

Item No		Quantity	Rate	Amount
	<p><u>SECTION NO 1</u></p> <p><u>BILL NO 1</u></p> <p><u>PRELIMINARIES</u></p> <p>The JBCC Principal Building Agreement (March 2005 Edition 4.1) prepared by the Joint Building Contracts Committee shall be the applicable building agreement, amended as hereinafter described</p> <p>The following documents form an integral part of this agreement: a) JBCC Principal Building Agreement Contract Data Edition 4.1 March 2005</p> <p>PREAMBLES FOR TRADES</p> <p>The Model Preambles for Trades (September 2008 edition) as 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 Model Preambles will be entertained.</p> <p>Supplementary preambles are incorporated in these bills of quantities to satisfy the requirements of this project. Such supplementary preambles shall take precedence over the provisions of the said Model Preambles</p>			
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	<p>Section No. 1</p> <p>PRELIMINARIES</p> <p>Bill No. 1</p> <p>PRELIMINARIES</p>			

The contractor's prices for all items throughout these bills of quantities must take account of and include for all of the obligations, requirements and specifications given in the said Model Preambles and in any supplementary preambles

STANDARD SYSTEM OF MEASURING BUILDING WORK

The measuring system used for the preparation of the bills of quantities is the Standard System of Measuring Building Work (seventh edition, 2017) published by the Association of South African Quantity Surveyors (ASAQS)

MEANING OF TERMS "TENDER / TENDERER"

Any reference to the words "Tender" or "Tenderer" herein and/or in any other documentation shall be construed to have the same meaning as the words "Bid" or "Bidder"

PRELIMINARIES

The JBCC Preliminaries Code 2103, May 2005 edition for use with the JBCC Principal Building Agreement Edition 4.1 Code 2101, March 2005 is taken to be incorporated herein. The tenderer is deemed to have referred to these documents for the full intent and meaning of each clause. These clauses are referred to by number and heading only. Where standard clauses or options are not applicable to the contract such modifications or corrections as are necessary are given under each relevant clause.

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PRELIMINARIES**

The clauses in the above-mentioned documents are herein after referred to by clause number and heading only. Where standard clauses or alternatives are not entirely applicable to this agreement such modifications, corrections or supplements as will apply are given under each relevant clause heading and such modifications, corrections or supplements shall take precedence not withstanding anything to the contrary contained in the above-mentioned documents

Where any item is not relevant to this agreement such item is marked N/A (signifying “not applicable”)

PRICING OF PRELIMINARIES

Should Option A, as set out in clause B10.3.1 hereinafter be used for the adjustment of preliminaries then each item priced is to be allocated to one or more of the three categories Fixed (F), Value Related (V) or Time Related (T) and the respective amounts entered in the spaces provided under each item.

Items not priced in these Preliminaries shall be deemed to be included elsewhere in these Bills of Quantities

CPA WORK GROUP

Unless otherwise stated all items in this bill will be Work Group 190

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SECTION A: JBCC PRINCIPAL BUILDING AGREEMENT

DEFINITIONS

A1 DEFINITIONS AND INTERPRETATION

Clause 1.0 Clause 1.1 Definition of "Commencement Date" is added:

"COMMENCEMENT DATE" means the date that the agreement, made in terms of the Form of Offer and Acceptance, comes into effect.

Clause 1.0 Clause 1.1 Definition of "Construction Guarantee" is amended by replacing it with the following:

"CONSTRUCTION GUARANTEE" means a guarantee at call obtained by the contractor from an institution approved by the employer in terms of the employer's construction guarantee form as selected in the schedule.

Clause 1.1 Definition of "Construction Period" is amended by replacing it with the following:

"CONSTRUCTION PERIOD" means the period commencing on the date of site hand over and ending on the date of practical completion.

Clause 1.1 Definition of "Corrupt Practice" is added:

"CORRUPT PRATICE" means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement or in the contract execution.

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Clause 1.1 Definition of "Fraudulent Practice" is added:

"FRAUDULENT PRACTICE" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of any tenderer and includes collusive practice among the tenderers (prior to or after the tender submission) designed to establish tender prices at artificial non-competitive levels and to deprive the tenderer of the benefits of free and open competition.

Clause 1.1 Definition of "Interest" is amended by replacing it with the following:

"INTEREST" means the interest rates applicable on this contract, whether specifically indicated in the relevant clauses or not, will be the rate as determined by the Minister of Finance, from time to time, in terms of section 80(1)(b) of the Public Finance Management Act, 1999 (Act No. 1 of 1999).

Clause 1.1 Definition of "Principal Agent" is amended by replacing it with the following:

"PRINCIPAL AGENT" means the person or entity appointed by the employer and named in the schedule. In the event of a principal agent not being appointed, then all the duties and obligations of a principal agent as detailed in the agreement shall be fulfilled by a representative of the employer as named in the schedule.

Clause 1.1 Definition of "Security" is amended by replacing it with the following:

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"SECURITY" means the form of security provided by the employer or contractor, as stated in the schedule, from which the contractor or employer may recover expense or loss.

Clause 1.6 is amended as follows: Any notice given may be delivered by hand, sent by prepaid registered post or telefax. Notice shall be presumed to have been duly given when:

Clause 1.6.4 is amended by replacing it with the following:

No clause

Fixed:.....Value:.....Time:.....

1

Item

OBJECTIVE AND PREPARATION

A2 OFFER AND ACCEPTANCE

Clause 2.0

Fixed:.....Value:.....Time:.....

2

Item

A3 DOCUMENTS

Clause 3.0

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Clause 3.7 is amended by the addition of the following: The contractor shall supply and keep a copy of the JBCC Series 2000 Principal Building Agreement and Preliminaries applicable to this contract on the site, to which the employer, principal agent and agents shall have access at all times. Clause 3.10 is amended by replacing the second reference to "principal agent" with the word "employer".

Fixed:.....Value:.....Time:.....

3

Item

A4 DESIGN RESPONSIBILITY

Clause 4.0

Clause 4.3 is amended by replacing it with the following: No clause

Fixed:.....Value:.....Time:.....

4

Item

A5 EMPLOYERS AGENTS

Clause 5.0

Clause 5.1.2 is amended to include clauses 32.6.3, 34.3, 34.4 and 38.5.8

Fixed:.....Value:.....Time:.....

5

Item

A6 SITE REPRESENTATIVE

Clause 6.0

Fixed:.....Value:.....Time:.....

6

Item

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A7 COMPLIANCE WITH REGULATIONS

Clause 7.0

Note: A separate clause has been included in Section C : Specific Preliminaries of the bills of quantities / lump sum document for the contractor to have the opportunity to price for all the requirements of the Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification.

Fixed:.....Value:.....Time:.....

7

Item

A8 WORKS RISK

Clause 8.0

Fixed:.....Value:.....Time:.....

8

Item

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A9 INDEMNITIES

Clause 9.0

Clause 9.0 is amended by adding sub-clause 9.1.4:
 The contractor indemnifies and holds harmless the employer against all liability, losses, claims, damages, penalties, actions, proceedings or judgements (collectively referred to as "Losses") arising from any infringement of letters, patent design, trademark, name, copyright or other protected rights in respect of any machine, plant, work, materials, thing, system or method of using, fixing, working or arrangement used or fixed or supplied by the contractor, but such indemnity shall not cover any use of the equipment of part thereof otherwise than in accordance with the provisions of the specification. All payments and royalties payable in one sum or otherwise shall be included by the contractor in the price and shall be paid by him to those to whom they may be payable. The contractor shall reimburse the employer for all legal and other costs and expenses, including without limitation attorney's fees on attorney-client scale incurred by the employer in connection with investigation, defending or settling any Losses in connection with pending or threatening litigation in which the employer is a party.

Fixed:.....Value:.....Time:.....

9

Item

A10 WORKS INSURANCES

Clause 10.0

Clause 10.0 is amended by the addition of the following clauses:

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10.5 Damage to the Works

(a) Without in any way limiting the contractors obligations in terms of the contract, the contractor shall bear the full risk of damage to and/or destruction of the works by whatever cause during construction of the works and hereby indemnifies and holds harmless the Employer against any such damage. The Contractor shall take such precautions and security measures and other steps for the protection and security of the works as the contractor may deem necessary.

(b) The Contractor shall at all times proceed immediately to remove or dispose of any debris arising from damage to or destruction of the works and to rebuild, restore, replace and/or repair the works.

(c) The employer shall carry the risk of damage to or destruction of the works and material paid for by the employer that is the result of the excepted risks as set out in 10.6

(d) Where the employer bears the risk in terms of this contract, the contractor shall, if requested to do so, reinstate any damage or destroyed portions of the works and the costs of such reinstatement shall be measured and valued in terms of 32.0 hereof.

10.6 Injury to Persons or loss of or damage to Properties

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(a) The contractor shall be liable for and hereby indemnifies the employer against any liability, loss, claim or proceeding whether arising in common law or by statute, consequent upon personal injuries to or the death of any person whomsoever arising out of or in the course of or caused by the execution of the works unless due to any act or neglect of any person for whose actions the employer is legally liable.

(b) The contractor shall be liable for and hereby indemnifies the employer against any liability, loss, claim or proceeding consequent upon loss of or damage to any moveable or immovable or personal property or property contiguous to the site, whether belonging to or under the control of the employer or any other body or person, arising out of or in the course of or by reason of the execution of the works unless due to any act or neglect of any person for whose actions the employer is legally liable.

(c) The contractor shall, upon receiving a contract instruction from the principal agent, cause the same to be made good in a perfect and workmanlike manner at his own cost and in default thereof the employer shall be entitled to cause it to be made good and to recover the cost thereof from the contractor or to deduct the same from amounts due to the contractor.

(d) The contractor shall be responsible for the protection and safety of such portions of the premises placed under his control by the employer for the purpose of executing the works until the issue of the certificate of practical completion.

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(e) Where the execution of the works involves the risk of removal of or interference with support to adjoining properties including land or structures or any structures to be altered or added to, the contractor shall obtain adequate insurance and will remain adequately insured or insured to the specific limit stated in the contract against the death of or injury to persons or damage to such property consequent on such removal or interference with the support until such portion of the works has been completed.

(f) The contractor shall at all times proceed immediately at his own cost to remove or dispose of any debris and to rebuild, restore, replace and/or repair such property and to execute the works.

10.7 High risk insurance

In the event of the project being executed in a geological area classified as a "High Risk Area", that is an area which is subject to highly unstable subsurface conditions that might result in catastrophic ground movement evident by sink hole or doline formation the following will apply:

10.7.1 Damage to the works

The contractor shall, from the date of site handover until the date of the certificate of practical completion bear the full risk of and hereby indemnifies and holds harmless the employer against any damage to and/or destruction of the works consequent upon a catastrophic ground movement as mentioned above. The contractor shall take such precautions and security measures and other steps for the protection of the works as he may deem necessary.

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When so instructed to do so by the principal agent, the contractor shall proceed immediately to remove and/or dispose of any debris arising from damage to or destruction of the works and to rebuild, restore, replace and/or repair the works, at the contractor's own costs.

10.7.2 Injury to persons or loss of or damage to property

The contractor shall be liable for and hereby indemnifies and holds harmless the employer against any liability, loss, claim or proceeding arising at any time during the period of the contract whether arising in common law or by statute, consequent upon personal injuries to or the death of any person whomsoever resulting from, arising out of or caused by a catastrophic ground movement as mentioned above.

The contractor shall be liable for and hereby indemnifies the employer against any and all liability, loss, claim or proceeding consequent upon loss of or damage to any moveable or immovable or personal property or property contiguous to the site, whether belonging to or under the control of the employer or any other body or person whomsoever arising out of or caused by a catastrophic ground movement, as mentioned above, which occurred during the period of the construction.

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10.7.3 It is the responsibility of the contractor to ensure that he has adequate insurance to cover his risk and liability as mentioned in 10.7.1 and 10.7.2. Without limiting the contractor's obligations in terms of the contract, the contractor shall, within twenty-one (21) calendar days of the commencement date but before commencement of the works, submit to the employer proof of such insurance policy, if requested to do so.

10.7.4 The employer shall be entitled to recover any and all losses and/or damages of whatever nature suffered or incurred consequent upon the contractor's default of his obligations as set out in 10.7.1; 10.7.2 and 10.7.3. Such losses or damages may be recovered from the contractor or by deducting the same from any amounts still due under this contract or under any other contract presently or hereafter existing between the employer and the contractor and for this purpose all these contracts shall be considered one indivisible whole.

Fixed:.....Value:.....Time:.....

10

Item

A11 LIABILITY INSURANCES

Clause 11.0

Fixed:.....Value:.....Time:.....

11

Item

A12 EFFECTING INSURANCES

Clause 12.0

Fixed:.....Value:.....Time:.....

