



# REHABILITATION OF SERVICE ROADS SPECIFICATION



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## **1. NATURE OF WORK**

1.1. PRASA RAIL intends to upgrade portions of gravel roads within the PRASA Gauteng Province

1.2. The work must be done in the Gauteng area

1.3. PRASA RAIL reserves the right to accept the whole or a portion of the tender, as listed in the schedule of quantities and prices.

1.4. The tendered prices shall consider and include all machines, plant and Consumables required for the proper completion of the work.

## **2. SUFFICIENCY OF TENDER**

2.1. The contract will only be awarded to a tenderer who has a proven record of wide experience in road works in South Africa.

2.2. The Contractor shall inspect and examine the site and its surroundings and shall satisfy himself with measurements, etc. before submitting his tender as to the form and nature of the site, the quantities and nature of the work, and material necessary for completion of the works, the means of access to the site, shall consider and consider any security and risks, contingencies and other circumstances that may influence, or affect his tender.

## **3. DURATION OF CONTRACT**

The contract will commence immediately after the appointment of the contractor for a period of 6 months.

## **4. COMPLIANCE WITH STATUTES**

4.1. The Contractor's procedures shall comply with all applicable legislation, Codes of Practice and Local, Regional or Provincial Authorities.

## **5. TO BE PROVIDED BY PRASA RAIL**

The following services to be provided free of charge by PRASA RAIL where required:

5.1. PRASA RAIL will make available old, rejected ballast material where available next to the track that can be used in the base layer. The extraction and transport of



the material shall be undertaken by the Contractor and the cost thereof shall be included in the rates.

- 5.2. A Site Access certificate. The Contractor will not be allowed to start with any part of the contract on site before a signed certificate has been issued.

## **6. TO BE PROVIDED BY THE CONTRACTOR**

6.1. In addition to all labour, materials, plant, equipment and incidentals needed to complete the work, the Contractor shall provide all accommodation and toilet facilities for his employees.

6.2. The Contractor shall provide at his own cost any security measures he may deem necessary for safe and effective execution of the work within the contract area for the duration of the contract.

6.3. The Contractor shall provide at his own cost a Site Instruction Book, a Site Dairy and a Safety File to be handed to the Technical Officer at the award of the contract. Work will not be allowed to commence without proof that the Safety File was approved by the PRASA Risk department.

6.4. A work program shall be submitted to the Technical Officer within 1 week from the date of the acceptance of the tender in the form of bar chart with sufficient detail to show clearly how the works will be performed.

6.5. The contractor is responsible to appoint the safety officer fulltime on site whose sole responsibility will be to manage and monitor safety related issues on site.

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

## **7. SCHEDULE OF QUANTITIES AND PRICES**

7.1. The quantities in the Schedule of Quantities are estimated and may be increased or decreased in accordance with operational requirements and budget constraints. The Contractor shall submit with his tender a complete and detailed priced schedule (prepared in black ink) for the work.

7.2. Each item shall be priced by the Tenderer. If the Contractor has omitted to price any items in the schedule, the tender may be rejected as incomplete.



7.3. The short description of the items in the schedule is for identification purposes only. The Minor Works Contract together with the Special Conditions of Contract and Specifications shall be read in conjunction with the schedules, and in so far as they have any bearing, shall be referred to for details of the description, quality, and test of plant and material used, and the workmanship, conditions, obligations, liabilities, and instructions generally which shall be complied with in carrying out the Contract. The cost of complying with all conditions, obligations and liabilities described in the contract documents including profit, shall be deemed to be included in the rates quoted by the Contractor in the schedule of quantities and prices.

## **8. CONTRACT PRICE ADJUSTMENT**

8.1. The Contractor's rates and contract price will be fixed for the duration of the contract and a contract price adjustment will not apply. The Contractor must allow in the tendered rates for any increases in prices such as for fuel, plant maintenance, material, tools, labour, etc.

