SCM SUBMISSION: SPECIFICATION / SCOPE OF WORK	
PURPOSE OF SUBMISSION	
DESCRIPTION OF GOODS / SERVICES / WORK	APPOINTMENT OF A SERVICE PROVIDER FOR THE SUPPLY, DELIVERY AND OFFLOADING OF BALLAST IN THE METRORAIL GAUTENG REGION.
REQUEST FOR PROPOSAL NUMBER	
DIVISION	METRORAIL GAUTENG REGION
USER DEPARTMENT	PERWAY & STRUCTURES
DATE SUBMITTED	

Contents

1. INTRODUCTION

This submission is aimed at getting the approval for the appointment of service providers for the supply, delivery and offloading of ballast in the Metrorail Gauteng region

The Gauteng Region is a network of commuter rail services in Gauteng province in South Africa, servicing the Johannesburg and Tshwane metro areas. It is operated by Metrorail, a division of the Passenger Rail Agency of South Africa (PRASA).

Metrorail routes spread out across the province from three main hubs: Park Station in Johannesburg, Germiston Station on the East Rand, and Pretoria Station. Routes service central Johannesburg, the East Rand, Soweto, the Vaal Triangle, the West Rand, central Pretoria, and suburbs to the north, east and west of Pretoria.

2. BACKGROUND INFORMATION

1.1. Status quo:

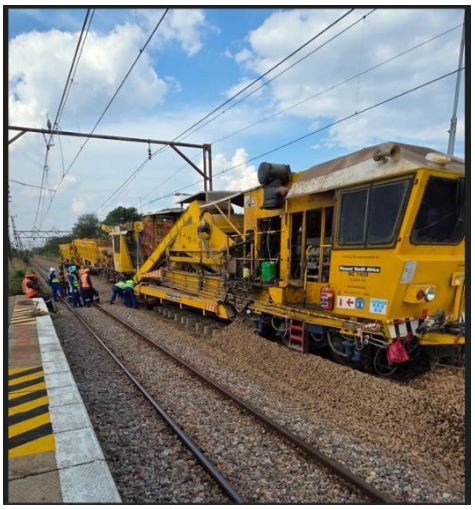
The Permanent way department has embarked on a Perway infrastructure rehabilitation by means of on-track machine packages that is comprised of ballast screening machines, Tamping machines, Track stabilizer machines and ballast regulator machines. Ballast is one of the main materials that is required when rehabilitation works are in progress and works cannot be possible if ballast is not supplied as most of the ballast get spoiled as it has reached its lifecycle or rather it no longer meets ballast quality requirement.

1.2. Problem statement:

PRASA is required to ensure that infrastructure is maintained and in good operational condition that conform to the required operating and safety standards, screening has not been executed in a very long time and this poses a safety risk on Perway infrastructure as ballast main purpose is to bear and distribute load; facilitate water drainage and to control vegetation which might interfere with the track structure.

It has also come to light that some of the areas are experiencing shortage of ballast due to lifespan, washaways caused by flooding during the rainy seasons which sometimes leads to service disruptions, ballast contamination caused by illegal trenching which led to poor drainage and service disruption. The procurement of ballast is urgently required, so that the department can be able to carry routine maintenance which will improve safe passage of trains and mitigate potential incidents and train delays.

1.3. Pictorials:



3. OBJECTIVE OF THE PROPOSED PROJECT

1.4. Desired outcomes for carrying out the proposed project

The project aims to restore the Perway infrastructure to enable the safe running of the train service. This will therefore assist PRASA in achieving its primary mandate of providing a reliable rail transport service to Gauteng commuters and enable the business to collect fare revenue from those commuters.

1.5. Project benefits to PRASA

In line with the PRASA strategic objectives and Operational effectiveness, Perway department aims to achieve continuous Perway service improvement and reliable track network. This can be achieved through the proactive management and procurement of ballast required to support the track infrastructure, in order to render a safe and reliable train service.

By restoring the Perway system to its design specification, maintenance cost, train disruptions that are due to the Perway system failures will be reduced thus improving the service offering.

1.6. Current mechanisms in place to address the problem

There's no active contract for supply and delivery of ballast which hinders the effort to rehabilitate Perway infrastructure.

4. SCOPE OF WORKS AND AREAS OF FOCUS

4.1. The project entails the supply, delivery and offloading of ballast in the Metrorail Gauteng region. and includes the following in terms of work to be done at all identified areas in order to ensure compliance:

4.1.1. <u>Supply, delivering and offloading of ballast will include the following activities:</u>

4.1.1.1. Ballast is to be loaded onto AY rail wagons at the supplier's local siding by the supplier.

4.1.1.2. Ballast transported by rail to be done by PRASA however the contractor's team must be ready on site to spread ballast where ballast is being offloaded and final level to conform with track manual and to be approved and signed off by PRASA Technical Officer/Track Inspector.

4.1.1.3. In some instances of derailments and emergencies, where AY rail wagons are not available, the contractor will be responsible for delivering ballast by road to PRASA stockpile siding. Location to be confirmed with Technical Officer/Track Inspector.

