail insulation and easy to use parking brake.

- Technical data:
  - Capacity – 2000 daN[kg]
  - Weight – 145 kg
  - Dimensions (L x W x H) – 1890 x 1230 x 890 mm
  - Gauge – 1065 mm

1.1.2.5. Two-wheel rail transporter

- Standard description:
- It's a railway equipment used for transporting and handling all types of rails and has two wheels with a comfortable and simple parking brake.
- Technical data:
  - Capacity – 15000 daN[kg]
  - Weight – +/-270 kg
  - Track gauge – 1065 mm

1.1.2.6. Rail carrying roller

- Standard description:
- Robust steel design roller used for moving and carrying long welded rails and supports different rail foot widths and base body internal dimensions, it has a maintenance free ball bearing.
- Technical data:
  - Max. load – 0,7 t
  - Inside roller dimensions – 170 mm
  - Dimensions (L x W x H) – 260 x 130 x 120 mm
  - Total weight – ~ 7,3 kg

1.1.2.7. Track gauge

- Standard description:
- Anodised aluminium channel section protects all sensitive parts. Sturdy and light weight track plus turnout tool that allows a quick reading of track gauge and cant on protected graduated rules. The track gauge allows measurements to be taken in grooves, guide rails dimensions from check rail to crossings and from check rail to check rail. Transporting case for ease of transport.

- Technical data:
- Gauge – -10 mm to +65 mm, 1055mm to 1130 mm
- Super elevation (cant) – +/- 195 mm
- Reading accuracy – 1 division = 1mm
- Mass – 2.4 kg

1.1.2.8. Magnetic outdoor digital thermometer

- Standard description:
- It must be able to measure the exact temperature of the rail and has a sensitive magnetic probe which is complete of calibration certificate.

- Technical description:
- Weight without probe – 200 g
- Max working detection of probe – 200

1.1.2.9. Measuring wheel

- Standard description:
- Practical and easy to use, it is suitable for rail And road lines. It consists of a foldable aluminium structure with Teflon wheels, an easy to read display with reset, parking brake and comfortable handle. Foldable with a carry bag for ease of storage.

- Technical data:
  - Length – 150 mm
  - Width – 320 mm
  - Height – 460 mm

1.1.2.10. Rail wear measuring device

- Standard description:
- This tool is a rail vertical (0 degrees) and lateral (45 degrees) wear measuring device and it reads the

height dimension of the rail parallel to the base of rail on different rail types and lateral wear value at 45 degrees. The device can be easily attached to the rail base surface and fixes itself with six magnets built into its sole part and the side touch is ensured by a stopper.
The vertical wear of the rail could be read from the vertical scale and the lateral wear value is shown by the 45 degrees measuring scale as a difference from the theoretical value of the rail type. This device can be used even if there is a guard rail or a flangeway in the point to be measured.

- Technical data:
  - Height value – 130 to 185 mm
  - Side wear value – 0 to 25 mm
  - Operational temp – -25 to 90 degrees Celsius
  - Dimensions – 295 x 243 x 60
  - Weight – 1.5 kg

1.1.2.11. Ballast fork

- Standard description:
- It's a ten-prong fork used for sifting and boxing in of ballast. Forged from carbon steel, hardened and tempered to ensure maximum strength and toughness. Anti-corrosive black and SABS approved.

- Technical data:
  - Height – 72 cm
  - Width – 15 cm
  - Depth – 30 cm
  - Gross weight – 4.4 kg

1.1.2.12. ydraulic rail bender

- Standard description:
- Device used to bend the rail made of light alloy

frame for easier change of position, ergonomic operations in all work positions, universal use due to replaceable rail claws and return of piston by spring force.

- Technical data:
- Maximum compressive force – 550 KN
- Piston travel – 100mm
- Dimensions (L x W x H) – 880 x750 x 240 mm
- Total weight – ~74 kg

1.1.2.13. Hydraulic track jack

- Standard description:
- The hydraulic track jack is specially manufactured for lifting the rail tracks. It has been manufactured with high quality material, which ensures high performance in all work conditions. It is easy to use and guarantees maximum safety for the operator, the device also consists of an oil tanker.

