CONSTRUCTION OF KWAGGAFONTEIN RECREATIONAL CENTRE PHASE 1

CIVIL ENGINEERING SERVICES

SCHEDULE OF QUANTITIES

Preamble to Pricing the Schedule of Quantities

1 The Conditions of Contract, the Special / Particular Conditions of Contract, the Specifications, (including the Project and Particular Specifications) and the Drawings are to be read in conjunction with this Schedule of Quantities.

2 The Schedule of Quantities comprises items covering the Contractor's profit and costs of general liabilities and of the construction of temporary and permanent works.

3 The Tenderer is at liberty to insert a rate of his own choosing for each item in the Schedule of Quantities and his attention is drawn to the fact that the Contract has the right under various circumstances, to payments for additional works carried out and that the Engineer shall base his assessment of the rates to be paid for such additional work on appropriate rates inserted in the Schedule by the Contractor.

4 Clause 8 of each Standardized Specification and the measurement and payment clause of each Particular Specification, read together with the relevant clauses of the Project Specification, set out what ancillary or associated activities are included in the rates for operations specified.

5 Descriptions in the Schedule of Quantities of this Tender Document drawn up generally in accordance with the latest issue of Civil Engineering Quantities (1). Should any requirement of the measurement and payment clause of the applicable Standardized Specification (2), or the Project Specification (2), or the Particular Specification (2) conflict with the terms in the Schedule of Quantities in this Tender Document the requirements in the Schedule of Quantities in this tender document shall prevail. The Contractor's attention will be called upon Clause "Qualifications of Tenders" and Clause "Preliminary & General" in the section "Conditions of Tender" in this Tender Document

Unless otherwise stated, items are measured neat in accordance with the Drawings, and no allowance has been made for waste. The Tender Quantities are derived from preliminary drawing, so due allowance shall be made for possible changes.

6 The prices and rates to be inserted in the Schedule of Quantities are to be the exclusive prices to the Employer for the work described under the various items. Such prices shall cover all costs and expenses that may be required in and for the construction of the work described, and shall cover the cost of all general risks, liabilities and obligations se forth or implied in the documents on which the Tender is based. The prices and rates specified in the Schedule of Quantities for this Contract shall be fixed, final and binding throughout the Contract period.

7 A price, rate or the word "NIL" is to be entered against each item of the Schedule of Quantities, whether the quantities are stated or not. If no rate is entered against an Item or a word other than "NIL" is entered, the item will be considered to be covered by other prices in the Schedule, the rate will, nevertheless, be taken as "NIL" and no claim will be considered if the quantity of such item increases or decreases.

The Tenderer shall price each item in the Schedule of Quantities in BLACK INK and each item must be priced separately and not in combination with other items (no groupings shall be allowed).

The Contractor is not entitled to change wording and / or quantities in the Schedule of Quantities without the written permission of the Engineer.

8 Units of measurement stated in the Schedule of Quantities are all metric units. Abbreviations used are as follows:

mm	=	millimetre
m	=	meter
km	=	kilometre
km-pass	=	kilometre pass
m^2	=	square meter
m^2-pass	=	square meter pass
m^3	=	cubic meter
m^3-km	=	cubic metre-kilometre
ha	=	hectare
kw	=	kilowatt
l	=	litre
kl	=	kilolitre
kg	=	kilogram
t	=	tonne (1 000 kg)
Prov.	=	provisional amount
m^3 km	=	cubic metre-kilometre
%	=	percent
PC Sum	=	prime cost sum
Sum	=	sum
No.	=	number

All rates and amounts quoted in the Schedule of Quantities shall be in South African Rand.

9 The Tenderer must provide a rate for all items marked "Rate only" in the amount column. The reason for this is that even though no work is expected to be done under such item, the stated rate will be applied if any work should be necessary under that particular item.

Notes :

1) The standard system of measurement of civil engineering quantities for South Africa published by the South African Institution of Civil Engineers.

2) See definition in Sub-Clause 2.1 of Part 1 of SANS 0120.

Information for the Submission of the Schedule of Quantities for Certifications

1) At each and every item where a reference is made for the quantities to be recorded in the site instruction book by the Engineer's representative and those signed and dated records must be forwarded with the relevant certificates for payments. Failing to do so will annul those items with the result that the requested quantities and amounts shall be deleted from the payment certificates and no compensation will be made for such items.

2) For each "Provisional Sum" items proof of transaction (i.e.. Proof of payment) must accompany the relevant payment certificates. Failing to do so will result in no compensation being made for such items. Purchase invoice or delivery note is insufficient proof of payments.

3) For each item that is claimed in the section "Materials on site" proof of payment and / or ownership by the Claimant must accompany the relevant payment certificates. Failing to do so will result in no compensation being made for such items. Purchase invoice or delivery note is insufficient proof of payments. A form is available in this Tender Document for proof of ownership of materials which page (or copy of that page) can be signed and proof stamped by the supplier, stating the value of purchased goods. The Engineer requires a copy of the receipt as proof of ownership of the materials claimed in the certificate.

4) Under no circumstances will allowance be made to deviate from the specifications set out in the Tender Document without the written consent of the Engineer. Any contravention of this shall result in rectification by the Contractor at his own cost.

SECTION 1 - PHASE 1.1

BILLOF QUANTITIES

BUILDING WORKS

ITEM NO		UNIT	QUANTITY	RATE	AMOUNT
	BILL NO. 1				
	PRELIMINARIES AND GENERAL				
i)	The agreement is to be the General Conditions of Contract for Works of Civil Engineering Construction (2015) (Third Edition) , published by the S. A. Institution Of Civil Engineering.				
ii)	The Preliminaries are to be the Construction and management requirements for works contracts - Part 1: General engineering and construction works (SANS 1921-1: 2004 Edition 1) prepared by Standards South Africa and shall be deemed to be incorporated herein.				
iii)	Tenderers are referred to the abovementioned 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.				
iv)	Where standard clauses or alternatives are not entirely applicable to this contract such modifications, corrections or supplements as will apply are given under each relevant clause heading.				
v)	Where any item is not relevant to this specific contract such item is marked N/A (signifying "not applicable").				
vi)	Adjustment of the preliminaries: each item priced, is to be allocated to one or more of the three categories, where "F" denotes a fixed amount (amount not to be varied), "V" denotes an amount variable in proportion to value and "T" denotes an amount in proportion to time.				
vii)	Time (T) related Preliminaries will only be adjusted for omissions or additions, issued by the Employer, or delays caused by the Employer, for which variation and extension of time has been granted. ***See Contract Data*** .				
	SECTION A: GENERAL CONDITIONS OF CONTRACT				
A1	General (clause 1) F:..... V:..... T:.....	Item			
A2	Basis of Contract (clause 2) F:..... V:..... T:.....	Item			
A3	Engineer (clause 3) F:..... V:..... T:.....	Item			
A4	Contractor's General Obligation (clause 4) F:..... V:..... T:.....	Item	1		
A5	Time and Related Matters (clause 5) - As referred to in the Contract Data under Special Condition of Contract. The Contract Period shall be deemed to include all Non – Working Days, Special Non – Working Days and the year-end Builders Annual Industry Holiday Periods. F:..... V:..... T:.....	Item			
A6	Payment and Related Matters (clause 6) F:..... V:..... T:.....	Item			
A7	Quality and Related Matters (clause 7) F:..... V:..... T:.....	Item			
	Carried forward				

	Brought forward				
A8	Risk and Related Matters (clause 8) F:..... V:..... T:.....		Item		
A9	Termination of Contract (clause 9) F:..... V:..... T:.....		Item		
A10	Claims and Disputes (clause 10) F:..... V:..... T:.....		Item		
	SECTION B: SANS 1921-1:2004 (Edition 1): CONSTRUCTION AND MANAGEMENT REQUIREMENTS FOR WORKS CONTRACTS: PART 1 **Refer to the SCOPE OF WORK for detail requirements:**				
B1	Scope F:..... V:..... T:.....		Item		
B2	Normative references F:..... V:..... T:.....		Item		
B3	Definitions F:..... V:..... T:.....		Item		
B4	Requirements for construction and management F:..... V:..... T:.....		Item		
B4.1	General F:..... V:..... T:.....		Item		
B4.2	Responsibilities for design and construction F:..... V:..... T:.....		Item		
B4.3	Planning, programme and method statements F:..... V:..... T:.....		Item	1	
B4.4	Quality assurance F:..... V:..... T:.....		Item		
B4.5	Setting out F:..... V:..... T:.....		Item		
B4.6	Management and disposal of water F:..... V:..... T:.....		Item		
B4.7	Blasting F:..... V:..... T:.....		Item		
B4.8	Works adjacent to services and structures F:..... V:..... T:.....		Item		
B4.9	Management of the Works and site F:..... V:..... T:.....		Item	1	
B4.10	Earthworks F:..... V:..... T:.....		Item		
B4.11	Testing F:..... V:..... T:.....		Item		
B4.12	Materials, samples and fabrication drawings F:..... V:..... T:.....		Item		
		Carried forward			

	Brought forward			
B4.13	Equipment F:..... V:..... T:.....	Item		
B4.14	Site establishment F:..... V:..... T:.....	Item	1	
B4.15	Survey control F:..... V:..... T:.....	Item		
B4.16	Temporary works F:..... V:..... T:.....	Item		
B4.17	Existing services F:..... V:..... T:.....	Item		
B4.18	Health and safety F:..... V:..... T:.....	Item	1	
B4.19	Environmental requirements F:..... V:..... T:.....	Item		
B4.20	Alterations, additions, extensions and modifications to existing works F:..... V:..... T:.....	Item		
B4.21	Inspection of adjoining structures, services, buildings and property F:..... V:..... T:.....	Item		
B4.22	Attendance on nominated and selected subcontractors F:..... V:..... T:.....	Item		
	SECTION C: SCOPE OF WORK in accordance with SANS 10403 *(The reference to Clauses refer to Table B.1 of SANS 1921-1:2004)*			
C1	Certification by recognised bodies - CLAUSE 4.4 F:..... V:..... T:.....	Item		
C2	Agrément certificates - CLAUSE 4.5 F:..... V:..... T:.....	N/A		
C3	Other services and facilities - CLAUSE 4.8 F:..... V:..... T:.....	Item		
C4	Recording of weather - CLAUSE 5.2 F:..... V:..... T:.....	Item		
C5	Management meetings - CLAUSE 5.3 F:..... V:..... T:.....	Item		
C6	Daily records CLAUSE 5.6 F:..... V:..... T:.....	Item		
C7	Bond and guarantees - CLAUSE 5.7 F:..... V:..... T:.....	Item	1	
C8	Permits - CLAUSE 5.9 F:..... V:..... T:.....	Item		
C9	Proof of compliance with the law - CLAUSE 5.10 F:..... V:..... T:.....	Item		
	Carried forward			

	Brought forward				
	SECTION D: SPECIFICATION DATA ASSOCIATED WITH SANS 1921-1:2004 (Table A.1)				
D1	Requirements for drawings, information and calculations for which the contractor is responsible CLAUSE 4.1.7 F:..... V:..... T:.....	Item			
D2	The responsibility strategy assigned to the contractor for the works CLAUSE 4.2.1 F:..... V:..... T:.....	Item			
D3	The planning, programme and method statements - CLAUSE 4.3 F:..... V:..... T:.....	Item			
D4	Samples of materials, workmanship and finishes - CLAUSE 4.12.1 F:..... V:..... T:.....	Item			
D5	Fabrication drawings that the contractor is to provide and deliver to the employer - CLAUSE 4.12.2 F:..... V:..... T:.....	Item			
D6	Office for the foreman CLAUSE 4.14.3 F:..... V:..... T:.....	Item			
D7	Telephone - CLAUSE 4.14.3 F:..... V:..... T:.....	Item			
D8	Office for inspector of works - CLAUSE 4.14.3 F:..... V:..... T:.....	Item			
D9	Telephone in office for inspector of works - CLAUSE 4.14.3 F:..... V:..... T:.....	Item			
D10	Sheds - CLAUSE 4.14.3 F:..... V:..... T:.....	Item			
D11	Provision and erection of signboards - CLAUSE 4.14.6 F:..... V:..... T:.....	Item			
D12	Termination, diversion or maintenance of existing services - CLAUSE4.17.1 F:..... V:..... T:.....	Item			
D13	Services which are known to exist - CLAUSE 4.17.3 F:..... V:..... T:.....	Item			
D14	Detection apparatus - CLAUSE 4.17.4 F:..... V:..... T:.....	Item			
D15	Additional health and safety requirements - CLAUSE 4.18 F:..... V:..... T:.....	Item			
	Carried forward				

	Brought forward				
	SECTION E: SPECIFIC PRELIMINARIES				
	Section E contains Specific Preliminary items which apply to this contract except where "N/A" (Not Applicable) appears against the item.				
E1	**PROPRIETARY BRANDED PRODUCTS**				
	The contractor shall take delivery of, handle, store, use apply and/or fix all proprietary branded products in strict accordance with the manufacturers' instruction after consultation with the manufacturer's authorised representative.				
	F:..... V:..... T:.....	Item			
E2	**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 Engineer/Principal Agent has specifically authorised in writing, prior to the execution thereof, that costs for such overtime are to be borne by the Employer.				
	F:..... V:..... T:.....	Item			
E3	**AS BUILT DRAWINGS**				
	The position of construction breaks and the extent of individual concrete pours are to be recorded by the Contractor on the Structural Engineer's drawings and are to be submitted to the Engineer/Principal Agent and the Structural Engineer for their records.				
	F:..... V:..... T:.....	Item			
	SECTION E: SPECIFIC PRELIMINARIES				
E4	**SITE INSTRUCTIONS**				
	Site Instructions issued on site are to be recorded in triplicate in a Site Instruction book which is to be maintained on site by the Contractor.				
	F:..... V:..... T:.....	Item			
E5	**LABOUR RECORD**				
	At the end of each week the Contractor shall provide the Engineer/Principal Agent with a written record, in schedule form, reflecting the number and description of tradesmen and labourers employed by him and all sub-contractors on the works each day.				
	F:..... V:..... T:.....	Item			
	Note : In the event that the contractor fails to satisfy the requirements of this specification, the Employer (Head: Public Works) may apply any of the sanctions provided in the contract. Sanctions may include the application of a financial penalty of .04% of the Contract Sum per calendar day of which the required report has not been submitted.				
E6	**PLANT RECORD**				
	At the end of each week the Contractor shall provide the Engineer/Principal Agent with a written record, in schedule form, reflecting the number, type and capacity of all plant, excluding hand tools, currently used on the works.				
	F:..... V:..... T:.....	Item			
E7	**NON CESSION OF MONIES**				
	The Contractor shall not cede nor assign his rights or claims to any monies due or to become due under this contract.				
	F:..... V:..... T:.....	Item			
	Carried forward				

	Brought forward				
E8	**SECTIONAL COMPLETION** When it is required that the contract be executed in sections or portions, the tenderer shall allow for all costs in this regard as no claim for additional costs will be entertained. F:..... V:..... T:.....	Item			
E9	**LOCAL LABOUR** It is a general requirement of this contract that persons normally resident in the locality of the works (Local Labour) be given preference for employment on the contract. Provided, however, that should adequate and appropriate Labour not be available within the locality, others may be employed subject to satisfactory proof being provided that every reasonable endeavour has been made to employ Local Labour. The Contractor shall identify the local community leaders with the purpose of negotiating with them regarding the utilization of Local Labour in the construction process. In this regard, the Contractor shall furthermore give preference, wherever possible to the employment of single heads of households, women and youth. The Contractor shall, in general, maximize the involvement of the local community. F:..... V:..... T:.....	Item			
E10	**IMPORT PERMITS AND DUTIES** The responsibility for obtaining the necessary import permits shall rest with the successful Tenderer. No foreign exchange will be arranged or provided by the Administration. Tenderers are to allow in their tenders and pay the ordinary levy imposed on imported items in terms of item 196.10 of Part 8 of Schedule No. 1 of the Customs and Excise Act, 1964 with effect from 1 October 1989. F:..... V:..... T:.....	Item			
E11	**CONTRACT PRICE ADJUSTMENT PROVISIONS (CPAP)** Contract Price Adjustment Provisions (CPAP) Indices Application Manual for use with P0151 indices (Revised 1 January 2013)" as published by Statistics South Africa. The Contract Price Adjustment Provision (CPAP) will be subject to the most recently released indices by Statistic South Africa. Tenderders are advised that with reference to Clause 3.4.6 of the Contract Price Adjustment Provisions (CPAP) Indices Applications Manual, the Head: Public Works will not accept the submission by Tenderders of lists of additional items." Where this contract is a Lump Sum contract, the contract will be subject to Contract Price Adjustment Provisions (CPAP) only where the contract period equals or exceeds 6 calendar months. The applicable work group shall be WG 180 for domestic buildings or WG 181 for commercial and industrial buildings. F:..... V:..... T:.....	Item			
E12	**EPWP CONDITIONS AND SPECIFICATIONS** **12.1 EMPLOYMENT TARGETS** <u>E12.1 a Employment Targets</u> The contractor needs to provide a realistic estimate on the number of jobs that the project has the potential to create throughout the project duration as No of jobs to be created = ……. *[Contractor to fill in an estimated number]* F:..... V:..... T:.....	Item			
	Carried forward				

Brought forward				
E12.1 b Employment requirements Tenderers are advised that this contract will be subject to the Expanded Public Works Program (EPWP) aimed at alleviating and reducing unemployment. Tenderers must allow for any costs for the employement of unskilled labour as per the requirements of the EPWP program; 1. 55% of unskilled labour to be women 2. 55% of unskilled labour to be youth aged between 18 and 35 years 3. 2% of unskilled labour to be people living with disability 4. 100% Unskilled labour utilised must reside within the boundries of the Municipality Ward where this contract is executed, with preference to the local community closest or at the walking distance to the contract site. Wherever possible local skilled tradesmen are to be employed on this contract with the view to maximize utilization of local resources.				
F:..... V:..... T:.....	Item			
E12.1 c Labour rate and payment intervals The contractor should ensure that labour rate paid to unskilled local labour is commensurate to the daily task. When determining the rate, consideration should be given to that EPWP beneficiaries are mostly bread winners in their families, as the program intends alleviating poverty. There should also be consideration that the labour rate promotes creation of expanded number of jobs created and person days of work. Contractors should make endeavours to ensure that labourers, particularly unskilled are remunerated on fortnight basis and prior notification be made should there be a shortfall on their wages. The labour rate for local unskilled shall also be determined in consideration of the location of the project, i.e. for projects implemented in urbanized municipalities will not be the same as that for rural municipalities.				
F:..... V:..... T:.....	Item			
12.2 LABOUR INTENSIVE CONSTRUCTION METHOD				
E12.2 a Labour Intensive Construction (LIC) method On site there must a person(s) having competency in managing and implementing LIC methods. *Foreman @ NQF Level 4 the Unit Standard on Implementing LIC methods on site. *Site Agent/ Managers @ NQF level 5 the Unit Standard on Manage Labour-Intensive Skills Programme both must be CETA accredited				
F:..... V:..... T:.....	Item			
E12.2 b Labour Intensive Construction Method Those parts of the contract to be constructed using Labour Intensive methods will be marked in the BoQ with letter LI (indicating Labour Intensive) against every item so designated. Such works will only be constructed using method so indicated. Reference to be made to Guidelines for the implementation of Labour Intensive Infrastructure projects under EPWP. "Scope of Work in Respect of Work Relating to the Expanded Public Works Programme (EPWP)"				
F:..... V:..... T:.....	Item			
Carried forward				

