

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>BILL NO. 1</u> <u>PRELIMINARIES</u> <u>BUILDING AGREEMENT AND PRELIMINARIES</u> The JBCC Principal Building Agreement (Edition 6.2 - May 2018) prepared by the Joint Building Contracts Committee shall be the applicable building agreement, amended as hereinafter described The JBCC Principal Building Agreement contract data form an integral part of this agreement The JBCC General Preliminaries (May 2018) published by the Joint Building Contracts Committee for use with the JBCC Principal Building Agreement (Edition 6.2 - May 2018) shall be deemed to be incorporated in these bills of quantities, amended as hereinafter described The contractor is deemed to have referred to the above mentioned documents for the full intent and meaning of each clause The clauses in the above mentioned documents are hereinafter referred to by clause number and heading only Where any item is not relevant to this agreement such item is marked N/A signifying "not applicable" Where standard clauses or alternatives are not entirely applicable to this agreement such amendments, modifications, corrections or supplements as will apply are given under each relevant clause heading and such amendments, modifications, corrections or supplements shall take precedence notwithstanding anything to the contrary contained in the above mentioned documents <u>PREAMBLES FOR TRADES</u> The General Preambles for Trades 2017 published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained Supplementary preambles and/or specifications are incorporated in these bills of quantities to satisfy the requirements of this project. Such supplementary preambles and/or specifications shall take precedence over the provisions of the General Preambles The contractor's prices for all items throughout these bills of quantities shall take account of and include where applicable for all of the obligations, requirements and specifications given in the General Preambles and in any supplementary preambles and/or specifications <u>STRUCTURE OF THIS PRELIMINARIES BILL</u> Section A : A recital of the headings of the individual clauses in the aforementioned JBCC Principal Building Agreement Section B : A recital of the headings of the individual clauses in the aforementioned JBCC General Preliminaries Section C : Any special clauses to meet the particular circumstances of the project <u>PRICING OF PRELIMINARIES</u> Should the contractor select Option A in the contract data for the adjustment of preliminaries, the amounts entered against the relevant items in these preliminaries are to be divided into one or more of the three categories provided namely fixed (F), value related (V) and time related (T) <u>SECTION A: PRINCIPAL BUILDING AGREEMENT</u> <u>Interpretation (A1-A7)</u> 1 Clause 1.0 - Definitions and interpretation 2 Clause 2.0 - Law, regulations and notices 3 Clause 5.0 - Documents Value Added Tax Provision is made in the summary page of these bills of quantities for the inclusion of Value Added Tax (VAT) F:..... V:..... T:..... 4 Clause 6.0 - Employer's agents F:..... V:..... T:.....				
		Item	0		
		Item	0		
		Item	0		
		Item	0		
		Item	0		

5	Clause 7.0 - Design responsibility	Item	0		
	Insurances and securities (A8-A11)				
6	Clause 8.0 - Works risk	Item	0		
7	Clause 9.0 - Indemnities				
	F:..... V:..... T:.....	Item	0		
8	Clause 10.0 - Insurances				
	F:..... V:..... T:.....	Item	0		
9	Clause 11.0 - Securities				
	F:..... V:..... T:.....	Item	0		
	Execution (A12 - A17)				
10	Clause 12.0 - Obligations of the parties				
	F:..... V:..... T:.....	Item	0		
11	Clause 13.0 - Setting out				
	F:..... V:..... T:.....	Item	0		
12	Clause 14.0 - Nominated subcontractors				
	F:..... V:..... T:.....	Item	0		
13	Clause 15.0 - Selected subcontractors				
	F:..... V:..... T:.....	Item	0		
14	Clause 16.0 - Direct contractors Attendance on direct contractors				
	F:..... V:..... T:.....	Item	0		
15	Clause 17.0 - Contract instructions				
	F:..... V:..... T:.....	Item	0		
	Completion (A18 - A24)				
16	Clause 18.0 - Interim completion	N/A	0		
17	Clause 19.0 - Practical completion	Item	0		
18	Clause 20.0 - Completion in sections				
	F:..... V:..... T:.....	Item	0		
19	Clause 21.0 - Defects liability period and final completion				
	F:..... V:..... T:.....	Item	0		
20	Clause 22.0 - Latent defects liability period F:..... V:..... T:.....	Item	0		
21	Clause 23.0 - Revision of the date for practical completion	Item	0		
22	Clause 24.0 - Penalty for late or non-completion F:..... V:..... T:.....	Item	0		
	Payment (A25 - A27)				
23	Clause 25.0 - Payment				
	F:..... V:..... T:.....	Item	0		
24	Clause 26.0 - Adjustment of the contract value and final account				
	F:..... V:..... T:.....	Item	0		
25	Clause 27.0 - Recovery of expense and/or loss F:..... V:..... T:.....	Item	0		

	Suspension and termination (A28 - A29)				
26	Clause 28.0 - Suspension by the contractor F:..... V:..... T:.....	Item	0		
27	Clause 29.0 - Termination Clause 29.0 is deemed to be amended by the addition of the following sub-clause:29.1.4 is placed under provisional or final liquidation F:..... V:..... T:.....	Item	0		
	Dispute resolution (A30)				
28	Clause 30.0 - Dispute resolution	Item	0		
	Agreement				
29	The required information of the parties and the accepted contract sum shall be inserted in the agreement for signature of the agreement by the parties	Item	0		
	Contract data				
30	Before submission of his tender the contractor is to complete the tenderer's selections in the contract data	Item	0		
	<u>SECTION B: GENERAL PRELIMINARIES</u>				
	Definitions and interpretation (B1)				
1	Clause 1.1 - Definitions F:..... V:..... T:.....	Item	0		
2	Clause 1.2 - Interpretation F:..... V:..... T:.....	Item	0		
	Documents (B2)				
3	Clause 2.2 - Provisional bills of quantities These bills of quantities shall not be used for ordering purposes F:..... V:..... T:.....	Item	0		
4	Clause 2.3 - Availability of construction information F:..... V:..... T:.....	Item	0		
5	Clause 2.4 - Ordering of materials and goods F:..... V:..... T:.....	Item	0		
	Previous work and adjoining properties (B3)				
6	Clause 3.1 - Previous work - dimensional accuracy	Item	0		
7	Clause 3.1 is amended by the addition of the following at the end of the paragraph: "In the event that the contractor fails to notify the principal agent to the contrary, it is deemed that the works is dimensionally accurate"	Item	0		
8	F:..... V:..... T:.....	Item	0		
9	Clause 3.2 - Previous work - defects F:..... V:..... T:.....	Item	0		
10	Clause 3.3 - Inspection of adjoining properties	Item	0		
	The site (B4)				
11	Clause 4.1 - Handover of site in stages F:..... V:..... T:.....	Item	0		
12	Clause 4.2 - Enclosure of the works F:..... V:..... T:.....	Item	0		
13	Clause 4.3 - Geotechnical and other investigations F:..... V:..... T:.....	Item	0		
14	Clause 4.4 - Encroachments F:..... V:..... T:.....	Item	0		
15	Clause 4.5 - Existing premises occupied F:..... V:..... T:.....	Item	0		
16	Clause 4.6 - Services - known F:..... V:..... T:.....	Item	0		
	Management of contract (B5)				
17	Clause 5.1 - Management of the works F:..... V:..... T:.....	Item	0		
18	Clause 5.2 - Progress meetings F:..... V:..... T:.....	Item	0		

19	Clause 5.3 - Technical meetings F:..... V:..... T:.....	Item	0		
	Samples, shop drawings and manufacturer's instructions (B6)				
20	Clause 6.1 - Samples of materials F:..... V:..... T:.....	Item	0		
21	Clause 6.2 - Workmanship samples F:..... V:..... T:.....	Item	0		
22	Clause 6.4 - Compliance with manufacturer's instructions F:..... V:..... T:.....	Item	0		
	Deposits and fees (B7)				
23	Clause 7.1 - Deposits and fees F:..... V:..... T:.....	Item	0		
	Temporary services (B8)				
24	Clause 8.1 - Water F:..... V:..... T:.....	Item	0		
25	Clause 8.2 - Electricity F:..... V:..... T:.....	Item	0		
26	Clause 8.3 - Ablution and welfare facilities F:..... V:..... T:.....	Item	0		
27	Clause 8.4 - Communication facilities F:..... V:..... T:.....	Item	0		
	Prime cost amounts (B9)				
28	Clause 9.1 - Responsibility for prime cost amounts	CONT	0		
	F:..... V:..... T:.....	Item	0		
	Attendance on subcontractors (B10)				
29	Clause 10.1 - General attendance F:..... V:..... T:.....	Item	0		
30	Clause 10.2 - Special attendance	CONT	0		
	F:..... V:..... T:.....	Item	0		
	General (B11)				
31	Clause 11.1 - Protection of the works Refer also to further information as included in Section C - Specific Preliminaries:..... V:..... T:.....	Item	0		
32	Clause 11.2 - Protection/isolation of existing works and works occupied in sections Refer also to further information as included in Section C - Specific Preliminaries:..... V:..... T:.....	Item	0		
33	Clause 11.3 - Security of the works				
	F:..... V:..... T:.....	Item	0		
34	Clause 11.4 - Notice before covering work F:..... V:..... T:.....	Item	0		
35	Clause 11.5 - Disturbance All work is to be carried out in such a manner as to cause no unacceptable or unreasonable dust, noise, vibrations, nuisance, inconvenience, annoyance and the like to the public, others, other properties and traffic in so far as they exceed the permissible limitations set by government legislation or by the local authority. Any delays, stoppages and the like arising from or in order to comply with the above will not constitute grounds for an adjustment to the construction period or contract value whatsoever	Item	0		
36	Clause 11.6 - Environmental disturbance Controlling all forms of pollution - The contractor shall be responsible for and take all precautions in controlling by whatever means necessary all forms of pollution emanating from the site during the construction period due inter alia to noise, artificial light, wind-blown sand, dust, deposits of mud, etc. The contractor is to ensure that all roads which border the site and are used by the contractor during the execution of the works are kept clean and free of any dirt or debris caused by the execution of the works	Item	0		
37	Clause 11.7 - Works cleaning and clearing F:..... V:..... T:.....	Item	0		
38	Clause 11.8 - Vermin F:..... V:..... T:.....	Item	0		
39	Clause 11.9 - Overhand work F:..... V:..... T:.....	Item	0		
40	Clause 11.10 - Tenant installations F:..... V:..... T:.....	Item	0		
41	Clause 11.11 - Advertising F:..... V:..... T:.....	Item	0		
	<u>SECTION C: SPECIFIC PRELIMINARIES</u>				

