

PROVISIONAL BILLS OF QUANTITIES

FOR

REFURBISHMENTS AND UPGRADES TO IKWEZI TRAIN STATION

AT

SOWETO, JOHANNESBURG

July-22

SECTION NO.1 : PRELIMINARIES

Item No	Quantity	Rate	Amount R
<p><u>SECTION NO. 1</u></p> <p><u>PRELIMINARIES AND GENERAL</u></p> <p><u>BILL NO. 1</u></p> <p><u>BUILDING AGREEMENT AND PRELIMINARIES</u></p> <p>The JBCC Principal Building Agreement (Edition 6.2 - May 2018) prepared by the Joint Building Contracts Committee shall be the applicable building agreement, amended as hereinafter described</p> <p>The JBCC Principal Building Agreement contract data form an integral part of this agreement</p> <p>The JBCC General Preliminaries (May 2018) published by the Joint Building Contracts Committee for use with the JBCC Principal Building Agreement (Edition 6.2 - May 2018) shall be deemed to be incorporated in these bills of quantities, amended as hereinafter described</p> <p>The contractor is deemed to have referred to the abovementioned documents for the full intent and meaning of each clause</p> <p>The clauses in the abovementioned documents are hereinafter referred to by clause number and heading only</p> <p>Where any item is not relevant to this agreement such item is marked N/A signifying "not applicable"</p> <p>Where standard clauses or alternatives are not entirely applicable to this agreement such amendments, modifications, corrections or supplements as will apply are given under each relevant clause heading and such amendments, modifications, corrections or supplements shall take precedence notwithstanding anything to the contrary contained in the abovementioned documents</p>			
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Section No. 1 Preliminaries Contract Part C2: Pricing Data			

SECTION A: PRINCIPAL BUILDING AGREEMENT

Interpretation (A1-A7)

- 1 Clause 1.0 - Definitions and interpretation
- 2 Clause 2.0 - **Law**, regulations and **notices**
- 3 Clause 3.0 - Offer and acceptance

F:..... V:.....
T:.....

- 4 Clause 4.0 - Cession and assignment

F:..... V:.....
T:.....

- 5 Clause 5.0 - Documents

F:..... V:.....
T:.....

- 6 Clause 6.0 - **Employer's agents**

F:..... V:.....
T:.....

- 7 Clause 7.0 - Design responsibility

F:..... V:.....
T:.....

Insurances and securities (A8-A11)

- 8 Clause 8.0 - **Works** risk

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9 Clause 9.0 - Indemnities
F:..... V:.....
T:.....

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10 Clause 10.0 - Insurances
F:..... V:.....
T:.....

Item

11 Clause 11.0 - **Securities**
Execution (A12 - A17)

12 Clause 12.0 - Obligations of the **parties**
F:..... V:.....
T:.....

Item

13 Clause 13.0 - Setting out
F:..... V:.....
T:.....

Item

14 Clause 14.0 - Nominated **subcontractors**
F:..... V:.....
T:.....

Item

15 Clause 15.0 - Selected **subcontractors**
F:..... V:.....
T:.....

Item

16 Clause 16.0 - **Direct contractors**
Attendance on direct contractors
In respect of **direct contractors** the **contractor** shall:
1. Designate an area for the **direct contractor** to establish a temporary office and workshop and storage of equipment and materials

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	<p>2. Allow the use of personnel welfare facilities, where provided</p> <p>3. Provide water, lighting and single phase electric power to a position within 50m of the place where the direct contract work is to be carried out, other than fuel or power for commissioning of any installation</p> <p>4. Permit the direct contractor to use erected scaffolding, hoisting facilities, etc provided by the contractor, in common with others having the like right, while it remains erected on the site [16.1]</p> <p>F:..... V:..... T:.....</p>	Item		
17	<p>Clause 17.0 - Contract instructions</p> <p>Site instructions</p> <p>Instructions issued on site are to be recorded in a site instruction book which is to be supplied and maintained on site by the contractor</p> <p>F:..... V:..... T:.....</p> <p>Completion (A18 - A24)</p>	Item		
18	Clause 18.0 - Interim completion	N/A		
19	<p>Clause 19.0 - Practical completion</p> <p>F:..... V:..... T:.....</p>	Item		
20	Clause 20.0 - Completion in sections			
21	Clause 21.0 - Defects liability period and final completion			
22	<p>Clause 22.0 - Latent defects liability period</p> <p>F:..... V:..... T:.....</p>	Item		
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23	<p>Clause 23.0 - Revision of the date for practical completion</p> <p>Substitution of materials and goods</p> <p>The removal or substitution of any materials and goods which do not conform to the specification or the contract drawings shall not constitute grounds for the extension of the construction period nor for the adjustment of the contract value [17.1.8; 23.1 & 2]</p> <p>F:..... V:..... T:.....</p>				
			Item		
24	<p>Clause 24.0 - Penalty for late or non-completion</p> <p>F:..... V:..... T:.....</p> <p>Payment (A25 - A27)</p>				
			Item		
25	<p>Clause 25.0 - Payment</p> <p>Prices submitted</p> <p>Where prices are submitted by the contractor or subcontractor during the progress of the works in respect of contract instructions or in regard to a claim under the terms of this agreement and notwithstanding the fact that such prices may be used in an interim payment certificate, there is to be no presumption of acceptance. Should the principal agent wish to accept any such prices prior to the issue of the certificate of final completion, it shall be in writing</p> <p>F:..... V:..... T:.....</p>				
			Item		
26	<p>Clause 26.0 - Adjustment of the contract value and final account</p> <p>Fluctuations in costs</p> <p>All fluctuations in costs, with the exception of fluctuations in the rate of Value Added Tax, shall be for the account of the contractor [26.9.5]</p>				
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27	<p>Clause 27.0 - Recovery of expense and/or loss</p> <p>F:..... V:..... T:.....</p>	Item	
<u>Suspension and termination (A28 - A29)</u>			
28	<p>Clause 28.0 - Suspension by the contractor</p> <p>F:..... V:..... T:.....</p>	Item	
29	<p>Clause 29.0 - Termination</p> <p>F:..... V:..... T:.....</p>	Item	
<u>Dispute resolution (A30)</u>			
30	<p>Clause 30.0 - Dispute resolution</p> <p>F:..... V:..... T:.....</p>	Item	
31	<p><u>Agreement</u></p> <p>The required information of the parties and the amount of the contract sum shall be inserted in the agreement for signature of the agreement by the parties</p> <p>F:..... V:..... T:.....</p>	Item	
32	<p><u>Contract data</u></p> <p>F:..... V:..... T:.....</p>	Item	
<u>SECTION B: GENERAL PRELIMINARIES</u>			
<u>Definitions and interpretation (B1)</u>			
33	<p>Clause 1.1 - Definitions</p> <p>F:..... V:..... T:.....</p>	Item	
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34	Clause 1.2 - Interpretation			
	F:..... V:..... T:.....	Item		
	<u>Documents (B2)</u>			
35	Clause 2.1 - Checking of documents			
	F:..... V:..... T:.....	Item		
36	Clause 2.2 - Provisional bills of quantities			
	F:..... V:..... T:.....	Item		
37	Clause 2.3 - Availability of construction information			
	F:..... V:..... T:.....	Item		
38	Clause 2.4 - Ordering of materials and goods			
	F:..... V:..... T:.....	Item		
	<u>Previous work and adjoining properties (B3)</u>			
39	Clause 3.1 - Previous work - dimensional accuracy			
	F:..... V:..... T:.....	Item		
40	Clause 3.2 - Previous work - defects			
	F:..... V:..... T:.....	Item		
41	Clause 3.3 - Inspection of adjoining properties			
	F:..... V:..... T:.....	Item		
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<u>The site (B4)</u>				
42	Clause 4.1 - Handover of site in stages F:..... V:..... T:.....	Item		
43	Clause 4.2 - Enclosure of the works	Item		
44	Clause 4.3 - Geotechnical and other investigations F:..... V:..... T:.....	Item		
45	Clause 4.4 - Encroachments F:..... V:..... T:.....	Item		
46	Clause 4.5 - Existing premises occupied F:..... V:..... T:.....	Item		
47	Clause 4.6 - Services - known F:..... V:..... T:.....	Item		
<u>Management of contract (B5)</u>				
48	Clause 5.1 - Management of the works F:..... V:..... T:.....	Item		
49	Clause 5.2 - Progress meetings F:..... V:..... T:.....	Item		
50	Clause 5.3 - Technical meetings F:..... V:..... T:.....	Item		
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Samples, shop drawings and manufacturer's instructions (B6)

51 Clause 6.1 - Samples of materials

F:..... V:.....
T:.....

Item

52 Clause 6.2 - Workmanship samples

F:..... V:.....
T:.....

Item

53 Clause 6.3 - Shop drawings

F:..... V:.....
T:.....

Item

54 Clause 6.4 - Compliance with manufacturer's instructions

F:..... V:.....
T:.....

Item

Deposits and fees (B7)

55 Clause 7.1 - Deposits and fees

F:..... V:..... T:.....

Item

Temporary services (B8)

56 Clause 8.1 - Water

F:..... V:.....
T:.....

Item

57 Clause 8.2 - Electricity

F:..... V:.....
T:.....

Item

58 Clause 8.3 - Ablution and welfare facilities

F:..... V:.....
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59	Clause 8.4 - Communication facilities	Item	
	F:..... V:..... T:.....		
	<u>Prime cost amounts (B9)</u>		
60	Clause 9.1 - Responsibility for prime cost amounts		
	<u>Attendance on subcontractors (B10)</u>		
61	Clause 10.1 - General attendance		
	<u>User note</u>		
	<i>General attendance is defined as being the duties of the contractor in terms of clause 12.2 of the JBCC n/s subcontract agreement</i>		
	F:..... V:..... T:.....	Item	
62	Clause 10.2 - Special attendance		
63	Clause 11.1 - Protection of the works		
	F:..... V:..... T:.....	Item	
64	Clause 11.2 - Protection/isolation of existing works and works occupied in sections		
	F:..... V:..... T:.....	Item	
65	Clause 11.3 - Security of the works		
	F:..... V:..... T:.....	Item	
66	Clause 11.4 - Notice before covering work		
	F:..... V:..... T:.....	Item	
67	Clause 11.5 - Disturbance		
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68 Clause 11.6 - Environmental disturbance
69 Clause 11.7 - **Works** cleaning and clearing

F:..... V:.....
T:.....

Item

70 Clause 11.8 - Vermin

F:..... V:.....
T:.....

Item

71 Clause 11.9 - Overhand work

F:..... V:.....
T:.....

Item

72 Clause 11.10 - Tenant installations

F:..... V:.....
T:.....

Item

73 Clause 11.11 - Advertising

F:..... V:.....
T:.....

Item

SECTION C: SPECIFIC PRELIMINARIES

74 **Site instructions**

Contract Instructions issued on **site** are to be recorded in triplicate in a **site** instruction book which is to be maintained on site by the **contractor**

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75 **Warranties for material and workmanship**

Where warranties for materials and/or workmanship are called for, the **contractor** shall obtain a written warranty, addressed to the **employer**, from the firm supplying the materials and/or doing the work and shall deliver same to the **principal agent** on the **final completion** of the **contract**. The warranty shall state that workmanship, materials and installation are warranted for a specified period from the date of **final completion** and that any **defects** that may arise during the specified period shall be made good at the expense of the firm supplying the materials and/or doing the work, upon written notice to do so. The warranty will not be enforced if the work is damaged by **defects** in the construction of the building in which case the responsibility for replacement shall rest entirely with the **contractor**

F:.....V:.....T:.....

Item

76 **Co-operation of contractor for cost management**

It is specifically agreed that the **contractor** accepts the obligation of assisting the **principal agent** in implementing proper cost management. The **contractor** will be advised by the **principal agent** of all cost management procedures which will be implemented to ensure that the final building cost does not exceed the budget. The **principal agent** undertakes to make available to the **contractor** all **budgetary allowances** and cost assessments/reports to enable the proper procedure to be implemented and the **contractor** shall attend all cost plan review and cost management meetings. The **contractor** undertakes to extend these procedures, as necessary, to all subcontractors

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77 **Propping of floors below**

The **contractor** is advised that propping of floors below may be required if he wishes to use any areas of completed suspended reinforced concrete slabs for vehicle access, storage of **materials and goods** and location of plant, scaffolding, etc. The location of these areas and any necessary propping shall be approved by the **principal agent** and the cost thereof shall be borne by the **contractor**

F:..... V:..... T:.....

