

PROVISIONAL BILLS OF QUANTITIES

FOR

**REFURBISHMENTS AND UPGRADES TO GROSVENOR TRAIN
STATION - PLATFORM AND SITEWORKS**

AT

SOWETO, JOHANNESBURG

June -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>			
<p>Carried to Collection</p>			R
<p>Section No. 1 Preliminaries Contract Part C2: Pricing Data</p>			

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

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

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Section No. 1
Preliminaries
Contract
Part C2: Pricing Data

R

Refurbishments and Upgrades to Grosvenor Train Station
Prasa South Gauteng Region Corridor 3
Siteworks - Platform and external works

9	<p>Clause 9.0 - Indemnities</p> <p>F:..... V:..... T:.....</p>	Item		
10	<p>Clause 10.0 - Insurances</p> <p>F:..... V:..... T:.....</p>	Item		
11	<p>Clause 11.0 - Securities</p> <p><u>Execution (A12 - A17)</u></p>			
12	<p>Clause 12.0 - Obligations of the parties</p> <p>F:..... V:..... T:.....</p>	Item		
13	<p>Clause 13.0 - Setting out</p> <p>F:..... V:..... T:.....</p>	Item		
14	<p>Clause 14.0 - Nominated subcontractors</p> <p>F:..... V:..... T:.....</p>	Item		
15	<p>Clause 15.0 - Selected subcontractors</p> <p>F:..... V:..... T:.....</p>	Item		
16	<p>Clause 16.0 - Direct contractors</p> <p>Attendance on direct contractors</p> <p>In respect of direct contractors the contractor shall:</p>			
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Refurbishments and Upgrades to Grosvenor Train Station
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	<p>1. Designate an area for the direct contractor to establish a temporary office and workshop and storage of equipment and materials</p> <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>				
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><u>Completion (A18 - A24)</u></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				
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Refurbishments and Upgrades to Grosvenor Train Station
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22	<p>Clause 22.0 - Latent defects liability period</p> <p>F:..... V:..... T:.....</p>	Item		
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>			
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	<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> <p>27 Clause 27.0 - Recovery of expense and/or loss</p> <p>F:..... V:..... T:.....</p> <p><u>Suspension and termination (A28 - A29)</u></p> <p>28 Clause 28.0 - Suspension by the contractor</p> <p>F:..... V:..... T:.....</p> <p>29 Clause 29.0 - Termination</p> <p>F:..... V:..... T:.....</p> <p><u>Dispute resolution (A30)</u></p> <p>30 Clause 30.0 - Dispute resolution</p> <p>F:..... V:..... T:.....</p> <p>31 <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> <p>32 <u>Contract data</u></p> <p>F:..... V:..... T:.....</p> <p><u>SECTION B: GENERAL PRELIMINARIES</u></p>	<p>Item</p> <p>Item</p> <p>Item</p> <p>Item</p> <p>Item</p> <p>Item</p>		
	<p style="text-align: right;">Carried to Collection</p> <p>Section No. 1 Preliminaries Contract Part C2: Pricing Data</p>		R	

<u>Definitions and interpretation (B1)</u>				
33	Clause 1.1 - Definitions F:..... V:..... T:.....	Item		
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		
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41 Clause 3.3 - Inspection of adjoining properties

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

Item

The site (B4)

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

Management of contract (B5)

48 Clause 5.1 - Management of the **works**

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

Item

49 Clause 5.2 - Progress meetings

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

Item

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Refurbishments and Upgrades to Grosvenor Train Station
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50	<p>Clause 5.3 - Technical meetings</p> <p>F:..... V:..... T:.....</p> <p><u>Samples, shop drawings and manufacturer's instructions (B6)</u></p>	Item		
51	<p>Clause 6.1 - Samples of materials</p> <p>F:..... V:..... T:.....</p>	Item		
52	<p>Clause 6.2 - Workmanship samples</p> <p>F:..... V:..... T:.....</p>	Item		
53	<p>Clause 6.3 - Shop drawings</p> <p>F:..... V:..... T:.....</p>	Item		
54	<p>Clause 6.4 - Compliance with manufacturer's instructions</p> <p>F:..... V:..... T:.....</p> <p><u>Deposits and fees (B7)</u></p>	Item		
55	<p>Clause 7.1 - Deposits and fees</p> <p>F:..... V:..... T:.....</p> <p><u>Temporary services (B8)</u></p>	Item		
56	<p>Clause 8.1 - Water</p> <p>F:..... V:..... T:.....</p>	Item		
57	<p>Clause 8.2 - Electricity</p> <p>F:..... V:..... T:.....</p>	Item		
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58 Clause 8.3 - Ablution and welfare facilities
 F:..... V:.....
 T:.....