12

Item

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13	<p>A13. No clause</p> <p>Fixed:.....Value:.....Time:.....</p> <p>....</p>	Item	
14	<p>A14 SECURITY</p> <p>Clause 14.0</p> <p>Sub clause 14.7.1 is deemed to be amended as follows: No interest will be paid on such amounts withheld.</p> <p>Fixed:.....Value:.....Time:.....</p> <p>....</p>	Item	
15	<p>EXECUTION</p> <p>A15 PREPARATION FOR AND EXECUTION OF THE WORKS</p> <p>Clause 15.0</p> <p>Clause 15.1 is amended by the addition of the following clause: 15.1.4 An acceptable health and safety plan, required in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993), the construction guarantee and insurances within ten (10) calendar days and prior to the site handover date.</p> <p>Clause 15.2.1 is amended by replacing it with the following clause:</p> <p>Give the contractor possession of the site only after the contractor complied with the terms of sub clause 15.1.4 and any other requirements as indicated in the schedule Clause 42.2.5</p> <p>Fixed:.....Value:.....Time:.....</p> <p>....</p>	Item	
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16	<p>A16 ACCESS TO THE WORKS</p> <p>Clause 16.0</p> <p>Fixed:.....Value:.....Time:.....</p>	Item	
17	<p>A17 CONTRACT INSTRUCTIONS</p> <p>Clause 17.0</p> <p>Fixed:.....Value:.....Time:.....</p>	Item	
18	<p>A18 SETTING OUT OF THE WORKS</p> <p>Clause 18.0</p> <p>Add sub-clause 18.5 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</p> <p>Fixed:.....Value:.....Time:.....</p>	Item	
19	<p>A19 ASSIGNMENT</p> <p>Clause 19.0</p> <p>Fixed:.....Value:.....Time:.....</p>	Item	
	<p>A20 NOMINATED SUB-CONTRACTORS</p> <p>Clause 20.0</p> <p>Clause 20.1.3 is amended with replacing it with: No clause</p>		
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20	<p>Fixed:.....Value:.....Time:..... </p> <p>A21 SELECTED SUBCONTRACTORS</p> <p>Clause 21.0</p> <p>Replace sub-clauses 21.1.2 to 21.1.4 and 21.2 to 21.6 with the following:The contractor and principal agent shall appoint a selected subcontractor in accordance with the CIDB practice note #7</p>	Item		
21	<p>Fixed:.....Value:.....Time:..... </p>	Item		
22	<p>A22 EMPLOYER'S DIRECT CONTRACTORS</p> <p>Clause 22.0</p>	Item		
23	<p>Fixed:.....Value:.....Time:..... </p>	Item		
24	<p>A23 CONTRACTOR'S DOMESTIC SUBCONTRACTORS</p> <p>Clause 23.0</p>	Item		
24	<p>Fixed:.....Value:.....Time:..... </p>	Item		
24	<p>COMPLETION</p> <p>A24 PRACTICAL COMPLETION</p> <p>Clause 24.0</p>	Item		
24	<p>Fixed:.....Value:.....Time:..... </p>	Item		
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A25 WORK'S COMPLETION

Clause 25.0

Add the following sub-clause 25.3.3: The contractor shall attend to defects during the works completion and defects liability periods on a progressive basis, to the satisfaction of the principal agent and will not be permitted to wait until the end of the works completion or defects liability period or until the amount of defects accumulate in order to attend to a comprehensive list of defects.”

Fixed:.....Value:.....Time:.....

25

Item

A26 FINAL COMPLETION

Clause 26.0

Add the following to the end of sub-clause 26.1.2: “All civil, electrical, electronic, HVAC, fire detection, gas suppression and other specialist installations are subject to a three hundred and sixty five (365) calendar days defects liability and maintenance period. The contractor shall attend to defects during the works completion and defects liability periods on a progressive basis, to the satisfaction of the principal agent and will not be permitted to wait until the end of the works completion or defects liability period or until the amount of defects accumulate in order to attend to a comprehensive list of defects.”

Fixed:.....Value:.....Time:.....

26

Item

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27	<p>A27 LATENT DEFECTS LIABILITY PERIOD</p> <p>Clause 27.0</p> <p>Fixed:.....Value:.....Time:.....</p> <p>....</p>	Item	
28	<p>A28 SECTIONAL COMPLETION</p> <p>Clause 28.0</p> <p>Fixed:.....Value:.....Time:.....</p> <p>....</p>	Item	
29	<p>A29 REVISION OF DATE FOR PRACTICAL COMPLETION</p> <p>Clause 29.0 Clause 29.0 is amended by:-i) The addition of the following clauses:-Sub-clause 29.9“Revision to the date for practical completion shall only be considered when work on the critical path of the agreed programme for the works is delayed.”ii) Sub-clause 29.10 – AccelerationSub-clause 29.10.1“Irrespective of whether or not the principal agent rules that the contractor is entitled to an extension of time or a revision of the date for practical completion, the principal agent shall nevertheless, at any time, be entitled to instruct the contractor in writing to accelerate the progress of the remaining works to ensure that the works are completed by the original date for practical completion or revised date as the case may be.”Sub-clause 29.10.2“Upon receipt of such instruction, the contractor shall take all necessary steps to ensure that the works are completed timeously including the provision by him of additional resources, plant, manpower, etc and the working overtime or additional overtime beyond that contemplated at the time of tender (at all times adhering to the regulations and requirements of all authorities) and by all other adequate and proper means and methods. The</p> <p>Fixed:.....Value:.....Time:.....</p> <p>....</p>	Item	
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A30 PENALTY FOR NON-COMPLETION

Clause 30.0

Replace reference to sub-clause 36.3 at end of sentence with 36.0

Fixed:.....Value:.....Time:.....

30

Item

PAYMENT

A31 INTERIM PAYMENT TO THE CONTRACTOR

Clause 31.0

Notwithstanding this or any other clause, materials and goods stored on and off site shall not be included in the amount authorized for payment.

Replace sub-clause 31.5.2 with the following:
Security adjustments in terms of sub-clause 14.0 and sub-clause 31.8

The first sentence of sub-clause 31.9 is deemed to be deleted and replaced with the following: The employer shall pay the contractor the amount certified within thirty (30) calendar days of the date of issue of the payment certificate, subject to the contractor giving the employer a tax invoice on the amount due

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Delete the following in clause 31.12: "Payment shall be subject to the employer giving the contractor a tax invoice for the amount due."

A32 ADJUSTMENT TO THE CONTRACT VALUE

Clause 32.0

Adjustment to the contract value (Clause 32.0)
 Where prices are submitted by the contractor or nominated/selected subcontractors during the progress of the works in respect of contract instructions or in regard to a claim under the terms of the contract 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 final certificate, it will be in writing.

Sub-clause 32.5.1, 32.5.4 and 32.5.7 is amended by the addition of the following at the end of the sentence: ... due to no fault of the contractor.

Fixed:.....Value:.....Time:.....

31

Item

Carried to Collection

R

A33 RECOVERY OF EXPENSE AND LOSS

Clause 33.0

Clause 33.2 is amended by adding the following sub-clauses: 33.2.9 The contractor's failure or neglect to commence with the works on the dates prescribed in the contract. 33.2.10 The contractor's failure or neglect to proceed with the works in terms of the contract. 33.2.11 The contractor's failure or neglect for any reason to complete the works in accordance with the contract. 33.2.12 The contractor's refusal or neglect to comply strictly with any of the conditions of contract or any contract instructions and/or orders in writing given in terms of the contract. 33.2.13 The contractor's estate being sequestrated or surrendered in terms of the Insolvency laws in force within the Republic of South Africa."

Fixed:.....Value:.....Time:.....

32

Item

A34 FINAL ACCOUNT AND FINAL PAYMENT

Clause 34.0

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R

Clause 34.2 is amended by inserting # next to 34.2
 The first sentence of Clause 34.10 is deemed to be deleted and replaced with the following: The employer shall pay to the contractor the amount certified for payment in the final payment certificate within thirty (30) calendar days of the date issue of the final payment certificate, subject to the contractor giving the employer a tax invoice for the amount due. Clause 34.13 is amended by deleting the words "subject to the employer giving the contractor a tax invoice for the amount due". Also replace "seven (7) calendar days" with "twenty one (21) calendar days".

Fixed:.....Value:.....Time:.....
 33

Item

A35 PAYMENT TO OTHER PARTIES

Clause 35.0

Fixed:.....Value:.....Time:.....
 34

Item

CANCELLATION

A36 CANCELLATION BY EMPLOYER -
 CONTRACTOR'S DEFAULT

Clause 36.0

Add the following sub-clauses 36.1.3 to 36.1.5 under 36.1 to read as follows: The contractor's refusal or neglect to comply strictly with any of the conditions of contract. The contractor's estate being sequestrated, liquidated or surrendered in terms of the insolvency laws in force with the Republic of South Africa. The contractor, in the judgement of the employer, has engaged in corrupt or fraudulent practices in competing for or in executing the contract.

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Replace clause 36.3 with the following: The employer may give notice of cancellation should the contractor remain in default for ten (10) working days after the date of issue of such a notice of default

35 Fixed:.....Value:.....Time:.....
....

A37 CANCELLATION BY EMPLOYER - LOSS AND DAMAGE

Clause 37.0

Clause 37.3.5 is amended as follows: Replace "ninety (90)" with "one hundred and twenty (120)".

36 Fixed:.....Value:.....Time:.....
....

A38 CANCELLATION BY CONTRACTOR - EMPLOYER'S DEFAULT

Clause 38.0

37 Fixed:.....Value:.....Time:.....
....

A39 CANCELLATION - CESSATION OF THE WORKS

Clause 39.0

Clause 39.3.5 is amended by the addition of the following at the end of the sentence: "within one hundred and twenty (120) working days of completion of such a report"

38 Fixed:.....Value:.....Time:.....
....

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<p>DISPUTE</p> <p>A40 DISPUTE SETTLEMENT</p> <p>Clause 40.0</p> <p>Clause 40.2.2 is amended by replacing "one (1) year" with "three (3) years". Clause 40.6 is amended by removing the reference to: No clause</p> <p>Fixed:.....Value:.....Time:.....</p>			
<p>39</p>	<p>Item</p>		
<p>SUBSTITUTE PROVISIONS</p> <p>A41 STATE CLAUSES</p> <p>Clause 41.0</p> <p>Add in the Substitute Provisions (41.0 State Clauses) as clauses 36.7, 37.5 and 39.5, the following: Notwithstanding any clause to the contrary, on cancellation of this agreement either by the employer or the contractor, or for any reason whatsoever, the contractor shall on written instruction, discontinue with the works on a stated date and withdraw himself from the site. The contractor shall not be entitled to refuse to withdraw from the works on the grounds of any lien or right of retention or on the grounds of any other right whatsoever.</p> <p>Fixed:.....Value:.....Time:.....</p>			
<p>40</p>	<p>Item</p>		
<p>CONTRACT VARIABLES</p> <p>THE SCHEDULE (C1.2 CONTRACT DATA)</p>			
<p style="text-align: right;">Carried to Collection</p>		<p>R</p>	
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A42 PRE-TENDER INFORMATION

Clause 42.0

Tenderers are referred to the document C1.2 Contract Data for variables pertaining to this contract.

Fixed:.....Value:.....Time:.....

41

Item

SECTION B: JBCC PRELIMINARIES

B1.0 DEFINITIONS AND INTERPRETATION

B1.1 Definitions and interpretation

See also clause A1.0 of Section A for additional and/or amended definitions which shall apply equally to this Section.

Fixed:.....Value:.....Time:.....

42

Item

B2.0 DOCUMENTS

B2.1 Checking of documents

Fixed:.....Value:.....Time:.....

43

Item

B2.2 Provisional bills of quantities

Fixed:.....Value:.....Time:.....

44

Item

B2.3 Availability of construction documentation

Fixed:.....Value:.....Time:.....

45

Item

B2.4 Interests of agents

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46	Fixed:.....Value:.....Time:..... B2.5 Priced documents	Item	
47	Fixed:.....Value:.....Time:..... B2.6 Tender submission	Item	
48	Clause 2.6 is amended by replacing "JBCC Form of Tender" with "Form of Offer and Acceptance (C1.1)".	Item	
49	Fixed:.....Value:.....Time:..... B3.0 THE SITE B3.1 Defined works area	Item	
50	Fixed:.....Value:.....Time:..... B3.2 Geotechnical investigation	Item	
51	Fixed:.....Value:.....Time:..... B3.3 Inspection of the site Tenderers shall complete the Site Inspection Certificate included in the tender documents and return the same with the tender submission.	Item	
52	Fixed:.....Value:.....Time:..... B3.4 Existing premises occupied	Item	
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53	B3.5 Previous work - dimensional accuracy Fixed:.....Value:.....Time:.....	Item	
54	B3.6 Previous work - defects Fixed:.....Value:.....Time:.....	Item	
55	B3.7 Services - known Fixed:.....Value:.....Time:.....	Item	
56	B3.8 Services - unknown Fixed:.....Value:.....Time:.....	Item	
57	B3.9 Protection of trees Fixed:.....Value:.....Time:.....	Item	
58	B3.10 Articles of value Fixed:.....Value:.....Time:.....	Item	
59	B3.11 Inspection of adjoining properties Fixed:.....Value:.....Time:.....	Item	
60	B4.0 MANAGEMENT OF CONTRACT B4.1 Management of the works Fixed:.....Value:.....Time:.....	Item	
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61	B4.2 Programme for the works Fixed:.....Value:.....Time:.....	Item	
62	B4.3 Progress meetings Fixed:.....Value:.....Time:.....	Item	
63	B4.4 Technical meetings Fixed:.....Value:.....Time:.....	Item	
64	B4.5 Labour and plant records Fixed:.....Value:.....Time:.....	Item	
B5.0 SAMPLES, SHOP DRAWINGS AND MANUFACTURERS' INSTRUCTIONS			
65	B5.1 Samples of materials Fixed:.....Value:.....Time:.....	Item	
66	B5.2 Workmanship samples Fixed:.....Value:.....Time:.....	Item	
67	B5.3 Shop drawings Fixed:.....Value:.....Time:.....	Item	
68	B5.4 Compliance with manufacturers instructions Fixed:.....Value:.....Time:.....	Item	
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B6.0 TEMPORARY WORKS AND PLANT			
B6.1 Deposits and fees			
69	Fixed:.....Value:.....Time:.....	Item	
B6.2 Enclosure of the works			
70	Fixed:.....Value:.....Time:.....	Item	
B6.3 Advertising			
71	Fixed:.....Value:.....Time:.....	Item	
B6.4 Plant, equipment, sheds and offices			
72	Fixed:.....Value:.....Time:.....	Item	
B6.5 Main notice board			
73	Fixed:.....Value:.....Time:.....	Item	
B6.6 Subcontractors notice board			
74	Fixed:.....Value:.....Time:.....	Item	
B7.0 TEMPORARY SERVICES			
B7.1 Location			
75	Fixed:.....Value:.....Time:.....	Item	
B7.2 Water			
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76	Fixed:.....Value:.....Time:..... B7.3 Electricity	Item	
77	Fixed:.....Value:.....Time:..... B7.4 Telecommunication facilities	Item	
78	Fixed:.....Value:.....Time:..... B7.5 Ablution facilities	Item	
79	Fixed:.....Value:.....Time:..... B8.0 PRIME COST AMOUNTS B8.1 Responsibility for prime cost amounts	Item	
80	Fixed:.....Value:.....Time:..... 9.0 ATTENDANCE ON N/S SUBCONTRACTORS B9.1 General attendance	Item	
81	Fixed:.....Value:.....Time:..... B9.2 Special attendance	Item	
82	Fixed:.....Value:.....Time:..... B9.3 Commissioning - fuel, water and electricity	Item	
83	Fixed:.....Value:.....Time:.....	Item	
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B10.0 FINANCIAL ASPECTS			
B10.1 Statutory taxes, duties and levies			
84	Fixed:.....Value:.....Time:.....	Item	
B10.2 Payment for preliminaries			
85	Fixed:.....Value:.....Time:.....	Item	
B10.3 Adjustment of preliminaries			
Clauses B10.3.1 and B10.3.2 are amended by replacing "within fifteen (15) working days of taking possession of the site" with "in his priced bills of quantities / lump sum document submitted with his tender offer".			
86	Fixed:.....Value:.....Time:.....	Item	
B10.4 Payment certificate cash flow			
87	Fixed:.....Value:.....Time:.....	Item	
B11. GENERAL			
B11.1 Protection of the works			
88	Fixed:.....Value:.....Time:.....	Item	
B11.2 Protection / isolation of existing / sectionally occupied works			
89	Fixed:.....Value:.....Time:.....	Item	
B11.3 Security of the works			
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90	Fixed:.....Value:.....Time:..... B11.4 Notice before covering work	Item	
91	Fixed:.....Value:.....Time:..... 11.5 Disturbance	Item	
92	Fixed:.....Value:.....Time:..... B11.6 Environmental disturbance	Item	
93	Fixed:.....Value:.....Time:..... B11.7 Works cleaning and clearing	Item	
94	Fixed:.....Value:.....Time:..... B11.8 Vermin	Item	
95	Fixed:.....Value:.....Time:..... B11.9 Overhand work	Item	
96	Fixed:.....Value:.....Time:..... B11.10 Instruction manuals and guarantees	Item	
97	Fixed:.....Value:.....Time:..... B11.11 As built information	Item	
98	Fixed:.....Value:.....Time:.....	Item	
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99	<p>B11.12 Tenant installations</p> <p>Fixed:.....Value:.....Time:.....</p> <p>.....</p> <p>B12. SCHEDULE OF VARIABLES</p> <p>B12.1 Schedule of variables</p> <p>This schedule contains all variables referred to in this document and is divided into pre-tender and post-tender categories. The pre-tender category must be completed in full and included in the tender documents. Both the pre-tender and post-tender categories form part of these Preliminaries.</p> <p>Spaces requiring information must be filled in, shown as "not applicable" or deleted and not left blank. Where choices are offered, the non-applicable items are to be deleted. Where insufficient space is provided the information should be annexed hereto and cross-referenced to the applicable clause of the schedule. Key cross reference clauses are italicised in [] brackets.</p> <p>12.1 PRE TENDER INFORMATION</p> <p>12.1.1 Provisional Bills of Quantities</p> <p>[2.2] The quantities are provisional YES</p> <p>12.1.2 Availability of construction documentation</p> <p>[2.3] Construction of documentation is completeYES</p> <p>12.1.3 Interest of agents</p> <p>[2.4] Details: NIL</p> <p style="text-align: right;">Carried to Collection</p> <p>Section No. 1 PRELIMINARIES Bill No. 1 PRELIMINARIES</p>	Item		
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12.1.4 Defined works area

