Item No		Quantity	Rate	Amount

SECTION No. 1

BILL No. 1 : PRELIMINARIES

BUILDING AGREEMENT AND PRELIMINARIES

The JBCC Principal Building Agreement (Edition 6.2 - May 2018) prepared by the Joint Building Contracts Committee shall be the applicable building agreement, amended as hereinafter described

The JBCC Principal Building Agreement contract data form an integral part of this agreement

The JBCC General Preliminaries (May 2018) published by the Joint Building Contracts Committee for use with the JBCC Principal Building Agreement (Edition 6.2 - May 2018) shall be deemed to be incorporated in these bills of quantities, amended as hereinafter described

The contractor is deemed to have referred to the above mentioned documents for the full intent and meaning of each clause

The clauses in the above mentioned documents are hereinafter referred to by clause number and heading only

Where any item is not relevant to this agreement such item is marked N/A signifying "not applicable"

Where standard clauses or alternatives are not entirely applicable to this agreement such amendments, modifications, corrections or supplements as will apply are given under each relevant clause heading and such amendments, modifications, corrections or supplements shall take precedence notwithstanding anything to the contrary contained in the above mentioned documents

PREAMBLES FOR TRADES

The General Preambles for Trades 2017 published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained

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Supplementary preambles and/or specifications are incorporated in these bills of quantities to satisfy the requirements of this project. Such supplementary preambles and/or specifications shall take precedence over the provisions of the General Preambles

The contractor's prices for all items throughout these bills of quantities shall take account of and include where applicable for all of the obligations, requirements and specifications given in the General Preambles and in any supplementary preambles and/or specifications

If any ambiguity or discrepancy in any of the documents forming part of the contract is found, then the contract data and or amendments within the special conditions of contract and herein shall prevail in cases of conflict between any of the documents

PRICING OF PRELIMINARIES

Contractors are required to price all individual items in the preliminary and general section of the bill of quantities and should not lump the items into a single sum or amount. This fully priced schedule must be included as part of the priced bill of quantities returnable with tender submission

In the event that the contractor, due to causes of his own making, fails to achieve the targets set out in his construction programme and his performance is not in accordance with the contract, payment of the time related p&g will be paid in proportion to the value of the monthly progress payment and not in accordance with the projected cash flow for this item. The principal agent shall review the status quo and revert to paying the contractor in accordance with the contract once the contractor has demonstrated improvement of their performance and the principal agent is satisfied that the contractor is performing diligently.

Similarly the full amount of the fixed portion of the p&g will be paid only once the successful contractor has fully complied with deliverables under this section

Should the contractor select Option A in the contract data for the adjustment of preliminaries, the amounts entered against the relevant items in these preliminaries are to be divided into one or more of the three categories provided namely fixed (F), value related (V) and time related (T)

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SECTION A: PRINCIPAL BUILDING AGREEMENT

Pricing of bills of quantities

The contractor is 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 packaging, duties, taxes (other than Value Added Tax), imposts, establishment charges, overheads, profit and all other obligations arising out of this agreement. Value Added Tax (VAT) is to be separately stated on the summary page of these bills of quantities

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 contractor's omission to price any item will be entertained

Prices for all construction equipment, temporary works, services and other items shall include for the supply, maintenance, operating cost and subsequent removal and making good as necessary

Contractors are reminded that some of the works are to be undertaken under restrictive site conditions, over steep terrain, in dense vegetation, protected environments etc.

In addition to the usual rates priced for standard measured items in the bills of quantities, contractors shall provide for all additional plant, labour, equipment, temporary works, temporary access ways and any additional supervision, transport, security, special plant and equipment to navigate restrictive site conditions and all things necessary for the completion of the works within this bills of quantities. The rates or amounts tendered for these items shall also include for the contractors management, attendance, profit, costs for removal and reinstatement of the ground conditions, vegetation, etc in the state and condition prior to the works being undertaken.

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In addition to the usual rates priced for compliance with law and regulation in relation to inspections, warranties, guarantees, tests, analysis, commissioning and all things necessary for compliance, the contractor is expected to include in the rates, prices and the tendered total of the prices for all inspections, warranties, guarantees, tests, analysis, commissioning and all things necessary for compliance, payable by the contractor.

Such items include but are not limited to:

- Electrical Compliance Certificate

- Plumbing Compliance Certificate

- Lightning Certificate

- Electrical and Mechanical test certificates

- Four months warranty from electrical appliances.

- Plumbing and drainage pressure test certificates

- Fire Compliance Certificate

- SANS 10400-A:2010 compliance certificates

- Any other requirement as per the latest National Building Regulation

Contractors are reminded and hereby given the opportunity to allow for and price all costs related to the abnormal working conditions referred to herein as no claims for additional costs will be entertained for any omission on the part of contractor

Clause 3.9 amended to read 'The priced document shall not be used as a specification for material and goods and the quantities should not be used for procurement purposes.

All procurement of material will be based on actual site measurements and not on drawings, specifications or the bill of quantities

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Abbreviated descriptions

The items in these bills of quantities utilise abbreviated descriptions. It is the intention that the abbreviated descriptions be fully described when read with the applicable measuring system and the relevant preambles and/or specifications. However, should the full intent and meaning of any description not be clear, the contractor shall, before submission of his tender, call for a written directive from the principal agent, failing which it shall be assumed that the contractor has allowed in his pricing for materials and workmanship in terms of international best practice

Legal status of contractor

If the contractor constitutes a joint venture, consortium or other unincorporated grouping of two or more persons then:

These persons are deemed to be jointly and severally liable to the employer for the performance of this agreement

These persons shall notify the employer of their leader who has assigned authority to bind the contractor and each of these persons

The contractor shall not alter its composition or legal status without the prior written consent of the employer

Interpretation (A1-A7)

1 Clause 1.0 - Definitions and interpretation

F:.....V:..... F:..... Item

2 Clause 2.0 - Law, regulations and notices

F:.....V:..... F:..... Item

3 Clause 3.0 - Offer and acceptance

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

4 Clause 4.0 - Cession and assignment

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

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5	Clause 5.0 - Documents			
	F:..... V:..... T:.....	Item		
	Provision is made in the summary page of these bills of quantities for the inclusion of Value Added Tax (VAT)			
	Priced document as specification			
	Clause 5.4 is deemed to be deleted			
	The principal agent shall decide which portion of the priced document may be used as a specification of materials and goods or methods, if any			
	Electronic issue of drawings			
	Some drawings for this project will be issued electronically and the contractor shall be deemed to have received such drawings on the date that such drawings have been dispatched electronically [5.6]			
6	Clause 6.0 - Employer's agents			
	F:..... V:..... T:.....	Item		
	Delegated authority			
	The authority of the principal agent to issue contract instructions [17.1] and perform duties for specific aspects of the works is delegated to agents as follows [6.2]. This does not preclude the principal agent from issuing such contract instructions:			
	1. Architect			
	1.1 Duties [6.2] :			
	The architect is responsible for the architectural design, functional design and quality inspection of the works			
	1.2 Contract instructions [6.2; 17.1] :			
	1.2.1 Rectification of discrepancies, errors in description or quantity or omission of items in the agreement other than in the JBCC Principal Building Agreement			
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1.2.2 Alteration to design, standards or quantity of the works provided that such contract instructions shall not substantially change the scope of the works

1.2.3 The site [13.0]

1.2.4 Compliance with the law, regulations and bylaws [2.1]

1.2.5 Provision and testing of samples of materials and goods and/or of finishes and assemblies of elements of the works

1.2.6 Opening up of work for inspection, removal or re-execution [23.2.4; 26.4.2]

1.2.7 Removal or re-execution of work

1.2.8 Removal or substitution of any materials and goods

1.2.9 Protection of the works

1.2.10 Making good physical loss and repairing damage to the works [23.2.2]

1.2.11 Rectification of defects [21.2]

1.2.12 A list for practical completion specifying outstanding or defective work to be rectified to achieve practical completion, a list for completion and a list for final completion specifying outstanding or defective work to be rectified to achieve final completion

1.2.13 Expenditure of budgetary allowances, prime cost amounts and provisional sums.

1.2.14 Appointment of a subcontractor [14.0; 15.0]

1.2.15 Work by direct contractors [16.0]

1.2.16 On suspension or termination, protection of the works, removal of construction equipment and surplus materials and goods [29.0]

2. Quantity surveyor

2.1 Duties [6.2] :

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The quantity surveyor is responsible for all measurements, valuations, financial assessments and all other quantity surveying and cost control functions of the works

2.2 Contract instructions [6.2; 17.1] :

2.2.1 Rectification of discrepancies, errors in description or quantity or omission of items in the agreement other than in the JBCC Principal Building Agreement

2.2.2 Alteration to design, standards or quantity of the works provided that such contract instructions shall not substantially change the scope of the works

2.2.3 The site [13.0]

2.2.4 Compliance with the law, regulations and bylaws [2.1]

2.2.5 Provision and testing of samples of materials and goods and/or of finishes and assemblies of elements of the works

2.2.6 Opening up of work for inspection, removal or re-execution [23.2.4; 26.4.2]

2.2.7 Removal or re-execution of work

2.2.8 Removal or substitution of any materials and goods

2.2.9 Protection of the works

2.2.10 Making good physical loss and repairing damage to the works [23.2.2]

2.2.11 Rectification of defects [21.2]

2.2.12 A list for practical completion specifying outstanding or defective work to be rectified to achieve practical completion, a list for completion and a list for final completion specifying outstanding or defective work to be rectified to achieve final completion

2.2.13 Expenditure of budgetary allowances, prime cost amounts and provisional sums

2.2.14 Appointment of a subcontractor [14.0; 15.0]

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2.2.15 Work by direct contractors [16.0]

2.2.16 On suspension or termination, protection of the works, removal of construction equipment and surplus materials and goods [29.0]

3. Civil and structural engineer

3.1 Duties [6.2] :

The civil and structural engineer is responsible for all aspects of civil and structural engineering design and quality inspection of the works

3.2 Contract instructions [6.2; 17.1] :

3.2.1 Rectification of discrepancies, errors in description or quantity or omission of items in the agreement other than in the JBCC Principal Building Agreement

3.2.2 Alteration to design, standards or quantity of the works provided that such contract instructions shall not substantially change the scope of the works

3.2.3 The site [13.0]

3.2.4 Compliance with the law, regulations and bylaws [2.1]

3.2.5 Provision and testing of samples of materials and goods and/or of finishes and assemblies of elements of the works

3.2.6 Opening up of work for inspection, removal or re-execution [23.2.4; 26.4.2]

3.2.7 Removal or re-execution of work

3.2.8 Removal or substitution of any materials and goods

3.2.9 Protection of the works

3.2.10 Making good physical loss and repairing damage to the works [23.2.2]

3.2.11 Rectification of defects [21.2]

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3.2.12 A list for practical completion specifying outstanding or defective work to be rectified to achieve practical completion, a list for completion and a list for final completion specifying outstanding or defective work to be rectified to achieve final completion

3.2.13 Expenditure of budgetary allowances, prime cost amounts and provisional sums

4. Mechanical engineer

4.1 Duties [6.2] :

The mechanical engineer is responsible for all aspects of mechanical engineering design and quality inspection of the works ? and, where appointed by the employer for quantity surveying services in respect of the mechanical installations, for all measurements, valuations, financial assessments and all other quantity surveying and cost control functions

4.2 Contract instructions [6.2; 17.1] :

4.2.1 Rectification of discrepancies, errors in description or quantity or omission of items in the agreement other than in the JBCC Principal Building Agreement

4.2.2 Alteration to design, standards or quantity of the works provided that such contract instructions shall not substantially change the scope of the works

4.2.3 Compliance with the law, regulations and bylaws [2.1]

4.2.4 Provision and testing of samples of materials and goods and/or of finishes and assemblies of elements of the works

4.2.5 Opening up of work for inspection, removal or re-execution [23.2.4; 26.4.2]

4.2.6 Removal or re-execution of work

4.2.7 Removal or substitution of any materials and goods

4.2.8 Protection of the works

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4.2.9 Making good physical loss and repairing damage to the works [23.2.2]

4.2.10 Rectification of defects [21.2]

4.2.11 A list for practical completion specifying outstanding or defective work to be rectified to achieve practical completion, a list for completion and a list for final completion specifying outstanding or defective work to be rectified to achieve final completion

4.2.12 Expenditure of budgetary allowances, prime cost amounts and provisional sums

5. Electrical/Electronics engineer

5.1 Duties [6.2] :

The electrical engineer is responsible for all aspects of electrical and electronics engineering design and quality inspection of the works and, where appointed by the employer for quantity surveying services in respect of the electrical and electronics installations, for all measurements, valuations, financial assessments and all other quantity surveying and cost control functions

5.2 Contract instructions [6.2; 17.1] :

5.2.1 Rectification of discrepancies, errors in description or quantity or omission of items in the agreement other than in the JBCC Principal Building Agreement

5.2.2 Alteration to design, standards or quantity of the works provided that such contract instructions shall not substantially change the scope of the works

5.2.3 Compliance with the law, regulations and bylaws [2.1]

5.2.4 Provision and testing of samples of materials and goods and/or of finishes and assemblies of elements of the works

5.2.5 Opening up of work for inspection, removal or re-execution [23.2.4; 26.4.2]

5.2.6 Removal or re-execution of work

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5.2.7 Removal or substitution of any materials and goods