42	Warranties for materials and workmanship Where warranties for materials and/or workmanship are called for, the contractor shall obtain a written warranty, addressed to the employer, from the entity supplying the materials and/or executing 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 practical 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. 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	Item	0		
43	Overtime Should overtime be required to be worked for any reason whatsoever, the costs of such overtime are 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	Item	0		
44	Cooperation of the contractor for cost management It is specifically agreed that the contractor accepts the obligation of assisting the principal agent in implementing proper cost management. The contractor will be advised by the principal agent of all cost management procedures which will be implemented to ensure that the contract value does not exceed the budget	Item	0		
45	Overloading 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 e.g. 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	Item	0		
46	Propping of floors below The contractor is advised that propping of floors below may be required if he wishes to use any areas of completed suspended reinforced concrete slabs for vehicle access, storage of materials and goods and location of plant, scaffolding, etc. The location of these areas and any necessary propping shall be approved by the principal agent and the cost thereof shall be borne by the contractor	Item	0		
47	Testing of flat roof waterproofing for watertightness Flat roof waterproof areas shall be flooded and kept "ponded" for at least forty (40) hours as a test to ensure the watertightness of the waterproofing and before any further construction work is carried out above the waterproofing	Item	0		
48	Health and safety Without limiting the generality of the provisions of clause 2.0, the contractor's attention is drawn to the provisions of the Construction Regulations issued in terms of the Occupational Health and Safety Act, 1993 as amended. 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 allow in the contract sum for compliance with the act and the regulations and the reasonable provisions of the aforementioned health and safety specification [2.1] The contractor shall: 1. Comply with the health and safety specification for the works 2. Prepare and agree with the health and safety consultant the health and safety plan for the works 3. Cooperate with the health and safety consultant in all respects 4. Manage the compliance of all subcontractors with the regulations and with the health and safety plan and specification 5. Conform to the conditions contained in the employer's health and safety specification	Item	0		
49	Broad based black economic empowerment (BBBEE) Tenders submitted will be evaluated taking into account their empowerment rating The employer will be monitoring the broad based black economic empowerment (BBBEE) status of the contractor throughout the execution of the works The contractor is to submit to the principal agent on an annual basis a schedule of spend, split into vendors engaged as subcontractors and suppliers indicating their BBBEE rating including proof of the said rating	Item	0		
50	Advertising rights The employer may elect to contract with advertising agencies for the erection of advertising hoardings, banners, wraps or the like for the duration of the contract. The contractor shall not prevent such an arrangement and will assist in the facilitation of same. The position and type of advertising structure to be agreed with the principal agent so as not to hinder the contractor in meeting the obligations under this agreement	Item	0		
51	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	Item	0		

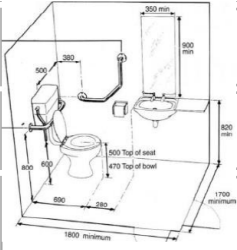
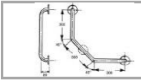
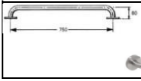
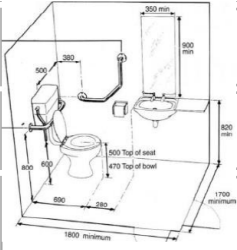
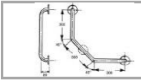
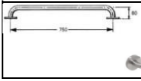
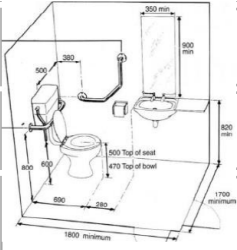
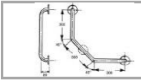
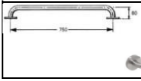
52	Media releases All rights of publication of articles in the media, together with any advertising relating thereto or in any way connected with this project, shall vest with the employer The contractor together with his subcontractors shall not, without the prior written consent of the employer, cause any statement or advertisement connected with this project to be printed, screened or aired by the media SUMMARY OF CATEGORIES Category : Fixed R..... Category : Value R..... Category : Time R.....	Item	0		
1	Preliminaries and General TOTAL CARRIED FORWARD TO SUMMARY PAGE <u>SECTION 2 : BUILDER'S WORK</u> BILL NO 2 ALTERATIONS, ADDITIONS AND REFURBISHMENT SUPPLEMENTARY PREAMBLES View site Before submitting his tender the contractor shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials contained in the buildings or portions of the buildings to be demolished. No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained Explosives No explosives whatsoever may be used in demolitions General The contractor shall carry out the whole of the work with as little mess and noise as possible and with a minimum of disturbance to adjoining premises and their tenants. He shall provide proper protection and provide and erect any temporary tarpaulins and temporary plumbing that may be necessary during the progress of the works, all to the satisfaction of the Principal Agent, and remove when directed Any water supply pipes and other piping that may be met with and found necessary to disconnect or cut, shall be effectually stopped off, or grubbed up and removed, and any new connections that may be necessary shall be made with proper fittings, to the satisfaction of the Principal Agent Doors, fanlights, fittings, frames, linings, etc shall be thoroughly overhauled before refixing including taking off, easing and rehanging, cramping up, re-wedging as required and making good cramps, dowels, etc, and easing, oiling, adjusting and repairing ironmongery if necessary, replacing any glass damaged in removal or subsequently and stopping up all nail and screw holes with tinted plastic wood to match timber Where doors, windows, etc are described as taken out this shall be understood to include for removal of all beads, architraves, ironmongery, etc and doors which are re-fixed are to be provided with new architraves (elsewhere measured) Prices for taking out and removing doors and frames shall include for removing door stops, cabin hooks, etc and making good to match existing With regard to building up of openings in existing walls, cement screeds and pavings, granolithic, etc, shall be levelled and prepared for raising of brickwork Allow for making good all existing plastered walls where damaged by furniture, etc, and stopping up all screw and nail holes before painting On walls D41:G41 Making good of finishes shall be deemed to include making good of the brick and concrete surfaces onto which the new finishes are applied, where necessary The contractor will be required to take all dimensions affecting the existing building on the site and he will be held solely responsible for the accuracy of all such dimensions REMOVAL OF EXISTING WORK <u>Breaking down and removing brickwork etc, at shelters and toilets on Platforms including removing all rubble and carting to a dump closest to the site.</u>	Sum	1		
2.1	One brick walls <u>Taking down and removing roofs, floors, panelling, ceilings, partitions, etc. including removing all rubble and carting to a dump closest to the site.</u>	m ²	85.00		
2.2	Take down and remove existing roof sheeting, Tongued and grooved timber suspended floors, including skirtings, joists, bearers, etc	m ²	50.00		
		m ²	0.00		

2.3	Gypsum plasterboard ceilings, including cornices, timber brandering, etc	m²	50.00		
2.4	Toilet partitioning walls	m²	34.38		
	<u>Taking out and removing Sanitaryware, i.e WC, wash hand basings, Urinals, etc. With and including all taps, stop cocks, valves etc., and make safe all connections. Removing all rubble and carting to a dump closest to the site.</u>				
2.5	WC	No	8.00		
2.6	Wash hand basins	No	8.00		
2.7	Unrinals	No	4.00		
	SOIL POISON				
	<u>Weed killer</u>				
2.8	Spary weed killer on the complete platform area and clear of all weeds, shrubs and encroaching vegetation from the entrie station and close craks to prohibit future growth.	m²	10,151.00		
	BILL NO 3				
	MASONRY				
	SUPPLEMENTARY PREAMBLES				
	BRICKWORK				
	Sizes in descriptions				
	Where sizes in descriptions are given in brick units, one brick shall represent the length and half brick the width of a brick				
	Linings to concrete				
	Descriptions of linings to concrete, unless otherwise described, shall be deemed to include wire ties				
	Hollow walls etc				
	Descriptions of hollow walls shall be deemed to include wire ties and leaving every fifth perpend of the bottom course of the external skin open as a weep hole				
	Reinforced brick lintels				
	Lintels shall bear at least 160mm onto adjacent walling. Where such bearing cannot be obtained due to the proximity of adjacent openings the lintel shall be continuous				
	Pointing				
	Descriptions of recessed pointing to fair face brickwork and face " brickwork shall be deemed to include square recessed, hollow" " recessed, weathered pointing, etc "				
	General				
	Window surrounds shall be built into brick walls and pointed all round on both sides with 10 x 10mm square recessed joints				
	Prices shall include for building in as single units or combinations in patterns of two or more window units and for bedding solid all round in mortar and pointing				
	Note				
	"Aluminium infill windows, glazing and pointing with sealing" compound are measured elsewhere				
	SAMPLES				
	"Samples of all masonry building units, shall consist of a minimum of" 6 units				
	PAVINGS				
	"Quarry tiles, precast concrete, cement, terrazzo and similar tiles "				
	"Tiles shall be of approved manufacture, well burnt or cured, and" " uniform and true in size, shape and colour "				
	"Preparation of concrete floor beds, slabs, etc for pavings "				
	Concrete surfaces shall be hacked (preferably by mechanical means) " until all laitance, dirt, oil, etc is dislodged and swept clean of all" loose matter. Surfaces shall then be wetted and kept damp for at least " six hours before slushing with 1:2 cement/sand and while still wet," " pavings, etc. shall be laid on a 1:4 cement mortar bed not exceeding" " 25mm thick. Sand shall be clean, sharp river sand "				

