

Item No		Quantity	Rate	Amount
	<u>BILL NO 1</u>			
	<u>PRELIMINARIES</u>			
	<u>BUILDING AGREEMENT AND PRELIMINARIES</u>			
	The JBCC Principal Building Agreement (March 2014 Edition 6.1) prepared by the Joint Building Contracts Committee shall be the applicable building agreement, amended as hereinafter described			
	The JBCC Principal Building Agreement contract data form an integral part of this agreement			
	The ASAQs Preliminaries (March 2014 edition) published by the Association of South African Quantity Surveyors for use with the JBCC Principal Building Agreement shall be deemed to be incorporated in these bills of quantities			
	The contractor is deemed to have referred to the abovementioned documents for the full intent and meaning of each clause			
	The clauses in the abovementioned documents are hereinafter 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 notwithstanding anything to the contrary contained in the abovementioned documents			
	Where any item is not relevant to this agreement such item is marked N/A (signifying "not applicable")			
	<u>PREAMBLES FOR TRADES</u>			
	The Model Preambles for Trades (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			
	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 Model Preambles			
	Carried Forward		R	
	Bill No. 1 PRELIMINARIES SARS Loading Bay in Musina New Construction Works Provisional Bills Of Quantities			

Brought Forward

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

PRICING OF PRELIMINARIES

Should the **contractor** select Option A in terms of clause 26.9.4 of the **contract data** for the purpose of adjustment of these **preliminaries**, the amount entered into the amount column in these **preliminaries** is to be divided into one or more of the three categories provided namely fixed (F), value related (V) and time related (T)

SECTION A: PRINCIPAL BUILDING AGREEMENT

Interpretation (A1-A7)

1 Clause 1.0 - Definitions and interpretation

1.2.6 Pricing of bills of quantities

The **contractor** is to allow opposite each item for all costs in connection therewith. All prices to include, unless otherwise stated, for all materials, fabrication, conveyance and delivery, unloading, storing, unpacking, hoisting, labour, setting, fitting and fixing in position, cutting and waste (except where to be measured in accordance with the standard system of measurement), patterns, models and templates, plant, temporary works, returning of packaging, duties, taxes, imposts, establishment charges, overheads, profit and all other obligations arising out of the **agreement**

Items left unpriced will be deemed to be covered in prices against other items throughout these **bills of quantities** and no claim for any extras arising out of the **contractor's** omission to price any item will be entertained