[3.1] Details: The work area will be pointed out to the contractor by the principal agent to the contractor who will sign written acknowledgement therefore before commencing operations.

12.1.5 Geotechnical investigation

[3.2] Details: A shallow geo-technical investigation has been carried out comprising of hand excavated trial pits, soils investigation, crack survey etc.

12.1.6 Existing premises occupied

[3.4] Specific requirements: The premises will be in use and occupied during the course of this contract. The contractor shall execute the works in such a manner as will least interfere with the general routine of the occupants of the premises and shall minimise any nuisance from dust, noise or other causes.

12.1.7 Previous work - dimensional accuracy

[3.5] Details: The contractor shall within four (4) weeks of the site handover date check the existing levels, lines, profiles and the like affecting the works and satisfy himself as to the dimensional accuracy of work previously executed. The contractor shall forthwith notify the supervisor of any inaccuracy.

12.1.8 Previous work - defects

[3.6] Details:

12.1.9 Services - known

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[3.7] Details: Should the contractor encounter any existing services such as underground cables, pipes or sewer during the execution of the works he shall notify the principal agent immediately and suspend all affected work in the immediate vicinity until instruction to proceed has been given by the principal agent.

12.1.10 Protection of trees

[3.9] Specific requirements: Only those trees and shrubs indicated as such on the drawings shall be removed or cut back. The remainder of the trees and shrubs shall be left undamaged.

12.1.11 Inspection of adjoining properties

[3.11] Specific requirements:

12.1.12 Enclosure of the works

[6.2] Specific requirements: The contractor shall enclose the areas of work

12.1.13 Offices

[6.4.3] Specific requirements: The contractor shall provide, erect where directed, maintain and remove on completion of the works an office for meetings size 8 x 3 x 3m high internally, tables, chairs and Air conditioning.

12.1.14 Main notice board

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[6.5] Specific requirements: The Contractor shall provide, erect where directed, maintain and remove on completion of the works a notice board, size 2,44m wide and 2,89m high, according to the standard drawing available from the employer, constructed of suitable boarding with flat smooth surface and with edging bead 19mm thick round outer edges and projecting 12mm from face of boarding and rounded on front edge. The board shall be securely fixed to hoarding, where hoarding is provided, or fixed to and including a suitable supporting structure of timber or tubular posts and braces. The lettering is to be 50mm and 100mm "sans serif" in ivory white on the blue background and in 100mm "sans serif" in navy blue on the ivory white background. The inscription, in one language only, which must bear the approval of the Principal Agent. No other names or notice boards may be erected without the written approval of the Principal Agent. Sketch drawings of all proposed names or notice boards must be submitted to the Principal Agent for approval, before being prepared and erected on site. These sketch drawings must not only show the full content of the proposed names or notice boards, but also the position and locality in which the boards will be erected.

12.1.15 Subcontractors' notice board

[6.6] Specific requirements: NIL

12.1.16 Water

[7.2] Option A (by contractor) YES Option B (by employer - free of charge) NO Option C (by b employer - metered) NO

12.1.17 Electricity

[7.3] Option A (by contractor) YES Option B (by employer - free of charge) NO Option C (by employer - metered) NO

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<p>12.1.18 Telecommunications</p> <p>[7.4] Telephone.....YES Facsimile.....YES Mail.....YES</p> <p>12.1.19 Ablution facilities</p> <p>[7.5] Option A (by contractor) YES Option B (by employer) NO</p> <p>12.1.20 Protection of existing/sectionally occupied works</p> <p>[11.2] Protection is required NO</p> <p>12.1.21 Special attendance</p> <p>[9.2]Subcontractor(1) details: Subcontractor(2) details: Subcontractor(3) details: Subcontractor (4) details:</p> <p>12.1.22 Protection of works</p> <p>[11.1] Specific requirements: N/A</p> <p>12.1.23 Disturbance</p> <p>[11.5] Specific requirements: The contractor shall keep the site, structures, etc well watered during operations to prevent dust and shall provide and erect and remove on completion of the works all necessary temporary dust screens all to the satisfaction of the principal agent.</p> <p>12.1.24 Environmental disturbance</p> <p>[11.6] Specific requirements:N/A</p> <p>12.2 POST-TENDER INFORMATION</p> <p>12.2.1 Payment of preliminaries</p> <p style="text-align: right;">Carried to Collection</p> <p>Section No. 1 PRELIMINARIES Bill No. 1 PRELIMINARIES</p>			
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[10.2] Option A (pro-rated) YES / NO Option
 B (calculated) YES / NO

12.2.2 Adjustment of preliminaries

(10.3] Option A (three categories) YES / NO
 Option B (detailed breakdown) YES / NO

12.2.3 Additional agreed preliminaries items

Details: N/A

SECTION C: SPECIFIC PRELIMINARIES

Section C contains specific preliminary items which apply to this contract except where N/A (Not Applicable) appears against an item.

C1 CONTRACT DRAWINGS

The drawings issued with the tender documents do not comprise the complete set but serve as a guide only for tendering purposes and for indicating the scope of the work to enable the tenderer to acquaint himself with the nature and extent of the works and the manner in which they are to be executed. Should any part of the drawings not be clearly intelligible to the tenderer he shall, before submitting his tender, obtain clarification in writing from the principal agent.

Fixed:.....Value:.....Time:.....

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Item

C2 GENERAL PREAMBLES

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101	<p>The document "General Specifications of materials, methods to be used for building contracts (GP ASC Rev 0)", shall be read in conjunction with the bills of quantities / lump sum document and be referred to for the full descriptions of work to be done and materials to be used.</p> <p>Fixed:.....Value:.....Time:.....</p> <p>....</p> <p>C3 IMPORTED MATERIALS AND EQUIPMENT</p> <p>Where imported items are listed in the tender documents, the tenderer shall provide all the information called for, failing which the price of any such item, materials or equipment shall be excluded from currency fluctuations. (refer to Schedule of Imported Materials and Equipment to be completed by Tenderer). Notwithstanding any provisions elsewhere regarding the adjustment of contract prices, the price of any item, material or equipment listed in terms of this clause shall be excluded from the Contract Price Adjustment Provisions (if applicable).</p> <p>Fixed:.....Value:.....Time:.....</p> <p>....</p> <p>C4 HIV/AIDS AWARENESS</p> <p>It is required of the contractor to promote HIV/AIDS awareness in accordance with requirements of SANS 1921-6</p> <p>C5 OCCUPATIONAL HEALTH AND SAFETY ACT</p>	Item		
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The contractor shall comply with all the requirements set out in the Construction Regulations, 2003 issued under the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993). It is required of the contractor to thoroughly study the Health and Safety Specification that must be read together with and is deemed to be incorporated under this Section of the bills of quantities / lump sum document.

The contractor must take note that compliance with the Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification is compulsory. In the event of partial or total non-compliance, the principal agent notwithstanding the provisions of clause A31.0 of Section A or any other clause to the contrary, reserves the right to delay issuing any progress payment certificate until the contractor provides satisfactory proof of compliance. The contractor shall not be entitled to any compensation of whatsoever nature, including interest, due to such delay of payment. Provision for pricing of the Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification is made under this clause and it is explicitly pointed out that all requirements of the aforementioned are deemed to be priced hereunder and no additional claims in this regard shall be entertained.

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COVID-19 HEALTH AND SAFETY REQUIREMENTS

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104	Hazard identification and risk assessment specific to the covid-19 Epidemic and other adjustments to ensure compliance for the assignment	Item	
105	Signage - Covid-19 Related	Item	
106	Face mask for covid-19	Item	
107	Covid-19 clearance certificate	Item	
108	Medical graded face shields	Item	
109	Non contact infrared thermometers	Item	
110	Hand sanitizers, cleaning detergents for everyday use	Item	
111	Daily logbook and screening for covid-19	Item	
112	Covid-19 Waste bins	Item	
113	Foot operated hand sanitizer equipment	Item	
	C6 LOCAL LABOUR AND BUILDING MATERIALS		
	C6.1 GENERAL		
	The contractor's attention is drawn to the Labour Intensive Methods and requirements incorporated in the tender documents. (C3.1).		
	All requirements of the aforesaid are to be priced hereunder; no additional items or extras to the contract in this regard will be entertained.		
114	Fixed:.....Value:.....Time:.....	Item	
	C6.2 LOCAL BUILDING MATERIALS		
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Preference shall be given to the supply of all materials produced or manufactured in Carletonville, Gauteng Province provided that:(a) Such materials comply in all respects with the specific requirements of SABS Standards.(b) The availability of such materials shall not adversely affect the desired progress of the specific works. (c) The use of such materials shall not constitute grounds for any claim for increased cost in respect thereof.

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Budgetary allowance

	Item		
CLO allowance	9	5000	R 45,000.00
PSC Allowance	1	12000	R 12,000.00
Land Survey	1	150000	R 150,000.00
Quantity survey	1	300000	R 300,000.00
Electrical and Mechanical engineer	1	250000	R 250,000.00
Civil and Structural engineer	1	250000	R 250,000.00
Fire Consultant	1	150000	R 150,000.00
EIA	1	250000	R 250,000.00
Geotech	1	200000	R 200,000.00
Social Facilitator	1	100000	R 100,000.00

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	<p><u>SECTION NO. 2</u></p> <p><u>BILL NO.1</u></p> <p><u>EARTHWORKS, ETC.</u></p> <p><u>FOUNDATIONS (PROVISIONAL)</u></p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p>Nature of ground</p> <p>A soil investigation has been carried out on site by the engineer and the report is available from the office of the Engineer, upon request. Descriptions of excavations shall be deemed to include all ground conditions classifiable as "earth" described in the above report and where conditions of a more difficult character are indicated these are separately measured</p> <p>Carting away of excavated material</p> <p>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</p> <p>Note: All excavation depths have been calculated from predetermined platform levels preformed under a separate contract.</p> <p style="text-align: center;">-----</p> <p>NOTE: <i>Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No 104 for JBCC CPAP purposes</i></p> <p style="text-align: center;">_____</p>			
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	<p>Section No. 2</p> <p>BUILDINGS</p> <p>Bill No. 1</p> <p>EARTHWORKS</p>			

SITE CLEARANCE ETC**REMOVAL OF TREES ETC****Site clearance**

1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc	m2	895
2	Strip topsoil average 150mm deep and dispose off site	m2	644

Taking out and removing, grubbing up roots and filling in Holes

3	Tree stump exceeding 200mm and not exceeding 500mm girth	No	1
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Excavate in compacted pickable material as defined not exceeding 2 m deep below reduced or filled up ground level, part return, fill in and ram and remainder deposit on site where directed.

