



BID NUMBER: LDPWRI-B/20290

**APPOINTMENT OF A CONTRACTOR FOR
REFURBISHMENT OF 12 CLASSROOMS, 16 WATERBORNE TOILETS AND
NUTRITIONAL BLOCK, CONSTRUCTION OF 10 CLASSROOMS, MEDIUM
ADMINISTRATION BLOCK, NEW 16 SEATER ENVIROLOO TOILETS, STEEL PALISADE
FENCE AND EXTERNAL WORKS AT MOKHARI SECONDARY SCHOOL IN
NABOOMSPRUIT, WATERBERG DISTRICT**

for

LIMPOPO DEPARTMENT OF EDUCATION (LDOE),

LIMPOPO PROVINCE

FRAMEWORK CATEGORY A CONTRACTORS ONLY (7GB AND ABOVE)

Issued by:

Limpopo Department of Public Works, Roads and Infrastructure
Works Towers Building
43 Church Street
Polokwane
0700

Contact Person: General Queries

Name : Mr NJ Motsopye,
Tel No. : 015 284 7126
Email : motsopyen@dpw.limpopo.gov.za

Technical: Technical Queries

Name : Mr K Modjadji
Tel No. : 083 673 5436
Email : ModjadjiM@dpw.limpopo.gov.za

Name of the Bidder :



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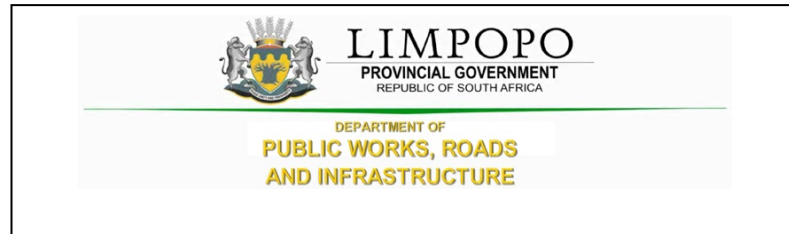
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PART T1: TENDERING PROCEDURE

T1.1 Tender Notice and Invitation to Tender

The Limpopo Department of Public Works, Roads and Infrastructure invites tenderers from contractors appointed on the framework agreement on category A for **APPOINTMENT OF A CONTRACTOR FOR REFURBISHMENT OF 12 CLASSROOMS, 16 WATERBORNE TOILETS AND NUTRITIONAL BLOCK, CONSTRUCTION OF 10 CLASSROOMS, MEDIUM ADMINISTRATION BLOCK, NEW 16 SEATER ENVIROLOO TOILETS, STEEL PALISADE FENCE AND EXTERNAL WORKS AT MOKHARI SECONDARY SCHOOL IN NABOOMSPRUIT, WATERBERG DISTRICT** for a period of 18 months. It is estimated that tenderers must have a CIDB contractor grading designation of **7 GB** or higher.

The conditions of the CIDB Standard for Indirect Targeting for Enterprise Development through Construction Works Contracts **Gazette Notice No. 36190 of 25 February 2013** will be applicable on this project

Project Name	APPOINTMENT OF A CONTRACTOR FOR REFURBISHMENT OF 12 CLASSROOMS, 16 WATERBORNE TOILETS AND NUTRITIONAL BLOCK, CONSTRUCTION OF 10 CLASSROOMS, MEDIUM ADMINISTRATION BLOCK, NEW 16 SEATER ENVIROLOO TOILETS, STEEL PALISADE FENCE AND EXTERNAL WORKS AT MOKHARI SECONDARY SCHOOL IN NABOOMSPRUIT, WATERBERG DISTRICT	
Tender Number	LDPWRI- B/20290	
Tender documents availability	Limpopo Department of Public Works, Roads and Infrastructure website	
Address for submission of tenders	DEPARTMENT OF PUBLIC WORKS, ROADS & INFRASTRUCTURE. Physical address: Corner River and Blaauwberg Streets, Ladanna, 0699.	
Closing date of the tender	As per Tender invite	
Closing time of the tender	As per Tender invite	
Compulsory briefing meeting (<i>Tenderers must sign the attendance register in the name of the tendering entity. Addenda (if any) will be issued only to those tendering entities appearing on the attendance register</i>)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
	Meeting venue	As per Tender invite
	Date	As per Tender invite
	Time:	As per Tender invite
Evaluation criteria	<ol style="list-style-type: none"> 1. Compliance with mandatory or compulsory requirements 2. Risk assessment on current projects 3. Price 4. Preference 	
Mandatory or Compulsory Requirements (<i>failure to submit or comply with these requirements will lead to automatic disqualification</i>)	Only tenderers who are appointed on category A registered with the Construction Industry Development Board (CIDB) with designation of 7 GB or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations are eligible to have their tenders evaluated	
	Priced Bills of Quantities	
	SBD 1.	
	Declaration on the status of Administration compliance.	
	Completed and signed Form of Offer	



T1.2 Tender Data

Clause number	Tender Data
	<p>The conditions of tender are the Standard Conditions of Tender as contained in Annex C of Board Notice 423 of 2019 in Government Gazette No. 42622 of 08 August 2019, Construction Industry Development Board (CIDB) Standard for Uniformity in Construction Procurement. (See www.cidb.org.za) which are reproduced without amendment or alteration for the convenience of tenderers as an Annexure to this Tender Data.</p> <p>The Standard Conditions of Tender make several references to the Tender Data for details that apply specifically to this tender. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the standard conditions of tender. Each item of data given below is cross-referenced to the clause in the Standard Conditions of Tender to which it mainly applies.</p> <p>The contractor shall achieve in the performance of the contract the Contract Participation Goals (CPG) relating to the engagement of targeted enterprises as established in the CIDB Standard for Indirect Targeting for Enterprise Development through Construction Works Contracts Gazette Notice No. 36190 of 25 February 2013. In this case, contractor shall provide a minimum Contract Participation Goal (CPG) of 5% of the total project value and develop targeted enterprises stated under C3 of this document.</p> <p>The following variations, amendments and additions to the Standard Conditions of Tender as set out in the Tender Data below shall apply to this tender. Add the following to clauses in Standard Conditions of Tender:</p>
C.1.1	The Employer is the Department of Public Works, Roads and Infrastructure

C.1.2	<p>The Tender</p> <p>Part T1: Tendering procedures</p> <p>T1.1 Tender notice and invitation to tender</p> <p>T1.2 Tender data</p> <p>Part T2: Returnable documents</p> <p>T2.1 List of returnable documents</p> <p>T2.2 Returnable schedules</p> <p>The Contract Part C1: Agreements and contract data</p> <p>C1.1 Form of offer and acceptance</p> <p>C1.2 Contract data</p> <p>C1.3 Joint Venture Agreement (If Applicable)</p> <p>The Contract Part C2: Pricing data</p> <p>C2.1 Pricing instructions</p> <p>C2.2 Bills of Quantities</p> <p>Part 3: Scope of work</p> <p>C3.1 Special Notes to Bidders</p> <p>C3.2 OHS Specifications</p> <p>Part 4: Site information</p> <p>C4 Drawings</p>
C.1.4	<p>The employer's representative is:</p> <p>Name : Mr K Modjadji</p> <p>Tel No. : 083 673 5436</p> <p>Email : ModjadjiM@dpw.limpopo.gov.za</p> <p>However, all communications related to this bid should be directed to the persons indicated under Enquires on this tender document.</p> <p>Attention is also drawn to the fact that verbal information, given by the Employer's agent during site visits/clarification meetings or at any other time prior to the award of the Contract, will not be regarded as binding on the Employer. Only information issued formally by the Employer in writing to Tenderers will be regarded as amending the Tender Documents.</p>
C.1.5	The employer reserve to cancel the tender prior to the award of the tender.
C1.6.2	A competitive negotiation procedure will not be followed.
C1.6.3	A two-stage system will not be followed.
C.2.1	<p>Eligibility in respect of CIDB grading</p> <p>Only tenderers who are appointed on framework agreement category A and registered with the Construction Industry Development Board (CIDB) with designation of 7 GB or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations, are eligible to have their tenders evaluated.</p>
C2.2	<p>Cost of tendering</p> <p>The tenderer accept that, unless otherwise stated in the tender data, the employer will not compensate the tenderer for any costs incurred in the preparation and submission of a tender offer, including the costs of any testing necessary to demonstrate that aspects of the offer complies with requirements.</p>

C.2.7	<p>Compulsory site briefing</p> <p>A compulsory briefing meeting will be held as per Tender invite</p> <p>Failure to attend the site briefing will result in the bidders not being considered for the project</p> <p>Tenderers must sign the attendance list in the name of the tendering entity. Addenda (if any) will be issued only to those tendering entities appearing on the attendance list.</p>
C.2.11	<p>Alterations to the documents</p> <p>Bidders are required to not make any alterations or additions to the tender documents, except to comply with instructions issued by the employer, or necessary to correct errors made by the tenderer. All signatories to the tender offer shall initial all such alterations</p>
C.2.12	<p>Alternative tender offer</p> <p>No alternative tender offer is permitted in this tender.</p>
C.2.13.2	<p>Replace sub-clause C.2.13.2 with the following; Return all returnable documents to the employer after completing them in their entirety by writing in non-erasable black ink (Black pen)</p>
C.2.13.3	Parts of each tender offer communicated on paper shall be submitted as an original
C.2.13.4	The tender shall be signed by a person duly authorized to do so.
C.2.13.5	<p>The employer's details and address for delivery of tender offers and identification details that are to be shown on each tender offer package are:</p> <p>Location of tender box: DEPARTMENT OF PUBLIC WORKS, ROADS & INFRASTRUCTURE. Physical address: Corner River and Blaauwberg Streets, Ladanna, 0699 Identification details: Sealed Tender with Tender reference number, Title of Tender and the closing date and time of the tender.</p>
C.2.15.1	The closing time for submission of tender offers is as stated in the Tender Notice and Invitation to Tender. Telephonic, telegraphic, telex, facsimile or e-mailed tender offers will not be accepted.
C.2.16.1	The tender offer validity period is 12 weeks or 90 days.
C.2.16.2	The tender accepts that a tender submission that has been submitted to the employer may only be withdrawn or substituted by giving the employer's agent written notice before the closing time for tenders that a tender is to be withdrawn or substituted. If the validity period stated in C.2.16.1 lapses before the employer evaluating tender, the contractor reserves the right to review the price based on Consumer Price Index (CPI).
C.3.1	<p>The tenderer is required to indicate how they claim points for each preference point system and attached relevant supporting documents. The specific goals for claiming of preference points include the following:</p> <ul style="list-style-type: none"> - Persons who had no franchise in national elections prior to 1983 and 1993 - Women - Disabled persons - Promotion of SMMEs - Enterprises located in Limpopo Province - Promotion of youth - South African owned enterprises

	<p>CIDB Grading Certificate</p> <p>Tenders are required to provide proof of registration with the CIDB register of contractors indicating the category of registration, grading as well as the CRS number of the tenderer.</p> <p>Letter of Good Standing</p> <p>Tenderer's are required to submit, bound with the tender submission, a letter of good standing from the compensation commissioner indicating that the bidder is in good standing.</p>
C3.2	Notwithstanding any requests for confirmation of receipt of Addenda issued, the tenderer shall be deemed to have received such addenda if the employer can show proof of transmission thereof (or a notice in respect thereof) via electronic mail, facsimile or registered post.
C.3.4.1	Tenders will not be opened immediately after the closing time for tenders.
C.3.11	<p>The tenderers will be evaluated in four stages</p> <ul style="list-style-type: none"> (i) Stage 1: Compliance with mandatory requirements as stated in Part T1.1 (ii) Stage 2: Risk assessment on current projects (iii) Stage 3: Price (iv) Stage 4: Preference <p>The technical capacity (functionality) of the contractors will not be evaluated any further during evaluation of the RFQ. However, the contractors will be required to declare the status of their key staff and any administrative compliance. In cases where there are changes in the key staff, the contractor should provide CVs and qualifications of the new staff to LDPWR&I. The new staff should have similar skills, qualifications and experience as the staff submitted during tender. Similarly, the contractors will be expected to provide an update on any changes in their administrative compliances – and should submit the required SBD document/forms in such cases.</p> <p>The award will only be issued to contractors with valid Tax Clearance certificates, active CIDB grading and the contractor who meets all the legislative requirement – this shall be verified by SCM in line with the departmental SCM Policy.</p> <p>The total value of current projects for a contractor under consideration cannot exceed twice the maximum value of their relevant CIDB grade.¹</p> <ul style="list-style-type: none"> a) Stage 1: Administrative Compliance: The Compliance or compulsory documents and returnable are detailed in Section T.2.1 of this tender document. Failure to submit, complete or comply with these requirements will lead to automatic disqualification. b) Stage 2: Risk assessment on current projects <p>The total value of current projects for a contractor under consideration cannot exceed twice the maximum value of their relevant CIDB grade.</p>

Stage 3 and 4:

The procedure for final evaluation of responsive tenders is Method 2 (Financial offer and preference). The total number of tender evaluation points (T_{EV}) shall be determined in accordance with the following formula.

$$T_{EV} = N_{FO} + N_P$$

- a) N_{FO} is the number of tender evaluation points awarded for the financial offer made. The score for financial offer is calculated using the following formula:

$$P = A * \left(1 - \frac{(P_o - P_m)}{P_m} \right)$$

Where:

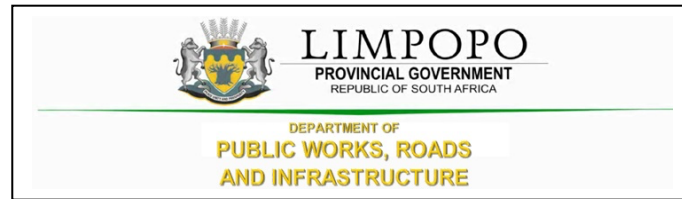
A is 80 since the estimated financial value of works inclusive of VAT is equals or is less than R 50,000,000.00.

P is the points awarded to the bid under consideration

P_m is the lowest Comparative bid price

P_o is the comparative price under consideration

- b) N_P is the number of tender evaluation points awarded for preferences claimed in accordance with the Preferencing Schedule in 3.18



PART T2: RETURNABLE DOCUMENTS



T2.1 : LIST OF RETURNABLE DOCUMENTS

The following documents will form part of the documents submitted to the Contractors as part of the Request for Proposals:

A -- MANDATORY REQUIREMENTS

- 2.1 Fully completed Form of Offer (Fully Completed and Signed Form of Offer)
- 2.2 Bills of Quantities (P&Gs are allowed to have a lump sum total in the P&Gs Summary Page and the rest of the Bill of Quantities trades must be completed in full (Rates and Amounts))
- 2.3 Record of Addenda to tender documents (Records of addendum must be captured in full, Whether applicable or not)
- 2.4 Proposed amendments and qualifications (Amendments and qualifications must be captured in full, Whether applicable or not)
- 2.5 Declaration on the status of Administration compliance.
- 2.6 CIDB grading certificate (Valid CIDB Certificate)
- 2.7 Declaration of current projects

B – NON- MANDATORY REQUIREMENTS

- 2.8 SBD 1 (Fully Completed and Signed)
- 2.9 SBD 4 (Fully Completed and Signed)
- 2.10 SBD 6.1 (Failure on the part of a tenderer to claim and submit proof or documentation required in terms of this tender to claim points for specific goals with tender, will be interpreted to mean that preference points for specific goals are not claimed)

SPECIFIC GOALS	REQUIRED ATTACHMENT
Persons who had no franchise in national elections prior to 1983 and 1993	Attach certified copy of South African ID as proof
Women	Attach Director's certified copy of South African ID as proof + company registration documents
Disabled Persons	Attach letter from a Health Professional as proof
Promotion of SMMEs	Attach latest financial statement as proof
Enterprises located in Limpopo Province	N.B: The physical address given in the SBD 1 will be used and it should be consistent or the same as the preferred address in the Central Supplier Database Report a) A Title deed, Letter from a Traditional Authority or Municipal Statement which must not be older than three (3) months; or b) A Formal Lease Agreement together with Lessor's Municipal Account or Letter from Traditional Authority
Promotion of Youth	Attach Director's certified copy of South African ID as proof
South African owned enterprises	Attach Director's certified copy of South African ID as proof + company registration documents

2.10 Full CSD Report

2.11 Bidders Tax matters should comply during the award

Failure by the service provider to submit or complete item 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, and 2.7 will render their proposal not responsive and will not be considered.

The bidder should also not appear on the National Treasury's list of black listed entities.

C -- SPECIAL NOTES TO BIDDERS AND DEPARTMENTAL RIGHTS

The following special conditions are for compliance and attention to bidders:

1.1 LDPWR&I reserve the right to call interviews with short-listed bidders before final selection.

1.2 LDPWR&I reserve the right to conduct supplier due diligence prior to final award or at any time during the contract period. This may include surprise site visits.

1.3 LDPWR&I reserves the right to appoint the bidder that proves to be fully capable and qualifies to handle and execute the job.

1.4 The proposals submitted must be in line with the detailed specification.

1.5 LDPWR&I reserve the right to cancel or withdraw this bid if:

- i. Due to changed circumstances, there is no longer a need for these services; or
- ii. Funds are no longer available to cover the total envisaged expenditure; or
- iii. No acceptable bids are received; or
- iv. There is a material irregularity in the Bid process.

1.6 In the case of sub-contracting or joint venture agreement, LDPWR&I will enter into a single contract with the principal bidder.

1.7 Bidders who are not registered on Central Supplier Database (CSD) must register before submission of bids.

1.8 Any completion of the bid document in pencil or erasable ink will not be acceptable and will automatically disqualify the submitted bid.

1.9 Successful bidder will be required to sign and enter into a formal contract upon the award.

1.10 Notwithstanding shortcomings and/or inconsistencies, if any, in this specification, which is only a minimum specification, a bidder shall make provision for a complete solution that will deliver the required service efficiently and cost-effectively.

1.11 Bid documents must be submitted physically to the closing address as reflected on the Request for Quotation/Tender.

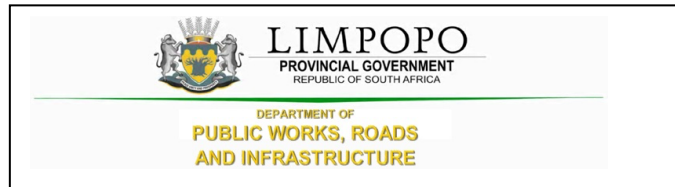
1.12 Quotations received after the closing date and time will not be accepted for consideration.

1.13 This request for bid document contains confidential information about LDPWR&I, which has been provided to supply potential bidders with the data necessary to provide a holistic response.

1.14 No part of the contents may be used, copied, disclosed or conveyed in whole or in part to any party, in any manner whatsoever without the prior written permission of LDPWR&I.

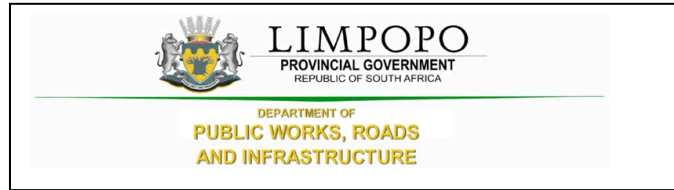
1.15 Any reproduction or transmission of information contained in this document except for the sole purpose of responding to this bid is strictly prohibited.

1.16 References to LDPWR&I must not be made in any literature, promotional material, and brochures or sales presentations without the express written consent of LDPWR&I



T 2.2: RETURNABLE SCHEDULE CHECKLIST

	Document Name	Returnable document
1.	Fully completed Form of Offer	<input type="checkbox"/> Yes <input type="checkbox"/> No
2.	Priced Bills of Quantities	<input type="checkbox"/> Yes <input type="checkbox"/> No
3.	Record of Addenda to tender documents	<input type="checkbox"/> Yes <input type="checkbox"/> No
4.	Proposed amendments and qualifications	<input type="checkbox"/> Yes <input type="checkbox"/> No
5.	Proof of specific goals for award of the preference points	<input type="checkbox"/> Yes <input type="checkbox"/> No
6.	SBD 1. Invitation to Tender	<input type="checkbox"/> Yes <input type="checkbox"/> No
7.	SBD4 Declaration Of Interest	<input type="checkbox"/> Yes <input type="checkbox"/> No
8.	SBD 6.1: Reference Points claim form in terms of the Preferential	<input type="checkbox"/> Yes <input type="checkbox"/> No
9.	Declaration on the status of Administration compliance.	<input type="checkbox"/> Yes <input type="checkbox"/> No
10.	Proof of CIDB class grading: 7GB or higher.	<input type="checkbox"/> Yes <input type="checkbox"/> No
11.	Full CSD Report	<input type="checkbox"/> Yes <input type="checkbox"/> No
12.	Original tax clearance certificate or tax pin	<input type="checkbox"/> Yes <input type="checkbox"/> No
13.	Declaration of current projects	<input type="checkbox"/> Yes <input type="checkbox"/> No



Declaration on the status of administrative compliance

Please indicate, by circling either **Yes** or **No**, whether the administrative information submitted with the original framework tender documents have changed or not. If yes, kindly provide the particulars below with any supporting documents.

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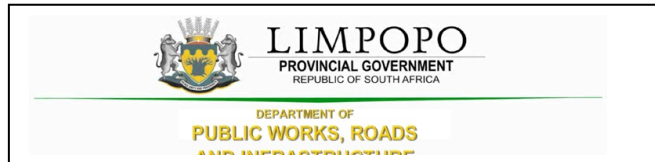
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Signed _____ Date _____

Name _____ Position _____

Enterprise _____



Record of Addenda to tender documents

We confirm that the following communications received from the Employer before the submission of this tender offer, amending the tender documents, have been taken into account in this tender offer:		
	Date	Title or Details
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Attach additional pages if more space is required.

Signed _____ Date _____

Name _____ Position _____

Tenderer _____



Proposed amendments and qualifications

The Tenderer should record any deviations or qualifications he may wish to make to the tender documents in this Returnable Schedule. Alternatively, a tenderer may state such deviations and qualifications in a covering letter to his tender and reference such letter in this schedule.

The Tenderer's attention is drawn to clause 5.8 of SANS 10845-3 regarding the employer's handling of material deviations and qualifications.

Page	Clause or item	Proposal

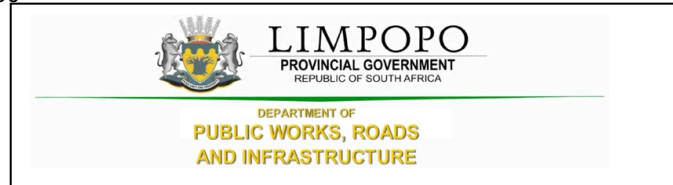
Signed

Date

Name

Position

Tenderer

**SBD 1****PART A: INVITATION TO BID**

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE LIMPOPO DEPARTMENT OF PUBLIC WORKS, ROADS AND INFRASTRUCTURE

BID NUMBER:	LDPWRI-B/20290	CLOSING DATE	As per Tender Advert	CLOSING TIME:	As per Tender Advert
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DESCRIPTION	REFURBISHMENT AND ADDITIONS AT MOKHARI SECONDARY SCHOOL IN NABOOMSPRUIT, WATERBERG DISTRICT.
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BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT (STREET ADDRESS)

DEPARTMENT OF PUBLIC WORKS, ROADS & INFRASTRUCTURE.

Physical address: Corner River and Blaauwberg Streets, Ladanna, 0699.

BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO

CONTACT PERSON	Mr. NJ Motsopye		
TELEPHONE NUMBER	0152847126	E-MAIL ADDRESS	motsopyen@dpw.limpopo.gov.za
CONTACT PERSON (TECHNICAL)	Mr. K Modjadji		
TELEPHONE NUMBER	083 673 5436	E-MAIL ADDRESS	ModjadjiM@dpw.limpopo.gov.za

SUPPLIER INFORMATION

NAME OF BIDDER					
POSTAL ADDRESS					
STREET ADDRESS					
TELEPHONE NUMBER	CODE		NUMBER		
CELLPHONE NUMBER					
E-MAIL ADDRESS					
VAT REGISTRATION NUMBER					
SUPPLIER COMPLIANCE STATUS	TAX COMPLIANCE SYSTEM PIN:		OR	CENTRAL SUPPLIER DATABASE No:	MAAA

ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?	<input type="checkbox"/> Yes <input type="checkbox"/> No [IF YES ENCLOSE PROOF]	ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS /SERVICES /WORKS OFFERED?	<input type="checkbox"/> Yes <input type="checkbox"/> No [IF YES, ANSWER THE QUESTIONNAIRE BELOW]
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QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS

IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)?	<input type="checkbox"/> YES <input type="checkbox"/> NO
DOES THE ENTITY HAVE A BRANCH IN THE RSA?	<input type="checkbox"/> YES <input type="checkbox"/> NO
DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA?	<input type="checkbox"/> YES <input type="checkbox"/> NO
DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA?	<input type="checkbox"/> YES <input type="checkbox"/> NO
IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION?	<input type="checkbox"/> YES <input type="checkbox"/> NO

IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 2.3 BELOW.

PART B: TERMS AND CONDITIONS FOR BIDDING

1. BID SUBMISSION:
<p>1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.</p> <p>1.2. ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED-(NOT TO BE RE-TYPED) OR IN THE MANNER PRESCRIBED IN THE BID DOCUMENT.</p> <p>1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT, 2000 AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2022, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.</p> <p>1.4. THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM.</p>
2. TAX COMPLIANCE REQUIREMENTS
<p>2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.</p> <p>2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VERIFY THE TAXPAYER'S PROFILE AND TAX STATUS.</p> <p>2.3 APPLICATION FOR TAX COMPLIANCE STATUS (TCS) PIN MAY BE MADE VIA E-FILING THROUGH THE SARS WEBSITE WWW.SARS.GOV.ZA.</p> <p>2.4 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.</p> <p>2.5 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.</p> <p>2.6 WHERE NO TCS PIN IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.</p> <p>2.7 NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE, COMPANIES WITH DIRECTORS WHO ARE PERSONS IN THE SERVICE OF THE STATE, OR CLOSE CORPORATIONS WITH MEMBERS PERSONS IN THE SERVICE OF THE STATE."</p>

NB: FAILURE TO PROVIDE / OR COMPLY WITH ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID.

SIGNATURE OF BIDDER:

CAPACITY UNDER WHICH THIS BID IS SIGNED:
(Proof of authority must be submitted e.g. company resolution)

DATE:

SBD 4**DECLARATION OF INTEREST**

1. Any legal person, including persons employed by the state¹, or persons having a kinship with persons employed by the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid (includes a price quotation, advertised competitive bid, limited bid or proposal). In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons employed by the state, or to persons connected with or related to them, it is required that the bidder or his/her authorised representative declare his/her position in relation to the evaluating/adjudicating authority where-

- the bidder is employed by the state; and/or
- the legal person on whose behalf the bidding document is signed, has a relationship with persons/a person who are/is involved in the evaluation and or adjudication of the bid(s), or where it is known that such a relationship exists between the person or persons for or on whose behalf the declarant acts and persons who are involved with the evaluation and or adjudication of the bid.

2. **In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.**

2.1 Full Name of bidder or his or her representative:

2.2 Identity Number:

2.3 Position occupied in the Company (director, trustee, shareholder²):

2.4 Company Registration Number:

2.5 Tax Reference Number:

2.6 VAT Registration Number:

- 2.6.1 The names of all directors / trustees / shareholders / members, their individual identity numbers, tax reference numbers and, if applicable, employee / persal numbers must be indicated in paragraph 3 below.

¹"State" means –

- (a) any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No. 1 of 1999);
- (b) any municipality or municipal entity;
- (c) provincial legislature;
- (d) national Assembly or the national Council of provinces; or
- (e) Parliament.

²"Shareholder" means a person who owns shares in the company and is actively involved in the management of the enterprise or business and exercises control over the enterprise.

- 2.7 Are you or any person connected with the bidder presently employed by the state? **YES / NO**

- 2.7.1 If so, furnish the following particulars:

Name of person / director / trustee / shareholder/ member:

Name of state institution at which you or the person connected to the bidder is employed :

Position occupied in the state institution:

Any other particulars:

.....

2.7.2 If you are presently employed by the state, did you obtain the appropriate authority to undertake remunerative work outside employment in the public sector? **YES / NO**

2.7.2.1 If yes, did you attached proof of such authority to the bid document? **YES / NO**

(Note: Failure to submit proof of such authority, where applicable, may result in the disqualification of the bid.

2.7.2.2 If no, furnish reasons for non-submission of such proof:

.....

2.8 Did you or your spouse, or any of the company's directors / trustees / shareholders / members or their spouses conduct business with the state in the previous twelve months? **YES / NO**

2.8.1 If so, furnish particulars:

.....

2.9 Do you, or any person connected with the bidder, have any relationship (family, friend, other) with a person employed by the state and who may be involved with the evaluation and or adjudication of this bid? **YES / NO**

2.9.1 If so, furnish particulars.

.....

2.10 Are you, or any person connected with the bidder, aware of any relationship (family, friend, other) between any other bidder and any person employed by the state who may be involved with the evaluation and or adjudication of this bid? **YES/NO**

2.10.1 If so, furnish particulars.

.....

2.11 Do you or any of the directors / trustees / shareholders / members of the company have any interest in any other related companies whether or not they are bidding for this contract? **YES/NO**

11.1 If so, furnish particulars:

.....

Full details of directors / trustees / members / shareholders.

Full Name	Identity Number	Personal Reference Number	Tax Number	State Number	Employee / Persal Number

4 DECLARATION

I, THE UNDERSIGNED (NAME).....

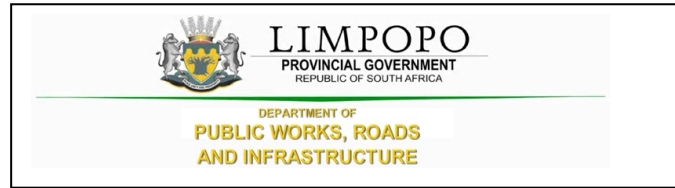
CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 2 and 3 ABOVE IS CORRECT.
 I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 23 OF THE GENERAL CONDITIONS OF CONTRACT SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....
 Signature

.....
 Date

.....
 Position

.....
 Name of bidder



SBD 6.1

PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022

This preference form must form part of all tenders invited. It contains general information and serves as a claim form for preference points for specific goals.

NB: BEFORE COMPLETING THIS FORM, TENDERERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF THE TENDER AND PREFERENTIAL PROCUREMENT REGULATIONS, 2022

1. GENERAL CONDITIONS

1.1 The following preference point systems are applicable to invitations to tender:

- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and
- the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).

1.2 To be completed by the organ of state

(delete whichever is not applicable for this tender).

- a) ~~The applicable preference point system for this tender is the 90/10 preference point system.~~
- b) The applicable preference point system for this tender is the 80/20 preference point system.
- c) Either the 90/10 or 80/20 preference point system will be applicable in this tender. The lowest/highest acceptable tender will be used to determine the accurate system once tenders are received.

1.3 Points for this tender (even in the case of a tender for income-generating contracts) shall be awarded for:

- (a) Price; and
- (b) Specific Goals.

1.4 To be completed by the organ of state:

The maximum points for this tender are allocated as follows:

	POINTS
PRICE	80
SPECIFIC GOALS	20
Total points for Price and SPECIFIC GOALS	100

- 1.5 Failure on the part of a tenderer to submit proof or documentation required in terms of this tender to claim points for specific goals with the tender, will be interpreted to mean that preference points for specific goals are not claimed.
- 1.6 The organ of state reserves the right to require of a tenderer, either before a tender is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the organ of state.

2. DEFINITIONS

- (a) **“tender”** means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations, competitive tendering process or any other method envisaged in legislation;
- (b) **“price”** means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts;
- (c) **“rand value”** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;
- (d) **“tender for income-generating contracts”** means a written offer in the form determined by an organ of state in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the organ of state and a third party that produces revenue for the organ of state, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions; and
- (e) **“the Act”** means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES**3.1. POINTS AWARDED FOR PRICE****3.1.1 THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS**

A maximum of 80 or 90 points is allocated for price on the following basis:

$$\begin{array}{ccc} \mathbf{80/20} & \mathbf{or} & \mathbf{90/10} \\ \\ \mathbf{Ps = 80 \left(1 - \frac{Pt - P_{min}}{P_{min}} \right)} & \mathbf{or} & \mathbf{Ps = 90 \left(1 - \frac{Pt - P_{min}}{P_{min}} \right)} \end{array}$$

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmin = Price of lowest acceptable tender

3.2. FORMULAE FOR DISPOSAL OR LEASING OF STATE ASSETS AND INCOME GENERATING PROCUREMENT**3.2.1. POINTS AWARDED FOR PRICE**

A maximum of 80 or 90 points is allocated for price on the following basis:

$$\begin{array}{ccc} \mathbf{80/20} & \mathbf{or} & \mathbf{90/10} \\ \\ \mathbf{Ps = 80 \left(1 + \frac{Pt - P_{max}}{P_{max}} \right)} & \mathbf{or} & \mathbf{Ps = 90 \left(1 + \frac{Pt - P_{max}}{P_{max}} \right)} \end{array}$$

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmax = Price of highest acceptable tender

4. POINTS AWARDED FOR SPECIFIC GOALS

4.1. In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in table 1 below as may be supported by proof/ documentation stated in the conditions of this tender:

4.2. In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of—

4.3. (a) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system; or

CONTRACT No. LDPWRI-B/20290

- (b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system,
then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.

Table 1: Specific goals for the tender and points claimed are indicated per the table below.

(Note to organs of state: Where either the 90/10 or 80/20 preference point system is applicable, corresponding points must also be indicated as such.

Note to tenderers: The tenderer must indicate how they claim points for each preference point system.)

The specific goals allocated points in terms of this tender	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (80/20 system) (To be completed by the tenderer)
Persons who had no franchise in national elections prior to 1983 and 1993	6	
Women	3	
Disabled persons	2	
Promotion of SMMEs	2	
Enterprises located in Limpopo Province	4	
Promotion of youth	1	
South African owned enterprises	2	

DECLARATION WITH REGARD TO COMPANY/FIRM

4.4. Name of company/firm.....

4.5. Company registration number:

4.6. TYPE OF COMPANY/ FIRM

- ☐ Partnership/Joint Venture / Consortium
- ☐ One-person business/sole propriety
- ☐ Close corporation
- ☐ Public Company
- ☐ Personal Liability Company
- ☐ (Pty) Limited
- ☐ Non-Profit Company
- ☐ State Owned Company

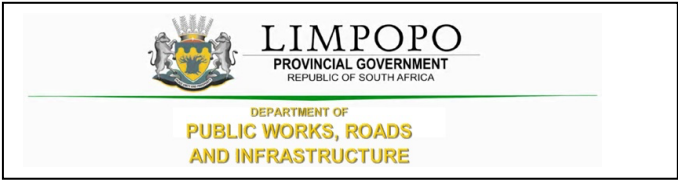
[TICK APPLICABLE BOX]

CONTRACT No. LDPWRI-B/20290

4.7. I, the undersigned, who is duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the specific goals as advised in the tender, qualifies the company/ firm for the preference(s) shown and I acknowledge that:

- i) The information furnished is true and correct;
- ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;
- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 4.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that the claims are correct;
- iv) If the specific goals have been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the organ of state may, in addition to any other remedy it may have –
 - (a) disqualify the person from the tendering process;
 - (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
 - (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
 - (d) recommend that the tenderer or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and
 - (e) forward the matter for criminal prosecution, if deemed necessary.

..... SIGNATURE(S) OF TENDERER(S)	
SURNAME AND NAME:
DATE:
ADDRESS:



ATION OF CURRENT PROJECTS

value refers to current value of projects for both General Building (GB) and Civil Engineering (CE).

st the current projects which your company is busy executing in the table below.

ects at the moment the tender must indicate/write on this table.

sentation of facts will render your bid non-responsive.

st of current projects executed by the bidder

o you have the current projects being executed Yes/No?

lease note that it is compulsory to answer the question above and if the answer is yes, complete the table below. Failure by the service
provider/tenderer to answer the question above or complete the table below will render their proposal not responsive and will not be cons

Description	Project Value	Start date	Planned end date	Client Name	Contact Person

Signed

Date

Name

Position

Enterprise

THE CONTRACT



PART C1: AGREEMENT AND CONTRACT DATA



C1.1. FORM OF OFFER AND ACCEPTANCE

Offer

The employer, identified in the acceptance signature block, has solicited offers to enter into a contract in respect of the following works:

REFURBISHMENT AND ADDITIONS AT MOKHARI SECONDARY SCHOOL IN NABOOMSPRUIT, WATERBERG DISTRICT.

The tenderer, identified in the offer signature block, has examined the documents listed in the tender data and addenda thereto as listed in the tender schedules, and by submitting this offer has accepted the conditions of tender.

By the representative of the tenderer, deemed to be duly authorized, signing this part of the Form of Offer and Acceptance, the tenderer offers to perform all of the obligations and liabilities of the contractor under the contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the conditions of contract identified in the contract data.

THE OFFERED TOTAL OF THE PRICE INCLUSIVE OF VALUE ADDED TAX IS (CONTRACT PRICE)

Rand (in words); R

.....

(in figures) R.....

This offer may be accepted by the employer by signing the acceptance part of this form of offer and acceptance and returning one copy of this document to the tenderer before the end of the period of validity stated in the tender data, whereupon the tenderer becomes the party named as the contractor in the conditions of contract identified in the contract data.

Signature(s)

Name(s)

Capacity

For the tenderer:

Name &
signature of
witness

Date

Acceptance (To be completed by the employer – not the bidder)

By signing this part of this Form of Offer and Acceptance, the *Employer* identified below accepts the tenderer's Offer. In consideration thereof, the *Employer* shall pay the Consultant the amount due in accordance with the *conditions of contract* identified in the Contract Data. Acceptance of the tenderer's Offer shall form an agreement between the *Employer* and the tenderer upon the terms and conditions contained in this agreement and in the contract that is the subject of this agreement.

The terms of the contract, are contained in:

Part C1	Agreements and Contract Data, (which includes this Form of Offer and Acceptance)
Part C2	Pricing Data
Part C3	Scope of Work

and drawings and documents (or parts thereof), which may be incorporated by reference into the above listed Parts.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Returnable Schedules as well as any changes to the terms of the Offer agreed by the tenderer and the *Employer* during this process of offer and acceptance, are contained in the Schedule of Deviations attached to and forming part of this Form of Offer and Acceptance. No amendments to or deviations from said documents are valid unless contained in this Schedule.

The tenderer shall within two weeks of receiving a completed copy of this agreement, including the Schedule of Deviations (if any), contact the *Employer's* agent (whose details are given in the Contract Data) to arrange the delivery of any securities, bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the *conditions of contract* identified in the Contract Data. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Notwithstanding anything contained herein, this agreement comes into effect on the date when the tenderer receives one fully completed original copy of this document, including the Schedule of Deviations (if any). Unless the tenderer (now *Consultant*) within five working days of the date of such receipt notifies the *Employer* in writing of any reason why he cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the Parties.

For the Employer

Signature

Name

Capacity

Name and address of organization

Signature and Name of Witness

Signature

Name

Capacity

Schedule of Deviations

1 Subject

Details

.....

.....

.....

2 Subject

Details

.....

.....

.....

3 Subject

Details

.....

.....

.....

4 Subject

Details

.....

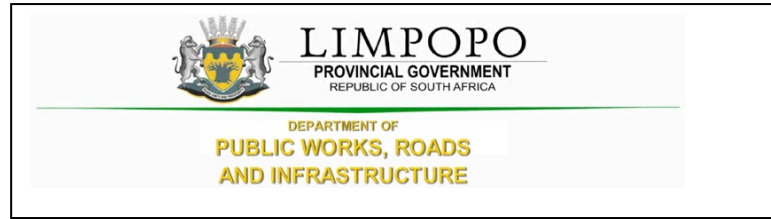
.....

.....

By the duly authorised representatives signing this agreement, the *Employer* and the Tenderer agree to and accept the foregoing schedule of deviations as the only deviations from and amendments to the documents listed in the Tender Data and addenda thereto as listed in the returnable schedules, as well as any confirmation, clarification or changes to the terms of the offer agreed by the Tenderer and the *Employer* during this process of offer and acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender documents and the receipt by the tenderer of a completed signed copy of this Agreement shall have any meaning or effect in the contract between the parties arising from this agreement.

.....



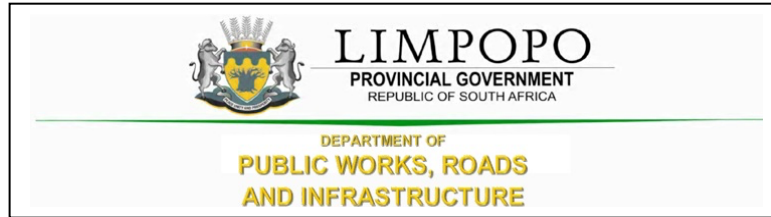
C2.1 CONTRACT DATA

The Conditions of Contract are clauses 1 to 41 of the **JBCC Series 2000 Principal Building Agreement (Edition 4.1 of March 2005)** published by the Joint Building Contracts Committee.

Copies of these conditions of contract may be obtained from the Association of South African Quantity Surveyors (011-3154140), Master Builders Association (011-205-9000; 057- 3526269) South African Association of Consulting Engineers (011-4632022) or South African Institute of Architects (051-4474909; 011-4860684; 053-8312003;)

The JBCC Principal Building Agreement makes several references to the Contract Data for specific data, which together with these conditions collectively describe the risks, liabilities, and obligations of the contracting parties and the procedures for the administration of the Contract. The Contract Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the JBCC Principal Building Agreement.

The contractor shall achieve in the performance of the contract the Contract Participation Goals (CPG) relating to the engagement of targeted enterprises as established in the **CIDB Standard for Indirect Targeting for Enterprise Development through Construction Works Contracts Gazette Notice No. 36190 of 25 February 2013.**"



PART C2: PRICING DATA

C2.1 Pricing instruction

- The Bills of Quantities have been drawn up in accordance with the Standard System of Measuring Building Work in accordance with the provisions of the Model Bills of Quantities or Electrical Work, published by the South African Association of Quantity Surveyors, (July, 2005).
- The agreement is under the JBCC N/S Subcontractor Agreement for use with the JBCC PBA (Edition 4.1 code 2101 March 2005) form of contract with Preliminaries (Code 2103 May 2005) incorporating the State Provisions of cl 41.0.
- It will be assumed that prices included in the Bills of Quantities are based on Acts, Ordinances, Regulations, By-laws, International Standards and National Standards that were published 28 days before the closing date for tenders.
- The prices and rates in these Bills of Quantities are fully inclusive prices for the work described under the items. Such prices and rates cover all costs and expenses that may be required in and for the execution of the work described in accordance with the provisions of the Scope of Work, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the Contract Data, as well as overhead charges and profit. These prices will be used as a basis for assessment of payment for additional work that may have to be carried out.
- An item against which no price is entered will be considered to be covered by the other prices or rates in the Bills of Quantities. A single lump sum will apply should a number of items be grouped together for pricing purposes.
- The Contract Data and the standard form of contract referenced therein must be studied for the full extent and meaning of each and every clause set out in Section 1 (Preliminaries) of the Bills of Quantities.
- The Bills of Quantities is not intended for the ordering of materials. Any ordering of materials, based on the Bills of Quantities, is at the Contractor's risk.
- The bidder shall set aside a minimum of 5 % of the project value for sub-contractor/s and determine the amount to be paid for the Contract Participation Goal (CPG).

PART C2.2: BILLS OF QUANTITIES

SECTION NO. 1

Preliminaries and Generals

Item
No**SECTION NO.1****BILL NO.1****MEANING OF TERMS "TENDER / TENDERER"**

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

PRELIMINARIES

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

PRICING OF PRELIMINARIES

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

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

SECTION A: JBCC PRINCIPAL BUILDING AGREEMENT**Carried to Collection****R**

Section No. 1
PRELIMINARIES
Bill No. 1

DEFINITIONS1 **A1 DEFINITIONS AND INTERPRETATIONS**

Clause 1.0 Clause

1.1 Definition of "**Commencement Date**" is added:

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

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

"CONSTRUCTION PERIOD" means the period commencing on the commencement date and ending on the date of practical completion.

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

INTEREST means the interest rates applicable on this contract, whether specifically indicated in the relevant clauses or not, will be in terms of the legislation of the Republic of South Africa, and in particular.

- (a) In respect of interest owed by the employer, the interest rate as determined by the Minister of Justice and Constitutional Development, from time to time, in terms of section 1(2) of the Prescribed Rate of Interest Act, 1975 (Act No. 55 of 1975), will apply; and
- (b) in respect of interest owed to the **employer**, the interest rate as determined by the Minister of Finance, from time to time, in terms of section 80(1)(b) of the Public Finance Management Act, 1999 (Act No. 1 of 1999), will apply.

Clause 1.6.4 is amended by replacing it with the following:

Carried to Collection

R

No clause

Fixed: _____ Value related: _____

Time related: _____

OBJECTIVE AND PREPARATION

2 A2 OFFER, ACCEPTANCE AND PERFORMANCE

Clause 2.0

Fixed: _____ Value related: _____

Time related: _____

3 A3 DOCUMENTS

Clause 3.0

Clause 3.7 is amended by the addition of the following:

The contractor shall supply and keep a copy of the JBCC Series 2000 Principal Building Agreement and Preliminaries applicable to this contract on the site, to which the employer, principal agent and agents shall have access at all times

Fixed: _____ Value related: _____

Time related: _____

4 A4 DESIGN RESPONSIBILITY

Clause 4.0

Fixed: _____ Value related: _____

Time related: _____

5 A5 EMPLOYEES AGENTS

Clause 5.0

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

Fixed: _____ Value related: _____

Time related: _____

Carried to Collection

item

item

item

item

item

R

6 **A6 SITE REPRESENTATIVE**

Clause 6.0

Fixed: _____ Value related: _____

Time related: _____

item

7 **A7 COMPLIANCE WITH REGULATION**

Clause 7.0

Note: The provisions herein include inter alia, compliance with all the requirements set out in the Construction Regulations, 2003 issued under the Occupational Health and Safety Act, 1993 (Act No 85 of 1993), and in particular with Regulation 5(1) requiring the compilation of a health and safety plan, as well as Regulation 6(1) requiring the appointment of a construction supervisor

See also clause C10 of Section C - Specific Preliminaries

Fixed: _____ Value related: _____

Time related: _____

item

8 **A8 WORKS RISK**

Clause 8.0

Fixed: _____ Value related: _____

Time related: _____

item

9 **A9 INDEMNITIES**

Clause 9.0

Fixed: _____ Value related: _____

Time related: _____

item

10 **A10 WORKS INSURANCES**

Fixed: _____ Value related: _____

Time related: _____

Clause 10.0

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

item

Carried to Collection

R

10.5 Damage to the Works

- (a) Without in any way limiting the **contractors** obligations in terms of the contract, the **contractor** shall bear the full risk of damage to and/or destruction of the **works** by whatever cause during construction of the **works** and hereby indemnifies and holds harmless the **employer** against any such damage. The **contractor** shall take such precautions and security measures and other steps for the protection and security of the **works** as the **contractor** may deem necessary
- (b) The **contractor** shall at all times proceed immediately to remove or dispose of any debris arising from damage to or destruction of the **works** and to rebuild, restore, replace and/or repair of **works**
- (c) The **employer** shall carry the risk of damage to or destruction of the **works** and material paid for by the **employer** that is the result of the excepted risks as set out in 10.6
- (d) Where the **employer** bears the risk in terms of this contract, the **contractor** shall, if requested to do so, reinstate any damage or destroyed portions of the **works** and the costs of such reinstatement shall be measured and valued in terms of 32.0 hereof

Carried to Collection

R

10.6 Injury to Persons or loss of or damage to Properties

- (a) The **contractor** shall be liable for and hereby indemnifies the **employer** against any liability, loss, claim or proceeding whether arising in common law or by statute, consequent upon personal injuries to or the death of any person whomsoever arising out of or in the course of or caused by the execution of the **works** unless due to any act or neglect of any person for whose actions the **employer** is legally liable
- (b) The **contractor** shall be liable for any hereby indemnifies the **employer** against any liability, loss, claim or proceeding consequent upon loss of or damage to any moveable or immovable or personal property or property contiguous to the **site**, whether belonging to or under the control of the **employer** or any other body or person, arising out of or in the course of or by reason of the execution of the **works** unless due to any act or neglect of any person for whose actions the **employer** is legally liable
- (c) The **contractor** shall, upon receiving a **contract instruction** from the **principal agent**, cause the same to be made good in a perfect and workmanlike manner at his own cost and in default therefore the **employer** shall be entitled to cause it to be made good and to recover the cost thereof from the **contractor** or to deduct the same from amounts due to the **contractor**
- (d) The **contractor** shall be responsible for the protection and safety of such portions of the premises placed under his control by the **employer** for the purpose of executing the **works** until the issue of the **certificate of practical completion**
- (e) Where the execution of the works involves the risk of removal of or interference with support to adjoining properties including land or structures or any structures to be altered or added to, the **contractor** shall and will remain adequately insured or insured against the death of or injury to persons or damage to such property consequent on such removal or interference with the support until such portion of the **works** has been completed

Carried to Collection**R**

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

10.7 High risk insurance

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

10.7.1 Damage to the works

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

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

10.7.2 Injury to persons or loss of or damage to property

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

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

Carried to Collection

R

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

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

Fixed: _____ Value related: _____

Time related: _____

item

11 A11 LIABILITY INSURANCES

Clause 11.0

Fixed: _____ Value related: _____

Time related: _____

item

12 A12 EFFECTING INSURANCES

Clause 12.0

Fixed: _____ Value related: _____

Time related: _____

item

13 A13.0 *No clause*

14 A14 SECURITY

Clause 14.0

Clause 14.1 - 14.8 are amended by replacing them with the following:

14.1. In respect of contracts with a **contract sum** up to R1 million, the **security** to be submitted by the **contractor** to the **employer** will be as a payment reduction of five per cent (5%) of the value certified in the **payment certificate** (excluding VAT)

Carried to Collection

R

14.1.1. The payment reduction of the value certified in a **payment certificate** shall be *mutatis mutandi* in terms of 31.8(A)

14.1.2. The **employer** shall be entitled to recover expense and loss from the payment reduction in terms of 33.0 provided that the **employer** complies with the provisions of 33.4 in which event the **employers** entitlement shall take precedence over his obligations to refund the payment reduction security or portions thereof to the **contractor**

14.2. In respect of contracts with a **contract sum** above R1 million, the **contractor** shall have the right to select the **security** to be provided in terms of 14.3, 14.4, 14.5, 14.6, or 14.7 as stated in the **schedule**. Such **security** shall be provided to the **employer** within twenty-one (21) **calendar days** from **commencement date**. Should the **contractor** fail to select the **security** to be provided or should the **contractor** fail to provide the **employer** with the selected **security** within twenty-one (21) **calendar days** from **commencement date**, the **security** in terms of 14.7 shall be deemed to have selected.

14.3. Where **security** as a cash deposit of ten per cent (10%) of the **contract sum** (excluding VAT) has been selected:

14.3.1. The **contractor** shall furnish the **employer** with a cash deposit equal in value of ten per cent (10%) of the **contract sum** (excluding VAT) within twenty-one (21) **calendar days** from **commencement date**

14.3.2. Within twenty-one (21) **calendar days** of the date of **practical completion** of the **works** the **employer** shall reduce the cash deposit to an amount equal to three per cent (3%) of the **contract value** (excluding VAT), and refund the balance to the **contractor**

14.3.3. Within twenty-one (21) **calendar days** of the date of **final completion** of the **works** the **employer** shall reduce the cash deposit to an amount equal to one per cent (1%) of the **contract value** (excluding VAT) and refund the balance to the **contractor**

14.3.4. On the date of payment of the amount in the final **payment certificate**, the **employer** shall refund the remainder of the cash deposit to the **contractor**

Carried to Collection

R

14.3.5. The **employer** shall be entitled to recover expense and loss from the cash deposit in terms of 33.0 provided that the **employer** complies with the provisions of 33.4 in which event the **employers** entitlement shall take precedence over his obligations to refund the cash deposit **security** or portions thereof to the **contractor**

14.3.6. The parties expressly agree that neither the **employer** nor the **contractor** shall be entitled to cede the rights to the deposit to any third party

14.4. Where **security** as a variable construction guarantee of ten percent (10%) of the **contract sum** (excluding VAT) has been selected.

14.4.1. The **contractor** shall furnish the **employer** with an acceptable variable construction guarantee equal in value to ten percent (10%) of the **contract sum** (excluding VAT) within twenty-one (21) **calendar days** from **commencement date**

14.4.2. The variable construction guarantee shall reduce and expire in terms of the Variable Construction Guarantee form include in the invitation to tender

14.4.3. The **employer** shall return the variable construction guarantee to the **contractor** within fourteen (14) **calendar days** of it expiring

14.4.4. Where the **employer** has a right of recovery against the **contractor** in terms of 33.0, the **employer** shall issue a written demand in terms of the variable construction guarantee

14.5. Where **security** as a fixed construction guarantee of five per cent (5%) of the **contract sum** (excluding VAT) and a five per cent (5%) payment reduction of the value certified in the payment certificate (excluding VAT) has been selected:

14.5.1. The **contractor** shall furnish a fixed construction guarantee to the **employer** equal in value to five per cent (5%) of the **contract sum** (excluding VAT)

14.5.2. The fixed construction guarantee shall come into force on the date of issue and shall expire on the date of **practical completion**

14.5.3. The **employer** shall return the fixed construction guarantee to the **contractor** within fourteen (14) **calendar days** of it expiring

14.5.4. The payment reduction of the value certified in a **payment certificate** shall be in terms of 31.8 (A) and 34.8

Carried to Collection

R

14.5.5. Where the **employer** has a right of recovery against the **contractor** in terms of 33.0, the **employer** shall be entitled to issue a written demand in terms of the fixed construction guarantee or may recover from the payment reduction or may do both

14.6. Where **security** as a cash deposit of five per cent (5%) of the **contract sum** (excluding VAT) and a payment reduction of five per cent (5%) of the value certified in the **payment certificate** (excluding VAT) has been selected:

14.6.1. The **contractor** shall furnish the **employer** with a cash deposit equal in value to five per cent (5%) of the **contract sum** (excluding VAT) within twenty-one (21) **calendar days** from **commencement date**

14.6.2. Within twenty-one (21) **calendar days** of the date of **practical completion** of the **works** the **employer** shall refund the cash deposit in total to the **contractor**

14.6.3. The payment reduction of the value certified in a **payment certificate** shall be *mutatis mutandi* in terms of 31.8(A)

14.6.4. Where the **employer** has a right of recovery against the **contractor** in terms of 33.0, the **employer** may issue a written notice in terms of 33.4 or may recover from the payment reduction or may do both

14.7. Where **security** as a payment reduction of ten per cent (10%) of the value certified in the **payment certificate** (excluding VAT) has been selected:

14.7.1. The payment reduction of the value certified in a **payment certificate** shall be *mutatis mutandi* in terms of 31.8(B)

14.7.2. The **employer** shall be entitled to recover expenses and loss from the payment reduction in terms of 33.0 provided that the **employer** complies with the provisions of 33.4 in which event the **employers** entitlement shall take precedence over his obligations to refund the payment reduction or portions thereof to the **contractor**

14.8. Payments made by the guarantor to the **employer** in terms of the fixed or variable construction guarantee shall not prejudice the rights of the **employer** or **contractor** in terms of this **agreement**

Carried to Collection

R

14.9. Should the **contractor** fail to furnish the **security** in terms of 14.2, the **employer**, in his sole discretion and without notification to the **contractors** selected form the **security** to that of a ten per cent (10%) payment reduction of the value certificate in the payment certificate (excluding VAT), whereafter 14.7 shall be applicable

Fixed: _____ Value related: _____

Time related: _____

EXECUTION

15 **A15 PREPARATION FOR AND EXECUTION OF THE WORKS**

Clause 15.0

Clause 15.1.1 is amended by replacing it with:

No Clause

Clause 15.1 is amended by the addition of the following clause:

15.1.4. An acceptable health and safety plan, required in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993), with twenty-one (21) **calendar days** of **commencement date**

Clause 15.2.1 is amended by replacing it with the following clause:

Give the **contractor** possession of the **site** within ten (10) **working days** of the **contractor** complying with the terms of 15.1.2 and 15.1.4

Fixed: _____ Value related: _____

Time related: _____

16 **A16 ACCESS TO THE WORKS**

Clause 16.0

Fixed: _____ Value related: _____

Time related: _____

17 **A17 CONTRACT INSTRUCTIONS**

Clause 17.0

Fixed: _____ Value related: _____

Time related: _____

Carried to Collection

item

item

item

item

R

18 **A18 SETTING OUT OF THE WORKS**

Clause 18.0

Fixed: _____ Value related: _____

Time related: _____

item

19 **A19 ASSIGNMENT**

Clause 19.0

Fixed: _____ Value related: _____

Time related: _____

item

20 **A20 NOMINATED SUB-CONTRACTORS**

Clause 20.0

Clause 20.1.3 is amended by replacing it with the following:

No Clause

Note: See item B9.1 hereinafter for adjustment of attendance on nominated subcontractors executing work allowed for under provisional sums

Fixed: _____ Value related: _____

Time related: _____

item

21 **A21 SELECTED SUBCONTRACTORS**

Clause 21.0

Clause 21 is amended by replacing with:

No Clause

Fixed: _____ Value related: _____

Time related: _____

item

Carried to Collection

R

22	A22 EMPLOYERS DIRECT CONTRACTORS Clause 22.0 Fixed: _____ Value related: _____ Time related: _____	item		
23	A23 CONTRACTOR'S DOMESTIC SUBCONTRACTORS Fixed: _____ Value related: _____ Time related: _____			
24	A24 PRACTICAL COMPLETION Clause 24.0 Fixed: _____ Value related: _____ Time related: _____			
25	A25 WORK'S COMPLETION Clause 25.0 Fixed: _____ Value related: _____ Time related: _____	item		
26	A26 FINAL COMPLETION Clause 26.0 Fixed: _____ Value related: _____ Time related: _____	item		
27	A27 LATENT DEFECTS LIABILITY PERIOD Clause 27.0 Fixed: _____ Value related: _____ Time related: _____	item		
28	A27 SECTIONAL COMPLETION Clause 28.0 Fixed: _____ Value related: _____ Time related: _____	item		
Carried to Collection		R		

29 **A29 REVISION OF DATE FOR PRACTICAL COMPLETION**

Clause 29.0

Fixed: _____ Value related: _____

Time related: _____

item

30 **A30 PENALTY FOR NON-COMPLETION**

Fixed: _____ Value related: _____

Time related: _____

item

PAYMENT

31 **A31 INTERIM PAYMENT TO THE CONTRACTOR**

Clause 31.0

Clause 31.8 is amended by replacing it with the following two alternative clauses:

Alternative A

31.8(A).1 Where a **security** is selected in terms of 14.1, 14.5 or 14.6, the value of the **works** in terms of 31.4.1 and **materials and goods** in terms of 31.4.2 shall be certified in full. The value certified shall be subject to the following percentage adjustments:

31.8(A).2 Ninety-seven per cent (97%) of such value in interim **payment certificates** issued on the date of **practical completion** and up to but excluding the date of **final completion**

31.8(A).3 Ninety-nine per cent (99%) of such value in interim **payment certificates** issued on the date of **final completion** and up to but excluding the final **payment certificate** in terms of 34.6

31.8(A).4 One hundred per cent (100%) of such value in the final **payment certificate** in terms of 34.6 except where the amount certified is in favour of the **employer**. In such an event the payment reduction shall remain at the adjustment level applicable to the final **payment certificate**

Carried to Collection

R

Alternative B

31.8(B) Where **security** is a payment reduction in terms of 14.7 the value of the **works** in terms of 31.4.1 and **materials and goods** in terms of 31.4.2 shall be certified in full. The value certified shall be subject to the following percentage adjustments:

31.8(b).1 Ninety per cent (90%) of such value in interim **payment certificates** issued up to the date of **practical completion**

31.8(B).1 Ninety-seven per cent (97%) of such value in interim **payment certificates** issued on the date of **practical completion** and up to but excluding the date of **final completion**

31.8(B).3 Ninety-nine per cent (99%) of such value in interim **payment certificates** issued on the date of **final completion** and up to but excluding the final **payment certificate** in terms of 34.6

31.8(B).4 One hundred per cent (100%) of such value in the final **payment certificate** in terms of 34.6 except where the amount certified is in favour of the **employer**. In such an event the payment reduction shall remain at the adjustment level applicable to the final **payment certificate**

Clause 31.12 is amended by deleting the following:

Payment shall be subject to the **employer** giving the **contractor** a tax invoice for the amount due

Fixed: _____ Value related: _____

Time related: _____

32

A32 ADJUSTMENT TO THE CONTRACT VALUE

Clause 32.0

Clauses 32.5.1, 32.5.7 are amended by the addition of the following at the end of the sentence:

"due to no fault of the **contractor**"

Fixed: _____ Value related: _____

Time related: _____

Carried to Collection

item

item

R

33 **A33 RECOVERY OF EXPENSE AND LOSS**

Clause 33.0

Clause 33.2 is amended by adding the following clauses:

33.2.9 the **contractors** failure or neglect to commence with the **works** on the dates prescribed in the contract

33.2.10 the **contractors** failure or neglect to proceed with the **works** in terms of the contract

33.2.11 the **contractors** failure or neglect for any reason to complete the **works** in accordance with the contract

33.2.12 the **contractors** refusal or neglect to comply strictly with any of the conditions of contract or any **contract instructions** and/or orders in writing given in terms of the contract

33.2.13 the **contractors** estate being sequestrated, liquidated or surrendered in terms of the insolvency laws in force within the Republic of South Africa

Fixed: _____ Value related: _____

Time related: _____

item

34 **A34 FINAL ACCOUNT AND FINAL PAYMENT**

Clause 34.0

Clause 34.13 is amended by replacing seven (7) **calendar days** with twenty-one (21) **calendar days** and deleting the words subject to the **employer** giving the **contractor** a tax invoice for the amount due

Fixed: _____ Value related: _____

Time related: _____

item

35 **A35 PAYMENT TO OTHER PARTIES**

Clause 35.0

Fixed: _____ Value related: _____

Time related: _____

item

Carried to Collection

R

CANCELLATION**A36 CANCELLATION BY EMPLOYER - CONTRACTORS
DEFAULT**

Clause 36.0

Clause 36.3 is amended by removing the reference to No clause and replacing the words **principal agent** with **employer**

Clause 36.0 is amended by the addition of the following clause:

36.7 Notwithstanding any clause to the contrary, on cancellation of this **agreement** either by the **employer** or the **contractor**; or for any reason whatsoever, the **contractor** shall on written instruction, discontinue with the **works** on a date stated and withdraw himself from the **site**. The **contractor** shall not be entitled to refuse to withdraw from the **works** on the grounds of any lien or right of retention or on the grounds of any other right whatsoever

Fixed: _____ Value related: _____

Time related: _____

item

**36 A37 CANCELLATION BY EMPLOYER - LOSS AND
DAMAGE**

Clause 37.0

Clause 37.0 is amended by the addition of the following clause:

37.5 Notwithstanding any clause to the contrary, on cancellation of this **agreement** either by the **employer** or the **contractor**; or for any reason whatsoever, the **contractor** shall on written instruction, discontinue with the **works** on a date stated and withdraw himself from the **site**. The **contractor** shall not be entitled to refuse to withdraw from the **works** on the grounds of any lien or right of retention or on the grounds of any other right whatsoever

Fixed: _____ Value related: _____

Time related: _____

item

**37 A38 CANCELLATION BY CONTRACTOR - EMPLOYERS
DEFAULT**

Clause 38.0

Carried to Collection**R**

Clause 38.0 is amended by the addition of the following clause:

38.7 Notwithstanding any clause to the contrary, on cancellation of this **agreement** either by the **employer** or the **contractor**; or for any reason whatsoever, the **contractor** shall on written instruction, discontinue with the **works** on a date stated and withdraw himself from the **site**. The **contractor** shall not be entitled to refuse to withdraw from the **works** on the grounds of any lien or right of retention or on the grounds of any other right whatsoever

Fixed: _____ Value related: _____
Time related: _____

38 **A39 CESSATION- CANCELLATION OF THE WORKS**

Clause 39.0

Fixed: _____ Value related: _____
Time related: _____

39 **A40 DISPUTE SETTLEMENT**

Clause 40.0

Clause 40.2.2 is amended by replacing one (1) year with three (3) years

Clause 40.6 is amended by removing the reference to:

No clause

Clause 40.7.1 is amended by replacing (10) with (15) and by the additions of the following

Whether or not mediation resolves the dispute, the parties shall bear their own cost concerning the mediation and equally share the costs of the mediator and related costs

Fixed: _____ Value related: _____
Time related: _____

Carried to Collection

item

item

item

R

SUBSTITUTE PROVISIONS**40 A41 STATE CLAUSES**

Clause 41.0

Fixed: _____ Value related: _____

Time related: _____

item

CONTRACT VARIABLES**THE SCHEDULE (DPW04EC)****41 A42 PRE-TENDER INFORMATION**

Clause 42.0

Tenderers are referred to the document C1.2 Contract Data
DPW04(EC) for variables pertaining to this contract

Fixed: _____ Value related: _____

Time related: _____

item

SECTION B: JBCC PRELIMINARIES**DEFINITIONS AND INTERPRETATION****42 *Definitions and interpretation***

Fixed: _____ Value related: _____

Time related: _____

item

DOCUMENTS**43 *Checking of documents***

Fixed: _____ Value related: _____

Time related: _____

item

44 *Provisional bills of quantities*

Fixed: _____ Value related: _____

Time related: _____

item

Carried to Collection**R**

45	Availability of construction documentation Fixed: _____ Value related: _____ Time related: _____	item	
46	Interests of agents Fixed: _____ Value related: _____ Time related: _____	item	
47	Priced documents Fixed: _____ Value related: _____ Time related: _____	item	
48	Tender submission Clause 2.6 is amended by replacing JBCC Form of Tender with Form of Offer and Acceptance Fixed: _____ Value related: _____ Time related: _____	item	
	<u>THE SITE</u>		
49	Defined works area Fixed: _____ Value related: _____ Time related: _____	item	
50	Geotechnical investigation Fixed: _____ Value related: _____ Time related: _____	item	
51	Inspection of the site Tenderers shall complete the Site Inspection Certificate included in the tender documents and return the same with the tender submission. Fixed: _____ Value related: _____ Time related: _____	item	
Carried to Collection		R	

52 ***Existing premises occupied***
 Fixed: _____ Value related: _____
 Time related: _____

item

53 ***Previous work dimensional accuracy***
 Fixed: _____ Value related: _____
 Time related: _____

item

54 ***Previous work defects***
 Fixed: _____ Value related: _____
 Time related: _____

item

55 ***Services known***
 Fixed: _____ Value related: _____
 Time related: _____

item

56 ***Services unknown***
 Fixed: _____ Value related: _____
 Time related: _____

item

57 ***Protection of trees***
 Fixed: _____ Value related: _____
 Time related: _____

item

58 ***Articles of value***
 Fixed: _____ Value related: _____
 Time related: _____

item

59 ***Inspection of adjoining properties***
 Fixed: _____ Value related: _____
 Time related: _____

item

Carried to Collection

R

MANAGEMENT OF CONTRACT60 ***Management of the works***

Fixed: _____ Value related: _____

Time related: _____

item

61 ***Programme for the works***

Fixed: _____ Value related: _____

Time related: _____

item

62 ***Progress meetings***

Fixed: _____ Value related: _____

Time related: _____

item

63 ***Technical meetings***

Fixed: _____ Value related: _____

Time related: _____

item

64 ***Labour and plant records***

Fixed: _____ Value related: _____

Time related: _____

item

**SAMPLES, SHOP DRAWINGS AND
MANUFACTURERS' INSTRUCTIONS**65 ***Samples of materials***

Fixed: _____ Value related: _____

Time related: _____

item

66 ***Workmanship samples***

Fixed: _____ Value related: _____

Time related: _____

item

67 ***Shop drawings***

Fixed: _____ Value related: _____

Time related: _____

item

Carried to Collection**R**

TEMPORARY WORKS AND PLANT69 ***Deposits and fees***

Fixed: _____ Value related: _____
 Time related: _____

item

70 ***Enclosure of the works***

Fixed: _____ Value related: _____
 Time related: _____

item

71 ***Advertising***

Fixed: _____ Value related: _____
 Time related: _____

item

72 ***Plant, equipment, sheds and offices***

Fixed: _____ Value related: _____
 Time related: _____

item

73 ***Main notice board***

Fixed: _____ Value related: _____
 Time related: _____

item

74 ***Subcontractors notice board***

Fixed: _____ Value related: _____
 Time related: _____

item

TEMPORARY SERVICES75 ***Location***

Fixed: _____ Value related: _____
 Time related: _____

item

76 ***Water***

Fixed: _____ Value related: _____
 Time related: _____

item

77 ***Electricity***

Fixed: _____ Value related: _____
 Time related: _____

item

Carried to Collection**R**

78 **Telecommunication facilities**

Fixed: _____ Value related: _____
 Time related: _____

item

79 **Ablution facilities**

Fixed: _____ Value related: _____
 Time related: _____

item

PRIME COSTS AMOUNTS80 **Responsibility for prime cost amounts**

Fixed: _____ Value related: _____
 Time related: _____

item

ATTENDANCE ON N/S SUBCONTRACTORS81 **General attendance**

The schedule rates providing for attendance on **nominated subcontractors** and other **contractors**, will be adjusted only if the scope of the work has changed

Fixed: _____ Value related: _____
 Time related: _____

item

82 **Special attendance**

Fixed: _____ Value related: _____
 Time related: _____

item

83 **Commissioning fuel, water and electricity**

Fixed: _____ Value related: _____
 Time related: _____

item

Carried to Collection**R**

FINANCIAL ASPECTS84 ***Statutory taxes, duties and levies***

Fixed: _____ Value related: _____
 Time related: _____

item

85 ***Payment for preliminaries***

Fixed: _____ Value related: _____
 Time related: _____

item

86 ***Adjustment of preliminaries***

Fixed: _____ Value related: _____
 Time related: _____

item

87 ***Payment certificate cash flow***

Fixed: _____ Value related: _____
 Time related: _____

item

GENERAL88 ***Protection of the works***

Fixed: _____ Value related: _____
 Time related: _____

item

89 ***Protection / isolation of existing / sectionally occupied works***

Fixed: _____ Value related: _____
 Time related: _____

item

90 ***Security of the works***

Fixed: _____ Value related: _____
 Time related: _____

item

91 ***Notice before covering work***

Fixed: _____ Value related: _____
 Time related: _____

item

Carried to Collection**R**

92 ***Disturbance***

Fixed: _____ Value related: _____

Time related: _____

item

93 ***Environmental disturbance***

Fixed: _____ Value related: _____

Time related: _____

item

94 ***Works cleaning and clearing***

Fixed: _____ Value related: _____

Time related: _____

item

95 ***Vermin***

Fixed: _____ Value related: _____

Time related: _____

item

96 ***Overhand work***

Fixed: _____ Value related: _____

Time related: _____

item

97 ***Instruction manuals and guarantees***

Fixed: _____ Value related: _____

Time related: _____

item

98 ***As built information***

Fixed: _____ Value related: _____

Time related: _____

item

99 ***Tenant installations***

Fixed: _____ Value related: _____

Time related: _____

item

Carried to Collection**R**

SCHEDULE OF VARIABLES

100 ***Pre-tender information***

Fixed: _____ Value related: _____
Time related: _____

This schedule contains all variables referred to in this document and is divided into pretender and post-tender categories. The pre-tender category must be completed in full and included in the tender documents. Both the pre-tender and post-tender categories form part of these Preliminaries.