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

1.2.7 Legal status of contractor

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

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<p style="text-align: right;">Brought Forward</p> <ol style="list-style-type: none"> These persons are deemed to be jointly and severally liable to the employer for the performance of this agreement These persons shall notify the employer of their leader who has authority to bind the contractor and each of these persons The contractor shall not alter its composition or legal status without the prior written consent of the employer <p>F:..... V:..... T:.....</p> <p>2 Clause 2.0 - Law, regulations and notices</p> <p>2.6 Health and safety</p> <p>Without limiting the generality of the provisions of clause 2.0, the contractor's attention is drawn to the provisions of Construction Regulations issued in terms of the Occupational Health and Safety Act, 1993. It is specifically stated that the employer shall prepare a documented health and safety specification for the works and that the employer shall ensure that the contractor has made provision for the cost of health and safety measures during the execution of the works. The contractor shall price opposite this item for compliance with the act and the regulations and the reasonable provisions of the aforementioned health and safety specification [2.1]</p> <p>The contractor shall:</p> <ol style="list-style-type: none"> Comply with the health and safety specification for the works Prepare and agree with the health and safety consultant the health and safety plan for the works Co-operate with the health and safety consultant in all respects Manage the compliance of all subcontractors with the regulations and with the health and safety plan and specification Conform to the conditions contained in the employer's safety specification <p style="text-align: right;">Carried Forward</p> <p>Bill No. 1 PRELIMINARIES SARS Loading Bay in Musina New Construction Works Provisional Bills Of Quantities</p>	<p style="text-align: center;">Item</p>	<p style="text-align: center;">R</p>	
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	Brought Forward		R	
3	Clause 3.0 - Offer and acceptance F:..... V:..... T:.....	Item		
4	Clause 4.0 - Assignment and cession F:..... V:..... T:.....	Item		
5	Clause 5.0 - Contract documents F:..... V:..... T:.....	Item		
6	Clause 6.0 - Employer's agents F:..... V:..... T:.....	Item		
7	Clause 7.0 - Design responsibility F:..... V:..... T:..... <u>Insurance and security (A8-A11)</u>	Item		
8	Clause 8.0 - Works risk F:..... V:..... T:.....	Item		
9	Clause 9.0 - Indemnities F:..... V:..... T:.....	Item		
10	Clause 10.0 - Insurances F:..... V:..... T:.....	Item		
11	Clause 11.0 - Security F:..... V:..... T:..... <u>Execution (A12 - A17)</u>	Item		
12	Clause 12.0 - Duties of the parties Clause 12.2.18 - Notice boards			
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	Brought Forward		R	
	The contractor shall erect in a position approved by the principal agent , maintain and remove at completion a notice board as recommended by the South African Institute of Architects listing the names and logos of the employer , the contractor and the professional consultants. No subcontractor or supplier notice boards may be erected [12.2.18]			
	F:..... V:..... T:.....	Item		
13	Clause 13.0 - Setting out			
	F:..... V:..... T:.....	Item		
14	Clause 14.0 - Nominated subcontractors			
	F:..... V:..... T:.....	Item		
15	Clause 15.0 - Selected subcontractors			
	F:..... V:..... T:.....	Item		
16	Clause 16.0 - Direct contractors			
	F:..... V:..... T:.....	Item		
17	Clause 17.0 - Contract instructions			
	17.6 Site Instructions			
18	Instructions issued on site are to be recorded in a site instruction book which is to be supplied and maintained on site by the contractor. Instructions recorded in the site instruction book will be scanned by the contractor and electronically distributed on a regular basis to the Principal Agent, Quantity Surveyor and other relevant consultants			
	F:..... V:..... T:.....	Item		
	<u>Completion (A18 - A24)</u>			
19	Clause 18.0 - Interim completion			
	F:..... V:..... T:.....	Item		
20	Clause 19.0 - Practical completion			
	F:..... V:..... T:.....	Item		
	Carried Forward		R	
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	Brought Forward		R	
21	Clause 20.0 - Sectional completion F:..... V:..... T:.....	Item		
22	Clause 21.0 - Defects liability period and final completion F:..... V:..... T:.....	Item		
23	Clause 22.0 - Latent defects liability period F:..... V:..... T:.....	Item		
24	Clause 23.0 - Revision of date for practical completion F:..... V:..... T:.....	Item		
25	Clause 24.0 - Penalty for late or non-completion F:..... V:..... T:..... <u>Payment (A25 - A27)</u>	Item		
26	Clause 25.0 - Payment F:..... V:..... T:.....	Item		
27	Clause 26.0 - Adjustment of the contract value and final account F:..... V:..... T:.....	Item		
28	Clause 27.0 - Recovery of expense and/or loss F:..... V:..... T:..... <u>Suspension and termination (A28 - A29)</u>	Item		
29	Clause 28.0 - Suspension by the contractor F:..... V:..... T:.....	Item		
30	Clause 29.0 - Termination F:..... V:..... T:.....	Item		
	Carried Forward		R	
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	Brought Forward		R	
	<u>Dispute resolution (A30)</u>			
31	Clause 30.0 - Dispute resolution F:..... V:..... T:.....	Item		
32	Agreement The required information of the parties and the amount of the contract sum shall be inserted in the agreement for signature of the agreement by the parties F:..... V:..... T:.....	Item		
33	Contract data Before submission of his tender the contractor is to complete the tenderer's selection in the contract data <u>SECTION B: PRELIMINARIES</u> <u>Definitions and Interpretation (B1)</u>			
34	Clause 1.1 - Definitions F:..... V:..... T:.....	Item		
35	Clause 1.2 - Interpretation F:..... V:..... T:.....	Item		
	<u>Documents (B2)</u>			
36	Clause 2.1 - Checking of documents F:..... V:..... T:.....	Item		
37	Clause 2.2 - Provisional bills of quantities F:..... V:..... T:.....	Item		
38	Clause 2.3 - Availability of construction information F:..... V:..... T:.....	Item		
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Brought Forward			R	
<u>Previous work and adjoining properties (B3)</u>				
39	Clause 3.1 - Previous work - dimensional accuracy F:..... V:..... T:.....	Item		
40	Clause 3.2 - Previous work - defects F:..... V:..... T:.....	Item		
41	Clause 3.3 - Inspection of adjoining properties F:..... V:..... T:.....	Item		
<u>Samples, shop drawings and manufacturer's instructions (B4)</u>				
42	Clause 4.1 - Samples of materials F:..... V:..... T:.....	Item		
43	Clause 4.2 - Workmanship samples F:..... V:..... T:.....	Item		
44	Clause 4.3 - Shop drawings F:..... V:..... T:.....	Item		
45	Clause 4.4 - Compliance with manufacturer's instructions F:..... V:..... T:.....	Item		
<u>Deposits and fees (B5)</u>				
46	Clause 5.1 - Deposits and fees F:..... V:..... T:.....	Item		
<u>Temporary services (B6)</u>				
47	Clause 6.1 - Water F:..... V:..... T:.....	Item		
48	Clause 6.2 - Electricity F:..... V:..... T:.....	Item		
Carried Forward			R	
Bill No. 1 PRELIMINARIES SARS Loading Bay in Musina New Construction Works Provisional Bills Of Quantities				