4	Excavate for surface trenches	m3	136
5	Holes	m3	37
6	Trenches and holes for thickening under surface beds	m3	4

Extra over trench and hole excavations for excavation in:

7	Soft rock	m3	18
8	Hard rock	m3	9

Extra over excavations for cartaway

9	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	119
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Prescribed density tests on filling				
17	"Modified AASHTO Density" test	No	6	
<u>PROTECTION AGAINST TERMITES</u>				
Hyvar X at a rate of 4g/m² to be applied together on 25mm bedding sand under pavings				
18	Under aprons, etc	m ²	34	
<u>SOIL POISONING</u>				
Soil insecticide				
19	Under floors etc including forming and poisoning shallow furrows against foundation walls etc,			
		m ²	625	
20	To bottoms and sides of trenches etc	m ²	631	
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EARTHWORKS

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EARTHWORKS

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	<p><u>SECTION NO. 2</u></p> <p><u>BILL NO.2</u></p> <p><u>CONCRETE, FORMWORK AND REINFORCEMENT</u></p> <p>For preambles see "Model Preambles for Trades"</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p>Cost of tests</p> <p>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 and to the approval of the architect. (Test cubes are measured separately)</p> <p>Formwork</p> <p>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. 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.</p> <p>Formwork to soffits of (solid) slabs etc shall be deemed to be to slabs not exceeding 250mm thick unless otherwise described</p> <p>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"</p>			
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NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No 110 for JBCC CPAP purposes

UNREINFORCED CONCRETE

15Mpa/19mm concrete

1	Blinding under footings and bases	m3	12
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10Mpa/19mm concrete

2	Aprons	m3	3
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REINFORCED CONCRETE

30MPa/19mm concrete

3	Stub columns	m3	1
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4	Columns	m3	4
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5	Surface beds cast in panels on water proofing	m3	74
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6	Thickening under surface beds	m3	4
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25MPa/19mm concrete

7	Strip footings	m3	58
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8	Bases	m3	17
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9	Stub columns	m3	1
---	--------------	----	---

10	Columns	m3	3
----	---------	----	---

11	Beams	m3	22
----	-------	----	----

12	Slabs	m3	21
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TEST CUBES

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13	Making and testing 150 x 150 x 150mm concrete strength test cubes (Provisional)	No	31	
<u>CONCRETE SUNDRIES</u>				
Finishing top surfaces of concrete smooth with a power float to a smooth surface				
14	Surface beds, slabs, etc	m2	730	
15	Ramps to falls to a rough non- slip finish	m2		Rate only
Finishing top surfaces of concrete smooth with a wood float to a smooth surface				
16	Aprons	m2	19	
<u>ROUGH FORMWORK</u>				
Rough formwork to sides				
17	Bases and stub columns	m2	6	
18	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	50	
<u>SMOOTH FORMWORK (DEGREE OF ACCURACY)</u>				
Smooth formwork to sides and soffits				
18	Soffits of slabs propped up exceeding 1.5m and not exceeding 3.5m high	m2	21	
19	Soffits of slabs propped up exceeding 3.5m and not exceeding 5m high	m2	124	
20	Beams propped up not exceeding 3.5m high	m2	156	
21	Beams propped exceeding 3.5m and not exceeding 5.0m high	m2	42	
22	Rectangular columns with height exceeding 3.5m and not exceeding 5m	m2	40	
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22	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	569	R 0.00
23	Curved edges, risers, ends and reveals not exceeding 300mm high or wide	m	14	R 0.00
<u>MOVEMENT JOINTS ETC</u>				
Expansion joints with bitumen impregnated fibreboard between vertical concrete and brick surfaces				
24	10mm Joints exceeding not exceeding 300mm high	m	282	
25	10mm Joints not exceeding 300mm wide	m	4	
26	4 x 30mm Saw cuts in top of concrete	m	215	
<u>REINFORCEMENT (PROVISIONAL)</u>				
Grade 250 steel reinforcement to structural concrete work				
27	8mm diameter bars	t	3.749	
28	12mm bars diameter bars	t	3.749	
29	16mm diameter bars	t	3.749	
30	20mm diameter bars	t	3.749	
Fabric reinforcement				
31	Type 245 fabric reinforcement in concrete surface beds, slabs, etc	m2	625	
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Section No. 2 BUILDINGS Bill No. 2 CONCRETE, FORMWORK AND REINFORCEMENT				

Item No	Quantity	Rate	Amount
<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 3</u></p> <p><u>MASONRY</u></p> <p><u>BRICKWORK</u></p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><i>NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No 116 for JBCC CPAP purposes</i></p> <hr/> <p><u>BRICKWORK</u></p> <p>Sizes in descriptions</p> <p>Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick</p> <p>Hollow walls etc</p> <p>Descriptions of hollow walls shall be deemed to include leaving every fifth perpend of the bottom course of the external skin open as a weep hole.</p> <p>Wall ties</p> <p>Descriptions of solid walls (except if built in English bond) and cavity walls shall be deemed to include metal wall ties complying with SABS 28 and of the butterfly or of the modified PWD type, of the required length with each end built at least 75mm deep into brickwork, spaced at not more than 1m centres alternatively to every third course of brickwork</p> <p>Cavity wall ties</p> <p>"Joluka Posi-ties Type PTT 4 Product No 8312", total length 270mm. 3/5 ties per m2 to be used</p> <p>Face bricks</p> <p>Bricks shall be ordered timeously to obtain uniformity in size and colour</p> <p style="text-align: right;">Carried to Collection</p> <p>Section No. 2 BUILDINGS Bill No. 3 MASONRY</p>			
		R	

Pointing

Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc

Samples

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

FOUNDATIONS

Brickwork of NFX bricks (14 MPa nominal compressive strength) in class 1 mortar

1	One brick walls	m2	188
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SUPERSTRUCTURE

Brickwork of NFP bricks in class II mortar

2	Half brick walls	m2	53
3	Half brick walls in beamfilling	m2	14
4	One brick walls	m2	477

BRICKWORK SUNDRIES

Brickwork reinforcement

5	75mm Wide reinforcement built in horizontally	m	406
6	150mm Wide reinforcement built in horizontally in foundations (provisional)	m	2212

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**Bill No. 3
MASONRY**

7	150mm Wide reinforcement built in horizontally	m	2893	
Concrete prestressed fabricated lintels				
8	110 x 70mm Lintels in lengths not exceeding 3m	m	107	
9	110 x 70mm Lintels in lengths exceeding 3m and not exceeding 4.5m	m	18	
10	110 x 70mm Lintels in lengths exceeding 4.5m and not exceeding 6m	m	5	
11	110 x 70mm Lintels in lengths exceeding 6m and not exceeding 7.5m	m	13	
12	110 x 70mm Lintels in lengths exceeding 9m and not exceeding 10.5m	m	9	
Turning pieces				
13	220mm Wide turning piece to lintels etc	m	152	
Galvanised hoop iron cramps, ties, etc				
14	40 x 1,6mm "Tibond" wall tie strips nailed to timber trusses with ties bent out and embedded into at least 300mm brickwork (Provisional)	m	321	
<u>FACE BRICKWORK</u>				
Approved yellow face bricks at a net purchase price of R6000/1000 bricks delivered to site with square recessed and pointed with flush horizontal and vertical joints in a stretcher bond				
15	Extra over brickwork for face brickwork in foundations	m2	101	
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16	Extra over brickwork in beamfilling for face brickwork	m2	53	
17	Extra over brickwork for face brickwork	m2	479	
18	Half brickwall in face brick	m2	2	
19	One brickwall faced bothside	m2	15	
20	Brick -on-edge coping 230mm high on top of one brickwall	m	9	
21	Fair cutting and fitting around pipe not exceeding 100mm diameter	No	5	
22	Fair cutting and fitting around pipe exceeding 100mm and not exceeding 200mm diameter	No	12	
23	Fair raking cutting	m	162	
24	Fair splay cutting	m	128	
	Brick-on-edge header course copings, sills, etc approved face bricks pointed with recessed joints on all exposed faces			
25	Brick-on-edge header course lintel pointed on one face and 220mm wide soffit	m	139	
26	220mm wide sill set level and slightly projecting	m	139	
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BUILDINGS Bill No. 3

MASONRY

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Bill No. 3

MASONRY

Item No	SECTION NO. 2	Quantity	Rate	Amount
	<u>BILL NO. 4</u>			
	<u>WATERPROOFING DAMP</u>			
	<u>PROOFING SUPPLEMENTARY</u>			
	<u>PREAMBLES</u>			
	<u>NOTE:</u> <i>Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No 120 for JBCC CPAP purposes</i>			
	Waterproofing			
	Waterproofing of roofs, basements, etc shall be laid under a ten year guarantee. Waterproofing to roofs shall be laid to even falls to outlets etc with necessary ridges, hips and valleys. Descriptions of sheet or membrane waterproofing shall be deemed to include additional labour to turn-ups and turn-downs			
	One layer 250 micron "Gunplas USB Green" polyethylene waterproof sheeting with all joints lapped and sealed with pressure sensitive tape all in strict accordance with the manufacturer's requirements:			
1	On compacted earth under concrete surface beds, lapped 150 mm and sealed at all joints (measured net).	m2	625	
	One layer 375 micron embossed "Gunplas Brikgrip" polyethylene damp proof course fixed with approved adhesive:			
2	On walls, stepped up in cavities, under cills, etc.	m2	99	
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	WATERPROOFING			

	Sundries			
3	10 x 10 mm Polysulphide sealant in expansion joint including scraping out softboard. (Provisional).	m	286	
	WATERPROOFING TO ROOFS, BASEMENTS, ETC			
	One layer "Derbigum" CG3mm and one layer "Derbigum" CG 4mm waterproofing membrane with 100mm side laps and 150mm end lape seals by means of torch-on-fusion to receive protection/drainage layer and garden (elsewhere)			
4	On flat roofs	m2	105	
	PROTECTIVE ROOFING PAINT			
	Two coats grey bituminous aluminium paint:			
5	On waterproofing to roofs	m2	105	
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	WATERPROOFING			

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BUILDINGS Bill No. 4

WATERPROOFING DAMP

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BUILDINGS

Bill No. 4

WATERPROOFING DAMP

Item No	Quantity	Rate	Amount
<p><u>SECTION NO. 2</u></p>			
<p><u>BILL NO. 5</u></p>			
<p><u>ROOF COVERINGS ETC</u></p>			
<p><i>NOTE : Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No 124 for JBCC CPAP purposes</i></p>			
<p><u>RIBBED METAL SHEETING AND ACCESSORIES</u></p>			
<p>BROWNBUILT PROFILED SHEETING AND ACCESSORIES</p>			
<p><u>Sheeting</u></p>			
<p>The roof sheeting shall be interlocking concealed-fix "Cromadek" profile roll-formed in continuous lengths and cut to length by a pneumatic cut-off process from certified Z275 commercial quality galvanized steel. The profile shall be roll-formed with three ribs at centres not exceeding 203mm and a cover width not exceeding 406mm. These will include a male and female rib. When interlocked, the minimum sheet depth shall be 48mm. Each trough shall incorporate two stiffener ribs.</p>			
<p>The paint finish shall be a full top coat Globalcoat Silicone Polyester and a half coat Globalcoat Grey to the reverse side.</p>			
<p><u>Fixing</u></p>			
<p>The "Cromadek" sheets shall be fixed to every purlin by means of patented clips which will securely hold the sheets in position and lock-in both the sidelap and centre ribs. The clips shall be manufactured from Galvanized steel and shall be fixed to the steel purlin with two cadmium plated tek 3 no 10, 24 x 16mm long self-drilling/tapping screws, or with NA2 annular nails to timber purlins.</p>			
<p>Carried to Collection</p>			
			<p>R R 0.00</p>

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BUILDINGS

Bill No. 5

ROOF COVERING

0.8mm thick flashings

The paint finish shall be epoxy primer of 4-6 microns with a top coat Globalcoat Silicone Polyester of at least 22 microns and a half coat Globalcoat Grey to the reverse side (Colour to be approved by Architect). Flashings shall be approved by "Brownbuilt Metal Sections" and fixed to the sheeting with S1 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 winddriven 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 "Brownbuilt Metal Sections". 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 spatter from penetrating colour coated areas.

Guarantee

the manufacturer shall comply with ISO9002 Quality Management System. "Brownbuilt" sheeting shall be laid in strict accordance with the manufacturer's specifications by an approved contractor.

A written and approved five year guarantee of site-workmanship and watertightness shall be issued after final inspection of roofs by the manufacturer "Brownbuilt Metal Section".

Erection

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.

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.

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ROOF COVERING

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Handling and storing

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 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.

0,6mm Thick "chromadek " Z275 spelter steel sheeting with pre-painted "Chromadek Gemsbok Sand" finish one side and half coat "Globalcoat Grey" other side and accessories fixed to timber or steel purlins or rails in strict accordance with manufacturer's specifications by an approved contractor

1	Roof covering with pitch not exceeding 25 degrees, in transportable lengths not exceeding 20m.	m2	643
2	Hip capping	m	17
Flashings from 0,8mm Z275 spelter steel sheeting with "Chromadek" finish to one side to match the roofing and fixed in strict accordance with manufacturer's specifications			
3	Head wall flashing 460mm girth	m	13

ROOF AND WALL LINING AND INSULATION

4	Double sided 50mm "Alucushion Bubblefoil" single sided aluminium foil faced insulation in 1250mm widths laid over and including white PVC coated straining wires at 383mm centres and with 100mm laps at the joints, laid over purlins and tensioned between and fixed to eaves and apex purlins with hoop iron and rivets, all in accordance with the manufacturer's specifications	m2	512
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ROOF COVERING

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BUILDINGS

Bill No. 5

ROOF COVERING

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<p><u>SECTION NO. 2</u></p>			
<p><u>BILL NO. 6</u></p>			
<p><u>CARPENTRY AND JOINERY</u></p>			
<p><u>NOTE :</u> <i>Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No 126 for JBCC CPAP purposes</i></p>			
<p><u>ROOF CONSTRUCTION</u></p>			
<p>Plate nailed timber roof truss construction</p>			
<p>The following is applicable in respect of roof trusses:</p>			
<p><u>Prefabricated roof trusses</u></p>			
<p><u>Plate nailed prefabricated roof truss construction, including hoisting up and fixing approximatley 3000mm above floor level (roof sheeting measured elsewhere) and maintaning trusses in position, including purlins, wall plates, bracing, connectors, wire ties, metal shoes etc.</u></p>			
<p>The following is applicable in respect of roof trusses:</p>			
<p>(a) All the roof trusses to be at an average 1100mm centres and constructed for 18 degree pitch unless otherwise stated</p>			
<p>Roof covering comprise '0.58mm thick Brownbuilt heavy industrial 275 splter powder coated ribbed sheet steel on 50 x 38mm battens at maximum 320mm centres.</p>			
<p>Ceilings consist of 6.4mm rhinoboard on 38 x 38mm brandering at 450mm centres.</p>			
<p>(b) All the roof trusses to be designed and constructed with softwood structural timber to include for live loads, wind loads and to take '0.58mm thick Brownbuilt heavy industrial 275 spleter galvanised ribbed sheet steel' and 6.4mm rhinoboard ceilings. Each roof truss shall have its members cut and close butted together and rigidly fixed by CSIR approved patended galvanised metal spiked connectors, fixed on both sides of intersection by an approved method, all in accordance with the manufacturer's instructions</p>			
<p>(c) Unless otherwise described all rafter feet are to extend 600mm beyond the length of the tie beam, with ends twice</p>			
<p>Carried to Collection</p>			
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BUILDINGS
Bill No. 6
CARPENTRY AND JOINERY

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(d) The design, manufacture and transportation of the roof trusses, bracing etc. shall be under the control of a registered Engineer and it shall be required from the manufacturer of the trusses to lodge a written guarantee that his construction has been designed by a qualified Structural Engineer and that he is in possession of capability certificate. The manufacturer of the trusses shall supply a written guarantee that the trusses are designed, manufactured and erected to support the roof covering specified. The guarantee shall be valid for a period of 10 (ten) years.

