



1. NATURE OF WORK

1.1 SCOPE

1.1.1 This specification covers the work in connection with the demolition of the following Pedestrian foot bridges in the Gauteng Region.

- Mzimhlope Footbridge
- Meyerton Footbridge
- Mayfair Footbridge
- Grosvenor Footbridge
- Daarspoort Footbridge
- Croesus Footbridge
- Olifantsfontein Footbridge

1.1.2 It covers the demolition of the existing rail bridge deck, demolition of the existing rail bridge supports, the removal of concrete from structural elements, removal of metal sections embedded in concrete for scrap disposal by PRASA material warehouse and disposal of waste material. The Contractor shall do the work as directed by the Engineer or his representative and in accordance with the specifications set out in this tender/contract document.

1.2 INTERPRETATION

1.2.1 Supporting specification

The following specifications shall be read with, and form part of the contract:

1.2.1.1 Project Specification

1.2.1.2 COLTO Standard Specification for Road and Bridge Works for State Road Authorities, 1998

1.2.1.3 SABS and BS standards referred to in this specification.

1.2.2 Definitions

1.2.2.1 Concrete members

1.2.2.1.1 All references to concrete members shall include mass concrete, unreinforced, reinforced and prestressed concrete members.

1.2.2.2 Demolition of concrete members

1.2.2.2.1 Demolition means the breaking up and removal of an entire concrete member.



1.2.2.3 Removal of concrete

- 1.2.2.3.1 Removal of concrete means cutting back into the surface or end of a concrete member and the removal of unsound, damaged, or contaminated concrete, or the partial removal of concrete sections.

1.3 MATERIALS

All devices used to remove concrete or to demolish concrete members, shall be handled, stored and used strictly in accordance with the manufacturer's instructions and current safety regulations.

1.4 PLANT AND EQUIPMENT

1.4.1 General

- 1.4.1.1 All plant, equipment, tools, and devices used for the demolition of concrete members or the removal of portions of existing concrete shall be based on the proven and accepted technology within the industry. The plant, equipment, tools, and accessories shall be inspected and maintained on a regular basis to ensure that they remain in a good working order, function efficiently, and that safety is not compromised. All cutting and breaking tools shall be kept sharp to reduce the force required to break out concrete to a minimum.
- 1.4.1.2 The plant, equipment, tools, and devices used for the demolition or removal process shall be of the accepted type and capacity for the relevant application. The suitability of the chosen method shall be demonstrated on a representative test section identified by the engineer prior to the execution of any programmed work.

1.4.2 Access structures and working platforms.

- 1.4.2.1 Where necessary, the contractor shall provide suitable and safe temporary access structures, working platforms, debris collection, and removal bins, including protection screens where required, at each location where concrete has to be demolished or removed.
- 1.4.2.2 The temporary propping specified in the approved method statement and the drawings shall be securely positioned in accordance with each stage of the demolition or removal sequence prior to commencement of the following stage.

1.5 CONSTRUCTION

1.5.1 Sequence of execution

- 1.5.1.1 The method and sequence of demolition or removal of concrete shall be in accordance with the approved method statement submitted by the contractor following the site inspection. Any temporary propping specified in the approved method statement and the drawings shall be securely positioned in accordance with each stage of demolition or removal sequence prior to the commencement of the following stage.



1.5.2 Site preparation and access

1.5.2.1 The necessary access and temporary support shall be in place prior to the commencement of demolition or removal of concrete. Screening and protective measures shall be established around the work area as necessary to acceptable environmental, health and safety conditions.

1.5.3 Demolition of concrete members

1.5.3.1 The demolition of entire concrete structures or major elements of the bridge structure shall employ techniques that do not damage the adjacent structures and road surface, the sounding rail tracks, mast foundations and overhead electrification infrastructure nor contaminate the surrounding environment. The contractor shall ensure that any nuisance associated with his or her work activity is minimised by implementing appropriate precautions and measures to the approval by PRASA. Common nuisances associated with demolition and concrete removal include fumes, noise, dust, flying fragments, heat, and vibration. Concrete members which are to be demolished completely shall be broken into suitable sized fragments to allow easy removal from site to an approved dump area.

Recommended demolition techniques include the use of percussion breakers or other approved mechanical equipment, the use of thermal or hydraulic cutting techniques or by non-explosive chemical means, to ensure minimal damage to the existing sound concrete abutments. Demolition by explosive means will normally not be acceptable and will be subject to PRASA's approval.

1.5.4 Removal of concrete from structural elements

1.5.4.1 The technique used shall be suited to its intended purpose and not cause damage to the remaining concrete members. Only techniques that do not damage the inherent structure, bond or strength of the remaining sound concrete structure shall be used. The fixed exposed contact surface shall be bounded by straight line edges cut at least 10mm deep by a diamond cutting saw, angle grinder or other approved equipment.