Item

78 **Testing of windows for watertightness**

Each window shall be tested for watertightness with water sprayed on using adequate pressure. If in the opinion of the **principal agent**, the pressure proves to be inadequate, then the pressure shall be boosted by means of compressed air or other approved means

F:..... V:..... T:.....

Item

79 **Testing of flat roof waterproofing for watertightness**

Flat roof waterproof areas shall be prepared with small sand dykes around them of a size and enclosing an area approved by the **principal agent**, flooded with water and kept "ponded" for at least 36 hours as a test to ensure the watertightness of the waterproofing and before any further construction work is carried out above the waterproofing

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HIV/AIDS AWARENESS

It is required of the Contractor to thoroughly study the HIV/AIDS Specification (C3.5) together with and is deemed to be incorporated under this Section of the Bills of Quantities. Provision for pricing of HIV/AIDS awareness is made under items hereafter and it is explicitly pointed out that all requirements of the aforementioned specification are deemed to be priced hereunder, as the said items represent the only method of measurement and no additional items or extras to the contract in this regard shall be entertained.

The **Contractor** must take note that compliance with the HIV/AIDS Specification is compulsory. In the event of partial or total non-compliance, the **Principal Agent**, notwithstanding the provisions of Clause A 31 of "Section 1: Preliminaries (Section A)" or any other clauses to the contrary, reserve the right to delay issuing any progress **payment certificate** until the **Contractor** provides satisfactory proof of compliance. The **Contractor** shall not be entitled to any compensation of whatsoever nature, including interest, due to such delay of payment.

80 **AWARENESS CHAMPION**

Selection, appointment, briefing and making available of an Awareness Champion including provision of all relevant services, all in accordance with the HIV/AIDS Specification.

F:..... V:..... T:.....

Item

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81 **AWARENESS WORKSHOPS**

Selection and appointment of a competent Service Provider approved by the **principal agent**, provision of a Service Provider Workshop Plan and a suitable venue, conducting of awareness workshops by means of traditional and/or modern multimedia techniques, including follow-up courses, making available all tuition material and performing assessment procedures, all in accordance with the HIV/AIDS Specification.

F:..... V:..... T:.....

Item

82 **POSTERS, BOOKLETS, VIDEOS, ETC.**

Provision, displaying, maintaining and replacing when necessary of four plastic laminated posters, booklets and educational videos, etc. for the duration of the **construction period**, all in accordance with the HIV/AIDS Specification.

F:..... V:..... T:.....

Item

83 **ACCESS TO CONDOMS**

Provision and maintenance of condom dispensers fixed in position, including male and female condoms, replenishing male and female condoms on a daily basis as required for the duration of the **construction period**, all in accordance with the HIV/AIDS Specification.

F:..... V:..... T:.....

Item

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84 **MONITORING**
Monitoring HIV/AIDS awareness of workers, providing the **principal agent** with access to information including making available all reports, thoroughly completed and reflecting the correct information, for the duration of the construction period and close out, all in accordance with the HIV/AIDS Specification.

F:..... V:..... T:.....

Item

SOCIO-ECONOMIC DELIVERABLES

85 It is required that the contractor shall adhere to all Socio-Economic Deliverables

Provision for pricing of all the main contractor's costs as stipulated in the deliverables is made under this clause and are deemed to be priced hereunder and no additional claims in this regard shall be entertained

F:..... V:..... T:.....

Item

EMPLOYMENT OF SMME SUB-CONTRACTORS AS A CONDITION OF TENDER

86 It is required that the contractor shall sub-contract 30% of the contract value (Excluding VAT, Escalation, Contingencies, HT equipment provisions and Socio-Economic provisions) of the contract including labour and material to EME's and QSE's

Provision for pricing of all the main contractor's costs is made under this clause and are deemed to be priced hereunder and no additional claims in this regard shall be entertained

F:..... V:..... T:.....N/A

Item

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Section No. 1
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OCCUPATIONAL HEALTH AND SAFETY ACT

87 The contractor shall comply with all the requirements set out in the Construction Regulations, 2014 issued under the Occupational Health and Safety Act, 1993 (Act no.85 Of 1993)

It is required of the contractor to thoroughly study the Health and Safety Specification that must be read together with and is deemed to be incorporated under this Section of the Bills of Quantities / lump sum document

The contractor must take note that compliance with the Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification is compulsory. In the event of partial or total non-compliance, the principal agent, notwithstanding the provisions of clause A31.0 of Section A or any other clause to the contrary, reserves the right to delay issuing any progress payment certificate until the contractor provides satisfactory proof of compliance. The contractor shall not be entitled to any compensation of whatsoever nature, including interest, due to such delay of payment.

Provision for pricing of the Occupational Health and Safety Act, Construction Regulations and Health and safety Specification is made under this clause and it is explicitly pointed out that all requirements of the aforementioned are deemed to be priced hereunder and no additional claims in this regard shall be entertained.

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ENVIRONMENTAL HEALTH AND SAFETY

88 The contractor shall comply with all the requirements set out in the Environmental Health and Safety Specification

It is required of the contractor to thoroughly study the Environmental Health and Safety Specification

The contractor must take note that compliance with the Environmental Health and Safety is compulsory.

Provision for pricing of the Environmental Health and Safety is made under this clause and it is explicitly pointed out that all requirements of the aforementioned are deemed to be priced hereunder and no additional claims in this regard shall be entertained.

F:..... V:..... T:.....

Item

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SUMMARY OF CATEGORIES

Category: Fixed R

Category: Value R

Category: Time R

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**Refurbishments and Upgrades to Ikwezi Train Station
Prasa South Gauteng Region Corridor 3**

Section No. 1			
Preliminaries			
Bill No. 1			
Preliminaries			
<u>COLLECTION PAGE</u>			
	Page No		Amount R
Total Brought Forward from Page No.	1		
Total Brought Forward from Page No.	2		
Total Brought Forward from Page No.	3		
Total Brought Forward from Page No.	4		
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Total Brought Forward from Page No.	19		
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SECTION NO.2 : BUILDING WORK

Item No	Quantity	Rate	Amount R
<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 1</u></p> <p><u>ALTERATIONS</u></p> <p><u>PREAMBLES</u></p> <p>Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Descriptions and preambles in other bills</u></p> <p>Reference shall be made to other trades and preambles for preambles and full descriptions of items not fully described in this trade which shall apply equally to the work in this trade, unless otherwise described.</p> <p><u>General</u></p> <p>The Tenderer is advised to visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials contained in the buildings or portions of the buildings to be demolished. No claim for a compensation event in respect of the nature and extent of the work or of inferior or damaged materials will be entertained</p> <p>The attention of tenderers is drawn to the fact that unless otherwise stated loose furniture, kitchen equipment, apparatus, machinery, etc. is to remain the property of the Chief Director and does not fall within the scope of this contract.</p>			
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Tenderers are advised that parts of the existing buildings on the site, including the existing water supply and sanitary systems will be in use during the progress of the Works and any disconnections, etc. that may be necessary must be made as directed by the Project Manager and in such a manner as to cause the minimum of inconvenience to the occupants of the buildings

Notices

Special care shall be exercised during the progress of the work to ensure that any electrical installations, water supply pipes, telephone and other services which may be encountered are not interfered with and notice shall be given to the Project Manager if any disconnection or alterations become necessary

Demolitions

All demolitions work shall be carried out in accordance with the Local By-laws and to the requirements of the Local Health Authorities. The Contractor shall take all precautions necessary to prevent any nuisance from dust whilst carrying out the work, including watering of the works with a jet or spray

Old materials to become the property of the Contractor

Old materials from alterations, except where described to be re-used or handed over to the Project Manager, become the property of the Contractor

Old materials from the alterations, except where described to be re-used or handed over to the Project Manager, as well as all rubbish, etc., must be regularly carted from site and not be allowed to accumulate on or around the site.

Old materials not to be re-used

None of the old materials is to be used for new work except where specifically described as being set aside for re-use

Carried to Collection

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Section No. 2
Alterations
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Handing over of materials

Where certain materials or articles from demolitions or alterations are described as to be handed over by the Contractor to the Project Manager such materials or articles shall be properly stored by the Contractor, until handing over thereof.

The Contractor must obtain an official receipt listing the materials or articles and dates of handing over. If the Contractor fails to submit the receipt when requested, it shall be deemed that the materials or articles are still in his possession and he will be liable to the Chief Director for the full replacement value thereof, which amount will be deducted from any monies due to the Contractor

Protection

In taking down and removing existing work the utmost care is to be observed to avoid any structural or other damage to the remaining portions of the building and the work is to be carried out in a workmanlike, practical and safe manner under the constant supervision of a competent foreman

The contractor must also protect all work not removed such as walls, floors, doors, windows, or other joinery, loose and fixed fittings and electrical appliances, etc. from damage during the progress of the work and provide all necessary materials for doing so

The Contractor will be held solely responsible for any damage to persons or property and for the safety of the structure throughout the whole of this contract and must make good at his own expense any damage that may occur. He shall allow for protecting and indemnifying persons using or passing through the existing buildings from injury and by necessary barriers, signs, etc

Making good damaged work

The Contractor shall make good in all trades to existing work where damaged or disturbed through the alterations with all necessary new materials to match the existing. The works shall be left complete and perfect in every respect

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Section No. 2
Alterations
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Pulling down

Pulling down walls shall include for dead shoring under existing concrete slabs, beams, roof members, etc., for pulling down face brick, tiled or plastered walls and concrete beams or lintels occurring in same, for removing skirtings, quadrants, cornices, etc, fixed to same for hacking up flooring in openings and making good as previously described to walls, floors, ceilings, etc, unless otherwise described

Junction of new and existing

Making good at the junction of new and existing work shall include for piercing out, cutting through or removing short lengths of existing material, for supplying short lengths of new material and for jointing to match existing

Existing and adjoining buildings, etc.

In taking down and removing existing work the utmost care must be observed to avoid any structural or other damage to the remaining portions of the building or adjoining buildings, boundary walls, pavings, roadways, etc, and the Contractor shall provide all shoring, needling, strutting, etc, to ensure the stability of all structures during demolition or alteration work. The Contractor must cover up and protect from damage all work not removed and must make good at his own expense any damage that may occur

Forming new openings or altering openings in existing walls

Descriptions for forming new openings or altering openings in existing walls shall be deemed to include breaking out for and forming new brick, in-situ concrete or pre-stressed concrete lintels including all reinforcement, formwork, turning pieces, etc, building up jambs or portions of openings as described with brickwork or blockwork properly toothed and bonded to existing, building cavities or hollow walls solid where necessary and making good finishes all round on both sides and into reveals as described

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Building up openings

Descriptions of building up existing openings, where given in number, shall be deemed to include preparing existing surfaces all round, brickwork or blockwork, properly toothed and bonded to existing, wedging up and making good finishes on both sides as described

Site works

Hacking up gravel, concrete, bituminous or other paving shall include for grubbing up the sub-base and brick or concrete kerb

Pulling down boundary, retaining walls, fencing, etc, shall include for grubbing up all bricks, concrete and reinforced concrete foundations, bases, etc

All voids in ground consequent upon the pulling or cutting down are to be filled in with clean earth, well consolidated and rammed up to finished ground level

Plant and Scaffolding

The Contractor shall provide, maintain and remove from site if no longer required, all plant and scaffolding for the proper execution of the works

Dimensions

The Contractor is advised to take all dimensions affecting the existing buildings on the site, as he will be held solely responsible for all new work being of the correct sizes

Removal of ceilings

The Contractor is to ensure compliance with all relevant by-laws and legislation in terms of taking down, temporary storing on site, loading and final removal from site of ceilings with asbestos cement content

NOTE:

All sizes and dimensions stated herein are approximate and deemed only sufficient to identify the item of work concerned

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All new finishes are measured in the relevant trades for new work

TEMPORARY BARRIERS, SCREENS, ETC

Temporary barriers, screens, etc including removal

1	Hoarding 3000mm high extreme formed of 0,6mm thick Z275 spelter galvanised steel sheeting on exposed public side, sheeting lapped and fixed with suitable fasteners and washers to and including 100mm diameter galvanised mild steel posts at 3000mm centres, and three galvanised mild steel angle section horizontal members, galvanised mild steel base plate welded on to end of 100mm diameter posts and base plate securely bolted to concrete floor, horizontal angle section members placed one at top of hoarding, one in the middle and one at the bottom, including applying suitable primer, undercoat and two finishing coats enamel paint on exposed surface of cladding	m	10	
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REMOVAL OF EXISTING WORK