The tenderer's attention is drawn to the fact that the detailed drawings included at the back of these Bills of Quantities only represents the overall size and bearing points of the trusses and not the required design.

1 Roof trusses supplied and erected complete to the ablution areas of the library at 760mm centres according to designer's specifications with an approximate area of 128 square metres

Item

2 Roof trusses supplied and erected complete to the guard house with an approximate area of 27 square metres

Item

FASCIAS AND BARGE BOARDS

3 228 x 9mm Fascia/ barge board with 0.8mm powder coated steel gable flashing

m

290

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CARPENTRY AND JOINERY

DOORS ETC

BRACED AND LEDGED TIMBER DOORS

40mm Thick button braced and ledged meranti door and natural solid wooden frames suitable for one brickwall

4	Door size 850 x 2125mm high (D3)	No	4
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5	Double door size 1510 x 2125mm high with 477 x 300mm louvred panels to two equal leaves with rebated meeting stiles (D5)	No	2
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HINGED HOLLOW CORE DOORS

40mm Thick superwood door and wooden frame suitable for one brickwall

6	Door size 850 x 2125mm high (D4)	No	7
---	----------------------------------	----	---

40mm Thick superwood door, hung to wooden frame for half brickwall

7	Door size 850 x 2125mm high (D4)	No	11
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THE FOLLOWING IN BATHROOMS

40mm Granite vanity slab

8	Vanity slab size 3625 x 500mm complete with holes for fitting four wash hand basin and support work etc, all to architectural specification	No	1
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9	Vanity slab size 5035 x 500mm complete with with holes for fitting four wash hand basin and support work etc, all to architectural specification	No	1
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CARPENTRY AND JOINERY

THE FOLLOWING IN KITCHENS

40mm Counter top

10	Formican counter to size 3220 x 500mm complete with support work etc, to architectural specification	No	1
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BUDGETTARY ALLOWANCE

11	Allow a budgettary allowance of R750 000 for the supply of Library furniture including interior designs and 3-d modeling of reception centre desks, office furniture, library shelving, periodicals couches, joinery fittings, computer desks, etc.	Item	R 750,000.00
	Allow for profit	Item	R 37,500.00

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CARPENTRY AND JOINERY

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	<u>SECTION NO. 2</u>			
	<u>BILL NO. 7</u>			
	<u>CEILINGS, PARTITIONS AND ACCESS FLOORING</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<i>NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No 129 for JBCC CPAP purposes</i>			
	Descriptions:			
	Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins or shot pinned to brickwork or concrete			
	Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres, and where described as "bolted" the bolts have been given elsewhere			
	<u>CEILINGS, ETC</u>			
	INSULATION, ETC			
	115mm Aerolite insulation			
1	50mm Thick non-combustible light weight fibreglass glasswool thermal ceiling insulation 12kg/m3 closely fitted with ends butted firmly between roof timbers, all in accordance with the manufacturer's recommendations	m2	457	
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NAILED UP CEILINGS

7mm Pelican Jumbo Flush plaster ceiling boards with H-profile cold rolled galvanised steel jointing strips

2	Horizontal ceiling nailed to and including 38 x 38mm SA pine brandering at 400mm centres in one direction and at ends of boards in other direction where required for fixing cornices (elsewhere) securely spiked to roof timbers and ceiling joists (elsewhere)	m2	95
3	Extra over ceiling for 600 x 600mm trap door of 52 x 114mm wrought softwood rebated framing with one 38 x 38mm sawn softwood cross brander covered with ceiling board and fitted flush in opening.	No	4
4	75mm Coved cornices	m	122

SUSPENDED CEILINGS

Proprietary suspended ceilings

Note:

Electrical light fittings, diffusers, panels, etc generally are "lay in" units of the same dimensions as the suspension grid described and allowance must be made accordingly for their support inclusive of any flexibility inseting out that may be required (ceiling panels have not been deducted and pricing is to take cognisance thereof)

User note:

a) The above note to be included in the bills of quantities after confirmation of the basic design of the ceilings, lighting, air conditioning, etc

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CEILINGS,PARTITIONS AND ACCESS FLOORING

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1200 x 600 x 6mm Thick nutec everite vinyl clad panels with 25mm thermal backing on "T3 system" pre-painted exposed tee suspension system including main and cross tees, necessary

5	Ceilings suspended not exceeding 1m below steel/ timber trusses.	m2	362
6	Shadowline cornice	m	222

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Item No		Quantity	Rate	Amount
<u>SECTION NO. 2</u>				
<u>BILL NO. 8</u>				
<u>IRONMONGERY</u>				
<i>NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No 132 for JBCC CPAP purposes</i>				
<hr/>				
<u>LOCKS</u>				
The following locks are in one set with a master key:				
1	"Solid Art 390/313" chromium plated four lever lockset.	No	12	
<u>BOLTS, INDICATOR BOLTS, ETC</u>				
"DCLSA Distributors (Pty) Ltd"				
2	Satin chrome WC indicator bolt code 170/83	No	12	
Sundries				
3	"Solid Art 255/E41" long pin doorstep.	No	0	
4	"Solid Art 252" chromium plated coat hook.	No	14	
5	TCS Hygene PSBIN PEDAL SQ sanitary bin	No	5	
6	TCS Hygene HD1600 stainless steel automatic hand dryer plugged on to brickwall	No	6	
7	TCS Hygene TRIGGI 3 rolls locable toilet roll holder plugged on to brickwall	No	14	
<u>BATHROOM FITTINGS</u>				
8	32mm diameter stainless steel "Chairman Industries" code SR 1 rear grab rail, plugged	No	2	
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9	32mm diameter stainless steel cistern straddle rail SR2, 750mm long plugged and screwed to walls with stainless steel screws.	No	2	
10	32mm diameter dog leg rail 1060mm long as "Chairman Industries" code DL3 or other approved grab rail, plugged	No	2	
<u>BUDGETTARY ALLOWANCE</u>				
11	Allow a budgetary allowance of R10 000.00 for signage, etc.		Item	R 10,000.00
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IRONMONGERY

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BUILDINGS

Bill No. 8

IRONMONGERY

Item No	Quantity	Rate	Amount
<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 9</u></p> <p><u>STRUCTURAL STEELWORK</u></p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><i>NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No 134 for JBCC CPAP purposes</i></p> <hr/> <p>Descriptions</p> <p>Descriptions of bolts shall be deemed to include nuts and washers</p> <p>Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete</p> <p>Descriptions of L-shaped and U-shaped anchor bolts shall be deemed to include bending, threading, nuts and washers and embedding in concrete. Where anchor bolts are described as embedded in sides or soffits of concrete it shall be deemed to include holes through formwork.</p> <p>Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.</p> <p><u>STEEL TRUSSES ETC</u></p> <p>Welded portal frames with flat section bearer, gusset and connection plates and L-section cleats bolted to concrete</p> <p>The following is applicable in respect of roof trusses:</p> <p style="text-align: center;">Carried to Collection</p> <p>Section No. 2 BUILDINGS Bill No. 9 STRUCTURAL STEELWORK</p>			

Trusses are at maximum centres determined by the Engineer and constructed for 25 degrees pitch unless otherwise stated

Roof covering comprise '0.58 mm thick Brownbuilt heavy industrial 275 splter galvanised ribbed sheet steel on steel purlins at centres as determined by the Engineer.

All the roof trusses to be designed and constructed with structural steel to include live loads, wind loads and to take '0.58 thick Brownbuilt heavy industrial 275 splter galvanised ribbed sheet steel'

The design, manufacture and transportation of the roof trusses, bracing etc. shall be under the control of a registered Engineer and it shall be required from the manufacturer of the trusses to lodge a written guarantee that his construction has been designed by a qualified Structural Engineer and that he is in possession of capability certificate.

The manufacturer of the trusses shall supply a written guarantee that the trusses are designed, manufactured and erected to support the roof covering specified. The guarantee shall be valid for a period of 10 (ten) years.

The tenderer's attention is drawn to the fact that the detailed drawings included at the back of these Bills of Quantities only represents the overall size and bearing points of the trusses and not the required design.

The dimensions in the descriptions of the trusses are nominal and actual measurements are to be obtained from the architect and/or the site before design or fabrication commences

STEEL TRUSSES ETC

ROOF CONSTRUCTION

Prefabricated roof trusses

Welded steel I beam rafter construction, including hoisting up and fixing approximatley 4600mm above floor level (roof sheeting measured elsewhere) and mantaning rafter in position, including purlins, wall plates, bracing, connectors, wire ties, metal shoes etc.

The following is applicable in respect of roof trusses:

(a) All the roof trusses to be at an average 1100mm centres and constructed for 18 degree pitch unless otherwise stated

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BUILDINGS

Bill No. 9

STRUCTURAL STEELWORK

Roof covering comprise '0.58mm thick Brownbuilt heavy industrial 275 splter galvanised ribbed sheet steel on 76 x 50mm Purlins at maximum 1200mm centres.

Ceilings consist of 4mm nutec on 38 x 38mm brandering at 450mm centres.

(b) All the roof trusses to be designed and constructed with structural steel to include for live loads, wind loads and to take '0.58mm thick Brownbuilt heavy industrial 275 spleter galvanised ribbed sheet steel' and suspended ceilings. Each roof truss shall have its members cut and close butted together and rigidly fixed by CSIR approved patented galvanised gusset plates connectors, fixed on both sides of intersection by an approved method, all in accordance with the manufacturer's instructions

(c) The design, manufacture and transportation of the roof trusses, bracing etc. shall be under the control of a registered Engineer and it shall be required from the manufacturer of the trusses to lodge a written guarantee that his construction has been designed by a qualified Structural Engineer and that he is in possession of capability certificate. The manufacturer of the trusses shall supply a written guarantee that the trusses are designed, manufactured and erected to support the roof covering specified. The guarantee shall be valid for a period of 10 (ten)

The tenderer's attention is drawn to the fact that the detailed drawings included at the back of these Bills of Quantities only represents the overall size and bearing points of the trusses and not the required design.

1	125 x 75 x 20 x 3 CFLC purlins	t	1.741
2	305 x 105 x 33 IUB Universal beam tapered at exposed ends	t	4.643
3	305 x 105 x 25 IUB Universal beam tapered at exposed ends	t	0.65
4	Extra over for bracing, cleats, bolts, brackets, etc	t	0.818
5	Extra over for shading elements on overhangs and over windows on the north , cleats, bolts, brackets, etc	t	

Rate only

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Bill No.9

STRUCTURAL STEELWORK

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BUILDINGS

Bill No. 9

STRUCTURAL STEELWORK

ALUMINIUM WINDOWS, DOORS, ETC

GLAZING

GENERAL: All rates for doors, windows, shopfronts, etc., should include for all glazing as specified.

GLASS AND GLAZING: All functional glass must be delivered to site, cut to size and ready for installation and must be classified to indicate grade and thickness. Labels must remain on each piece of glass until it is glazed, inspected and officially accepted in writing by the employer, thereafter an insurance letter will follow absolving the contractor of responsibility.

FACTORY GLAZING: All glazing carried out in manufacturer's factory must be in accordance with window fabricated types. Manufacturing of frames must provide for glass, vinyl extrusions, cut off sharp corners, these are to line up with frame/glass rebates.

GLAZING ON SITE: This is to be carried out in accordance with glass specification previously referred to. Glazing in windows must be undertaken from outside, with drawn vinyl strips, Neoprene gaskets, and not hardening "Bitumastic" putty, as

SIZES: The sizes given are approximate and are not to be used for ordering purposes, but careful references must be made to the building for exact sizes. Any costs incurred for errors in this respect shall be at the contractor's expense.

All items are unless otherwise described measured net.

BUILDING IN: Windows, doors, etc must be set up and build in complete in position in concrete or brickwork and left completely watertight and prices should include thereof.

ANODISING: Anodising of aluminium sections must comply with SABS 999. Anodising must be a minimum of 25 MIKRON.

POWDER COATING: Power coating to SABS1796 specifications with a test certificate available on request. **A guarantee of no less than 10 years is to be provided against peeling and discolouration.**

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PROTECTING: Windows, doors, etc., must, wherever practicable, be erected as near to the end of the contract period as possible to minimise the danger of damage of deterioration and all work must be protected by covering up with temporary casings against damage, deterioration or discolouration caused by mortar droppings, varnish, wax, paint, etc., all to the entire satisfaction of the Engineer.

IRONMONGERY: Window and doors are to be fitted with the necessary locks, door closers, etc., as described and prices should include thereof.

DESCRIPTIONS: Descriptions shall be deemed to include all components of the units i.e glass and glazing, ironmongery complete with security lock and latches as per manufacturer's specification, dust seals, timber fixing blocks, protection film, etc.

