

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

Item No	Description	Quantity	Amount
	<u>BILL NO. 1</u>		
	<u>SECTION NO. 1</u>		
	<u>PRELIMINARY AND GENERAL (PROVISIONAL)</u>		
	<u>NOTES TO PRELIMINARY AND GENERAL</u>		
	<u>NOTE : TENDERERS ARE TO PRICE PRELIMINARIES BASED ON THE TERMS, INSTRUCTIONS AND CONDITIONS OF THE CONTRACT AND BILLS OF QUANTITIES INCLUDED HEREIN</u>		
	<u>STRUCTURE OF THIS PRELIMINARIES BILL</u>		
	Section A : A recital of the headings of the individual clauses of the aforementioned JBCC Series 2000 Principal Building Agreement prepared by Joint Building Contracts Committee, Edition 6.2 - March 2018		
	Section B : A recital of the headings of the individual clauses of the aforementioned Preliminaries document		
	Section C : Any special clauses to meet the particular circumstances of the project		
	<u>SECTION A: PRINCIPAL BUILDING AGREEMENT</u>		
1.1.1	Clause 1.0 - Definitions and interpretation F:..... V:..... T:.....	Item	
1.1.2	Clause 2.0 - Law, regulations and notices		
1.1.3	Clause 3.0 - Offer and acceptance F:..... V:..... T:.....	Item	
1.1.4	Clause 4.0 - Assignment and cession F:..... V:..... T:.....	Item	
1.1.5	Clause 5.0 - Contract documents		
	Carried forward	R	
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		Brought forward	R	
	F:..... V:..... T:.....		Item	
1.1.6	Clause 6.0 - Employer's agents			
	F:..... V:..... T:.....		Item	
1.1.7	Clause 7.0 - Design responsibility			
	F:..... V:..... T:.....		Item	
	<u>Insurance and security (A8-A11)</u>			
1.1.8	Clause 8.0 - Works risk			
	F:..... V:..... T:.....		Item	
1.1.9	Clause 9.0 - Indemnities			
	F:..... V:..... T:.....		Item	
1.1.10	Clause 10.0 - Insurances			
	F:..... V:..... T:.....		Item	
1.1.11	Clause 11.0 - Security			
	F:..... V:..... T:.....		Item	
	<u>Execution (A12 - A17)</u>			
1.1.12	Clause 12.0 - Duties of the parties			
	F:..... V:..... T:.....		Item	
1.1.13	Clause 13.0 - Setting out			
	F:..... V:..... T:.....		Item	
1.1.14	Clause 14.0 - Nominated subcontractors			
	F:..... V:..... T:.....		Item	
1.1.15	Clause 15.0 - Selected subcontractors			
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	F:..... V:..... T:.....		Item	
1.1.16	<p>Clause 16.0 - Direct contractors</p> <p>Attendance on direct contractors</p> <p>In respect of direct contractors the contractor shall:</p> <p>F:..... V:..... T:.....</p>		Item	
1.1.17	<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>		Item	
	<u>Completion (A18 - A24)</u>			
1.1.18	<p>Clause 18.0 - Interim completion</p> <p>F:..... V:..... T:.....</p>		Item	
1.1.19	<p>Clause 19.0 - Practical completion</p> <p>F:..... V:..... T:.....</p>		Item	
1.1.20	<p>Clause 20.0 - Sectional completion</p> <p>F:..... V:..... T:.....</p>		Item	
1.1.21	<p>Clause 21.0 - Defects liability period and final completion</p> <p>F:..... V:..... T:.....</p>		Item	
1.1.22	<p>Clause 22.0 - Latent defects liability period</p> <p>F:..... V:..... T:.....</p>		Item	
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		Brought forward	R	
1.1.23	<p>Clause 23.0 - Revision of 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>In assessing his price and programme for the works to be completed by the given practical completion date/s (refer to Contract Data EC), the contractor shall take into account and shall allow 10 working days to be included in his construction programme (based on a five day working week), as a contingency period to cover any items such as rain & other delays. This contingency period will be used at the discretion of the Principal Agent</p> <p>F:..... V:..... T:.....</p>			
				Item
1.1.24	<p>Clause 24.0 - Penalty for late or non-completion</p> <p>F:..... V:..... T:.....</p> <p><u>Payment (A25 - A27)</u></p>			
				Item
1.1.25	<p>Clause 25.0 - Payment</p> <p>F:..... V:..... T:.....</p>			
				Item
1.1.26	<p>Clause 26.0 - Adjustment of the contract value and final account</p> <p>F:..... V:..... T:.....</p>			
				Item
1.1.27	<p>Clause 27.0 - Recovery of expense and/or loss</p> <p>F:..... V:..... T:.....</p> <p><u>Suspension and termination (A28 - A29)</u></p>			
				Item
1.1.28	<p>Clause 28.0 - Suspension by the contractor</p> <p>F:..... V:..... T:.....</p>			
				Item
1.1.29	<p>Clause 29.0 - Termination</p>			
		Carried forward	R	
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	F:..... V:..... T:.....		Item	
	<u>Dispute resolution (A30)</u>			
1.1.30	Clause 30.0 - Dispute resolution			
	F:..... V:..... T:.....		Item	
	<u>SECTION B: PRELIMINARIES</u>			
	<u>Interpretation (B1)</u>			
1.1.31	Clause 1.1 - Definitions			
	F:..... V:..... T:.....		Item	
1.1.32	Clause 1.2 - Interpretation			
	F:..... V:..... T:.....		Item	
	<u>Documents (B2)</u>			
1.1.33	Clause 2.1 - Checking of documents			
	F:..... V:..... T:.....		Item	
1.1.34	Clause 2.2 - Provisional bills of quantities			
	The quantities in provisional bills of quantities are an indication of the works to be executed and are subject to remeasurement			
1.1.35	Clause 2.3 - Availability of construction information			
	Budgetary allowances and provisional sums			
	The budgetary allowances and/or provisional sums allocated for subsequent trades included in this agreement will be separately procured, based on multiple procurement of subcontractors during the construction period			
	F:..... V:..... T:.....		Item	
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	<p>The construction documentation for the works is not complete and will only be completed during the construction period. The contractor and principal agent shall work together to identify the requirements for the provision of construction documentation. The contractor and principal agent shall agree the dates that are reasonable by when the contractor is to be provided with each outstanding item of the anticipated construction documentation.</p> <p>The contractor and n/s subcontractor shall agree dates by when the n/s subcontractor is to be provided with each item of the outstanding documentation in terms of the programme.</p>		
1.1.36	<p>Clause 2.4 - Ordering of materials and goods</p> <p>F:..... V:..... T:.....</p> <p>Previous work and adjoining properties (B3)</p>	Item	
1.1.37	<p>Clause 3.1 - Previous work - dimensional accuracy</p> <p>F:..... V:..... T:.....</p> <p>The contractor shall, within a reasonable period after taking possession of the site, but not exceeding ten (10) per cent of the construction period or twenty (20) working days whichever is the lesser, check the existing levels, lines, profiles and the like affecting the works and satisfy himself as to the dimensional accuracy of work previously executed. The contractor shall forthwith notify the principal agent and request a contract instruction regarding any dimensional inaccuracy found in work previously executed</p>	Item	
1.1.38	<p>Clause 3.2 - Previous work - defects</p> <p>F:..... V:..... T:.....</p> <p>The contractor, on becoming aware of a defect in work previously executed, shall forthwith notify the principal agent requesting a contract instruction regarding such a defect.</p>	Item	
1.1.39	<p>Clause 3.3 - Inspection of adjoining properties</p> <p>F:..... V:..... T:.....</p>	Item	
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	<p>Before commencing the works, the principal agent and contractor shall arrange with the owners of adjacent buildings and properties and representatives of local authorities to inspect, among others, the buildings, structures, pavings, kerbs, channels and fences. The contractor shall record all conditions that the works could affect and copy the principal agent accordingly. The contractor shall pay particular attention to cracks, defects and existing levels related to structures, pavings, kerbs, channels and fences, which later could be claimed to have been caused or disturbed by the works.</p> <p>Where instructed by the principal agent, levels and photographs shall be taken by the contractor and the cost thereof shall be for the employer's account. Certified copies shall be lodged with the principal agent.</p> <p><u>The site (B4)</u></p>		
1.1.40	<p>Clause 4.1 - Defined works area</p> <p>F:..... V:..... T:.....</p>	Item	
1.1.41	<p>Clause 4.2 - Handover of site in stages</p> <p>F:..... V:..... T:.....</p>	Item	
1.1.42	<p>Clause 4.3 - Enclosure of the works</p> <p>F:..... V:..... T:.....</p>	Item	
1.1.43	<p>Clause 4.4 - Geotechnical investigation</p> <p>F:..... V:..... T:.....</p>	Item	
1.1.44	<p>Clause 4.5 - Encroachments</p> <p>F:..... V:..... T:.....</p>	Item	
1.1.45	<p>Clause 4.6 - Existing premises occupied</p> <p>F:..... V:..... T:.....</p>	Item	
1.1.46	<p>Clause 4.7 - Services - known</p> <p>F:..... V:..... T:.....</p>	Item	
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1.1.47	Clause 4.8 - Protection of trees and/or relevant natural features F:..... V:..... T:.....		Item	
	<u>Management of contract (B5)</u>			
1.1.48	Clause 5.1 - Management of the works F:..... V:..... T:.....		Item	
1.1.49	Clause 5.2 - Progress meetings F:..... V:..... T:.....		Item	
1.1.50	Clause 5.3 - Technical meetings F:..... V:..... T:.....		Item	
	<u>Samples, shop drawings and manufacturer's instructions (B6)</u>			
1.1.51	Clause 6.1 - Samples of materials F:..... V:..... T:.....		Item	
1.1.52	Clause 6.2 - Workmanship samples F:..... V:..... T:.....		Item	
1.1.53	Clause 6.3 - Shop drawings F:..... V:..... T:.....		Item	
1.1.54	Clause 6.4 - Compliance with manufacturer's instructions F:..... V:..... T:.....		Item	
	<u>Deposits and fees (B7)</u>			
1.1.55	Clause 7.1 - Deposits and fees F:..... V:..... T:.....		Item	
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	<u>Temporary services (B8)</u>			
1.1.56	Clause 8.1 - Water			
	F:..... V:..... T:.....		Item	
1.1.57	Clause 8.2 - Electricity			
	F:..... V:..... T:.....		Item	
1.1.58	Clause 8.3 - Ablution and welfare facilities			
	F:..... V:..... T:.....		Item	
1.1.59	Clause 8.4 - Communication facilities			
	F:..... V:..... T:.....		Item	
	<u>Prime cost amounts (B9)</u>			
1.1.60	Clause 9.1 - Responsibility for prime cost amounts			
	<i>Where details of materials for which prime cost amounts are to be allowed <u>are</u> readily available, the quantity surveyor may elect to insert the relevant prime cost amounts in measured items, which measured items shall contain sufficient detail for the contractor to price for fixing and installation, waste, etc</i>			
	F:..... V:..... T:.....		Item	
	<u>Attendance on subcontractors (B10)</u>			
1.1.61	Clause 10.1 - General attendance			
	F:..... V:..... T:.....		Item	
1.1.62	Clause 10.2 - Special attendance			
	<u>General (B11)</u>			
1.1.63	Clause 11.1 - Protection of the works			
	F:..... V:..... T:.....		Item	
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1.1.64	Clause 11.2 - Protection/isolation of existing/sectionally occupied works F:..... V:..... T:.....		Item	
1.1.65	Clause 11.3 - Security of the works F:..... V:..... T:.....		Item	
1.1.66	Clause 11.4 - Notice before covering work F:..... V:..... T:.....		Item	
1.1.67	Clause 11.5 - Disturbance F:..... V:..... T:..... Clause 11.6 - Environmental disturbance F:..... V:..... T:.....		Item Item	
1.1.68	Clause 11.7 - Works cleaning and clearing F:..... V:..... T:.....		Item	
1.1.69	Clause 11.8 - Vermin F:..... V:..... T:.....		Item	
1.1.70	Clause 11.9 - Overhand work F:..... V:..... T:.....		Item	
1.1.71	Clause 11.10 - Tenant installations by direct contractors F:..... V:..... T:.....		Item	
1.1.72	Clause 11.11 - Advertising F:..... V:..... T:.....		Item	
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<u>Preliminaries schedule (B12)</u>			
12.1 - Provisional bills of quantities [2.2]			
Yes			
12.2 - Availability of construction information [2.3]			
No			
12.3 - Previous work - dimensional accuracy [3.1] Yes			
12.4 - Previous work - defects [3.2]			
12.5 - Inspection of adjoining properties [3.3] Yes			
12.6 - Defined works area [4.1] Yes			
12.7 - Handover of site in stages [4.2] Yes			
12.8 - Enclosure of the works [4.3] Yes			
12.9 - Geotechnical investigation [4.4] Yes			
12.10 - Existing premises occupied [4.6] No			
12.11 - Services - known [4.7] Yes			
12.12 - Protection of trees and/or relevant natural features [4.8] Yes			
12.13 - Water [8.1]			
Option A (by contractor)			
No			
Option B (by employer - free of charge)			
No			
Option C (by employer - metered)			
Yes			
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<p>12.14 - Electricity [8.2]</p> <p>Option A (by contractor) No Option B (by employer - free of charge) No Option C (by employer - metered) Yes</p> <p>12.15 - Ablution and welfare facilities [8.3]</p> <p>Option A (by contractor) Yes Option B (by employer) No</p> <p>12.16 - Communication facilities [8.4]</p> <p>12.17 - Protection of the works [11.1]</p> <p>12.18 - Protection/isolation of existing/sectionally occupied works [11.2]</p> <p>No</p> <p>12.19 - Disturbance [11.5]</p> <p>12.20 - Environmental disturbance [11.6]</p> <p>F:..... V:..... T:.....</p>		
		Item
<p><u>SECTION C: SPECIFIC PRELIMINARIES</u></p> <p>The warranty will not be enforced if the work is damaged by defects in the execution of the works, in which case the responsibility for replacement shall rest entirely with the contractor</p> <p>F:..... V:..... T:.....</p>		
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1.1.73	<p>Overtime</p> <p>Should overtime be required to be worked for any reason whatsoever, the cost of such overtime is to be borne by the contractor unless the principal agent has specifically authorised, prior to execution thereof, that costs for such overtime are to be borne by the employer</p> <p>F:..... V:..... T:.....</p>			
			Item	
1.1.74	<p>Co-operation of the contractor for cost management</p> <p>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 contract value does not exceed the budget</p> <p>F:..... V:..... T:.....</p>			
			Item	
1.1.75	<p>Overloading</p> <p>The contractor shall take all necessary steps to ensure that no damage occurs due to overloading of any portion of the works or temporary works eg scaffolding, etc. The contractor shall submit details of his proposed loading, storage, plant erection, etc to the principal agent for approval prior to proceeding with such loading, storing or erecting and shall comply with and pay for the principal agent's requirements in connection with the provision of temporary support work, etc. Any damage caused to the works by overloading shall be made good by the contractor at his sole expense</p> <p>F:..... V:..... T:.....</p>			
			Item	
1.1.76	<p>Propping of floors below</p> <p>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</p> <p>F:..... V:..... T:.....</p>			
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1.1.77	<p>Testing of flat roof waterproofing for watertightness</p> <p>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 forty (40) hours as a test to ensure the watertightness of the waterproofing and before any further construction work is carried out above the waterproofing</p> <p>F:..... V:..... T:.....</p>			
			Item	
1.1.78	<p>Advertising rights</p> <p>The employer may elect to contract with advertising agencies for the erection of advertising hoardings, banners, wraps or the like for the duration of the contract. The contractor shall not prevent such an arrangement and will assist in the facilitation of same. Position and type of advertising structure to be agreed with the principal agent so as not to hinder the contractor in meeting the obligations under this agreement</p> <p>F:..... V:..... T:.....</p>			
			Item	
1.1.79	<p>Confidentiality</p> <p>The contractor undertakes to maintain in confidence any and all information regarding this project and shall obtain appropriate similar undertakings from all subcontractors and suppliers. Such information shall not be used in any way except in connection with the execution of the works</p> <p>No information regarding this project shall be published or disclosed without the prior written consent of the employer</p> <p>F:..... V:..... T:.....</p>			
			Item	
1.1.80	<p>Media releases</p> <p>All rights of publication of articles in the media, together with any advertising relating thereto or in any way connected with this project, shall vest with the employer</p> <p>The contractor together with his subcontractors shall not, without the prior written consent of the employer, cause any statement or advertisement connected with this project to be printed, screened or aired by the media</p> <p>F:..... V:..... T:.....</p>			
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1.1.81	<p>Tenderers are to allow opposite each item for all costs in connection therewith. All prices to include, unless otherwise stated, for all materials, fabrication, conveyance and delivery, unloading, storing, unpacking, hoisting, labour, setting, fitting and fixing in position, cutting and waste (except where to be measured in accordance with the Standard System of Measurement) patterns, models and templates, plant, temporary works, returning of packing, duties, taxes, imposts, establishment charges, overheads, profit and all other obligations arising out of the agreement.</p> <p>Items left unpriced will be deemed to be covered in prices against other items throughout these bills of quantities and no claim for any extras arising out of the tenderer's omission to price any item will be entertained.</p> <p>Prices for all plant, temporary works, services and other items provided shall include for the supply, maintenance, operating cost and subsequent removal and making good as necessary.</p> <p>The contractor shall execute work during "overtime" hours as necessary in order to complete the project within the agreed construction period and shall provide such resources and work such overtime hours as necessary. Costs for the execution of this work under these conditions shall be included within the contract sum.</p>		Item
1.1.82	<p>Tenderers are advised that the nature of this contract is such that the detail design will evolve in parallel with construction.</p> <p>The Tenderer acknowledges that he is aware that the project detail design and related planning and production of drawings are in an embryonic stage and that the appointments of major selected/nominated subcontractors have yet to take place and that notwithstanding this, the rates and prices contained herein, shall remain of full force and effect.</p>		Item
1.1.83	<p>All costs incurred by the contractor in the preparation of claims to the satisfaction of the principal agent and/or quantity surveyor shall be borne by the contractor. The contractor shall provide a written opinion on all claims, including those submitted by selected/nominated subcontractors, pertaining to reduced time available for execution of the relevant work, out-of-sequence working, lack of access or claims of a similar nature.</p>		Item
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1.1.84	<p>Submission of a tender shall be deemed as acceptance by the contractor that he is satisfied with the scope of the insurances effected by the employer, supplemented by any additional insurance considered necessary by himself.</p> <p>The employer warrants that the insurances effected by him shall remain in force for the duration of the contract including the period of maintenance.</p> <p>Any clarification of the scope of cover provided by the policies arranged by the employer should be obtained from the employer's insurance brokers.</p> <p>The contractor warrants that he shall give all notices and shall observe all the terms and conditions and requirements of all insurances applicable to this contract.</p> <p>Where the contractor is responsible for the appointment of sub-contractors, then the contractor shall:</p> <ul style="list-style-type: none"> i) ensure that potential and appointed subcontractors are aware of the whole content of Clauses A10.0, A11.0 and A12.0 ii) ensure the compliance of subcontractor with these Clauses where applicable. 	Item	
1.1.85	<p>In the In the event of any occurrence which is likely to give rise to a claim under the insurances arranged by the employer, the contractor / subcontractor shall :-</p> <ul style="list-style-type: none"> i) In addition to any statutory requirement or other requirements contained in the agreement, immediately notify the employer's insurance brokers by telephone or telefax, giving the circumstances, nature and an estimate of the loss or damage or liability; ii) Complete a claims advice form per Annexure "L", in conjunction with both the principal agent and the employer and return it to the insurance brokers without delay; iii) Assist as required, in negotiations of the settlement of claims with the insurers through the employer's insurance brokers. <p>The employer shall have the right to make all and any enquiry on the site or elsewhere as to the cause and results of any such occurrence and the contractor shall give the employer and his insurers full facilities for carrying out such enquiries.</p>	Item	
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1.1.86	<p>Copies of the structural engineer's drawings showing the positions of construction breaks and the extent of individual concrete pours are to be maintained by the contractor for record purposes and are to be submitted to the structural engineers for their records, at the end of the project.</p> <p>All such as-built drawings are required to be lodged prior to the issue of the certificate of works completion (refer Clause A25 hereof).</p>	Item	
1.1.87	<p>The contractor shall obtain and hand over to the principal agent on practical completion, all relevant guarantees and operating and maintenance manuals, as required by the principal agent or provided by manufacturers, suppliers or subcontractors.</p> <p>The contractor shall ensure that all warranties and guarantees received are fully ceded to the employer on works completion, failing which, the issue of the works completion certificate and the release of construction guarantee, will be withheld until this is satisfactorily completed.</p> <p>The guarantees shall state that workmanship, materials and installations are guaranteed for a specified period reckoned from the date of practical completion of the works and that any defects in the workmanship, materials and installation that may arise during that period, shall be made good at the expense of the contractor / subcontractors doing the work, upon written notice from the principal agent or the employer to do so.</p>	Item	
1.1.88	At completion, the contractor shall leave the works secure with all accesses locked. The contractor shall account for and hand over to the principal agent all keys, properly labelled with an itemised schedule to be signed by the principal agent as receipt.	Item	
1.1.89	The contractor shall take all appropriate measures for general security of the works	Item	
1.1.90	The contractor shall give adequate notice to the principal agent whenever any work or material which is subject to inspection or remeasurement is to be covered or concealed in any way. In default of such a notice being received timeously by the principal agent such work shall be exposed and later made good at the contractor's expense.	Item	
1.1.91	The contractor shall execute the works with a minimum of disturbance to adjoining premises, any parts of the works already handed over and the occupants of those premises and/or parts.	Item	
1.1.92	The contractor shall execute the works without any unreasonable adverse effect on the environment.	Item	
	Carried forward	R	
	Bill No. 1 PRELIMINARY AND GENERAL (PROVISIONAL) PRASA		

**TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1**

	Brought forward	R	
1.1.93	The contractor shall produce, when required to do so by the principal agent, a method statement outlining the methods of construction and labour and plant resources that he proposes to use in the execution of the works. Any approval given or observation made by the principal agent shall not relieve the contractor of his sole responsibility to adopt the methods of construction and to provide the labour and plant resources necessary for the due and proper timeous execution of the works.	Item	
1.1.94	The contractor shall take all necessary steps to ensure that no damage occurs due to overloading of any portion of the works or temporary works, scaffolding, etc. The contractor shall submit details of his proposed loading, storage, plant erection, etc., to the principal agent for their approval prior to proceeding with such loading, storing or erecting and shall comply with and pay for the principal agents requirements in connection with the provision of temporary support work, etc. Any damage caused to the works by overloading shall be made good by the contractor at his sole experience.	Item	
1.1.95	The contractor shall take all reasonable measures to ensure that all alteration works are structurally practicable and safe. The contractor shall provide and price under the relevant demolition item, for all necessary temporary propping and support which may be required.	Item	
1.1.96	The contractor shall remove from the site all materials not conforming with the relevant specification and condemned by the principal agent, whether incorporated in the works or not. He shall replace such material and re-execute the affected work in accordance with the contract and without expense to the employer.	Item	
1.1.97	Notwithstanding anything to the contrary contained herein, the principal agent at all times reserves the right to direct the order in which the various parts of the contract are to be executed. The contractor shall give priority to any individual section or portion of the works that, in the opinion of the principal agent, requires to be expedited.		
	Should the contractor and/or principal agent be of the opinion that such instruction warrants a revision to the contract programme, then the provisions of Clause A15.6.6 hereof shall apply.		
	Should it appear, in the principal agent's opinion, that work in any area is not being executed in accordance with the requirements of the programme, the contractor shall provide additional manpower and resources and shall work additional overtime and do everything else required to bring the work back to programme to the satisfaction of the principal agent.	Item	
	Carried forward	R	
Bill No. 1 PRELIMINARY AND GENERAL (PROVISIONAL) PRASA			

**TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1**

	Brought forward	R	
1.1.98	<p>The contractor shall indemnify the principal agent against any action, claim, demand, costs or expenses arising from or incurred by reason of any infringement of letters, patent design, trademark, name, copyright or other protected rights in respect of any machine, plant, work, materials, thing, system or method of using, fixing, working or arrangement used or fixed or supplied by the contractor, but such indemnity shall not cover any use of the equipment or part thereof otherwise than in accordance with the provisions of the specification.</p> <p>All payments and royalties payable in one sum or by instalments or otherwise, shall be included by the contractor in the price and shall be paid by him to those to whom they may be due or payable.</p> <p>In the event of any claim being made or action brought against the principal agent arising out of the matter referred to in this clause, the contractor shall be promptly notified thereof and may, at his own expense, conduct negotiations for the settlement of the same and/or litigation, that may arise therefrom. The principal agent shall not, unless and until the contractor shall have failed to take over and conduct the negotiations of litigation, make any admission which might be prejudicial thereto.</p> <p>The conduct by the contractor of such negotiations or litigation shall be conditional upon the contractor having first given the principal agent such reasonable security as shall from time to time be required by the principal agent, to cover the amount ascertained or agreed or estimated, as the case may be, or any compensation, damage, expenses and costs for which the principal agent may become liable in respect of such infringement as aforesaid. The principal agent shall, at the request of the contractor, afford all available assistance for the purpose of contesting any such claim or action and shall be repaid the expenses incurred in doing so.</p> <p>The conduct by the contractor of such negotiations or litigation shall be conditional upon the contractor having first given the principal agent such reasonable security as shall from time to time be required by the principal agent, to cover the amount ascertained or agreed or estimated, as the case may be, or any compensation, damage, expenses and costs for which the principal agent may become liable in respect of such infringement as aforesaid. The principal agent shall, at the request of the contractor, afford all available assistance for the purpose of contesting any such claim or action and shall be repaid the expenses incurred in doing so.</p>		
		Item	
1.1.99	<p>Note : The contractor is to ensure that the following requirements, as stated in the subcontractor documentation in respect of specialist equipment and services installations by specialist subcontractors under his control, are adhered to:</p>		
		Item	
	Carried forward	R	
	<p>Bill No. 1 PRELIMINARY AND GENERAL (PROVISIONAL) PRASA</p>		

**TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1**

	Brought forward	R	
1.1.100	<p>All specialist plant and equipment, subject to the principal agents sole discretion, is subject to acceptance tests, which shall be arranged in the works of the subcontractor / supplier within 10 days of notification that such plant or equipment is available for testing . The subcontractor shall inform the principal agent in writing, indicating the exact dates for these acceptance tests during the course of the last month of manufacture of such plant or equipment.</p> <p>In the event that the principal agent or his representatives cannot witness such tests, the employer may:</p> <p>i) appoint a specialist inspection organisation to witness such tests at his expense on behalf of the principal agent or his representatives.</p> <p>OR</p> <p>ii) accept the subcontractors certificate testifying as to the quality and performance of the specialist plant / equipment so supplied.</p> <p>Should no inspection have been made by the date indicated by the subcontractor as set out above, the equipment will be deemed as accepted and packed accordingly for delivery.</p> <p>The final acceptance will take place on site in the presence of the subcontractor responsible for the commissioning of the equipment. The principal agents representative shall also be present.</p> <p>The subcontractor shall demonstrate to the principal agent the full scope of operation of the installation and shall ensure that he is satisfied that the principal agent is fully aware of all the operational aspects of the installation prior to handover at practical completion stage.</p> <p>The principal agents shall be afforded access at all reasonable times to such part of the works on site or at the subcontractor's premises or the premises of the manufacturer of component parts, as may be necessary for the purpose of inspecting, examining and testing the materials, workmanship and performance of any plant or equipment for the works.</p> <p>The subcontractor shall be responsible for the tests required by any local statute, building regulation, etc.</p> <p>Any breakdown or mechanical failure and any damage or consequential losses which may arise from such breakdown, mechanical or structural failure, will be the responsibility of the subcontractor.</p>		
	Carried forward	R	
	<p>Bill No. 1 PRELIMINARY AND GENERAL (PROVISIONAL) PRASA</p>		
		Item	

**TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
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	Brought forward	R	
1.1.101	The efficiency of the design is the responsibility of the subcontractor who shall ensure that the quality of workmanship and the installation of equipment meets the requirements of the specification and is done in such a manner that the equipment performance meets with the figures published by the manufacturers an/or suppliers. The subcontractor, by entering into this contract, shall be deemed to have offered his services, workmanship, materials and equipment to meet the requirements of the specification and shall further be deemed to have ensured that the suppliers and manufacturers of the equipment installed by him under this contract, have manufactured and supplied such equipment to perform within the recommended limits of the manufacturer's design and performance figures, as well as to comply with the specification supplied.	Item	
1.1.102	<p>The subcontractor shall guarantee the complete installation for a period of one year from the date of acceptance of the installation by the principal agent against defects as a result of patent or latent defects of the design and apparatus, as well as against faulty materials and workmanship. The guarantee must provide that all parts, spares, consumables and appurtenances that become defective during the guarantee period, be replaced free of charge of any nature to the employer. The costs of labour and transportation required to replace such part of a defective installation, shall be borne by the subcontractor and shall be included in his guarantee.</p> <p>The expiry of the one year guarantee period shall in no way relieve the subcontractor of any of his obligations and/or responsibilities in respect of latent defects in terms of Clause A27 hereof.</p> <p>The subcontractor shall cede to the employer the remainder of any equipment guarantee which he has received from his suppliers and which extends beyond the period of twelve months mentioned herein.</p>	Item	
1.1.103	The subcontractor shall commission and test the entire installation at his own expense, including provision of all test equipment. Such testing is to be done in the presence of the principal agent, who shall have been notified of the dates and approximate duration of the tests, sufficiently in advance so as to allow attendance at such tests	Item	
<u>SUMMARY OF CATEGORIES</u>			
Category : Fixed		R.....	
Category : Value		R.....	
Category : Time		R.....	
Carried to Final Summary		R	
Bill No. 1 PRELIMINARY AND GENERAL (PROVISIONAL) PRASA			