4.1.1.4. Prices tendered shall be the ex-works, loaded onto road trucks and transport cost will be borne by the supplier.

4.1.1.5. All work is subjected to the terms of the succeeding clauses, drawings, specifications and conditions pertaining to this contract.

4.1.1.6. PRASA Technical Officer/Track Inspector or his delegate together with Contractor's Track Master/Inspector will assess the site before the project commences.

4.1.1.7. Quality Assurance Plan.

4.1.1.8. Project Execution Plan encompassing liaison with all the role players i.e. PRASA Rail, Transnet Freight Rail and Local Authorities.

4.1.1.9. All work will have to be done by the contractor with machinery, equipment, transport and Labour that he shall provide, maintain and operate during the contract period.

4.1.1.10. The contractor will be responsible for Health and Safety compliance on site.

4.1.1.11. PRSA Track Inspector and the contractor Track Inspector master will be responsible for arrangement of occupations.

4.1.2. Ballast stones:

4.1.2.1. Compliance

4.1.2.1.1. Ballast stone shall comply with SABS 1083 (latest revision). In addition, ballast stone shall comply with the requirements specified hereinafter.

4.1.2.1.2. Acceptance of the stone shall also depend on a full petro graphic analysis to identify any micro fissuring, weakness and/or the presence of undesirable minerals that could lead to early degradation.

4.1.2.2. Loading and Off-loading

4.1.2.2.1. The Contractor must be willing to offload ballast stone on weekends and public holidays.

4.1.2.2.2. Before the Contractor start loading the AY or DZ trucks in the siding, he must ensure the doors are closed.

4.1.2.3. Cleaning of the Siding

4.1.2.3.1. The Contractor must ensure that at least 3 meters on both sides of the railway line is clean and level in the siding. The ballast in the centre of the line must be level with the sleepers.

4.1.2.4. Standard of workmanship

4.1.2.4.1. If the ballast delivered does not comply with specifications as mentioned in this document, it will not be paid for.

4.1.2.4.2. Material: The Contractor shall ensure that all material conform to the minimum standard as per appendix A, B and C.

4.1.2.5. Damage

4.1.2.5.1. Should any damages been caused to any assets of PRASA by the Contractor during the execution of his/her duties, it will be for the Contractor's account**.**

4.1.2.6. Ballast Stone

4.1.2.6.1. In the soundness test described in Appendix A, the loss in mass shall not exceed 5% after 20 cycles of the tests.

4.1.2.6.2. No doleritic stone shall be found to be broken when conducting the durability test described in Appendix B.

4.1.2.6.3. The Los Angeles abrasion value, determined in accordance with ASTM C 131- 89 grading B, shall not exceed 22%.

4.1.2.6.4. The plasticity index on the fines developed from the Los Angeles abrasion test shall be less than 6.

4.1.2.6.5. Flakiness index measured in accordance with SABS 1083 (latest revision) shall not exceed 30%.

4.1.2.6.6. Voids measured in accordance with SABS 1083 (latest revision) shall not be less than 40%.

4.1.2.6.7. The relative density shall not be less than 2.5.

4.1.2.6.8. Grading shall comply with the following for heavy axle lines (S1)

NOMINAL APERTURE SIZE OF SIEVE MM	% BY MASS PASSING
73.0	100
63.0	90 – 100
53.0	40 – 70
37.5	10 – 30
26.5	0 – 5
19.0	0 - 1

The Mill Abrasion value, determined according to test procedure described in Appendix C, shall not exceed 7%.

4.1.2.7. Specification for stone – Appendix A

4.1.2.7.1. **Test for soundness of stone (Sodium Sulphate Method)**

4.1.2.7.1.1. A1 – Test solution

Prepare a saturated solution of anhydrous Na SO or crystalline Na SO. 10H O is distilled or demineralized water between 33 o C and 35o C. Use sufficient of the salt to give excess crystals after thorough stirring. Cool to between 22 o C and 24o C and keep this temperature for at least 16 h. Stir thoroughly before use.

4.1.2.7.1.2. A2 - Preparation of test specimen

From a representative sample of stone take a random specimen of at least 500g passing a 19mm and retained on a 13,2mm sieve. Wash the specimen to remove all adhering material. Dry at 105 ° C in a well-ventilated oven and determine the mass after cooling. Continue drying until the decrease in mass after each of 2 successive drying periods of 4 h does not exceed 0,1 % of the total mass. Let this mass be M1.

4.1.2.7.1.3. A3 – Procedure

A3.1 Place the specimen in a porcelain dish and cover fully with test solution between 20 °C for 7 h. Decant the solution taking care that no stone is lost.

A3.2 Dry the specimen for 15 h at 105 °C. Allow the specimen to cool for 2 h. This completes one cycle of the soundness test.

A3.3 Repeat the cycle described in A3.1 and A3.2 as often as specified. After every fifth cycle, wash the specimen on a 1,70 mm sieve with hot water until no crystalline sodium sulphate is visible and continue the test with material retained on a 1,70 mm sieve.

A3.4 After completion of the final cycle, wash the specimen in hot water until the washings are free of sodium sulphate. Dry the specimen to constant mass and screen on a 1,70 mm sieve. Let the mass retained on the sieve be M2.