Item

59 Clause 8.4 - Communication facilities
 F:..... V:.....
 T:.....

Item

Prime cost amounts (B9)

60 Clause 9.1 - Responsibility for **prime cost amounts**

Attendance on subcontractors (B10)

61 Clause 10.1 - General attendance

User note

General attendance is defined as being the duties of the contractor in terms of clause 12.2 of the JBCC n/s subcontract agreement

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

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Refurbishments and Upgrades to Grosvenor Train Station
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66 Clause 11.4 - Notice before covering work
 F:..... V:.....
 T:.....

Item

67 Clause 11.5 - Disturbance

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**

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

Item

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R

Section No. 1
 Preliminaries
 Contract
 Part C2: Pricing Data

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

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

Item

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Section No. 1
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Contract
Part C2: Pricing Data

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

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

Item

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Section No. 1
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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

Carried to Collection

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Section No. 1
Preliminaries
Contract
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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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Section No. 1
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Contract
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84	<p>MONITORING</p> <p>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.</p> <p>F:..... V:..... T:.....</p> <p><u>SOCIO-ECONOMIC DELIVERABLES</u></p>	Item		
85	<p>It is required that the contractor shall adhere to all Socio-Economic Deliverables.</p> <p>F:..... V:..... T:.....</p> <p><u>EMPLOYMENT OF SMME SUB-CONTRACTORS AS A CONDITION OF TENDER</u></p>	Item		
86	<p>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. N/A.</p> <p>F:..... V:..... T:.....</p>	Item		
Carried to Collection			R	
Section No. 1 Preliminaries Contract Part C2: Pricing Data				

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.

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.

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

Item

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Section No. 1
Preliminaries
Contract
Part C2: Pricing Data

ENVIRONMENTAL HEALTH AND SAFETY

88 The contractor shall comply with all the requirements set out in 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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Section No. 1
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SUMMARY OF CATEGORIES

Category: Fixed R

Category: Value	R
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Category: Time R

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Section No. 1
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**Refurbishments and Upgrades to Grosvenor Train Station
Prasa South Gauteng Region Corridor 3
Siteworks - Platform and external works**

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.	14		
Total Brought Forward from Page No.	15		
Total Brought Forward from Page No.	16		
Total Brought Forward from Page No.	17		
Total Brought Forward from Page No.	18		

**Refurbishments and Upgrades to Grosvenor Train Station
Prasa South Gauteng Region Corridor 3
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SECTION NO.2 : BUILDING WORK

Item No	Quantity	Rate	Amount R
<u>SECTION NO. 2</u>			
<u>BILL NO. 1</u>			
<u>EARTHWORKS</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>SUPPLEMENTARY PREAMBLES</u>			
<u>Nature of ground</u>			
The nature of the ground is assumed to be loose sandy material, therefore "earth", but possibly interspersed with "hard rock" or "soft rock".			
The nature of the ground is assumed to be gravel, therefore "earth", but possibly interspersed with "soft rock".			
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".			
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.			
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			
Carried to Collection			R
Section No. 2 Earthworks Contract Part C2: Pricing Data			

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

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Section No. 2
Earthworks
Contract
Part C2: Pricing Data

Refurbishments and Upgrades to Grosvenor Train Station
Prasa South Gauteng Region Corridor 3
Siteworks - Platform and external works