	Brought Forward		R	
49	Clause 6.3 - Ablution and welfare facilities			
	F:..... V:..... T:.....	Item		
50	Clause 6.4 - Communication facilities			
	F:..... V:..... T:.....	Item		
	<u>Prime cost amounts (B7)</u>			
51	Clause 7.1 - Responsibility for prime cost amounts			
	F:..... V:..... T:.....	Item		
	<u>Attendance on subcontractors (B8)</u>			
52	Clause 8.1 - General attendance			
	F:..... V:..... T:.....	Item		
53	Clause 8.2 - Special attendance			
	F:..... V:..... T:.....	Item		
	<u>General (B9)</u>			
54	Clause 9.1 - Protection of the works			
	F:..... V:..... T:.....	Item		
55	Clause 9.2 - Protection/isolation of existing/sectionally occupied works			
	F:..... V:..... T:.....	Item		
56	Clause 9.3 - Security of the works			
	F:..... V:..... T:.....	Item		
57	Clause 9.4 - Notice before covering work			
	F:..... V:..... T:.....	Item		
58	Clause 9.5 - Disturbance			
	F:..... V:..... T:.....	Item		
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<p style="text-align: right;">Brought Forward</p> <p>10.5 - Inspection of adjoining properties [3.3]</p> <p>F:..... V:..... T:.....</p> <p>10.6 - Water [6.1]</p> <p>Option B</p> <p>F:..... V:..... T:.....</p> <p>10.7 - Electricity [6.2]</p> <p>Option B</p> <p>F:..... V:..... T:.....</p> <p>10.8 - Ablution and welfare facilities [6.3]</p> <p>Option A</p> <p>F:..... V:..... T:.....</p> <p>10.9 - Communication facilities [6.4]</p> <p>F:..... V:..... T:.....</p> <p>10.10 - Protection of the works [9.1]</p> <p>F:..... V:..... T:.....</p> <p>10.11 - Protection / isolation of existing / sectionally occupied works [9.2]</p> <p>N/A</p> <p>F:..... V:..... T:.....</p> <p style="text-align: right;">Carried Forward</p> <p>Bill No. 1 PRELIMINARIES SARS Loading Bay in Musina New Construction Works Provisional Bills Of Quantities</p>	<p>Item</p> <p>Item</p> <p>Item</p> <p>Item</p> <p>Item</p> <p>Item</p> <p>Item</p>	<p>R</p>	
		R	

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All work is to be carried out in such a manner as to cause no unacceptable or unreasonable dust, noise, vibrations, nuisance, inconvenience, annoyance and the like to the public, others, other properties and traffic in so far as they exceed the permissible limitations set by government legislation or the local authority. Any delays, stoppages and the like arising from or in order to comply with the above will not constitute grounds for an adjustment to the **construction period** or **contract value** whatsoever

Item

The **contractor** shall be responsible for and take all precautions in controlling by whatever means necessary all forms of pollution during the **construction period** due *inter alia* to noise, artificial light, wind-blown sand, dust, deposits of mud, etc

Item

SECTION C: SPECIFIC PRELIMINARIES

Where warranties for materials and/or workmanship are called for, the **contractor** shall obtain a written warranty, addressed to the **employer**, from the entity supplying the materials and/or doing the work and shall deliver same to the **principal agent** on the **final completion** of the contract

The warranty shall state that workmanship, materials and installation are warranted for a specific period from the date of **final completion** and that any **defects** that may arise during the specified period shall be made good at the expense of the entity supplying the materials and/or doing the work, upon written **notice** to do so

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Brought Forward			R
	<p>The warranty will not be enforced if the work is damaged by defects in the execution of the works, in which case the responsibility for replacement shall rest entirely with the contractor</p> <p>F:..... V:..... T:.....</p>	Item	
65	<p>C2 Overtime</p> <p>Should overtime be required to be worked for any reason whatsoever, the costs of such overtime is to be borne by the contractor unless the principal agent has specifically authorised, in writing, prior to execution thereof, that costs for such overtime are to be borne by the employer</p> <p>There will be days in the week and over week ends when access to the site will be restricted. Further to this will there be days that no construction will be allowed. Days such as UP international student day and UP first year welcome day.</p> <p>F:..... V:..... T:.....</p>	Item	
66	<p>C3 Co-operation of the contractor for cost management</p> <p>It is specifically agreed that the contractor accepts the obligation of assisting the principal agent in implementing proper cost management. The contractor will be advised by the principal agent of all cost management procedures which will be implemented to ensure that the final building cost does not exceed the budget</p> <p>F:..... V:..... T:.....</p>	Item	
67	<p>C4 Overloading</p> <p>The contractor shall take all necessary steps to ensure that no damage occurs due to overloading of any portion of the works or temporary works eg scaffolding, etc. The contractor shall submit details of his proposed loading, storage, plant erection, etc to the principal agent for approval prior to proceeding with such loading, storing or erecting and shall comply with and pay for the principal agent's requirements in connection with the provision of temporary support work, etc. Any damage caused to the works by overloading shall be made good by the contractor at his sole expense</p> <p>F:..... V:..... T:.....</p>	Item	
Carried Forward			R
Bill No. 1 PRELIMINARIES SARS Loading Bay in Musina New Construction Works Provisional Bills Of Quantities			

Brought Forward

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68 **C5 Confidentiality**

The **contractor** undertakes to maintain in confidence any and all information regarding this project and shall obtain appropriate similar undertakings from all **subcontractors** and suppliers. Such information shall not be used in any way except in connection with the execution of the **works**

No information regarding this project shall be published or disclosed without the prior written consent of the **employer**

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

Item

69 **C6 Media releases**

All rights of publication of articles in the media, together with any advertising relating thereto or in any way connected with this project, shall vest with the **employer**

The **contractor** together with his **subcontractors** shall not, without the prior written consent of the **employer**, cause any statement or advertisement to be printed, screened or aired by the media

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

Item

SUMMARY OF CATEGORIES

Category : Fixed R.....