	Jointing of pavings "Pavings, etc, shall, except for crazy paving, be laid with continuous" joints in both directions Setting out "Care shall be exercised in setting out the work, the preparation of" templates and the checking of the detail drawings. All measurements shall be taken on the site where necessary and the full size setting out of each course shall be done at the yard so as to ensure the proper fitting of each stone Before putting any work in hand the contractor is to submit to the architect for his approval details of the manner in which he proposes " to set out the slabs and joints in all wall facings, pavings, sills," " treads, etc together with samples of grain or pattern matching " Face labours Face labours are to match samples to be submitted to and approved by the architect Arises are to be clean and sharp except to treads and thresholds where they are to be slightly rounded Bedding and jointing "Slate, marble, granite and other floor paving and wall linings are to" be bedded solidly on the mortar thicknesses described and are to have tightly fitting butt joints unless otherwise stated "Where stonework is to be fixed with adhesive, the adhesive is to be" " TAL Goldstar/Bond"" (mixed 20kg/5 litre) for external use or where"" " white or light coloured marble is used, TAL Goldstar"" for internal"" use or other approved. The contractor will be liable for any defects to " the slate, marble and granite arising from the use of the adhesive " Where soffit linings are suspended the suspension system must be concealed and must be submitted to the architect for approval before work commences Where tolerance screws are required these are to be stainless steel expanding bolt type with matching stainless steel bracket and PVC clad dowel with nuts and washers etc Damaged work Any damaged stonework shall be discarded and replaced at the contractor's expense. No touching up will be permitted except in " exceptional cases, with the architect's consent " Descriptions Descriptions of stonework shall be deemed to include preparatory " work, labours to backs, beds and joints, templates, mortices for bolts" " etc and for hoisting and setting in position, bedding, jointing and" " pointing, casing and protecting from injury and cleaning down at" completion Descriptions of recessed pointing to stonework shall be deemed to be " square recessed, hollow recessed, weathered pointing, etc " SUPERSTRUCTURE <u>Brickwork of NFP bricks in class II mortar</u> <tr><td>3.1</td><td>One brick walls</td><td>m²</td><td>55.00</td><td></td><td></td></tr> <tr><td></td><td> Face Brickwork <u>230mm Face brick pointed with recessed horizontal and vertical joints</u> </td><td></td><td></td><td></td><td></td></tr> <tr><td>3.2</td><td>Extra over for face brick patching and remedial works</td><td>m²</td><td>20.00</td><td></td><td></td></tr> <tr><td></td><td> CONCRETE SLAB Reinforced Concrete Slab 30Mpa/19mm stone to ticket office on top on superstructure incl. formwork. </td><td>m²</td><td>95.00</td><td></td><td></td></tr> <tr><td></td><td> BILL NO 4 CARPENTRY AND JOINERY SUPPLEMENTARY PREAMBLES Joinery Descriptions of frames shall be deemed to include frames, transomes mullions, rails, etc Descriptions of hardwood joinery shall be deemed to include pelleting of bolt holes Fixing Items described as nailed shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete </td><td></td><td></td><td></td><td></td></tr>	3.1	One brick walls	m ²	55.00				Face Brickwork <u>230mm Face brick pointed with recessed horizontal and vertical joints</u>					3.2	Extra over for face brick patching and remedial works	m ²	20.00				CONCRETE SLAB Reinforced Concrete Slab 30Mpa/19mm stone to ticket office on top on superstructure incl. formwork.	m ²	95.00				BILL NO 4 CARPENTRY AND JOINERY SUPPLEMENTARY PREAMBLES Joinery Descriptions of frames shall be deemed to include frames, transomes mullions, rails, etc Descriptions of hardwood joinery shall be deemed to include pelleting of bolt holes Fixing Items described as nailed shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete				
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	Decorative laminate finish				
	Laminate finish shall be glued under pressure. Edge strips shall be butt jointed at junctions with adjacent similar finish				
	DOORS, ETC				
	<u>Wrought meranti fanlights hung to steel frames</u>				
	<u>Semi solid exterior door hung on steel frames hinged 3 times</u>				
4.1	40mm Door 0,81 x 2,03m high	No	5.00		
	<u>Semi solid exterior door hung on steel frames hinged 3 times</u>				
4.2	40mm Door 0,81 x 2,03m high	No	10.00		
	BILL NO 5				
	"CEILINGS, PARTITIONS AND ACCESS FLOORIN				
	SUPPLEMENTARY PREAMBLES				
	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 are measured elsewhere Proprietary suspended ceilings				
	Electric light fittings, diffusers, panels, etc generally are lay in units of the same dimensions as the suspension grid described and allowance shall be made accordingly for their support, inclusive of any flexibility in setting out that may be required (ceiling panels have not been deducted and pricing shall take cognisance thereof)				
	Rhino-Drywall partition systems				
	Rhino-Drywall partitions shall 5mm top and bottom comprise 63 galvanised steel tracks with 63,5mm galvanised steel vertical studs at " " maximum 600mm centres, friction fitted or pop-riveted to the top" and bottom tracks with similar additional vertical studs as necessary " at abutments, ends, etc and covered as described with wallboard" " screwed to studding with Drywall"" screws at maximum 220mm"" " centres. Boards shall be butt jointed and finished with Rhino"" tape"" " and Readymix D"" jointing compound allin accordance with the"" " manufacturer's instructions, complete with flat section aluminium" skirtings. Intersections and abutments are measured separately and " descriptions shall be deemed to include any additional studs, corner" " beads, jointing compound "				
	Note: Wall paper and/or paint and varnish finishes are measured elsewhere				
	"Donn Vanguard"" partition systems ""				
	"Demountable partitions are to be Donn Vanguard"" with an overall"" " thickness of 76mm, comprising 50mm wide galvanised steel tracks" " and studs with one layer of 12,7mm gypsum plasterboard in 1,20m" modules on each side and flat section aluminium skirtings and recessed aluminium cornices. The panels shall be covered with " Donn"" paper backed vinyl wall cladding wrapped around edges."" " Aluminium door frames and glazing sections, skirtings, cornices, etc" shall be natural anodised aluminium. The partitions shall be erected in accordance with the manufacturer's instructions				
	"CEILINGS, ETC "				
	NAILED UP CEILINGS				
	<u>"6,4mm Rhino"" gypsum plasterboard with H-type pressed steel"" jointing strips</u>				
5.1	"Horizontal ceilings, including 38 x 38mm sawn softwood branderling" at 450mm centres	m2	1,255.00		
	Sundries				
5.2	Extra over ceilings for opening for sprinkler head	No	456.32		
5.3	Extra over ceilings for opening for 150mm diameter downlighter	No	10.00		
5.4	"Extra over ceilings for opening for 0,60 x 1,20m light fitting "	No	88.00		
5.5	"Extra over ceilings for opening for 0,60 x 0,60m ventilation/air" conditioning diffuser	No	10.00		
5.6	"Extra over ceilings for 0,60 x 0,60m trap door of 44 x 44mm" wrought softwood rebated framing with one 38 x 38mm sawn softwood cross brander covered with ceiling board and fitted flush in opening	No	4.00		
	BILL NO 6				
	ROOF COVERING				
	SUPPLEMENTARY PREAMBLES				

	Where battens for roof coverings form part of the plate nailed timber roof trusses design it shall be included under the roof construction in the capentry and joinery trade and not under this trade.				
	PROFILED METAL SHEETING AND ACCESSORIES				
	<u>0,5 mm Brown built clip lok sheeting to coated one side fixed to timber or steel purlin or rails</u>				
6.1	Roof covering with pitch not exceeding 25 degree pitch	m²	85.00		
6.2	Edges of verges	m	30.00		
6.3	Ridge capping 300mm girth	m	30.00		
	BILL NO 7				
	IRONMONGERY				
	SUPPLEMENTARY PREAMBLES				
	Finishes to ironmongery				
	Where applicable finishes to ironmongery are indicated by suffixes in accordance with the following list:				
	SC Satin chromium plated				
	LOCKS				
	Union or Similar approved				
	2457-78SS Two lever mortice sliding door lock with striking plate and PB5390SC escutcheons, including handles				
7.1	CZ682-24/2277-78SC Two lever mortice lockset with striking plate and rebate kit	No	22.00		
	BATHROOM FITTINGS				
7.2	Toilet roll holder	No	12.00		
7.3	Coat hooks	No	12.00		
7.3.1	Whyte House wall mounted basin with wall mounted push on demand tap - Vandal resistant	No	8.00		
7.3.2	Paraplegic Whyte House wall mounted basin with wall mounted push on demand tap - Vandal resistant	No	3.00		
7.3.3	Vaal Sanitaryware Hibiscus vitreous china lavatory basin colour White (Code: 7023), size 510 x 405mm with one taphole including integrated overflow and chainstay hole bolted to wall with two x 10mm bolts (Code: 844820) and including Universal half pedestal with hanger springs for staff ablutions	No	3.00		
7.3.4	Whyte House Vandal Resistant Urinal with automatic flush sensors or manual flush valve (at least one urinal to be installed at lowered height for kids) for Public Ablutions	No	4.00		
7.3.5	Vaal "Sweetpea" wall mounted urinal with back inlet with automatic flush sensors or manual flush valve for staff	No	3.00		
7.3.6	Concealed vandal resistant automatic urinal flush valve with infrared sensor	No	7.00		
7.3.7	Concealed vandal resistant push-button toilet flush valve	No	7.00		
7.3.8	Paraplegic Elbow Action WHB Tap from any Cobra agent or equally approved	No	3.00		
7.3.9	Single lever basin mixer. Chrome finish Staff Ablutions - Hot & Cold Water Mixer	No	11.00		
7.3.10	Cobra Watertech Ledimo or equal approved 15mm chrome plated wall mounted sink mixer with overarm swivel outlet, adjustable wall flanges and concealed connections	No	3.00		
7.3.11	Double Kitchen Sinks polished stainless steel double end bowl inset sink (Code: 821048), overall size 1160 x 460mm wide with two 340 x 370 x 152mm deep bowls, fitted onto cupboard	No	2.00		
7.3.12	Whyte House or equal approved Security Pan/Public Vandal Resistant Toilet	No	8.00		
7.3.13	Vaal "Hibiscus" close coupled suite Staff Toilets	No	6.00		
7.3.14	Toilet Roll Holder Wall Mounted Stainless Steel Toilet Roll Holder - Staff and Public Ablutions - Ref code: X 03	No	8.00		
7.3.15	Ref code: X 05 Bins - Public Wall Mounted Stainless Steel Bin - Public Ablutions	No	6.00		
7.3.16	Ref code: X 06 Bins - Staff Wall Mounted Stainless Steel Bin - Staff Ablutions	No	4.00		
7.3.17	Ref code: X 07 Sanitary Bins Surface Mounted Stainless Steel Sanitary Towel Disposal Bins - Staff and Public Ablutions (female only)	No	3.00		
7.3.18	Ref code: X 08 Hand Dryers Automatic Hands Free Stainless Steel Hand Dryer - Staff and Public Ablutions	No	6.00		