TEMBISA TRAIN STATION
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UPGRADE TO EXISTING TRAIN STATION - PHASE 1

Item No	Description	Quantity	Rate	Amount
	<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 1</u></p> <p><u>REPAIRS AND RENOVATIONS TO EXISTING BUILDINGS (PROVISIONAL)</u></p> <p>NOTE: For the purposes of tendering, only the total quantity shall be used in calculating the amount for inclusion in the tender at the tendered rate. The quantities in the description column immediately below the item represent the quantities per section for information and administration only as follows:</p> <p>A - Ticket Office + Admin</p> <p>B - Staff Ablutions</p> <p>C - Public Ablutions</p> <p>D - External Works</p> <p>E - Electrical Installation</p> <p>G - HVAC</p> <p>F - Fire Fighting Equipment</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>View site</u></p> <p>Before submitting his tender the contractor shall 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 any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained</p> <p><u>Explosives</u></p> <p>No explosives whatsoever may be used for demolition purposes unless otherwise stated</p>			
	Carried forward		R	
	<p>Bill No. 1</p> <p>ALTERATIONS (PROVISIONAL)</p> <p>PRASA</p>			

Brought forward	R
<p><u>Taking Out and Removal of Asbestos</u></p> <p>Taking out and removing asbestos roof, gutters, underlay, fibreglass, downpipes, etc. must be in strict accordance with health and occupational safety regulations and a specialist firm must be contracted to dispose of the material</p> <p><u>Demolitions</u></p> <p>All demolition work is to be carried out in accordance with the local by-laws.</p> <p>All demolition is to be carried out in strict accordance with the instructions and to the satisfaction of the Principal Agent.</p> <p><u>General</u></p> <p>Descriptions of taking out shall be deemed to include carting away from site to a dump ground to be found by the contractor</p> <p>The contractor shall carry out the whole of the works with as little mess and noise as possible and with a minimum of disturbance to adjoining premises and their tenants. He shall provide proper protection and provide, erect and remove when directed, any temporary tarpaulins that may be necessary during the progress of the works, all to the satisfaction of the principal agent</p> <p>Water supply pipes and other piping that may be encountered and found necessary to disconnect or cut, shall be effectually stopped off or grubbed up and removed, and any new connections that may be necessary shall be made with proper fittings, to the satisfaction of the principal agent</p> <p>Doors, fanlights, fittings, frames, linings, etc which are to be re-used shall be thoroughly overhauled before refixing including taking off, easing and rehanging, cramping up, re-wedging as required and making good cramps, dowels, etc, and easing, oiling, adjusting and repairing ironmongery as necessary, replacing any glass damaged in removal or subsequently and stopping up all nail and screw holes with tinted plastic wood to match timber, unless otherwise described. Re-painting or re-varnishing is given separately</p>	
Carried forward	R
<p>Bill No. 1 ALTERATIONS (PROVISIONAL) PRASA</p>	

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

	Brought forward			R
	<p>Prices for taking out of doors, windows, etc shall include for removal of all beads, architraves, ironmongery, etc</p> <p>With regard to building up of openings in existing walls, cement screeds and pavings, granolithic, tops of walls, etc, shall be levelled and prepared for raising of brickwork</p> <p>Making good of finishes shall include making good of the brick and concrete surfaces onto which the new finishes are applied, where necessary</p> <p>The contractor will be required to take all dimensions affecting the existing buildings on the site and he will be held solely responsible for the accuracy of all such dimensions where used in the manufacture of new items (doors, windows, fittings, etc)</p> <p>The Contractor to acknowledge that sequencing of the work will be necessary to accommodate the operational aspects of the school. The Contractor to accordingly factor the above requirement in the construction programme and pricing</p> <p>The Contractor will be held responsible for any damage to persons and property and for the safety of the structures and he is to allow for protecting and indemnifying persons using the existing buildings from injury by virtue of the building operations, including providing necessary barriers, signs, etc.</p>			
	<u>REMOVAL OF EXISTING WORK</u>			
	<u>Breaking down and removing brickwork etc</u>			
2.1.1	<p>One brick walls m2</p> <p style="margin-left: 40px;">A : 0 B : 0 C : 4 D : 0</p> <p style="margin-left: 40px;">E : 0</p>	4		
	<u>Taking out and removing doors, windows, etc including thresholds, sills, etc and prepare surface to receive new door and gates</u>			
2.1.2	<p>Timber single door size, door size 813 x 2032mm high. No</p> <p style="margin-left: 40px;">A : 0 B : 0 C : 1 D : 0</p> <p style="margin-left: 40px;">E : 0</p>	1		
	Carried forward			R
	<p>Bill No. 1 ALTERATIONS (PROVISIONAL) PRASA</p>			

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

	Brought forward			R	
	<u>Taking out and removing doors, windows, etc including thresholds, sills, etc and building up openings in brick walls including making good cement plaster on both sides (making good paintwork elsewhere)</u>				
2.1.3	Steel window size 600 x 600mm high A : 0 B : 0 C : 9 D : 0 E : 0	No	9		
2.1.4	Steel window size 1685 x 1200mm High A : 0 B : 0 C : 1 D : 0 E : 0	No	1		
	<u>Taking down and removing roofs, floors, panelling ceilings, partitions, gutters, downpipes, fascias, barges, chalkboards, pinning boards, etc. completely (new work elsewhere measured) including carting away</u>				
2.1.5	Corrugated roof sheeting including purlins, underlay, etc and cartaway rubble to a dumping site to be located by contractor A : 864 B : 109 C : 37 D : 0 E : 0	m2	1 010		
2.1.6	Gypsum plasterboard ceilings including cornices, timber brandering, etc A : 819 B : 93 C : 26 D : 0 E : 0	m2	938		
2.1.7	Fibre cement fascia boards and fixings A : 55 B : 34 C : 23 D : 0 E : 0	m	113		
2.1.8	Fibre cement barge boards and fixings A : 52 B : 24 C : 6 D : 0 E : 0	m	83		
2.1.9	Aluminium rainwater gutters and fixings A : 55 B : 34 C : 23 D : 0 E : 0	m	113		
	Carried forward			R	
	Bill No. 1 ALTERATIONS (PROVISIONAL) PRASA				

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

		Brought forward			R
2.1.10	Aluminium rainwater downpipes and fixings	m	84		
	A : 42 B : 28 C : 14 D : 0				
	E : 0				
	<u>Taking out and removing piping, sanitary fittings, etc including making good pipework to receive new fittings</u>				
2.1.11	Vitreous paraplegic WC pan with flush valve, including short lengths of piping, etc	No	20		
	A : 0 B : 14 C : 6 D : 0				
	E : 0				
2.1.12	Vitreous china wall hung urinal with flush valve, including short lengths of piping, etc	No	6		
	A : 0 B : 4 C : 2 D : 0				
	E : 0				
2.1.13	Vitreous china wash hand basin, including short lengths of piping, etc	No	13		
	A : 0 B : 8 C : 5 D : 0				
	E : 0				
	<u>Taking out and removing sundry joinery work, fittings, etc.</u>				
2.1.14	Timber benches	No	10		
	A : 10 B : 0 C : 0 D : 0				
	E : 0				
2.1.15	Timber skirtings from brickwork	m	393		
	A : 393 B : 0 C : 0 D : 0				
	E : 0				
	<u>Taking up and removing vinyl floor coverings, carpeting, etc</u>				
2.1.16	Ceramic tile floor covering including preparing screed for new vinyl floor covering	m2	938		
	A : 819 B : 93 C : 26 D : 0				
	E : 0				
		Carried forward			R
	Bill No. 1				
	ALTERATIONS (PROVISIONAL)				
	PRASA				

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

Brought forward

R

Taking out and removing ironmongery

2.1.17	Full height, bidirectional single turnstile - Single turnstile	No	8	
	A : 8 B : 0 C : 0 D : 0			
	E : 0			

MAKING GOOD OF EXISTING WORK

2.1.18	Cleaning and sealing of existing face brickwork	m2	297	
	A : 0 B : 189 C : 108 D : 0			
	E : 0			

Carried Forward to Sectional Summary:

R

Bill No. 1
ALTERATIONS (PROVISIONAL)
PRASA

Item No	Description	Unit	Quantity	Rate	Amount
	<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 2</u></p> <p><u>MASONRY (PROVISIONAL)</u></p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Sizes in descriptions</u></p> <p>Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick.</p> <p><u>Specification</u></p> <p>Where BOQ item descriptions are in conflict with Engineers specification, Drawing "General Notes". Then the Engineers specification is to take preference.</p> <p><u>Hollow walls</u></p> <p>Descriptions of hollow walls shall be deemed to include leaving every fifth perpend of the bottom course of the external skin open as a weep hole</p> <p>Walls in two skins described as "bagged and sealed" shall be deemed to include having the outer face of the inner skin bagged with 1:6 cement and sand mixture and sealed with two coats "Brixal" bitumen emulsion waterproofing coating</p> <p><u>Face bricks</u></p> <p>Bricks shall be ordered timeously to obtain uniformity in size and colour</p> <p><u>Pointing</u></p> <p>Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc</p> <p><u>BLOCKWORK</u></p>				
	<p style="text-align: right;">Carried forward</p> <p>Bill No. 2 MASONRY (PROVISIONAL) PRASA</p>			R	

	Brought forward			R
<p><u>Concrete masonry units</u></p> <p>Blocks are to be either solid or hollow modular dense concrete masonry units having a compressive strength as indicated in item descriptions</p> <p><u>Blockwork</u></p> <p>Blockwork shall comply with SANS 10145 "Concrete Masonry Construction"</p>				
SUPERSTRUCTURE				
<u>BRICKWORK SUNDRIES</u>				
<u>Galvanised wire ties etc</u>				
2.2.1	30 x 1.6mm Roof tie 1.6m long with one end built into brickwork and other end fixed to timber A : 53 B : 33 C : 22 D : 0 E : 0	No	107	
<u>Air bricks etc</u>				
2.2.2	229 x 152mm Terra-cotta vermin proof air brick A : 4 B : 8 C : 4 D : 0 E : 0	No	16	
<p style="text-align: right;">Carried Forward to Sectional Summary:</p> <p>Bill No. 2 MASONRY (PROVISIONAL) PRASA</p>				
				R

Item No	Description	Quantity	Rate	Amount
	<u>SECTION NO. 2</u>			
	<u>BILL NO. 3</u>			
	<u>ROOF COVERINGS, ETC.(PROVISIONAL)</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Corrugated metal sheeting and accessories</u>			
	Roof sheeting systems are to be manufactured in strict accordance with the supplier's specifications			
	Fixing of all roof sheeting is to be in accordance with the manufacturer's approved instruction book			
	The manufacturer shall comply with ISO9002 Quality Management System			
	<u>PROFILED METAL SHEETING AND ACCESSORIES</u>			
	<u>0.58mm IBR profile sheeting, colour one side fixed to timber purlins (elsewhere measured) and fixed strictly in accordance with the manufacturer's instructions</u>			
2.3.1	Roof covering with pitch not exceeding 18 degrees A : 864 B : 109 C : 37 D : 0 E : 0	m2	1 010	
2.3.2	Standard galvanised ridge capping (550mm girth) screwed through sheeting to purlins (LI) A : 28 B : 17 C : 12 D : 0 E : 0	m	56	
2.3.3	Sondor IBR pattern polyclosures to underside of ridge capping A : 28 B : 17 C : 12 D : 0 E : 0	m	56	
	<u>ROOF AND WALL INSULATION</u>			
	Carried forward		R	
	Bill No. 3 ROOF COVERING & RAINWATER DISPOSAL PRASA			

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Item No	Description	Quantity	Rate	Amount
	<u>SECTION NO. 2</u>			
	<u>BILL NO. 4</u>			
	<u>CARPENTRY AND JOINERY</u>			
	<u>(PROVISIONAL)</u>			
	<u>Wrought softwood</u>			
2.4.1	76 x 76mm Splayed gutter purlins A : 1404 B : 0 C : 70 D : 0 E : 0	m	1 474	
2.4.2	38 x 114mm Timber backing board fixed onto rafter for fascia boards A : 107 B : 58 C : 30 D : 0 E : 0	m	195	
	<u>EAVES, VERGES, ETC.</u>			
	<u>Medium density fibre reinforced cement boards to comply with SANS 10400 Part L</u>			
2.4.3	12mm x 300mm Fascia boards including aluminium H-profile fascia joiners fixed with galvanised screws and washers A : 55 B : 34 C : 23 D : 0 E : 0	m	113	
2.4.4	12mm x 300mm Barge boards including H-profile jointing strips A : 52 B : 24 C : 6 D : 0 E : 0	m	83	
	<u>SKIRTINGS</u>			
	<u>Wrought meranti</u>			
2.4.5	16 x 100mm High skirtings including quadrant bead, plugged A : 393 B : 0 C : 0 D : 0 E : 0	m	393	
	Carried forward		R	
	Bill No. 4			
	CARPENTRY AND JOINERY(PROVISIONAL)			
	PRASA			

Brought forward					R
<u>DOORS, ETC.</u>					
Note: Tenderers to refer to the following drawing numbers when pricing items below: Prasa Blue Print Book					
<u>Semi-solid flush doors with 3,2mm plain (to receive primer and paint, measured elsewhere) hardboard covering on both sides, hung to steel frames</u>					
2.4.6	44mm Thick semi-solid flush panel door size 813 x 2032mm high	No	3		
	A : 0 B : 0 C : 3 D : 0 E : 0				
<u>Double sided framed, braced and ledged hardwood doors including saligna weather bar at bottom (to receive varnish, measured elsewhere), hung to steel frames</u>					
2.4.7	44mm Thick door size 1000 x 2032mm high - Disabled door	No	1		
	A : 0 B : 0 C : 1 D : 0 E : 0				
<u>FITTINGS</u>					
<u>GRANITE COUNTER TOPS, ETC</u>					
<u>32mm Thick "Rusternberg" or similar and equally approved worktop with a beveled front edge including 80mm Diameter support post fixed to floor and counter top, complete with counter top fixed and sealed to brick walls by specialists</u>					
2.4.8	1200 x 500 x 32mm Thick counter top with bullnosed edges all round including 50 x 50 x 3mm mild steel angle support as per Architects drawing Arch-289-22	No	5		
	A : 5 B : 0 C : 0 D : 0 E : 0				
Carried forward					R
Bill No. 4 CARPENTRY AND JOINERY(PROVISIONAL) PRASA					

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R

2.4.9	1534 x 500 x 32mm Thick counter top with bullnosed edges all round including 50 x 50 x 3mm mild steel angle support as per Architects drawing Arch-289-22 A : 0 B : 0 C : 0 D : 2 E : 0	No	2
2.4.10	3026 x 600 x 32mm Thick counter top with bullnosed edges all round including 50 x 50 x 3mm mild steel angle support as per Architects drawing Arch-289-22 A : 0 B : 1 C : 0 D : 0 E : 0	No	1
2.4.11	5692 x 500 x 32mm Thick counter top with bullnosed edges all round including 50 x 50 x 3mm mild steel angle support as per Architects drawing Arch-289-22 A : 0 B : 1 C : 0 D : 0 E : 0	No	1

Carried Forward to Sectional Summary:

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Bill No. 4
CARPENTRY AND JOINERY(PROVISIONAL)
PRASA

**TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1**

Item No	Description	Quantity	Rate	Amount
	<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 5</u></p> <p><u>CEILINGS & PARTITIONS (PROVISIONAL)</u></p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Pricing of Bills</u></p> <p>Tenderers are advised to inspect the drawings issued with this enquiry and to satisfy themselves as to the nature and requirements of the contract. No extras will be allowed due to the Contractor's failure in this respect.</p> <p>Quantities contained in these Bills of Quantities are only indicative of the actual final quantities required and shall not be used for ordering purposes.</p> <p>The descriptions contained in these Bills of Quantities are intended as a means of identifying the various facets of the work. Tenderers shall allow for all costs in connection with the various items taking full cognizance of drawings, schedule of finishes and the Bills of Quantities descriptions.</p> <p>Final measurement shall be made from construction drawings or from measurements taken on site.</p> <p><u>Fixing</u></p> <p>Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins, or to be 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 500mm centres, and where described as "bolted", the bolts have been given elsewhere.</p> <p><u>Ceilings</u></p> <p>All units shall be readily removable from either side without disturbing adjacent units.</p> <p>Unless otherwise described ceilings shall be deemed to be horizontal.</p>			
	Carried forward		R	
	<p>Bill No. 5</p> <p>CEILINGS (PROVISIONAL)</p> <p>PRASA</p>			

Brought forward	R
<p><u>Proprietary suspended ceilings</u></p> <p>Hangers, suspension grids, "lay-in" panels, etc are to be in accordance with the manufacturers' recommendations.</p> <p>Electrical light fittings, diffusers, panels etc are generally "lay-in" units of the same dimensions as the suspension grid described and allowance must be made in the rates accordingly for their support inclusive of any flexibility in setting out that may be required (ceiling panels have not been deducted and pricing is to take cognisance thereof).</p> <p><u>Flush plastered gypsum plasterboard suspended ceilings</u></p> <p>Ceilings shall comprise 9mm and 12mm gypsum plasterboard boards screwed to and including screw-up suspension grid consisting of main tees at 1 200mm centres and galvanised steel capped cross tees at 400mm centres and with tape fixed over joints and the whole finished with gypsum plaster trowelled to a smooth polished surface.</p> <p>The grid shall be suspended by means of galvanised steel L-section hangers at suitable centres, securely shot-pinned or screwed to concrete, steel or wood.</p> <p>The tenderers are to allow for a continuous corner bead edge trim to the exposed plasterboard edges.</p> <p><u>Flush plastered gypsum plasterboard suspended bulkheads</u></p> <p>Bulkheads shall comprise galvanised steel studding of 63,5mm top and bottom tracks with vertical studs at maximum 400mm centres, pop-riveted to the top and bottom tracks with similar additional vertical studs as necessary at abutments, ends, etc and covered as described with plasterboard screwed to studding with drywall screws at maximum 300mm centres. Boards shall be butt jointed and finished with tape and jointing compound and the whole finished with gypsum plaster trowelled to a smooth polished surface to the thickness recommended by the manufacturer.</p>	
Carried forward	R
<p>Bill No. 5 CEILINGS (PROVISIONAL) PRASA</p>	

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TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

	Brought forward			R
	<u>12.5mm Vinyl Faced Gypsum Ceiling Panels, face-covered with white embossed vinyl, size 1200 x 600mm, laid on fire rated Cliq system S3 exposed demountable suspension system including galvanised main tees, cross tees, etc., all suspended with galvanised hangers at centres not exceeding 1200mm, with ceiling perimeter finished with Shadowline W-trim plugged at 200mm centres, and all installed to manufacturer's instructions</u>			
2.5.3	Ceilings including standard steel brandering at 450mm centres in one direction only, joined with joiner sections and hung with suspension brackets including standard steel perimeter angles fixed to walls etc A : 0 B : 93 C : 26 D : 0 E : 0	m2	119	
2.5.4	Extra over ceiling for 600 x 600mm trap door including rebated framing cross branders covered with ceiling board and fitted flush in opening A : 0 B : 0 C : 2 D : 0 E : 0	No	2	
	<u>CORNICE</u>			
	<u>Gypsum plasterboard cornices</u>			
2.5.5	65mm Coved cornices A : 0 B : 141 C : 55 D : 0 E : 0	m	196	
	<u>Shadow line</u>			
2.5.6	25 x 25mm Shadowline angle cornice "L" trim, to match tee grid between suspended ceiling and wall A : 393 B : 0 C : 0 D : 0 E : 0	m	393	
	Carried Forward to Sectional Summary:			R
	Bill No. 5			
	CEILINGS (PROVISIONAL)			
	PRASA			

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

Item No	Description		Quantity	Rate	Amount
	<u>SECTION NO. 2</u>				
	<u>BILL NO. 6</u>				
	<u>IRONMONGERY (PROVISIONAL)</u>				
	<u>Note: All ironmongery shall be for heavy duty use and must be in anodized aluminium or stainless steel</u>				
	<u>HINGES, BOLTS, ETC</u>				
2.6.1	100 x 75 x 3mm Stainless steel ball bearing butt hinge A : 0 B : 0 C : 12 D : 0 E : 0	No	12		
	<u>LOCKS</u>				
2.6.2	Four lever mortice lockset with stainless steel strike plate A : 0 B : 0 C : 4 D : 0 E : 0	No	4		
	<u>HANDLES</u>				
2.6.3	Dove pull handle with 152 x 152mm Backplate screwed onto door panel A : 0.0 B : 0.0 C : 4.0 D : 0.0 E : 0.0	Pairs	4.0		
	<u>SUNDRIES</u>				
2.6.4	Brushed stainless steel floor door stop with rubber surround A : 0 B : 0 C : 4 D : 0 E : 0	No	4		
	<u>WASTE BINS</u>				
2.6.5	Steel litter bin size 400mm Ø x 750mm high /72-litre capacity with steel ash tray, galvanised with a polyurethane paint. A : 0 B : 0 C : 0 D : 8 E : 0	No	8		
	Carried forward			R	
	Bill No. 6				
	IRONMONGERY (PROVISIONAL)				
	PRASA				

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

Brought forward

R

BENCHES

2.6.6	Back-to-Back or single side bench 1,8m long with straight leg with galvanised and polyurethane painted finish, set into concrete bed.	No	8
	A : 8 B : 0 C : 0 D : 0		
	E : 0		

BATHROOM FITTINGS

2.6.7	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	13
	A : 0 B : 8 C : 5 D : 0		
	E : 0		
2.6.8	Stainless steel jumbo toilet roll holders with refill indicator and cylinder lock, plugged and screwed to the wall with stainless steel screws.	No	18
	A : 0 B : 14 C : 4 D : 0		
	E : 0		
2.6.9	Bathroom Butler Paraplegic Rails flush valve grab rail with brushed grade 304 stainless steel finish, overall size 842mm long, plugged and screwed to wall with stainless steel screws.	No	2
	A : 0 B : 1 C : 1 D : 0		
	E : 0		
2.6.10	Bathroom Butler Paraplegic Rails dog leg grab rail with 3 supports with brushed grade 304 stainless steel finish, overall size 750 x 750mm, plugged and screwed to wall with stainless steel screws.	No	2
	A : 0 B : 1 C : 1 D : 0		
	E : 0		
2.6.11	Satin stainless steel sanitary towel disposal bins with capacity of min10 litres, free standing, or wall mounted (plugged and screwed to the wall with stainless steel screws)	No	2
	A : 0 B : 0 C : 2 D : 0		
	E : 0		

Carried Forward to Sectional Summary:

R

Bill No. 6
IRONMONGERY (PROVISIONAL)
PRASA

Carried forward

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

	Brought forward			R
	<u>1,6mm Double rebated pressed steel door frames suitable for one brick walls</u>			
2.7.4	Frame for door type A 813 x 2032mm high A : 0 B : 0 C : 4 D : 0 E : 0	No	4	
	<u>STEEL ROLLER SHUTTERS ETC</u>			
	<u>Roller grilles fixed to brickwork or concrete</u>			
2.7.5	Manual push-up slatted roller shutter for 600 x 1000mm high opening A : 6 B : 0 C : 0 D : 0 E : 0	No	6	
2.7.6	Manual push-up slatted roller shutter for 2600 x 1000mm high opening A : 2 B : 0 C : 0 D : 0 E : 0	No	2	
2.7.7	Manual push-up slatted roller shutter for 4800 x 1000mm high opening A : 2 B : 0 C : 0 D : 0 E : 0	No	2	
	<u>BULLET PROOF WINDOWS</u>			
	<u>Level G3 bullet resistant glazed & natural anodised aluminium transaction window with 30mm deep stainless steel dish tray and speech transfer posts (interior applications only)</u>			
2.7.8	Transaction window overall size 600 x 1000mm high A : 6 B : 0 C : 0 D : 0 E : 0	No	6	
	<u>ALUMINIUM WINDOWS, DOORS, ETC</u>			
	<u>Aluminium windows</u>			
2.7.9	Window overall size 600 x 600mm high A : 0 B : 0 C : 9 D : 0 E : 0	No	9	
	Carried forward			R
	Bill No. 7 METALWORK (PROVISIONAL) PRASA			

**TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1**

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TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

Item No	Description	Unit	Quantity	Rate	Amount
	<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 8</u></p> <p><u>PLASTERING (PROVISIONAL)</u></p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>GENERAL</u></p> <p>V-Joints or the like between brick and concrete surfaces shall be deemed to be included in the external plaster on walls rate.</p>				
	<p><u>SCREEDS</u></p> <p><u>Screeds steel trowelled on concrete</u></p>				
2.8.1	<p>30mm Thick on floors</p> <p>A : 819 B : 93 C : 26 D : 0</p> <p>E : 0</p>	m2	938		
	<p><u>INTERNAL PLASTER</u></p> <p><u>Cement plaster on brickwork, blockwork or concrete finished with a steel trowel</u></p>				
2.8.2	<p>On narrow widths</p> <p>A : 0 B : 0 C : 14 D : 0</p> <p>E : 0</p>	m2	14		
	<p style="text-align: right;">Carried Forward to Sectional Summary:</p> <p>Bill No. 8 PLASTERING (PROVISIONAL) PRASA</p>			R	

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

Item No	Description	Quantity	Rate	Amount
	<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 9</u></p> <p><u>FLOOR AND WALL TILING (PROVISIONAL)</u></p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Site Visit</u></p> <p>The tenderer is advised to visit the site and acquaint themselves fully as to the conditions on site and working times as no claims in this regard will be entertained.</p> <p><u>Pricing of Bills</u></p> <p>Tenderer is to allow an adequate wastage factor when pricing. Any deviation of the quantities as a result of wastage is to be factored into the rates.</p> <p>Tenderer is advised to inspect the drawings issued with this enquiry and to satisfy themselves as to the nature and requirements of the contract. No extras will be allowed due to the Contractor's failure in this respect.</p> <p>Quantities contained in these Bills of Quantities are only indicative of the actual final quantities required and shall not be used for ordering purposes.</p> <p>The descriptions contained in these Bills of Quantities are intended as a means of identifying the various facets of the work. Tenderer shall allow for all costs in connection with the various items taking full cognizance of drawings, schedule of finishes and the Bills of Quantities descriptions.</p> <p>Final measurement shall be made from construction drawings or from measurements taken on site.</p> <p><u>Tile Specifications</u></p> <p>Tenderer is advised that the skirting is to be cut under a controlled factory environment to ensure the quality of the cut is even across all individual sections.</p> <p><u>WALL TILING</u></p>			
	Carried forward		R	
	<p>Bill No. 9 TILING (PROVISIONAL) PRASA</p>			

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

	Brought forward			R
	<u>600 x 600 x 10mm Full bodied porcelain tiles fixed to internal floor screed with tile adhesive (elsewhere specified) mixed with bonding liquid in lieu of water with diagonal joints continuous in both directions and grouted with tile grout, excess grout on the surface to be cleaned with water as work proceeds (Allow PC of R120/m² in the rate for supply and delivery to site, excluding VAT)</u>			
2.9.1	On walls	m2	254	
	A : 0 B : 193 C : 61 D : 0			
	E : 0			
	<u>FLOOR TILING</u>			
	<u>600 x 600 x 10mm Full bodied porcelain tiles fixed to internal floor screed with tile adhesive (elsewhere specified) mixed with bonding liquid in lieu of water with diagonal joints continuous in both directions and grouted with tile grout, excess grout on the surface to be cleaned with water as work proceeds (Allow PC of R120/m² in the rate for supply and delivery to site, excluding VAT)</u>			
2.9.2	To floors	m2	938	
	A : 819 B : 93 C : 26 D : 0			
	E : 0			
2.9.3	Circular cutting	m	235	
	A : 205 B : 23 C : 7 D : 0			
	E : 0			
	<u>SUNDRIES</u>			
	<u>Supply and install Aluminium edge trim</u>			
2.9.4	12mm Aluminium straight edge trim fixed vertically to edges and ends of wall tiles	m	589	
	A : 393 B : 141 C : 55 D : 0			
	E : 0			
	Carried Forward to Sectional Summary:			
	Bill No. 9 TILING (PROVISIONAL) PRASA			
				R

**TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1**

Item No	Description	Quantity	Rate	Amount
	<u>SECTION NO. 2</u>			
	<u>BILL NO. 13</u>			
	<u>PLUMBING AND DRAINAGE</u>			
	<u>(PROVISIONAL)</u>			
	<u>PLUMBING</u>			
	NOTE: Prices for sanitary fittings fixed to walls or abutting walls, etc. shall include for sealing against walls with silicone sealing compound. This shall apply to wash hand basins, sinks and drainers, urinals, WC cisterns, wash troughs, shower trays and the like			
	<u>RAINWATER DISPOSAL</u>			
	<u>'Seamless' aluminium gutters</u>			
2.10.1	OGEE 125 x 75mm 0.6mm Seamless aluminium proprietary eaves gutters with baked enamel finished fixed with concealed brackets A : 55 B : 34 C : 23 D : 0 E : 0	m	113	
2.10.2	Extra over eaves gutter for stopped ends A : 4 B : 8 C : 4 D : 0 E : 0	No	16	
2.10.3	Extra over eaves gutter for drop box suitable 155 x 100mm box gutter A : 12 B : 8 C : 4 D : 0 E : 0	No	24	
	<u>Aluminium downpipes</u>			
2.10.4	100 x 75mm 0.6mm Fluted aluminium downpipes with baked enamel finish A : 42 B : 28 C : 14 D : 0 E : 0	m	84	
2.10.5	Extra over rainwater downpipes for bends A : 24 B : 16 C : 8 D : 0 E : 0	No	48	
	Carried forward		R	
	Bill No. 10			
	PLUMBING AND DRAINAGE (PROVISIONAL)			
	PRASA			