## **9. SITE MEETINGS**

The Contractor shall attend site meetings when required. These meetings will be held under the chairmanship of the Technical Officer or his Deputy.

## **10. SITE BOOKS**

10.1. The site Instruction Book shall have triplicate numbered sheets for receiving and recording instructions by the Technical Officer and shall be clearly marked "Site Instruction Book".

10.2. The triplicate Site Diary shall be clearly marked "Site Diary". At the end of each day a line shall be drawn below the last entry of the day and both the Contractor and a Technical Officer or his Deputy shall sign across the line. If no entry was made, a "NIL" return must be entered and signed. The two carbon copies are for the Contractor and Technical Supervisor's files respectively.

10.3. Any claim arising from delays which cannot be substantiated by reference to the Site Diary will not be considered.

10.4. This Site Diary shall serve as a daily record of all relevant information concerning work done during the day and site conditions prevailing on site.



- 10.5. Only persons authorized in writing by the Technical Officer or Contractor may make entries in the site books.
- 10.6. Receipt of materials supplied by PRASA shall be recorded in the "Site Diary".
- 10.7. The Contractor must always keep a copy of the approved Safety File available on site.

## **11. INFORMATION TO BE PROVIDED WITH TENDER**

- 11.1. The Tenderer shall submit the following information at the time of tendering:
- 11.2. Full description of the plant and work methods to be used for all aspects of the work required ensuring performance as specified.
- 11.3. Whether the tenderer intends to work on Saturdays, Sundays or Statutory holidays or is prepared to work on such days if required to do so by PRASA.
- 11.4. The Schedule of Quantities and Prices must be completed in full.
- 11.5. An undertaking that all equipment will be ready for operation and that the work can commence timeously, to comply with requirements of the contract.
- 11.6. A detailed construction program shall be submitted with the tender.

## **12. PENALTIES AND REMEDIAL WORK**

- 12.1. The provisions in the Minor Works 287 contract, pertaining to "penalties for late completion" shall apply to this contract. Where the Contractor fails to complete the work within the contract period a penalty amount with respect to the contract per day will be applied.
- 12.2. Any trains delayed and/or cancelled caused by the Contractor for whatever reason, will be for his account. Penalties for trains delayed/cancelled will be at rate of R5000.00 per hour or part there-of no matter the number of trains delayed/cancelled. The time will be recorded in the Site Diary.

## **13. UNDERGROUND SERVICES**

- 13.1. Before work start on a section the Contractor must ascertain himself about services such as:
  - a) Electrical underground cables
  - b) Telecoms underground cables
  - c) Underground Signalling cables
  - d) Water pipes.



- 13.2. Before any excavations take place, the Contractor must contact the relevant department(s) to ensure their presence on site while excavating anywhere near the underground services.
- 13.3. The Contractor will be held responsible for the repair of any damage to all known services and assets.

#### 14. DEFINITIONS

- 14.1. **Technical Officer:** It is the Metrorail's Regional Engineer (Perway), his appointed Deputy or any person lawfully acting in that capacity.
- 14.2. **Re-surface:** Means the ripping of the in-situ layer to a depth of 150mm and the provision, raising, placement, mixing and compaction to a minimum 92% MOD.AASHTO of 150mm layer(s) of gravel or rejected ballast with the in-situ material to form the base layer, as well as the provision, placement, and compaction to a maximum 95% MOD.AASHTO of 150mm layer(s) of G5 material to form the top layer.
- 14.3. **Raising:** Means lifting the level of the road to a minimum of 300mm above the natural ground level adjacent the road.
- 14.4. **Re-shape:** Means the ripping of the in-situ layer to a depth of 150mm, grading it to the requested road profile and compacting it to a minimum 92% MOD.AASHTO.
- 14.5. **Scraping:** Means the levelling and shaping of the gravel road surface with a grader.
- 14.6. **Compact:** Means wetting of loose soil to the optimum moisture content and compacting it to the required percentage MOD.AASHTO.