4.1.2.7.1.4. A4 – Loss

Calculate the percentage loss in mass from the formula

$$\frac{(M1 - M2) \times 100\%}{M1}$$

4.1.2.8. Durability test for stone – Appendix B

4.1.2.8.1. **Test for soundness of stone (Sodium Sulphate Method)**

4.1.2.8.1.1. B1 – Preparation of test specimen

From a representative sample of ballast stone take at random 100 stones passing a 53.0 mm and retained on a 26.5 mm sieve. Wash the stones to remove all adhering material. Dry the stones at 105 °C in a well-ventilated oven and determine the mass after cooling. Continue drying until the decrease in mass after each of 2 successive drying periods of 4 h does not exceed 0.1% of the total mass.

4.1.2.8.1.2. B2 – Procedure

Place the 100 stones in a suitable container and cover with ethylene glycol between 18 °C and 25 °C for 20 days. Determine the number of stones that have broken or can be broken by hand.

4.1.2.8.1.3. B3 – Testing

The supplier must send a (3) monthly sample to laboratory for testing and all cost will be paid by the supplier, the suppler must send the results to PRASA.

PRASA will take random test and send to the laboratory for testing and cost will be paid by the supplier.

4.1.2.9. Mill Abrasion Test – Appendix C

4.1.2.9.1. C1 – Test Method

4.1.2.9.1.1. Prepare a test sample of the ballast under test, consisting of 1.5kg each of the following two particle sizes:

<37.5 mm > 26.5 mm and <26.5 mm > 19 mm.

The particles shall be washed and oven – dried to a constant weight before it is weighed and tested.

(Wo = the total weight of sample)

4.1.2.9.1.2. Place the sample in the porcelain mill pot and add 3 litres of distilled water. Ensure that the cork washer is correctly in position before tightening the lid securely.

4.1.2.9.1.3. The mill pot is placed in a horizontal position on the two rollers of the test apparatus with the lid on the side of the electric motor in order that the counter's sensor is activated with each revolution of the mill pot.

4.1.2.9.1.4. The mill pot shall be rotated at 33 r.p.m. for a total of 10 000 revolutions.

4.1.2.9.1.5. The sample shall then be wash – sieved through a 9.5 mm sieve placed on top of a 0.075 mm sieve and then oven dried to a constant weight.

4.1.2.9.1.6. Record the dry mass of the material on the sieves:

W1 = mass of material on 9.5 mm sieve.

W2 = mass of material on 0.075 mm sieve.

C 2. **Evaluation method**

Calculate the following abrasion value:

$$MA = \frac{Wo - W1 - W2}{Wo} \times 100 = Mill\ Abrasion\ Value$$

4.1.3. Occupations

4.1.3.1. PRASA RAIL shall arrange the track occupations for work between trains or during total occupation for the area of occupation.

4.1.3.2. PRASA RAIL will endeavour to arrange occupations, total or between trains from 09:00 to 15:00 where practically possible on weekdays (Mondays to Fridays)

4.1.3.3. Work done must be completed during these occupations in order for Metrorail to open the track for normal rail traffic.

4.1.3.4. The contractor must conform to these occupations as laid down by the Technical Officer.

4.1.3.5. Occupation time used by the contractor in excess of the maximum specified occupation time will not be paid against overtime rates unless:

4.1.3.5.1. The Technical Officer agrees upon it in writing before the start of the occupation.

4.1.3.5.2. It can be proved by the contractor that delays caused by Metrorail resulted in an overtime claim.

4.1.3.6. Work will be done between trains or under total occupation as will be agreed before the work commence.

4.1.4. Provision of plant will include the following:

1. Provision and operating of Plant (TLB and Front-end Loader) in good working condition on an “as and when required basis”.
2. Maintenance of all provided plant and machinery and replacement when broken.

4.1.4.1. Basis of Provision of Plant and Hours of Duty

4.1.4.1.1. The Contractor on an “As and when required” basis shall provide the plant. The plant shall be supplied on site as agreed upon by the parties .

4.1.4.1.2. Normal weekdays or 10 Days out of 14 will be worked and off days can be taken through the week. Time worked in for off periods, over weekends, will be regarded as normal working time.

4.1.4.1.3. No standing time will be paid for time worked in, only as and when requested by PRASA plant will be paid for standing time.

4.1.4.1.4. The contractor's employees shall conform to the hours of duty required by the Project manager. The normal weekly hours of duty are 45 hours in a 5-day week, from 07h00 to 16h30 with a half hour break between 12h00 and 12h30. When so ordered by the Project manager, the contractor's employees shall work overtime and on statutory paid public holidays.

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4.1.5.6. Work will be done between trains or under total occupation as will be agreed before the work commence.

4.1.6. Initial Delivery of Plant

4.1.6.1. The Contractor shall deliver the plant in a full operational condition, with operator to the initial place of work as directed by the PRASA RAIL REPRESENTATIVE. Initial establishment and final removal from site will be paid for separately.