7.3.19	Ref code: Y 02 Kitchennette Hydroboil/Water Heaters Kwikot or Franke ZIP Stainless steel water boiler with stainless steel tank, electronic controls, connected to 15mm cold water supply and 230 volt 2000 watt electrical power supply	No	3.00																							
	<table><tr><td>Z 01</td><td>Dog Leg Side Rail</td><td rowspan="3"></td><td>brushed stainless steel</td><td>GRDG03B</td><td></td><td></td><td>Bathroom Butler Paralegic Rails dog leg grab rail with 3 supports (code: GRDG03B) or equal approved with brushed grade 304 stainless steel finish, overall size 750 x 750mm, plugged and screwed to wall with stainless steel screws.</td></tr><tr><td>Z 02</td><td>Flush Valve Back Rail</td><td>brushed stainless steel</td><td>GRFV01B</td><td></td><td></td><td>Bathroom Butler Paralegic Rails flush valve grab rail (code: GRFV01B) or equal approved with brushed grade 304 stainless steel finish, overall size 842mm long, plugged and screwed to wall with stainless steel screws.</td></tr><tr><td>Z 03</td><td>Cistern Back Rail</td><td>brushed stainless steel</td><td>GRCS01B</td><td></td><td></td><td>Bathroom Butler Paralegic Rails cistern grab rail (code: GRCS01B) or equal approved with brushed grade 304 stainless steel finish, overall size 842mm long, plugged and screwed to wall with stainless steel screws.</td></tr></table>	Z 01	Dog Leg Side Rail		brushed stainless steel	GRDG03B			Bathroom Butler Paralegic Rails dog leg grab rail with 3 supports (code: GRDG03B) or equal approved with brushed grade 304 stainless steel finish, overall size 750 x 750mm, plugged and screwed to wall with stainless steel screws.	Z 02	Flush Valve Back Rail	brushed stainless steel	GRFV01B			Bathroom Butler Paralegic Rails flush valve grab rail (code: GRFV01B) or equal approved with brushed grade 304 stainless steel finish, overall size 842mm long, plugged and screwed to wall with stainless steel screws.	Z 03	Cistern Back Rail	brushed stainless steel	GRCS01B			Bathroom Butler Paralegic Rails cistern grab rail (code: GRCS01B) or equal approved with brushed grade 304 stainless steel finish, overall size 842mm long, plugged and screwed to wall with stainless steel screws.			
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7.3.20	Disabled Ablution facility - see above for reference	No	2.00																							
	SIGNAGE SUPPLEMENTARY PREAMBLES Signs are to comply with SANS 1186-1 to 5 and to be to the approval of the local authority. Signs are to have anodised aluminium frames and as per Prasa blueprint. Wall Mounted Station Name 500mm x 3000mm Wall Mounted Station name (HEIDEVELD STATION) Illuminated Text with ACM Cladded steel structure with routed out graphics (Refer to Code sign B3.1 of prasa Signages Blue print) Double Sided Floor Mounted Platform Station Name 2600mm x 3000mm Double sided platform station name (HEIDEVELD STATION) with ACM Cladded steel structure with vinyl graphic overlay suspended with two support 2.1m high poles (Refer to Code sign E2.1 of Prasa Signages Blue print) Double Sided Projecting Directional Sign 940mm x 1500mm Double Sided Projecting Directional Sign with ACM Cladded steel structure with vinyl graphic overlay and wall mounted (Refer to Code sign B1.4 of Prasa Signages Blue print) Wall Mounted and Door Mounted Internal Sign 300mm x 300mm Wall and Door Mounted Internal Sign with ACM Cladded steel structure with vinyl graphic overlay (Refer to Code sign J2.1 of Prasa Signages Blue print) Wall Mounted Single Sided Iconography Sign 500mm x 500mm Side Mounted Double Sided Informational Sign with ACM Cladded steel structure with vinyl graphic overlay (Refer to Code sign B2.1 of Prasa Signages Blue print) Ticket Sales Decals - ABS and Vinyl 100mm x 530mm Ticket Sales Decals - ABS and Vinyl with Digitally printed Graphics with ABS backing (Refer to Code sign F2.1 of Prasa Signages Blue print) Pole Mounted Double Sided Platform Number 500mm x 500mm Pole Mounted Double Sided Platform Number (1) with ACM Cladded steel structure with vinyl graphic overlay (Refer to Code sign C2.1 of Prasa Signages Blue print) Digitally printed Prohibition Signs 800mm x 300mm ea Digitally printed Prohibition Signs Digitally Printed Graphics mounted on walls (Refer to Code sign J1.1 of Prasa Signages Blue print) End of Platform Sign - New Pole Required 300mm x 1800mm End of Platform Sign - New Pole Required with Digitally Printed Graphics Mounted to New Pole at the End of the Platform (Refer to Code sign E1.3 of Prasa Signages Blue print) BILL NO 8 METALWORK SUPPLEMENTARY PREAMBLES Descriptions Descriptions of bolts shall be deemed to include nuts and washers Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete Metalwork described asholed for bolt(s) shall be deemed to exclude the bolts unless otherwise described STEEL HANDRAILS, BALUSTRADES, ETC <u>Welded and bolted balustrading to stairs</u>	No	2.00																							
7.4	500mm x 3000mm Wall Mounted Station name (HEIDEVELD STATION) Illuminated Text with ACM Cladded steel structure with routed out graphics (Refer to Code sign B3.1 of prasa Signages Blue print)	No	2.00																							
7.5	2600mm x 3000mm Double sided platform station name (HEIDEVELD STATION) with ACM Cladded steel structure with vinyl graphic overlay suspended with two support 2.1m high poles (Refer to Code sign E2.1 of Prasa Signages Blue print)	No	2.00																							
7.6	940mm x 1500mm Double Sided Projecting Directional Sign with ACM Cladded steel structure with vinyl graphic overlay and wall mounted (Refer to Code sign B1.4 of Prasa Signages Blue print)	No	2.00																							
7.7	300mm x 300mm Wall and Door Mounted Internal Sign with ACM Cladded steel structure with vinyl graphic overlay (Refer to Code sign J2.1 of Prasa Signages Blue print)	No	16.00																							
7.8	500mm x 500mm Side Mounted Double Sided Informational Sign with ACM Cladded steel structure with vinyl graphic overlay (Refer to Code sign B2.1 of Prasa Signages Blue print)	No	16.00																							
7.9	100mm x 530mm Ticket Sales Decals - ABS and Vinyl with Digitally printed Graphics with ABS backing (Refer to Code sign F2.1 of Prasa Signages Blue print)	No	5.00																							
7.10	500mm x 500mm Pole Mounted Double Sided Platform Number (1) with ACM Cladded steel structure with vinyl graphic overlay (Refer to Code sign C2.1 of Prasa Signages Blue print)	No	10.00																							
7.11	800mm x 300mm ea Digitally printed Prohibition Signs Digitally Printed Graphics mounted on walls (Refer to Code sign J1.1 of Prasa Signages Blue print)	No	12.00																							
7.12	300mm x 1800mm End of Platform Sign - New Pole Required with Digitally Printed Graphics Mounted to New Pole at the End of the Platform (Refer to Code sign E1.3 of Prasa Signages Blue print)	No	6.00																							
8.1	150 x 150 x 3mm Welded mesh infill panels 600mm high and in single lengths, spot welded to sub-framing	m	55																							

8.2	25 x 25 x 2mm Square hollow section framing	m	55		
8.3	Extra over for T-intersection	No	75		
8.4	Extra over for baseplate, four times holed to receive anchor bolts	No	45		
8.5	25 x 25 x 2mm Square hollow section post 900mm long, with flat closed tops welded to top rail	No	36		
8.6	Hilti Perfix PHB 12 x 65 expansion anchor and bolt	No	38		
	STEEL SCREENS, GATES, ETC				
	<u>Welded screens and gates to safe storage area</u>				
8.7	50 x 2,5mm Galvanised diamond mesh covering in approximately 2100mm high panels, tied with 1,6mm galvanised binding wire to framing	m2	10		
8.8	50 x 2,5mm Plastic coated galvanised diamond mesh covering in approximately 2100mm high panels, tied with 1,6mm plastic coated binding wire to framing	m2	10		
	PRESSED STEEL DOOR FRAMES				
	<u>"1,2mm Rebated frames suitable for half brick walls with 2 brass butt" hinges per door leaf and 2 brass butt hinges per fanlight</u>				
8.9	Frame for door 813 x 2032mm high	No	12		
8.10	Frame for double door 1500 x 2032mm high	No	4		
	PRESSED STEEL CUPBOARD DOOR FRAMES				
	"Durowin"" standard cupboard door frames ""				
8.11	Type CCL frame 2400 x 2064mm high overall	No	1		
	"STEEL WINDOWS, DOORS, ETC "				
	Standard industrial windows with mesh burglar sceens to fixed lights and opening sashes				
8.12	"Window with size approximately 600 x 900mm high	No	16		
	STEEL ROLLER SHUTTERS ETC				
8.13	Galvanised steel roller shutters with 76mm slats (18kg/m), with epoxy powder coated finish, fixed to brickwork or concrete				
8.14	Crank operated slatted roller shutter for 3000 x 2400mm high opening	No	2		
8.15	Crank operated slatted roller shutter for 3,500 x 3000mm high opening	No	2		
8.16	Crank operated slatted roller shutter for 4000 x 3000mm high " opening	No	3		
8.17	Crank operated slatted roller shutter for 8000 x 3000mm high " opening	No	1		
	SECURITY PAYROLL WINDOWS				
	<u>Chubb Safes, security payroll windows for indoor use suitable for 230mm walls, fixed to brickwork or concrete</u>				
8.18	Window MK II 610 x 915mm high overall	No	8		
	BILL NO 9				
	PLASTERING				
	SUPPLEMENTARY PREAMBLES				
	GRANOLITHIC				
	Method				
	The method to be used shall be either the monolithic or bonded method				
	Preparation				
	"For granolithic applied monolithically, the concrete floor shall be" swept clean after bleeding of the concrete has ceased and the slab has begun to stiffen; any remaining bleed water shall be removed and the granolithic shall then be applied immediately afterwards. For " granolithic to be bonded to the floor slab after it has hardened, the" slab surface shall be hacked (preferably by mechanical means) until " all laitance, dirt, oil, etc is dislodged and swept clean of all loose" matter. The slabs hall then be wetted and kept damp for at least six hours before applying the finish				