#### 15. Standards of workmanship

- 15.1. The Contractor shall survey the selected portions of roads, prior to any construction work, and shall provide PRASA RAIL with an accurate and detailed longitudinal and cross section diagrams of the portions of the road surveyed at intervals as instructed by the Technical Officer. The volumes derived from the cross section will form the basis to determine the cost and payment for the portion of road worked on.
- 15.2. The Contractor shall shape and construct the road in accordance with the attached cross section diagrams, including raising the level of the road above the natural ground level and the establishment of "v" drains adjacent the road to direct and divert storm water away from the track and road.





- 15.3. All excess soil (windrows) resulting from the scraping and resurfacing shall be levelled or removed as agreed.
- 15.4. All material used to raise the road level, or resurface the roads shall be provided, placed, wetted and compacted in layers not exceeding 150mm layers to a minimum of 92% MOD.AASHTO.
- 15.5. The Contractor shall apply extreme care when working near live high voltage power lines, railway tracks, and bordering private property. The Contractor shall implement safe working practices and precautions to safeguard his personnel and prevent damage to infrastructure. The Contractor shall follow and abide by the prescriptions as specified in the E7/1 (Specifications for works on, over, under, or adjacent to railway lines and near high voltage equipment, where applicable.)
- 15.6. The Contractor shall appoint a responsible representative at the site, who shall be present while the works is in progress and ensure that safe working practices are implemented.

## **16. PROGRAMME OF WORK**

- 16.1. The Contractor shall undertake the planning and programming of the entire project and shall submit to the Technical Officer for approval full particulars thereof within one week from the date of acceptance of the contract.

## **17. PERFORMANCE MONITORING AND EVALUATION**

- 17.1. The Contractor shall always be responsible for supervision of the work and for follow-up instructions to monitor that the work is being done to specification. He shall immediately take appropriate remedial action, in areas where the specified standards are not achieved.
- 17.2. The Technical Officer shall at any time during the contract period cover inspections.
- 17.3. During these inspections conformance to the standards of workmanship shall be evaluated. Work that does not comply with the specified standards will be recorded as "rejected work" and will be subject to remedial action. The rejected work can only be contested by the Contractor at the time and place of rejection.

## **18. REMEDIAL WORK AND NON-PERFORMANCE**

- 18.1. The Contractor shall implement immediate remedial action of rejected work.



18.2. In the case of inaction or non-conformance by the Contractor, PRASA RAIL reserves the right to implement remedial action and recover the cost from the Contractor.

18.3. In the case of failure by the Contractor to execute the work in accordance with the contract document, PRASA RAIL shall reserve the right to cancel the contract with immediate effect. Monies owed to the Contractor for work done and accepted up to the time of cancellation shall first and foremost be applied by PRASA RAIL to remedy the non-performance of the Contractor in terms of the contract for purpose of limiting damages to PRASA.

## **19. MEASUREMENT AND PAYMENT**

Payment will be based on the Contractor's rate per item as listed in the Schedule of Quantities and Prices and for which the Contractor successfully upgraded the road in accordance with the specifications.

### **19.1. Scraping of Road**

**ITEM 1:** Scraping of road

Unit: m<sup>2</sup>

Payment will be made per square meter road that was levelled and shaped to the required road profile with a grader as described elsewhere in this specification.

### **19.2. Re-shape Road**

**ITEM 2:** Re-shape Road

Unit: m<sup>2</sup>

Payment will be made per square meter road that was ripped, compacted and shaped to the required road profile as described elsewhere in this specification.

### **19.3. Re-surface Road**

**ITEM 3.1:** Re-surface Road: Base layer: Gravel material

Unit: m<sup>3</sup>

**ITEM 3.2:** Re-surface Road: Top layer: G5 material

Unit: m<sup>3</sup>



Payment will be made per cubic meter material that was imported to do the work including the ripping, mixing, wetting, compacting and shaping the road to the required road profile as described elsewhere in this specification.