4.1.7. Fuel, Servicing and Maintenance

4.1.7.1. In all cases plant shall arrive on site, as directed, in a fully operational condition.

4.1.7.2. The contractor shall provide all fuel for the operation of the plant while on site.

4.1.7.3. The contractor shall ensure that the fuel tanks are full on arrival of plant on site.

4.1.7.4. The contractor will be fully responsible for the servicing, maintenance and carrying out of repairs at his own expense, and in his own time, during the duration of the contract. Maintenance of the plant must be within 2 hours after a breakdown was reported or the plant must be replaced by a similar model.

4.1.8. Provision Of TLB and Front-end Loader with operators (Provisional)

4.1.8.1. The Contractor shall provide a roadworthy TLB and Front-end loader with operators to PRASA RAIL for the work as required by the Project Manager on prescribed sections of railway lines as and when required.

4.1.8.2. The Contractor shall provide the TLB and Front-end loader with operators within one (1) working day (or within such other time as the parties may agree to from time to time)**. The Contractor shall not provide any additional machine and/or operator on verbal or written request from any PRASA representative. PRASA RAIL shall not affect payment for the unauthorised service rendered.**

4.1.8.3. The operators together with the plant required and requested by PRASA RAIL shall report for duty at such times or places as may be agreed upon from time to time between PRASA RAIL and the Contractor.

4.1.8.4. The operator together with all the plant shall perform their daily duties at such times as agreed upon from time to time between PRASA RAIL and the Contractor.

4.1.8.5. The plant provided by the Contractor to PRASA RAIL in terms of this Agreement shall only be driven by operators supplied by the Contractor.

4.1.9. Responsibility of The Contractor IRO the Plant

The Contractor shall at his own cost -

4.1.9.1. supply to PRASA RAIL all the plant in a roadworthy condition, and complying fully with the requirements of the appropriate Road Traffic legislation, and in particular with the Road Traffic Act, 1989 (Act No. 29 of 1989) (as amended);

4.1.9.2. Ensure all plant machines supplied to PRASA RAIL comprehensively and in respect of all third-party risks;

4.1.9.3. Replace within two (2) hours of notification, any plant which is no longer acceptable to PRASA RAIL;

4.1.9.4. Keep the plant supplied in a clean, neat and working condition;

4.1.9.5. Remove from site any plant(s) requiring workshop repairs and return it (them) in a serviceable condition or replace it (them) as soon as reasonably possible for the Contractor to do so; and

4.1.9.6. Arrange to do daily and weekly checks on all its machines as far as is reasonably possible to do so.

4.1.9.7. Provide a logbook for each plant, that will be used to record hours worked, as recorded by the machine hour meter, which shall at all times be in working condition.

4.1.10. Responsibility of PRASA Rail IRO the Plant

PRASA RAIL shall -

4.1.10.1. Ensure that all the plant provided by the Contractor are not intentionally damaged or misused in any way by PRASA RAIL employees and be liable in respect of any damage or loss suffered by the Contractor as a result of the wilful misconduct of PRASA RAIL employees.

4.1.10.2. Ensure that all the plant are not loaded in excess of the load capacity specified by the motor vehicle manufacturer, or which is permitted by law, and shall at all times comply with the maximum permissible axle, axle unit, vehicle and combination masses as prescribed by the Road Traffic Act, 1989 (Act No. 29 of 1989) (as amended);

4.1.10.3. Not affix any item or sign, nor modify or attach an accessory to any plant provided by the Contractor without the prior written permission of the Contractor.

4.1.10.4. In the event of any occurrence giving rise to a claim under the Contractor's policy of insurance, advise the Contractor within forty-eight (48) hours of the occurrence thereof.

4.1.11. Maintenance of Plant

4.1.11.1. Maintenance, servicing and mechanical repairs (hereinafter referred to as maintenance), of the machines, including all adjustments necessary to keep the plant in a roadworthy and operational condition are included in the agreement and shall be provided by the Contractor at his own cost.

4.1.11.2. Should any plant provided by the Contractor break down or be involved in an accident while working on the prescribed sections of railway line in terms of this agreement, the Contractor shall, if that machine cannot be repaired within two (2) hours or is unable to proceed with its duties within two (2) hours, at his own cost, forthwith provide another vehicle in a roadworthy and operational condition to continue with its duty.

4.1.11.3. The Contractor shall inform PRASA Rail as soon as practically possible of any of his machine working in terms of this agreement which has broken down or has been involved in an accident.

4.1.11.4. The Contractor shall submit a monthly log sheet IRO all hours worked during the course of each machine duty. In the absence of a certified log sheet no payment shall be affected for any hours worked.

4.2. DELIVERABLES:

4.2.1 The following deliverables are to be provided by the appointed contractor:

4.2.2 Conducting of all ballast test at the Quarry and submit the report to PRASA Technical Officer. All ballast stone to comply with provided specifications.

4.2.3 Submission of all municipality and statutory applications and documents to enable work activities to commence.

4.2.4 Submission of method statement, health and safety plans as well as quality plan. These plans to be provided and approved before work commences.

4.2.5 Supply, delivery and offloading of ballast on an “as and when required basis” for a period of 12 months.

4.3. INFORMATION TO BE PROVIDED WITH TENDER:

4.3.1 The Bidders shall submit a detailed priced proposal with the following information at the time of tendering:

4.3.1.2 Detailed schedule (in Microsoft Project format) to show how work can be performed within timelines provided by PRASA.