1.5.5 Removal of metal sections embedded in concrete.

1.5.5.1 Metal sections that are embedded in concrete members by means of grout pockets shall be removed by carefully chipping out embedment grout filling pockets.

1.5.6 Disposal of waste material



1.5.6.1 All waste materials, rubble, scrap and rubbish arising from the contractor's presence on site and/or the execution of the works shall be disposed daily to a disposal site identified by the contractor.

1.5.7 Testing

1.5.7.1 The contractor shall carry out pre-construction tests with the proposed equipment to determine the suitability of technique for the envisaged application. The test results shall be reported to PRASA and shall be subject to the Engineer's approval.

2. LOCATION OF CONTRACTOR'S SITE CAMP

The contractor should identify a suitable location for a site camp and propose this to the engineer on commencement of the works. The contractor should make due allowance for ensuring that suitable access is achievable especially for the transport of concrete rubble to the dumping site. Access to the site is by public roads. The Contractor must acquaint himself with the available access to the site and the condition of the roads during the site inspection. No housing of employees of the Contractor will be allowed on the property of PRASA, and the Contractor shall make his own arrangements for the housing of his employees.

3. PROVISION FOR SERVICES

The Contractor shall make his own arrangements for the supply of water (for all purposes), light, power, sanitation, and telephones, as required on the site.

4. UNDERGROUND SERVICES

Various types of services, both overhead and underground, exist within the boundaries of the site.

4.1 Before work start on a section the Contractor must ascertain himself about services such as:

- 4.1.1 Electrical underground cables
- 4.1.2 Telecoms underground cables
- 4.1.3 Underground Signalling cables
- 4.1.4 Water pipes.

4.2 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.

4.3 The Contractor will be held responsible for the repair of any damage to all known services and assets.

5. CONSTRUCTION IN CONFINED AREAS



- 5.1 It may be necessary for the Contractor to work within confined areas and no additional payment will be made for work done in restricted areas. The method of construction in these confined areas will depend largely on the contractor's construction plan.
- 5.2 The tendered rates and amounts shall include full compensation for all special equipment and construction methods and for all difficulties encountered during working in confined areas and narrow widths, and at, around or through obstructions, and that no extra payment will be made nor will any claim for additional payment be considered in such cases.
- 5.3 The contractor will be held responsible when working in confined areas for the repair, at his own cost, of damage caused by him to any asset or service indicated to him.

6. FEATURES REQUIRING SPECIAL ATTENTION

6.1 Railway overhead powerlines

- 6.1.1 Overhead powerlines are present within the boundaries of the site. To perform certain works the contractor may require these to be switched off for a certain period, termed occupation. An application to this effect must be made to the client. Refer to project specification occupation clause.

6.2 Existing Services

- 6.2.1 Various types of services, both overhead and underground, exist within the boundaries of the site. It is envisaged that it will be necessary for the Contractor to arrange for the removal, relocation or protection of existing services. Should any work become necessary then all work shall be done strictly in accordance with the requirements of the relevant service owner and in accordance with the requirements of these Works Specifications.
- 6.2.2 The procedures for the protection and/or relocation of such services are outlined in SPK7/1 specifications.

6.3 Construction in confined areas

- 6.3.1 It will be necessary for the Contractor to work within confined and restricted areas. No additional payment will be made for work done in such areas, despite indications to the contrary in the Standard Specifications.

6.4 Water for construction purposes

- 6.4.1 The Contractor must make adequate provision in their tender for all negotiations and procurement of water for demolition activities and all related costs will be deemed to be included in his or her tendered rates.

6.5 Weatherproof Protection for Workers

- 6.5.1 All staff required to continue working during rainy or dusty conditions shall be provided with oilskins and rubber knee boots, masks, or other approved protective clothing and footwear.



6.6 Night Work and Work on Public Holidays

- 6.6.1 Where the Contractor requires staff to do shift work, he or she shall make the necessary arrangements with the Engineer and obtain written approval from the Engineer. The Contractor shall bear the cost of his or her overtime work.

6.7 Environmental Requirements

- 6.7.1 The Contractor shall perform the works in accordance with current environmental legislation. Any queries regarding this to be directed to the engineer.
- 6.7.2 Personnel and plant shall not enter property beyond the railway reserve boundary irrespective of whether or not the boundary is fenced.
- 6.7.3 The Contractor shall take every precaution to avoid damage to landscape plants/vegetation within that area of the railway reserve which falls outside the designated work area. Any damage caused is to be repaired at the Contractor's expense.
- 6.7.4 Storage and stockpiling of materials within the railway reserve will not be permitted without the written consent of the Engineer. Excess material from the demolition, excavations and waste material shall be spoiled off site at suitable locations.