Category : Value R.....

Category : Time R.....

Carried to Summary

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Bill No. 1

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Brought Forward			R	
<u>Temporary barriers, screens, etc including removal</u>				
1	Hoardings 2.50m high to sides of buildings on brick pavings formed of suitable steel or timber framing covered on one side with 22mm shutterboard panels and finished with two coats emulsion paint on one side, including corners, ends, one pedestrian gate approx 0.90 x 2.10m high and one vehicle gate approx 0.90 x 2.10m high access doors making good pavings, etc	m	56	
<u>REMOVAL OF EXISTING WORK</u>				
<u>Break up and remove brick pavings</u>				
2	50mm Thick pavings on sand bed	m2	116	
Carried to Summary			R	
Bill No. 2				
ALTERATIONS				
SARS Loading Bay in Musina				
New Construction Works Provisional Bills Of Quantities				

Item No		Quantity	Rate	Amount
	<u>BILL NO 3</u>			
	<u>EARTHWORKS</u>			
	For preambles see "Model Preambles for Trades"			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>General</u>			
	The contractor shall carry out the whole of the work with as little mess, dust and noise as possible and with a minimum of disturbance to adjoining premises and their tenants. He shall keep damp elements or areas creating dust where reasonable and appropriate. He shall further provide proper protection etc that may be necessary during the progress of the works, all to the satisfaction of the principal agent			
	<u>Material of a more difficult character</u>			
	Should the contractor consider that any of the excavations are more difficult in character than excavations in "earth" he shall immediately notify the principal agent in writing. Failing such notification the excavations shall be deemed to be in "earth" and shall be measured and valued accordingly			
	The contractor may use any method he chooses to excavate any class of material, but his chosen method of excavation shall not determine the classification of the material excavated			
	<u>Excavations</u>			
	No claim for rock excavation will be entertained unless the contractor has timeously notified the quantity surveyor thereof prior to backfilling			
	<u>Keeping excavations free of water</u>			
	No water shall be allowed to stand in any part of the excavations. The excavations shall be protected from flooding and water in the excavations, whether as a result of flooding, rain or other causes and shall immediately be removed by baling, pumping or other means			
	Carried Forward		R	
	Bill No. 3 EARTHWORKS SARS Loading Bay in Musina New Construction Works Provisional Bills Of Quantities			

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Disposal of excavated material

All excavations shall be deemed to include disposal of excavated material by setting aside for use as filling or depositing on site within 100m of the perimeter of the building and spreading and leveling

Carting away of excavated material

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

Filling

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

Tenderers are to allow in the filling rates for testing in accordance with SABS 1200DM

Tests

1. During the progress of the work tests shall be conducted on materials and workmanship to ensure compliance with the requirements of the specifications
2. The cost of testing undertaken by the contractor in terms of his obligation under Clause 7.2 in SABS 1200 DM and Clause 7.2.1 in SABS 1200 ME for the purposes of process control, including taking of samples, reinstating where samples have been taken and all testing equipment, labour, materials, etc shall be included in the rates tendered for the various items of work supplied and will not be paid separately. Those tests measured in the bill of quantities are for extra tests required by the engineer.
3. The above mentioned testing as described in note 2 includes density tests, indicator tests - reflecting grading modules and all Atterberg Limits (PI's etc), as well as CBR (Californian Bearing Ratio) tests as prescribed and specified in SABS 1200 DM and ME
4. The engineer shall be entitled to take or order extra samples and tests on materials or workmanship, as required. The contractor shall be paid at the appropriate rates for these extra tests provided that such tests indicate compliance with the

Carried Forward

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Bill No. 3

EARTHWORKS

SARS Loading Bay in Musina

New Construction Works Provisional Bills Of Quantities

Brought Forward			R	
required specifications, otherwise the cost shall be borne by the contractor				
<u>EXCAVATIONS</u>				
<u>Excavation in earth not exceeding 2m deep</u>				
1	Strip footings	m3	44	
2	Bases	m3	22	
<u>Cut to spoil</u>				
3	Soft material	m3	7	
<u>EXCAVATIONS IN STRATA OF A MORE DIFFICULT CHARACTER</u>				
<u>Extra over excavations in earth for excavations in</u>				
4	Soft rock	m3	2	
5	Hard rock	m3	1	
<u>SUNDRIES</u>				
<u>Extra over all excavations for carting away</u>				
6	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	31	
<u>Keeping excavations free of water</u>				
7	Keeping excavations free of water		Item	
<u>FILLING ETC</u>				
<u>Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 95% Mod AASHTO density</u>				
8	Trenches	m3	35	
<u>G5/G6 filling supplied by the contractor, compacted to 95% Mod AASHTO density</u>				
9	Bases	m3	7	
10	Under floors, ramps, etc	m3	126	
Carried Forward			R	
Bill No. 3 EARTHWORKS SARS Loading Bay in Musina New Construction Works Provisional Bills Of Quantities				