4.3.1.3 Project Team organisation’s and individual team members’ recent experience on similar projects.

4.3.1.4 Project organogram showing names, function & responsibilities of Directors/HODs including all sub-ordinates to the lowest ranked positions involved in this project.

4.3.1.5 Clear legal relationship, namely joint venture agreement where it applies and responsibility between Joint Venture or Consortium members or with sub-contractors if tendered by a single entity.

4.3.1.6 Proof of professional indemnity insurance valid for the duration of the project.

4.3.1.8 Detailed health, safety and environmental plan that is site specific and customized for working in a railway environment.

4.3.1.9 Detailed quality management plan clearly stating all the quality management processes and procedures that the contractor will follow in delivering the scope of work to PRASA.

4.4. MEASUREMENTS AND PAYMENT:

4.4.1. Payments will only be made against completed milestone as per the appointed contractor's schedule of works, payment schedule and proposal.

4.4.2. The PRASA Project Manager will certify payments to the appointed contractor.

4.4.3. The unit of measurement for both working and standing time will be the hour.

4.4.4. Payment will only be made:

4.4.4.1. For total quantity of ballast delivered and spread where required.

4.4.4.2. For actual hours worked at the prices quoted in the Schedule of Rates, for working time.

4.4.4.3. The unit of measurement will be as per items in the schedule of quantities.

4.4.4.4. No down time claim for inclement weather will be paid.

4.4.4.5. No escalation will be paid. Allowance for escalation cost must be provided for in the tendered price.

4.4.4.6. The contractor shall submit his/her claim certificate which will be checked and certified by the Project Manager before payment can be processed. The Project Manager shall check claimed quantities against actual completed quantities and make necessary adjustments before payment can be processed.

4.5. PROTECTION OF WORKPLACES:

4.5.1. Protection of the workplace will be done by flagmen supplied by the PRASA and all liaisons with Train Services shall be done by the contractor's supervisor together with PRASA RAIL Track Inspector/Master.

4.5.2. It is the responsibility of the contractor to provide security on site for equipment, material and personnel for the duration of the contract.

4.6. SAFETY:

4.6.1. 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.

4.6.2. A copy of the act as well as an approved safety file shall be kept on site for the duration of the project.

4.6.3. The Contractor shall comply with all applicable legislation and PRASA's safety requirements adopted from time to time and instructed by the Project Manager. Such compliance shall be entirely at the contractor's cost and shall be deemed to have been allowed for in the rates or total prices in the contract.

4.6.4. The Contractor shall report all incidents in writing to the Project Manager. Any incident resulting in the death of or injury to any person on the works shall be reported within 1 hour of its occurrence and any other incident shall be reported within 24 hours of its occurrence.

4.6.5. All personnel employed by the Contractor shall have undergone a Health and Safety Induction.

4.6.6. Permits to work (in line with Covid-19 regulations) shall be issued at the cost of the contractor to all personnel on that shall be signed and stamped by the authorized PRASA Official responsible for Risk Management.

4.6.7. The contractor shall ensure that all COVID - 19 protocols are adhered to.

4.6.8. The Contractor shall make necessary arrangements for sanitation, water and electricity at these relevant sites during the installation of the equipment.

4.6.9. The safety file will be approved only after all the requirements on the checklist are met. WITS_LIB/RISK_MGT/SHE File Checklist (version 3) is attached in this regard.

4.6.10. All work shall at all times comply with the E7/1 Specification attached hereto.

4.6.11. Normal protection measures in accordance with the Protection Manual shall apply.

4.6.12. An effective safety procedure to be followed by all personnel on any work site in the case of approaching rail traffic shall be compiled by the Contractor and implemented before any work commences. This procedure shall be updated whenever the need arises, and any changes shall be communicated to all employees on a works site before work proceeds.

4.6.13. The Contractor shall be responsible for the safety of personnel on site.

4.6.14. The following shall also form part of the safety plan:

4.6.14.1. Transportation of tools, equipment and personnel

4.6.14.2. Transportation, storage and handling of hazardous equipment.

4.6.14.3. The site access certificate shall only be issued (to the successful bidder) after the evaluation and approval of the safety file.

4.6.15. It is the requirement of this contract that the contractor should provide PRASA with a detailed safety plan prior to being issued with a site access certificate, in accordance with the latest version of the OHS Act and the SPK7 and the PRASA SHE specification.

4.7. GENERAL

4.7.1. The Contractor shall ensure that all staff working on or with the contract are adequately trained, so as to comply with any relevant safety and quality requirements.

4.7.2. Flagman must be officially trained, evaluated and certified competent, (TETA - ASSR 463972 (Accreditation no: TETA 1186) and Transnet 407 – Item Number 37/270451 - "Certificate of Competency") by a designated competent person, before being used on protection duties. This certificate of competency shall remain valid for two (2) years only after, which re-testing and re-certification of competency will be required.

4.7.3. Flagmen will be tested by PRASA representative and if found not competent will

not be allowed to form part of the contractor's team.