Spaces requiring information must be filled in, shown as not applicable or deleted and not left blank. Where choices are offered, the non-applicable items are to be deleted.

Carried to Collection

item

R

12.1 PRE-TENDER INFORMATION**12.1.1 Provisional Bills of Quantities**

[2.2] The quantities are provisional
NO

12.1.2 Availability of construction documentation

[2.3] *Construction documentation is complete*
YES

12.1.3 Interest of agent

[2.4] Details:
Employer: Limpopo Department of Roads & Infrastructure

43 Church Street
Private Bag X9490
POLOKWANE, 0700
Tel: [015] 284 7000/1 Cell: 082 460 6271

Architect and Principal Agent:

Ruben Reddy Architects
4 Ismini Office Park,
POLOKWANE
Tel: [015] 065 0645 Fax: [011] 475 8364
Email : Geshim.Francis@rubenreddyarch.co.za

Quantity Surveyor:

Phahlana-Hunadi QS
2760 Zone B
LEBOWAKGOMO , 0737
Tel: [015] 633 6535 Fax: [015] 633 6477
Email : 'info@phqs.co.za

Civil/Structural:

Muteo Consulting
39 Grobler Street
POLOKWANE
Tel: [015] 291 4065 Fax: 015 291 4043
Email: vonganim@muteo.co.za

Electrical/Mechanical Engineers:

NSKECM
38 Burger Street
Polokwane 0700
Tel: 015 295 2104 Fax: 015 295 2104
Email: mark@nskecm.co.za

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12.1.4 [3.1]	Defined works area Details: Site as per land surveyor		
12.1.5 [3.2]	Geotechnical investigation Details: Refer to Principal Agent		
12.1.6 [3.4]	Existing premises occupies Specific requirements: N/A		
12.1.7 [3.5]	Previous work - dimensional accuracy Details: N/A		
12.1.8 [3.6]	Previous work - defects Details: N/A		
12.1.9 [3.7]	Services - known Details: N/A		
12.1.10 [3.9]	Protection of trees Specific requirements:		
12.1.11 [3.11]	Inspection of adjoining properties Specific requirements:		
12.1.12 6.2]	Enclosure of the works Specific requirements:		
12.1.13 [6.4.3]	Offices Specific requirements: The contractor shall provide, maintain and remove on completion of the works an office for the exclusive use of the principal agent, minimum size 4 x 3 x 3m high internally, suitable insulated and ventilated, provided with electric lighting and fitted with boarded floor, desk, chair, drawing stool, drawing board and lock-up drawers for drawings. The office shall be kept clean and fit for use at all times.		
Carried to Collection		R	

12.1.14 [6.5]	<p>Main notice board</p> <p>Specific requirements:</p> <p>The contractor shall provide, erect where directed, maintain and remove on completion of the works a notice board size 3 x 3m as type Drawing GEN 063, constructed of suitable boarding with flat smooth surface and with edging bead 19mm thick around outer edges and projecting 12mm from face of boarding and rounded on front edge. The board shall be securely fixed to hoarding, where hoarding is provided, or fixed to and including a suitable supporting structure of timber or tubular posts and braces. The board is to be painted ivory white and the bead and 12mm wide dividing lines dark green. All wording shall be inscribed in dark green as per the coat of arms of SA. All working shall be inscribed in dark green painted sans serif lettering.</p>		
12.1.15 [6.6]	<p>Subcontractor's notice board</p> <p>Specific requirements:</p>	YES/NO	
12.1.16 [7.2]	<p>Water</p> <p>Option A (by contractor)</p> <p>Option B (by employer - free of charge)</p> <p>Option C (by employer - metered)</p>	<p>YES</p> <p>NO</p> <p>NO</p>	
12.1.17 [7.3]	<p>Electricity</p> <p>Option A (by contractor)</p> <p>Option B (by employer - free of charge)</p> <p>Option C (by employer - metered)</p>	<p>YES</p> <p>NO</p> <p>NO</p>	
12.1.18 [7.4]	<p>Telecommunications</p> <p>Telephone</p> <p>Facsimile</p> <p>E-mail</p>	<p>YES</p> <p>YES</p> <p>YES</p>	
12.1.19 [7.5]	<p>Ablution facilities</p> <p>Option A (by contractor)</p> <p>Option B (by employer)</p>	<p>YES</p> <p>NO</p>	
12.1.20 [11.2]	<p>Protection of existing/sectionally occupied works</p> <p>Protection is required</p>	NO	
Carried to Collection			
		R	

12.1.21 [9.2]	Special attendance Subcontractor (1) details:		
	Subcontractor (2) details:		
	Subcontractor (3) details:		
	Subcontractor (4) details:		
12.1.22 [11.1]	Protection of works Specific requirements		
12.1.23 [11.5]	Disturbance Specific requirements: The contractor shall keep the site, structures, etc. well watered during operations to prevent dust and shall provide and erect and remove on completion of the works all necessary temporary dust screens all to the satisfaction of the principal agent		
12.1.22 [11.1]	Protection of works Specific requirements		
12.1.23 [11.5]	Disturbance Specific requirements: The contractor shall keep the site, structures, etc. well watered during operations to prevent dust and shall provide and erect and remove on completion of the works all necessary temporary dust screens all to the satisfaction of the principal agent		
12.1.24 [11.6]	Environmental disturbance Specific requirements:		
12.2	POST-TENDER INFORMATION		
12.2.1 [10.2]	Payment of preliminaries Option A (prorated)	YES/NO	
	Option B (calculates)	YES/NO	
12.2.2 [10.3]	Adjustment of preliminaries Option A (three categories)	YES/NO	
	Option B (detailed breakdown)	YES/NO	
12.2.3	Additional agreed preliminaries items Details:		
Carried to Collection		R	

SECTION C: SPECIFIC PRELIMINARIES

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

101 **C1 CONTRACT DRAWINGS**

The drawings issued with the tender documents do not comprise the complete set but serve as a guide only for tendering purposes and for indicating the scope of the work to enable the tenderer the acquaint himself with the nature and extend of the **works** and the manner in which they are to be executed

Should any part of the drawings not be clearly intelligible to the tenderer he shall, before submitting his tender, obtain clarification in writing from the **principal agent**

Fixed: _____ Value related: _____

Time related: _____

item

102 **C2 GENERAL PREAMBLES**

The document Specification of Materials and Methods to be used (PW371) is obtainable on request from the head office and all regional offices of the Department, 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

Fixed: _____ Value related: _____

Time related: _____

item

103 **C3 TRADE NAMES**

Wherever a trade name of any product has been described in the **bills of quantities**, the tenderers attention is drawn to the fact that any other product of equal quality may be used subject to the written approval of the **principal agent** being obtained to the closing date for submission of tenders

If prior written approval for an alternative product is not obtained, the product described shall be deemed to have been tendered for

Fixed: _____ Value related: _____

Time related: _____

item

Carried to Collection

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104	<p>C4 IMPORTED MATERIALS AND EQUIPMENT</p> <p>Where imported items are listed in the tender documents, the tenderer shall provide all the information called for, failing which the price of any such item, materials or equipment shall be excluded from currency fluctuations. (refer to Schedule of Imported Materials and Equipment to be completed)</p> <p>Notwithstanding any provisions elsewhere regarding the adjustment of contract prices, the price of any item, material or equipment listed in terms of this clause shall be excluded from the Contract Price Adjustment Provisions (if applicable)</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>
105	<p>C5 VIEWING THE SITE IN SECURITY AREAS</p> <p>The site is situated in a security area and the tenderer must arrange with the unit commander or other responsible officer to obtain permission to enter the site for tendering purposes</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>
106	<p>C6 COMMENCEMENT OF WORKS IN SECURITY AREAS</p> <p>As the works falls within a security area the contractor must give the unit commander or other responsible officer notice 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 contractors account</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>
Carried to Collection	

item

item

item

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107 **C7 ENTRANCE PERMITS TO SECURITY AREAS**

As the **works** falls 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 the control of the Defence Force, Police or chief security officer

Fixed: _____ Value related: _____

Time related: _____

item

108 **C8 SECURITY CHECK OF PERSONNEL**

The **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**

Fixed: _____ Value related: _____ Time

related: _____

item

109 **C9 PROHIBITION ON TAKING OF 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 civic works thereon or to be in possession of a camera or other apparatus used for taking of photographs except when authorized thereto by or on behalf of the Minister.

Fixed: _____ Value related: _____

Time related: _____

item

Carried to Collection

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C10 HIV/AIDS AWARENESS

It is required of the **contractor** to thoroughly study the HIV/AIDS Specification of the Department that must be read together with and is deemed to be incorporated under this Section of the Bills of Quantities.

Provision for pricing of HIV/AIDS awareness is made under items C10.1 TO C10.5 hereafter and it is explicitly pointed out that all requirements of the aforementioned specification are deemed to be priced hereunder, as the said items represent the only method of measurement and no additional items or extras to the contract in this regard shall be entertained

The **contractor** must take note that compliance with the HIV/AIDS Specification is compulsory. In the event of partial or total non-compliance, the **principal agent**, notwithstanding the provisions of Clause A 31 of Section A:

Preliminaries (Section A) or any other clause to the contrary, reserves the right to delay issuing any progress **payment certificate** until the **contractor** provides satisfactory proof of compliance. The **contractor** shall not be entitled to any compensation of whatsoever nature, including interest, due to such delay of payment

110 C10.1 AWARENESS CHAMPION

Selection, appointment, briefing and making available of an Awareness Champion including provision of all relevant services, all in accordance with the HIV/AIDS Specification

Fixed: _____ Value related: _____

Time related: _____

item

111 C10.2 AWARENESS WORKSHOPS

Selection and appointment of a completed Services Provider approved by the **principal agent**, provision of a Service Provider Workshop Plan and a suitable venue, conducting of awareness workshops by means of traditional and/or modern multi-media techniques, including follow-up courses, making available all tuition material and performing assessment procedures, all in accordance with the HIV/AIDS Specification

Fixed: _____ Value related: _____

Time related: _____

item

Carried to Collection

R

112	C10.3 POSTERS, BOOKLETS, VIDEOS, ETC Provision, displaying, maintaining and replacing when necessary of four plastic laminated posters, booklets and educational videos, etc. for the duration of the construction period , all in accordance with the HIV/AIDS Specification Fixed: _____ Value related: _____ Time related: _____	item		
113	C10.4 ACCESS TO CONDOMS Provision and maintenance of condom dispensers fixed in position, including male and female condoms, replenishing male and female condoms on a daily basis as required for the duration of the construction period , all in accordance with the HIV/AIDS Specification Fixed: _____ Value related: _____ Time related: _____	item		
114	C10.5 MONITORING Monitoring HIV/AIDS awareness of workers, providing the Principal Agent with access to information including making available all reports, thoroughly completed and reflecting the correct information, for the duration of the construction period and close out, all in accordance with the HIV/AIDS Specification Fixed: _____ Value related: _____ Time related: _____	item		
Carried to Collection		R		

Section No.1

PRELIMINARIES

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PRELIMINARIES

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PRELIMINARIES

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PRELIMINARIES
Bill No. 1

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SECTION NO. 2

Renovations (12CR, 16Waterborne, Nutrition)

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u>				
<u>Renovations (12CR, 16Waterborne, Nutrition)</u>				
<u>BILL NO. 1</u>				
<u>ALTERATIONS</u>				
PREAMBLES				
For preambles see "Specifications and methods to be used - PW371"				
<u>TEMPORARY BARRICADES, SCREENS, ETC</u>				
<u>Temporary barricades, screens, roofs, etc including removal</u>				
1 Dust screen 1800mm high between concrete floor and ceiling , of suitable timber framing with 375 micron polyethylene sheeting stapled on on one side , including corners, ends, etc	m	50		
<u>Taking out and removing fencing, gates, etc</u>				
2 1800mm high steel fence	m	663		
<u>REMOVAL OF EXISTING WORK</u>				
<u>Breaking up and removing unreinforced concrete</u>				
3 100mm Thick surface beds	m ²	180		
4 100mm thick aprons	m ²	337		
<u>Taking down and removing roofs, floors, panelling, ceilings, partitions, etc:</u>				
5 10 x 250mm fascia and barge boards	m	337		
<u>Breaking down and removing brickwork etc</u>				
6 One brick walls	m ²	31		
<u>Taking out and removing sanitary fittings, tanks, geysers, etc, including disconnecting from pipes, traps, etc and making good floor and wall finishes (making good tiling and paintwork elsewhere)</u>				
7 Gutters and down pipes	m	585		
<u>Taking out and removing sundry joinery work, fittings, etc</u>				
8 Chalk boards size 4800 x 1220mm high from brick wall.	No	12		
9 Pinning boards size 2440 x 1220mm high from brick walls.	No	24		
Carried to Collection			R	
Section No. 2				
Bill No. 1				
Alterations				

		Unit	Quantity	Rate	Amount
	<u>Taking out/off and removing glass and mirrors</u>				
10	Glass from steel windows, including cleaning out rebates and preparing for new glass	m ²	68		
	<u>Taking out doors, windows, etc</u>				
11	Timber single door size 813 x 2032mm high overall from steel frames.	No	40		
12	Steel gate size 813 x 2032mm high overall from steel frames.	No	20		
13	Steel gate size 1600 x 2032mm high overall from steel frames.	No	1		
	<u>Hack up and removing granolithic screeds, plaster, etc from concrete or brickwork and preparing surfaces for new screed, plaster, etc</u>				
14	30mm screed from floors	m ²	902		
	<u>Take out and remove existing pit toilet</u>				
15	Demolish pit toilet 20m ² on plan and 3m high comprising concrete surface beds, one brick wall, corrugated roof sheeting including sucking of human waste, filling the pit, etc	No	2		
	<u>Taking down and removing roofs, floors, panelling, ceilings, partitions, etc</u>				
16	Pitched roof 330m ² on plan of timber trusses and purlins, corrugated sheet steel covering, ceilings and cornices, eaves soffit covering, fascias, barge boards, gutters and rainwater pipes	No	1		
17	Roof sheeting from timber trusses	m ²	792		
18	Gypsum plasterboard ceilings, including timber brandering, cornices, etc	m ²	1 170		
19	Cornices	m	372		
	<u>Taking up and removing wood block floor coverings, vinyl floor coverings, carpets, etc and preparing screeds for new floor coverings</u>				
20	Floor coverings	m ²	815		
	<u>Hacking up/off and removing ceramic tiles including removing mortar bed or adhesive from concrete or brickwork and preparing surfaces for new screed, plaster, tile finish, etc</u>				
21	Tiles to floors	m ²	80		
	Carried to Collection			R	
	Section No. 2				
	Bill No. 1				
	Alterations				

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BILL NO. 1
ALTERATIONS
COLLECTION

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Section No. 2
Bill No. 1
Alterations

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u>				
<u>Renovations (12CR, 16Waterborne, Nutrition)</u>				
<u>BILL NO. 2</u>				
<u>EARTHWORKS</u>				
<u>PREAMBLES</u>				
For preambles see "Specifications and methods to be used - PW371"				
<u>SITE CLEARANCE</u>				
<u>Site clearance</u>				
1 Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush, etc and trees not exceeding 200mm girth	m ²	96		
<u>EXCAVATIONS, FILLING, ETC OTHER THAN BULK</u>				
<u>Excavation in earth not exceeding 2m deep:</u>				
2 Trenches	m ³	22		
<u>Extra over bulk excavations in earth for excavation in</u>				
3 Soft rock	m ³	2		
4 Hard rock	m ³	1		
<u>Extra over all excavations for carting away</u>				
5 Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m ³	4		
<u>Risk of collapse of excavations</u>				
6 Sides of bulk excavations not exceeding 1,5m deep	m ²	64		
<u>Keeping excavations free of water</u>				
7 Keeping excavations free of water other than subterranean water	Item			
<u>FILLING ETC</u>				
<u>Earth filling obtained from the excavations</u>				
8 Backfilling to trenches, holes, etc	m ³	11		
9 Under floors, steps, paving, etc	m ³	6		
<u>Earth filling supplied by the contractor, compacted to 95% Mod AASHTO density</u>				
10 Under floors, steps, paving, etc	m ³	29		
Carried to Collection			R	
Section No. 2				
Bill No. 2				
Earthworks				

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Amount

BILL NO. 2
EARTHWORKS
COLLECTION

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Section No. 2
Bill No. 2
Earthworks

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u>				
<u>Renovations (12CR, 16Waterborne, Nutrition)</u>				
<u>BILL NO. 3</u>				
<u>CONCRETE, FORMWORK AND REINFORCEMENT</u>				
PREAMBLES				
For preambles see "Specifications and methods to be used - PW371"				
<u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u>				
<u>15Mpa/19mm concrete</u>				
1 Pavings	m ³	10		
2 Ramps	m ³	3		
3 Thickening down the edge of apron 150mm deep, 200mm top and tapering to 100mm at bottom including all excavations, formwork, backfilling etc				
Description				
Thickening down the edge of apron 150mm deep, 200mm top and tapering to 100mm at bottom including all excavations, formwork, backfilling etc	m	96		
<u>REINFORCED CONCRETE CAST ON/IN FORMWORK</u>				
<u>25MPa/19mm concrete</u>				
4 Surface beds cast in panels	m ³	10		
<u>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u>				
<u>25MPa/19mm concrete</u>				
5 Footings	m ³	6		
<u>TEST CUBES</u>				
<u>Test Cubes</u>				
6 Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	10		
<u>CONCRETE SUNDRIES</u>				
<u>Finishing top surfaces of concrete smooth with a wood float</u>				
7 Surface beds, slabs, etc	m ²	96		
Carried to Collection			R	
Section No. 2				
Bill No. 3				
Concrete, Formwork And Reinforcement				

		Unit	Quantity	Rate	Amount
<u>MOVEMENT JOINTS ETC</u>					
<u>Saw-cut joints</u>					
8	10 x 10mm Saw-cut joints in top of concrete	m	48		
<u>REINFORCEMENT</u>					
<u>Mild steel reinforcement to structural concrete work</u>					
9	Various sizes of reinforcement steel	Tonnes	2.00		
<u>Fabric reinforcement</u>					
10	Type 193 fabric reinforcement in concrete slabs etc	m ²	96		
Carried to Collection				R	
Section No. 2					
Bill No. 3					
Concrete, Formwork And Reinforcement					

Amount

BILL NO. 3
CONCRETE, FORMWORK AND REINFORCEMENT
COLLECTION

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Section No. 2
Bill No. 3
Concrete, Formwork And Reinforcement

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u>				
<u>Renovations (12CR, 16Waterborne, Nutrition)</u>				
<u>BILL NO. 4</u>				
<u>MASONRY</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371"				
<u>BRICKWORK IN FOUNDATIONS (PROVISIONAL)</u>				
<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in class II mortar</u>				
1 One brick walls	m ²	32		
<u>BRICKWORK IN SUPERSTRUCTURE</u>				
<u>Brickwork of NFP bricks in class II mortar</u>				
2 One brick walls	m ²	98		
<u>2,5mm Brickwork reinforcement</u>				
3 150mm Wide reinforcement built in horizontally	m	429		
<u>Turning pieces to lintels etc</u>				
4 220mm Wide turning pieces	m	16		
<u>Galvanised wire ties etc</u>				
5 4mm Diameter roof tie 2m girth bent double, with one end built into brickwork and other end fixed to timber	No	32		
<u>FACE BRICKWORK</u>				
<u>Face bricks (Prime cost R5 500/1000 delivered to site excluding VAT) pointed with recessed horizontal and flush vertical joints:</u>				
6 Extra over brickwork for face brickwork	m ²	98		
7 Extra over brickwork for face brickwork in foundations (Provisional).	m ²	14		
8 Half brick in facings in beamfilling	m ²	10		
<u>Brick-on-edge header course copings, sills, etc of face bricks (Prime cost R5 500/1000 delivered to site excluding VAT), pointed with recessed joints on all exposed faces</u>				
9 220mm Copings on top of one brick walls	m	10		
10 Extra over brickwork for brick on edge header course lintel pointed on face and 220mm soffit	m	16		
Carried to Collection			R	
Section No. 2				
Bill No. 4				
Masonry				

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BILL NO. 4
MASONRY
COLLECTION

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Section No. 2
Bill No. 4
Masonry

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u>				
<u>Renovations (12CR, 16Waterborne, Nutrition)</u>				
<u>BILL NO. 5</u>				
<u>WATERPROOFING</u>				
<u>PREAMBLES</u>				
For preambles see "Specifications and methods to be used - PW371"				
<u>DAMPPROOFING OF WALLS AND FLOORS</u>				
<u>One layer 375 micron embossed polyethylene dampproof course (SANS 952-1985 type B)</u>				
1 In walls	m ²	7		
<u>One layer 250 micron green polyethylene waterproof sheeting (SANS 952-1985 type C) sealed at laps with PVC self-adhesive tape</u>				
2 Under surface beds	m ²	96		
Carried To Section Summary			R	
Section No. 2				
Bill No. 5				
Waterproofing				

		Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u>					
<u>Renovations (12CR, 16Waterborne, Nutrition)</u>					
<u>BILL NO. 6</u>					
<u>ROOF COVERINGS</u>					
<u>PREAMBLES</u>					
For preambles see "Specification of materials and methods to be used - PW 371					
<u>General</u>					
<u>PROFILED METAL SHEETING AND ACCESSORIES</u>					
<u>0.58mm "Klip-lok light industrial" galvanised troughed sheet steel with "chromadek" finish one side, fixed to 76 x 50mm purlin complete under 5year guarantee by an approved firm of specialists, all in accordance with the materials supplied and methods employed by the manufacturer</u>					
1	Roof covering with pitch not exceeding 25 degrees.	m ²	1 249		
<u>0.58mm galvanised sheet iron, with "chromadek" one side in:</u>					
2	Standard type FK3 ridge or hip flashing	m	118		
Carried To Section Summary				R	
Section No. 2					
Bill No. 6					
Roof Coverings					

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u>				
<u>Renovations (12CR, 16Waterborne, Nutrition)</u>				
<u>BILL NO. 7</u>				
<u>CARPENTRY AND JOINERY</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Particle board:</u>				
Particle board shall comply with the following specifications: a) SABS 1300 Particle board: exterior and flooring type b) SABS 1301 Particle board: interior type.				
<u>Joinery:</u>				
Descriptions of frames shall be deemed to include frames, transoms, mullions, rails, etc.				
Descriptions of hardwood joinery shall be deemed to include pelleting of bolt holes.				
<u>Fixing:</u>				
Items described as nailed shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete.				
<u>Decorative laminate finish:</u>				
Laminate finish shall be glued under pressure. Edge strips shall be butt jointed at junctions with adjacent similar finish.				
<u>PREFABRICATED ROOF TRUSSES, ETC.</u>				
<u>Plate nailed timber roof truss construction:</u>				
The following is applicable in respect of roof trusses: Trusses are at maximum 1200mm centres Roof covering is 'Klip-lok' roof sheeting on 76 x 50mm purlins. Ceilings are 6mm sheeting on 38 x 50mm brandering .Refer to drawings at the end of these bills of quantities for full details. All trusses are fabricated in a factory by specialists approved by the Architect. All trusses shall be designed by a Registered Professional Engineer(in accordance with the draft SABS Code of Practice for Design of Timber Trusses). The manufacturer of trusses shall supply a written guarantee that the trusses are designed, manufactured,and erected, to support the roof coverings specified. The guarantee shall be valid for 10(ten) years .				
Carried to Collection			R	
Section No. 2				
Bill No. 7				
Carpentry And Joinery				

		Unit	Quantity	Rate	Amount
1	Roof construction to double pitched roof with hipped ends approximately 100m ² (nutrition centre) on plan overall including trusses, rafters, purlins, permanent bracing, etc (measured flat).	No	1		
	<u>ROOF SUNDRIES</u>				
	<u>Sundries:</u>				
2	Two coats creosote on sawn timbers.	m ²	91		
	<u>EAVES, VERGES, ETC</u>				
	<u>Everite FC77 or equal approved pressed fibre-cement:</u>				
3	10 x 250mm Fascias and barge boards including galvanised steel H-profile jointing strips.	m	373		
	<u>Wrought meranti doors:</u>				
	<u>Wrought meranti doors hung to steel frames:</u>				
4	44mm Framed batten door 813 x 2032mm high of 44 x 150mm top rail and stiles, 16 x 150mm middle ledge and braces and 22 x 220mm bottom rail, filled in with 22mmV-jointed one side boarding and covered on other side with 4mm plywood with veneer to match door, let into and including rebates all round.	No	20		
	<u>DOORS ETC</u>				
	<u>Semi-solid flush doors with veneer</u>				
5	40mm Door 813 x 2032mm high	No	16		
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Section No. 2					
Bill No. 7					
Carpentry And Joinery					

Amount

BILL NO. 7
CARPENTRY AND JOINERY
COLLECTION

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Section No. 2
Bill No. 7
Carpentry And Joinery

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u>				
<u>Renovations (12CR, 16Waterborne, Nutrition)</u>				
<u>BILL NO. 8</u>				
<u>CEILINGS PARTITIONS AND ACCESS FLOORING</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Descriptions:</u>				
Items described as nailed shall be deemed to be fixed with hardened steel nails or pins or shot pinned to brickwork or concrete.				
Items described as plugged shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres, and where described as bolted the bolts have been given.				
<u>INSULATION</u>				
<u>Aerolite insulation:</u>				
1	100mm Insulation closely fitted and laid on top of brandering between roof timbers etc.	m ²	1 166	
<u>Wrought softwood</u>				
2	19 x 76mm cornices nailed	m	694	
<u>NAILED UP AND SCREW UP CEILINGS</u>				
<u>6mm Everite Nutec or equal approved fibre-cement boards with H-type steel cover strips over joints:</u>				
3	Ceilings including 38 x 38mm sawn softwood brandering at 400mm centres.	m ²	1 166	
4	Extra over ceiling for hinged trap door size 610 x 610mm	No	17	
Carried To Section Summary			R	
Section No. 2				
Bill No. 8				
Ceilings Partitions And Access Flooring				

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u>				
<u>Renovations (12CR, 16Waterborne, Nutrition)</u>				
<u>BILL NO. 9</u>				
<u>IRONMONGERY</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Finishes to ironmongery:</u>				
Where applicable finishes to ironmongery are indicated by suffixes in accordance with the following list: BS Satin bronze lacquered : CH Chromium plated : SC Satin chromium plated : SE Silver enamelled : GE Grey enamelled : AS Anodised silver : AB Anodised bronze : AG Anodised gold : ABL Anodised black : PB Polished brass : PL Polished and lacquered : PT Epoxy coated.				
<u>SUNDRIES</u>				
<u>Brass or equal approved:</u>				
1 Sliding stays plugged.	No	230		
2 Window handle plugged.	No	156		
3 Peg stay plugged.	No	156		
<u>Locks:</u>				
<u>Solid or equal approved:</u>				
4 CZ6822461 "Gower" Four lever lockset.	No	36		
<u>CATCHES, CABIN HOOKS, ETC</u>				
<u>Solid or equal approved</u>				
5 100mm cabin hook and eye including 70 x 70 x 20mm chamfered hardwood block twice oiled and plugged	No	20		
<u>LOCKS</u>				
<u>Solid or equal approved</u>				
6 'Code 63' padlock plugged.	No	20		
<u>PINNING BOARDS, WRITING BOARDS, PROJECTION SCREENS, ETC</u>				
7 Pinning board 2400 x 1200mm high plugged.	No	24		
8 White Magnetic Writing Board 4000 x 1200mm	No	12		
Carried to Collection			R	
Section No. 2				
Bill No. 9				
Ironmongery				

Amount

BILL NO. 9
IRONMONGERY
COLLECTION

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Carried To Section Summary

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Section No. 2
Bill No. 9
Ironmongery

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u>				
<u>Renovations (12CR, 16Waterborne, Nutrition)</u>				
<u>BILL NO. 10</u>				
<u>METALWORK</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Descriptions:</u>				
Descriptions of bolts shall be deemed to include nuts and washers.				
Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.				
Metalwork described as holed for bolt(s) shall be deemed to exclude the bolts unless otherwise described.				
<u>MILD STEEL HANDRAILS AND BALUSTRADING</u>				
<u>Mild steel handrails and balustrades fixed to base plates constructed of two number 6mm steel flat bar cut to profile mounted to wall with 6mm thick steel fixing plate welded to two steel flat bars with 4mm fillet welds chemical anchors (bolts included), 12mm dia. Mild steel round spaced at 150mm centres, pedrilled opening 3No. In each upright, top rail to be 30mm thick x 100mm wide steel</u>				
1 Balustrading and handrails approximately 1000mm high fixed to concrete.	m	10		
<u>Mild Steel Poles</u>				
2 76 x 76 x 3mm mild steel square tubing columns 3m high secured on top of foundation with 5mm thick fixing plate including 10mm dia 4No. bolts	No	2		
<u>WELDED SCREENS, GATES, ETC.</u>				
<u>Gates to external doors</u>				
3 Single gate and frame 813 x 2032mm high of 25 x 25x 2mm hollow section frame and 25 x 25x 2mm hollow section horizontal middle rail filled in with 12 x 12mm square section vertical rails at 75mm centres and fitted with a pair of suitable hinges welded to frame and with locking mechanism for padlock all in and including outer frame of 25 x 25 x 2mm hollow section welded frame bolted to brickwork.	No	20		
Carried to Collection			R	
Section No. 2				
Bill No. 10				
Metalwork				

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BILL NO. 10
METALWORK
COLLECTION

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Section No. 2
Bill No. 10
Metalwork

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u>				
<u>Renovations (12CR, 16Waterborne, Nutrition)</u>				
<u>BILL NO. 11</u>				
<u>PLASTERING</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>SCREEDS</u>				
<u>Screeds on concrete:</u>				
<u>Screeds of wood floated on concrete to receive ceramic tiles:</u>				
1 30mm Thick on floors and landings.	m ²	902		
<u>GRANOLITHIC</u>				
<u>Untinted wood floated granolithic on concrete</u>				
2 30mm Thick on floors and landings.	m ²	72		
<u>INTERNAL PLASTER</u>				
<u>Cement plaster steel trowelled, on brickwork</u>				
3 On walls	m ²	98		
4 Narrow widths	m ²	5		
Carried To Section Summary			R	
Section No. 2				
Bill No. 11				
Plastering				

		Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u>					
<u>Renovations (12CR, 16Waterborne, Nutrition)</u>					
<u>BILL NO. 12</u>					
<u>TILING</u>					
<u>PREAMBLES</u>					
For preambles see "Specification of materials and methods to be used - PW371					
<u>FLOOR TILING</u>					
<u>300 x 300 x 11.5mm ceramic floor tiles (Prime Cost amount R250.00/m2 delivered excluding vat) fixed with adhesive to screed (screed elsewhere) and flush pointed with tinted waterproof jointing compound</u>					
1	On floors and landings.	m ²	895		
2	Skirting formed of ceramic tile cut to 300 x 75mm high	m	694		
Carried To Section Summary				R	
Section No. 2					
Bill No. 12					
Tiling					

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u> <u>Renovations (12CR, 16Waterborne, Nutrition)</u> <u>BILL NO. 13</u> <u>PLUMBING AND DRAINAGE</u> <u>PREAMBLES</u> For preambles see "Specification of materials and methods to be used - PW371 <u>SUPPLEMENTARY PREAMBLES</u> <u>Concrete pipes:</u> Pipes shall be jointed with ogee joints with rubber collars or socket and spigot joints with rubber rings. <u>uPVC pressure pipes and fittings:</u> Pipes for water supply shall be of the class stated. Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings. Pipes of 50mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints. <u>Copper pipes:</u> Pipes shall be hard drawn and half-hard pipes of the class stated. Class 0 (thin walled hard drawn) pipes shall not be bent. Class 1 (thin walled half-hard), class 2 (half-hard) and class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be 'Cobra Watertech' type. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or in ground. <u>Fixing of pipes</u> Unless specifically otherwise stated, descriptions of pipes shall be deemed to include for fixing to walls etc. casting in, building in or suspending not exceeding 1m below suspension level				
Carried to Collection			R	
Section No. 2 Bill No. 13 Plumbing And Drainage				

	Unit	Quantity	Rate	Amount
<p><u>Reducing fittings:</u></p> <p>Where fittings have reducing ends or branches they are described as 'reducing'. In the case of pipes with diameters not exceeding 60mm only the largest end or branch size is given. Should the Contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained. In the case of pipes with diameters exceeding 60mm all sizes are given and no claim for extra bushes, reducers, etc will be entertained.</p> <p><u>Wire gratings:</u></p> <p>Descriptions of gutter outlets etc shall be deemed to include wire balloon gratings.</p> <p><u>Septic tanks:</u></p> <p>Descriptions of septic tanks shall be deemed to include excavation, bedding and jointing, concrete base slabs, jointing to drains and backfilling, compaction, etc all in accordance with the manufacturer's instructions.</p> <p><u>Exposed concrete surfaces:</u></p> <p>Exposed surfaces of concrete stormwater channels, cover slabs, inspection eye marker slabs, gully tops, cleaning eye tops, catchpits, inspection chambers, etc shall be finished smooth with plaster.</p> <p><u>Excavations:</u></p> <p>No claim for rock excavation will be entertained unless the Contractor has timeously notified the quantity surveyor thereof prior to backfilling.</p> <p>'Soft rock' and 'hard rock' shall be as defined in 'Earthworks'.</p> <p><u>Laying, backfilling, bedding, etc of pipes:</u></p> <p>Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturers' instructions.</p> <p>Where no manufacturers' instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following: SABS 1200 L : Medium pressure pipelines LD : Sewers LE : Stormwater drainage Pipe trenches etc shall be backfilled in accordance with clause 3, 5.5, 5.6, 5.7 and 7 of SAB.</p> <p><u>Flush pans:</u></p> <p>Flush pans shall have straight or side outlets and 'P' or 'S' traps as necessary.</p>				
Carried to Collection			R	
Section No. 2				
Bill No. 13				
Plumbing And Drainage				

	Unit	Quantity	Rate	Amount
<u>Stainless steel basins, sinks, wash troughs, urinals, etc:</u>				
Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable.				
<u>Waste unions:</u>				
Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings.				
<u>RAINWATER DISPOSAL</u>				
<u>Approved .6mm galvanised sheet iron with "chromadek" finish ,in:</u>				
1	100 x 100mm Eaves gutters	m	337	
2	Extra over eaves gutter for angle/corner.	No	30	
3	Extra over eaves gutter for stopped end	No	30	
4	Extra over eaves gutter for outlet for 75mm pipe.	No	48	
5	75mm Diameter rainwater pipes.	m	192	
6	Extra over rainwater pipe for bend.	No	48	
7	Extra over rainwater pipe for shoe.	No	48	
<u>FIRE APPLIANCES ETC.</u>				
<u>'Chubb' or equal approved:</u>				
8	9kg Dry chemical fire extinguisher plugged.	No	17	
<u>RAINWATER HARVESTING</u>				
<u>Rainwater harvesting</u>				
9	Allow a sum of R15 000.00/each (Fifteen Thousand Rands) for provision of 5000l Jojo or equal approved tank complete with lid, fittings, tap, concrete plinth as per Architect details	No	8	
Carried to Collection			R	
Section No. 2				
Bill No. 13				
Plumbing And Drainage				

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BILL NO. 13
PLUMBING AND DRAINAGE
COLLECTION

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Section No. 2
Bill No. 13
Plumbing And Drainage

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u>				
<u>Renovations (12CR, 16Waterborne, Nutrition)</u>				
<u>BILL NO. 15</u>				
<u>PAINTWORK</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>ON FLOATED PLASTER</u>				
<u>Prepare , etc as specified and apply two coats of super acrylic paint:</u>				
1 On interior walls.	m ²	98		
<u>ON FIBRE-CEMENT, ETC.</u>				
<u>Prepare , etc as specified and apply two coats of super acrylic Pva paint:</u>				
2 On ceilings and cornices.	m ²	1 166		
3 On fascias and barge boards.	m ²	373		
<u>ON METAL</u>				
<u>Prepare, etc as specified and apply two coats of gloss enamel paint on :</u>				
4 Door frames	m ²	54		
5 On windows with burglar bars (both sides measured).	m ²	150		
6 On gates, grilles, burglar screens, balustrades, etc (both sides measured over the full flat area).	m ²	110		
7 Steel poles	m	6		
8 Palisade Fence (both sides measured over the full flat area).	m ²	3 000		
<u>Prepare, etc as specified and paint inside eaves gutters with waterproofing based paint:</u>				
9 Inside eaves gutters with waterproofing based paint	m ²	131		
<u>ON WOOD, WOOD BOARD</u>				
<u>Prepare, etc as specified and apply two coats of polyurethane suede varnish:</u>				
10 On general surfaces of doors.	m ²	53		
Carried to Collection			R	
Section No. 2 Bill No. 15 Paintwork				

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BILL NO. 15
PAINTWORK
COLLECTION

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Section No. 2
Bill No. 15
Paintwork

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SECTION NO. 2**Renovations (12CR, 16Waterborne, Nutrition)****SECTION SUMMARY**

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5	WATERPROOFING	55
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14	GLAZING	73
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Section No. 2
SECTION SUMMARY

SECTION NO. 3

2 x 5 Classroom Block

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>2 x 5 Classroom Block</u>				
<u>BILL NO. 1</u>				
<u>FOUNDATIONS</u>				
<u>PREAMBLES</u>				
For preambles see " Specification of materials and methods to be used - PW371"				
<u>SITE CLEARANCE ETC</u>				
<u>Site clearance:</u>				
1 Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc.	m ²	580		
<u>REMOVAL OF TREES, ETC.</u>				
<u>Taking out and removing, grubbing up roots and filling in holes:</u>				
2 Tree stump exceeding 200mm and not exceeding 500mm girth.	No	1		
<u>EXCAVATION, FILLING, ETC OTHER THAN BULK</u>				
<u>Excavation in earth not exceeding 2m deep:</u>				
3 Trenches.	m ³	157		
<u>Extra over trench and hole excavations in earth for excavation:</u>				
4 Soft rock.	m ³	15		
5 Hard rock.	m ³	8		
<u>Risk of collapse of excavations:</u>				
6 Sides of trench and hole excavations not exceeding 1,5m deep.	m ²	418		
<u>Keeping excavations free of water:</u>				
7 Keeping excavations free of all water other than subterranean water.	Item			
<u>Earth filling obtained from excavations and/or prescribed stock piles on site compacted to 93% Mod AASHTO:</u>				
8 Backfilling to trenches, holes, etc.	m ³	72		
9 Under floors, steps, pavings, etc.	m ³	62		
Carried to Collection			R	
Section No. 3				
Bill No. 1				
Foundations				

R

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FOUNDATIONS
COLLECTION

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Section No. 3
Bill No. 1
Foundations

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>2 x 5 Classroom Block</u>				
<u>BILL NO. 2</u>				
<u>CONCRETE, FORMWORK AND REINFORCEMENT</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371"				
<u>UNREINFORCED CONCRETE</u>				
<u>15Mpa/19mm Concrete</u>				
1 Aprons cast in panels.	m ³	12		
2 Ramps.	m ³	3		
3 Thickening down the edge of apron 150mm deep, 200mm top and tapering to 100mm at bottom including all excavations, formwork, backfilling etc	m	119		
<u>REINFORCED CONCRETE</u>				
<u>25 MPa/19mm Concrete:</u>				
4 Footings.	m ³	37		
5 Surface beds cast in panels on waterproofing.	m ³	48		
<u>TEST BLOCKS</u>				
<u>Test blocks:</u>				
6 Making and testing set of three 150 x 150 x 150mm concrete strength test cubes (Provisional).	Sets	10		
7 Paving to falls.	m ²	120		
8 Ramps to falls.	m ²	4		
<u>FINISHING TOP SURFACE OF CONCRETE</u>				
<u>ROUGH FORMWORK (DEGREE OF ACCURACY III)</u>				
<u>(CPAP Work Group No 111)</u>				
<u>Rough Formwork to Sides:</u>				
9 Edges and reveals not exceeding 300mm high or wide.	m	124		
<u>MOVEMENT JOINTS ETC</u>				
<u>Two layers of .5mm galvanised mild steel slip joints between horizontal concrete and brick surfaces including cement mortar bed:</u>				
10 Not exceeding 300mm wide.	m	60		
Carried to Collection			R	
Section No. 3				
Bill No. 2				
Concrete, Formwork And Reinforcement				

Concrete, Formwork And Reinforcement

Amount

BILL NO. 2
CONCRETE, FORMWORK AND REINFORCEMENT
COLLECTION

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Section No. 3
Bill No. 2
Concrete, Formwork And Reinforcement

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>2 x 5 Classroom Block</u>				
<u>BILL NO. 3</u>				
<u>MASONRY</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371"				
<u>BRICKWORK</u>				
<u>Sizes in descriptions:</u>				
Where sizes in descriptions are given in brick units, 'one brick' shall represent the length and 'half brick' the width of a brick.				
<u>Face bricks:</u>				
Bricks shall be ordered timeously to obtain uniformity in size and colour.				
<u>Pointing:</u>				
Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc.				
<u>SAMPLES</u>				
Samples of all masonry building units, except those for walls described as 'load bearing', shall consist of a minimum of 6 units. Samples of building units to be used in walls described as 'load bearing' shall consist of 30 units from every 30 000 units delivered to site.				
<u>BRICKWORK IN FOUNDATIONS (PROVISIONAL)</u>				
<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar:</u>				
1	m ²	217		
<u>BRICKWORK IN SUPERSTRUCTURE</u>				
<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar:</u>				
2	m ²	671		
<u>BRICKWORK SUNDRIES</u>				
<u>Brickwork reinforcement:</u>				
3	m	2 930		
<u>Turning pieces:</u>				
4	m	56		
Carried to Collection			R	
Section No. 3				
Bill No. 3				
Masonry				

R

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BILL NO. 3
MASONRY
COLLECTION

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Section No. 3
Bill No. 3
Masonry

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>2 x 5 Classroom Block</u>				
<u>BILL NO. 4</u>				
<u>WATERPROOFING</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>DAMPPROOFING OF WALLS AND FLOORS</u>				
<u>One layer of 375 micron Consol Plastics Brikgrip DPC embossed damp proof course:</u>				
1 In walls.	m ²	50		
<u>One layer of 250 micron Consol Plastics Gunplas USB Green waterproof sheeting sealed at laps with Gunplas Pressure Sensitive Tape:</u>				
2 Under surface beds.	m ²	410		
<u>JOINT SEALANTS ETC</u>				
<u>silicone sealing compound including backing cord, bond breaker, primer, etc</u>				
3 12 x 20mm in expansion joints in floors including raking out expansion joint filler as necessary (Provisional)	m	118		
4 12 x 20mm in vertical expansion joints in walls including raking out expansion joint filler as necessary	m	48		
Carried To Section Summary			R	
Section No. 3				
Bill No. 4				
Waterproofing				

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>2 x 5 Classroom Block</u>				
<u>BILL NO. 5</u>				
<u>ROOF COVERINGS</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW 371				
<u>PROFILED METAL SHEETING AND ACCESSORIES</u>				
<u>.5mm "Klip-lok light industrial" galvanised troughed sheet steel with "chromadek" finish one side, fixed to 76 x 50mm purlin complete under 5 year guarantee by an approved firm of specialists, all in accordance with the materials supplied and methods employed by the manufacturer</u>				
1	Roof covering with pitch not exceeding 25 degrees.	m ²	555	
<u>.8mm galvanised sheet iron, with "chromadek" one side in:</u>				
2	Standard type FK3 ridge or hip flashing	m	54	
Carried To Section Summary			R	
Section No. 3				
Bill No. 5				
Roof Coverings				

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>2 x 5 Classroom Block</u>				
<u>BILL NO. 6</u>				
<u>CARPENTRY AND JOINERY</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Particle board:</u>				
Particle board shall comply with the following specifications: a) SABS 1300 Particle board: exterior and flooring type b) SABS 1301 Particle board: interior type.				
<u>Joinery:</u>				
Descriptions of frames shall be deemed to include frames, transoms, mullions, rails, etc.				
Descriptions of hardwood joinery shall be deemed to include pelleting of bolt holes.				
<u>Fixing:</u>				
Items described as nailed shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete.				
<u>Decorative laminate finish:</u>				
Laminate finish shall be glued under pressure. Edge strips shall be butt jointed at junctions with adjacent similar finish.				
<u>PREFABRICATED ROOF TRUSSES, ETC.</u>				
<u>Plate nailed timber roof truss construction:</u>				
The following is applicable in respect of roof trusses: Trusses are at maximum 1200mm centres Roof covering is 'Klip-lok' roof sheeting on 76 x 50mm purlins. Ceilings are 6mm sheeting on 38 x 50mm branderling .Refer to drawings at the end of these bills of quantities for full details. All trusses are fabricated in a factory by specialists approved by the Architect. All trusses shall be designed by a Registered Professional Engineer(in accordance with the draft SABS Code of Practice for Design of Timber Trusses). The manufacturer of trusses shall supply a written guarantee that the trusses are designed, manufactured,and erected, to support the roof coverings specified. The guarantee shall be valid for 10(ten) years .				
Carried to Collection			R	
Section No. 3				
Bill No. 6				
Carpentry And Joinery				

		Unit	Quantity	Rate	Amount
	<u>Sawn softwood:</u>				
1	Roof construction to double pitched roof with two hipped ends approximately 483m ² (five classrooms) on plan overall including trusses, rafters, purlins, permanent bracing, etc (measured flat).	No	1		
	<u>ROOF CONSTRUCTION</u>				
	<u>Sawn softwood:</u>				
2	114 x 38mm Wall plates.	m	119		
3	114 x 38mm rafters exceeding 2.4m and not exceeding 3.9m.	m	45		
4	50 x 76mm purlins.	m	240		
5	50 x 220mm support beam.	m	54		
	<u>ROOF SUNDRIES</u>				
	<u>Sundries:</u>				
6	Two coats creosote on sawn timbers.	m ²	41		
	<u>EAVES, VERGES, ETC</u>				
	<u>Everite FC77 or equal approved pressed fibre-cement:</u>				
7	10 x 250mm Fascias and barge boards including galvanised steel H-profile jointing strips.	m	119		
	<u>Wrought meranti doors:</u>				
	<u>Wrought meranti doors hung to steel frames:</u>				
8	44mm Framed batten door 914 x 2032mm high of 44 x 150mm top rail and stiles, 16 x 150mm middle ledge and braces and 22 x 220mm bottom rail, filled in with 22mmV-jointed one side boarding and covered on other side with 4mm plywood with veneer to match door, let into and including rebates all round.	No	5		
	<u>DOORS ETC</u>				
	<u>40mm semi-solid flush doors with veneer</u>				
9	40mm Door 813 x 2032mm high	No	5		
10	Shelving 400mm wide made up of 25mm thick hardwood top and 250 x 250mm high triangular mild steel brackets bolted to wall	m	52		
	<u>FITTINGS</u>				
	Carried to Collection			R	
	Section No. 3				
	Bill No. 6				
	Carpentry And Joinery				

Amount

BILL NO. 6
CARPENTRY AND JOINERY
COLLECTION

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Section No. 3
Bill No. 6
Carpentry And Joinery

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>2 x 5 Classroom Block</u>				
<u>BILL NO. 7</u>				
<u>CEILINGS PARTITIONS AND ACCESS FLOORING</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Descriptions:</u>				
Items described as nailed shall be deemed to be fixed with hardened steel nails or pins or shot pinned to brickwork or concrete.				
Items described as plugged shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres, and where described as bolted the bolts have been given.				
<u>INSULATION</u>				
<u>Aerolite insulation:</u>				
1	100mm Insulation closely fitted and laid on top of brandering between roof timbers etc.	m ²	410	
<u>Wrought softwood</u>				
2	19 x 76mm cornices nailed	m	265	
<u>NAILED UP AND SCREW UP CEILINGS</u>				
<u>6mm Everite Nutec or equal approved fibre-cement boards with H-type steel cover strips over joints:</u>				
3	Ceilings including 38 x 38mm sawn softwood brandering at 400mm centres.	m ²	410	
4	Extra over ceiling for hinged trap door size 610 x 610mm	No	5	
Carried To Section Summary			R	
Section No. 3				
Bill No. 7				
Ceilings Partitions And Access Flooring				

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>2 x 5 Classroom Block</u>				
<u>BILL NO. 8</u>				
<u>IRONMONGERY</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Finishes to ironmongery:</u>				
Where applicable finishes to ironmongery are indicated by suffixes in accordance with the following list: BS Satin bronze lacquered : CH Chromium plated : SC Satin chromium plated : SE Silver enamelled : GE Grey enamelled : AS Anodised silver : AB Anodised bronze : AG Anodised gold : ABL Anodised black : PB Polished brass : PL Polished and lacquered : PT Epoxy coated.				
<u>CATCHES, CABIN HOOKS, ETC</u>				
<u>Solid or equal approved:</u>				
1	100mm cabin hook and eye including 70 x 70 x 20mm chamfered hardwood block twice oiled and plugged.	No	5	
<u>LOCKS</u>				
<u>Solid or equal approved:</u>				
2	"Code 630" or equal approved padlock.	No	5	
<u>'Solid" or equal approved</u>				
3	CZ6822461 "Gower" Four lever lockset.	No	10	
<u>SUNDRIES</u>				
<u>Solid or equal approved:</u>				
4	38mm Diameter rubber door stop plugged.	No	10	
<u>PINNING BOARDS, WRITING BOARDS, PROJECTION SCREENS, ETC</u>				
<u>Vitrex or equal approved:</u>				
5	Pinning board 2400 x 1200mm high plugged.	No	10	
6	White magnetic Writing Board 4000mm x 1200mm	No	5	
Carried to Collection			R	
Section No. 3				
Bill No. 8				
Ironmongery				

Proprietary type steel shelving with standard powder coated finish

[illegible]

R

Section No. 3
Bill No. 8
Ironmongery

Amount

BILL NO. 8
IRONMONGERY
COLLECTION

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Section No. 3
Bill No. 8
Ironmongery

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>2 x 5 Classroom Block</u>				
<u>BILL NO. 9</u>				
<u>METALWORK</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Descriptions:</u>				
Descriptions of bolts shall be deemed to include nuts and washers.				
Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.				
Metalwork described as holed for bolt(s) shall be deemed to exclude the bolts unless otherwise described.				
<u>STEEL BALUSTRADES AND HANDRAILS</u>				
<u>Mild steel handrails and balustrades fixed to base plates constructed of two number 6mm steel flat bar cut to profile mounted to wall with 6mm thick steel fixing plate welded to two steel flat bars with 4mm fillet welds chemical anchors (bolts included), 12mm dia. Mild steel round spaced at 150mm centres, pedrilled opening 3No. In each upright, top rail to be 30mm thick x 100mm wide steel</u>				
1	Steel handrails and balustrades 1000mm high	m	10	
<u>Mild Steel Poles</u>				
2	76 x 76 x 3mm mild steel square tubing columns 3m high secured on top of foundation with 5mm thick fixing plate including 10mm dia 4No. bolts	No	17	
Carried to Collection			R	
Section No. 3				
Bill No. 9				
Metalwork				

	Unit	Quantity	Rate	Amount
<u>COMBINATION DOOR FRAME WITH SECURITY GATE</u>				
<u>Classroom combination door frame with security gate</u>				
3 "Code 914" door frame size 914 x 2032mm high fitted with three (3) parliament hinges, complete with single security gate size 914 x 2032mm high overall formed of 25 x 25 x 2mm tubular section frame mitred and welded at angles and two 25 x 25 x 2mm tubular section horizontal middle rails, gate filled in with 12 x 12 x 12mm square section vertical rails at 100mm centres and fitted with locking bolt for padlock, frame formed of 25 x 38 x 2mm tubular section stiles and top rail mitred and welded at angles and fitted with three hinges welded to gate and frame, frame factory welded at maximum 250mm centres to door frame	No	5		
<u>PRESSED STEEL DOOR FRAMES</u>				
<u>1.2mm Rebated frames suitable for one brick walls:</u>				
4 Frame for door 813 x 2032mm high.	No	10		
<u>STEEL WINDOWS, DOORS, ETC.</u>				
<u>Standard residential windows with 12 x 12(B33) solid burglar bars to all sashes:</u>				
5 Window Code 5/2 (NTY or equal approved), 1143 x 1332mm high.	No	45		
6 Window Code 5 (NTY or equal approved), 1143 x 846mm high.	No	6		
<u>STEEL LOUVRES,ETC</u>				
<u>Purpose made louvres:</u>				
7 Triangular shaped (on elevation) residential section louvred ventilators 3138 wide (at the horizontal bottom) x 571mm high overall, filled in with type LC fixed horizontal louvre blades fixed to surround and covered at back with No. 256 galvanised mesh mosquito gauze, fixed with and including 3 x 20mm steel flat section cover strips screwed	No	2		
Carried to Collection			R	
Section No. 3				
Bill No. 9				
Metalwork				

Amount

BILL NO. 9
METALWORK
COLLECTION

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Section No. 3
Bill No. 9
Metalwork

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>2 x 5 Classroom Block</u>				
<u>BILL NO. 10</u>				
<u>PLASTERING</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>SCREEDS</u>				
<u>Screeds on concrete:</u>				
<u>Screeds of wood floated on concrete to receive ceramic tiles:</u>				
1	m ²	343		
30mm Thick on floors to receive ceramic tiling.				
<u>GRANOLITHIC</u>				
<u>Untinted wood floated granolithic on concrete</u>				
2	m ²	66		
30mm Thick on floors and landings.				
<u>INTERNAL PLASTER</u>				
<u>Cement plaster steel trowelled, on brickwork</u>				
3	m ²	657		
On walls				
4	m ²	24		
On narrow widths not exceeding 300mm wide				
5	m	5		
30 x 3mm Flat section brass dividing strips between different floor finishes.				
<u>CORNER PROTECTORS, DIVIDING STRIPS, ETC</u>				
<u>(CPAP Work Group No 136)</u>				
Carried To Section Summary			R	
Section No. 3				
Bill No. 10				
Plastering				

		Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>					
<u>2 x 5 Classroom Block</u>					
<u>BILL NO. 11</u>					
<u>TILING</u>					
<u>PREAMBLES</u>					
For preambles see "Specification of materials and methods to be used - PW371					
<u>FLOOR TILING</u>					
<u>300 x 300 x 11.5mm ceramic floor tiles (Prime Cost amount R250.00/m2 excluding vat) fixed with adhesive to screed (screed elsewhere) and flush pointed with tinted waterproof jointing compound</u>					
1	On floors and landings.	m ²	343		
2	Skirting formed of ceramic tile cut to 300 x 75mm high	m	265		
Carried To Section Summary				R	
Section No. 3					
Bill No. 11					
Tiling					

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u> <u>2 x 5 Classroom Block</u> <u>BILL NO. 12</u> <u>PLUMBING AND DRAINAGE</u> <u>PREAMBLES</u> For preambles see "Specification of materials and methods to be used - PW371 <u>SUPPLEMENTARY PREAMBLES</u> <u>Concrete pipes:</u> Pipes shall be jointed with ogee joints with rubber collars or socket and spigot joints with rubber rings. <u>uPVC pressure pipes and fittings:</u> Pipes for water supply shall be of the class stated. Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings. Pipes of 50mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints. <u>Copper pipes:</u> Pipes shall be hard drawn and half-hard pipes of the class stated. Class 0 (thin walled hard drawn) pipes shall not be bent. Class 1 (thin walled half-hard), class 2 (half-hard) and class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be 'Cobra Watertech' type. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or in ground. <u>Fixing of pipes</u> Unless specifically otherwise stated, descriptions of pipes shall be deemed to include for fixing to walls etc. casting in, building in or suspending not exceeding 1m below suspension level				
Carried to Collection			R	
Section No. 3				
Bill No. 12				
Plumbing And Drainage				

	Unit	Quantity	Rate	Amount
<p><u>Reducing fittings:</u></p> <p>Where fittings have reducing ends or branches they are described as 'reducing'. In the case of pipes with diameters not exceeding 60mm only the largest end or branch size is given. Should the Contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained. In the case of pipes with diameters exceeding 60mm all sizes are given and no claim for extra bushes, reducers, etc will be entertained.</p> <p><u>Wire gratings:</u></p> <p>Descriptions of gutter outlets etc shall be deemed to include wire balloon gratings.</p> <p><u>Septic tanks:</u></p> <p>Descriptions of septic tanks shall be deemed to include excavation, bedding and jointing, concrete base slabs, jointing to drains and backfilling, compaction, etc all in accordance with the manufacturer's instructions.</p> <p><u>Exposed concrete surfaces:</u></p> <p>Exposed surfaces of concrete stormwater channels, cover slabs, inspection eye marker slabs, gully tops, cleaning eye tops, catchpits, inspection chambers, etc shall be finished smooth with plaster.</p> <p><u>Excavations:</u></p> <p>No claim for rock excavation will be entertained unless the Contractor has timeously notified the quantity surveyor thereof prior to backfilling.</p> <p>'Soft rock' and 'hard rock' shall be as defined in 'Earthworks'.</p> <p><u>Laying, backfilling, bedding, etc of pipes:</u></p> <p>Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturers' instructions.</p> <p>Where no manufacturers' instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following: SABS 1200 L : Medium pressure pipelines LD : Sewers LE : Stormwater drainage Pipe trenches etc shall be backfilled in accordance with clause 3, 5.5, 5.6, 5.7 and 7 of SAB.</p> <p><u>Flush pans:</u></p> <p>Flush pans shall have straight or side outlets and 'P' or 'S' traps as necessary.</p>				
Carried to Collection				
Section No. 3				
Bill No. 12				
Plumbing And Drainage				
			R	

		Unit	Quantity	Rate	Amount
<u>Stainless steel basins, sinks, wash troughs, urinals, etc:</u>					
Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable.					
<u>Waste unions:</u>					
Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings.					
<u>RAINWATER DISPOSAL</u>					
<u>Approved .6mm galvanised sheet iron with "chromadek" finish ,in:</u>					
1	100 x 100mm Eaves gutters	m	119		
2	Extra over eaves gutter for angle/corner.	No	4		
3	Extra over eaves gutter for outlet for 75mm pipe.	No	30		
4	75mm Diameter rainwater pipes.	m	120		
5	Extra over rainwater pipe for bend.	No	30		
6	Extra over rainwater pipe for shoe.	No	30		
<u>FIRE APPLIANCES ETC.</u>					
<u>'Chubb' or equal approved:</u>					
7	9kg Dry chemical fire extinguisher.	No	5		
<u>RAINWATER HARVESTING</u>					
<u>Rainwater Harvesting</u>					
8	Allow a sum of R15 000.00/each (Fifteen Thousand Rands) for provision of 5000l Jojo or equal approved tank complete with lid, fittings, tap, concrete plinth as per Architect details	No	2		
Carried to Collection				R	
Section No. 3					
Bill No. 12					
Plumbing And Drainage					

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PLUMBING AND DRAINAGE
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Section No. 3
Bill No. 12
Plumbing And Drainage

		Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>					
<u>2 x 5 Classroom Block</u>					
<u>BILL NO. 13</u>					
<u>GLAZING</u>					
<u>PREAMBLES</u>					
For preambles see "Specification of materials and methods to be used - PW371					
<u>GLAZING TO STEEL WITH PUTTY</u>					
<u>5mm Clear float glass:</u>					
1	Panes not exceeding 0,1m2.	m ²	55		
<u>5mm obscure glass:</u>					
2	Panes not exceeding 0,1m2.	m ²	25		
Carried To Section Summary				R	
Section No. 3					
Bill No. 13					
Glazing					

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>2 x 5 Classroom Block</u>				
<u>BILL NO. 14</u>				
<u>PAINTWORK</u>				
<u>PREAMBLES</u>				
<u>Description</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
Description				
For preambles see "Specification of materials and methods to be used - PW371				
<u>ON NEW INTERNAL FLOATED PLASTER SURFACES</u>				
<u>One coat alkali resistant primer and two coats PVA emulsion paint for interior use</u>				
1 Walls	m ²	657		
<u>ON FIBRE-CEMENT, ETC.</u>				
<u>Prepare , etc as specified and apply two coats of super acrylic Pva paint:</u>				
2 On ceilings and cornices.	m ²	410		
3 On fascias and barge boards.	m	119		
<u>ON METAL</u>				
<u>Prepare, etc as specified and apply two coats of gloss enamel paint on :</u>				
4 Door frames	m ²	6		
5 On windows with burglar bars (both sides measured).	m ²	58		
6 On gates, grilles, burglar screens, balustrades, etc (both sides measured over the full flat area).	m ²	17		
7 Steel poles	m	21		
<u>Eaves Gutter</u>				
8 Inside eaves gutter with waterproofing based paint	m ²	42		
Carried to Collection			R	
Section No. 3 Bill No. 14 Paintwork				

9 General surfaces of doors (interior).

0 On general surfaces of doors.

1 On laminated beam.

2 On shelves.

R

Bill No. 14

Paintwork

Amount

BILL NO. 14
PAINTWORK
COLLECTION

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Section No. 3
Bill No. 14
Paintwork

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SECTION NO. 3**2 x 5 Classroom Block****SECTION SUMMARY**

Bill No.		Page
1	FOUNDATIONS	81
2	CONCRETE, FORMWORK AND REINFORCEMENT	84
3	MASONRY	87
4	WATERPROOFING	88
5	ROOF COVERINGS	89
6	CARPENTRY AND JOINERY	92
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12	PLUMBING AND DRAINAGE	105
13	GLAZING	106
14	PAINTWORK	109

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Section No. 3
SECTION SUMMARY

SECTION NO. 4

Medium Administration Block

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 4</u>				
<u>Medium Administration Block</u>				
<u>BILL NO. 1</u>				
<u>FOUNDATIONS</u>				
<u>PREAMBLES</u>				
For preambles see " Specification of materials and methods to be used - PW371"				
<u>SITE CLEARANCE ETC</u>				
<u>Site clearance:</u>				
1 Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc.	m ²	537		
<u>REMOVAL OF TREES, ETC.</u>				
<u>Taking out and removing, grubbing up roots and filling in holes:</u>				
2 Tree stump exceeding 200mm and not exceeding 500mm girth.	No	1		
<u>EXCAVATION, FILLING, ETC OTHER THAN BULK</u>				
<u>Excavation in earth not exceeding 2m deep:</u>				
3 Trenches.	m ³	134		
<u>Extra over trench and hole excavations in earth for excavation:</u>				
4 Soft rock.	m ³	9		
5 Hard rock.	m ³	5		
<u>Risk of collapse of excavations:</u>				
6 Sides of trench and hole excavations not exceeding 1,5m deep.	m ²	312		
<u>Keeping excavations free of water:</u>				
7 Keeping excavations free of all water other than subterranean water.	Item			
<u>Earth filling obtained from excavations and/or prescribed stock piles on site compacted to 93% Mod AASHTO:</u>				
8 Backfilling to trenches, holes, etc.	m ³	23		
9 Under floors, steps, pavings, etc.	m ³	42		
Carried to Collection			R	
Section No. 4				
Bill No. 1				
Foundations				

Carried to Collection

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FOUNDATIONS
COLLECTION

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Section No. 4
Bill No. 1
Foundations

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 4</u>				
<u>Medium Administration Block</u>				
<u>BILL NO. 2</u>				
<u>CONCRETE, FORMWORK AND REINFORCEMENT</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371"				
<u>UNREINFORCED CONCRETE</u>				
<u>15Mpa/19mm Concrete</u>				
1 Aprons cast in panels.	m ³	11		
2 Ramps.	m ³	4		
3 Thickening down the edge of apron 150mm deep, 200mm top and tapering to 100mm at bottom including all excavations, formwork, backfilling etc	m	79		
<u>REINFORCED CONCRETE</u>				
<u>25MPa/19mm Concrete:</u>				
4 Surface beds cast in panels on waterproofing.	m ³	27		
5 Footings.	m ³	27		
6 Slabs.	m ³	2		
<u>TEST BLOCKS</u>				
<u>Test blocks:</u>				
7 Making and testing set of three 150 x 150 x 150mm concrete strength test cubes (Provisional).	Sets	20		
<u>FINISHING TOP SURFACE OF CONCRETE</u>				
8 Paving to falls.	m ²	79		
<u>ROUGH FORMWORK (DEGREE OF ACCURACY III)</u>				
<u>Rough Formwork to Sides:</u>				
9 Edges and reveals not exceeding 300mm high or wide.	m	25		
<u>Rough Formwork to Soffits:</u>				
10 Slabs propped up exceeding 1.5 and not exceeding 3.5m high.	m ²	10		
Carried to Collection			R	
Section No. 4				
Bill No. 2				
Concrete, Formwork And Reinforcement				

		Unit	Quantity	Rate	Amount
<u>MOVEMENT JOINTS ETC</u>					
<u>Two layers of .5mm galvanised mild steel slip joints between horizontal concrete and brick surfaces including cement mortar bed:</u>					
11	Not exceeding 300mm wide.	m	70		
<u>Expansion joints with bitumen impregnated softboard between vertical concrete and brick surfaces:</u>					
12	12mm Joints not exceeding 300mm high.	m	75		
<u>Dividing Strips ,etc</u>					
13	6 x 38mm Angle iron step guard cast into concrete with 3x 6mm anchors	m	8		
<u>REINFORCEMENT(PROVISIONAL)</u>					
<u>Fabric reinforcement:</u>					
14	Type 193 fabric reinforcement in concrete surface beds, slabs, etc.	m ²	297		
15	Type 395 fabric reinforcement in concrete surface beds, slabs, etc.	m ²	10		
<u>Mild steel reinforcement to structural concrete work:</u>					
16	10mm Diameter bars.	Tonnes	1.00		
<u>High tensile steel reinforcement to structural concrete work:</u>					
17	20mm Diameter bars.	Tonnes	1.00		
18	16mm Diameter bars.	Tonnes	2.00		
19	12mm Diameter bars.	Tonnes	1.00		
Carried to Collection				R	
Section No. 4					
Bill No. 2					
Concrete, Formwork And Reinforcement					

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BILL NO. 2
CONCRETE, FORMWORK AND REINFORCEMENT
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Section No. 4
Bill No. 2
Concrete, Formwork And Reinforcement

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 4</u>				
<u>Medium Administration Block</u>				
<u>BILL NO. 3</u>				
<u>MASONRY</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371"				
<u>BRICKWORK</u>				
<u>Sizes in descriptions:</u>				
Where sizes in descriptions are given in brick units, 'one brick' shall represent the length and 'half brick' the width of a brick.				
<u>Face bricks:</u>				
Bricks shall be ordered timeously to obtain uniformity in size and colour.				
<u>Pointing:</u>				
Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc.				
<u>SAMPLES</u>				
Samples of all masonry building units, except those for walls described as 'load bearing', shall consist of a minimum of 6 units. Samples of building units to be used in walls described as 'load bearing' shall consist of 30 units from every 30 000 units delivered to site.				
<u>BRICKWORK IN FOUNDATIONS (PROVISIONAL)</u>				
<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar:</u>				
1	Half brick walls.	m ²	36	
2	One brick walls	m ²	130	
<u>BRICKWORK IN SUPERSTRUCTURE</u>				
<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar:</u>				
3	Piers	m ³	3	
4	Half brick walls	m ²	138	
5	Half brick walls in beam filling.	m ²	28	
6	One brick walls	m ²	357	
Carried to Collection			R	
Section No. 4				
Bill No. 3				
Masonry				