5.2.8 Protection of the works

5.2.9 Making good physical loss and repairing damage to the works [23.2.2]

5.2.10 Rectification of defects [21.2]

5.2.11 A list for practical completion specifying outstanding or defective work to be rectified to achieve practical completion, a list for completion and a list for final completion specifying outstanding or defective work to be rectified to achieve final completion

5.2.12 Expenditure of budgetary allowances, prime cost amounts and provisional sums

6. Health and safety consultant

(Appointed through the contract - refer to Provisional Sums)

6.1 Duties [6.2] :

The health and safety consultant is responsible for all aspects of health and safety of the works. Without derogating from the generality thereof, the health and safety consultant will perform the following specific functions and duties in respect of the health and safety aspects of the works. He shall:

6.1.1 Act as the employer's agent in terms of the Construction Regulations issued in terms of the Occupational Health and Safety Act,1993 as amended

6.1.2 Prepare and update the health and safety specification for the works

6.1.3 Agree with the contractor the health and safety plan for the works

6.1.4 Carry out regular audits to ensure adherence to the safety plan and compliance with the act and regulations

6.1.5 Stop the execution of the works where the agreed specification or plan is not adhered to

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7	Clause 7.0 - Design responsibility				
	F:..... V:..... T:.....	Item			
8	Clause 8.0 - Insurances and securities (A8-A11)				
	F:..... V:..... T:.....	Item			
9	Clause 9.0 - Indemnities				
	F:..... V:..... T:.....	Item			
10	Clause 10.0 - Insurances				
	F:..... V:..... T:.....	Item			
	Clause 10.1.1 - Contracts Works Insurance				
	'the contractor shall be responsible for effecting and maintaining the contract works insurance for the full duration of the contract period. The insured amount for the full scope of works shall be 120% of the contract amount				
	Clause 10.1.2 - Supplementary Insurance Clause 10.1.3 - Public Liability Insurance				
	Clause 10.1.4 - Removal of Lateral Support Insurance Clause 10.1.5 - Other Insurances				
11	Clause 11.0 - Securities				
	F:..... V:..... T:.....	Item			
	Clause 11.1 - Guarantee for construction				
	The contractor shall not provide to the employer a guarantee for construction within fifteen (15) working days of acceptance of the contractor's tender.				
	Clause 11.5 - Guarantee for payment				
	The employer shall not provide to the contractor a guarantee for payment. The contractor shall waive his lien or right of continuing possession of the works [11.10]				
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Extension of waiver of lien

The contractor shall ensure that a waiver of lien is included in all subcontracts and that the works executed on the site are kept free of all liens and other encumbrances at all times [11.10]

12 Clause 12.0 - Execution (A12 - A17)

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

Clause 12.0 - Obligations of the parties

Office accommodation

The contractor shall provide, maintain and remove on practical completion air conditioned office accommodation with suitable tables and chairs for meetings to be held on the site. Such offices shall be kept clean and fit for use at all times [12.2.18]

Notice board

The contractor shall erect in a position approved by the principal agent, maintain and remove on practical completion a notice board recommended by the South African Institute of Architects and as approved by the principal agent listing the names and logos of the employer, the contractor and the professional consultants. No subcontractor or supplier notice boards may be erected unless permission is granted by the principal agent for such notice boards to be erected [12.2.18]

Statutory and other notices

The contractor shall submit and/or comply with all statutory and other notices that may be required by any local or other authority in order not to cause any delay to the commencement of the works by the contractor. The contractor shall pay all deposits or fees in this regard

It is, however, specifically recorded that the employer shall be responsible for the timeous approval of building plans by any local or other authorities and the payment of any fees or charges related thereto

13 Clause 13.0 - Setting out

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

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14	Clause 14.0 - Nominated subcontractors			
	F:..... V:..... T:.....	Item		
15	Clause 15.0 - Selected subcontractors			
	F:..... V:..... T:.....	Item		
16	Clause 16.0 - Direct contractors			
	F:..... V:..... T:.....	Item		
	1. Designate an area for the direct contractor to establish a temporary office and workshop and storage of equipment and materials			
	2. Allow the use of personnel welfare facilities, where provided			
	3. Provide water, lighting and single phase electric power to a position within 50m of the place where the direct contract work is to be carried out, other than fuel or power for commissioning of any installation			
	4. Permit the direct contractor to use erected scaffolding, hoisting facilities, etc provided by the contractor, in common with others having the like right, while it remains erected on the site [16.1]			
17	Clause 17.0 - Contract instructions			
	F:..... V:..... T:.....	Item		
	<u>Site instructions</u>			
	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			
	Completion (A18 - A24)			
18	Clause 18.0 - Interim completion N/A	Item		
19	Clause 19.0 - Practical completion			
	F:..... V:..... T:.....	Item		
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20	Clause 20.0 - Completion in sections			
	F:..... V:..... T:.....	Item		
21	Clause 21.0 - Defects liability period and final completion A 2.5% retention shall apply. The maintenance period shall be 12 months			
	F:..... V:..... T:.....	Item		
22	Clause 22.0 - Latent defects liability period			
	F:..... V:..... T:.....	Item		
23	Clause 23.0 - Revision of the date for practical completion			
	F:..... V:..... T:.....	Item		
	Adverse weather conditions			
	The contract duration includes a monthly allowance of 3 working days for adverse weather conditions [23.1.1] during which rainfall exceeds 10mm per day. These days shall be reflected on the critical path of the construction programme. Where the programmed delays for adverse weather conditions exceed the actual delays incurred the date for practical completion will not be adjusted. Where the actual delays incurred for adverse weather conditions exceed the programmed delays and such delays have impacted on the critical path of the construction programme, the date for practical completion will be adjusted should the requirements of Clause 23.0 be satisfied			
	Substitution of materials, goods and or workmanship			
	The removal or substitution of any materials, goods and/or workmanship 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]			
24	Clause 24.0 - Penalty for late or non-completion			
	F:..... V:..... T:.....	Item		
	Payment (A25 - A27)			
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25	Clause 25.0 - Payment F:..... V:..... T:.....	Item		
	Prices submitted Where prices are submitted by the contractor or subcontractor during the progress of the works in respect of contract instructions or in regard to a claim under the terms of this agreement and notwithstanding the fact that such prices may be used in an interim payment certificate, there is to be no presumption of acceptance. Should the principal agent wish to accept any such prices prior to the issue of the certificate of final completion, it shall be in writing Clause 25 amended to read 'The employer shall pay to the contractor the amount certified in interim payment certificate within thirty (30) calendar days of the date of issue of the payment certificate or the contractors tax invoice whichever is the later date' Materials and goods stored off site shall not be included in the amount authorised for payment unless the requirements for an Advanced Payment Guarantee are met			
26	Clause 26.0 - Adjustment of the contract value and final account F:..... V:..... T:.....	Item		
	Fluctuations in costs All fluctuations in costs, with the exception of fluctuations in the rate of Value Added Tax, shall be for the account of the contractor [26.9.5] **Tenant installation/user requirements delayed** There is a possibility that certain works related to tenant installation/user requirements may have to be delayed and may consequently not be executed prior to practical completion			
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	Should the contractor be instructed to do so he shall execute this work under the conditions pertaining to this agreement on the basis that a separate amount for preliminaries appurtenant to this work (if applicable) is agreed to between the contractor and the principal agent and on condition that instruction to proceed with such work is given to him within a period of three (3) calendar months after the date of practical completion of the works The contractor shall not receive any mark-up for overheads and profit on any omission of tenant installation work or tenant installation work by others. Claims of loss of profit shall not be considered The employer reserves the right to omit such work without compensation to the contractor for loss of profit or any other loss which the contractor may suffer as a result of such omission **Cost of claims** All costs incurred by the contractor in the preparation of claims shall be borne by the contractor. This provision shall not preclude an adjudicator or an arbitrator appointed in terms of this agreement [30.6 & 7] from making a determination on costs **Claims from subcontractors** The contractor shall review, assess and adjudicate any claims received by him from any subcontractor and thereafter submit same to the principal agent with a recommendation in order to assist the principal agent in adjudicating the claim [26.6]			
27	Clause 27.0 - Recovery of expense and/or loss F:..... V:..... T:.....	Item		
	Suspension and termination (A28 - A29)			
28	Clause 28.0 - Suspension by the contractor F:..... V:..... T:.....	Item		
29	Clause 29.0 - Termination F:..... V:..... T:.....	Item		
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	Dispute resolution (A30)			
30	Clause 30.0 - Dispute resolution			
	F:..... V:..... T:.....	Item		
	Agreement			
31	The required information of the parties and the amount of the contract sum shall be inserted in the agreement for signature of the agreement by the parties			
	F:..... V:..... T:.....	Item		
	Contract data			
	Tenderer's selections			
32	Before submission of his tender the contractor is to complete the tenderer's selections in the contract data			
	F:..... V:..... T:.....	Item		
	SECTION B - GENERAL PRELIMINARIES			
	Definitions and interpretation (B1)			
33	Clause 1.1 - Definitions			
	F:..... V:..... T:.....	Item		
34	Clause 1.2 - Interpretation			
	F:..... V:..... T:.....	Item		
	Documents (B2)			
35	Clause 2.1 - Checking of documents			
	F:..... V:..... T:.....	Item		
	Clause 2.2 - Provisional bills of quantities			
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	Multiple procurement			
36	These bills of quantities are in multiple procurement format ie the "wet trades" - earthworks, concrete, formwork and reinforcement, precast concrete, masonry, waterproofing and sub-surface drainage - are provisionally measured and the subsequent trades are budgetary allowances and provisional sums			
	F:..... V:..... T:.....	Item		
37	Clause 2.3 - Availability of construction information			
	F:..... V:..... T:.....	Item		
38	Clause 2.4 - Ordering of materials and goods			
	F:..... V:..... T:.....	Item		
	Previous work and adjoining properties (B3)			
39	Clause 3.1 - Previous work - dimensional accuracy			
	F:..... V:..... T:.....	Item		
40	Clause 3.2 - Previous work - defects			
	F:..... V:..... T:.....	Item		
41	Clause 3.3 - Inspection of adjoining properties			
	F:..... V:..... T:.....	Item		
	The site (B4)			
42	Clause 4.1 - Handover of site in stages			
	F:..... V:..... T:.....	Item		
43	Clause 4.2 - Enclosure of the works			
	F:..... V:..... T:.....	Item		
44	Clause 4.3 - Geotechnical and other investigations			
	F:..... V:..... T:.....	Item		
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	Clause 4.4 - Encroachments			
45	The contractor shall notify the principal agent if any encroachments of adjoining foundations, buildings, structures, pavements, boundaries, etc. exist in order that the necessary arrangements may be made for the rectification of any such encroachments			
	F:..... V:..... T:.....	Item		
46	Clause 4.5 - Existing premises occupied			
	F:..... V:..... T:.....	Item		
47	Clause 4.6 - Services - known			
	F:..... V:..... T:.....	Item		
	Management of contract (B5)			
48	Clause 5.1 - Management of the works			
	F:..... V:..... T:.....	Item		
49	Clause 5.2 - Progress meetings			
	F:..... V:..... T:.....	Item		
50	Clause 5.3 - Technical meetings			
	F:..... V:..... T:.....	Item		
	Samples, shop drawings and manufacturer's instructions (B6)			
51	Clause 6.1 - Samples of materials			
	F:..... V:..... T:.....	Item		
52	Clause 6.2 - Workmanship samples			
	F:..... V:..... T:.....	Item		
53	Clause 6.3 - Shop drawings and As-Built Drawings			
	F:..... V:..... T:.....	Item		
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54	Clause 6.4 - Compliance with manufacturer's instructions			
	F:..... V:..... T:.....	Item		
	Deposits and fees (B7)			
55	Clause 7.1 - Deposits and fees			
	F:..... V:..... T:.....	Item		
	Temporary services (B8)			
56	Clause 8.1 - Water			
	F:..... V:..... T:.....	Item		
57	Clause 8.2 - Electricity			
	F:..... V:..... T:.....	Item		
58	Clause 8.3 - Ablution and welfare facilities in compliance to the provisions of the Construction Regulations 2014 issued in terms of the Occupational Health and Safety Act, 1993 as amended: Section (30): Sub-section (1)(a) - Shower facilities after consultation with the employees or the employees representatives, or at least one shower facility for every 15 persons; Sub-section (1)(b) - at least one sanitary facility for each sex and for every 30 workers; Sub-section (1)(c) - changing facilities for each sex and Sub-section (1)(d) - sheltered eating areas			
	F:..... V:..... T:.....	Item		
59	Clause 8.4 - Communication facilities			
	F:..... V:..... T:.....	Item		
60	Storage facilities			
	F:..... V:..... T:.....	Item		
	Prime cost amounts (B9)			
	Clause 9.1 - Responsibility for prime cost amounts			
	Attendance on subcontractors (B10)			
	Clause 10.1 - General attendance			
	Carried to Collection		R	