Brought forward				
E12.3 RECORD KEEPING 12.3.1 Every employer must keep in the project site office the following minutes of site progress minutes; contractors' monthly site progress reports; accurately recorded attendance register; proof of payment as means to verify authenticity of data in the EPWP Beneficiary form submitted with payment certificates. Copies of submitted EPWP beneficiary data forms should also be kept in the site office. F:..... V:..... T:.....	Item			
12.3.2 The employer must keep this record for a period of at least three (3) years after the completion of the project in his/her office as the project site office would have been relocated. This should be safely kept for job creation data verifications and periodical audits on projects conducted by National and Provincial Department of Public Works after one (1) or two (2) quarters of submitting captured EPWP Data to the National EPWP coordinating Department. F:..... V:..... T:.....	Item			
E12.4 EPWP REPORTING as per EPWP DATA FORM At the end of each month as part of site progress report and to be attached to every contractors' progress payment certificate; the contractor shall provide the Engineer/Principal agent & Public Works with a written records, as per EPWP data form; which will be reflecting, beneficiaries full name & surname; ID No and job description of labour employed by main contractor and sub-contractors on site. At the end of each month the contractor must submit the following documents to be attached to the Progress payment certificate: 1. EPWP monthly data collection form 2. Worker monthly payment upload 3. Worker monthly proof of payment i.e 3.1 Acknowledgement of receipt of payment or 3.2 Payslips 3.3 Bank statement highlighted the workers paid 4. Worker monthly training form 5. Monthly attendance register 6. Certified copies of ID's (once off) 7. ID size photos (once off) 8. Proof of UIF 9. Proof of COIDA F:..... V:..... T:.....	Item			
E12.5 EPWP PROMOTION <u>12.5.1 EPWP signage board</u> EPWP Program at the project level shall always be promoted through have the projects signage board that embrace EPWP logo at the bottom, correct measurement for this signage board will be provided by the project leader during the site handing over meeting. the standard "HELVETIVA MEDUIM " letters are to be used . Professional title to be 10 mm above line . Line thickness to be 8 mm thick . Space between bottom of the line and bottom of the lettering below the line has to be 100 mm. Letter sizes are as follows : Helvetica meduim 100 mm black upper case to be for project name and owner . Helvetica meduim 75mm black upper case only to be used for professional titles.Project name and owner shall be black lettering on white background.board sizes are as follows : Board to be minomum 2000mm from ground level and to be constructed from reinforced formed chromadek panels minimum 0,6mm thick chromadek. The contractor is responsible for ensuring that the project board remains neatly and safely erected for the full duration including maintenance period,after which the project board and post are to be dismantled and handed to the client in good order.				
Carried forward				

Brought forward				
F:..... V:..... T:.....	Item			
12.5.2 Branding of labour apparel Contractor & Sub-contractors' labourers shall be provided with EPWP branded Personal Protective Equipment (PPE), reflector vest with EPWP wording at the back is an ideal and cost effective means of promoting program on site. The contractor is then advised to price for both item 17.5.1 and 17.5.2 F:..... V:..... T:.....	Item			
E12.6 COMMUNITY LIAISON OFFICER (CLO)				
UTILISATION OF A COMMUNITY LIAISON OFFICER				
In addition to the requirements of Clause E9, contained in this document;				
The Contractor shall allow for and pay any and all costs necessary for the engagement of the services of a Community Liaison Officer (CLO) for the full duration of this contract				
In the interest of providing a sound service to both the community and the Contractor, a CLO may only manage one project at a given time.				
A CLO will be identified by the local structures of the ward areas and appointed following fair and transparent interviewing process, to be conducted in the presence of local structures and the contractor representative, in order to assist the Contractor in the procurement of any local labour, etc. required for this project. The Contractor is to liaise with the CLO and afford him any assistance needed in ensuring sound working relations with the local community.				
Key Responsibilities of the CLO are envisaged to include and not necessary be limited to:				
1. Assisting local leadership in conducting skills and resources audit which facilitates sourcing labour from within the ward or targeted areas for employment, as required by contractor.				
2. Assisting in sourcing labour-only domestic sub-contractors and the procurement of materials from local resources, as required by the contractor.				
3. Assisting the contractor by identifying areas of potential conflict and or threats to the project or to stakeholders in the project and recommend appropriate action to the contractor.				
4. Assisting contractor and stakeholders in the project in the resolution of any conflict which may arise.				
5. Establishing and ensuring that sufficient and open communication channels between the contractor and the work force are maintained.				
6. Establish and ensuring that efficient and open communication channels between the contractor and the community are maintained				
7. Identifying and reporting to the Contractor regarding issues where communication between stakeholder is necessary, recommend courses of action and facilitate such communications				
8. Assisting the Contractor and the work force in the establishment of grievance procedures and necessary recommendation to the Contractor regarding the grievances and solution thereto.				
Carried forward				

Brought forward				
9. Attending to site meetings and project implementation meetings as required by the Contractor and prepare periodic reports as may be required by the Contractor from time to time. 10. Attending to such other duties which are consistent with the functions of a CLO, as may be required by the Contractor from time to time. Tenderers are to price twice the rate of unskilled local labour rate against this item for any and all costs arising out of compliance with the foregoing and in the event of a Tenderer failing to price against this item or making inadequate financial provision against this item for compliance as aforesaid, then no claim for costs or additional cost incurred will be entertained by the Head: Works F:..... V:..... T:.....	Item			
E12.7 SKILLS DEVELOPMENT ON SITE Contractor in conforming to the object of EPWP that its beneficiaries need to be capacitated with skills that will render them employable in the future. It is then the responsibility of the Contractor that mandatory life skills are provided to 100% of workforce on site and on the job training to labourers from whom the potential for further development has been identified. The latter is not mandatory to all as it covers technical skills. Contractor should also make provision for the possibility that there might be local youth that will need to be placed on the project with an intention to be provided support towards improving their level of competency and productivity. Contractor shall also provide all necessary on-the-job training to targeted labour to enable such labour to master and advance on techniques required to undertake the work in accordance with requirements of the contract in a manner that does not compromise workers health and safety. F:..... V:..... T:.....	Item			
E12.8 LABOUR ONLY Sub Contracting for local emerging enterprises Tenderer's are advised that this contract is subject to the Expanded Public Works Programme (EPWP) and the following criteria will apply: <u>African Equity Ownership</u> a) The Tenderer is to allow for 5% of the total value of works to be undertaken by a Priority Population Group. This percentage excludes the costs of employing local unskilled labour. The allocation of this percentage from the Project, the screening of people, the selection of skills, will be for the Contractor to adjudicate. b) The Priority Population Group consists of women, youth and disabled people. c) The Contractor is to give first option for prospective PPG's from the surrounding areas of the Project. Should there be insufficient suitable people fitting the criteria of PPG's, the Contractor may hire people from further afield. This is to be done only after consultation with the Department of Works EPWP Co-ordinator and the Community Liaison Officer (CLO). d) A Mentor is to be employed by the Contractor, in consultation with the Department of Works for the purposes of quality control and liaison between the Contractor and the selected PPG's on site. The mentor will be responsible for ensuring an acceptable level of quality workmanship and that such work carried out by the PPG's is executed within the time frames stipulated.				
Carried forward				

Brought forward				
In so far as possible, the Contractor is encouraged to expand the PPG's skills, knowledge and performance levels. F:..... V:..... T:.....	Item			
TENDERER'S TO NOTE CONDITIONS a) The contract to be entered into between the Contractor and the PPG's will be a LABOUR ONLY sub-contract. b) The Contractor will be responsible for ensuring that all materials for use by the PPG's in the works are to be on site timeously. The Contractor shall liaise with The Mentor and PPG to determine the nature and extent of materials required and the lead time necessary. c) The Contractor shall be responsible for the overall programming of the Works and he is to allow for monitoring the PPG's programme and progress. d) In conjunction with the Mentor, he is to allow for the supervision and mentoring (where necessary) of the PPG to ensure quality and adherence to standard building practice e) The Contractor is to allow for extra storage facilities on site for the PPG's tools and equipment. f) Basic tools shall be provided by the PPG's and where these are not available; the Contractor will supply him with the necessary tools and equipment and deduct the costs thereof from the interim claims made by the PPG. g) Work requiring specialized tools will be provided free of chargeby the Contractor with the provision that these be returned upon completion of the Work.				
CO-ORDINATION The Contractor is to co-ordinate the work of all the PPG's, Sub-Contractors and Nominated Sub- Contractors appointed direct by the Employer in such a manner and at all times as will suit the building programme and he is to allow adequate access, for the PPG's, where required, to carry out their work in an efficient manner as no claims for extras in this connection will be entertained. F:..... V:..... T:.....	Item			
ATTENDANCE The Contractor may allow for attendance upon the PPG's concerned to execute the work. The Contractor is to allow the PPG's the use of any scaffolding belonging to him while it remains so erected on the site. Where scaffolding is necessary for the use by any PPG and the Contractor has not erected any for his own use or has removed same after his own use, the Contractor shall supply sufficient scaffolding to the PPG to be erected and dismantled by the PPG and returned to the Contractor. This attendance upon PPG's to execute the work is to include for the scaffolding provisions as aforesaid and, in addition, is to include for co-operating to the fullest extent with all the parties, attending on off-loading materials, providing suitable storage for tools and materials used by the PPG's, use of general facilities such as latrines, etc., supply and cost of power, lighting, water and the like. F:..... V:..... T:.....	Item			
Carried forward				

Brought forward				
E12.9 EPWP CONTRACT FOR LABOUR It is compulsory that shortly after the contractor and or sub contractor has appointed local labour, the employment contract should be signed by both parties, prior to commencement with works on site. The employment contract forms part of the Ministerial Determination or from the regional EPWP officials. Each contract will lapse at the end of each financial year therefore requiring the Contractor to do a renewal of each contract should the need of employment still exist for that particular labourer. F:..... V:..... T:.....				
E12.10 EPWP SCOPE of WORK **Note:** Contractors are to price any item on the Bill of Quantities having below, bearing in mind that they are regarded as main sources of job creation, whether sub contracted or undertaken by the main contractor. Elements on the scope of work where application of Labour Intensive Construction methods as will indicated with letters (LI) are regarded feasible are as follows; i) Excavating trenches for foundations and any other civil works with the depth not more than 1.5 m ii) All masonry works which include concrete mixing on site; brickwork; plastering; screed works; jointing; etc. iii) Painting, Plumbing, Ironmongery; roof cladding; glazing; tilling; carpentry; flooring; waterproofing; etc. F:..... V:..... T:.....	Item			
Note: It is a general requirement of this contract that persons normally resident in the ward of the works (local labour) be given preference for employment on the contract. Provided, however, that should adequate and appropriate labour not be available within the ward, others may be employed subject to satisfactory proof being provided that every reasonable endeavour has been made to employ local labour (Local Sub-contractor(s); Skilled; Semi-Skilled and Unskilled). The contractor shall in consultation with the local community leaders with the purpose of negotiating with them regarding the utilization of local resources in the construction process. In this regard, the contractor shall furthermore give preference, wherever possible to the employment of single heads of households, women and youth as well as families declared as most indigent by War on Poverty/ Sukuma Sakhe program profiling process. The contractor should aim, in general, to maximise the involvement of the local community, however workers from other communities should not exceed 20% of all persons working on the project, where local employees possess skills at level of competency that meet contractors requirements. Payment for the labour-intensive component of the works Payment for works identified in the Scope of Work as being labour-intensive shall only be made in accordance with the provisions of the Contract if the works are constructed strictly in accordance with the provisions of the Scope of Work. Any non-payment for such works shall not relieve the Contractor in any way from his obligations either in contract or in delict.				
Carried forward				

	Brought forward				
	Linkage of payment for labour-intensive component of works to submission of project data The Contractor's payment invoices shall be accompanied by labour information for the corresponding period in a format specified by the employer. If the contractor chooses to delay submitting payment invoices, labour returns shall still be submitted as per frequency and timeframe stipulated by the Employer. The contractor's invoices shall not be paid until all pending labour information has been submitted. Applicable labour laws The current Ministerial Determination (also downloadable at www.epwp.gov.za) Expanded Public Works Programmes, issued in terms of the Basic Conditions of Employment Act of 1997 by the Minister of Labour in Government Notice , shall apply to works described in the scope of work as being labour-intensive and which are undertaken by unskilled or semi-skilled workers. F:..... V:..... T:.....	Item			
E13	**HIV/AIDS AWARENESS** Tenderers are to price against the following items for compliance with the SPECIFICATION FOR HIV/AIDS AWARENESS bound into this document (The clauses referred to are those of the Specification for HIV/AIDS)				
E13.1	Provide and maintain a condom dispenser in terms of Clause 5.1a) F:..... V:..... T:.....	Item			
E13.2	Provide and maintain HIV/AIDS awareness posters terms of Clause 5.1b) F:..... V:..... T:.....	Item			
E13.3	HIV /Aids Awareness Programme on Site for not less than 90% of workers inclusive of all direct and indirect costs; Engage a qualified service provider as described in the scope of works to conduct an HIV Awareness Programme in terms of Clause 5.2.1a) F:..... V:..... T:.....	Item			
E13.4	Arrange for workers to attend the HIV Awareness Programme in terms of Clause 5.2.1b) F:..... V:..... T:.....	Item			
E13.5	**Reporting** Prepare and attach to claims for payment a brief report in terms of Clause 5.3 (see also HIV/STI Compliance Report included with this document). F:..... V:..... T:..... ***Note: In the event that the contractor fails to satisfy the requirements of this specification, the employer may apply any of the sanctions provided for in the contract. Sanctions may include the application of a financial penalty of .04% of the Contract Sum per calendar day of which the required reports has not been submitted.***	Item			
	Carried forward				

	Brought forward				
E14	**OCCUPATIONAL HEALTH AND SAFETY ACT NO. 85 OF 1993** Tenderers are to allow for costs in providing a project specific ' Construction Phase Safety, Health and Environmental Plan' in accordance with "Section 2 - Specification Data associated with SANS 1921-1:2004" clause C4.18 in "Part C3 - Scope of Work" F:..... V:..... T:.....	Item	1		
E15	**NOTICE BOARD, SITE OFFICE, ETC.** Tenderers are to allow for the provision and removal of a project notice board and a site office in accordance with the Principal Agent's requirements. F:..... V:..... T:.....	Item	1		
E15.1	**FACILITIES FOR ENGINEER** Tenderers are to allow for the provision and removal of a furnished office with an airconditioning unit for the Resident Engineer in accordance with the Engineer/Prinicpal Agents requirements. F:..... V:..... T:.....	Item	1		
E16	**IMPORTED MATERIALS AND EQUIPMENT** Where imported items are listed in the tender documents, the tenderer shall provide all information called for, failing which the price of any such item, material or equipment shall be excluded from currency fluctuations. F:..... V:..... T:.....	Item	1		
E17	**CONTRACT DOCUMENTS** The drawings issues with these Tender documents do not comprise the complete set but serves as a guide only for tendering purposes and for indicating the scope of works to enable the Tenderer to acquaint him with the nature and extent of the works and the manner in which they are to be executed. Should any part of the drawings not be clearly legible to the Tenderer he shall, before submitting his Tender, obtain clarification in writing from the Engineer/Principal agent. F:..... V:..... T:.....	Item	1		
E18	**GENERAL PREAMBLES** The Document Preambles will be the “ASAQS Model Preambles for Trades – 2008” and is obtainable from the various Regional Office’s of the Department of Public Works and shall be read in conjunction with the Bills of Quantities and be referred to for the full descriptions of work to be done and materials to be used. F:..... V:..... T:.....	Item	1		
E19	**TRADE NAMES** Wherever a Trade Name for any product has been described in the Bills of Quantities the Tenderer's attention is drawn to the fact that any other product of equal quality may be used subject to the written approval of the Engineer/Principal Agent being obtained prior to the closing date for submission of Tenders. F:..... V:..... T:.....	Item			
E20	**EXISTING PREMISES OCCUPIED** Refer to Scope of Works Part C3 of this Tender Document for information on the occupation of existing buildings. F:..... V:..... T:.....	Item			
E21	**INACCURATE AND DEFECTIVE WORK EXECUTED UNDER PREVIOUS CONTRACT**				
	Carried forward				

	Brought forward				
	The contractor shall, after taking possession of the site and before commencing the work, check all levels, liners, profiles and the like and satisfy himself as to the dimensional accuracy of all work executed under the previous contract which may affect his work. Should any inaccurate or defective work be found, the contractor shall immediately notify the Engineer/Principal agent in writing requesting his instructions with regard thereto and afford every facility to those rectifying such inaccurate or defective work. F:..... V:..... T:.....	Item			
E22	**VIEWING THE SITE IN SECURITY AREAS** If the site is situated in a security area and the Tenderder must arrange with the Authorities to obtain permission to enter the site for Tenderding purposes. F:..... V:..... T:.....	Item			
E23	**COMMENCEMENT OF WORKS IN SECURITY AREAS** If the works falls within a security area, the contractor must arrange with the Authorities and give the necessary notices before commencement of the works. Should the contractor fail to make such arrangements, admission to the site may be refused and any additional costs will be for the contractor's account. F:..... V:..... T:.....	Item			
E24	**ENTRANCE PERMITS TO SECURITY AREAS** If the works fall within a security area, the contractor shall obtain entrance permits for his personnel and workmen entering the area and shall comply with all regulations and instructions which may be issued from time to time regarding the protection of persons and property under control of the Authority. F:..... V:..... T:.....	Item			
E25	**SECURITY CHECK OF PERSONNEL** The Engineer/Principal agent may require the contractor to have his personnel and workmen, or a certain number of them, security classified. In the event of the principal agent requesting the removal of a person or persons from the works for security reasons, the contractor shall do so forthwith and shall thereafter ensure that such person or persons are denied access to the works and the site and/or to any document or information relating to the works. F:..... V:..... T:.....	Item			
E26	**PROHIBITION ON TAKING PHOTOGRAPHS** In terms of article 119 of the Defence Act, 44 of 1957, it is prohibited to sketch or to take photographs of any military site or installation or any building or civil works thereon or to be in possession of a camera or other apparatus used for taking photographs, except when authorised thereto by or on behalf of the Minister. The same prohibition is also applicable to all Correctional Institutions in terms of article 44.1(e) of the Correctional Services Act 8 of 1959. F:..... V:..... T:.....	Item			
E27	Management of Water Water for Construction purposes must be obtained from alternative water sources (i.e. supply other than water that is produced and distributed by a regulated water service authority from a licenced water treatment works for human consumption), eg dams, rivers, boreholes, springs, rainwater harvesting, recycled sewerage water,etc. The alternative water source shall not be of an inferior quality / standard than that required for construction purposes. The client reserves the rigfht through his agents to test such supplies or request certificates confirming the grade and nature of the water supply. Relevant knowledge of the respective area will be an advantage.				
	Carried to Phase 1.1 Summary			**R**	

ITEM NO			QUANTITY	RATE	AMOUNT
	BILL NO 2				
	EXTERNAL WORK				
	BOUNDARY WALL				
	Excavation in earth not exceeding 2m deep				
1	Trenches	m3	299		
	Risk of collapse of excavations				
2	Sides of trench and hole excavations not exceeding 1,5m deep	m2	996		
	Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% Mod AASHTO density				
3	Backfilling to trenches, holes, etc	m3	168		
	30MPa/19mm unreinforced concrete				
4	Strip footings	m3	90		
	Foundations (Provisional)				
	Brickwork of NFX bricks (14 MPa nominal compressive strength) in class I mortar				
5	One brick walls	m2	182		
	2,5mm Brickwork reinforcement				
6	150mm Wide reinforcement built in horizontally	m	798		
	Superstructure (Provisional)				
	Brickwork of NFX bricks (14 MPa nominal compressive strength) in class I mortar				
7	One brick walls	m2	996		
	2,5mm Brickwork reinforcement				
8	150mm Wide reinforcement built in horizontally	m	2316		
	External Plaster				
	Cement plaster wood floated, on brickwork				
9	On walls	m2	1991		
10	On narrow widths not exceeding 300mm wide	m2	115		
	Paintwork to new work				
	On external Floated Plaster Surfaces				
	One coat alkali resistant primer and two coats superior quality acrylic emulsion paint for interior and exterior use				
11	Walls	m2	2105		
	Carried forward				