6.8 Concrete rubble

- 6.8.1 All concrete rubble, scrap and rubbish arising from the contractor's demolition work on site/or the execution of work shall be disposed to a disposal site identified by the contractor and approved by the Engineer.

7. PROTECTION OF WORKPLACES AND SECURITY ON SITE

- 7.1. Protection of the workplace will be done by flagmen supplied by the contractor and all liaisons with Train Services shall be done by the contractor's supervisor or PRASA RAIL Track master.
- 7.2. It is the responsibility of the contractor to provide security on site for equipment, material, and personnel for the duration of the contract. Including security for site office and PRASA Infrastructure Assets within the envelope along the boundary limits)

8. REMOVAL OF RUBBLE

- 8.1. No indiscriminate spoil of material is permitted. The tendered rate must include the removal of surplus or unsuitable materials to be spoiled at a site provided by the Contractor, away from the rail as to prevent further contamination of ballast and ensure adequate drainage. The local authority in whose area it is located shall approve the site, and the spoiling shall comply with the applicable statutory and municipal regulations. No material shall be disposed onto the station platform, adjacent railway line and road.



9. LABOUR REQUIREMENTS

9.1. Use of local labour

- 9.1.1. Where feasible and practical, work opportunities on the contract should be provided for Local Labourers within the local communities residing close to the site of the Works. Labourers and workers of the local communities required by the Contractor shall be recruited and appointed for work. The Contractor shall provide for suitable means of transport of workers from local communities to and from the site of the works. The contractor shall make provision for appointment of Community Liaison Officer from the ward within the boundary limits of the project site.

10. CONTRACT AREA

The contract area will be within the Gauteng Province.

11. SUFFICIENCY OF TENDER

- 11.1. The contract will only be awarded to a tenderer who has a proven record of wide experience in rail track rehabilitation works in South Africa.
- 11.2. 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.

12. DURATION OF CONTRACT

The projected duration of the contract is twelve (12) months on a fixed contract.

13. COMPLIANCE WITH STATUTES

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



14. TO BE PROVIDED BY PRASA RAIL

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

- 14.1. 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.
- 14.2. 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.

15. TO BE PROVIDED BY THE CONTRACTOR

- 15.1. 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.
- 15.2. 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.
- 15.3. 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.
- 15.4. 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.
- 15.5. 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.
- 15.6. It is the responsibility of the contractor to provide security on site for equipment, material, and personnel for the duration of the contract.

16. STANDARD SPECIFICATIONS

The following specifications, instructions and documents shall, inter alia, form part of this contract:

- (i) The project specification
- (ii) The schedule of quantities
- (iii) Specification for safety arrangements and procedural compliance with the Occupational Health and Safety Act: Act 85 of 1993 and Regulations E.4E
- (iv) General conditions of contract, SPK 5(SEPT 2008) (September 2008).
- (v) Specification for Works on, over, under or adjacent to Railway lines and near High Voltage Equipment, SPK7/1 (September, 1999).
- (vi) Manual for Track Maintenance 2000
- (vii) E10 Specification for Trackwork
- (viii) S410 Specification for Railway Earthworks



(ix) S406 Specification for supply of ballast stone

The following relevant standardized SANAS 1200 series and TRH 14 specifications, as listed below, shall form the Standard Specifications, and apply to this contract:

- SANS 1200 A: General
- SANS 1200 C: Site Clearance
- SANS 1200 D: Earthworks
- SANS 1200 DM: Earthworks (Roads, Sub-grade)
- SANS 1200 G: Concrete (Structural)
- SANS 1200 H: Structural Steel work
- SANS 1200 M: Roads (General)
- SANS 1200 ME: (Subbase)
- SANS 1200 MF: (Base)
- TRH 14: Guidelines for road construction materials

17. METHOD STATEMENT

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

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

18. SAMPLES AND TESTING

- 18.1. The Contractor shall make available, free of charge, a sufficient quantity of material supplied by him, which are to be used for the WORKS, for quality verification by the engineer. Soil samples for foundation structural layers to be sent to a soil materials laboratory (SANAS approved) for testing as requested by the Engineer.

19. SITE MEETINGS

- 19.1. Site liaison meetings will be arranged by the Engineer as necessary. The Contractor or his duly authorized representative shall be available when called upon to attend site meetings with the Engineer or his representative.

20. SITE INSTRUCTION BOOK AND SITE DIARY

- 20.1. The contractor to provide a site instruction book for any instructions that need to be issued on site. The Contractor will have to sign for all instructions issued and will be issued with copies of the instructions.
- 20.2. The contractor will be responsible for keeping a site diary with all information related to the contract. This diary will have to be kept to make record of rain delays, production for the day,



visitors to the site, expected date of material delivery, material delivered daily, labour and plant on site each day, etc. This will have to be filled in daily.