Item No		Quantity	Rate	Amount
	<p><u>BILL NO 4</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><u>Cost of tests</u></p> <p>The costs of making, storing and testing of concrete test cubes as required under clause 7 "Tests" of SANS 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 principal agent. The testing shall be undertaken by an independent firm or institution nominated by the contractor to the approval of the principal agent. (Test cubes are measured separately)</p> <p><u>Formwork</u></p> <p>Description 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</p> <p>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 shall be deemed to be for slabs not exceeding 250mm thick unless otherwise described</p> <p>Formwork to soffits of slabs, beams, etc shall be deemed to be propped up exceeding 1.5m and not exceeding 3.5m high unless otherwise described</p> <p>Rates for all formwork shall be deemed to include propping</p>			
	<p style="text-align: right;">Carried Forward</p> <p>Bill No. 4 CONCRETE, FORMWORK AND REINFORCEMENT SARS Loading Bay in Musina New Construction Works Provisional Bills Of Quantities</p>		R	

Brought Forward			R	
Formwork to sides of bases, pile caps, ground beams, etc will only be measured where it is prescribed 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"				
<u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u>				
<u>15MPa/19mm concrete</u>				
1	Surface blinding under footings	m3	4	
<u>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u>				
<u>25MPa/19mm concrete</u>				
2	Strip footings	m3	14	
3	Bases	m3	7	
4	Stub columns	m3	4	
5	Surface beds on waterproofing	m3	27	
6	Steps	m3	0.3	
7	Ramps	m3	22	
<u>CONCRETE SUNDRIES</u>				
<u>Power float surface treatment to finished face of concrete, including "Florguard Industrial" dry shake surface hardener added at a rate of 7kg/m2 and curing with "Cureseal F" liquid membrane forming curing compound at a rate of 1litre/10m2</u>				
8	Surface beds, slabs, etc	m2	108	
<u>"Sika Grout 212" non-shrink grout</u>				
9	Bedding approximately 30mm thick under 500 x 500mm base plate	No	11	
Carried Forward			R	
Bill No. 4 CONCRETE, FORMWORK AND REINFORCEMENT SARS Loading Bay in Musina New Construction Works Provisional Bills Of Quantities				

Brought Forward			R	
<u>TEST CUBES</u>				
10	Making and testing 150 x 150 x 150mm concrete strength test cubes (Provisional)	No	3	
<u>ROUGH FORMWORK</u>				
<u>Rough formwork to sides</u>				
11	Steps	m	6	
12	Stub columns	m2	86	
13	Ramps	m2	18	
<u>REINFORCEMENT</u>				
<u>High tensile steel reinforcement to structural concrete work</u>				
14	Various Diameter bars	t	3.62	
<u>Fabric reinforcement</u>				
15	Type 888 in concrete ramps etc	m2	254	
16	Type 193 in concrete steps etc	m2	2	
Carried to Summary			R	
Bill No. 4				
CONCRETE, FORMWORK AND REINFORCEMENT				
SARS Loading Bay in Musina				
New Construction Works Provisional Bills Of Quantities				

Item No		Quantity	Rate	Amount
	<u>BILL NO 5</u>			
	<u>MASONRY</u>			
	For preambles see "Model Preambles for Trades"			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>BRICKWORK</u>			
	<u>Linings to concrete</u>			
	Descriptions of linings to concrete, unless otherwise described, shall be deemed to include wall ties			
	<u>Hollow walls</u>			
	Descriptions of hollow walls shall be deemed to include wire ties and leaving every fifth perpend of the bottom course and above lintels of the external skin open as a weep hole			
	<u>Lintels</u>			
	Lintels shall bear at least 250mm onto adjacent walling. Where such bearing cannot be obtained due to the proximity of adjacent openings the lintel shall be continuous			
	<u>Pointing</u>			
	Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc			
	<u>Bagged brick finish</u>			
	Bagged brickwork shall be of the mortar as described rubbed onto wall with hessian cloth to provide a fair finish. The finished surface shall be free of penetrations or pitted openings or large protruding lumps of mortar. The finish shall be to the principal agent's approval			
	<u>SAMPLES</u>			
	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			
	Carried Forward		R	
	Bill No. 5 MASONRY SARS Loading Bay in Musina New Construction Works Provisional Bills Of Quantities			

Brought Forward			R	
<u>Joints</u>				
Pavings, etc, shall, except for crazy paving, be laid with continuous joints in both directions				
<u>Cutting</u>				
Descriptions of all pavings shall be deemed to include for all straight cutting and circular cutting around pipes, etc not exceeding 150mm diameter				
<u>BRICKWORK</u>				
<u>FOUNDATIONS</u>				
<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in class 1 mortar</u>				
1	230mm Retaining Walls	m2	112	
<u>SUPERSTRUCTURE</u>				
<u>Brickwork of NFP bricks (7 MPa nominal compressive strength) in class II mortar</u>				
2	110mm Linings to concrete	m2	17	
<u>Brickwork reinforcement</u>				
3	150mm Wide reinforcement built in horizontally	m	379	
Carried to Summary			R	
Bill No. 5				
MASONRY				
SARS Loading Bay in Musina				
New Construction Works Provisional Bills Of Quantities				