	Brought forward			
	ROADWORK, PARKING AREAS AND PAVING			
	Testing of material and filling			
	Descriptions of earth filling, compaction, etc shall be deemed to include for all necessary testing required in accordance with the SABS 1200 series Precast concrete block road surfacing			
	Paving shall be laid in accordance with SABS 1200 MJ, SANS 1058 and the Concrete Masonry Association's specifications			
	Paving shall be laid to herringbone pattern on 20mm thick (thickness after final compaction) clean river sand (preparation of ground or filling elsewhere)			
	Clean sand shall be swept into joints between roadstones at completion			
	Site clearance			
12	Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush, etc and trees not exceeding 200mm girth	m2	3016	
	Compaction of surfaces			
13	Compaction of ground surfaces under pavings etc, including scarifying for a depth of ?mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density	m2	3016	
	Weedkiller,Insectides,etc			
	Weedkiller(active ingredients metalaclor 102.8 g/l) mixed in the proportion of 100ml weedkiller to 100 litre water and applied at a rate of 10l/m2			
14	Under paving,etc	m2	3016	
	LAYER WORK			
	Selected earth filling obtained from the excavations and/or prescribed stock piles on site, including haulage from perimeter of excavations and/or stock piles			
15	Subbase course under parking areas etc, compacted to 93% Mod AASHTO density	m3	453	
	Filling supplied by the contractor under parking areas, roadways, etc			
16	Subbase course of G5 natural gravel material, compacted to 93% Mod AASHTO density	m3	453	
	80mm Thick precast concrete interlocking block paving in accordance with SANS 1058, laid to falls on and including 20mm thick sand layer with joints filled in with sand, compacted with a vibration compactor			
17	Paving to parking areas etc to falls, including necessary straight edge blocks	m2	3616	
	Precast concrete finished smooth on exposed surfaces, including bedding, jointing and pointing			
18	150 x 300mm High kerbs (SANS 927 fig 3) with 150 x 150 x 300mm unreinforced concrete haunching at back of each joint, including excavation, backfilling, etc	m	250	
	Carried forward			

	Brought forward				
	Road signs				
19	Standard "STOP" sign with 50mm diameter galvanised mild steel post bedded in and including unreinforced concrete base, including any necessary excavation, paint finish, etc	No	4		
	Paintwork				
	Two coats reflective road marking paint on tarmacadam				
	Etching primer and two coats reflective road marking paint on concrete				
20	Line 100mm wide	m	900		
21	Numeral or letter 200mm high	No	20		
22	Traffic arrow 1280 x 1000mm wide extreme	No	20		
23	Disability parking sign 600 x 600mm wide extreme	No	4		
	Carried to Phase 1.1 Summary			**R**	

ITEM NO			QUANTITY	RATE	AMOUNT
	BILL NO 3				
	PROVISIONAL SUMS				
	Special attendance on nominated/selected subcontractors				
	Where "special attendance" such as unloading, storing, placing in position, providing special power supplies, specific hoisting, cranage and scaffolding requirements, provision of temporary casing and/or other specific protection of the works, special security and clearing away rubbish is required, a separate item describing the specific requirements in detail is to be provided for the pricing of such requirements				
	Builder's work				
	Builder's work in connection with specialist services is given elsewhere in these bills of quantities				
	BUDGETARY ALLOWANCES				
	Sundry building work				
1	Provide the sum of R300 000(Three Hundred Thousand Rands only) for sundry building work	Item	1	300 000,00	300 000,00
	PROVISIONAL SUMS FOR NOMINATED/SELECTED SUBCONTRACT WORKS				
	Screens and gates				
2	Provide the sum of R100 000 (One Hundred Thousand Rands Only) for screens and gates	Item	1	100 000,00	100 000,00
3	Profit	Item			
4	Attendance	Item			
	Enviromental				
5	Provide the sum of R200 000 (Two Hundred Thousand Rands only) for Environmental assessments	Item	1	200 000,00	200 000,00
6	Profit	Item			
7	Attendance	Item			
	Power Supply by Eskom				
8	Provide the sum of R472 000 (Four Hundred and Seventy Thousand Rands) for provision of permanent power supply to site by Eskom	Item	1	472 000,00	472 000,00
10	Profit	Item			
11	Attendance	Item			
	Subcontracting to Local Subcontractors				
12	Allocate the sum of R500 000 (Five Hundred Thousand Rands) to identify procurement opportunities and impliment the participation of local EME's and QSE's as subcontractors within the project.	Item	0	976 320,00	Amount Only
13	Profit	Item			
14	Attendance	Item			
15	Allocate the sum of R65 000 (Sixty Five Thousand Rands) for a Community Liason Officer (CLO)	Item	1	65 000,00	65 000,00
16	Profit	Item			
17	Attendance	Item			
	Carried to Phase 1.1 Summary			**R**	

SECTION 2 PHASE 1.1

BILLOF QUANTITIES

CIVIL WORKS

ITEM No.	PAYM. REFERS			QUANTITY	RATE	AMOUNT
	SABS	**SECTION 2**				
		BILL NO 1				
	1 200	**CIVIL EARTHWORKS**				
	D	Drawing refers : A051-P2				
1,1		**Site preparation**				
1.1.1	8.3.1.1	Clear vegetation, rubble, bushes and trees up to 1 m of girth to a designated area of soil to a depth not exceeding 150 mm	m2	2 418		
1.1.2	8.3.1.2	Removal of topsoil to a nominal depth of 150 mm, stockpilling and preventing dust as specified in section 5 of SABS 1200D	m2	2 418		
1,2	1200 D	**Bulk excavation**				
1.2.1	8.3.2	a) Excavate in all materials and use for embankment or backfilling or dispose as ordered	m3	308		
		b) Extra-over on item 1.2.1 for:				
1.2.2		1) Intermediate excavation	m3	235		
1.2.3		2) hard rock excavation	m3	5		
1,3		**Platform Layerworks**				
	1200 D 8.3.4	Import material from either designated borrow pit or commecial source irrespective of haul distance. The rate shall cover loyalities (where applicable), aquiring suitable material, forming access to the borrow pit, removal of overburden, loading, transporting offloading at a point of placing, removal of access and replacing overburden,inclusive of the bulking factor compacted to the following compaction efforts:				
1.3.1		G7 compacted to 93% mod AASHTO	m3	2 209		
1.3.2		G6 compacted to 95% mod AASHTO	m3	20		
1,4		**Platform preparation**				
	1200 D	PLATFORM PREPARATION				
1.4.1	8.3.2	Rip and recompact the insitu material to to 93% of Mod AASHTO max density 150mm thick	m3	200		
		Extra-over to item 1.4.1 in the following types of excavation:				
1.4.2		Intermediate excavation	m3	235		
1.4.3		Hard excavation	m3	5		
1.4.4	8.3.3	Removal of oversize materials	m3	5		
1,5		**Topsoiling**				
		Excavate material form stockpile, transport and spread material to a designated position as order by the Engineer on site.	m3	363		
1,6	PS	Supply and construct a retaining wall (loffelstein block) of a max. height of 1.9m	m2	342		
		Carried to Phase 1.1 Summary			**R**	

ITEM No.	PAYM. REFERS			QUANTITY	RATE	AMOUNT
		SECTION 2				
		BILL NO 2				
		WATER MAINS				
4.1		**Site Clearance**				
4.1.1	C 8.2.1 PSC 1-2	Clear vegetation, rubble, bushes and trees up to 1 m of girth to a width of 1.5 m from the centre of the trench to either side as well as any other obstructions if instructed by the Engineer in writing, recorded in the site instruction book and forwarded with the relevant certificates for payment purposes. This item shall include the removal of the topsoil to a depth of 75 mm and a width of 3 000 mm, the maintenance thereof until it can be re-used and the re-laying and spreading upon the completion of the pipe line to the satisfaction of the Engineer	m2	410		
4.2		**Excavations**				
	DB 8.3.2.(a) PSDB 1 - 7 D 5.2.3.2	Excavate in all materials for trenches, compact the trench bottom to 90 % MOD AASHTO density, backfill by hand in layers of not exceeding of 150 mm in thickness using excavated material unless otherwise instructed by the Engineer in writing, compact the layers to 90 % MOD AASHTO density, dispose of all surplus and / or unsuitable material within free haul distance at a place as shall be instructed by the Engineer for the 90 mm diameter pipes, for the following depths :				
4.2.1		a)Excavation exceeding 0.0 m up to and including 1.5 m.	m3	13		
		b)Excavation exceeding 1.5 m up to and including 2.0 m.	m3	405		
4.2.2	8.3.2.(b)2 PSDB 8	Extra over for excavation in hard rock material (as specified in SANS 1 200 D Item 3.1.2 c.1). Quantities with positions and dates must be recorded in the site instruction book and agreed with the Engineer on site before any blasting commences. Those records must accompany the certificates for payment purposes. Rate shall include the spoiling of un - usable hard rock material within free haul distance	m3	3		
4.2.3	8.3.2.(b)2 PSDB 8 8.3.2.(c)	Extra over for additional deeper excavations in trench bottoms caused by unsuitable material to lay bedding on, rate shall include the disposal of any such material within free haul distance, quantities must be agreed upon by theEngineer and recorded in the site instruction book and forwarded with the relevant certificates for payment purposes	m3	10		
4.3		**Excavation Ancillary Items**				
4.4.1	8.3.3.1.a	Make up deficiency in backfill material due to spoiling of surplus, unsuitable and / or rock material from other necessary excavations on site within free haul of 0.5km (compaction of this material measured in excavation items), quantity to be agreed with the Engineer, recorded in the site instruction book and forwarded with the relevant certificates for payment purposes.	m3	236		
4.4.2	8.3.3.1.b	Make up deficiency in backfill material due to spoiling of surplus, unsuitable and / or rock material from other necessary excavations on site outside a free haul of 0.5km (compaction of this material measured in excavation items), quantity to be agreed with the Engineer, recorded in the site instruction book and forwarded with the relevant certificates for payment purposes.	m3/km	20		
4.4.3	8.3.3.3 PSDB 4	Compaction in road reserves to 95 % MOD AASHTO density with soilcrete using a ratio of 1 : 10, rate shall include all materials and labour. Positions,dates and quantities shall be recorded in the site instruction book and accompany the certificates for payment, (in each instance 5 000 mm from road centre line in both direction (10 000 mm length) x trench width x trench depth less 300 mm from street level must be cast), all trenches in street crossings must have soilcrete filling	m3	2		
4.4		**Dealing with existing services**				
	8.3.5	Dealing with services that intersect or adjoin the pipe trenches involved in this contract				
			Carried forward			

		Brought forward			
	8.3.5.a PS 8.8	Excavate by hand in soft material to expose existing services crossing the road or shoulder areas and provide permanent or temporary protection to be approved by the Engineer and recorded in the site instruction book, with position for the following items and forwarded with the relevant certificates for payment purposes, these items must be shown on the "record" drawings as well which are to be handed to the Engineer's office at completion of the project	m3	6	
4.4.4		Excavate by hand in soft material to expose existing services adjoining the new road and shoulder areas and provide permanent or temporary protection, length and positions to be confirmed by the Engineer and recorded in the site instruction book and forwarded with the relevant certificates for payment purposes	m3	6	
4,5		**Surface Finishing**			
4.5.1	DB 8.3.6.1.a	Re - instate all surfaces encountered in the process of construction work, with all existing layer works as well as asphalt, concrete or paved block finishing to original conditions prior to the start of the contract, including the importation of material if necessary and the compaction thereof to 93 % MOD AASHTO density	m2	2	
4,6		**Provision for Bedding and Covering**			
4.6.1	LB 8.2.2.1 PSLB' 1 - 3	Provision of bedding and covering material from other excavations within 0.5 km on this site,(compaction thereof measured under Items 1.2)			
4.6.1.1	8.2.2.1.a	Selected granular material for bedding as specified for Class B bedding, placed and compacted in uniform layers as pipe barrel on both sides of the pipes for bedding cradle, ensuring that no stones are amongst the materials, the Engineer must inspect, approve and record each section of bedding in the site instruction book and each approval must accompany the relevant certificates for payment purposes	m3	53	
4.6.1.2	8.2.2.1.b	Selected fill material for blanket as specified for Class A, B and C beddings,compacted uniformly in layers with light compaction directly over pipes, ensuring that no stones are amongst the blanket materials, the Engineer must inspect,approve and record each section of 300 mm thick covering fill in the site instruction book and each approval must accompany the certificates for payment purposes	m3	128	
4.6.2	8.2.2.2	Provision of bedding and covering material from designated borrow pits '(compaction thereof measured under Items 1.2) this quantity is in addition to the re-usable bedding material from trench excavations as stated in Item 1.2.3			
4.6.2.1	8.2.2.1.a	Selected granular material for bedding as specified for Class B bedding, placed and compacted in uniform layers as pipe barrel on both sides of the pipes for bedding cradle, ensuring that no stones are amongst the materials, the Engineer must inspect, approve and record each section of bedding in the site instruction book and each approval must accompany the relevant certificates for payment purposes	m3	60	
4.6.2.2	8.2.2.1.b	Selected fill material for blanket as specified for Class B beddings, compacted uniformly in layers with light compaction directly over pipes, ensuring that no stones are amongst the blanket materials, the Engineer must inspect,approve and record each section of 300 mm thick covering fill in the site instruction book and each approval must accompany the certificates for payment purposes	m3	69	
4.6.3		19 mm stones to be used for bedding if requested by the Engineer in writing in the site instruction book, Item shall cover the cost of acquiring the material regardless of the distance, delivering to points alongside the trenches and the disposal of material displaced by such importation	m3	0	
4.7		**Water Pipes**			
	8.2.1	Supply and lay, handle, bed on Class B (or as specified by the Engineer) bedding, joint test, cut pipes where necessary and disinfect various water pipes of the following sizes and types (compaction measured under item 1.2 of this bill of quantities			
4.7.1	8.2.1	90mm diameter Class 12.5 HDPE water pipe	m	547	
		Carried forward			

		Brought forward			
4.8		**Specials and Fittings**			
	L				
	8.2.2	Supply, handle, lay, bed on Class B (or as specified by the Engineer) bedding,joint,			
	8.2.3	various items to fit 75mm diameter HDPE class 12.5 water pipes			
4.8.2		90 mm diameter equal tee	No	6	
4.8.3		90 mm diameter end caps	No	2	
4.8.4		90 mm x 90 degree bend	No	10	
4.8.5		90 mm x 45 degree bend	No	3	
4.8.8		90mm Isolation valve	No	6	
		90mm Non-return valve	No	1	
4.9		**Water Ancillary Items**			
	L				
4.9.1	PSL 7	Break into and connect to existing water lines, at positions and levels indicated on the relevant plans, sections and details on the drawings, make good all connections and ensure water tight sealing of the existing pipes after connection, the rate shall include all excavations, backfill and re - compaction as per Items 8.3.2 and 8.3.3 of SABS 1 200 Section DB, compaction to be 90 % MOD AASHTO density	No	1	
4.9.2	8.2.8	Anchor trust blocks and pedestals using mass concrete of 15 Mpa mix strength where required by the pipe bends, tees and end - caps or where the Engineer requested and recorded in the site instruction book and forwarded with the relevant certificates for payment purposes, rate shall include the cost of concrete, reinforcement, form work, excavation , backfill, compaction etc.	m3	6	
4.9.4		Supply, install and test 80 mm diameter COSMOS MEINECKE SANS approved bulk water meter including all fitting as per manufacturer's specifications and City of Tshwane Standards	No	1	
4.9.5		Supply material and construct box chamber as detailed on drawing	No	5	
4.10		**Water source and storage**			
4.10.1		Supply, Deliver, and errect a 65kl elevated tank on a stand including inlet and outet pipework from the ground level up to the tank level.	No	1	
4.10.2		Drilling and equiping of borehole inclusive of all mechanical and electrical parts	No	0	
4.10.3		Refublishment of existing borehole. Detailed scope to be obtaned on site	No	0	
		Carried to Phase 1.1 Summary			**R**

ITEM No.	PAYM. REFERS			QUANTITY	RATE	AMOUNT
	SABS	**SECTION 2**				
		BILL NO 3				
	1 200	**SEWER MAINS**				
6.1	C	**Site Clearance**				
6.1.1	8.2.1 PSC 1-2	Clear vegetation, rubble, bushes and trees up to 1 m of girth to a width of 1.5 m from the centre of the trench to either side as well as any other obstructions if instructed by the Engineer in writing, recorded in the site instruction book and forwarded with the relevant certificates for payment purposes. This item shall include the removal of the topsoil to a depth of 75 mm and a width of 3 000 mm, the maintenance thereof until it can be re-used and the re-laying and spreading upon the completion of the pipe line to the satisfaction of the Engineer	m2	135		
6.2	DB 8.3.2.(a) PSDB 1 - 7 D 5.2.3.2	**Excavations** Excavate in all materials for trenches, compact the trench bottom to 90 % MOD AASHTO density, backfill by hand in layers of not exceeding of 150 mm in thickness using excavated material unless otherwise instructed by the Engineer in writing, compact the layers to 90 % MOD AASHTO density, dispose of all surplus and / or unsuitable material within free haul distance at a place as shall be instructed by the Engineer for pipe sizes of 110 mm and 160 mm diameter for depths as described below (any changes and / or deviations from the designs are to be agreed upon, confirmed by the Engineer on site and recorded in thesite instruction book				
6.2.1		a)Excavation exceeding 0.0 m up to and including 1.5 m.	m3	9		
		b)Excavation exceeding 1.5 m up to and including 2.0 m.	m3	22		
		c)Excavation exceeding 2.0 m up to and incliuding 2.5 m	m3	22		
		d)Excavation exceeding 2.5 m up to and including 3.0 m	m3	25		
		e)Excavation exceeding 3.0 m up to and including 3.5 m	m3	4		
		f)Excavation exceeding 3.5 m up to and excluding 4.0 m	m3	170		
		g)Excavation exceeding 4.0 m up to and excluding 4.5 m	m3	160		
6.2.2	8.3.2.(b)2 PSDB 8	Extra over for excavation in hard rock material (as specified in SANS 1 200 D Item 3.1.2 c.1). Quantities with positions and dates must be recorded in the commences. Those records must accompany the certificates for payment purposes. Rate shall include the spoiling of un - usable hard rock material within free haul distance	m3	75		
6.2.3	8.3.2.(b)2 PSDB 8 8.3.2.(c)	Extra over for additional deeper excavations in trench bottoms caused by unsuitable material to lay bedding on, rate shall include the disposal of any such material within free haul distance, quantities must be agreed upon by the Engineer and recorded in the site instruction book and forwarded with the relevant certificates for payment purposes	m3	5		
6.3		**Excavation Ancillary Items**				
6.3.1	8.3.3.1.a	Make up deficiency in backfill material due to spoiling of surplus, unsuitable and / or rock material from other necessary excavations on site within free haul distance (compaction of this material measured under Items 3.2), quantity to be agreed with the Engineer, recorded in the site instruction book and forwarded with the relevant certificates for payment purposes	m3	320		
6.3.2	8.3.3.1.b	Make up deficiency in backfill material due to spoiling of surplus, unsuitable and / or rock material from other necessary excavations on site outside a free haul of 0.5km (compaction of this material measured in excavation items), quantity to be agreed with the Engineer, recorded in the site instruction book and forwarded with the relevant certificates for payment purposes.	m3	320		
		Carried forward				

		Brought forward		
5.3.3	DB 8.3.14 D 8.3.4(b) 5.2.2.2	Open up borrow pit if required by the Engineer or his representative and record in the site instruction book, the rate shall cover the cost of construction of all necessary access to the borrow pit site, the removal of all vegetable matter and rubbish from where the borrow material shall be obtained, topsoil and overburden shall be stockpiled if requested by the Engineer and the Contractor shall maintain the borrow pit in a safe and orderly condition throughout the contract duration, after the completion of the borrowing the contractor shall level the area and replace such overburden as has been stock piled to the satisfaction of the Engineer	No	1
5.4		**Dealing with Existing Services**		
	DB 8.3.5	Dealing with services that intersect or adjoin the pipe trenches involved in this contract		
	8.3.5.a PS 8.8	Excavate by hand in soft material to expose existing services crossing the road or shoulder areas and provide permanent or temporary protection to be approved by the Engineer and recorded in the site instruction book, with position for the following items and forwarded with the relevant certificates for payment purposes, these items must be shown on the "record" drawings as well which are to be handed to the Engineer's office at completion of the project		
5.4.1	8.3.5.a	Electrical cables crossing the new trenches	No	0
5.4.2	8.3.5.a	Other services not specified and / or not indicated on the relevant drawings but encountered during the road construction, each such item must be recorded by the Engineer in the site instruction book as to the positions and nature of such services, and forwarded with the relevant certificates for payment purposes	No	0
5.4.3		Excavate by hand in soft material to expose existing services adjoining the new road and shoulder areas and provide permanent or temporary protection, length and positions to be confirmed by the Engineer and recorded in the site instruction book and forwarded with the relevant certificates for payment purposes	m3	0
5.5		**Surface Finishing**		
5.5.1	DB 8.3.6.1.a	Re - instate all surfaces encountered in the process of construction work, with all existing layer	m2	0
5.6		**Provision for Bedding and Covering**		
	8.2.2.1 PSLB '1 - 3	Provision of bedding and covering material from designated borrow pits '(compaction thereof measured under Items 3.2)		
5.6.1	8.2.2.1.a	Selected granular material for bedding as specified for Class B bedding, placed and compacted in uniform layers as pipe barrel on both sides of the pipes for bedding cradle, ensuring that no stones are amongst the materials, the Engineer must inspect, approve and record each section of bedding in the site instruction book and each approval must accompany the relevant certificates for payment purposes	m3	22
5.6.2	8.2.2.1.b	Selected fill material for blanket as specified for Class A, B and C beddings, compacted uniformly in layers with light compaction directly over pipes, ensuring that no stones are amongst the blanket materials, the Engineer must inspect,approve and record each section of 300 mm thick covering fill in the site instruction book and each approval must accompany the certificates for payment purposes	m3	44
	8.2.2.2	Provision of bedding and covering material from designated borrow pits '(compaction thereof measured under Items 5.6) this quantity is in addition to the re-usable bedding material from trench excavations as stated in Item 5.2.1		
5.6.3	8.2.2.1.a	Selected granular material for bedding as specified for Class B bedding, placed and compacted in uniform layers as pipe barrel on both sides of the pipes for bedding cradle, ensuring that no stones are amongst the materials, the Engineer must inspect, approve and record each section of bedding in the site instruction book and each approval must accompany the relevant certificates for payment purposes	m3	23
5.6.4	8.2.2.1.b	Selected fill material for blanket as specified for Class A, B and C beddings, compacted uniformly in layers with light compaction directly over pipes, ensuring that no stones are amongst the blanket materials, the Engineer must inspect, approve and record each section of 300 mm thick covering fill in the site instruction book and each approval must accompany the certificates for payment purposes	m3	49
5.6.5		19 mm stones to be used for bedding if requested by the Engineer in writing in the site instruction book, Item shall cover the cost of acquiring the material regardless of the distance, delivering to points alongside the trenches and the disposal of material displaced by such importation	m3	10
		Carried forward		