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

		Brought forward			R
2.10.6	Extra over rainwater downpipes for shoes A : 12 B : 8 C : 4 D : 0 E : 0	No	24		
	<u>SANITARY FITTINGS</u>				
	<u>Public Ablutions - Wash hand Basin</u>				
2.10.7	Size 420 x 420mm fitted into opening in granite vanity top (elsewhere specified) and sealed with silicone sealant where basin rim meets vanity top. To be used in conjunction with wall mounted push on demand tap as specified V05-V06. A : 0 B : 0 C : 4 D : 0 E : 0	No	4		
2.10.8	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. To be used in conjunction with paraplegic tap V07 as specified A : 0 B : 0 C : 1 D : 0 E : 0	No	1		
	<u>Public Ablutions - Water closet</u>				
2.10.9	Wall hung closed rim pan with soft close seat, including pan fixations, vitreous china, Installation as per manufacturers specification. Certified plumber recommended. SABS and ISO certified. Adjustable height options. Concealed cistern to be used with this pan. Pan Weight 23kg - width 370mm - height 420mm - pan flush volume 3/6 Lt, 10-year warranty on the ceramic. A : 0 B : 0 C : 4 D : 0 E : 0	No	4		
2.10.10	Wall mounted top inlet Urinal, including kit, vitreous china, Installation as per manufacturers specification. Certified plumber recommended. SABS and ISO certified. Weight 9kg - width 300mm - length 460mm. 10 year warranty on the ceramic. A : 0 B : 0 C : 2 D : 0 E : 0	No	2		
		Carried forward			R
	Bill No. 10 PLUMBING AND DRAINAGE (PROVISIONAL) PRASA				

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

Brought forward

R

Staff - Ablutions

2.10.11	Drop-in vanity basin colour White size 420 x 420mm fitted into opening in granite vanity top (elsewhere specified) and sealed with silicone sealant where basin rim meets vanity top. To be used in conjunction with wall mounted push on demand tap as specified V05-V06.	No	8
	A : 0 B : 8 C : 0 D : 0		
	E : 0		

Staff Ablutions - Water closet

2.10.12	Wall mounted top inlet Urinal, including kit, vitreous china, Installation as per manufacturers specification. Certified plumber recommended. SABS and ISO certified. Weight 9kg - width 300mm - length 460mm. 10 year warranty on the ceramic.	No	4
	A : 0 B : 4 C : 0 D : 0		
	E : 0		

2.10.13	Wall hung closed rim pan with soft close seat, including pan fixations, vitreous china, Installation as per manufacturers specification. Certified plumber recommended. SABS and ISO certified. Adjustable height options. Concealed cistern to be used with this pan. Pan Weight 23kg - width 370mm - height 420mm - pan flush volume 3/6 Lt, 10 year warranty on the ceramic.	No	13
	A : 0 B : 13 C : 0 D : 0		
	E : 0		

SANITARY PLUMBING

Black uPVC UV stabilised pipes

2.10.14	110mm Vent pipes	m	72
	A : 0 B : 56 C : 16 D : 0		
	E : 0		

Carried forward

R

Bill No. 10
PLUMBING AND DRAINAGE (PROVISIONAL)
PRASA

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

		Brought forward		R
	<u>Extra over Black uPVC UV stabilised pipes for fittings</u>			
2.10.15	Vent cowl formed of 110mm vent valve with top cut off and black shade cloth fixed over end of vent pipe A : 0 B : 14 C : 4 D : 0 E : 0	No	18	
	<u>uPVC pipes</u>			
2.10.16	50mm Pipes A : 0 B : 32 C : 20 D : 0 E : 0	m	52	
2.10.17	110mm Pipes Above ground A : 0 B : 14 C : 4 D : 0 E : 0	m	18	
2.10.18	50mm Pipes including chasing A : 8 B : 0 C : 0 D : 0 E : 0	m	8	
2.10.19	110mm Pipes including chasing A : 12 B : 0 C : 0 D : 0 E : 0	m	12	
	<u>Extra over uPVC pipes for fittings</u>			
2.10.20	50mm Bend A : 0 B : 16 C : 10 D : 0 E : 0	No	26	
2.10.21	110mm Bend A : 0 B : 28 C : 8 D : 0 E : 0	No	36	
2.10.22	50mm Access bend A : 0 B : 8 C : 5 D : 0 E : 0	No	13	
2.10.23	110mm Access bend A : 0 B : 14 C : 4 D : 0 E : 0	No	18	
		Carried forward		R
	Bill No. 10 PLUMBING AND DRAINAGE (PROVISIONAL) PRASA			

UPGRADE TO EXISTING TRAIN STATION - PHASE 1

R

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

Brought forward

R

TAPS, VALVES, ETC

2.10.33	Fullway isolating ball valves with plastic coated plated steel lever handle A : 0 B : 13 C : 4 D : 0 E : 0	No	17
2.10.34	Fullway isolating ball valves with plastic coated plated steel lever handle A : 0 B : 5 C : 3 D : 0 E : 0	No	8
2.10.35	15mm Chromium plated metering pillar tap with non-hold open feature and flow controller A : 0 B : 8 C : 4 D : 0 E : 0	No	12
2.10.36	15mm Chromium plated elbow action pillar tap A : 0 B : 0 C : 1 D : 0 E : 0	No	1
2.10.37	Standard flushmaster toilet flushvalve concealed type including back entry, econoflush push button assembly with push rod, rubber pan connectore, integral vacuum breaker and non-hold open feature A : 0 B : 13 C : 3 D : 0 E : 0	No	16
2.10.38	CP Urinal flushvalve concealed type including back entry, econoflush push button assembly with push rod, rubber pan connectore, integral vacuum breaker and non-hold open feature A : 0 B : 4 C : 2 D : 0 E : 0	No	6
2.10.39	C.P junior flushmaster exposed flushvalve with top entry flushpipe compression pan connector and wall flange rubber seat buffer and integral vacuum breaker A : 0 B : 1 C : 1 D : 0 E : 0	No	2

Carried forward

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Bill No. 10
PLUMBING AND DRAINAGE (PROVISIONAL)
PRASA

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

Brought forward

R

WATER SUPPLIES

NOTES: Prices for pipes in ground are to include for excavations 700mm deep, for 100mm bed of sand under pipes and for selected backfilling with no stones larger than 15mm to 300mm above pipe before the remainder is backfilled. All backfilling is to be compacted to 93% Mod AASHTO and surplus excavated material is to be spread and levelled within 50m of the trench

Copper piping with capillary or compression type fittings (Class 460/1 above ground and Class 460/2 under ground or in chase)

2.10.40	15mm Pipes chased into brick walls A : 0 B : 32 C : 19 D : 0 E : 0	m	51
2.10.41	22mm Pipes A : 0 B : 24 C : 14 D : 0 E : 0	m	38
2.10.42	22mm Pipes chased into brick walls A : 0 B : 24 C : 14 D : 0 E : 0	m	38
2.10.43	28mm Pipes A : 0 B : 32 C : 19 D : 0 E : 0	m	51
<u>Extra over class 460/1 copper pipes for capillary fittings, angle and isolation valves and hose connectors</u>			
2.10.44	15mm Fittings A : 0 B : 32 C : 19 D : 0 E : 0	No	51
2.10.45	22mm Fittings A : 0 B : 24 C : 14 D : 0 E : 0	No	38
2.10.46	28mm Fittings A : 0 B : 24 C : 14 D : 0 E : 0	No	38

Carried forward

R

**Bill No. 10
PLUMBING AND DRAINAGE (PROVISIONAL)
PRASA**

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

		Brought forward			R
		<u>Extra over 460/1 copper pipes for brass compression fittings</u>			
2.10.47	15mm Fittings A : 0 B : 24 C : 14 D : 0 E : 0	No	38		
2.10.48	22mm Fittings A : 0 B : 20 C : 12 D : 0 E : 0	No	32		
2.10.49	28mm Fittings A : 0 B : 20 C : 12 D : 0 E : 0	No	32		
	<u>Denso anti-corrosion tape wrapped around 15mm and 22mm pipewhere passing through or chased into walls etc.</u>				
2.10.50	Denso anti-corrosion tape wrapped around 15mm and 22mm pipewhere passing through or chased into walls etc. A : 25 B : 0 C : 0 D : 0 E : 0	m	25		
	<u>MEPLA Piping and fittings</u>				
2.10.51	DN 15mm fixed to walls, ceiling etc. A : 25 B : 0 C : 0 D : 0 E : 0	m	25		
2.10.52	DN 20mm fixed to walls, ceiling etc. A : 45 B : 0 C : 0 D : 0 E : 0	m	45		
2.10.53	DN 25mm fixed to walls, ceiling etc. A : 55 B : 0 C : 0 D : 0 E : 0	m	55		
2.10.54	DN 32mm fixed to walls, ceiling etc. A : 15 B : 0 C : 0 D : 0 E : 0	m	15		
		Carried forward			R
	Bill No. 10				
	PLUMBING AND DRAINAGE (PROVISIONAL)				
	PRASA				

Bill No. 10
PLUMBING AND DRAINAGE (PROVISIONAL)
PRASA

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

Brought forward

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Extra over Class 12 HDPE pipes for fittings

2.10.64	54mm fittings	No	6
	A : 6 B : 0 C : 0 D : 0		
	E : 0		

ELECTRIC WATER HEATERS

2.10.65	Zip stainless steel 7,5 litre Hydroboil size 310 x 180 x 460mm high with instant boiling water, two way tap control, connected to 15mm cold water supply and 220 volt 15 amp electrical power supply, plugged and screwed to wall and fitted under 1 year guarantee	No	1
	A : 1 B : 0 C : 0 D : 0		
	E : 0		

Carried Forward to Sectional Summary:

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Bill No. 10
PLUMBING AND DRAINAGE (PROVISIONAL)
PRASA

TEMBISA TRAIN STATION
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Item No	Description	Quantity	Rate	Amount
	<u>SECTION NO. 2</u>			
	<u>BILL NO. 10</u>			
	<u>GLAZING (PROVISIONAL)</u>			
	<u>GLAZING TO WOOD/STEEL WITH PUTTY</u>			
	<u>6mm Thick obscure safety glass</u>			
2.11.1	Panes exceeding 0,5m ² and not exceeding 2m ² A : 0 B : 0 C : 41 D : 0 E : 0	m2	41	
	<u>MIRRORS, ETC</u>			
	<u>6mm Silvered float glass copper backed mirrors</u> <u>with polished edges holed for and fixed with</u> <u>chromium plated dome capped mirror screws with</u> <u>rubber buffers to plugs in brickwork or concrete</u>			
2.11.2	Mirror 450 x 450mm high A : 0 B : 8 C : 5 D : 0 E : 0	No	13	
	Carried Forward to Sectional Summary:			
	Bill No. 11			
	GLAZING (PROVISIONAL)			
	PRASA			
			R	

**TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1**

Item No	Description	Quantity	Rate	Amount
	<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 11</u></p> <p><u>PAINTWORK (PROVISIONAL)</u></p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>PRICING OF BILLS</u></p> <p>Tenderers are advised to inspect the drawings issued with this enquiry and to satisfy themselves as to the nature and requirements of the contract. No extras will be allowed due to the Contractor's failure in this respect.</p> <p>The Contractor shall be responsible for adequately protecting his work during installation and shall provide a suitable protective covering to be removed when so directed by the Main Contractor.</p> <p>Quantities contained in these Bills of Quantities are only indicative of the actual final quantities required and shall not be used for ordering purposes.</p> <p>The descriptions contained in these Bills of Quantities are intended as a means of identifying the various facets of the work. Tenderers shall allow for all costs in connection with the various items taking full cognizance of drawings, schedule of finishes and the Bills of Quantities descriptions.</p> <p>Final measurement shall be made from construction drawings or from measurements taken on site.</p> <p><u>PROGRAMME REQUIREMENTS</u></p> <p>Tenderers are advised to discuss their programme with the Principal Agent to ensure that no delays occur.</p> <p>Tenderers will be required to have sufficient teams on site, at all times, as to ensure that the programme dates are met. Tenderers are to allow for this in their tenders as no claim for additional teams or workmen will be entertained at a later stage.</p> <p><u>SITE REPRESENTATIVE</u></p> <p>Tenderers are to allow for a full time site representative.</p>			
	Carried forward		R	
	<p>Bill No. 12</p> <p>PAINT WORK (PROVISIONAL)</p> <p>PRASA</p>			

	Brought forward			R
	<p><u>PAINT SPECIFICATIONS</u></p> <p>All painting shall be done in accordance with Architect's specifications unless otherwise described</p> <p><u>COLOURS</u></p> <p>Unless otherwise described all paintwork shall be deemed to have a colour value in excess of 7 on the Munsell system in accordance with SANS 1091</p> <p><u>GUARANTEE</u></p> <p>A Project Guarantee Request Sheet must be filled in and passed on to the relevant representative. Please request this from your specifier consultant. The client/contractor must notify TWO weeks prior to commencement of the project to facilitate the necessary QA.</p> <p><u>PAINTWORK, ETC. TO NEW WORK</u></p> <p><u>ON PLASTERBOARD SURFACES</u></p> <p><u>Prepare and brush surface to remove all loose contaminants and apply one coat alkali resistant primer, one undercoat and two coats emulsion paint for interior use</u></p>			
2.12.1	<p>Internal Ceilings and bulkheads</p> <p style="text-align: center;">A : 819 B : 93 C : 26 D : 0</p> <p style="text-align: center;">E : 0</p>	m2	938	
	<p><u>ON FIBRE-CEMENT BOARD SURFACES</u></p> <p><u>Prepare and brush surface to remove all loose contaminants and apply one coat alkali resistant primer and two coats superior quality acrylic emulsion paint for exterior use</u></p>			
2.12.2	<p>Fascias and barge boards, including priming metal jointing strips</p> <p style="text-align: center;">A : 61 B : 36 C : 20 D : 0</p> <p style="text-align: center;">E : 0</p>	m2	118	
	<p><u>ON METAL SURFACES</u></p>			
	Carried forward			R
	<p>Bill No. 12 PAINT WORK (PROVISIONAL) PRASA</p>			

Brought forward

R

Prepare surfaces and remove all loose material, apply one coat water based primer, one coat alkyd based universal undercoat and two coats superior quality universal enamel paint

2.12.3	Door frames	m2	4
	A : 0 B : 0 C : 4 D : 0		
	E : 0		

ON WOOD SURFACES

Prepare surfaces and remove all loose material, apply one coat wood primer, one coat alkyd based universal undercoat and two coats super quality gloss paint. Colour TBC. by Architect (sand between coats)

2.12.4	On doors	m2	16
	A : 0	B : 0	C : 16
	E : 0	D : 0	

2.12.5	Skirtings, rails, etc not exceeding 300mm girth	m	393
	A : 393 B : 0 C : 0 D : 0		
	E : 0		

PAINTWORK, ETC. TO PREVIOUSLY PAINTED WORK

ON INTERNAL FLOATED PLASTER SURFACES

Prepare and brush surface to remove all loose contaminants and apply one coat alkali resistant primer, one undercoat and two coats emulsion paint for interior use

2.12.6	Walls				m2	993
	A : 993	B : 0	C : 0	D : 0		
	E : 0					

ON METAL SURFACES

Carried forward

R

Bill No. 12
PAINT WORK (PROVISIONAL)
PRASA

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

Brought forward

R

Prepare and brush surface to remove all loose contaminants and apply one coat alkali resistant primer, one undercoat and two coats emulsion paint for interior use

2.12.7	On windows	m2	40	
	A : 0 B : 0 C : 40 D : 0			
	E : 0			

2.12.8	On gates	m2	15	
	A : 0 B : 0 C : 15 D : 0			
	E : 0			

2.12.9	On corrugated roof sheeting	m2	985	
	A : 0 B : 0 C : 0 D : 985			
	E : 0			

Prepare and brush surface of structural steelwork by abrasively blast to ST 2.5 of swedish standard SIS 055900 and blast to PSH 2.4.1 as per SANS 064 code. Apply one coat of Sigma cover 630 polyamide epoxy and one coat of Sigma cover 456 polyamide epoxy to suite Prasa colours.