Breaking down and removing brickwork etc

2	Half brick wall	m ²	8	
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Taking up and removing pavers, etc

3	Concrete pavers laid loose on compacted subbase	m ²		Rate Only
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Taking out and removing doors from walls to be demolished

4	Timber single door not exceeding 2,5m2	No	1	
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Taking out and removing doors, windows, etc including thresholds, sills, etc (building up openings elsewhere)

5	Timber single door not exceeding 2,5m2	No	2	
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Alterations
Contract
Part C2: Pricing Data

**Refurbishments and Upgrades to Ikwezi Train Station
Prasa South Gauteng Region Corridor 3**

<u>Take off and remove doors from existing frames including preparing frame to receive new door leaves (elsewhere measured)</u>			
6	Timber single door not exceeding 2,5m2	No	4
7	Steel transformer double door exceeding 2,5m2 but not exceeding 5m2	No	1
<u>Taking down and removing roofs, floors, panelling, ceilings, partitions, etc</u>			
8	Suspended ceilings including cornices, timber bandering, etc	m ²	394
9	Toilet Partitioning including doors	m	14
10	Gutters and downpipes complete with fittings	m	
<u>Taking out and removing sundry joinery work</u>			
11	Timber skirtings from brickwork	m	271
<u>Taking up and removing vinyl floor coverings, carpeting, etc</u>			
12	Carpet floor covering including preparing screed for new floor covering	m ²	104
<u>Take off and remove existing ironmongery from doors, including making good and prepare to receive new ironmongery (elsewhere measured)</u>			
13	Mortice lockset complete with handles from timber door	No	
<u>Taking out and removing ironmongery</u>			
14	Stainless steel toilet roll holder	No	2
15	Liquid dispenser	No	1
<u>Hacking up/off and removing granolithic, screeds, plaster, etc from concrete or brickwork and preparing surfaces for new screeds, plaster, etc</u>			
16	30mm Thick screed from floors	m ²	
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**Refurbishments and Upgrades to Ikwezi Train Station
Prasa South Gauteng Region Corridor 3**

<u>Hacking up/off and removing porcelain or ceramic tile floor and wall finishes including removing mortar bed or backing and preparing concrete or brick surfaces for new screed, plaster or tile finishes</u>				
17	Tiles to floors	m ²	184	
18	Tiles to walls	m ²	196	
19	Tile skirting	m	407	
<u>Hacking up/off and removing terrazzo tile floor and wall finishes including removing mortar bed or backing and preparing concrete or brick surfaces for new screed, plaster or tile finishes</u>				
20	Tiles to floors	m ²	31	
<u>Carefully take out existing sanitary fittings and hand over to Client, or store in demarcated area on site, as directed by the Project Manager</u>				
21	Vitreous china wash hand basin	No	6	
22	Vitreous china WC pan with cistern	No	2	
23	Paraplegic grab and flush rails	No	6	
24	Floor drain	No	2	
<u>Taking out and removing glass and mirrors</u>				
25	Glass from steel windows including cleaning out rebates and preparing for new glass	m ²		Rate Only
26	Mirror size 450 x 600mm high from wall	No		Rate Only
<u>Taking out and removing street furniture:</u>				
27	Steel seats	No	12	
<u>BUILDING UP OPENINGS</u>				
<u>Brickwork in NFP bricks in class II mortar in building up openings</u>				
28	Half brick walls	m ²	1	
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**Refurbishments and Upgrades to Ikwezi Train Station
Prasa South Gauteng Region Corridor 3**

29	One brick walls	m ²	3	
	<u>Sundries</u>			
30	Cutting toothings and bonding new brickwork to existing	m ²	2	
	<u>PREPARATORY WORK TO EXISTING SURFACES</u>			
31	Making good defects in existing screeded floors with an approved cementious compound	m ²		Rate Only
	<u>MAKING GOOD OF FINISHES ETC</u>			
32	Making good brickwork to face of wall where 230mm brick cross wall was removed	m	1	
33	Terrazzo floor tiles in patches to match existing	m ²	2	
	<u>REPAIRING PLASTER</u>			
	<u>General Notes</u>			
	All plaster repair admixtures are to be applied strictly in accordance with the manufacturer's requirements. Break out all loose and hollow plaster at least 200mm wide all around loose plaster area, brush clean of all loose material, treat exposed area with adhesive slurry and plaster with an admixture of 3:1 sand/cement and 3:1 water/adhesive slurry			
	All work is deemed to be in patches			
	<u>Prepare and apply 3:1 plaster admixture as described</u>			
34	On brick walls	m ²		Rate Only
	<u>CONCRETE CRACK REPAIRS</u>			
	<u>General Notes</u>			
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<u>Preparation of surfaces</u>				
Surfaces shall be dry and clean, free of dust, sand, grit and flaking particles, rust, scale, marine growths, laitance and loose matter, contaminants such as oil, grease, etc. Cracks to be cleaned and widened by hand or mechanical means. Where applicable, surfaces shall not have a moisture content exceeding 4%. The cleaning of surfaces to be done by means of high speed pneumatic rotary wire brush. Oil, grease, animal fats, etc to be removed with suitable product to be applied in strict accordance with the manufacturer's instructions. Once clean, surfaces to be profiled mechanically (Vacublasting, scarifying or grinding) by means of acid etching (one part concrete etchant thinned with two parts water applied at the rate of 2m ² /1 litre in strict accordance with the manufacturer's instructions)				
<u>CONCRETE REPAIRS</u>				
<u>Prepare cracked concrete surfaces as described and apply two component epoxy putty</u>				
35	On soffits of slabs	m ²		Rate Only
<u>Making good defects in concrete with an approved cementious compound</u>				
36	On edges of concrete stairs	m	69	
<u>CLEANING OF WALLS</u>				
<u>Cleaning of surfaces</u>				
37	Facebrick walls	m ²	297	
<u>OPENINGS THROUGH EXISTING WALLS ETC</u>				
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Breaking out for and forming openings through brick walls for new windows, doors and frames including necessary precast concrete lintels and making good plaster on both sides and into reveals with steel trowelled finish (new windows, doors and frames and making good paintwork elsewhere)

38	Opening for door with steel frame 813 x 2032mm high overall through one brick wall	No	1
39	Opening for window size 600mm x 600mm high overall through one brick wall	No	2

SEALING OF EXISTING ROOF SHEETING

Inspect, clean and seal existing corrugated metal roof sheeting by tightening all existing screws and replacing missing or damaged screws with new, seal all screw heads and laps with an approved sealant to ensure a leak free roof, all to the approval of the Project Manager. (Re-painting elsewhere measured)

40	Roof with a pitch not exceeding 25 degrees	m ²	2 894
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SERVICE AND REPAIR

Inspect and service

41	Roller shutter door 2000 x 2400mm high including ironmongery	No	1
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Repair and waterproof lightwell windows

42	Repair & make good all rust, corrosion & other damage to existing steel frame. Replace all damaged glazing to match existing. Seal or waterproof windows. Prepare steel frame (remove all scale, dust, oil etc) to receive new oxide industrial primer and top coat finish. Window approximate size 4600 x 4600mm high.	No	2
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Item No	Quantity	Rate	Amount R
<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 2</u></p> <p><u>EARTHWORKS</u></p> <p><u>PREAMBLES</u></p> <p>Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Nature of ground</u></p> <p>The nature of the ground is assumed to be loose sandy material, therefore "earth", but possibly interspersed with "hard rock" or "soft rock".</p> <p>The nature of the ground is assumed to be gravel, therefore "earth", but possibly interspersed with "soft rock".</p> <p>The nature of the ground is assumed to be silty clay with loose river boulders varying in size up to approximately 450mm diameter, therefore "earth", but possibly interspersed with "hard rock".</p> <p>Trial holes indicate that the nature of the ground is silty clay to a depth of approximately 500mm with fine to medium loose sandy material below, therefore "earth". The trial holes also indicate that the water table is at a maximum depth of approximately 1000mm.</p> <p>A soils investigation has been carried out on site by the engineer and the report is annexed to these bills of quantities. Descriptions of excavations shall be deemed to include all ground conditions classifiable as "earth" described in the above report and where conditions of a more difficult character are indicated these are separately measured</p>			
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<p>Section No. 2 Earthworks Contract Part C2: Pricing Data</p>			

Carting away of excavated material

Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stock piles situated on the building site

Filling

Notwithstanding the reference to prescribed multiple handling in clause 1 page 6 of the Standard System of Measuring Building Work, prices for filling and backfilling shall include for all selection and any multiple handling of material

Testing

Prices for filling are to include for all necessary density tests in accordance with SANS 1200D

DEMOLITIONS ETC

Demolishing and removing

43	Single storey building with timber pitched roof approximately 10 x 3.2m on plan and 2.6m high overall comprising concrete surface bed and one brick external walls	No	1	
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Taking down and removing

44	Mild steel Security fence and sliding gate approximately 2.6m high	m	14	
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Earthworks

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<u>SUPERSTRUCTURE</u>			
<u>Brickwork of NFP bricks in class 1 mortar</u>			
45	Half brick walls	m ²	13
46	One brick walls	m ²	1
<u>BRICKWORK SUNDRIES</u>			
<u>Brickwork reinforcement</u>			
47	75mm Wide reinforcement built in horizontally	m	50
48	150mm Wide reinforcement built in horizontally	m	1
<u>Prestressed fabricated lintels</u>			
49	110 x 75mm Lintels in lengths not exceeding 3m	m	3
<u>GRANITE COUNTER TOPS AND VANITY SLABS</u>			
<u>KITCHEN COUNTERS</u>			
<u>30mm thick polished granite counters with all exposed edges large bevel edged, fixed to supports (elsewhere specified) using dabs of 100% black silicone adhesive along all supports with all joints filled with matching polyester resin glue. Granite surface to be sealed using an approved stone sealer, all in accordance with the manufacturer's recommendations.</u>			
50	Kitchen counter 3540 long x 600mm wide including forming opening for double bowl sink	No	1
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Masonry

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Item No		Quantity	Rate	Amount R
	<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 4</u></p> <p><u>WATERPROOFING</u></p> <p><u>PREAMBLES</u></p> <p>Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p>Waterproofing Waterproofing of roofs, basements, etc shall be laid under a ten year guarantee. Waterproofing to roofs shall be laid to even falls to outlets etc with necessary ridges, hips and valleys. Descriptions of sheet or membrane waterproofing shall be deemed to include additional labour to turn-ups and turn-downs</p> <p style="text-align: center;">-----</p> <p><u>DAMPPROOFING OF WALLS AND FLOORS</u></p> <p><u>One layer of 375 micron embossed damp proof course</u></p>			
51	In walls	m ²	1	
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	Section No. 2 Waterproofing Contract Part C2: Pricing Data			

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<p><u>SECTION NO. 2</u></p>			
<p><u>BILL NO. 6</u></p>			
<p><u>CARPENTRY AND JOINERY</u></p>			
<p><u>PREAMBLES</u></p>			
<p>Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities</p>			
<p><u>SUPPLEMENTARY PREAMBLES</u></p>			
<p>Plate nailed timber roof truss construction</p>			
<p>The following is applicable in respect of roof trusses:</p>			
<p>Trusses are at maximum 1,20m centres. Roof covering is 0,58mm Corrugated sheeting on 50 x 75mm purlins. Ceilings are 6,4mm skimmed gypsum plasterboard sheeting on 38 x 38mm branderling. The dimensions in the descriptions of the trusses are nominal and actual measurements shall be obtained from the architect and/or the site before design or fabrication commences</p>			
<p>Joinery</p>			
<p>Descriptions of frames shall be deemed to include frames, transomes, mullions, rails, etc</p>			
<p>Descriptions of hardwood joinery shall be deemed to include pelleting of bolt holes</p>			
<p>Fixing</p>			
<p>Items described as "nailed" shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete</p>			
<p>Decorative laminate finish</p>			
<p>Laminate finish shall be glued under pressure. Edge strips shall be butt jointed at junctions with adjacent similar finish</p>			
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<p>Section No. 2 Carpentry and Joinery Contract Part C2: Pricing Data</p>			