		Brought forward			
5,7		**Sewer Pipes**			
	LD				
	8.2.1 PSLD 1	Supply and lay, handle, bed on Class B (or as specified by the Engineer) bedding, joint, test and connect into manholes various sewer pipes of the following sizes and types (compaction measured under Items 3.2 of this bill of quantities			
5.7.1	b.)	160 mm diameters uPVC Class 34 under ground sewer pipe as per SANS 1 601	m	220	
		Extra over for sewer fittings in 6.1.1 and 6.1.2 above			
		(a) sewer specials for solid wall pipes (Supradur or similar approved) of outside diameters stated:			
		Bends - 160 mm dia			
5.7.3		22.5 ° plain	No	0	
5.7.4		45 ° plain	No	0	
5.7.5		90 ° plain	No	3	
		b) 45 deg junctions ("Y") of outside diameters and type stated:			
5.7.6		160mm x 160mm	No	0	
5.7.8		c)ABC Rodding Eyes - 110 mm dia x 45°	No	2	
		d) Female stop ends of diameters stated:			
5.7.9		160mm	No	1	
5.7.10		110mm	No	0	
		e) Short pipe specials of lengths and outside diameters stated, to be built into manhole walls:			
5.7.11		160mm	No	5	
5.7.12		110mm	No	0	
5,8		**Manholes**			
	LD				
	8.2.3 PSLD 5 - 8	Supply and install 1 000 mm diameter concrete manhole bases and rings including the reinforced concrete cover slab with steel ring, step irons cast into concrete rings at 300 mm staggered intervals. The rate shall cover the cost of all necessary excavations in all types of materials, the backfill in 150 mm thick layers compacted to 90 % MOD AASHTO density, the compaction of ground before the placing of base commences to 90 % MOD AASHTO density, the connection of the main sewer pipes to the manhole and the water tight sealing of the structure as per specifications in SANS 1 200 DB 8.3.2 and 8.3.3 as well as SANS 1 200 LD 3.6 for the following depths (depths are to be confirmed from the relevant longitudinal section drawings supplied in the construction drawings for this contract, any changes and / or deviations from the designs are to be confirmed and agreed upon by the Engineer or his representative on site, recorded in the site instruction book and accompany the relevant certificates for payment purposes) :			
5.8.1		a)From 0.0 m up to and including 1.5 m	No	1	
5.8.2		b)From 1.5 m up to and including 2.0 m	No	0	
		c)From 2.0 m up to and including 2.5 m	No	1	
		d)From 2.5 m up to and including 3.0m	No	1	
		e)From 3.0 m up to and including 3.5 m	No	0	
		f)From 3.5 m up to and including 4.0 m	No	3	
		g)From 4.0 m up to and including 4.5 m	No	0	
		h)From 4.5 m up to and including	No	1	
		Extra over5.8.1 to 5.8.7 for the construction of ramps and backdrops as detailed:			
		(a) Ramps for pipes of diameters stated:			
5.8.8		160mm	No	2	
		(b) Backdrops:			
		Extra over 5.8.1 to 5.8.7 for the construction of additional channelling and the building in of short pipe specials at branch manholes and manholes at bends			
		(a) For HDPE branched channels:			
		(i) Main sewer:			
5.8.10		- 160mm dia	No	7	
5.8.11		Cast iron manhole covers and frames (SABS 5580) build into roofs of sewer manholes.	No	7	
5,9		**Sewer Ancillary Items**			
5.9.1	8.2.11	Break into and connect to existing manholes, at positions and levels indicated on the relevant plans, sections and details on the drawings, make good all benching and ensure water tight sealing of the existing structure after connection, the rate shall include all excavations, backfill and re - compaction as per Items 8.3.2 and 8.3.3 of SANS 1 200 Section DB, compaction to be 90 % MOD AASHTO density	No	0	
		Carried forward			

		Brought forward			
5.9.2		Extra over in 6.3.1 for dealing with existing sewer flows. The rate shall cover all material required to deal with existing sewer flows and complience with OHS and EMP.	No	0	
5.9.3	8.2.8	Encasing of pipes in concrete using mass concrete of 15 Mpa mix strength on Erf connections and Clearning Eyes or where required by the Engineer on the site, recorded in the site instruction book and forwarded with the relevant certificates for payment purposes, rate shall include the cost of concrete, reinforcement, form work, excavation, back fill, excavation , backfill, compaction etc.	m3	3	
5,10		**Wastewater treatment**			
6.4.1		Supply and construct a conservancy tank	Prsum	1	
6.4.2		Handling fee on item 6.4.1 above	%		
		Carried to Phase 1.1 Summary			**R**

	PHASE 1.1 SUMMARY				
1	Bill No 1: Preliminaries	Page	109		
2	Bill No 2: External Works	Page	112		
3	Bill No 3: Provisional Sums	Page	113		
4	**SECTION 2 :CIVIL WORKS**				
5	Bill No 1: Civil Earthworks	Page	115		
6	Bill No 2: Water Mains	Page	118		
7	Bill No 3: Sewer Mains	Page	122		
8	Sub-total			R	
	5% Contingency				
9	Provide the sum of 5% for contingencies to be used as directed and deducted in whole or in part if not required	Item			
	6% Escalation				
10	Provide the sum of 6% for Escalatiom to be used as directed and deducted in whole or in part if not required	Item			
	Carried to Final Summary			**R**	

SECTION 1 - PHASE 1.2

BILLOF QUANTITIES

BUILDING WORKS

ITEM NO		UNIT	QUANTITY	RATE	AMOUNT
	BILL NO. 1				
	PRELIMINARIES AND GENERAL				
i)	The agreement is to be the General Conditions of Contract for Works of Civil Engineering Construction (2015) (Third Edition) , published by the S. A. Institution Of Civil Engineering.				
ii)	The Preliminaries are to be the Construction and management requirements for works contracts - Part 1: General engineering and construction works (SANS 1921-1: 2004 Edition 1) prepared by Standards South Africa and shall be deemed to be incorporated herein.				
iii)	Tenderers are referred to the abovementioned 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.				
iv)	Where standard clauses or alternatives are not entirely applicable to this contract such modifications, corrections or supplements as will apply are given under each relevant clause heading.				
v)	Where any item is not relevant to this specific contract such item is marked N/A (signifying "not applicable").				
vi)	Adjustment of the preliminaries: each item priced, is to be allocated to one or more of the three categories, where "F" denotes a fixed amount (amount not to be varied), "V" denotes an amount variable in proportion to value and "T" denotes an amount in proportion to time.				
vii)	Time (T) related Preliminaries will only be adjusted for omissions or additions, issued by the Employer, or delays caused by the Employer, for which variation and extension of time has been granted. ***See Contract Data*** .				
	SECTION A: GENERAL CONDITIONS OF CONTRACT				
A1	General (clause 1) F:..... V:..... T:.....	Item			
A2	Basis of Contract (clause 2) F:..... V:..... T:.....	Item			
A3	Engineer (clause 3) F:..... V:..... T:.....	Item			
A4	Contractor's General Obligation (clause 4) F:..... V:..... T:.....	Item	1		
A5	Time and Related Matters (clause 5) - As referred to in the Contract Data under Special Condition of Contract. The Contract Period shall be deemed to include all Non – Working Days, Special Non – Working Days and the year-end Builders Annual Industry Holiday Periods. F:..... V:..... T:.....	Item			
A6	Payment and Related Matters (clause 6) F:..... V:..... T:.....	Item			
A7	Quality and Related Matters (clause 7) F:..... V:..... T:.....	Item			
	Carried forward				

	Brought forward				
A8	Risk and Related Matters (clause 8) F:..... V:..... T:.....	Item			
A9	Termination of Contract (clause 9) F:..... V:..... T:.....	Item			
A10	Claims and Disputes (clause 10) F:..... V:..... T:.....	Item			
	SECTION B: SANS 1921-1:2004 (Edition 1): CONSTRUCTION AND MANAGEMENT REQUIREMENTS FOR WORKS CONTRACTS: PART 1 **Refer to the SCOPE OF WORK for detail requirements:**				
B1	Scope F:..... V:..... T:.....	Item			
B2	Normative references F:..... V:..... T:.....	Item			
B3	Definitions F:..... V:..... T:.....	Item			
B4	Requirements for construction and management F:..... V:..... T:.....	Item			
B4.1	General F:..... V:..... T:.....	Item			
B4.2	Responsibilities for design and construction F:..... V:..... T:.....	Item			
B4.3	Planning, programme and method statements F:..... V:..... T:.....	Item	1		
B4.4	Quality assurance F:..... V:..... T:.....	Item			
B4.5	Setting out F:..... V:..... T:.....	Item			
B4.6	Management and disposal of water F:..... V:..... T:.....	Item			
B4.7	Blasting F:..... V:..... T:.....	Item			
B4.8	Works adjacent to services and structures F:..... V:..... T:.....	Item			
B4.9	Management of the Works and site F:..... V:..... T:.....	Item	1		
B4.10	Earthworks F:..... V:..... T:.....	Item			
B4.11	Testing F:..... V:..... T:.....	Item			
B4.12	Materials, samples and fabrication drawings F:..... V:..... T:.....	Item			
	Carried forward				

	Brought forward			
B4.13	Equipment F:..... V:..... T:.....	Item		
B4.14	Site establishment F:..... V:..... T:.....	Item	1	
B4.15	Survey control F:..... V:..... T:.....	Item		
B4.16	Temporary works F:..... V:..... T:.....	Item		
B4.17	Existing services F:..... V:..... T:.....	Item		
B4.18	Health and safety F:..... V:..... T:.....	Item	1	
B4.19	Environmental requirements F:..... V:..... T:.....	Item		
B4.20	Alterations, additions, extensions and modifications to existing works F:..... V:..... T:.....	Item		
B4.21	Inspection of adjoining structures, services, buildings and property F:..... V:..... T:.....	Item		
B4.22	Attendance on nominated and selected subcontractors F:..... V:..... T:.....	Item		
	SECTION C: SCOPE OF WORK in accordance with SANS 10403 *(The reference to Clauses refer to Table B.1 of SANS 1921-1:2004)*			
C1	Certification by recognised bodies - CLAUSE 4.4 F:..... V:..... T:.....	Item		
C2	Agrément certificates - CLAUSE 4.5 F:..... V:..... T:.....	N/A		
C3	Other services and facilities - CLAUSE 4.8 F:..... V:..... T:.....	Item		
C4	Recording of weather - CLAUSE 5.2 F:..... V:..... T:.....	Item		
C5	Management meetings - CLAUSE 5.3 F:..... V:..... T:.....	Item		
C6	Daily records CLAUSE 5.6 F:..... V:..... T:.....	Item		
C7	Bond and guarantees - CLAUSE 5.7 F:..... V:..... T:.....	Item	1	
C8	Permits - CLAUSE 5.9 F:..... V:..... T:.....	Item		
C9	Proof of compliance with the law - CLAUSE 5.10 F:..... V:..... T:.....	Item		
	Carried forward			

	Brought forward				
	SECTION D: SPECIFICATION DATA ASSOCIATED WITH SANS 1921-1:2004 (Table A.1)				
D1	Requirements for drawings, information and calculations for which the contractor is responsible CLAUSE 4.1.7 F:..... V:..... T:.....	Item			
D2	The responsibility strategy assigned to the contractor for the works CLAUSE 4.2.1 F:..... V:..... T:.....	Item			
D3	The planning, programme and method statements - CLAUSE 4.3 F:..... V:..... T:.....	Item			
D4	Samples of materials, workmanship and finishes - CLAUSE 4.12.1 F:..... V:..... T:.....	Item			
D5	Fabrication drawings that the contractor is to provide and deliver to the employer - CLAUSE 4.12.2 F:..... V:..... T:.....	Item			
D6	Office for the foreman CLAUSE 4.14.3 F:..... V:..... T:.....	Item			
D7	Telephone - CLAUSE 4.14.3 F:..... V:..... T:.....	Item			
D8	Office for inspector of works - CLAUSE 4.14.3 F:..... V:..... T:.....	Item			
D9	Telephone in office for inspector of works - CLAUSE 4.14.3 F:..... V:..... T:.....	Item			
D10	Sheds - CLAUSE 4.14.3 F:..... V:..... T:.....	Item			
D11	Provision and erection of signboards - CLAUSE 4.14.6 F:..... V:..... T:.....	Item			
D12	Termination, diversion or maintenance of existing services - CLAUSE4.17.1 F:..... V:..... T:.....	Item			
D13	Services which are known to exist - CLAUSE 4.17.3 F:..... V:..... T:.....	Item			
D14	Detection apparatus - CLAUSE 4.17.4 F:..... V:..... T:.....	Item			
D15	Additional health and safety requirements - CLAUSE 4.18 F:..... V:..... T:.....	Item			
	Carried forward				

	Brought forward				
	SECTION E: SPECIFIC PRELIMINARIES				
	Section E contains Specific Preliminary items which apply to this contract except where "N/A" (Not Applicable) appears against the item.				
E1	**PROPRIETARY BRANDED PRODUCTS**				
	The contractor shall take delivery of, handle, store, use apply and/or fix all proprietary branded products in strict accordance with the manufacturers' instruction after consultation with the manufacturer's authorised representative.				
	F:..... V:..... T:.....	Item			
E2	**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 Engineer/Principal Agent has specifically authorised in writing, prior to the execution thereof, that costs for such overtime are to be borne by the Employer.				
	F:..... V:..... T:.....	Item			
E3	**AS BUILT DRAWINGS**				
	The position of construction breaks and the extent of individual concrete pours are to be recorded by the Contractor on the Structural Engineer's drawings and are to be submitted to the Engineer/Principal Agent and the Structural Engineer for their records.				
	F:..... V:..... T:.....	Item			
	SECTION E: SPECIFIC PRELIMINARIES				
E4	**SITE INSTRUCTIONS**				
	Site Instructions issued on site are to be recorded in triplicate in a Site Instruction book which is to be maintained on site by the Contractor.				
	F:..... V:..... T:.....	Item			
E5	**LABOUR RECORD**				
	At the end of each week the Contractor shall provide the Engineer/Principal Agent with a written record, in schedule form, reflecting the number and description of tradesmen and labourers employed by him and all sub-contractors on the works each day.				
	F:..... V:..... T:.....	Item			
	Note : In the event that the contractor fails to satisfy the requirements of this specification, the Employer (Head: Public Works) may apply any of the sanctions provided in the contract. Sanctions may include the application of a financial penalty of .04% of the Contract Sum per calendar day of which the required report has not been submitted.				
E6	**PLANT RECORD**				
	At the end of each week the Contractor shall provide the Engineer/Principal Agent with a written record, in schedule form, reflecting the number, type and capacity of all plant, excluding hand tools, currently used on the works.				
	F:..... V:..... T:.....	Item			
E7	**NON CESSION OF MONIES**				
	The Contractor shall not cede nor assign his rights or claims to any monies due or to become due under this contract.				
	F:..... V:..... T:.....	Item			
	Carried forward				

	Brought forward				
E8	**SECTIONAL COMPLETION** When it is required that the contract be executed in sections or portions, the tenderer shall allow for all costs in this regard as no claim for additional costs will be entertained. F:..... V:..... T:.....	Item			
E9	**LOCAL LABOUR** It is a general requirement of this contract that persons normally resident in the locality of the works (Local Labour) be given preference for employment on the contract. Provided, however, that should adequate and appropriate Labour not be available within the locality, others may be employed subject to satisfactory proof being provided that every reasonable endeavour has been made to employ Local Labour. The Contractor shall identify the local community leaders with the purpose of negotiating with them regarding the utilization of Local Labour in the construction process. In this regard, the Contractor shall furthermore give preference, wherever possible to the employment of single heads of households, women and youth. The Contractor shall, in general, maximize the involvement of the local community. F:..... V:..... T:.....	Item			
E10	**IMPORT PERMITS AND DUTIES** The responsibility for obtaining the necessary import permits shall rest with the successful Tenderer. No foreign exchange will be arranged or provided by the Administration. Tenderers are to allow in their tenders and pay the ordinary levy imposed on imported items in terms of item 196.10 of Part 8 of Schedule No. 1 of the Customs and Excise Act, 1964 with effect from 1 October 1989. F:..... V:..... T:.....	Item			
E11	**CONTRACT PRICE ADJUSTMENT PROVISIONS (CPAP)** Contract Price Adjustment Provisions (CPAP) Indices Application Manual for use with P0151 indices (Revised 1 January 2013)" as published by Statistics South Africa. The Contract Price Adjustment Provision (CPAP) will be subject to the most recently released indices by Statistic South Africa. Tenderders are advised that with reference to Clause 3.4.6 of the Contract Price Adjustment Provisions (CPAP) Indices Applications Manual, the Head: Public Works will not accept the submission by Tenderders of lists of additional items." Where this contract is a Lump Sum contract, the contract will be subject to Contract Price Adjustment Provisions (CPAP) only where the contract period equals or exceeds 6 calendar months. The applicable work group shall be WG 180 for domestic buildings or WG 181 for commercial and industrial buildings. F:..... V:..... T:.....	Item			
E12	**EPWP CONDITIONS AND SPECIFICATIONS** **12.1 EMPLOYMENT TARGETS** <u>E12.1 a Employment Targets</u> The contractor needs to provide a realistic estimate on the number of jobs that the project has the potential to create throughout the project duration as No of jobs to be created = ……. *[Contractor to fill in an estimated number]* F:..... V:..... T:.....	Item			
	Carried forward				

Brought forward				
E12.1 b Employment requirements Tenderers are advised that this contract will be subject to the Expanded Public Works Program (EPWP) aimed at alleviating and reducing unemployment. Tenderers must allow for any costs for the employement of unskilled labour as per the requirements of the EPWP program; 1. 55% of unskilled labour to be women 2. 55% of unskilled labour to be youth aged between 18 and 35 years 3. 2% of unskilled labour to be people living with disability 4. 100% Unskilled labour utilised must reside within the boundries of the Municipality Ward where this contract is executed, with preference to the local community closest or at the walking distance to the contract site. Wherever possible local skilled tradesmen are to be employed on this contract with the view to maximize utilization of local resources.				
F:..... V:..... T:.....	Item			
E12.1 c Labour rate and payment intervals The contractor should ensure that labour rate paid to unskilled local labour is commensurate to the daily task. When determining the rate, consideration should be given to that EPWP beneficiaries are mostly bread winners in their families, as the program intends alleviating poverty. There should also be consideration that the labour rate promotes creation of expanded number of jobs created and person days of work. Contractors should make endeavours to ensure that labourers, particularly unskilled are remunerated on fortnight basis and prior notification be made should there be a shortfall on their wages. The labour rate for local unskilled shall also be determined in consideration of the location of the project, i.e. for projects implemented in urbanized municipalities will not be the same as that for rural municipalities.				
F:..... V:..... T:.....	Item			
12.2 LABOUR INTENSIVE CONSTRUCTION METHOD				
E12.2 a Labour Intensive Construction (LIC) method On site there must a person(s) having competency in managing and implementing LIC methods. *Foreman @ NQF Level 4 the Unit Standard on Implementing LIC methods on site. *Site Agent/ Managers @ NQF level 5 the Unit Standard on Manage Labour-Intensive Skills Programme both must be CETA accredited				
F:..... V:..... T:.....	Item			
E12.2 b Labour Intensive Construction Method Those parts of the contract to be constructed using Labour Intensive methods will be marked in the BoQ with letter LI (indicating Labour Intensive) against every item so designated. Such works will only be constructed using method so indicated. Reference to be made to Guidelines for the implementation of Labour Intensive Infrastructure projects under EPWP. "Scope of Work in Respect of Work Relating to the Expanded Public Works Programme (EPWP)"				
F:..... V:..... T:.....	Item			
Carried forward				