DRAWINGS: Tenderers are referred to Architect's drawings WAN-004 and WAN-005

ALUMINIUM WINDOWS AND DOOR

Powder coated aluminium doors (colour: to Architect specification) including 6mm toughened safety glass complete with subframes, ironmongery, sealing, etc and fixing to brickwork or concrete as per drawing number WAN-004 & WAN-005

2	Single door size 850 x 2125 mm high (D1).	No	4
3	Double door size 1730 x 2125 mm high over (D2).	No	1

Powder coated aluminium windows (colour: to Architect specification) with 6mm clear/obscured glass to SABS standards with structural silicone all round and secret fixed glazing beads on one side including ironmongery, etc fixed to brickwork as per drawing number WAN-004 & WAN-005

4	Window size 1200 x 600mm high (W1)	No	2
5	Window size 1800 x 600mm high (W1)	No	1
6	Window size 600 x 900mm high (W2)	No	13
7	Window size 1500 x 900mm high (W3)	No	1

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8	Window size 600 x 1800mm high (W4)	No	11	
9	Window size 1800 x 600mm high (W5)	No	12	
10	Window size 3600 x 600mm high (W6)	No	1	
11	Window size 650 x 600mm high (NC1)	No	1	
12	Window size 1059 x 600mm high (NC2)	No	2	
13	Window size 938 x 600mm high (NS99)	No	1	
<u>ALUMINIUM SHOPFRONTS AND GLASS PARTITIONS</u>				
Powder coated aluminium shopfront (colour: to Architect specification) with 6mm toughened clear float safety glass to SABS standards with structural silicone all round and secret fixed glazing beads on one side as per drawing number WAN-004 & WAN-005				
14	Shop front size 4500 x 2125mm high (W7)	No	1	
15	Shop front size 1190 x 2125mm high (W8)	No	3	
16	Shop front size 6890 x 2125mm high (W9)	No	1	
17	Shop front size 8706 x 2700mm high (W10)	No	1	
18	Shop front size 3021 x 2125mm high (W11)	No	1	
19	Shop front size 2710 x 2700mm high (W12)	No	1	
20	Shop front size 2595 x 2700mm high (W13)	No	1	
21	Shop front size 5755 x 2700mm high (W14)	No	1	
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Powder coated aluminium glass partition (colour: to Architect specification) with 6mm toughened clear float safety glass to SABS standards with structural silicone all round and secret fixed glazing beads on one side as per drawing number WAN-004 & WAN-005

22	Glass partition size 1965 x 2125mm high (GP1)	No	1
23	Glass partition size 2830 x 2125mm high (GP2)	No	1
24	Glass partition size 1925 x 2125mm high (GP3)	No	1
25	Glass partition size 2150 x2125mm high (GP4)	No	1
26	Glass partition size 1950 x 2125mm high (GP5)	No	1
27	Glass partition size 3890 x 2125mm high (GP6)	No	1

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METALWORK

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	<u>SECTION NO. 2</u>			
	<u>BILL NO. 11</u>			
	<u>PLASTERING</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<p>NOTE: Screed mix designs must be done by the engineer and the sand tested in a laboratory beforehand. A mechanical mixer is preferred to ensure a homogenous smooth plaster, screed, etc mixtures and each batch should be mixed for not less than 3 minutes. The time which elapse between the start of mixing a batch and when it is placed should not exceed 45 minutes and during that time the mix should be protected from drying out. Regular strenght tests must be conducted to these mixes.</p> <p>A level screeds must be provided and a apECIAL large wooden trowel to be used. Screeds should be inspected and tested to determine deviation from datum level and surface regularity. The strength of the screed, once it have dried out, must be test regular using the "BRE screed tester" as well as tests to check the adhesion between screed and base.</p> <p>NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No 142 for JBCC CPAP purposes</p>			
	<u>SCREEDS</u>			
	Screeds on concrete			
1	25mm Thick on floors and landings	m2	636	
2	Average 80mm thick on roof slab to falls	m2	105	
	<p><u>Prepare new screeded surfaces and apply "Abescreed" or other similar approved ivory coloured epoxy mortar flooring system to achieve a 6mm thick non-slip finish including preparation, cleaning, priming, final coat and non-slip sealer, etc all in accordance with manufacturer's instructions</u></p>			
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	<p>Section No. 2 BUILDINGS Bill No. 11 PLASTERING</p>			
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INTERNAL PLASTER

Cement plaster on brickwork finished with smooth rhinolite

3	On walls	m2	601
4	On narrow widths	m2	81

Cement plaster on concrete finished with smooth rhinolite

5	On ceilings	m2	105
6	On beams	m2	245
7	On columns	m2	110

CORNER PROTECTORS, DIVIDING STRIPS, ETC.

8	40mm High brass or aluminium transition strip built into screed between different floor finishes or different floor levels	m	7
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PLASTERING

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Bill No. 11

PLASTERING

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	<u>SECTION NO. 2</u>			
	<u>BILL NO. 12</u>			
	<u>TILING</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	Descriptions			
	<u>NOTE:</u> Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No 144 for JBCC CPAP purposes			
	<p>Unless described as "fixed with adhesive to plaster (plaster elsewhere)" descriptions of tiling on brick or concrete walls, columns, etc shall be deemed to include 1:4 cement plaster backing and descriptions of tiling on concrete floors etc shall be deemed to include 1:3 plaster bedding</p>			
	<u>CERAMIC TILES</u>			
	<u>WALL TILING</u>			
	300 x 600 mm porcelain wall tiles fixed with adhesive to bedding (as per tiling layout DWG NO. WAN-DTL001 & WAN-DTL002) and flush pointed with tinted waterproof jointing compound. The tenderer to allow an amount of R250.00 per square meter (exclusive of VAT) for the supply of tiles only and include for all waste, transport, labour and profit in the applicable "rate"			
1	On walls	m2	200	
2	On narrow widths	m2	11	
3	On walls in isolated panels, splash backs,etc	m2	2	
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	TILING			

FLOORING

600 x 600mm polished porcelain floor tiles fixed with adhesive to bedding (bedding elsewhere) and flush pointed with tinted waterproof jointing compound. The tenderer to allow an amount of R250.00 per square meter (exclusive of VAT) for the supply of tiles only and include for all waste, transport, labour and profit in the applicable "rate"

4	On floors	m2	530
5	Cut tile skirting 100mm high	m	327

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TILING

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BUILDINGS

Bill No. 12

TILING

Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 13</u></p> <p><u>PLUMBING AND DRAINAGE</u></p> <p><u>(PROVISIONAL)</u></p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><i>NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No 148 for JBCC CPAP purposes</i></p> <p>General</p> <p>All work shall be carried out strictly according to the relevant SABS Specifications, Codes of Practice and Institutional requirements. The requirements of Institutional bodies such as the Local Authorities, etc shall be adhered to.</p> <p>This document must be read in conjunction with the Model Preambles for Trades (latest edition) as included in the Annexure and all relevant drawings.</p> <p>The works shall comprise the internal plumbing and drainage systems and the domestic water supply and the connection thereof to the main supplies. The main supplies will be execute by others and selected sub-contractors.</p> <p>The subcontractor shall be responsible for the “construction engineering” of all works.</p> <p><u>RAINWATER DISPOSAL</u></p> <p>Commercial and industrial Ogee profile chromadek seamless gutter coated internally and externally (colour: to Architect's specifications) with matching splashplate including cut and mitred angles covered with a mitre strip externally, stop ends crimped and all sealed on the inside with Dow Corning 813 silicone sealer, secured to fibre cement fascia with 20 x 2.5mm hanger brackets at 600mm centres using aluminium peeled rivets</p>			
1	100 x 125mm Rectangular section eaves gutter with 20mm wide overlapping joints sealed with and including compressible sealing strip and riveted at 20mm centres	m	119	
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Extra over 100 x 125mm gutter for:			
2	Outlets	No	22
3	Stopends	No	16
4	Angle intersection	No	4
75 x 50 x 0.6mm thick chromadek downpipe in colour beteleur brown fixed to wall with straps at 1500mm centres using nail plugs, with downpipes riveted and silicone sealed to gutter outlets, including all necessary bends, elbows, shoes etc			
5	75 x 50 x 0.6mm Rainwater downpipe with brackets fixed to brick wall or concrete	m	57
Extra over 75 x 50 x 0.6mm downpipe for:			
6	Offset	No	22
7	Shoe	No	22
<u>SOIL DRAINAGE</u>			
Workgroup No 146 for JBCC CPAP purposes			
uPVC pipes			
8	110mm Pipes vertically or ramped to cleaning eyes etc (no excavation)	m	2
9	110mm Pipes laid in and including trenches not exceeding 1m deep	m	42
10	Unreinforced concrete encasing to horizontal pipe	m ³	1
Extra over uPVC pipes for fittings			
11	110mm Access junction	No	9
12	110mm Gulley complete with deepseal "P" trap and cast iron grid	No	1
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SANITARY FITTINGS

"Vaal Sanitaryware" vitreous china wash hand basins fixed on marble top

13	510 x 405mm 'Hibiscus' white vitreous china basin (product code 7050) with one tapholes including integrated overflow and chainstay hole, bolted to wall with two 10mm bolts (product code 8448Z0)	No	13
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"Vaal Sanitaryware" vitreous china WC suites

14	Vaal sanitaryware vitreous china Orchid wall hung back inlet (product code 439016) complete with heavy duty double flap toilet seat, with a cobra flushmaster flush valve FM3-402	No	3
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15	"Mini WC" suite comprising of white 45 litres vitreous china pan and p-trap with white heavy duty single plastic flap seat complete with a 5 litre low level white vitreous china cistern	No	8
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16	"Protea Paraplegic" white vitreous china floor mounted WC pan (product code 750200) and 9-litre low level cistern (code 710631), complete with side-flush lever mounted on wall adjacent to cistern and heavy duty double flap toilet seat.	No	2
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"Vaal Sanitaryware" vitreous china urinals

17	"Sweet pea" white vitreous china wall hung back inlet urinal (product code 705426) including 38mm chromium plated domical grating (product code 8787) and chromium plated top inlet spreader (product code 7041Z0) and exposed flush valve (elsewhere measured), fitted on and including two hanger brackets (product code 8127Z0) plugged and screwed to wall and Cobra concealed type flushmaster palm press push button assembly (FM3.402)	No	4
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Stainless Steel Sink

18	Drop- in one piece pressed stainless steel sink with steel gallow brackets and legs in formican counter (elsewhere measured)	No	1
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WASTE UNIONS ETC**"Cobra"**

19	32mm Code 301 chrome plated basin waste union.	No	13
20	40mm Code 316 chrome plated unslotted bath or sink waste union.	No	1

TRAPS ETC**"Vulcathene"**

21	40mm Deep seal "P" or "S" trap	No	14
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TAPS, VALVES, ETC

22	20mm Fullway gate valve	No	3
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"Cobra Watertech" light pattern angle regulating valves

23	15 x 10mm Code 232/10 chrome plated angle regulating valve with adaptor nut and ring	No	16
24	10mm Diameter x 350mm long code C-232PIPE chrome plated supply tube and capnut	No	16
25	15 x 350mm long flexible service connection	No	16

"Cobra Watertech" "Star", "Aquila" and "Carina" pillar taps

26	15mm Chrome plated code 211-15 "Star" pillar tap with flanged backnut	No	12
27	15mm Chrome plated code 138-15 "Carina" undertile stopcock	No	3
28	15mm Chromium plated code 503-21 elbow action pillartap	No	2

"Cobra Watertech" "Star", "Aquila" and "Carina" mixers

29	20mm Chrome plated code 166/041CA Carina sink mixer with S-041/10 'Overarm' swivel outlet,adjustable wall flanges and exposed connections.	No	1
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SANITARY PLUMBING**uPVC pipes**

30	50mm Pipes	m	17
31	110mm Pipes	m	24
32	50mm Pipes chased into brickwork	m	4
33	50mm Pipes laid in and including trenches not exceeding 1m deep under surface beds	m	12

Extra over uPVC pipes for uPVC fittings

34	50mm End cap	No	2
35	110mm End cap	No	4
36	50mm Bend	No	10
37	110mm Bend	No	13
38	50mm Junction	No	4
39	110mm Junction	No	14
40	110mm Reducing junction	No	8
41	50mm Access bend	No	7
42	110mm Access bend	No	3
43	110mm Access bend with anti syphon horn	No	13
44	110mm Straight pan connector	No	13

Sundries

45	Testing waste pipe system	Item	
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WATER SUPPLIES

Class O copper pipes with capillary couplings

46	15mm Pipes	m	10
47	22mm Pipes	m	50
48	15mm Pipes chased into brickwork	m	19
49	22mm Pipes chased into brickwork	m	2

Extra over class O copper pipes for capillary fittings

50	15mm Fittings	No	24
51	22mm Fittings	No	20

Extra over class O copper pipes for conex compression fittings

52	15mm Fittings	No	13
53	22mm Fittings	No	10

Copper overflow and service pipes

54	22mm Overflow pipe 500mm girth twice bent	No	1
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ELECTRIC WATER HEATERS

"Kwikot"

55	100 Litre solar heater installed in the roof in compliance with SANS 10106 Solar Water Heater Specification complete with a Temperature & Pressure Valve (Safety Valve), Drain Cock (both supplied with the solar water heater), Multi Pressure Control Valve 400kPa, Drip Tray and Kwikot Vacuum Breakerson the cold water supply and hot water supply complete with a 1 x 2m Solar Collector Panel mounted on Roof Mounting Bracket (SOL-BRCT-RB)	No	1
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BUDGETTARY ALLOWANCE

56 Allow a budgettary allowance of R200,000.00 for the supply of 1 borehole, 2 no 5000litres jojo tanks complete with steel stands at least 3000mm high, 75mm HDPE pipes, 65mm BIC coupling fire hydrant and a .5l/sec @ 7Bar pressure booster pump, etc. as per drawing

Item

R 200,000.00

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	<u>GLAZING</u>			
	<i>NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No 150 for JBCC CPAP purposes</i>			

	<u>MIRRORS</u>			
1	6 mm Float glass multiple silvered mirror size 300 x 450 mm with polished and bevelled edges, holed and screwed with four chromium plated dome headed screws with rubber spacer washers behind, to and including hardwood plugs in wall.	No	10	
2	6 mm Float glass multiple silvered mirror size 2400 x 600 mm with polished and bevelled edges, holed and screwed with four chromium plated dome headed screws with rubber spacer washers behind, to and including hardwood plugs in wall.	No.	2	
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	GLAZING			

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	<u>SECTION NO. 2</u>			
	<u>BILL NO. 15</u>			
	<u>PAINTWORK</u>			
	<u>PAINTWORK, ETC TO NEW WORK ON</u>			
	<i>NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No 152 for JBCC CPAP purposes</i>			
	<u>FLOATED PLASTER SURFACES WITH</u>			
	One coat alkali resistant plaster primer and two coats PVA acrylic emulsion paint on			
1	Internal walls	m2	480	
2	Internal ceilings and beams	m2	105	
3	On columns	m	110	
	<u>ON WOOD</u>			
	One coat oil wood primer, one coat universal undercoat and two coats super universal enamel paint on			
4	Doors	m2	120	
	<u>ON METAL</u>			
	Prepare, stop and apply one coat alkaline resistant primer, one coat universal undercoat and two coats eggshell enamel paint			
5	Solar shield	m2	32.4	
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BUILDINGS**