#### **19.4. Provide Survey Cross-sections**

**ITEM 4:** Provide Cross-sections

Unit: meter

Payment will be made per meter cross-section provided by a qualified surveyor to do the work as described elsewhere in this specification.

#### **19.5. Provide Survey Longitudinal sections**

**ITEM 5:** Provide Survey Longitudinal-sections

Unit: meter

Payment will be made per meter longitudinal section provided by a qualified surveyor to ensure that the road is built at the correct levels and to allow stormwater to drain away from the track and the road.

#### **19.6. Provide 350 Diameter Concrete Pipes**

**ITEM 6:** Provide and install 350mm diameter Concrete pipes

Unit: meter

Payment will be made per meter 350mm diameter concrete pipes installed beneath the road in G5 material compacted to 95% MOD.AASHTO to drain storm water away from the track.

#### **19.7. Provide 450 Diameter Concrete Pipes**

**ITEM 7:** Provide and install 450mm diameter Concrete pipes

Unit: meter

Payment will be made per meter 450mm diameter concrete pipes installed beneath the road in G5 material compacted to 95% MOD.AASHTO to drain stormwater away from the track.

#### **19.8. Provide 600 Diameter Concrete Pipes**

**ITEM 8:** Provide and install 600mm diameter Concrete pipes

Unit: meter

Payment will be made per meter 600mm diameter concrete pipes installed beneath the road in G5 material compacted to 95% MOD.AASHTO to drain stormwater away from the track.

**19.9. Provide Reinforced Concrete**

**ITEM 9.1:** 25 Mpa Reinforced Concrete (Ready Mix) Unit: Cubic meter

**ITEM 9.2:** 15 Mpa Reinforced Concrete (Hand Mix) Unit: Cubic meter

Payment will be made per cubic meter concrete placed with nominal reinforcement and it will include all related work to do the work such as shuttering, offloading, trimming, curing, etc.

It will be used for 150 mm thick storm water causeways, etc for small concrete work next to or across the road. The slope and width of the causeways will be agreed on site and written in the Site Instruction Book.

**19.10. Compaction Tests**

**ITEM 10:** Compaction Tests Unit: Each

Payment will be done for each compaction test done on completed work when asked to be done by the Technical Officer. Payment will only be done on tests that are equal to or above the specified MOD.AASHTO.

**19.11. Day Labour**

**ITEM 11.1:** Payment for a Surveyor Unit: Hour

**ITEM 11.2:** Payment for a Supervisor Unit: Hour

**ITEM 11.3:** Payment for Labourers Unit: Hour

- a) These rates for labour will apply to work not covered in this contract.
- b) The number of labourers and the time to complete a task must be agreed to before commencement of the work by an inscription in the Site Book signed by both parties.
- c) These rates must include transport and general hand-tools and equipment required to do any work specified in this contract as well as normal garden maintenance tools and small fence repair work.



- d) A day labour rate of 1.5 (one point five) and 2 (two) times the Day Labour rates will be applied respectively for Overtime and Sunday time.

**19.12. Hire a TLB**

**ITEM 12: Hire of TLB**

Unit: Hour

Payment will be made per hour for work done with a TLB on a basis that it must be available to work for a minimum of 8 hours per day.

It will include transport, consumables and an operator.

**19.13. GENERAL**

19.13.1. Claims for payment will be made monthly.

19.13.2. No payment will be made for rejected work where workmanship does not meet the standards specified until remedial work has been completed and conformance to the specification has been achieved.

19.13.3. After completion of a specified portion of the road, the work will be measured for conformance to the specification.

The Contractor will thereafter receive payment for the completed work that conforms to the standards at the rates tendered for that item(s) as listed in the Schedule of Quantities and Prices,

19.13.4. All prices quoted must also include for the cleaning of site after completion of the work, whether it is mentioned or not.

19.13.5. PRASA RAIL reserves the right to adjust quantities to conform to budget constraint

**20. SAFETY**

20.1. 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.