DEMOLITIONS ETC

Taking down and removing

1	Steel palisade fence 2.1m high with steel posts and droppers	m	62
2	Mesh gate approximately 5m x 4m high	No	1

Demolishing and removing

3	Single storey building with flat roof 7.4 x 2.2 on plan and 2.6m high overall comprising concrete surface bed, reinforced concrete roof slabs, one brick external walls and half internal walls	No	1
4	Single storey building with flat roof 6.9 x 2.5m on plan and 2.6m high overall comprising concrete surface bed, reinforced concrete roof slabs, one brick external walls and half internal walls	No	2
5	Single storey building with flat roof 6.4 x 2.7m on plan and 2.6m high overall comprising concrete surface bed, reinforced concrete roof slabs, one brick external walls and half internal walls	No	2
6	Single storey building with flat roof 5.8 x 2.2m on plan and 2.6m high overall comprising concrete surface bed, reinforced concrete roof slabs, one brick external walls and half internal walls	No	1
7	Single storey building with timber monopitch roof 14.7 x 4.7m on plan and 2.6m high overall comprising concrete surface bed, reinforced concrete intermediate and roof slabs, one brick external walls and half internal walls	No	1

Carried to Collection

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Section No. 2
Earthworks
Contract
Part C2: Pricing Data

**Refurbishments and Upgrades to Grosvenor Train Station
Prasa South Gauteng Region Corridor 3
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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>ROOF COVERINGS 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>Straight cutting</u></p> <p>Descriptions of all roof coverings are deemed to include for all straight cutting</p> <p>-----</p> <p><u>PROFILED METAL SHEETING AND ACCESSORIES</u></p> <p><u>0.58mm "Klip Lok 700" Z275 spelter galvanised ribbed sheet steel with "Chromadek" finish on one side in single lengths and accessories, fixed to timber purlins using SL 700 approved clips and fasteners all in accordance with manufacturer's recommendations and specifications.</u></p>			
8	Roof covering with pitch not exceeding 25 degrees	m²	344	
	<p>Carried Forward to Summary of Section No. 2</p> <p>Section No. 2</p> <p>Roof Coverings</p> <p>Contract</p> <p>Part C2: Pricing Data</p>			R

Refurbishments and Upgrades to Grosvenor Train Station
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Item No		Quantity	Rate	Amount R
	<u>SECTION NO. 2</u>			
	<u>BILL NO. 3</u>			
	<u>METALWORK</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>SUPPLEMENTARY PREAMBLES</u>			
	<u>Descriptions</u>			
	Descriptions of bolts shall be deemed to include nuts and washers			
	Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete			
	Metalwork described as "holed for bolt(s)" shall be deemed to exclude the bolts unless otherwise described			

	<u>STEEL ROLLER SHUTTERS ETC</u>			
	<u>Approved galvanised steel powder coated roller shutters fixed to brickwork or concrete</u>			
9	Manual roll-up slatted roller shutter for 1800 x 2475mm high opening	No	4	
	Carried Forward to Summary of Section No. 2			R
	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. 4</u></p> <p><u>STRUCTURAL STEELWORK</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</p> <p>Descriptions of bolts shall be deemed to include nuts and washers</p> <p>Descriptions of L-shaped and U-shaped anchor bolts shall be deemed to include bending, threading, nuts and washers and embedding in concrete</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>All structural steelwork to be fabricated and erected in accordance with SABS 1200 H, SABS 0162-1193 and the project specification.</p>			
<p>Carried to Collection</p>			R
<p>Section No. 2 Structural Steel Contract Part C2: Pricing Data</p>			

Welding shall conform to AWS D1.1-90 specifications.

Butt-welds shall develop the full strength of the elements joined.

All welding to be 6mm continuous fillet welds unless otherwise shown.

Welding electrode to be E70 XX (unless otherwise noted).

A complete set of shop drawings shall be submitted to the Engineer for approval before fabrication commences.

All structural steelwork shall be grade 350W except for cold-rolled purlins and girts where commercial quality steel may be used if approved by the Engineer

H-D Bolts to be hot-dipped galvanized and threads undercut after galvanizing.

All painting must comply with SANS 1200 HC.