	Mix Granolithic shall attain a compressive strength of at least 41MPa. The coarse aggregate shall comply with SABS 1083 and be capable of passing a 10mm mesh sieve. Where the thickness of the " granolithic exceeds 25mm, the size of the coarse aggregate shall be" increased to the maximum size compatible with the thickness of the granolithic Panels Granolithic shall be laid in panels not exceeding 14m2 for " granolithic finishes, not exceeding 9,5m2 for bonded finishes and" " not exceeding 6m2 for all external granolithic. Wherever possible," panels shall be square but at no time should the length of the panel " exceed 1,5 times its width. Joints between panels shall be positioned," " where possible, over joints in the floor slab and shall be at least 3mm" " wide through the full thickness of the finish, separated by strips of" wood or fibreboard and finished with small V-joints 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 SPECIALIST PLASTER WALL COVERINGS General All specialist plaster wall coverings shall be executed in strict accordance with the manufacturer's instructions SCREEDS <u>Screeds on concrete</u>				
10.1	25mm Thick on floors and landings INTERNAL PLASTER <u>Cement plaster on brickwork</u>	m ²	20		
10.2	On walls	m ²	35.00		
10.3	On narrow widths EXTERNAL PLASTER <u>Cement plaster on brickwork</u>	m ²	12		
10.4	On walls BILL NO 11 PAINTWORK SUPPLEMENTARY PREAMBLES DESCRIPTIONS Descriptions of paintwork shall be deemed to include for all cutting in PREPARATORY WORK TO EXISTING WORK Previously painted plastered surfaces	m ²	35.00		

	Surfaces shall be thoroughly washed down and allowed to dry completely before any paint is applied. Blistered or peeling paint " shall be completely removed and cracks shall be opened, filled with a" suitable filler and finished smooth				
	Previously painted metal surfaces				
	Surfaces shall be thoroughly rubbed and cleaned down. Blistered or peeling paint shall be completely removed down to bare metal				
	Previously painted wood surfaces				
	Surfaces shall be thoroughly cleaned down. Blistered or peeling paint shall be completely removed and cracks and crevices shall be " primed, filled with suitable filler and finished smooth "				
	PAINT SPECIFICATIONS				
	All painting shall be done in accordance with manufacturers specification				
	ON INTERNAL PLASTERED SURFACES				
	One coat alkali resistance primer and two coats low odour premium quality highly washable and stain resistant acrylic emulsion paint for interior use				
11.1	On walls	m2	866.86		
11.2	On ceilings	m2	1228.23		
	METAL SURFACES WITH				
	Spot priming defects in pre-primed surfaces with zinc phosphate " metal primer, one coat universal undercoat and two coats super" universal enamel paint on steel				
11.3	On structural steel members, sided and underside of walkway bridges, all as indicated by the consulting Engineer	m2	300		
	WOOD SURFACES WITH				
11.4	Doors	m2	135		
	BILL NO 12				
	EXTERNAL WORK				
	SUPPLEMENTARY PREAMBLES				
	Clean sand is to be swept into joints between roadstones				
	FENCING				
	<u>Fence Repair and patch works</u>				
	Security fencing, gates, etc, including two coats aluminium paint on metal standards, posts, etc, bolts, straining eye bolts, site clearance and preparation of ground				
12.1	Cochrane ClearVu Black coated or similar security fencing 2,40m high vertically with poles planted in concrete(size 400X500X600) require to secure the premises.	m	400		
12.2	Palisade Fencing New Palisade fencing around the ticket office, 2,4m high above ground with top and bottom rails and post 2,0m long at 2,0m centres cast in and including 400x 500 x 600mm concrete base in the ground to secure the post	m	1200		
	<u>Structural repairs and patch works</u>				
12.3	Allow a budgetary allowance of R150 000,00 to be directed by the Engineer/Project Manager	Item	1.00		
	BILL NO.13 : Provisional Sums				
	<u>SUPPLEMENTARY PREAMBLES</u>				
	<u>General</u>				
	Work for which budgetary allowances are provided will be measured and valued in accordance with clause 32 of the Principal Building Agreement and deducted in whole or in part if not required without any compensation for loss or profit on the said allowances				
	Prime cost amounts and provisional sums are net. Prime cost amounts include for delivery to site of all articles concerned Provisional sums are for material and equipment supplied and installed complete by firms of specialists				
	<u>Profit</u>				
	Where stated, the contractor may allow for profit if required				

	General attendance on nominated/selected subcontractors				
	The item 'Attendance' which follows each provisional sum for nominated/selected subcontractors' work, shall be deemed to cover all the contractor's costs incurred in providing free of charge to the nominated/selected subcontractors, the following:				
	1 The services as set out in clause B9.1 of the Preliminaries 2 Making good in all trades and cleaning down and removal of rubbish on completion				
	Special attendance on nominated/selected subcontractors				
	Where stated special attendance will be described in detail in the Schedule for Variables in the Preliminaries for the services as set out in clause B9.2				
	PROVISIONAL SUMS FOR NOMINATED/SELECTED SUBCONTRACT WORKS				
	<u>User Note</u>				
	An item 'Special attendance as described in clause 12.0 of the Preliminaries' is to be inserted after the Attendance item under each installation/service if applicable				
	<u>Solar</u>				
13.1	Provide the sum of R450 000 ,00 (Four Hundred and Fifty Thousand Rand) for full solar installation	Item		1.00	
13.2	Profit	Item		1.00	
13.3	Attendance	Item		1.00	
	<u>Electronic Installation</u>				
13.10	Provide the sum of R300 000.00 (Three Hundred Thousand Rand) for Electronic Installation	Item		1.00	
13.11	Profit	Item		1.00	
13.12	Attendance	Item		1.00	
2	Alteration, Additions and Refurbishment				
3	Masonry				
4	Carpentry & Joinery				
5	Ceiling, Partitions & Access Flooring				
6	Roof Covering				
7	Ironmongery				
8	Metal Work				
10	Plaster				
11	Paintwork				
12	External Works				
13	Provisional Sums				
	<u>SECTION 3 : CIVIL WORKS</u>				
	BILL NO 14				
2.1	CLEAR SITE				
2.1.1	Clear and Grub of Platform surface				
	a) paving blocks	m2		4370	
	b) asphalt	m2		4370	
	BILL NO 15				
3.1	PLATFORM PREPARATION				
3.,1.1	Rip & Re-compaction of in-situ material to 90% Mod AASHTO	m3		1000	
3.2	SUBGRADE / SELECTED LAYER				
3.2.1	Upper selected layer 150mm (G7 quality material) from commercial sources compacted to 93% Mod AASHTO	m3		670	
3.3	CUT TO SPOIL				

3.3.1	(a)Removal of unsuitable material from platform to spoil (including freehaul of 1km)	m3	1540		
3.4	OVERHAUL				
3.4.1	Extra over item 3.7 for hauling material in excess of the freehaul of 1km beyond the site	m3/km	1540		
	BILL NO 16				
	PLATFORM REHABILITATION FOR PAVED AREAS				
	BASE LAYER				
4.1	Construct Base with imported G5 material from commercial sources compacted to 98% Mod AASHTO				
4.1.1	150mm thick	m3	670		
	PLATFORM TACTILE				
4.2	TACTILE Construct Base with imported G5 material from commercial sources compacted to 98% Mod AASHTO				
4.2.1	300mmX300mmX30mm Tactile (Yellow)	m2	810		
	BILL NO 17				
5.1	BITUMINOUS SURFACE TREATMENT				
5.1.1	PRIME COAT (b) 50/70 penetration-grade bitumen (0,7l/m2)	l	2860		
5.2	TACK COAT				
5.2.1	Tack coat of 30% stable grade emulsion (0,55l/m2)	l	3,930		
5.3	ASPHALT SURFACING				
5.3.1	Continuously fine grading using 50/70 penetration grade bitumen 30mm thick compacted to 93% MOD	m2	7130		
5.3.2	Sawing asphalt or cemented pavement layers for patching: (a) Sawing asphalt to an average depth: (i) Not exceeding 50mm	m	400		
5.3.3	Excavation in existing pavements for patching in: (a) Asphalt layers	m3	2760		
5.4	TREATMENT OF AN EXISTING SURFACE EXHIBITING CERTAIN DEFECTS				
5.4.1	Treatment with diluted bituminous emulsion (Fogspray) (a) 30% bitumen emulsion (0,4l/m2)	l	9410		
5.4.2	150mm cores in asphalt paving	No	5		
5.5	BLOCK PAVING				
5.5.1	Construct concrete edge beams to edge of tar / paving class 15/9	m	650		
5.5.2	Supply and install 600X600 block pavers complete including 25mm thick bedding sand: 50mm thick	m2	125		
5.5.3	Lift, place and re-use existing pavers	m2	85		
	BILL NO 18				
6.1	ROAD MARKINGS				
6.1.1	Non-reflectorized paint applied at nominal rate of 0.42 l/m2 or proprietary brand road marking material applied at nominal rate of 0.50 l/m2				
6.2.1	Yellow lines (broken or unbroken)				
6.2.1.1	(1) 100mm wide	m	1620		
14	Site Clearance				
15	Road Earthworks				
16	Subbase & Basecourse				
17	Asphalt Base, Kerbing & Surfacing.				
18	Ancillary Roadworks				
	SECTION 4 : MECHANICAL AND WET SERVICES				
	BILL NO 19				