21. HOURS OF WORK AND DAYS OF DUTY

- 21.1. 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.
- 21.2. Work outside of normal working hours shall not be paid against overtime rates unless:
- 21.3. Agreed upon by the Project Manager in writing before the start of the any project task.
- 21.4. The contractor can prove PRASA Rail's accountability for delays resulting in overtime being required.

22. OCCUPATIONS AND WORK PERMITS

Between trains occupations and work permits will be granted for the repair of track. The maximum duration of occupations/work permits will normally not exceed six hours nor be less than three hours. Occupations/work permits will normally be granted from 09:00 to 15:00 on weekdays. The Contractor shall apply for occupations/work permits, or "work between trains permits" 28 days in advance. Late applications will not be considered. Penalties for late completion will not be waived should the contractor not apply for occupations in time.

23. QUALITY ASSURANCE

The contractor must provide the Technical Officer with the results of compaction tests (soil material) and concrete cube tests (7&28 days) as randomly selected / required by the Technical Officer during the construction process. Work not approved as a result of non-compliance will have to be rectified by the contractor on his account

24. PERFORMANCE MONITORING AND EVALUATION

- 24.1. The Contractor shall at all times 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.

24.2. The Technical Officer shall at any time during the contract period carry out inspections of the Contractor's performance methods and procedures.

24.3. 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.

25. REMEDIAL WORK AND NON-PERFORMANCE

25.1. The Contractor shall implement immediate remedial action of rejected work.

25.2. 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.

25.3. 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.

26. INFORMATION TO BE PROVIDED WITH TENDER

The Tenderer shall submit the following information at the time of tendering:

26.1. Full description of the plant and work methods to be used for all aspects of the work required ensuring performance as specified.

26.2. 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.

26.3. The Schedule of Quantities and Prices must be completed in full.

26.4. An undertaking that all equipment will be ready for operation and that the work can commence timeously, to comply with requirements of the contract.



26.5. A detailed construction program shall be submitted with the tender.

27. MEASUREMENT AND PAYMENT

Claims for payment will be made on a monthly basis.

Any rejected or uncompleted work will not be paid.

All rates in the schedule of quantities must be made per unit as requested and should be all inclusive through rate, converting all the items described under "Measurement and Payments".

The rate quoted by the Tenderer(s) and accepted by PRASA Rail must hold good till the completion of the work and shall not subject to any escalation due to increase in the local market rates for materials & labour. No claim on this account whatsoever shall be entertained at any stage including the extended period, if any

Payment will be made in accordance with the rates tendered in the schedule of prices and as follows:

27.1. **Site establishment**..... **Unit: Sum**

A fixed rate for the Site Establishment, including the management and site supervision will be made in accordance with the relevant pay item under ITEM of the BOQ.

The Contractor shall allow in this rate for the work, travelling and effort associated with pre-inspection of site in order to quantify and identify the exact demolition work site and associated plant, equipment, tools, and devices required, discuss and confirm with the depot staff the extend of preparation required of PRASA Rail for each site.

27.2. **Security on site**..... **Unit: Sum**

The contractor shall make provision in this item to allow for security personnel on site. Minimum of three security officers (Including security for site office and PRASA Infrastructure Assets between the boundary limits)

27.3. **Community Liaison Officer**..... **Unit: Sum**

The contractor shall make provision in this item for appointment of Community Liaison Officer from the ward within the boundary limits of the project site.

27.4. **F122.01 Demolition of concrete members (location and description)** **Unit: M³**

The unit of measurement is the cubic metre of concrete demolished, measured in its original position and shaped based on:

27.4.1. Full demolition



27.4.2. Partial demolition

The tendered rate shall include full compensation for all labour, material, screening of the structure for safety and environmental protective measures, equipment and plant as well as for all work and incidentals required to complete the work as specified and required to demolish the concrete structure and load, transport and dump the concrete segments and rubble at the nearest approved dumping site. See in clause 1.5 (f).

27.5. **F122.02 Removal of metal sections embedded in concrete (description)Unit: No.**

The unit of measurement shall be the number of metal sections removed.

The tendered rate shall include full compensation for all labour, material, equipment, screening of the structure and protective measures, required for the removal of the metal sections as described in clause 1.5 (e) and disposal of all rubble at an approved waste disposal site, and the cleaning of the pocket as specified in 1.5 (e).