2.12.10	On solid steel balustrades - Bridges	m2	144	
	A : 0 B : 0 C : 0 D : 144			
	E : 0			

ON WOOD SURFACES

Prepare and brush surface to remove all loose contaminants and apply one coat alkali resistant primer, one undercoat and two coats emulsion paint for interior use

2.12.11	On doors	m2	132	
	A : 76 B : 56 C : 0 D : 0			
	E : 0			

Carried Forward to Sectional Summary:

R

Bill No. 12
PAINT WORK (PROVISIONAL)
PRASA

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

Item No	Description	Quantity	Rate	Amount
	<u>SECTION NO. 2</u>			
	<u>BILL NO. 12</u>			
	<u>BUDGETARY ALLOWANCES</u>			
	<u>(PROVISIONAL)</u>			
	The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition)			
	<u>SIGNAGE</u>			
	<u>Signage</u>			
2.13.1	Provide the amount of R 50,000.00 (Fifty Thousand Rand) for the Signage A : 0.00 B : 0.00 C : 0.00 D : 1.00 E : 0.00	Item		50 000.00
	<u>CARPORT</u>			
	<u>Carports - Staff Parking</u>			
2.13.2	Provide the amount of R 120,000.00 (One Hundred and Twenty Thousand Rand) for Staff Parking Carports A : 0.00 B : 0.00 C : 0.00 D : 1.00 E : 0.00	Item		120 000.00
	<u>SAFES</u>			
	<u>DROP SAFE</u>			
2.13.3	Provide the amount of R 60,000.00 (Sixty Thousand Rand) for Drop safe A : 1.00 B : 0.00 C : 0.00 D : 0.00 E : 0.00	Item		60 000.00
	Carried Forward to Sectional Summary:		R	
	Bill No. 13			
	BUDGETARY ALLOWANCES (PROVISIONAL)			
	PRASA			

**TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
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SUMMARY					
Bill No		Page No		Amount	
2.1	ALTERATIONS (PROVISIONAL)	27			
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2.3	ROOF COVERING & RAINWATER DISPOSAL	31			
2.4	CARPENTRY AND JOINERY(PROVISIONAL)	34			
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2.7	METALWORK (PROVISIONAL)	43			
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2.9	TILING (PROVISIONAL)	46			
2.10	PLUMBING AND DRAINAGE (PROVISIONAL)	56			
2.11	GLAZING (PROVISIONAL)	57			
2.12	PAINT WORK (PROVISIONAL)	61			
2.13	BUDGETARY ALLOWANCES (PROVISIONAL)	62			
Carried to Final Summary			R		
PRASA					

TEMBISA TRAIN STATION
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Item No	Description	Unit	Quantity	Rate	Amount
	<u>SECTION NO.3</u>				
	<u>BILL NO. 1</u>				
	<u>EXTERNAL WORKS (PROVISIONAL)</u>				
	<u>GENERAL SITEWORKS</u>				
	<u>Site clearance</u>				
3.1.1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc.	m2	4 160		
3.1.2	Stripping average 150mm thick layer of top soil and stockpiling on site	m2	4 160		
	<u>REMOVAL OF TREES ETC</u>				
3.1.3	Removal and Grubbing of large trees and stumps	No	2		
	<u>FILLING ETC</u>				
	<u>Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 93% Mod AASHTO density</u>				
3.1.4	Backfilling to trenches	m3	100		
	<u>COMPACTION</u>				
	<u>Compaction of surfaces</u>				
3.1.5	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	200		
	Carried Forward to Sectional Summary:				
	Bill No. 1				
	GENERAL SITEWORKS (PROVISIONAL)				
	PRASA				

R

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

Item No	Description	Unit	Quantity	Rate	Amount
	<u>SECTION NO. 3</u>				
	<u>BILL NO. 2</u>				
	<u>EXTERNAL WORKS (PROVISIONAL)</u>				
	<u>STORMWATER DRAINAGE</u>				
	<u>Class 100D SS concrete pipes with spigot and socket joints with rubber rings</u>				
3.2.1	300mm Pipes laid in and including trenches exceeding 1m and not exceeding 2m deep	m	68		
3.2.2	600mm Pipes laid in and including trenches exceeding 2m not exceeding 3m deep	m	42		
	<u>MANHOLES</u>				
	<u>Excavate in earth and build 805 x 805mm size internally formed from one brick 14Mpa NFP clay bricks walls cement plastered to internal face including 25Mpa/19mm 250mm thick concrete with mesh ref 245 in base and cover slabs, cover slab to have recessed opening to suit 1200 x 1200mm cast iron manhole cover frame with 230 x 230mm Grid inlet (cover, grating and frame measured elsewhere) benching up in 20MPa/8mm concrete and finished smooth in 1:1 cement plaster around channels</u>				
3.2.3	Not exceeding 1m deep	No	2		
3.2.4	Exceeding 1m but not exceeding 2m deep	No	1		
3.2.5	Exceeding 2m but not exceeding 3m deep	No	1		
	<u>Extra over all manhole excavations for excavation in</u>				
3.2.6	Hard rock	m3	9		
	<u>COVERS & GRATINGS (SUPPLY AND INSTALL COMPLETE)</u>				
	Carried forward			R	
	Bill No. 2 STORMWATER DRAINAGE (PROVISIONAL) PRASA				

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

	Brought forward			R	
	<u>Cast iron gratings, covers, etc</u>				
3.2.7	1200 x 1200mm Heavy duty cover frame with 230 x 230mm Grid inlet including all fixings to brickwork and stormwater channel.	No	4		
	<u>SUNDRIES</u>				
	<u>Altering Existing Manholes</u>				
3.2.8	Raising or lowering of existing manholes	No	2		
	<u>Municipal connection points</u>				
3.2.9	Cut into existing manhole for new 300mm pipe not exceeding 3m deep, including making good and all connections necessary	No	3		
3.2.10	Cut into existing manhole for new 600mm pipe not exceeding 3m deep, including making good and all connections necessary	No	1		
	<u>Municipal connection fees</u>				
3.2.11	Allow the sum of R10,000.00 for municipal connection fees		Item		10 000.00
	<u>Testing</u>				
3.2.12	Testing stormwater drainage system		Item		
	Carried Forward to Sectional Summary:			R	
	Bill No. 2				
	STORMWATER DRAINAGE (PROVISIONAL)				
	PRASA				

Item No	Description	Quantity	Rate	Amount
	<u>SECTION NO. 3</u>			
	<u>BILL NO. 3</u>			
	<u>EXTERNAL WORKS (PROVISIONAL)</u>			
	<u>FENCING AND GATES</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Design Responsibility</u>			
	Tenderers are responsible for the design and supply of the fencing system and rates shall include approval and sign off from an approved Engineer			
	<u>Shop Drawings</u>			
	The successful Tenderer shall provide full shop drawings and calculations for approval by the Architect and Engineer prior to commencing work. The cost of such shop drawings shall be included in the rates below			
	<u>Design Responsibility</u>			
	Tenderers are responsible for the design and supply of the fencing system and rates shall include approval and sign off from an approved Engineer			
	<u>Shop Drawings</u>			
	The successful Tenderer shall provide full shop drawings and calculations for approval by the Architect and Engineer prior to commencing work. The cost of such shop drawings shall be included in the rates below			
	<u>CLEAR VIEW FENCE</u>			
	Carried forward		R	
	Bill No. 3 FENCING (PROVISIONAL) PRASA			

Brought forward				R
	<u>Galvanised clear view security fence with steel posts, stays, gates, etc. including galvanised steel bolts, straining eye bolts, etc, site clearance and preparation of ground</u>			
3.3.1	High Density Anti-climb security fence 2,1m (1,8m High above ground) high with anti-cut pressed mesh panel of panels at 3,305m widths and apertures 76,2mm x 12,7mm with vertical wire 4mm and horizontal wire of 3mm including all galvanised posts 2,1m High and anti-climb galvanised mesh, PVC coating and applicable corrosion protection complete with all earthworks, concrete bases etc. as confirmed and approved by the suppliers Engineer.	m	561	
3.3.2	4000mm wide x 1800mm High Sliding gate with steel track, ground beams etc. complete (gate to match fence panel type)	No	1	
<p style="text-align: right;">Carried Forward to Sectional Summary:</p> <p>Bill No. 3 FENCING (PROVISIONAL) PRASA</p>				R

**TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1**

Item No	Description	Quantity	Rate	Amount
	<u>SECTION NO. 3</u>			
	<u>BILL NO. 4</u>			
	<u>LANDSCAPING (PROVISIONAL)</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Landscaping specification</u>			
	Refer to the landscape architect's specification annexed to these bills of quantities which is supplementary to and shall take precedence over the "Model Preambles for Trades"			
	<u>GRASSING, SHRUBS, ETC.</u>			
	<u>Excavate in earth and dispose on site</u>			
3.4.1	To remove humps, form shallow ditches, etc	m2	242	
	<u>Ground preparation</u>			
3.4.2	Cultivation and preparation of areas to be planted	m2	242	
	<u>Topsoil supplied by the contractor (3 parts top soil, 1 part compost and 1 part milled pine bark), including spreading and levelling</u>			
3.4.3	In plant beds, grassed areas and holes for trees, shrubs, etc	m3	36	
	<u>Grassing, ground covers, etc</u>			
3.4.4	"Kikuyu" roots in rows at 250mm centres	m2	242	
	Carried Forward to Sectional Summary:			
	Bill No. 4			
	LANDSCAPING (PROVISIONAL)			
	PRASA			
			R	

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

Item No	Description	Quantity	Rate	Amount
	<u>SECTION NO. 3</u>			
	<u>BILL NO. 5</u>			
	<u>EXTERNAL WORKS (PROVISIONAL)</u>			
	<u>PARKING AND DRIVEWAY</u>			
	<u>EARTHWORKS</u>			
	<u>SITE CLEARANCE ETC</u>			
	<u>Site clearance</u>			
3.5.1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc (LI)	m2	1 329	
	<u>EXCAVATION OTHER THAN BULK</u>			
	<u>Excavation in earth not exceeding 2m deep</u>			
3.5.2	Reduce levels under floors	m3	133	
	<u>CARTING AWAY</u>			
	<u>Extra over all excavations for carting way</u>			
3.5.3	Surplus material from excavations and/or stocked piles on site to a dumping site to be located by the contractor	m3	133	
	<u>FILLING, ETC.</u>			
	<u>Earth filling supplied by the contractor under surface beds</u>			
3.5.4	Imported G7 filling material from commercial sources by the contractor in accordance with SABS 1200 and the Engineers specifications, to be stabilized and compacted, to 95% Mod AASHTO density	m3	174	
	Carried forward		R	
	Bill No. 5			
	PARKING AND DRIVEWAYS (PROVISIONAL)			
	PRASA			

Brought forward			R
3.5.5	Imported C4 stabilised natural gravel filling material from commercial sources by the contractor in accordance with SABS 1200 and the Engineers specifications, compacted to 97% Mod AASHTO density	m3	174
<u>Prescribed density tests on filling</u>			
3.5.6	"Modified AASHTO Density" test on request by the engineer	No	4
<u>Compaction of surfaces</u>			
3.5.7	Compaction of ground surface under floors etc including ripping and recompacting for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% modified AASHTO density	m2	1 329
<u>SOIL POISONING</u>			
<u>Soil insecticide</u>			
3.5.8	Under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming	m2	1 329
<u>BRICK PAVING</u>			
3.5.9	220 x 108 x 50mm Thick heavy duty Clay brick paving with butt joints including saw cutting and laid to interlocking pattern bedded on and including 50mm thick river sand	m2	1 329
<u>PAINTED PARKING LINES</u>			
Carried forward			R
Bill No. 5 PARKING AND DRIVEWAYS (PROVISIONAL) PRASA			

	Brought forward			R
	<u>Prepare and apply one coat two coats 'Road Marking Paint', on paved surface in accordance with manufacturers instructions to be guaranteed against delamination from court surface or wear for a period of 5 years from date of issue of Final Completion Certificate</u>			
3.5.10	White road paint in individual lettering of STOP sign painted on paving, all in accordance with manufacturer's specification, each letter size approximately 600 x 900mm wide extreme	No	1	
3.5.11	Numeral or letter 100mm high	No	21	
3.5.12	Directional arrow 4700 x 500 wide extreme	No	2	
3.5.13	Parking lines 100mm wide	m	115	
	<u>PRECAST CONCRETE</u>			
	<u>PRECAST CONCRETE TACTILE PAVING</u>			
	<u>Cement base product with Tac pins from Union Tiles</u>			
3.5.14	Tactile pavers, size 300 x 300 x 30mm thick laid externally with 5mm joints grouted with suitable grout, bedded on 20-30mm thick river sand bed, on base course and subgrade, conforming to SANS 1200 MJ Degree Of Accuracy I. Tactile to comply to SANS 784:2008	m2	93	
	<u>PRECAST CONCRETE KERBING</u>			
	<u>Concrete kerbing incl vertical joints between kerbs sealed with DOW CORNING 888 silicone joint sealant 6mm deep</u>			
3.5.15	Fig. 1 Kerb (SABS 927) size 150 x 300mm, on and including 150mm wide base and 200 x 200mm (class 15/19) unreinforced concrete haunching at back of each joint, including excavation, backfilling, etc.	m	308	
	<u>RESURFACING PLATFORMS</u>			
	Carried forward			R
	Bill No. 5 PARKING AND DRIVEWAYS (PROVISIONAL) PRASA			

**TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1**

Brought forward

R

Bituminous premix road surfacing

3.5.16	50mm Thick paving to parking areas, roadways, etc. including bituminous spray to base course (0.65l/m ²)	m2	985	
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Carried Forward to Sectional Summary:

R

**Bill No. 5
PARKING AND DRIVEWAYS (PROVISIONAL)
PRASA**

**TEMBISA TRAIN STATION
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UPGRADE TO EXISTING TRAIN STATION - PHASE 1**

Bill No	<u>SUMMARY</u>	Page No	Amount
3.1	GENERAL SITEWORKS (PROVISIONAL)	64	
3.2	STORMWATER DRAINAGE (PROVISIONAL)	66	
3.3	FENCING (PROVISIONAL)	68	
3.4	LANDSCAPING (PROVISIONAL)	69	
3.5	PARKING AND DRIVEWAYS (PROVISIONAL)	73	
PRASA		Carried to Final Summary	
			R

TEMBISA TRAIN STATION
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UPGRADE TO EXISTING TRAIN STATION - PHASE 1

Item No	Description	Quantity	Rate	Amount
	<u>SECTION NO. 4</u>			
	<u>BILL NO. 1</u>			
	<u>ELECTRICAL INSTALLATION (PROVISIONAL)</u>			
	<u>ADMIN BUILDING</u>			
	<u>Security System</u>			
	<u>Installation of Camera System equipment as specified in Section E of the Detailed Specification.</u>			
	<u>360 Degree resolution CCTV Camera</u>			
4.1.1	Supply	No	6	
4.1.2	Install	No	6	
	<u>CONDUITS</u>			
	<u>25mm Conduit</u>			
4.1.3	Supply	m	20	
4.1.4	Install	m	20	
	<u>CONDUIT BOXES & ENDS</u>			
	<u>Terminate and connect one pair of conduit ends including supply and installation of 1, 2, 3 or 4 way box on surface or in brickwork. Either round, 50mm x 100mm, 100mm x 100mm (excluding coverplates), including holes for conduit.</u>			
	<u>25mm Conduit</u>			
4.1.5	Supply	No	4	
	Carried forward			R
	Bill No. 1 PLATFORM SHELTERS PRASA			

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

Brought forward

R

4.1.6	Install	No	4
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CONDUIT ENDS

Terminate and connect one pair of conduit ends including lock nuts, bushes, etc. connecting into board tray, wiring channel etc. including cutting holes for conduit entries, but excluding conduit box.