Brought forward				
E12.3 RECORD KEEPING 12.3.1 Every employer must keep in the project site office the following minutes of site progress minutes; contractors' monthly site progress reports; accurately recorded attendance register; proof of payment as means to verify authenticity of data in the EPWP Beneficiary form submitted with payment certificates. Copies of submitted EPWP beneficiary data forms should also be kept in the site office. F:..... V:..... T:.....	Item			
12.3.2 The employer must keep this record for a period of at least three (3) years after the completion of the project in his/her office as the project site office would have been relocated. This should be safely kept for job creation data verifications and periodical audits on projects conducted by National and Provincial Department of Public Works after one (1) or two (2) quarters of submitting captured EPWP Data to the National EPWP coordinating Department. F:..... V:..... T:.....	Item			
E12.4 EPWP REPORTING as per EPWP DATA FORM At the end of each month as part of site progress report and to be attached to every contractors' progress payment certificate; the contractor shall provide the Engineer/Principal agent & Public Works with a written records, as per EPWP data form; which will be reflecting, beneficiaries full name & surname; ID No and job description of labour employed by main contractor and sub-contractors on site. At the end of each month the contractor must submit the following documents to be attached to the Progress payment certificate: 1. EPWP monthly data collection form 2. Worker monthly payment upload 3. Worker monthly proof of payment i.e 3.1 Acknowledgement of receipt of payment or 3.2 Payslips 3.3 Bank statement highlighted the workers paid 4. Worker monthly training form 5. Monthly attendance register 6. Certified copies of ID's (once off) 7. ID size photos (once off) 8. Proof of UIF 9. Proof of COIDA F:..... V:..... T:.....	Item			
E12.5 EPWP PROMOTION <u>12.5.1 EPWP signage board</u> EPWP Program at the project level shall always be promoted through have the projects signage board that embrace EPWP logo at the bottom, correct measurement for this signage board will be provided by the project leader during the site handing over meeting. the standard "HELVETIVA MEDUIM " letters are to be used . Professional title to be 10 mm above line . Line thickness to be 8 mm thick . Space between bottom of the line and bottom of the lettering below the line has to be 100 mm. Letter sizes are as follows : Helvetica meduim 100 mm black upper case to be for project name and owner . Helvetica meduim 75mm black upper case only to be used for professional titles.Project name and owner shall be black lettering on white background.board sizes are as follows : Board to be minomum 2000mm from ground level and to be constructed from reinforced formed chromadek panels minimum 0,6mm thick chromadek. The contractor is responsible for ensuring that the project board remains neatly and safely erected for the full duration including maintenance period,after which the project board and post are to be dismantled and handed to the client in good order.				
Carried forward				

Brought forward				
F:..... V:..... T:.....	Item			
12.5.2 Branding of labour apparel Contractor & Sub-contractors' labourers shall be provided with EPWP branded Personal Protective Equipment (PPE), reflector vest with EPWP wording at the back is an ideal and cost effective means of promoting program on site. The contractor is then advised to price for both item 17.5.1 and 17.5.2				
F:..... V:..... T:.....	Item			
E12.6 COMMUNITY LIAISON OFFICER (CLO)				
UTILISATION OF A COMMUNITY LIAISON OFFICER				
In addition to the requirements of Clause E9, contained in this document;				
The Contractor shall allow for and pay any and all costs necessary for the engagement of the services of a Community Liaison Officer (CLO) for the full duration of this contract				
In the interest of providing a sound service to both the community and the Contractor, a CLO may only manage one project at a given time.				
A CLO will be identified by the local structures of the ward areas and appointed following fair and transparent interviewing process, to be conducted in the presence of local structures and the contractor representative, in order to assist the Contractor in the procurement of any local labour, etc. required for this project. The Contractor is to liaise with the CLO and afford him any assistance needed in ensuring sound working relations with the local community.				
Key Responsibilities of the CLO are envisaged to include and not necessary be limited to:				
1. Assisting local leadership in conducting skills and resources audit which facilitates sourcing labour from within the ward or targeted areas for employment, as required by contractor.				
2. Assisting in sourcing labour-only domestic sub-contractors and the procurement of materials from local resources, as required by the contractor.				
3. Assisting the contractor by identifying areas of potential conflict and or threats to the project or to stakeholders in the project and recommend appropriate action to the contractor.				
4. Assisting contractor and stakeholders in the project in the resolution of any conflict which may arise.				
5. Establishing and ensuring that sufficient and open communication channels between the contractor and the work force are maintained.				
6. Establish and ensuring that efficient and open communication channels between the contractor and the community are maintained				
7. Identifying and reporting to the Contractor regarding issues where communication between stakeholder is necessary, recommend courses of action and facilitate such communications				
8. Assisting the Contractor and the work force in the establishment of grievance procedures and necessary recommendation to the Contractor regarding the grievances and solution thereto.				
Carried forward				

Brought forward				
9. Attending to site meetings and project implementation meetings as required by the Contractor and prepare periodic reports as may be required by the Contractor from time to time. 10. Attending to such other duties which are consistent with the functions of a CLO, as may be required by the Contractor from time to time. Tenderers are to price twice the rate of unskilled local labour rate against this item for any and all costs arising out of compliance with the foregoing and in the event of a Tenderer failing to price against this item or making inadequate financial provision against this item for compliance as aforesaid, then no claim for costs or additional cost incurred will be entertained by the Head: Works F:..... V:..... T:.....	Item			
E12.7 SKILLS DEVELOPMENT ON SITE Contractor in conforming to the object of EPWP that its beneficiaries need to be capacitated with skills that will render them employable in the future. It is then the responsibility of the Contractor that mandatory life skills are provided to 100% of workforce on site and on the job training to labourers from whom the potential for further development has been identified. The latter is not mandatory to all as it covers technical skills. Contractor should also make provision for the possibility that there might be local youth that will need to be placed on the project with an intention to be provided support towards improving their level of competency and productivity. Contractor shall also provide all necessary on-the-job training to targeted labour to enable such labour to master and advance on techniques required to undertake the work in accordance with requirements of the contract in a manner that does not compromise workers health and safety. F:..... V:..... T:.....	Item			
E12.8 LABOUR ONLY Sub Contracting for local emerging enterprises Tenderer's are advised that this contract is subject to the Expanded Public Works Programme (EPWP) and the following criteria will apply: <u>African Equity Ownership</u> a) The Tenderer is to allow for 5% of the total value of works to be undertaken by a Priority Population Group. This percentage excludes the costs of employing local unskilled labour. The allocation of this percentage from the Project, the screening of people, the selection of skills, will be for the Contractor to adjudicate. b) The Priority Population Group consists of women, youth and disabled people. c) The Contractor is to give first option for prospective PPG's from the surrounding areas of the Project. Should there be insufficient suitable people fitting the criteria of PPG's, the Contractor may hire people from further afield. This is to be done only after consultation with the Department of Works EPWP Co-ordinator and the Community Liaison Officer (CLO).				
Carried forward				

Brought forward				
d) A Mentor is to be employed by the Contractor, in consultation with the Department of Works for the purposes of quality control and liaison between the Contractor and the selected PPG's on site. The mentor will be responsible for ensuring an acceptable level of quality workmanship and that such work carried out by the PPG's is executed within the time frames stipulated. In so far as possible, the Contractor is encouraged to expand the PPG's skills, knowledge and performance levels. F:..... V:..... T:.....	Item			
TENDERER'S TO NOTE CONDITIONS a) The contract to be entered into between the Contractor and the PPG's will be a LABOUR ONLY sub-contract. b) The Contractor will be responsible for ensuring that all materials for use by the PPG's in the works are to be on site timeously. The Contractor shall liaise with The Mentor and PPG to determine the nature and extent of materials required and the lead time necessary. c) The Contractor shall be responsible for the overall programming of the Works and he is to allow for monitoring the PPG's programme and progress. d) In conjunction with the Mentor, he is to allow for the supervision and mentoring (where necessary) of the PPG to ensure quality and adherence to standard building practice e) The Contractor is to allow for extra storage facilities on site for the PPG's tools and equipment. f) Basic tools shall be provided by the PPG's and where these are not available; the Contractor will supply him with the necessary tools and equipment and deduct the costs thereof from the interim claims made by the PPG. g) Work requiring specialized tools will be provided free of chargeby the Contractor with the provision that these be returned upon completion of the Work. CO-ORDINATION The Contractor is to co-ordinate the work of all the PPG's, Sub-Contractors and Nominated Sub- Contractors appointed direct by the Employer in such a manner and at all times as will suit the building programme and he is to allow adequate access, for the PPG's, where required, to carry out their work in an efficient manner as no claims for extras in this connection will be entertained.				
F:..... V:..... T:.....	Item			
ATTENDANCE The Contractor may allow for attendance upon the PPG's concerned to execute the work. The Contractor is to allow the PPG's the use of any scaffolding belonging to him while it remains so erected on the site. Where scaffolding is necessary for the use by any PPG and the Contractor has not erected any for his own use or has removed same after his own use, the Contractor shall supply sufficient scaffolding to the PPG to be erected and dismantled by the PPG and returned to the Contractor.				
Carried forward				

Brought forward				
This attendance upon PPG's to execute the work is to include for the scaffolding provisions as aforesaid and, in addition, is to include for co-operating to the fullest extent with all the parties, attending on off-loading materials, providing suitable storage for tools and materials used by the PPG's, use of general facilities such as latrines, etc., supply and cost of power, lighting, water and the like. F:..... V:..... T:.....	Item			
E12.9 EPWP CONTRACT FOR LABOUR				
It is compulsory that shortly after the contractor and or sub contractor has appointed local labour, the employment contract should be signed by both parties, prior to commencement with works on site. The employment contract forms part of the Ministerial Determination or from the regional EPWP officials. Each contract will lapse at the end of each financial year therefore requiring the Contractor to do a renewal of each contract should the need of employment still exist for that particular labourer. F:..... V:..... T:.....	Item			
E12.10 EPWP SCOPE of WORK **Note:**				
Contractors are to price any item on the Bill of Quantities having below, bearing in mind that they are regarded as main sources of job creation, whether sub contracted or undertaken by the main contractor.				
Elements on the scope of work where application of Labour Intensive Construction methods as will indicated with letters (LI) are regarded feasible are as follows;				
i) Excavating trenches for foundations and any other civil works with the depth not more than 1.5 m				
ii) All masonry works which include concrete mixing on site; brickwork; plastering; screed works; jointing; etc.				
iii) Painting, Plumbing, Ironmongery; roof cladding; glazing; tilling; carpentry; flooring; waterproofing; etc.				
F:..... V:..... T:.....	Item			
Note: It is a general requirement of this contract that persons normally resident in the ward of the works (local labour) be given preference for employment on the contract. Provided, however, that should adequate and appropriate labour not be available within the ward, others may be employed subject to satisfactory proof being provided that every reasonable endeavour has been made to employ local labour (Local Sub-contractor(s); Skilled; Semi-Skilled and Unskilled). The contractor shall in consultation with the local community leaders with the purpose of negotiating with them regarding the utilization of local resources in the construction process. In this regard, the contractor shall furthermore give preference, wherever possible to the employment of single heads of households, women and youth as well as families declared as most indigent by War on Poverty/ Sukuma Sakhe program profiling process. The contractor should aim, in general, to maximise the involvement of the local community, however workers from other communities should not exceed 20% of all persons working on the project, where local employees possess skills at level of competency that meet contractors requirements.				
Carried forward				

	Brought forward				
	Payment for the labour-intensive component of the works Payment for works identified in the Scope of Work as being labour-intensive shall only be made in accordance with the provisions of the Contract if the works are constructed strictly in accordance with the provisions of the Scope of Work. Any non-payment for such works shall not relieve the Contractor in any way from his obligations either in contract or in delict.				
	Linkage of payment for labour-intensive component of works to submission of project data The Contractor's payment invoices shall be accompanied by labour information for the corresponding period in a format specified by the employer. If the contractor chooses to delay submitting payment invoices, labour returns shall still be submitted as per frequency and timeframe stipulated by the Employer. The contractor's invoices shall not be paid until all pending labour information has been submitted.				
	Applicable labour laws The current Ministerial Determination (also downloadable at www.epwp.gov.za) Expanded Public Works Programmes, issued in terms of the Basic Conditions of Employment Act of 1997 by the Minister of Labour in Government Notice , shall apply to works described in the scope of work as being labour-intensive and which are undertaken by unskilled or semi-skilled workers.				
	F:..... V:..... T:.....	Item			
E13	**HIV/AIDS AWARENESS** Tenderers are to price against the following items for compliance with the SPECIFICATION FOR HIV/AIDS AWARENESS bound into this document (The clauses referred to are those of the Specification for HIV/AIDS)				
E13.1	Provide and maintain a condom dispenser in terms of Clause 5.1a) F:..... V:..... T:.....	Item			
E13.2	Provide and maintain HIV/AIDS awareness posters terms of Clause 5.1b) F:..... V:..... T:.....	Item			
E13.3	HIV /Aids Awareness Programme on Site for not less than 90% of workers inclusive of all direct and indirect costs; Engage a qualified service provider as described in the scope of works to conduct an HIV Awareness Programme in terms of Clause 5.2.1a) F:..... V:..... T:.....	Item			
E13.4	Arrange for workers to attend the HIV Awareness Programme in terms of Clause 5.2.1b) F:..... V:..... T:.....	Item			
E13.5	**Reporting** Prepare and attach to claims for payment a brief report in terms of Clause 5.3 (see also HIV/STI Compliance Report included with this document). F:..... V:..... T:..... ***Note: In the event that the contractor fails to satisfy the requirements of this specification, the employer may apply any of the sanctions provided for in the contract. Sanctions may include the application of a financial penalty of .04% of the Contract Sum per calendar day of which the required reports has not been submitted.***	Item			
	Carried forward				

	Brought forward				
E14	**OCCUPATIONAL HEALTH AND SAFETY ACT NO. 85 OF 1993** Tenderers are to allow for costs in providing a project specific ' Construction Phase Safety, Health and Environmental Plan' in accordance with "Section 2 - Specification Data associated with SANS 1921-1:2004" clause C4.18 in "Part C3 - Scope of Work" F:..... V:..... T:.....	Item	1		
E15	**NOTICE BOARD, SITE OFFICE, ETC.** Tenderers are to allow for the provision and removal of a project notice board and a site office in accordance with the Principal Agent's requirements. F:..... V:..... T:.....	Item	1		
E15.1	**FACILITIES FOR ENGINEER** Tenderers are to allow for the provision and removal of a furnished office with an airconditioning unit for the Resident Engineer in accordance with the Engineer/Prinicpal Agents requirements. F:..... V:..... T:.....	Item	1		
E16	**IMPORTED MATERIALS AND EQUIPMENT** Where imported items are listed in the tender documents, the tenderer shall provide all information called for, failing which the price of any such item, material or equipment shall be excluded from currency fluctuations. F:..... V:..... T:.....	Item	1		
E17	**CONTRACT DOCUMENTS** The drawings issues with these Tender documents do not comprise the complete set but serves as a guide only for tendering purposes and for indicating the scope of works to enable the Tenderer to acquaint him with the nature and extent of the works and the manner in which they are to be executed. Should any part of the drawings not be clearly legible to the Tenderer he shall, before submitting his Tender, obtain clarification in writing from the Engineer/Principal agent. F:..... V:..... T:.....	Item	1		
E18	**GENERAL PREAMBLES** The Document Preambles will be the “ASAQS Model Preambles for Trades – 2008” and is obtainable from the various Regional Office’s of the Department of Public Works and shall be read in conjunction with the Bills of Quantities and be referred to for the full descriptions of work to be done and materials to be used. F:..... V:..... T:.....	Item	1		
E19	**TRADE NAMES** Wherever a Trade Name for any product has been described in the Bills of Quantities the Tenderer's attention is drawn to the fact that any other product of equal quality may be used subject to the written approval of the Engineer/Principal Agent being obtained prior to the closing date for submission of Tenders. F:..... V:..... T:.....	Item			
E20	**EXISTING PREMISES OCCUPIED** Refer to Scope of Works Part C3 of this Tender Document for information on the occupation of existing buildings. F:..... V:..... T:.....	Item			
E21	**INACCURATE AND DEFECTIVE WORK EXECUTED UNDER PREVIOUS CONTRACT**				
	Carried forward				

	Brought forward				
	The contractor shall, after taking possession of the site and before commencing the work, check all levels, liners, profiles and the like and satisfy himself as to the dimensional accuracy of all work executed under the previous contract which may affect his work. Should any inaccurate or defective work be found, the contractor shall immediately notify the Engineer/Principal agent in writing requesting his instructions with regard thereto and afford every facility to those rectifying such inaccurate or defective work. F:..... V:..... T:.....	Item			
E22	**VIEWING THE SITE IN SECURITY AREAS** If the site is situated in a security area and the Tenderder must arrange with the Authorities to obtain permission to enter the site for Tenderding purposes. F:..... V:..... T:.....	Item			
E23	**COMMENCEMENT OF WORKS IN SECURITY AREAS** If the works falls within a security area, the contractor must arrange with the Authorities and give the necessary notices before commencement of the works. Should the contractor fail to make such arrangements, admission to the site may be refused and any additional costs will be for the contractor's account. F:..... V:..... T:.....	Item			
E24	**ENTRANCE PERMITS TO SECURITY AREAS** If the works fall within a security area, the contractor shall obtain entrance permits for his personnel and workmen entering the area and shall comply with all regulations and instructions which may be issued from time to time regarding the protection of persons and property under control of the Authority. F:..... V:..... T:.....	Item			
E25	**SECURITY CHECK OF PERSONNEL** The Engineer/Principal agent may require the contractor to have his personnel and workmen, or a certain number of them, security classified. In the event of the principal agent requesting the removal of a person or persons from the works for security reasons, the contractor shall do so forthwith and shall thereafter ensure that such person or persons are denied access to the works and the site and/or to any document or information relating to the works. F:..... V:..... T:.....	Item			
E26	**PROHIBITION ON TAKING PHOTOGRAPHS** In terms of article 119 of the Defence Act, 44 of 1957, it is prohibited to sketch or to take photographs of any military site or installation or any building or civil works thereon or to be in possession of a camera or other apparatus used for taking photographs, except when authorised thereto by or on behalf of the Minister. The same prohibition is also applicable to all Correctional Institutions in terms of article 44.1(e) of the Correctional Services Act 8 of 1959. F:..... V:..... T:.....	Item			
E27	Management of Water Water for Construction purposes must be obtained from alternative water sources (i.e. supply other than water that is produced and distributed by a regulated water service authority from a licenced water treatment works for human consumption), eg dams, rivers, boreholes, springs, rainwater harvesting, recycled sewerage water,etc. The alternative water source shall not be of an inferior quality / standard than that required for construction purposes. The client reserves the rigfht through his agents to test such supplies or request certificates confirming the grade and nature of the water supply. Relevant knowledge of the respective area will be an advantage.				
	Carried to Phase 1.1 Summary			**R**	