4.7.4. PRASA Rail Regional Engineer remains ultimately responsible in terms of the requirements of Act 85 for the safe working environment of his/her own personnel as well as contractor's personnel within the track maintenance environment on his/her region/depot.

4.7.5. The Regional Engineer is therefore also responsible for ensuring that any changes in the Protection Procedures that may occur over time are effectively communicated to any flagmen prior to them being used for Protection Duties.

4.8. METHOD STATEMENT

4.8.1. Contractor is requested to submit with their tender a method statement, in it the following should be outlined in detail:

4.8.1.1. Procedure in carrying out the work (working methods)

4.8.1.2. Technical and Engineering capability (Certificates of key personnel staff)

4.8.1.3. All Resources (Labour, Plant, Equipment, Support and Outside Services) that the contractor proposes to use in the execution of the works.

4.9. HOURS AND DAYS OF DUTY / OCCUPATION

4.9.1. Work shall proceed during weekdays from 06h00 to 18h00 and or over weekends from 06h00 to 18h00.

4.9.2. Work outside of normal working hours shall not be paid against overtime rates unless:

4.9.2.1. Agreed upon by the Project Manager in writing before the start of the any project task.

4.9.2.2. The contractor can prove PRASA Rail's accountability for delays resulting in overtime being required.

4.10. BONDS AND GUARANTEES

4.10.1. Surety in the amount equal to either five percent or five percent of the contract price, as elected by the Contractor, shall be provided by the Contractor for the due and faithful performance by him in terms of the Contract. Such security shall be in the form of:

4.10.1.1. Government or approved Municipal stocks in negotiable form, or

4.10.1.2. A deed of suretyship furnished by an approved bank, insurance or guarantee corporation in such form as may be prescribed by PRASA, provided however that the Project Manager may, upon written application by the Contractor, return to the Contractor the whole or part of such security held by PRASA.

4.10.2. All work done shall be guaranteed for a period of 12 month after the successful handover.

4.10.3. All completion certificates will be given in writing after all contract obligations are met and approved by PRASA Project Manager.

4.10.4. Formal completion certificate will be given in writing after all contract obligations are met and approved by PRASA Project Manager.

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

4.10.6. Project Manager will, where practicable be entitled to take corrective action of its own should the Contractor 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.

4.11. PAYMENT CERTIFICATE

4.11.1. On or after the assessment date, the Supervisor and the Contractor will together assess the quantities of the progress on each item in the Bill of Quantities and complete the Progress Assessment Detail form, where after the Progress Assessment Certificate will be issued.

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

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

4.11.4. Contractor to provide the Employer with the necessary details regarding banking details to enable the Employer to make electronic payments.

4.12. PRICING THE WORKS

4.12.1. The contractor is required to provide firm prices/ rates for material and labor for the duration of the contract.

4.12.2. The Contractor is advised to study the requirements of the SPK 7/1 and ensure that all works can be completed in accordance with these requirements.

4.12.3. The contract offer shall be based on the rates as indicated in the bill of quantities. The quantities shall be agreed during construction per section.

4.13. PENALTIES

4.13.1. If the Contractor fails to complete the Services within the time a stipulated in this Contract for completion of Services or a part or portion of Services, the Contractor 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.

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

4.13.3. PRASA may set off or deduct from the fees due to the Contractor any penalty amounts due and owed by the Contractor in terms of clause 4.13.1

4.14. CONSTRUCTION RELATED SECURITY

4.14.1. Mandatory Security Requirements

4.14.1.1. All security companies used by the Contractor shall be PSIRA registered with valid letter of good standing.

4.14.1.2. Security personnel shall all be PSIRA registered with a clear criminal record no criminal pending cases and preferably be sourced from the local community.

4.14.1.3. All security officials utilised in this project shall be South African Citizens.

4.14.1.4. All personnel employed by the Contractor including sub-contractors shall have undergone a Health and Safety Induction.

4.14.1.5. Permits to work (in line with Covid-19 regulations) shall be issued at the cost of the contractor to all personnel on that shall be signed and stamped by the authorized PRASA Official responsible for Risk Management.

4.14.1.6. The security to be provided by the contractor shall be responsible for both the appointed contractor's assets and PRASA's assets on site until the site is handed over to PRASA. A list of all functioning equipment that do not form part of this scope of work will be shared with the successful bidder and shall be signed off by both the successful bidder and PRASA's representative.

4.14.1.7. PRASA assets that shall be guarded by the contracted security includes Permanent way assets, All Train Authorisation on track elements, all train stations (with all assets included) along the section and all functioning equipment along the corridor.

4.14.1.8. Any lost or stolen material shall be replaced by the contractor at his own cost.

4.14.1.9. The contractor shall provide on-site security for personnel and material stock and should ensure that patrols are in place at the section handed over to the contractor and until the completed work is handed over to PRASA. No claims of material or losses shall be lodged with the client for stolen goods during the construction

before the completed work is handed over to PRASA.

4.14.1.10. Furthermore, it is the contractor's responsibility to ensure that valuable metal i.e. copper is adequately protected while in transit to and from site.