Item No	Quantity	Rate	Amount
BILL NO 6			
<u>WATERPROOFING</u>			
For preambles see "Model Preambles for Trades"			
<u>DAMPPROOFING OF WALLS AND FLOORS</u>			
<u>One layer of green colour coded polyethylene damp proof membrane with SABS 952, Type C in widest practicable widths with all joints lapped and sealed in accordance with the manufacturer's instructions</u>			
1	250 Micron green medium density damp-proof membrane laid loose on top of sand bed (elsewhere) under solid floors with pressure sensitive tape jointing	m2	135
Carried to Summary			R
Bill No. 6 WATERPROOFING SARS Loading Bay in Musina New Construction Works Provisional Bills Of Quantities			

Brought Forward			R	
<u>Welded columns in single lengths with flat base, top, bearer and connection plates, bolted to concrete</u>				
1	203 x 203 x 46kg/m H-section columns in lengths not exceeding 13m	t	1.87	
<u>Welded beams in single lengths with flat bearer and connection plates, bolted to steel</u>				
2	IPE 200 Beams	t	0.92	
<u>Bolts, etc to columns and beams</u>				
3	20mm Diameter L-shaped anchor bolt 600mm girth	No	44	
<u>GALVANISED STEEL PURLINS, GIRTS, BRACING, ETC</u>				
<u>Purlins and girts, bolted to steel</u>				
4	125 x 75 x 20 x 2.5mm x 5.12kg/m Cold-formed lipped channel purlins	t	0.66	
<u>Welded bracing, etc with flat connection plates, bolted to steel</u>				
5	45 x 45 x 3mm x 6.38kg/m Angle bracing	t	0.14	
6	50 x 50 x 3mm x 6.38kg/m Sag Bars	t	0.05	
7	70 x 70 x 6mm x 6.38kg/m Angle bracing	t	0.80	
8	100 x 100 x 8mm x 6.38kg/m Angle bracing	t	0.80	
Carried to Summary			R	
Bill No. 8				
STRUCTURAL STEELWORK				
SARS Loading Bay in Musina				
New Construction Works Provisional Bills Of Quantities				

Brought Forward

R

Laying

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

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

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

Curing, seasoning and protection

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

Colour

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

PLASTER

Finish

Internal plaster shall be finished with a steel trowel and external plaster with a wooden float

INTERNAL PLASTER

Cement plaster class II on masonry

1 Walls

m2

71

Carried to Summary

R

Bill No. 9

PLASTERING

SARS Loading Bay in Musina

New Construction Works Provisional Bills Of Quantities

Brought Forward

R

Rock excavations

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

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

Laying, backfilling, bedding, etc of pipes

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

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

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

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

Pipes shall be bedded in accordance with clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SANS 1200 LB : Bedding (Pipes). Unless otherwise described bedding of rigid pipes shall be class B bedding

Concrete pipes

Pipes shall be jointed with ogee joints with rubber collars or socket and spigot joints with rubber rings

Vitrified clay pipes etc

Pipes shall rest on solid ground and, where necessary, pockets of sufficient size shall be cut around joints to enable the jointing to be properly performed or, alternatively, pipes shall be bedded full length on and including concrete laid in a semi-dry state immediately before pipes are laid

uPVC pipes and fittings

Drainage pipes and fittings shall be jointed and sealed with butyl rubber rings

Sanitary plumbing pipes and fittings shall be solvent weld jointed or sealed with butyl rubber rings

Carried Forward

R

Bill No. 10
PLUMBING AND DRAINAGE
SARS Loading Bay in Musina
New Construction Works Provisional Bills Of Quantities

<p style="text-align: right;">Brought Forward</p> <p><u>Gratings, covers, etc</u></p> <p>Gratings, covers, etc shall be as manufactured by "Saint-Gobain", unless otherwise described</p> <p><u>French drains</u></p> <p>Descriptions of french drains shall be deemed to include for battered sides and sloping bottoms with inlet chamber size 300 x 300mm internally under inlet pipe, from bottom of drain to top of pipe, formed of loosely packed, rough, hard stone walls and covered with precast concrete slab size 600 x 600 x 100mm thick and the rest of the drain filled in to the same height with similar stone graded from 300mm diameter at bottom to 50mm diameter at top, covered with galvanised corrugated iron sheets treated on both sides with bituminous paint and 300mm earthfilling over</p> <p><u>Septic tanks</u></p> <p>Descriptions of septic tanks shall be deemed to include concrete base slabs, jointing to drains, etc</p> <p><u>Stainless steel basins, sinks, wash troughs, urinals, etc</u></p> <p>Stainless steel for economy basins, domestic sinks, worktops and wash troughs shall be type 430 (17/0)</p> <p>Stainless steel for urinals, basins, quality sinks, wash troughs, institutional equipment, etc shall be type 304 (18/8)</p> <p>Stainless steel for laboratory sinks, photographic equipment, etc shall be type 316 (18/8)</p> <p>Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable</p> <p><u>Flush pans</u></p> <p>Flush pans shall have straight or side outlets and "P" or "S" traps as necessary</p> <p style="text-align: right;">Carried Forward</p> <p>Bill No. 10 PLUMBING AND DRAINAGE SARS Loading Bay in Musina New Construction Works Provisional Bills Of Quantities</p>		R	
		R	