ITEM NO			QUANTITY	RATE	AMOUNT
	BILL NO. 2				
	EARTHWORKS (PROVISIONAL)				
	Nature of ground				
	The nature of the ground is assumed to be gravel, therefore "earth", but possibly interspersed with "soft rock" or "hard rock"				
	Subterranean water				
	The removal of subterranean water is given separately				
	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 and layer work materials				
	References such as "G1", "G2", etc and "C1", "C2", etc in descriptions of filling and layer work materials refer to corresponding references in the document "Guidelines for Road Construction Materials. TRH 14 : 1985" compiled by the Committee of State Road Authorities and the properties set out therein for each kind shall be applicable to the respective materials described hereinafter				
	Testing				
	Prices for filling are to include for all necessary density and other tests				
	EXCAVATIONS ETC				
	EXCAVATION, FILLING, ETC				
	EXCAVATION, FILLING, ETC OTHER THAN BULK				
	User note				
	Only the appropriate one of the above two alternative headings is to be inserted, depending on whether the separate "bulk excavation, filling, etc" option is utilised or not				
	EXCAVATIONS ETC				
	Excavation in earth not exceeding 2m deep				
1	Trenches	m3	465		
2	Holes	m3	20		
3	Thickening under surface beds etc	m3	3		
4	Extra over for excavation in soft rock	m2	1		
5	Extra over for excavation in hard rock	m2	1		
	Carried forward				

	Brought forward			
	Extra over all excavations for carting away			
6	Surplus material from excavations and/or stock piles on site, to a dumping site to be located by the contractor	m3	126	
	Risk of collapse of excavations			
7	Sides of trench and hole excavations not exceeding 1,5m deep	m2	963	
	Keeping excavations free of water			
8	Keeping excavations free of all water other than subterranean water	Item	1	
	FILLING ETC			
	Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 93% Mod AASHTO density			
9	Backfilling to trenches, holes, etc	m3	290	
	Filling of G6 natural gravel material supplied by the contractor, compacted to 93% Mod AASHTO density			
10	Under floors, steps, pavings, etc	m3	308	
	Compaction of ground surfaces			
11	Compaction of natural or excavated ground surface under floors etc, including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density	m2	2050	
	WEED KILLERS, INSECTICIDES, ETC			
	Soil insecticide in accordance with SANS 5859			
12	Under floors etc, including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming	m2	2050	
13	To bottoms and sides of trenches,holes etc	m2	1378	
	TESTS			
	Prescribed tests to determine degree of compaction or other properties of ground or filling			
14	Modified AASHTO Density test	No	48	
	Carried to Phase 1.2 Summary			**R**

ITEM NO			QUANTITY	RATE	AMOUNT
	BILL NO 3				
	CONCRETE, FORMWORK AND REINFORCEMENT				
	Cost of tests				
	The costs of making, storing and testing of concrete test cubes as required under clause 7 "Tests" of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests for approval. The testing shall be undertaken by an approved independent firm or institution nominated by the contractor (test cubes are measured separately)				
	Formwork				
	Descriptions of formwork shall be deemed to include use and waste only (except where described as "left in" or "permanent"), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use				
	The vertical strutting shall be carried down to such construction as is sufficiently strong to afford the required support without damage and shall remain in position until the newly constructed work is able to support itself				
	Formwork to soffits of solid slabs etc shall be deemed to be to slabs not exceeding 250mm thick unless otherwise described				
	Formwork to soffits of slabs, beams, etc shall be deemed to be propped up exceeding 1,5m and not exceeding 3,5m high unless otherwise described				
	Formwork to sides of bases, pile caps, ground beams, etc will only be measured where it is prescribed by the engineer for design reasons. Formwork necessitated by irregularity or collapse of excavated faces will not be measured and the cost thereof shall be deemed to be included in the allowance for taking the risk of collapse of the sides of the excavations, provision for which is made in "Earthworks"				
	REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES				
	30MPa/19mm concrete				
1	Strip footings	m3	164		
2	Bases	m3	7		
3	Surface beds on waterproofing	m3	173		
4	Ramps	m3	2		
5	Aprons	m3	26		
	REINFORCED CONCRETE CAST ON/IN FORMWORK				
	30MPa/19mm concrete				
6	Slabs including beams and inverted beams	m3	50		
	Carried forward				

	Brought forward				
7	Stairs including landings, beams and inverted beams	m3	1		
8	Columns	m3	5		
	TEST CUBES				
9	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	60		
	CONCRETE SUNDRIES				
	Finishing top surfaces of concrete smooth with a power float				
10	Surface beds, slabs, etc	m2	1740		
11	Surface beds, slabs, etc to falls	m2	348		
	15 MPa non-shrink grout				
12	Bedding approximately 15mm thick under 350 x 350mm base plate	No	22		
	ROUGH FORMWORK (DEGREE OF ACCURACY III)				
	Rough formwork to sides				
13	Surface beds and aprons not exceeding 300mm high or wide	m	217		
	SMOOTH FORMWORK (DEGREE OF ACCURACY II)				
	Smooth formwork to sides				
14	Rectangular columns with total height exceeding 5m and not exceeding 6.5m above bearing level	m2	55		
15	Edges, risers, ends and reveals not exceeding 300mm high or wide	m2	30		
16	Sloping and stepped outer edges of stairs not exceeding 300mm high extreme	m	6		
	Smooth formwork to soffits				
17	Slabs not exceeding 250mm thick propped up exceeding 5m and not exceeding 6,5m high	m2	37		
18	Stairs with sloping soffits	m2	6		
	Smooth formwork to sides and soffits				
19	Beams propped up exceeding 5m and not exceeding 6,5m high	m2	346		
	Boxing in smooth formwork to form				
20	25 x 25mm Chamfers along top or bottom edges	m	641		
	MOVEMENT JOINTS ETC				
	Expansion joints with 10mm softboard between vertical concrete and brick surfaces				
	Carried forward				

	Brought forward			
21	Not exceeding 300mm high to edges of surface beds	m	699	
	Saw-cut joints			
22	6 x 40mm Saw-cut joints in top of concrete	m	828	
	Horizontal construction joints through concrete including thick cement slurry to one face			
23	Surface beds not exceeding 300mmm thick	m	62	
	REINFORCEMENT			
	REINFORCEMENT (PROVISIONAL)			
	High tensile steel reinforcement to structural concrete work			
24	All Diameter bars	t	20	
	Fabric reinforcement			
25	Type 100 fabric reinforcement in concrete surface beds etc	m2	325	
26	Type 193 fabric reinforcement in concrete surface beds etc	m2	24	
27	Type 245 fabric reinforcement in concrete surface beds etc	m2	1703	
	Carried to Phase 1.2 Summary			**R**

ITEM NO			QUANTITY	RATE	AMOUNT
	BILL NO 4				
	MASONRY				
	BRICKWORK				
	FOUNDATIONS (PROVISIONAL)				
1	Half brick walls	m2	108		
2	One brick walls	m2	225		
3	280mm cavity walls of two half brick skins, including weepholes at regular intervals	m2	4		
	2,5mm Brickwork reinforcement				
4	75mm Wide reinforcement built in horizontally	m	712		
5	150mm Wide reinforcement built in horizontally	m	1113		
	SUPERSTRUCTURE				
	Brickwork of NFX bricks (14 MPa nominal compressive strength) in class I mortar				
6	Half brick walls	m2	369		
7	One brick walls	m2	1345		
8	One brick walls in beamfilling	m2	66		
9	280mm cavity walls of two half brick skins, including weepholes at regular intervals	m2	15		
	BRICKWORK SUNDRIES				
10	Closing 280mm cavities of hollow walls vertically with brickwork half brick wide	m	6		
	2,5mm Brickwork reinforcement				
11	75mm Wide reinforcement built in horizontally	m	903		
12	150mm Wide reinforcement built in horizontally	m	3291		
	Prestressed fabricated concrete lintels including necessary temporary supports				
13	110 x 75mm Lintels in lengths not exceeding 3m	m	162		
	Galvanised wire ties etc				
14	4mm Diameter roof tie 2m girth bent double, with one end built into brickwork and other end fixed to timber	No	683		
	Carried forward				

	Brought forward				
	Galvanised hoop iron cramps, ties, etc				
15	30 x 1,6mm Cramp 400mm long with one end fixed to structural steel and other end built into brickwork	No	110		
	Carried to Phase 1.2 Summary			**R**	

ITEM NO			QUANTITY	RATE	AMOUNT
	BILL NO 5				
	WATERPROOFING				
	Waterproofing				
	Waterproofing of roofs, basements, etc shall be laid under a ten year guarantee. Waterproofing to roofs shall be laid to even falls to outlets etc with necessary ridges, hips and valleys. Descriptions of sheet or membrane waterproofing shall be deemed to include additional labour to turn-ups and turn-downs				
	DAMPPROOFING OF WALLS AND FLOORS				
	One layer 375 micron embossed polyethylene dampproof course (SANS 952-1985 type B)				
1	In walls	m2	154		
	One layer 250 micron green polyethylene waterproof sheeting (SANS 952-1985 type C) sealed at laps with PVC self-adhesive tape				
2	Under surface beds	m2	2050		
	WATERPROOFING TO ROOFS ETC				
	Prime with one coat bitumen primer and one layer 4mm fully bonded waterproof membrane comprising two bitumen layers reinforced with woven spunbonded polyester fabric and coated with polyethelene film for heat bonding, laid with 100mm side and 150mm end laps				
3	On flat roofs	m2	37		
4	On tops and sides of inverted beams	m2	305		
5	Sealing edges to brickwork or concrete	m	244		
	Two coats bituminous aluminium paint				
6	On waterproofing to roofs	m2	37		
	WATERSTOPS, SEALING STRIPS, JOINT SEALANTS, ETC				
	Silicone sealing compound including backing cord, bond breaker, primer, etc				
7	6 x 40mm In saw cut joints in floors	m	828		
8	10mm In expansion joints in floors including raking out expansion joint filler as necessary	m	699		
	Carried to Phase 1.2 Summary			**R**	

ITEM NO			QUANTITY	RATE	AMOUNT
	BILL NO 6				
	ROOF COVERINGS, CLADDINGS, ETC				
	PROFILED METAL SHEETING AND ACCESSORIES				
	0,8mm Kliplok 406 standing seam metal roof sheets fixed to steel purlins				
1	Roof covering with pitches not exceeding 25 degrees	m2	1516		
2	Extra over translucent roof sheeting for skylight	m2	89		
3	Side cladding	m2	580		
	0,8mm Kliplok 406 standing seam metal roof sheet accessories to preceding roof covering and claddings				
4	Rolled edge at verges	m	245		
5	Roll-top type ridge cappings , including dressing edges into corrugations of roof covering on both sides	m	85		
6	Roll-top type hip cappings, including dressing edges into corrugations of roof covering	m	30		
7	Cover flashings	m	245		
8	Side wall flashings	m	245		
9	Head wall flashings	m	245		
	ROOF AND WALL INSULATION				
	Multi-layered reinforced double-sided aluminium foil sheeting in accordance with SANS 1381-4 with a mass of not less than 293g/mÃ½ and a Class I fire rating in accordance with SANS 0177-3				
10	Insulation sheeting fixed to underside of rafters at approximately 600mm centres with 150mm stapled laps including galvanised steel straining wires at not exceeding 400mm centres and double-sided tape at edges where required	m2	1516		
	Carried to Phase 1.2 Summary			**R**	

ITEM NO			QUANTITY	RATE	AMOUNT
	BILL NO 7				
	CARPENTRY AND JOINERY				
	Fixing				
	Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins, or to be shot-pinned, to brickwork or concrete				
	Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 500mm centres, and where described as "bolted", the bolts have been given elsewhere				
	PLATE NAILED TIMBER ROOF TRUSS CONSTRUCTION ETC				
	SUPPLEMENTARY PREAMBLES				
	Dimensions in descriptions of trusses are nominal and actual measurements are to be obtained from the architect/engineer and/or taken on site before design or fabrication commences				
	Sawn softwood				
1	38 x 114mm Wall plates	m	78		
2	Design, manufacture, deliver on site and install Hipped end to monopitched roof 21 x 8m overall on plan x 600mm high overall, including part trusses, jack rafters, hip rafters, permanent bracing, Purlins, battens, etc	m2	160		
3	Design, manufacture, deliver on site and install Hipped end to monopitched roof 24 x 10m overall on plan x 600mm high overall, including part trusses, jack rafters, hip rafters, permanent bracing, Purlins, battens, etc	m2	235		
4	Design, manufacture, deliver on site and install Hipped end to monopitched roof 10 x 11m overall on plan x 600mm high overall, including part trusses, jack rafters, hip rafters, permanent bracing, Purlins, battens, etc	m2	105		
5	Design, manufacture, deliver on site and install Hipped end to monopitched roof 10 x 8m overall on plan x 600mm high overall, including part trusses, jack rafters, hip rafters, permanent bracing, Purlins, battens, etc	m2	70		
6	Design, manufacture, deliver on site and install Hipped end to monopitched roof 5 x 1m overall on plan x 600mm high overall, including part trusses, jack rafters, hip rafters, permanent bracing, Purlins, battens, etc	m2	5		
	Carried to Phase 1.2 Summary				**R**

ITEM NO			QUANTITY	RATE	AMOUNT
	BILL NO 8				
	CEILINGS, PARTITIONS AND ACCESS FLOORING				
	Fixing				
	Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins, or to be shot-pinned, to brickwork or concrete				
	Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 500mm centres, and where described as "bolted", the bolts have been given elsewhere				
	Ceilings				
	Unless otherwise described ceilings shall be deemed to be horizontal				
	Bulkheads				
	Unless otherwise described bulkheads shall be deemed to be horizontal along the length				
	Steel components				
	All steel components for ceilings, partitions, etc are to be galvanised in accordance with SANS 121				
	NAILED-UP CEILINGS				
	SUPPLEMENTARY PREAMBLES				
	Openings				
	Prices for openings for light fittings, ventilation grilles, air conditioning diffusers, etc are to include for any necessary additional support, trimming around, etc				
	6mm Nutec ceiling board				
1	Flush plastered Ceilings including 38 x 38mm sawn softwood brandering at 400mm centres and cross brandering at 400mm centres	m2	337		
2	Opening for sprinkler head	No	25		
3	Opening for 165mm diameter downlighter	No	32		
4	Extra over ceiling for opening for 1200 x 600mm light fitting	No	10		
5	Extra over ceiling for 600 x 600mm opening for ventilation grille/air conditioning diffuser	No	10		
6	Extra over ceiling for 600 x 600mm trap door of 38 x 38mm wrought softwood rebated framing with one cross brander, covered with ceiling board and fitted flush in opening, including necessary trimmers around	No	6		
	Carried forward				

	Brought forward				
	Nutec plasterboard cornices				
7	75mm Coved cornices	m	220		
	Insulated panels				
8	Ceilings of 50 x 600 x 600mm panels including 38 x 38mm sawn softwood brandering at 400mm centres in both directions	m2	5		
	Gypsum plasterboard cornices				
9	75mm polyurethane coved cornices	m	9		
	SUSPENDED CEILINGS				
	SUPPLEMENTARY PREAMBLES				
	Proprietary suspended ceilings				
	Hangers, suspension grids, "lay-in" panels, etc are to be in accordance with the manufacturers' recommendations				
	Flush plastered gypsum plasterboard suspended ceilings				
	Ceilings shall comprise 12,5m gypsum plasterboard boards screwed to and including screw-up suspension grid consisting of main tees at 1 200mm centres and galvanised steel capped cross tees at 400mm centres and with tape fixed over joints and the whole finished with gypsum plaster trowelled to a smooth polished surface				
	The grid shall be suspended by means of galvanised steel L-section hangers at suitable centres, securely shot-pinned or screwed to concrete, steel or wood according to manufacturer's instruction				
10	Ceilings suspended not exceeding 1m below timber/steel purlins at 400mm centres	m2	76		
	1200 x 600mm pre-painted chamfered and grooved acoustic panels on concealed suspension grid including hangers etc				
11	Ceilings suspended not exceeding 1mbelow timber/stee purlins at 400mm centres	m2	644		
12	Opening for sprinkler head	No	10		
13	Opening for 165mm diameter downlighter	No	32		
14	Extra over ceiling for opening for 1200 x 600mm light fitting	No	13		
15	Extra over ceiling for 600 x 600mm opening for ventilation grille/air conditioning diffuser	No	4		
	cornices, perimeter trims, etc to suspended ceilings				
16	47mm x 35mm Aluminium Nutec recessed wall angle shadow line	m	180		
	Carried to Phase 1.2 Summary			**R**	

ITEM NO			QUANTITY	RATE	AMOUNT
	BILL NO 9				
	STRUCTURAL STEELWORK				
	Descriptions				
	Descriptions of bolts shall be deemed to include nuts and washers				
	Descriptions of L-shaped and U-shaped anchor bolts shall be deemed to include bending, threading, nuts and washers and embedding in concrete Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete				
	STEEL COLUMNS AND BEAMS				
	GALVANISED STEEL COLUMNS AND BEAMS				
	Welded columns in single lengths with flat base, cap, bearer and connection plates, bolted to concrete				
1	203 x 203mm x 46kg/m H-sectioncolumns	t	7		
2	203 x 203mm x 60kg/m U-section columns	t	1		
	Welded beams in single lengths with flat bearer and connection plates, bolted to steel				
3	406 x 140mm x 39kg/m U-section beams	t	2		
	GALVANISED STEEL TRUSSES				
	Welded roof trusses of angle rafters, tie beams, rails, struts, braces, cleats, etc and flat bearer, gusset and connection plates, bolted to steel				
	Welded roof trusses of rectangular (round?) hollow section rafters, tie beams, rails, struts, braces, cleats, etc and flat bearer, gusset and connection plates, bolted to steel				
4	Double pitched trusses 30256 x 2240mm high extreme (Type A Trusses)	t	8		
5	Double pitched trusses 24736 x 2240mm high extreme (Type B Trusses)	t	6		
	GALVANISED STEEL PURLINS, GIRTS, BRACING, ETC				
	Purlins and girts, bolted to steel				
6	175 x 65 x 20 x 2,5mm Thick cold-formed lipped channel purlins	t	7		
7	101.6 Diameter x 4.5 CHS Bracing	t	2		
8	101.6 Diameter x 4.5 CHS Eaves Beam	t	1		
	GALVANISED STEEL GUTTERS AND RAINWATER PIPES				
	175mm Welded plate gutters				
9	Box gutters 175 x 175mm girth, 3 times bent along length including necessary collared and sealed expansion joints (bearers elsewhere)	t	2		
	Carried forward				

		Brought forward			
	175mm Welded plate rainwater pipes, including holderbats, brackets, etc				
10	175mm Internal diameter pipes	t	2		
	PAINTWORK TO STRUCTURAL STEEL				
11	On all members of structural steel	t	38		
		Carried to Phase 1.2 Summary			R

ITEM NO			QUANTITY	RATE	AMOUNT
	BILL NO 10				
	METALWORK				
	Descriptions of bolts, anchors, etc				
	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				
	Items described as "holed for bolt(s)" shall be deemed to exclude the bolts unless otherwise described				
	Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres				
	Aluminium doors, windows, etc				
	Doors and windows shall comply with AAAMSA design criteria Glazing shall comply with SAGGA regulations. Glass shall be type ? laminated performance glass as shown on the window schedules/drawings appended to these bills of quantities (as described in the headings to window descriptions?). Glass thickness shall comply with SAGGA regulations irrespective of thicknesses shown on the schedules/drawings Doors and windows shall be supplied with protective tape and plastic and shall be removed only once surrounding trades have been completed For purpose made windows and doors, refer to drawings annexed to (issued separately with?) these bills of quantities				
	The following certificates shall be provided prior to commencement of site work:1A copy of the relevant AAAMSA Performance Test Certificate from the manufacturer/contractor supplying the architectural aluminium product 2A Certificate of Conformance confirming that anodising or powder coating has been processed in accordance with SANS 999 and SANS 1796 respectively				
	3A powder guarantee of not less than 15 years issued by the powder manufacturer. The specificconditions contained in this guarantee shall form part of the powder coating process 4A Certificate of Conformance confirming that glazing has been installed in accordance with SANS 0137, ensuring that safety glazing materials have been installed in the mandatory areas and that each individual pane of safety glazing materials has been permanently marked5A warranty from the manufacturer of thelaminated safety glass and/or hermetically sealed glazing units guaranteeing the products against delamination and colour degredation for a period of not less than five years				
	STEEL HANDRAILS				
	Welded handrails to stair walls				
1	32mm diameter Hollow section rails	m	186		
2	Extra over for rounded end	No	44		
	STEEL BALUSTRADING				
	Welded balustrading to walkways and stairs				
3	Raking balustrading 1000mm high, of 32mm external diameter x 32mm thick continuous pipe handrail, 15x 15mm flat section continuous top and bottom rails, 15 x 15mm flat section posts at approximately 100mm centres with ?32 x 32mm footplates bolted to concrete (bolts elsewhere) and 12 x 12mm intermediate vertical balusters at 100mm centres between top and bottom rails	m	20		
4	Extra over for rounded end	No	4		
	Carried forward				