		Unit	Quantity	Rate	Amount
	<u>BRICKWORK SUNDRIES</u>				
	<u>Brickwork reinforcement:</u>				
7	75mm Wide reinforcement built in horizontally.	m	749		
8	150mm Wide reinforcement built in horizontally.	m	3 125		
	<u>Prestressed fabricated lintels:</u>				
9	110 x 75mm Lintels in lengths not exceeding 3m.	m	55		
	<u>Turning pieces:</u>				
10	110mm Wide turning piece to lintels etc.	m	55		
11	220mm Wide turning piece to lintels etc.	m	20		
	<u>Galvanised wire ties etc:</u>				
12	4mm Diameter roof tie 2m girth bent double with one end fixed to timber and other end built into brickwork (Provisional)	No	125		
	<u>Galvanised hoop iron cramps, ties, etc:</u>				
13	30 x 1,6mm Cramp 500mm long with one end fixed to wood and other end built into brickwork (Provisional)	No	125		
	<u>FACE BRICKWORK</u>				
	<u>Face bricks (Prime cost R5 500/1000 delivered to site excluding VAT) pointed with flush horizontal and vertical joints:</u>				
14	Extra over brickwork for face brickwork.	m ²	297		
15	Extra over brickwork for face brickwork in foundations (Provisional).	m ²	51		
16	Extra over brickwork for face brickwork to piers.	m ²	4		
17	Half brick in facings in beamfilling	m ²	27		
	<u>FACE BRICKWORK COPINGS, SILLS, ETC.</u>				
	<u>Brick-on-edge header course copings, sills, etc of face bricks (Prime cost R5 500/1000 delivered to site excluding VAT) and pointed with recessed joints on all exposed faces:</u>				
18	Extra over brickwork for brick-on-edge header course lintel pointed on face and 110mm soffit.	m	54		
19	Extra over brickwork for brick-on-edge header course lintel pointed on face and 220mm soffit	m	17		
20	110mm cut brick Wide sills set flat	m	14		
	Carried to Collection			R	
	Section No. 4				
	Bill No. 3				
	Masonry				

		Unit	Quantity	Rate	Amount
21	230mm Wide sill set sloping and slightly projecting.	m	10		
22	Coping on top of one brick wall pointed on exposed faces	m	14		
<u>NUTEC-CEMENT/FIBRE-CEMENT WINDOW SILLS</u>					
<u>Natural grey sills in single lengths bedded in class I mortar including metal fixing lugs etc:</u>					
23	12 x 152mm Wide sills set flat and slightly projecting.	m	8		
Carried to Collection				R	
Section No. 4					
Bill No. 3					
Masonry					

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MASONRY
COLLECTION

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Section No. 4
Bill No. 3
Masonry

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 4</u>				
<u>Medium Administration Block</u>				
<u>BILL NO. 4</u>				
<u>WATERPROOFING</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>DAMPPROOFING OF WALLS AND FLOORS</u>				
<u>One layer of 375 micron Consol Plastics Brikgrip DPC embossed damp proof course:</u>				
1 In walls.	m ²	38		
<u>One layer of 250 micron Consol Plastics Gunplas USB Green waterproof sheeting sealed at laps with Gunplas Pressure Sensitive Tape:</u>				
2 Under surface beds.	m ²	297		
<u>JOINT SEALANTS ETC</u>				
<u>Silicone sealing compound including backing cord, bond breaker, primer, etc</u>				
3 12 x 20mm in expansion joints in floors including raking out expansion joint filler as necessary (Provisional).	m	46		
4 12 x 20mm in vertical expansion joints in walls including raking out expansion joint filler as necessary.	m	40		
Carried To Section Summary			R	
Section No. 4				
Bill No. 4				
Waterproofing				

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 4</u>				
<u>Medium Administration Block</u>				
<u>BILL NO. 5</u>				
<u>ROOF COVERINGS</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW 371				
<u>General</u>				
<u>PROFILED METAL SHEETING AND ACCESSORIES</u>				
<u>0.58mm "Klip-lok light industrial" galvanised troughed sheet steel with "Globalcoat" finish one side (colour Traffic Green), fixed to 76 x 50mm purlin complete under 5year guarantee by an approved firm of specialists, all in accordance with the materials supplied and methods employed by the manufacturer</u>				
1	Roof covering with pitch not exceeding 25 degrees.	m ²	376	
<u>0.58mm galvanised sheet iron, with "chromadek" one side in:</u>				
2	Standard type FK3 ridge or hip flashing	m	26	
3	Standard valley flashing	m	16	
Carried To Section Summary			R	
Section No. 4				
Bill No. 5				
Roof Coverings				

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 4</u>				
<u>Medium Administration Block</u>				
<u>BILL NO. 6</u>				
<u>CARPENTRY AND JOINERY</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Particle board:</u>				
Particle board shall comply with the following specifications: a) SABS 1300 Particle board: exterior and flooring type b) SABS 1301 Particle board: interior type.				
<u>Joinery:</u>				
Descriptions of frames shall be deemed to include frames, transoms, mullions, rails, etc.				
Descriptions of hardwood joinery shall be deemed to include pelleting of bolt holes.				
<u>Fixing:</u>				
Items described as nailed shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete.				
<u>Decorative laminate finish:</u>				
Laminate finish shall be glued under pressure. Edge strips shall be butt jointed at junctions with adjacent similar finish.				
<u>PREFABRICATED ROOF TRUSSES, ETC.</u>				
<u>Plate nailed timber roof truss construction:</u>				
The following is applicable in respect of roof trusses: Trusses are at maximum 1200mm centres Roof covering is 'Klip-lok' roof sheeting on 76 x 50mm purlins. Ceilings are 6mm sheeting on 38 x 50mm branderling .Refer to drawings at the end of these bills of quantities for full details. All trusses are fabricated in a factory by specialists approved by the Architect. All trusses shall be designed by a Registered Professional Engineer(in accordance with the draft SABS Code of Practice for Design of Timber Trusses). The manufacturer of trusses shall supply a written guarantee that the trusses are designed, manufactured,and erected, to support the roof coverings specified. The guarantee shall be valid for 10(ten) years .				
Carried to Collection			R	
Section No. 4				
Bill No. 6				
Carpentry And Joinery				

Carried to Collection

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Amount

BILL NO. 6
CARPENTRY AND JOINERY
COLLECTION

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Section No. 4
Bill No. 6
Carpentry And Joinery

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 4</u>				
<u>Medium Administration Block</u>				
<u>BILL NO. 7</u>				
<u>CEILINGS PARTITIONS AND ACCESS FLOORING</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Descriptions:</u>				
Items described as nailed shall be deemed to be fixed with hardened steel nails or pins or shot pinned to brickwork or concrete.				
Items described as plugged shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres, and where described as bolted the bolts have been given.				
<u>INSULATION</u>				
<u>Aerolite insulation:</u>				
1		100mm Insulation closely fitted and laid on top of brandering between roof timbers etc.	m ²	297
<u>Wrought softwood</u>				
2		19 x 76mm cornices nailed	m	482
<u>NAILED UP AND SCREW UP CEILINGS</u>				
<u>6mm Everite Nutec or equal approved fibre-cement boards with H-type steel cover strips over joints:</u>				
3		Ceilings including 38 x 38mm sawn softwood brandering at 400mm centres.	m ²	297
4		Extra over ceiling for hinged trap door size 610 x 610mm	No	2
Carried To Section Summary			R	
Section No. 4				
Bill No. 7				
Ceilings Partitions And Access Flooring				

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 4</u>				
<u>Medium Administration Block</u>				
<u>BILL NO. 8</u>				
<u>IRONMONGERY</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Finishes to ironmongery:</u>				
Where applicable finishes to ironmongery are indicated by suffixes in accordance with the following list: BS Satin bronze lacquered : CH Chromium plated : SC Satin chromium plated : SE Silver enamelled : GE Grey enamelled : AS Anodised silver : AB Anodised bronze : AG Anodised gold : ABL Anodised black : PB Polished brass : PL Polished and lacquered : PT Epoxy coated.				
<u>HINGES, FLOOR SPRING HINGES, BOLTS, PANIC BOLTS, ETC</u>				
<u>"Solid" or equal approved:</u>				
1	150mm 8052-150 Brass flush bolt with keep fixed to metal.	No	2	
2	150mm 8052-150 Brass flush bolt with keep let into concretet.	No	2	
3	CZ 80941WC indicator bolt with keep fixed to metal.	No	2	
<u>CATCHES, CABIN HOOKS, ETC</u>				
<u>Solid or equal approved:</u>				
4	100mm cabin hook and eye including 70 x 70 x 20mm chamfered hardwood block twice oiled and plugged.	No	4	
<u>LOCKS</u>				
<u>Solid or equal approved:</u>				
5	"Code 630" padlock.	No	2	
<u>'Solid" or equal approved</u>				
6	CZ682-24-95SC"Gower" two lever lockset.	No	11	
<u>DOOR CLOSERS</u>				
<u>"Yale" or equal approved</u>				
7	Y202RC Door closer with cover fixed to metal	No	2	
Carried to Collection			R	
Section No. 4				
Bill No. 8				
Ironmongery				

		Unit	Quantity	Rate	Amount
<u>BATHROOM FITTINGS</u>					
<u>Kimberley-Clark or equal approved:</u>					
8	19mm Diameter chromium plated towel rail 900mm long including flanged end brackets.	No	2		
9	Vandal proof lockable toilet roll holder plugged.	No	2		
<u>SUNDRIES</u>					
<u>Solid or equal approved:</u>					
10	38mm Diameter rubber door stop plugged.	No	15		
<u>MATS</u>					
<u>Squeegee or equal approved</u>					
11	1500 x 800 x 17mm Door mat laid loose in mat surround fixed with 25 x 25mm aluminium angle plugged to concrete (Provisional).	No	2		
<u>VERTICAL AND ROLLER BLINDS</u>					
<u>127mm wide non-fade material vertical blinds as per "Windowvert" or similar approved ,fitted as per manufacturere's instructions</u>					
12	To fit window 2 044 x 954mm high.	No	1		
13	To fit window 1 511 x 1 245mm high.	No	14		
14	To fit window 1 022 x 1 224mm high.	No	3		
15	To fit window 533 x 949mm high.	No	5		
<u>PINNING BOARDS, WRITING BOARDS, PROJECTION SCREENS, ETC</u>					
<u>Vitrex or equal approved:</u>					
16	Pinning board 2400 x 1200mm high plugged.	No	1		
17	Pinning board 3000 x 1200mm high plugged.	No	4		
<u>STEEL LOCKERS</u>					
<u>Greenfield steel lockers with standard baked enamel finish</u>					
18	Double door steel cupboard 914 x 457 x 1828mm high with five shelves bolted to brickwork.	No	4		
Carried to Collection				R	
Section No. 4					
Bill No. 8					
Ironmongery					

Amount

BILL NO. 8
IRONMONGERY
COLLECTION

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Section No. 4
Bill No. 8
Ironmongery

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 4</u>				
<u>Medium Administration Block</u>				
<u>BILL NO. 9</u>				
<u>METALWORK</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Descriptions:</u>				
Descriptions of bolts shall be deemed to include nuts and washers.				
Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.				
Metalwork described as holed for bolt(s) shall be deemed to exclude the bolts unless otherwise described.				
<u>Mild steel handrails and balustrades fixed to base plates constructed of two number 6mm steel flat bar cut to profile mounted to wall with 6mm thick steel fixing plate welded to two steel flat bars with 4mm fillet welds chemical anchors (bolts included), 12mm diameter mild steel round spaced at 150mm centres, predrilled opening 3no in each upright, top rail to be 30mm thick x 100mm wide steel</u>				
1 Balustrades including steel handrails approximately 1000mm high fixed to concrete.	m	16		
<u>WELDED SCREENS, GATES, ETC.</u>				
<u>Gates to external doors</u>				
2 Ditto, double gate and frame 1613 x 2032mm high overall as per Architectural drawing	No	2		
<u>PRESSED STEEL DOOR FRAMES</u>				
<u>1,2mm Rebated frames suitable for half brick walls:</u>				
3 Frame for door 813 x 2032mm high.	No	10		
<u>1,2mm Rebated frames suitable for one brick walls:</u>				
4 Frame for door 813 x 2032mm high.	No	1		
Carried to Collection			R	
Section No. 4 Bill No. 9 Metalwork				

		Unit	Quantity	Rate	Amount
<u>STEEL WINDOWS, DOORS, ETC.</u>					
<u>Standard residential windows with 12 x 12(B33) solid burglar bars to all sashes:</u>					
5	Window type SWE37S/SWE37S, size 2044 x 954mm high.	No	1		
6	Window type SWE418, size 1511 x 1245mm high.	No	14		
7	Window type SW37, size 1022 x 1224mm high.	No	3		
8	Window type SWE31S, size 533 x 949mm high.	No	5		
9	Composite window type NG9/D4HS, size 1511 x 1623mm high.	No	1		
<u>STEEL STRONGROOM DOORS, VENTILATORS, ETC.</u>					
<u>Strongroom doors etc. suitable for 220mm walls fixed to brickwork or concrete</u>					
10	Double ended strongroom ventilator.	No	1		
11	Record room door and frame 1030 x 2010mm high overall with a mass of 324kg, including one 7lever security lock and wall mounted door stop	No	1		
<u>ALUMINIUM DOORS AND WINDOWS, ETC</u>					
<u>Purpose made natural anodised aluminium windows glazed with 6mm thick laminated safety glass and plugged to brickwall or concrete</u>					
12	Window 1525 x 1300mm high overall in clear panes.	No	3		
13	Window 2400 x 1300mm high overall in clear panes.	No	1		
<u>Purpose made natural anodised aluminium doors glazed with 6mm thick laminated safety glass and plugged to brickwall or concrete</u>					
14	Double door size 1575 x 2125mm high in four panes with each leaf side hung and one pair type TS550 satin chromium plated double action floor spring hinges with standard open feature, including adjustable top centre and box let into concrete, two double cylinder lockset, and two pairs of AL5512-300BB ABL aluminium pull handles fixing back to back.	No	2		
<u>SECURITY BARRIERS</u>					
15	Trellidoor 1600 x 2125mm high plugged.	No	2		
Carried to Collection				R	
Section No. 4					
Bill No. 9					
Metalwork					

Purpose made louvres:

- | | |
|----|--|
| 16 | Triangular shaped (on elevation) residential section
louvred ventilators 3138 wide (at the horizontal bottom) x
571mm high overall, filled in with type LC fixed horizontal
louvre blades fixed to surround and covered at back with
No. 256 galvanised mesh mosquito gauze, fixed with and
including 3 x 20mm steel flat section cover strips
screwed |
| 17 | Ditto but approximately 3700 x 1000mm high overall |

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Section No. 4
Bill No. 9
Metalwork

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BILL NO. 9
METALWORK
COLLECTION

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Section No. 4
Bill No. 9
Metalwork

		Unit	Quantity	Rate	Amount
<u>SECTION NO. 4</u>					
<u>Medium Administration Block</u>					
<u>BILL NO. 10</u>					
<u>PLASTERING</u>					
<u>PREAMBLES</u>					
For preambles see "Specification of materials and methods to be used - PW371					
<u>SCREEDS</u>					
<u>Screeds on concrete:</u>					
<u>Screeds of wood floated on concrete to receive ceramic tiles:</u>					
1	30mm Thick on floors and landings.	m ²	297		
<u>GRANOLITHIC</u>					
<u>Untinted wood floated granolithic on concrete</u>					
2	30mm Thick on floors and landings.	m ²	4		
<u>INTERNAL PLASTER</u>					
<u>Cement plaster on brickwork:</u>					
3	On walls.	m ²	658		
4	On narrow widths.	m ²	6		
5	On concrete soffit.	m ²	6		
<u>CORNER PROTECTORS, DIVIDING STRIPS, ETC</u>					
6	30 x 3mm Flat section brass dividing strips between different floor finishes.	m	7		
Carried To Section Summary				R	
Section No. 4					
Bill No. 10					
Plastering					

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 4</u>				
<u>Medium Administration Block</u>				
<u>BILL NO. 11</u>				
<u>TILING</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>WALL TILING</u>				
<u>200 x 200 x 10mm White glazed ceramic tiles fixed with adhesive to plaster (plaster elsewhere):</u>				
1 On walls in isolated panels, splashbacks, etc.	m ²	32		
2 On narrow widths.	m ²	1		
<u>FLOOR TILING</u>				
<u>300 x 300 x 11.5mm ceramic floor tiles (Prime Cost amount R250.00/m2 excluding vat) fixed with adhesive to screed (screed elsewhere) and flush pointed with tinted waterproof jointing compound</u>				
3 On floors and landings.	m ²	297		
4 Skirting formed of ceramic tile cut to 300 x 75mm high	m	211		
Carried To Section Summary			R	
Section No. 4				
Bill No. 11				
Tiling				

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 4</u>				
<u>Medium Administration Block</u>				
<u>BILL NO. 12</u>				
<u>PLUMBING AND DRAINAGE</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Concrete pipes:</u>				
Pipes shall be jointed with ogee joints with rubber collars or socket and spigot joints with rubber rings.				
<u>uPVC pressure pipes and fittings:</u>				
Pipes for water supply shall be of the class stated.				
Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings.				
Pipes of 50mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints.				
<u>Copper pipes:</u>				
Pipes shall be hard drawn and half-hard pipes of the class stated. Class 0 (thin walled hard drawn) pipes shall not be bent. Class 1 (thin walled half-hard), class 2 (half-hard) and class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be 'Cobra Watertech' type. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or in ground.				
<u>Fixing of pipes</u>				
Unless specifically otherwise stated, descriptions of pipes shall be deemed to include for fixing to walls etc. casting in, building in or suspending not exceeding 1m below suspension level				
Carried to Collection			R	
Section No. 4				
Bill No. 12				
Plumbing And Drainage				

	Unit	Quantity	Rate	Amount
<p><u>Reducing fittings:</u></p> <p>Where fittings have reducing ends or branches they are described as 'reducing'. In the case of pipes with diameters not exceeding 60mm only the largest end or branch size is given. Should the Contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained. In the case of pipes with diameters exceeding 60mm all sizes are given and no claim for extra bushes, reducers, etc will be entertained.</p> <p><u>Wire gratings:</u></p> <p>Descriptions of gutter outlets etc shall be deemed to include wire balloon gratings.</p> <p><u>Septic tanks:</u></p> <p>Descriptions of septic tanks shall be deemed to include excavation, bedding and jointing, concrete base slabs, jointing to drains and backfilling, compaction, etc all in accordance with the manufacturer's instructions.</p> <p><u>Exposed concrete surfaces:</u></p> <p>Exposed surfaces of concrete stormwater channels, cover slabs, inspection eye marker slabs, gully tops, cleaning eye tops, catchpits, inspection chambers, etc shall be finished smooth with plaster.</p> <p><u>Excavations:</u></p> <p>No claim for rock excavation will be entertained unless the Contractor has timeously notified the quantity surveyor thereof prior to backfilling.</p> <p>'Soft rock' and 'hard rock' shall be as defined in 'Earthworks'.</p> <p><u>Laying, backfilling, bedding, etc of pipes:</u></p> <p>Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturers' instructions.</p> <p>Where no manufacturers' instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following: SABS 1200 L : Medium pressure pipelines LD : Sewers LE : Stormwater drainage Pipe trenches etc shall be backfilled in accordance with clause 3, 5.5, 5.6, 5.7 and 7 of SAB.</p> <p><u>Flush pans:</u></p> <p>Flush pans shall have straight or side outlets and 'P' or 'S' traps as necessary.</p>				
Section No. 4				
Bill No. 12				
Plumbing And Drainage				
Carried to Collection			R	

	Unit	Quantity	Rate	Amount
<u>Stainless steel basins, sinks, wash troughs, urinals, etc:</u>				
Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable.				
<u>Waste unions:</u>				
Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings.				
<u>RAINWATER DISPOSAL</u>				
<u>Approved .6mm galvanised sheet iron with "chromadek" finish ,in:</u>				
1	m	79		
2	No	12		
3	No	6		
4	No	12		
5	m	48		
6	No	12		
7	No	12		
<u>SANITARY FITTINGS</u>				
<u>'Citimetal' stainless steel or equal approved:</u>				
8	No	1		
<u>"Vaal" or equal approved</u>				
9	No	3		
10	No	2		
<u>WASTE UNIONS ETC</u>				
<u>'Cobra Watertech" or equal approved</u>				
11	No	1		
<u>TRAPS ETC</u>				
<u>"Marley' or equal approved</u>				
12	No	1		
Carried to Collection			R	
Section No. 4				
Bill No. 12				
Plumbing And Drainage				

		Unit	Quantity	Rate	Amount
	<u>"Cobra Watertech" or equal approved</u>				
13	"Cobra Ref. 365/40" CP Bottle trap.	No	2		
	<u>TAPS, VALVES, ETC</u>				
	<u>'Cobra Watertech' or equal approved</u>				
14	"Cobra Rf. 107EC-15" Bib tap plugged	No	3		
15	15mm Gate valves plugged	No	6		
16	"Cobra Ref. 232/350" Angle regulating valve	No	2		
17	"Cobra Ref. 166/041 wall type "Star" sink mixer with overarm swivel outlet	No	1		
	<u>SANITARY PLUMBING</u>				
	<u>uPVC pipes:</u>				
18	50mm Pipes	m	60		
19	110mm Pipes.	m	55		
20	50mm Pipes laid in and including trenches not exceeding 1m deep.	m	25		
21	110mm Pipes laid in and including trenches not exceeding 1m deep under surface beds.	m	25		
	<u>Extra over uPVC pipes for fittings:</u>				
22	50mm Bend.	No	10		
23	100mm Bend.	No	8		
24	110mm Junction.	No	6		
25	50mm Junction.	No	12		
26	110mm Reducing junction.	No	6		
27	110mm Double junction.	No	5		
28	110mm Pan connector	No	2		
29	110mm "G1 Two-way " vent valve	No	2		
	<u>Sundries:</u>				
30	Testing waste pipe system.	Item			
	<u>WATER SUPPLIES</u>				
	<u>Class 9 uPVC pressure pipes:</u>				
31	63mm Pipes laid in and including trenches not exceeding 1000mm deep	m	60		
	Carried to Collection			R	
	Section No. 4				
	Bill No. 12				
	Plumbing And Drainage				

		Unit	Quantity	Rate	Amount
<u>RAINWATER HARVESTING</u>					
<u>Rainwater harvesting</u>					
46	Allow a sum of R15 000.00/each (Fifteen Thousand Rands) for provision of 5000l Jojo or equal approved tank complete with lid, fittings, tap, concrete plinth as per Architect details	No	2		
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Section No. 4					
Bill No. 12					
Plumbing And Drainage					

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PLUMBING AND DRAINAGE
COLLECTION

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Section No. 4
Bill No. 12
Plumbing And Drainage

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 4</u>				
<u>Medium Administration Block</u>				
<u>BILL NO. 13</u>				
<u>GLAZING</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>GLAZING TO STEEL WITH PUTTY</u>				
<u>5mm Clear float glass:</u>				
1	Panes exceeding 0,1m2 and not exceeding 0,5m2.	m ²	43	
<u>5mm Rough cast glass:</u>				
2	Panes exceeding 0,1m2 and not exceeding 0,5m2.	m ²	2	
<u>TOPS, SHELVES, DOORS, MIRRORS, ETC.</u>				
<u>6mm Silvered float glass copper backed mirrors with polished edges fixed with double sided adhesive tape:</u>				
3	Mirror 450 x 600 mm high.	No	3	
Carried To Section Summary			R	
Section No. 4				
Bill No. 13				
Glazing				

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 4</u>				
<u>Medium Administration Block</u>				
<u>BILL NO. 14</u>				
<u>PAINTWORK</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>ON FLOATED PLASTER</u>				
<u>Prepare , etc as specified and apply two coats of super acrylic paint:</u>				
1 On interior walls.	m ²	658		
<u>ON FIBRE-CEMENT, ETC.</u>				
<u>Prepare , etc as specified and apply two coats of super acrylic Pva paint:</u>				
2 On ceilings and cornices.	m ²	297		
3 On fascias and barge boards.	m	172		
<u>ON METAL</u>				
<u>Prepare, etc as specified and apply two coats of gloss enamel paint on :</u>				
4 Door frames	m ²	16		
5 On windows with burglar bars (both sides measured).	m ²	74		
6 On gates, grilles, burglar screens, balustrades, etc (both sides measured over the full flat area).	m ²	21		
<u>Inside eaves gutter</u>				
7 Inside eaves gutter with waterproofing paint	m ²	60		
<u>ON WOOD, WOOD BOARD</u>				
<u>Prepare,etc as specified and apply two coats of super acrylic Pva paint on:</u>				
8 General surfaces of doors (interior).	m ²	36		
<u>Prepare, etc as specified and apply two coats of polyurethane suede varnish:</u>				
9 On open slatted seating.	m ²	9		
10 On laminated beam.	m ²	3		
Carried To Section Summary			R	
Section No. 4				
Bill No. 14				
Paintwork				

Amount

SECTION NO. 4**Medium Administration Block****SECTION SUMMARY**

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SECTION SUMMARY

SECTION NO. 5

4 x 4 Waterborne Toilet

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 5</u>				
<u>4 x 4 Waterborne Toilet</u>				
<u>BILL NO. 1</u>				
<u>FOUNDATIONS</u>				
<u>PREAMBLES</u>				
For preambles see " Specification of materials and methods to be used - PW371"				
<u>SITE CLEARANCE ETC</u>				
<u>Site clearance:</u>				
1 Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc.	m ²	24		
<u>REMOVAL OF TREES, ETC.</u>				
<u>Taking out and removing, grubbing up roots and filling in holes:</u>				
2 Tree stump exceeding 200mm and not exceeding 500mm girth.	No	1		
<u>EXCAVATION, FILLING, ETC OTHER THAN BULK</u>				
<u>Excavation in earth not exceeding 2m deep:</u>				
3 Trenches.	m ³	28		
4 Pit.	m ³	4		
<u>Extra over trench and hole excavations in earth for excavation:</u>				
5 Soft rock.	m ³	3		
6 Hard rock.	m ³	1		
<u>Risk of collapse of excavations:</u>				
7 Sides of trench and hole excavations not exceeding 1,5m deep.	m ²	23		
<u>Keeping excavations free of water:</u>				
8 Keeping excavations free of all water other than subterranean water.	Item			
<u>Earth filling obtained from excavations and/or prescribed stock piles on site compacted to 93% Mod AASHTO:</u>				
9 Backfilling to trenches, holes, etc.	m ³	4		
10 Under floors, steps, pavings, etc.	m ³	5		
Carried to Collection			R	
Section No. 5				
Bill No. 1				
Foundations				

Amount

BILL NO. 1
FOUNDATIONS
COLLECTION

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Section No. 5
Bill No. 1
Foundations

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 5</u>				
<u>4 x 4 Waterborne Toilet</u>				
<u>BILL NO. 2</u>				
<u>CONCRETE, FORMWORK AND REINFORCEMENT</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371"				
<u>UNREINFORCED CONCRETE</u>				
<u>15Mpa/19mm Concrete</u>				
1 Aprons cast in panels.	m ³	2		
2 Ramps.	m ³	1		
3 Thickening down the edge of apron 150mm deep, 200mm top and tapering to 100mm at bottom including all excavations, formwork, backfilling etc	m	29		
<u>REINFORCED CONCRETE</u>				
<u>25 MPa/19mm Concrete:</u>				
4 Surface beds cast in panels on waterproofing.	m ³	2		
5 Footings.	m ³	7		
6 Slabs	m ³	2		
<u>TEST BLOCKS</u>				
<u>Test blocks:</u>				
7 Making and testing set of three 150 x 150 x 150mm concrete strength test cubes (Provisional).	Sets	5		
<u>FINISHING TOP SURFACE OF CONCRETE</u>				
8 Paving to falls.	m ²	17		
9 Ramps to falls.	m ²	2		
<u>ROUGH FORMWORK (DEGREE OF ACCURACY III)</u>				
<u>(CPAP Work Group No 111)</u>				
<u>Rough Formwork to Sides:</u>				
10 Edges and reveals not exceeding 300mm high or wide.	m	6		
11 Formwork to soffits of slabs	m ²	9		
Carried to Collection			R	
Section No. 5				
Bill No. 2				
Concrete, Formwork And Reinforcement				

		Unit	Quantity	Rate	Amount
<u>MOVEMENT JOINTS ETC</u>					
<u>Two layers of .5mm galvanised mild steel slip joints between horizontal concrete and brick surfaces including cement mortar bed:</u>					
12	Not exceeding 300mm wide.	m	6		
<u>Expansion joints with bitumen impregnated softboard between vertical concrete and brick surfaces:</u>					
13	12mm Joints not exceeding 300mm high.	m	6		
<u>Dividing Strips ,etc</u>					
14	6 x 38mm Angle iron step guard cast into concrete with 3x 6mm anchors	m	2		
<u>REINFORCEMENT(PROVISIONAL)</u>					
<u>Fabric reinforcement:</u>					
15	Type 193 fabric reinforcement in concrete surface beds, slabs, etc.	m ²	26		
<u>Mild steel reinforcement to structural concrete work:</u>					
16	10mm Diameter bars.	Tonnes	1		
<u>High tensile steel reinforcement to structural concrete work:</u>					
17	20mm Diameter bars.	Tonnes	1		
18	16mm Diameter bars.	Tonnes	1		
Carried to Collection				R	
Section No. 5					
Bill No. 2					
Concrete, Formwork And Reinforcement					

Amount

BILL NO. 2
CONCRETE, FORMWORK AND REINFORCEMENT
COLLECTION

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Carried To Section Summary

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Section No. 5
Bill No. 2
Concrete, Formwork And Reinforcement

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 5</u>				
<u>4 x 4 Waterborne Toilet</u>				
<u>BILL NO. 3</u>				
<u>MASONRY</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371"				
<u>BRICKWORK</u>				
<u>Sizes in descriptions:</u>				
Where sizes in descriptions are given in brick units, 'one brick' shall represent the length and 'half brick' the width of a brick.				
<u>Face bricks:</u>				
Bricks shall be ordered timeously to obtain uniformity in size and colour.				
<u>Pointing:</u>				
Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc.				
<u>SAMPLES</u>				
Samples of all masonry building units, except those for walls described as 'load bearing', shall consist of a minimum of 6 units. Samples of building units to be used in walls described as 'load bearing' shall consist of 30 units from every 30 000 units delivered to site.				
<u>BRICKWORK IN FOUNDATIONS (PROVISIONAL)</u>				
<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar:</u>				
1	Half brick walls	m ²	11	
2	One brick walls	m ²	11	
<u>BRICKWORK IN SUPERSTRUCTURE</u>				
<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar:</u>				
3	Half brick walls	m ²	18	
4	Half brick walls in beam filling.	m ²	2	
5	One brick walls	m ²	69	
Carried to Collection			R	
Section No. 5				
Bill No. 3				
Masonry				

		Unit	Quantity	Rate	Amount
	<u>BRICKWORK SUNDRIES</u>				
	<u>Brickwork reinforcement:</u>				
6	75mm Wide reinforcement built in horizontally.	m	64		
7	150mm Wide reinforcement built in horizontally.	m	194		
	<u>Turning pieces:</u>				
8	110mm Wide turning piece to lintels etc.	m	5		
9	220mm Wide turning piece to lintels etc.	m	2		
	<u>Galvanised wire ties etc:</u>				
10	4mm Diameter roof tie 2m girth bent double with one end fixed to timber and other end built into brickwork.(Provisional)	No	24		
	<u>Galvanised hoop iron cramps, ties, etc:</u>				
11	30 x 1,6mm Cramp 500mm long with one end fixed to wood and other end built into brickwork.(Provisional)	No	24		
	<u>FACE BRICKWORK</u>				
	<u>Face bricks (Prime cost R5 500/1000 delivered to site excluding VAT) pointed with flush horizontal and vertical joints:</u>				
12	Extra over brickwork for face brickwork.	m ²	79		
13	Extra over brickwork for face brickwork in foundations (Provisional).	m ²	6		
14	Extra over brickwork for face brickwork to piers.	m ²	2		
15	Half brick in facings in beamfilling	m ²	5		
	<u>FACE BRICKWORK COPINGS, SILLS, ETC.</u>				
	<u>Brick-on-edge header course copings, sills, etc of face bricks (Prime cost R5 500/1000 delivered to site excluding VAT) and pointed with recessed joints on all exposed faces:</u>				
16	Extra over brickwork for brick-on-edge header course lintel pointed on face and 110mm soffit.	m	2		
17	230mm Wide sill set sloping and slightly projecting.	m	5		
18	Coping on top of one brick wall pointed on exposed faces	m	16		
	Carried to Collection			R	
	Section No. 5				
	Bill No. 3				
	Masonry				

Natural grey sills in single lengths bedded in class I mortar including metal fixing lugs etc:

19 12 x 152mm Wide sills set flat and slightly projecting.

Unit

Quantity

Rate

Amount

m

4

Carried to Collection

R

Masonry

Amount

BILL NO. 3
MASONRY
COLLECTION

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Carried To Section Summary

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Section No. 5
Bill No. 3
Masonry

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 5</u>				
<u>4 x 4 Waterborne Toilet</u>				
<u>BILL NO. 4</u>				
<u>WATERPROOFING</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>DAMPPROOFING OF WALLS AND FLOORS</u>				
<u>One layer of 375 micron Consol Plastics Brikgrip DPC embossed damp proof course:</u>				
1 In walls.	m ²	10		
<u>One layer of 250 micron Consol Plastics Gunplas USB Green waterproof sheeting sealed at laps with Gunplas Pressure Sensitive Tape:</u>				
2 Under surface beds.	m ²	16		
<u>JOINT SEALANTS ETC</u>				
<u>silicone sealing compound including backing cord, bond breaker, primer, etc</u>				
3 12 x 20mm in expansion joints in floors including raking out expansion joint filler as necessary (Provisional)	m	38		
4 12 x 20mm in vertical expansion joints in walls including raking out expansion joint filler as necessary	m	48		
Carried To Section Summary			R	
Section No. 5				
Bill No. 4				
Waterproofing				

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 5</u>				
<u>4 x 4 Waterborne Toilet</u>				
<u>BILL NO. 5</u>				
<u>ROOF COVERINGS</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW 371				
<u>General</u>				
<u>PROFILED METAL SHEETING AND ACCESSORIES</u>				
<u>0.58mm "Klip-lok light industrial" galvanised troughed sheet steel with "Globalcoat" finish one side(colour Traffic Green), fixed to 76 x 50mm purlin complete under 5year quarantee by an approved firm of specialists, all in accordance with the materials supplied and methods employed by the manufacturer</u>				
1	m ²	20		
<u>0.58mm galvanised sheet iron, with "Globalcoat" one side in:</u>				
2	m	8		
Carried To Section Summary			R	
Section No. 5				
Bill No. 5				
Roof Coverings				

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 5</u>				
<u>4 x 4 Waterborne Toilet</u>				
<u>BILL NO. 6</u>				
<u>CARPENTRY AND JOINERY</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Particle board:</u>				
Particle board shall comply with the following specifications: a) SABS 1300 Particle board: exterior and flooring type b) SABS 1301 Particle board: interior type.				
<u>Joinery:</u>				
Descriptions of frames shall be deemed to include frames, transoms, mullions, rails, etc.				
Descriptions of hardwood joinery shall be deemed to include pelleting of bolt holes.				
<u>Fixing:</u>				
Items described as nailed shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete.				
<u>Decorative laminate finish:</u>				
Laminate finish shall be glued under pressure. Edge strips shall be butt jointed at junctions with adjacent similar finish.				
<u>PREFABRICATED ROOF TRUSSES, ETC.</u>				
<u>Plate nailed timber roof truss construction:</u>				
The following is applicable in respect of roof trusses: Trusses are at maximum 1200mm centres Roof covering is 'Klip-lok' roof sheeting on 76 x 50mm purlins. Ceilings are 6mm sheeting on 38 x 50mm brundering .Refer to drawings at the end of these bills of quantities for full details. All trusses are fabricated in a factory by specialists approved by the Architect. All trusses shall be designed by a Registered Professional Engineer(in accordance with the draft SABS Code of Practice for Design of Timber Trusses). The manufacturer of trusses shall supply a written guarantee that the trusses are designed, manufactured,and erected, to support the roof coverings specified. The guarantee shall be valid for 10(ten) years .				
Carried to Collection			R	
Section No. 5				
Bill No. 6				
Carpentry And Joinery				

		Unit	Quantity	Rate	Amount
	<u>Sawn softwood:</u>				
1	Roof construction to double pitched roof with two gable ends approximately 16m ² on plan overall including trusses, rafters, purlins, permanent bracing, etc (measured flat).	No	1		
	<u>ROOF CONSTRUCTION</u>				
	<u>Sawn softwood :</u>				
2	114 x 38mm Wall plates.	m	4		
3	114 x 38mm rafters exceeding 2.4m and not exceeding 3.9m.	m	5		
4	50 x 76mm purlins.	m	16		
	<u>ROOF SUNDRIES</u>				
	<u>Sundries:</u>				
5	Two coats creosote on sawn timbers.	m ²	6		
	<u>EAVES, VERGES, ETC</u>				
	<u>Everite FC77 or equal approved pressed fibre-cement:</u>				
6	10 x 250mm Fascias and barge boards including galvanised steel H-profile jointing strips.	m	20		
	<u>Wrought meranti doors:</u>				
	<u>Wrought meranti doors hung to steel frames:</u>				
7	44mm Framed batten door 813 x 2032mm high of 44 x 150mm top rail and stiles , 16 x 150mm middle ledge and braces and 22 x 220mm bottom rail, filled in with 22mmV-jointed one side boarding and covered on other side with 4mm plywood with veneer to match door, let into and including rebates all round.	No	2		
	<u>Semi-solid flush doors</u>				
8	40mm semi-solid flush doors with 3.2mm standard hardboard covering on both sides hung to steel frames:	No	4		
Carried to Collection				R	
Section No. 5					
Bill No. 6					
Carpentry And Joinery					

Amount

BILL NO. 6
CARPENTRY AND JOINERY
COLLECTION

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Section No. 5
Bill No. 6
Carpentry And Joinery

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 5</u>				
<u>4 x 4 Waterborne Toilet</u>				
<u>BILL NO. 7</u>				
<u>CEILINGS PARTITIONS AND ACCESS FLOORING</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Descriptions:</u>				
Items described as nailed shall be deemed to be fixed with hardened steel nails or pins or shot pinned to brickwork or concrete.				
Items described as plugged shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres, and where described as bolted the bolts have been given.				
<u>INSULATION</u>				
<u>Aerolite insulation:</u>				
1	100mm Insulation closely fitted and laid on top of brandering between roof timbers etc.	m ²	16	
<u>Wrought softwood</u>				
2	19 x 76mm cornices nailed	m	16	
<u>NAILED UP AND SCREW UP CEILINGS</u>				
<u>6mm Everite Nutec or equal approved fibre-cement boards with H-type steel cover strips over joints:</u>				
3	Ceilings including 38 x 38mm sawn softwood brandering at 400mm centres.	m ²	16	
4	Extra over ceiling for hinged trap door size 610 x 610mm	No	1	
Carried To Section Summary			R	
Section No. 5				
Bill No. 7				
Ceilings Partitions And Access Flooring				

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 5</u>				
<u>4 x 4 Waterborne Toilet</u>				
<u>BILL NO. 8</u>				
<u>IRONMONGERY</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Finishes to ironmongery:</u>				
Where applicable finishes to ironmongery are indicated by suffixes in accordance with the following list: BS Satin bronze lacquered : CH Chromium plated : SC Satin chromium plated : SE Silver enamelled : GE Grey enamelled : AS Anodised silver : AB Anodised bronze : AG Anodised gold : ABL Anodised black : PB Polished brass : PL Polished and lacquered : PT Epoxy coated.				
<u>CATCHES, CABIN HOOKS, ETC</u>				
<u>Solid or equal approved:</u>				
1		100mm cabin hook and eye including 70 x 70 x 20mm chamfered hardwood block twice oiled and plugged.	No	2
<u>LOCKS</u>				
<u>Solid or equal approved:</u>				
2		"Code 630" padlock.	No	2
<u>'Solid" or equal approved</u>				
3		CZ682-24-95SC"Gower" two lever lockset.	No	4
4		CZ6822461 "Gower" Four lever lockset.	No	2
<u>SUNDRIES</u>				
<u>Solid or equal approved:</u>				
5		38mm Diameter rubber door stop plugged.	No	6
<u>Lockable toilet roll holder</u>				
6		Lockable toilet roll holder plugged	No	4
Carried To Section Summary			R	
Section No. 5				
Bill No. 8				
Ironmongery				

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 5</u>				
<u>4 x 4 Waterborne Toilet</u>				
<u>BILL NO. 9</u>				
<u>METALWORK</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Descriptions:</u>				
Descriptions of bolts shall be deemed to include nuts and washers.				
Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.				
Metalwork described as holed for bolt(s) shall be deemed to exclude the bolts unless otherwise described.				
<u>WELDED SCREENS, GATES, ETC.</u>				
<u>Gates to external doors</u>				
1				
Single gate and frame 813 x 2032mm high of 25 x 25x 2mm hollow section frame and 25 x 25x 2mm hollow section horizontal middle rail filled in with 12 x 12mm square section vertical rails at 75mm centres and fitted with a pair of suitable hinges welded to frame and with locking mechanism for padlock all in and including outer frame of 25 x 25 x 2mm hollow section welded frame bolted to brickwork.				
	No	2		
<u>PRESSED STEEL DOOR FRAMES</u>				
<u>1,2mm Rebated frames suitable for half brick walls:</u>				
2				
Frame for door 813 x 2032mm high.				
	No	4		
<u>1,2mm Rebated frames suitable for one brick walls:</u>				
3				
Frame for door 813 x 2032mm high				
	No	2		
<u>STEEL WINDOWS, DOORS, ETC.</u>				
<u>Standard residential windows with 12 x 12(B33) solid burglar bars to all sashes:</u>				
4				
Window type NE1, 533 x 654mm high				
	No	4		
Carried to Collection			R	
Section No. 5				
Bill No. 9				
Metalwork				

Amount

BILL NO. 9
METALWORK
COLLECTION

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Section No. 5
Bill No. 9
Metalwork

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 5</u>				
<u>4 x 4 Waterborne Toilet</u>				
<u>BILL NO. 10</u>				
<u>PLASTERING</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>SCREEDS</u>				
<u>Screeds on concrete:</u>				
<u>Screeds of wood floated on concrete to receive ceramic tiles:</u>				
1	m ²	16		
<u>INTERNAL PLASTER</u>				
<u>Cement plaster steel trowelled, on brickwork</u>				
2	m ²	92		
3	m ²	1		
Carried To Section Summary			R	
Section No. 5				
Bill No. 10				
Plastering				

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 5</u>				
<u>4 x 4 Waterborne Toilet</u>				
<u>BILL NO. 11</u>				
<u>TILING</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>WALL TILING</u>				
<u>200 x 200 x 5mm White glazed ceramic tiles on brickwork including cement plaster backing</u>				
1 On walls	m ²	2		
<u>FLOOR TILING</u>				
<u>300 x 300 x 11.5mm glazed floor tiles (Prime Cost amount R250.00/m2 delivered excluding vat) fixed with adhesive to screed (screed elsewhere) and flush pointed with tinted waterproof jointing compound</u>				
2 On floors and landings.	m ²	16		
3 Skirting formed of ceramic tile cut to 300 x 75mm high	m	16		
Carried To Section Summary			R	
Section No. 5				
Bill No. 11				
Tiling				

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 5</u>				
<u>4 x 4 Waterborne Toilet</u>				
<u>BILL NO. 12</u>				
<u>PLUMBING AND DRAINAGE</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Concrete pipes:</u>				
Pipes shall be jointed with ogee joints with rubber collars or socket and spigot joints with rubber rings.				
<u>uPVC pressure pipes and fittings:</u>				
Pipes for water supply shall be of the class stated.				
Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings.				
Pipes of 50mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints.				
<u>Copper pipes:</u>				
Pipes shall be hard drawn and half-hard pipes of the class stated. Class 0 (thin walled hard drawn) pipes shall not be bent. Class 1 (thin walled half-hard), class 2 (half-hard) and class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be 'Cobra Watertech' type. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or in ground.				
<u>Fixing of pipes</u>				
Unless specifically otherwise stated, descriptions of pipes shall be deemed to include for fixing to walls etc. casting in, building in or suspending not exceeding 1m below suspension level				
Carried to Collection			R	
Section No. 5				
Bill No. 12				
Plumbing And Drainage				

	Unit	Quantity	Rate	Amount
<p><u>Reducing fittings:</u></p> <p>Where fittings have reducing ends or branches they are described as 'reducing'. In the case of pipes with diameters not exceeding 60mm only the largest end or branch size is given. Should the Contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained. In the case of pipes with diameters exceeding 60mm all sizes are given and no claim for extra bushes, reducers, etc will be entertained.</p> <p><u>Wire gratings:</u></p> <p>Descriptions of gutter outlets etc shall be deemed to include wire balloon gratings.</p> <p><u>Septic tanks:</u></p> <p>Descriptions of septic tanks shall be deemed to include excavation, bedding and jointing, concrete base slabs, jointing to drains and backfilling, compaction, etc all in accordance with the manufacturer's instructions.</p> <p><u>Exposed concrete surfaces:</u></p> <p>Exposed surfaces of concrete stormwater channels, cover slabs, inspection eye marker slabs, gully tops, cleaning eye tops, catchpits, inspection chambers, etc shall be finished smooth with plaster.</p> <p><u>Excavations:</u></p> <p>No claim for rock excavation will be entertained unless the Contractor has timeously notified the quantity surveyor thereof prior to backfilling.</p> <p>'Soft rock' and 'hard rock' shall be as defined in 'Earthworks'.</p> <p><u>Laying, backfilling, bedding, etc of pipes:</u></p> <p>Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturers' instructions.</p> <p>Where no manufacturers' instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following: SABS 1200 L : Medium pressure pipelines LD : Sewers LE : Stormwater drainage Pipe trenches etc shall be backfilled in accordance with clause 3, 5.5, 5.6, 5.7 and 7 of SAB.</p> <p><u>Flush pans:</u></p> <p>Flush pans shall have straight or side outlets and 'P' or 'S' traps as necessary.</p>				
Carried to Collection				
Section No. 5				
Bill No. 12				
Plumbing And Drainage				
			R	

		Unit	Quantity	Rate	Amount
	<u>Stainless steel basins, sinks, wash troughs, urinals, etc:</u>				
	Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable.				
	<u>Waste unions:</u>				
	Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings.				
	<u>RAINWATER DISPOSAL</u>				
	<u>Approved .6mm galvanised sheet iron with "chromadek" finish ,in:</u>				
1	100 x 100mm Eaves gutters	m	18		
2	Extra over eaves gutter for angle/corner.	No	4		
3	Extra over eaves gutter for outlet for 75mm pipe.	No	4		
4	75mm Diameter rainwater pipes.	m	16		
5	Extra over rainwater pipe for bend.	No	4		
6	Extra over rainwater pipe for shoe.	No	4		
	<u>SANITARY FITTINGS</u>				
	<u>"Vaal" or equal approved</u>				
7	510 x 405mm "Hibiscus" (code 7050) white vitreous china rounded lavatory basin with two tapholes supported on and including two bolts(code 84467Z0)	No	4		
8	White vitreous china "Daisy" semi-close coupled 90degree outlet open rim washdown pan (code 774000) and matching 9litre cistern (code 710034) complete with lid, fitments and flush pipe elbow and conversion bend (code 710044) and "deluxe" toilet seat	No	4		
	<u>WASTE UNIONS ETC</u>				
	<u>'Cobra Watertech" or equal approved</u>				
9	38mm "Cobra 316" unslotted waste and plug with chain	No	4		
	<u>TRAPS ETC</u>				
	<u>"Marley' or equal approved</u>				
10	40mm Flexi butyl rubber trap with reseal "P" trap	No	4		
	<u>"Cobra Watertech" or equal approved</u>				
11	"Cobra Ref. 365/40" CP Bottle trap.	No	4		
	Carried to Collection				
	Section No. 5				
	Bill No. 12				
	Plumbing And Drainage				
				R	

		Unit	Quantity	Rate	Amount
<u>TAPS, VALVES, ETC</u>					
<u>'Cobra Watertech' or equal approved:</u>					
12	"Cobra Rf. 107EC-15" Bib tap plugged	No	4		
13	15mm Gate valves plugged	No	8		
14	"Cobra Ref. 232/350" Angle regulating valve	No	4		
<u>SANITARY PLUMBING</u>					
<u>uPVC pipes:</u>					
15	50mm Pipes	m	30		
16	110mm Pipes.	m	50		
17	50mm Pipes laid in and including trenches not exceeding 1m deep.	m	20		
18	110mm Pipes laid in and including trenches not exceeding 1m deep under surface beds.	m	30		
<u>Extra over uPVC pipes for fittings:</u>					
19	50mm Bend.	No	6		
20	100mm Bend.	No	4		
21	110mm Junction.	No	4		
22	50mm Junction.	No	4		
23	110mm Reducing junction.	No	4		
24	110mm Double junction.	No	4		
25	110mm Pan connector	No	4		
26	110mm "G1 Two-way " vent valve	No	4		
<u>Sundries:</u>					
27	Testing waste pipe system.	Item			
<u>WATER SUPPLIES</u>					
<u>Class 9 uPVC pressure pipes:</u>					
28	63mm Pipes laid in and including trenches not exceeding 1000mm deep	m	30		
<u>Extra over uPVC pressure pipes for solvent welded pressure fittings:</u>					
29	63mm Elbow	No	2		
30	63mm Tee	No	2		
Carried to Collection				R	
Section No. 5					
Bill No. 12					
Plumbing And Drainage					

		Unit	Quantity	Rate	Amount
31	63mm Reducer.	No	1		
	<u>Class o copper pipes:</u>				
32	15mm Pipes	m	20		
33	22mm Pipes.	m	15		
	<u>Extra over class o copper pipes for capillary fittings:</u>				
34	15mm Fittings.	No	10		
35	22mm Fittings.	No	10		
	<u>Copper overflow and service pipes:</u>				
36	15mm Service pipe 300mm girth.	No	1		
	<u>Sundries:</u>				
37	450 x 450m cast iron stopcock box including brick chamber below not exceeding 750mm deep internally.	No	1		
	<u>FIRE APPLIANCES ETC.</u>				
	<u>'Chubb':</u>				
38	9kg Dry chemical fire extinguisher fixed on and including 22mm thick x 400 x 200mm wide meranti timber back plate with chamfered edges	No	2		
Carried to Collection				R	
Section No. 5					
Bill No. 12					
Plumbing And Drainage					

Amount

BILL NO. 12
PLUMBING AND DRAINAGE
COLLECTION

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Section No. 5
Bill No. 12
Plumbing And Drainage

Carried To Section Summary

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	Unit	Quantity	Rate	Amount
<u>SECTION NO. 5</u>				
<u>4 x 4 Waterborne Toilet</u>				
<u>BILL NO. 13</u>				
<u>GLAZING</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>GLAZING TO STEEL WITH PUTTY</u>				
<u>5mm obscure glass:</u>				
1	Panes not exceeding 0,1m2.	m ²	4	
Carried To Section Summary			R	
Section No. 5				
Bill No. 13				
Glazing				

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 5</u>				
<u>4 x 4 Waterborne Toilet</u>				
<u>BILL NO. 14</u>				
<u>PAINTWORK</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>ON INTERNAL FLOATED PLASTER SURFACES</u>				
<u>One coat alkali resistant primer and two coats superior quality acrylic emulsion paint for interior use</u>				
1 Walls	m ²	91		
<u>ON FIBRE-CEMENT, ETC.</u>				
<u>Prepare , etc as specified and apply two coats of super acrylic Pva paint:</u>				
2 On ceilings and cornices.	m ²	16		
3 On fascias and barge boards.	m	16		
<u>ON METAL</u>				
<u>Prepare, etc as specified and apply two coats of gloss enamel paint on :</u>				
4 Door frames	m ²	9		
5 On windows with burglar bars (both sides measured).	m ²	4		
6 On gates, grilles, burglar screens, balustrades, etc (both sides measured over the full flat area).	m ²	7		
<u>Inside eaves gutter</u>				
7 Inside eaves gutter with waterproofing paint	m ²	6		
<u>ON WOOD, WOOD BOARD</u>				
<u>Prepare,etc as specified and apply two coats of super acrylic Pva paint on:</u>				
8 General surfaces of doors (interior).	m ²	13		
<u>Prepare, etc as specified and apply two coats of polyurethane suede varnish:</u>				
9 On general surfaces of doors.	m ²	7		
10 On general surfaces of timber.	m ²	2		
Carried To Section Summary			R	
Section No. 5				
Bill No. 14				
Paintwork				

Amount

SECTION NO. 5**4 x 4 Waterborne Toilet****SECTION SUMMARY**

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x 4

Carried to Final Summary

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Section No. 5
SECTION SUMMARY

SECTION NO. 6

Guard House

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 6</u>				
<u>Guard House</u>				
<u>BILL NO. 1</u>				
<u>FOUNDATIONS</u>				
<u>PREAMBLES</u>				
For preambles see " Specification of materials and methods to be used - PW371"				
<u>SITE CLEARANCE ETC</u>				
<u>Site clearance:</u>				
1 Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc.	m ²	11		
<u>REMOVAL OF TREES, ETC.</u>				
<u>Taking out and removing, grubbing up roots and filling in holes:</u>				
2 Tree stump exceeding 200mm and not exceeding 500mm girth.	No	1		
<u>EXCAVATION, FILLING, ETC OTHER THAN BULK</u>				
<u>Excavation in earth not exceeding 2m deep:</u>				
3 Trenches.	m ³	18		
<u>Extra over trench and hole excavations in earth for excavation:</u>				
4 Soft rock.	m ³	2		
5 Hard rock.	m ³	1		
<u>Risk of collapse of excavations:</u>				
6 Sides of trench and hole excavations not exceeding 1,5m deep.	m ²	25		
<u>Keeping excavations free of water:</u>				
7 Keeping excavations free of all water other than subterranean water.	Item			
<u>Earth filling obtained from excavations and/or prescribed stock piles on site compacted to 93% Mod AASHTO:</u>				
8 Backfilling to trenches, holes, etc.	m ³	9		
9 Under floors, steps, pavings, etc.	m ³	3		
Carried to Collection			R	
Section No. 6				
Bill No. 1				
Foundations				

Carried to Collection

R

Amount

BILL NO. 1
FOUNDATIONS
COLLECTION

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Carried To Section Summary

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Section No. 6
Bill No. 1
Foundations

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 6</u>				
<u>Guard House</u>				
<u>BILL NO. 2</u>				
<u>CONCRETE, FORMWORK AND REINFORCEMENT</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371"				
<u>UNREINFORCED CONCRETE</u>				
<u>15Mpa/19mm Concrete</u>				
1 Aprons cast in panels.	m ³	1		
2 Ramps.	m ³	1		
3 Thickening down the edge of apron 150mm deep, 200mm top and tapering to 100mm at bottom including all excavations, formwork, backfilling etc	m	11		
4 Footings.	m ³	4		
<u>REINFORCED CONCRETE</u>				
<u>25MPa/19mm Concrete:</u>				
5 Surface beds cast in panels on waterproofing.	m ³	1		
<u>TEST BLOCKS</u>				
<u>Test blocks:</u>				
6 Making and testing set of three 150 x 150 x 150mm concrete strength test cubes (Provisional).	Sets	2		
7 Paving to falls.	m ²	11		
<u>FINISHING TOP SURFACE OF CONCRETE</u>				
<u>ROUGH FORMWORK (DEGREE OF ACCURACY III)</u>				
<u>Rough Formwork to Sides:</u>				
8 Edges and reveals not exceeding 300mm high or wide.	m	11		
<u>MOVEMENT JOINTS ETC</u>				
<u>Two layers of .5mm galvanised mild steel slip joints between horizontal concrete and brick surfaces including cement mortar bed:</u>				
9 Not exceeding 300mm wide.	m	5		
Carried to Collection			R	
Section No. 6				
Bill No. 2				
Concrete, Formwork And Reinforcement				

		Unit	Quantity	Rate	Amount
	<u>Expansion joints with bitumen impregnated softboard between vertical concrete and brick surfaces:</u>				
10	12mm Joints not exceeding 300mm high.	m	4		
	<u>Dividing Strips ,etc</u>				
11	6 x 38mm Angle iron step guard cast into concrete with 3x 6mm anchors	m	1		
	<u>REINFORCEMENT(PROVISIONAL)</u>				
	<u>Fabric reinforcement:</u>				
12	Type 193 fabric reinforcement in concrete surface beds, slabs, etc.	m ²	9		
Carried to Collection				R	
Section No. 6					
Bill No. 2					
Concrete, Formwork And Reinforcement					

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BILL NO. 2
CONCRETE, FORMWORK AND REINFORCEMENT
COLLECTION

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Section No. 6
Bill No. 2
Concrete, Formwork And Reinforcement

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 6</u>				
<u>Guard House</u>				
<u>BILL NO. 3</u>				
<u>MASONRY</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371"				
<u>BRICKWORK</u>				
<u>Sizes in descriptions:</u>				
Where sizes in descriptions are given in brick units, 'one brick' shall represent the length and 'half brick' the width of a brick.				
<u>Face bricks:</u>				
Bricks shall be ordered timeously to obtain uniformity in size and colour.				
<u>Pointing:</u>				
Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc.				
<u>SAMPLES</u>				
Samples of all masonry building units, except those for walls described as 'load bearing', shall consist of a minimum of 6 units. Samples of building units to be used in walls described as 'load bearing' shall consist of 30 units from every 30 000 units delivered to site.				
<u>BRICKWORK IN FOUNDATIONS (PROVISIONAL)</u>				
<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar:</u>				
1	Half brick walls.	m ²	3	
2	One brick walls	m ²	11	
<u>BRICKWORK IN SUPERSTRUCTURE</u>				
<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar:</u>				
3	Piers	m ³	1	
4	Half brick walls	m ²	9	
5	One brick walls	m ²	34	
Carried to Collection			R	
Section No. 6				
Bill No. 3				
Masonry				

		Unit	Quantity	Rate	Amount
<u>BRICKWORK SUNDRIES</u>					
<u>Brickwork reinforcement:</u>					
6	75mm Wide reinforcement built in horizontally.	m	36		
7	150mm Wide reinforcement built in horizontally.	m	149		
<u>Prestressed fabricated lintels:</u>					
8	110 x 75mm Lintels in lengths not exceeding 3m.	m	1		
<u>Turning pieces:</u>					
9	220mm Wide turning piece to lintels etc.	m	6		
<u>Galvanised wire ties etc:</u>					
10	4mm Diameter roof tie 2m girth bent double with one end fixed to timber and other end built into brickwork.(Provisional)	No	11		
<u>Galvanised hoop iron cramps, ties, etc:</u>					
11	30 x 1,6mm Cramp 500mm long with one end fixed to wood and other end built into brickwork.(Provisional)	No	11		
<u>FACE BRICKWORK</u>					
<u>Face bricks (Prime cost R5 500/1000 delivered to site excluding VAT) pointed with flush horizontal and vertical joints:</u>					
12	Extra over brickwork for face brickwork.	m ²	34		
13	Extra over brickwork for face brickwork in foundations (Provisional).	m ²	5		
14	Extra over brickwork for face brickwork to piers.	m ²	12		
15	Half brick in facings in beamfilling	m ²	5		
<u>FACE BRICKWORK COPINGS, SILLS, ETC.</u>					
<u>Brick-on-edge header course copings, sills, etc of face bricks (Prime cost R5 500/1000 delivered to site excluding VAT) and pointed with recessed joints on all exposed faces:</u>					
16	Extra over brickwork for brick-on-edge header course lintel pointed on face and 110mm soffit.	m	7		
17	230mm Wide sill set sloping and slightly projecting.	m	5		
18	Coping on top of one brick wall pointed on exposed faces	m	1		
Carried to Collection				R	
Section No. 6					
Bill No. 3					
Masonry					

Natural grey sills in single lengths bedded in class I mortar including metal fixing lugs etc:

19 12 x 152mm Wide sills set flat and slightly projecting.

Unit

Quantity

Rate

Amount

m

5

Carried to Collection

R

Masonry

Amount

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MASONRY
COLLECTION

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Section No. 6
Bill No. 3
Masonry

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 6</u>				
<u>Guard House</u>				
<u>BILL NO. 4</u>				
<u>WATERPROOFING</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>DAMPPROOFING OF WALLS AND FLOORS</u>				
<u>One layer of 375 micron Consol Plastics Brikgrip DPC embossed damp proof course:</u>				
1 In walls.	m ²	6		
<u>One layer of 250 micron Consol Plastics Gunplas USB Green waterproof sheeting sealed at laps with Gunplas Pressure Sensitive Tape:</u>				
2 Under surface beds.	m ²	9		
<u>JOINT SEALANTS ETC</u>				
<u>Silicone sealing compound including backing cord, bond breaker, primer, etc</u>				
3 12 x 20mm in expansion joints in floors including raking out expansion joint filler as necessary (Provisional)	m	2		
4 12 x 20mm in vertical expansion joints in walls including raking out expansion joint filler as necessary	m	2		
Carried To Section Summary			R	
Section No. 6				
Bill No. 4				
Waterproofing				

		Unit	Quantity	Rate	Amount
<u>SECTION NO. 6</u>					
<u>Guard House</u>					
<u>BILL NO. 5</u>					
<u>ROOF COVERINGS</u>					
<u>PREAMBLES</u>					
For preambles see "Specification of materials and methods to be used - PW 371					
<u>General</u>					
<u>PROFIED METAL SHEETING AND ACCESSORIES</u>					
<u>.5mm "Klip-lok light industrial" galvanised troughed sheet steel with "chromadek" finish one side, fixed to 76 x 50mm purlin complete under 5year guarantee by an approved firm of specialists, all in accordance with the materials supplied and methods employed by the manufacturer</u>					
1	Roof covering with pitch not exceeding 25 degrees.	m ²	12		
<u>.8mm galvanised sheet iron, with "chromadek" one side in:</u>					
2	Standard type FK3 ridge or hip flashing	m	10		
Carried To Section Summary				R	
Section No. 6					
Bill No. 5					
Roof Coverings					

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 6</u>				
<u>Guard House</u>				
<u>BILL NO. 6</u>				
<u>CARPENTRY AND JOINERY</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Particle board:</u>				
Particle board shall comply with the following specifications: a) SABS 1300 Particle board: exterior and flooring type b) SABS 1301 Particle board: interior type.				
<u>Joinery:</u>				
Descriptions of frames shall be deemed to include frames, transoms, mullions, rails, etc.				
Descriptions of hardwood joinery shall be deemed to include pelleting of bolt holes.				
<u>Fixing:</u>				
Items described as nailed shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete.				
<u>Decorative laminate finish:</u>				
Laminate finish shall be glued under pressure. Edge strips shall be butt jointed at junctions with adjacent similar finish.				
<u>PREFABRICATED ROOF TRUSSES, ETC.</u>				
<u>Plate nailed timber roof truss construction:</u>				
The following is applicable in respect of roof trusses: Trusses are at maximum 1200mm centres Roof covering is 'Klip-lok' roof sheeting on 76 x 50mm purlins. Ceilings are 6mm sheeting on 38 x 50mm branderling .Refer to drawings at the end of these bills of quantities for full details. All trusses are fabricated in a factory by specialists approved by the Architect. All trusses shall be designed by a Registered Professional Engineer(in accordance with the draft SABS Code of Practice for Design of Timber Trusses). The manufacturer of trusses shall supply a written guarantee that the trusses are designed, manufactured,and erected, to support the roof coverings specified. The guarantee shall be valid for 10(ten) years .				
Carried to Collection			R	
Section No. 6				
Bill No. 6				
Carpentry And Joinery				

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CARPENTRY AND JOINERY
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Section No. 6
Bill No. 6
Carpentry And Joinery

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 6</u>				
<u>Guard House</u>				
<u>BILL NO. 7</u>				
<u>CEILINGS PARTITIONS AND ACCESS FLOORING</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Descriptions:</u>				
Items described as nailed shall be deemed to be fixed with hardened steel nails or pins or shot pinned to brickwork or concrete.				
Items described as plugged shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres, and where described as bolted the bolts have been given.				
<u>INSULATION</u>				
<u>Aerolite insulation:</u>				
1				
100mm Insulation closely fitted and laid on top of brandering between roof timbers etc.	m ²	9		
<u>Wrought softwood</u>				
2				
19 x 76mm cornices nailed	m	16		
<u>NAILED UP AND SCREW UP CEILINGS</u>				
<u>6mm Everite Nutec fibre-cement boards with H-type steel cover strips over joints:</u>				
3				
Ceilings including 38 x 38mm sawn softwood brandering at 400mm centres.	m ²	9		
4				
Extra over ceiling for hinged trap door size 610 x 610mm	No	1		
Carried To Section Summary			R	
Section No. 6				
Bill No. 7				
Ceilings Partitions And Access Flooring				

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 6</u>				
<u>Guard House</u>				
<u>BILL NO. 8</u>				
<u>IRONMONGERY</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Finishes to ironmongery:</u>				
Where applicable finishes to ironmongery are indicated by suffixes in accordance with the following list: BS Satin bronze lacquered : CH Chromium plated : SC Satin chromium plated : SE Silver enamelled : GE Grey enamelled : AS Anodised silver : AB Anodised bronze : AG Anodised gold : ABL Anodised black : PB Polished brass : PL Polished and lacquered : PT Epoxy coated.				
<u>HINGES, FLOOR SPRING HINGES, BOLTS, PANIC BOLTS, ETC</u>				
<u>"Solid":</u>				
1	CZ 80941WC indicator bolt with keep fixed to metal.	No	1	
<u>LOCKS</u>				
<u>'Solid"</u>				
2	CZ6822461 "Gower" Four lever lockset.	No	2	
<u>DOOR CLOSERS</u>				
<u>"Yale"</u>				
3	Y202RC Door closer with cover fixed to metal	No	1	
<u>BATHROOM FITTINGS</u>				
<u>Kimberley-Clark:</u>				
4	19mm Diameter chromium plated towel rail 900mm long including flanged end brackets.	No	1	
5	Lockable toilet roll holder plugged.	No	1	
<u>SUNDRIES</u>				
<u>Solid:</u>				
6	38mm Diameter rubber door stop plugged.	No	2	
Carried To Section Summary			R	
Section No. 6				
Bill No. 8				
Ironmongery				

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 6</u>				
<u>Guard House</u>				
<u>BILL NO. 9</u>				
<u>METALWORK</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Descriptions:</u>				
Descriptions of bolts shall be deemed to include nuts and washers.				
Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.				
Metalwork described as holed for bolt(s) shall be deemed to exclude the bolts unless otherwise described.				
<u>PRESSED STEEL DOOR FRAMES</u>				
<u>1,2mm Rebated frames suitable for half brick walls:</u>				
1	No	1		
<u>1,2mm Rebated frames suitable for one brick walls:</u>				
2	No	1		
<u>STEEL WINDOWS, DOORS, ETC.</u>				
<u>Standard residential windows with 12 x 12(B33) solid burglar bars to all sashes:</u>				
3	No	2		
4	No	2		
5	No	1		
<u>STEEL LOUVRES,ETC</u>				
<u>Purpose made louvres:</u>				
6	No	2		
Triangular shaped (on elevation) residential section louvred ventilators 3138 wide (at the horizontal bottom) x 571mm high overall, filled in with type LC fixed horizontal louvre blades fixed to surround and covered at back with No. 256 galvanised mesh mosquito gauze, fixed with and including 3 x 20mm steel flat section cover strips screwed				
Carried To Section Summary			R	
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Bill No. 9				
Metalwork				

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 6</u>				
<u>Guard House</u>				
<u>BILL NO. 10</u>				
<u>PLASTERING</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>GRANOLITHIC</u>				
<u>Untinted wood floated granolithic on concrete</u>				
1 30mm Thick on floors and landings.	m ²	9		
2 75mm thick high grano skirting	m	14		
<u>INTERNAL PLASTER</u>				
<u>Cement plaster on brickwork:</u>				
3 On walls.	m ²	43		
4 On narrow widths.	m ²	2		
5 30 x 3mm Flat section brass dividing strips between different floor finishes.	m	1		
<u>CORNER PROTECTORS, DIVIDING STRIPS, ETC</u>				
Carried To Section Summary			R	
Section No. 6				
Bill No. 10				
Plastering				

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 6</u> <u>Guard House</u> <u>BILL NO. 12</u> <u>PLUMBING AND DRAINAGE</u> <u>PREAMBLES</u> For preambles see "Specification of materials and methods to be used - PW371 <u>SUPPLEMENTARY PREAMBLES</u> <u>Concrete pipes:</u> Pipes shall be jointed with ogee joints with rubber collars or socket and spigot joints with rubber rings. <u>uPVC pressure pipes and fittings:</u> Pipes for water supply shall be of the class stated. Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings. Pipes of 50mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints. <u>Copper pipes:</u> Pipes shall be hard drawn and half-hard pipes of the class stated. Class 0 (thin walled hard drawn) pipes shall not be bent. Class 1 (thin walled half-hard), class 2 (half-hard) and class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be 'Cobra Watertech' type. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or in ground. <u>Fixing of pipes</u> Unless specifically otherwise stated, descriptions of pipes shall be deemed to include for fixing to walls etc. casting in, building in or suspending not exceeding 1m below suspension level				
Carried to Collection			R	
Section No. 6 Bill No. 12 Plumbing And Drainage				

	Unit	Quantity	Rate	Amount
<p><u>Reducing fittings:</u></p> <p>Where fittings have reducing ends or branches they are described as 'reducing'. In the case of pipes with diameters not exceeding 60mm only the largest end or branch size is given. Should the Contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained. In the case of pipes with diameters exceeding 60mm all sizes are given and no claim for extra bushes, reducers, etc will be entertained.</p> <p><u>Wire gratings:</u></p> <p>Descriptions of gutter outlets etc shall be deemed to include wire balloon gratings.</p> <p><u>Septic tanks:</u></p> <p>Descriptions of septic tanks shall be deemed to include excavation, bedding and jointing, concrete base slabs, jointing to drains and backfilling, compaction, etc all in accordance with the manufacturer's instructions.</p> <p><u>Exposed concrete surfaces:</u></p> <p>Exposed surfaces of concrete stormwater channels, cover slabs, inspection eye marker slabs, gully tops, cleaning eye tops, catchpits, inspection chambers, etc shall be finished smooth with plaster.</p> <p><u>Excavations:</u></p> <p>No claim for rock excavation will be entertained unless the Contractor has timeously notified the quantity surveyor thereof prior to backfilling.</p> <p>'Soft rock' and 'hard rock' shall be as defined in 'Earthworks'.</p> <p><u>Laying, backfilling, bedding, etc of pipes:</u></p> <p>Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturers' instructions.</p> <p>Where no manufacturers' instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following: SABS 1200 L : Medium pressure pipelines LD : Sewers LE : Stormwater drainage Pipe trenches etc shall be backfilled in accordance with clause 3, 5.5, 5.6, 5.7 and 7 of SAB.</p> <p><u>Flush pans:</u></p> <p>Flush pans shall have straight or side outlets and 'P' or 'S' traps as necessary.</p>				
Section No. 6				
Bill No. 12				
Plumbing And Drainage				
Carried to Collection			R	

		Unit	Quantity	Rate	Amount
<u>Stainless steel basins, sinks, wash troughs, urinals, etc:</u>					
Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable.					
<u>Waste unions:</u>					
Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings.					
<u>RAINWATER DISPOSAL</u>					
<u>Approved .6mm galvanised sheet iron with "chromadek" finish ,in:</u>					
1	100 x 100mm Eaves gutters	m	16		
2	Extra over eaves gutter for angle/corner.	No	4		
3	Extra over eaves gutter for outlet for 75mm pipe.	No	2		
4	75mm Diameter rainwater pipes.	m	8		
5	Extra over rainwater pipe for bend.	No	2		
6	Extra over rainwater pipe for shoe.	No	2		
<u>SANITARY FITTINGS</u>					
<u>"Vaal"</u>					
7	510 x 405mm "Hibiscus" (code 7050) white vitreous china rounded lavatory basin with two tapholes supported on and including two bolts(code 84467Z0)	No	1		
8	White vitreous china "Daisy" semi-close coupled 90degree outlet open rim washdown pan (code 774000) and matching 9litre cistern (code 710034) complete with lid, fitments and flush pipe elbow and conversion bend (code 710044) and "deluxe" toilet seat	No	1		
<u>WASTE UNIONS ETC</u>					
<u>'Cobra Watertech'</u>					
9	38mm "Cobra 316" unslotted waste and plug with chain	No	1		
<u>TRAPS ETC</u>					
<u>"Marley"</u>					
10	40mm Flexi butyl rubber trap with reseal "P" trap	No	1		
<u>TAPS, VALVES, ETC</u>					
<u>'Cobra Watertech':</u>					
11	"Cobra Rf. 107EC-15" Bib tap	No	1		
Carried to Collection				R	
Section No. 6					
Bill No. 12					
Plumbing And Drainage					

		Unit	Quantity	Rate	Amount
12	15mm Gate valves	No	2		
	<u>SANITARY PLUMBING</u>				
	<u>uPVC pipes:</u>				
13	50mm Pipes	m	10		
14	110mm Pipes.	m	15		
15	50mm Pipes laid in and including trenches not exceeding 1m deep.	m	7		
16	110mm Pipes laid in and including trenches not exceeding 1m deep under surface beds.	m	20		
	<u>Extra over uPVC pipes for fittings:</u>				
17	50mm Bend.	No	4		
18	100mm Bend.	No	4		
19	110mm Junction.	No	2		
20	50mm Junction.	No	2		
21	110mm Reducing junction.	No	2		
22	110mm Double junction.	No	2		
23	110mm Pan connector	No	1		
24	110mm "G1 Two-way " vent valve	No	1		
	<u>Sundries:</u>				
25	Testing waste pipe system.	Item			
	<u>WATER SUPPLIES</u>				
	<u>Class 9 uPVC pressure pipes:</u>				
26	63mm Pipes laid in and including trenches not exceeding 1000mm deep	m	30		
	<u>Extra over uPVC pressure pipes for solvent welded pressure fittings:</u>				
27	63mm Elbow	No	2		
28	63mm Tee	No	2		
29	63mm Reducer.	No	1		
	<u>Class o copper pipes:</u>				
30	15mm Pipes	m	15		
31	22mm Pipes.	m	10		
	Carried to Collection			R	
	Section No. 6				
	Bill No. 12				
	Plumbing And Drainage				

Carried to Collection

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Amount

BILL NO. 12
PLUMBING AND DRAINAGE
COLLECTION

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Section No. 6
Bill No. 12
Plumbing And Drainage

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 6</u>				
<u>Guard House</u>				
<u>BILL NO. 13</u>				
<u>GLAZING</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>GLAZING TO STEEL WITH PUTTY</u>				
<u>5 mm Clear float glass:</u>				
1	Panes exceeding 0,1m2 and not exceeding 0,5m2.	m ²	4	
<u>5 mm Rough cast glass:</u>				
2	Panes exceeding 0,1m2 and not exceeding 0,5m2.	m ²	1	
<u>TOPS, SHELVES, DOORS, MIRRORS, ETC.</u>				
<u>6 mm Silvered float glass copper backed mirrors with polished edges fixed with double sided adhesive tape:</u>				
3	Mirror 450 x 600 mm high.	No	1	
Carried To Section Summary				R
Section No. 6				
Bill No. 13				
Glazing				

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 6</u>				
<u>Guard House</u>				
<u>BILL NO. 14</u>				
<u>PAINTWORK</u>				
<u>PREAMBLES</u>				
For preambles see "Specification of materials and methods to be used - PW371				
<u>SUPPLEMENTARY PREAMBLES</u>				
All work are to be executed in strict accordance with the paint specifications of Dulux Coating Systems. The coating systems have a 5-star (6 years) durability rating, unless otherwise specified. Full specifications are available on request from Ansie Mangelsdorf Tel.: (011) 861-1000 Cell.: 082 801 9336).				
Primer (first) coats may be thinned in accordance with the specifications of Dulux Coating Systems to aid the absorption of the paint.				
All surfaces must be sound, clean and have a moisture content of less than 12%.				
Where surfaces of plaster, etc. are sandy the first coat must be replaced with 'Dulux Durabond Bonding Liquid'.				
<u>ON FLOATED PLASTER</u>				
<u>Prepare , etc as specified and apply two coats of super acrylic paint:</u>				
1 On interior walls.	m ²	43		
<u>ON FIBRE-CEMENT, ETC.</u>				
<u>Prepare , etc as specified and apply two coats of super acrylic Pva paint:</u>				
2 On ceilings and cornices.	m ²	9		
3 On fascias and barge boards.	m	16		
<u>ON METAL</u>				
<u>Prepare, etc as specified and apply two coats of gloss enamel paint on :</u>				
4 Door frames	m ²	3		
5 On windows with burglar bars (both sides measured).	m ²	10		
<u>Inside eaves gutter</u>				
6 Inside eaves gutter with waterproofing based paint	m ²	6		
Carried to Collection			R	
Section No. 6				
Bill No. 14				
Paintwork				

Amount

BILL NO. 14
PAINTWORK
COLLECTION

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Section No. 6
Bill No. 14
Paintwork

Amount

SECTION NO. 6**Guard House****SECTION SUMMARY**

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3	MASONRY	189
4	WATERPROOFING	190
5	ROOF COVERINGS	191
6	CARPENTRY AND JOINERY	194
7	CEILINGS PARTITIONS AND ACCESS FLOORING	195
8	IRONMONGERY	196
9	METALWORK	197
10	PLASTERING	198
11	TILING	199
12	PLUMBING AND DRAINAGE	205
13	GLAZING	206
14	PAINTWORK	209

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Section No. 6
SECTION SUMMARY

SECTION NO. 7
Provisional Sums

Amount

SECTION NO. 7**Provisional Sums****NOTE: All provisional sums are nett****The Client reserves the right to omit any or all provisional sums allowed in his tender without claim for loss of profit by the Contractor****Flags, Flag Poles & Plaque**

1	Provide the amount of R30 000.00 (Thirty Thousand Rands) for flags and plaque by a specialist	Item	30 000	00
2	Profit on above item.	Item		
3	Attendance on ditto.	Item		

Signage

4	Provide the sum of R35 000.00 (Thirty Five Thousand Rands) for signage	Item	35 000	00
5	Profit	Item		
6	Attendance	Item		

School furniture

7	Provide the sum of R900 000.00 (Nine Hundred Thousand Rands) for supply of school furniture	Item	900 000	00
8	Profit	Item		
9	Attendance	Item		

Office equipments and furniture

10	Provide the sum of R300 000.00 (Three Hundred Thousand Rands) for supply of Office equipments, furniture, first aid kit and sick bed in the administration block by specialist.	Item	300 000	00
11	Profit	Item		
12	Attendance	Item		

Community liason officer

13	Provide the budgedary allowance of R120 000.00 (One Hundred and Twenty Thousand Rands) for employment of a community liason officer for labour requirements by the contractor and deducted in whole or part if not required.	Item	120 000	00
14	Profit	Item		
15	Attendance	Item		

Carried To Section Summary

R

Section No. 7

Bill No. 1

Provisional Sums

Amount

Project Steering Committee (PSC)

16 Provide the budgetary allowance of R12 000.00 (Twelve Thousand Rands) for employment of a PSC for labour requirements by the contractor and deducted in whole or part if not required.