THE FOLLOWING IN MILD STEEL ROOF, COLUMNS AND BEAMS

Welded roof structure of angle rafters, tie beams, rails, struts, braces, cleats, etc and flat bearer, gusset and connection plates, bolted to steel (Platform shelters)

- 10 Mono pitched roof including columns, beams, part trusses, jack rafters, permanent bracing, 50 x 76mm purlins at 1200mm centres for roof sheeting all in accordance to the Structural Engineer's Drawings (Platform Shelters).

m²

344

Carried to Collection

R

Section No. 2
Structural Steel
Contract
Part C2: Pricing Data

Refurbishments and Upgrades to Grosvenor Train Station
Prasa South Gauteng Region Corridor 3
Siteworks - Platform and external works

Section No. 2

Building Work

Bill No. 4

Structural Steel

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Section No. 2
 Structural Steel
 Contract
 Part C2: Pricing Data

Item No	Quantity	Rate	Amount R
<u>SECTION NO. 2</u>			
<u>BILL NO. 5</u>			
<u>PLUMBING AND DRAINAGE</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>SUPPLEMENTARY PREAMBLES</u>			
Descriptions of gutter outlets etc shall be deemed to include wire balloon gratings unless hailguards are allowed for in the bills of quantities			
<u>Stormwater channels</u>			
Descriptions of channels shall be deemed to include necessary excavation, surface preparation, compaction, etc, and disposal of surplus material on site			
<u>Stainless steel basins, sinks, wash troughs, urinals, etc</u>			
Stainless steel for economy basins, domestic sinks and worktops shall be Type 430 (17/0)			
Stainless steel for urinals, basins, quality sinks, wash troughs, institutional equipment, etc shall be Type 304 (18/8)			
Stainless steel for laboratory sinks, photographic equipment, etc shall be Type 316 (18/8)			
Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable			
Carried to Collection			R
Section No. 2 Plumbing and Drainage Contract Part C2: Pricing Data			

Waste unions

Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings

Sealing of edges

Outer edges of sinks, basins, baths, urinals, etc are to be sealed against adjacent surfaces with approved silicone

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

Copper pipes

All copper pipework shall be half hard drawn copper tubing pipes class 2 (medium) to SANS 460 and SANS 1067 used in conjunction with capillary type soldered joints done in accordance with the manufacturer's specifications, and installed in accordance with SANS 10400: 2011 and SANS 10252-1:2012, including couplers along the running length, and all necessary supports, fixing, brackets, saddles, holderbats, etc, and flow direction arrows including colour-coded galvanised metal sheet strips painted and affixed to the pipes in accordance with SANS 10140-3:2003.

Carried to Collection

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

R

Copper pipes are to be installed in accordance with the latest revision of the Code of Practice for Copper Plumbing soldering techniques. Flux, solder, etc to be strictly in accordance with the manufacturer's requirements with special attention to copper flux composition

All hot and cold water pipes are to be chased into walls except where pipes are to be surface-mounted on wall faces or run in ceiling voids or inside ducts, and fixed with standard type pipe saddles and brackets at 1000mm maximum

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.

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

Paper wrapping to pipes

Pipes chased into brickwork must be wrapped with two layers of stout brown paper tied with wire. Rates are to include for wrapping around joints and fittings

Disinfection of water pipework

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

Carried to Collection

R

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

Carried to Collection

R

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, gulley 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"

Carried to Collection

R

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

As-built drawings

Where required, the contractor shall prepare an updated set of as-built drawings. At completion of the contract the contractor shall hand these drawings to the principal agent for reproducing onto the originals for handing over to the employer (provision for allowance of as-built drawings elsewhere)

BUDGETARY ALLOWANCES

Sewer

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

Item

Stormwater

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

Item

Carried to Collection

R

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

**Refurbishments and Upgrades to Grosvenor Train Station
Prasa South Gauteng Region Corridor 3
Siteworks - Platform and external works**

[illegible]

Item No	Quantity	Rate	Amount R
<u>SECTION NO. 2</u>			
<u>BILL NO. 6</u>			
<u>PAINTWORK</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>SUPPLEMENTARY PREAMBLES</u>			
<u>DESCRIPTIONS</u>			
Descriptions of paintwork shall be deemed to include for all cutting in			
<u>PREPARATORY WORK TO EXISTING WORK</u>			
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			
Previously painted metal surfacesSurfaces shall be thoroughly rubbed and cleaned down. Blistered or peeling paint shall be completely removed down to bare metal			
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			

Carried to Collection			R
Section No. 2 Painting Contract Part C2: Pricing Data			

PAINTWORK, ETC TO NEW WORK ON

FLOATED PLASTER SURFACES WITH

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

13	Internal walls	m ²	1
14	Narrow widths	m ²	1

One coat alkali resistant plaster primer and two coats modified acrylic fine textured emulsion paint on