<u>SKIRTINGS</u>			
<u>Wrought meranti</u>			
52	20 x 120mm Skirtings	m	272
<u>DOORS, ETC</u>			
<u>Semi-solid flush panel door with concealed hardwood edges and commercial veneer on both sides, hung to steel frames</u>			
53	44mm Thick single door size 915 x 2100mm high	No	4
54	44mm Thick single door size 813 x 2032mm high	No	3
<u>JOINERY FITTINGS</u>			
<u>General</u>			
The following fittings have been measured as complete units i.e. the components of the units have not been separately measured. The descriptions, therefore, of such units shall be deemed to include all components, assembling, housing, notching, glueing, blocking, planting on and screwing with countersunk screws, edge strips, decorative plastic finish, glass, ironmongery, metalwork, paint or varnish finishes, etc			
<u>KITCHEN CUPBOARDS</u>			
<u>22mm Thick white melamine carcass base and shelves with masonite backing and black painted chipboard kickplates complete with and including timber bearers, melawood impact post formed wrapped doors fitted with appropriate hinges and all ironmongery</u>			
55	Floor standing cupboard 3540mm long x 600mm wide x 900mm high complete with back, divisions, drawers, filler pieces etc for supporting counter (counter measured elsewhere)	No	1
56	Wall cupboard 3540mm long x 450mm wide x 700mm high complete with back, divisions etc	No	1
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BUDGETARY ALLOWANCES

Joinery fittings

57 Provide a sum of R80 000.00 (Eighty Thousand Rand)
for staff serving counters, cupboard drawers, shelving
etc

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Carpentry and Joinery

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	<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 7</u></p> <p><u>CEILING, PARTITIONS AND ACCESS FLOORING</u></p> <p><u>PREAMBLES</u></p> <p>Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Descriptions</u></p> <p>Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins or shot pinned to brickwork or concrete</p> <p>Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres, and where described as "bolted", the bolts are measured elsewhere</p> <p><u>Proprietary suspended ceilings</u></p> <p>Electric light fittings, diffusers, panels, etc generally are "lay in" units of the same dimensions as the suspension grid described and allowance shall be made accordingly for their support, inclusive of any flexibility in setting out that may be required (ceiling panels have not been deducted and pricing shall take cognisance thereof)</p> <p>-----</p> <p><u>CEILING, ETC</u></p> <p><u>Approved insulation</u></p>			
58	50mm Insulation closely fitted and laid on top of steel purlins etc,	m ²	394	
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	Section No. 2 Ceilings, Partitions and Access Flooring Contract Part C2: Pricing Data			

NAILED UP CEILINGS

12.5mm Vinyl Faced Gypsum Ceiling Panels, face-covered with white embossed vinyl, size 1200 x 600mm, laid on fire rated exposed demountable suspension system including galvanised main tees, cross tees, etc., all suspended with galvanised hangers at centres not exceeding 1200mm, all installed to manufacturer's instructions.

59	Horizontal ceilings suspended not exceeding 1m below concrete soffits	m ²	71
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SUSPENDED CEILINGS

1200 x 600 x 15mm biologically absorbable mineral wool fire rated ceiling tiles, with Square-edge and white painted finish, laid on fire rated system exposed demountable T24 suspension system, comprising galvanised main tees and cross tees with main tees suspended by means of galvanised hangers at centres not exceeding 1200mm with ceiling perimeter

60	Horizontal ceilings suspended not exceeding 1m below concrete soffits	m ²	149
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61	Horizontal ceilings suspended not exceeding 1m below steel trusses	m ²	174
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Cornices to suspended ceilings

62	Pre-painted cornices, nailed and plugged	m	1 304
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PARTITIONS ETC

TOILET PARTITIONS

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Ceilings, Partitions and Access Flooring
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12mm Compact High Pressure Laminate (colour: Charcoal) modular, frameless system with overhead brace and hanging clamp, floor anchored with adjustable supporting feet and bracketed to walls and pilasters using stainless steel brackets. All fixings and ironmongery in 316 grade stainless steel as specified. Ironmongery to include hat and coat hook with buffer stopper, indicator bolt and rise and fall butt auto open hinge installed complete in strict accordance with the manufacturer's instructions

63	Partition 1840 x 1935mm high	m	14
64	Door size 750 x 1930mm high	No	6

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Item No		Quantity	Rate	Amount R
	<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 8</u></p> <p><u>FLOOR COVERINGS, WALL LININGS, ETC</u></p> <p><u>PREAMBLES</u></p> <p>Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Fixing</u></p> <p>Floor coverings, wall linings, etc shall, where applicable, be fixed with adhesive as recommended by the manufacturers of the flooring, linings, etc</p> <p style="text-align: center;">-----</p> <p><u>FLOOR COVERINGS</u></p> <p><u>100% Stainproof (Polypropylene) structured needlepunch SABS Class 3 fire rating heavy commercial carpet tiles, size 500 x 500 x 8,5mm thick, all installed by approved installer in accordance with SANS 10186:2010.</u></p>			
65	On floors	m ²	103	
	<p><u>CORNER PROTECTORS, DIVIDING STRIPS, ETC</u></p>			
66	Natural anodised aluminium edge strips between different floor finishes	m		Rate Only
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	Section No. 2 Floor Coverings and Wall Linings Contract Part C2: Pricing Data			

Item No		Quantity	Rate	Amount R
	<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 9</u></p> <p><u>IRONMONGERY</u></p> <p><u>PREAMBLES</u></p> <p>Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Finishes to ironmongery</u></p> <p>Where applicable finishes to ironmongery are indicated by suffixes in accordance with the following list: BS Satin bronze lacquered CH Chromium plated SC Satin chromium plated SE Silver enamelled GE Grey enamelled AS Anodised silver AB Anodised bronze AG Anodised gold ABL Anodised black PB Polished brass PL Polished and lacquered PT Epoxy coated SD Sanded</p> <p><u>NOTE:</u></p> <p><u>ALL LOCKS TO BE ON A MASTER AND GRAND MASTER KEY SYSTEM</u></p> <p style="text-align: center;">-----</p> <p><u>HINGES, BOLTS, ETC</u></p> <p><u>Grade 304 Stainless steel</u></p>			
67	WC indicator bolt	No	5	
68	Disabled indicator bolt, fixed to surface with matching stainless steel screws.	No	2	
69	88 x 100mm High overall bush bearing butt hinge	No	16	
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	Section No. 2 Ironmongery Contract Part C2: Pricing Data			

<u>LOCKS</u>					
<u>Grade 304 Stainless steel</u>					
70	Euro profile Mortice sash lock with reversible latch and deadbolt. Fore end to be stainless steel	No	7		
<u>PUSH PLATES AND KICKING PLATES</u>					
<u>Grade 304 Stainless steel plates counter sunk screwed along edges at not exceeding 200mm centres</u>					
71	813 x 200mm Kick plate	No	4		
<u>HANDLES</u>					
<u>Grade 304 Stainless steel</u>					
72	Round D pull handle on a long backplate	Pairs	7		
<u>DOOR CLOSERS</u>					
<u>Approved</u>					
73	Approved delayed action door closer	No			Rate Only
<u>LETTERS, NAMEPLATES, ETC</u>					
<u>Stainless steel</u>					
74	152 x 152 x 2mm Thick engraved with female pictogram	No	3		
75	152 x 152 x 2mm Thick engraved with male pictogram	No	3		
76	152 x 152 x 2mm Thick engraved with paraplegic pictogram	No	2		
77	152 x 152 x 2mm Thick engraved with Unisex pictogram	No	1		
78	152 x 152 x 2mm Thick engraved with kitchen and breakroom pictogram	No	2		
79	152 x 152 x 2mm Thick engraved with cleaning store pictogram	No	1		
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SUNDRIES

Approved

80	Stainless steel door stop	No	3
81	Hat and coat hook	No	3
<u>BATHROOM FITTINGS</u>			
82	Satin stainless steel recessed toilet roll holders for single or two rolls, plugged and screwed to the wall with stainless steel screws.	No	4
83	Satin stainless steel waste disposal bins with capacity of plus minus 20 litres and with a frame inside the dispenser to hold a liner, plugged and screwed to the wall with stainless steel screws.	No	1
84	Satin stainless steel towel rings, plugged and screwed to the wall with stainless steel screws.	No	2
85	Satin stainless steel soap dispensers with a replaceable and refillable 1 litre container, cylinder lock , plugged and screwed to the wall with stainless steel screws.	No	3
86	Satin stainless steel paper towel dispenser with min 600 folded paper towels and cylinder lock, plugged and screwed to the wall with stainless steel screws.	No	1
87	Satin stainless steel full automatic industrial hand dryer with 2 vandal proof lock screws and key wrench, plugged and screwed to the wall with stainless steel screws. 2500 W motor with automatic power cut off after 90 second and a 5 year warranty.	No	1
88	Paraplegic Rails dog leg grab rail with 3 supports or equal approved with brushed grade 304 stainless steel finish, overall size 750 x 750mm, plugged and screwed to wall with stainless steel screws.	No	2
89	Paraplegic Rails flush valve grab rail or equal approved with brushed grade 304 stainless steel finish, overall size 842mm long, plugged and screwed to wall with stainless steel screws.	No	2

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Section No. 2
Ironmongery
Contract
Part C2: Pricing Data

**Refurbishments and Upgrades to Ikwezi Train Station
Prasa South Gauteng Region Corridor 3**

Section No. 2

Bill of Quantities

Bill No. 8

Ironmongery

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Section No. 2
Ironmongery
Contract
Part C2: Pricing Data

Item No	Quantity	Rate	Amount R
<p><u>SECTION NO. 2</u></p>			
<p><u>BILL NO. 10</u></p>			
<p><u>METALWORK</u></p>			
<p><u>PREAMBLES</u></p>			
<p>Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities</p>			
<p><u>SUPPLEMENTARY PREAMBLES</u></p>			
<p><u>Descriptions</u></p>			
<p>Descriptions of bolts shall be deemed to include nuts and washers</p>			
<p>Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete</p>			
<p>Metalwork described as "holed for bolt(s)" shall be deemed to exclude the bolts unless otherwise described</p> <p>-----</p>			
<p align="center">Carried to Collection</p>			
<p>Section No. 2 Metalwork Contract Part C2: Pricing Data</p>			
			R

STEEL GATES, SCREENS, ETC

GALVANISED STEEL GATES, SCREENS, ETC

High density security galvanised mesh with min 3.15mm horizontal wire diameter and 4mm vertical wire diameter. Apertures to be 76x12mm, inner panels to be reinforced with 4x 50mm V formation horizontal recessed bands. Plexiglass sheets to be installed behind the panels for weather proofing.