Item 12 000 00

17 Profit

Item

18 Attendance

Item

Joinery fittings

19 Provide the sum of R300 000 (Three Hundred Thousand Rands) for joinery fittings by specialist

Item 300 000 00

20 Profit

Item

21 Attendance

Item

Occupational Health and Safety Consultancy Services

22 Provide the sum of R500 000.00 (Five Hundred Thousand Rands) for occupational health and safety services to be appointed by the Employer

Item 500 000 00

23 Profit

Item

24 Attendance

Item

Carried To Section Summary

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Section No. 7

Bill No. 1

Provisional Sums

Amount

SECTION NO. 7

Provisional Sums

SECTION SUMMARY

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Section No. 7
SECTION SUMMARY

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	<u>FINAL SUMMARY</u>			
1	Preliminaries and Generals	40		
2	Renovations (12CR, 16Waterborne, Nutrition)	77		
3	2 x 5 Classroom Block	110		
4	Medium Administration Block	146		
5	4 x 4 Waterborne Toilet	178		
6	Guard House	210		
7	Provisional Sums	214		
	ADD: PART B - ELECTRICAL INSTALLATIONS			
	TENDER AMOUNT CARRIED OVER FROM PART B			
	(separate document attached marked Part B)			
	ADD:PART C- CIVIL WORKS			
	TENDER AMOUNT CARRIED OVER FROM PART C			
	(separate document attached marked Part C)			
	ADD: CONTINGENCIES			
	Allow the Amount of R600 000 (Six Hundred Thousand Rands) for contingencies, to be used by the Architect in terms of Clause 17 of the Principal Building Agreement.		600 000	00
	Carried to Next			
	FINAL SUMMARY			

Brought from Previous

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ADD: CPAP ALLOWANCE

Allow the amount of R600 000 (Six Hundred Thousand Rands) for CPAP (Contract Price Adjustment Provisions) as Item 38.5.3 of the Schedule in the Preliminaries Bill No.1, to be used in terms of Clause 28.11 of the Principal Building Agreement.

600 000 00

SubTotal excluding Value Added Tax

ADD VAT @ 15%:

Carried to Tender

R

FINAL SUMMARY

REPUBLIC OF SOUTH AFRICA
LIMPOPO DEPARTMENT OF PUBLIC WORKS
INFRASTRUCTURE

MOKHARI COMBINED SCHOOL

LDPWRI-B/20290

PART B
ELECTRICAL INSTALLATIONS
BILLS OF QUANTITIES

Summary- Mokhari School

BILL	DESCRIPTION	AMOUNT
1A and 1B	Preliminary and General and Transport	R 0,00
2	Internal Installation	R 0,00
3	Site Reticulation	R 0,00
4	PVC Sleeves for Electric Installation	R 0,00
5	HVAC	R 0,00
6	Prov Sum for Eskom Bulk Power Supply	R 327 500,00
7	Prov Sum for CCTV	R 100 000,00

SUB TOTAL A**SUB TOTAL****TOTAL FOR THE WORKS**

New Rate Items:

Mark-up percentage on New Rate Items%. Labour cost shall be based on the bill of rates.

CONTRACTOR:

SIGNATURE:

DATE:

Internal Installations Bill- Mokhari School

ITEM	DESCRIPTION	UNIT	Scheduled Qty	Rate	TOTAL
	BILL 2				
	CONDUIT WORK				
	Flush in walls, floors and concrete slabs against wooden and steel structures and walls in ceiling void, indoor and outdoor, chasing of floors and walls where necessary, etc.				
2	CONDUIT				
	20 mm dia PVC				
2,1	Material	m	5000		0,00
2,2	Installation	m	5000		0,00
	50 mm dia PVC				
2,3	Material	m	2500		0,00
2,4	Installation	m	2500		0,00
3	STEEL BOXES AND COVER PLATES				
	20mm PVC Round conduit boxes				
3,1	Material	No	206		0,00
3,2	Installation	No	206		0,00
	Galvanized Steel wall boxes with cover plates				
	100 x 50 x 50 mm				
3,3	Material	No	102		0,00
3,4	Installation	No	102		0,00
	TOTAL CARRIED FORWARD				0,00

ITEM	DESCRIPTION	UNIT	Scheduled Qty		TOTAL
	TOTAL BROUGHT FORWARD				0,00
4	CONDUCTORS				
	PVC Insulated copper conductors				
	1,5sq mm				
4,1	Material	m	0		
4,2	Installation	m	0		
	2,5sq mm				
4,3	Material	m	10000		0,00
4,4	Installation	m	10000		0,00
	4sq mm				
4,5	Material	m	5000		0,00
4,6	Installation	m	5000		0,00
	6sq mm				
4,7	Material	m	0		0,00
4,8	Installation	m	0		0,00
	TOTAL CARRIED FORWARD				0,00

ITEM	DESCRIPTION	UNIT	Scheduled Qty		TOTAL
	TOTAL BROUGHT FORWARD				0,00
	Stranded Bare Copper Earth Wire				
	2,5sq mm				
4,11	Material				
4,12	Installation	m	5000		0,00
		m	5000		0,00
	4,0sq mm				
4,13	Material	m	2500		0,00
4,14	Installation	m	2500		0,00
	Galvanized Draw wire				
	1,5sq mm				
4,15	Material	m	5000		0,00
4,16	Installation	m	5000		0,00
5	SWITCHES, SOCKET OUTLETS AND ISOLATORS FOR FLUSH INSTALLATION INCLUDING COVERPLATES				
	Switches				
	16 A Single Lever 1 way				
5,1	Material	No	80		0,00
5,2	Installation	No	80		0,00
	16A 1 Lever 2 way				
5,3	Material				
5,4	Installation				

	Socket Outlets with switch				
	16A 3 pin Double 100 x 100				
5,5	Material	No	80		0,00
5,6	Installation	No	80		0,00
	Isolators				
	20A 2 pole, 100 x 100				
5,6	Material	No	27		0,00
5,7	Installation	No	27		0,00
	40A 2 pole, 100 x 100				
5,8	Material	No	28		0,00
5,9	Installation	No	28		0,00
	TOTAL CARRIED FORWARD				0,00

ITEM	DESCRIPTION	UNIT	Scheduled Qty		TOTAL
	TOTAL BROUGHT FORWARD				0,00
6	SQUARE TUBING				
	POWER SKIRTING				
	Supply and installation of power skirting complete with covers and end caps. Tenderers shall make provision for				
6,1	Material				
6,2	Installation				
7	PHOTOCELL / DAYLIGHT SWITCH				
	Royce Thompson type Oasis 2000, Min lamp Load of 10A or equal				
7,1	Material	No	8		0,00
7,2	Installation	No	8		0,00
8	BONDING OF DISTRIBUTION BOARDS TO WATER AND ROOF				
	Installation	lot	5		0,00

9	EARTHING AND LIGHTING PROTECTION Supply, install and test a complete class 2 lightning protection installation, including alu and cu conductors, test joints, steel conduits, earth electrodes etc.				
9,1	Material	lot	8		0,00
9,2	Installation	lot	8		0,00
10	TESTS OF THE COMPLETE ELECTRICAL INSTALLATION AND ISSUING OF COC'S				
10,1	Installation	lot	5		0,00
Total for Bill 2 carried to summary sheet					0,00
ITEM	DESCRIPTION	UNIT	Scheduled Qty		TOTAL
	BILL 3				
11	LIGHT FITTINGS Tenderer shall include tubes or lamps and 5A unswitched plug in his tender rates. The light fittings shall be installed complete with lamps. Colour to be advised where not specified Light Fittings samples shall be submitted for approval before final order is made				
11,1	TYPE 1 - (Surface mounted LED Open Channel, IP20, fitted with 2 x 18W LED tubes, minimum 2320lm output per tube, colour temp 4000k)				
	Material	No	214		0,00
	Installation	No	214		0,00
11,2	TYPE 2 - IP65, vapour proof, open channel with 2 x 24W T8 LED tubes with lumen output of 1720lm per tube.				
	Material	No	4		0,00
	Installation	No	4		0,00
11,3	TYPE B1 - IP65 Wall and ceiling mounted mounted bulkhead complete with 1 x 30W LED bulb .				
	Material	No	74		0,00
	Installation	No	74		0,00
11,4	Type 3 - Open Channel complete with 2 x 24W T8 LED tubes .Each tube to have a lumen output of 2315lm.				
	Material	No	0		0,00
	Installation	No	0		0,00

	Total for Bill 3 carried to summary sheet				0,00
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ITEM	DESCRIPTION	UNIT	Scheduled Qty		TOTAL
	BILL 4				
12	DISTRIBUTION BOARDS AND KIOSKS				
	Site Kiosk. Refer to the Kiosk Schematics				
12,1	Material	No	1		0,00
12,2	Installation, including Kiosk plinth	No	1		0,00
	Block DBs, Refer to Schematics				
12,3	Material	No	5		0,00
12,4	Installation	No	5		0,00
	Telephone and Computer Distribution Board				
	500 x 500 x 250 mm surface type distribution board installed flush				
12,5	Material	No	1		0,00
12,6	Installation	No	1		0,00
	Telephone point	No			
12,7	Material	No	5		0,00
12,8	Installation	No	5		0,00
	Computer point				
12,9	Material	No	5		0,00
12,10	Installation	No	5		0,00
	Total for Bill 4 carried to summary sheet				0,00
ITEM	DESCRIPTION	UNIT	Scheduled Qty		TOTAL

SUMMARY OF QUANTITIES

BILL	DESCRIPTION	Scheduled Value
2	Conduit Work	0,00
3	Light Fittings	0,00
4	Distribution Board	0,00
	SUB TOTAL	0,00

Site Reticulation Bill- Mokhari School

ITEM	DESCRIPTION	UNIT	Scheduled Qty	Rate	TOTAL
13	BILL 5 LOW VOLTAGE CABLES Low Voltage cables 600 to 1000 PVC insulated steel wire armoured, copper cables underground cable Cable in trenches, sleeves and building duct also in ceiling void if necessary 70 mm sq x 4 core 25mm sq x 2 core				
13,1	Material	m	50		0,00
13,2	Installation	m	50		0,00
	16mm sq x 2 core 13,3 Material 13,4 Installation	m m	400 400		0,00 0,00
	TERMINATIONS 25mm sq x 2 core				
13,5	Material	No	2		0,00
13,6	Installation	No	2		0,00
	16mm sq x 2 core 13,7 Material 13,8 Installation	No No	16 16		0,00 0,00
	TOTAL CARRIED FORWARD				0,00

ITEM	DESCRIPTION	UNIT	Scheduled Qty		TOTAL
	TOTAL BROUGHT FORWARD				0,00
14	COPPER EARTH WIRE				
	25mm sq				
14,1	Material	m	50		0,00
14,2	Installation	m	50		0,00
	16mm sq				
14,3	Material	m	400		0,00
14,40	Installation	m	400		0,00
15	Yellow Cable Marker / Danger Tape				
15,1	Material	m	25		0,00
15,2	Installation	m	25		0,00
	TOTAL CARRIED FORWARD TO SUMMARY				0,00

SUMMARY OF QUANTITIES

BILL	DESCRIPTION	Scheduled Value
5	LOW VOLTAGE CABLES	0,00
	SUB TOTAL	0,00

Site Reticulation Bill- Mokhari School

ITEM	DESCRIPTION	UNIT	Scheduled Qty	Rate	TOTAL
	BILL 6				
16	PVC SLEEVES FOR ELECTRIC AND COMMUNICATION				
	PVC SLEEVES complete with bends				
	100mm dim				
16,1	Material	m	0		0,00
16,2	Installation	m	0		0,00
	50mm dim				
16,3	Material	m	150		0,00
16,4	Installation	m	150		0,00
	Excavation				
16,5	Soft Rock and Earth	m3	100		0,00
16,6	Hard Rock	m3	80		0,00
16,7	Very Hard Rock	m3	0		0,00
	Sifted Soil Bedding and Cover				
16,8	Material	m3	50		0,00
16,9	Labour	m3	50		0,00
17	Prepare As Built Drawings for all Layouts				
	As Built Drawings	lot	1		0,00
18	Manholes 600 x 600mm with Heavy duty Steel cover				
18,1	Material	No	3		0,00
18,2	Labour	No	3		0,00
19	Concrete Cable Markers				
19,1	Material	Lot	1		0,00
19,2	Labour	Lot	1		0,00
	TOTAL CARRIED TO SUMMARY				0,00

REPUBLIC OF SOUTH AFRICA
LIMPOPO DEPARTMENT OF PUBLIC WORKS
INFRASTRUCTURE

MOKHARI COMBINED SCHOOL

LDPWRI-B/20290

PART C
CIVIL WORKS
BILLS OF QUANTITIES

Item	Payment Reference	Description	Unit	Qty	Rate	Amount
Alternative see 1200C 1200DM Alternative see 1200DB 1200DM	SABS 1200 D	<u>SCHEDULE 1: EARTHWORKS</u>				
		<u>SITE CLEARANCE</u>				
	8.3.1	<u>Clear and grub area for</u>				
		Buildings	m ²	1978		
		<u>PREPARATION AND STRIPPING OF SITE</u>				
	8.3.1	<u>Remove topsoil to a depth of 150mm and</u>				
		Stockpile on site within freehaul distance and maintain	m ³	296.70		
		Spoil at designated spoil site	m ³	118.68		
		<u>EXCAVATION</u>				
	8.3.2	<u>Excavate in all materials and use as fill, compacted to 90% mod</u> <u>AASHTO density for:</u>				
		Platforms	m ³	356.04		
	8.3.2	<u>Extra over item 8.3.2 (a) for</u>				
		Intermediate excavation	m ³	106.81		
		Hard rock excavation	m ³	71.21		
		Boulder excavation class A	m ³	7.12		
		Boulder excavation class B	m ³	7.12		
		<u>COMMERCIAL MATERIAL</u>				
	8.3.4	<u>Extra over item 8.3.2 (a) for importation of materials from:</u>				
		Commercial sources selected by the Contractor	m ³	237.36		
TOTAL CARRIED FORWARD						

Item	Payment Referenc e	Description	Unit	Qty	Rate	Amount
ITEM NO.	PAYMENT REFER.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
		<u>DESIGNATED BORROW PIT (ARRANGED BY EMPLOYER)</u>				
	8.3.4	Extra over item 8.3.2 (a) for importation of materials from Designated borrow pits	m³	1,186.80		
	8.3.4	Opening up and closing down of designated borrow pit	sum	1.00		
		<u>OVERHAUL</u>				
	8.3.6	<u>Overhaul (Provisional)</u>				
		Limited overhaul	m³	356.04		
		Long overhaul	m³.km	237.36		
		<u>COMPACTION OF BACKFILLING</u>				
	8.3.9	Selected material compacted to 93% mod AASHTO density	m³	1,424.16		
		Mod AASHTO Tests	No.	29.00		
Carried forward to Summary of Schedules						

SCHEDULE 2: EARTHWORKS (ROADS AND SUBGRADE)

ITEM NO.	PAYMENT REFER.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		SCHEDULE 2: EARTHWORKS (ROADS AND SUBGRADE)				
1	SANS	EARTHWORKS				
1.2		TREATMENT OF ROAD-BED				
1.2.1	8.3.3(a)	Road-bed preparation and compaction of material compacted to 93% MOD AASHTO maximum density	m ³	422.40		
1.2.2	8.3.3(b)	In-place treatment of road-bed in intermediate or hard material				
		Ripping	m ³	84.48		
1.3		EARTHWORKS				
1.3.1	8.3.4	Cut to fill				
		Compact to 90 % mod. AASHTO maximum density	m ³	211.20		
		Selected layer compacted to 93 % mod. AASHTO maximum density	m ³	211.20		
1.3.2	8.3.6	Extra-over items 1.3.1 inclusive for excavating and breaking down material in:				
		Intermediate excavation	m ³	42.24		
		Hard excavation	m ³	21.12		
1.3.3	8.3.7	Cut to spoil from				
		Soft excavation	m ³	422.40		
		Intermediate excavation	m ³	84.48		
		Hard excavation	m ³	12.67		
1.3.4	8.3.8	Removal of oversize material	m ³	6.34		
TOTAL CARRIED FORWARD						

SCHEDULE 2: EARTHWORKS (ROADS AND SUBGRADE)

ITEM NO.	PAYMENT REFER.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
1.4	SABS 1200 DM	SUNDRIES				
	8.3.10	Materials bladed to windrow	m ³	0.00		
	8.3.11	Extra-over items 8.3.7 and 8.3.8 for temporary stockpiling of material	m ³	30.00		
		Construction of storm water berm along the designated areas by engineer	m ³	0.00		
1.5	SABS 1200 ME	SECTION : SUBBASE				
	8.3.1	Construct gravel wearing course with material from borrow pits in all materials				
		150mm to main carriageways	m ³	422.40		
	8.3.4	Extra over items .1 to .2 inclusive for class of				
		Intermediate excavation	m ³	84.48		
		Hard rock excavation	m ³	63.36		
1.6	SANS 1200 MFL	BASE				
	8.3.1	Construct base with material from borrow pit				
		Stabilized base using material from borrow 150mm to 95% mod AASHTO	m ³	422.40		
1.7	8.3.4	Stabilizing Agent				
		(b) Portland Cement	m ³	12.67		
1.8	SANS 1200 MJ	SEGMENTED BLOCK PAVING TO THE ACCESS ROAD				
	8.2.2	80mm Type S-A 35mPa for roadway (Grey	m ²	0.00		
	8.2.2	60mm Type S-A 35mPa for roadway (Grey	m ²	2,816.00		
	8.2.1	The construction of edge restraints	m	125.16		
TOTAL CARRIED FORWARD						

ITEM NO.	PAYMENT REFER.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
1.8	SANS 1200 MK	KERBING AND CHANNELLING				
	8.2.2	Supply, bed, lay, & joint concrete sections:				
1.8.1		400X200 Concrete edge strip (Class 20/19 Concrete Strength).				
		a) 1m Length on straight	m	155.00		
		b) 330mm Length on curves	m	20.00		
1.8.2		300X150 Barrier Kerb (SABS 927 Fig 3).	m	558.00		
1.8.3		Mountable Kerb (SABS 927 Fig 3).	m	111.60		
9	1200 DK	SUBSOIL DRAINS				
9.1	1200 DK 8.2	Supply and install A4 Bidim Geosynthetic materials to the subsoil drains, as per drawings.	m ²	40.00		
9.2	1200 DK 8.2	Supply and install 110mm Class 6 HDPE perforated pipe to the subsoil drains outlet, as per drawings.	m	50.00		
9.3	1200 DK 8.2	Supply and install 1,5mm smooth HDPE Geomembrane as the liner to the channel, as per drawings.	m ²	44.00		
9.4	1200 DK 8.2	Supply and install A7 Bidim Geosynthetic protection layer to channel liner, as per drawings.	m ²	60.00		
9.5	SANS 1200 AH	CONCRETE				
9.5.1	8.4.3	Supply, place and shape 25MPa concrete in hyson cells on the A10 Bidim Geosynthetic protection layer, as per drawings.	m ³	50.03		
9.5.2	8.4.3	Supply, place and shape 25MPa concrete in hyson cells in the leachate outlet channel, as per drawings.	m ³	12.51		
TOTAL CARRIED FORWARD						

SCHEDULE 2: EARTHWORKS (ROADS AND SUBGRADE)

ITEM NO.	PAYMENT REFER.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		TOTAL BROUGHT FORWARD				
10		STORMWATER MANAGEMENT				
	SANS	EARTHWORKS				
10.1		EXCAVATIONS				
10.1.1	1200 D	Excavate and prepare all cut off trenches and berms around the site as shown on the drawings and as directed by the Engineer.	m³	7.50		
10.1.2	8.3.2	Disposal of unsuitable or surplus material off site	m³	2.25		
10.2	SANS 1200 G	Concrete				
10.2.1	8.4.1	Mass concrete backfilling to replace unsuitable material, prescribed mix, Grade 10MPa/20 mm	m³	2.25		
10.2.2	8.4.2	Blinding layer, 50 mm minimum, prescribed mix, Grade 15MPa/20 mm	m²	2.50		
10.2.3	8.4.3	Strength concrete Grade 25 MPa/20 mm for:				
10.3		Concrete Channels	m³	11.25		
10.3.1	8.1.1	Formwork				
10.3.2	8.2.5	Rough, vertical, circular, maximum height 300 mm.	m	90.00		
10.3.3	8.2.5	Smooth, circular, vertical, 175 mm high to outer edge of base footing, (including forming of drainage lips with 110 mm dia drips)	m	20.00		
10.3.4	PSA8-11	Forming of drainage lips with 110 mm dia drips as per detail, Drawing	No	4.00		
10.3.5	8.4.4	Unformed surface finishes				
10.3.6		Steel float finish	m²	50.00		
TOTAL CARRIED TO SUMMARY						

SCHEDULE3: FENCING

Item No.	Payment Refers	Short Description	Unit	Quantity	Rate	Amount
2	SABS 1200A	SCHEDULE 3 - STEEL PALISADE FENCING				
2.1	PCC-4.1	Steel palisade fencingn 2,4m high according to specification including excavations, foundation concreting, posts, pales and ground beams. All as per drawing.	m	625.00		
2.2	PCC-4.1	Supply and install according to specification a 6m wide vehicular gate	No	1.00		
2.3	PCC-4.1	Supply and install according to specification 1.5m wide pedestrian gate as per drawing	No	1.00		
2.4	PCC-4.1	Repainting of the existing fence	m ²	0.00		
SUB - TOTAL CARRIED TO SUMMARY						

SCHEDULE 4:WATER SUPPLY PIPELINES AND WATER SOURCE

ITEM NO.	PAYMENT REFRES	DESCRIPTION	UNIT	Estimated QTY	RATE	AMOUNT
		SCHEDULE 4 : WATER SUPPLY PIPELINES AND WATER SOURCE				
	SABS 1200DB	EARTHWORKS : PIPE TRENCHES				
3.1		SITE CLEARANCE				
3.1.1	8.3.1(a)	Clear 2m wide vegetation and trees of girth up to 1m	m	1,520.00		
3.1.2	8.3.1(b)	Remove trees over 1 m and up to 2 m girth	No.	0.00		
3.2	PSDB12	EXCAVATION				
3.2.1		Excavate in all materials for trenches for pipes with a diameter between 20 mm and 100 mm, backfill compact and dispose of surplus/unsuitable material				
		Up to 1,5m in depth	m³	1,520.00		
3.2.1.1	8.3.2(b)	Extra-over item 3.2.1 incl. for excavation (provisional) in :				
		a) Intermediate material	m³	304.00		
		b) Hard rock material	m³	228.00		
3.2.1.2		Extra over Item 3.2.1				
		a) Backfill and compact by means of labour intensive construction methods in layers of 200mm compacted to 90% mod AASHTO	m³	1,520.00		
3.2.2		EXCAVATION ANCILLARIES				
3.2.2.1	8.3.3.1(a)	Imported backfill materials from designated borrow pits (Only if approved by Engineer)	m³	532.00		
3.2.2.2	8.3.3.2	Opening up and closing down of designated borrow pit	P.Sum	1.00	22,000.00	R 22,000.00
3.2.2.3	8.3.3.3	Compaction in road reserves	m³	0.00		
3.2.2.4	8.3.3.4	Overhaul :				
		a) Short haul	m³	-		
		b) Truck haul	m³/km	-		
3.2.4	SABS120 0LB	PROVISION OF BEDDING (PIPES)				
3.2.4.1	8.2.1	Provision of bedding material from trench excavations				
		a) Selected granular material	m³	228.00		
		b) Selected fill material	m³	532.00		
3.2.4.2		Provision of bedding material by importation from other necessary excavations (freehaul within the village boundaries)				
		a) Selected granular material	m³	273.60		
		b) Selected fill material	m³	638.40		
TOTAL CARRIED FORWARD						

SCHEDULE 4:WATER SUPPLY PIPELINES AND WATER SOURCE

ITEM NO.	PAYMENT REFERS	DESCRIPTION	UNIT	Estimated QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
3.2.4.4	8.2.3	Concrete bedding	m³	5.00		
3.2.4.5	8.2.4	Encasing of pipes in Class 19/20 concrete	m³	5.00		
3.2.4.6	8.2.5	Overhaul of material for bedding cradle and selected fill blanket	m³km	0.00		
3.2.5	1200L	PIPEWORK				
	8.2.1	Supply, lay, joint, bed, test and disinfect the following pipes complete with couplings and fittings to the relevant SABS standards including short lengths (all uPVC pipes to comply with DWS1160)				
3.2.5.1		uPVC pipes				
		a) 75 Class 12	m	-		
		b) 75 Class 9	m	-		
3.2.5.2		HDPE pipes Type IV				
		a) 20 mm class 6	m	60.00		
		b) 50 mm class 6	m	440.00		
		c) 75 mm class 10	m	20.00		
3.2.5.3		GMS pipes (medium duty)				
		a) 15 mm Ø	m	-		
		b) 20 mm Ø	m	-		
		c) 25 mm Ø	m	-		
3.2.6		VALVES				
3.2.6.1		Line valve assemblies.				
		Extra over item F.6 for supplying, installing, bedding and testing line valve assemblies as per Drawing complete cutting of pipes and couplings included (all valves to comply with DWS 2510)				
		a) 50 mm	No.	4.00		
		b) 75 mm	No.	0.00		
3.2.6.2		Scour valve assemblies				
		Extra over item F.6 for supplying, installing, bedding and testing scour valve assemblies as per Drawing complete. Scour tee, cutting of pipes and couplings included.				
		a) On 50 mm dia main	No.	5.00		
3.2.6.3		Ditto for 40 Ø and smaller pipes as detailed in Drawing for the following diameters				
		a) 25 Ø	No.	-		
		b) 32 Ø	No.	-		
		c) 40 Ø	No.	-		
3.2.6.4		Air valve assemblies				
		Extra over item D.6 for supplying, installing and testing air valve assemblies as per Drawing complete				
		a) On 50 mm and 64 mm Ø main	No.	1.00		
TOTAL CARRIED FORWARD						

ITEM NO.	PAYMENT REFERS	DESCRIPTION	UNIT	Estimated QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
3.2.10		FITTINGS FOR HDPE PIPES				
3.2.11		SUNDRIES				
3.2.11.3		Thrust blocks as per typical details on specification Drawing				
		a) Concrete Class 15/19	m ³	1.00		
		b) Rough formwork	m ²	1.00		
3.2.14		BOREHOLE DEVELOPMENT				
		Geohydrological Servies				
		Sitting of drilling sites. Allowance to be made for desk study, site assessment, drilling supervision, testing supervision, and reporting.	No	1.00		
		Borehole Drilling				
		Site Establishment/De-establishment				
		Mobilisation and set up of plant to/at first borehole. Rate to include inter-borehole moves and de-establishment from site of the drilling batch.	No	1.00		
		Drilling				
		Drilling of 165mm diameter borehole in non-collapsible material.	m	100.00		
		Odex drilling in collapsible material and where ordered by the Geohydrologist of 254mm diameter borehole. Rate to include supply, delivery and installation of at least 6mm sidewall Odex casing.	No	120.00		
		Steel casing (plain), 165 mm (state wall thickness here as 3 mm)	m	35.00		
		Steel casing (slotted), 165 mm (state wall thickness here as 4 mm)	m	0.00		
		Pump testing of borehole.				
		Rate to include the following: installation of pump testing equipment and remove after, calibration testing, 24hr constant testing, recovery measurements, data recording and reporting.	No	1.00		
		Sampling for water quality testing	No	1.00		
		Site finishing				
		Borehole finishing, rate to include borehole disinfection, concrete collar in Grade 20Mpa concrete, normal sanitary seal, borehole making.	No	1.00		
		Reporting				
		Complete Geohydrology report signed by a registered personnel	No	1.00		
3.2.15		BOREHOLE REHABILITATION - (PROVISIONAL)				
		Site Establishment/De-establishment				
		Mobilisation and set up of plant to/at first borehole. Rate to include inter-borehole moves and de-establishment from site	No	1.00		
		Removal of existing pumphouse	No	1.00		
		Removal of existing pump	No	1.00		
		Positive displacement pump				
		Removal using cable-tool (jumper) drilling rig of columns instalations diameter, 25mm-100mm upto 120m. Rate to include all pipe work and fittings	No	1.00		
TOTAL CARRIED FORWARD						

ITEM NO.	PAYMENT REFERS	DESCRIPTION	UNIT	Estimated QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
3.2.16		Site Establishment/De-establishment Mobilisation and set up of plant to/at first borehole. Rate to including inter-borehole moves and de-estalishment from Site, of the given drilling batch Pump testing of borehole. Rate to include the following:installation of pump testing equipment and remove after, calibration testing, 24hr constant testing, recovery measurements, data recording and reporting. Sampling for water quality testing BOREHOLE PUMPS AND APPURTENANCES NEW BOREHOLE INSTALLATION <i>Supply and commissioning and testing of New Borehole complete with electric wiring and connection and controls. All units are to be made good and neat in accordance to manufactures and Engineers' specification.</i> Submersible pumpsets and fittings Supply and install new submersible pump - Grundfos or similar Quality. All internals of wet-end shall be 316 stainless steel/brass. Electrical motor will be 316 stainless steel. Complete with corrosion protection. <i>Engineer to approve prior to installation.</i> Pump Installation, Head & Flow fas per borehole test report Electric Motor installation, as per pump size requirements determined in item above. Pump Protection Mechanical pressure switch, PN16, Complete with cabling to panel : Limits between 160m and 80m, WIKA PSM-550 or Equivalent Mechanical flow switch, PN16, Complete with cabling to panel Float Switch for Switching off Pump on Low Level, c/w wiring to panel's liquid level control relay. Electric Motor Control Panel Supply and install control panel with all fittings required to operate pumps and motors efficiently, including 0-20 second delay timer and 0-24 hour timer. Pipework <i>Supply and install borehole discharge pipework complete with flow meter, non return and pressure valves on the following pipework.</i> Submersed pipe: Ø 63mm HDPE, Class 12, 7,1mm Wall thickness, SANS 4427, Borehole to Surface Metal Base plate - Double choke 65 NB Schedule 40 pipe discharge Galvanised Steel pipe, Incl Elbows and fittings 65 NB Threaded Brass Type Isolation valve, PN10	No 			

ITEM NO.	PAYMENT REFERS	DESCRIPTION	UNIT	Estimated QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
3.2.18		65 NB Flanged Non Return Valve, tilted disc type, PN 10	No.	1.00		
		65 NB Flanged Mechanical flow meter, PN 10	No.	1.00		
		M16 galvanised bolts and nuts	No.	96.00		
		65 NB Gaskets, Incl Consumables	No.	24.00		
		Mechanical Pressure Gauge, Wika (100mm dial and filled with glycerine), with a range from 400 kPa to 1600 kPa, complete with ball isolating valve and piping	No.	1.00		
		T-Pieces and Bushes to mount Pressure gauge, Pressure Switch and Flow Switch	No.	3.00		
		Submersible pump steel cage				
		Supply and install borehole discharge pipework complete as per	No	1.00		
		TESTING AND COMMISSIONING				
		Testing and commission borehole installation including pumps, motors, control system and verify discharge and head characteristics	No	1.00		
		Electricity Supply				
		Supply material and erect a three phase electricity power line to the new borehole	No	1.00		
		Mark-up on item 4.2.1				
		Supply all material and install a 25kVa transformer	No	1.00		
WATER TREATMENT (PROVISIONAL)						
		10kl PVC pre-treatment tank	No.	1		
		Supply, installation, connections, testing and handing over in working order of a 20m³/hr package water treatment plant	Prov. Sum	1	350,000.00	R 350,000.00
		Overheads, charges and profit.	%	350,000.00		
TOTAL CARRIED FORWARD						

ITEM NO.	PAYMENT REFRES	DESCRIPTION	UNIT	Estimated QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD						R -
		WATER STORAGE Water Tanks 5 000 Litre polyethylene water tank (JoJo make or equivalent). Tank complete with 50 x 40 DN nylon bushes sealed into all inlets and outlets. Include for anchorage onto tank stand platform with 4mm diameter galvanized steel wire (bloudraad), 2 Strands/Anchor. 10 000 Litre polyethylene water tank (JoJo make or equivalent). Tank complete with 50 x 40 DN nylon bushes sealed into all inlets and outlets. Include for anchorage onto tank stand platform with 4mm diameter galvanized steel wire (bloudraad), 2 Strands/Anchor. Elevated 4.5m Steel Stand Tankstand Refurbishment including, modification to concrete foundations, pipe work, brackets, surface preparation and re-painting Elevated 4.5m Steel Stand Refurbishment (Provisional) Refurbish existing steel stand - including repainting, rust protection and replacing corroded purlins Outlet and overflow Pipe Schedule for items below: a) 1½" to 50mm MALE ELBOW (Plasson) b) 50mm Ø HDPE PIPE CLASS 10 c) 50mm Ø PLASSON ELBOW d) 50mm Ø MALE ADAPTER (Plasson) e) 50GMS bend F/F f) 50mm Ø x 3000 GMS STAND PIPE g) 50mm Ø BRASS BALL VALVE (COBRA) h) 50mm Ø GMS NIPPLE i) 50mm Ø GMS UNION k) 50mm Ø GMS PIPE 6000 LONG l) 50mm Ø GMS ELBOW F/F m) 50mm Ø GMS STAND PIPE 300 LONG (400 long in sandy conditions) n) 50mm Ø GMS STAND PIPE 700 LONG o) 50mm Ø GMS SOCKET p) 50mm Ø GMS STAND PIPE 150mm	No	1		
			No	3		
			Sum	4		
			P.Sum	1	10,000.00	R 10,000.00
			Sum	4		
			m	4	Included	
			No	4	Included	
			No	4	Included	
			No	4	Included	
			No	4	Included	
			No	4	Included	
			No	4	Included	
			No	4	Included	
			No	4	Included	
			No	4	Included	
			No	4	Included	
			No	4	Included	
			No	4	Included	
			No	4	Included	
TOTAL CARRIED FORWARD						

ITEM NO.	PAYMENT REFRES	DESCRIPTION	UNIT	Estimated QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
		Inlet Pipe Schedule (From Pump)	Sum	4		
		a) 1½ "TO 40mm MALE ELBOW (Plasson)	No	4	Included	
		b) 40mm Ø HDPE PIPE CLASS 10	m	4	Included	
		c) 40mm Ø PLASSON ELBOW	No	4	Included	
		d) 40mm Ø MALE ADAPTER (Plasson)	No	4	Included	
		k) 40mm Ø GMS PIPE 6000 LONG	No	4	Included	
		l) 40mm Ø GMS ELBOW F/F	No	4	Included	
		m) 40mm Ø GMS STAND PIPE 300 LONG (400 long in sandy conditions)	No	4	Included	
		n) 40mm Ø GMS STAND PIPE 700 LONG	No	4	Included	
		o) 40mm Ø Galvanised socket	No	4	Included	
		p) 40mm Ø Galvanised standpipe 150 mm long	No	4	Included	
3.2.7		DRAW-OFFS				
3.2.7.1		Complete supply, install and test single rudimentary domestic drawoff standard type as detailed in Drawing with :				
		i) 2 Taps	No.	3.00		
		ii) 4 Taps	No.	0.00		
3.2.7.3		Complete supply, install and test garden standpipe as detailed in Drawing	No.	1.00		
		DECOMMISSIONING OF OLD SERVICES				
		Removal of old water supply equipment including old tanks, tank stands, and pumps etc.	No	2		
TOTAL CARRIED TO SUMMARY						

SCHEDULE 5:EXTERNAL SEWER RETICULATION

Item	Description	Unit	Qty	Rate	Amount
	SCHEDULE 5 : EXTERNAL SEWER RETICULATION				
4.1	EARTHWORKS (PIPE TRENCHES)				
4.1.1	Excavation				
	Excavate in all material for trenches, backfill, compact and dispose of surplus material for pipes over 25mm dia up to 400mm dia for depths:				
	a) Exceeding 0,0m but not more than 1,0m	m ³	135.00		
	b) Exceeding 1,0m but not exceeding 2.0m	m ³	6.75		
4.2	Extra-over all excavations in pickable material irrespective of depth. for excavating in:-				
4.2.1	Intermediate excavation	m ³	27.00		
4.2.2	Hard rock excavation	m ³	20.25		
4.3	Excavation Ancilliaries				
4.3.1	Excavate and dispose of unsuitable material from trench bottom (provisional)	m ³	6.75		
4.3.2	Make deficiency in backfill material (Provisional)				
	a) from other necessary excavation on Site	m ³	6.75		
	b) by importation designated borrow pits	m ³	6.75		
	c) Compaction in platform reserves	m ³	6.75		
4.4	Existing services				
	a) Services that adjoin a trench	m	12.00		
	b) Services that intersect a trench	No	5.00		
Amount Carried Forward					

SCHEDULE 5:EXTERNAL SEWER RETICULATION

Item	Description	Unit	Qty	Rate	Amount
Amount Brought Forward					0.00
4.5	BEDDING (PIPES)				
4.5.1	Provision of Bedding from Trench Excavation				
	a) Selected granular material	m ³	20.25		
	b) Selected fill material	m ³	56.70		
4.5.2	Supply only of Bedding by Importation From Commercial Sources (provisional)				
	a) Selected granular material	m ³	20.25		
	b) Selected fill material	m ³	56.70		
4.6	SEWERS PIPELINES				
4.6.1	Supply, Lay, Joint and Bed PVC Heavy Duty Class 34 solid wall pipe (conforming to SABS 891), complete with fittings				
	a) 110mm dia	m	135.00		
	b) 150mm diameter	m	-		
	c) 225mm diameter	m	-		
	d) 375mm diameter	m	-		
4.6.2	Extra over items 11.3.1 for specials				
	a) 110mm Access bends	No	12.00		
	b) 110mm Access junctions	No	6.00		
	c) 160mm Bends	No			
	d) 160mm Access bends	No	-		
	e) 160mm Access Junctions	No	-		
Amount Carried Forward					

SCHEDULE 5:EXTERNAL SEWER RETICULATION

Item	Description	Unit	Qty	Rate	Amount
Amount Brought Forward					
4.7	Sundries				
4.7.1	Breaking into and connecting into existing manhole	No	6.00		
4.8	MANHOLES				
4.8.1	Supply and install manholes & slabs (SABS 1294)				
4.8.1.1	Precast concrete manholes 1200mm diameter, exceeding 750mm and not exceeding 1m deep, complete with precast concrete heavy duty cover and frame TYPE 4A	No	1.00		
4.8.1.1	Precast concrete manholes 1200mm diameter, exceeding 1000mm and not exceeding 1250m deep, complete with precast concrete heavy duty cover and frame TYPE 4A	No	1.00		
4.8.1.1	Precast concrete manholes 1200mm diameter, exceeding 1250mm and not exceeding 1500m deep, complete with precast concrete heavy duty cover and frame TYPE 4A	No	2.00		
4.9	PIPE ANCILLARIES				
4.9.1	Encasing around pipe				
4.9.1.1	Anchor blocks in strength concrete 25Mpa /19mm including all formwork, reinforcement, reinforcement, etc.				
4.9.1.2	Anchor block size 600 x 600mm	No	10.00		
4.10	EXISTING SERVICES				
4.10.1	Connection to existing sewer				
4.10.1.1	200mm Diameter pipe to existing manhole	No	1.00		
4.10.2	Raising or lowering of existing manholes	No	1.00		
4.10.2.1	Remove cover and frame then lower the manhole to required level, complete with all necessary accessories.	No	1.00		
Amount Carried to Forward					

SCHEDULE 5:EXTERNAL SEWER RETICULATION

Item	Description	Unit	Qty	Rate	Amount
Amount Brought Forward					0.00
4.11	SEPTIC TANK				
4.11.1	Septic tank:				
	Excavate in soft material exceeding 2m deep.	m³	73.017		
	Extra over septic tank excavations for carting away surplus material from excavations or stock piles to a dumping site to be located by the Contractor.	m³	10.95		
	Risk of collapse to sides septic tank excavations not exceeding 1,5m deep.	m²	49.09		
	Earthfilling obtained from the excavations or stock piles compacted to 93% in septic tank.	m³	10.95		
	Modified AASHTO density tests	No	2		
	Extra over excavation in soft material for pipe trenches, chambers, etc. for excavation in intermediate material.	Item	1.5		
	25 MPa Reinforced concrete top slab.	m³	5.48		
	25 MPa Reinforced concrete base.	m³	5.48		
	Backfilling to sides of septic tank.	m³	7.30		
	Type 395 fabric reinforcement in concrete surface beds, floor slabs, etc.	m²	40		
	Rough formwork to soffit of slab.	m²	36.51		
	Plaster to vertical surfaces.	m²	49.09		
	One brick wall in commons including wire ties for septic tank walls.	m²	6.588		
	Two brick wall in commons including wire ties for septic tank walls.	m²	49.09		
	Lintels as permanent shutters	m	73.017		
	600 x 600mm Cast iron manhole covers	No	2		
	Pipework				
	Extra over excavation in soft material for pipe trenches, chambers, etc. for excavation in intermediate material.	m³	35		
	Connecting 110mm uPVC pipe including 110mm channel junction and making good concrete benching.	No	2		
	Connecting 160mm pipe including inserting 160mm channel junction and making good concrete benching.	No	2		
	Allow for testing the complete drainage installation by visual and Air Pressure test to the satisfaction of the Employer. (All defective work to be replaced at the Contractor's expense).	Item	1		
	160mm uPVC slotted drainage pipe laid in and including trench not exceeding 1,00m deep with 500 x 500mm washed 25mm stone casing wrapped in u24 non-woven, spun-bonded, punched continuous polyester fabric, including fill, ram, carting away, etc.	m	35		
Amount Carried to Forward					

SCHEDULE 5:EXTERNAL SEWER RETICULATION

Item	Description	Unit	Qty	Rate	Amount
Amount Brought Forward					
	Soakaway: Excavate in earth for and build French drain size as indicated on drawings , fill in with 20mm crushed stone to within 0,2m of top, enclose stone with geofabric u 24 and fill in with earth filling.	m	35		
	Extra over soakaway excavations for carting away surplus material from excavations to a dumping site to be located by the Contractor.	m³	5		
	Risk of collapse to sides of soakaway excavations exceeding 1,5m and not exc. 2m deep.	m²	28		
	One layer of 250 micron waterproof sheeting and sealed at overlaps with pressure sensitive tape laid over soak away	m²	35		
	0,6mm IBR sheeting laid across walls.	m²	35		
	Lintels laid above soakaway	m	35		
Amount Carried to Final Summary					

ITEM NO.	PAYMENT REFRES	DESCRIPTION	UNIT	Estimated QTY	RATE	AMOUNT
	SABS 1200 GB	SCHEDULE 6 : WALKWAYS AND CARPORTS				
5.1		FORMWORK				
5.1.1	8.2.1(b)	Normal formwork to c) Column Foundations	m ³	189.44		
5.2		REINFORCEMENT				
5.2.1	8.2.4	Mild steel bars of nominal diameter				
5.2.1.1		12mm	t	7.58		
5.2.2		High-tensile steel bars of nominal diameter				
5.2.2.1		16mm	t	11.37		
5.2.3		High-tensile welded mesh of nominal mass				
5.2.3.1		a) 3.95 kg/m ²	m ²	0.00		
5.3		CONCRETE				
5.3.1	8.2.5	Strength concrete, Grade 25MPa/19 mm in Column Footings	m ³	18.94		
5.3.2		Blinding layer, Grade 10/19,0 mm	m ³	2.37		
5.3.4	8.2.6	Unformed surface finishes				
5.3.4.1		Wood-float to all floors except	m ²	47.36		
	SABS 1200 AH	SECTION : STRUCTURAL STEELWORK				
5.5	8.3.1	PRELIMINARY AND GENERAL				
5.5.1	8.3.1	SUPPLY AND FABRICATION				
5.5.1.1	8.3.1.1	Preparation of shop detail drawings	Sum	1.00		
5.5.2	8.3.1.2	Supply, delivery and installation of steelwork (see Drawings) complete with all the necessary cleats, brackets, gussets, packs, bolts & nuts etc. as follows : a) Using steel to SABS 1431 Grade 350WA for walkways				
5.5.2.1		Simple Square Tubing - columns (welded)	t	3.32		
5.5.2.2		Square Tubing Beams - beams (welded)	t	1.15		
5.5.2.3		Square Tubing purlins	t	3.38		
5.5.2.4		Unequal Angle rafter bracing	t	3.92		
5.5.2.5		200 x 200 x 6mm Base Plates	No.	188.00		
		Fasteners for angles hexhead bolts with washers - Grade 8.8	No.	564.00		
		Sika Non-shrink grout or Similar	m ³	1.50		
		M12 Holding Down Bolts - Grade 8.8 hexhead bolts	No.	752.00		
		b) Using steel to SABS 1431 Grade 350WA for assembly				
		Simple Square Tubing - columns (welded)	t	1.75		
		Square Tubing Beams - beams (welded)	t	1.52		
		Square Tubing purlins	t	1.74		
		Unequal Angle rafter bracing	t	1.78		

SCHEDULE 6: COVERED PARKING

	200 x 200 x 6mm Base Plates	No.	86.00		
	Fasteners for angles hexhead bolts with washers - Grade 8.8	No.	258.00		
	Sika Non-shrink grout or Similar	m ³	0.69		
	M12 Holding Down Bolts - Grade 8.8 hexhead bolts	No.	344.00		
	c) Using steel to SABS 1431 Grade 350WA for carports				
	Simple Square Tubing - columns (welded)	t	0.81		
	Square Tubing Beams - beams (welded)	t	0.50		
	Square Tubing purlins	t	3.21		
	Unequal Angle rafter bracing	t	2.45		
	Steel Fascia beams	t	1.54		
	200 x 200 x 6mm Base Plates	No.	22.00		
	Fasteners for angles hexhead bolts with washers - Grade 8.8	No.	66.00		
	Sika Non-shrink grout or Similar	m ³	0.18		
	M12 Holding Down Bolts - Grade 8.8 hexhead bolts	No.	88.00		
TOTAL CARRIED FORWARD					

ITEM NO.	PAYMENT REFRES	DESCRIPTION	UNIT	Estimated QTY	0.00	AMOUNT
TOTAL BROUGHT FORWARD						
5.5.5	8.3.5	SITE WELDING				
5.5.5.1		Site weld items inclusive	m	88.80		
		CLADDING AND SHEETING				
		ROOF CLADDING				
5.6		Supply, deliver to Site, erect and fix green chromedek sheeting/cladding etc, including the supply of all necessary fasteners etc. and cutting and notching: (See Drawings)	m ²	1,173.20		
5.6.2	8.2.3	Approved troughed profile-sheeting to roofs, 0,6mm				
		Ridge flashing 450-600mm girth x 1mm - 3 bends, baked enamel external finish	m	32.00		
	8.3.1	GUTTERS AND RAINWATER PIPES				
		Galvanized mild steel				
		3mm Thick box gutter, 100mm girth 6 times bent along length to detail, including straps, stiffeners,etc as per drawing	m	364.00		
		Extra for stopped end	no	6.00		
		Extra for 150mm diameter outlet	no	52.50		
		1mm Thick 150mm diameter rainwater pipe including straps, fixed to steel columns	m	136.50		
		Extra for 45° bend	no	52.50		
	SABS 1200 HC	CORROSION PROTECTION OF STRUCTURAL STEELWORK				
		Steelwork included under Items 1 to 7inclusive, of Section 1200H (Supply, Fabrication and Erection)	t	18.58		
5.7	8.2.1	SURFACE DRESSING AND REPAIRS AT PLACE OF FABRICATION				
		Remove slag and weld spatter, grind welds to smooth profile, radius sharp edges as specified.	t	18.58		
5.7.1	8.2.3	SURFACE PREPARATION AND COATING APPLICATION				
5.7.1.1		Shopwork. Prepare surface and apply coat(s) as specified.	t	18.58		
5.7.2		Sitework. Clean down surfaces, touch up damaged shop coats and apply finish coats as specified	t	18.58		
5.7.2.1		Cold-formed sections				
		Tonnage shall be gross quantities inclusive of unpainted steel (e.g. embedded portions and underside of baseplate,etc.	t	18.58		
TOTAL CARRIED TO SUMMARY						

DEPARTMENT OF EDUCATION : LIMPOPO

STORM DAMAGED SCHOOL: MOKHARI SECONDARY SCHOOL

PRELIMINARY COSTS ESTIMATE FOR CIVIL ENGINEERINGS SERVICES

SUMMARY OF BILL OF QUANTITIES

SCHEDULE 1: EARTHWORKS

SCHEDULE 2: EARTHWORKS (ROADS AND SUBGRADE)

SCHEDULE 3: STEEL PALISADE FENCE

SCHEDULE 4: WATER SUPPLY PIPELINES AND WATER SOURCE

SCHEDULE 5: EXTERNAL SEWER RETICULATION

SCHEDULE 6: COVERED PARKING

TENDER (CONTRACT) SUM (CIVIL AND STRUCTURAL WORKS)

0.00

PART C3 SCOPE OF WORKS

SCOPE OF WORKS

BID NUMBER: LDPWRI-B/20290

APPOINTMENT OF A CONTRACTOR FOR
REFURBISHMENT OF 12 CLASSROOMS, 16 WATERBORNE TOILETS AND
NUTRITIONAL BLOCK, CONSTRUCTION OF 10 CLASSROOMS, MEDIUM
ADMINISTRATION BLOCK, NEW 16 SEATER ENVIROLOO TOILETS, STEEL
PALISADE FENCE AND EXTERNAL WORKS AT MOKHARI SECONDARY SCHOOL IN
NABOOMSPRUIT, WATERBERG DISTRICT

PART C3.1: SPECIAL NOTES TO BIDDERS

The following special conditions are for compliance and attention to bidders:

- 1.1. LDPWR&I reserve the right to call interviews with short-listed bidders before final selection.
- 1.2. LDPWR&I reserve the right to conduct supplier due diligence prior to final award or at any time during the contract period. This may include surprise site visits.
- 1.3. LDPWR&I reserve the right to appoint the bidder that proves to be fully capable and qualified to handle and execute the job.
- 1.4. The proposals submitted must be in line with the detailed specification.
- 1.5. LDPWR&I reserve the right to cancel or withdraw this bid if:
 - i. Due to changed circumstances, there is no longer a need for this services; or
 - ii. Funds are no longer available to cover the total envisaged expenditure; or
 - iii. No acceptable bids are received; or
 - iv. There is a material irregularity in the Bid process.
- 1.6. In the case of sub-contracting or joint venture agreement, LDPWR&I will enter into a single contract with the principal bidder.
- 1.7. Bidders who are not registered on Central Supplier Database (CSD) must register before submission of bids.
- 1.8. Any completion of the bid document in pencil or erasable ink will not be acceptable and will automatically disqualify the submitted bid.
- 1.9. Successful bidder will be required to sign and enter into a formal contract upon the award.
- 1.10. Notwithstanding shortcomings and/or inconsistencies, if any, in this specification, which is only a minimum specification, a bidder shall make provision for a complete solution that will deliver the required service efficiently and cost-effectively.
- 1.11. Bid documents must be submitted physically to the closing address as reflected on the Request for Quotations/Tender.
- 1.12. Quotations received after the closing date and time will not be accepted for consideration.
- 1.13. This request for bid document contains confidential information about LDPWR&I, which has been provided to supply potential bidders with the data necessary to provide a holistic response.
- 1.14. No part of the contents may be used, copied, disclosed or conveyed in whole or in part to any party, in any manner whatsoever without the prior written permission of LDPWR&I.
- 1.15. Any reproduction or transmission of information contained in this document except for the sole purpose of responding to this bid is strictly prohibited.
- 1.16. References to LDPWR&I must not be made in any literature, promotional material, and brochures or sales presentations without the express written consent of LDPWR&I.



PART C3.2: OHS SPECIFICATIONS

PART C4 SITE INFORMATION

SITE INFORMATION

BID NUMBER: LDPWRI-B/20290

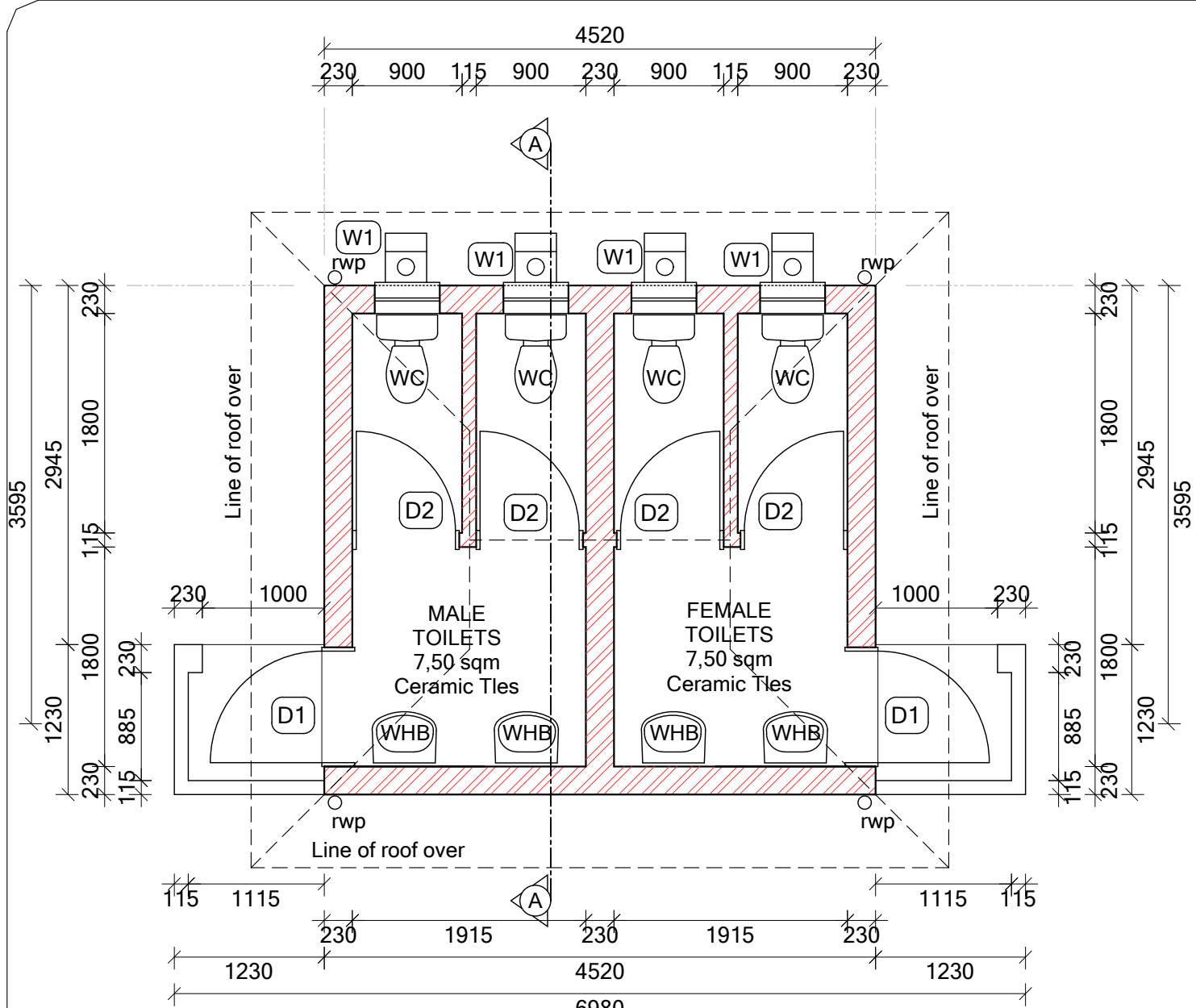
REFURBISHMENT AND ADDITIONS AT MOKHARI SECONDARY SCHOOL IN NABOOMSPRUIT,
WATERBERG DISTRICT, LIMPOPO PROVINCE.