28. SAFETY

- 28.1. 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.
- 28.2. A copy of the act as well as an approved safety file shall be kept on site for the duration of the project.
- 28.3. 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.
- 28.4. 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.
- 28.5. All personnel employed by the Contractor shall have undergone a Health and Safety Induction.
- 28.6. 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.
- 28.7. The contractor shall ensure that all COVID - 19 protocols are adhered to.
- 28.8. The Contractor shall make necessary arrangements for sanitation, water and electricity at these relevant sites during the installation of the equipment.
- 28.9. 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.
- 28.10. All work shall always comply with the E7/1 Specification attached hereto.
- 28.11. Normal protection measures in accordance with the Protection Manual shall apply.
- 28.12. 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.

28.13. 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.

28.14. 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.

29. GENERAL

29.1. 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.

29.2. 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.

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

29.4. 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.

29.5. 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.



29.6. 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.

30. PAYMENT CERTIFICATE

- 30.1.1. 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.
- 30.1.2. The Contractor shall then submit a VAT invoice and attach the above Progress Certificate for payment by the Employer.
- 30.1.3. Claims for payment will only be made on a monthly basis and payments will be made within 30 days of approved invoices.
- 30.1.4. Contractor to provide the Employer with the necessary details regarding banking details to enable the Employer to make electronic payments.

31. PRICING THE WORKS

- 31.1.1. The contractor is required to provide firm prices/ rates for material and labor for the duration of the contract.
- 31.1.2. 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.
- 31.1.3. 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.
- 31.1.4. 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.



32. PENALTIES

- 32.1.1. 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 0.5% 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.
- 32.1.2. 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,
- 32.1.3. 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 32.1.1.

33. CONSTRUCTION RELATED SECURITY

33.1. MANDATORY SECURITY REQUIREMENTS

- 33.1.1. All security companies used by the Contractor shall be PSIRA registered with valid letter of good standing.
- 33.1.2. Security personnel shall all be PSIRA registered with a clear criminal record no criminal pending cases and preferably be sourced from the local community.
- 33.1.3. All security officials utilised in this project shall be South African Citizens.
- 33.1.4. All personnel employed by the Contractor including sub-contractors shall have undergone a Health and Safety Induction.
- 33.1.5. 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.
- 33.1.6. 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.



33.1.7. 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.

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

33.1.9. 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.

33.1.10. 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.

33.1.11. 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.

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

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

33.2. Risks

33.2.1. 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

33.2.2. PROPOSED INTERVENTIONS

33.2.2.1. 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.

33.2.2.2. 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.

34. OVERALL STAFFING AND KEY RELATED PROFESSIONAL STAFF

34.1 PROFESSIONAL TECHNICAL STAFF REQUIREMENTS

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

- 34.1.1. Civil Engineer
- 34.1.2. Structural Engineer
- 34.1.3. Construction Health and Safety Officer



34.1.4. Construction Manager/Project Manager

34.1.5. Railway Flagmen

34.2 PROFESSIONAL BODY REGISTRATION

34.2.1 **Engineering Council of South Africa:** Pr. Engineer/s, Pr. Technologist/s, Pr. Technician/s

34.2.2 **South African Institute of Civil Engineering:** SAICE

34.2.3 **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

34.2.4 **Project Management Profession Certification:** PMP

34.2.5 **Environmental Assessment Practitioners Association of South Africa (EAPA)/ South African Council for natural Scientific Professions**

34.3 DETAILS OF THE MINIMUM QUALIFICATIONS FOR THE TECHNICAL STAFF LISTED ON 34.1 ARE AS OUTLINED BELOW.

34.3.1 CIVIL ENGINEER/ TECHNOLOGIST (CIVIL ENGINEERING EXPERIENCE)

The desired minimum qualifications for the Civil and structural Engineer/s are as follows:

34.3.1.1 BSc Degree/ B-Tech Degree in Civil Engineering.

34.3.1.2 ECSA registration as a Professional Engineer (Pr Eng)/Technologist (Pr Tech Eng).

34.3.1.3 A minimum of 5 years' experience in Civil Engineering projects.

NB: All foreign qualifications to be SAQA approved.

34.3.2 CONTRUCTION HEALTH AND SAFETY OFFICER (PRCHSO)

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



34.3.2.1 Be in possession of a NEBOSH International General Construction Health & Safety Certificate (NQF Level 6) OR National Diploma safety Management (NQF level 6) OR Degree in Safety Management (NQF level 7)

34.3.2.2 A minimum of 5 years' experience as a Health and Safety Officer in the construction environment.

34.3.2.3 South African Council for the Project and Construction Management Professions (SACPCMP) professional registration certification.

NB: All foreign qualifications to be SAQA approved.