15	Ceilings and beams	m ²	1
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STEEL SURFACES WITH

Spot priming defects in pre-primed surfaces with zinc phosphate metal primer, one coat universal undercoat and two coats super universal high gloss enamel paint on steel

16	On structural steel members	m ²	200
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Carried to Collection

R

Section No. 2
Painting
Contract
Part C2: Pricing Data

Refurbishments and Upgrades to Grosvenor Train Station
Prasa South Gauteng Region Corridor 3
Siteworks - Platform and external works

Section No. 2

Building Work

Bill No. 6

Painting

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Section No. 2

Painting

Contract

Part C2: Pricing Data

Refurbishments and Upgrades to Grosvenor Train Station
Prasa South Gauteng Region Corridor 3
Siteworks - Platform and external works

Item No		Quantity	Rate	Amount R
<u>SECTION NO. 2</u>				
<u>BILL NO. 7</u>				
<u>PROVISIONAL SUMS</u>				

<u>COMMUNITY LIASON OFFICER</u>				
17	Allow the amount of R27,000.00 Twenty Seven 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		27 000.00
18	Allow for general attendance		%	
19	Allow for profit		%	
<u>EPWP TRAINING</u>				
20	Allow the amount of R135,000.00 (One Hundred and Thirty Five 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		135 000.00
21	Allow for general attendance		%	
22	Allow for profit		%	
<u>SIGNAGE</u>				
23	Allow the amount of R70 000.00 (Seventy Thousand Hundred Rand) signage to be used at the discretion of the Project Manager and deducted in whole or in part if not required	Item		70 000.00
24	Allow for profit		%	
Carried to Collection				R
Section No. 2 Provisional Amounts Contract Part C2: Pricing Data				

Refurbishments and Upgrades to Grosvenor Train Station
Prasa South Gauteng Region Corridor 3
Siteworks - Platform and external works

25	Allow for general attendance		%	
	<u>LIGHTWELL</u>			
26	Provide a sum of R30 000.00 (Thirty Thousand Rand) for the conversion of existing tunnel access into a light well to be used at the discretion of the Project Manager and deducted in whole or in part if not required			
		Item		30 000.00
27	Allow for profit		%	
28	Allow for general attendance		%	
	<u>TEMPORARY ACCOMMODATION</u>			
29	Allow the amount of R100,000.00 (One Hundred Thousand Rand) for the temporary office and ablution buildings and connection to services on site, to be used at the discretion of the Project Manager and deducted in whole or in part if not required			
		Item		100 000.00
30	Allow for profit		%	
31	Allow for general attendance		%	
Carried to Collection				R
Section No. 2 Provisional Amounts Contract Part C2: Pricing Data				

Refurbishments and Upgrades to Grosvenor Train Station
Prasa South Gauteng Region Corridor 3
Siteworks - Platform and external works

Section No. 2

Building Work

Bill No. 7

Provisional Amounts

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Section No. 2

Provisional Amounts

Contract

Part C2: Pricing Data

**Refurbishments and Upgrades to Grosvenor Train Station
Prasa South Gauteng Region Corridor 3
Siteworks - Platform and external works**

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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>For preambles see "Model Preambles for Trades 2008" as issued by The Association of South African Quantity Surveyors</p> <p>For additional preambles see "SABS 1200" as issued.</p> <p><u>uPVC pipes and fittings:</u></p> <p>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.</p> <p><u>uPVC pressure pipes and fittings:</u></p> <p>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.</p> <p><u>Reducing fittings:</u></p> <p>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.</p>			
<p>Carried to Collection</p>			R
<p>Section No. 3 Platforms Contract Part C2: Pricing Data</p>			

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 SABS 1200L (provision for disinfection elsewhere).

Laying, backfilling, bedding, etc., of pipes:

Pipes shall be laid and bedded in accordance with manufacturers' instructions or in accordance with engineers details 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: SABS 1200L : Medium-pressure pipelines SABS 1200 LD : Sewers SABS 1200 LE : Stormwater drainage Pipe trenches, etc shall be backfilled in accordance with Clauses 3, 5.5, 5.6, 5.7 and 7 of SABS 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 SABS 1200LB : Bedding (Pipes) Unless otherwise described bedding of rigid pipes shall be Class B bedding

General:

Descriptions of pipes laid in and including trenches and of inspection chambers, catchpits, etc shall be deemed to include excavation, bedding, backfilling, compaction to a minimum of 98% Mod AASHTO density and disposal of surplus material on site.