CO-ORDINDATES

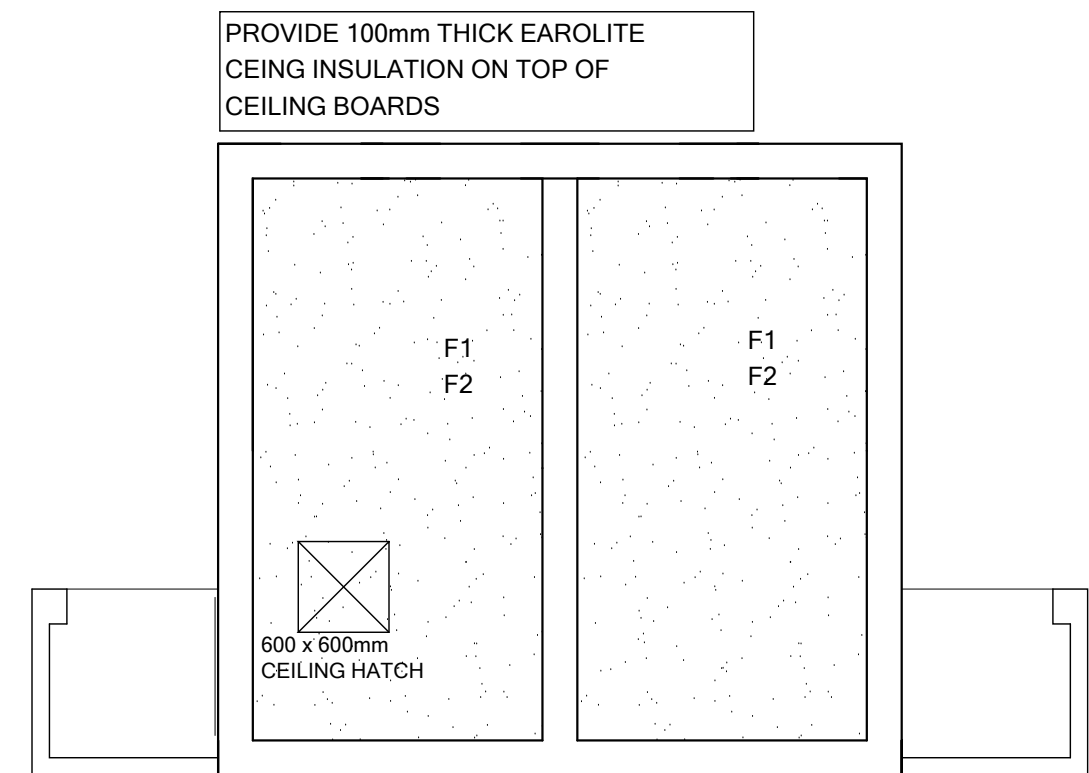
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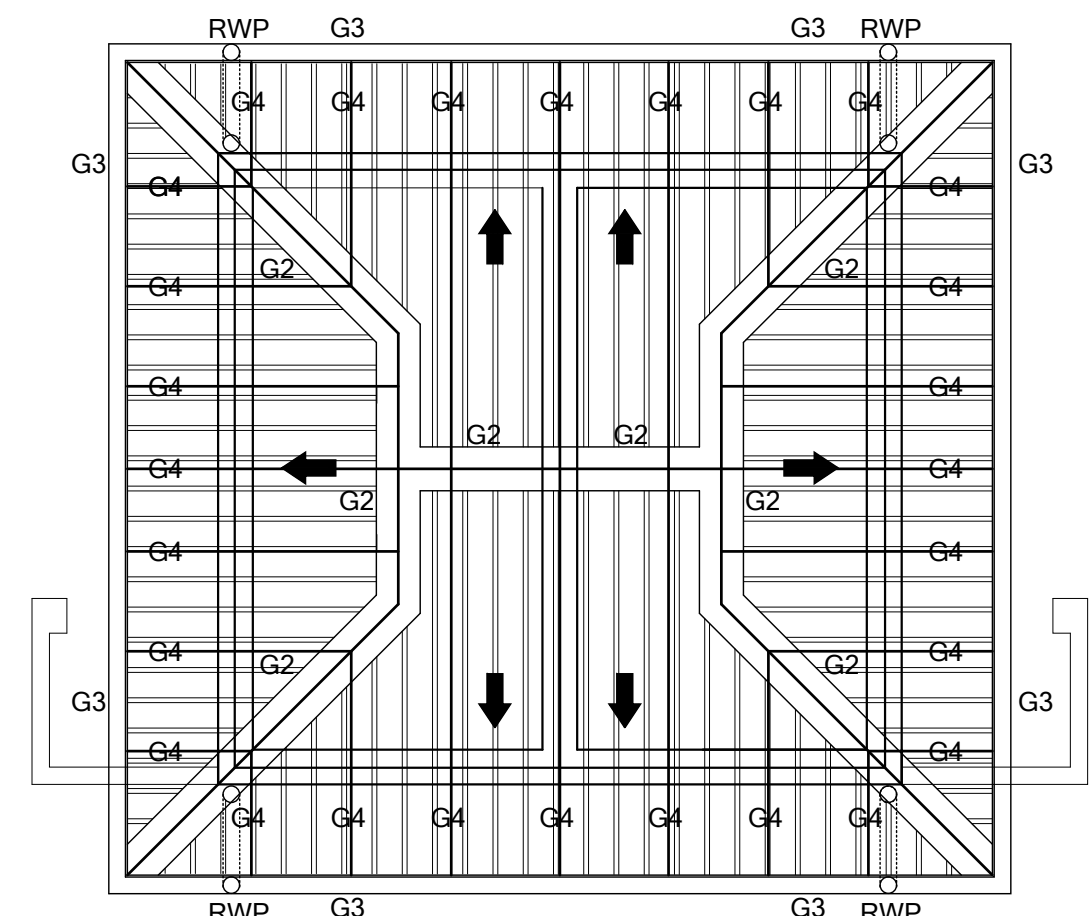
C4.1 DRAWINGS



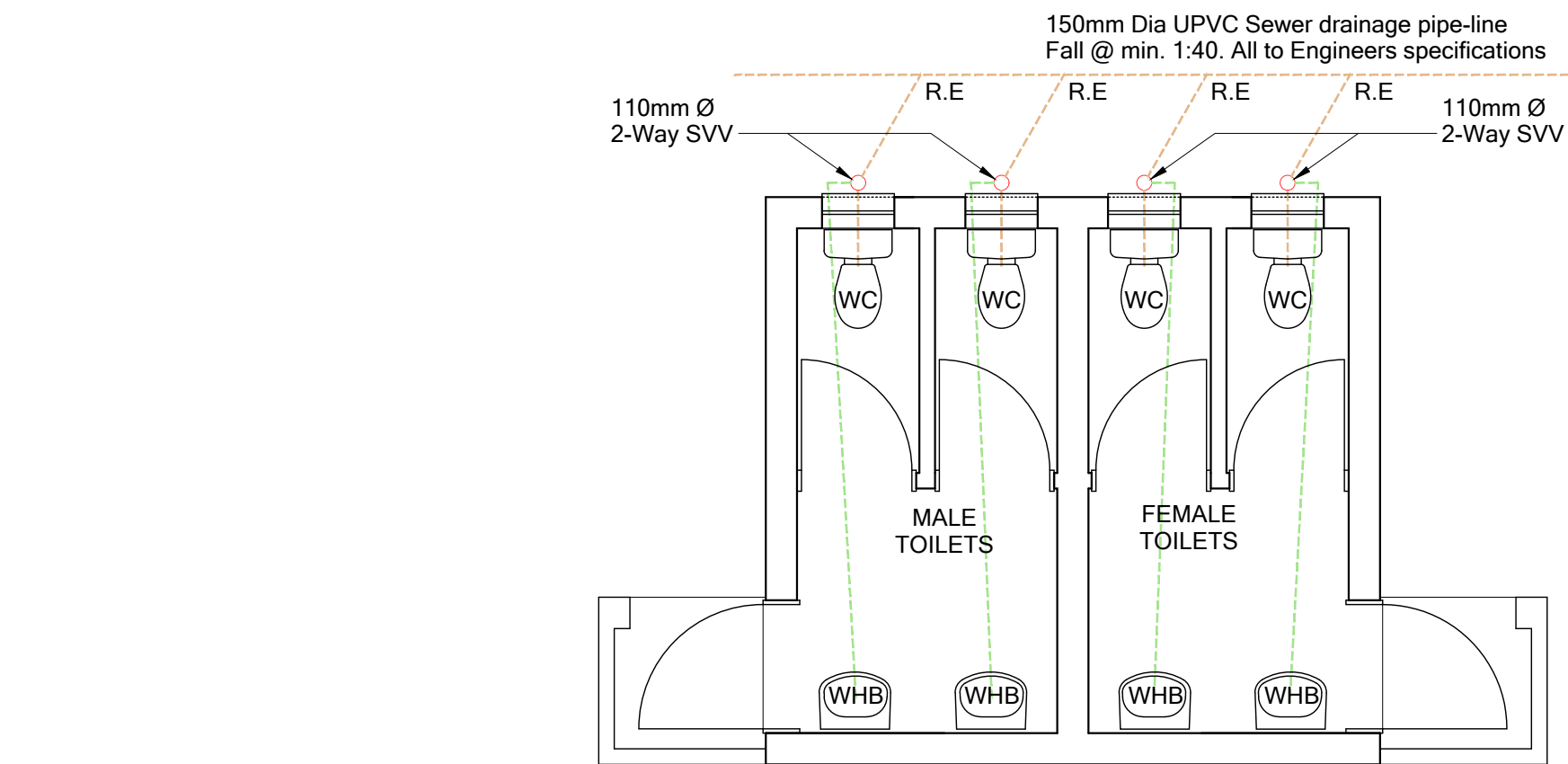
FLOOR PLAN
SCALE 1 : 50



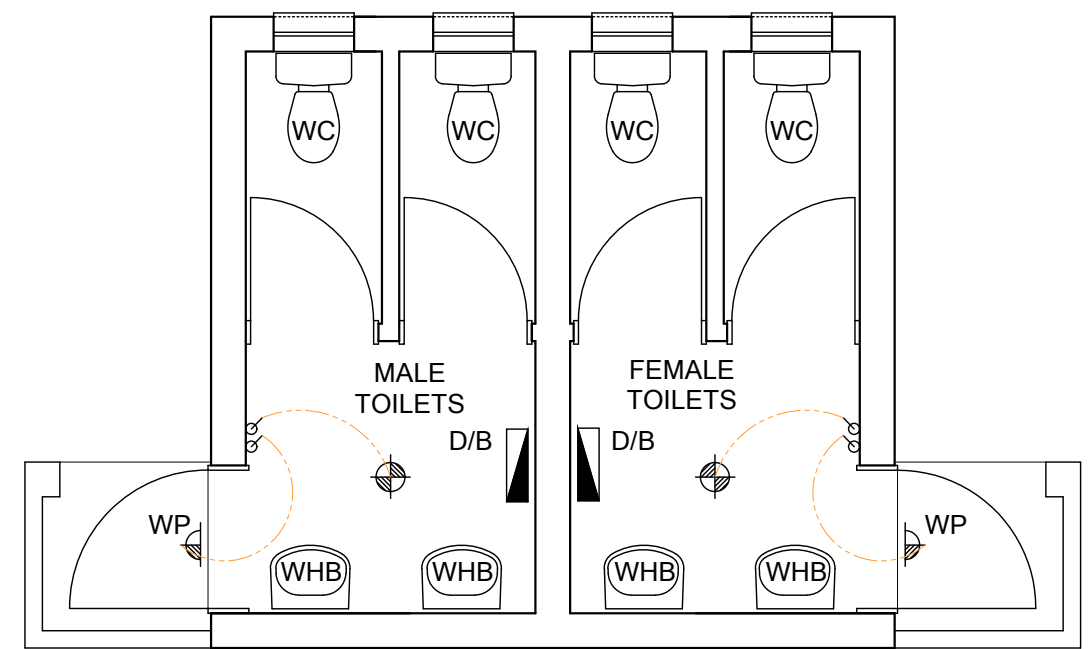
CEILING PLAN
SCALE 1 : 50



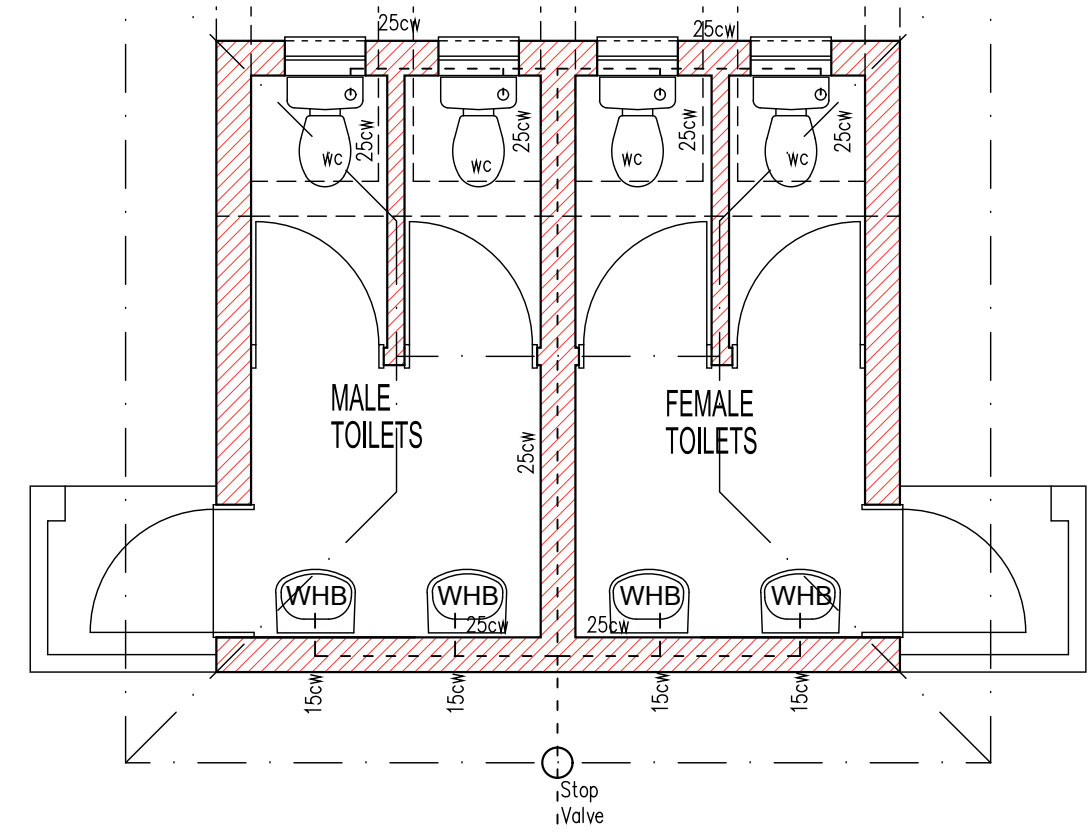
ROOF PLAN
SCALE 1 : 50



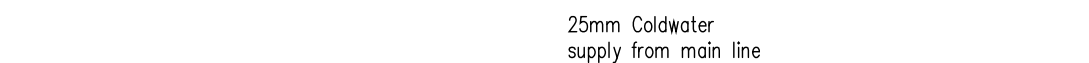
SEWER LAYOUT
SCALE 1 : 100



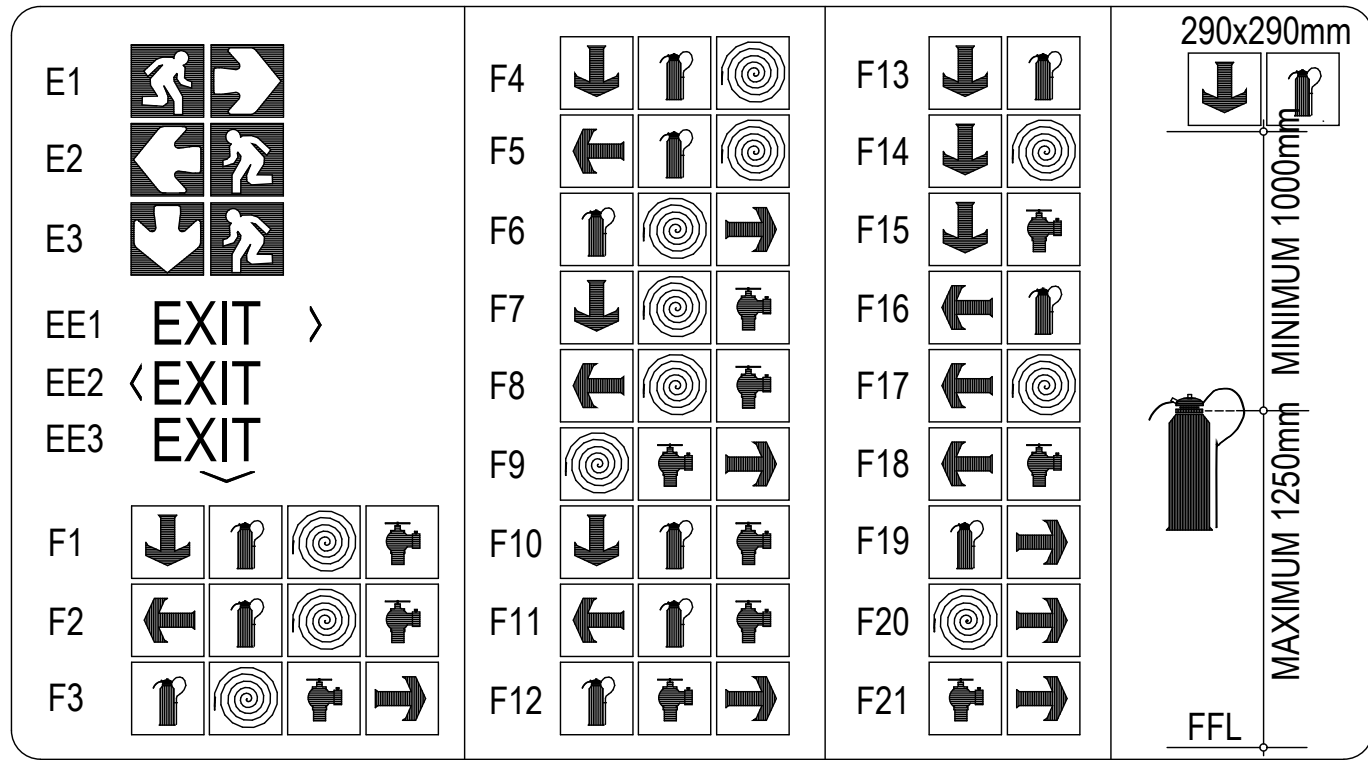
ELECTRICAL LAYOUT
SCALE 1 : 100



FIRE LAYOUT
SCALE 1 : 100



WATER LAYOUT
SCALE 1 : 100



NOTE:
FOUNDATION PLAN & DETAILS - WHERE
APPLICABLE REFER TO ENGINEERS DRAWINGS
& DETAIL FOR REINFORCED CONCRETE
FOUNDATIONS.

ELECTRICAL LEGEND			
	CEILING LIGHT FITTING		15 AMP DOUBLE PLUG BUILT IN 340mm ABOVE FFL
	DECORATIVE WALL LIGHT FITTING		15 AMP DOUBLE PLUG POINT BUILT IN 1000mm ABOVE FFL
	DECORATIVE WATERPROOF EXTERNAL WALL MOUNTED LIGHT FITTING		TELEPHONE POINT
	DOUBLE TUBE FLUSH FITTING FLUORESCENT LIGHT COMPLETE WITH DIFFUSER		12 AMP ISOLATOR FOR AC UNIT MOUNTED 150mm BELOW CEILING
	DISTRIBUTION BOARD & PRE-PAY METERBOX		40 AMP ISOLATOR FOR AC UNIT MOUNTED 500mm BELOW ROOF'S EAVES
			LIGHT SWITCH

CONSTRUCTION NOTES

Foundations
A1. Concrete foundations - concrete mix type and with steel reinforcement according to structural engineer's drawings. Top of strip footings to be 340mm minimum below N.G.L. Provide test cubes (1 per 15m³ or 1 per batch). Finished sides and bottoms of trenches to be treated with ant poison of the Prothor 200 SC or other approved type applied at a rate of not less than 5 litres of solution per m² by a firm of specialists in accordance with SANS Specification 1165 and SANS Code of Practice 0124. Concrete to be casted within 24 hours of application. Contractor to provide five year guarantee.
A2. Backfilling and filling under floors - in general, approved filling compacted to at least 93% Mod. AASHTO density in layers of maximum 150mm - refer to engineer's drawings for detail in case of poor soil conditions. Minimum of 170mm filling to be provided above natural or compacted ground level under floors. All filling to be approved by engineer (imported filling to be minimum G5 or G7 material as per engineer's drawings). Compaction tests to be provided at a rate of one test per 125m² filling area under floors per each layer of 150mm compacted filling. Filling under floors to be treated with ant poison of the Prothor 200 SC or other approved type applied at a rate of not less than 5 litres of solution per m² by a firm of specialists in accordance with SANS Specification 1165 and SANS Code of Practice 0124. Concrete to be casted within 24 hours of application. Contractor to provide five year guarantee.

Surface beds and floors
B1. Surface bed - concrete mix as described on structural engineer's drawings but minimum 85mm thick on SANS Specification 952 Type C approved USB Green 250 micron waterproofing membrane with laps sealed with pressure sensitive tape. Surface bed cast in alternative sections of maximum 20m² with saw cut joints with joints filled up with polysulfide sealer. All saw cut joints to be done within 24 hours after casting of concrete. Provide 10mm thick bitumen impregnated soft board between all walls and concrete and seal joint with polysulfide sealer. Provide mesh ref. no. 193 as per structural engineer's drawings. Provide test cubes (1 per 15m³ or 1 per batch).
B2. Surface bed on walkways as described on structural engineer's drawings but minimum 85mm thick on SANS Specification 952 Type C approved USB Green 250 micron waterproofing membrane with laps sealed with pressure sensitive tape. Surface bed cast in alternative sections of maximum 20m² with expansion joints with joints filled up with polysulfide sealer. Provide 10mm thick bitumen impregnated soft board between all walls and concrete and seal joint with polysulfide sealer. Provide mesh ref. no. 193 as per structural engineer's drawings. Provide test cubes (1 per 15m³ or 1 per batch).
B3. Screed and floor finish on walkways - Average 30mm thick wood floated 1:4 granolithic screed sloping towards edges. At all external door openings external surface beds must be level with granolithic threshold finish. Finish off edges of screed smooth with edging tool.
B4. Apron - 1200mm wide 15MPa mass concrete apron with wood floated finish. Apron to be cast in alternative sections in lengths of maximum 3m and to have a 1:100 fall away from building. Apron edge to be thickened by 240mm wide x 115mm deep (net) edge excavated in natural or finished ground level.

Skirtings
C1. 19 x 76mm Meranti skirting plugged to walls at 400mm c/c with 19mm meranti quadrand bead plated on. Sand down to a smooth finish, stop with Polycell Woodfiller, stain with Plascon Woodcare Stain (W-range)(colour meranti), apply one coat Plascon Woodcare Ultra Varnish (X44), thinned with 1:3 mineral turpentine (AZH1) and apply two finishing coats Plascon Woodcare Ultra (X44) suede varnish to skirtings.

Walls and structure
D1. External walls - Corobrik face bricks in stretcher bond with 10mm wide x 6mm deep square recessed joints.
D2. Brickwork - Brickwork to 115 and 230mm foundation walls - every 2nd course. Superstructure walls - every 6th course. Over openings formed in brickwork as per table below.
D3. 75 x 75 x 30mm Thick tubular section steel columns with 250mm girth x 4.5mm thick flat section U-shaped fixing bracket, 200mm long, twice holed and welded to top, 200 x 200 x 10mm thick flat section baseplate, four times holed and welded to bottom. Columns to be fixed to top of brickwork below copings with four M10 x 75mm masonry anchor bolts. Degrease with "Plascon Aqualolv Degreaser (GR1)", remove rust with "Plascon Rust Remover (RR1)", prime with Plascon Metal Primer (UC501) and apply two coats Plascon Enamel Door & Trims high gloss enamel paint - colour as per finishes schedule.
D4. 10 x 220mm Laminated SA Pine beam twice bolted to steel columns. Sand down to a smooth finish, stop with Polycell Woodfiller, provide one coat raw linseed oil thinned with 1:3 mineral turpentine (AZH1), apply one coat Plascon Woodcare Sunproof (Amber - PNW22) suede varnish thinned with 1:3 mineral turpentine (AZH1) and apply two finishing coats Plascon Woodcare Sunproof (Amber - PNW22) suede varnish.
D5. DPC - SANS Specification 952 Type B approved 375 micron black dpc in walls at floor level and under all window sills.
D6. Internal walls - approved stockbrick walls in stretcher bond above to receive one coat smooth 1:5 cement plaster finished off with one coat Plascon Plaster Primer (UC56) and two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour broken white (EPL314) or French Chartreuse (Y5-D2-3) as per Principal Agent.
D7. Internal walls - face brickwork in stretcher bond above to receive one coat smooth 1:5 cement plaster finished off with one coat Plascon Plaster Primer (UC56) and two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour as per finishes schedule.
D8. All exposed expansion joints in walls and floors to be filled in with Urochem 205 polysulfide joint sealant after surfaces have been primed with Urochem 614 primer.
D9. Expansion joints in walls and ceilings to be covered with 2 x 50mm Migua KF250/30 aluminium cover strips.

Window sills
E1. Internal window sills - 15 x 150mm nute-cement window sills, bedded and set flat in 1:4 cement mortar. Prime with one coat Plascon Multi-surface Primer (WUP1) and apply two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour as per finishes schedule.
E2. External window sills - Middewit Fynbos Geel face brick-on-edge sloping sill to match walls with 10 x 6mm square recessed joints.

Ceilings and cornice
F1. Internal cornice - 19 x 76mm Meranti cornice nailed to walls at 400mm centres maximum. Sand down to a smooth finish, stop with Polycell Woodfiller, stain with Plascon Woodcare Stain (W-range)(colour meranti), apply one coat Plascon Woodcare Ultra Varnish (X44), thinned with 1:3 mineral turpentine (AZH1) and apply two finishing coats Plascon Woodcare Ultra (X44) suede varnish to cornices.
F2. Ceilings - 6mm Everite Nute-cement fibre-cement boards nailed to 38 x 38mm SAP brandler at 400mm centres maximum with galvanised clout nails. Provide H-profile galvanised jointing strips. Jointing strips to be pre-painted. Prime ceilings with one coat Plascon Multi-Surface Primer (WUP1) and finish off with two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour White (EPL30). Provide 100mm thick Aerolite insulation on top of ceilings.
F3. Plastered ceiling as per finishes schedule.
F4. 610 x 610mm Trap door formed of 50 x 65mm SA pine rebated frame with 38 x 38mm SA pine cross brander covered with ceiling board and fitted flush in opening. Provide 18 x 50mm meranti surround. Trap door and surround to be painted as for ceiling. Trap door opening between trusses to be formed with 38 x 114mm SA pine bearers, nailed to trusses.

Roof and fascias
G1. Roof sheeting - 0.58mm Brownbuilt Klip-lok roof sheeting with Globalcoat finish (colour Traffic Green) on 50 x 76mm SAP purlins at maximum 1200mm centres on patent and approved pre-fabricated truss system. Roof sheeting to be done by specialist installer providing a five year guarantee.
G2. Ridge and hip flashings - 0.8mm galvanised sheet iron standard factory manufactured FK3 ridge or hip flashing with Globalcoat finish (colour Traffic Green).
G3. Fascia boards - 10 x 300mm Everite Nute-cement fibre-cement boards screw fixed to truss ends and counter batten with countersunk brass screws. Prime fascias and barge boards with one coat Plascon Multi-Surface Primer (WUP1) and finish off with two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour as per finishes schedule.
G4. Truss system - Mittek or other approved patent timber pre-fabricated truss system at maximum 100mm centres with 20 degrees pitch. 50 x 76mm SAP purlins at maximum 1200mm centres. 38 x 114mm SAP wall plate to be carbolineum treated before fixing. Trusses to be secured to walls with 2.5mm diameter galvanised steel wire ties, built into walls minimum 6 courses. Purlins nailed to trusses must also be secured with 2.5mm diameter galvanised steel wire, twice wrapped around and tied around rafters and purlins. All exposed parts of trusses, purlins, etc. to be sanded smooth, seal knots with Plascon Knot Seal (PK2), prime with one coat Plascon Wood Primer (UC2) and apply two coats Plascon Enamel Doors & Trims paint. Colour as per finishes schedule.
G5. Gutters - 100 x 100mm High gutters formed of 0.58mm galvanised sheet iron with Globalcoat finish (colour Gemsbok Sand). All brackets, etc. to be pre-coated with Globalcoat to match colour of gutters.
G6. Downpipes - 100mm Diameter downpipes formed of 0.58mm galvanised sheet iron with Globalcoat finish (colour Gemsbok Sand). All holdbrats, brackets, etc. to be pre-coated to match colour of downpipes.
G7. Barge flashing over barge boards at louvres - 0.8mm galvanised sheet iron standard factory manufactured FK13 barge or gable flashing with Globalcoat finish (colour Traffic Green).
G8. Flashings at bottom of louvres - 0.8mm galvanised sheet iron standard factory manufactured FK8 headwall flashing and FK7 counter flashing with Globalcoat finish (Colour Traffic Green).

Fittings
H1. Vitrex Model 2400 (code 2404) enameled green folding type writing board with wall mounted centre board 2000 x 1200mm high, two wall mounted side boards each 1000 x 1200mm high & two swing leaves each 1000 x 1200mm high with permanent aluminium chalk rail.
H2. Vitrex System 2000 (code 2317) light grey wall mounted pinning board, size 2000 x 1200mm high (2 per classroom).
H3. Greenfield G25 double door steel cupboard with standard baked enamel finish, 760 x 610 x 1700mm high with four shelves (2 per classroom).
H4. Five rows of 19mm Thick laminated SA Pine shelving, 350mm wide, evenly spaced & fixed from underside to 305mm wide Shelco epoxy powder coated steel brackets. Brackets to be fixed to 25mm wide x 2134mm long double slotted epoxy powder coated Shelco type FT6 wall bands, plugged to walls at maximum 600mm c/c. Sand down to a smooth finish, stop with Polycell Woodfiller, apply one coat Plascon Woodcare Ultra Varnish (X44) thinned with 1:3 mineral turpentine (AZH1) then apply two finishing coats Plascon Woodcare Clear Ultra (X44) suede varnish to shelves.

Miscellaneous
I1 9 Kg DCP fire extinguisher fitted to 400 x 200 x 22mm thick meranti backplate with chamfered edges. Sand down to a smooth finish, stop with Polycell Woodfiller, apply one coat Plascon Woodcare Ultra (X44) suede varnish thinned with 1:3 mineral turpentine (AZH1) & then apply two finishing coats Plascon Woodcare Ultra (X44) suede varnish to back plate.
I2 150 x 150mm Union AL5066-ED5/2AS aluminium fire extinguisher sign and Union AL5066-ED5/2AS aluminium red down arrow sign above fire extinguisher.
I3 2 Safex fire hose reel with 30m hose. Supply 152 x 152 x 3mm thick Union AL5066-ED5/2AS aluminium engraved red fire hose reel sign & Union AL5066-ED5/2AS aluminium engraved red down arrow sign above fire hose reel. Water supply in buildings to fire hose reel to be 25mm galvanised mild steel. Degrease exposed parts of pipes with Plascon Aqualolv Degreaser (GR1), remove any rust with Plascon Rust Remover (RR1), prime with Plascon Metal Primer (UC501) and apply two coats Plascon Enamel Doors & Trims (G-Range) paint - colour Signal Red (S7). Provide 150 x 150mm Union AL5066-ED5/2AS aluminium fire sign & Union AL5066-ED5/2AS aluminium red down arrow sign above fire hose reel.

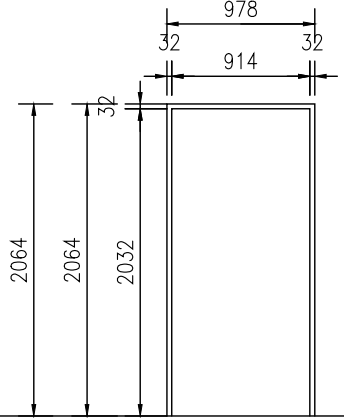
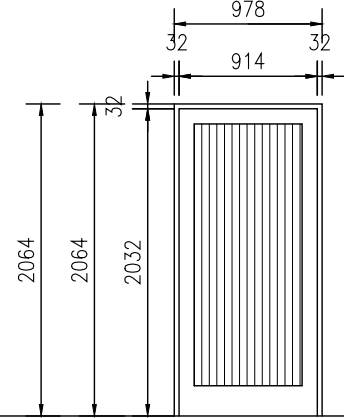
- NOTES :
- 1) Workmanship to comply with Standard Specification of materials and methods - to be used - SABS 0400.
 - 2) Light Switch in Disabled toilet to be at 1200 mm above FFL.
 - 3) If Step over 800 mm Built in Balustrade.
 - 4) Gully positions to be determined as per site prescribed overall drainage design.
 - 5) 2 x coats sealant on all exposed trusses (sand off all SABS & other materials).
 - 6) 30mm mineral wool insulation - to be installed where there are ceilings.
 - 7) Bubble plastic insulation with foil backing to be installed with wire supports in all areas that do not have ceilings.
 - 8) West Facing Facades to have standard aluminium louvers from below eaves to drop of 1200 mm.
 - 9) Trusses to be designed in accordance with SABS 0400 & approved by Project Engineers.

ISSUED FOR TENDER

SIGNATURE TABLE		
DISCIPLINE	SIGNATURE	DATE
CLIENT		
PLAN EXAMINER		
FIRE CONTROL		
ENVIRONMENTAL OFFICER		
ROADS /STORMWATER		
WATER AND SANITATION		
ENVIRONMENTAL OFFICER		
REV NO	DATE	DESCRIPTION
REVISIONS		
SIZE ON ORIGINAL DRAWING 100 mm		

DEPARTMENT OF PUBLIC WORKS, ROADS & INFRASTRUCTURE	
INSTITUTION MOKHARI SECONDARY SCHOOL	
INSTITUTION EMIS NUMBER 906121051	
SERVICE NEW BUILDINGS & ALTERATIONS	
CONTRACT - SECTION DOCUMENTATION	
DISCIPLINE ARCHITECTURAL	PROJECT STAGE 4
WORK DESCRIPTION - SUB DIVISION 4 CUBICLE WATERBORNE ABLUTION BLOCK	
DRAWING DESCRIPTION FLOOR, ELECTRICAL, SEWER PLAN	
FILE NO.	ITEM NO.
DESIGN	DRAWN
SCALE 1:100	CHECKED
DATE 2023.06.20	RESPONSIBLE PROFESSIONAL NAME Y.VAHED
	SIGNATURE
	PR NUMBER 7812
DRAWING CO-ORDINATED	
CONSULTANT : 	
CONTRACTOR :	
CADD SYSTEM AUTO CAD	FILE NAME DRAWING NUMBER 2020_67-4WAB - 100
SIZE A 1	REV A

DOOR SCHEDULE:
Scale 1:50.



DOOR NUMBER:	D1	D2
POSITION:	TOILET ENTRANCE DOOR AREA TOILET	ENTRANCE TO TOILET
QUANTITY:	2 (1=LH) (1 = RH)	4 (2= LH) (2 = RH)
DOOR-FRAME DESCRIPTION:	1,2mm THICK STANDARD STEEL DOUBLE REBATED DOORFRAME FOR 115MM WALL TO RECEIVE PLASTER ON ONE-SIDE	1,2mm THICK STANDARD STEEL DOUBLE REBATED DOORFRAME FOR 115MM WALL TO RECEIVE PLASTER ON ONE-SIDE
FINISHES:	1/RED OXIDE PRIMER + 1/COAT UNIVERSAL UNDERCOAT + 2/COATS PLASCON GLOSS ENAMEL PAINT. - COLOUR TO ARCHITECT.	1/RED OXIDE PRIMER + 1/COAT UNIVERSAL UNDERCOAT + 2/COATS PLASCON GLOSS ENAMEL PAINT. - COLOUR TO ARCHITECT.
DOOR DESCRIPTION:	2032 x 914 x 44mm THICK SOLID HARDWOOD DOOR WITH MASONITE BACKING. TYPE OF HARDWOOD DOOR ACCORDING TO OWNERS CHOICE.	2032 x 914 x 40mm SOLID HARDWOOD DOOR WITH MASONITE FACINGS TO RECEIVE 1/COAT UNDERCOAT + 2/COATS PLASCON VELVAGLO PAINT.
IRON MONGERY: FITTINGS:	HINGES - 2x100mm M/S STEEL BUTT HINGES PER DOOR LEAF LOCKSET - "SOLID BLESBOK" 460/313 FOUR LEVER LOCKSET.	HINGES - 2x100mm M/S STEEL BUTT PER DOOR LEAF LOCKSET - "SOLID BLESBOK" 460/313 FOUR LEVER LOCKSET.
FINISHES:	PREPARE NEW DOOR & FRAME TO RECEIVE ONE UNDERCOAT PLUS 3/COATS POLYURETHANE VARNISH.	1/UNDERCOAT + 2/COATS PLASCON VELVAGLO PAINT FINISH.
GLASS:	NOT APPLICABLE	NOT APPLICABLE

CONSTRUCTION NOTES

Foundations
A1. Concrete foundations - concrete mix type and with steel reinforcement according to structural engineer's drawings. Top of strip footings to be 340mm minimum below N.G.L. Provide test cubes (1 per 15m³ or 1 per batch). Finished sides and bottoms of trenches to be treated with anti poison of the Prothor 200 SC or other approved type applied at a rate of not less than 5 litres of solution per m² by a firm of specialists in accordance with SANS Specification 1165 and SANS Code of Practice 0124. Concrete to be casted within 24 hours of application. Contractor to provide five year guarantee.
A2. Backfilling and filling under floors - in general, approved filling compacted to at least 93% Mod. AASHTO density in layers of maximum 150mm - refer to engineer's drawings for detail in case of poor soil conditions. Minimum of 170mm filling to be provided above natural or compacted ground level under floors. All filling to be approved by engineer (imported filling to be minimum G5 or G7 material as per engineer's drawings). Compaction tests to be provided at a rate of one test per 125m² filling area under floors per each layer of 150mm compacted filling. Filling under floors to be treated with anti poison of the Prothor 200 SC or other approved type applied at a rate of not less than 5 litres of solution per m² by a firm of specialists in accordance with SANS Specification 1165 and SANS Code of Practice 0124. Concrete to be casted within 24 hours of application. Contractor to provide five year guarantee

Surface beds and floors
B1. Surface bed - concrete mix as described on structural engineer's drawings but minimum 85mm thick on SANS Specification 952 Type C approved USB Green 250 micron waterproofing membrane with laps sealed with pressure sensitive tape. Surface bed cast in alternative sections of maximum 20m² with saw cut joints with joints filled up with polysulfide sealer. All saw cut joints to be done within 24 hours after casting of concrete. Provide 10mm thick bitumen impregnated soft board between all walls and concrete and seal joint with polysulfide sealer. Provide mesh ref. no. 193 as per structural engineer's drawings. Provide test cubes (1 per 15m³ or 1 per batch)
B2. Surface bed on walkways - concrete mix as described on structural engineer's drawings but minimum 85mm thick on SANS Specification 952 Type C approved USB Green 250 micron waterproofing membrane with laps sealed with pressure sensitive tape. Surface bed cast in alternative sections of maximum 20m² with expansion joints with joints filled up with polysulfide sealer. Provide 10mm thick bitumen impregnated soft board between all walls and concrete and seal joint with polysulfide sealer. Provide mesh ref. no. 193 as per structural engineer's drawings. Provide test cubes (1 per 15m³ or 1 per batch)
B3. Screed and floor finish on walkways - Average 30mm thick wood floated 1:4 granolithic screed sloping towards edges. At all external door openings external surface beds must be level with granolithic threshold finish. Finish off edges of screed smooth with edging tool.
B4. Apron - 1200mm wide 15MPa mass concrete apron with wood floated finish. Apron to be cast in alternative sections in lengths of maximum 3m and to have a 1:100 fall away from building. Apron edge to be thickened by 240mm wide x 115mm deep (net) edge excavated in natural or finished ground level

Skirtings
C1. 19 x 76mm Meranti skirting plugged to walls at 400mm c/c with 19mm meranti quadrand bead plated on. Sand down to a smooth finish, stop with Polycell Woodfiller, stain with Plascon Woodcare Stain (W-range)(colour merant), apply one coat Plascon Woodcare Ultra Varnish (X44), thinned with 1:3 mineral turpentine (AZH1) and apply two finishing coats

Walls and structure
D1. External walls - Corobrik face bricks in stretcher bond with 10mm wide x 6mm deep square recessed joints
D2. Brickforce - Brickforce to 115 and 230mm foundation walls - every 2nd course. Superstructure walls - every 6th course. Over openings formed in brickwork as per table below
D3. 75 x 75 x 3mm Thick tubular section steel columns with 250mm girth x 4.5mm thick flat section U-shaped fixing bracket. 200mm long, twice holed and welded to top. 200 x 200 x 10mm thick flat section baseplate, four times holed and welded to bottom. Columns to be fixed to top of brickwork below copings with four M10 x 75mm masonry anchor bolts. Degrease with "Plascon Aquasolv Degreaser (GR1)", remove rust with "Plascon Rust Remover (RR1)", prime with Plascon Metal Primer (UC501) and apply two coats Plascon Enamel Door & Trims High gloss enamel paint - colour as per finishes schedule.
D4. 50 x 228mm Laminated SA Pine beam twice bolted to steel columns. Sand down to a smooth finish, stop with Polycell Woodfiller, provide one coat raw linseed oil thinned with 1:3 mineral turpentine (AZH1), apply one coat Plascon Woodcare Sunproof (Amber - PNW22) suede varnish thinned with 1:3 mineral turpentine (AZH1) and apply two finishing coats Plascon Woodcare Sunproof (Amber - PNW22) suede varnish
D5. Lintel - Corobrik brick-on-edge face brick lintel over all window, door and clear openings with 10 x 6mm square recessed joints
D6. DPC - SANS Specification 852, type B approved 375 micron black dpc in walls at floor level and under all window openings
D7. Internal walls - approved stockbrick walls in stretcher bond above to receive one coat smooth 1:5 cement plaster finished off with one coat Plascon Plaster Primer (UC56) and two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour broken white (EPL314) or French Chartreuse (Y5-D2-3) as per Principal Agent
D8. Internal walls - face brick plinth up to 650mm with approved stockbrick walls in stretcher bond above to receive one coat smooth 1:5 cement plaster finished off with one coat Plascon Plaster Primer (UC56) and two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour as per finishes schedule.
D9. All exposed expansion joints in walls and floors to be filled in with Urochem 205 polysulfide joint sealant after surfaces have been primed with Urochem 614 primer
D10. Expansion joints in walls and ceilings to be covered with 2 x 50mm Migua KF250/30 aluminium cover strips

Window sills
E1. Internal window sills - 15 x 150mm nute-cement window sills, bedded and set flat in 1:4 cement mortar. Prime with one coat Plascon Multi-surface Primer (WUP1) and apply two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour as per finishes schedule
E2. External window sills - Middewit Fynbos Geel face brick-on-edge sloping sill to match walls with 10 x 6mm square recessed joints



Ceilings and cornices
F1. Internal cornice - 19 x 76mm Meranti cornice nailed to walls at 400mm centres maximum. Sand down to a smooth finish, stop with Polycell Woodfiller, stain with Plascon Woodcare Stain (W-range)(colour merant), apply one coat Plascon Woodcare Ultra Varnish (X44), thinned with 1:3 mineral turpentine (AZH1) and apply two finishing coats Plascon Woodcare Ultra (X44) suede varnish to cornice
F2. Ceilings - 6mm Everite Nutec fibre-cement boards nailed to 38 x 38mm SAP brackerding at 400mm centres maximum with galvanised clout nails. Provide H-profile galvanised jointing strips. Jointing strips to be pre-painted. Prime ceilings with one coat Plascon Multi-Surface Primer (WUP1) and finish off with two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour White (EPL30). Provide 100mm thick Aerolite insulation on top of ceilings
F3. Plastered ceiling as per finishes schedule
F4. 610 x 610mm Trap door formed of 50 x 65mm SA pine rebated frame with 38 x 38mm SA pine cross brander covered with ceiling board and fitted flush in opening. Provide 18 x 50mm meranti surround. Trap door and surround to be painted as for ceiling. Trap door opening between trusses to be formed with 38 x 114mm SA pine bearers, nailed to trusses

Roof and fascias
G1. Roof sheeting - 0.58mm Brownbuilt Klip-lok roof sheeting with Globalcoat finish (colour Traffic Green) on 50 x 76mm SAP purlins at maximum 1200mm centres on patent and approved pre-fabricated truss system. Roof sheeting to be done by specialist installer providing a five year guarantee
G2. Ridge and hip flashings - 0.8mm galvanised sheet iron standard factory manufactured FK3 ridge or hip flashing with Globalcoat finish (colour Traffic Green)
G3. Fascia boards - 10 x 300mm Everite Nutec-cement fascia boards screw fixed to truss ends and counter batten with countersunk brass screws. Barge boards - 200 x 80mm Everite socketless barge boards screw fixed to trusses or purlins with countersunk brass screws. Prime fascias and barge boards with one coat Plascon Multi-Surface Primer (WUP1) and finish off with two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour as per finishes schedule.
G4. Truss system - Mi Tek or other approved patent timber pre-fabricated truss system at maximum 1100mm centres with 20 degrees pitch. 50 x 76mm SAP purlins at maximum 1200mm centres. 38 x 114mm SAP wall plate to be carbolineum treated before fixing. Trusses to be secured to walls with 2.5mm diameter galvanised steel wire ties, built into walls minimum 6 courses. Purlins nailed to trusses as well as detailed shop drawings. Shop drawings to be provided to the Principal Agent for approval before manufacturing. All sections in contact with wet trades to be carbolineum treated before fixing in position. Trusses to be secured to walls with 2.5mm diameter galvanised steel wire ties, twice wrapped around and tied around rafters and purlins. All exposed parts of trusses, purlins, etc. to be sanded smooth, seal knots with Plascon Knot Seal (PK2), prime with one coat Plascon Wood Primer (UC2) and apply two coats Plascon Enamel Doors & Trims paint. Colour as per finishes schedule.
G5. Gutters - 100 x 100mm High gutters formed of 0.58mm galvanised sheet iron with Globalcoat finish (colour Gemsbok Sand). All brackets, etc. to be pre-coated with Globalcoat to match colour of gutters
G6. Downpipes - 100mm Diameter downpipes formed of 0.58mm galvanised sheet iron with Globalcoat finish (colour Gemsbok Sand). All holderbats, brackets, etc. to be pre-coated to match colour of downpipes
G7. Barge flashing over barge boards at louvres - 0.8mm galvanised sheet iron standard factory manufactured FK13 barge or gable flashing with Globalcoat finish (colour Traffic Green)
G8. Flashings at bottom of louvres - 0.8mm galvanised sheet iron standard factory manufactured FK8 headwall flashing and FK7 counter flashing with Globalcoat finish (Colour Traffic Green)

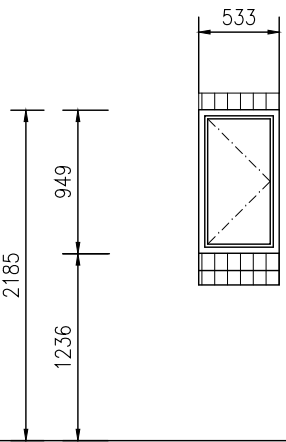
Fittings
H1. Vitrex Model 2400 (code 2404) enameled green folding type writing board with wall mounted centre board 2000 x 1200mm high, two wall mounted side boards each 1000 x 1200mm high & two swing leaves each 1000 x 1200mm high with permanent aluminium chalk rail
H2. Vitrex System 2000 (code 2317) light grey wall mounted pinning board, size 2000 x 1200mm high (2 per classroom)
H3. Greenfield G25 double door steel cupboard with standard baked enameled finish. 760 x 610 x 1700mm high with four shelves (2 per classroom)
H4. Five rows of 18mm Thick laminated SA Pine shelving. 350mm wide, evenly spaced & fixed from underside to 305mm wide Shelco epoxy powder coated steel brackets. Brackets to be fixed to 25mm wide x 2134mm long double slotted epoxy powder coated Shelco type FT6 wall bands, plugged to walls at maximum 600mm c/c. Sand down to a smooth finish, stop with Polycell Woodfiller, apply one coat Plascon Woodcare Ultra Varnish (X44) thinned with 1:3 mineral turpentine (AZH1) then apply two finishing coats Plascon Woodcare Clear Ultra (X44) suede varnish to shelves

Miscellaneous
I1 9 Kg DCP fire extinguisher fitted to 400 x 200 x 22mm thick meranti backplate with chamfered edges. Sand down to a smooth finish, stop with Polycell Woodfiller, apply one coat Plascon Woodcare Ultra (X44) suede varnish thinned with 1:3 mineral turpentine (AZH1) & then apply two finishing coats Plascon Woodcare Ultra (X44) suede varnish to back plate. Provide 150 x 150mm Union AL5066-E08/2AS aluminium fire extinguisher sign and Union AL5066-E08/2AS aluminium red down arrow sign above fire extinguisher
I2 Safex fire hose reel with 30m hose. Supply 152 x 152 x 3mm thick Union AL5066-06ASE05 aluminium engraved red fire hose reel sign & Union AL5066-06ASE08 aluminium engraved red down arrow sign above fire hose reel. Water supply in buildings to fire hose reel to be 25mm galvanised mild steel. Degrease exposed parts of pipes with Plascon Aquasolv Degreaser (GR1), remove any rust with Plascon Rust Remover (RR1), prime with Plascon Metal Primer (UC501) and apply two coats Plascon Enamel Doors & Trims (G-Range) paint - colour Signal Red (G7). Provide 150 x 150mm Union AL5066-E08/2AS aluminium fire sign & Union AL5066-E08/2AS aluminium red down arrow sign above fire hose reel.

- NOTES :
- 1) Workmanship to comply with Standard Specification of materials and methods - to be used - SABS 0400.
 - 2) Light Switch in Disabled toilet to be at 1200 mm above FFL
 - 3) If Step over 300 mm Built in Balustrade
 - 4) Gully positions to be determined as per site prescribed overall drainage design
 - 5) 2 x coats sealant on all exposed trusses (sand off all SABS & other markings)
 - 6) 30mm mineral wool insulation to be installed where there are ceilings
 - 7) Bubble plastic insulation with foil backing to be installed with wire supports in all areas that do not have ceilings
 - 8) West Facing Facades to have standardised aluminium louvers from below eaves to drop of 1200 mm
 - 9) Trusses to be designed in accordance with SABS 0400 & approved by Project Engineers

ISSUED FOR TENDER		
SIGNATURE TABLE		
DISCIPLINE	SIGNATURE	DATE
CLIENT		
PLAN EXAMINER		
FIRE CONTROL		
ENVIRONMENTAL OFFICER		
ROADS / STORMWATER		
WATER AND SANITATION		
ENVIRONMENTAL OFFICER		
REV NO	DATE	DESCRIPTION
REVISIONS		
SIZE ON ORIGINAL DRAWING 100 mm		
 DEPARTMENT OF PUBLIC WORKS, ROADS & INFRASTRUCTURE		
INSTITUTION		
MOKHARI SECONDARY SCHOOL		
INSTITUTION EMIS NUMBER		
906121051		
SERVICE		
NEW BUILDINGS & ALTERATIONS		
CONTRACT - SECTION		
DOCUMENTATION		
DISCIPLINE	PROJECT STAGE	
ARCHITECTURAL	4	
WORK DESCRIPTION - SUB DIVISION		
4 CUBICLE WATERBORNE ABLUTION BLOCK		
DRAWING DESCRIPTION		
DOOR SCHEDULE		
FILE No.		ITEM No.
DESIGN		DRAWN
SCALE	1:100	CHECKED
DATE	RESPONSIBLE NAME	PROFESSIONAL SIGNATURE
2023.06.20	Y.VAHED	7812
DRAWING CO-ORDINATED		
CONSULTANT :		
 Suite 4 No 6 Isarini Office Building 6 Isarini Street, Polokwane, 0999 South Africa Tel: +27 11 085 8645, Fax: +27 11 475 8364, Email: info@rubenreddyarch.co.za Web: www.rubenreddyarch.co.za		
CONTRACTOR :		
CADD SYSTEM	AUTO CADD	FILE NAME
SIZE	DRAWING NUMBER	REV
A 1	2020_67-4WAB- 102	A

WINDOW SCHEDULE:
Scale 1:50.






WINDOW NUMBER:	W1
POSITION:	GUARD ROOM
QTY:	4
WINDOW-FRAME DESCRIPTION:	STANDARD SS INDUSTRIAL TYPE STEEL WINDOW-FRAME CATALOGUE NUMBER (TBC) COMPLETE WITH FITTINGS AS SUPPLY BY MANUFACTURER
WINDOW FURNITURE:	IRON-MONGERY & FITTINGS AS SUPPLY BY WINDOW MANUFACTURER. AND ACCORDING TO ARCHITECTS APPROVAL.
BURGLAR-BARS:	OUT OF 10mm WIDE FLAT-BARS
FINISHES:	1/COAT RED OXIDE PRIMER + 1/COAT UNIVERSAL UNDERCOAT + 2/COATS PLASCON GLOSS ENAMEL PAINT - COLOUR ACCORDING TO ARCHITECT.
GLASS:	4mm THICK CLEAR FLOATED SHEET GLAZING SECURED IN FRAME WITH SABS APPROVED GLAZING PUTTY

CONSTRUCTION NOTES	
Foundations A1. Concrete foundations - concrete mix type and with steel reinforcement according to structural engineer's drawings. Top of strip footings to be 340mm minimum below N.G.L. Provide test cubes (1 per 15m ² or 1 per batch). Finished sides and bottoms of trenches to be treated with ant poison of the Prothor 200 SC or other approved type applied at a rate of not less than 5 litres of solution per m ² by a firm of specialists in accordance with SANS Specification 1165 and SANS Code of Practice 0124. Concrete to be casted within 24 hours of application. Contractor to provide five year guarantee. A2. Backfilling and filling under floors - in general, approved filling compacted to at least 93% Mod. AASHTO density in layers of maximum 150mm - refer to engineer's drawings for detail in case of poor soil conditions. Minimum of 170mm filling to be provided above natural or compacted ground level under floors. All filling to be approved by engineer (imported filling to be minimum G5 or G7 material as per engineer's drawings). Compaction tests to be provided at a rate of one test per 125m ² filling area under floors per each layer of 150mm compacted filling. Filling under floors to be treated with ant poison of the Prothor 200 SC or other approved type applied at a rate of not less than 5 litres of solution per m ² by a firm of specialists in accordance with SANS Specification 1165 and SANS Code of Practice 0124. Concrete to be casted within 24 hours of application. Contractor to provide five year guarantee. Surface beds and floors B1. Surface bed - concrete mix as described on structural engineer's drawings but minimum 85mm thick on SANS Specification 952 Type C approved USB Green 250 micron waterproofing membrane with laps sealed with pressure sensitive tape. Surface bed cast in alternative sections of maximum 20m ² with saw cut joints with joints filled up with polysulfide sealer. All saw cut joints to be done within 24 hours after casting of concrete. Provide 10mm thick bitumen impregnated soft board between all walls and concrete and seal joint with polysulfide sealer. Provide mesh ref. no. 193 as per structural engineer's drawings. Provide test cubes (1 per 15m ² or 1 per batch). B2. Surface bed on walkways - concrete mix as described on structural engineer's drawings but minimum 85mm thick on SANS Specification 952 Type C approved USB Green 250 micron waterproofing membrane with laps sealed with pressure sensitive tape. Surface bed cast in alternative sections of maximum 20m ² with expansion joints with joints filled up with polysulfide sealer. Provide 10mm thick bitumen impregnated soft board between all walls and concrete and seal joint with polysulfide sealer. Provide mesh ref. no. 193 as per structural engineer's drawings. Provide test cubes (1 per 15m ² or 1 per batch). B3. Screed and floor finish on walkways - Average 30mm thick wood floated 1:4 granolithic screed sloping towards edges. At all external door openings external surface beds must be level with granolithic threshold finish. Finish off edges of screed smooth with edging tool. B4. Apron - 1200mm wide 15MPa mass concrete apron with wood floated finish. Apron to be cast in alternative sections in lengths of maximum 3m and to have a 1:100 fall away from building. Apron edge to be thickened by 240mm wide x 115mm deep (net) edge excavated in natural or finished ground level Skirtings C1. 19 x 76mm Meranti skirting plugged to walls at 400mm c/c with 19mm meranti quadrand bead plated on. Sand down to a smooth finish, stop with Polycell Woodfiller, stain with Plascon Woodcare Stain (W-range)(colour meranti), apply one coat Plascon Woodcare Ultra Varnish (X44), thinned with 1:3 mineral turpentine (AZH1) and apply two finishing coats Plascon Woodcare Ultra (X44) suede varnish to skirtings Walls and structure D1. External walls - Corobrik face bricks in stretcher bond with 10mm wide x 6mm deep square recessed joints D2. Brickforce - Brickforce to 115 and 230mm foundation walls - every 2nd course. Superstructure walls - every 6th course. Over openings formed in brickwork as per table below D3. 75 x 75 x 3mm Thick tubular section steel columns with 250mm girth x 4.5mm thick flat section U-shaped fixing bracket, 200mm long, twice holed and welded to top, 200 x 200 x 10mm thick flat section baseplate, four times holed and welded to bottom. Columns to be fixed to top of brickwork below copings with four M10 x 75mm masonry anchor bolts. Degrease with "Plascon Aquasolv Degreaser (GR1)", remove rust with "Plascon Rust Remover (RR1)", prime with Plascon Metal Primer (UC501) and apply two coats Plascon Enamel Door & Trims high gloss enamel paint - colour as per finishes schedule. D4. 50 x 228mm Laminated SA Pine beam twice bolted to steel columns. Sand down to a smooth finish, stop with Polycell Woodfiller, provide one coat raw linseed oil thinned with 1:3 mineral turpentine (AZH1), apply one coat Plascon Woodcare Sunproof (Amber - PNW22) suede varnish thinned with 1:3 mineral turpentine (AZH1) and apply two finishing coats Plascon Woodcare Sunproof (Amber - PNW22) suede varnish D5. Lintel - Corobrik brick-on-edge face brick lintel over all window, door and clear openings with 10 x 6mm square recessed joints D6. Internal walls - approved stockbrick walls in stretcher bond above to receive one coat smooth 1:5 cement plaster finished off with one coat Plascon Plaster Primer (UC56) and two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour broken white (EPL314) or French Chartreuse (Y5-D2-3) as per Principal Agent D7. Internal walls - face brick plinth up to 850mm with approved stockbrick walls in stretcher bond above to receive one coat smooth 1:5 cement plaster finished off with one coat Plascon Plaster Primer (UC56) and two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour as per finishes schedule. D8. All exposed expansion joints in walls and floors to be filled in with Urochem 205 polysulfide joint sealant after surfaces have been primed with Urochem 614 primer D9. Expansion joints in walls and ceilings to be covered with 2 x 50mm Migua KF250/30 aluminium cover strips Window sills E1. Internal window sills - 15 x 150mm nutec-cement window sills, bedded and set flat in 1:4 cement mortar. Prime with one coat Plascon Multi-surface Primer (WUP1) and apply two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour as per finishes schedule E2. External window sills - Middelwit Fynbos Geel face brick-on-edge sloping sill to match walls with 10 x 6mm square recessed joints Ceilings and cornices F1. Internal cornice - 19 x 76mm Meranti cornice nailed to walls at 400mm centres maximum. Sand down to a smooth finish, stop with Polycell Woodfiller, stain with Plascon Woodcare Stain (W-range)(colour meranti), apply one coat Plascon Woodcare Ultra Varnish (X44), thinned with 1:3 mineral turpentine (AZH1) and apply two finishing coats Plascon Woodcare Ultra (X44) suede varnish to cornices F2. Ceilings - 6mm Everite Nutec fibre-cement boards nailed to 38 x 38mm SAP branderling at 400mm centres maximum with galvanised clout nails. Provide H-profile galvanised jointing strips. Jointing strips to be pre-painted. Prime ceilings with one coat Plascon Multi-Surface Primer (WUP1) and finish off with two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour White (EPL30). Provide 100mm thick Aerolite insulation on top of ceilings F3. Plastered ceiling as per finishes schedule F4. 610 x 610mm Trap door formed of 50 x 65mm SA pine rebated frame with 38 x 38mm SA pine cross brander covered with ceiling board and fitted flush in opening. Provide 18 x 50mm meranti surround. Trap door and surround to be painted as for ceiling. Trap door opening between trusses to be formed with 38 x 114mm SA pine bearers, nailed to trusses Roof and fascias G1. Roof sheeting - 0.58mm Brownbuilt Klip-lok roof sheeting with Globalcoat finish (colour Traffic Green) on 50 x 76mm SAP purlins at maximum 1200mm centres on patent and approved pre-fabricated truss system. Roof sheeting to be done by specialist installer providing a five year guarantee G2. Ridge and hip flashings - 0.8mm galvanised sheet iron standard factory manufactured FK3 ridge or hip flashing with Globalcoat finish (colour Traffic Green) G3. Fascia boards - 10 x 300mm Everite Nutec-cement fascia boards screw fixed to truss ends and counter batter with countersunk brass screws. Barge boards - 200 x 80mm Everite socketless barge boards screw fixed to trusses or purlins with countersunk brass screws. Prime fascias and barge boards with one coat Plascon Multi-Surface Primer (WUP1) and finish off with two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour as per finishes schedule. G4. Truss system - MiTek or other approved patent timber pre-fabricated truss system at maximum 1100mm centres with 20 degrees pitch. 50 x 76mm SAP purlins at maximum 1200mm centres. 38 x 114mm SAP wall plate to be carbolineum treated before fixing. Truss manufacturer to provide certificate and guarantee for design and erection of trusses as well as detailed shop drawings. Shop drawings to be provided to the Principal Agent for approval before manufacturing. All sections in contact with wet trades to be carbolineum treated before fixing in position. Trusses to be secured to walls with 2.5mm diameter galvanised steel wire ties, built into walls minimum 6 courses. Purlins nailed to trusses must also be secured with 2.5mm diameter galvanised steel wire, twice wrapped around and tied around rafters and purlins. All exposed parts of trusses, purlins, etc. to be sanded smooth, seal knots with Plascon Knot Seal (PK2), prime with one coat Plascon Wood Primer (UC2) and apply two coats Plascon Enamel Doors & Trims paint. Colour as per finishes schedule. G5. Gutters - 100 x 100mm High gutters formed of 0.58mm galvanised sheet iron with Globalcoat finish (colour Gemsbok Sand). All brackets, etc. to be pre-coated with Globalcoat to match colour of gutters G6. Downpipes - 100mm Diameter downpipes formed of 0.58mm galvanised sheet iron with Globalcoat finish (colour Gemsbok Sand). All holderbats, brackets, etc. to be pre-coated to match colour of downpipes G7. Barge flashing over barge boards at louvres - 0.8mm galvanised sheet iron standard factory manufactured FK13 barge or gable flashing with Globalcoat finish (colour Traffic Green) G8. Flashings at bottom of louvres - 0.8mm galvanised sheet iron standard factory manufactured FK8 headwall flashing and FK7 counter flashing with Globalcoat finish (Colour Traffic Green) Fittings H1. Vitrex Model 2400 (code 2404) enameled green folding type writing board with wall mounted centre board 2000 x 1200mm high, two wall mounted side boards each 1000 x 1200mm high & two swing leaves each 1000 x 1200mm high with permanent aluminium chalk rail H2. Vitrex System 2000 (code 2317) light grey wall mounted pinning board, size 2000 x 1200mm high (2 per classroom) H3. Greenfield G25 double door steel cupboard with standard baked enameled finish, 760 x 610 x 1700mm high with four shelves (2 per classroom) H4. Five rows of 19mm Thick laminated SA Pine shelving, 350mm wide, evenly spaced & fixed from underside to 305mm wide Shelco epoxy powder coated steel brackets. Brackets to be fixed to 25mm wide x 2134mm long double slotted epoxy powder coated Shelco type FT6 wall bands, plugged to walls at maximum 600mm c/c. Sand down to a smooth finish, stop with Polycell Woodfiller, apply one coat Plascon Woodcare Ultra Varnish (X44) thinned with 1:3 mineral turpentine (AZH1) then apply two finishing coats Plascon Woodcare Clear Ultra (X44) suede varnish to shelves Miscellaneous I1. 9 Kg DCP fire extinguisher fitted to 400 x 200 x 22mm thick meranti backplate with chamfered edges. Sand down to a smooth finish, stop with Polycell Woodfiller, apply one coat Plascon Woodcare Ultra (X44) suede varnish thinned with 1:3 mineral turpentine (AZH1) & then apply two finishing coats Plascon Woodcare Ultra (X44) suede varnish to back plate. Provide 150 x 150mm Union AL5066-E08/2AS aluminium red down arrow sign above fire extinguisher I2. Safex fire hose reel with 30m hose. Supply 152 x 152 x 3mm thick Union AL5066-06ASE05 aluminium engraved red fire hose reel sign & Union AL5066-06ASE08 aluminium engraved red down arrow sign above fire hose reel. Water supply in buildings to fire hose reel to be 25mm galvanised mild steel. Degrease exposed parts of pipes with Plascon Aquasolv Degreaser (GR1), remove any rust with Plascon Rust Remover (RR1), prime with Plascon Metal Primer (UC501) and apply two coats Plascon Enamel Doors & trims (G-Range) paint - colour Signal Red (G7). Provide 150 x 150mm Union AL5066-E08/2AS aluminium fire sign & Union AL5066-E08/2AS aluminium red down arrow sign above fire hose reel	

NOTES :

- 1) Workmanship to comply with Standard Specification of materials and methods to be used - SABS 0400
- 2) Light Switch in Disabled toilet to be at 1200 mm above FFL
- 3) If Step over 900 mm Build in Balustrade
- 4) Gully positions to be determined as per site prescribed overall drainage design
- 5) 2 x coats sealant on all exposed trusses (sand off all SABS & other markings)
- 6) 50 mm mineral wool insulation to be installed where there are ceilings. Bubble plastic insulation with foil backing to be installed with wire supports in all areas that do not have ceilings
- 7) West Facing Facades to have standardised aluminium louvers from below eaves to drop of 1200 mm
- 8) Trusses to be designed in accordance with SABS 0400 & approved by Project Engineers

ISSUED FOR TENDER

SIGNATURE TABLE		
DISCIPLINE	SIGNATURE	DATE
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PLAN EXAMINER		
FIRE CONTROL		
ENVIRONMENTAL OFFICER		
ROADS / STORMWATER		
WATER AND SANITATION		
ENVIRONMENTAL OFFICER		
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MOKHARI SECONDARY SCHOOL		
INSTITUTION EMIS NUMBER		
906121051		
SERVICE		
NEW BUILDINGS & ALTERATIONS		
CONTRACT - SECTION		
DOCUMENTATION		
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ARCHITECTURAL	4	
WORK DESCRIPTION - SUB DIVISION		
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WINDOW SCHEDULE		
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DRAWING CO-ORDINATED		
CONSULTANT :		
		
CONTRACTOR :		
CADD SYSTEM	AUTO CAD	FILE NAME
		DRAWING NUMBER
A 1	2020_67-4WAB- 103	A



1 9 Kg KCP fire extinguisher fitted to 400 x 200 x 22mm thick meranti backplate with chamfered edges. Sand down to a smooth finish, stop with Polycol Woodfiller, apply one coat Plascon Woodcare Ultra (X44) suede varnish thinned with 1:3 mineral turpentine (AZH1) & then apply two finishing coats Plascon Woodcare Ultra (X44) suede varnish to back plate. Provide 150 x 150mm Union ALS0606-E02/2AS aluminium fire extinguisher sign and Union ALS0606-E08/2AS aluminium red down arrow sign above fire extinguisher

12 Satisfy fire hose reel with 30m hose. Supply 152 x 152 x 3mm thick aluminium 06AS06-06AS06 aluminium engraved red fire hose reel sign and Union ALS0606-E05/2AS aluminium engraved red down arrow sign above fire hose reel. Water supply in building to be 25mm galvanneal mild steel. Degreaser (GR1), remove any dirt with Plascon Rust Remover (RR1), prime with Plascon Metal Primer (UC501) and apply two coats Plascon Enamel Doors & Trims (G-Range) paint - colour Signal Red (G7). Provide 150 x 150mm Union ALS0606-E05/2AS aluminium fire sign and Union ALS0606-E08/2AS aluminium red down arrow sign above fire hose reel.

Workmanship to comply with Standard Specification of materials and methods to be used - SABS 0400

Light Switch in Disabolted toile to be at 1200 mm above FFL

If Step over 900 mm Built in Bulustrade

Curly positions to be determined as per site prescribed overall drainage design

2 x 2 coats sealant on all exposed trusses (sand off all SABS & other markings)

Mineral wool insulation to be installed where there are ceilings

Plastic insulation with foil backing to be installed with wire supports in all areas that do not have ceilings

West Facing Facades to have standardised aluminium louvers from below windows to drop of 1200 mm

Trusses to be designed in accordance with SABS 0400 & approved by project Engineer

ISSUED FOR TENDER


SIGNATURE TABLE		
DISCIPLINE	SIGNATURE	DATE
CLIENT		
PLAN EXAMINER		
FIRE CONTROL		
ENVIRONMENTAL OFFICER		
ROADS / STORMWATER		
WATER AND SANITATION		
ENVIRONMENTAL OFFICER		

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REV No	DATE :	DESCRIPTION :
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INSTITUTION	
MOKHARI SECONDARY SCHOOL	
INSTITUTION EMIS NUMBER	
906121051	
SERVICE	
NEW BUILDINGS & ALTERATIONS	
CONTRACT - SECTION	
DOCUMENTATION & PROCUREMENT	
DISCIPLINE	PROJECT STAGE
ARCHITECTURAL	4

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FILE No.			ITEM No.
DESIGN			DRAWN
SCALE	1: 100		CHECKED

RESPONSIBLE PROFESSIONAL			
DATE	NAME	SIGNATURE	PR NUMBER
2023.06.20	Y.VAHED		7812

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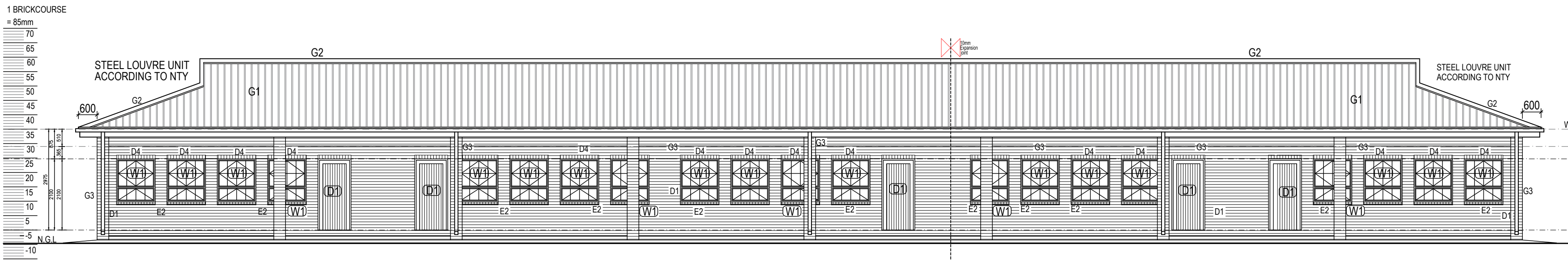
CONSULTANT :

 **ruben reddy architects**

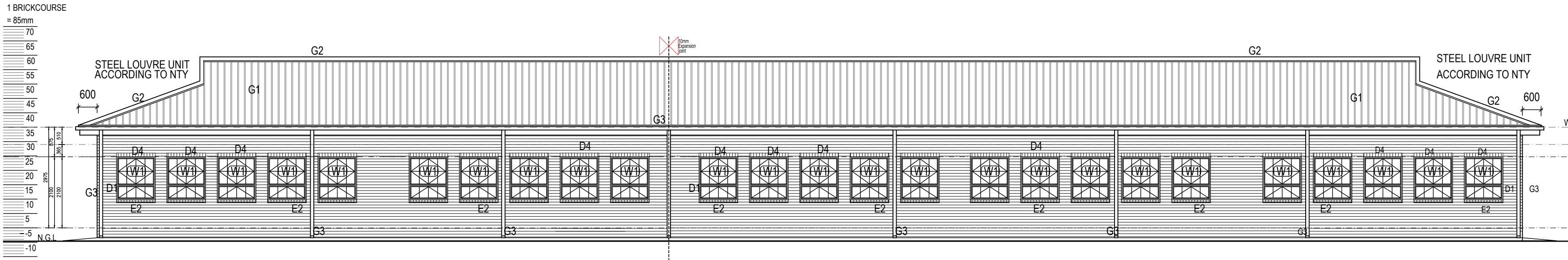
Suite 4 No 6 Iminini Office Building,
6 Iminini Street, Polokwane, 0669 South Africa
Tel: +27 15 065 0645, Fax: +27 11 475 8364,
Email: info@rubenreddyarch.co.za
Web: www.rubenreddyarch.co.za

CONTRACTOR :

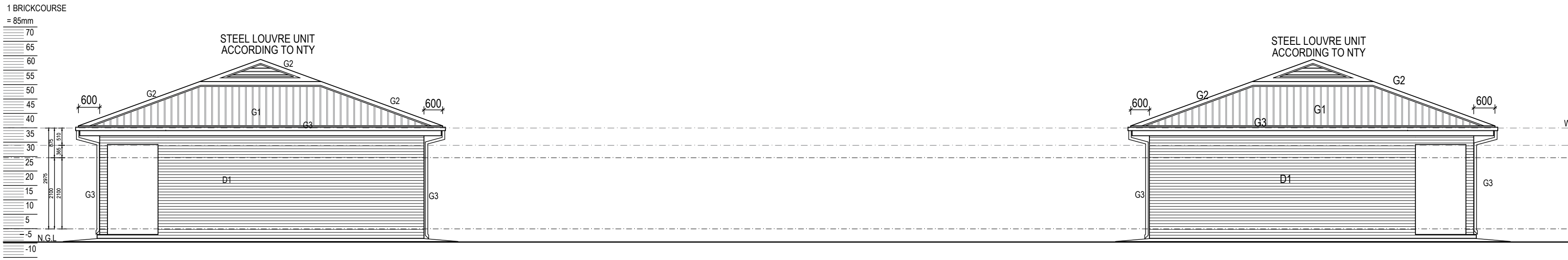
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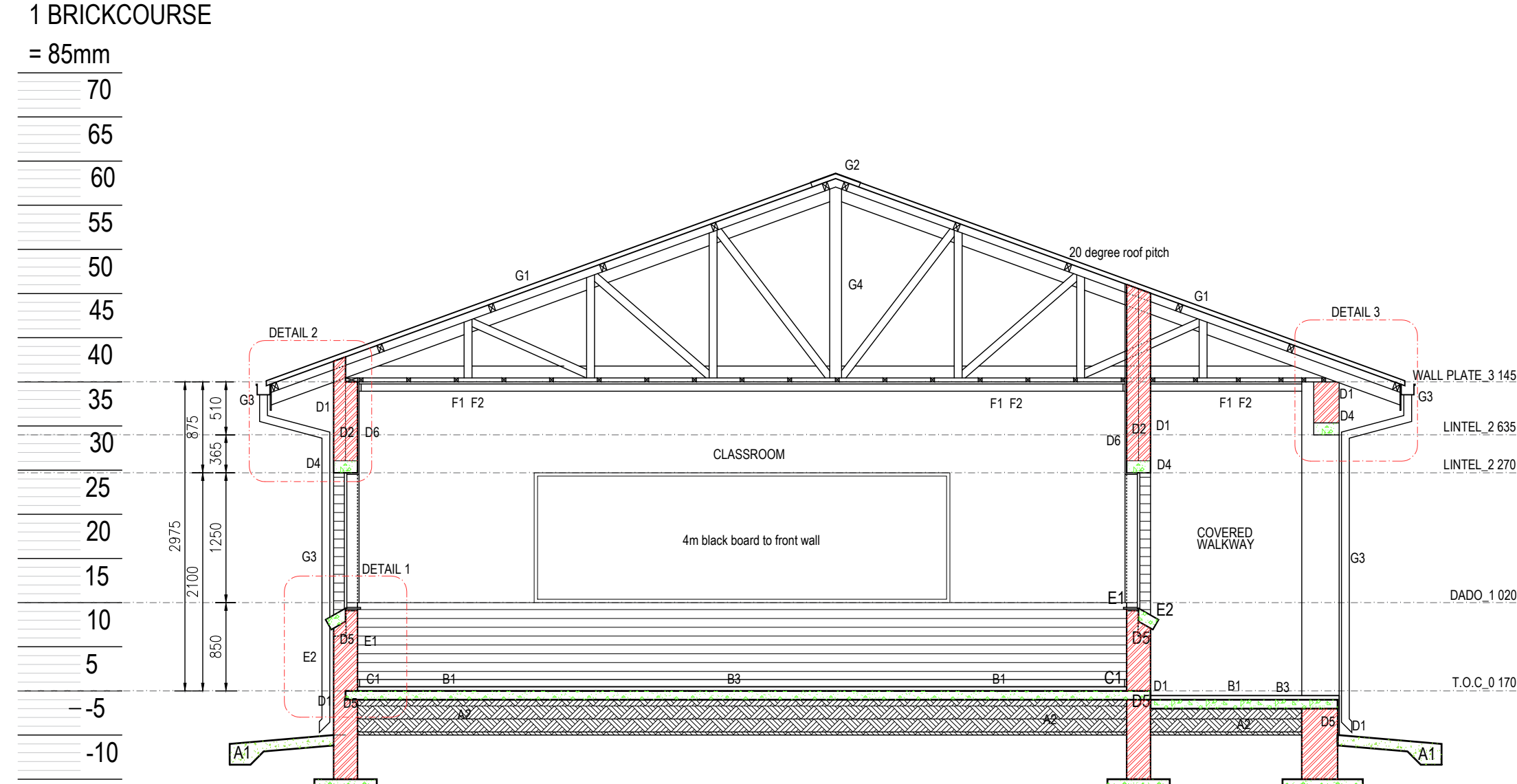
FRONT ELEVATION
SCALE 1 : 100



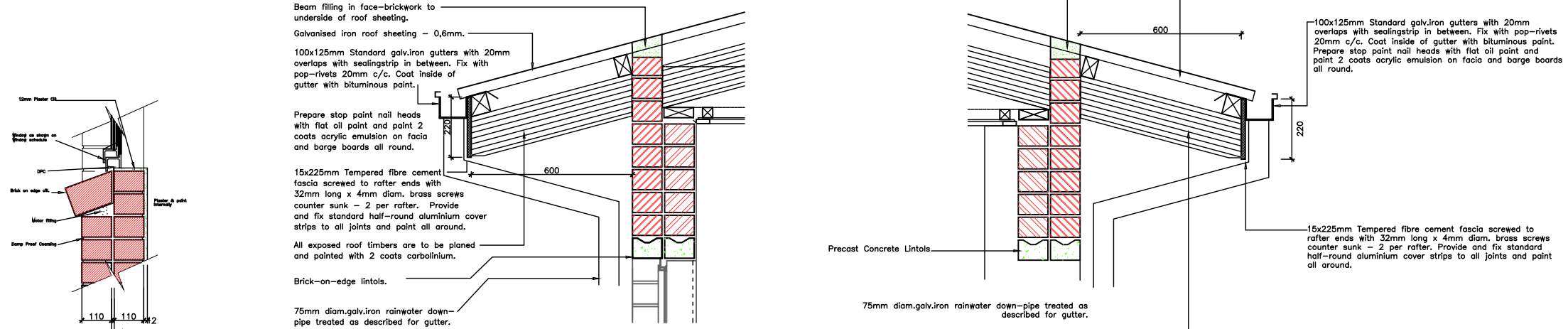
BACK ELEVATION
SCALE 1 : 100



SIDE ELEVATION
SCALE 1 : 100



SECTION A-A
SCALE 1 : 50



DETAIL 1
SCALE 1 : 20



DETAIL 2
SCALE 1 : 20

DETAIL 3
SCALE 1 : 20

DETAIL 3
SCALE 1 : 20

CONSTRUCTION NOTES:

Foundations

A1. Concrete foundations - concrete mix type and with steel reinforcement according to structural engineer's drawings. Top of strip footings to be 340mm minimum below N.G.L. Provide test cubes (1 per 15m³ or 1 per batch). Finished sides and bottoms of trenches to be treated with ant poison of the Prothor 200 SC or other approved type applied at a rate of not less than 5 litres of solution per m² by a firm of specialists in accordance with SANS Specification 1165 and SANS Code of Practice 0124. Concrete to be casted within 24 hours of application. Contractor to provide five year guarantee.