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



- 20.3. 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.
- 20.4. 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.
- 20.5. All personnel employed by the Contractor shall have undergone a Health and Safety Induction.
- 20.6. 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.
- 20.7. The contractor shall ensure that all COVID - 19 protocols are adhered to.
- 20.8. The Contractor shall make necessary arrangements for sanitation, water and electricity at these relevant sites during the installation of the equipment.
- 20.9. 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.
- 20.10. All work shall always comply with the E7/1 Specification attached hereto.
- 20.11. Normal protection measures in accordance with the Protection Manual shall apply.
- 20.12. 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.
- 20.13. The Contractor shall be responsible for the safety of personnel on site.  
The following shall also form part of the safety plan:



- Transportation of equipment and personnel.
- Transportation, storage, and handling of hazardous equipment
- The site access certificate shall only be issued (to the successful bidder) after the evaluation and approval of the safety file.

20.14. 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 E4E.

## **21. GENERAL**

21.1. 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.

21.2. 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.

21.3. PRASA RAIL shall assist the contractor with the training of flagman.

21.4. Flagmen that are already qualified will be tested by PRASA representative and if found not competent will not be allowed to form part of the contractor's team.

21.5. 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 depot.

21.6. 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.

## **22. METHOD STATEMENT**

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

- 22.1. Procedure in carrying out the work (construction methods)
- 22.2. Technical and Engineering capability (Certificates of Engineering staff)
- 22.3. All Resources (Labour, Plant, Equipment, Support and Outside Services) that the contractor proposes to use in the execution of the works.

## **23. HOURS AND DAYS OF DUTY / OCCUPATION**

- 23.1. Work shall proceed during weekdays from 07h00 to 16h30 and or over weekends from 07h00 to 17h00. Most of work will be done during the week and over-time, work on public paid holidays, Saturdays and Sundays shall only be required in exceptional cases.
- 23.2. Work outside of normal working hours shall not be paid against overtime rates unless:
- 23.3. Agreed upon by the Project Manager in writing before the start of the any project task.
- 23.4. The contractor can prove PRASA Rail's accountability for delays resulting in overtime being required.

## **24. PAYMENT CERTIFICATE**

- 24.1.1. 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.





- 24.1.2. The Contractor shall then submit a VAT invoice and attach the above Progress Certificate for payment by the Employer.
- 24.1.3. Claims for payment will only be made on a monthly basis and payments will be made within 30 days of approved invoices.
- 24.1.4. Contractor to provide the Employer with the necessary details regarding banking details to enable the Employer to make electronic payments.

## **24.2. PRICING THE WORKS**

- 24.2.1. The contractor is required to provide firm prices/ rates for material and labor for the duration of the contract.
- 24.2.2. The contract period shall be inclusive of the rehabilitation of service roads in the Gauteng Region on an “as and when” required basis for a period of 36 months.
- 24.2.3. 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.
- 24.2.4. 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.

## **24.3. PENALTIES**

- 24.3.1. If the Contractor fails to complete the Services within the time 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.
- 24.3.2. 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,



24.3.3. PRASA may set off or deduct from the fees due to the Contractor any penalty amounts due and owing by the Contractor in terms of clause 5.27.1

## **25. CONSTRUCTION RELATED SECURITY**

### **25.1. MANDATORY SECURITY REQUIREMENTS**

- 25.1.1. All security companies used by the Contractor shall be PSIRA registered with valid letter of good standing.
- 25.1.2. Security personnel shall all be PSIRA registered with a clear criminal record no criminal pending cases and preferably be sourced from the local community.
- 25.1.3. All security officials utilised in this project shall be South African Citizens.
- 25.1.4. All personnel employed by the Contractor including sub-contractors shall have undergone a Health and Safety Induction.
- 25.1.5. 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.
- 25.1.6. 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.
- 25.1.7. 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.
- 25.1.8. Any lost or stolen material shall be replaced by the contractor at his own cost.
- 25.1.9. 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.