Section 1
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Preliminaries

	User note			
61	General attendance is defined as being the duties of the contractor in terms of clause 12.2 of the JBCC n/s subcontract agreement			
	F:..... V:..... T:.....	Item		
	Clause 10.2 - Special attendance			
	General (B11)			
62	Clause 11.1 - Protection of the works			
	F:..... V:..... T:.....	Item		
63	Clause 11.2 - Protection/isolation of existing works and works occupied in sections			
	F:..... V:..... T:.....	Item		
	Clause 11.3 - Security of the works			
	The contractor shall be briefed on the restrictions of movement, servitudes, access control, buildings in use, security requirements and security clearances, working hours due to the right being occupied and under the employers control at all times. The contractor shall not extend his operations into any restricted or undefined areas.			
	Work shall be carried out during normal working hours. Any extended times or approval or overtime work shall be considered and approved by the PA.			
	The contractor shall comply with the employers rules for the control of delivery of materials and goods into the site and for the removal of such items from the site.			
64	The Contractor will be responsible for ensuring the security and protection of all material, hand tools, power tools, plant, equipment, machinery, etc stored on the site. The Contractor will be required to make arrangements with the Employer, through the Principal Agent, for the use of and reimbursement for the security measures currently in force and operational on the site			
	F:..... V:..... T:.....	Item		
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65	Clause 11.4 - Notice before covering work				
	F:..... V:..... T:.....	Item			
	Clause 11.5 - Disturbance				
	Disturbance				
66	All work is to be carried out in such a manner as to cause no unacceptable or unreasonable dust, noise, vibrations, nuisance, inconvenience, annoyance and the like to the public, others, other properties and traffic in so far as they exceed the permissible limitations set by government legislation or by the local authority. Any delays, stoppages and the like arising from or in order to comply with the above will not constitute grounds for an adjustment to the construction period or contract value whatsoever				
	F:..... V:.....T:.....	Item			
	Clause 11.6 - Environmental disturbance				
	Controlling all forms of pollution				
	The contractor shall be responsible for and take all precautions in controlling by whatever means necessary all forms of pollution emanating from the site during the construction period due inter alia to noise, artificial light, wind-blown sand, dust, deposits of mud, etc				
	The contractor is to ensure that all roads which border the site and are used by the contractor during the execution of the works are kept clean and free of any dirt or debris caused by the execution of the works				
67	Clause 11.7 - Works cleaning and clearing				
	F:..... V:..... T:.....	Item			
68	Clause 11.8 - Vermin				
	F:..... V:..... T:.....	Item			
69	Clause 11.9 - Overhand work				
	F:..... V:..... T:.....	Item			
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70	Clause 11.10 - Tenant installations			
	F:..... V:..... T:.....	Item		
71	Clause 11.11 - Advertising			
	F:..... V:..... T:.....	Item		
	SECTION C - SPECIFIC PRELIMINARIES			
72	**Site instructions**			
	Instructions issued on site are to be recorded in triplicate in a site instruction book which is to be maintained on site by the contractor			
	F:..... V:..... T:.....	Item		
73	**Warranties for material and workmanship**			
	Where warranties for materials and/or workmanship are called for, the contractor shall obtain a written warranty, addressed to the employer, from the firm supplying the materials and/or doing the work and shall deliver same to the principal agent on the certified completion of the contract. The warranty shall state that workmanship, materials and installation are warranteed for a specified period from the date of final completion and that any defects that may arise during the specified period shall be made good at the expense of the firm supplying the materials and/or doing the work, upon written notice to do so. The warranty will not be enforced if the work is damaged by defects in the construction of the building in which case the responsibility for replacement shall rest entirely with the contractor			
	F:.....V:.....T:.....	Item		
	Carried to Collection		R	

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74	**Co-operation of contractor for cost management** It is specifically agreed that the contractor accepts the obligation of assisting the principal agent in implementing proper cost management. The contractor will be advised by the principal agent of all cost management procedures which will be implemented to ensure that the final building cost does not exceed the budget. The principal agent undertakes to make available to the contractor all budgetary allowances and cost assessments/reports to enable the proper procedure to be implemented and the contractor shall attend all cost plan review and cost management meetings. The contractor undertakes to extend these procedures, as necessary, to all subcontractors F:.....V:.....T:.....	Item		
75	**Propping of floors below** The contractor is advised that propping of floors below may be required if he wishes to use any areas of completed suspended reinforced concrete slabs for vehicle access, storage of materials and goods and location of plant, scaffolding, etc. The location of these areas and any necessary propping shall be approved by the principal agent and the cost thereof shall be borne by the contractor F:..... V:..... T:.....	Item		
76	**Agreement: Code of conduct for Contrators** The Contractor must comply with the agreement: Code of Conduct for Conractors, as per IDT requirements F:..... V:..... T:.....	Item		
77	**Rules and Regulations** The Contractor must comply with the Rules and Regulations (as per IDT requirements) F:..... V:..... T:.....	Item		
	Carried to Collection		R	

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78	**LOCAL LABOUR** It is a general requirement of this contract that persons normally resident in the locality of the works (local labour) be given preference for employment on the contract. Provided, however, that should adequate and appropriate labour not be available within the locality, other may be employed subject to satisfactory proof being provided that every reasonable endeavour has been made to employ local labour. The Contractor shall identify the local community leaders with the purpose of negotiating with them regarding the utilization of local labour in the construction process. In this regard, the Contractor shall furthermore give preference, wherever possible to the employment of single heads of households, women and youth. The Contractor shall, in general, maximize the involvement of the local community. F:..... V:..... T:.....	Item		
79	**LABOUR RECORD** At the end of each week the contractor shall provide the principal agent with written record, in schedule form, reflecting the number and description of tradesmen and labours employed by him and all subcontractors on each day. F:..... V:..... T:.....	Item		
80	**C13 HIV/AIDS Awareness** It is required of the contractor to thoroughly study the HIV/AIDS Specification (HIV 1 to HIV 4) of the Department of Public Works, which must be read together with and is deemed to be incorporated under this section of the Bills of Quantities. Provision for pricing of HIV/AIDS awareness is made under C13.1 to C13.5 hereafter and it is explicitly pointed out that all requirements of the aforementioned specification are deemed to be priced hereunder, as the said items represent the only method of measurement and no additional items or extras to the contract in this regard shall be entertained The contractor must take note that compliance with the HIV/AIDS Specification is compulsory. In the event of partial or total non-compliance, the F:..... V:..... T:.....	Item		
	Carried to Collection		R	

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81	**C13.1 Awareness Champion** Selection, appointment, briefing and making available of an Awareness Champion including provision of all relevant services, all in accordance with the HIV/AIDS Specification. F..... V..... T.....	Item		
82	**C13.3 Posters, Booklets, Videos, etc.** Provision, displaying, maintaining and replacing when necessary of four plastic laminated posters, booklets and educational videos, etc. for the F..... V..... T.....	Item		
83	**C13.4 Access to condoms** Provision and maintenance of condom dispensers fixed in position, including male and female condoms, replenish male and female condoms on a daily basis as required for the duration of the construction period, all in accordance with the HIV/AIDS Specification. F..... V..... T.....	Item		
84	**C13.5 Monitoring** Monitoring HIV/AIDS awareness of workers, providing the principal agent with access to information including making available all reports, thoroughly completed and reflecting the correct information, for the duration of the construction period, all in accordance with the HIV/AIDS Specification. F..... V..... T.....	Item		
85	**C14 Occupational Health and Safety Act No. 85 of 1993** Bidders are to allow for costs in providing a "Construction Phase Safety, Health and Environmental Plan". Bidders are further reminded that it is their responsibility to amend their safety plan if the assessed risk of the work changes in the slightest manner. F..... V..... T.....	Item		
	Carried to Collection		R	

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86	**C15 Expanded Public Works Programme (EPWP) Management and Administration** Bidders are to allow for all costs associated with the appointment of a Contractor's Compliance Officer responsible for managing EPWP databases, compiling monthly labour reports, capturing data on the EPWP reporting system and managing community liaison activities.The bidder shall study the guidelines for the implementation of labour-intensive infrastructure projects under the Expanded Public Works Programme (EPWP) attached to this document. The Contractor shall take note of the requirements and inform all selected and or other sub-contractors, as no claim afterwards will be entertained.			
	F..... V..... T.....	Item		
	COMMUNITY LIAISON OFFICER (CLO) It is a requirement of this Contract that a Community Liaison officer (CLO) be appointed for the area represented by the Tender. The function of the CLO shall be to represent the local community in matters concerning the use of local labour on the works and to assist with and facilitate communication between the Contractor, the Principal Agent and the local communities. The period of appointment of the CLO shall be as stated in the Contract for Temporary Employment as a Community Liaison officer referred to below. It must be noted that the date of commencement of temporary employment of the CLO shall be no later than the date of commencement of the Contract. The identification of the approved CLO to be appointed by the Contractor under the Contract shall be resolved by the Contractor, the particular Ward Councillors in collaboration with the Local Communities and reported to Principal Agent. It will be required, therefore, that the successful Tenderer (i.e. the Contractor) enter into a contract for the employment of the above-mentioned CLO. The contract will be between the Contractor and the CLO, all costs involved shall be borne by the Contractor and the tender shall be deemed to include for this.			
	SUMMARY OF CATEGORIES			
87	SUB - TOTAL: FIXED ITEMS	Item		
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88	SUB - TOTAL: VALUE - RELATED ITEMS	Item			
89	SUB - TOTAL: TIME - RELATED ITEMS	Item			
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Preliminaries

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Section 1
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Preliminaries

Item No		Quantity	Rate	Amount
	SECTION 1			
	BILL No. 2			
	HEALTH AND SAFETY			
	BUILDING AGREEMENT AND PRELIMINARIES			
	The JBCC Principal Building Agreement (Edition 6.2 - May 2018) prepared by the Joint Building Contracts Committee shall be the applicable building agreement, amended as hereinafter described			
	The JBCC Principal Building Agreement contract data form an integral part of this agreement			
	The JBCC General Preliminaries (May 2018) published by the Joint Building Contracts Committee for use with the JBCC Principal Building Agreement (Edition 6.2 - May 2018) shall be deemed to be incorporated in these bills of quantities, amended as hereinafter described			
	The contractor is deemed to have referred to the above-mentioned documents for the full intent and meaning of each clause			
	The clauses in the above-mentioned documents are hereinafter referred to by clause number and heading only			
	Where any item is not relevant to this agreement such item is marked N/A signifying "not applicable"			
	Where standard clauses or alternatives are not entirely applicable to this agreement such amendments, modifications, corrections or supplements as will apply are given under each relevant clause heading and such amendments, modifications, corrections or supplements shall take precedence notwithstanding anything to the contrary contained in the above-mentioned documents			
	Carried to Collection		R	
	Section 1 Bill No. 2 Health and Safety			

PREAMBLES FOR TRADES

The General Preambles for Trades 2017 published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained

Supplementary preambles and/or specifications are incorporated in these bills of quantities to satisfy the requirements of this project. Such supplementary preambles and/or specifications shall take precedence over the provisions of the General Preambles

The contractor's prices for all items through-out these bills of quantities shall take account of and include where applicable for all of the obligations, requirements and specifications given in the General Preambles and in any supplementary preambles and/or specifications

If any ambiguity or discrepancy in any of the documents forming part of the contract is found, then the contract data and or amendments within the special conditions of contract and herein shall prevail in cases of conflict between any of the documents

PRICING OF PRELIMINARIES

Contractors are required to price all individual items in the preliminary and general section of the bill of quantities and should not lump the items into a single sum or amount. This fully priced schedule must be included as part of the priced bill of quantities returnable with tender submission

In the event that the contractor, due to causes of his own making, fails to achieve the targets set out in his construction programme and his performance is not in accordance with the contract, payment of the time related P&G will be paid in proportion to the value of the monthly progress payment and not in accordance with the projected cash flow for this item. The principal agent shall review the status quo and revert to paying the contractor in accordance with the contract once the contractor has demonstrated improvement of their performance and the principal agent is satisfied that the contractor is performing diligently.

Carried to Collection R

Section 1
Bill No. 2
Health and Safety

	Similarly the full amount of the fixed portion of the P&G will be paid only once the successful contractor has fully complied with deliverables under this section Should the contractor select Option A in the contract data for the adjustment of preliminaries, the amounts entered against the relevant items in these preliminaries are to be divided into one or more of the three categories provided namely fixed (F), value related (V) and time related (T)				
	Health and safety				
1	Notify the provincial director in writing of the commencement of construction work with and including submission of a letter of receipt and acknowledgement of the aforementioned notice by the director of his/her representative F:..... V:.....T:.....		Item		
2	Allow for the necessary Workman's Compensation Fund or FEM contributions for the duration of the project with and including renewals F:..... V:.....T:.....		Item		
3	Allow for the preparation and approval of project-specific H&S Plan & File [CR 7(1)(a)] F:..... V:.....T:.....		Item		
4	Allow for the implementation and maintenance of project-specific H&S Plan & File. [CR 7] (Unit refers to number of months) F:..... V:.....T:.....	No	1.00		
5	Allow for the appointment of a Full-Time Registered with SACPCMP Competent Construction Health & Safety Officer to assist in the control of all health and safety related aspects on site as per [CR 8(5)] (Unit refers to number of months) F:..... V:.....T:.....	No	1.00		
	Carried to Collection			R	
	Section 1 Bill No. 2 Health and Safety				

6	Allow for provision of laptop, printer and telecommunication facilities for the appointed Construction Health & Safety Officer (Unit refers to number of months)				
	F:..... V:.....T:.....	No	1.00		
7	Allow for provision of Basic Emergency Preparedness and Response equipment & at least Level 2 First Aider/s (Unit refers to number of months)				
	F:..... V:.....T:.....	No	1.00		
	Provide, supply and maintenance for each worker the following SANS approved personal protective equipment & clothing as per the site-specific risk assessments:				
8	Hard Hats (High Density polyethylene, & 6-point lining)				
	F:..... V:.....T:.....		Item		
9	Overall/work suit (100% Cotton)				
	F:..... V:.....T:.....		Item		
10	Safety boots/shoes (Steel-Toe)				
	F:..... V:.....T:.....		Item		
11	Safety gloves				
	F:..... V:.....T:.....		Item		
12	Ear Plugs/Muffs				
	F:..... V:.....T:.....		Item		
13	Dust Mask (at least FF2 type)				
	F:..... V:.....T:.....		Item		
14	Respirators				
	F:..... V:.....T:.....		Item		
15	Safety goggles				
	F:..... V:.....T:.....		Item		
	Carried to Collection			R	