90	Sliding manual weatherproofed gate 5.70 x 2.6m high with galvanised wheels all as per architect's specifications.	No	1
91	Sliding manual weatherproofed gate 8.60 x 2.6m high with galvanised wheels all as per architect's specifications.	No	1
92	Pedestrian gate overall size 900 x 2100mm high and lockable sliding bolt with keep in gate post	No	1

PRESSED STEEL DOOR FRAMES

1,2mm Thick double rebated frames suitable for one brick walls complete with hoop iron anchors welded to frame, one adjustable chromium plated steel striking plate suitable for cylinder locks, three rubber shock absorbers in rebate and one and a half pair 100mm knuckle loose pin steel hinges welded to frame

93	Frame for door size 813 x 2100mm high	No	3
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ALUMINIUM SHOP FRONTS, DOORS, WINDOWS, ETC

Natural anodized aluminium windows preglazed with 6,5mm thick clear laminated safety glass complete with anti bandit butler, ironmongery and fittings including sealing with approved silicone sealant and fixed to brickwork or concrete

94	Window overall size 600 x 600mm high	No	2
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PRESSED STEEL TRANSFORMER ROOM DOORS AND FRAMES

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Section No. 2
Metalwork
Contract
Part C2: Pricing Data

**Refurbishments and Upgrades to Ikwezi Train Station
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Bill of Quantities

Bill No. 9

Metalwork

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Section No. 2

Metalwork

Contract

Part C2: Pricing Data

Item No	Quantity	Rate	Amount R
<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 11</u></p> <p><u>PLASTERING</u></p> <p><u>PREAMBLES</u></p> <p>Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>GRANOLITHIC</u></p> <p><u>Method</u></p> <p>The method to be used shall be either the monolithic method or the bonded method</p> <p><u>Preparation</u></p> <p>For granolithic applied monolithically, the concrete floor shall be swept clean after bleeding of the concrete has ceased and the slab has begun to stiffen; any remaining bleed water shall be removed and the granolithic applied immediately thereafter. For granolithic to be bonded to the floor slab after it has hardened, the slab surface shall be hacked (preferably by mechanical means) until all laitance, dirt, oil, etc is dislodged and swept clean of all loose matter. The slab shall then be wetted and kept damp for at least six hours before applying the granolithic</p> <p><u>Mix</u></p> <p>Granolithic shall attain a compressive strength of at least 41MPa. The coarse aggregate shall comply with SANS 1083 and shall generally be capable of passing a 10mm mesh sieve. Where the thickness of the granolithic exceeds 25mm, the size of the coarse aggregate shall be increased to the maximum size compatible with the thickness of the granolithic</p>			
Carried to Collection			R
<p>Section No. 2 Plastering Contract Part C2: Pricing Data</p>			

Panels

Granolithic shall be laid in panels not exceeding 14m² for monolithic finishes, not exceeding 9,5m² for bonded finishes and not exceeding 6m² for all external granolithic. Wherever possible, panels shall be square but at no time should the length of the panel exceed 1,5 times its width

Where possible joints between panels shall be positioned over joints in the floor slab and shall be at least 3mm wide through the full thickness of the finish, separated by strips of wood or fibreboard and finished with V-joints

Laying

Monolithic granolithic shall be applied to the partially set slab and thoroughly compacted and lightly wood floated to the required levels

Bonded granolithic shall be applied to the slab after applying a 1:1 sand-and-cement slurry brushed over the surface and allowed to partially set before applying the granolithic. The granolithic shall be thoroughly compacted and lightly wood floated to the required levels

After wood floating, the monolithic and bonded granolithic shall remain undisturbed until bleeding has ceased and the surface has stiffened. Any remaining bleed water and laitance shall then be removed and the surface steel trowelled or power floated

Curing, seasoning and protection

Granolithic shall be covered with clean hessian with waterproof building foil over and kept wet for at least seven days after laying

Colour

Coloured granolithic shall be tinted with an approved colouring pigment mixed into a true and even colour

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Section No. 2
Plastering
Contract
Part C2: Pricing Data

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INTERNAL PLASTER

Cement plaster on brickwork

98	On walls	m ²	32
99	On narrow widths	m ²	1

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Section No. 2
Plastering
Contract
Part C2: Pricing Data

**Refurbishments and Upgrades to Ikwezi Train Station
Prasa South Gauteng Region Corridor 3**

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Plastering

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Plastering
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Item No		Quantity	Rate	Amount R
	<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 12</u></p> <p><u>TILING</u></p> <p><u>PREAMBLES</u></p> <p>Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p>Descriptions Unless described as "fixed with adhesive to plaster (plaster elsewhere)" descriptions of tiling on brick or concrete walls, columns, etc shall be deemed to include 1:4 cement plaster backing and descriptions of tiling on concrete floors etc shall be deemed to include 1:3 plaster bedding</p> <p style="text-align: center;">-----</p> <p><u>WALL TILING</u></p> <p><u>600 x 300mm x 12mm Thick glazed full bodied porcelain tiles fixed to internal wall plaster backing with tile adhesive mixed with bonding liquid in lieu of water with joints continuous in both directions and grouted with tile grout</u></p>			
100	On walls	m ²	301	
101	On narrow widths	m ²	1	
	<p><u>600 x 300mm x 12mm Thick matt full bodied porcelain tiles fixed to internal wall plaster backing with tile adhesive mixed with bonding liquid in lieu of water with joints continuous in both directions and grouted with tile grout</u></p>			
102	On walls in isolated panels, splashbacks, etc	m ²	1	
	<p><u>FLOOR TILING</u></p>			
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	<p>Section No. 2 Tiling Contract Part C2: Pricing Data</p>			

**Refurbishments and Upgrades to Ikwezi Train Station
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Section No. 2

Bill of Quantities

Bill No. 11

Tiling

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Tiling
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Item No	Quantity	Rate	Amount R
<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 13</u></p> <p><u>PLUMBING AND DRAINAGE</u></p> <p><u>PREAMBLES</u></p> <p>Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p>Descriptions of gutter outlets etc shall be deemed to include wire balloon gratings unless hailguards are allowed for in the bills of quantities</p> <p><u>Stainless steel basins, sinks, wash troughs, urinals, etc</u></p> <p>Stainless steel for economy basins, domestic sinks and worktops shall be Type 430 (17/0)</p> <p>Stainless steel for urinals, basins, quality sinks, wash troughs, institutional equipment, etc shall be Type 304 (18/8)</p> <p>Stainless steel for laboratory sinks, photographic equipment, etc shall be Type 316 (18/8)</p> <p>Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable</p> <p><u>Waste unions</u></p> <p>Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings</p> <p><u>Sealing of edges</u></p> <p>Outer edges of sinks, basins, baths, urinals, etc are to be sealed against adjacent surfaces with approved silicone</p>			
Carried to Collection			R
<p>Section No. 2 Plumbing and Drainage Contract Part C2: Pricing Data</p>			

uPVC pipes and fittings

Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings

Soil, waste and vent pipes and fittings shall be solvent weld jointed or sealed with butyl rubber rings

uPVC pressure pipes and fittings

Pipes of 50mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings

Pipes of 63mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints

Pipes shall be type IV and of the class specified with "Plasson" or "Alprene" compression fittings

Reducing fittings

Where fittings have reducing ends or branches they are described as "reducing" and only the largest end or branch size is given. Should the contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained

Fixing of pipes

Unless specifically otherwise stated, descriptions of pipes shall be deemed to include fixing to walls, etc, casting in, building in or suspending not exceeding 1m below suspension level

Disinfection of water pipework

Water pipework is to be disinfected at completion in accordance with SANS 1200L (provision for disinfection elsewhere)

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Section No. 2
Plumbing and Drainage
Contract
Part C2: Pricing Data

Petrolatum anti-corrosion tape

Pipes to be taped shall be coated with the appropriate primer and the tape shall be applied in the appropriate widths and with 30% overlaps

Couplings and fittings to pipes shall be taped in strict accordance with the manufacturer's instructions including mastic, tape, "Layflat" sheeting, securing of same, etc

Prices for wrapping of pipes shall include for all work as described to couplings in the length

Laying, backfilling, bedding, etc of pipes

Pipes shall be laid and bedded in accordance with manufacturers' instructions and trenches shall be carefully backfilled

Where no manufacturers' instructions exist, pipes shall be laid in accordance with Clauses 5.1 and 5.2 of each of the following:

- SANS 1200L : Medium-pressure pipelines
- SANS 1200LD : Sewers
- SANS 1200LE : Stormwater drainage

Pipe trenches, etc shall be backfilled in accordance with Clauses 3, 5.5, 5.6, 5.7 and 7 of SANS 1200DB : Earthworks (Pipe trenches)

Pipes shall be bedded in accordance with Clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SANS 1200LB : Bedding (Pipes)

Unless otherwise described bedding of rigid pipes shall be Class B bedding

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Section No. 2
Plumbing and Drainage
Contract
Part C2: Pricing Data

General

Descriptions of cast iron roof outlets shall be deemed to include joints to pipes and casting into concrete (adaptors for joints to uPVC pipes, etc are given separately)

Descriptions of overflow pipes where measured in number, shall be deemed to include joints to cisterns and splay cut ends

Descriptions of pipes laid in and including trenches and of inspection chambers, catch pits, etc shall be deemed to include excavation, bedding, backfilling, compaction to a minimum of 95% Mod AASHTO density and disposal of surplus material on site

Descriptions of service pipes and flexible connecting pipes shall be deemed to include connections to taps, cisterns, etc and to steel pipes (adaptors for connections to copper pipes, etc are given separately)

Descriptions of WC pans, slop hoppers, etc shall be deemed to include for joints to soil pipes (pan connectors are separately measured)

Exposed concrete surfaces

Exposed surfaces of concrete stormwater channels, cover slabs, inspection eye marker slabs, gully tops, cleaning eye tops, catchpits, inspection chambers, etc shall be finished smooth with plaster

Excavations

No claim for rock excavation will be entertained unless the contractor has timeously notified the quantity surveyor thereof prior to backfilling

"Soft rock" and "hard rock" shall be as defined in "Earthworks"

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Section No. 2
Plumbing and Drainage
Contract
Part C2: Pricing Data

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SOIL DRAINAGE

Sewer Budgetary Allowance

106 Provide a sum of R75 000.00 (Seventy Five Thousand Rand) for replacing damaged and missing manhole covers and clearing pipe blockages

Item

Stormwater Budgetary Allowance

107 Provide a sum of R100 000.00 (One Hundred Thousand Rand) for replacing damaged and missing manhole covers and clearing pipe and open drain blockages

Item

SANITARY FITTINGS

1,6mm Stainless steel type 304 (18/10)

108 Stainless steel double end bowl inset sink, overall size 1160 x 460mm wide with two 340 x 370 x 150mm deep bowl, fitted onto cupboard (elsewhere measured) including 38mm waste fitting and PVC trap (trap elsewhere measured).

No

2

White glazed vitreous china

109 Vitreous china close coupled suite colour White , comprising 90° outlet open rim pan with matching 9 litre front single flush cistern including lid and fitments and Thermoset seat.

No

4

110 Paraplegic vitreous china wall hung paraplegic back inlet washdown suite colour White, fixed on and including floor bracket comprising 90° outlet open rim back inlet pan with exposed back inlet flushvalve (elsewhere measured) and Orchid double flap wooden seat

No

2

111 Vitreous china lavatory basin, size 510 x 405mm with one taphole including integrated overflow and chainstay hole bolted to wall with two x 10mm bolts and including Universal half pedestal with hanger springs and sealed with silicone sealant where basin meets wall.

No

2

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Section No. 2
Plumbing and Drainage
Contract
Part C2: Pricing Data

**Refurbishments and Upgrades to Ikwezi Train Station
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112	Vitreous china drop-in vanity basin colour White, size 420 x 420mm fitted into opening in granite vanity top (elsewhere measured) and sealed with silicone sealant where basin rim meets vanity top.	No	4		
	<u>Acrylic</u>				
113	1000 x 1000 x 150mm shower tray with waste outlet, bedded in position	No	1		
114	5mm Cast Acrylic Perspex saloon doors (Colour: Frosted White) or 4mm Compact High Pressure Laminate (colour White) slotted in to the extrusion and a nylon hinge system. Overall size 900 x 1800mm high	No	1		
	<u>Floor drain</u>				
115	Floor drain square brass including trap	No	4		
	<u>WASTE UNIONS ETC</u>				
116	38mm Bath or sink waste union	No	2		
	<u>TRAPS ETC</u>				
117	40mm Deep seal "P" or "S" trap	No	2		
118	Chromium plated bottle trap	No	4		
	<u>Brass</u>				
119	40mm rough brass shower P trap with shallow seal and chrome plated square grating.	No	1		
	<u>TAPS, VALVES, ETC</u>				
120	15mm approved ball type angle valve	No	6		
121	15mm Chrome plated single lever basin mixer with square type handles and cast fixed spout.	No	4		
122	Medical elbow action pillar tap with high waist or equal approved, chrome finish.	No	2		
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**Refurbishments and Upgrades to Ikwezi Train Station
Prasa South Gauteng Region Corridor 3**

123	25mm diameter chrome flush valve for WC or equal approved for concealed installation with push button actuator, 1,2 - 5,0 bar flow pressure, flow rate adjustment, including 25mm supply pipe, stop valve, flush pipe and 300mm extension pipe to WC.	No	6		
124	15mm chrome plated deck mounted sink mixer with overarm swivel outlet and adjustable flanges	No	2		
125	15mm chrome plated wall mounted underwall shower mixer	No	1		
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Section No. 2
Plumbing and Drainage
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**Refurbishments and Upgrades to Ikwezi Train Station
Prasa South Gauteng Region Corridor 3**

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Plumbing and Drainage

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	<u>BILL NO. 14</u>			
	<u>GLAZING</u>			
	<u>PREAMBLES</u>			
	Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities			