25mm uPVC Conduit

4.1.7	Supply	No	4
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4.1.8	Install	No	4
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CONDUCTORS

Supply and installation of PVC insulated copper conductors drawn into conduit or wiring channel in groups of 2, 3, 4, etc. with the required colour coding, but excluding any wiring connections.

2.5 mm² PVC Conductors

4.1.9	Supply	m	10
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4.1.10	Install	m	10
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EARTH CONDUCTORS

Supply and drawing into conduit PVC insulated earth conductors, excluding any connections

2.5mm² Conductors

4.1.11	Supply	m	10
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4.1.12	Install	m	10
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LUMINAIRES

Carried forward

R

Bill No. 1
PLATFORM SHELTERS
PRASA

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

		Brought forward			R
		<u>Supply and Installation of the following luminaires, complete with lamps as specified in Part C</u>			
		<u>Type A1</u>			
4.1.13	Supply	No	8		
4.1.14	Install	No	8		
		<u>DAYLIGHT SWITCHES / PHOTO-CELLS</u>			
		<u>Supply and installation of approved daylight switch.</u>			
		<u>Daylight Switch</u>			
4.1.15	Supply	No	2		
4.1.16	Install	No	2		
		<u>Loud speaker at a train station</u>			
4.1.17	Supply	No	2		
4.1.18	Install	No	2		
		<u>SOCKET OUTLETS</u>			
		<u>Supply, fitting and electrical connection of flush or surface mounted switched socket in either 100 x 100, 100 x 50, round box or wiring channel, excluding box (for flush type) and conduit connections, but including cover plate</u>			
		<u>16A Double SSO c/w coverplate</u>			
4.1.19	Supply	No	2		
4.1.20	Install	No	2		
		<u>PROVISIONAL SUMS</u>			
		Carried forward			R
		Bill No. 1 PLATFORM SHELTERS PRASA			

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

Brought forward

R

ALARM SYSTEM

4.1.21	Complete supply, installation and commissioning of the alarm system to the Ticket Office - ABT	Item	15 000.00
4.1.22	Add for profit upon above, if required.	%	
4.1.23	Add for attendance upon above, if required.	%	

SIREN

4.1.24	Complete supply, installation and commissioning a Siren with bell switch	Item	
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LIGHTNING PROTECTION

Down Conductors

Supply and fixing on surface in an approved manner of aluminium conductor as specified in Clause A1.3.1 including all fixing accessories, such as insulating sleeves and stand-off brackets, but not including terminations. Rates quoted shall allow for wastage, off-cuts and joints.

4.1.25	50mm ² aluminium conductor	m	5.6
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Air Terminal Conductors

4.1.26	Supply and fixing on surface in an approved manner of 50mm ² aluminium conductor including all fixing accessories, such as insulating sleeves and stand-off brackets, but not including terminations. Rates quoted shall allow for wastage, off-cuts and joints.	m	5.6
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Terminations of Down Conductors to Air Terminals

Termination of aluminium conductor to metal roof as specified in Clause A1.4 including lugs and making off of the ends etc.

4.1.27	50mm ² aluminium conductor to metal roof.	No	2
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Carried forward

R

Bill No. 1
PLATFORM SHELTERS
PRASA

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

Brought forward

R

Earthing Conductors

Supply and laying in the ground and in conduits of copper earth wire as specified in Clause A1.5 excluding terminations. Rates quoted shall allow for wastage, off-cut and joints.

4.1.28	70mm ² Green PVC insulated copper conductor	m	5.6
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Termination of Earthing Conductors to Down Conductors

Termination of earth conductor to aluminium down conductor and earth electrodes including making off the ends, lugs, clamps, etc.

4.1.29	50mm ² Termination to 70mm ² conductor	No	2
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Earth Electrodes

Supply and installation of earth electrodes generally as specified in Clause A1.3.3.

4.1.30	3,6m long earth electrodes	No	2
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Termination of Earth Conductors to Earth Electrodes

Termination of Earth Conductors to Earth Electrodes including making off of ends, lugs, clamps, etc.

4.1.31	70mm ² Earth Conductor to Earth Electrode	No	2
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General Earth Bonding

4.1.32	Bonding of metal drainage down pipes and items.		Item
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Testing

Supply and testing apparatus and testing in accordance with SANS Code.

4.1.33	Testing of joint continuity		Item
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Carried forward

R

Bill No. 1
PLATFORM SHELTERS
PRASA

**TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1**

Brought forward

R

4.1.34	Testing of Lightning Protection System	Item
4.1.35	Testing of Earthing Points	Item
4.1.36	Soil Resistivity Test and Report	Item

Carried Forward to Sectional Summary:

R

**Bill No. 1
PLATFORM SHELTERS
PRASA**

**TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1**

Item No	Description		Quantity	Rate	Amount
	<u>SECTION NO. 4</u>				
	<u>BILL NO. 2</u>				
	<u>ELECTRICAL INSTALLATION (PROVISIONAL)</u>				
	<u>PUBLIC ABLUTIONS</u>				
	<u>DISTRIBUTION BOARDS</u>				
	<u>Supply, Installation and commissioning of the Distribution Board, including making off all wire connections (external wiring, conduit, armoured cable and terminations given elsewhere)</u>				
	<u>DB-1</u>				
4.2.1	Supply	No	2		
4.2.2	Install	No	2		
	<u>Security System</u>				
	<u>Installation of Camera System equipment as specified in Section E of the Detailed Specification.</u>				
	<u>360 Degree resolution CCTV Camera</u>				
4.2.3	Supply	No	2		
4.2.4	Install	No	2		
	<u>CONDUITS</u>				
	<u>25mm Conduit</u>				
4.2.5	Supply	m	15		
4.2.6	Install	m	15		
	Carried forward			R	
	Bill No. 2				
	PUBLIC ABLUTIONS (PROVISIONAL)				
	PRASA				

		Brought forward			R
		<u>CONDUIT BOXES & ENDS</u>			
		<u>Terminate and connect one pair of conduit ends including supply and installation of 1, 2, 3 or 4 way box on surface or in brickwork. Either round, 50mm x 100mm, 100mm x 100mm (excluding coverplates), including holes for conduit.</u>			
		<u>25mm Conduit</u>			
4.2.7	Supply	No	5		
4.2.8	Install	No	5		
		<u>CONDUIT ENDS</u>			
		<u>Terminate and connect one pair of conduit ends including lock nuts, bushes, etc. connecting into board tray, wiring channel etc. including cutting holes for conduit entries, but excluding conduit box.</u>			
		<u>25mm uPVC Conduit</u>			
4.2.9	Supply	No	4		
4.2.10	Install	No	4		
		<u>CONDUCTORS</u>			
		<u>Supply and installation of PVC insulated copper conductors drawn into conduit or wiring channel in groups of 2, 3, 4, etc. with the required colour coding, but excluding any wiring connections.</u>			
		<u>2,5 mm² PVC Conductors</u>			
4.2.11	Supply	m	20		
4.2.12	Install	m	20		
		Carried forward			R
		Bill No. 2 PUBLIC ABLUTIONS (PROVISIONAL) PRASA			

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

Brought forward

R

EARTH CONDUCTORS

Supply and drawing into conduit PVC insulated earth conductors, excluding any connections

2.5mm² Conductors

4.2.13	Supply	m	20
4.2.14	Install	m	20

LIGHT SWITCHES

Supply, fitting and electrical connection of a flush or surface mounted 16A switch in 100 x 50 excluding box (for flush type) and conduit connections, but including cover plates.

16A 1 Lever

4.2.15	Supply	No	2
4.2.16	Install	No	2

LUMINAIRES

Supply and Installation of the following luminaires, complete with lamps as specified in Part C

Type C1

4.2.17	Supply	No	20
4.2.18	Install	No	20

Type J1

4.2.19	Supply	No	12
4.2.20	Install	No	12

Carried forward

R

Bill No. 2
PUBLIC ABLUTIONS (PROVISIONAL)
PRASA

Brought forward

R

DAYLIGHT SWITCHES / PHOTO-CELLS

Supply and installation of approved daylight switch.

Daylight Switch

4.2.21	Supply	No	2
4.2.22	Install	No	2

ISOLATORS

Supply , fitting and electrical connection of flush or surface mounted Metal Clad Isolators in either 100x100,100x50, round connections, but including cover plate.

30A DP Weather proof isolator for HVAC

4.2.23	Supply	No	2
4.2.24	Install	No	2

WEATHERPROOF BOXES

Supply and installation of a weatherproof york(200x200mm) box for isolators excluding conduit connections

200x200 york box

4.2.25	Supply	No	2
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LIGHTNING PROTECTION

Down Conductors

Carried forward

R

Bill No. 2
PUBLIC ABLUTIONS (PROVISIONAL)
PRASA

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

		Brought forward			R
	<u>Supply and fixing on surface in an approved manner of aluminium conductor as specified in Clause A1.3.1 including all fixing accessories, such as insulating sleeves and stand-off brackets, but not including terminations. Rates quoted shall allow for wastage, off-cuts and joints.</u>				
4.2.26	50mm ² aluminium conductor	m	11.2		
	<u>Air Terminal Conductors</u>				
4.2.27	Supply and fixing on surface in an approved manner of 50mm ² aluminium conductor including all fixing accessories, such as insulating sleeves and stand-off brackets, but not including terminations. Rates quoted shall allow for wastage, off-cuts and joints.	m	11.2		
	<u>Terminations of Down Conductors to Air Terminals</u>				
	<u>Termination of aluminium conductor to metal roof as specified in Clause A1.4 including lugs and making off of the ends etc.</u>				
4.2.28	50mm ² aluminium conductor to metal roof.	No	2		
	<u>Earthing Conductors</u>				
	<u>Supply and laying in the ground and in conduits of copper earth wire as specified in Clause A1.5 excluding terminations. Rates quoted shall allow for wastage, off-cut and joints.</u>				
4.2.29	70mm ² Green PVC insulated copper conductor	m	11.2		
	<u>Termination of Earthing Conductors to Down Conductors</u>				
	<u>Termination of earth conductor to aluminium down conductor and earth electrodes including making off the ends, lugs, clamps, etc.</u>				
4.2.30	50mm ² Termination to 70mm ² conductor	No	2		
	<u>Earth Electrodes</u>				
		Carried forward			R
	Bill No. 2 PUBLIC ABLUTIONS (PROVISIONAL) PRASA				

	Brought forward		R
	<u>Supply and installation of earth electrodes generally as specified in Clause A1.3.3.</u>		
4.2.31	3,6m long earth electrodes	No	2
	<u>Termination of Earth Conductors to Earth Electrodes</u>		
	<u>Termination of Earth Conductors to Earth Electrodes including making off of ends, lugs, clamps, etc.</u>		
4.2.32	70mm ² Earth Conductor to Earth Electrode	No	2
	<u>General Earth Bonding</u>		
4.2.33	Bonding of metal drainage down pipes and items.		Item
	<u>Testing</u>		
	<u>Supply and testing apparatus and testing in accordance with SANS Code.</u>		
4.2.34	Testing of joint continuity		Item
4.2.35	Testing of Lightning Protection System		Item
4.2.36	Testing of Earthing Points		Item
4.2.37	Soil Resistivity Test and Report		Item
	Carried Forward to Sectional Summary:		R
	Bill No. 2 PUBLIC ABLUTIONS (PROVISIONAL) PRASA		

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

Item No	Description	Quantity	Rate	Amount
	<u>SECTION NO. 4</u>			
	<u>BILL NO. 3</u>			
	<u>ELECTRICAL INSTALLATION (PROVISIONAL)</u>			
	<u>EXTERNAL WORKS</u>			
	<u>PREAMBLES</u>			
	Refer to the attached Specifications for the Electrical Installation. The Tenderer must at all times read the Bills of Quantities in conjunction with the specification and drawings prior to pricing this section. Items 1-4 below applies to the entire electrical installation for the school.			
	<u>GUARANTEE AND MAINTENANCE</u>			
4.3.1	Guarantee and maintenance for the complete installation of Electrical Installation including fittings, materials and workmanship for a period of TWELVE MONTHS after date of completion and handover.	Item		
	<u>TESTING</u>			
4.3.2	Allow for testing, balancing and commissioning the whole of the electrical installation as laid down in the specification and for re-testing as may be required after the making good of all defective work to the satisfaction of the Department and the Engineer.	Item		
	<u>AS-BUILT DRAWINGS</u>			
4.3.3	Provision for the drawings showing all site cable routes, conduit routes, draw boxes and positions of outlets, etc.	Item		
	Carried forward		R	
	Bill No. 3 EXTERNAL WORKS (POVISIONAL) PRASA			

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

	Brought forward			R	
	<u>CERTIFICATE OF COMPLIANCE</u>				
4.3.4	Provision for the Certificate of Compliance to be issued on completion of the project.	Item			
	<u>LABELLING AND MARKING</u>				
4.3.5	Allow for marking and labelling of all equipment, cables etc.	Item			
	<u>Provisional Sum</u>				
4.3.6	Allow for a Connection with the Back-up Generator of 100KVA	Item			
4.3.7	Add for profit upon above, if required.			%	
4.3.8	Add for attendance upon above, if required.			%	
	<u>New Kiosk</u>				
	<u>Supply and Installation and commissioning of the Kiosk, including making off all wire connections (external wiring, conduit, armoured cable and terminations given elsewhere).</u>				
4.3.9	Install	No	3		
	<u>Copper Cables - (External Works)</u>				
	<u>Provisional Quantities</u>				
	<u>Supply, delivery and laying of PVC/ECC/SWA/PVC copper cables as specified, excluding terminations and cable supports. Lengths given shall be taken as measured lengths to cable runs from terminal to terminal and rates quoted shall include for off-cuts</u>				
	<u>70 mm² 4 core PVC/SWA/PVC ECC Cable</u>				
4.3.10	Supply	m	20		
4.3.11	Install	m	20		
	Carried forward			R	
	Bill No. 3 EXTERNAL WORKS (POVISIONAL) PRASA				