Section 1
Bill No. 2
Health and Safety

16	Personal Fall arrest and rescue equipment with and including life lines and associated equipment F:..... V:.....T:.....	Item		
17	High visibility reflective vests and/or bibs F:..... V:.....T:.....	Item		
18	Temporary handrails, toe boards, edge protection other than for access scaffolding F:..... V:.....T:.....	Item		
19	Temporary warning signs and symbols F:..... V:.....T:.....	Item		
20	SANS approved safety netting (orange color with minimum of 1,2 meters high) F:..... V:.....T:.....	Item		
21	Provision for the supply and maintenance of Road Traffic Signs as in terms of the South African Road Traffic Signs Manual complete F:..... V:.....T:.....	Item		
22	Allow for Pre-employment medical examinations F:..... V:.....T:.....	Item		
23	Allow for exit medical examinations F:..... V:.....T:.....	Item		
	<u>Health and Safety Education</u>			
24	Allow for HIV/AIDS awareness and Implementation programs, including STI and TB as well as HIV/AIDS Co-ordinator. (unit refers to number of months) F:..... V:.....T:.....	Item		
	Carried to Collection		R	

Section 1
Bill No. 2
Health and Safety

25	Allow for all compulsory health and safety awareness program (e.g. Inductions, toolbox Talks, Safety Promotions, H&S related training, etc.) (unit refers to number of months) F:..... V:.....T:.....		Item		
26	Allow for all health & safety training (e.g. H&S representative, working at heights, fall protection planner, first aider level 2, scaffolding inspector, erector, supervisor, temporary works erector, construction plant operators etc.) F:..... V:.....T:.....		Item		
	Environmental				
27	Provide for adequate handling and storage of materials so as to minimize contamination of ground, air or water. F:..... V:.....T:.....		Item		
28	Provide for the adequate and safe collection and disposal of general and hazardous waste materials from site by an approved method. F:..... V:.....T:.....		Item		
29	Provide Facilities and Eating Area for workers. F:..... V:.....T:.....		Item		
30	Provide for rehabilitation on completion of site areas and temporary access routes not covered by construction or landscaping specifications. F:..... V:.....T:.....		Item		
31	Provide for environmental management of stockpiling topsoil for re-use F:..... V:.....T:.....		Item		
32	Provide for a Responsible person to prepare and update Method Statements, conduct regular inspections, maintain records, and report to the Principal Agent. (Unit refers to number of months) F:..... V:.....T:.....	No	1.00		
	Carried to Collection			R	
	Section 1 Bill No. 2 Health and Safety				

33	Allow provision for Health and safety plans and approval thereof by Safety Agent	No	1		
34	Allow for Health & Safety Training for SMME Contractors as per OHS Act (Safety Representative, First aid, Fire Fighting , Working at heights etc)		Item		
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	Section 1 Bill No. 2 Health and Safety				

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Health and Safety

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Section 1

SECTION SUMMARY - PRELIMINARIES

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Section 1

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SECTION No. 2

BILL No. 1 : EARTHWORKS (PROVISIONAL)

MODEL PREAMBLES

The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates

SUPPLEMENTARY PREAMBLES

Proprietary products in descriptions:

Proprietary products shall be used as specified. Substitute products of similar quality and specification may only be used with prior approval by the Principal Agent.

Nature of material to be excavated:

The material to be excavated is assumed to be predominantly of a composition that will allow excavation in "earth" as specified, but including a percentage of excavation in "soft rock" and "hard rock".

Carting away of excavated material:

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

Dewatering of excavations:

The Contractor shall allow for removing seepage and other water from subterranean sources from the excavations by pumping, baling or otherwise.Accurate records of all such dewatering shall be kept to determine the total volume of water so removed and a clear distinction shall be made between water from subterranean sources and other water

	Carried to Collection		R	

Section 2
Bill No. 1
Earthworks (Provisional)

	Density testing on filling: Rates for filling, etc. shall include for all density and soil type testing to prove that the specified compaction is achieved.When additional testing is done on instruction of the Principal Agent and these tests are successful, they will be paid for additionally. Imported fill: "Filling and bedding to trenches etc. to be in compliance with SABS 1200 DB and LB respectively"				
	EXCAVATION OTHER THAN BULK				
	Excavation in earth not exceeding 2m deep:				
1	Trenches.	m3	24		
2	Holes.	m3	198		
3	Reduced levels under floors.	m3	83		
	Extra over trench and hole excavations in earth for excavation in:				
4	Soft rock.	m3	30		
5	Hard rock.	m3	182		
	Extra over all excavations for carting away:				
6	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor.	m3	89		
	Risk of collapse of excavations:				
7	Sides of trench and hole excavations not exceeding 1,5m deep.	m2	51		
8	Ditto, but from ground level to exceeding 1,5m and not exceeding 3,0m deep.	m2	146		
	Keeping excavations free of water:				
9	Keeping excavations free from mud and all water including subterranean sources.		Item		
	EARTH FILLING, ETC.				
	Carried to Collection			R	

Section 2
Bill No. 1
Earthworks (Provisional)

	Earth filling (G5 material) supplied by the contractor compacted to 98% Mod AASHTO density:				
10	Under floors, steps, pavings, footings, etc.	m3	41		
	Earth filling (G7 material) supplied by the contractor compacted to 95% Mod AASHTO density:				
11	Under floors, steps, pavings, footings, etc.	m3	55		
	Coarse river sand filling supplied by the contractor:				
12	Under floors etc. (Provisional).	m3	3		
	Compaction of surfaces:				
13	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	80		
	Prescribed density tests on filling:				
14	Allow for compaction tests by an approved laboratory to determine density of filling material.	No	8		
	SOIL POISONING				
	Approved brand of anti-termite soil poison applied by a Registered Pest Control company and guaranteed against termite infestation for ten years:				
15	Under floors, etc., including forming and poisoning shallow furrows against foundation walls, etc., filling in furrows and ramming.	m2	80		
16	To bottoms and sides of trenches, holes, etc.	m2	233		
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Section 2
Bill No. 1
Earthworks (Provisional)

Section 2

Bill No. 1

Earthworks (Provisional)

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Section 2
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Earthworks (Provisional)

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	BILL No. 2 : CONCRETE, FORMWORK AND REINFORCEMENT			
	MODEL PREAMBLES			
	The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates			
	SUPPLEMENTARY PREAMBLES			
	Proprietary products in descriptions:			
	Proprietary products shall be used as specified. Substitute products of similar quality and specification may only be used with prior approval by the Principal Agent.			
	Cost of tests:			
	The costs of making, storing and testing of concrete test cubes as required under clause 7 'Tests' of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the Architect. The testing shall be undertaken by an independent firm or institution nominated by the Contractor to the approval of the Architect. (Test cubes are measured separately).			
	Formwork:			
	Descriptions of formwork shall be deemed to include use and waste only (except where described as left in or permanent), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use.			
	Carried to Collection		R	

Section 2
Bill No. 2
Concrete, Formwork and Reinforcement

	The vertical strutting shall be carried down to such construction as is sufficiently strong to afford the required support without damage and shall remain in position until the newly constructed work is able to support itself. Formwork to soffits of solid slabs etc., shall be deemed to be to slabs not exceeding 250mm thick unless otherwise described. Formwork to sides of bases, pile caps, ground beams, etc., will only be measured where it is prescribed by the Engineer for design reasons. Formwork necessitated by irregularity or collapse of excavated faces will not be measured and the cost thereof shall be deemed to be included in the allowance for taking the risk of collapse of the sides of the excavations, provision for which is made in Earthworks.				
	REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES				
	30MPa/20mm concrete:				
1	Footings to walls (Provisional).	m3	17		
	REINFORCED CONCRETE				
	30MPa/20mm concrete:				
2	Surface beds on waterproofing.	m3	10		
3	Suspended Slabs.	m3	12		
4	Ground slab.	m3	9		
5	Infill to 330mm cavity walls.	m3	10		
	TEST BLOCKS				
	Test blocks:				
6	Making and testing set of three 150x150x150mm concrete strength test cubes (Provisional).	No	12		
	FINISHING TOP SURFACE OF CONCRETE				
	Carried to Collection			R	

Section 2
Bill No. 2
Concrete, Formwork and Reinforcement

	Finishing top surfaces of concrete smooth with a wood float:				
7	Surface beds, slabs, etc	m2	210		
	ROUGH FORMWORK (DEGREE OF ACCURACY III)				
	Rough Formwork to Sides:				
8	Edges, risers, ends and reveals not exceeding 300mm high or wide.	m	70		
	Permanent Formwork:				
9	Soffit of slab over pit.	m2	65		
	Extra on permanent formwork for boxing or blocking in or boxing out to form:				
10	450mm Diameter opening through 200mm thick slab.	No	16		
	MOVEMENT JOINTS ETC				
	Expansion joints with bitumen impregnated softboard between vertical concrete or brick surfaces:				
11	12mm Joints not exceeding 300mm high (Provisional).	m	103		
	REINFORCEMENT (PROVISIONAL)				
12	Steel reinforcement to structural concrete work.	t	4.68		
	Fabric reinforcement:				
13	REF. 395 fabric reinforcement in concrete surface beds, slabs, etc.	m2	55		
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Section 2

Bill No. 2

Concrete, Formwork and Reinforcement

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Section 2
Bill No. 2
Concrete, Formwork and Reinforcement

Item No		Quantity	Rate	Amount
	SECTION No. 2			
	BILL No. 3 : MASONRY			
	MODEL PREAMBLES			
	The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates			
	SUPPLEMENTARY PREAMBLES			
	BRICKWORK			
	(CPAP WORK GROUP NO. 116 UNLESS OTHERWISE STATED)			
	Sizes in descriptions			
	Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick			
	Bricks			
	Clay & concrete bricks are to comply with N.H.B.R.C Part 2, Section 3			
	Hollow walls etc			
	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.			
	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 "Brixeal" bitumen emulsion waterproofing coating.			
	Pointing			
	All pointing of exposed joints to be concave			
	Carried to Collection		R	

Section 2
Bill No. 3
Masonry

Samples

Samples of all masonry building units, except those of walls described as "loadbearing", shall consist of a minimum of 6 units. Samples of building units to be used in walls described as "loadbearing" shall consist of 30 units from every 30 000 units delivered to site

BLOCKWORK

Concrete masonry units

Blocks are to be either solid or hollow modular dense concrete masonry units having a compressive strength of 7 MPa

Wall ties for blockwork

Wall ties shall be polypropylene "Permaties" complying with BS 76377. Ties for hollow walls shall be of sufficient length to allow not less than 75mm of each end to be built into the blockwork. Ties are to be spaced at intervals of not more than 1m in the horizontal direction and not more than 400mm staggered in the vertical direction except at openings, vertical joints or ends of walls where they are to be placed vertically above each other

Blockwork

Blockwork shall comply with SABS 0145 "Concrete Masonry Construction"

Surfaces to be plastered shall have joints raked out to a depth of at least 10mm to provide a key. Cavities of hollow walls shall be kept free of mortar droppings or other undesirable matter. Every second perpend of the bottom course of the external skin of hollow walls shall be left open as a weep hole

Standard complementary blocks

Descriptions of blockwork shall be deemed to include standard complementary blocks such as corner, three-quarter, half and quarter blocks required in the construction of corners, reveals, jambs, ends, etc to solid and hollow walls and for bonding as necessary

Carried to Collection R

Section 2
Bill No. 3
Masonry

	BRICKWORK IN FOUNDATIONS (PROVISIONAL)				
	Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar:				
1	One brick walls.	m2	25		
2	345mm thick cavity brick walls made of two leafs of 110mm wall with 135mm concrete fill (concrete elsewhere measured).	m2	100		
3	Mass brickwork walls.	m3	3		
	BRICKWORK IN SUPERSTRUCTURE				
	Brickwork of NFP bricks (14 MPa nominal compressive strength) in Class II mortar:				
4	Mass brickwork walls.	m3	3		
	BRICKWORK AND BLOCKWORK SUNDRIES				
	Galvanized brickwork reinforcement				
5	115mm Wide reinforcement built in horizontally	m	120		
6	230mm Wide reinforcement built in horizontally.	m	764		
7	Ditto, but in foundations (Provisional).	m	1 500		
	Bagging and sealing the outer face of the inner skin of walls with 1:3 cement and sand mixture and seal with two coats "Brixeal" bitumen emulsion waterproofing coating:				
8	To walls (Provisional).	m2	191		
	Cramps, ties, etc:				
9	30 x 2mm Galvanized roof tie 1500mm long with one end fixed to timber and other built into brickwork or concrete.	No	62		
	Ventilation blockwork:				
10	Breeze block panels	m2	8		
	Carried to Collection			R	

Section 2
Bill No. 3
Masonry

FACE BRICKWORK

"Corobrik Firelight Satin" or other approved face bricks in stretcher bond with ruled joints and perpends externally:

11	Extra over for facebrick in piers.	m2	12		
12	Extra over for facebrick in foundations (Provisional).	m2	25		
13	Half brick wall in beam filling pointed one side including cutting and fitting around roof timbers and bedding roofing solid on top in cement mortar.	m2	6		
14	One brickwall pointed on both sides.	m2	191		
15	Fair raking cutting.	m	36		