A2. Backfilling and filling under floors - in general, approved filling compacted to at least 93% Mod. AASHTO density in layers of maximum 150mm - refer to engineer's drawings for detail in case of poor soil conditions. Minimum of 170mm filling to be provided above natural or compacted ground level under floors. All filling to be approved by engineer (imported filling to be minimum G5 or G7 material as per engineer's drawings). Compaction tests to be provided at a rate of one test per 125m³ filling area under floors per each layer of 150mm compacted filling. Filling under floors to be treated with ant poison of the Prothor 200 SC or other approved type applied at a rate of not less than 5 litres of solution per m² by a firm of specialists in accordance with SANS Specification 1165 and SANS Code of Practice 0124. Concrete to be casted within 24 hours of application.

Surface beds and floors

B1. Surface bed - concrete mix as described on structural engineer's drawings but minimum 85mm thick on SANS Specification 952 Type C approved USB Green 250 micron waterproofing membrane with laps sealed with pressure sensitive tape. Surface bed cast in alternative sections of maximum 20m² with saw cut joints with joints filled up with polysulfide sealer. All saw cut joints to be done within 24 hours after casting of concrete. Provide 10mm thick bitumen impregnated soft board between all walls and concrete and seal joint with polysulfide sealer. Provide mesh ref. no. 193 as per structural engineer's drawings.

B2. Surface bed on walkways - concrete mix as described on structural engineer's drawings but minimum 85mm thick on SANS Specification 952 Type C approved USB Green 250 micron waterproofing membrane with laps sealed with pressure sensitive tape. Surface bed cast in alternative sections of maximum 20m² with expansion joints with joints filled up with polysulfide sealer. Provide 10mm thick bitumen impregnated soft board between all walls and concrete and seal joint with polysulfide sealer. Provide mesh ref. no. 193 as per structural engineer's drawings. Provide test cubes (1 per 15m³ or 1 per batch).

B3. Screed and floor finish on walkways - Average 30mm thick wood floated 1:4 granolithic screed sloping towards edges. At all external door openings external surface beds must be level with granolithic threshold finish. Finish off edges of screed smooth with edging tool.

B4. Apron - 1200mm wide 15MPa mass concrete apron with wood floated finish. Apron to be cast in alternative sections in lengths of maximum 3m and to have a 1:100 fall away from building. Apron edge to be thickened by 240mm wide x 115mm deep (net) edge excavated in natural or finished ground level.

Skirtings

C1. 19 x 76mm Meranti skirting plugged to walls at 400mm c/c with 19mm meranti quadrand bead plated on. Sand down to a smooth finish, stop with Polycell Woodfiller, stain with Plascon Woodcare Stain (W-range)(colour meranti), apply one coat Plascon Woodcare Ultra Varnish (X44), thinned with 1:3 mineral turpentine (AZH1) and apply two finishing coats Plascon Woodcare Ultra (X44) suede varnish to skirtings.

Walls and structure

D1. External walls - Corobrik face bricks in stretcher bond with 10mm wide x 6mm deep square recessed joints.

D2. Brickforce - Brickforce to 115 and 230mm foundation walls - every 2nd course. Superstructure walls - every 6th course. Over openings formed in brickwork as per table below.

D3. 75 x 75 x 3mm Thick tubular section steel columns with 250mm girth x 4.5mm thick flat section U-shaped fixing bracket, 200mm long, twice holed and welded to top. 200 x 200 x 10mm thick flat section baselate, four times holed and welded to bottom. Columns to be fixed to top of brickwork below copings with four M10 x 75mm masonry anchor bolts. Degrease with "Plascon Aquasolv Degreaser (GR1)", remove rust with "Plascon Rust Remover (RR1)", prime with Plascon Metal Primer (UC501) and apply two coats Plascon Enamel Door & Trims high gloss enamel paint - colour as per finishes schedule.

50 x 228mm Laminated SA Pine beam twice bolted to steel columns. Sand down to a smooth finish, stop with Polycell Woodfiller, provide one coat raw linseed oil thinned with 1:3 mineral turpentine (AZH1), apply one coat Plascon Woodcare Sunproof (Amber - PNW22) suede varnish thinned with 1:3 mineral turpentine (AZH1) and apply two finishing coats Plascon Woodcare Sunproof (Amber - PNW22) suede varnish.

D4. Lintel - Corobrik brick-on-edge face brick lintol over all window, door and clear openings with 10 x 6mm square recessed joints.

D5. DPC - SANS Specification 952 Type B approved 375 micron black dpc in walls at floor level and under all window sills.

D6. Internal walls - approved stockbrick walls in stretcher bond above to receive one coat smooth 1:5 cement plaster finished off with one coat Plascon Plaster Primer (UC56) and two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour broken white (EPL314) or French Chartreuse (Y5-D2-3) as per Principal Agent.

D7. Internal walls - face brick plinth up to 850mm with approved stockbrick walls in stretcher bond above to receive one coat smooth 1:5 cement plaster finished off with one coat Plascon Plaster Primer (UC56) and two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour as per finishes schedule.

D8. All exposed expansion joints in walls and floors to be filled in with Urochem 205 polysulfide joint sealant after surfaces have been primed with Urochem 614 primer.

D9. Expansion joints in walls and ceilings to be covered with 2 x 50mm Migua KF250/30 aluminium cover strips.

Window sills

E1. Internal window sills - 15 x 150mm nute-cement window sills, bedded and set flat in 1:4 cement mortar. Prime with one coat Plascon Multi-surface Primer (WUP1) and apply two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour as per finishes schedule.

E2. External window sills - Middeltwit Fyntbos Geel face brick-on-edge sloping sill to match walls with 10 x 6mm square recessed joints.

Ceilings and cornices

F1. Internal cornice - 19 x 76mm Meranti cornice nailed to walls at 400mm centres maximum. Sand down to a smooth finish, stop with Polycell Woodfiller, stain with Plascon Woodcare Stain (W-range)(colour meranti), apply one coat Plascon Woodcare Ultra Varnish (X44), thinned with 1:3 mineral turpentine (AZH1) and apply two finishing coats Plascon Woodcare Ultra (X44) suede varnish to cornices.

F2. Ceilings - 6mm Everite Nute-cement fibre-cement boards nailed to 38 x 38mm SAP branding at 400mm centres maximum with galvanised clout nails. Provide H-profile galvanised jointing strips. Jointing strips to be pre-painted. Prime ceilings with one coat Plascon Multi-surface Primer (WUP1) and apply two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour White (EPL30). Provide 100mm thick Aerolite insulation on top of ceilings.

F3. Plastered ceiling as per finishes schedule.

F4. 610 x 610mm Trap door formed of 50 x 65mm SA pine rebated frame with 38 x 38mm SA pine cross brander covered with ceiling board and fitted flush in opening. Provide 18 x 50mm meranti surround. Trap door and surround to be painted as for ceiling. Trap door opening between trusses to be formed with 38 x 114mm SA pine bearers, nailed to trusses.

Roof and fascias

G1. Roof sheeting - 0.58mm Brownbuilt Klip-lok roof sheeting with Globalcoat finish (colour Traffic Green) on 50 x 76mm SAP purlins at maximum 1200mm centres on patent and approved pre-fabricated truss system. Roof sheeting to be done by specialist installer providing a five year guarantee.

G2. Ridge and hip flashings - 0.8mm galvanised sheet iron standard factory manufactured FK3 ridge or hip flashing with Globalcoat finish (colour Traffic Green).

G3. Fascia boards - 10 x 300mm Everite Nute-cement fascia boards screw fixed to truss ends and counter batten with countersunk brass screws. Barge boards - 200 x 80mm Everite socketless barge boards screw fixed to trusses or purlins with countersunk brass screws. Prime fascias and barge boards with one coat Plascon Multi-surface Primer (WUP1) and finish off with two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour as per finishes schedule.

G4. Truss system - MITek or other approved patent timber pre-fabricated truss system at maximum 1100mm centres with 20 degrees pitch. 50 x 76mm SAP purlins at maximum 1200mm centres. 38 x 114mm SAP wall plate to be carboliteum treated before fixing. Truss manufacturer to provide certificate and guarantee for design and erection of trusses as well as detailed shop drawings. Shop drawings to be provided to the Principal Agent for approval before manufacturing. All sections in contact with wet trades to be carboliteum treated before fixing in position. Trusses to be secured to walls with 2.5mm diameter galvanised steel wire ties, built into walls minimum 6 courses. Purlins nailed to trusses must also be secured with 2.5mm diameter galvanised steel wire, twice wrapped around and tied around rafters and purlins. All exposed parts of trusses, purlins, etc. to be sanded smooth, seal knots with Plascon Knot Seal (PK2), prime with one coat Plascon Wood Primer (UC2) and apply two coats Plascon Enamel Doors & Trims paint. Colour as per finishes schedule.

G5. Gutters - 100 x 100mm high gutters formed of 0.58mm galvanised sheet iron with Globalcoat finish (colour Gemsbok Sand). All brackets, etc. to be pre-coated with Globalcoat to match colour of gutters.

G6. Downpipes - 100mm Diameter downpipes formed of 0.58mm galvanised sheet iron with Globalcoat finish (colour Gemsbok Sand). All holderbats, brackets, etc. to be pre-coated to match colour of downpipes.

G7. Barge flashing over barge boards at louvres - 0.8mm galvanised sheet iron standard factory manufactured FK13 barge or gable flashing with Globalcoat finish (colour Traffic Green).

G8. Flashings at bottom of louvres - 0.8mm galvanised sheet iron standard factory manufactured FK8 headwall flashing and FK7 counter flashing with Globalcoat finish (Colour Traffic Green).

Fittings

H1. Vitrex Model 2400 (code 2404) enameled green folding type writing board with wall mounted centre board 2000 x 1200mm high, two wall mounted side boards each 1000 x 1200mm high & two swing leaves each 1000 x 1200mm high with permanent aluminium chalk rail.

H2. Vitrex System 2000 (code 2317) light grey wall mounted pinning board, size 2000 x 1200mm high (2 per classroom).

H3. Greenfield G25 double door steel cupboard with standard baked enameled finish, 760 x 610 x 1700mm high with four shelves (2 per classroom).

H4. Five rows of 19mm Thick laminated SA Pine shelving, 350mm wide, evenly spaced & fixed from underside to 305mm wide Shelco epoxy powder coated steel brackets. Brackets to be fixed to 25mm wide x 2134mm long double slotted epoxy powder coated Shelco type FT6 wall bands, plugged to walls at maximum 600mm c/c. Sand down to a smooth finish, stop with Polycell Woodfiller, apply one coat Plascon Woodcare Ultra Varnish (X44) thinned with 1:3 mineral turpentine (AZH1) then apply two finishing coats Plascon Woodcare Clear Ultra (X44) suede varnish to shelves.

Miscellaneous

I1 9 Kg DCP fire extinguisher fitted to 400 x 200 x 22mm thick meranti backplate with chamfered edges. Sand down to a smooth finish, stop with Polycell Woodfiller, apply one coat Plascon Woodcare Ultra (X44) suede varnish thinned with 1:3 mineral turpentine (AZH1) & then apply two finishing coats Plascon Woodcare Ultra (X44) suede varnish to back plate. Provide 150 x 150mm Union AL5066-E06/2AS aluminium fire extinguisher sign and Union AL5066-E08/2AS aluminium red down arrow sign above fire extinguisher.

I2 Safex fire hose reel with 30m hose. Supply 152 x 152 x 3mm thick Union AL5066-06ASE05 aluminium engraved red fire hose reel sign & Union AL5066-06ASE08 aluminium engraved red down arrow sign above fire hose reel. Water supply in buildings to fire hose reel to be 25mm exposed parts of pipes with Plascon Aquasolv Degreaser (GR1), remove any rust with Plascon Rust Remover (RR1), prime with Plascon Metal Primer (UC501) and apply two coats Plascon Enamel Doors & trims (G-Range) paint - colour Signal Red (G7). Provide 150 x 150mm Union AL5066-E05/2AS aluminium thr sign & Union AL5066-E08/2AS aluminium red down arrow sign above fire hose reel.

NOTES :

- 1) Workmanship to comply with Standard Specification of materials and methods - to be used - SABS 0400.
- 2) Light Switch in Disabled toilet to be at 1200 mm above FFL.
- 3) If Step over 900 mm Build in Balustrade.
- 4) Gully positions to be determined as per site prescribed overall drainage design.
- 5) 2 x coats sealant on all exposed trusses (sand off all SABS & other markings).
- 6) 50mm mineral wool insulation to be installed where there are ceilings.
- 7) Bubble plastic insulation with foil backing to be installed with wire supports in all areas that do not have ceilings.
- 8) West Facing Facades - to have standardised aluminium louvers from below eaves to drop of 1200 mm.
- 9) Trusses to be designed in accordance with SABS 0400 & approved by Project Engineers.

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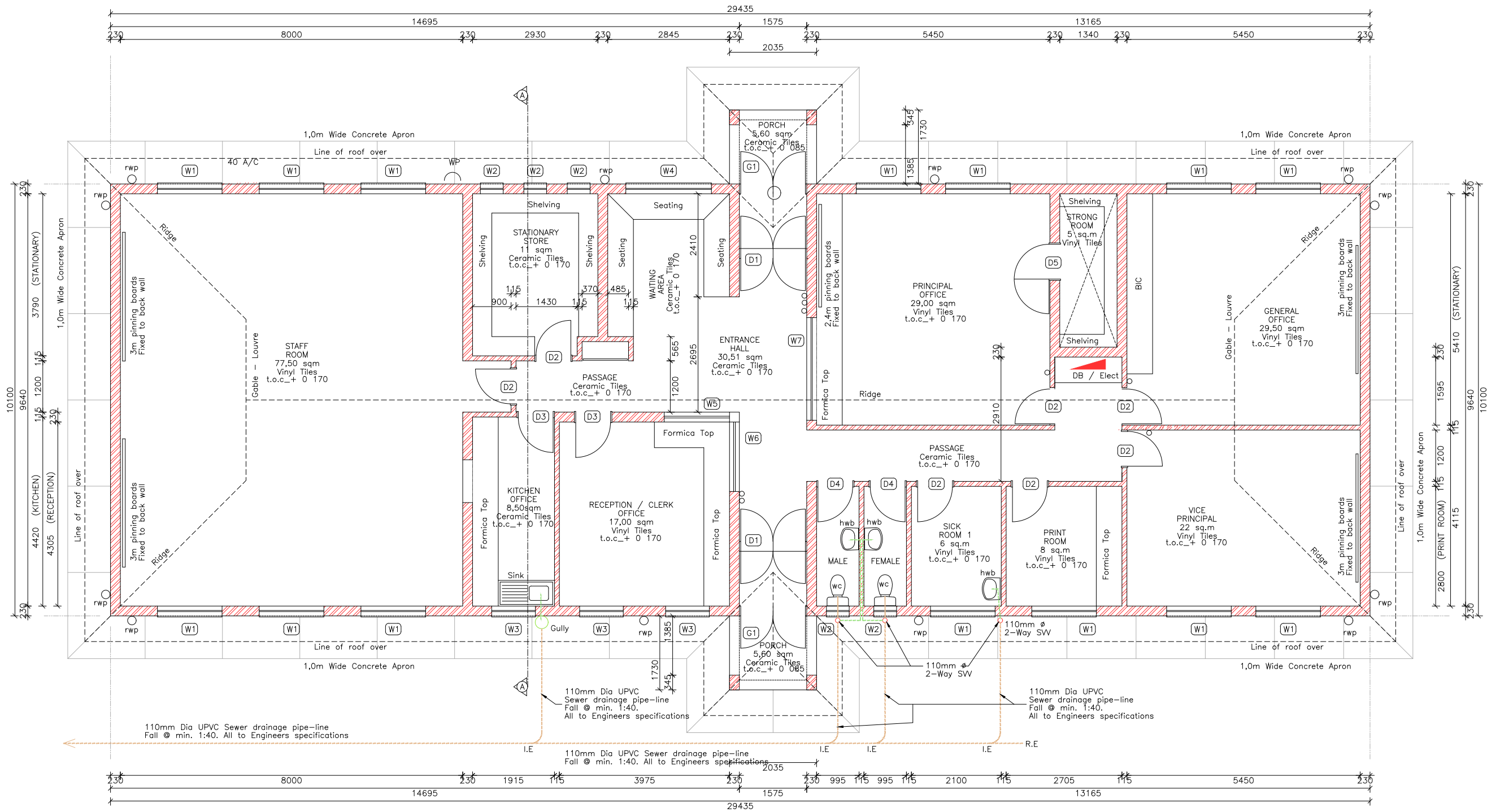
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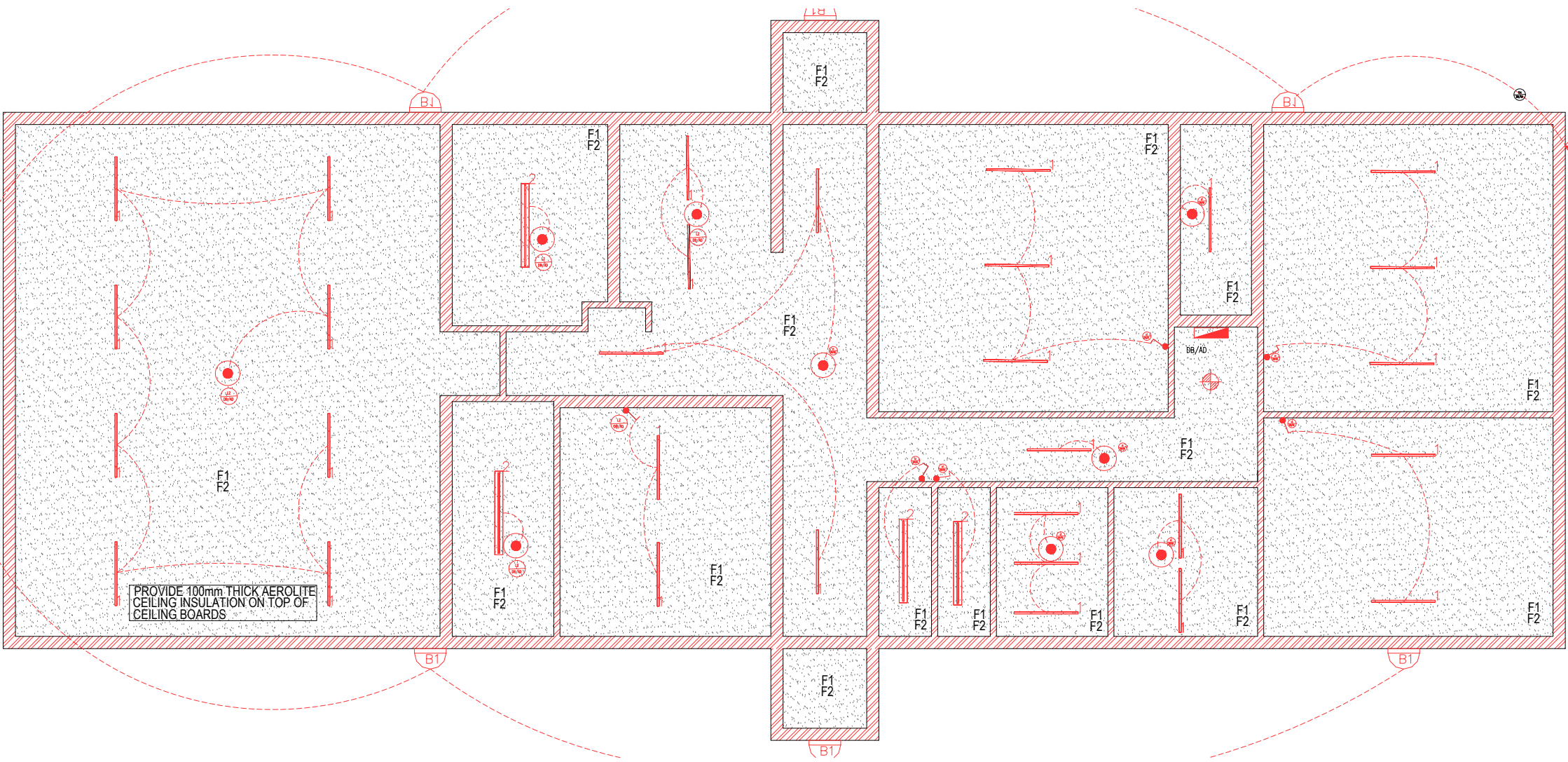
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DOCUMENTATION & PROCUREMENT	
DISCIPLINE	PROJECT STAGE
ARCHITECTURAL	4
WORK DESCRIPTION - SUB DIVISION	
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DRAWING DESCRIPTION	
ELEVATIONS & SECTIONS	

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SCALE	CHECKED
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CONSULTANT :	
ruben reddy architects	
Suite 4 No 8 Temini Office Building 6 Temini Street, P.O. Box 1000, 2000 South Africa Tel: +27 15 065 0645, Fax: +27 11 475 8364, Email: info@rubenreddyarch.co.za Web: www.rubenreddyarch.co.za	
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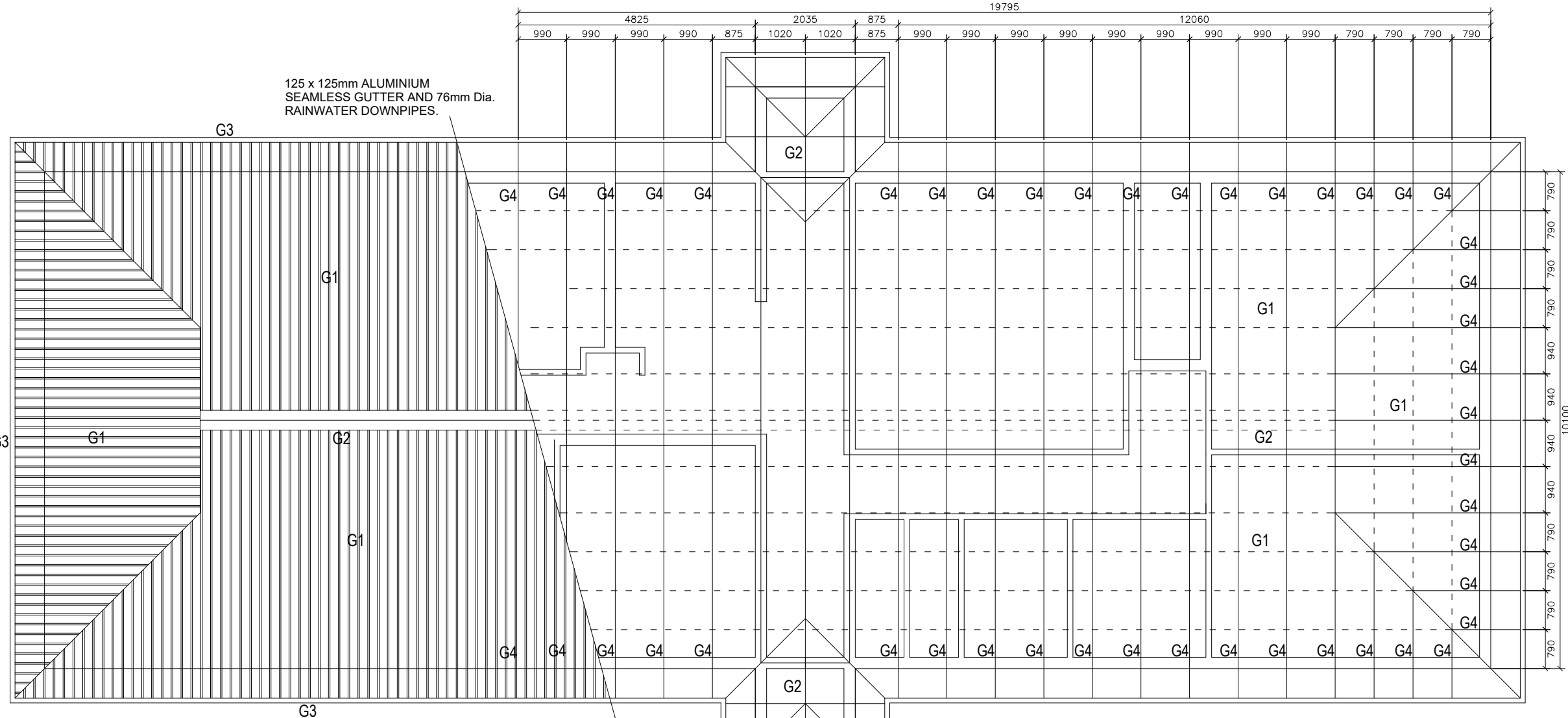
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FLOOR PLAN
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CEILING PLAN
SCALE 1 : 100



ROOF PLAN
SCALE 1 : 100

CONSTRUCTION NOTES:

Foundations
A1. Concrete foundations - concrete mix type and with steel reinforcement according to structural engineer's drawings. Top of strip footings to be 340mm minimum below N.G.L. Provide test cubes (1 per 15m² or 1 per batch). Finished sides and bottoms of trenches to be treated with ant poison of the Prothor 200 SC or other approved type applied at a rate of not less than 5 litres of solution per m² by a firm of specialists in accordance with SANS Specification 1165 and SANS Code of Practice 0124.
Concrete to be casted within 24 hours of application. Contractor to provide five year guarantee.
A2. Backfilling and filling under floors - in general, approved filling compacted to at least 93% Mod. AASHTO density in layers of maximum 150mm - refer to engineer's drawings for detail in case of poor soil conditions. Minimum of 170mm filling to be provided above natural or compacted ground level under floors. All filling to be approved by engineer (imported filling to be minimum G5 or G7 material as per engineer's drawings). Compaction tests to be provided at a rate of one test per 125m² filling area under floors per each layer of 150mm compacted filling. Filling under floors to be treated with ant poison of the Prothor 200 SC or other approved type applied at a rate of not less than 5 litres of solution per m² by a firm of specialists in accordance with SANS Specification 1165 and SANS Code of Practice 0124. Concrete to be casted within 24 hours of application.
Surface beds and floors
B1. Surface bed - concrete mix as described on structural engineer's drawings but minimum 85mm thick on SANS Specification 952 Type C approved USB Green 250 micron waterproofing membrane with laps sealed with pressure sensitive tape. Surface bed cast in alternative sections of maximum 20m² with saw cut joints with joints filled up with polysulfide sealer. All saw cut joints to be done within 24 hours after casting of concrete. Provide 10mm thick bitumen impregnated soft board between all walls and concrete and seal joint with polysulfide sealer. Provide mesh ref. no. 193 as per structural engineer's drawings.
Provide test cubes (1 per 15m² or 1 per batch)
B2. Surface bed on walkways - concrete mix as described on structural engineer's drawings but minimum 85mm thick on SANS Specification 952 Type C approved USB Green 250 micron waterproofing membrane with laps sealed with pressure sensitive tape. Surface bed cast in alternative sections of maximum 20m² with expansion joints with joints filled up with polysulfide sealer. Provide 10mm thick bitumen impregnated soft board between all walls and concrete and seal joint with polysulfide sealer. Provide mesh ref. no. 193 as per structural engineer's drawings. Provide test cubes (1 per 15m² or 1 per batch)
B3. Screed and floor finish on walkways - Average 30mm thick wood floated 1:4 granolithic screed sloping towards edges. At all external door openings external surface beds must be level with granolithic threshold finish. Finish off edges of screed smooth with edging tool
B4. Apron - 1200mm wide 15MPa mass concrete apron with wood floated finish. Apron to be cast in alternative sections in lengths of maximum 3m and to have a 1:100 fall away from building. Apron edge to be thickened by 240mm wide x 115mm deep (net) edge excavated in natural or finished ground level
Skirtings
C1. 19 x 76mm Meranti skirting plugged to walls at 400mm c/c with 19mm meranti quadrand bead plated on. Sand down to a smooth finish, stop with Polycell Woodfiller, stain with Plascon Woodcare Stain (W-range)(colour meranti), apply one coat Plascon Woodcare Ultra Varnish (X44), thinned with 1:3 mineral turpentine (AZH1) and apply two finishing coats Plascon Woodcare Ultra (X44) suede varnish to skirtings
Walls and structure
D1. External walls - Corobrik face bricks in stretcher bond with 10mm wide x 6mm deep square recessed joints
D2. Brickforce - Brickforce to 115 and 230mm foundation walls - every 2nd course. Superstructure walls - every 6th course. Over openings formed in brickwork as per table below
D3. 75 x 75 x 3mm Thick tubular section steel columns with 250mm girth x 4.5mm thick flat section U-shaped fixing bracket, 200mm long, twice holed and welded to top, 200 x 200 x 10mm thick flat section baffle plate, four times holed and welded to bottom. Columns to be fixed to top of brickwork below copings with four M10 x 75mm masonry anchor bolts. Degrease with "Plascon Aqualsoy Degreaser (GR1)", remove rust with "Plascon Rust Remover (RR1)", prime with Plascon Metal Primer (UC501) and apply two coats Plascon Enamel Door & Trims high gloss enamel paint - colour as per finishes schedule. 50 x 228mm Laminated SA Pine beam twice bolted to steel columns. Sand down to a smooth finish, stop with Polycell Woodfiller, provide one coat raw linseed oil thinned with 1:3 mineral turpentine (AZH1), apply one coat Plascon Woodcare Sunproof (Amber - PNW22) suede varnish thinned with 1:3 mineral turpentine (AZH1) and apply two finishing coats Plascon Woodcare Sunproof (Amber - PNW22) suede varnish
D4. Lintol - Corobrik brick-on-edge face brick lintol over all window, door and clear openings with 10 x 6mm square recessed joints
D5. DPC - SANS Specification 952 Type B approved 375 micron black dpc in walls at floor level and under all window sills
D6. Internal walls - approved stockbrick walls in stretcher bond above to receive one coat smooth 1:5 cement plaster finished off with one coat Plascon Plaster Primer (UC56) and two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour broken white (EPL314) or French Chartreuse (Y5-D2-3) as per Principal Agent
D7. Internal walls - face brick plinth up to 850mm with approved stockbrick walls in stretcher bond above to receive one coat smooth 1:5 cement plaster finished off with one coat Plascon Plaster Primer (UC56) and two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour as per finishes schedule.
D8. All exposed expansion joints in walls and floors to be filled in with Urochem 205 polysulfide joint sealant after surfaces have been primed with Urochem 614 primer
D9. Expansion joints in walls and ceilings to be covered with 2 x 50mm Migua KF250/30 aluminium cover strips
Window sills
E1. Internal window sills - 15 x 150mm nutec-cement window sills, bedded and set flat in 1:4 cement mortar. Prime with one coat Plascon Multi-surface Primer (WUP1) and apply two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour as per finishes schedule
E2. External window sills - Middelitwit Fyntbos Geel face brick-on-edge sloping sill to match walls with 10 x 6mm square recessed joints
Ceilings and cornices
F1. Internal cornice - 19 x 76mm Meranti cornice nailed to walls at 400mm centres maximum. Sand down to a smooth finish, stop with Polycell Woodfiller, stain with Plascon Woodcare Stain (W-range)(colour meranti), apply one coat Plascon Woodcare Ultra Varnish (X44), thinned with 1:3 mineral turpentine (AZH1) and apply two finishing coats Plascon Woodcare Ultra (X44) suede varnish to cornices
F2. Ceilings - 6mm Everite Nutek fibre-cement boards nailed to 38 x 38mm SAP brander at 400mm centres maximum with galvanised clout nails. Provide H-profile galvanised jointing strips. Jointing strips to be pre-painted. Prime ceilings with one coat Plascon Multi-Surface Primer (WUP1) and finish off with two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour White (EPL30). Provide 100mm thick Aerolite insulation on top of ceilings
F3. Plastered ceiling as per finishes schedule
F4. 610 x 610mm Trap door formed of 50 x 65mm SA pine rebated frame with 38 x 38mm SA pine cross brander covered with ceiling board and fitted flush in opening. Provide 18 x 50mm meranti surround. Trap door and surround to be painted as for ceiling. Trap door opening between trusses to be formed with 38 x 114mm SA pine bearers, nailed to trusses
Roof and fascias
G1. Roof sheeting - 0.58mm Brownbuilt Klip-lok roof sheeting with Globalcoat finish (colour Traffic Green) on 50 x 76mm SAP purlins at maximum 1200mm centres on patent and approved pre-fabricated truss system. Roof sheeting to be done by specialist installer providing a five year guarantee
G2. Ridge and hip flashings - 0.8mm galvanised sheet iron standard factory manufactured FK3 ridge or hip flashing with Globalcoat finish (colour Traffic Green)
G3. Fascia boards - 10 x 300mm Everite Nutek-cement fascia boards screw fixed to truss ends and counter batten with countersunk brass screws. Barge boards - 200 x 80mm Everite socketless barge boards screw fixed to trusses or purlins with countersunk brass screws. Prime fascias and barge boards with one coat Plascon Multi-Surface Primer (WUP1) and finish off with two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour as per finishes schedule
G4. Truss system - MITek or other approved patent pre-fabricated truss system at maximum 1100mm centres with 20 degrees pitch, 50 x 76mm SAP purlins at maximum 1200mm centres, 38 x 114mm SAP wall plate to be carbolineum treated before fixing. Truss manufacturer to provide certificate and guarantee for design and erection of trusses as well as detailed shop drawings. Shop drawings to be provided to the Principal Agent for approval before manufacturing. All sections in contact with wet trades to be carbolineum treated before fixing in position. Trusses to be secured to walls with 2.5mm diameter galvanised steel wire ties, built into walls minimum 6 courses. Purlins nailed to trusses must also be secured with 2.5mm diameter galvanised steel wire, twice wrapped around and tied around rafters and purlins. All exposed parts of trusses, purlins, etc. to be sanded smooth, seal knots with Plascon Knot Seal (PK2), prime with one coat Plascon Wood Primer (UC2) and apply two coats Plascon Enamel Doors & Trims paint. Colour as per finishes schedule.
G5. Gutters - 100 x 100mm high gutters formed of 0.58mm galvanised sheet iron with Globalcoat finish (colour Gemsbok Sand). All brackets, etc. to be pre-coated with Globalcoat to match colour of gutters
G6. Downpipes - 100mm Diameter downpipes formed of 0.58mm galvanised sheet iron with Globalcoat finish (colour Gemsbok Sand). All holderbats, brackets, etc. to be pre-coated to match colour of downpipes
G7. Barge flashing over barge boards at louvres - 0.8mm galvanised sheet iron standard factory manufactured FK13 barge or gable flashing with Globalcoat finish (colour Traffic Green)
G8. Flashings at bottom of louvres - 0.8mm galvanised sheet iron standard factory manufactured FK8 headwall flashing and FK7 counter flashing with Globalcoat finish (Colour Traffic Green)
Fittings
H1. Vitrex Model 2400 (code 2404) enameled green folding type writing board with wall mounted centre board 2000 x 1200mm high, two wall mounted side boards each 1000 x 1200mm high & two swing leaves each 1000 x 1200mm high with permanent aluminium chalk rail
H2. Vitrex System 2000 (code 2317) light grey wall mounted pinning board, size 2000 x 1200mm high (2 per classroom)
H3. Greenfield G25 double door steel cupboard with standard baked enameled finish, 760 x 610 x 1700mm high with four shelves (2 per classroom)
H4. Five rows of 19mm Thick laminated SA Pine shelving, 350mm wide, evenly spaced & fixed from underside to 305mm wide Shelco epoxy powder coated steel brackets. Brackets to be fixed to 25mm wide x 2134mm long double slotted epoxy powder coated Shelco type FT6 wall bands, plugged to walls at maximum 600mm c/c. Sand down to a smooth finish, stop with Polycell Woodfiller, apply one coat Plascon Woodcare Ultra Varnish (X44) thinned with 1:3 mineral turpentine (AZH1) then apply two finishing coats Plascon Woodcare Clear Ultra (X44) suede varnish to shelves
Miscellaneous
I1 9 Kg DCP fire extinguisher fitted to 400 x 200 x 22mm thick meranti backplate with chamfered edges. Sand down to a smooth finish, stop with Polycell Woodfiller, apply one coat Plascon Woodcare Ultra (X44) suede varnish thinned with 1:3 mineral turpentine (AZH1) & then apply two finishing coats Plascon Woodcare Ultra (X44) suede varnish to back plate. Provide 150 x 150mm Union AL5066-E06/2AS aluminium fire extinguisher sign and Union AL5066-E08/2AS aluminium red down arrow sign above fire extinguisher
I2 Safex fire hose reel with 30m hose. Supply 152 x 152 x 3mm thick Union AL5066-06ASE05 aluminium engraved red fire hose reel sign & Union AL5066-06ASE08 aluminium engraved red down arrow sign above fire hose reel. Water supply in buildings to fire hose reel to be 25mm galvanised mild steel. Degrease exposed parts of pipes with Plascon Aqualsoy Degreaser (GR1), remove any rust with Plascon Rust Remover (RR1), prime with Plascon Metal Primer (UC501) and apply two coats Plascon Enamel Doors & trims (G-Range) paint - colour Signal Red (G7). Provide 150 x 150mm Union AL5066-E05/2AS aluminium thr sign and Union AL5066-E08/2AS aluminium red down arrow sign above fire hose reel.

NOTES :

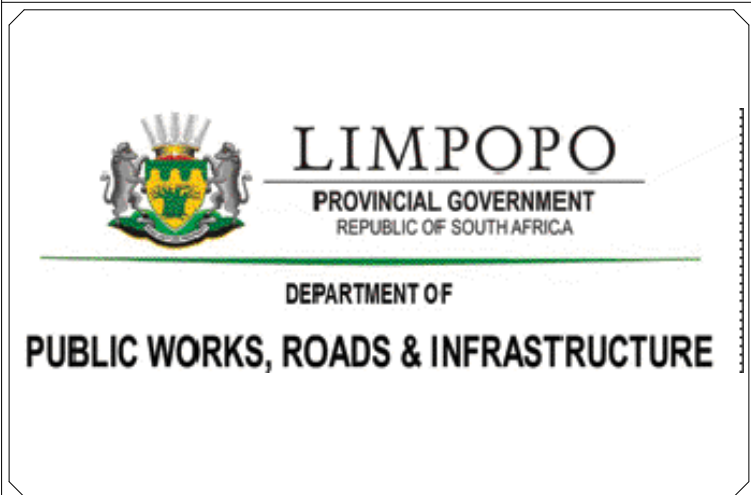
- 1) Workmanship to comply with Standard Specification of materials and methods - to be used - SABS 0400
- 2) Light Switch in Disabled toilet to be at 1200 mm above FFL
- 3) If Step over 900 mm Build in Balustrade
- 4) Gully positions to be determined as per site prescribed overall drainage design
- 5) 2 x coats sealant on all exposed trusses (sand off all SABS & other markings)
- 6) 50 mm mineral wool insulation to be installed where there are ceilings
- 7) West Facing Facades to have standardised aluminium louvers from below eaves to drop of 1200 mm
- 8) Trusses to be designed in accordance with SABS 0400 & approved by Project Engineers

ISSUED FOR TENDER

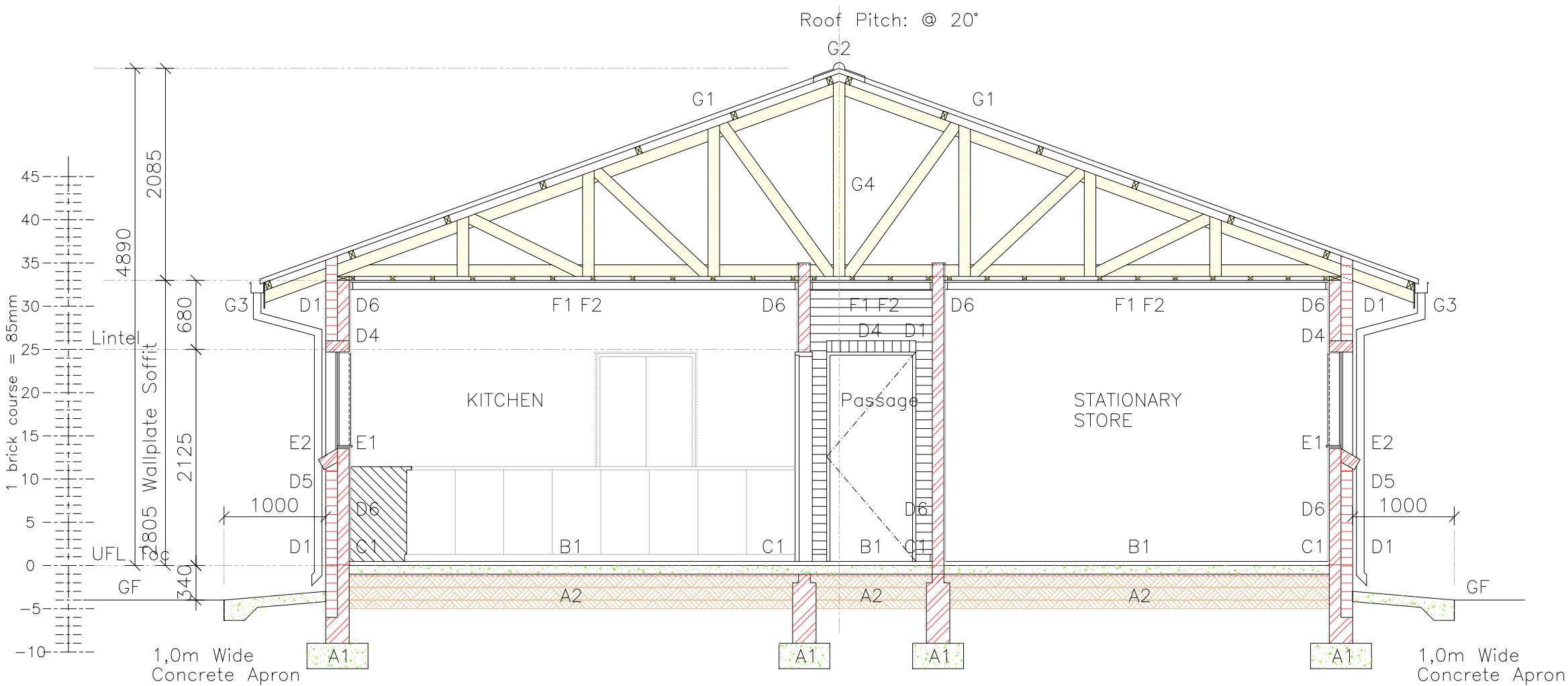
SIGNATURE TABLE

DISCIPLINE	SIGNATURE	DATE
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PLAN EXAMINER		
FIRE CONTROL		
ENVIRONMENTAL OFFICER		
ROADS / STORMWATER		
WATER AND SANITATION		
ENVIRONMENTAL OFFICER		

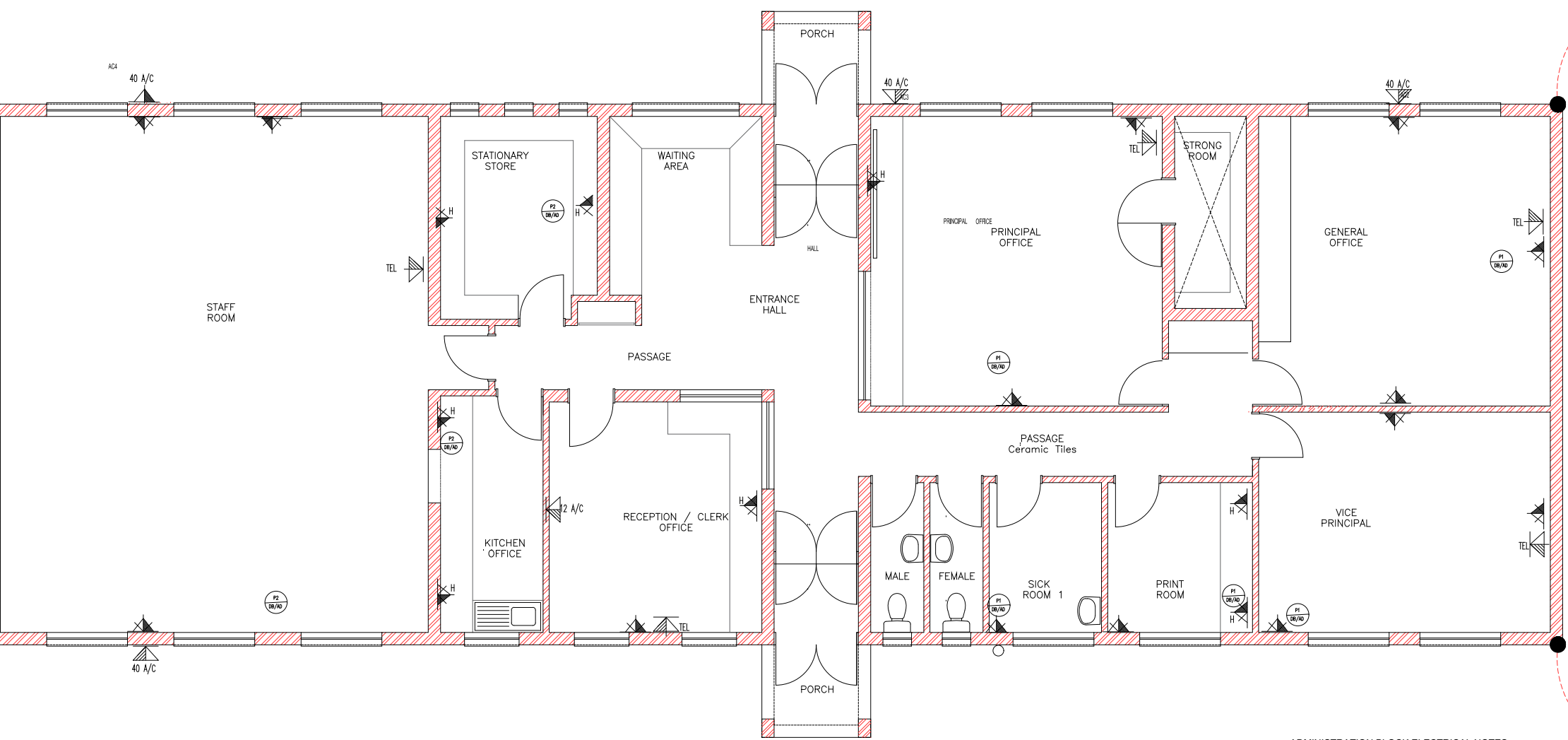
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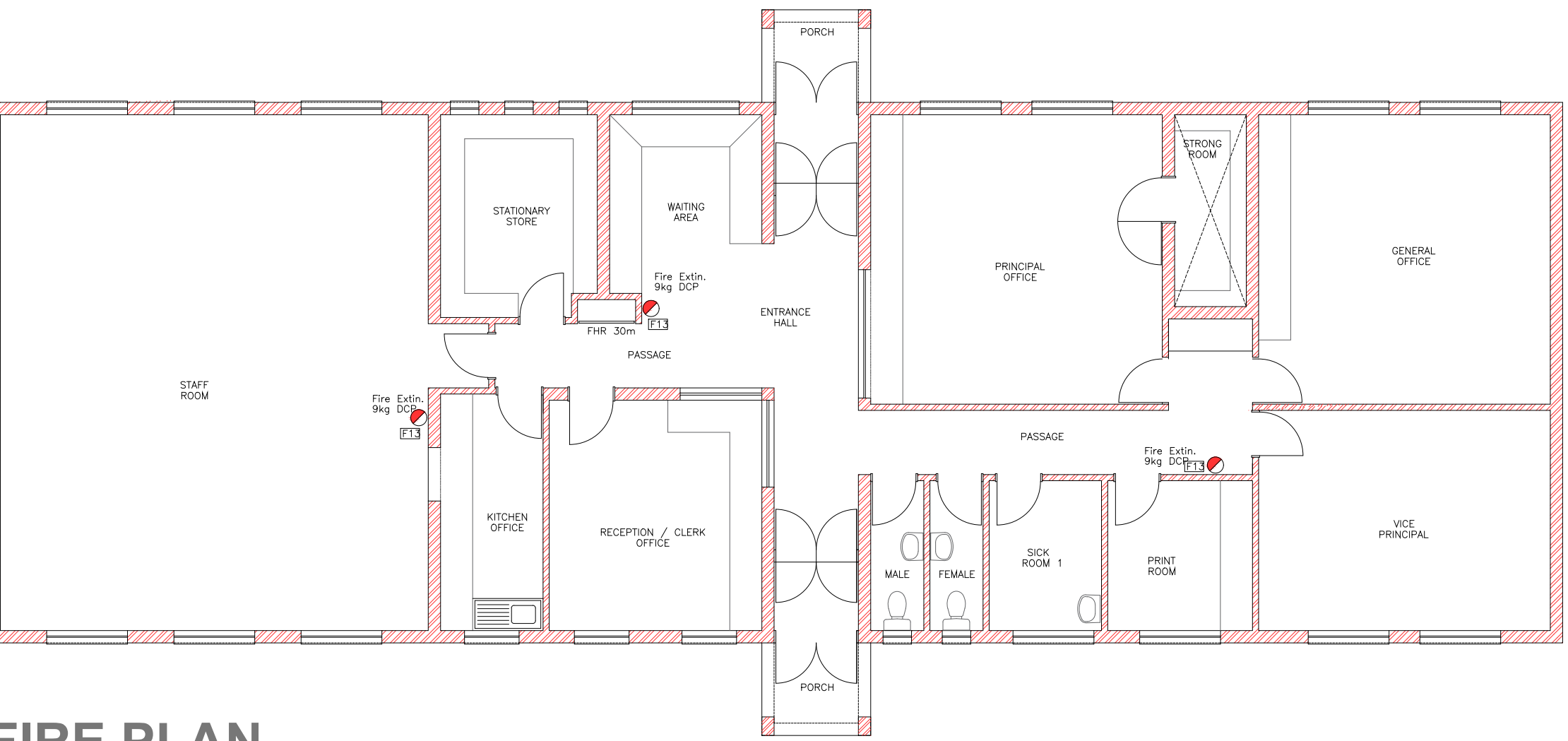
INSTITUTION			
MOKHARI SECONDARY SCHOOL			
INSTITUTION EMIS NUMBER			
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SERVICE			
NEW BUILDINGS & ALTERATIONS			
CONTRACT - SECTION			
DOCUMENTATION & PROCUREMENT			
DISCIPLINE		PROJECT STAGE	
ARCHITECTURAL		4	
WORK DESCRIPTION - SUB DIVISION			
MEDIUM ADMINISTRATION BLOCK			
DRAWING DESCRIPTION			
FLOOR, CEILING & ROOF PLAN			
FILE No.		ITEM No.	
DESIGN		DRAWN	
SCALE	1:100	CHECKED	
DATE	2023.06.20	RESPONSIBLE NAME	Y.VAHED
		PROFESSIONAL SIGNATURE	[Signature]
		PR NUMBER	7812
DRAWING CO-ORDINATED			
CONSULTANT :			
ruben reddy architects			
Suite 4 No 6 Isipingo Office Building 6 Isipingo Street, Isipingo, 0859 South Africa Tel: +27 11 085 0845, Fax: +27 11 475 8364, Email: info@rubenreddyarch.co.za Web: www.rubenreddyarch.co.za			
CONTRACTOR :			
CADD SYSTEM	AUTO CAD	FILE NAME	
SCALE	DRAWING NUMBER	REV	
A 1	2020_67-MAD-100		A



SECTION A-A
SCALE 1 : 50



ELECTRICAL AND LIGHTING PLAN
SCALE 1 : 100



FIRE PLAN
SCALE 1 : 100

CONSTRUCTION NOTES:

Foundations
A1. Concrete foundations - concrete mix type and with steel reinforcement according to structural engineer's drawings. Top of strip footings to be 340mm minimum below N.G.L. Provide test cubes (1 per 15m³ or 1 per batch). Finished sides and bottoms of trenches to be treated with ant poison of the Prothor 200 SC or other approved type applied at a rate of not less than 5 litres of solution per m² by a firm of specialists in accordance with SANS Specification 1165 and SANS Code of Practice 0124.
Concrete to be casted within 24 hours of application. Contractor to provide five year guarantee.
A2. Backfilling and filling under floors - in general, approved filling compacted to at least 93% Mod. AASHTO density in layers of maximum 150mm - refer to engineer's drawings for detail in case of poor soil conditions. Minimum of 170mm filling to be provided above natural or compacted ground level under floors. All filling to be approved by engineer (imported filling to be minimum G5 or G7 material as per engineer's drawings). Compaction tests to be provided at a rate of one test per 125m² filling area under floors per each layer of 150mm compacted filling. Filling under floors to be treated with ant poison of the Prothor 200 SC or other approved type applied at a rate of not less than 5 litres of solution per m² by a firm of specialists in accordance with SANS Specification 1165 and SANS Code of Practice 0124. Concrete to be casted within 24 hours of application.
Contractor to provide five year guarantee
Surface beds and floors
B1. Surface bed - concrete mix as described on structural engineer's drawings but minimum 85mm thick on SANS Specification 952 Type C approved USB Green 250 micron waterproofing membrane with laps sealed with pressure sensitive tape. Surface bed cast in alternative sections of maximum 20m² with saw cut joints with joints filled up with polysulfide sealer. All saw cut joints to be done within 24 hours after casting of concrete. Provide 10mm thick bitumen impregnated soft board between all walls and concrete and seal joint with polysulfide sealer. Provide mesh ref. no. 193 as per structural engineer's drawings.
Provide test cubes (1 per 15m³ or 1 per batch)
B2. Surface bed on walkways - concrete mix as described on structural engineer's drawings but minimum 85mm thick on SANS Specification 952 Type C approved USB Green 250 micron waterproofing membrane with laps sealed with pressure sensitive tape. Surface bed cast in alternative sections of maximum 20m² with expansion joints with joints filled up with polysulfide sealer. Provide 10mm thick bitumen impregnated soft board between all walls and concrete and seal joint with polysulfide sealer. Provide mesh ref. no. 193 as per structural engineer's drawings. Provide test cubes (1 per 15m³ or 1 per batch)
B3. Screed and floor finish on walkways - Average 30mm thick wood floated 1:4 granolithic screed sloping towards edges. At all external door openings external surface beds must be level with granolithic threshold finish. Finish off edges of screed smooth with edging tool
B4. Apron - 1200mm wide 15MPa mass concrete apron with wood floated finish. Apron to be cast in alternative sections in lengths of maximum 3m and to have a 1:100 fall away from building. Apron edge to be thickened by 240mm wide x 115mm deep (net) edge excavated in natural or finished ground level
Skirtings
C1. 19 x 76mm Meranti skirting plugged to walls at 400mm c/c with 19mm meranti quadrand bead plated on. Sand down to a smooth finish, stop with Polycell Woodfiller, stain with Plascon Woodcare Stain (W-range)(colour meranti), apply one coat Plascon Woodcare Ultra Varnish (X44), thinned with 1:3 mineral turpentine (AZH1) and apply two finishing coats Plascon Woodcare Ultra (X44) suede varnish to skirtings
Walls and structure
D1. External walls - Corobrik face bricks in stretcher bond with 10mm wide x 6mm deep square recessed joints
D2. Brickforce - Brickforce to 115 and 230mm foundation walls - every 2nd course. Superstructure walls - every 6th course. Over openings formed in brickwork as per table below
D3. 75 x 75 x 3mm Thick tubular section steel columns with 250mm girth x 4.5mm thick flat section U-shaped fixing bracket, 200mm long, twice holed and welded to top, 200 x 200 x 10mm thick flat section baseplate, four times holed and welded to bottom. Columns to be fixed to top of brickwork below copings with four M10 x 75mm masonry anchor bolts. Degrease with "Plascon Aqualsoy Degreaser (GR1)", remove rust with "Plascon Rust Remover (RR1)", prime with Plascon Metal Primer (UC501) and apply two coats Plascon Enamel Door & Trims high gloss enamel paint - colour as per finishes schedule.
50 x 228mm Laminated SA Pine beam twice bolted to steel columns. Sand down to a smooth finish, stop with Polycell Woodfiller, provide one coat raw linseed oil thinned with 1:3 mineral turpentine (AZH1), apply one coat Plascon Woodcare Sunproof (Amber - PNW22) suede varnish thinned with 1:3 mineral turpentine (AZH1) and apply two finishing coats Plascon Woodcare Sunproof (Amber - PNW22) suede varnish
D4. Lintel - Corobrik brick-on-edge face brick lintol over all window, door and clear openings with 10 x 6mm square recessed joints
D5. DPC - SANS Specification 952 Type B approved 375 micron black dpc in walls at floor level and under all window sills
D6. Internal walls - approved stockbrick walls in stretcher bond above to receive one coat smooth 1:5 cement plaster finished off with one coat Plascon Plaster Primer (UC56) and two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour broken white (EPL314) or French Chartreuse (Y5-D2-3) as per Principal Agent
D7. Internal walls - face brick plinth up to 850mm with approved stockbrick walls in stretcher bond above to receive one coat smooth 1:5 cement plaster finished off with one coat Plascon Plaster Primer (UC56) and two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour as per finishes schedule.
D8. All exposed expansion joints in walls and floors to be filled in with Urochem 205 polysulfide joint sealant after surfaces have been primed with Urochem 614 primer
D9. Expansion joints in walls and ceilings to be covered with 2 x 50mm Migua KF250/30 aluminium cover strips
Window sills
E1. Internal window sills - 15 x 150mm nute-cement window sills, bedded and set flat in 1:4 cement mortar. Prime with one coat Plascon Multi-surface Primer (WUP1) and apply two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour as per finishes schedule
E2. External window sills - Middeltwit Fynbos Geel face brick-on-edge sloping sill to match walls with 10 x 6mm square recessed joints
Ceilings and cornices
F1. Internal cornice - 19 x 76mm Meranti cornice nailed to walls at 400mm centres maximum. Sand down to a smooth finish, stop with Polycell Woodfiller, stain with Plascon Woodcare Stain (W-range)(colour meranti), apply one coat Plascon Woodcare Ultra Varnish (X44), thinned with 1:3 mineral turpentine (AZH1) and apply two finishing coats Plascon Woodcare Ultra (X44) suede varnish to cornices
F2. Ceilings - 6mm Everite Nute-cement boards nailed to 38 x 38mm SAP branding at 400mm centres maximum with galvanised clout nails. Provide H-profile galvanised jointing strips. Jointing strips to be pre-painted. Prime ceilings with one coat Plascon Multi-surface Primer (WUP1) and finish off with two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour White (EPL30). Provide 100mm thick Aerolite insulation on top of ceilings
F3. Plastered ceiling as per finishes schedule
F4. 610 x 610mm Trap door formed of 50 x 65mm SA pine rebated frame with 38 x 38mm SA pine cross brander covered with ceiling board and fitted flush in opening. Provide 18 x 50mm meranti surround. Trap door and surround to be painted as for ceiling. Trap door opening between trusses to be formed with 38 x 114mm SA pine bearers, nailed to trusses
Roof and fascias
G1. Roof sheeting - 0.58mm Brownbuilt Klip-lok roof sheeting with Globalcoat finish (colour Traffic Green) on 50 x 76mm SAP purlins at maximum 1200mm centres on patent and approved pre-fabricated truss system. Roof sheeting to be done by specialist installer providing a five year guarantee
G2. Ridge and hip flashings - 0.8mm galvanised sheet iron standard factory manufactured FK3 ridge or hip flashing with Globalcoat finish (colour Traffic Green)
G3. Fascia boards - 10 x 300mm Everite Nute-cement fascia boards screw fixed to truss ends and counter batten with countersunk brass screws. Barge boards - 200 x 80mm Everite socketless barge boards screw fixed to trusses or purlins with countersunk brass screws. Prime fascias and barge boards with one coat Plascon Multi-surface Primer (WUP1) and finish off with two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour as per finishes schedule
G4. Truss system - MITek or other approved patent timber pre-fabricated truss system at maximum 1100mm centres with 20 degrees pitch, 50 x 76mm SAP purlins at maximum 1200mm centres, 38 x 114mm SAP wall plate to be carbolineum treated before fixing. Truss manufacturer to provide certificate and guarantee for design and erection of trusses as well as detailed shop drawings. Shop drawings to be provided to the Principal Agent for approval before manufacturing. All sections in contact with wet trades to be carbolineum treated before fixing in position. Trusses to be secured to walls with 2.5mm diameter galvanised steel wire ties, built into walls minimum 6 courses. Purlins nailed to trusses must also be secured with 2.5mm diameter galvanised steel wire, twice wrapped around and tied around rafters and purlins. All exposed parts of trusses, purlins, etc. to be sanded smooth, seal knots with Plascon Knot Seal (PK2), prime with one coat Plascon Wood Primer (UC2) and apply two coats Plascon Enamel Doors & Trims paint. Colour as per finishes schedule.
G5. Gutters - 100 x 100mm high gutters formed of 0.58mm galvanised sheet iron with Globalcoat finish (colour Gemsbok Sand). All brackets, etc. to be pre-coated with Globalcoat to match colour of gutters
G6. Downpipes - 100mm Diameter downpipes formed of 0.58mm galvanised sheet iron with Globalcoat finish (colour Gemsbok Sand). All holderbats, brackets, etc. to be pre-coated to match colour of downpipes
G7. Barge flashing over barge boards at louvres - 0.8mm galvanised sheet iron standard factory manufactured FK13 barge or gable flashing with Globalcoat finish (colour Traffic Green)
G8. Flashings at bottom of louvres - 0.8mm galvanised sheet iron standard factory manufactured FK8 headwall flashing and FK7 counter flashing with Globalcoat finish (Colour Traffic Green)
Fittings
H1. Vitrex Model 2400 (code 2404) enameled green folding type writing board with wall mounted centre board 2000 x 1200mm high, two wall mounted side boards each 1000 x 1200mm high & two swing leaves each 1000 x 1200mm high with permanent aluminium chalk rail
H2. Vitrex System 2000 (code 2317) light grey wall mounted pinning board, size 2000 x 1200mm high (2 per classroom)
H3. Greenfield G25 double door steel cupboard with standard baked enameled finish, 760 x 610 x 1700mm high with four shelves (2 per classroom)
H4. Five rows of 19mm Thick laminated SA Pine shelving, 350mm wide, evenly spaced & fixed from underside to 305mm wide Shelco epoxy powder coated steel brackets. Brackets to be fixed to 25mm wide x 2134mm long double slotted epoxy powder coated Shelco type FT6 wall bands, plugged to walls at maximum 600mm c/c. Sand down to a smooth finish, stop with Polycell Woodfiller, apply one coat Plascon Woodcare Ultra Varnish (X44) thinned with 1:3 mineral turpentine (AZH1) then apply two finishing coats Plascon Woodcare Clear Ultra (X44) suede varnish to shelves
Miscellaneous
I1 9 Kg DCP fire extinguisher fitted to 400 x 200 x 22mm thick meranti backplate with chamfered edges. Sand down to a smooth finish, stop with Polycell Woodfiller, apply one coat Plascon Woodcare Ultra (X44) suede varnish thinned with 1:3 mineral turpentine (AZH1) & then apply two finishing coats Plascon Woodcare Ultra (X44) suede varnish to back plate. Provide 150 x 150mm Union AL5066-E06/2AS aluminium fire extinguisher sign and Union AL5066-E08/2AS aluminium red down arrow sign above fire extinguisher
I2 Safex fire hose reel with 30m hose. Supply 152 x 152 x 3mm thick Union AL5066-06ASE05 aluminium engraved red fire hose reel sign & Union AL5066-E08/2AS aluminium engraved red down arrow sign above fire hose reel. Water supply in buildings to fire hose reel to be 25mm galvanised mild steel. Degrease exposed parts of pipes with Plascon Aqualsoy Degreaser (GR1), remove any rust with Plascon Rust Remover (RR1), prime with Plascon Metal Primer (UC501) and apply two coats Plascon Enamel Doors & trims (G-Range) paint - colour Signal Red (G7). Provide 150 x 150mm Union AL5066-E05/2AS aluminium fire sign & Union AL5066-E08/2AS aluminium red down arrow sign above fire hose reel.