Brought Forward

R

uPVC pressure pipes and fittings

Pipes for water supply shall be of the class described

Pipes of 42mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings

Pipes of 50mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints

HDPE (high density polyethylene) pipes and fittings

Pipes shall be type 4 and of the class specified with "Plasson" or "Alprene" compression fittings

"Polycop" polypropylene pipes

Polypropylene pipes of 54mm diameter and smaller shall be seamless copper coloured class 16 pipes jointed with "Fast-fuse" heat welded thermoplastic or brass compression fittings as designed for use with copper pipes, as described

Pipes shall be firmly fixed to walls, etc with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed

All pipe diameters are nominal external

Copper pipes

Pipes shall be hard drawn and half-hard pipes of the class described. Class 0 (thin walled hard drawn) pipes shall not be bent. Class 1 (thin walled half-hard), class 2 (half-hard) and class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be "Cobra Watertech" type. Capillary solder fittings shall comply with ISO 2016

Carried Forward

R

Bill No. 10
PLUMBING AND DRAINAGE
SARS Loading Bay in Musina
New Construction Works Provisional Bills Of Quantities

Brought Forward

R

Fixing of pipes

Unless specifically otherwise stated, descriptions of pipes shall be deemed to include for :

- casting in, building in, chasing in and fixing to walls, etc, including chasing; or
- placing in ground or filling under solid floors, including necessary excavation, backfilling and ramming; or
- suspending not exceeding 1m below suspension level

Disinfection of potable water pipelines

Descriptions of all potable water pipelines shall be deemed to include for disinfection in accordance with 5.10 of SANS 1200 L

Reducing fittings

Where fittings have reducing ends or branches they are described as "reducing". In the case of pipes with diameters not exceeding 60mm, only the largest end or branch size is given. Should the contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained. In the case of pipes with diameters exceeding 60mm, all sizes are given and no claim for extra bushes, reducers, etc will be entertained

Steel sectional water tanks

Tanks shall comply with CKS 114

Geyser installations

Geyser installations shall comply with SANS 10254

"Densyl" petrolatum anti-corrosion tape as manufactured by Denso SA (Pty) Ltd

Pipes to be taped shall be coated with the appropriate primer and the tape shall be applied in the appropriate widths and with relevant overlaps for specific diameters of pipes

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

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

Carried Forward

R

Bill No. 10
PLUMBING AND DRAINAGE
SARS Loading Bay in Musina
New Construction Works Provisional Bills Of Quantities

Brought Forward			R	
<u>General</u>				
Descriptions of cast iron roof outlets shall be deemed to include joints to pipes and casting into concrete				
Descriptions of pipes laid in and including trenches, sumps, catchpits, junction boxes, inspection chambers, french drains, septic tanks and the like shall be deemed to include for excavations, bedding of pipes, risk of collapse, keeping free of water, a dewatering system for removal of seepage water and water from other subterranean sources in the excavations designed and executed by the contractor, backfilling, compaction to a minimum of 93% modified AASHTO density and disposal of surplus material				
Descriptions of sumps, catchpits, junction boxes, inspection chambers and the like shall be deemed to include reinforcement, step irons and channels where applicable				
Descriptions for jointing of new to existing pipes shall be deemed to include searching for the existing pipe, exposing if necessary, cutting into, jointing and necessary fittings				
Descriptions of washdown pans, slop hoppers, etc shall be deemed to include for joints to soil pipes (pan connectors measured separately)				
Descriptions of all sanitary fittings shall be deemed to include for silicone sealant pointing between the fittings and finished wall surfaces				
Descriptions of copper service pipes and flexible connecting pipes shall be deemed to include connections to taps, cisterns, etc and to pipes				
Descriptions of overflow pipes where measured in number, shall be deemed to include joints to cisterns and splay cut ends				
<u>RAINWATER DISPOSAL</u>				
<u>0.6mm Galvanised sheet iron</u>				
1	310mm eaves gutters	m	17	
2	Extra over for stopped end	No	1	
3	Extra over for angle	No	1	
Carried Forward			R	
Bill No. 10 PLUMBING AND DRAINAGE SARS Loading Bay in Musina New Construction Works Provisional Bills Of Quantities				

Brought Forward			R
4	230mm diameter rainwater pipe	m	5
5	Extra over for outlet for 230mm diameter pipe	No	1
6	Extra over for bend	No	1
7	Extra over for shoe	No	1
Carried to Summary			R