	Brought forward				
5	Extra over for flat closed end	No	7		
6	Extra over for rounded closed end	No	7		
7	Extra over for L-intersection	No	7		
	DOORS, WINDOWS, CURTAIN WALLING, SHOPFRONTS, ETC				
	PRESSED STEEL DOOR FRAMES				
	1,2mm Rebated frames suitable for half brick walls				
8	Frame for door 800 x 2125mm high Door Type D1	No	28		
9	Frame for door 900 x 2125mm high Door Type D2	No	10		
10	Frame for double door 2085 x 2125mm high Door Type D5	No	8		
	1,6mm Rebated frames suitable for one brick walls				
11	Frame for door 800 x 2125mm high Door Type D3	No	2		
12	Frame for door 900 x 2125mm high Door Type D2	No	1		
13	Frame for double door 2085 x 2125mm high Door Type D5	No	1		
	STEEL ROLLER SHUTTERS ETC				
	Galvanised steel roller shutters with 76mm slats (18kg/m²), fixed to brickwork or concrete				
14	Chain operated slatted roller shutter for 4000 x 1200mm high opening	No	1		
	ALUMINIUM WINDOWS, DOORS, ETC				
	Powder coated colour matte charcoal casement window units , complete with subframes, ironmongery, clear laminated glass, sealing, etc and fixing to brickwork or concrete				
15	Standard window type W1, 600 x 900mm high	No	23		
16	Purpose made window type W2, 600 x 2125mm high	No	6		
17	Purpose made window type W3, 1500 x 900mm high	No	8		
18	Purpose made window type W4, 1315 x 5050mm high	No	4		
19	Purpose made window type W5, 1480 x 4435mm high	No	6		
20	Purpose made window type W6, 1900 x 4435mm high	No	2		
21	Purpose made window type W7, 5450 x 2125mm high	No	1		
22	Purpose made window type W8, 2000 x 900mm high	No	1		
23	Purpose made window type W9,2 x 2000 x 1200mm high	No	1		
24	Purpose made window type W10, 1420 x 2990mm high	No	4		
25	Purpose made window type W11, 2475 x 600mm high	No	4		
	Powder coated colour matte charcoal doors complete with subframes, ironmongery, glass, sealing, etc and fixing to brickwork or concrete				
26	Purpose made door type D4, 900 x 2125mm high	No	2		
27	Purpose made double door type D6, 1805 x 2125mm high	No	7		
	Carried to Phase 1.2 Summary			**R**	

ITEM NO			QUANTITY	RATE	AMOUNT
	BILL NO 11				
	PLASTERING				
	SCREEDS				
	Screeds wood floated, on concrete				
1	Average 30mm thick on floors with upper surface to falls	m2	37		
	INTERNAL PLASTER				
	Cement plaster rendering coat with gypsum skim plaster finishing coat, on brickwork				
2	On walls	m2	2050		
3	On raking soffits of stairs	m2	6		
4	On narrow widths not exceeding 300mm wide	m2	71		
	Cement plaster rendering coat with gypsum skim plaster finishing coat, on concrete				
5	On projecting and isolated beams	m2	137		
	EXTERNAL PLASTER				
	Cement plaster wood floated, on brickwork				
6	On walls	m2	1125		
7	On narrow widths not exceeding 300mm wide	m2	41		
	Cement plaster wood floated, on concrete				
8	On projecting and isolated beams	m2	137		
	Carried to Phase 1.2 Summary			**R**	

ITEM NO			QUANTITY	RATE	AMOUNT
	BILL NO 12				
	TILING				
	Patterns				
	Unless otherwise described, tiles shall be laid with continuous joints in both directions				
	Fixing				
	Ceramic, porcelain, marble and granite tiles are to be fixed and grouted with suitable adhesives and grouts as recommended by the manufacturer of the tiles				
	WALL TILING				
	300 x 300mm Porcelain tiles (PC R 200/m²) fixed with adhesive to plaster (plaster elsewhere) and flush pointed with tinted grout				
1	On walls	m2	225		
2	On narrow widths not exceeding 300mm	m2	3		
	FLOOR TILING				
	600 x 600mm Union Tiles code UNM35600 Porcelain floor tiles on screeded floors and flush pointed with TAL tile grout				
3	On floors and landings	m2	1133		
4	On risers 170mm high	m	14		
5	On treads 300mm high	m	14		
6	On raking and stepped outer edges of stairs 450mm wide extreme	m	6		
7	Skirting 150mm high	m	510		
8	Sloping skirting 150mm high extreme	m	20		
	SUNDRIES				
	Stainless steel corner protectors, stair nosings, expansion joint strips, etc				
9	corner protectors	m	42		
10	stair nosings	m	14		
	Carried to Phase 1.2 Summary			**R**	

ITEM NO			QUANTITY	RATE	AMOUNT
	BILL NO 13				
	PAINTWORK				
	SUPPLEMENTARY PREAMBLES				
	PAINT SPECIFICATIONS				
	All painting shall be done in accordance with "?" specifications unless otherwise described				
	PAINTWORK ETC TO NEW WORK				
	ON EXTERNAL FLOATED PLASTER SURFACES				
	One coat alkali resistant primer and two coats superior quality acrylic emulsion paint for interior and exterior use				
1	Walls	m2	1305		
	ON INTERNAL GYPSUM PLASTER SURFACES				
	One coat primer and two coats low odour premium quality highly washable and stain resistant acrylic emulsion paint for interior use				
2	Walls	m2	2264		
	ON PLASTERBOARD SURFACES				
	One coat alkali resistant primer and two coats PVA emulsion paint for interior use				
3	Ceilings and cornices	m2	364		
	ON FIBRE-CEMENT BOARD SURFACES				
	One coat alkali resistant primer and two coats superior quality acrylic emulsion paint for interior and exterior use				
4	Fascias and barge boards not exceeding 300mm girth, including priming metal jointing strips	m	110		
	ON METAL SURFACES				
	One coat alkyd based zinc phosphate primer and two coats premium quality polyurethane enamel paint, on steel				
5	Door frames	m2	72		
6	Rails, bars, pipes, etc	m2	20		
7	Rails, bars, pipes, etc not exceeding 300mm girth	m	6		
8	Eaves gutters not exceeding 300mm girth	m	110		
9	Rainwater downpipes not exceeding 300mm girth	m	72		
	ON WOOD SURFACES				
	One coat primer, one coat alkyd based universal undercoat and two coats superior quality universal enamel paint				
10	Doors	m2	355		
11	Roof timbers at eaves and verges	m2	110		
	Carried to Phase 1.2 Summary			**R**	

ITEM NO			QUANTITY	RATE	AMOUNT
	BILL 14				
	ELECTRICAL INSTALLATIONS				
	SECTION 1: DISTRIBUTION BOARDS AND SITE RETICULATION				
	Distribution Boards				
	Distribution board complete with all MCBs, switchgear, accessories, sheet metal frames, sub-frames, busbars, terminals, wiring, conduit terminations, labelling, fixtures and fittings as specified, with all equipment fitted and equipped in factory all strictly as per the issued schematic diagram.				
	(Please note that the distribution board's shop drawing should be submitted to the Engineer for approval prior to manufacture).				
	DB-AB (Auditorium Building - Flush Mounted)				
1	Supply	No.	1		
2	Install	No.	1		
	DB-ST (Stage - Flush Mounted)				
3	Supply	No.	1		
4	Install	No.	1		
	DB-PS (Pump House - Flush Mounted)				
5	Supply	No.	1		
6	Install	No.	1		
	Low voltage cables				
	600/1 000V PVC/PVC/SWA/PVC multi-core copper cable to SANS 1507-3 installed on cable tray, cable ladder, ground and sleeves including all fixings and accessories (cable trays and sleeves measured elsewhere)				
	150mm² 4 Core				
7	Supply	m	80		
8	Install	m	80		
	95mm² 4 Core				
9	Supply	m	95		
10	Install	m	95		
	16mm² 4 Core				
11	Supply	m	80		
12	Install	m	80		
	Low voltage cable terminations				
	Make off and terminate the LV cable, complete with glands, lugs and shrouds including connection of cable to equipment terminals. Rate to include supply, nuts, flat and spring washers and any other accessories required to make task complete.				
	150mm² 4 Core				
13	Supply	No.	2		
14	Install	No.	2		
	95mm² 4 Core				
15	Supply	No.	6		
16	Install	No.	6		
	16mm² 4 Core				
17	Supply	No.	8		
18	Install	No.	8		
	Earthing Conductors				
	Bare stranded copper earth conductor installed in sleeves (sleeves measured elsewhere)				
	Carried forward				

		Brought forward			
	95mm² BCEW				
19	Supply	m	80		
20	Install	m	80		
	70mm² BCEW				
21	Supply	m	95		
22	Install	m	95		
	10mm² BCEW				
23	Supply	m	95		
24	Install	m	95		
	Earthing conductor terminations				
	Make off and terminate earth conductor, including lugs and connections				
	95mm² BCEW				
25	Supply	No.	2		
26	Install	No.	2		
	70mm² BCEW				
27	Supply	No.	6		
28	Install	No.	6		
	10mm² BCEW				
29	Supply	No.	8		
30	Install	No.	8		
	Earth Rods				
	SABS approved copper earth rod 1500mm long 16mm diameter				
31	Supply	No.	10		
32	Install	No.	10		
	Sleeves Kabelflex high density (or equal and approved) polyethylene (HDPE) sleeve with double wall construction, corrugated outer wall and smooth inner wall finish inclusive of couplers, bends, etc				
	110mm diameter				
33	Supply	m	60		
34	Install	m	60		
	50mm diameter				
35	Supply	m	200		
36	Install	m	200		
	Draw wires Draw wire drawn into sleeves and conduits including approximately 300mm slack in boxes, distribution board, etc.				
	1.6mm² Galvanised steel draw wire				
37	Supply	m	260		
38	Install	m	260		
	Excavations All excavations, back filling and compaction must be done manually using local labour				
	Excavate for cable and sleeve trench including temporary support of sides, keeping excavations dry, backfilling and compacting to the Engineer's specification				
39	Pickable Soil	m³	400		
40	For Soft Rock	m³	50		
41	For Hard Rock	m³	10		
		Carried forward			

		Brought forward			
	Bedding under and filling around cables comprising sifted sand				
42	Supply	m^3	100		
43	Install	m^3	100		
44	Remove all waste material	m^3	160		
	Cable Tape and Markers				
	PVC warning marking tape				
45	Supply	m	190		
46	Install	m	190		
	Concrete route markers				
47	Supply	m	3,8		
48	Install	m	3,8		
	Manholes complete with heavy duty trafficable covers				
	600 x 600 x 800 mm				
49	Supply	No.	4		
50	Install	No.	4		
	SECTION 2: GENERAL ELECTRICAL INSTALLATIONS - AUDITORIUM BUILDING				
	CONDUIT WORK				
	Galvanised steel / PVC conduit including bending, short lengths, draw boxes, cutting,bands, jointing, couplings, saddles and accessories as per SABS 1065. Fixed to surface or laid in or flush mounted in brickwork, dry walls (partitions), concrete, roof space or ceiling void. The rate to allow for the conduit mounting brackets to suspend conduits from concrete slab as would be required in the ceiling void.				
	20mm diameter Galvanised Steel				
51	Supply	m	200		
52	Install	m	200		
	20 mm diameter PVC				
53	Supply	m	1000		
54	Install	m	1000		
	25mm diameter Galvanised Steel				
55	Supply	m	200		
56	Install	m	200		
	25 mm diameter PVC				
57	Supply	m	1500		
58	Install	m	1500		
	PVC AND STEEL ROUND BOXES AND COVER PLATES Surface or flush mounted 60mm deep conduit round boxes with one, two, three or four way or back entry as required, including fixing to conduit with the necessary locknuts, adaptors, bushes, etc., installed in brickwork, on surface in ceiling void or cast in concrete inclusive of coverplates, where necessary.				
	20mm diameter Galvanised Steel				
59	Supply	No.	100		
60	Install	No.	100		
	20 mm diameter PVC				
61	Supply	No.	100		
62	Install	No.	100		
	25mm diameter Galvanised Steel				
63	Supply	No.	100		
64	Install	No.	100		
		Carried forward			

		Brought forward			
	25 mm diameter PVC				
65	Supply	No.	50		
66	Install	No.	50		
	Surface or flush mounted galvanised boxes with one, two, three or four way or back entry as required, including fixing to conduit with the necessary locknuts, adaptors, bushes, etc., installed chased in brickwork, on surface in ceiling or cast in concrete, excluding coverplates.				
	100 x 50 x 50mm				
67	Supply	No.	20		
68	Install	No.	20		
	100 x 100 x 50mm				
69	Supply	No.	40		
70	Install	No.	40		
	230mm x 230mm x 50mm Galvanised draw box with knockouts. Draw boxes to be supplied complete with covers and all accessories required to deliver a complete installation.				
71	Supply	No	10		
72	Install	No	10		
	Power skirting				
	Supply and install the following galvanized steel power skirting, complete with end caps, elbows, tees, and associated accessories and covers, colour to be specified by the Architect.				
	2-Compartment 2-Cover				
73	Supply	m	120		
74	Install	m	120		
	Power skirting Accessories				
	Aluminium power skirting accessories				
	End caps				
75	Supply	No.	30		
76	Install	No.	30		
	Elbows				
77	Supply	No.	4		
78	Install	No.	4		
	Power trunking				
	Supply and install ceiling mounted single compartment galvanized steel trunking complete with covers, tees, bends, hangers, threaded rods, purlin clamps and all other accessories for a complete installation.				
	76 mm wide x 63 mm deep (for lighting circuits, as Cabstrut P8300)				
79	Supply	m	200		
80	Install	m	200		
	127mm wide x 76 mm deep (for power circuits,as Cabstrut P9000)				
81	Supply	m	200		
82	Install	m	200		
	Cable Trays				
	Heavy Duty Galvanised Cable Trays complete with cantilever hangers or suspension rods complete with all joints, bends, tees, splicing etc as specified on the Drawings				
	150mm wide wiremesh cable tray				
83	Supply	m	100		
84	Install	m	100		
		Carried forward			

	Brought forward			
	PVC insulated conductors			
	600/1000V PVC insulated conductors drawn into conduit or installed in wiring channel including conductor identification labels, terminating, etc.			
	2.5 mm²			
85	Supply	m	1600	
86	Install	m	1600	
	4.0 mm²			
87	Supply	m	2000	
88	Install	m	2000	
	Insulated copper earth conductors			
	Earth conductors drawn into conduit or installed in wiring channel including conductor identification labels, terminating, etc.			
	2.5 mm²			
89	Supply	m	3600	
90	Install	m	3600	
	Socket outlets			
	Socket outlet complete with all necessary chrome fixing screws, steel cover plates, labeling, cradles, including all holes,drilling, etc			
	16A, 230V, 3-pin normal double switched,complying to both SANS 164-1 and SANS 164-2, wall mounted or surface mounted on wall			
91	Supply	No.	30	
92	Install	No.	30	
	Combination outlet, flush mounted, consisting of 16A, 230V, 3-pin blue switched socket outlet, combined telephone and data point, 2pin socket outlet, USB outlet, mounted on power skirting			
93	Supply	No.	35	
94	Install	No.	35	
	Floor box outlet, floor flush mounted, consisting of 1*RSA (164-1), 2* Slimline (164-2) and 2 USB type A, 2* RJ45, Arteor 8 module with USB power cluster - Magnesim or approved equal supply			
95	Supply	No.	2	
96	Install	No.	2	
	16A, 230V, 3-pin dedicated switched socket outlet with shaved earth pin, mounted on power skirting or power pole			
97	Supply	No.	2	
98	Install	No.	2	
	16A, 230V, 3-pin dedicated slimline switched socket outlet with shaved earth pin, mounted on power skirting or power pole			
99	Supply	No.	2	
100	Install	No.	2	
	5A, 230V, 3-pin unswitched, trunking mounted (for light fittings)			
101	Supply	No.	208	
102	Install	No.	208	
	230V, 3-pin double switched socket outlet for television / projector, surface mounted in ceiling void			
103	Supply	No.	2	
104	Install	No.	2	
	Isolators			
	Isolator complete with box, cover plate and accessories.			
	20A DP Single phase isolator, surface mounted, weatherproof, IP65			
105	Supply	No.	24	
106	Install	No.	24	
	Carried forward			

		Brought forward			
	20A DP Single phase isolator, ceiling mounted for geyser				
107	Supply	No.	1		
108	Install	No.	1		
	20A TP isolator, surface mounted, weatherproof, IP65				
109	Supply	No.	2		
110	Install	No.	2		
	60A TP isolator, surface mounted, weatherproof, IP65				
111	Supply	No.	3		
112	Install	No.	3		
	Light switches				
	Light switch complete with all necessary chrome fixing screws, steel cover plates, labeling, cradles, including all holes,drilling, etc inclusive of termination of circuit wiring onto switch terminals.				
	16A, 230V, 1 Lever 1 Way				
113	Supply	No.	14		
114	Install	No.	14		
	16A, 230V, 2 Lever 1 Way				
115	Supply	No.	2		
116	Install	No.	2		
	16A, 230V, 1 Lever 2 Way				
117	Supply	No.	4		
118	Install	No.	4		
	16A, 230V, 4 Lever 2 Way				
119	Supply	No.	4		
120	Install	No.	4		
	Photocell				
	Photocell installed in a suitably sized rectangular bulkhead luminaire housing with clear UV stabilised high impact acrylic lens and labelling as specified				
	16A, 230V, Photocell				
121	Supply	No.	2		
122	Install	No.	2		
	Occupancy Sensors				
	Ceiling/concrete slab mounted occupancy sensors for lighting control				
	10A, 250V, Passive 360^{o} occupancy sensor				
123	Supply	No.	10		
124	Install	No.	10		
	Light fittings				
	SABS approved light fittings as per the specification, complete with lamps,machine or wood screws, bolts, installed and connected as specified. All fittings shall be similar or equal to (and subject to approval) the light fittings specified in the schedule of light fittings.				
	Please note that all ceiling mounted lay in fittings shall be delivered with 3m of 1,5mm² flexible cabtyre with a 5 amp 3 pin plug top fitted.				
	Type A - 1200mm Surface mounted LED light fitting, polycarbonate optical cover, 46W lamp, 7062 lumens, 4000K colour temperature, IP65 protection, electronic control gear.				
125	Supply	No.	8		
126	Install	No.	8		
		Carried forward			

	Brought forward				
	Type AE - 1200mm Surface mounted LED light fitting, polycarbonate optical cover, 46W lamp, 7062 lumens, 4000K colour temperature, IP65 protection, electronic control gear. Emergency version.				
127	Supply	No.	2		
128	Install	No.	2		
	Type B - Recessed mounted LED downlight, 165mm diameter, aluminium housing complete with specular white trim ring finish, 15W LED lamp, 2100 lumens, 4000K colour temperature, IP20 protection, electronic control gear.				
129	Supply	No.	25		
130	Install	No.	25		
	Type BE - Recessed mounted LED downlight, 165mm diameter, aluminium housing complete with specular white trim ring finish, 15W LED lamp, 2100 lumens, 4000K colour temperature, IP20 protection, electronic control gear. Emergency version.				
131	Supply	No.	5		
132	Install	No.	5		
	Type B1 - Rectangular bulkhead luminaire with high pressure die-cast aluminium base and high impact acrylic diffusser, 8W LED lamp, 1095 lumens, 4000K colour temperature, IP65 protection, electronic control gear.				
133	Supply	No.	5		
134	Install	No.	5		
	Type C1 - Recess mounted LED panel luminaire, 1200mm x 600mm, polycarbonate body, acrylic opal diffuser, 65W LED lamp, 5850 lumens, 4000K colour temperature, IP20 protection, electronic control gear.				
135	Supply	No.	8		
136	Install	No.	8		
	Type C1E - Recess mounted LED panel luminaire, 1200mm x 600mm, polycarbonate body, acrylic opal diffuser, 65W LED lamp, 5850 lumens, 4000K colour temperature, IP20 protection, electronic control gear. Emergency version				
137	Supply	No.	3		
138	Install	No.	3		
	Type C2 - Surface mounted LED panel luminaire, 600mm x 600mm, polycarbonate body, acrylic opal diffuser, 36W LED lamp, 3240 lumens, 4000K colour temperature, IP20 protection, electronic control gear.				
139	Supply	No.	130		
140	Install	No.	130		
	Type C2E - Surface mounted LED panel luminaire, 600mm x 600mm, polycarbonate body, acrylic opal diffuser, 36W LED lamp, 3240 lumens, 4000K colour temperature, IP20 protection, electronic control gear. Emergency version.				
141	Supply	No.	22		
142	Install	No.	22		
	Type VP - Surface mounted watertight, steamproof, and corrosion proof light fitting with 33W LED lamp, 5304 lumens, IP65 Protection, UV stabilised polycarbonate diffuser, electronic control gear and a 5-year warranty				
143	Supply	No.	0		
144	Install	No.	0		
	Type SL - Track mounted Professional Stage & Theater Lighting with Adjustable and Dimmable 20W LED Projector light fitting , 6000K colour temperature lumens, IP20 Protection, electronic control gear complete with mounting track and mounting accessories				
145	Supply	No.	20		
146	Install	No.	20		
	Carried forward				