NOTES :

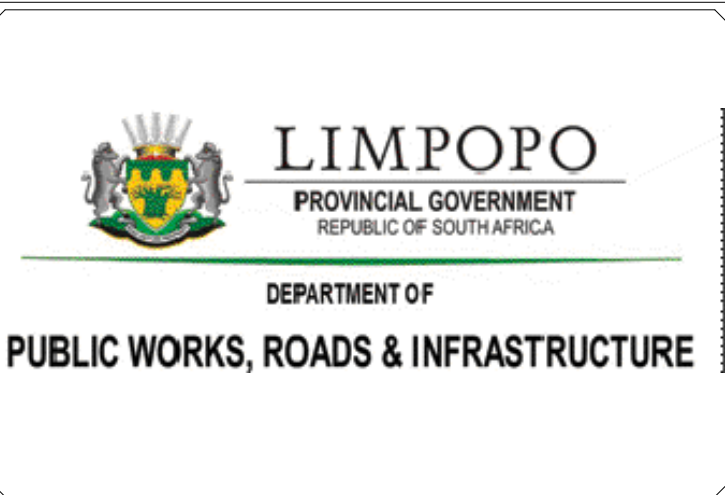
- 1) Workmanship to comply with Standard Specification of materials and methods - to be used - SABS 0400
- 2) Light Switch in Disabled toilet to be at 1200 mm above FFL
- 3) If Step over 900 mm Build in Balustrade
- 4) Gully positions to be determined as per site prescribed overall drainage design
- 5) 2 x coats sealant on all exposed trusses (sand off all SABS & other markings)
- 6) 50 mm mineral wool insulation to be installed where there are ceilings
- 7) Bubble plastic insulation with foil backing to be installed with wire supports in all areas that do not have ceilings
- 8) West Facing Facades to have standardised aluminium louvers from below eaves to drop of 1200 mm
- 9) Trusses to be designed in accordance with SABS 0400 & approved by Project Engineers

ISSUED FOR TENDER

SIGNATURE TABLE

DISCIPLINE	SIGNATURE	DATE
CLIENT		
PLAN EXAMINER		
FIRE CONTROL		
ENVIRONMENTAL OFFICER		
ROADS / STORMWATER		
WATER AND SANITATION		
ENVIRONMENTAL OFFICER		

REV No	DATE :	DESCRIPTION :
REVISIONS		
SIZE ON ORIGINAL DRAWING 100 mm		



INSTITUTION	
MOKHARI SECONDARY SCHOOL	
INSTITUTION EMIS NUMBER	
906121051	
SERVICE	
NEW BUILDINGS & ALTERATIONS	
CONTRACT - SECTION	
DOCUMENTATION & PROCUREMENT	
DISCIPLINE	PROJECT STAGE
ARCHITECTURAL	4
WORK DESCRIPTION - SUB DIVISION	
MEDIUM ADMINISTRATION BLOCK	
DRAWING DESCRIPTION	
SECTION, ELECTRICAL AND FIRE PLAN	
FILE No.	ITEM No.
DESIGN	DRAWN
SCALE	CHECKED
1:100	

DATE	RESPONSIBLE	PROFESSIONAL	SIGNATURE	PR NUMBER
2023.06.20	Y.VAHED			7812

DRAWING CO-ORDINATED	
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CONSULTANT :	
CONTRACTOR :	

CADD SYSTEM	AUTO CAD	FILE NAME
SIZE	DRAWING NUMBER	REV
A 1	2020_67-MAD-101	A





A 1	2020_01-MAD-104	A
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NUMBER	W06
TYPE	N/A
AREA	ADMINISTRATION RECEPTION
WINDOW	PURPOSE MADE ALUMINIUM TO SUIT SLIDING SASH
GLASS	6.3mm Safety glass
FITTINGS	SLIDING BOLT TO LOCK FROM INSIDE
BURGLAR BARS	N/A
FINISH	NATURAL ANODIZED
NOTES	

Foundations

A1. Concrete foundations - concrete mix type and with steel reinforcement according to structural engineer's drawings. Top of strip footings to be 340mm minimum below N.G.L. Provide test cubes (1 per 15m² or 1 per batch). Finished sides and bottoms of trenches to be treated with ant poison of the Prothor 200 SC or other approved type applied at a rate of not less than 5 litres of solution per m² by a firm of specialists in accordance with SANS Specification 1165 and SANS Code of Practice 0124. Concrete to be casted within 24 hours of application. Contractor to provide five year guarantee.

A2. Backfilling and filling under floors - in general, approved filling compacted to at least 93% Mod. AASHTO density in layers of maximum 150mm - refer to engineer's drawings for detail in case of poor soil conditions. Minimum of 170mm filling to be provided above natural or compacted ground level under floors. All filling to be approved by engineer (imported filling to be minimum G5 or G7 material as per engineer's drawings). Compaction tests to be provided at a rate of one test per 125m² filling area under floors per each layer of 150mm compacted filling. Filling under floors to be treated with ant poison of the Prothor 200 SC or other approved type applied at a rate of not less than 5 litres of solution per m² by a firm of specialists in accordance with SANS Specification 1165 and SANS Code of Practice 0124. Concrete to be casted within 24 hours of application.

Contractor to provide five year guarantee

Surface beds and floors

B1. Surface bed - concrete mix as described on structural engineer's drawings but minimum 85mm thick on SANS Specification 952 Type C approved USB Green 250 micron waterproofing membrane with laps sealed with pressure sensitive tape. Surface bed cast in alternative sections of maximum 20m² with saw cut joints with joints filled up with polysulfide sealant. All saw cut joints to be done within 24 hours after casting of concrete. Provide 10mm thick bitumen impregnated soft board between all walls and concrete and seal joint with polysulfide sealant. Provide mesh ref. no. 193 as per structural engineer's drawings.

B2. Surface bed test cubes (1 per 15m² or 1 per batch)

B3. Surface bed on walkways - concrete mix as described on structural engineer's drawings but minimum 85mm thick on SANS Specification 952 Type C approved USB Green 250 micron waterproofing membrane with laps sealed with pressure sensitive tape. Surface bed cast in alternative sections of maximum 20m² with expansion joints with joints filled up with polysulfide sealant. Provide 10mm thick bitumen impregnated soft board between all walls and concrete and seal joint with polysulfide sealant. Provide mesh ref. no. 193 as per structural engineer's drawings. Provide test cubes (1 per 15m² or 1 per batch)

B4. Screed and floor finish on walkways - Average 30mm thick wood floated 1:4 granolithic screed sloping towards edges. At all external door openings external surface beds must be level with granolithic threshold finish. Finish off edges of screed smooth with edging tool

B4. Apron - 1200mm wide 15MPa mass concrete apron with wood floated finish. Apron to be cast in alternative sections in lengths of maximum 3m and to have a 1:100 fall away from building. Apron edge to be thickened by 240mm wide x 15mm deep (net) edge excavated in natural or finished ground level

Skirtings

C1. 19 x 76mm Meranti skirting plugged to walls at 400mm c/c with 19mm meranti quadrant bead plated on. Sand down to a smooth finish, stop with Polycell Woodfiller, stain with Plascos Woodcare Stain (V-range)(colour meranti), apply one coat Plascos Woodcare Ultra Varnish (X44), thinned with 1:3 mineral turpentine (AZH1) and apply two finishing coats Plascos Woodcare Ultra (X44) suede varnish to skirtings

Walls and structure

D1. External walls - Corobrik face bricks in stretcher bond with 10mm wide x 6mm deep square recessed joints

D2. Brickwork - Brickwork to 115 and 230mm foundation walls - every 2nd course. Superstructure walls - every 6th course. Over openings formed in brickwork as per table below

D3. 75 x 75 x 3mm Thick tubular section steel columns with 250mm girth x 4.5mm thick flat section U-shaped fixing bracket, 200mm long, twice holed and welded to top, 200 x 200 x 10mm thick top section baseplate, four times holed and welded to bottom. All welding to be fixed to top of brickwork below coping with four M10 x 75mm masonry anchor bolts. Degrease with "Plascos Aquasolv Degreaser (GR1)", remove rust with "Plascos Rust Remover (R1)", prime with Plascos Metal Primer (UC501) and apply two coats Plascos Enamel Door & Trims high gloss enamel paint - colour as per finishes schedule

D4. 50 x 228mm Laminated SA Pine beam twice bolted to steel columns. Sand down to a smooth finish, stop with Polycell Woodfiller, provide one coat raw linseed oil thinned with 1:3 mineral turpentine (AZH1), apply one coat Plascos Woodcare Sunproof (Amber - PNW22) suede varnish thinned with 1:3 mineral turpentine (AZH1) and apply two finishing coats Plascos Woodcare Sunproof (Amber - PNW22) suede varnish

D4. Lintel - Corobrik brick-on-edge face brick lintel over all window, door and clear openings with 10 x 6mm square recessed joints

D5. IPC - SANS Specification 952 Type B approved 375 micron black dpc in walls at floor level and under all window sills

D6. Internal walls - approved stockbrick walls in stretcher bond above to receive one coat smooth 1.5 cement plaster finished off with one coat Plascos Plaster Primer (UC56) and two coats Plascos Polvin Walls & Ceilings (EPL) PVA paint. Colour broken white (EPL314) or French Chateau (Y5-D2-3) as per Principal Agent

D7. Internal walls - face brick finish up to 850mm with approved stockbrick walls in stretcher bond above to receive one coat smooth 1.5 cement plaster finished off with one coat Plascos Plaster Primer (UC56) and two coats Plascos Polvin Walls & Ceilings (EPL) PVA paint. Colour as per finishes schedule

D8. All exposed expansion joints in walls and floors to be filled in with Urochem 205 polysulfide joint sealant after surfaces have been primed with Urochem 614 primer

D9. Expansion joints in walls and ceilings to be covered with x 50mm Migua KF250/30 aluminium cover strips

Window sills

E1. Internal window sills - 15 x 150mm nutec-cement window sills, bedded and set flat in 1:4 cement mortar. Prime with one coat Plascos Multi-Surface Primer (WUP1) and apply two coats Plascos Polvin Walls & Ceilings (EPL) PVA paint. Colour as per finishes schedule

E2. External window sills - Middewilt Fynbos Geel face brick-on-edge sloping sill to match walls with 10 x 6mm square recessed joints

Ceilings and cornices

F1. Internal cornice - 19 x 76mm Meranti cornice nailed to walls at 400mm centres maximum. Sand down to a smooth finish, stop with Polycell Woodfiller, stain with Plascos Woodcare Stain (V-range)(colour meranti), apply one coat Plascos Woodcare Ultra Varnish (X44), thinned with 1:3 mineral turpentine (AZH1) and apply two finishing coats Plascos Woodcare Ultra (X44) suede varnish to cornices

F2. Ceilings - 6mm Everite Nutec fibre-cement boards nailed to 38 x 38mm SAP bracing at 400mm centres maximum with galvanised cut nails. Provide H-profile galvanised jointing strips. Jointing strips to be pre-painted. Prime ceilings with one coat Plascos Multi-Surface Primer (WUP1) and finish off with two coats Plascos Polvin Walls & Ceilings (EPL) PVA paint. Colour White (EPL30). Provide 100mm thick Aerolite insulation on top of ceilings

F3. Plastered ceiling as per finishes schedule

F4. 610 x 610mm Trap door formed of 50 x 65mm SA pine ribated frame with 38 x 38mm SA pine cross bender covered with ceiling board and fitted flush in opening. Provide 18 x 50mm meranti surround. Trap door and surround to be painted as for ceiling. Trap door opening between trusses to be formed with 38 x 114mm SA pine bearers, nailed to trusses

Roof of fascias

G1. Roof sheeting - 0.58mm Brownbult Klip-lok roof sheeting with Globalcoat finish (colour Traffic Green) on 50 x 76mm SAP purlins at maximum 1200mm centres on patent and approved pre-fabricated truss system. Roof sheeting to be done by specialist installer providing a five year guarantee

G2. Ridge and hip flashings - 0.8mm galvanised sheet iron standard factory manufactured FK3 ridge or hip flashing with Globalcoat finish (colour Traffic Green)

G3. Fascia boards - 10 x 300mm Everite Nutec-cement fascia boards screw fixed to truss ends and counter batten with countersunk brass screws. Barge boards - 200 x 80mm Everite sockets screw fixed to trusses or batten with countersunk brass screws. Prime fascias and barge boards with one coat Plascos Multi-Surface Primer (WUP1) and finish off with two coats Plascos Polvin Walls & Ceilings (EPL) PVA paint. Colour as per finishes schedule

G4. Truss system - Mitef or other approved patent timber pre-fabricated truss system at maximum 1100mm centres with 20 degrees pitch. 50 x 76mm SAP purlins at maximum 1200mm centres. 38 x 114mm SAP wall plate to be carboliteum treated before fixing. Truss manufacturer to provide certificate and guarantee for design and erection of trusses as well as detailed shop drawings. Shop drawings to be provided to the Principal Agent for approval before manufacturing. All sections in contact with wet trades to be carboliteum treated before fixing in position. Trusses to be secured to walls with 2.5mm diameter galvanised steel wire ties, built into walls minimum 6 courses. Purlins nailed to trusses must also be secured with 2.5mm diameter galvanised steel wire, twice wrapped around and tied around rafters and purlins. All exposed parts of trusses, purlins, etc. to be sanded smooth, seal knots with Plascos Knot Seal (PK2), prime with one coat Plascos Wood Primer (UC2) and apply two coats Plascos Enamel Doors & Trims paint - colour as per finishes schedule

G5. Gutters - 100 x 100mm high gutters formed of 0.8mm galvanised sheet iron with Globalcoat finish (colour Gemsbok Sand). All brackets, etc. to be pre-coated with Globalcoat to match colour of gutters

G6. Downpipes - 100mm Diameter downpipes formed of 0.8mm galvanised sheet iron with Globalcoat finish (colour Gemsbok Sand). All holdbrackets, brackets, etc. to be pre-coated to match colour of downpipes

G7. Barge flashing over barge boards at louvres - 0.8mm galvanised sheet iron standard factory manufactured FK13 barge or gable flashing with Globalcoat finish (colour Traffic Green)

G8. Flashings at bottom of louvres - 0.8mm galvanised sheet iron standard factory manufactured FK8 headwall flashing and FK7 counter flashing with Globalcoat finish (Colour Traffic Green)

Fittings

H1. Vitrex Model 2400 (code 2404) enameled green folding type writing board with wall mounted board 2000 x 1200mm high, two wall mounted side boards each 1000 x 1200mm high & two swing leaves each 1000 x 1200mm high with permanent aluminium chalk rail

H2. Vitrex System 2000 (code 2317) light grey wall mounted pinning board, size 2000 x 1200mm high (2 per classroom)

H3. Greenfield G25 double door steel cupboard with standard black enameled finish, 760 x 610 x 1700mm high with four shelves (2 per classroom)

H4. Five rows of 19mm thick laminated SA Pine shelving, 350mm wide, evenly spaced & fixed from underside to 305mm wide Shelco epoxy powder coated steel brackets. Brackets to be fixed to 25mm wide x 2134mm long double slotted epoxy powder coated steel type FT19 brackets. Wall to wall shelving at 600mm centres. Sand down to a smooth finish, stop with Polycell Woodfiller, apply one coat Plascos Woodcare Clear Ultra Varnish (X44) thinned with 1:3 mineral turpentine (AZH1) then apply two finishing coats Plascos Woodcare Clear Ultra (X44) suede varnish to shelves

Miscellaneous

I 1 9K DCP fire extinguisher fitted to 400 x 200 x 22mm thick meranti backplate with chamfered edges. Sand down to a smooth finish, stop with Polycell Woodfiller, apply one coat Plascos Woodcare Ultra (X44) suede varnish thinned with 1:3 mineral turpentine (AZH1) & then apply two finishing coats Plascos Woodcare Ultra (X44) suede varnish to back plate. Provide 150 x 150mm Union AL506E-E08/2AS aluminium fire extinguisher sign and Union AL506E-E08/2AS aluminium red down arrow sign above fire extinguisher

I2. Safex fire hose reel 10mm hose. Supply 152 x 152 x 3mm thick Union AL506E-06ASE05 aluminium engraved red fire hose reel sign & Union AL506E-06ASE08 aluminium engraved red down arrow sign above fire hose reel. Water supply in buildings to fire hose reel to be 25mm galvanised mild steel. Degrease exposed parts of pipes with Plascos Aquasolv Degreaser (GR1), remove any rust with Plascos Rust Remover (R1), prime with Plascos Metal Primer (UC501) and apply two coats Plascos Enamel Doors & Trims (G-range) paint - colour Signal Red (G7). Provide 150 x 150mm Union AL506E-E05/2AS aluminium fire sign & Union AL506E-E08/2AS aluminium red down arrow sign above fire hose reel.

Workmanship to comply with Standard Specification of materials and methods to be used - SABS 0400

Light Switch in Disabolted to be at 1200 mm above FFL

If Step over 900 mm Built in Bulustrade

Curly positions to be determined as per site prescribed overall drainage design




2 x cross sealtant on all exposed trusses (sand off all SABS & other markings)

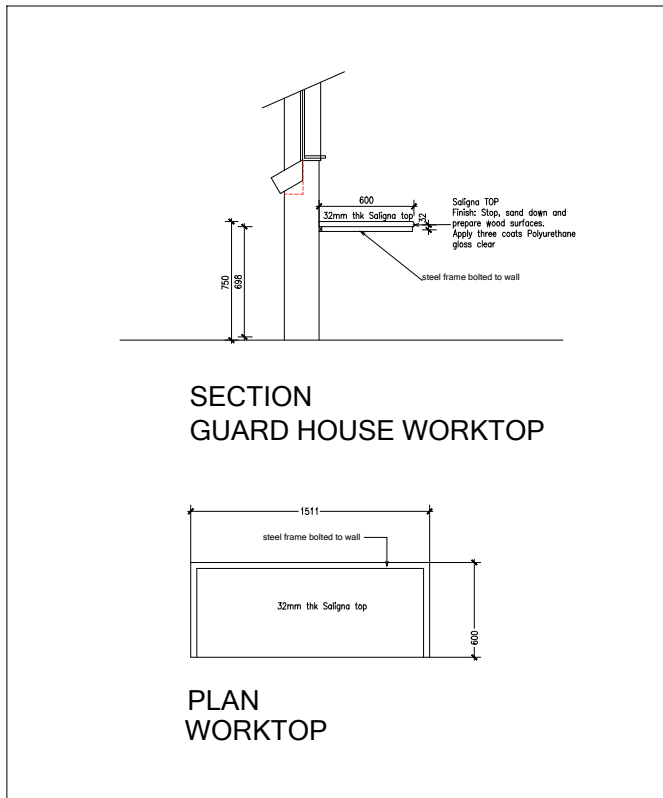
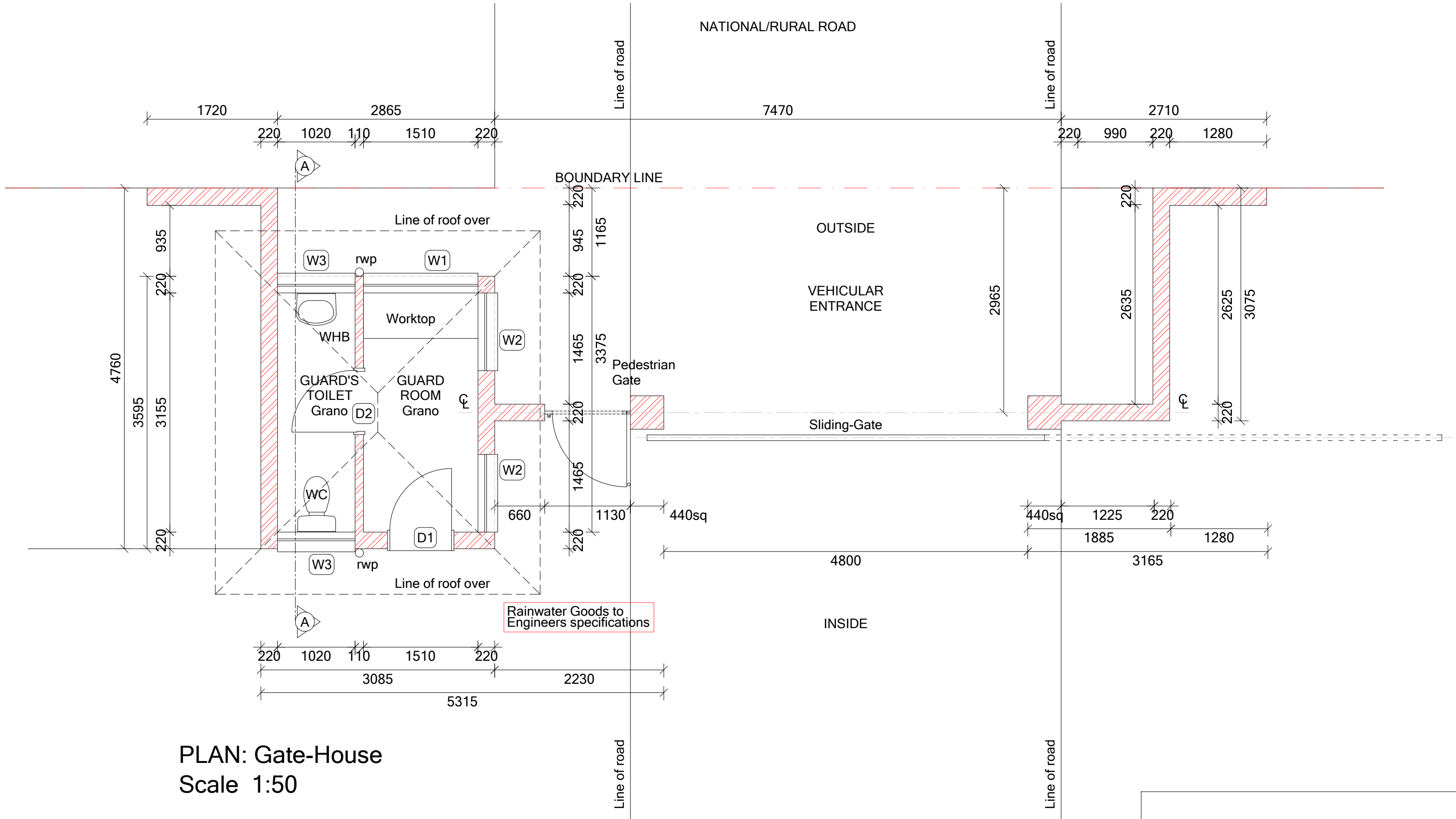
Mineral wool insulation to be installed where there are ceilings

Plastic insulation with foil backing to be installed with wire supports in all areas that do not have ceilings

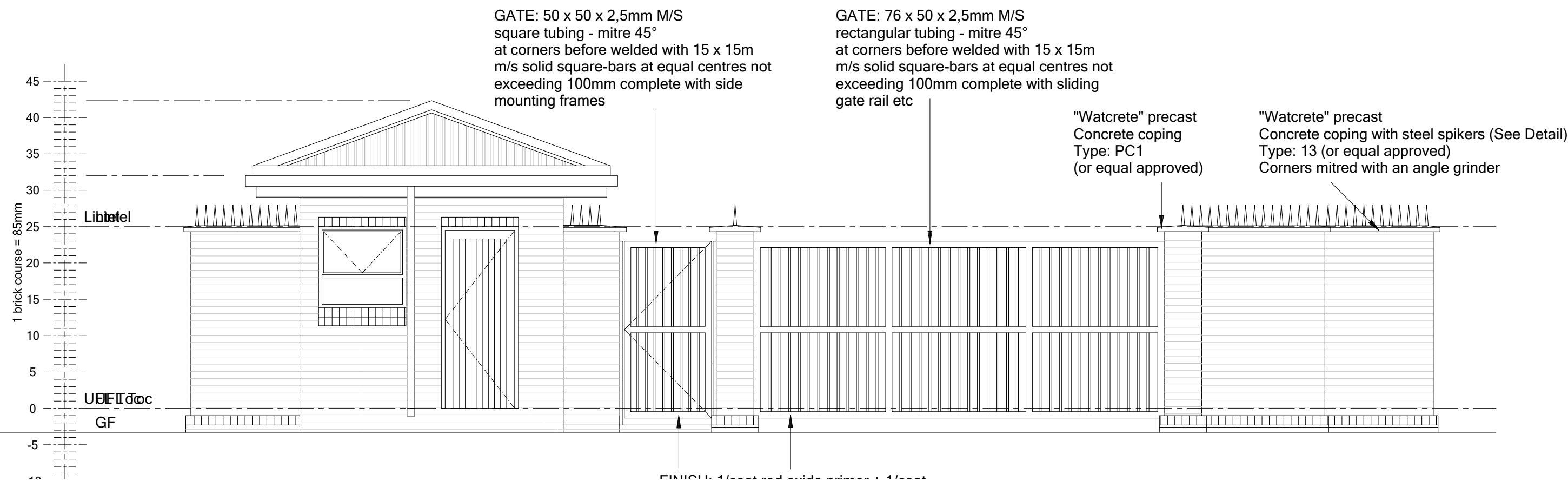
West Facing Facades to have standardised aluminium louvers from below windows to drop of 1200 mm

Trusses to be designed in accordance with SABS 0400 & approved by project Engineer

SIGNATURE TABLE		
DISCIPLINE	SIGNATURE	DATE
CLIENT		
PLAN EXAMINER		
FIRE CONTROL		
ENVIRONMENTAL OFFICER		
ROADS / STORMWATER		
WATER AND SANITATION		
ENVIRONMENTAL OFFICER		
REV No	DATE :	DESCRIPTION :
<div style="text-align: center;">REVISIONS</div> SIZE ON ORIGINAL DRAWING 100 mm		
 <div style="text-align: center; margin-top: 10px;"> LIMPOPO PROVINCIAL GOVERNMENT REPUBLIC OF SOUTH AFRICA </div> <hr style="border: 1px solid green;"/> <div style="text-align: center; margin-top: 10px;"> DEPARTMENT OF PUBLIC WORKS, ROADS & INFRASTRUCTURE </div>		
<div style="text-align: center;">INSTITUTION</div> MOKHARI SECONDARY SCHOOL		
<div style="text-align: center;">INSTITUTION EMIS NUMBER</div> 906121051		
<div style="text-align: center;">SERVICE</div> NEW BUILDINGS & ALTERATIONS		
<div style="text-align: center;">CONTRACT - SECTION</div> DOCUMENTATION & PROCUREMENT		
DISCIPLINE	PROJECT STAGE	
ARCHITECTURAL	4	
WORK DESCRIPTION - SUB DIVISION		
MEDIUM ADMINISTRATION BLOCK		
DRAWING DESCRIPTION		
WINDOW SCHEDULE		
FILE NO.		ITEM NO.
SCALE	1 : 100	DRAWN
		CHECKED
RESPONSIBLE PROFESSIONAL		
DATE	NAME	SIGNATURE
2023.06.20	Y.WAHD	
DRAWING CO-ORDINATED		PR NUMBER
		7812
CONSULTANT :		
<div style="text-align: center; margin-top: 20px;">  ruben reddy architects Suite 4 No 6 Ismailia Office Building, 6 Ismailia Street, Rosebank, 2009 South Africa Tel: +27 13 045 0640, Fax: +27 11 475 8564, Email: info@rubenreddyarch.co.za Web: www.rubenreddyarch.co.za </div>		
CONTRACTOR :		
CADD SYSTEM	AUTO CAD	FILE NAME
SIZE	DRAWING NUMBER	REV2
A 1	2020_67-MAD-105	A



PLAN
WORKTOP



CONSTRUCTION NOTES

Foundations

A1. Concrete foundations - concrete mix type and with steel reinforcement according to structural engineer's drawings. Top of strip footings to be 340mm minimum below N.G.L. Provide test cubes (1 per 15m³ or 1 per batch). Finished sides and bottoms of trenches to be treated with ant poison of the Prothor 200 SC or other approved type applied at a rate of not less than 5 litres of solution per m² by a firm of specialists in accordance with SANS Specification 1165 and SANS Code of Practice 0124. Concrete to be casted within 24 hours of application. Contractor to provide five year guarantee.

A2. Backfilling and filling under floors - in general, approved filling compacted to at least 93% Mod. AASHTO density in layers of maximum 150mm - refer to engineer's drawings for detail in case of poor soil conditions. Minimum of 170mm filling to be provided above natural or compacted ground level under floors. All filling to be approved by engineer (imported filling to be minimum G5 or G7 material as per engineer's drawings). Compaction tests to be provided at a rate of one test per 125m² filling area under floors per each layer of 150mm compacted filling. Filling under floors to be treated with ant poison of the Prothor 200 SC or other approved type applied at a rate of not less than 5 litres of solution per m² by a firm of specialists in accordance with SANS Specification 1165 and SANS Code of Practice 0124. Concrete to be casted within 24 hours of application. Contractor to provide five year guarantee.

Surface beds and floors

B1. Surface bed - concrete mix as described on structural engineer's drawings but minimum 85mm thick on SANS Specification 952 Type C approved USB Green 250 micron waterproofing membrane with laps sealed with pressure sensitive tape. Surface bed cast in alternative sections of maximum 20m² with saw cut joints with joints filled up with polysulfide sealer. All saw cut joints to be done within 24 hours after casting of concrete. Provide 10mm thick bitumen impregnated soft board between all walls and concrete and seal joint with polysulfide sealer. Provide mesh ref. no. 193 as per structural engineer's drawings. Provide test cubes (1 per 15m³ or 1 per batch).

B2. Surface bed on walkways - concrete mix as described on structural engineer's drawings but minimum 85mm thick on SANS Specification 952 Type C approved USB Green 250 micron waterproofing membrane with laps sealed with pressure sensitive tape. Surface bed cast in alternative sections of maximum 20m² with expansion joints with joints filled up with polysulfide sealer. Provide 10mm thick bitumen impregnated soft board between all walls and concrete and seal joint with polysulfide sealer. Provide mesh ref. no. 193 as per structural engineer's drawings. Provide test cubes (1 per 15m³ or 1 per batch).

B3. Screed and floor finish on walkways - Average 30mm thick wood floated 1:4 granolithic screed sloping towards edges. At all external door openings external surface beds must be level with granolithic threshold finish. Finish off edges of screed smooth with edging tool.

B4. Apron - 1200mm wide 15MPa mass concrete apron with wood floated finish. Apron to be cast in alternative sections in lengths of maximum 3m and to have a 1:100 fall away from building. Apron edge to be thickened by 240mm wide x 115mm deep (net) edge excavated in natural or finished ground level.

Skirtings

C1. 19 x 76mm Meranti skirting plugged to walls at 400mm c/c with 19mm meranti quadrand bead plated on. Sand down to a smooth finish, stop with Polycell Woodfiller, stain with Plascon Woodcare Stain (V-range)(colour meranti), apply one coat Plascon Woodcare Ultra Varnish (X44), thinned with 1:3 mineral turpentine (AZH1) and apply two finishing coats Plascon Woodcare Ultra (X44) suede varnish to skirtings.

Walls and structure

D1. External walls - Corobrik face bricks in stretcher bond with 10mm wide x 6mm deep square recessed joints.

D2. Brickforce - Brickforce to 115 and 230mm foundation walls - every 2nd course. Superstructure walls - every 6th course. Over openings formed in brickwork as per table below.

D3. 75 x 75 x 3mm Thick tubular section steel columns with 250mm girth x 4.5mm thick flat section U-shaped fixing bracket, 200mm long, twice holed and welded to top, 200 x 200 x 10mm thick flat section baseplates, four times holed and welded to bottom. Columns to be fixed to top of brickwork below copings with four M10 x 75mm masonry anchor bolts. Degrease with 'Plascon Aquasolv Degreaser (GR1)', remove rust with 'Plascon Rust Remover (RR1)', prime with Plascon Metal Primer (UC501) and apply two coats Plascon Enamel Door & Trims high gloss enamel paint - colour as per finishes schedule.

D4. 50 x 228mm Laminated SA Pine beam twice bolted to steel columns. Sand down to a smooth finish, stop with Polycell Woodfiller, provide one coat raw linseed oil thinned with 1:3 mineral turpentine (AZH1), apply one coat Plascon Woodcare Sunproof (Amber - PNW22) suede varnish thinned with 1:3 mineral turpentine (AZH1) and apply two finishing coats Plascon Woodcare Sunproof (Amber - PNW22) suede varnish.

D5. DPC - SANS Specification 952 Type B approved 375 micron black dpc in walls at floor level and under all window sills.

D6. Internal walls - approved stockbrick walls in stretcher bond above to receive one coat smooth 1:5 cement plaster finished off with one coat Plascon Plaster Primer (UC56) and two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour broken white (EPL314) or French Chartreuse (Y5-D2-3) as per Principal Agent.

D7. Internal walls - face brick plinth up to 850mm with approved stockbrick walls in stretcher bond above to receive one coat smooth 1:5 cement plaster finished off with one coat Plascon Plaster Primer (UC56) and two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour as per finishes schedule.

D8. All exposed expansion joints in walls and floors to be filled in with Urochem 205 polysulfide joint sealant after surfaces have been primed with Urochem 614 primer.

D9. Expansion joints in walls and ceilings to be covered with 2 x 50mm Migua KF250/30 aluminium cover strips.

Ceilings and cornices

E1. Internal window sills - 15 x 150mm nute-cement window sills, bedded and set flat in 1:4 cement mortar. Prime with one coat Plascon Multi-surface Primer (WUP1) and apply two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour as per finishes schedule.

E2. External window sills - Middlewit Fynbos Geel face brick-on-edge sloping sill to match walls with 10 x 6mm square recessed joints.

F1. Internal cornice - 19 x 76mm Meranti cornice nailed to walls at 400mm centres maximum. Sand down to a smooth finish, stop with Polycell Woodfiller, stain with Plascon Woodcare Stain (V-range)(colour meranti), apply one coat Plascon Woodcare Ultra Varnish (X44), thinned with 1:3 mineral turpentine (AZH1) and apply two finishing coats Plascon Woodcare Ultra (X44) suede varnish to cornices.

F2. Ceilings - 6mm Everite Nute-cement boards nailed to 38 x 38mm SAP bracing at 400mm centres maximum with galvanised clout nails. Provide H-profile galvanised jointing strips. Jointing strips to be pre-primed. Prime ceilings with one coat Plascon Multi-Surface Primer (WUP1) and finish off with two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour White (EPL30). Provide 100mm thick Aerolite insulation on top of ceilings.

F3. Plastered ceiling as per finishes schedule.

F4. 610 x 610mm Trap door formed of 60 x 65mm SA pine rebated frame with 38 x 38mm SA pine cross brander covered with ceiling board and fitted flush in opening. Provide 18 x 50mm meranti surround. Trap door and surround to be painted as for ceiling. Trap door opening between trusses to be formed with 38 x 114mm SA pine bearers, nailed to trusses.

Roof and fascias

G1. Roof sheeting - 0.58mm Brownbuilt Klip-lok roof sheeting with Globalcoat finish (colour Traffic Green) on 50 x 76mm SAP purlins at maximum 1200mm centres on patent and approved pre-fabricated truss system. Roof sheeting to be done by specialist installer providing a five year guarantee.

G2. Ridge and hip flashings - 0.8mm galvanised sheet iron standard factory manufactured FK3 ridge or hip flashing with Globalcoat finish (colour Traffic Green).

G3. Fascia boards - 10 x 300mm Everite Nute-cement fascia boards screw fixed to truss ends and counter batten with countersunk brass screws. Barge boards - 200 x 80mm Everite socketless barge boards screw fixed to trusses or purlins with countersunk brass screws. Prime fascias and barge boards with one coat Plascon Multi-Surface Primer (WUP1) and finish off with two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour as per finishes schedule.

G4. Truss system - Mitek or other approved patent pre-fabricated truss system at maximum 1100mm centres with 20 degrees pitch. 50 x 76mm SAP purlins at maximum 1200mm centres. 38 x 114mm SAP wall plate to be carbolium treated before fixing. Truss manufacturer to provide certificate and guarantee for design and erection of trusses as well as detailed shop drawings. Shop drawings to be provided to the Principal Agent for approval before manufacturing. All sections in contact with wet trades to be carbolium treated before fixing in position. Trusses to be secured to walls with 2.5mm diameter galvanised steel wire ties, built into walls minimum 6 courses. Purlins nailed to trusses must also be secured with 2.5mm diameter galvanised steel wire, twice wrapped around and tied around rafters and purlins. All exposed parts of trusses, purlins, etc. to be sanded smooth, seal knots with Plascon Knot Seal (PK2), prime with one coat Plascon Wood Primer (UC2) and apply two coats Plascon Enamel Doors & Trims paint. Colour as per finishes schedule.

G5. Gutters - 100 x 100mm High gutters formed of 0.58mm galvanised sheet iron with Globalcoat finish (colour Gembok Sand). All brackets, etc. to be pre-coated with Globalcoat to match colour of gutters.

G6. Downpipes - 100mm Diameter downpipes formed of 0.58mm galvanised sheet iron with Globalcoat finish (colour Gembok Sand). All holderbats, brackets, etc. to be pre-coated to match colour of downpipes.

G7. Barge flashing over barge boards at louvers - 0.8mm galvanised sheet iron standard factory manufactured FK13 barge or gable flashing with Globalcoat finish (colour Traffic Green).

G8. Flashings at bottom of louvers - 0.8mm galvanised sheet iron standard factory manufactured FK8 headwall flashing and FK7 counter flashing with Globalcoat finish (Colour Traffic Green).

Fittings

H1. Vitrex Model 2400 (code 2404) enameled green folding type writing board with wall mounted centre board 2000 x 1200mm high, two wall mounted side boards each 1000 x 1200mm high and two swing leaves each 1000 x 1200mm high with permanent aluminium chalk rail.

H2. Vitrex System 2000 (code 2317) light grey wall mounted pinning board, size 2000 x 1200mm high (2 per classroom).

H3. Greenfield G25 double door steel cupboard with standard baked enameled finish, 760 x 610 x 1700mm high with four shelves (2 per classroom).

H4. Five rows of 19mm Thick laminated SA Pine shelving, 350mm wide, evenly spaced & fixed from undersides to 305mm wide Shelco epoxy powder coated steel brackets. Brackets to be fixed to 25mm wide x 2134mm long double slotted epoxy powder coated Shelco type FT6 wall bands, plugged to walls at maximum 600mm c/c. Sand down to a smooth finish, stop with Polycell Woodfiller, apply one coat Plascon Woodcare Ultra Varnish (X44) thinned with 1:3 mineral turpentine (AZH1) then apply two finishing coats Plascon Woodcare Clear Ultra (X44) suede varnish to shelves.

Miscellaneous

I1. 9 Kg DCP fire extinguisher fitted to 400 x 200 x 22mm thick meranti backplate with chamfered edges. Sand down to a smooth finish, stop with Polycell Woodfiller, apply one coat Plascon Woodcare Ultra (X44) suede varnish thinned with 1:3 mineral turpentine (AZH1) and then apply two finishing coats Plascon Woodcare Ultra (X44) suede varnish to back plate. Provide 150 x 150mm Union AL5066-E08/2AS aluminium fire extinguisher sign and Union AL5066-E08/2AS aluminium red down arrow sign above fire extinguisher.

I2. Safex fire hose reel with 30m hose. Supply 152 x 152 x 3mm thick Union AL5066-06ASE05 aluminium engraved red fire hose reel sign & Union AL5066-06ASE08 aluminium engraved red down arrow sign above fire hose reel. Water supply in buildings to fire hose reel to be 25mm galvanised mild steel. Degrease exposed parts of pipes with Plascon Aquasolv Degreaser (GR1), remove any rust with Plascon Rust Remover (RR1), prime with Plascon Metal Primer (UC501) and apply two coats Plascon Enamel Doors & Trims (C-Range) paint - colour Signal Red (G7). Provide 150 x 150mm Union AL5066-E08/2AS aluminium fire sign & Union AL5066-E08/2AS aluminium red down arrow sign above fire hose reel.

NOTES :

- 1) Workmanship to comply with Standard Specification of materials and methods to be used - SABS 0400
- 2) Light Switch in Disabled toilet to be at 1200 mm above FFL
- 3) If Step over 800 mm Build in Balustrade
- 4) Gully positions to be determined as per site prescribed overall drainage design
- 5) 2 x coats sealant on all exposed trusses (sand off all SABS & other markings)
- 6) 50 mm mineral wool insulation to be installed where there are ceilings
- 7) Bubble plastic insulation with foil backing to be installed with wire supports in all areas that do not have ceilings
- 8) West Facing Facades to have standardised aluminium louvers from below eaves to drop of 1200 mm
- 9) Trusses to be designed in accordance with SABS 0400 & approved by Project Engineers

ISSUED FOR TENDER

SIGNATURE TABLE		
DISCIPLINE	SIGNATURE	DATE
CLIENT		
PLAN EXAMINER		
FIRE CONTROL		
ENVIRONMENTAL OFFICER		
ROADS / STORMWATER		
WATER AND SANITATION		
ENVIRONMENTAL OFFICER		

REV No	DATE	DESCRIPTION
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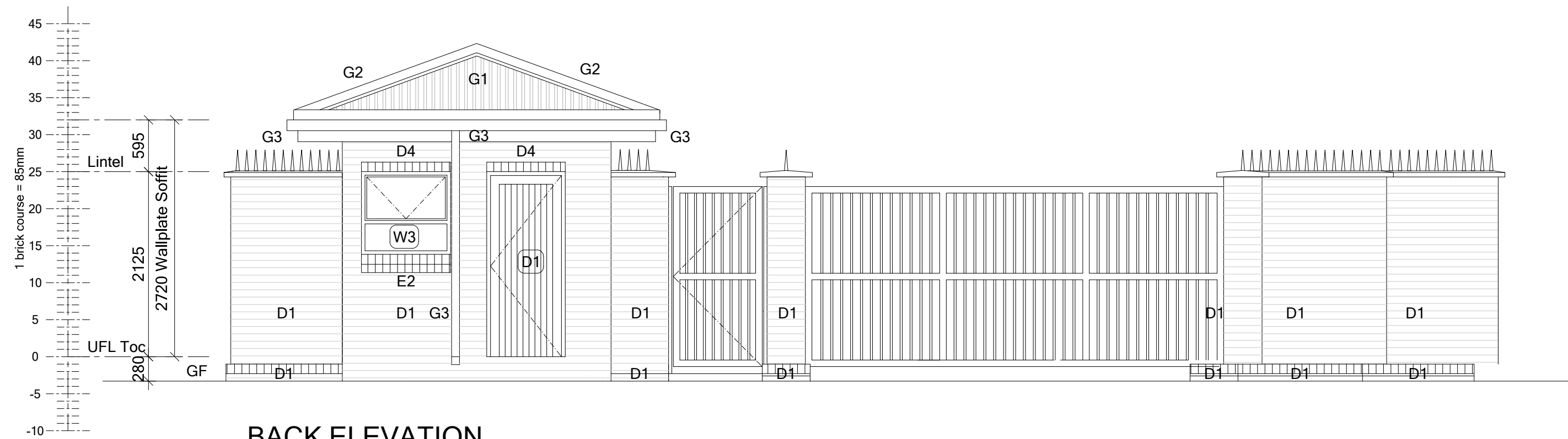
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INSTITUTION

MOKHARI SECONDARY SCHOOL
INSTITUTION EMIS NUMBER
906121051
SERVICE
NEW BUILDINGS
CONTRACT - SECTION
DOCUMENTATION & PROCUREMENT
DISCIPLINE
PROJECT STAGE
ARCHITECTURAL
4
WORK DESCRIPTION - SUB DIVISION
GUARD HOUSE
DRAWING DESCRIPTION
PLAN, ELEVATIONS AND JOINERY

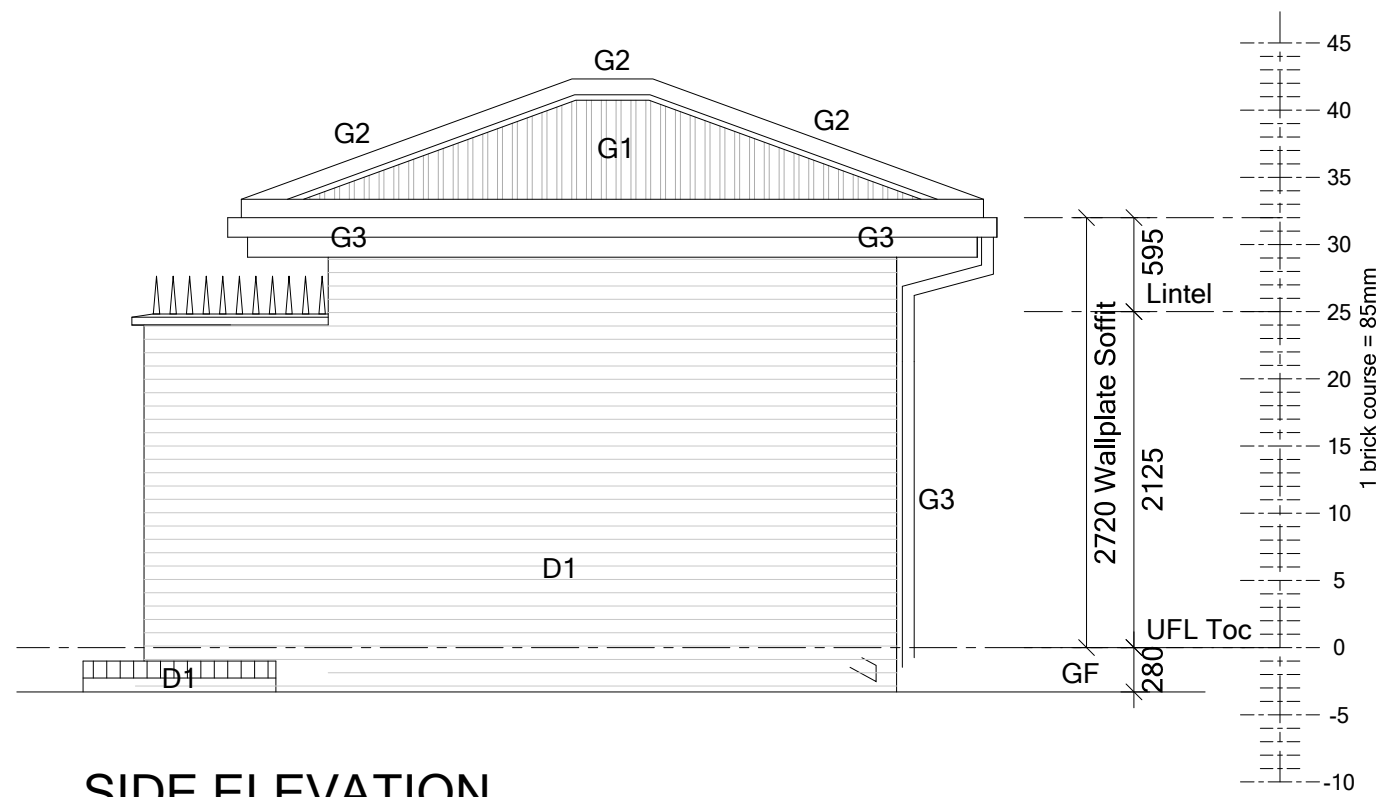
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DRAWING CO-ORDINATED			
CONSULTANT :			
CONTRACTOR :			

Suite 4 No 6 Jamini Office Building 6 Jamini Street, Polokwane, 0959 South Africa Tel: +27 15 065 0645, Fax: +27 11 475 8364 Email: info@rubenreddyarch.co.za Web: www.rubenreddyarch.co.za

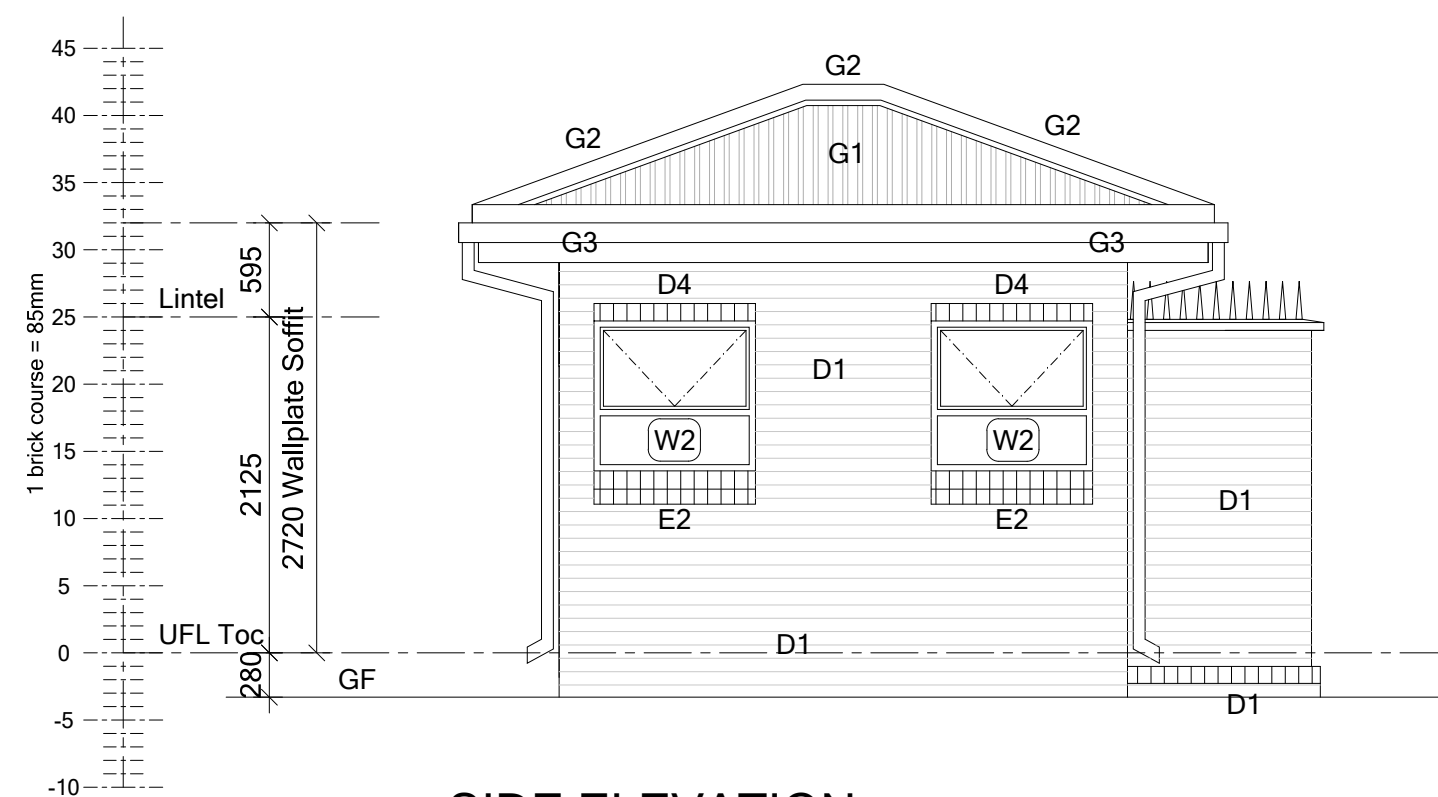
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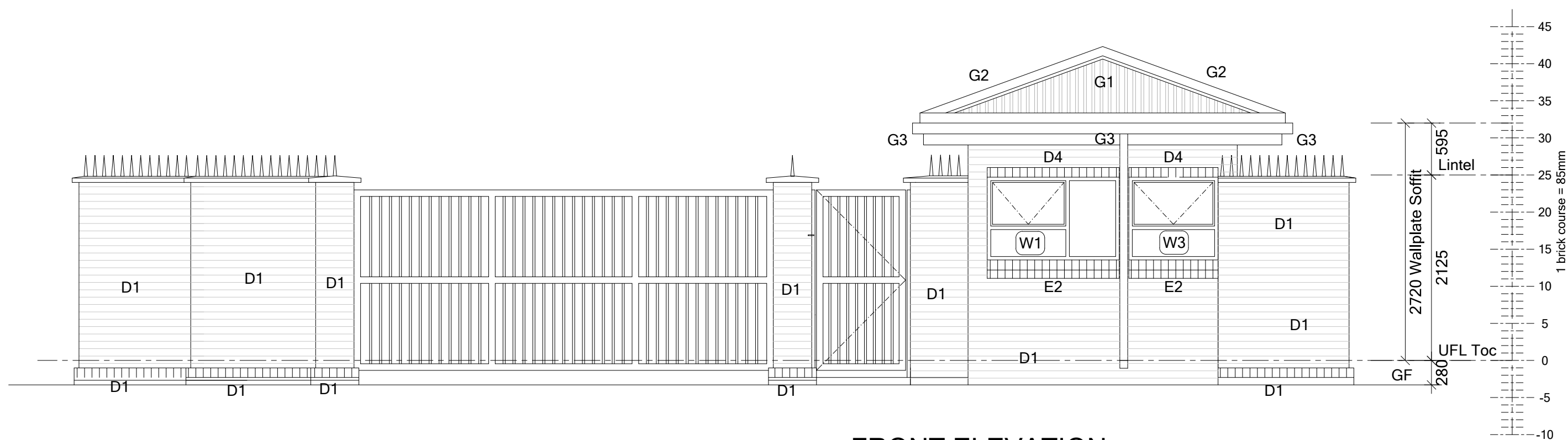
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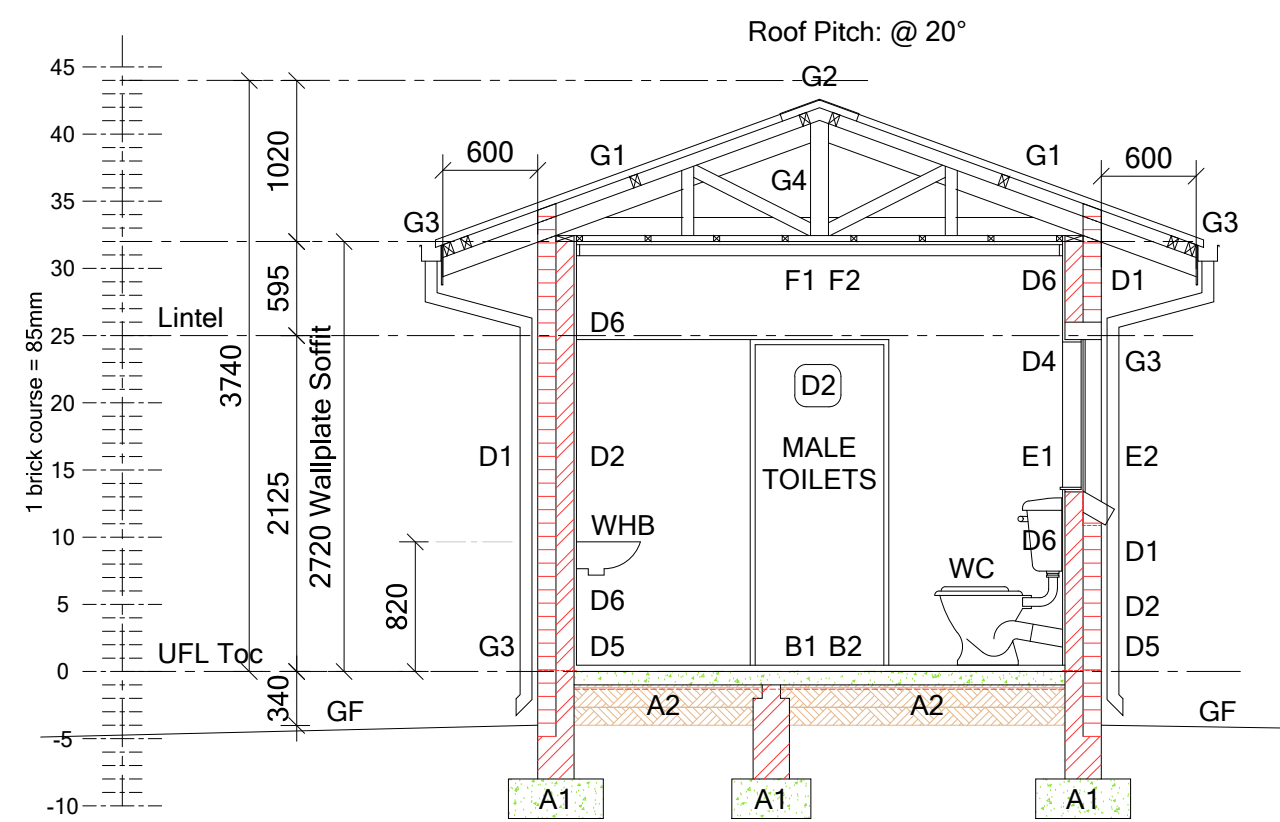
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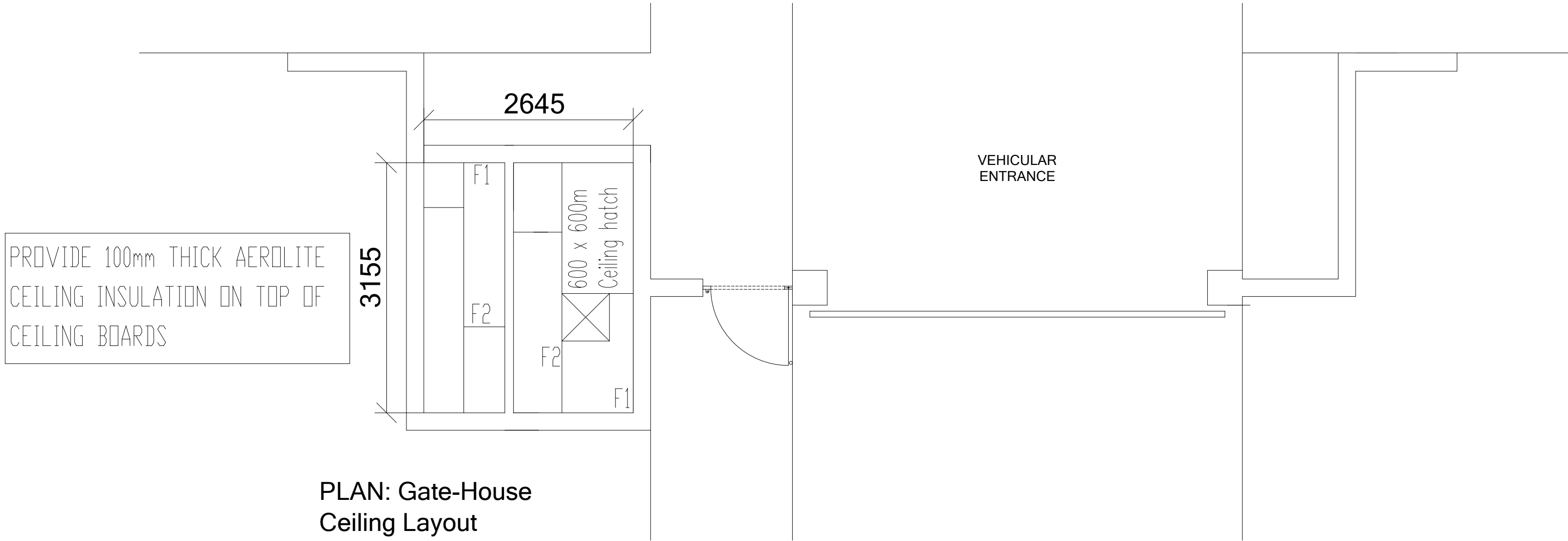
SIDE ELEVATION
Scale 1:50



FRONT ELEVATION
Scale 1:50



SECTION A-A
Scale 1:50



PLAN: Gate-House
Ceiling Layout
Scale 1:50

NOTES :

- 1) Workmanship to comply with Standard Specification of materials and methods to be used - SABS 0400
- 2) Light Switch in Disabled toilet to be at 1200 mm above FFL
- 3) If Step over 800 mm Build in Balustrade
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ENVIRONMENTAL OFFICER		

REV No	DATE	DESCRIPTION
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REVISIONS

SIZE ON ORIGINAL DRAWING 100 mm



INSTITUTION

MOKHARI SECONDARY SCHOOL

INSTITUTION EMIS NUMBER

906121051

SERVICE

NEW BUILDINGS

CONTRACT - SECTION

DOCUMENTATION & PROCUREMENT

DISCIPLINE PROJECT STAGE

ARCHITECTURAL 4

WORK DESCRIPTION - SUB DIVISION

GUARD HOUSE

DRAWING DESCRIPTION

SECTION, ELEVATIONS AND CEILING

FILE No.	ITEM No.
DESIGN	DRAWN
SCALE	CHECKED

DATE	RESPONSIBLE PROFESSIONAL NAME	SIGNATURE	PR NUMBER
2023.06.20	YUSUF VAHED		PA7812

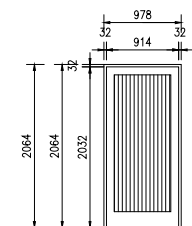
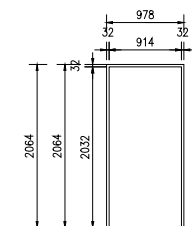
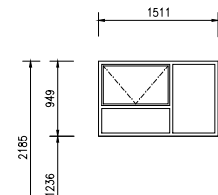
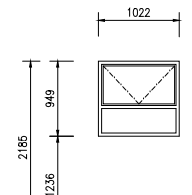
DRAWING CO-ORDINATED

CONSULTANT :



CONTRACTOR :

CADD SYSTEM	AUTO CAD	FILE NAME
SCALE	DRAWING NUMBER	REV
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DOOR SCHEDULE: Scale 1:50.			
			
DOOR NUMBER:	D1	D2	
POSITION:	BULK STOREROOM, DAY STORE AREA TOILET	ENTRANCE TO TOILET	
QUANTITY:	1 (1=LH) (0 = RH)	1 (0 = LH) (1 = RH)	
DOOR-FRAME DESCRIPTION:	1,2mm THICK STANDARD STEEL DOUBLE REBATED DOORFRAME FOR 115MM WALL TO RECEIVE PLASTER ON ONE-SIDE	1,2mm THICK STANDARD STEEL DOUBLE REBATED DOORFRAME FOR 115MM WALL TO RECEIVE PLASTER ON ONE-SIDE	
FINISHES:	1)RED OXIDE PRIMER + 1)COAT UNIVERSAL UNDERCOAT + 2)COATS PLASCON GLOSS ENAMEL PAINT - COLOUR TO ARCHITECT.	1)RED OXIDE PRIMER + 1)COAT UNIVERSAL UNDERCOAT + 2)COATS PLASCON GLOSS ENAMEL PAINT - COLOUR TO ARCHITECT.	
DOOR DESCRIPTION:	2032 x 914 x 44mm THICK SOLID HARDWOOD DOOR WITH MASONITE BACKING. TYPE OF HARDWOOD DOOR ACCORDING TO OWNERS CHOICE.	2032 x 914 x 40mm SOLID HARDWOOD DOOR WITH MASONITE FACINGS TO RECEIVE 1)COAT UNDERCOAT + 2)COATS PLASCON VELVAGLO PAINT.	
IRON MONGERY: FITTINGS:	HINGES - 2x100mm M/S STEEL BUTT HINGES PER DOOR LEAF LOCKSET - "SOLID BLESBOK" 460/313 FOUR LEVER LOCKSET.	HINGES - 2x100mm M/S STEEL BUTT PER DOOR LEAF LOCKSET - "SOLID BLESBOK" 460/313 FOUR LEVER LOCKSET.	
FINISHES:	PREPARE NEW DOOR & FRAME TO RECEIVE ONE UNDERCOAT PLUS 3)COATS POLYURETHANE VARNISH.	1)UNDERCOAT + 2)COATS PLASCON VELVAGLO PAINT FINISH.	
GLASS:	NOT APPLICABLE	NOT APPLICABLE	
WINDOW SCHEDULE: Scale 1:50.			
			
WINDOW NUMBER:	W1	W2	W3
POSITION:	GUARD ROOM	GUARD ROOM	TOILETS
QTY:	1	2	2
WINDOW-FRAME DESCRIPTION:	STANDARD SS INDUSTRIAL TYPE STEEL WINDOW-FRAME CATALOGUE NUMBER (TBC) COMPLETE WITH FITTINGS AS SUPPLY BY MANUFACTURER	STANDARD SS INDUSTRIAL TYPE STEEL WINDOW-FRAME CATALOGUE NUMBER (TBC) COMPLETE WITH FITTINGS AS SUPPLY BY MANUFACTURER	STANDARD E-TYPE TOP-HUNG STEEL WINDOW-FRAME CATALOGUE NUMBER (TBC) COMPLETE WITH FITTINGS AS SUPPLY BY MANUFACTURER
WINDOW FURNITURE:	IRON-MONGERY & FITTINGS AS SUPPLY BY WINDOW MANUFACTURER, AND ACCORDING TO ARCHITECTS APPROVAL.	IRON-MONGERY & FITTINGS AS SUPPLY BY WINDOW MANUFACTURER, AND ACCORDING TO ARCHITECTS APPROVAL.	IRON-MONGERY & FITTINGS AS SUPPLY BY WINDOW MANUFACTURER, AND ACCORDING TO ARCHITECTS APPROVAL.
BURGLAR-BARS:	OUT OF 10mm WIDE FLAT-BARS	OUT OF 10mm WIDE FLAT-BARS	OUT OF 10mm WIDE FLAT-BARS
FINISHES:	1)COAT RED OXIDE PRIMER + 1)COAT UNIVERSAL UNDERCOAT + 2)COATS PLASCON GLOSS ENAMEL PAINT - COLOUR ACCORDING TO ARCHITECT. 4mm THICK CLEAR FLOATED SHEET	1)COAT RED OXIDE PRIMER + 1)COAT UNIVERSAL UNDERCOAT + 2)COATS PLASCON GLOSS ENAMEL PAINT - COLOUR ACCORDING TO ARCHITECT. 4mm THICK CLEAR FLOATED SHEET	1)COAT RED OXIDE PRIMER + 1)COAT UNIVERSAL UNDERCOAT + 2)COATS PLASCON GLOSS ENAMEL PAINT - COLOUR ACCORDING TO ARCHITECT. 5mm THICK PACIFIC OBSCURED GLAZING SECURED IN FRAME WITH SABS APPROVED GLAZING PUTTY
GLASS:	GLAZING SECURED IN FRAME WITH SABS APPROVED GLAZING PUTTY	GLAZING SECURED IN FRAME WITH SABS APPROVED GLAZING PUTTY	

Foundations
A1. Concrete foundations - concrete mix type and with steel reinforcement according to structural engineer's drawings. Top of strip footings to be 340mm minimum below N.G.L. Provide test cubes (1 per 15m³ or 1 per batch). Finished sides and bottoms of trenches to be treated with ant poison of the Prothor 200 SC or other approved type applied at a rate of not less than 5 litres of solution per m² by a firm of specialists in accordance with SANS Specification 1165 and SANS Code of Practice 0124. Concrete to be casted within 24 hours of application. Contractor to provide five year guarantee.

CONSTRUCTION NOTES
A2. Backfilling and filling under floors - in general, approved filling compacted to at least 93% Mod. AASHTO density in layers of maximum 150mm - refer to engineer's drawings for detail in case of poor soil conditions. Minimum of 170mm filling to be provided above natural or compacted ground level under floors. All filling to be approved by engineer (imported filling to be minimum G5 or G7 material as per engineer's drawings). Compaction tests to be provided at a rate of one test per 125m³ filling area under floors per each layer of 150mm compacted filling. Filling under floors to be treated with ant poison of the Prothor 200 SC or other approved type applied at a rate of not less than 5 litres of solution per m² by a firm of specialists in accordance with SANS Specification 1165 and SANS Code of Practice 0124. Concrete to be casted within 24 hours of application. Contractor to provide five year guarantee.

Surface beds and floors
B1. Surface bed - concrete mix as described on structural engineer's drawings but minimum 85mm thick on SANS Specification 952 Type C approved USB Green 250 micron waterproofing membrane with laps sealed with pressure sensitive tape. Surface bed cast in alternative sections of maximum 20m² with saw cut joints with joints filled up with polysulfide sealer. All saw cut joints to be done within 24 hours after casting of concrete. Provide 10mm thick bitumen impregnated soft board between all walls and concrete and seal joint with polysulfide sealer. Provide mesh ref. no. 193 as per structural engineer's drawings. Provide test cubes (1 per 15m³ or 1 per batch).
B2. Surface bed on walkways - concrete mix as described on structural engineer's drawings but minimum 85mm thick on SANS Specification 952 Type C approved USB Green 250 micron waterproofing membrane with laps sealed with pressure sensitive tape. Surface bed cast in alternative sections of maximum 20m² with expansion joints with joints filled up with polysulfide sealer. Provide 10mm thick bitumen impregnated soft board between all walls and concrete and seal joint with polysulfide sealer. Provide mesh ref. no. 193 as per structural engineer's drawings. Provide test cubes (1 per 15m³ or 1 per batch).
B3. Screed and floor finish on walkways - Average 30mm thick wood floated 1:4 granolithic screed sloping towards edges. At all external door openings external surface beds must be level with granolithic threshold finish. Finish off edges of screed smooth with edging tool.
B4. Apron - 1200mm wide 15Mpa mass concrete apron with wood floated finish. Apron to be cast in alternative sections in lengths of maximum 3m and to have a 1:100 fall away from building. Apron edge to be thickened by 240mm wide x 115mm deep (net) edge excavated in natural or finished ground level.

Skirtings
C1. 19 x 76mm Meranti skirting plugged to walls at 400mm c/c with 19mm meranti quadrand bead plated on. Sand down to a smooth finish, stop with Polycell Woodfiller, stain with Plascon Woodcare Stain (V-range)(colour meranti), apply one coat Plascon Woodcare Ultra Varnish (X44), thinned with 1:3 mineral turpentine (AZH1) and apply two finishing coats Plascon Woodcare Ultra (X44) suede varnish to skirtings.