	<u>PRELIMINARIES & GENERAL</u>				
	Tenderers are referred to the JBCC Series 2000 and relevant parts of SANS 1921: Construction and Management Requirements for Works Contracts, Occupational Health & Safety Act No 85 and C3: Scope of Works documents for the full intent and meaning of each clause thereof (hereinafter referred to by heading and clause number only) for which such allowance must be made as may be considered necessary.				
	Where any item is not relevant to this specific contract, such item is marked N/A (signifying "Not Applicable").				
1.1.1	Health and Safety Compliance.	Item	1		
1.1.2	Site Establishment.	Item	1		
1.1.3	Quality Management Plan.	Item	1		
1.1.4	Technical Submissions and Engineering Calculations.	Item	1		
1.1.5	Workshop Drawings.	Item	1		
1.1.6	Engineering and Supervision.	Item	1		
1.1.7	Transport	Item	1		
1.1.8	Craneage.	Item	1		
1.1.9	Rigging.	Item	1		
1.1.10	Supply and Erection of Scaffolding.	Item	1		
1.1.11	Training of end user personnel.	Item	1		
1.1.12	Operating and Maintenance Manuals, including As-built Drawings	Item	1		
1.1.13	C.O.C.'s for all HVAC related electrical work.	Item	1		
	BILL NO. 20 : PIPES AND FITTINGS				
	<u>WATER SUPPLY</u>				
	All rates supplied in this bill of quantities will be deemed to include scaffolding to any height and fixing of cold and hot water pipes up to and including roof height.				
	All pipes shall be deemed to include in the rates all necessary hanger brackets, threaded rod (irrespective of the suspension length), nuts, washers, anchors and drilling of holes in the concrete slab.				
	All cold water supply pipes are to be chased into walls except where pipes are to be surface-mounted on wall face and fixed with standard type pipe saddles and brackets.				
	Note : Manufacturer names are used only to define quality and specification, but any equivalent may be priced and proposed for prior approval by Engineer.				
	<u>COPPER PIPE</u>				
	<u>Supply and install Class 1 copper pipes with and including brackets, fittings fixed to walls, etc.</u>				
	<u>Note : Rate to include all fittings; bends, elbows, t-pieces, reducers, couplers, etc.</u>				
1.2.1	15 mm Pipe	m	12		
1.2.2	22 mm Pipe	m	18		
1.2.3	28 mm Pipe	m	6		
1.2.4	35 mm Pipe	m	12		
1.2.5	42 mm Pipe	m	6		
1.2.6	54 mm Pipe	m	6		Rate Only
1.2.7	76 mm Pipe	m	6		Rate Only
	<u>Galvanised mild steel Pipework</u>				
	<u>Heavy duty galvanised mild steel (GMS) clamp on pipes to SANS 62, in the running length, and all necessary supports, fixing, brackets, saddles, holderbats, etc.</u>				
	<u>Note : Rate to include all fittings: clamp on fittings, bends, elbows, reducers, t-pieces, couplers, etc.</u>				
1.2.8	100 mm Pipe	m	6		
1.2.9	80 mm Pipe	m	6		
	<u>VALVES</u>				

	<u>Note</u> : Manufacturer names are used only to define quality and specification, but any equivalent may be priced and proposed for prior approval by Engineer. <u>NRV's</u> <u>Cobra or similar approved</u>				
1.2.12	50 mm NRV Spring Check Valve, brass body and internals, screwed BSP	No.	1		
	<u>PRV's</u> <u>Cobra or similar approved</u>				
1.2.13	32 mm PRV pressure reducing valve	No.	1		
1.2.14	100 mm PRV pressure regulating valve	No.	2		
1.2.15	50 mm Caleffi adjustable PRV with pressure gauge	No.	2		
	<u>STRAINER</u>				
1.2.16	50 mm Strainer	No.	1		
	<u>GATE SHUT OFF VALVES</u>				
1.2.17	Gate Valve 50 mm SABS 664-2011	No.	2		
	<u>LEVER BALL VALVE</u>				
1.2.18	50 mm Lever ball valve	No.	1		
1.2.19	32 mm Lever ball valve	No.	1		
1.2.20	25 mm Lever ball valve	No.	1		
1.2.21	20 mm Lever ball valve	No.	1		
1.2.22	15 mm Lever ball valve	No.	2		
	<u>HOT WATER SYSTEM</u>				
	<u>PIPES AND FITTINGS</u>				
	All rates supplied in this bill of quantities will be deemed to include scaffolding to any height and fixing of cold and hot water pipes up to and including roof height. All pipes shall be deemed to include in the rates all necessary hanger brackets, threaded rod (irrespective of the suspension length), nuts, washers, anchors and drilling of holes in the concrete slab. All hot water supply pipes are to be chased into walls except where pipes are to be surface-mounted on wall face and fixed with standard type pipe saddles and brackets. <u>Note</u> : Manufacturer names are used only to define quality and specification, but any equivalent may be priced and proposed for prior approval by Engineer.				
	<u>COPPER PIPE</u>				
	Supply and install Class 1 copper pipes with and including brackets, fittings fixed to walls, etc. <u>Note</u> : Rate to include all fittings; bends, elbows, t-pieces, reducers, couplers inclusive of labour, etc.				
1.2.24	15 mm Pipe	m	12		
1.2.25	22 mm Pipe	m	12		
1.2.26	28 mm Pipe	m	12		
1.2.27	35 mm Pipe	m	12		
1.2.28	42 mm Pipe	m	12		
1.2.29	54 mm Pipe	m	12		
1.2.30	80 mm Pipe	m	6		
	<u>HOT WATER PIPE INSULATION</u>				
	Install rigid non-combustible light weight "Snap on Pipe" Glasswool insulation, Isover or similar approved, with wall thickness of (15/20/25/40/50) mm with vapour tin foil reinforced barrier facing for hot water piping. Install in accordance with manufacturer's detail & specification.				
1.2.31	15 mm Pipe	m	6		
1.2.32	20 mm Pipe	m	12		
1.2.33	25 mm Pipe	m	12		
1.2.34	40 mm Pipe	m	12		

1.2.35	50 mm Pipe	m	6		
	<u>External Aluminium cladding over insulation</u>				
1.2.36	20 mm Pipe	m	6		
1.2.37	25mm Pipe	m	6		
1.2.38	32mm Pipe	m	6		
1.2.39	40mm Pipe	m	6		
1.2.40	50mm Pipe	m	6		
	BILL NO. 21 : DRAINAGE				
	<u>PIPES AND FITTINGS</u>				
	The installation shall be carried out so as to conceal the drainage pipes where possible. Supply, install, test and commission all the Sanitary Drainage installation to conform to SANS 10252 part 2.				
	Valsir/Geberit pipe or similar approved, to duct and walls including brackets & support to manufacturers specifications note fixed point at expansion socket or 90 degree change in direction (20/25mm strut). All pipes laid in ground must be bedded on selected compacted filling at least 150 mm thick. Soft Excavation and Intermediate Excavations' as defined in clause 3.1.2.B of SABS 1200 D have not been identified by way of separate measurement. The Contractor shall thus include within his 'Pickable Earth' excavation rates for excavation in all materials. HDPE pipes for above ground and underground use including couplers, and support brackets in the running length. (contractor to included couplers, and support brackets in the rate per meters)				
	<u>HDPE piping</u>				
	Note : Pipe rate to be fully inclusive of all butt welds, bends, junctions, reducers, etc. Rate to include for supply, install, test and commissioning.				
1.3.1	160 mm pipe above ground	m	6		
1.3.2	110 mm pipe above ground	m	6		
1.3.3	75 mm pipe above ground	m	6		
1.3.4	63 mm pipe above ground	m	18		
1.3.5	50 mm pipe above ground	m	18		
1.3.6	40 mm pipe above ground	m	18		
	<u>Electroweld couplings</u>				
1.3.7	160 mm	No.	62		
1.3.8	110 mm	No.	135		
1.3.9	75 mm	No.	65		
1.3.10	63 mm	No.	1		
1.3.11	50 mm	No.	1		
	<u>VALVES</u>				
	<u>One way vent valves</u>				
1.3.12	100 mm HDPE vent valves	No.	1		
1.3.13	50 mm HDPE vent valves	No.	35		
	BILL NO 22 : FIRE PROTECTION				
	<u>Supply and install fire protection hydrant valves, hose reels, fire extinguishers and pipes & fittings in positions as indicated on the drawings. The installation of the fire protection equipment shall conform to the minimum requirements of SANS 10400-T & SANS 10400-W latest revisions.</u>				
	<u>FIRE HYDRANTS</u>				
	<u>All Fire Hydrants shall comply with the requirements of SANS 1128-1.</u>				
	<u>Note : Rates to be fully inclusive for removal and re-installation of hydrant heads.</u>				
1.4.1	Supply, install and commission 65 mm diameter Twin Fire Booster connection complete with Plastic material dust covers and connecting chain, 65 mm Pressure Gauge Adaptor with Ball Valve. Twin booster position shall be installed at site entrance or in a suitable position for access by the Fire Brigade.	No.	1		
1.4.2	Supply, install, test and commission 80 mm x 65 mm right angled Tamperproof Hydrant with single lug outlet and supplied complete with spindle for opening valve.	No.	2		