	Brought forward				
	Telecommunications distribution board Flush mounted distribution board, lockable, complete with 20mm thick wooden back board				
	300 x 300 x 150mm deep				
147	Supply	No.	1		
148	Install	No.	1		
	Telecommunications outlets				
	Galvanised steel epoxy powder coated cradles and covers mounted on power skirting or wall complete with removable blank inserts.				
	RJ45 socket outlet - Power Skirting Mounted				
149	Supply	No.	40		
150	Install	No.	40		
	Hand Dryer				
	Stainless Steel Automatic Hand Dryer as 1400W Exellerator with a motor speed of 20,000rpm and air output temperature of 57 degrees Celsius, or equal and approved				
151	Supply	No.	2		
152	Install	No.	2		
	SECTION 3: ADDITIONAL ITEMS				
	Earthing and Lightning Protection				
153	Allowance for Earthing and Lightning Protection system to be done by a specialist as may be required.	Sum	1	150 000,00	150 000,00
	Telephone and Data Network				
154	Allowance for Telephone and Data Network system to be done by a specialist as may be required.	Sum	0	300 000,00	-
	Power supply to site by Eskom				
155	Allow R650 000 (Six Hundred and Fifty Thousand Rands) for provision of permanent power supply to site by Eskom	Sum	1	650 000,00	650 000,00
	Centralised UPS System				
156	Allowance for Centralised UPS system to be done by a specialist as may be required.	Sum	1	140 000,00	140 000,00
	350kVA Standby Generator				
157	Standby Power: 330kVA @ 230/400v | 50Hz | 1500rpm, Four-cylinder water-cooled diesel engine, Prime power (PRP): 300kVA, Starts & Stops Automatically, Maintenance-free Battery, Silent Weatherproof Mild-steel Canopy, Long-range Fuel Tank, Easy Cable Entry, Emergency Stop Button, Weatherproof Exhaust System, Complete with Automatic Transfer Switch	Sum	1	620 000,00	620 000,00
	Carried to Phase 1.2 Summary			**R**	

ITEM NO			QUANTITY	RATE	AMOUNT
	BILL 15				
	MECHANICAL WORKS				
	SECTION 1: FIRE PROTECTION				
	Supply, delivery, installation, testing and commissioning of Fire Protection Systems complete with connections and fittings to make the installation complete in Accordance with SANS 10400 Part T and SANS 10400 Part W				
	Fire Hydrants & Fire Hose Reels				
1	Φ100 Two Port Booster Connection with Pressure Guage (FPC)	No	1		
2	Φ100mm Storz Suction Hydrant – Φ100mm female BSP inlet & Φ100mm Storz outlet (FPH)	No	1		
3	Φ110mm Class 16 HDPE piping for ring main including fittings	m	450		
4	Φ65mm Outlet Outdoor Type, Right Angle Fire Hydrant (FH)	No	6		
5	Φ100mm Galvanised Steel (SABS 62) Piping including fittings for Connection of Fire Hydrants	m	50		
6	Φ80mm Galvanised Steel (SABS 62) Piping including fittings for Connection of Fire Hydrants	m	30		
7	Φ80mm Class 16 HDPE Piping including fittings for Connection of Fire Hydrant	m	50		
8	30m long, 20mm hose diameter, non-swinging rotary pattern type Fire Hose Reels	No	5		
9	Steel Lockable Fire Hose Reel Red Cabinet. Cabinet to also house two fire extinguishers	No	4		
10	Φ25mm Galvanised Steel (SABS 62) Piping including fittings for Connection of Fire Hose Reels	m	100		
11	Φ25mm Class 16 HDPE Piping for Connection of Fire Hose Reels	m	40		
12	Pipe Supports for Galavanised piping Reticulation at a manimum interval of 2.4m, Reducing Valves, Fittings and Accessories (Fire Hose Reels & Hydrants)	Sum	1		
13	Openable Fire Hose Reel Cabinet	No	2		
14	Red Oxide Imperial Paint	L	20		
	PUMP ROOM / PUMPHOUSE PIPEWORK & ELECTRICAL CONNECTIONS				
15	End suction centrifugal pump type, fire pump complete with 21 l/s at a total head of 5.5 Bar including by pass piping arrangement for periodical testing of the working of the pump set as required, strainer on suction side and pressure gauge on delivery side etc.The pump shall be provided with mechanical seals.and outlet manifolds. The above mounted on a base, pre-piped, pre-wired and tested. Stanby pump connected to diesel generator.	No	2		
16	Squirel cage A.C induction motor suitable for operation on 415V, 3 Phase 50Hz A.C supply and of minimum 100kW for the above pump with flexible coupling as per specification	No	1		
17	All coupling of pump and motor should be covered with safety guard	No			
18	Jockey Pump: 1.5 L/s @ 5.5 Bar Jockey Electrically driven for the two fire pump set	No	1		
19	All pumphouse pipework, necessary fittings and isolation valves to make the installation complete and functioning	Sum	1		
	Carried forward				

	Brought forward				
20	All electrical panels, cabling, safeties, switches, etc for electrical pump, jockey pump and any other equipment housed within the pump house	Sum	1		
21	Auto-start, test piping arrangment complete with pressure switches and gauges	Sum	1		
22	Supply, delivery, installation, testing and commissioning of a vertical inline centrifugal twin booster domestic water pump set (2 pumps: 1 duty, 1 standby) with common suction and discharge manifold complete with control panel, electrical connection, galvanized steel piping and fittings for above ground installation and HDPE piping for below groung. Pump set with a duty point of 3 L/s @ 1.5 bar	Sum	1		
23	227 m3 Steel Panel Water Storage Tank complete with all accessories and fixtures to make the installation complete and functioning - mounitng plinths, strainers, non-return valves, ball valves, and inlet and outlet manifolds	Sum	1		
	Fire Extinguishers complete with chevron board				
24	5 kg Carbon Dioxide Portable Fire Extinguishers	No	5		
25	4.5 kg Dry Chemical Powder Portable Fire Extinguishers	No	15		
26	Fire Extinguishers Cabinet for 4.5kg DCP	No	5		
	Fire Equipment Signage				
27	F5/F6, Size: 190mm x 570mm (h x w) Double sided photoluminescent sign with back plate framed in natural anodised aluminium. Supply and install with steel wire and ceiling hook/onto mild steel bracket at 3.0 meters from finished floor level/mechanically mounted onto wall/fixture.	No	4		
28	F1, Size: 190mm x 760mm (h x w) Double sided photoluminescent sign with back plate framed in natural anodised aluminium. Supply and install with steel wire and ceiling hook/onto mild steel bracket at 3.0 meters from finished floor level/mechanically mounted onto wall/fixture.	No	2		
29	F4, Size: 190mm x 570mm (h x w) Double sided photoluminescent sign with back plate framed in natural anodised aluminium. Supply and install with steel wire and ceiling hook/onto mild steel bracket at 3.0 meters from finished floor level/mechanically mounted onto wall/fixture.	No	4		
30	F16/F19, Size: 190mm x 380mm (h x w) Double sided photoluminescent sign with back plate framed in natural anodised aluminium. Supply and install with steel wire and ceiling hook/onto mild steel bracket at 3.0 meters from finished floor level/mechanically mounted onto wall/fixture.	No	10		
31	F13, Size: 190mm x 380mm (h x w) Double sided photoluminescent sign with back plate framed in natural anodised aluminium. Supply and install with steel wire and ceiling hook/onto mild steel bracket at 3.0 meters from finished floor level/mechanically mounted onto wall/fixture.	No	20		
	Evacuation Signage				
32	E1/E2, Size: 190mm x 380mm (h x w) Double sided photoluminescent sign with back plate framed in natural anodised aluminium. Supply and install with steel wire and ceiling hook/onto mild steel bracket at 3.0 meters from finished floor level/mechanically mounted onto wall/fixture.	No	7		
33	E3, Size: 190mm x 380mm (h x w) Double sided photoluminescent sign with back plate framed in natural anodised aluminium. Supply and install with steel wire and ceiling hook/onto mild steel bracket at 3.0 meters from finished floor level/mechanically mounted onto wall/fixture.	No	17		
	Testing and Commissioning of all Fire Protection Installations				
34	Testing and Commissioning of all Fire Protection Installations	Sum	1		
	Carried forward				

	Brought forward				
	SECTION 2: WET SERVICES - SUPPLY				
	Supply, delivery, installation, commissioning and testing of New water supply system complete connections, fittings and any other accessories to make the installation complete and functioning				
	Cold/Hot Water Supply system				
35	Φ15mm 460/0 Copper Piping for Connection of Cold Water Supply Piping complete with connections, reducers and fittings	m	80		
36	Φ15mm 460/0 Copper Piping for Connection of Hot Water Supply Piping complete with connections, reducers and fittings	m	20		
37	Φ22mm 460/0 Copper Piping for Connection of Cold Water Supply Piping complete with connections, reducers and fittings	m	80		
38	Φ22mm 460/0 Copper Piping for Connection of Hot Water Supply Piping complete with connections, reducers and fittings	m	0		
39	Φ28mm 460/0 Copper Piping for Connection of Cold Water Supply Piping complete with connections, reducers and fittings	m	30		
40	Φ28mm 460/0 Copper Piping for Connection of Hot Water Supply Piping complete with connections, reducers and fittings	m	0		
41	Pipe Supports at Dia. 15mm Copper Reticulation at a manimum interval of 1.8m, Reducing Valves, Fittings and AccessoriesAccessories (Braided Connectors, Elbows, Tees and etc.)	Sum	1		
42	Pipe Supports at Dia. 22mm Copper Reticulation at a manimum interval of 1.8m, Reducing Valves, Fittings and AccessoriesAccessories (Braided Connectors, Elbows, Tees and etc.)	Sum	1		
43	Pipe Supports at Dia. 28mm Copper Reticulation at a manimum interval of 2.4m, Reducing Valves, Fittings and AccessoriesAccessories (Braided Connectors, Elbows, Tees and etc.)	Sum	1		
44	Sundries	Sum	1		
	Hot Water				
45	100L Indirect Solar Geyser with electric backup element	No	0		
46	10L Undersink Water Heater complete with fittings	No	2		
47	Testing and Commissioning of all Fire Protection Installations				
48	Testing and Commissioning of water supply Installations	Sum	1		
	SECTION 3: WET SERVICES - DRAINAGE				
	Supply, delivery, installation, commissioning and testing of waste water drainage system complete with connections, fittings and any other accessories to make the installation complete and functioning				
	uPVC drain pipe or silimar approved, to duct and walls including brackets & support to manufacturers specifications				
49	110 mm pipe	m	70		
50	50 mm pipe	m	60		
	Bends				
51	110 mm Bend 22.50/87.50	No	10		
52	110 mm Bend 450	No	20		
53	110 mm Bend 450 Access Bend Left and Right Hand	No	10		
54	50 mm Bend 22.50/8.50	No	8		
	Carried forward				

		Brought forward			
55	50 mm Bend 450	No	5		
56	50 mm Bend 450 Access Heel	No	5		
57	50 mm Bend 22.50/87.50 Access Heel	No	4		
	Junctions				
58	110 mm Junction 450 Ribbed Plain	No	15		
59	110 mm Junction 450 Ribbed Left Hand	No	10		
60	110 mm Junction 450 Ribbed Right Hand	No	10		
61	50mm x 50mm x 87.50 Double Junction Plain	No	8		
62	50mm x 50mm x 87.50 Double Junction Access Heel	No	4		
63	50mm x 87.50 Single Junction	No	4		
64	50mm x 87.50 Single Junction Access Heel	No	4		
65	110 mm Junction With Screw Type Access Eye	No	4		
	Reducing Junctions				
66	110 mm x 50mm x 450 Double Reducing Junction	No	4		
67	110 mm x 50mm x 87.50 Double Reducing Junction Access Heel	No	4		
68	100mm x 50mm x 450 Single Reducing Junction	No	4		
69	100mm x 50mm x 450 Single Reducing Junction Access Heel	No	4		
70	100mm x 50mm x 87.50 Single Reducing Junction Access Heel	No	4		
71	100mm x 50mm x 87.50 Double Reducing Junction Access Heel	No	4		
72	50 mm Reducing junctions	No	6		
	Electroweld couplings				
73	110 mm electroweld couplings	No	8		
74	50 mm Electroweld couplings	No	8		
	Expansion Sockets				
75	110mm Single Expansion Sockets	No	4		
76	110mm Double Expansion Socket	No	4		
77	50mm Single Expansion Socket	No	4		
78	50mm Double Expansion Socket	No	4		
	Screwed End Caps				
79	110 mm screw on caps	No	3		
80	50 mm Screwed end cap	No	3		
	MI Adaptors				
81	50 mm Adaptors	No	2		
	FI Adaptors				
82	50 mm adaptors	No	2		
83	Sundries	Sum	1		
		Carried forward			

		Brought forward			
	Testing and Commissioning				
84	Testing and Commissioning of all Installations	Sum	1		
	SECTION 4: HVAC				
	Supply, delivery, installation, commissioning and testing of HVAC systems complete with connections, fittings, supports, etc…				
	Ventilations				
85	Extraction Axial Fan - Airflow 340L/s @116Pa Static Pressure complete with sound attenuators, canvas, electrical connection and all necessary items to make the installation complete and functioning	No	1		
86	Extraction Axial Fan - Airflow 557L/s @125Pa Static Pressure complete with sound attenuators, canvas, electrical connection and all necessary items to make the installation complete and functioning	No	1		
87	Extraction Axial Fan - Airflow 458L/s @140Pa Static Pressure complete with sound attenuators, canvas, electrical connection and all necessary items to make the installation complete and functioning	No	1		
88	Wall Mounted Extraction Fan - Airflow 200L/s @50Pa Static Pressure complete with louver and any other accessories to make the installation complete and functioning	No	1		
89	Wall Mounted Extraction Fan - Airflow 300L/s @50Pa Static Pressure complete with louver and any other accessories to make the installation complete and functioning	No	0		
	Ducting				
90	Ø350	m	20		
91	Ø300	m	40		
92	Ø250	m	100		
93	Ø200	m	30		
94	Ø150	m	30		
95	Ø200 Flexile duct	m	20		
96	Ø150 Flexile duct	m	40		
97	Elbows, Reducers, Spigots and End Cap	Sum	1		
98	Hide away unit plenum box	No	4		
99	Hide away unit canvas colar	No	4		
100	Duct Insulation	Sum	1		
101	Couplers and Suspension Rings/Hangers	Sum	1		
102	Ø250 Radial supply air diffuser, manually controlled with connection box and square face.	No	22		
103	Ø150 Extraction air disk valve	No	27		
104	Ø200 Extraction air disk valve	No	10		
105	Door Grilles Size: 400x300mm Door Grilles	No	27		
106	1200x600 Return air grill	No	4		
		Carried forward			

	Brought forward				
	Air-Conditioning				
	2.64 kW cooling Inverter Midwall split unit (Inverter, R32) complete with outdoor unit, insulated refrigerant piping, condensate drains, trunking, electric wiring and connection, remote controls and top-up refrigerant				
107	Midwall split Indoor Unit, 2.64 kW cooling capacity complete with remote control and outdoor unit	No	3		
108	Chord for Wired Controller	m	15		
109	Refrigerant piping with insulation	m	30		
110	Condensate Drain piping complete with fittings	m	20		
	7.03 kW cooling Inverter Split Four way Cassettee unit (Inverter, R32) complete with outdoor unit, insulated refrigerant piping, condensate drains, trunking, electric wiring and connection, remote controls and top-up refrigerant				
111	Four way Casselle split Indoor Unit, 7.03 kW cooling capacity complete with remote control and outdoor unit	No	1		
112	Chord for Wired Controller	m	5		
113	Refrigerant piping with insulation	m	15		
114	Condensate Drain piping complete with fittings	m	10		
	17.58 kW cooling Inverter Split Indoor unit (Inverter, R32) complete with outdoor unit, insulated refrigerant piping, condensate drains, trunking, electric wiring and connection, remote controls and top-up refrigerant				
115	Hide away split indoor unit, 17.58 kW cooling capacity complete with remote control outdoor unit	No	4		
116	Chord for Wired Controller	m	40		
117	Refrigerant piping with insulation	m	120		
118	Condensate Drain piping complete with fittings	m	60		
	Testing and Commissioning				
119	Testing and Commissioning of all Installations	Sum	1		
	SECTION 5: FIRE DETECTION				
	Fire Detection System to comply with the latstest SANS 10139 and SANS 10400: T				
	Supply, delivery, installation, commissioning and testing of fire detection system complete with all necessary accossories to make the installation complete and functioning				
120	Conventional Fire Panel 4 Zone	No	1		
121	Battery 12 V 7.2 AH	No	2		
122	Optical Smoke Detector with detector base	No	25		
123	Themal Heat Detector with detector base	No	2		
124	Remote Indicator	No	10		
125	Red Manual Call Point	No	10		
126	Sounder Beacon	No	7		
127	PH30 cable, 1 mm2, 2 core	m	400		
128	20mm Galvanized steel conduit	m	400		
	Carried forward				

		Brought forward			
129	Sundries	No	1		
	Testing and Commissioning				
130	Testing and Commissioning Fire Detection Installation	Sum	1		
		Carried to Phase 1.2 Summary		**R**	

ITEM NO			QUANTITY	RATE	AMOUNT
	BILL NO 16				
	PROVISIONAL SUMS				
	Special attendance on nominated/selected subcontractors				
	Where "special attendance" such as unloading, storing, placing in position, providing special power supplies, specific hoisting, cranage and scaffolding requirements, provision of temporary casing and/or other specific protection of the works, special security and clearing away rubbish is required, a separate item describing the specific requirements in detail is to be provided for the pricing of such requirements				
	PROVISIONAL SUMS FOR NOMINATED/SELECTED SUBCONTRACT WORKS				
	Subcontracting to Local Subcontractors				
1	Allocate the sum of R2 791 000 (Two Million and Seven Hundred and Ninety One Thousand Rands) to identify procurement opportunities (including masonry, plastering, painting, and tiling) and implement the participation of local EME's and QSE's as subcontractors within the project.	Item	0	2 791 000,00	Amount Only
2	Profit	Item			
3	Attendance	Item			
4	Allocate the sum of R91 000 (Ninety OneThousand Rands) for a Community Liason Officer (CLO)	Item	1	91 000,00	91 000,00
5	Profit	Item			
6	Attendance	Item			
7	Allow the sum of R150 000 (One Hundred and Fifty Thousand Rands) for the Extended Public Works Programme (EPWP) training Requirements	Item	1	150 000,00	150 000,00
8	Profit	Item			
9	Attendance	Item			
10	Allow the sum of R605 000 (Six hundred and Five Thousand Rands only) for the Construction Industry Development Board Regulations Fees	Item	1	605 000,00	605 000,00
	Carried to Phase 1.2 summary			**R**	

PHASE 1.2 SUMMARY

	FINAL SUMMARY				
1	PHASE 1.1 TOTAL	Page	123		
2	PHASE 1.2 TOTAL	Page	175		
	Sub-total			R	
	Value Added Tax				
3	Allow Fifteen per cent (15%) of the above sub-total for Value Added Tax	Item		15%	
	Carried to Form of offer			**R**	