Carried to Collection

Section No. 3
Platforms
Contract
Part C2: Pricing Data

R

As-built drawings:

Where required, the contractor shall prepare an updated set of as-built drawings. At completion of the contract the contractor shall hand these drawings to the principal agent for reproducing onto the originals for handing over to the employer (provision for allowance of as-built drawings elsewhere).

ROADS - ASPHALT BASE AND SURFACING

DEMOLITIONS ETC

Hacking up and removing

- | | | | | |
|---|----------------------|----------------|-------|--|
| 1 | Asphalt road surface | m ² | 7 048 | |
|---|----------------------|----------------|-------|--|

EARTHWORKS (BULK EXCAVATION, FILLING ETC)

Excavation not exceeding 2m deep

- | | | | | |
|---|--|----------------|-------|--|
| 2 | 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 | 2 114 | |
|---|--|----------------|-------|--|

Extra over excavations for carting away

- | | | | | |
|---|---|----------------|-------|--|
| 3 | Surplus material from stock piles on site to a dumping site to be located by the contractor | m ³ | 2 114 | |
|---|---|----------------|-------|--|

Keeping excavations free of water

- | | | | | |
|---|-----------------------------------|--|------|--|
| 4 | Keeping excavations free of water | | Item | |
|---|-----------------------------------|--|------|--|

Earth filling supplied by the contractor under pavings and roads or in soil mattress, etc as drawings 102472-CIV-005 and 006

- | | | | | |
|---|--|----------------|-------|--|
| 5 | 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 | 2 114 | |
|---|--|----------------|-------|--|

Carried to Collection

R

Section No. 3
Platforms
Contract
Part C2: Pricing Data

Refurbishments and Upgrades to Grosvenor Train Station
Prasa South Gauteng Region Corridor 3
Siteworks - Platform and external works

Compaction of surfaces

6	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	7 048		
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Additional prescribed density tests on filling as requested by the principal agent

7	Relative compaction test in accordance with methods A1, A10b and A17 of TMH1	No	1		
8	Indicator test in accordance with methods A1 to A5 of TMH1	No	1		
9	CBR test in accordance with method A8 of TMH1	No	1		
10	UCS test in accordance with method A14 of TMH1	No	1		

SURFACING

Asphalt road and parking surfacing

11	50mm Thick continuously graded asphalt surfacing	m ²	7 048		
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Prime coat

12	MC-30 Cutback bitumen	m ²	7 048		
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Tack coat

13	30% Stable-grade emulsion	m ²	7 048		
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PAINTING

Prepare and paint one coat colour reflective road marking paint on paving

14	100mm Wide yellow line	m	1 100		
15	Single-headed directional arrow 400mm wide x 1400mm long	No	10		

Carried to Collection

R

Section No. 3
Platforms
Contract
Part C2: Pricing Data

Refurbishments and Upgrades to Grosvenor Train Station
Prasa South Gauteng Region Corridor 3
Siteworks - Platform and external works

16	Paraplegic sign painted on road surface	No	3		
	<u>PAVING ETC</u>				
	<u>300 x 300mm "Flagstone Tac-Pave" in-situ system, yellow colour, applied to existing surfaces all in accordance to manufacturer's instructions.</u>				
17	Paving to platform surfaces	m²	329		
Carried to Collection					R
Section No. 3 Platforms Contract Part C2: Pricing Data					

**Refurbishments and Upgrades to Grosvenor Train Station
Prasa South Gauteng Region Corridor 3
Siteworks - Platform and external works**

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Refurbishments and Upgrades to Grosvenor Train Station
Prasa South Gauteng Region Corridor 3
Siteworks - Platform and external works

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>"Wilsonstone" or similar approved galvanised steel furniture</u>			
18	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	
19	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				

	Quantity	Rate	Amount R
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Refurbishments and Upgrades to Grosvenor Train Station
Prasa South Gauteng Region Corridor 3
Siteworks - Platform and external works