34.3.3 CIVIL STRUCTURAL ENGINEER/TECHNOLOGIST

The desired minimum qualifications for Structural Engineer/Technologist are as follows:

34.3.3.1 BSc Degree/ B-Tech Degree in Structural Engineering.

34.3.3.2 ECSA registration as a Professional Engineer (Pr Eng)/Technologist (Pr Tech Eng).

34.3.3.3 A minimum of 5 years' experience in Civil Structural Projects.

NB: All foreign qualifications to be SAQA approved.

34.3.4 CONSTRUCTION MANAGER/PROJECT MANAGER

34.3.4.1 BSc Degree/B-Tech Degree in Construction Management/Project Manager

34.3.4.2 SACPCMP registration as a Professional Construction Manager/Project Manager.

34.3.4.3 A minimum of 5 years' experience in Construction Projects.

NB: All foreign qualifications to be SAQA approved.

34.3.5 RAILWAY FLAGMAN

The desired minimum qualifications for the Railway Flagman are as follows:



34.3.5.1 Recognised Railway – Flagman certificate;

34.3.5.2 A minimum of 3 years' experience

NB. A minimum of three qualified flagmen shall be deployed for each occupied section or site. The certificates are not required to be submitted with the bid returnable.

35 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
- n) S410 Specification for Railway Earthworks
- o) S406 Specification for supply of ballast stone

36 Is this a CIDB GRADING, (Yes/No)

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

Class of Work: CEMinimum Grade: 4**37 PRICING SCHEDULE**

Item No.	Ref.	Description	Unit	Rate	Amount (R)
1		Temporarily remove a section of fence for access to site and reinstate at end of contract	m		
2		Remove and dispose of existing precast concrete decks planks and stair treads to an approved dump off site	No.		
3		Dismantle and remove the existing bridge from site to a storage area within 25 Km of the site (approximate mass = 13,000 Kg)	Lump Sum		
4		Demolish concrete footings down to platform level, cut off bolts & reinforcement and skim smooth and dispose of rubble to an approved dump site	m ³		
5		Pedestrian traffic control	Lump Sum		
6		Temporary Access (erect and dismantle)	Lump Sum		
7		Preliminary & General items	Item		
		Sub total			
		Vat @ 15%			

Note: Prices to remain fixed for the duration of contract.**38 PROJECT SPECIFIC SAFETY RELATED REGULATIONS**

38.1 The supplier shall comply with requirements of safety legislations and regulations in all respects.

38.2 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.

38.3 The supplier shall be responsible for all protective clothing and –equipment for his employees. All employees required to climb structures shall be issued with suitable harnesses.



- 38.4 All work shall at all times comply with the E7/1 Specification attached hereto.
- 38.5 Normal protection measures in accordance with the Protection Manual shall apply.
- 38.6 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.
- 38.7 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.
- 38.8 Occupational Safety Act, 1993 (Act No: 85 of 1993)
- 38.9 National Environmental Management Act 107 of 1997
- 38.10 Construction regulation 2014
- 38.11 The contractor shall ensure that all Covid 19 protocols are adhered to.
- 38.12 The Contractor shall make necessary arrangements for sanitation, water, and electricity at these relevant sites during the installation of the equipment.
- 38.13 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.
- 38.14 The contractor shall be responsible for the safety of personnel on site. The following shall also form part of the safety plan:
- 38.15 Transportation of equipment and personnel.
- 38.16 Transportation, storage and handling of hazardous equipment
- 38.17 The site access certificate shall only be issued (to the successful bidder) after the evaluation and approval of the safety file.

39 EVALUATION METHODOLOGY

39.1 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 39.1 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 Requirements
Stage 1B	Other Mandatory Requirements
Stage 2	
Technical/Functional Requirements	Threshold of 80%
Stage 3	
Price	80
Specific Goals	20
TOTAL	100

Table 39.1: Evaluation criteria for the selection of a potential bidder

The details of the stages outlined in Table 39.2 above are presented in following sections below.

39.1.1 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 do not submit/meet the following mandatory documents/requirements, your bid will be automatically disqualified.

Only bidders who comply with stage 1A will be evaluated further. [Note: only include technical legislative requirements]

No.	Description of requirement	✓ Tick
a)	Proof of CIDB registration (4CE or Higher) – Proof to be attached	

Table 39.2: List of Mandatory Compliance Documents



Stage 1B- Other Mandatory Requirements

If you do not submit the following mandatory documents/requirements, PRASA may request the bidder to submit the information within three (3) working days. Should this information not be provided, your bid proposal will be disqualified.

No.	Description of requirement	✓ Tick
a)	Letter of Good Standing (COID)	
b)	Supply of valid SARS Pin	
c)	CSD supplier registration number	
d)	Completion of ALL RFP documentation (includes ALL)	
e)	Briefing Session Form D. Bidders must also reflect on the Compulsory Briefing Session Attendance Register	
f)	Joint Venture, Consortium Agreement or Partnering Agreement / Subcontract Agreement signed by all parties (If applicable). The agreement should indicate the leading bidder where applicable.	