4.14.1.11. The contractor shall make sure that all material removed from site is quantified, counted, logged in the site diary and that it is co-signed by a PRASA representative on site before it is removed from site.

4.14.1.12. Scrap metal removed from the section shall be adequately protected until it is delivered to PRASA's stores.

4.14.1.13. PRASA reserves the right to conduct ad-hoc inspections to ensure Compliance.

4.14.2. Risks

4.14.2.1. Tabulated below are the associated security Risks and proposed mitigation measures. It should be noted that this are minimum risks identified and bidders shall be responsible for conducting their own risk assessment that will influence their quotations.

Risk	Probability	Mitigation
Project Hi-jacking – Regulation 9 30% Subcontracting. This includes the provision of security.	High	Social Facilitation to ensure community involvement and buy in. PRASA recommends an approach that involves the local community. Failure to ensure local involvement can result in serious work stoppages.
Theft of Installed equipment	High	Fit for purpose security with an integrated plan for assets installed and physical security at site office. Ensure protective measures for site with an access gate.
Hi-jacking of site personnel vehicles	High	Armed Escorts to and from the site
Armed Robbery of personnel on site and Storage Facility at site	High	Armed Guarding at site and site office with an armed response for mobilisation

4.14.3. Proposed Interventions

4.14.3.1. Minimum of 2 vehicles with armed response officers (2-4) per vehicle strategically deployed within the site. To supplement the vehicles, a suitable number of day and night visible officers on foot patrol is required.

4.14.3.2. Requisite equipment:

4.14.3.2.1. Bullet proof vests.
4.14.3.2.2. Spotlights.
4.14.3.2.3. Night vision equipment.
4.14.3.2.4. Torches.
4.14.3.2.5. Tactical Radios (PTT with GPS and Panic Button). This should be the primary communication for all personnel on site.
4.14.3.2.6. Handcuffs (disposable type) and other standard equipment.
4.14.3.2.7. Firearms with extra magazine.

5. Any other equipment identified though the risk assessment.

5.9.1.1.1. Any other equipment identified through the risk assessment.

4.15. FORM OF CONTRACT:

General Condition of Contract (GCC) will be used as form of contract.

4.16. AREA OF FOCUS: METRORAIL GAUTENG REGION

4.17. PREFERRED OPTION

This is the latest available preferred option of tackling the problem as also prescribed or recommended by the Perway Track maintenance manual, Railway Safety Regulator and the South African National Standards.

4.18. TARGETED AREAS BY THIS PROJECT

The targeted area by this project is Metrorail Gauteng Region.

4.19. EXTENT AND COVERAGE OF THE PROPOSED PROJECT

The extent and coverage area is Metrorail Gauteng Region.

4.20. OTHER RELATED PROJECTS

On-track Screening Project

5. OVERALL STAFFING AND KEY RELATED PROFFESIONAL STAFF

5.1 STAFF REQUIREMENTS

The appointed Contractor will be required to provide qualified and experienced professional staff with the following key professional expertise:

1. Project or Contract Manager (Civil).
2. Plant Operators

Professional Body Registration

- **South African Council for the Project and Construction Management Professions:** Pr. CPM, CPM **and/or** Pr. CM, CM **and/or** Pr. CHSA, CHSO and CHSM
- **Project Management Profession Certification:** PMP
- **Road Traffic Management Corporation (RTMC)**
- **Quality Council for Trades and Occupations (QTCO)**

Details of the minimum qualifications for the technical staff listed above are outlined in the Technical matrix.

5.1.1. PROJECT OR CONTRACT MANAGER

The desired minimum qualifications for the Project or Contract Manager are as follows:

- BSc, B-Tech Degree or National Diploma in Project Management
- More than 5 years of post-graduate experience.
- Project Management qualification over 5 years' experience in Project Management.
- South African Council for the Project and Construction Management Professions (SACPCMP) professional registration certification or Project Management Professional (PMP) Certification.

- More than 5 years of leadership experience on similar or related projects;

5.1.2. PLANT OPERATORS

The desired minimum qualifications for the Health and Safety Officer are as follows:

- In possession of Valid driver's licence
- In possession of plant and machinery operation licence/certificate
- Minimum Three (3) years relevant experience

6. TECHNICAL SPECIFICATIONS RELATED TO THIS PROJECT:

6.1.1. 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:

a) SANS 3000-1 to 2, Railway Safety Management.
b) SABS 1200NB Railway Sidings (Track work).
c) EN13674-1, UIC 860-0, UIC 8610-1 or the latest equivalent standard.
d) EN13848 - Railway applications – Track geometry quality or the latest equivalent standard.
e) Standard specifications E7/1.
f) Safety Arrangements and Procedural Compliance with the Occupational Health and Safety Act (Act 85 of 1993); PRASA SHE Specification and Applicable Regulations; including any subsequent amendments.
g) E10: General Specifications for Railway Track work.
h) E10/1: Laying of Rails.
i) E10/2: Laying of sleepers.
j) E10/4: Ballasting and alignment.
k) Manual for Track Maintenance (2000).
l) Railway Safety Regulator Act (Act 16 of 2004)
m) Infrastructure Perway Technical Specification for Rails

7. PRICING SCHEDULE

ITEM NO.	DESCRIPTION	UNIT	QTY	Rate (EXCLING VAT)
1	**SUPPLY OF BALLAST**			
1.1	Ballast supplied, loaded and delivered by road trucks	m^3 /km	5000	
2	**PROVISION OF PLANT (wet rate) - Provisional**			
2.1	TLB	R/hr	180	
2.2	Front-end Loader	R/hr	180	
			Sub-total (VAT exclusive)	
			VAT	
			TOTAL (VAT Inclusive	

NB: Prices remain fixed for the duration of contract.