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

	Brought forward			R	
	<u>16 mm² 4 core PVC/SWA/PVC ECC Cable</u>				
4.3.12	Supply	m	15		
4.3.13	Install	m	15		
	<u>10 mm² 2 core PVC/SWA/PVC ECC Cable</u>				
4.3.14	Supply	m	884		
4.3.15	Install	m	884		
	<u>Cable Terminations</u>				
	<u>Including the supply and fitting of Pratley Cable gland, shroud, making off the cable and fitting the gland to gland plates, switchgear or equipment including final connections of cable tails with lugs onto board terminals and including earth in ECC cable</u>				
	<u>10 mm² 2 core PVC/SWA/PVC ECC Cable</u>				
4.3.16	Supply	No	10		
4.3.17	Install	No	10		
	<u>16 mm² 4 core PVC/SWA/PVC ECC Cable</u>				
4.3.18	Supply	No	10		
4.3.19	Install	No	10		
	<u>EXCAVATIONS</u>				
	<u>CPAP WORK GROUP NO 104 UNLESS OTHERWISE STATED</u>				
	<u>Excavations other than bulk in soft excavation not exceeding 2m deep for:</u>				
	Allowance is to be made for the installation of cable markers and warning sheets				
	Carried forward			R	
	Bill No. 3 EXTERNAL WORKS (POVISIONAL) PRASA				

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

		Brought forward			R	
4.3.20	In trenches for cables and sleeves	m3	15			
	<u>Filling obtained from excavations and/or prescribed stock piles on site compacted to 95% Mod AASHTO dencity</u>					
4.3.21	Backfilling of trenches	m3	15			
	<u>Risk of collapse of excavations other than bulk</u>					
4.3.22	Sides of trenches and hole excavations not exceeding 1.5m deep	m3	15			
	<u>Manholes</u>					
	<u>Supply and installation of manholes as shown on the drawings. Refer to Clause B6</u>					
4.3.23	Cable Manholes install the leads	No	15			
	<u>Cable Markers</u>					
	Allow to supply and install cable markers					
4.3.24	PVC warning marking tape	m	15			
	<u>Luminaires</u>					
	<u>Supply and install and electrically connecting the following luminaires, complete with lamps. Refer to Clause C2 of Part 3.</u>					
	<u>Type P1.1</u>					
4.3.25	Supply	No	10			
4.3.26	Install	No	10			
	<u>7m Pole</u>					
4.3.27	Supply	No	16			
4.3.28	Install	No	16			
		Carried forward			R	
	Bill No. 3 EXTERNAL WORKS (POVISIONAL) PRASA					

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

		Brought forward			R
	<u>Type J1</u>				
4.3.29	Supply	No	16		
4.3.30	Install	No	16		
	<u>LIGHTNING PROTECTION</u>				
	<u>Down Conductors</u>				
	<u>Supply and fixing on surface in an approved manner of aluminium conductor as specified in Clause A1.3.1 including all fixing accessories, such as insulating sleeves and stand-off brackets, but not including terminations. Rates quoted shall allow for wastage, off-cuts and joints.</u>				
4.3.31	50mm ² aluminium conductor	m	5.6		
	<u>Air Terminal Conductors</u>				
4.3.32	Supply and fixing on surface in an approved manner of 50mm ² aluminium conductor including all fixing accessories, such as insulating sleeves and stand-off brackets, but not including terminations. Rates quoted shall allow for wastage, off-cuts and joints.	m	5.6		
	<u>Terminations of Down Conductors to Air Terminals</u>				
	<u>Termination of aluminium conductor to metal roof as specified in Clause A1.4 including lugs and making off of the ends etc.</u>				
4.3.33	50mm ² aluminium conductor to metal roof.	No	2		
	<u>Earthing Conductors</u>				
	<u>Supply and laying in the ground and in conduits of copper earth wire as specified in Clause A1.5 excluding terminations. Rates quoted shall allow for wastage, off-cut and joints.</u>				
4.3.34	70mm ² Green PVC insulated copper conductor	m	5.6		
		Carried forward			R
	Bill No. 3				
	EXTERNAL WORKS (POVISIONAL)				
	PRASA				

	Brought forward			R	
	<u>Termination of Earthing Conductors to Down Conductors</u>				
	<u>Termination of earth conductor to aluminium down conductor and earth electrodes including making off the ends, lugs, clamps, etc.</u>				
4.3.35	50mm ² Termination to 70mm ² conductor	No	2		
	<u>Earth Electrodes</u>				
	<u>Supply and installation of earth electrodes generally as specified in Clause A1.3.3.</u>				
4.3.36	3,6m long earth electrodes	No	2		
	<u>Termination of Earth Conductors to Earth Electrodes</u>				
	<u>Termination of Earth Conductors to Earth Electrodes including making off of ends, lugs, clamps, etc.</u>				
4.3.37	70mm ² Earth Conductor to Earth Electrode	No	2		
	<u>General Earth Bonding</u>				
4.3.38	Bonding of metal drainage down pipes and items.		Item		
	<u>Testing</u>				
	<u>Supply and testing apparatus and testing in accordance with SANS Code.</u>				
4.3.39	Testing of joint continuity		Item		
4.3.40	Testing of Lightning Protection System		Item		
4.3.41	Testing of Earthing Points		Item		
4.3.42	Soil Resistivity Test and Report		Item		
	Carried Forward to Sectional Summary:			R	
	Bill No. 3				
	EXTERNAL WORKS (POVISIONAL)				
	PRASA				

**TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1**

Bill No	<u>SUMMARY</u>	Page No	Amount
4.1	PLATFORM SHELTERS	80	
4.2	PUBLIC ABLUTIONS (PROVISIONAL)	86	
4.3	EXTERNAL WORKS (POVISIONAL)	92	
PRASA		Carried to Final Summary	
			R

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

Item No	Description	Quantity	Rate	Amount
	<u>SECTION NO. 5</u>			
	<u>BILL NO. 1</u>			
	<u>AIR CONDITIONING AND VENTILATION INSTALLATION (PROVISIONAL)</u>			
	<u>EXISTING ADMINISTRATION OFFICE</u>			
	<u>AIR CONDITIONING</u>			
	Split Inverter Type Air Conditioning Pricing shall include Refrigerant Pipes.			
	Air Conditioning Indoor Unit and Outdoor Units.			
	Split Inverter Type.			
	<u>Ticket Sales Booth Six(6) off: 2.5kW Cooling Capacity and 2.8kW Heating Highwall Inverter type Split Unit, complete with controls and accessories.</u>			
5.1.1	Supply	No	6	
5.1.2	Intsall	No	6	
	<u>Existing Reception/Waiting Area: 7,1kW Cooling Capacity and 8kW Heating Ceiling Cassette Inverter type Split Unit, complete with controls and accessories</u>			
5.1.3	Supply	No	1	
5.1.4	Install	No	1	
	<u>Existing Offices-1: 3,4kW Cooling Capacity and 4kW Heating Ceiling Cassette Inverter type Split Unit, complete with controls and accessories.</u>			
5.1.5	Supply	No	5	
5.1.6	Install	No	5	
	Carried forward			
	Bill No. 1 HVAC (PROVISIONAL) PRASA		R	

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

	Brought forward			R	
	<u>Board Room: 5.3kW Cooling Capacity and 6kW Heating Ceiling Cassette Inverter type Split Unit, complete with controls and accessories.</u>				
5.1.7	Supply	No	1		
5.1.8	Install	No	1		
	<u>Existing Server: 2.5kW Cooling Capacity Only High Wall Inverter type Split Unit, complete with controls and accessories.</u>				
5.1.9	Supply	No	1		
5.1.10	Install	No	1		
	<u>Existing Offices-2: 2.5kW Cooling Capacity Only High Wall Inverter type Split Unit, complete with controls and accessories.</u>				
5.1.11	Supply	No	6		
5.1.12	Install	No	6		
	<u>Existing Area: 3.4kW Cooling Capacity and 4kW Heating Ceiling Cassette Inverter type Split Unit, complete with controls and accessories.</u>				
5.1.13	Supply	No	5		
5.1.14	Install	No	5		
	<u>EXISTING CLEANING STAFF AND ACCOMMODATION BUILDING</u>				
	<u>AIR CONDITIONING</u>				
	Split Inverter Type Air Conditioning Pricing shall include Refrigerant Pipes.				
	Air Conditioning Indoor Unit and Outdoor Units.				
	Split Inverter Type.				
	Carried forward			R	
	Bill No. 1 HVAC (PROVISIONAL) PRASA				

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**TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1**

Item No	Description	Quantity	Rate	Amount
	<u>SECTION NO. 6</u>			
	<u>BILL NO. 1</u>			
	<u>CONVENTIONAL FIRE PROTECTION SYSTEM</u>			
	<u>FIRE FIGHTING EQUIPMENT (PROVISIONAL)</u>			
	All rates supplied in this bill of quantities shall be deemed to include scaffolding to any height and fixing piping up to roof height.			
	<u>FIRE HYDRANTS</u>			
6.1.1	Supply and install Right Angle Tamperproof Hydrant with 100mm Storz Outlet and 100mm Female BSP Inlet. Spindle Square: - 16mm (SABS1128) (Installation downstream of water meter connection).	No	1	
6.1.2	Supply and install 100mm FxF (Female x Female) Full Bore BSP Brass Ball Valve	No	1	
6.1.3	Supply and install Cast Iron Wafer Check Valve with Ductile Iron or 316 Stainless Steel. Double Doors and EPDM Seal. This valve assembly downstream of the suction hydrant to be encased in a 600mm x 480mm medium grade cast iron manhole with frame for access for maintenance.	No	3	
6.1.4	Supply and install 100mm Two-Port Booster with 65mm Brass Booster Connectors, Pressure Gauge with 100mm T/16 Inlet encased in a steel cover with front open. Pressure gauge Dial to read up to 2500kPa.	No	1	
6.1.5	Supply and install 80mm x 65mm Cast Iron Right Angle Tamperproof Hydrant with Single Lug. Instantaneous Outlet and 80mm Male BSP Inlet. Hand wheel type hydrants are not acceptable.	No	5	
	Carried forward			
	Bill No. 1		R	
	FIRE FIGHTING EQUIPMENT (PROVISIONAL)			
	PRASA			

TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1

Brought forward

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HOSE REEL

6.1.6	Supply and install 30 Metre Hose Reel complete with 25mm Chromium plated Shut-off valve, Aluminium Nozzle, Hose Guide and angle iron fixing bracket.	m	4
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FIRE EXTINGUISHER

6.1.7	Supply and install 4.5kg Dry Chemical Powder (DCP) Type portable fire extinguisher complete with steel mounting bracket and 100mm W x 600mm L polished & varnished Meranti Hardwood Backing board plugged in wall behind.	No	12
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6.1.8	Supply and install 5kg Carbon dioxide (CO2) Type portable fire extinguisher complete with steel mounting bracket and 100mm W x 600mm L polished & varnished Meranti Hardwood Backing board plugged in wall behind.	No	4
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SIGNAGE

6.1.9	ABS signage in accordance with SANS 1186 for external twin fire booster connection incorporating the pictographs in the standard 290mm x 290mm module size fixed on a purpose made triangular steel support such that the sign is visible from the two sides along the road. The mounting height to be ± 2000 mm above finished ground level.	No	6
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6.1.10	Photoluminescent signage and warning notices in accordance with SANS 1186 Parts 1 & 5 incorporating the pictographs in the standard 190mm x 190mm module size encased in Aluminium metal frames with chamfered edges mechanically and securely fixed to walls or roof slabs or ceiling hung in stainless steel chain or wire. Strictly NO double sided tape or silicone sealing of statutory signage is allowed. Signs shall be a single sign along its width and not multiple individual signs.	No	32
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Carried forward

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Bill No. 1
FIRE FIGHTING EQUIPMENT (PROVISIONAL)
PRASA

**TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1**

	Brought forward			R
6.1.11	<p>ABS signage in accordance with SANS 1186 for external raised fire hydrants incorporating the pictographs in the standard 290mm x 290mm module size fixed on a purpose made triangular steel support such that the sign is visible from the two sides along the viewing two sides. The mounting height to be ±2000mm above finished ground level.</p> <p><u>EXTERNAL FIRE PIPING RETICULATION - BELOW GROUND (BY OTHERS)</u></p> <p>High Pressure HDPE Type IV PE 80 Class 16 pipes to SANS 4427:2008 used in conjunction with electro fusion and butt weld fittings or compression fittings or Victaulic Takstubs suitable for below-ground applications for the conveyance of potable water in reticulation systems in which continuous temperatures in excess of 25°C are not encountered.</p> <p>All piping rates supplied shall include couplings, bends, tees, sockets, pipe supports, anchors, along the running length, wrap (denso or similar), backfilling and compaction.</p>	No	5	
6.1.12	<p>Ø110mm High pressure pipe laid in ground not exceeding 1000mm deep.</p>	m	580	
6.1.13	<p>Ø110mm HDPE to 100mm Galvanised steel pipe connector</p>	No	18	
6.1.14	<p>Ø50mm High pressure pipe laid in ground not exceeding 1000mm deep.</p>	m	32	
	Carried forward			R
<p>Bill No. 1 FIRE FIGHTING EQUIPMENT (PROVISIONAL) PRASA</p>				

Brought forward			R
<u>INTERNAL FIRE PIPING RETICULATION</u>			
All above-ground firewater pipes shall be Medium Grade Galvanised Steel to SANS 62-1:2013 for nominal sizes from 25mm up to and including 150mm. All pipes and fittings shall be installed strictly in accordance with the manufacturer's specifications, and recommendations. Pipes shall be colour coded in accordance with the requirements of SANS 10140 Identification Colour Markings - Part 3: 2017 Contents of Pipelines or similar approved in close liaison with with the Fire Engineer.			
<u>Medium Grade Steel Pipes</u>			
6.1.15	100mm diameter pipes	m	24
6.1.16	100mm 90 deg elbow, SANS 509	No	18
6.1.17	100mm 45 deg elbow, SANS 509	No	7
6.1.18	100mm x 100mm x 80mm Tee, SANS 509	No	8
6.1.19	80mm diameter pipes	m	11
6.1.20	80mm 90 deg elbow, SANS 509	No	10
6.1.21	32mm diameter pipes	m	94
6.1.22	32mm 90 deg elbow, SANS 509	No	22
6.1.23	32mm x 32mm x 32mm Tee, SANS 509	No	24
6.1.24	32mm to 25mm reducer	No	28
6.1.25	25mm diameter pipes	m	88
6.1.26	25mm 90 deg elbow, SANS 509	No	24
6.1.27	25mm 45 deg elbow, SANS 509	No	12
Carried to Final Summary			R
Bill No. 1 FIRE FIGHTING EQUIPMENT (PROVISIONAL) PRASA			

**TEMBISA TRAIN STATION
PRASA - CORRIDOR 2A
UPGRADE TO EXISTING TRAIN STATION - PHASE 1**

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