25.1.10. 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.

25.1.11. 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.

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

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

## 25.2. Risks

25.2.1. 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	High	Armed Guarding at site and site



Storage Facility at site		office with an armed response for mobilisation
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## 25.2.2. PROPOSED INTERVENTIONS

25.2.2.1. 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.

25.2.2.2. Requisite equipment:

- Bullet proof vests;
- Spotlight;
- Night vision equipment;
- Torches;
- Tactical Radios (PTT with GPS and Panic Button). This should be the primary communication for all personnel on site.
- Handcuffs (disposable type) and other standard equipment;
- Firearms with extra magazine; and
- Any other equipment identified through the risk assessment.

## 26. OVERALL STAFFING AND KEY RELATED PROFESSIONAL STAFF

26.1. The contractor shall provide qualified and experienced professional staff with the following key professional expertise.

- Team Leader/Project Director
- Civil Engineering Technician
- Flagman
- Construction Health and Safety Officer
- Plant Operator

26.2. MINIMUM QUALIFICATION OF KEY PROFESSIONAL STAFF

### **Team Leader/Project Engineer**



- Civil Engineering qualification (Degree, Diploma or N-level certificate)
- Minimum 3 years post experience in the Perway railway industry.
- Project Management qualification with 3 years minimum experience

### **Civil Engineering Technician**

- Fully qualified Engineering Technician registered with professional body (ECSA).
- Minimum 3 years' experience as a qualified Engineering Technician.

### **Surveyor**

- All survey cross-sections and longitudinal-sections work shall be done by a fully qualified Surveyor in possession of a valid land survey qualifications
- Minimum 3 years' experience as a qualified Land Surveyor.

### **Flagman**

- Qualified flagmen for the protection of the work site with valid flagman certificates.
- A minimum of three qualified flagmen shall be deployed for each occupied section.

### **Health and Safety Officer**

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

- Registered with professional body (SACPCMP)
- Minimum of 3 years industry experience as a health and safety officer.

### **Plant Operator**



- All plant must be operated by a qualified plant operator with valid plant operation licence/certificates.
- Minimum 3 years' experience as a plant operator.

### **General labours**

- All general labour must be medical fit.

## **27. APPLICABLE SPECIFICATIONS**

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) and Applicable Regulations (E4E); 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); and
- l) Railway Safety Regulator Act (Act 16 of 2004)
- m) Infrastructure Perway Technical Specification for Rails

## **28. PROJECT SPECIFIC TERMS AND CONDITIONS**



E10: General specifications for Railway tracks Maintenance 2000	Refers to Manual for Track
E10/3: Ballast cleaning	Refers to Manual for Track Maintenance 2000
E10/10: Drainage cleaning	Refers to Manual for Track Maintenance 2000
E10/4: Ballasting and Tamping	Refers to Manual for Track Maintenance 2000

## **29. PROJECT SPECIFIC SAFETY RELATED REGULATIONS**

- 29.1. The contractor shall comply with requirements of safety legislations and regulations in all respects.
- 29.2. All drivers shall be in possession of valid driver's licenses and Public Drivers Permits (PDP) where applicable. Crane operators will be required to have a valid Crane Operator's certificate. All vehicles shall be road worthy.
- 29.3. The contractor shall be responsible for all protective clothing and –equipment for his employees. All employees required to climb structures shall be issued with suitable harnesses.
- 29.4. All work shall always comply with the E7/1 Specification attached hereto.
- 29.5. Normal protection measures in accordance with the Protection Manual shall apply.
- 29.6. 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.
- 29.7. 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 E4E.
- 29.8. Occupational Safety Act, 1993 (Act No: 85 of 1993)
- 29.9. National Environmental Management Act 107 of 1997
- 29.10. Construction regulation 2014



### 29.11. STAGE 2: TECHNICAL / FUNCTIONALITY REQUIREMENTS

Qualifying bidders shall then be evaluated on functionality after meeting all compliance requirements outlined above. The minimum threshold for the technical/functionality requirements is 70% as per the standard Evaluation Criteria presented in table 15.1 above. Bidders who score below this minimum requirement shall not be considered for further evaluation in stage 3.