THE FOLLOWING IN ONE SEPTIC TANKS AND FRENCH DRAINS

SEPTIC TANK

Earthworks

Excavate in "earth" below natural ground level (backfilling and carting away surplus material elsewhere) to:

4	Bulk excavation exceeding 2m but not 4m deep	m3	63
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(End of excavations in earth)

5	Excavating in "soft rock"	m3	6
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6	Excavating in "hard rock"	m3	3
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Cart away excavated material

7	Extra over all excavations for loading and carting away surplus excavated material to a suitable dumping ground to be located by the Contractor	m3	63
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Risk of collapse to side of excavation in "earth" exceeding 1,5m deep starting from average natural, reduced or consolidated

8	Septic tank excavation	m2	52
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Keeping excavations free from water

9	Allow for keeping excavations free from water		Item
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Compaction of surfaces

10	Scarify top surface of excavated area to a depth of 150mm and compact to not less than 93% of the modified AASHTO maximum density, to receive concrete slab	m2	26
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Concrete formwork and reinforcement

25Mpa/20mm concrete

11	Septic tank floor slab	m3	3
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12	Septic tank cover slab	m3	3
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Formwork

Rough formwork to:

13	Soffit of septic tank cover slab and remove through small opening	m2	26
14	Opening through 150mm thick slab exceeding 2m and not exceeding 3m girth	No	2

Reinforcement

High tensile steel reinforcement to structural concrete work

15	10mm Diameter bars	t	0.1425
16	12mm Diameter bars	t	0.1425

Fabric reinforcement having a surface that is plain, indented or otherwise deformed (measured nett)

17	Welded steel fabric ref. 395 to slabs	m2	26
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Precast concrete

18	Precast concrete surround to manhole suitable to receive cast iron cover and frame size 600mm x 600mm	No	2
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Masonry

Brickwork in 73mm extra hard burnt clay masonry units class

NFX in 6:1 cement mortar in:

19	Half brick wall	m2	6
20	One-brick wall	m2	40

Reinforcement to brickwork

21	Steel fabric 75mm wide	m	71
22	Steel fabric 150mm wide	m	470

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<u>Waterproofing</u>				
23	250 Micron green medium density damproof membrane laid loose on top of stone filling in french drain with pressure sensitive tape jointing	m2	20	
<u>Internal plaster</u>				
24	One coat (4:1) cement plaster on septic tank walls	m2	49	
25	Ditto, to narrow widths	m2	1	
<u>Class 4 uPVC pipes</u>				
26	160mm pipe and excavation not exceeding 1m deep	m	3	
27	160mm uPVC channel	m	2	
28	Extra over uPVC pipe for 110mm junction	No	2	
29	450 x 600mm x 38kg Cast iron single manhole cover and frame	No	2	
<u>Extra over Class 4 uPVC pipes for fittings</u>				
30	160mm Bend	No	2	
31	160mmmm Access junction	No	1	
32	160mm Access bend	No	1	
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THE FOLLOWING IN BRICK TYPE MANHOLE

Deep type manhole formed of one brick sides in extra hard burnt clay bricks in (3:1) cement mortar, the chamber section size internally 1100 x 770mm comprising three quarters of the total depth to invert level, on and including 150mm thick 20MPa/19mm mass concrete base complete with 1210 x 720 x 150mm thick precast concrete reducer slab over; the shaft size internally 770 x 600mm, all sides finished with (3:1) cement plaster, complete with 1210 x 1040x 150mm thick precast concrete cover slab with opening rebated for and with 600 x 450 x 125mm thick x 66kg medium dutv precast concrete cover. includinga necessary step

20MPa/19mm mass concrete benching in bottom with top surfaces to falls and finished smooth with (1:1) cement plaster, 150mm vitrified clay channels, channel bends, channel junctions, etc., reinforcement, additional excavation and backfilling compacted to 90% modified AASHTO density, all as detail DT82 included at the back of these Bills of Quantities

33	Manhole exceeding 1,75m and not exceeding 2m deep	No	1
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Septic tank manhole covers

Cast iron cover and frame size 600mm x 600mm to septic

34	Cast iron cover and frame size 600mm x 600mm to septic tank to designers specifications	No	2
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PERCOLATION TRENCHES

Earthworks

Excavate in "earth" below natural ground level (backfilling and carting away surplus material elsewhere) to:

32	Trench not exceeding 2m deep	m3	45
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Extra over trench excavations in "earth" for:

33	Excavating in "soft rock"	m3	5
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34	Excavating in "hard rock"	m3	3
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EXTERNAL WORKS

Bill No. 1

EXTERNAL WORKS

<u>Extra over 100mm internal diameter pitch-impregnated fibre pipe with perforated walls for:</u>				
45	Plain bend	No	2	
46	Junction	No	1	
47	Install a 1000 x 1500mm metal cylindrical water tanks for water harvesting including a concrete platform plinth as per sketch on drawing number WAF001		Item	
Testing				
48	Allow for testing all sewer piping in accordance with statutory requirements, including making good defective work if necessary and re-testing if required		Item	
PAVING WORKS				
Workgroup No 104 for JBCC CPAP purposes				
<u>EXCAVATION, FILLING, ETC</u>				
Site and Access road clearance				
49	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc	m2	455	
Excavation in earth not exceeding 2m deep				
50	Reduced levels under paving	m3	159	
Extra over bulk excavation in earth for excavation in				
51	Soft rock	m3	16	
52	Hard rock	m3	8	
Extra over all excavations for carting away				
53	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	91	
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EXTERNAL WORKS				
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Keeping excavations free of water				
54	Keeping excavations free of all water other than subterranean water		Item	
Earth filling obtained from stock piles on site including haulagee				
55	under walkwas, road islands, pedestals, etc compacted to 90%Mod AASHTO density	m3	68	
Earth filling supplied by the contractor under pavings etc				
56	Selected layer of G5 material in accordance with SABS 1200 DM compacted to 93% Mod AASHTO density in 150mm thick layers	m3	68	
<u>Sand filling</u>				
57	50mm thick dry, clean, washed riversand layer evenly spread	m2	23	
Compaction of surfaces				
58	Compaction of ground surface under floors etc including "Hyvar-X" or similar weed killer	m2	455	
59	Under pavings, etc and sprayed over previously wetted ground	m2	455	
<u>PRECAST CONCRETE</u>				
Workgroup No 112 for JBCC CPAP purposes				
<u>PAVING</u>				
60mm Standard grey and red double zig-zag interlocking precast concrete paving blocks laid to pattern, on 25mm riversand bed with sand sept into joints				
60	Paving to sidewalks, etc laid to falls	m2	455	
61	Circular cutting	m	12	
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EXTERNAL WORKS				

Precast concrete kerb (SABS 927 fig 4

Precast concrete 250 x 150 Figure 7 kerb , with 150 x 150 x 300mm unreinforced concrete haunching at back of each joint including finishing smooth on all exposed surfaces, excavation, backfilling, jointing, pointing, bedding in cement mortar, etc

62	Straight kerbing and channelling	m	107
63	Curved kerbing and channelling of radius exceeding 4m	m	12

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EXTERNAL WORKS

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EXTERNAL WORKS

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Section No. 3

EXTERNAL WORKS

DRAWINGS

6 Allow for marking up a full set of drawings to show the exact positions for cables, cable joints, road crossings, position of devices, etc, to render a complete as-installed set of drawings. These drawings must be handed to the Engineer on completion of the contract

Item

OCCUPATIONAL HEALTH AND SAFETY

7 Allow for compliance with the requirements as set out in the main contract (Building Bills of Quantities)

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ELECTRICAL WORKS

Bill No. 1

PRELIMINARY AND GENERAL

Section No. 4

ELECTRICAL WORKS

Bill No. 1

PRELIMINARY AND GENERAL

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ELECTRICAL WORKS

Bill No. 1

PRELIMINARY AND GENERAL

Item No		Quantity	Rate	Amount
<u>SECTION NO. 4</u>				
<u>BILL NO. 2</u>				
<u>GROUND FLOOR</u>				
<u>Distribution Boards</u>				
Supply the following Distribution Boards complete with all switchgear, accessories as specified on the schematic layouts, all fitted in the factory & tested, including delivery to site & off-loading in accordance with the single lines.:				
1	Supply main distribution board 160A	Item		
2	Install distribution board	Item		
3	Eskom new connection fee	Item		
<u>Cables</u>				
600/1000V PVC/PVC/SWA/PVC/Cu cable ladder, tray, trenching or sleeves.cable in shaft, sleeve, trench, on cable rack or on surface, including strapping or clamping, supports, etc.				
4	70 mm ² x 4 Core	m	90	
5	Install	m	90	
<u>Cable Terminations</u>				
Terminate and connect 600/1000V PVC/SWA/PVC/Cu cable including drilling, bolting, lugs, number tags, core markers, gland, shroud, etc.				
6	70 mm ² x 4 Core	No	4	
7	Install	No	4	
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GROUND FLOOR				

EARTH CONDUCTORS

Copper earth conductor in trench or sleeve, on racking, steelwork or strapped to cable

8	50 mm ² x 4 Core	m	90
9	Install	m	90

EARTH TERMINATIONS

Terminate and connect earth conductor including lug, bolt, nut,

10	50 mm ² x 4 Core	No	4
11	Install	No	4
12	Hellerman tyton 7day digital geyser timer	No	2
13	Install	No	2
14	Earthing and lightning protection	No	1

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ELECTRICAL WORKS

Bill No. 2

GROUND FLOOR

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ELECTRICAL WORKS

Bill No. 2

GROUND FLOOR

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 4</u>			
	<u>BILL NO. 3</u>			
	<u>GROUND FLOOR LV RETICULATION</u>			
	<u>Conduit</u>			
	Supply and install conduit complete with all accessories including couplings, bending and fixings as specified:			
1	20mm Conduit - cast in concrete or built in brickwork	m	1200	
2	Install	m	1200	
3	20mm Conduit - suspended in ceiling void	m	40	
4	Install	m	40	
	<u>Conduit Boxes</u>			
	Supply and install conduit boxes complete with all accessories including conduit terminations			
5	60mm round, 25mm deep for 20mm conduit mounted flush in wall or fixed to surface	No	20	
6	Install	No	20	
	<u>Outlet boxes excluding covers:</u>			
7	100mm x 50mm x 50mm Conduit box.	No	19	
8	Install	No	19	
9	100mm x 100mm x 50mm Conduit box.	No	7	
10	Install	No	7	
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Wiring and Conductors

Supply and install PVC insulated copper conductors in required colours, drawn into conduit or trunking:

11	2.5mm ²	m	4000
12	Install	m	4000
13	4 mm ² Wiring	m	1200
14	Install	m	1200
15	2.5mm ² B.C.E.W	m	2100
16	Install	m	2100

Light Switches

Supply, install and connect light switch complete with cover plate and all accessories:

17	16A 1 lever 1 way light switch complete with cover plate	No	15
18	Install	No	15
19	16A 2 lever 1 way light switch complete with cover plate	No	3
20	Install	No	3

Luminaires

Supply, install and connect luminaires mounted as specified, complete with lamps, control gear and all accessories:

21	ADMIRAL specular miro 4 double parabolic louvre 2x 24W T5	No	4
22	Install	No	4

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Bill No. 3

GROUND FLOOR LV RETICULATION

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23	ADMIRAL specular miro 4 double parabolic louvre 3x 28W T5	No	47	
24	Install	No	47	
25	ATOM MINI 14W LED downlighter	No	25	
26	Install	No	25	
27	VP2 LED 43W 4000K	No	14	
28	Install	No	14	
29	BEKASERIES 31 17W LED decorative bulkhead	No	14	
30	Install	No	14	
<u>Switched Socket Outlets</u>				
Supply, install and connect Switched socket outlets mounted flush in wall or in powerskirting as specified, complete with cover plates and all accessories				
31	16A Single switch socket outlet. (White)	No	3	
32	Install	No	3	
33	16A Double switch socket outlet (White)	No	10	
34	Install	No	10	
35	5A, Unswitched sockets for fluorescent lighting	No	51	
36	Install	No	51	
37	VETI pull up tower - 2 x data outlets, 2 x USB chargers, 2 x SA V-slim outlet, 2 x SA standard sockets	No	2	
38	Install	No	2	
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Isolators

Supply and install Isolators mounted as specified complete with cover plate and all accessories.

39	20A Single phase isolator	No	3
40	Install	No	3
41	20A Three phase isolator	No	3
42	Install	No	3

Powerskirting

2 Compartment 2 cover steel type power-skirting as per specification and drawings complete with cover plates, splices, earthing, powder coating, etc.