Bill No. 10

PLUMBING AND DRAINAGE

SARS Loading Bay in Musina

New Construction Works Provisional Bills Of Quantities

Item No		Quantity	Rate	Amount
	<u>BILL NO 11</u>			
	<u>PAINTWORK</u>			
	For preambles see "Model Preambles for Trades"			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>DESCRIPTIONS</u>			
	Descriptions of paintwork shall be deemed to include for all cutting in			
	<u>PREPARATORY WORK TO EXISTING SURFACES</u>			
	<u>Plaster or concrete surfaces</u>			
	Surfaces shall be thoroughly cleaned down by high pressure water jet and allowed to dry completely before any paint is applied. Blistered or peeling paint shall be completely removed. All existing walls to be made good where damaged by removals, furniture, etc, and all screw and nail holes and cracks shall be opened, primed with plaster primer, filled with a suitable filler and finished smooth			
	<u>Metal surfaces</u>			
	Surfaces shall be thoroughly rubbed and cleaned down by means of grit blasting or wire brushing. Blistered or peeling paint, including all traces of corrosion, shall be completely removed down to bare metal			
	<u>Previously painted wood surfaces</u>			
	Surfaces shall be thoroughly cleaned down by scraping and sanding all loose and flaking paint. All dust and surface contamination are to be removed by wiping down. All exposed nail heads are to be punched in and primed with one coat metal primer. Holes, cracks and crevices shall be primed with wood primer, filled with wood stopping and finished smooth			
	Carried Forward		R	
	Bill No. 11 PAINTWORK SARS Loading Bay in Musina New Construction Works Provisional Bills Of Quantities			

Brought Forward

R

Previously varnished/natural wood surfaces

Surfaces shall be thoroughly cleaned down with existing coatings removed by sanding and/or using paint remover. All residual paint remover and surface contamination are to be removed by washing down, allowed to dry and sandpapered to a uniformed surface. All exposed nail heads are to be punched in and primed with one coat metal primer. Holes, cracks and crevices shall be treated with woodcare pretreatment, filled with wood stopping and finished smooth

PAINTWORK, ETC TO NEW SURFACES ON

ON FLOATED PLASTER

Prepare surfaces and remove all loose material, apply 1 coat universal dulux undercoat and 2 coats dulux wash and wear silk (colour: Gids gloves manufactures code (6J1-2) all with 5-7 year performance guarantee, applied to manufactures specification on:

1	Walls	m2	71
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Carried to Summary

R

Bill No. 11
PAINTWORK
SARS Loading Bay in Musina
New Construction Works Provisional Bills Of Quantities

Item No		Quantity	Rate	Amount
	BILL NO 12			
	<u>PROVISIONAL AMOUNTS, ETC</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>General</u>			
	All prime cost and provisional amounts are net			
	<u>Overheads and profit</u>			
	The contractor may allow for overheads and profit if required in the item "Allow for overheads and profit" wherever indicated			
	<u>Profit and general attendance upon selected subcontractors</u>			
	The item "Allow for profit and general attendance" which follows each selected subcontractor, shall be deemed to allow for the contractor's profit if required and to cover all the contractor's costs incurred in providing free of charge to the selected subcontractors, the following:			
	1. Access to the site and places where the subcontract work is to be carried out, including the reasonable use of any temporary personnel hoists erected by the contractor			
	2. Hoisting of the subcontractor's material in batches that can be handled by the contractor's hoist or crane during normal working hours			
	3. The provision of water and lighting and of single phase electric power to a position within 50m of the place where the subcontractor's work is to be carried out other than water, fuel and power for commissioning of any installation			
	4. The provision of an area for the subcontractor to establish temporary office accommodation and workshops and for the storage of plant and materials and goods			
	5. The use of erected scaffolding belonging to the contractor, along with others having the like right. Scaffolding will remain erected on site until all work which requires the use thereof has been completed			
	6. The use of ablution facilities and the like, where provided			
	Carried Forward		R	
	Bill No. 12 PROVISIONAL AMOUNTS, ETC SARS Loading Bay in Musina New Construction Works Provisional Bills Of Quantities			

Brought Forward		R	
7.	The use of the site telecommunication facilities, where provided, subject to payment by the subcontractor for usage thereof		
8.	Making good in all trades and cleaning down and removal of rubbish on completion		
<u>Preliminaries</u>			
The contractor is referred to the Preliminaries for further amplification of "Prime Cost Amounts"			
<u>BUDGETARY ALLOWANCES</u>			
<u>Sundry building work</u>			
1	Provide the sum of R 35,000.00 (Thirty five thousand rand) for sundry builders work in connection with selected subcontractors, electrical, mechanical and electronic, etc installation, to be adjusted at scheduled rates	Item	35 000 00
Carried to Summary		R	
Bill No. 12			
PROVISIONAL AMOUNTS, ETC			
SARS Loading Bay in Musina			
New Construction Works Provisional Bills Of Quantities			

BULDER'S WORK SUMMARY

Bill No		Page No	Amount
1	PRELIMINARIES	-14-	
2	ALTERATIONS	-16-	
3	EARTHWORKS	-20-	
4	CONCRETE, FORMWORK AND REINFORCEMENT	-23-	
5	MASONRY	-25-	
6	WATERPROOFING	-26-	
7	ROOF COVERINGS, ETC.	-27-	
8	STRUCTURAL STEELWORK	-29-	
9	PLASTERING	-31-	
10	PLUMBING AND DRAINAGE	-38-	
11	PAINTWORK	-40-	
12	PROVISIONAL AMOUNTS, ETC	-42-	
	Sub-total		R
	Contingencies to be used as directed by the principal agent and deducted in whole or in part if not required	Item	98 000 00
	Total Carried to Final Summary (Excluding VAT)		R
	SARS Loading Bay in Musina		
	New Construction Works Provisional Bills Of Quantities		