Clean sand shall be swept into joints between roadstones at completion

EARTHWORKS (BULK EXCAVATION, FILLING ETC)

Excavation not exceeding 2m deep

20	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	m³	81	
----	--	----	----	--

Extra over excavations for carting away

21	Surplus material from stock piles on site to a dumping site to be located by the contractor	m³	81	
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Keeping excavations free of water

22	Keeping excavations free of water		Item	
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Earth filling supplied by the contractor under pavings and roads or in soil mattress, etc as drawings 102472-CIV-005 and 006

23	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)	m³	27	
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24	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)	m³	27	
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25	Base course under roads and parking compacted to 85% apparent density (G2 graded crushed stone material)	m³	27	
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Carried to Collection

R

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

Refurbishments and Upgrades to Grosvenor Train Station
Prasa South Gauteng Region Corridor 3
Siteworks - Platform and external works

<u>Compaction of surfaces</u>					
26	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	181		
<u>Prescribed density tests on filling:</u>					
27	Allow for compaction tests by an approved laboratory to determine density of filling material.	No	10		
<u>Additional prescribed density tests on filling as requested by the principal agent</u>					
28	Relative compaction test in accordance with methods A1, A10b and A17 of TMH1	No	1		
29	Indicator test in accordance with methods A1 to A5 of TMH1	No	1		
30	CBR test in accordance with method A8 of TMH1	No	1		
31	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>					
32	Under block paving, etc	m ²	181		
<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>					
33	Paving to Yards	m ²	181		
<u>Precast concrete finished smooth on exposed surfaces including bedding, jointing and pointing</u>					
34	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		
Carried to Collection				R	
Section No. 3 Roads and Paving Contract Part C2: Pricing Data					

PAVING

400 x 400 x 65 mm Guidance tactile blocks on 25mm thick compacted cement/riversand bed with sand and cement mixture swept into joints and hosed down

35	Paving to walkways	m ²	100
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Carried to Collection

R

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

**Refurbishments and Upgrades to Grosvenor Train Station
Prasa South Gauteng Region Corridor 3
Siteworks - Platform and external works**

[illegible]

Item No		Quantity	Rate	Amount R
<u>SECTION NO. 3</u>				
<u>BILL NO. 4</u>				
<u>BOUNDARY WALL</u>				
Unless otherwise described, the preambles and full descriptions of the items in the preceeding Bills are to apply equally to this Bill				
<u>Excavation in earth not exceeding 2m deep</u>				
36	Trenches	m³	119	
<u>Extra over trench and hole excavations in earth for excavation in:</u>				
37	Soft rock.	m³	12	
38	Hard rock.	m³	6	
<u>Extra over all excavations for carting away:</u>				
39	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor.	m³	65	
<u>Risk of collapse of excavations</u>				
40	Sides of trench and hole excavations not exceeding 1,5m deep	m²	339	
<u>G5 Material supplied by the Contractor compacted to 95% Mod. AASHTO density:</u>				
41	Backfilling to trenches, holes, etc.	m³	60	
42	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density.	m²	119	
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<u>Prescribed density tests on filling:</u>					
43	Allow for compaction tests by an approved laboratory to determine density of filling material.	No	3		
<u>Soil insecticide</u>					
44	To bottoms and sides of trenches, etc	m ²	458		
<u>25 MPa/20mm reinforced concrete</u>					
45	Strip footings	m ³	30		
<u>Test blocks</u>					
46	Making and testing 150 x 150 x 150mm concrete strength test cube	No	3		
<u>BRICKWORK</u>					
<u>FOUNDATIONS</u>					
<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in class 1 mortar</u>					
47	One brick walls	m ²	153		
48	Brick Piers	m ³	2		
<u>SUPERSTRUCTURE</u>					
<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar:</u>					
49	230mm walls.	m ²	204		
50	Brick Piers	m ³	6		
<u>BRICKWORK SUNDRIES</u>					
<u>Brickwork reinforcement:</u>					
51	150mm Wide reinforcement built in horizontally.	m	1 696		
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FACE BRICKWORK

External facings in approved face bricks (FBX) with a PC amount of R4,500.00 per thousand bricks delivered to site (excluding VAT) pointed with flush horizontal and vertical joints