Brick-on-edge header course copings, sills, etc, of "Corobrik Firelight Satin" or other approved face bricks pointed with recessed joints on all exposed faces, 220mm wide sill set sloping and slightly projecting:

16	230mm Brick on edge sill bedded sloping and jointed in cement mortar and pointed on top, edge and projecting soffit including cutting and fitting between reveals and splay cutting brickwork under.	m	20		
17	220mm Wide lintel pointed on face and 110mm soffit.	m	33		

Carried to Collection R

Section 2
Bill No. 3
Masonry

Section 2

Bill No. 3

Masonry

COLLECTION

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Section 2
Bill No. 3
Masonry

Item No			Quantity	Rate	Amount
	SECTION No. 2				
	BILL No. 4 : WATERPROOFING				
	MODEL PREAMBLES				
	The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates				
	SUPPLEMENTARY PREAMBLES				
	Proprietary products in descriptions:				
	Proprietary products shall be used as specified. Substitute products of similar quality and specification may only be used with prior approval by the Principal Agent.				
	DAMPPROOFING OF WALLS AND FLOORS				
	One layer of 350 micron 'USB GREEN' waterproof sheeting sealed at laps with 'Gunplas Pressure Sensitive Tape':				
1	Under surface beds.	m2	26		
	One layer of 350 micron embossed dampcourse waterproof sheeting below walls, sills, etc:				
2	Below walls, sills, etc.	m2	15		
	Two coats flexible cementitious waterproofing slurry to all internal faces of pit walls and base slab, "SikaTop Seal-107" or approved equivalent, strictly in accordance with the manufacturer's recommendations				
3	Internal pit walls	m2	100		
4	Under surface beds.	m2	55		
	Carried to Collection			R	

Section 2
Bill No. 4
Waterproofing

	Two coats bituminous waterproof coating to external faces of below-ground pit walls prior to backfilling, "Sika Igolflex-201" or approved equivalent				
5	Pit walls etc.	m2	100		
	JOINT SEALANTS ETC				
	Clear Neutral silicone sealant:				
6	In joint sealing and pointing all round external window and door frames.	m	56		
	Two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc				
7	10 x 12mm In movement joints in floors or walls including raking out expansion joint filler as necessary (Provisional).	m	103		
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	Section 2 Bill No. 4 Waterproofing				

Section 2

Bill No. 4

Waterproofing

COLLECTION

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Section 2
Bill No. 4
Waterproofing

Item No		Quantity	Rate	Amount

SECTION No. 2

BILL No. 5 : ROOF COVERINGS

MODEL PREAMBLES

The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates

SUPPLEMENTARY PREAMBLES

Sheeting

The roof sheeting shall be 0,55mm AZ150 ZincAl or equal approved IBR 686 profile roll-formed in continuous lengths and cut to length by a pneumatic cut-off process from certified Z275 galvanized steel complying with ISQ 550 (3T). A certificate verifying compliance shall be issued by the manufacturer.

Finish for AZ150 Zincalume

The profile shall be supplied with a paint finish G550 consisting of a full top coat "Colourplus" or equal approved silicone modified polyester Colour: To match existing on one side and Cool Grey backing to other

Assembly

The AZ150 ZincAl sheets shall be fixed to every purlin strictly in accordance with manufacturer's specifications. Holes through sheeting are to be drilled and NO punching of holes are allowed. 8mm Diameter x 75mm long fixing screws with 19mm diameter washer and rubber gasket are to be used. Every precaution shall be taken to prevent damage to roof sheets during all stages of construction. Duck boards should be used when necessary to protect the sheeting from damage. Sheeting which has become deformed or damaged in any way, shall be replaced

Carried to Collection R

Section 2
Bill No. 5
Roof Coverings Etc.

Flashings

Flashings shall be approved by roof sheeting manufacturer and fixed to the sheeting with S10 clips to obviate any direct fixing perforations. Prior to flashings being fixed, all troughs at the apex shall be stop-ended to the full depth of the sheet in order to prevent any penetration of wind drived water. The trough shall be lipped at the eaves end to form a drip. Flashing flanges shall be notched to the sheet profile where necessary. All these operations must be performed with special tools available from the manufacturer. Care shall be taken to ensure that no sheeting or flashing will be cut with abrasive disc on roof surface in order to prevent steel splatter from penetrating colour coated areas. The flashings shall be supplied with a paint finish consisting of a full top coat silicon modified polyester Colour : White to one side

Quality Assurance

The manufacturer shall be assessed and certifed as complying with ISO 9001: 2008 Quality Management System

Guarantee

AZ150 ZincAl or equal approved sheeting shall be laid in strict accordance with manufacturer's specifications by an approved contractor. The employer shall be provided with a ten year written guarantee on materials and a five year written guarantee on workmanship and water-tightness after final inspection of the roofs, by the manufacturer.

Safety

The contractor shall exercise special care when handling long length sheeting, particularly in windy conditions. Should work be interrupted for any reason, all loose sheeting and incomplete sections must be adequately secured against possible movement by wind and gravity

Carried to Collection R

Section 2
Bill No. 5
Roof Coverings Etc.

Handling and Storage

The contractor shall ensure that all materials used on site for cladding, etc are transported, handled and stored in accordance with the manufacturer's recommendations. Material damaged shall be rejected and replaced with undamaged material at the contractor's expense. Repair of damaged material will not generally be permitted. Rates are to include for preventing damage and protecting sheets through all stages of construction

Inspection Prior to Installation or Erection

Before commencing with installation, the contractor shall verify that the following items have been checked and accepted:
a. The entire structure or the portion thereof to be sheeted has been correctly aligned, levelled and grouted
b. Purlins and sheeting rails are at the correct spacing and are within the specified tolerances
c. The corners of the roof are square and the wall framework is perpendicular or as specified
d. No protrusions such as bolt heads, splice plates, cleats, etc. appear on the face of the framework
e. All members to which roofing and cladding are to be fixed in aesthetically sensitive areas are true and square
f. Paint and any other materials that may be incompatible with the sheeting, have been painted over or so dealt with that direct contact with the sheeting is avoided
g. The contact faces between the purlins or the girts and the cladding are in the same plane. Should the alignment be inadequate, the contractor shall request instructions from the engineer before proceeding with the fixing of the cladding

Protrusion through Sheeted Surfaces

Protrusions such as pipes, ducts and the like, shall be adequately flashed where they pass through the sheeting surface. Where ribs have to be cut away to permit penetration, additional framing is to be installed as required to support the sheeting. Depending on the position of the penetration through the roof, special attention shall be given to back flashing the sheeting to the ridge or point of water entry. In all cases, all cutting and flashings shall be so arranged that adequate provision is made for the drainage of all troughs and corrugation

Carried to Collection R

Section 2
Bill No. 5
Roof Coverings Etc.

	Cleaning of Roofs, etc				
	All debris, etc arising from the fixing of the cladding shall be removed from the sheetin as the fixing progresses. In addition, off-cuts of insulation, surplus fastners and sealants, mandrels from pop rivets, off-cuts of flashings and sheeting, surplus flashing, food packaging, cartons, bottles, cans, etc shall not be left on the roof or in the gutters. Care shall be taken to ensure that no such material enters, blocks or partially impedes the flow of water into the outlets, downpipes, etc				
	ROOF COVERING				
	(CPAP WORK GROUP NO. 125 UNLESS OTHERWISE STATED)				
	PROFILED METAL SHEETING AND ACCESSORIES				
	0.53 mm AZ150 Colorplus IBR roof sheeting, "Safintra" or approved equivalent, fixed strictly in accordance with the manufacturer's recommendations, complete with all fixings, closures, sealants and accessories				
1	Roof covering with pitch not exceeding 15 degrees.	m2	140		
2	Ridge capping 500mm girth, screwed through sheet to purlins	m	22		
	Extra Over for Translucent polycarbonate roof sheeting				
3	0.8 mm translucent polycarbonate roof sheeting to match roof profile, complete with proprietary fixings	m2	22		
	ROOF AND WALL INSULATION				
	"Sisalation Grade FR430" or equal approved heavy industrial insulation				
4	Insulation laid taut over roof trusses (at approximately 1 100mm centres) and fixed concurrent with SA Pine purlins at 900mm centres, etc including galvanised steel straining wires	m2	140		
	ROOF VENTILATION				
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Section 2
Bill No. 5
Roof Coverings Etc.

	Aluminium roof turbine ventilator "Whirlybird", complete with flashing, weatherproofing, fixings and all necessary accessories, installed in accordance with the manufacturer's recommendations.				
5	Roof Turbine Ventilators.	No	4		
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Section 2
Bill No. 5
Roof Coverings Etc.

Section 2

Bill No. 5

Roof Coverings Etc.

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Section 2
Bill No. 5
Roof Coverings Etc.

Item No		Quantity	Rate	Amount
	SECTION No. 2			
	BILL No. 6 : CARPENTRY & JOINERY			
	MODEL PREAMBLES			
	The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates			
	CARPENTRY AND JOINERY			
	(CPAP WORK GROUP NO. 126 UNLESS OTHERWISE STATED)			
	SUPPLEMENTARY PREAMBLES			
	ROOFS ETC			
	MONOPLANAR PREFABRICATED METAL CONNECTORED TIMBER ROOF TRUSSES			
	All trusses to be fabricated in a factory by a truss fabricator who holds a current Certificate of Competence awarded by the Institute for Timber Construction			
	TR1 & TR2 Certificates are to be issued for each Block before occupation may take place			
	PREFABRICATED ROOF TRUSSES HAVING A PITCH NOT EXCEEDING 25 DEGREES			
	NOTE: All timber roof trusses including nail-plated trusses and bolted trusses with lapped members must comply with SANS 0243 : THE DESIGN, MANUFACTURE AND ERECTION OF TIMBER TRUSSES			
	Prices for roof trusses are to include for all temporary bracing and supports and for all necessary top and bottom chord bracing, wind bracing and runners where required and TR1 and TR2 Certificates			
	Carried to Collection		R	

Section 2
Bill No. 6
Carpentry and Joinery

TIMBER

Timber for trusses to be South African softwood structural timber and shall be at least of grade 4 and in accordance with SANS Specification No.'s 563 or 1245 or laminated timber in accordance with SANS 1460

METAL CONNECTOR PLATES

Metal truss connector plates shall be made from galvanised steel of at least 1mm nominal thickness, with a minimum yield strength of 250MPa and a minimum ultimate tensile strength of 330MPa. The corrosion resisting coating shall be 0,275Kg/m2 commercial class hot dipped galvanising

The connector plates shall have been tested by the CSIR and be a size capable of transmitting the forces between the members of a truss without exceeding the design values given in the CSIR report

BOLTS

Bolts shall be to BS 4190 or SANS 135 with appropriate washers. (See below)

WASHERS

Square or round washers of the following minimum dimensions shall be used with all bolts:

WASHER DIMENSIONS

Bolts Size	Width (mm)	Thickness
up to M8	25	2,5
up to M12	36	4,0
up to M20	60	5,0

SHEAR PLATES, TOOTH CONNECTORS AND SPLIT RINGS

These shall be as specified in BS 1579 and installed in accordance with the CSIR Publication : HOUT 468, "The Design, Manufacture and Erection of Timber Trusses".

NAILS

These shall be in accordance with SANS 820 : 1974

Carried to Collection R

Section 2
Bill No. 6
Carpentry and Joinery

TRUSS CONSTRUCTION

The trusses shall be constructed to ensure the correct profile, overhangs and cambers

All joints are to be close fitting butt joints made by precision pressing of the metal connector plates into each side of the joint

TRUSS DESIGN

All trusses shall be designed by a registered Professional Engineer employed by the Contractor in accordance with the SANS Code of Practice for the Design of Timber Structures SANS 0163 and the Code of Practice for General Procedures and Loadings SANS 0160

TRUSS SPACING

The truss centres shall be less than or equal to that described in the Bills for each respective truss type

DRAWINGS

Prints shall be provided to the consulting engineer/ architect for approval. These drawings shall be signed by a Professional Engineer

The following minimum information shall be supplied:
* Details of the roof system with the positions of all trusses and beams clearly indicated
* Bracing details
* All truss details, including valley trusses where applicable, with the following clearly detailed:-
  - All member sizes and grades
  - Connector plate sizes for all truss joints. Code numbers are deemed sufficient
* All connection and hold down details between trusses, girders, beams and supports
* The type of roof covering, ceiling and any other loads taken into account in the design

The dimensions in the descriptions of trusses are nominal and verification measurements are to be obtained from site before design or fabrication commences, and must be designed in accordance with the environmental conditions of the area

Carried to Collection R

Section 2
Bill No. 6
Carpentry and Joinery

GENERAL

The following schedule of prices includes all timber of the required grade and type shown on the designs, all cutting and waste, cutting to exact length and end angles necessary to manufacture the respective truss types, the supply of all connector plates, fabrication of the trusses, checking the completed truss for quality, as well as loading, transporting to the site and offloading

The trusses must be suitable stored and protected on site as directed by the Secretary or his Representative

ERECTION

The trusses are to be hoisted and erected strictly in accordance with the procedures and recommendations of the Manual "The Erection and Bracing of Timber Roof Trusses" published by the Institute for Timber Construction and the Council for Scientific and Industrial Research of as detailed by the designer of the SANS Code of Practice: "The Design, Manufacture and Erection of Timber Roof Trusses"