	<u>FIRE HOSE REELS</u>				
	<u>All Fire Hose Reels shall comply with the requirements of SANS 543, and shall be installed accordance with SANS 10105-1 and SANS 10400-W and the Department's Document GP/M1 Rev 1.</u>				
1.4.3	Supply, install, test and commission SABS approved fire hose reel fitted with 30 m length of 20 mm hose mounted on wall bracket bolted to wall behind. The FHR to be installed complete with 25 mm chromium shut-off valve, 7 mm diameter aluminium nozzle and hose guide.	No.	4		
	<u>PORTABLE FIRE EXTINGUISHERS</u>				
	<u>All Portable Fire Extinguishers shall comply with the requirements of SANS 1910.</u>				
	<u>Note : Rates to be inclusive for supply and install.</u>				
1.4.4	9 kg Dry chemical powder (DCP) type fire extinguisher supply and install on bracket and wooden back plate fixed to wall.	No.	6		
1.4.5	10 kg CO2 F.E. type fire extinguisher with wooden back plate and bracket fixed to wall.	No.	4		
1.4.6	5 kg CO2 F.E. type fire extinguisher with wooden back plate and bracket fixed to wall.	No.	20		
1.4.7	4,5 kg dry chemical powder (DCP) type fire extinguisher with wooden back plate and bracket fixed to wall.	No.	4		
1.4.8	Service existing non-functional 4,5 kg dry chemical powder (DCP) type fire extinguisher with wooden back plate and bracket fixed to wall.	No.	4		
	<u>FIRE SIGNAGE</u>				
	<u>Photoluminescent fire equipment and direction location signage and warning notices in accordance with SANS 1186-1: 2008, and incorporating the pictographs in the standard size 190 x 190 mm, securely fixed to wall, door, ceiling or soffit as required and as maybe indicated on drawings and architectural specifications. No fixing mechanisms by use of doubles sided tape will be permitted. Only durable steel screws and aluminium frames will be allowed. Refer to project specifications.</u>				
1.4.9	Photoluminescent fire sign as per fire protection plans.	No.	15		
	<u>DOORS</u>				
	<u>All fire doors to comply with SANS 1253 and all doors to be clearly labelled with certification label fixed with steel plate adjacent to door hinge. All fire doors to be fitted with approved self closing mechanisms. All fire doors shall open in the direction of egress and be hinged on the same side. Rates for fire doors to include for approved paint finish on doors and frames.</u>				
1.4.10	Supply and install new self closing single leaf class B fire door 1000 mm wide x 2400 mm high with complete steel door frame fitted with Geze TS 4000 or similar approved self closer.	No.	1		
1.4.11	Supply and install new Geze TS 4000 or similar approved self closer on all existing alluminium frame glass smoke doors on office floor levels and where required by Fire Engineer.	No.	2		
1.4.12	Service and repair existin fire doors	No.	1		
1.4.13	Supply and install new double leaf self closing class B fire door fitted with Geze Boxer E-ISM or similar approved.	No.	1		
1.4.14	Supply and install external Level G3 bullet resistant Anti-bandit door, complete with 100 x 50 x 3mm gauge mild steel rectangular frame and 25 x 25 x 3mm MS anlge rebates, overall size 930 x 2100mm high in powder coating and or galvanised cladding with peep hole, supplied with a 6 pin tumbler key system, mortice dead lock with an additional heavy duty magnetic lock and striker including key switch and surface mounted casing, 6 Amp power supply, push buttons and interlock system, heavy duty aluminium continuous hinge, aluminium slam bar with heavy duty door closer and D-style pull handles. Door to comply to SABS 1658-1996	No.	1		
1.4.15	Supply and install internally G2 bullet resistant Anti-bandit door, complete with 100 x 50 x 3mm gauge mild steel rectangular frame and 25 x 25 x 3mm MS anlge rebates, overall size 930 x 2100mm high in paint finish with 250 X 500mm high BRG viewing panel glazed in 38mm thick bullet resistant glass with one-way vision film, supplied with a 6 pin tumbler key system, mortice dead lock with an additional heavy duty magnetic lock and striker including key switch and surface mounted casing, 6 Amp power supply, push buttons and interlock system, heavy duty aluminium continuous hinge, aluminium slam bar with heavy duty door closer and D-style pull handles. Door to comply to SABS 1658-1996	No.	2		
	<u>Building work Alterations</u>				
1.4.16	Remove existing single door and frame from brickwork and prepare opening for new fire door and frame (new fire door and frame measured elsewhere)	No.	1		
1.4.17	Remove existing double door and frame from brickwork and prepare opening for new double fire door and frame (new fire door and frame measured elsewhere)	No.	1		
	<u>FIRE SEALING</u>				
1.4.18	Supply and install Hilti CP 644 or similar approved fire stop collar for 110 mm diameter pipe penetrating firewalls.	No.	1		
1.4.19	Supply and install Hilti CP 644 or similar approved fire stop collar for 50 mm diameter pipe penetrating firewalls.	No.	2		
1.4.20	Supply and install Hilti CP 620 Firestop foam 300 ml cartridge or similar approved to seal cable penetrations within the building where necessary upon insntruction of the Fire Engineer.	No.	5		
	<u>HYDRANT, FIRE HOSE REEL PIPEWORK</u>				

	Heavy duty galvanised mild steel (GMS) screwed and socketed pipes to SANS 62, in the running length, and all necessary, supports, fixing, brackets, saddles, holderbats, etc.				
	<u>Note</u> : Rate to include for all fittings: Elbows, t-pieces, reducers, bushes, couplers, etc.				
1.4.21	150 mm	m	6		
1.4.22	125 mm	m	6		
1.4.23	100 mm	m	6		
1.4.24	80 mm	m	6		
1.4.25	32 mm	m	6		
1.4.26	25 mm	m	12		
1.4.27	150 mm Diameter Bermad or similar approved pressure reducing valves to limit pressure on system from booster pumps.	No.	1		
	<u>HYDRANT PUMPS</u>				
	Supply, installation and delivery of the following fire pumps:				
1.4.28	Horizontal multistage fire hydrant pump to deliver 1800 kPa @ 2400l/min each	No.	2		
	Supply, installation of the following hydrant jockey pumps:				
	Pump type: CR5-36 A-FGJ-A-E-HQQE				
	Pump Model: A96542802P31704				
	Q: 5.8m3/h				
1.4.29	H: 189,2m	No.	1		
	<u>HYDRANT & DOMESTIC STORAGE TANK</u>				
1.4.30	Sectional steel water storage tank to be cleaned from debris and internal surface corrosion. Internal of tank to be lined with protective EPDM liner or similar approved method. Tank size 7,32 m x 2,44 m x 2,44 m (43,5 kl total capacity split in two compartments).	No.	1		
1.4.31	Supply and install 100mm Bermad level control model 750-67 valves.	No.	1		
	<u>TESTING AND COMMISSIONING</u>				
1.4.32	Allow for testing of entire Fire Protection installation after completion.	Item	1		
	<u>GUARANTEE AND MAINTENANCE</u>				
1.4.33	Provision of Guarantee on fire hydrant equipment	Item	1		
1.4.34	12 Month maintenance period on main and jockey fire hydrant pumps.	Item	1		
	<u>OPERATING AND MAINTENANCE PROCEDURES</u>				
1.4.35	Compilation and submission of 4 No. Operation & Maintenance procedures for the Fire Protection installation.	No.	3		
	<u>PAINTING</u>				
1.4.36	Painting and identification of all fire pipe work as per SANS. Painting and marking of all exposed pipe work, equipment where required. Per installed unit FHR & Hydrant	Item	1		
1.4.37	Painting and identification of all fire pipe work as per SANS. Painting and marking of all exposed pipe work, equipment where required. Per installed unit FHR & Hydrant	Item	1		
	<u>VALVES</u>				
	<u>GATE VALVE</u>				
	<u>Supply and install fully flanged Class 12 resilient seal gate valve to SABS 664 with non-rising spindle and anti-clockwise closing</u>				
1.4.38	100 mm	No.	1		
1.4.39	150 mm	No.	1		
	<u>Supply and install fully flanged Class 12 resilient seal gate valve to SABS 664 with non-rising spindle and anti-clockwise closing.</u>				
1.4.40	100 mm	No.	1		
1.4.41	150 mm	No.	1		
	BILL NO. 23 : HVAC				

	<u>Installation of linear diffusers with 595 x 595 mm Brian Rickard or similar approved constant volume type diffusers for a drop-in ceiling in floors.</u>				
1.5.1	150 mm Diameter	No.	2		
	<u>Supply and installation of the following size spigots.</u>				
1.5.2	150 mm Diameter	No.	2		
	<u>Supply and installation of the following size ducts.</u>				
1.5.3	150 mm Diameter	m	6		
	<u>Supply and installation of 150 mm diameter Aludec - 45 flexible ducting of the following sizes.</u>				
1.5.4	150 mm Diameter	m	6		
	<u>Supply and installation of the following sizes galvanised steel clamps.</u>				
1.5.5	150 mm Diameter	m	2		
	<u>Stripping, carting off and or storage of the existing equipment.</u>				
1.5.6	Wall mounted split air-con units	No.	1		
	<u>Toilet Extraction Fan</u>				
1.5.7	Supply and install in PVC pipe sleeve by builder, Donkin Vortice Punto in-line extraction fan with duty of 93L/sec at a pressure of 59Pa	No	1		
1.5.8	E.A Weather Louvre 250x250	No	1		
	<u>Supply and installation of the following size spigots.</u>				
1.5.9	125 mm Diameter	No.	2		
	<u>Supply and installation of 150 mm diameter Aludec - 45 flexible ducting of the following sizes.</u>				
1.5.10	125 mm Diameter	m	2		
1.5.11	Fresh air intake Grilles c/w OBD 700mm X 350m	No	4		
1.5.12	7.1 kW heating & cooling VRV unit, (Medium Static Pressure Duct) connected to essential power.	No.	1		
1.5.13	Hard wired temperature controller for the control of the indoor unit.	No.	1		
	<u>Outdoor Unit</u>				
1.5.14	Matching air cooled VRV condenser unit for indoor units	No.	1		
1.5.15	Supply and install equipment support, hot dipped galvanised IPE 200 I-beams (20m total length) cut to specific lengths	Item	1		
	<u>Electrics</u>				
1.5.16	Electrical Board complete with circuit-breakers to suit, a power surge protector and connection to essential power.	Item	1		
1.5.17	Complete communication line between indoor units and out door unit.	Item	1		
1.5.18	Cabling for the indoor units from the main supply DB to the indoor units complete with cable tray support.	Item	1		
1.5.19	Commissioning of the air-conditioning installation.	Item	1		
1.5.20	HVAC Fire Dampers	Item	1		Rate Only
	<u>Refrigerant Gas Piping, including approved Insulation similar or equal to amoureflex.</u>				
1.5.21	6,35 mm Diameter	m	6		
1.5.22	9,52 mm Diameter	m	6		
1.5.23	12,7 mm Diameter	m	6		
1.5.24	15,88 mm Diameter	m	6		
1.5.25	19,05 mm Diameter	m	6		
1.5.26	22,2 mm Diameter	m	6		
1.5.27	28,58 mm Diameter	m	6		