8. CIDB REQUIREMENTS

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

Class of Work: N/A

Minimum Grade: N/A

9. EVALUATION METHODOLOGY

9.1. Evaluation And Scoring Methodology

The evaluation of the Bids by the evaluation committees will be conducted at various levels.

The following levels will be applied in the evaluation:

LEVEL		DESCRIPTION
Verify completeness		The Bid is checked for completeness and whether all required documentation, certificates; verify completeness warranties and other Bid requirements and formalities have been complied with. Incomplete Bids will be disqualified.
Verify compliance		The Bids are checked to verify that the essential RFQ requirements have been met. Non-compliant Bids will be disqualified.
Detailed Evaluation of Technical		Detailed analysis of Bids to determine whether the Bidder is capable of delivering the Project in terms of business and technical requirements. **The minimum threshold for technical evaluation is [80%], any bidder who fails to meet the minimum requirement will be disqualified and not proceed with the evaluation of Price and Specific Goals.**
Specific Goals		Evaluate Specific Goals

LEVEL		DESCRIPTION
Price Evaluation		Bidders will be evaluated on price offered.
Scoring		Scoring of Bids using the Evaluation Criteria.
Recommendation		Report formulation and recommendation of Preferred and Reserved Bidders
Best and Final Offer		PRASA may go into the Best and Final Offer process in the instance where no bid meets the requirements of the RFP and/or the Bids are to close in terms of points awarded.
Approval		Approval and notification of the final Bidder.

Table 11.1: Levels that will be applied in the evaluation.

9.2. Evaluation Criteria

Interested bidders for this project shall be evaluated in terms for their administrative responsiveness, substantive responsiveness, technical/functional (capacity testing) evaluation and preference points. The evaluation committee shall use the following Evaluation Criteria depicted in table 11.2 below for the selection of the preferred bidder that shall render / deliver the required works, goods and / or services.

EVALUATION CRITERIA	WEIGHTING
Stage 1	**Compliance**
Stage 1A - Mandatory Compliance	
Stage 1B – Other Technical Mandatory Requirements	
Stage 1C – Basic Compliance	
Stage 2 - Technical Mandatory Requirements	**Technical/Functionality**
Technical/Functional Requirements	Threshold of 80%
Stage 3	**Price and Specific goals**
Price	80
Specific Goals	20

TOTAL	**100**

Table 11.2: Evaluation criteria for the selection of a potential bidder

The details of the stages outlined in Table 11.2 above are presented in following sections below.

9.3. Stage 1: Compliance Requirements

Bidders must comply with all mandatory requirements and failure to comply will lead to immediate disqualification.

Stage 1A- Mandatory Requirements

If you (Bidders) do not complete and submit the following documents your (Bidders) proposal will be automatically disqualified:

No.	Description of requirement	SUBMITTED (Yes or No)
a)	Completion and submission of the whole RFQ document inclusive of all forms/documents and declarations related to this RFQ document.	
b)	Completed BOQ / Pricing and delivery Schedule - Section 10 of this RFQ **NB: Prasa will notify the bidders of any arithmetic errors or omission identified on BOQ to obtain clarity.**	

Table 11.3: Mandatory requirement

Table 11.4: List of Mandatory Compliance Documents

Stage 1B - Basic Compliance:

If you do not submit the following basic compliance documents and should an award, be made, these basic compliance documents must be made available within three (3) days, failing of which the award will be recalled.

No.	Description of requirement	SUBMITTED (Yes or No)
a)	Letter of Good Standing: COIDA.	
b)	Supply of valid SARS Pin	

c)	Joint Venture, Consortium Agreement or Partnering Agreement/ Subcontract Agreement signed by all parties. The agreement should indicate the leading bidder where applicable.	
d)	CSD supplier latest report	

Table 11.4: Basic Compliance

NB: The report containing the list of potential sub-contractors has been drawn and maybe accessed through the following link: www.csd.gov.za using the project number for this bid and relevant Professionals / Services are as follows:

“Should bidders identify sub-contractors that meet the requirements as set in above who are not registered in any of the commodity categories listed above and/or are not registered on the CSD, bidders must ensure that these sub-contractors are registered in one of the listed commodity categories and registered on the CSD prior to the closing date and time. Bidders who do not meet this requirement will be disqualified and will not be evaluated further”.

9.4. Required Professionals / Services:

1. Project or Contract Manager (Civil);
2. Construction Health and Safety Officer;
3. Perway – Track Inspector/Master;
4. Railway – Flag Personnel x 3;
5. Perway - Track workers x 10