TRUSS LOADING

The trusses shall be designed for:
* Roof Cover: 0,55mm Metal roof sheeting
* Max Purlin centres: 900mm
* Ceilings: Plasterboard ceilings
* Overhang: Min 600mm

Carried to Collection R

Section 2
Bill No. 6
Carpentry and Joinery

TRUSSES

a. All the roof trusses to be at average 1 177mm centres and constructed for approximable 25deg pitch unless otherwise stated

b. All the roof trusses to be designed and constructed with softwood structural timber to include for live loads, wind loads and to take corrugated roof covering, purlins and fibre cement or plasterboard ceilings with brandering. Each roof truss shall have all its members accurately cut and close butted together and rigidly fixed by CSIR approved patented galvanized metal spiked connectors, fixed on both sides of each intersection by an approved method, all in accordance with the manufacturer's instructions

c. Unless otherwise described all rafter feet are to extend 600mm beyond the length of the tie beam, with ends twice splay cut

d. Upon completion of the contract the Registered Professional Engineer must issue to the Principal Agent a certificate to the effect that the roof has been erected in accordance with his approved design, under his supervision and that the entire roof is structurally stable. The lump sum price of the roof trusses and purlins or battens (bottom purlin or tilting fillet to be wrought) shall include for the design and supervision by a Registered / Professional Engineer and for all necessary runners, overhangs wrought all round and trimmed and splay cut as required, braces, hoisting and fixing, etc.,but shall exclude fixing brackets and hurricane clips, wall plates, fascia, barge boards, roof coverings, purlins, etc. which are all separately measured

e. The tenderer's attention is drawn to the fact that the description of the trusses only represents the overall size (fascia to fascia) and not the required design

f. Erection must be carried out as described in "The Erection and Bracing of Timber Roof Trusses" published by the Truss Plate Association of South Africa Ltd. and the National Timber Research Institute, CSIR

g. Descriptions of roof trusses shall be deemed to include for design, manufacture, supply, hoisting and fixing in position, trimming ends, notching, etc. and for any temporary bracing

Plate nailed pitched timber roof construction

Carried to Collection R

Section 2
Bill No. 6
Carpentry and Joinery

	Sawn softwood:				
1	Design, supply and install prefabricated timber roof truss system complete, designed in accordance with the Standard Building Regulations and the Engineer's requirements, measured on the flat plan area of the roof inclusive of overhangs	m2	106		
2	38 x 114mm Wall plate.	m	42		
3	50 x 76mm Purlins.	m	143		
4	76 x 50mm Cross bracing	m	67		
5	Hurricane clips	No	62		
6	Prior to the erection of all the roof trusses the consulting engineer shall certify that he has received such working drawings and construction detail designs from the professional engineer employed by the contractor and that he has considered same and given permission to proceed with the fabrication of the trusses (TR1 certificate issued by Contractor's Engineer) and then before the roof covering commences the completed structure shall be inspected and certifed as stable by the professional engineer employed by the contractor to ensure that the manufacture of the trusses and erection details have been complied with to his satisfaction (TR2 certificate issued by Contractor's Engineer)		Item		
	EAVES, VERGES, ETC				
	"Everite Nutec" or equal approved fibre cement				
7	12 x 225mm Fascias to match existing including H-profile jointing strips	m	49		
8	200 x 80mm barge board, joined with aluminium H-profile fascia joiner and secured to a trimmer purlin	m	36		
	DOORS ETC				
	Solid Core MERANTI hardwood Flush panel door, edged with 5mm MERANTI edging on all sides:				
9	Door size 44 x 813 x 2032mm high.	No	5		
10	Door size 32 x 880 x 1800mm high.	No	10		
	Carried to Collection			R	

Section 2
Bill No. 6
Carpentry and Joinery

	FRAMED FRAMES, ETC				
	Meranti Frames bolted to wall with expanding masonry bolts - four per style including quadrant beads on both sides:				
11	50 x 108mm rebated meranti frame	No	10		
	Carried to Collection			R	

Section 2
Bill No. 6
Carpentry and Joinery

Section 2

Bill No. 6

Carpentry and Joinery

COLLECTION

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Section 2
Bill No. 6
Carpentry and Joinery

Item No			Quantity	Rate	Amount
	SECTION No. 2				
	BILL No. 7 : IRONMONGERY				
	MODEL PREAMBLES				
	The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates				
	SUPPLEMENTARY PREAMBLES				
	Keys/Locks				
	Each lock is to be distinctly numbered with consecutive numbers and each key is to be stamped with the corresponding number to the lock that it controls. All locks are to have two keys				
	Trade Names				
	Where trade names are specified other ironmongery approved by the Principal Agent may be used				
	Fixing				
	Fixing of ironmongery is deemed to be fixed to timber unless otherwise described				
	IRONMONGERY				
	(CPAP WORK GROUP NO. 132 UNLESS OTHERWISE STATED)				
	HINGES, BOLTS, ETC				
	LD medium duty or equal approved				
1	100 x 75 brass butt hinge	No	30		
	LOCKS				
	Carried to Collection			R	

Section 2
Bill No. 7
Ironmongery

	"Union" or equal approved				
2	"Gower" three lever mortice lockset and furniture to external door	No	5		
	HANDLES				
	"Union" or equal approved				
3	"AL 8294 AS anodised aluminium" Water closet indicator bolt.	No	10		
	LD medium duty or equal approved				
4	100 x 75 polished barrel bolt	No	10		
	Sundries:				
5	38mm Diameter black rubber door stop plugged to concrete floor.	No	15		
6	ASSA ABLOY DC300DA R&P closer EN 3-6 SIL (Silver) Code - DC300DA.	No	5		
7	Union Kick Plate 900 X 800mm Works Code - SS5089-900W x 2 Per Door.	No	30		
	Sign Plates:				
	All sign plates, and door numbers are to be with engraved blue perspex all in accordance with the standard signplates for Schools.				
8	Signplate plugged and screwed to walls with chromium plated dome headed screws.	No	6		
	BATHROOM FITTINGS				
	Franke or equal approved:				
9	TR3 3 Roll toilet roll holder (code TRW0003) size 120x380x130mm or equal approved with a mild steel white epoxy coated one-piece body 1mm thick, holds 3 toilet rolls and the frontal sight-hole indicate refill time.	No	16		
10	Liquid soap dispenser, Grade 402 stainless steel, Classic White Range, size 310 x 160 x 105 mm complete with vandal-resistant fixings	No	8		
	Carried to Collection			R	

Section 2
Bill No. 7
Ironmongery

11	Lockable paper towel dispenser, Grade 402 stainless steel, Classic White Range, size 334 x 286 x 184 mm complete with vandal-resistant fixings	No	3		
12	Wall-mounted waste bin, Grade 402 stainless steel, 20 litre capacity, size 600 x 420 x 125 mm complete with vandal-resistant fixings	No	3		
13	300 × 300 × 300 × 50 mm stainless steel dog-leg side grab rail (Code KB26) complete with concealed fixings	No	1		
14	800 mm long stainless steel straight grab rail (Code KB18) complete with concealed fixings.	No	1		
15	6mm Silvered float glass copper backed mirrors with polished edges holed for and fixed with chromium plated dome capped mirror screws with rubber buffers to plugs in brickwork or concrete	No	13		
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Section 2
Bill No. 7
Ironmongery

Section 2

Bill No. 7

Ironmongery

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Section 2
Bill No. 7
Ironmongery

Item No			Quantity	Rate	Amount
	SECTION No. 2				
	BILL No. 8 : METALWORK				
	MODEL PREAMBLES				
	The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates				
	SUPPLEMENTARY PREAMBLES				
	The Contractor is to check and verify on site that the item specified in the BoQ matches existing prior to placing orders. Additional costs will not be borne by the client for items that do not match existing and are not approved by the Principal Agent				
	METALWORK				
	(CPAP WORK GROUP NO. 136 UNLESS OTHERWISE STATED)				
	HOT-DIPPED GALVANIZED STEEL WINDOW FRAMES				
	Purpose made school windows with brass fittings to opening sashes with and including 10mm square burglar bars at 150mm centres:				
1	Window size 889 x 457mm high.	No	20		
	GALVANIZED PRESSED STEEL DOOR FRAMES				
	1,6mm galvanised mild steel standard pressed jamb lining with double rebates to suit one brick wall:				
2	Frame for door 813 x 2032mm high.	No	5		
	HOT DIP GALVANIZED STEEL GATES				
	Note: The contractor is to check on site measurements before placing of order.				
	Carried to Collection			R	

Section 2
Bill No. 8
Metalwork

	Gate constructed from hot-dipped galvanised mild steel, consisting of 40mm x 30mm x 2,0mm thick rectangular hollow section to outer frame and horizontal rails. Infill to be no. 8 continuous 10mm dia galvanised mild steel rods passing through and welded to horizontal rails and welded to outer frame. Lock housing to be formed of no.2 100mm x 180mm x 3mm galvanised mild steel plates welded to finish flush with each face of the gate and is to have the necessary cut-outs for the lock deadbolt and Euro Profile cylinder. Frame stile to hinge side to be 30mm x 30mm x 2,00mm thick galvanised mild steel hollow square section 2000mm long, bolted to wall with no. 4 expansion bolts. 30mm x 30mm x 2,00mm thick galvanised mild steel hollow square section 260mm long, twice bolted to wall as lock keep. End caps to be provided to both the frame stile and the lock keep. Gate to include 1,5 pairs galvanised mild steel pintle hinges welded to gate and frame stile. Pin of top hinge to be inverted. No. 1 N302 Union Euro Profile Cylinder Gate Lock with LH5240-N302 housing and 2 x 18SC Union double cylinder. No. 1 Halstead 166SC cabin hook and eye with cabin hook screwed to 100mm x 70mm x 32mm Meranti block plugged and screwed to wall, and eye welded to leading edge of gate outer frame:				
3	Security Gate size 1 000 x 2 100mm high.	No	5		
	MANHOLE COVERS				
4	600 x 600mm Type 2A Heavy duty cast iron manhole cover and frame to SABS 558.	No	10		
	Carried to Collection			R	

Section 2
Bill No. 8
Metalwork

Section 2

Bill No. 8

Metalwork

COLLECTION

	Page No		Amount
Total Brought Forward from Page No.	76		
	77		
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Section 2
Bill No. 8
Metalwork

Item No			Quantity	Rate	Amount
	SECTION No. 2				
	BILL No. 9 : PLASTERING				
	MODEL PREAMBLES				
	The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates				
	PLASTERING				
	GRANOLITHIC				
	Untinted granolithic on concrete:				
1	30mm Thick on floors.	m2	91		
	POLYURETHANE FLOOR FINISH				
	Prepare existing concrete surface and apply approved 4 mm heavy-duty polyurethane cement floor finish, complete with primer, body coat, seal coat and 100 mm high integral coved skirting, all in accordance with the manufacturer's recommendations:				
2	On floors	m2	91		
	INTERNAL PLASTER				
	Solidcove Mortar Skirtings				
3	75mm High coved skirting.	m	103		
	Carried Forward to Summary of Section No. 2			R	
	Section 2 Bill No. 9 Plastering				

Item No			Quantity	Rate	Amount
	SECTION No. 2				
	BILL No. 10 : PLUMBING AND DRAINAGE (PROVISIONAL)				
	MODEL PREAMBLES				
	The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates				
	PLUMBING AND DRAINAGE				
	(CPAP WORK GROUP NO. 148 UNLESS OTHERWISE STATED)				
	RAINWATER DISPOSAL:				
	Seamless aluminium gutters and downpipes				
1	125 x 75mm high gutters fixed to falls in continuous lengths at not exceeding 1000mm centres with and including approved gutter brackets.	m	49		
2	100 x 75mm rainwater downpipe	m	24		
3	Extra over rainwater pipe for shoe	No	12		
4	Extra eaves gutter for stopped end.	No	12		
5	Extra over rainwater downpipe for bend	No	12		
	TAPS, VALVES, ETC				
	Cobra Watertech or Similar approved				
6	(Code. 232-10-15) fullway isolating ball valves with plastic coated plated steel lever handle	No	13		
	SANITARY FITTINGS				
	Carried to Collection			R	

Section 2
Bill No. 10
Plumbing and Drainage (Provisional)

	Atlas Plastics or similar approved				
7	Ref 507AP, Bowl Urinal c/w brackets, fixed to brickwork	No	6		
8	VIP 450 Pit Pedestal, fixed to concrete floor	No	16		
9	Wash hand basin	No	13		
	SANITARY PLUMBING				
	PVC waste or vent pipes and fittings:				
10	50mm Waste pipe.	m	130		
11	110mm Vent pipe.	m	48		
	Extra for:				
12	50mm Bend.	No	33		
13	50mm Access bend.	No	6		
14	50mm Rubber S trap with side outlet.	No	6		
15	Black Whirlybird with insect-proof netting inside, to fit on 110mm vent pipe.	m	16		
	Polycop pipe				
16	15mm pipe from tank to sink	m	130		
	Soakaway (Provisional)				
17	3 000 x 900 x minimum 700mm deep, complete with graded stone filling, geotextile lining of Bidim U14 or similar approved, 500mm compacted soil cover to 90% MOD AASHTO above soakaway, pipe connection from hand wash basin waste, excavation, backfilling and disposal of surplus material, all subject to final Engineer's detail	No	1		
	Sundries:				
18	200 x 200 mm, 8 mm thick, first-grade glazed ceramic wall tiles with satin or semi-gloss finish, colour selected by the Architect	m2	7		
	Carried to Collection			R	