	<u>GLAZING TO STEEL WITH PUTTY</u>			
	<u>4mm Clear float glass</u>			
126	Panes not exceeding 0,1 m2	m ²		Rate Only
127	Panes exceeding 0,5m2 and not exceeding 2m2	m ²		Rate Only
	<u>TOPS, SHELVES, DOORS, MIRRORS, ETC</u>			
	<u>4mm Silvered float glass copper backed mirrors with polished edges holed for and fixed with chromium plated dome capped mirror screws with rubber buffers to plugs in brickwork or concrete</u>			
128	Mirror size 600 x 900mm high	No	2	
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	Section No. 2 Glazing Contract Part C2: Pricing Data			

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	<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 15</u></p> <p><u>PAINTWORK</u></p> <p><u>PREAMBLES</u></p> <p>Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>DESCRIPTIONS</u></p> <p>Descriptions of paintwork shall be deemed to include for all cutting in</p> <p><u>PREPARATORY WORK TO EXISTING WORK</u></p> <p>Previously painted plastered surfacesSurfaces shall be thoroughly washed down and allowed to dry completely before any paint is applied. Blistered or peeling paint shall be completely removed and cracks shall be opened, filled with a suitable filler and finished smooth</p> <p>Previously painted metal surfacesSurfaces shall be thoroughly rubbed and cleaned down. Blistered or peeling paint shall be completely removed down to bare metal</p> <p>Previously painted wood surfacesSurfaces shall be thoroughly cleaned down. Blistered or peeling paint shall be completely removed and cracks and crevices shall be primed, filled with suitable filler and finished smooth</p> <p style="text-align: center;">-----</p>			
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	<p>Section No. 2 Paintwork Contract Part C2: Pricing Data</p>			

PAINTWORK, ETC TO NEW WORK ON

FLOATED PLASTER SURFACES WITH

One coat alkali resistant plaster primer and two coats PVA acrylic emulsion paint on

129	Internal walls	m ²	32
130	Narrow widths	m ²	1

METAL SURFACES WITH

One coat multisurface primer and two coats gloss enamel paint on work in sound condition on steel

131	On door frames	m ²	8
132	On doors	m ²	6
133	On gates, grilles, balustrades, etc (both sides measured over the full flat area)	m ²	4

WOOD SURFACES WITH:

One coat pink wood primer, one coat universal undercoat and two coats super universal high gloss enamel paint on

134	Doors	m ²	25
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PAINTWORK, ETC TO PREVIOUSLY PAINTED WORK ON

General

All works are to be executed in strict accordance with the paint specifications of the manufacturer for the preparation of previously painted surfaces

Primer (first) coats may be thinned in accordance with the specifications of the manufacturer to aid the absorption of the paint

All surfaces must be sound, clean and have a moisture content of less than 12%

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Section No. 2
Paintwork
Contract
Part C2: Pricing Data

**Refurbishments and Upgrades to Ikwezi Train Station
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139	On gates, grilles, balustrades, etc (both sides measured over the full flat area)	m ²	36
	<u>One coat of waterprime, one coat of universal undercoat and two coats of gloss enamel on work in sound condition on steel</u>		
140	Rails, bars, pipes, etc not exceeding 300mm girth	m	36
	<u>Wash down thoroughly with degreaser and rinse with water removing all traces of degreaser. Allow to dry and prime with one coat primer and two coats polyurethane enamel paint on steel:</u>		
141	Roller shutter doors	m ²	10
	<u>Spot prime and bare metal surfaces with red oxide primer and apply two coats acrylic roof paint</u>		
142	On profiled roof sheeting (measured on flat)	m ²	2 894
	<u>WOOD SURFACES WITH:</u>		
	<u>Remove all loose and flaking paint to sound substrate, stop, fill holes and cracks with wood filler, sand down, spot prime bare wood with primer for wood and apply one coat universal undercoat and two coats high gloss enamel paint on existing alkyd-based paint surfaces on:</u>		
143	Doors	m ²	125

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Paintwork
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Bill No. 14

Paintwork

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Paintwork

Contract

Part C2: Pricing Data

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	<u>BILL NO. 16</u>			
	<u>PROVISIONAL SUMS</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>General</u>			
	Work for which budgetary allowances are provided will be measured and valued in accordance with the JBCC Principal Building Agreement and deducted in whole or in part if not required without any compensation for loss of profit on the said allowances			
	Prime cost amounts and provisional sums are net. Prime cost amounts shall include for delivery to site of all articles concerned			
	Provisional sums are for material and equipment supplied and installed complete by firms of specialists			
	<u>Profit</u>			
	Where stated, the contractor may allow for profit if required			
	<u>PROVISIONAL AMOUNTS</u>			
	<u>COMMUNITY LIASON OFFICER</u>			
144	Allow the amount of R54,000.00 (Fifty Four Thousand Rand) for the employment of a Community Liaison Officer for the entire duration of construction activities on site, to be used at the discretion of the Project Manager and deducted in whole or in part if not required	Item		54 000.00
145	Allow for general attendance		%	
146	Allow for profit		%	
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	Section No. 2 Provisional Amounts Contract Part C2: Pricing Data			

**Refurbishments and Upgrades to Ikwezi Train Station
Prasa South Gauteng Region Corridor 3**

	<u>EPWP TRAINING</u>			
147	Allow the amount of R220,000.00 (Two Hundred and Twenty Thousand Rand) for Expanded Public Works Programme Training to be used at the discretion of the Project Manager and deducted in whole or in part if not required	Item		220 000.00
148	Allow for general attendance		%	
149	Allow for profit		%	
	<u>STRUCTURAL STEEL ROOF</u>			
150	Allow the amount of R1 200 000.00 (One Million Two Hundred Thousand Rand) for roof installation by a roof specialist, to be used at the discretion of the Project Manager and deducted in whole or in part if not require	Item		1 200 000.00
151	Allow for general attendance		%	
152	Allow for profit		%	
	<u>BUDGETARY AMOUNTS</u>			
	<u>STATION AND PLATFORM SIGNAGE</u>			
153	Allow the amount of R40 000.00 (Forty Thousand Rand) signage to be used at the discretion of the Project Manager and deducted in whole or in part if not required	Item		40 000.00
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Section No. 2
Provisional Amounts
Contract
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**Refurbishments and Upgrades to Ikwezi Train Station
Prasa South Gauteng Region Corridor 3**

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Provisional Amounts

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14	Paintwork	77	
15	Provisional Amounts	80	
	Carried to Final Summary		R
	Section No. 2 Contract Part C2: Pricing Data		

SECTION NO.3 : CIVIL WORK

Item No		Quantity	Rate	Amount R
	<p><u>SECTION NO. 3</u></p> <p><u>BILL NO. 1</u></p> <p><u>PLATFORM RESURFACING</u></p> <p>Unless otherwise described, the preambles and full descriptions of the items in the preceeding Bills are to apply equally to this Bill</p> <p><u>PREAMBLES</u></p> <p>Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Descriptions and Preambles</u></p> <p>Wherever possible abridged descriptions have been used for those items in the bill which appear under the main trade headings in previous bills. The full descriptions of these items and the Model Preambles are to, and do, apply equally to this section.</p> <p><u>Testing of material and filling</u></p> <p>Descriptions of earth filling, compaction, etc shall be deemed to include for all necessary testing required in accordance with the SABS 1200 series</p> <p><u>ROADS - ASPHALT BASE AND SURFACING</u></p> <p><u>DEMOLITIONS ETC</u></p> <p><u>Hacking up and removing</u></p>			
1	Asphalt road surface	m ²	50	
	Carried to Collection			R
	Section No. 3 Platforms Contract Part C2: Pricing Data			

<u>EARTHWORKS (BULK EXCAVATION, FILLING ETC)</u>					
<u>Extra over excavations for carting away</u>					
2	Surplus material from stock piles on site to a dumping site to be located by the contractor	m ³	3		
<u>Keeping excavations free of water</u>					
3	Keeping excavations free of water		Item		
<u>Compaction of surfaces</u>					
4	Rip and compact existing subbase to 90% of Mod AASHTO density	m ²	50		
<u>Prescribed density tests on filling:</u>					
5	Allow for compaction tests by an approved laboratory to determine density of filling material.	No	20		
<u>Additional prescribed density tests on filling as requested by the principal agent</u>					
6	Relative compaction test in accordance with methods A1, A10b and A17 of TMH1	No	1		
7	Indicator test in accordance with methods A1 to A5 of TMH1	No	1		
8	CBR test in accordance with method A8 of TMH1	No	1		
9	UCS test in accordance with method A14 of TMH1	No	1		
<u>SURFACING</u>					
<u>Asphalt road and parking surfacing</u>					
10	50mm Thick continuously graded asphalt surfacing	m ²	50		
<u>Prime coat</u>					
11	MC-30 Cutback bitumen	m ²	50		
Carried to Collection					
Section No. 3 Platforms Contract Part C2: Pricing Data					R

**Refurbishments and Upgrades to Ikwezi Train Station
Prasa South Gauteng Region Corridor 3**

Section No. 3

Civil Work

Bill No. 1

Platforms

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Section No. 3
Platforms
Contract
Part C2: Pricing Data

**Refurbishments and Upgrades to Ikwezi Train Station
Prasa South Gauteng Region Corridor 3**

Item No		Quantity	Rate	Amount R
	<u>SECTION NO. 3</u>			
	<u>BILL NO 2</u>			
	<u>STREET FURNITURE</u>			
	<u>FOLLOWING IN PLATFORM FURNITURE</u>			
	<u>Approved galvanised steel furniture</u>			
14	Perforated galvanised steel seat 1800mm long with two legs mounted to 500 x 500 x 500mm 25 Mpa concrete base including excavation, carting away and concrete. Including filling both steel legs with concrete as per Architectural detail	No	12	
15	Perforated galvanised steel litter bin 497mm Diameter x 815mm high with one leg mounted to 500 x 500 x 500mm 25 Mpa concrete base including excavation, Carting away and concrete. Including filling both steel legs with concrete as per Architectural detail	No	10	
	Carried Forward to Summary of Section No. 3			R
	Section No. 3 Street Furniture Contract Part C2: Pricing Data			

Item No		Quantity	Rate	Amount R
	<p><u>SECTION NO. 3</u></p> <p><u>BILL NO. 3</u></p> <p><u>PARKING AND KERBING</u></p> <p><u>PREAMBLES</u></p> <p>Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Descriptions and Preambles</u></p> <p>Wherever possible abridged descriptions have been used for those items in the bill which appear under the main trade headings in previous bills. The full descriptions of these items and the Model Preambles are to, and do, apply equally to this section.</p> <p><u>Testing of material and filling</u></p> <p>Descriptions of earth filling, compaction, etc shall be deemed to include for all necessary testing required in accordance with the SABS 1200 series</p> <p><u>Precast concrete block road surfacing</u></p> <p>Paving shall be laid in accordance with SABS 1200 MJ, SANS 1058 and the Concrete Masonry Association's specifications</p> <p>Paving shall be laid to herringbone pattern on 20mm thick (thickness after final compaction) clean river sand (preparation of ground or filling elsewhere)</p> <p>Clean sand shall be swept into joints between roadstones at completion</p> <p style="text-align: center;">-----</p> <p style="text-align: right;">Carried to Collection</p> <p>Section No. 3 Roads and Paving Contract Part C2: Pricing Data</p>			R

<u>EARTHWORKS (BULK EXCAVATION, FILLING ETC)</u>					
<u>Excavation not exceeding 2m deep</u>					
16	In roadways and parking to reduce levels for layerworks and depositing excavated material in prescribed stock piles including haulage not exceeding 200m from perimeter of excavations	m ³	14		
<u>Extra over excavations for carting away</u>					
17	Surplus material from stock piles on site to a dumping site to be located by the contractor	m ³	14		
<u>Keeping excavations free of water</u>					
18	Keeping excavations free of water			Item	
<u>Earth filling supplied by the contractor under pavings and roads or in soil mattress, etc as drawings 102472-CIV-005 and 006</u>					
19	Subbase course under roads and parking compacted to 95% Mod AASHTO density (G5 material with CBR to be minimum 45% at 95% Mod AASHTO density, maximum PI to be 10 in accordance with SANS 1200M)	m ³	5		
20	Subbase course under roads and parking compacted to 95% Mod AASHTO density (C4 material stabilized with approximately 3% Portland blast furnace cement with UCS to be 750KPa at 100% Mod AASHTO density)	m ³	5		
21	Base course under roads and parking compacted to 85% apparent density (G2 graded crushed stone material)	m ³	5		
<u>Compaction of surfaces</u>					
22	Compaction of ground surface (G7 material) under roads and parking, etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% of Mod AASHTO density	m ²	30		
Carried to Collection					R
Section No. 3 Roads and Paving Contract Part C2: Pricing Data					