1.5.28	34.9 mm Diameter	m	6		
	<u>Refrigerant Gas Pipe 90° insulated bends, including approved Insulation similar or equal to armourflex</u>				
1.5.29	6,35 mm Diameter	No.	1		
1.5.30	9,52 mm Diameter	No.	1		
1.5.31	12,7 mm Diameter	No.	1		
1.5.32	15,88 mm Diameter	No.	1		
1.5.33	19,05 mm Diameter	No.	1		
1.5.34	22,2 mm Diameter	No.	1		
1.5.35	28,58 mm Diameter	No.	1		
1.5.36	34.9 mm Diameter	No.	1		
	<u>Insulated Refrigerant Gas Pipe Y Branches</u>				
1.5.37	15,88 mm Diameter x 15,88 mm Diameter x 15,88 mm Diameter complete with 1 off 19,05 mm Diameter to 15,88 mm Diameter reducer.	No.	1		
1.5.38	9,52 mm Diameter x 6,35 mm Diameter x 6,35 mm Diameter complete with 1 off 12,7 mm Diameter to 9,52 mm Diameter reducer.	No.	1		
1.5.39	22,2 mm Diameter x 19,05 mm Diameter x 12,7 mm Diameter complete with 1 off 28,58 mm Diameter to 19,05 mm Diameter, 19,05 mm Diameter to 22,2 mm Diameter, 25,4 mm Diameter to 19,05 mm diameter reducers.	No.	1		
1.5.40	12,7 mm Diameter x 6,35 mm diameter x 6,35 mm diameter.	No.	1		
1.5.41	28,58 mm Diameter x 15,88 mm diameter x 12,7 mm diameter complete with 1 off 34,9 mm diameter to 31,8 mm diameter, 31,8 mm diameter to 22,2 mm diameter, 28,58 mm diameter to 119,05 mm diameter reducers.	No.	11		
1.5.42	12,7 mm Diameter x 12,7 mm diameter x 12,7 mm diameter complete with 1 off 12,7 mm diameter to 6,35 mm diameter, 12,7 mm diameter to 9,52 mm diameter reducers.	No.	5		
1.5.43	28,58 mm Diameter x 28,58 mm diameter x 28,58 mm diameter complete with 1 off 41,3 mm diameter to 34,9 mm diameter reducers.	No.	1		
1.5.44	19,05 mm Diameter x 15,88 mm diameter x 15,88 mm diameter complete with 1 off 22,2 mm diameter to 19,05 mm diameter reducers.	No.	1		
1.5.45	41,3 mm Diameter x 34,9 mm diameter x 28,58 mm diameter complete with 1 off 41,3 mm diameter to 34,9 mm diameter reducers.	No.	1		
1.5.46	22,2 mm Diameter x 19,05 mm diameter x 12,7 mm diameter .	No.	1		
	<u>Pipe Supports</u>				
1.5.47	4mm Diameter wire, 300mm wide welded wire mesh cable tray complete with bends and hangers for refrigerant and condensate piping.	m	15		
	<u>DX Split Type Air Conditioning Units</u>				
1.5.48	HWSU 1 : 4 kW, Direct Expansion, inverter,high wall split unit. c/w Wall mounted Wired remote control complete with panel kits and correct cabling to manufacturer's specification to be chased into the wall	No	1		
1.5.49	CCSU 1 : 9.5 kW, Direct Expansion, inverter,Ceiling Cassette split unit. c/w Wall mounted Wired remote control complete with panel kits and correct cabling to manufacturer's specification to be chased into the wall	No	2		
1.5.50	CSSU 1 : 12.1 kW, Direct Expansion, inverter,Ceiling Suspended split unit. c/w Wall mounted Wired remote control complete with panel kits and correct cabling to manufacturer's specification to be chased into the wall	No	1		
	<u>Roller Shutter Gate</u>				
1.5.51	Supply & Installation of new roller shutter gate and all necessary accessories to make installation complete	Item	1		
	BILL NO. 24: CONTAINERS CONFIGURATION				
	<u>Containers</u>				
13.7	Provide the rate for the Design and Configuration of the existing containers.	Item	1.00		
13.8	Profit	Item	1.00		
13.9	Attendance	Item	1.00		
1.6.5	Operating and maintenance manuals, as built drawings and commisioning data (3 sets)	No	3		

19	Preliminaries and General				
20	Water Supply				
21	Drainage				
22	Fire Services				
23	HVAC				
24	Containers				
	<u>SECTION 5: ELECTRICAL INSTALLATION</u>				
	BILL NO. 25: ELECTRICAL				
	<u>GENERAL NOTES</u>				
	Contractor is required to visit the site and inspect items before bidding for the tender.				
	Note: All rates should include supply and install.				
	Before submitting, the Contractor shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials contained in the buildings or portions of the buildings.				
	Old material to become property of the contractor.				
	All materials to be SABS approved, installation to comply with SANS 10142 and other statutory building regulations.				
	<u>PLATFORMS</u>				
1	Supply and install 150W LED, Die cast aluminum housing and Integrated LED chips and driver in module. IP66, 18000lm, 5 Year Warranty.	Item	36		
2	Supply and install 8m (above the ground) high galanised steel pole with mid-height swivel fixing and to be mounted as per manufacturers specification.	Item	24		
3	Supply and install U-shape galvanised steel bracket structure to accommodate dual light fittings for the 8m pole above.	Item	24		
4	Supply and deliver twin and earth 2.5mm ² cable.	m	600		
5	Supply and install 10mm ² 4 core cable.	m	1200		
6	Supply and install single pole 10A, circuit breaker.	Item	24		
7	Supply and deliver photo cell/daynight switch.	Item	2		
8	Supply and deliver contactor.	Item	2		
	<u>SHELTERS</u>				
	<u>BUTTERFLY WAITING SHELTERS</u>				
9	Supply and install 4ft LED double light fittings , IP65 and to be mounted onto the frame structure.	Item	8		
10	Supply and install deep galvanised anti vandal cages for the 4ft light fittings.	Item	8		
11	Supply and install 25mm steel conduit pipe, to be welded onto the frame structure.	Item	50		
12	Supply and install steel type bosal and to be bolted onto the frame structure to secure the conduit pipe.	Item	50		
13	Supply and install 2.5mm ² twin and earth cable	m	100		
	<u>CONCRETE WAITING SHELTERS</u>				
14	Supply and install install 13W 2D LED Round Bulkhead light fittings, bolt light fittings onto brick wall and chase into the wall to hide the cable.	Item	60		
15	Supply and install 2.5mm ² twin and earth cable.	m	500		
16	Supply and install deep galvanised anti-vandal cages, 340mm x 340mm x 220mm for the 2D LED round bulkhead light fittings.	Item	60		
17	Supply and install 25mm PVC conduit pipe.	m	200		
	Note: Remove the existing steel bosal, 2D cages and make it ready for the new intsallation.				
	<u>MANHOLES</u>				
18	Supply and install fiber glass manhole inspection covers with the mechanical locking mechanism.	Item	42		

	<u>CONCRETE FOOTSTEP BRIDGE</u>				
19	Supply and install 4ft LED double light fittings , IP65 and to be mounted onto the roof structure.	Item	9		
20	Supply and install deep galvanised cages for the 4 ft LED double light fittings.	Item	9		
21	Supply and install 25mm steel conduit pipe.	m	50		
22	Supply and install steel type bosal and to be bolted on the roof to secure the conduit pipes.	m	50		
23	Supply and install 60W post top lamp, IP65, 5 year Warranty Post Top LED Light with a built in 3CCT (3000K/4000K/6000K).	Item	6		
24	Supply and install 2.5mm ² twin and earth cable.	m	500		
25	Supply and install single pole 10A, circuit breaker.	Item	6		
26	Supply and install 6mm ² 4 core cable.	m	300		
27	Supply and install expanded metal grid deep galvanised cage. 425mm x 395mm x 215mm with clyindrical collar welded to the centre bottom and to be connected to the light pole. Collar to be 0.5mm thick mild steel pipe, diameter to match the light fitting holder x 235m length. Collar to be deep galvanised. The collar must fit onto the pole top end and to be secured tight with min of 3 special bolt and nuts to safeguard them from theft.	Item	6		
28	Supply and install 1.8m steel type pole to be deep galvanised. The pole must have the base plate, to be secured with 4x1 bolts and nuts.	Item	6		
	<u>STEEL FOOTSTEP BRIDGE</u>				
29	Supply and install 60W post top lamp, IP65, 5 year Warranty Post Top LED Light with a built in 3CCT (3000K/4000K/6000K).	Item	2		
30	Supply and install 2.5mm ² twin and earth cable.	m	100		
31	Supply and install 6mm ² 4 core cable.	m	200		
32	Supply and install expanded metal grid deep galvanised cage. 425mm x 395mm x 215mm with clyindrical collar welded to the centre bottom and to be connected to the light pole. Collar to be 0.5mm thick mild steel pipe, diameter to match the light fitting holder x 235m length. Collar to be deep galvanised. The collar must fit onto the existing pole top end and to be secured tight with min of 3 special bolt and nuts to safeguard them from theft.	Item	2		
33	Supply and install 25mm steel conduit pipe, to be welded onto the bridge frame structure.	Item	250		
	<u>STATION BUILDING</u>				
34	Supply and install 200W Heavy Duty Coastal grade LED Floodlight, 26500lm (130lm/w), 5 Year Warranty, IP65, 120 Degree, Platinum-PD Range and replace the existing light fitting and dispose them at an approved disposal site.	Item	4		
35	Supply and install install 13W 2D LED Round Bulkhead light fittings, bolt light fittings onto brick wall and chase into the wall to hide the cable.	Item	8		
36	Supply and install 2.5mm2 twin and earth cable.	m	100		
37	Provisional sum - Ticket Office Rewire and supply all the required electrical accessories in compliance with SANS 10142 and building regulations.	Sum	1		
	<u>ABLUTIONS</u>				
38	Supply and install 2.5mm ² twin and earth cable.	m	100		
39	Supply and install install 13W 2D LED Round Bulkhead light fittings, bolt light fittings onto brick wall and chase into the wall to hide the cable.	Item	11		
40	Supply and install 5ft LED double light fittings , IP65 to be mounted onto the ceiling.	Item	2		
41	Supply and install deep galvanised anti-vandal cages, 340mm x 340mm x 220mm for the 2D LED round bulkhead light fittings.	Item	11		
42	Platform - Railway Track Cable Crossing Provisional sum	Sum	1		
	<u>Carried to summary</u>				
	<u>FINAL SUMMARY</u>				
1	PRELIMINARIES				
2	BUILDERS WORK				

3	CIVIL WORKS				
4	MECHANICAL AND WET SERVICES				
5	ELECTRICAL				
	SUB TOTAL (EXCLUDING VALUE ADDED TAX)				
	Contingency				
	SUB-TOTAL				
	ADD VAT @ 15%				
	GRAND TOTAL				