- Technical data:
- Capacity – 8000 daN[kg]
- Lifting height – 90 mm
- Weight – ~18.5 kg

1.1.2.14. Sledgehammer

- Standard description:
- Sledgehammer is drop forged from quality carbon steel. Heat treated and tempered for maximum strength. Working surfaces are hardened and tempered for durability and safety. Striking surfaces are ground and polished, heads are epoxy coated with anti-corrosive coating on polished surfaces. Polypropylene handle with unbreakable steel core. SABS approved.

- Technical description:
- Weight – 6.3 kg
- Handle length – ~900 mm

1.1.2.15. Round nose shovel

- Standard description:
- It's a tool used for scooping, manufactured from carbon steel and heat treated for durability. Anti-corrosion treated and SABS approved.

- Technical data:
  - Width – 230 mm
  - Height – 920 mm
  - Weight – 2.5 kg

1.1.2.16. Pick

- Standard description:
- It's used for difficult digging in hard ground, clay and temping of ballast by hand. Forged from carbon steel and tempered point. Anti-corrosive black, SABS approved.

- Technical data:
  - Weight (head only) – 3.5 kg
  - Blade width – 75 mm (Beater end)

1.1.2.17. Pick handle

- Standard description:
  - Polypropylene handle with unbreakable steel core and SABS approved.
- Technical data:
  - Length – 80 mm
  - Width – 60 mm
  - Height – 900 mm

- Weight – 1.4 kg

1.1.2.18. Adjustable wrench

- Standard description:

- Adjustable wrench is an open-end wrench with a movable jaw, allowing it to be used with different sizes of fastener head It's made of chrome vanadium steel 31 CrCV3. Swedish pattern jaw set at 15 degrees, manganese phosphate finish, ground head, in accordance with SANS 1211 and DIN 3117.

- Technical data:
  - Size – 600 mm
  - Jaw opening – 0 to 62 mm

1.1.2.19. Pliers

- Standard description:
  - Fencing pliers used for fastening and cutting, made of steel With a cutting edge at the front of the pliers' concrete nippers are mainly used for twisting and cutting of tie wire. Each cutting edge has been additionally induction hardened in order to further strengthen the cutting ability.

- Technical data:
  - Head size – 300 mm
  - Clamping width – 300 mm
  - Length – 300 mm
  - Weight – 0.8 kg

1.1.2.20. Working flood lights

- Standard description:
  - Double portable generator outside led flood lights a mounting frame made of aluminium/ steel. Two led flood lights are attached on the mounting frame.

- Technical description:
  - Power – 600W per led light
  - IP rating – IP 66
  - Beam angle – 120 degrees
  - Colour temperature – 6500k
  - Length of mounting frame – 710 mm
  - Width of mounting frame – 580 mm
  - Height of mounting frame – 1890 mm

1.1.2.21. Track Square

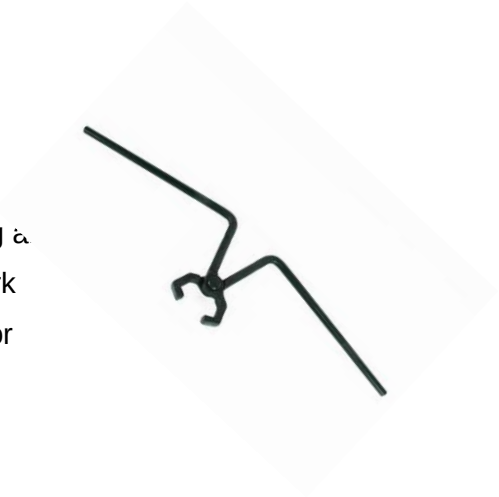
- Standard description:
- For aligning sleepers and squaring the rails, it has inner and outer stops, provides insulation from rail to rail.