<u>Additional prescribed density tests on filling as requested by the principal agent</u>					
23	Relative compaction test in accordance with methods A1, A10b and A17 of TMH1	No	1		
24	Indicator test in accordance with methods A1 to A5 of TMH1	No	1		
25	CBR test in accordance with method A8 of TMH1	No	1		
26	UCS test in accordance with method A14 of TMH1	No	1		
<u>Approved weedkiller mixed in the proportion and applied as specified by the manufacturer</u>					
27	Under block paving, etc	m ²	30		
<u>60mm standard grey double zig zag interlocking roadstone paving on 25mm thick cement/riversand bed with sand and cement mixture swept into joints and hosed down</u>					
28	Paving to islands and yards	m ²	30		
<u>Precast concrete finished smooth on exposed surfaces including bedding, jointing and pointing</u>					
29	Kerb (SABS 927 fig 11) 75mm wide x 150mm high with 150mm x 150mm x 300mm unreinforced concrete haunching at back of each joint including excavation, backfilling, etc	m	1		
<u>PAVING</u>					
<u>300 x 300 x 30 mm Guidance tactile pavers on 20mm - 30mm thick compacted cement/riversand bed n base course and subgrade, conforming to SANS 1200</u>					
30	Paving to walkways	m ²	56		
Carried to Collection					R
Section No. 3 Roads and Paving Contract Part C2: Pricing Data					

**Refurbishments and Upgrades to Ikwezi Train Station
Prasa South Gauteng Region Corridor 3**

Section No. 3

Civil Work

Bill No. 3

Roads and Paving

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Section No. 3
Roads and Paving
Contract
Part C2: Pricing Data

Section No. 3

SECTION SUMMARY: CIVIL WORK

Bill No		Page No	Amount R
1	Platforms	85	
2	Street Furniture	86	
3	Roads and Paving	90	
Carried to Final Summary			R
Section No. 3 Contract Part C2: Pricing Data			

SECTION NO.4 : ELECTRICAL WORK

**Refurbishments and Upgrades to Ikwezi Train Station
Prasa South Gauteng Region Corridor 3**

Item No		Quantity	Rate	Amount R
1	Electrical Work sub-total amount carried from final summary Section 4 (Excluding Value added Tax).	Item		
	Carried to Final Summary			R
	Section No. 4 Electrical Work Contract Part C2: Pricing Data			

PRASA IKWEZI STATION ELECTRICAL PROVISIONAL BOQ

LV Reticulation

Item	Description	Unit	QTY	Cost	Total Cost
	<p align="center">Distribution Boards</p> <p>Refurbish the following distribution boards, including all equipment, complete with all accessories. Installation shall include fixing, accessories and earthing.</p> <p>The price shall include for all fixing materials, circuit terminations, lugs, cable straps and any other items necessary for the complete installation. The price shall also include liaison with the board manufacturer, obtaining shop drawings for approval by the engineer, and the preparation and provision of detailed legend cards, as per the specification.</p>				
1	Main Site DB - PC	Lot	1	R 50 000,00	R 50 000,00
2	DB - G Refurb - PC	Lot	1	R 25 000,00	R 25 000,00
3	DB - F Refurb - PC	Lot	1	R 25 000,00	R 25 000,00
4	Platform Distribution Boards - PC	Lot	3	R 15 000,00	R 45 000,00
	<p align="center">Power Cabling</p> <p>Supply and install the following cables laid on cable tray, pulled in a sleeve or in a trench, including all fixings and accessories. The cables shall be 600/1000V/ PVC/SWA/PVC/ECC with copper conductors. Complete with terminations</p>				
5	50mm ² x 4 core ecc cable	m	300		
6	Joining Kits PC Sum	Lot	1		
	<p align="center">Standby Generator</p> <p>Supply, Rig and Install following Standby Generator, including all equipment, complete with all accessories. Installation shall include fixing, plinth, accessories and earthing.</p>				
7	Containerized 100kVA complete with Day tank and Automatic Transfer Switch	Lot	1		
8	Full Tank of Diesel upon Commissioning	Lot	1		
Total Ex VAT					

PRASA IKWEZI STATION ELECTRICAL PROVISIONAL BOQ
LIGHTING

Item	Description	Unit	QTY	Cost	Total Cost
LIGHTING					
1	16 Amp, single lever light Switch	Lot	20		
2	5 Amp, 3 pin, unswitched socket outlet to fit deep round conduit boxes	Lot	100		
3	LED panel Sidelift flicker free driver + PMMA LG + Prisma Diffuser - 4000 Lumens - 600x600 Recessed	Lot	60		
4	LED panel Sidelift flicker free driver + PMMA LG + Prisma Diffuser - 4000 Lumens - 600x600 Recessed with Battery Backup	Lot	64		
5	1578mm Surface Mounted fitting 53W LED complete with microwave sensor with 70'000hr operation warranty	Lot	75		
6	Led Industrial Bulkhead fitting with unpainted marine grade high pressure die cast aluminium backing with non discolouring injection moulded high impact acrylic diffuser, IP66. 4370 lm 32W, Neutral white 740 with 10kv surge protection	Lot	95		
7	LED Pole Top with aluminium Spigot and Cover, high impact Acrylic Protector, IP55 rated, 3506-5219lm output, 37-54W with 142 Efficacy, Neutral white 740, complete with 5m Pole with 2m Stub	Lot	24		
8	LED Type Highbay with marine grade high pressure die castaluminium housing, Acrylic PMMA optic with High Impact Polycarbonate diffuser, IP66 rated with 18350 - 50680 lm colour rendering Neutral White 840 Dali Controlled with optimum mounting height 4-12m, power consumption 132-451W, efficacy 149	Lot	20		
9	Exit Sign/Running Man c/w battery backup including lamps	Lot	8		
10	2,5mm ² x 3 (Red, Black & Green) -	m	1000		
11	25mm diameter PVC conduit	m	1000		
Total Ex VAT					

PRASA IKWEZI STATION ELECTRICAL PROVISIONAL BOQ
SMALL POWER

Item	Description	Unit	QTY	Cost	Total Cost
	SMALL POWER				
1	16 Amp, single Switched Socket Outlet - white - complete with 100x100 box chased	No	15		
2	16 Amp, single Switched Socket Outlet - white on Power Skirting	No	40		
3	20 Amp, DP Isolator - complete with conduit to outlet box below-	No	2		
4	4mm ² x 3 (Red, Black & Green) - Housewire	m	3000		
5	25mm diameter PVC conduit	m	200		
6	2 compartment PVC Power Skirting	m	50		
7	500VA single phase UPS	Lot	8		
8	To provide the earthing and testing of the electrical installation in accordance with the General Specification, regulations and the requirements of the local authority. All circuits shall be earthed in accordance with the wiring code. Where the earth conductor is joined at the terminal block, the wires shall be soldered together so that removal of the equipment shall not result in an interruption of the earth continuity of the conductors.	Lot	1		
Total Ex VAT					

PRASA IKWEZI STATION ELECTRICAL PROVISIONAL BOQ

SUMMARY

Item	Description	Cost
1	LV Reticulation	
2	Lighting	
3	Small Power	
Sub Total Ex VAT		
VAT @ 15%		
Total Inc VAT		

SECTION NO.5 : MECHANICAL WORK

**Refurbishments and Upgrades to Ikwezi Train Station
Prasa South Gauteng Region Corridor 3**

Item No		Quantity	Rate	Amount R
1	Mechanical Work sub-total amount carried from final summary Section 5 (Excluding Value added Tax).	Item		
Carried to Final Summary				R
Section No. 5 Mechanical Work Contract Part C2: Pricing Data				

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SECTION NO. 5				
	BILL NO. 1				
	HVAC INSTALLATION				
1,0	Supply and install the following extract air fan complete with electronic and electrical wiring up to isolator supplied by electrical contractor, speed controllers, support brackets, AND ALL NECESSARY MOUNTING ACCESSORIES				
1,1	FAN EF - 120 l/s wall mounted fans				
		Supply	No	3	
		Install	No	3	
2,0	Supply and install the following AC units (<i>DX system</i>), complete with matching refrigerant tubing, condensate drainage, mounting brackets, thermostats, remote controllers, electronic and electrical wiring upto isolator supplied by electrical contractor and ALL MOUNTING ACCESSORIES NECESSARY				
2,1	Inverter type Wall mounted units, cooling load 2.2kW, heating load 2.5kW with outdoor unit, refrigerant tubing, condensate drainage and all necessary accessories.				
		Supply	No	12	
		Install	No	12	
2,1	Inverter type Wall mounted units, cooling load 3.5kW, heating load 3.2kW with outdoor unit, refrigerant tubing, condensate drainage and all necessary accessories.				
		Supply	No	1	
		Install	No	1	
2,2	Inverter type console units, cooling load 3.5kW, heating load 4.0kW with outdoor unit, refrigerant tubing, condensate drainage and all necessary accessories.				
		Supply	No	2	
		Install	No	2	
3,0	General				
3,1	Stripping of existing air conditioning system	Item	1		
3,2	Testing and commissioning of the above system to the complete satisfaction of the Mechanical engineer and client	item	1		
3,3	Preparation and supply of handover documents	item	1		
3,4	Production of shop drawings and schematics	item	1		
TOTAL					
VAT @ 15%					
GRAND TOTAL					

ITEM NO.	DESCRIPTION	UNIT	QTY	TOTAL RATE	AMOUNT R c
	<u>SECTION NO. 5</u> <u>BILL NO. 2</u> <u>FIRE INSTALLATION</u>				
1,00	<u>General</u>				
1,1	Allow for Client instruction in the use and maintenance of all fire services equipment as required by the Manufacturers and the specification	Item	1		
1,2	Allow for the Production and submittal of Operation & Maintenance Manuals and record information, workshop drawings and 'As-Built' drawings.	Item	1		
2	<u>Fire Plan</u> Design, manufacture, works testing, supply and delivery to site, moving into position, erection, connecting up, site testing, witness testing, proving to the inspectors, demonstrating to the Employer and maintenance of the complete installation as per conditions of contract and the specification and on drawings.				
	<u>Fire Hydrants</u>				
2,1	65mm hydrant valve with handwheel opening mechanism & fittings. Supply Install	No. No.	4 4		
	<u>Fire Hose Reels</u>				
2,2	Standard Wall Mounted Type Fire Hose Reel to comply with SANS 543 Fire hose reels shall be fitted with a 30m long reinforced red rubber hose of internal diameter of 20mm nominal bore, with a 4.8mm internal diameter chromium plated brass nozzle and isolating valve. Fire hose reel pipes above ground shall be colour coded signal red A11. Complete with double door hose reel cabinet Supply Install	No. No.	2 2		
2,3	Galvanised mild steel pipe treated with galvafruid paint and two coats of firemen red signal paint A11. Pipework to be complete with supports,bends,unions to make a complete installation				
2.3.1	25mm	m	80		
2.3.2	50mm	m	100		
2.3.3	100mm	m	400		
3,0	<u>Fire extinguishers</u>				
3,1	Fire extinguishers complete with supports & fittings. 4,5kg DCP fire extinguishers Supply Install	No. No.	6 6		
3,20	Fire extinguishers complete with supports & fittings. 5kg CO ² fire extinguishers Supply Install	No. No.	2 2		

4,00	Statutory Fire Signage Supply and install photoluminescent signs (in Anodised aluminium frames) on all areas indicating the escae routes and equipment location. The installation shall comply to SANS 1186. The signs shall be mechanically fixed on walls and soffits.				
4,1	E1/E2 (190mm high)	No.	16		
4,2	E3 (190mm high)	No.	8		
4,3	E6 (190mm high)	No.	8		
4,4	F14 (190mm high)	No.	6		
4,5	F17/20 (190mm high)	No.	6		
4,6	F13 (190mm high)	No.	8		
4,70	F30 (190mm high)	No.	8		
Total to Summary Page					
vat 15%					
Grand Total					