39.1.2 STAGE 2: TECHNICAL / FUNCTIONALITY REQUIREMENTS

NOTE: The Technical or Functionality criteria must be guided by the project scope of works and area of focus.

Scoring of Functionality:

Responsive tenders will firstly be evaluated on functionality. The minimum score for functionality is 80% on each evaluation criteria and a bidder who scores below this minimum shall not be considered for further evaluation in terms of the preference point systems.

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

Table 39.5: Technical Evaluation Criteria

Item	Criteria	Weight
1	Organizational Experience	40



2	Experience and Qualification of key staff	40
3	Project Technical Approach /Methodology	10
4	Project program (Work plan) / Project Schedule	10
	TOTAL	100

Table 39.6: Technical Evaluation Criteria

Note: Bidders that fail to achieve the minimum overall qualifying score of 80% on functional/ technical requirements will not be considered for further Price and Specific Goals (Stage 3) evaluation.

Evaluation Area	Weight	Technical/Functional Criteria and Scoring
<u>Organizational Experience</u> Track record on similar type of projects previously executed for Demolition of Steel/Concrete bridges: 1. Steel bridges 2. Concrete bridges <i>N.B. Provide for each successfully completed project/s in the following sequence:</i> 1. Letter of Award on a letterhead of the client, signed and dated by an official from the client. 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, project end date, extension	40	Score will be based on the similar successfully executed and completed projects: 0: Not submitted information/No response = 0 points 1: 1 similar listed project with certificate of completion = 8 points. 2: 2 - 3 similar listed projects with certificate of completion = 16 points. 3: 4 similar listed projects with certificate of completion = 24 points. 4: 5 similar listed projects with certificate of completion = 32 points. 5: More than 5 similar listed projects with certificate of completion = 40 points.



Evaluation Area	Weight	Technical/Functional Criteria and Scoring
<p><i>of time where applicable, contract value inclusive of VAT.</i></p> <p>2. The Certificate of Completion on a letterhead of the client, signed and dated by an official from the client.</p> <p><i>Attach completion certificates signed by client indicating the value and type of work performed.</i></p>		
<p>Experience of key personnel</p> <p>(Based on submitted CVs)</p> <ol style="list-style-type: none"> 1. Civil Engineer 2. Structural Engineer 3. Construction Manager/Project Manager 4. Construction Health and Safety Officer <p>(N.B. Minimum of 5 (five) years of related experience for each key personnel is required. Provide copies of original qualifications and certificates of professional bodies. The copies must be certified by commissioner of oath. The date on the stamp</p>	40	<p>Detailed CVs of the team members who will be used in completing the works. Score will be based on experience and submitted CVs.</p> <p>The points will be based on the four (4) Key Staff listed in the Evaluation Area:</p> <p>0: No submission/Non-compliance = 0 points</p> <p>1: One (1) of the listed key staff team members with minimum of 5-years related experience on submitted CV's = 8 points.</p> <p>2: Two (2) listed staff team members with minimum of 5-years related experience on submitted CV's = 16 points.</p> <p>3: Three (3) of the listed key staff team members with minimum of 5-years related experience on submitted CV's = 24 points.</p>



Evaluation Area	Weight	Technical/Functional Criteria and Scoring
<i>shall be three months or less old, before the closing date of the tender. If the qualification is foreign, please provide SAQA accreditation)</i>		4: All Four (4) of the listed key staff team members with minimum of 5-years related experience on submitted CV's = 32 points. 5: All Four (4) of the listed key staff members with more than 10-years related experience. = 40 points.
<u>Project Approach and methodology</u> Provide detailed technical approach / methodology that is aligned to the scope of work/ highlighting the risk/s and mitigation measures associated with working within the Rail environment. <i>Technical approach and methodology must demonstrate the understanding of the project scope of work in accordance with the following elements:</i> <ol style="list-style-type: none"> 1. Site establishment 2. Identification of risks and mitigation 3. Detailed Environmental plan (including dust and noise mitigation) 4. Detailed Waste Management plan 	10	The points for the project approach and methodology will be allocated as follows: 0: No methodology or unrelated/ Irrelevant information provided = 0 points 1: Methodology detailing less than 5 elements in line with the scope of work = 2 points. 2: Methodology detailing 5 - 6 elements in line with the scope of work = 4 points. 3: Methodology detailing 7 - 8 elements in line with the scope of work = 6 points. 4: Methodology detailing 9 - 10 elements in line with the scope of work = 8 points 5: Methodology detailing all 11 elements in line with the scope of work = 10 points