- Technical data:
  - Dimensions (L x W) – 1700 x 1400 mm

1.1.2.22. Rail Tong

- Standard description:

  - Manual tongs made of drop-forged steel for grabbing & lifting rails. It has ample handles that simplify the work and assure a perfect grab. It has been zinc-coated for increasing quality and durability.



- Weight:

  - 7.5kg

1.1.2.23. Sleeper Tong

- Standard description:
  Manual tongs made of drop-forged steel for grabbing and lifting sleepers. It has ample handles that simplify the work

and assure a perfect grab. It has been zinc-coated for increasing quality and durability.

- Weight:
  - 8.0kg

1.1.2.24. Heavy duty Industrial Tri-point blade

- Standard description:
  - For brush cutters and large trimmers
- Technical data:
  - Teeth – 3
  - Length – 255mm
  - Thickness – 3.0mm
  - Hole – 20mm
  - Hole type – Round slotted

1.1.2.25. Heavy duty Industrial Nylon trimmer lin

- Standard description:
  - For brush cutters and large trimmers
- Technical data:
  - Thickness – 3.5mm
  - Weight – 2kg

1.1.2.26. Heavy duty Industrial grass Slasher

- Standard description:
  - For grass cutting
- Technical data:
  - Dimensions (L x W) – 40mm x 60mm
  - Weight – 0.49kg

1.1.2.27. Two-way Radios

- Standard description:
  - Heavy-duty two-way repeaters

- Technical data:
  - Range: minimum 5km radius

1.1.2.28. Hammer

- Standard specification:

  Handle: Rubber

- Technical data:
  - Dimensions (L x W x H) – 110mm x 50mm x
  - Weight – 1.8kg

1.1.2.29. Wooden Sleeper Drill bit 17mm

- Standard description:
  - 17.5mm Railway wooden sleepers drill bit

1.1.2.30. Cold Chisels

- Standard description:
  - Dimensions (L x W) – 300mm x 32mm

    Cold chisels with hand grip and guard

aint Brush Set

- Standard description:

  5 Piece paint brush set.

1.1.2.31. Jerry Can

- Standard description:

  5, 10, 20 litres steel jerry can set.

1.1.2.32. Hard Brooms

- Standard description:

Hard bristle broom.

2. AREA OF OPERATION AND ACCESS OF SITE.

2.1. Permanent way maintenance tools shall be supplied and delivered to Metrorail Perway Depot in Pretoria Gauteng region (Rebecca Depot in Pretoria West).

3. PRODUCT REQUIREMENTS.

3.1. All Permanent way maintenance tools to be supplied must be SABS and ISO compliant and must meet with the technical specification provided.

3.2. All Permanent way maintenance tools to be supplied must have a 24-month warranty, with a 24-month maintenance/repair plan and a lead time to repair of five working days.

4. INFORMATION TO BE SUBMITTED BY THE SUPPLIER

4.1. Details of at least three (3) manufacturers of Permanent way maintenance tools they wish to supply and a broacher before purchasing of this Permanent way maintenance tools.

5. DELIVERY AND PACKAGING

5.1. All Permanent way maintenance tools must be parked and delivered with care and any damage occurred during transit is of the supplier's account and PRASA will not accept any damaged tools or be liable for such.

6. GENERAL

6.1. The supplier is responsible for the safekeeping of all tools in his possession. Any loss of, or damage to tools (while in his possession) will be for the supplier's

account.

6.2. It is a requirement of this contract that the supplier supply PRASA with sufficient proof of relevant previous experience of supplying of the Perway maintenance tools listed on this contract before the contract can be awarded.

6.3. The supplier shall supply PRASA with details of at least three (3) manufacturers of tools they wish to supply and a broacher before purchasing this tools. This is to be submitted with the tender document.

6.4. PRASA will verify all the provided references and manufacturers.

6.5. PRASA do reserve the right to verify quality of all supplied tools to see if they conform with the prescribed specifications. Any irregularities will not be accepted by PRASA, who have the right to cancel contract/agreement.