Details of the technical/functional requirements are presented in the table below.

Table 31.5: Technical Evaluation Criteria

Item	Criteria	Weight
1	Organizational Experience	40
2	Experience of key personnel	30
3	Project program (Work plan)	30
	<b>TOTAL</b>	<b>100</b>

Table 15.6: Technical evaluation criteria

Evaluation Area	Weight	Technical/Functional Criteria and Scoring
<b>Organizational Experience</b>  <i>(N.B. Provide for each successfully completed project/s in the following sequence; Copy of an appointment letter/s(on a company letterhead), description of the project, Client name, Client contact (i.e. email and office number), Project start date,</i>	<b>40</b>	<b>Score will be based on successfully completed similar projects in the service roads rehabilitation of which details are provided.</b>  <b>0: No submission/Non-compliance = 0 points</b> <b>1 : 0 to 1 similar project = 8 points</b> <b>2 : 2 similar projects = 16 points</b> <b>3 : 3 similar projects = 28 points</b> <b>4 : 4 similar projects = 34 points</b> <b>5 : 5 and more similar projects = 40 points</b>





Evaluation Area	Weight	Technical/Functional Criteria and Scoring
<b><i>project end date, extension of time where applicable, contract value inclusive of VAT. Furthermore, attach completion certificates signed by client indicating the value and type of work performed or letter with on a company letter head indicating that they are new on the field.</i></b>		
<p>Experience of key personnel (based on CVs submitted)</p> <ul style="list-style-type: none"> <li>• <i>Civil Engineering Technician</i></li> </ul> <p>(N.B. Provide copies of original qualifications and certificates of professional bodies. The copies must be certified by commissioner of oath. The date on the stamp shall be three months or less old, before the closing date of the tender. If the qualification has been awarded in other language either than English, please</p>	30	<p>Score will be allocated as follows:</p> <p>0: No submission/Non-compliance = 0 points</p> <p>1: Listed key staff members have minimum 1 but less than 2 years' related experience = 6 points</p> <p>2: Listed key staff members have 2 but less than 3 years' related experience = 15 points</p> <p>3: Listed key staff members have 3 but less than 4 years' related experience = 21 points</p> <p>4: Listed key staff members have 4 but less than 5 years' related experience = 25 points</p> <p>5: Listed key staff members have 5 years' related experience and above = 30 points</p>



Evaluation Area	Weight	Technical/Functional Criteria and Scoring
<i>provide translation in English)</i>		
Project Program (Work plan)  <i>(N.B. Provide project schedule in MS projects that meets the client's timeline requirements and the schedule to cover the following key Milestones:</i> <ul style="list-style-type: none"> <li>• Site Establishment</li> <li>• Procurement of material and all services</li> <li>• Actual construction activities.</li> <li>• Practical completion</li> <li>• Final works completion</li> <li>• Maximum project duration of Thirty-six (36) Months</li> </ul>	30	Score will be allocated for MS Project Schedule provided  0: No submission/Non-compliance = 0 points 1: Inadequate/ unrelated project schedule provided = 6 points 2: Project schedule provided but no detailed activities indicated = 12 points 3: Project schedule provided with activities indicated on the program aligned with the preferred duration of the project; = 18 points 4: Project schedule provided with activities indicated on the program aligned with preferred duration of the project, showing the sequence of activities (i.e., Baseline and critical path) = 24 points 5: Project schedule provided with activities indicated on the program aligned with the preferred duration of the project, showing the sequence of activities (i.e., Baseline and critical path), clear understanding of the scope of work and site challenges addressed = 30 points
Total	100	

**NB: Minimum threshold of 70% per evaluation criteria must be met for a bidder to be evaluated further.**