Section 2
Bill No. 10
Plumbing and Drainage (Provisional)

Section 2

Bill No. 10

Plumbing and Drainage (Provisional)

COLLECTION

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	81		
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Section 2
Bill No. 10
Plumbing and Drainage (Provisional)

Item No			Quantity	Rate	Amount
	SECTION No. 2				
	BILL No. 11 : GLAZING				
	MODEL PREAMBLES				
	The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates				
	GLAZING				
	(CPAP WORK GROUP NO. 150 UNLESS OTHERWISE STATED)				
	GLAZING TO STEEL WITH PUTTY				
	6.38 mm laminated "Arctic Snow" obscure safety glass secured into galvanised steel windows with compatible UV-resistant structural glazing sealant complete, all in accordance with SANS 10400				
1	Panes exceeding 0,1m2 and not exceeding 0,5m2.	m2	10		
2	Issue glazing certificate of compliance		Item		
	Carried Forward to Summary of Section No. 2			R	
	Section 2 Bill No. 11 Glazing				

Item No			Quantity	Rate	Amount
	SECTION No. 2				
	BILL No. 12 : PAINTWORK				
	MODEL PREAMBLES				
	The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates				
	SUPPLEMENTARY PREAMBLES				
	Trade Names				
	Where trade names are specified it will read "or equal approved"				
	PAINTWORK ETC TO NEW WORK				
	(CPAP WORK GROUP NO. 152 UNLESS OTHERWISE STATED)				
	ON FLOATED PLASTER				
	Prepare and brush surface to remove all loose contaminants and apply one coat PP700 gypsum and plaster primer and two coats "Plascon Polvin" or equal approved emulsion paint for interior use				
1	On internal walls.	m2	100		
	ON WOOD				
	Prepare, brush surface to remove all loose contaminants, stain and apply one coat "Plascon Woodcare Pretreatment (WWP 1)" or equal approved , and three coats "Woodcare Wood Preservative (FPR1)" or equal approved preservative strictly in accordance with the Manufacturer's instructions				
2	On doors	m2	56		
	Carried to Collection			R	

Section 2
Bill No. 12
Paintwork

	Prepare and apply two coats carbolenium on:				
3	On exposed timbers.	m2	189		
	ON FIBRE-CEMENT				
	Prepare and brush surface to remove loose contaminants and apply one coat professional gypsum & plaster primer PP700, and two coats "Plascon Wall 'n All (WAA)" or equal approved emulsion paint				
4	On fascias and barge boards.	m2	19		
	ON METAL				
	Prepare surfaces and remove all loose material, check for dents in frame and fill with body filler as required.Wash down with galv clean.Touch up factory applied primer and apply one undercoat, followed by two coats gloss enamel paint:				
5	On window frames	m2	10		
6	On door frames	m2	9		
	ON BRICK SURFACES				
	Clean down with spirits of salts solution and apply two coats silicone-based brick dressing on:				
7	On facings	m2	442		
	Carried to Collection			R	

Section 2
Bill No. 12
Paintwork

Section 2

Bill No. 12

Paintwork

COLLECTION

	Page No		Amount
Total Brought Forward from Page No.	84		
	85		
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Section 2
Bill No. 12
Paintwork

Section 2

SECTION SUMMARY - BUILDING WORKS

Bill No		Page No		Amount
	Earthworks (Provisional)	45		
	Concrete, Formwork and Reinforcement	49		
	Masonry	54		
	Waterproofing	57		
	Roof Coverings Etc.	63		
	Carpentry and Joinery	71		
	Ironmongery	75		
	Metalwork	78		
	Plastering	79		
	Plumbing and Drainage (Provisional)	82		
	Glazing	83		
	Paintwork	86		
	Carried to Final Summary		R	

Section 2

Item No		Quantity	Rate	Amount
	SECTION 3			
	BILL No. 1			
	DEMOLITIONS			
	MODEL PREAMBLES			
	The tenderer is referred to the "General Preambles for Trades 2017" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates.			
	SUPPLEMENTARY PREAMBLES			
	View site			
	Before submitting his tender the tenderer 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			
	Explosives			
	No explosives whatsoever may be used for demolition purposes unless otherwise stated.			
	General			
	Water supply pipes and other piping in ground 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.			
	Unless otherwise described all materials are to become the property of the contractor and are to be removed from the site.			
	Carried to Collection		R	
	Section 3 Bill No. 1 Demolitions			

Removal of asbestos material

All preparatory work, alterations, etc., to existing asbestos cement roof sheeting, gutters, rainwater pipes, etc., is to be carried out strictly by an approved and certified specialist company and in accordance with statutory requirements (Occupational Health and Safety Act, 1993 - Asbestos Regulations 2001) and all necessary precautions must be taken when working with and disposing of asbestos cement products and the disposal of waste water resulting from cleaning operations, etc.

The following shall apply in respect of asbestos removal

The removal of asbestos shall be carries out by a certified entity, registered in accordance with the Occupational Health and Safety Act. 1993 and the Asbestos Regulations 2001

Asbestos in all forms/building elements that is to be removed, shall be carried out in strict accordance with aforementioned regulation and a certificate issued by the entity as contemplated in the above, shall be provided per block for the removal thereof, where the term block shall in this context refer to any single, free standing building structure, regardless of size or purpose

Corresponding disposal certificates shall be issued by the facility at which the asbestos is disposed off, with said facility to, prior to the disposal of any asbestos material provide satisfactory proof that the facility is duly registered and fully compliant in terms of the act, to receive the asbestos material

Under no circumstances is the Contractor nor any of his duly authorised representatives to sell and/or give away asbestos material to any member/s of the school community, the community in general or the public at large. Should this be found to be occuring, the Contractor will be held responsible contractually and may further be prosecuted ciminally

The cost for complying with the above, and all requirements of regulation as reflected above is to be priced for in terms for removal of asbestos material. No further claims in this regard will therefore be entertained

Carried to Collection R

Section 3
Bill No. 1
Demolitions

TEMPORARY BARRIERS, SCREENS, ETC

Temporary barriers, screens, etc including removal

1	SANS approved weld mesh type temporary barrier fencing 1,8m high covered with a net fixed to and including 100mm diameter gum poles set securely min 300mm deep in ground at max 3m spacing including excavation, backfilling, etc	m	120		
2	Extra over mesh fence for double leaf gate size 5.5 x 1,8m high.	No	1		

DESLUDGING EXISTING TOILETS

3	Clean out pit latrine by desludging including removal of all debris and waste including solid waste as per Health and Safety requirements and make good on completion including disposing of all debris and waste at an authorised municipal waste disposal facility. Contractor to price per seat	No	25		
4	Issue of Certificate of Waste Disposal.		Item		

DEMOLISHING AND REMOVING

5	Demolish pit latrine structure comprising of brick/block work with corrugated roof sheeting, approximate size 11 x 6m wide with 3,5m high top structure and 2,0m deep pit. Demolition is to only commence once the latrine has been completely emptied (elsewhere measured).	No	2		
6	Demolish pit latrine structure comprising of brick/block work with 30mm concrete roof , approximate size 1.5m diameter with 3,5m high top structure and 2,0m deep pit. Demolition is to only commence once the latrine has been completely emptied (elsewhere measured).	No	2		
7	Demolish pit latrine structure comprising of pre-cast work with corrugated roof sheeting, approximate size 1 x 1.2m wide with 3m high top structure and 2,0m deep pit. Demolition is to only commence once the latrine has been completely emptied (elsewhere measured).	No	11		
8	Breaking up and removing reinforced 85mm thick concrete surfacebed including cutting back/and removing reinforcement	m3	1		
	Carried to Collection			R	

Section 3
Bill No. 1
Demolitions

9	Breaking down and removing one brickwall	m2	37		
10	Cart away rubble from demolitions and dispose off site.		Item		
11	Backfill existing hole with G7 fill material in max. 150mm layers and compact to 95% MOD AASHTO density.	m3	27		
12	Allow for compaction tests by an approved laboratory to determine density of filling material.	No	5		
	Carried to Collection			R	

Section 3
Bill No. 1
Demolitions

Section 3

Bill No. 1

Demolitions

COLLECTION

	Page No		Amount
Total Brought Forward from Page No.	88		
	89		
	90		
	91		
Carried Forward to Summary of Section No. 3		R	

Section 3
Bill No. 1
Demolitions

Item No			Quantity	Rate	Amount
	SECTION No. 3				
	BILL No. 2				
	EXTERNAL WORKS (PROVISIONAL)				
	MODEL PREAMBLES				
	The tenderer is referred to the "General Preambles for Trades 2017" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates.				
	SITE CLEARANCE, ETC.				
	Site Clearance, ETC				
1	Allow for clearing the area of the site to be built upon of all grass, weeds, shrubs, trees with trunks not exceeding 200mm girth, debris, etc., including grubbing up all roots, scoffling up as required and cart away all vegetation and debris.	m2	230		
	BULK EARTHWORKS				
	Open face excavation not exceeding 2m deep:				
2	Excavate to cut in open face, not exceeding 2m deep to reduce levels and grade to fill and compact to 93% mod AASHTO density at optimum moisture content.	m3	180		
	Extra over all excavations for carting away:				
3	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor.	m3	180		
	Earth filling from excavated material				
4	Dig, load and remove filling selected from spoil heaps on site and deposit as filling in platforms including spreading and compacting to cambers and falls in layers not exceeding 150 mm thick to a minimum of 95% Modified AASHTO dry density.	m3	180		
	Carried to Collection			R	
	Section 3 Bill No. 2 Site Works				

	Surface Preparation:				
5	Trim and level off surface of ground (excavated or filled under this Contract) including excavating or filling, ripping and scarifying as necessary and compacting the whole area for a depth of 300mm to a density of at least 90% Mod. AASHTO maximum density, part to falls.	m2	230		
	Prescribed density tests on filling:				
6	Modified AASHTO Density test.	No	5		
	THE FOLLOWING IN PEDESTRIAN ACCESS				
	Excavation not exceeding 2m deep				
7	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	253		
	Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):				
8	Off site to a dumping site to be found by the Contractor.	m3	253		
	Filling supplied by the contractor under walkways				
9	Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.	m3	127		
	Rip and Re - compact insitu material on site compacted to 93% Mod. AASHTO density:				
10	Under floors,etc.	m2	424		
	Prescribed density tests on filling:				
11	In-situ dry density test.	No	5		
	Approved brand of anti-termite soil poison applied by a Registered Pest Control Company and guaranteed against termite infestation for ten years:				
12	Treat filling under paving with 'Chlordane Heptachlor Aldrin' or equal approved.	m2	424		
	Concrete Paving Blocks				
	Carried to Collection			R	

Section 3
Bill No. 2
Site Works

	Paving of 50mm thick 200x100mm 25MPa Bevel Bond paver blocks grey in colour in herringbone pattern on and including 20mm thick sand bed with dry filler sand swept and vibrated into joints all laid on subgrade (elsewhere measured) conforming to SABS 1200D degree of accuracy I:				
13	Paving to walkway areas, etc laid to falls.	m2	332		
14	Extra over ordinary paving for 200mm wide block-on-flat header course edging on 100mm thick mortar bed including unreinforced concrete haunching along outside edge.	m	232		
15	Ditto but circular on plan.	m	20		
	Kerbing				
	Precast or in situ mass concrete (25 MPa - 19 mm stone) kerbs cast in convenient lengths with exposed faces finished smooth from the mould and all salient angles rounded, jointed and pointed in 1:3 cement mortar, including excavations, formwork, etc.				
16	Figure 8B (300 x 275 x 175mm) semi mountable kerb laid in lengths not exceeding 1000mm on a well rammed earth bottom or base course.	m	222		
17	Ditto but circular on plan.	m	20		
18	Fig. 12 kerb size 75 x 150mm high overall, laid in lengths not exceeding 1000mm on a well rammed earth bottom or base course.	m	25		
19	Ditto but circular on plan.	m	20		
	Carried to Collection			R	
	Section 3 Bill No. 2 Site Works				

	THE FOLLOWING IN RETAINING WALLS, ETC.				
	Excavation in earth not exceeding 2m deep				
20	Trenches.	m3	3		
	Risk of collapse of excavations:				
21	Sides of trench and hole excavations not exceeding 1,5m deep.	m2	5		
	Keeping excavations free of water:				
22	Keeping excavations free of all water other than subterranean water.		Item		
	Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):				
23	Off site to a dumping site to be found by the Contractor.	m3	3		
	Filling with approved clean, hard, dry decomposed dolerite filling supplied and carted onto site by the Contractor, compacted to a density of at least 95% Mod. AASHTO maximum density:				
24	Behind walls with selected backfilling supplied by the Contractor compacted to 98% Mod ASSHTO density	m3	3		
	Compaction of surfaces				
25	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 90% Mod AASHTO density.	m2	9		
	15Mpa/19mm Concrete				
26	Surface blinding under footings and bases.	m3	1		
	30Mpa/19mm Concrete				
27	Strip footings.	m3	1		
28	Cavity walls.	m3	1		
	Carried to Collection			R	
	Section 3 Bill No. 2 Site Works				