52	Extra over brickwork for face brickwork	m ²	407
53	Extra over brickwork for face brickwork in foundations	m ²	305

Brick-on-edge header course copings, sills, etc of approved face bricks (FBX) with a PC Amount of R4,500.00 per thousand bricks delivered to site (excluding VAT) pointed with flush horizontal and vertical joints on all exposed faces

54	220mm Copings on top of one brick walls	m	170
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GALVANISED STEEL GATES

Gates

55	Vehicle gate 6,00 x 1,8m high made with galvanised square tubing elements, Clear-Vu type or similar approved with galvanised wheels all as per structural engineer's specifications	No	1
56	Vehicle gate 4,30 x 1,8m high made with galvanised square tubing elements, Clear-Vu type or similar approved with galvanised wheels all as per structural engineer's specifications	No	2
57	Pedestrian gate 0,915 x 1,8m high made with galvanised square tubing elements, Clear-Vu type or similar approved with galvanised wheels all as per structural engineer's specifications	No	3

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67	Field Density test, including "Optimum Moisture Content" (four readings per test)	No	1		
	<u>CONCRETE, FORMWORK AND REINFORCEMENT</u>				
	<u>25MPa/19mm Unreinforced concrete cast against excavated surfaces</u>				
68	Strip footings	m³	17		
	<u>30MPa/19mm concrete</u>				
69	Slabs including upstand beams	m³	21		
	<u>TEST CUBES</u>				
70	Making and testing 150 x 150 x 150mm concrete strength test cubes	No	7		
	<u>CONCRETE SUNDRIES</u>				
	<u>Finishing top surfaces of concrete smooth with a steel trowel</u>				
71	Top of slabs and beams	m²	105		
	<u>SMOOTH FORMWORK (DEGREE OF ACCURACY I)</u>				
	<u>Smooth formwork to soffits</u>				
72	Slabs not exceeding 250mm thick propped up exceeding 1,5m and not exceeding 3,5m high	m²	105		
	<u>Smooth formwork to sides</u>				
73	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	103		
	<u>MOVEMENT JOINTS ETC</u>				
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	<u>Isolation joints with 10mm "Jointex" filler between vertical concrete surfaces or between vertical concrete and brickwork surfaces</u>		
74	10mm joints not exceeding 300mm high	m	103
	<u>REINFORCEMENT</u>		
	<u>Mild and high tensile steel reinforcement to structural concrete work</u>		
75	All diameter bars	t	4.18
	<u>MASONRY</u>		
	<u>Brickwork of NFP bricks in class II mortar</u>		
76	One brick walls	m ²	362
	<u>Brickwork reinforcement</u>		
77	150mm Wide reinforcement built in horizontally	m	1 792
	<u>"Corobrik Firelight Satin" face bricks pointed with recessed horizontal and vertical joints</u>		
78	Extra over brickwork for face brickwork	m ²	724
	<u>Glass blockwalls</u>		
79	Provide a budgetary allowance of R50 000 (Thirty Thousand Rand) for glass block walls as per the Architect's drawings and specifications		Item
	<u>WATERPROOFING</u>		
	<u>One layer of 375 micron embossed damp proof course</u>		
80	In walls	m ²	1

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	<u>Two layers of 4mm thick Torch-on polyester based sheeting inclusive of additional membrane dressing around fullbores, pipes, etc</u>				
81	On flat roofs	m ²	105		
	<u>Polysulphide sealing compound including backing cord, bond breaker, primer, etc</u>				
82	10 x 10mm In vertical isolation joints	m	1		
	<u>PLASTERING</u>				
	<u>Screeds on concrete</u>				
83	Average 50mm thick on floors with upper surface to falls	m ²	105		
	<u>Cement plaster on brickwork</u>				
84	On walls	m ²	1		
85	On narrow widths	m ²	1		
	<u>Cement plaster on concrete</u>				
86	On ceilings	m ²	1		

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Section No	SUMMARY OF SECTION NO. 2: BUILDING WORK	Page No	Amount R
1	Preliminaries	21	
2	Building Work	44	
3	Civil Work	67	
	Sub Total		R
	ADD: Contingency at 10%		R
	Sub Total		R
	ADD: Value Added Tax at 15%		R
	TOTAL CARRIED TO FORM OF TENDER		R
	Contract Part C2: Pricing Data		