43	3 Tier 2 Compartment power skirting	m	50
44	Install	m	50
45	3 Tier 2 end caps	No	8
46	Install	No	8
47	Telephone/ data outlet	No	12
48	Install	No	12
49	16A SSO in powerskirting	No	13
50	Install	No	13
51	16A Dedicated SSO in powerskirting	No	11
52	Install	No	11

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ELECTRICAL WORKS
Bill No. 3**

GROUND FLOOR LV RETICULATION

Trunking

Supply and install trunking, cable tray, cable ladder and/or basket complete with covers and accessories, mounted along ceiling void at 3000mm height

53	P8000 Trunking	m	80
54	Install	m	80
55	P8000 Trunking - DB entry	No	1
56	Install	No	1
57	P8000 Trunking - end caps	No	8
58	Install	No	8
59	P8000 Trunking - 90 degree bends	No	6
60	Install	No	6

Electronic Services Outlets

Data and Telephone Installation

Conduit

Supply and install conduit complete with all accessories including

61	25mm Conduit - cast in concrete or built in brickwork	m	300
62	Install	m	300
63	25mm Conduit - suspended in ceiling void	m	220
64	Install	m	220

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GROUND FLOOR LV RETICULATION

Draw-wire

Supply and draw into conduit 1mm steel draw-wire

65	Draw-wire	m	700
66	Install	m	700

Outlets

Supply, install blank cover plates and conduit boxes mounted as

67	100mm x 100mm x 50mm Conduit box	No	4
68	Install	No	4

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ELECTRICAL WORKS

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	<p><u>SECTION NO. 5</u></p> <p><u>BILL NO. 1</u></p> <p><u>FIRE INSTALLATION</u></p> <p><u>PROJECT AND QUALITY SPECIFICATIONS</u></p> <p>This Bill shall be read in conjunction with the Detailed Mechanical Specification as well as the mechanical drawings</p> <p>The project comprises the supply, delivery, installation, testing and commissioning of all the mechanical equipment together with other services as specified in the Detailed Specification.</p> <p>The Tenderer shall be deemed to have perused the above-mentioned document and considered fully conversant with the contents and allow for it in his price.</p> <p>No allowance has been made in the measurement of conductors for additional lengths at connection points from the isolator, prices for the measured conductors shall be deemed to be included</p> <p>Conduits described as "fixed" shall be deemed to include for fixing to all types of surfaces, in chases or casting in or building into walls, etc., and prices shall include for the above</p> <p>"Install complete" shall be deemed to include all relevant flanges, sockets, reducers, elbows, bends or any required fitting to ensure full functionality and compliance.</p> <p>A compulsory site meeting is scheduled before pricing of the Bill of Quantities. Tenderer to ensure that all relevant queries and questions regarding the installation is raised at this platform. No allowance will be made and no claim will be entertained as a result of missing or incomplete information.</p> <p>Any and all discrepancies on the drawings or specification to brought to the attention of the engineer prior to closing of tender.</p> <p>All measurements to be checked on site before any orders to be placed.</p> <p>All supplied and installed equipment and completed installations and assemblies will comply to all relevant SABS specifications and all local council by-laws. No claim will be entertained in this regard.</p> <p style="text-align: right;">Carried to Collection</p>			
	<p>Section No. 5</p> <p>MECHANICAL WORKS</p> <p>Bill No. 1</p> <p>FIRE INSTALLATION</p>			R

Preliminaries and General

1	Establishment of site		Sum
2	Provision of public liability insurance		Sum
3	Provision for insurance against damage to buildings and contents		Sum
4	Twelve month guarantee		Sum
5	Workshop drawings		Sum
6	As-built drawings		Sum
7	Minor builder's work and making good		Sum
8	Testing and commissioning of mechanical systems		Sum
9	Transportation		Sum
10	Hiring of scaffolding and rigging of the equipments		Sum
11	Municipal water connection pressure test	No	1

Supply and Install fire protection equipment

12	Fire hose reels complete with 30m rubber hose,	No	2
13	Fire Hydrant complete with associated piping and fittings	No	1

New portable, hand-held fire fighting equipment

14	4,5kg DCP portable fire extinguisher complete with backing boards	No	2
15	5kg CO2 portable fire extinguisher complete with backing boards	No	3

Supply and install fire water piping

16	25 Diameter galvanized steel pipe	m	10
17	32 Diameter galvanized steel pipe	m	35

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Bill No. 1
FIRE INSTALLATION**

18	40 Diameter galvanized steel pipe	m	55		
19	110 Diameter galvanized steel pipe	m	15		
Emergency evacuation signage					
20	Supply and install all signage as shown on drawings			Sum	
21	Supply and install emergency assembly point			Item	
Directional sign maps					
22	Supply and install directional sign maps in passages - A3 size (colour prints, laminated and framed)	No	3		
Manual audible and visual alarm system					
23	Supply and install 1 loop analogue addressable fire control panel complete with battery back-up system.	No	1		
24	Supply and install 25mm metal conduit for fire detection system wiring, including all round and square termination boxes.	m	200		
25	Supply and install fire resistant type wire cable, interconnected between the detectors, the breakglass units, strobe lights, audible alarm devices and fire panel.	m	200		
26	Supply and install optical smoke detectors	No	10		
27	Supply and install heat detector	No	2		
28	Supply and install optical smoke detector complete with base siren/ sounder warning unit.	No	1		
29	Manual call point complete	No	1		
30	Supply and install 'Red' strobe light.	No	1		
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FIRE INSTALLATION

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<p><u>HEATING, VENTILATION & AIR CONDITIONING</u></p>			
<p><u>PROJECT AND QUALITY SPECIFICATIONS</u></p>			
<p>This Bill shall be read in conjunction with the Detailed Mechanical Specification as well as the mechanical drawings</p>			
<p>The project comprises the supply, delivery, installation, testing and commissioning of all the mechanical equipment together with other services as specified in the Detailed Specification.</p>			
<p>The Tenderer shall be deemed to have perused the above-mentioned document and considered fully conversant with the contents and allow for it in his price.</p>			
<p>No allowance has been made in the measurement of conductors for additional lengths at connection points from the isolator, prices for the measured conductors shall be deemed to be included</p>			
<p>Conduits described as "fixed" shall be deemed to include for fixing to all types of surfaces, in chases or casting in or building into walls, etc., and prices shall include for the above</p>			
<p>"Install complete" shall be deemed to include all relevant flanges, sockets, reducers, elbows, bends or any required fitting to ensure full functionality and compliance.</p>			
<p>A compulsory site meeting is scheduled before pricing of the Bill of Quantities. Tenderer to ensure that all relevant queries and questions regarding the installation is raised at this platform. No allowance will be made and no claim will be entertained as a result of missing or incomplete information.</p>			
<p>Any and all discrepancies on the drawings or specification to brought to the attention of the engineer prior to closing of tender.</p>			
<p>All measurements to be checked on site before any orders to be placed.</p>			
<p>All supplied and installed equipment and completed installations and assemblies will comply to all relevant SABS specifications and all local council by-laws. No claim will be entertained in this regard.</p>			
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Preliminaries and General

1	Establishment of site	Sum
2	Provision of public liability insurance	Sum
3	Provision for insurance against damage to buildings and contents	Sum
4	Twelve month guarantee	Sum
5	Workshop drawings	Sum
6	As-built drawings	Sum
7	Minor builder's work and making good	Sum
8	Testing and commissioning of mechanical systems	Sum
9	Transportation	Sum
10	Hiring of scaffolding and rigging of the equipments	Sum

AIR CONDITIONING UNITS

Supply and install ait conditioning unit, inverter type complete with suitable Refrigerant pipes, armaflex electrical connections, condensate drain, hard wired controller, galvanized trunking for all outside exposed pipes, PVC trunking for all inside exposed pipes, communication cable, supporting brackets and wiremesh cable tray for all pipes in ceiling void

11	Ceiling cassette unit (AC-1) (4.5kW) to computer room and meeting room	No	2
12	Mid-wall unit (AC - 2) (3.8kW) to colab room	No	1
13	Ceiling cassette unit (AC-3) (18kW) to study hall and reference	No	2
14	Ceiling cassette unit (AC-4) (8kW) to computer room	No	1
15	Mid-wall unit (AC-5) (4.5 kW) to librarian office	No	1
16	Under ceiling unit (AC-6) (16 kW) to reception area	No	2

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Section No. 5**MECHANICAL WORKS****Bill No. 2**

MALE ABLUTION AREA				
17	Supply and install 315 diameter axial flow fan with air flow of 390l/s @ 235pa complete with 1 off 1.5D attenuator	No	1	
18	650 x 300 Weather louvre complete with wire mesh	No	1	
19	500 x 300 Doore grille	No	1	
20	150 x 150 Doore grille	No	1	
UNINSULATED DUCTING				
21	300 x 250	m	1	
22	250 x 250	m	1.5	
23	200 x 250	m	1	
24	200 x 200	m	1	
25	150 x 250	m	1	
26	150 x 200	m	6	
TRANSFORMATION PIECES				
27	300 x 250 to 250 x 250	No	1	
28	250 x 250 to 150 x 250	No	1	
29	200 x 200 to 150 x 200	No	1	
30	Diameter 315 to 300 x 250 rectangular	No	1	
31	Diameter 315 to 650 x 300 rectangular	No	1	
DUCT SPIGOTS				
32	Diameter 150	No	3	
33	Diameter 200	No	3	
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34	200 x 200 to 250 x 250	No	3		
35	200 x 250 to 300 x 250	No	3		
	BENDS				
36	200 x 200	No	1		
37	Flexible connetion		Sum		
	FEMALE ABLUTION AREA				
38	Suply and install 315 diameter in-line flow fan with air flow of 250l/s @ 255pa complete with 1 off 1.5D attenuator	No	1		
39	450 x 300 Weather louvre complete with wire mesh	No	1		
40	400 x 300 Doore grille	No	1		
	UNINSULATED DUCTING				
41	250 x 200	m	1.5		
42	150 x 200	m	2.5		
	TRANSFORMATION PIECES				
43	250 x 200 to 150 x 200	No	1		
43	Diameter 315 to 250 x 200 rectangular	No	1		
45	Diameter 315 to 450 x 300 rectangular	No	1		
	DUCT SPIGOTS				
46	Diameter 150	No	5		
47	150 x 200 to 250 x 200	No	1		
	BENDS				
48	150 x 200	No	1		
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49	Flexible connetion		Sum	
STAFF ABLUTION AREA				
50	Suply and install 250 diameter in-line flow fan with air flow of 180l/s @ 205pa complete with 1 off 1.5D attenuator	No	1	
51	300 x 300 Weather louvre complete with wire mesh	No	1	
52	150 x 150 Doore grille	No	1	
UNINSULATED DUCTING				
53	200 x 250	m	2	
54	150 x 250	m	3.5	
TRANSFORMATION PIECES				
55	200 x 250 to 150 x 250	No	1	
56	Diameter 250 to 200 x 250 rectangular	No	1	
57	Diameter 250 to 300 x 300 rectangular	No	1	
DUCT SPIGOTS				
58	Diameter 150	No	2	
59	Diameter 200	No	1	
BENDS				
60	200 x 250	No	1	
61	Flexible connetion		Sum	
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MECHANICAL WORKS

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MECHANICAL WORKS

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	<p><u>SECTION NO. 6</u></p> <p><u>BILL NO. 1</u></p> <p><u>OCCUPATIONAL HEALTH AND SAFETY</u></p> <p>The Contractor shall comply with all the requirements set out in the Construction Regulations, 2003 issued under the Occupational Health and Safety Act, 1993 (Act No 85 of 1993).</p> <p>It is required of the contractor to thoroughly study these Regulations and the Health and Safety Specification that must be read together with and is deemed to be incorporated under this Section of the bills of quantities.</p> <p>The contractor must take note that compliance with the Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification is compulsory. In the event of partial or total non-compliance, the principal agent, notwithstanding the provisions of clause A31.0 of Section A or any other clause to the contrary, reserves the right to delay issuing any progress payment certificate until the contractor provides satisfactory proof of compliance. The contractor shall not be entitled to any compensation of whatsoever nature, including interest, due to such delay of payment shall not be entitled to any compensation of whatsoever nature, including interest, due to such delay of payment. such delay of payment.</p> <p>Provision for pricing of the Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification is made under this bill and it is explicitly pointed out that all requirements of the aforementioned are deemed to be priced hereunder and no additional claims in this regard shall be entertained.</p> <p><u>GENERAL REQUIREMENTS</u></p> <p>1 Contractor's construction safety officer</p> <p>2 Health and safety representatives, committees, supervisors and inspectors</p> <p style="text-align: right;">Carried to Collection</p> <p>Section No. 6 OCCUPATIONAL HEALTH AND SAFETY Bill No. 1 OCCUPATIONAL HEALTH AND SAFETY</p>			

3	Risk assessment and safety policy	Item	
4	Health and safety file	Item	
5	Safety registers, audits, reports, check lists, permits, etc	Item	
6	Log books	Item	
7	First aid, first aid-boxes, trained first-aiders, etc	Item	
8	Hazard notices	Item	
9	Fall prevention and protection	Item	
10	Health and safety education, training and promotion	Item	
11	Public safety, security measures and emergency preparedness	Item	
<u>COVID-19 HEALTH AND SAFETY REQUIREMENTS</u>			
Contractor to ensure that all Covid-19 health and safety requirements are met for the duration of the project			
12	Hazard identification and risk assessment specific to the covid-19 epidemic and other adjustments to ensure compliance for the assignment	Item	
13	Signage - Covid-19 Related	Item	
14	Two layers of fabric face mask for Covid-19	Item	
15	Medical graded face shields	Item	
16	Covid-19 clearance certificate	Item	
17	Non contact infrared thermometers	Item	
18	Supply chemicals for cleaning and disinfecting surfaces and equipment on site	Item	
19	Supply cleaning detergents including soap, handwash etc. for everyday use	Item	
20	Supply at least 70% alcohol hand sanitizers	Item	
21	Foot operated hand sanitizer equipment incorporating hands free station and refillable empty spray bottles placed on strategic working area and entrances	Item	
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22	Daily logbook and screening for covid-19	Item	
23	Covid-19 Waste bins	Item	
24	Provision of facilities with adequate ventilation to accommodate people in adherence to social distancing protocols on site	Item	
25	Provide fully equipped, well ventilated isolation facility, to accomodate personnel who failed the screening test for Covid-19	Item	
26	Post Covid-19 case decontamination deep cleaning with a disinfectant	Item	
<u>SPECIAL REQUIREMENTS</u>			
Excavation/ shoring			
27	Safe working loads	Item	
28	Working at heights including roof work	Item	
29	Construction vehicles and mobile plant	Item	
30	Electrical equipment and procedures used by the contractor	Item	
31	Explosive power tools	Item	
32	Temporary storage of flammable liquids on construction sites	Item	
33	Housekeeping on construction sites	Item	
34	Stacking and storage on construction sites	Item	
35	Fire precautions on construction sites	Item	
36	Commissioning safety precautions	Item	
37	Toxic materials	Item	
38	Hazardous chemicals and materials	Item	
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SPECIFIC REQUIREMENTS

39 Related restrictions affecting health and safety

Item

40 Control of pollution

Item

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Bill No. 1

HEALTH AND SAFETY

COLLECTION

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<u>FINAL SUMMARY</u>		
1 PRELIMINARIES	31	
2 BUILDINGS	104	
3 EXTERNAL WORKS	114	
4 ELECTRICAL WORKS	128	
5 MECHANICAL WORKS	139	
6 HEALTH AND SAFETY	144	
TRAINING ALLOWANCE		R 50,000.00
<u>CONTINGENCY</u>		
Allow a contingency amount of R 800 000.00 (Eight Hundred Thousand Rands) to be used as directed by the Client.		R 800,000.00
SUB TOTAL		R
VALUE ADDED TAX @ 15%		R
Total construction Estimate		R