	Test blocks:				
29	Making and testing of 150x150x150mm concrete strength test cubes (Provisional).	No	1		
	Fabric reinforcement:				
30	REF. 395 fabric reinforcement in concrete infill, strip footings.	m2	6		
	Brickwork reinforcement:				
31	230mm Wide reinforcement built in horizontally.	m	36		
	"Corobrik Firelight Satin" clay face bricks or other approved equal, size 222 × 106 × 73 mm, bedded and jointed in Class II mortar and pointed with recessed vertical and recessed horizontal joints, suitable for Exposure Zones 1–2 (cement to be 42.5N all-purpose cement).				
32	330 mm reinforced concrete-filled cavity wall comprising two 110 mm facebrick leaves separated by a 110 mm cavity, cavity filled with 25 MPa concrete, including all wall ties, reinforcement, concrete infill, placing, compacting, curing and all necessary sundries, complete	m2	3		
	Brick-on-edge header course copings, sills, etc., of "Corobrik Firelight Satin" clay face bricks or other approved equal, size 222 x 106 x 73mm, bedded and jointed in Class II mortar and pointed with recessed joints on all exposed faces.				
33	220mm Wide header course to top of one brick wall bedded and jointed in cement mortar and pointed on top and both sides as described.	m	3		
	Openings in Walls etc.				
34	Leave or form 32mm weephole through one brick wall	No	3		
	Membranes				
35	"Geofabric filter blanket wrapped around stone with 150mm side and 300mm end laps, including stitching.	m2	4		
	Carried to Collection			R	

Section 3
Bill No. 2
Site Works

	Earth filling 300 x 300mm section of 19mm thick stone material surrounding 110mm uPVC pipe, supplied by the contractor compacted to 98% Mod AASHTO density:				
36	19mm Stone.	m3	1		
	THE FOLLOWING IN STORMWATER DRAINAGE, APRONS ETC.				
	APRONS				
	Excavation not exceeding 2m deep				
37	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	4		
	Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):				
38	Off site to a dumping site to be found by the Contractor.	m3	4		
	Filling supplied by the contractor under floors, aprons, etc				
39	G7 Base course material compacted to 98% Mod AASHTO density	m3	2		
40	Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.	m3	2		
	Coarse river sand filling supplied by the contractor:				
41	Under floors etc.	m3	1		
	Compaction of surfaces:				
42	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density.	m2	12		
	Prescribed density tests on filling:				
43	In-situ dry density test.	No	4		
	Carried to Collection			R	
	Section 3 Bill No. 2 Site Works				

	Reinforced 25Mpa/19mm Concrete:				
44	Surface beds cast in panels on waterproofing.	m3	1		
	Finishing top surfaces of concrete smooth with a wood float:				
45	Surface beds, slabs, etc to falls and currents.	m2	12		
	Test blocks:				
46	Making and testing of 150x150x150mm concrete strength test cubes (Provisional).	No	4		
	Expansion joints with bitumen impregnated softboard between vertical concrete or brick surfaces:				
47	12mm Joints not exceeding 300mm high.	m	16		
	Two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc				
48	10 x 12mm In movement joints in floors or walls including raking out expansion joint filler as necessary.	m	16		
	Fabric reinforcement:				
49	REF. 395 fabric reinforcement in concrete surface beds, slabs, etc.	m2	12		
	Waterproofing under Surface beds				
50	350 Micron USB orange polyethylene dampproof membrane in accordance with SABS 952 Type C laid on sand bed (elsewhere measured).	m2	12		
	STORMWATER CHANNELS				
	Excavation not exceeding 2m deep				
51	Reducing levels and depositing excavated material in prescribed stock piles on site.	m3	13		
	Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):				
52	Off site to a dumping site to be found by the Contractor.	m3	13		
	Carried to Collection			R	
	Section 3 Bill No. 2 Site Works				

	Filling supplied by the contractor under channels				
53	Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.	m3	8		
	Cast in-situ Ref 395 mesh reinforced concrete (25MPa) open stormwater channels having V-shaped waterway formed in top, finished smooth on all exposed surfaces in 3:1 cement plaster trowelled smooth and with angles rounded, cast in suitable lengths not exceeding 2m, including all formwork, moulds, shallow excavation, filling and ramming, laying to falls, bedding and pointing in 3:1 cement mortar. Concrete apron to be tinted, colour to be specified by the Engineer.				
54	700 x 80mm thick V' channel 150mm deep in centre laid in position in ground not exceeding 2000mm sections including all formwork, reinforcement, expansion joints, smooth finishing to top of concrete surface etc.	m	56		
55	Extra for 700mm angle	No	4		
56	Extra for forming 200mm thick 700mm wide spreader with 200mm high edges fanning out to 1 960mm width at furthest end with hard burnt bricks pitching cast in ass diffusers including working off concrete to a smooth finish and draining onto natural ground with 150 - 200mm diameter loose stones.	No	3		
	Sundries:				
57	Create earth berm for stormwater control with in situ material 1,5m wide at base x 500mm high	m	20		
58	Construct shaped earth V-drain 2m wide with grass runners	m	20		
	THE FOLLOWING IN SUB-SOIL DRAINAGE, ETC.				
	Excavation in earth not exceeding 2m deep:				
59	Trenches.	m3	35		
	Carried to Collection			R	

Section 3
Bill No. 2
Site Works

	Extra over all excavations for carting away:				
60	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor.	m3	35		
	Risk of collapse of excavations:				
61	Sides of trench and hole excavations not exceeding 1,5m deep.	m2	139		
62	Ditto, but from ground level to exceeding 1,5m.	m2	17		
	Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% MOD AASHTO density:				
63	Backfilling to trenches, holes, etc.	m3	17		
	Earth filling 300 x 300mm section of 19mm thick stone material surrounding 110mm uPVC pipe, supplied by the contractor compacted to 98% Mod AASHTO density:				
64	19mm Stone.	m3	12		
	Membrane				
65	""Geofabric filter blanket wrapped around stone with 150mm side and 300mm end laps, including stitching.	m2	139		
	Keeping excavations free of water:				
66	Keeping excavations free from mud and all water including subterranean sources.		Item		
	Compaction of surfaces				
67	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 90% Mod AASHTO density.	m2	59		
	SUB-SOIL DRAINAGE				
	Carried to Collection			R	

Section 3
Bill No. 2
Site Works

	110mm Diameter perforated uPVC pipe surrounded with 300 x 300mm section of 20mm stone wrapped in A3 geotextile material.				
68	110mm uPVC pipe.	m	6		
	Extra for:				
69	110mm Tee.	No	4		
70	110mm Y junction.	No	4		
	THE FOLLOWING IN SOAKAWAY				
	Excavation in earth not exceeding 2m deep:				
71	Holes	m3	7		
	Extra over all excavations for carting away				
72	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor within 5km from the building site	m3	7		
	Risk of collapse of excavations				
73	Sides of trench and hole excavations exceeding 1,5m deep but not exceeding 3,0m deep	m2	26		
	Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 90% Mod AASHTO density				
74	Backfilling to holes	m3	4		
	Earth filling with stone material supplied by the contractor:				
75	Stone (>53mm).	m2	4		
	Membranes				
76	"BidimGeotextile or equal approved, lined on all sides including the top and bottom faces.	m2	32		
	Carried to Collection			R	

Section 3
Bill No. 2
Site Works

	Keeping excavations free of water				
77	Keeping excavations free of all water other than subterranean water		Item		
	THE FOLLOWING IN RAINWATER TANKS AND STANDS				
	Excavation in earth not exceeding 2m deep:				
78	Trenches.	m3	16		
	Extra over all excavations for carting away:				
79	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor.	m3	16		
	Risk of collapse of excavations:				
80	Sides of trench and hole excavations not exceeding 1,5m deep.	m2	7		
	Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% MOD AASHTO density:				
81	Backfilling to trenches, holes, etc.	m3	7		
	Earth filling (G7 material) supplied by the contractor in layers not exceeding 150mm thick and compacted to 98% Mod AASHTO density:				
82	Under footings.	m3	7		
	Compaction of surfaces				
83	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 90% Mod AASHTO density.	m2	16		
	25 Mpa/19mm Concrete				
84	Strip footings.	m3	6		
	Carried to Collection			R	
	Section 3 Bill No. 2 Site Works				

	25 MPa/19mm Concrete:				
85	Tank concrete slab.	m3	4		
	Test blocks:				
86	Making and testing of 150x150x150mm concrete strength test cubes (Provisional).	No	4		
	Finishing top surfaces of concrete smooth with a steel trowel including adding additional cement while concrete is still green to attain a smooth, hard surface:				
87	Surface beds, slabs, etc.	m2	16		
	Rough Formwork to Sides:				
88	Edges, risers, ends and reveals not exceeding 300mm high.	m	32		
	Allens Meshco Square Mesh Fabric reinforcement:				
89	Type 617 fabric reinforcement in concrete slabs.	m2	16		
	BRICKWORK IN FOUNDATIONS.				
	Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar (Cement to be 42.5N all-purpose cement):				
90	One brick walls.	m2	16		
	BRICKWORK IN SUPERSTRUCTURE				
	Brickwork of NFP bricks (14 MPa nominal compressive strength) in Class II mortar (Cement to be 42.5N all-purpose cement):				
91	One brick walls.	m2	20		
	Brickwork reinforcement:				
92	230mm Wide reinforcement built in horizontally.	m	107		
93	Ditto but in foundations.	m	114		
	Carried to Collection			R	

Section 3
Bill No. 2
Site Works

	FACE BRICK				
	"Corobrik Firelight Satin" clay face brick or equal approved, size 222 x 106 x 73mm, bedded and jointed in Class II mortar and pointed with recessed vertical and recessed horizontal joints, suitable for exposure zones 1-2(Cement to be 42.5N all-purpose cement):				
94	Extra over brickwork for face brickwork externally.	m2	20		
	Brick-on-edge header course copings, sills, etc, of "Corobrik Firelight Satin" or equal approved face bricks pointed with recessed joints on all exposed faces, 220mm wide sill set sloping and slightly projecting:				
95	230mm wide header course to top of one brick wall bedded and jointed in cement mortar and pointed on top and both sides as described.	m	32		
	Plastic water tanks etc:				
96	5000 Litre roto molded or equal approved plastic tank complete with lid, 15mm brass bibtap with handle suitable for locking and 4 No. galvanised stay wires 2.5m each long connected to tank, with and including 4 No. eye bolts cast into concrete.	No	3		
97	Hole top of tank for 100mm pipe.	No	3		
	Carried to Collection			R	

Section 3
Bill No. 2
Site Works

Section 3

Bill No. 2

Site Works

COLLECTION

	Page No		Amount
Total Brought Forward from Page No.	93		
	94		
	95		
	96		
	97		
	98		
	99		
	100		
	101		
	102		
	103		
	104		
	105		
Carried Forward to Summary of Section No. 3		R	

Section 3
Bill No. 2
Site Works

Section 3

SECTION SUMMARY - EXTERNAL WORKS

Bill No		Page No		Amount
	Demolitions	92		
	Site Works	106		
	Carried to Final Summary		R	

Section 3

Item No		Quantity	Rate	Amount
	SECTION 4			
	BILL No. 1			
	PROVISIONAL SUMS			
	SUPPLEMENTARY PREAMBLES			
	Tenderers are advised that no claim in respect of loss of profit or Preliminary charges based on the omission of these amounts will be considered and the said amounts will be omitted strictly without any financial compensation payable to the Contractor.			
	Provisional sums and Budgetary allowances contained herein may be omitted or reduced at the Employer's discretion and the Contractor shall not be entitled to claim for any loss by way of reductions or omission of any discount, or percentage relating to Provisional amounts and Budgetary sums or any loss of profit related therto.			
	BUDGETARY ALLOWANCES			
	The following budgetary allowances are for work to be executed at rates in the bills of quantities or to be agreed by the Principal agent:			
	COMMUNITY LIAISON OFFICER			
1	Provide the sum of R39 000.00 for the employment of a Community Liaison Officer to be employed by the Main Contractor and be paid an allowance of R6 500.00 a month for the duration (6 months)	Item		39 000.00
2	Add: Mark-up		%	
	ELECTRICAL INSTALLATION			
3	Provide the sum of R 180 000.00 (One Hundred and Eighty Thousand Rand) for Electrical installation and Lightning Protection	Item		180 000.00
4	Add: Profit		%	
5	Add: Attendance		%	
	Carried to Collection		R	
	Section 4 Bill No. 1 Provisional Sums			

	GEOTECHNICAL INVESTIGATION			
6	Provide the sum of R 25 000.00 (Twenty Five Thousand Rand) for carrying out a geotechnical investigation and submission of a geotechnical report with recommendations for the proposed works	Item		25 000.00
7	Add: Profit		%	
8	Add: Attendance		%	
	TOPOGRAPHICAL SURVEY			
9	Provide the sum of R 25 000.00 (Twenty Five Thousand Rand) for carrying out a topographical survey of the site and submission of survey drawings	Item		25 000.00
10	Add: Profit		%	
11	Add: Attendance		%	
	Carried to Collection		R	

Section 4
Bill No. 1
Provisional Sums

Section 4

Bill No. 1

Provisional Sums

COLLECTION

	Page No		Amount
Total Brought Forward from Page No.	108		
	109		
Carried to Final Summary		R	

Section 4
Bill No. 1
Provisional Sums

FINAL SUMMARY

Section No		Page No		Amount
1	PRELIMINARIES	41		
2	BUILDING WORKS	87		
3	EXTERNAL WORKS	107		
4	PROVISIONAL SUMS	110		
	SUB-TOTAL		R	
	CONTINGENCIES			
	Allow five per cent (5%) of the above sub-total for contingencies to be used as directed and deducted in whole or in part if not required.		R	
	SUB-TOTAL		R	
	ADD VAT @ 15%		R	
	Carried to Cluster Summary		R	