7. PROJECT SPECIFIC SAFETY RELATED REGULATIONS

7.1. All work in this contract shall comply with the Occupational Safety Act No 85 of 1993, National Environmental management Act 107 of 1997 Act and construction regulation 2014. These items shall all be included in the tendered rates, a copy of the act as well as an approved safety file shall be kept on site for the duration of the project.

8. GUARANTEE

8.1. The supplier will be required to guarantee all the Permanent way maintenance tools to be supplied against all defects attributable to faulty manufacture, workmanship, and quality of materials for a period of 24 month. Tools that fail in service before the expiration of the guarantee period due to such faults shall be replaced free of charge at the initial point of delivery.

9. ACCEPTANCE OF TOOLS AT POINT OF DELIVERY

9.1. All tools supplied must be completely new as per the manufacturer specification and will be tested by the Technical Manager to ensure that they meet with the required technical specifications.

10. PAYMENTS

10.1. The Project Manager or his/her delegated person and the supplier will together assess the quantities and quality of the delivered tools before acceptance of the delivery and therefore Invoices for payment purposes will be accepted for processing.

10.2. The supplier shall then submit a VAT invoice and attach the above Progress Certificate for payment by the Employer.

10.3. Claims for payment will only be made on a monthly basis and payments will be made within 30 days of approved invoices.

10.4. The supplier to provide the Employer with the necessary details regarding banking details to enable the Employer to make electronic payments.

11. BOND AND GUARANTEES

11.1. All machinery to be supplied must have a 24-month warranty, with a 24 months maintenance plan and a lead time to repair of five working days.

11.2. Completion certificate will be given in writing after all contract obligations are met and approved by PRASA Project Manager.

11.3. Corrective action to be taken by the Supplier during the guarantee period at his/her own cost and expense.

11.4. Project Manager will, where practicable be entitled to take corrective action of its own should the supplier not be able to give immediate attention at the time a fault occurs and recover from the contractor any costs and expenses reasonably incurred by it in doing so as per penalty clauses.

12. PRICING OF THE WORKS

12.1. The supplier shall supply an item list with prices in South African currency with their tender document and Prices shall be inclusive of transport to the point of delivery inclusive of loading and off-loading in Gauteng Province (Rebecca Depot in Pretoria West) and must also be VAT inclusive at an ex-works and in DDP (deliver duty paid) and must be valid until the duration of contract.

12.2. The supplier shall also indicate a minimum order quantity as well as lead time for each item.

12.3. All items to be priced as per the provided bill of quantities.

13. PENALTIES

13.1. If the supplier fails to complete the Services within the time as stipulated in this Contract for completion of Services or a part or portion of Services, the Supplier shall be liable to the Employer for an amount calculated at 0.05% of the Contract Price per delayed Day per order, which shall be paid for every day which shall elapse between the time for due completion and completion of the relevant Services. However, the total amount due under this sub-clause shall not exceed the maximum of 10% of the Contract Price.

13.2. The imposition of such penalty shall not relieve the supplier from its obligation to complete Services or from any of its obligations and liabilities under the Contract,

13.3. PRASA may set off or deduct from the fees due to the supplier any penalty amounts due and owing by the Contractor in terms of clause 5.13.1

14. APPLICABLE SPECIFICATIONS

14.1. The documents forming the contract are to be taken as complimentary to each other. In case of any discrepancy or inconsistency between contract documents, the order of precedence will be:

14.1.1. Manual for Track Maintenance (2000).

14.1.2. Safety Arrangements and Procedural Compliance with the Occupational Health and Safety Act (Act 85 of 1993) and Applicable Regulations (SHE Specification).

14.1.3. Railway Safety Regulator Act (Act 16 of 2004).

15. IS THIS A CIDB RELATED PROJECT? (YES / NO)

No.

If YES, what is the applicable Class of Work & Grade?

Class of Work: N/A

Minimum Grade: N/A