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<p>SECTION NO. 5 BILL NO. 3 PLUMBING AND DRAINAGE</p> <p>All rates supplied in this Bill of Quantities will be deemed to include scaffolding to any height and fixing of cold and hot water pipes up to and including roof height. All pipes suspended from concrete slabs, roof, ceiling, etc. shall be deemed to include in the rates, all necessary hanger brackets, threaded rod (irrespective of the suspension length), nuts, washers, anchors and drilling of holes in the concrete slab. For the complete supply, delivery and installation of supply piping, as specified, piping to include piping between geysers on roof. All cold and hot water pipes are to be chased into walls except where pipes are to be surface-mounted on wall face or run in ceiling voids or inside ducts, and fixed with standard type pipe saddlers and brackets at 1000mm maximum.</p> <p>HOT & COLD WATER PIPING Hard drawn copper pipes to SANS 460 and SANS 1067 with capillary type soldered joints to SANS 1067 done in accordance with the manufacturer's specifications, and installed in accordance with SANS 10400 and SANS 10252-1:2004, including couplers in the running length, and all necessary supports, fixing, brackets, saddlers, holderbats, etc, and colour-coded in accordance with SANS 10140-3:2003: Straight hot water copper piping not chased in walls but surface-mounted fixed to walls, or in ceiling voids or in service ducts are to be insulated with thermaflex material, clad in 0,5mm galvanised muffs secured with 10mm galvanised strapping and seal, throughout the length of pipe inclusive of fittings. Valves, strainers and flanges will not be insulated.</p>				
1	PIPING - COPPER				
1.1	Ø28mm pipe	m	60		
1.2	Ø22mm pipe	m	40		
1.3	Ø15mm pipe	m	64		
2	FITTINGS				
	Extra over copper pipework for capillary type soldered fittings				
2.1	Ø28mm Equal T-piece	No	4		
2.2	Ø22mm Equal T-piece	No	12		
2.3	Ø28mm Elbow: 90°	No	10		
2.4	Ø22mm Elbow: 90°	No	10		
2.5	Ø15mm Elbow: 90°	No	20		
2.6	Reducer: Ø28mm x Ø22mm	No	4		
2.8	Reducer: Ø28mm x Ø15mm	No	12		
2.9	Reducer: Ø22mm x Ø15mm	No	8		
2.10	Pipe clamps and hangers	Sum	1		

2,11	Hot water pipe insulation	Sum	1		
3	VALVES - COPPER				
3.1	Ø25mm isolating ball valve with lever on cold and hot water main pipes	No	2		
3.2	Ø20mm isolating ball valve with lever on cold and hot water main pipes	No	4		
3.3	Flexible connector to sanitay fittings	No	22		
3.4	15mm diameter stopcock/angle valve on cold and hot water pipe to sanitary appliance or sink	No	15		
4	ELECTRIC GEYSER				
4.1	Supply and install a horizontal electric water geyser , mounted in ceiling void, complete with copper piping, pressure control valves, draincock, vaccum breakers, thermostat, expansion relief valve, strainers, lever ball valves, drip tray, hot water pipe insulation, mixing valve and all necessary accesories and ftings. Capacity: 150 litres Element Rating: 3 kW	No	1		
5	Supply and install an instant boiling water heater unit with White Epoxy Powder Coated outer case, and a two-way tap, complete with twin-chamber technology. Unit to be installed in accordance with manufacturer's installation instruction manual and equipped with Water Filtration Kit. Capacity: 5 litres	No	2		
5,1	Element Rating: 1.5 kW				
6	Allow for connection of the existing Jojo tank to the water reticulation for	Sum	1		
7	1.5 l/s @ 4.5 bars domestic water pumps duty and standby are required to be installed complete with the necessary suction/ delivery pipework, valves, control equipment, pressure switches.	Sum	1		
8	Stripping of existing plumbing and drainage	Sum	1		
SUBTOTAL					

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<p>SECTION NO. 5 BILL NO. 3 PLUMBING AND DRAINAGE</p> <p>These bills of quantities form part of and must be read in conjunction with the Technical Specifications and Drawings, which contain the full descriptions of the work to be done and material and equipment to be used. Unless otherwise described in these bills of quantities, reference should be made to the Technical Specifications for the full meaning of descriptions of work to be done and materials and equipment to be used in this service. All materials, equipment, fixings, brackets, etc, are to be supplied by the Contractor unless otherwise stated.</p> <p>SANITARY DRAINAGE PIPING</p> <p>Polyvinyl Chloride (PVC) pipe including couplers in the running length, installed in accordance with SANS 10400 and SANS 10252-2:2004</p>				
1	PIPING				
1.1	∅50mm uPVC pipe	m	50		
1.2	∅110mm uPVC pipe	m	20		
2	FITTINGS				
2.1	∅50mm fitting; 90°elbow	No	36		
2.2	∅110mm fitting; 45°elbow	No	10		
2.3	∅110mm x ∅110mm x ∅110mm fitting; 87.5° swept entry, lateral branch junction	No	6		
2.4	∅50mm vent one way valve	No	6		
2.5	∅110mm x ∅50mm fitting; concentric reducer	No	8		
3	WASTE TRAPS				
3.1	40mm flexi rubber "P" trap complete with coupling clamps.	No	13		
4	AS BUILT DRAWINGS				
4.1	Submission of 3off 'As Built' drawings indicating the final positioning and layout of the entire sanitary drainage installation as installed on site by the Contractor	Sum	1		
SUBTOTAL					
TOTAL CARRIED FORWARD TO SUMMARY					

PRASA IKWEZI STATION MECHANICAL PROVISIONAL BOQ

SUMMARY

Item	Description	Cost
1	HVAC	
2	Fire Installation	
3	Plumbing and Drainage	
	VAT @ 15%	
	Total Inc VAT	

SECTION NO.6 : ELECTRONICS

**Refurbishments and Upgrades to Ikwezi Train Station
Prasa South Gauteng Region Corridor 3**

Item No		Quantity	Rate	Amount R
1	Electronic Work sub-total amount carried from final summary Section 6 (Excluding Value added Tax).	Item		
	Carried to Final Summary			R
	Section No. 6 Electronics Contract Part C2: Pricing Data			

PRASA IKWEZI STATION ELECTRONICS PROVISIONAL BOQ
FIRE DETECTION

Item	Description	Unit	QTY	Cost	Total Cost
	Fire Detection				
1	Addressable Smoke Detectors	Lot	40		
2	Addressable Smoke Detectors + Void LED	Lot	20		
3	Addressable Heat Detectors	Lot	5		
4	Addressable Manual Call Point (Breakglass)	Lot	10		
5	Addressable Relay Unit	Lot	3		
6	Addressable Loop Beacon	Lot	4		
7	Addressable Loop Sounder	m	5		
8	Power Supply 24V	Lot	4		
9	Fire Cables - PH30/30 minutes rated	m	1500		
10	Fire Cables - PH120/120 minutes rated	m	400		
11	4 Loop Fire Panel	Lot	1		
12	Installation & Commissioning	Lot	1		
Total Ex VAT					

**PRASA IKWEZI STATION ELECTRONICS PROVISIONAL BOQ
EQUIPMENT**

Item	Description	Unit	QTY	Cost	Total Cost
	Equipment				
1	Digital Voice Evac/PA System compliant with Prasa Railcom System complete with 36 x 30W Outdoor Speakers and all mounting Brackets. Include 43U Mounting Rack	No	1		
2	5M steel Mounting poles complete with 2 m Stubs for mounting of Voice Evac/PA System Speakers	Lot	18		
3	PH30 Voice Evacuation Cabling including IP66 Rated Junction Boxes	m	5000		
4	Integration of Detection System with other Services/System - Engineer AutoFill	No	1		
5	Alarm System complete with 6 x panic buttons - Ticket Office - Engineer Autofill	Lot	1		
6	Ticket Office Counter Inductive Loop complete with goose neck counter top microphone, driver, amplifier and signage in compliance with IEC60118-4:2014. Loop to be in PVC Conduit in floor screed under tiling where client stands	Lot	2		
7	Intrusion Detection System with Infrared Motion sensors in Ticket Offices complete with 8 zone control panel, Led Keypad with Battery Backup, 6 x panic Buttons and Internal Siren	Lot	2		
Total Ex VAT					

PRASA IKWEZI STATION ELECTRONICS PROVISIONAL BOQ

SUMMARY

Item	Description	Cost
1	Fire Detection	
2	Equipment	
Sub Total Ex VAT		
VAT @ 15%		
Total Inc VAT		

SECTION NO.7 : ACCESS CONTROL

**Refurbishments and Upgrades to Ikwezi Train Station
Prasa South Gauteng Region Corridor 3**

Item No		Quantity	Rate	Amount R
1	Access Control sub-total amount carried from final summary Section 7 (Excluding Value added Tax).	Item		
	Carried to Final Summary			R
	Section No. 7 Access Control Contract Part C2: Pricing Data			

PROVISIONAL BOQ IKWEZI STATION

PRELIMINARY AND GENERAL

Item	Description	QTY	Cost	Total Cost
1	Tansport - Supply separate breakdown	1		
2	Labour Monday -Friday- Rate Only	65		
3	Delivery of turnstile	1		
4	Brownfield Fees	1		
Total Ex VAT				

PROVISIONAL BOQ IKWEZI STATION

CABLING

Item	Description	QTY	Cost	Total Cost
1	Connector - RJ 45 for CAT 5	120		
2	Server Racks Cabinets 42U - Lockable	2		
3	Connector Boot - RJ45 Grey	120		
4	Cable - CAT 6E U/UTP BC 500m	6		
5	Cable CAT6E UTP 0.57mm Solid Copper	1		
Total Ex VAT				

PROVISIONAL BOQ IKWEZI STATION

EQUIPMENT

Item	Description	QTY	Cost	Total Cost
1	AI IR Dome Network Camera,8MP, 1/2.8" CMOS image sensor, low illuminance, 8MP (3840 × 2160) @20 fps H.265 codec, high compression rate, low bit rate. Built-in IR LED, max. IR distance: 50m. ROI, SMART H.264+/H.265+, flexible coding, applicable to various bandwidth and storage environments. Rotation mode, WDR, 3D DNR, HLC, BLC, digital watermarking, applicable to various monitoring scenes. Intelligent detection: Intrusion, tripwire (Recognition of vehicle and human).Supports max. 256 G Micro SD card, built-in Mic. 12V DC/POE power support. IP67 protection. SMD	92		
2	2MP 25x 100m IR PTZ Network Camera with Smart Video Analytics IVS + Alarm + Audio >1/2.8" 2Megapixel CMOS. Powerful 25x optical zoom. Starlight technology. Max. 50/60fps@1080P. Support PoE+. IR distance up to 100m. SMD. IP66	21		
3	NVR 32 Ch 16 PoE 4K AI+SMD+ANPR. Rack mounted complete with all relevant Software	3		
5	Surveillance Hard Drive 6TB.	6		
6	Rack Mountable 10KVA UPS complete with 1 hour full load capacity on non corrosive batteries - 1 duty and other standby	1		
7	55 Inch HD Monitor Wall Mounted	1		
8	16 Port 10/100 Managed PoE + 2GB TP	3		
9	IP Based Intercomm System - PC	1		
10	Anti Vandal Bespoke Solid Steel Poles	8		
11	Full height, bi directional single turnstile - Single turnstile - Polyester exterior grade powder cost - charcoal blue - Fail Secure	3		
12	Biometric/fingerprint reader mounting bracket - Polyester exterior grade powder coat - charcoal blue	6		
13	Battery backup 24 Volt DC with 12V rechargeable batteries	3		
14	LED indicator lights (red and green - 80mm diameter) for full height turnstile - 2 units, one for entry and one for exit	3		

15	Security gate 970mm wide x 2 125mm high - mortice lock (843mm clear opening) - Polyester exterior grade powder coat - charcoal blue	1		
	Total Ex VAT			

PROVISIONAL BOQ NALEDI STATION

SUMMARY

Item	Description	Cost
1	P & G	
2	Cabling - Building Cost	
3	Equipment	
	Sub Total Ex VAT	
	Vat @ 15%	
	Total Inc VAT	

**Refurbishments and Upgrades to Ikwezi Train Station
Prasa South Gauteng Region Corridor 3**

Section No	<u>SUMMARY OF SECTIONS</u>	Page No	Amount R
1	Preliminaries	20	
2	Building Work	81	
3	Civil Work	91	
4	Electrical Work	92	
5	Mechanical Work	93	
6	Electronics Work	94	
7	Access Control	95	
	Sub Total		R
	<u>CONTINGENCY</u>		
	ADD: Construction Contingency (10%)	Item	
	Sub Total		R
	ADD: Value added Tax at 15%		R
	TOTAL CARRIED TO FORM OF TENDER		R
	Contract Part C2: Pricing Data		