Evaluation Area	Weight	Technical/Functional Criteria and Scoring
5. <i>Pre-handover quality inspection</i> 6. <i>Quality assurance plan</i> 7. <i>Material handling and storage process</i> 8. <i>Hand tools</i> 9. <i>Plant and equipment</i> 10. <i>Transportation and Post quality inspection</i> 11. <i>Detailed SHE plan</i>		
<u>Project Program (Work plan)</u> <i>(N.B. Provide a project schedule in MS Project or MS Excel or similar format that meets the client's timeline requirements and the schedule to cover the following key Milestones:</i> <ol style="list-style-type: none"> <i>Site establishment</i> <i>Identification of risks and mitigation</i> <i>Detailed Environmental plan (including dust and noise mitigation)</i> <i>Detailed Waste Management plan</i> <i>Pre-handover quality inspection</i> <i>Quality assurance plan</i> <i>Material handling and storage process</i> <i>Hand Tools</i> <i>Plant and equipment</i> 	10	Score will be allocated for Project Schedule provided: 0: No submission/Non-compliance = 0 points 1: Schedule with 4 or less of the 10 listed key milestones on required format indicating sequencing of activities = 2 points. 2: Schedule with 4 – 5 of the 10 listed key milestones on required format indicating sequencing of activities = 4 points. 3: Schedule with 6 - 7 of the 10 listed key milestones on required format indicating sequencing of activities = 6 points. 4: Schedule with 8 - 9 of the 10 listed key milestones on required format indicating sequencing of activities = 8 points 5: Schedule with all 10 listed key milestones on required format clearly indicating sequencing of activities and commitment to



Evaluation Area	Weight	Technical/Functional Criteria and Scoring
10. Transportation and Post quality inspection The overall schedule should clearly indicate sequencing of activities with clear understanding of scope .		practical and final works completion = 10 points
Total	100	

39.1.3 STAGE 3 - PRICING AND SPECIFIC GOALS

Include or attach detailed pricing schedule

Bidders should provide their price proposal in envelope 2, which should include Form C (Financial Offer) and also provide proof of Specific Goals.

THE 80/20 PREFERENCE POINT SYSTEMS

The maximum points for this tender are allocated as follows:

	POINTS
PRICE	80
SPECIFIC GOALS	20
TOTAL POINTS FOR PRICE AND SPECIFIC GOALS	100

FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

The following formula shall be used by the Bid Evaluation Committee to allocate scores to the interested bidders:

$$P_s = 80 \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right)$$

Where:

P_s = Points scored for the price of tender under consideration;



Pt. = Rand value of the tender under consideration;

Pin = Rand value of the lowest acceptable tender.

The minimum qualifying criteria for pricing is 70 points as per the standard Evaluation Criteria presented in figure 13.2 above.

POINTS AWARDED FOR SPECIFIC GOALS

In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in table 39.7 below as may be supported by proof/ documentation stated in the conditions of this tender:

In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of—

- (a) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system; or
 - (b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system,
- then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.

Subject to section 2(1)(f) of the Act, the contract must be awarded to the tenderer scoring the highest points.

40 THE NATIONAL INDUSTRIAL PARTICIPATION PROGRAMME

The National Industrial Participation Programme (NIPP), which is applicable to all government procurement contracts that have an imported content, became effective on the 1 September 1996. The NIP policy and guidelines were fully endorsed by Cabinet on 30 April 1997. In terms of the Cabinet decision, all state and parastatal purchases / lease contracts (for goods, works and services) entered into after this date, are subject to the NIP requirements. NIP is obligatory and therefore must be complied with. The Industrial Participation Secretariat (IPS) of the Department of Trade and Industry (DTI) is charged with the responsibility of administering the programme.

Bidders are therefore required to complete SBD 5 to give effect to the above. **Bidders who do not complete this form will be automatically disqualified.**



41 RECOMMENDATION AND APPROVAL OF THE SPECIFICATION / TERMS OF REFERENCE / STATEMENT OF WORK SUBMISSION FOR APPOINTMENT OF A SERVICE PROVIDER FOR DEMOLITION SPECIALISTS FOR THE DEMOLISHING OF VARIOUS PEDESTRAIN FOOT BRIDGES IN THE GAUTENG REGION.

REQUESTED BY MR. PROJECT MANAGER: METRORAIL GAUTENG DATE:	
..... MR. MESHACK MUZILA CHIEF ENG TECH: PERWAY DATE:	SUPPORTED / NOT SUPPORTED / COMMENTS
..... MR. TSHILIDZI SAMUEL MBEDZI REGIONAL PERWAY ENGINEER: ACTING DATE:	APPROVED/ NOT APPROVED / COMMENTS