Walls and structure
D1. External walls - Corobrik face bricks in stretcher bond with 10mm wide x 6mm deep square recessed joints.
D2. Brickforce - Brickforce to 115 and 230mm foundation walls - every 2nd course. Superstructure walls - every 5th course. Over openings formed in brickwork as per table below.
D3. 75 x 75 x 3mm Thick tubular section steel columns with 250mm girth x 4.5mm thick flat section U-shaped fixing bracket, 200mm long, twice holed and welded to top, 200 x 200 x 10mm thick flat section baseplate, four times holed and welded to bottom. Columns to be fixed to top of brickwork below copings with four M10 x 75mm masonry anchor bolts. Degrease with "Plascon Aquasolv Degreaser (GR1)", remove rust with "Plascon Rust Remover (RR1)", prime with Plascon Metal Primer (UC501) and apply two coats Plascon Enamel Door & Trims high gloss enamel paint - colour as per finishes schedule.
D4. 50 x 228mm Laminated SA Pine beam twice bolted to steel columns. Sand down to a smooth finish, stop with Polycell Woodfiller, provide one coat raw linseed oil thinned with 1:3 mineral turpentine (AZH1), apply one coat Plascon Woodcare Sunproof (Amber - PNW22) suede varnish thinned with 1:3 mineral turpentine (AZH1) and apply two finishing coats Plascon Woodcare Sunproof (Amber - PNW22) suede varnish.
D5. DPC - SANS Specification 952 Type B approved 375 micron black dpc in walls at floor level and under all window sills.
D6. Internal walls - approved stockbrick walls in stretcher bond above to receive one coat smooth 1:5 cement plaster finished off with one coat Plascon Plaster Primer (UC56) and two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour broken white (EPL314) or French Chateauise (Y5-D2-3) as per Principal Agent.
D7. Internal walls - face brick plinth up to 850mm with approved stockbrick walls in stretcher bond above to receive one coat smooth 1:5 cement plaster finished off with one coat Plascon Plaster Primer (UC56) and two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour as per finishes schedule.
D8. All exposed expansion joints in walls and floors to be filled in with Urochem 205 polysulfide joint sealant after surfaces have been primed with Urochem 614 primer.
D9. Expansion joints in walls and ceilings to be covered with 2 x 50mm Migas KF25030 aluminium cover strips.

Window sills
E1. Internal window sills - 15 x 150mm nute-cement window sills, bedded and set flat in 1:4 cement mortar. Prime with one coat Plascon Multi-surface Primer (WUP1) and apply two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour as per finishes schedule.
E2. External window sills - Middelduyn Fyntos Geel face brick-on-edge sloping sill to match walls with 10 x 6mm square recessed joints.

Ceilings and cornices
F1. Internal cornice - 19 x 76mm Meranti cornice nailed to walls at 400mm centres maximum. Sand down to a smooth finish, stop with Polycell Woodfiller, stain with Plascon Woodcare Stain (W-range)(colour meranti), apply one coat Plascon Woodcare Ultra Varnish (X44), thinned with 1:3 mineral turpentine (AZH1) and apply two finishing coats Plascon Woodcare Ultra (X44) suede varnish to cornices.
F2. Ceilings - 6mm Everite Nute-cement boards nailed to 38 x 38mm SAP brandering at 400mm centres maximum with galvanised out nails. Provide H-profile galvanised jointing strips. Jointing strips to be pre-painted. Prime ceilings with one coat Plascon Multi-Surface Primer (WUP1) and finish off with two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour White (EPL30). Provide 100mm thick Aerolite insulation on top of ceilings.
F3. Plastered ceiling as per finishes schedule.
F4. 610 x 610mm Trap door formed of 50 x 65mm SA pine rebated frame with 38 x 38mm SA pine cross brander covered with ceiling board and fitted flush in opening. Provide 18 x 50mm meranti surround. Trap door and surround to be painted as for ceiling. Trap door opening between trusses to be formed with 38 x 114mm SA pine bearers, nailed to trusses.

Roof and fascias
G1. Roof sheeting - 0.58mm Brownbuilt Klip-lok roof sheeting with Globalcoat finish (colour Traffic Green) on 50 x 76mm SAP purlins at maximum 1200mm centres on patent and approved pre-fabricated truss system. Roof sheeting to be done by specialist installer providing a five year guarantee.
G2. Ridge and hip flashings - 0.8mm galvanised sheet iron standard factory manufactured FK3 ridge or hip flashing with Globalcoat finish (colour Traffic Green).
G3. Fascia boards - 10 x 300mm Everite Nute-cement fascia boards screw fixed to truss ends and counter batten with countersunk brass screws. Barge boards - 200 x 80mm Everite sockless barge boards screw fixed to trusses or purlins with countersunk brass screws. Prime fascias and barge boards with one coat Plascon Multi-Surface Primer (WUP1) and finish off with two coats Plascon Polvin Walls & Ceilings (EPL) PVA paint. Colour as per finishes schedule.
G4. Truss system - MITAK or other approved patent timber pre-fabricated truss system at maximum 1100mm centres with 20 degrees pitch. 50 x 76mm SAP purlins at maximum 1200mm centres. 38 x 114mm SAP wall plate to be carbolineum treated before fixing. Truss manufacturer to provide certificate and guarantee for design and erection of trusses as well as detailed shop drawings. Shop drawings to be provided to the Principal Agent for approval before manufacturing. All sections in contact with wet trades to be carbolineum treated before fixing in position. Trusses to be secured to walls with 2.5mm diameter galvanised steel wire ties, built into walls minimum 6 courses. Purlins nailed to trusses must also be secured with 2.5mm diameter galvanised steel wire, twice wrapped around and tied around rafters and purlins. All exposed parts of trusses, purlins, etc. to be sanded smooth, seal knots with Plascon Knot Seal (PK2), prime with one coat Plascon Wood Primer (UC2) and apply two coats Plascon Enamel Doors & Trims paint. Colour as per finishes schedule.
G5. Gutters - 100 x 100mm High gutters formed of 0.58mm galvanised sheet iron with Globalcoat finish (colour Gemsbok Sand). All brackets, etc. to be pre-coated with Globalcoat to match colour of gutters.
G6. Downpipes - 100mm Diameter downpipes formed of 0.58mm galvanised sheet iron with Globalcoat finish (colour Gemsbok Sand). All holderbats, brackets, etc. to be pre-coated to match colour of downpipes.
G7. Barge flashing over barge boards at louvres - 0.8mm galvanised sheet iron standard factory manufactured FK13 barge or gable flashing with Globalcoat finish (colour Traffic Green).
G8. Flashings at bottom of louvres - 0.8mm galvanised sheet iron standard factory manufactured FK8 headwall flashing and FK7 counter flashing with Globalcoat finish (Colour Traffic Green).




Fittings
H1. Vitrex Model 2400 (code 2404) enameled green folding type writing board with wall mounted centre board 2000 x 1200mm high, two wall mounted side boards each 1000 x 1200mm high & two swing leaves each 1000 x 1200mm high with permanent aluminium chalk rail.
H2. Vitrex System 2000 (code 2317) light grey wall mounted pinning board, size 2000 x 1200mm high (2 per classroom).
H3. Greenfield G25 double door steel cupboard with standard baked enameled finish, 760 x 610 x 1700mm high with four shelves (2 per classroom).
H4. Five rows of 19mm Thick laminated SA Pine shelving, 350mm wide, evenly spaced & fixed from underside to 305mm wide Shelco epoxy powder coated steel brackets. Brackets to be fixed to 25mm wide x 2134mm long double slotted epoxy powder coated Shelco type F16 wall bands, plugged to walls at maximum 600mm c/c. Sand down to a smooth finish, stop with Polycell Woodfiller, apply one coat Plascon Woodcare Ultra Varnish (X44) thinned with 1:3 mineral turpentine (AZH1) then apply two finishing coats Plascon Woodcare Clear Ultra (X44) suede varnish to shelves.

Miscellaneous
I1 9 Kg DCP fire extinguisher fitted to 400 x 200 x 22mm thick meranti backplate with chamfered edges. Sand down to a smooth finish, stop with Polycell Woodfiller, apply one coat Plascon Woodcare Ultra (X44) suede varnish thinned with 1:3 mineral turpentine (AZH1) & then apply two finishing coats Plascon Woodcare Ultra (X44) suede varnish to back plate. Provide 150 x 150mm Union AL5066-E08/2AS aluminium fire extinguisher sign and Union AL5066-E08/2AS aluminium red down arrow sign above fire extinguisher.
I2 Safex fire hose reel with 30m hose. Supply 152 x 152 x 3mm thick Union AL5066-06ASE05 aluminium engraved red fire hose reel sign & Union AL5066-06ASE08 aluminium engraved red down arrow sign above fire hose reel. Water supply in buildings to fire hose reel to be 25mm galvanised mild steel. Degrease exposed parts of pipes with Plascon Aquasolv Degreaser (GR1), remove any rust with Plascon Rust Remover (RR1), prime with Plascon Metal Primer (UC501) and apply two coats Plascon Enamel Doors & Trims (G-range) paint - colour Signal Red (G7). Provide 150 x 150mm Union AL5066-E05/2AS aluminium fire sign & Union AL5066-E08/2AS aluminium red down arrow sign above fire hose reel.

NOTES :

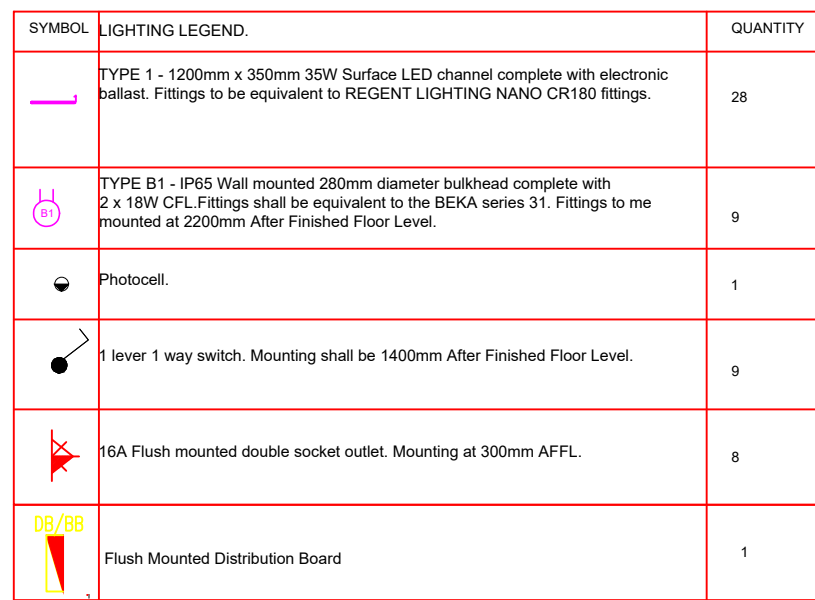
- 1) Workmanship to comply with Standard Specification of materials and methods - to be used - SABS 0400.
- 2) Light Switch in Disabled toilet to be at 1200 mm above FFL.
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WATER AND SANITATION		
ENVIRONMENTAL OFFICER		
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SERVICE		
NEW BUILDINGS		
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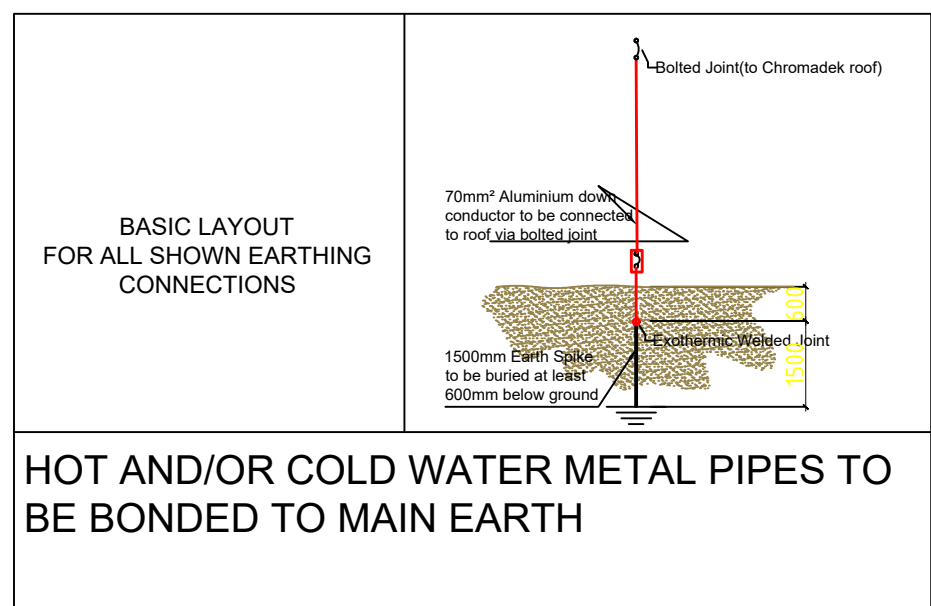
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4 CLASSROOM BLOCK ELECTRICAL NOTES

1. The earthing and lightning protection shall be installed by a specialist.
2. Such specialist as appointed by the contractor shall ensure the installation is compliant to the requirements of SANS 10199 and SANS 62305 and shall issue a certificate after completion of the works.
3. All down conductors shall be of Solid Aluminium conductor and shall be installed inside Ø25mm pvc pipes which shall be chased inside the wall.
4. 4" x 4" Test Boxes shall also be installed at 300mm AFFL. These shall be installed flush on the outside wall for all earthing connections.
5. All connections between conductor and earth spikes shall be exothermically welded.
6. The layout shown for electrode installation is a guide and should there be any need to drive the rods deeper into the ground or add more rods to lower the ground resistance the specialist shall inform the Electrical Engineer.

Symbol	Description
	1500mm earth spike

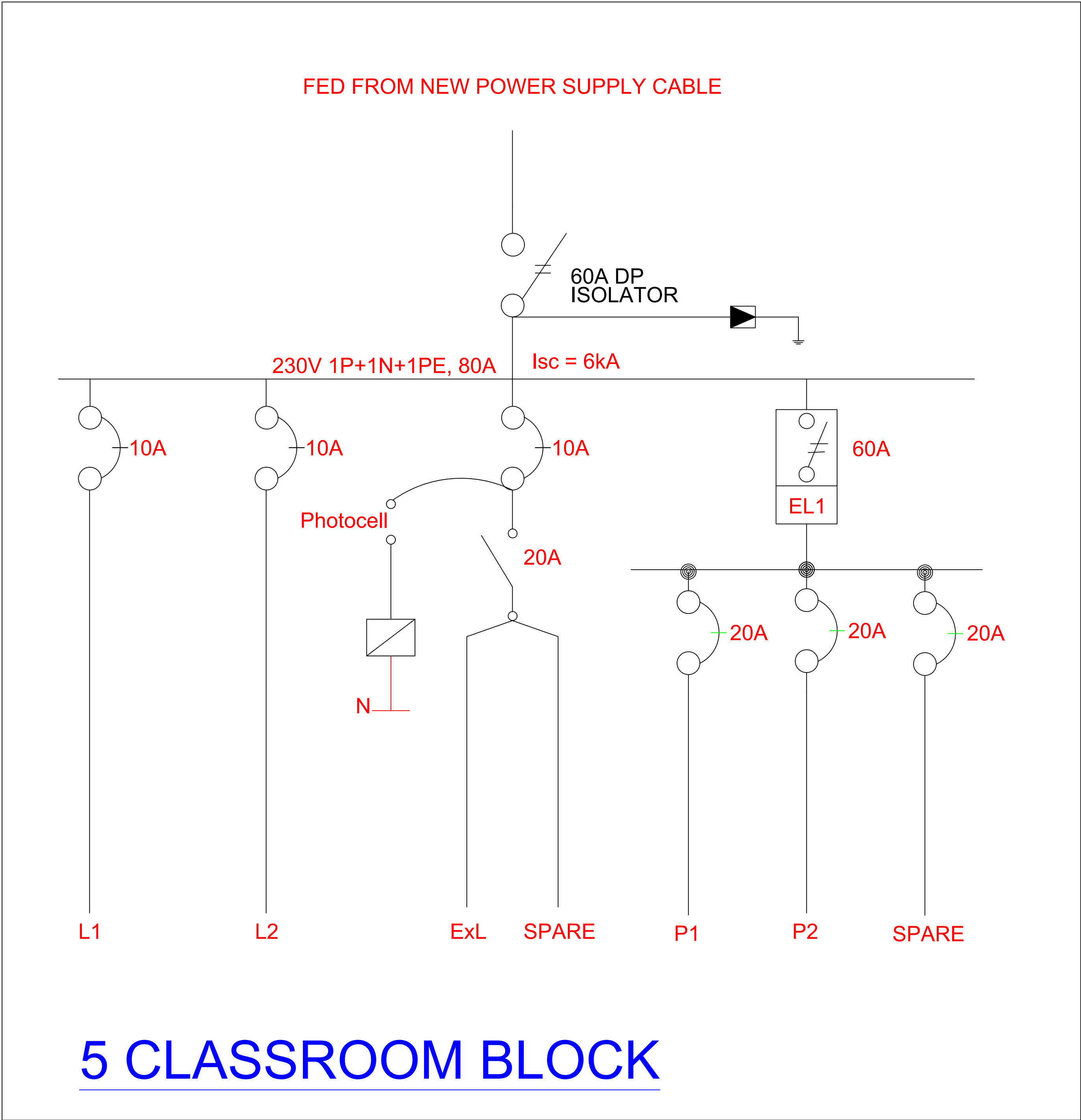
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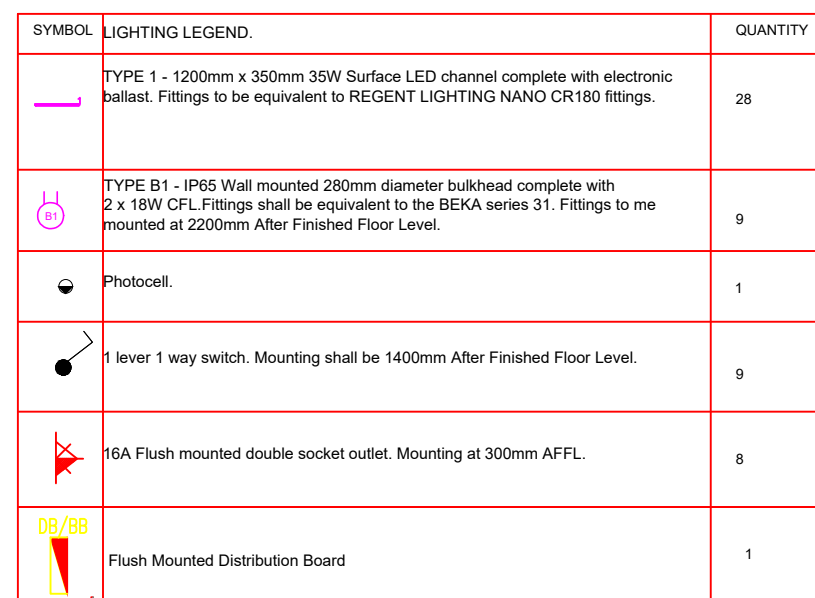
DB-G2	Distribution board.
L1,L2	Internal lighting.
P1,P2	Plugs
EL	Earth Leakage
ExL	External Lighting

NOTES

1. Board shall be made of 1.6mm 3CR12 material.
2. Board shall be flush mounted.
3. Shop drawings to be submitted to the Electrical Engineer for approval before manufacture commences.
4. 25% spare capacity shall be provided in the board for future additions of loads.



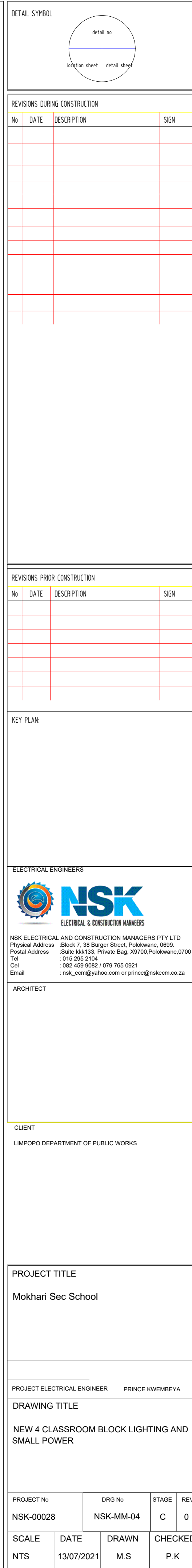
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KEY PLAN			
ELECTRICAL ENGINEERS			
 NSK ELECTRICAL AND CONSTRUCTION MANAGERS PTY LTD Physical Address : Block 7, 38 Burger Street, Polokwane, 0899. Postal Address : Suite Mx133, Private Bag, X9700, Polokwane, 0700. Tel : 015 255 2104 Cell : 082 459 8082 / 079 765 0021 Email : nsk_ecm@yahoo.com or prince@nskecm.co.za			
ARCHITECT			
CLIENT			
DEVELOPMENT BANK OF SOUTH AFRICA			
PROJECT TITLE			
MOKHARI SEC SCHOOL			
PROJECT ELECTRICAL ENGINEER PRINCE KWEMBEYA			
DRAWING TITLE			
5 CLASSROOM BLOCK DB SLD			
PROJECT No	DRG No	STAGE	REV
NSK-00026	NSK-DS-02	C	0
SCALE	DATE	DRAWN	CHECKED
NTS	19/06/2021	M.S	P.K



4 CLASSROOM BLOCK ELECTRICAL NOTES

1. Install new electrical installation as per the design drawing.
2. At conduit to be used for small power and lighting installation should be 025mm and 020mm SABS approved PVC conduit respectively.
3. 2.5mm² and 4mm² GP wire (with 2.5mm² bare copper earth wire for 020mm) shall be used for wiring the lighting and small power circuits respectively.
4. Positions of socket outlets on this drawings are indicative. Actual positions of the socket outlets to be finalised on site.
5. Light fittings shall be of the type approved by the Engineer.
6. Light fittings , sockets , light switches and distribution board shall be installed flush and square and at positions indicated on the drawing. Change of position shall be effected after approval by the Electrical Engineer.
7. After installation is complete, label equipment, test and issue Certificate of Compliance for the installation.

- | Symbol | Description |
|--------|--------------------|
| | 1500mm earth spike |

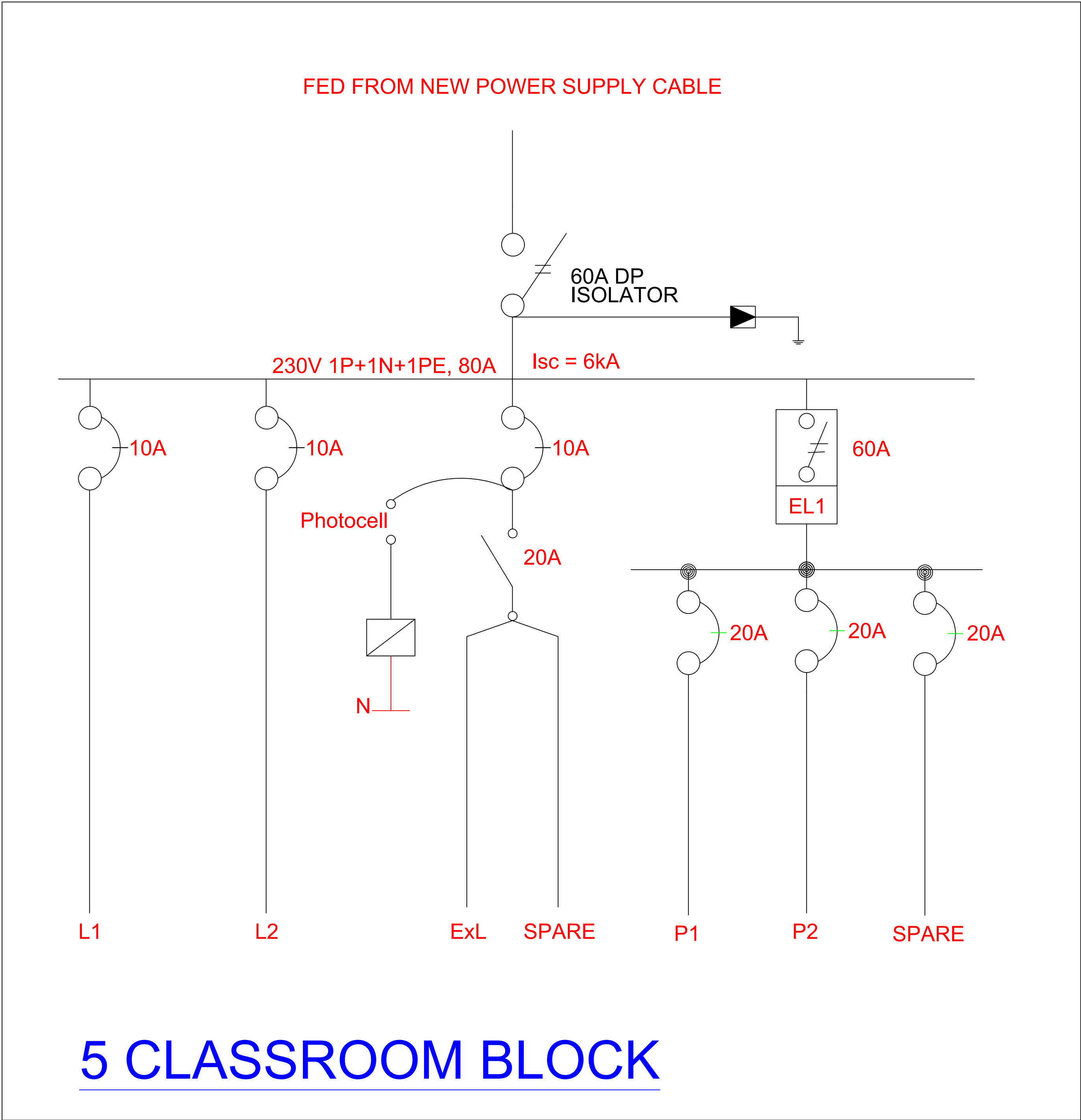


LEGEND

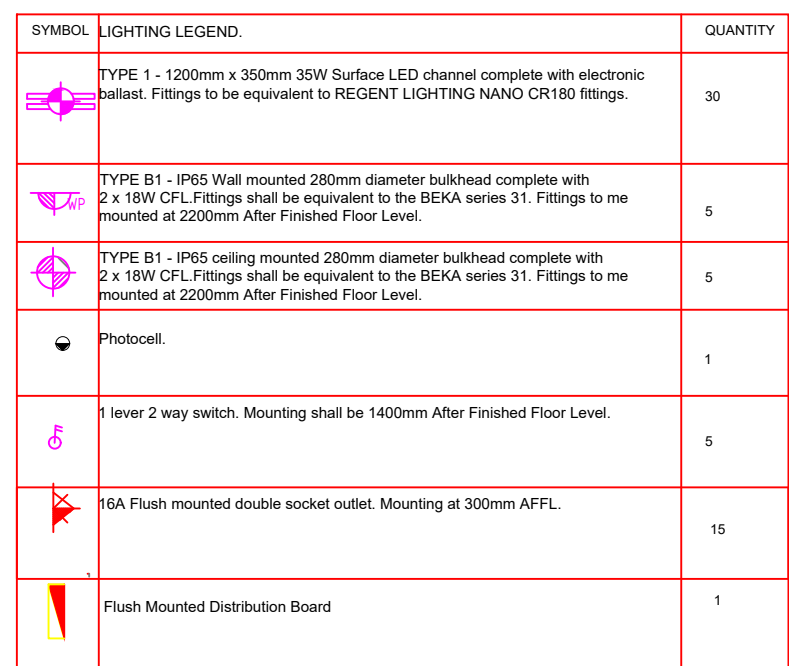
DB-G2	Distribution board.
L1,L2	Internal lighting.
P1,P2	Plugs
EL	Earth Leakage
ExL	External Lighting

NOTES

1. Board shall be made of 1.6mm 3CR12 material.
2. Board shall be flush mounted.
3. Shop drawings to be submitted to the Electrical Engineer for approval before manufacture commences.
4. 25% spare capacity shall be provided in the board for future additions of loads.

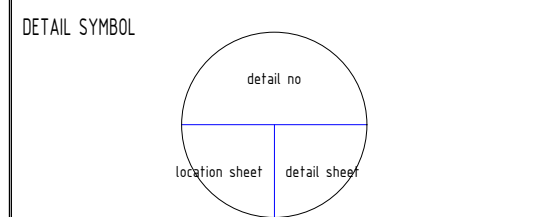


DETAIL SYMBOL			
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REVISIONS DURING CONSTRUCTION			
No	DATE	DESCRIPTION	SIGN
REVISIONS PRIOR CONSTRUCTION			
No	DATE	DESCRIPTION	SIGN
KEY PLAN			
ELECTRICAL ENGINEERS			
<div><div><div></div><div>NSK</div><div>ELECTRICAL & CONSTRUCTION MANAGERS</div></div><div>NSK ELECTRICAL AND CONSTRUCTION MANAGERS PTY LTD Physical Address : Block 7, 38 Burger Street, Polokwane, 0899. Postal Address : Suite Mx133, Private Bag, X9700, Polokwane, 0700. Tel : 015 255 2104 Cell : 082 459 8062 / 079 765 0021 Email : nsk_ecm@yahoo.com or prince@nskecm.co.za</div></div>			
ARCHITECT			
CLIENT			
DEVELOPMENT BANK OF SOUTH AFRICA			
PROJECT TITLE			
MOKHARI SEC SCHOOL			
PROJECT ELECTRICAL ENGINEER PRINCE KWEMBEYA			
DRAWING TITLE			
5 CLASSROOM BLOCK DB SLD			
PROJECT No	DRG No	STAGE	REV
NSK-00026	NSK-DS-02	C	0
SCALE	DATE	DRAWN	CHECKED
NTS	19/06/2021	M.S	P.K



- #### 4 CLASSROOM BLOCK ELECTRICAL NOTES.
1. Install new electrical installation as per the design drawing.
 2. All conduit to be used for small power and lighting installation shall be 625mm and 25mm PVC approved for use as conduit respectively.
 3. 2.40mm² 4 core 40mm GP wire to be used for 25mm² bare copper earth wire (for all circuits) shall be used for wiring the lighting and small power circuits respectively.
 4. Positions of socket outlets on this drawings are indicative. Actual position of the socket outlets to be finalised on site.
 5. Light fittings shall bear the SABS stamp of approval.
 6. Light fittings , sockets , light switches and distribution board shall be installed flush and square and at positions indicated on the drawing. Change of position shall be effected after approval by the Electrical Engineer.
 7. After installation is complete, label equipment, test and issue Certificate of Compliance for the installation.

- | Symbol | Description |
|--------|--------------------|
| | 1500mm earth spike |

[illegible][illegible]

KEY PLAN:

ELECTRICAL ENGINEERS

 **NSK**
ELECTRICAL & CONSTRUCTION MANAGERS

NSK ELECTRICAL AND CONSTRUCTION MANAGERS PTY LTD
Physical Address: Block 7, 38 Burger Street, Polokwane, 0699
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Email: nsk_ecm@yahoo.co.za or prince@nskecm.co.za

ARCHITECT

CLIENT

LIMPOPO DEPARTMENT OF PUBLIC WORKS

PROJECT TITLE
Mokhari Sec School

PROJECT ELECTRICAL ENGINEER	PRINCE KWEMBEYA
-----------------------------	-----------------

DRAWING TITLE

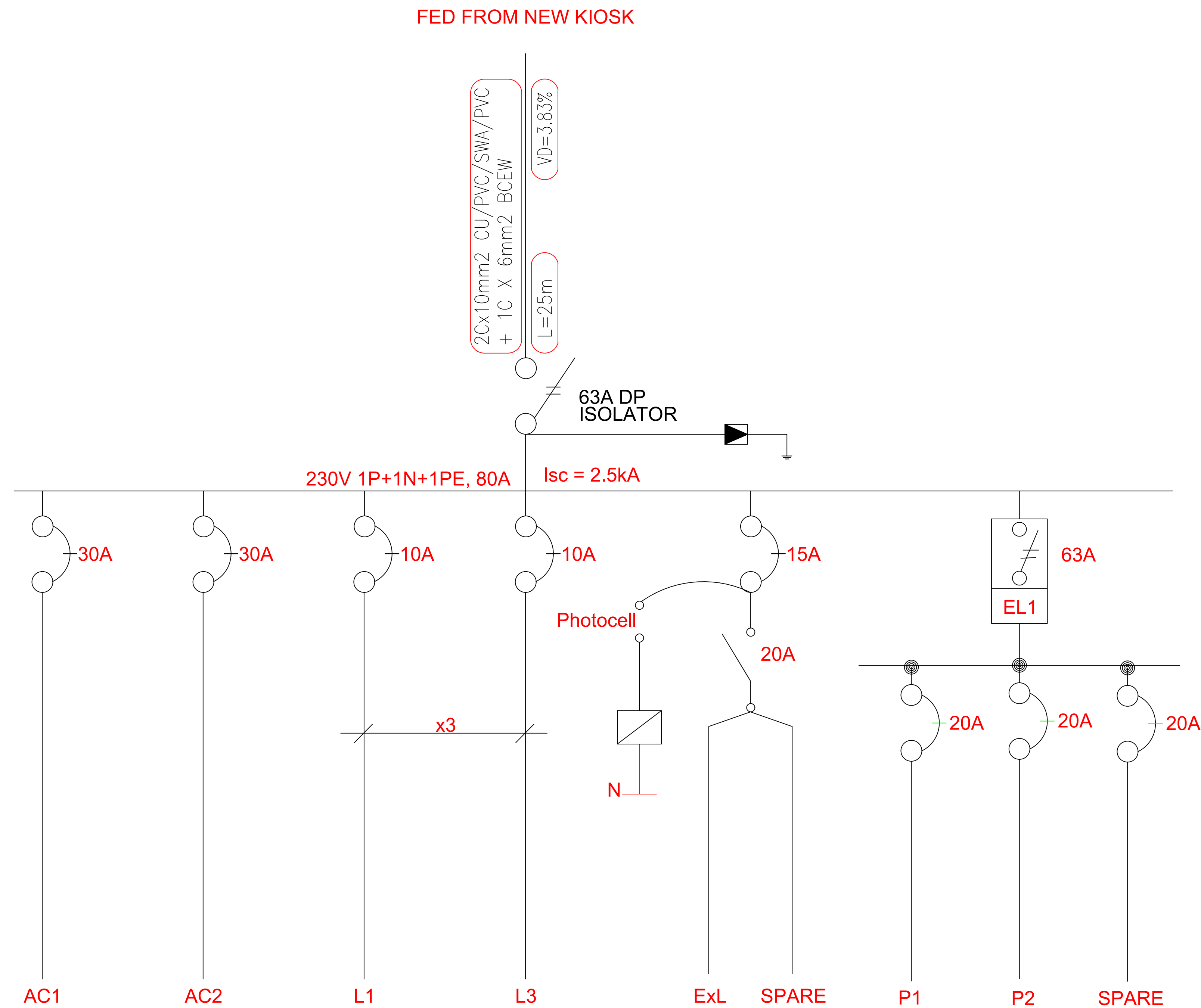
5 CLASSROOM BLOCK LIGHTING AND POWER

PROJECT No NSK-00028		DRG No NSK-MM-04		STAGE C	REV 0
SCALE NTS	DATE 13/07/2021	DRAWN M.S		CHECKED P.K 325	

DB-AD
L1,L2,L3
P1,P2
EL
ExL

Distribution board.
Internal lighting.
Plugs
Earth Leakage
External Lighting

1. Board shall be made of 1.6mm 3CR12 material.
2. Board shall be flush mounted.
3. Shop drawings to be submitted to the Electrical Engineer for approval before manufacture commences.
4. 25% spare capacity shall be provided in the board for future additions of loads.



DB-MEDIUM ADMIN BLOCK

detail no

on sheet

detail sheet

[illegible][illegible]

KEY PLAN:

 **NSK**
ELECTRICAL & CONSTRUCTION MANAGERS

NSK ELECTRICAL AND CONSTRUCTION MANAGERS PTY LTD
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Cell: 082 459 9082 / 079 765 0921
Email: nsk_ecm@yahoo.com or prince@nskcm.co.za

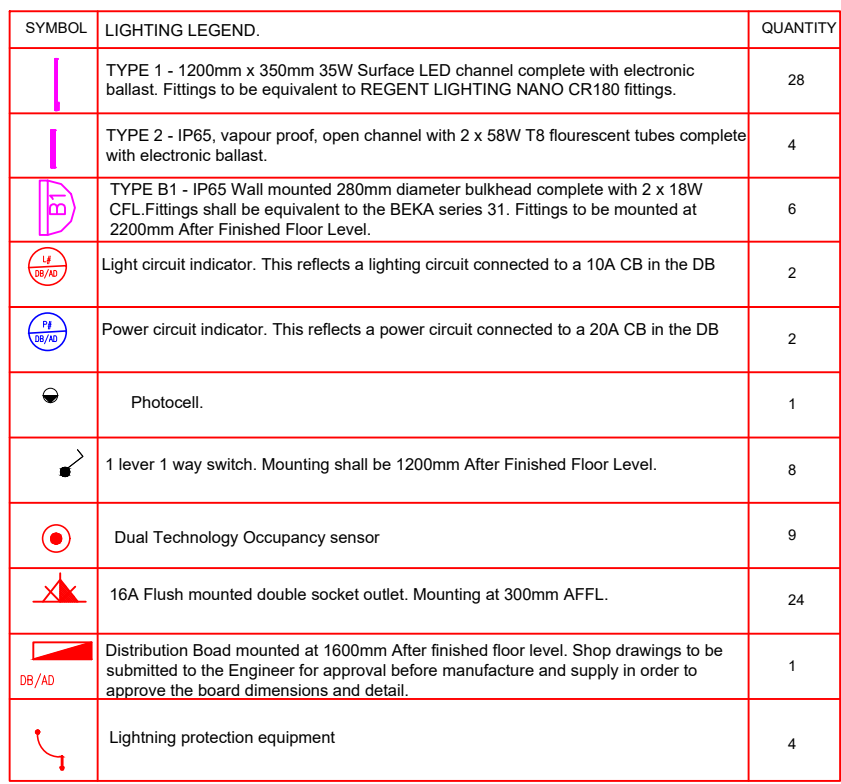
ARCHITECT


LIMPOPO DEPARTMENT OF EDUCATION

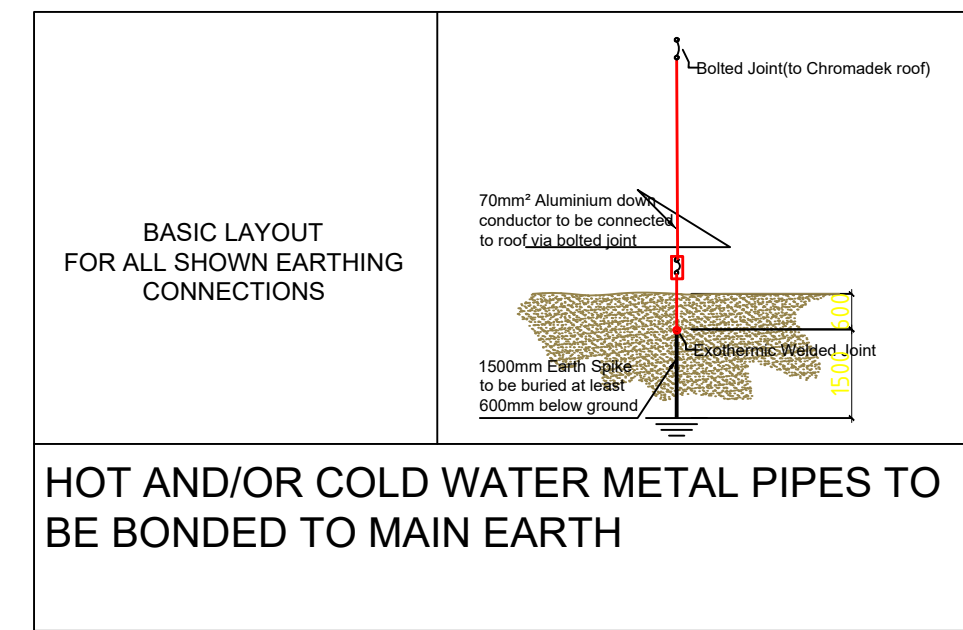
MOKHARI SEC SCHOOL

PROJECT ELECTRICAL ENGINEER PRINCE KWEMBEYA

PROJECT No		DRG No		STAGE	REV.
NSK-00028		NSK-MM-04		C	0
SCALE	DATE	DRAWN		CHECKED	
NTS	19/06/2021	MS		P.K	



- | Symbol | Description |
|---|--------------------|
|  | 1500mm earth spike |

[illegible]

KEY PLAN:

ELECTRICAL ENGINEERS



NSK ELECTRICAL AND CONSTRUCTION MANAGERS PTY LTD
Physical Address : Block 7, 38 Burger Street, Polokwane, 0699.
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Tel : 015 295 2104
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Email : nsk_ecm@yahoo.com or prince@nskcm.co.za

ARCHITECT

CLIENT
LIMPOPO DEPARTMENT OF EDUCATION

PROJECT TITLE

MOKHARI SCHOOL

PROJECT ELECTRICAL ENGINEER PRINCE KWEMBEYA

DRAWING TITLE

NEW ADMINISTRATION BLOCK
POWER, LIGHTING & LIGHTNING LAYOUT

SCALE	DATE	DRAWN	CHECKED
1:50	13/06/2021	M.S	P.K

ISSUED FOR TENDER

NOTES.

Panels: 1.8 x 3m

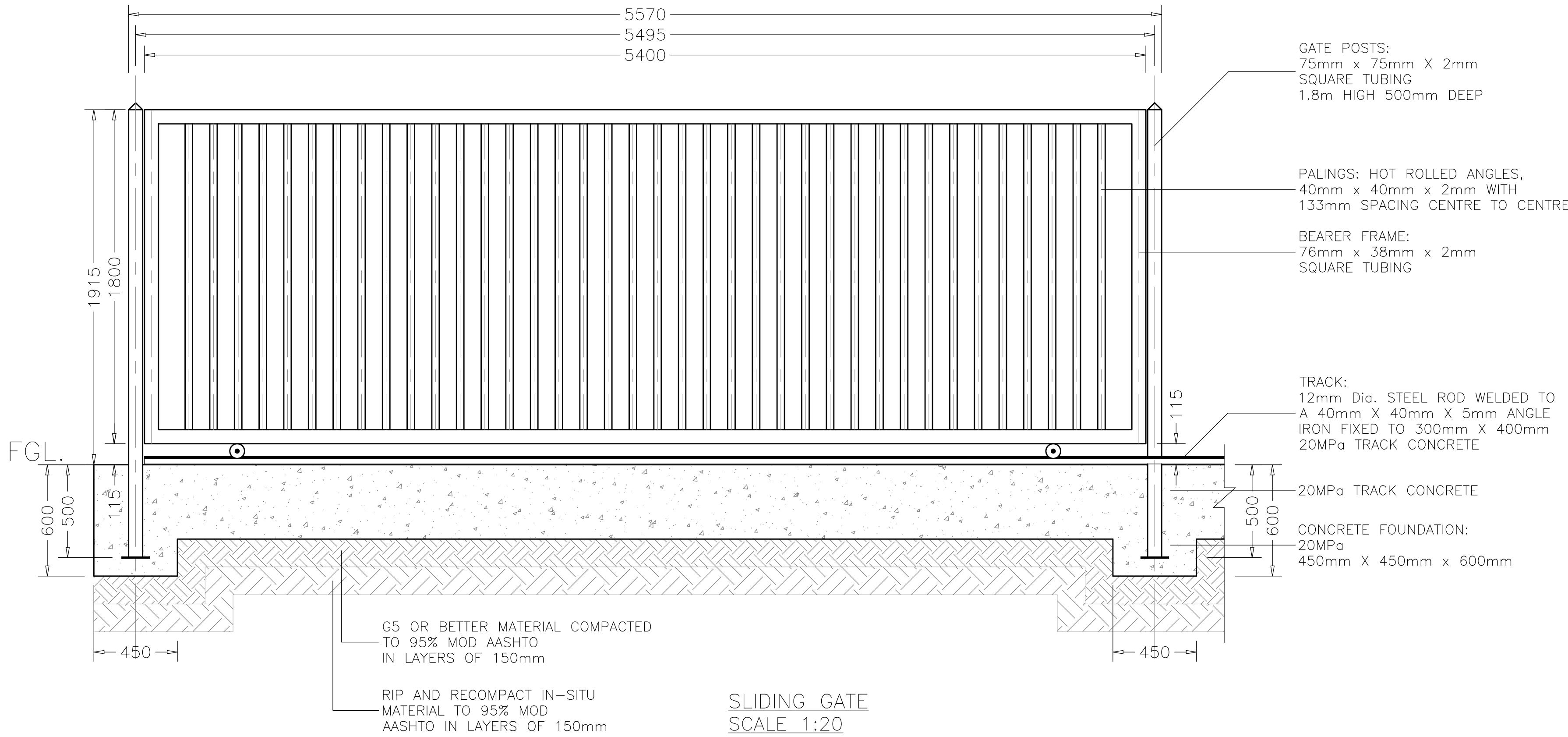
1. Fence bearers:
- 40 x 40 x 2mm angle iron. These are to be placed 300mm from top of paling and 300mm from bottom of paling. (350mm from ground level).
 - These are to be welded flash with the back of the post.
2. Palings "Devil fork"
- 21 palings per panel.
 - 30 x 30 x 2mm steel angle iron paling 1.8m high.
 - Palings to be inserted and firmly welded to the bearers at 133mm centre to centre.
 - Top of the paling to provide a "Devil Fork" effect and the bottom will have a dove tail.
3. Posts:
- 76 x 76 x 2 mm steel square tubing with closing pyramid caps on top.
 - Post must 2.4m high and 600mm will planted into concrete footing.

Palisade Gates

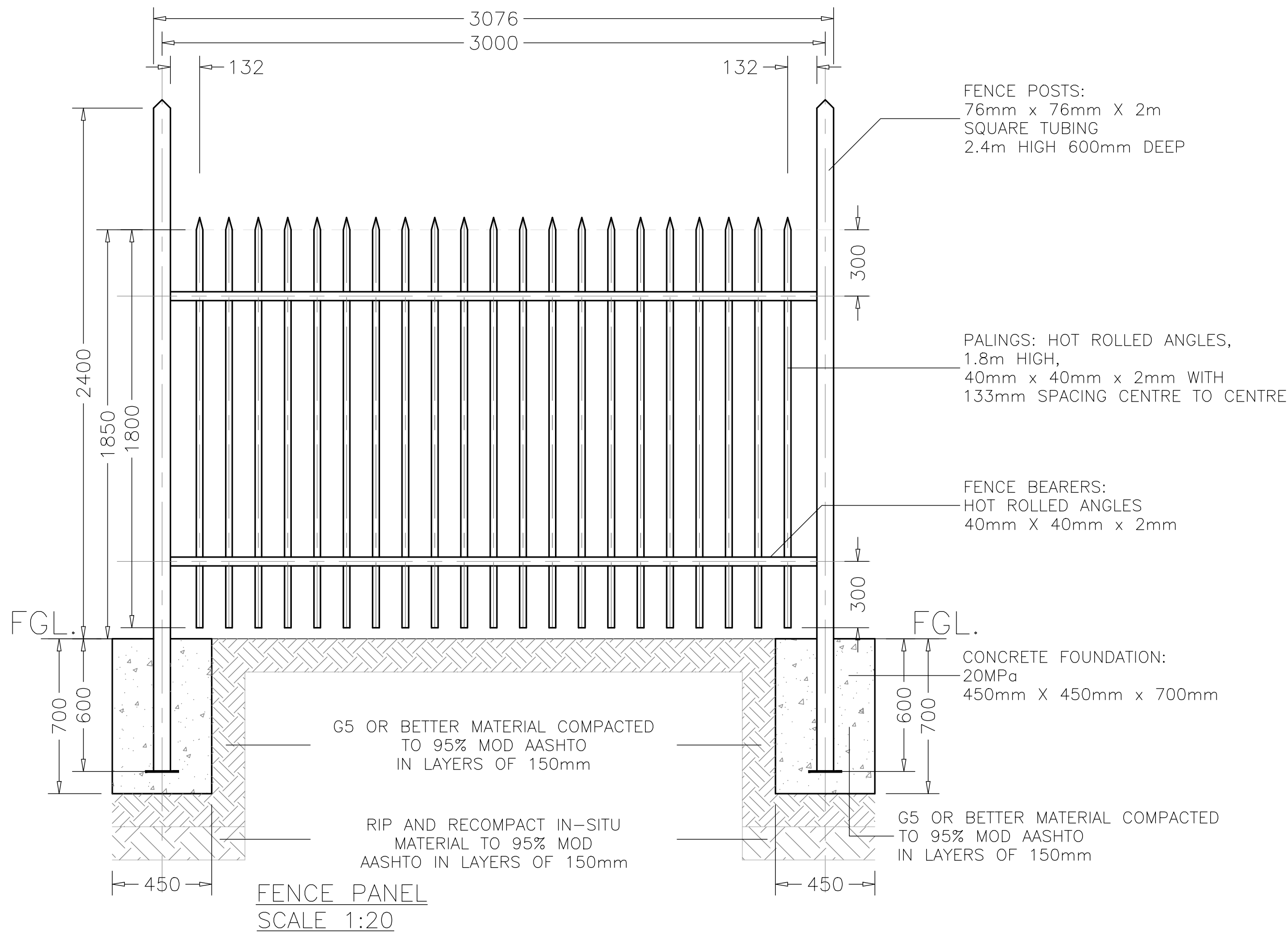
1. Sliding Gate:
- 5/4 m wide x 1.8 m high. 40 x 40 x 2 mm angle iron palings welded to a 76 x 38x 2mm rectangular tubing bearer frame.
 - Palings to be placed at 133 mm apart from each other centre to centre.
 - Gate to be provided with 2 x 80mm roller coaster wheels fitted with ball bearing. These are to be fitted 500mm from edge of the gates.
 - Gate to be provide with proper closing and guidance mechanism.
 - Track is to be 12 mm steel rod welded to a 40 x 40 x 5mm angle iron fixed into a 300 wide x 400 thick x 5m length of the gate (track concrete to engineer's design).
 - Gate Post: 75mm x 75mm 2mm steel square tubing post is to be provided on each side of gate opening with closing pyramid caps on top.
 - Post to be founded in a concrete footing 450 x 450 x 600 deep. Concrete strength to be 20Mpa (minimum) at 28 days.
2. Pedestrian gate:
- 1.5 m wide x 1.8 m high. 40 x 40 x 2 mm angle iron palings welded to a minimum 50 x 25 x 1.6mm rectangular tubing bearer frame.
 - Palings to be placed at 133 mm apart from each other centre to centre.

Painting

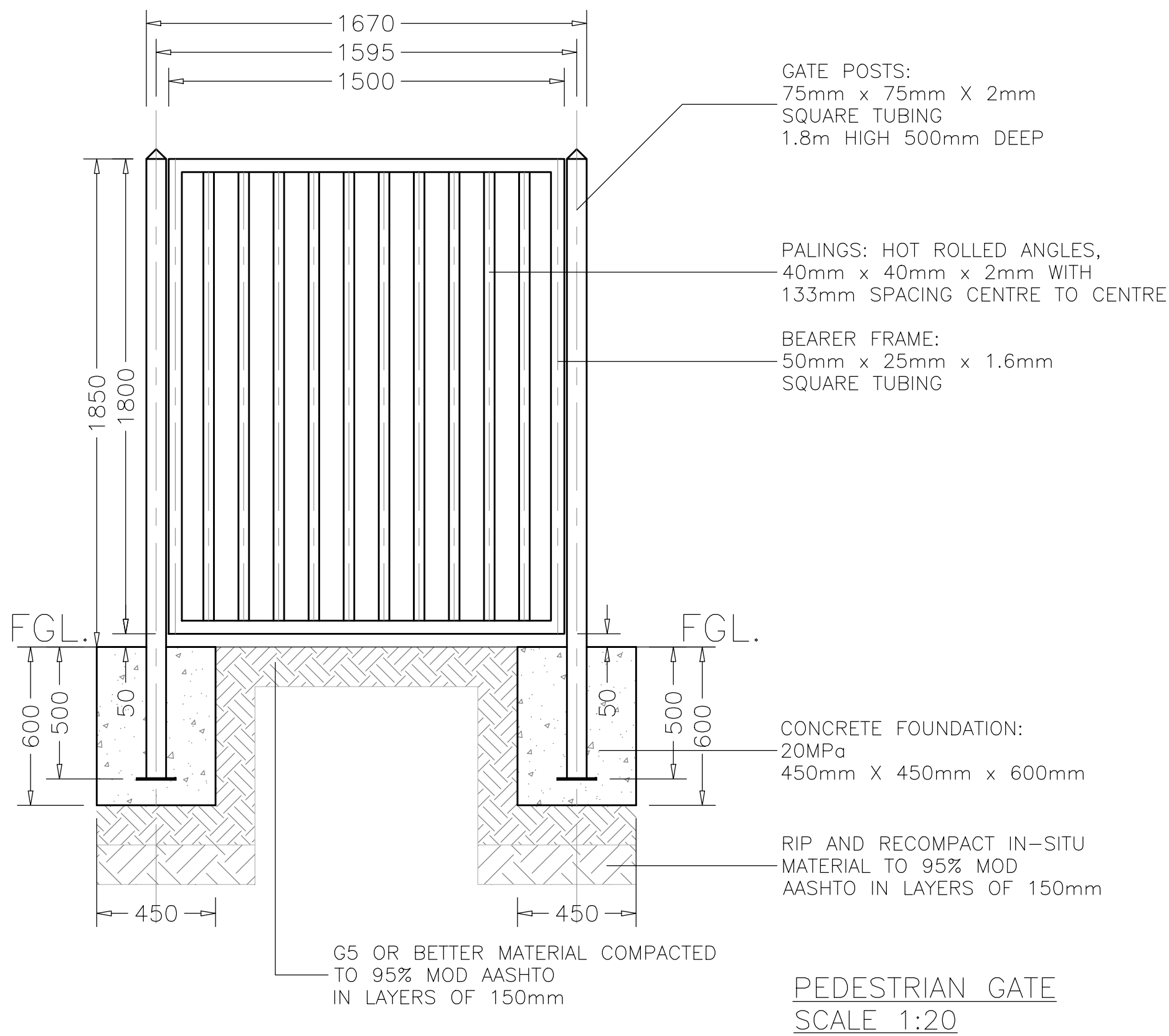
- All joints must be smoothed off.
- All Flux, rust, grease and loose material to be removed before painting.
- Apply one coat primer for steel (red oxide), apply one coat universal undercoat for all surfaces, apply one coat Gloss enamel (colour as specified by the LPDE).
- No brush painting.



SLIDING GATE
SCALE 1:20

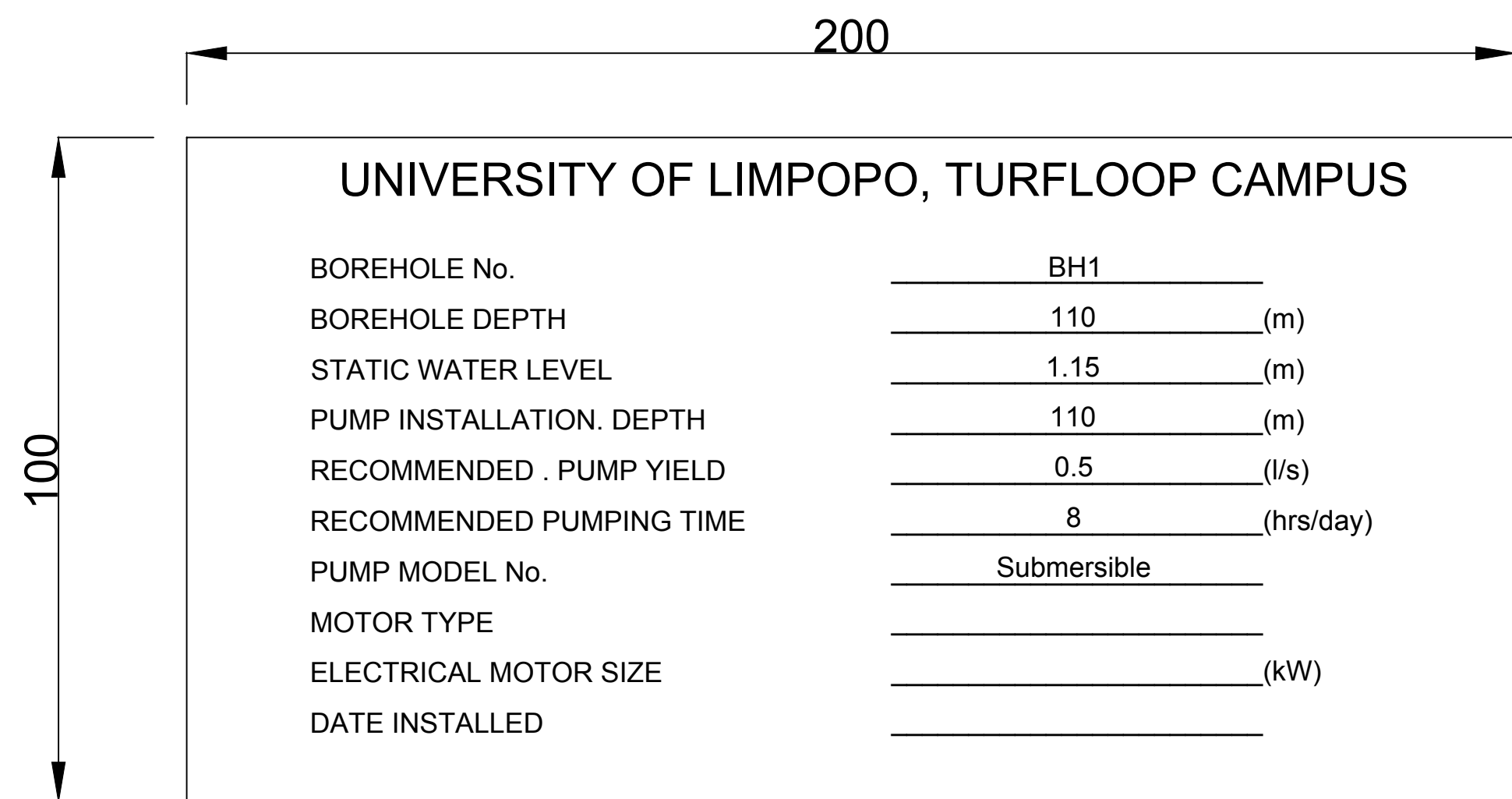
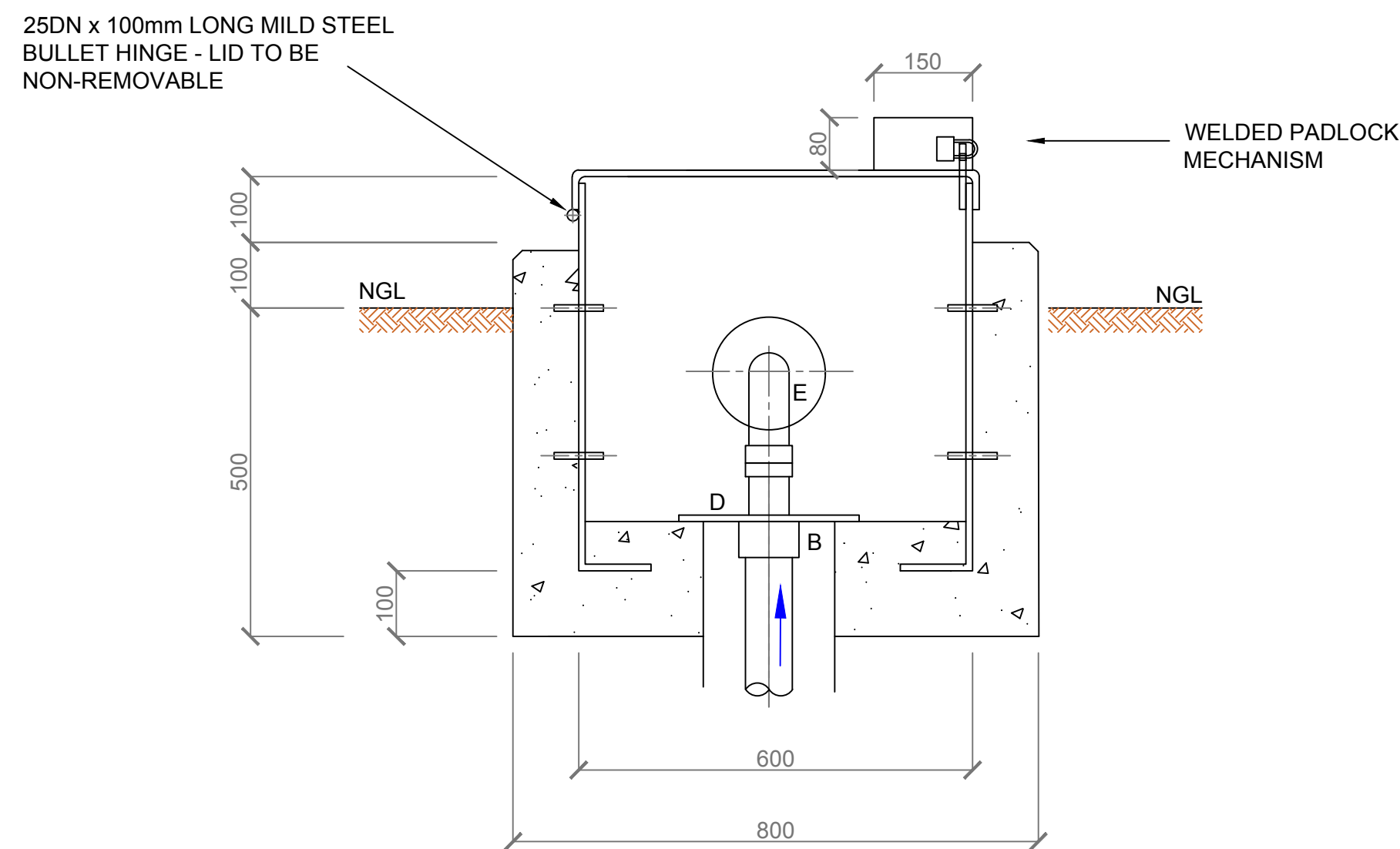


FENCE PANEL
SCALE 1:20



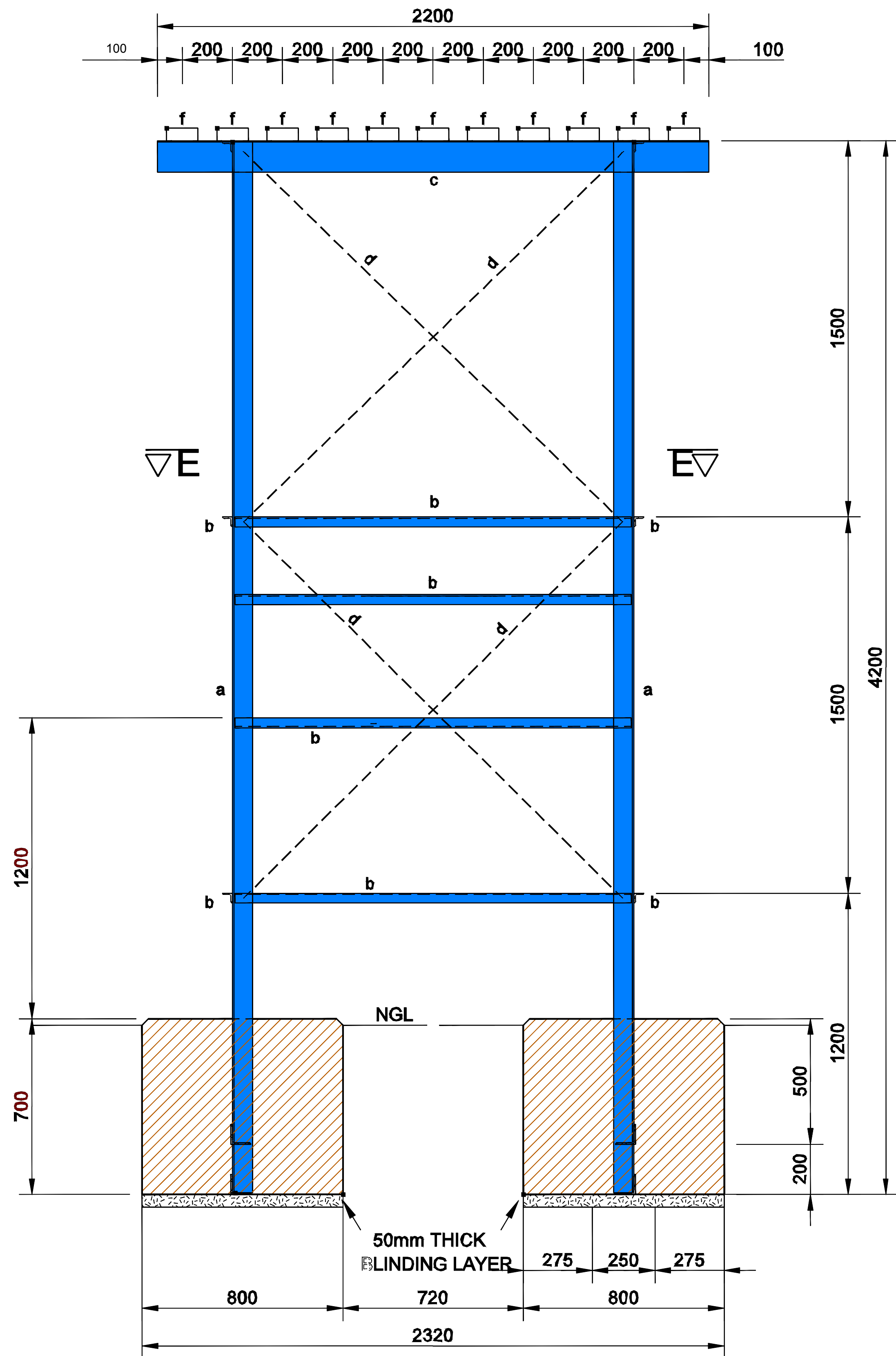
PEDESTRIAN GATE
SCALE 1:20

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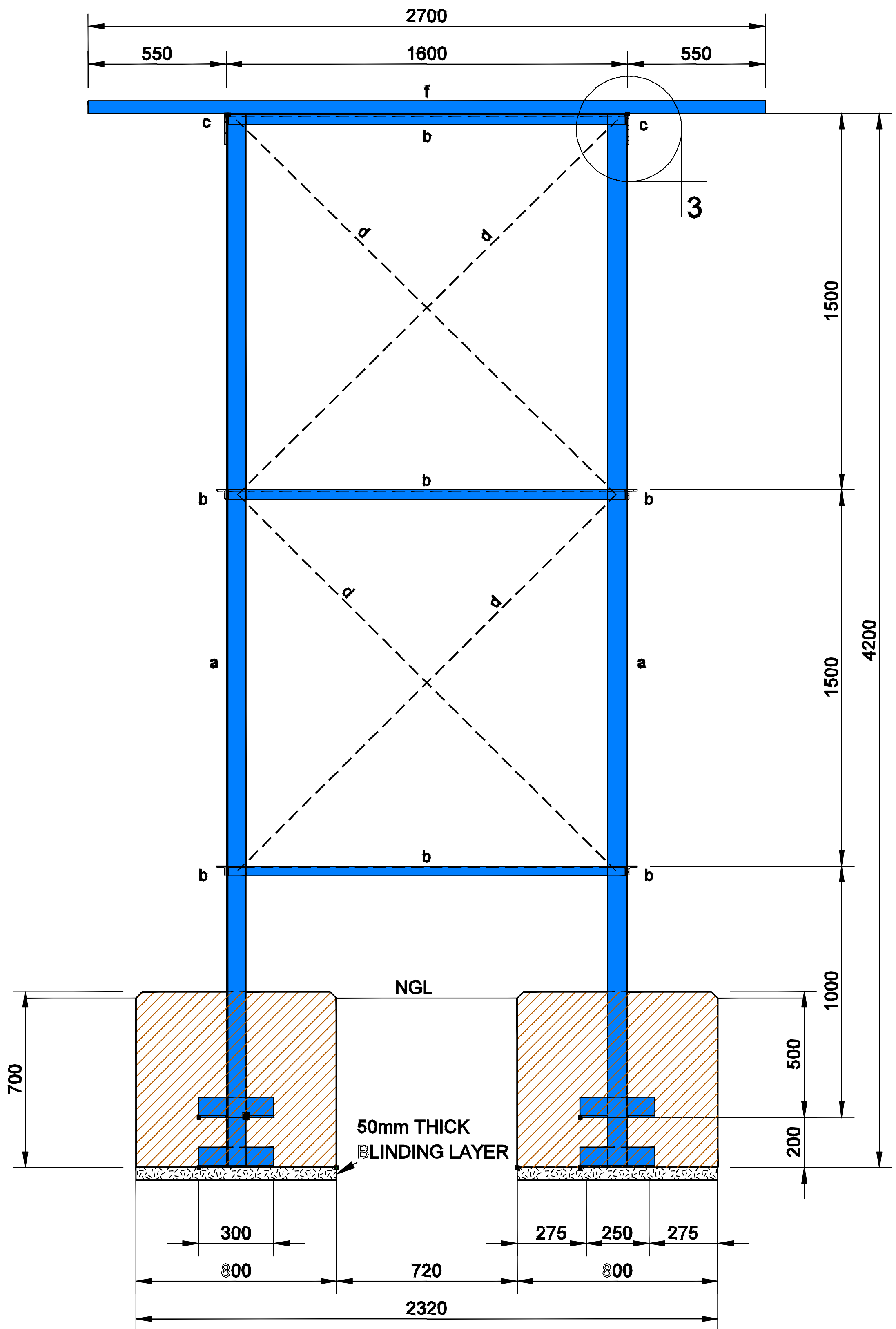


REF.	SCHEDULE OF FITTINGS	SIZE	LENGTH	QT.
A	PUMP AND MOTOR	-	-	1
B	MALE ADAPTOR			
C	SUBMERSIBLE HDPE PIPE, CLASS 12, 4,1mm WALL THICKNESS, SANS 4427, BOREHOLE TO SURFACE	Ø25	110	1
D	METAL BASE PLATE - DOUBLE CHOKE	Ø280	-	1
E	90 DEGREE ELBOW	Ø65	-	2
F	FLANGED MECHANICAL FLOW METER	Ø65	-	1
G	SCHEDULE 40 GALVANIZED PIPE	Ø65	-	-
H	HEAVY DUTY GALVANISED TEE COMPLETE WITH PLUG FITTED TO BRANCH TO PRESSURE SWITCH ON ELECTRICAL INSTALLATIONS	Ø65	-	1
I	MECHANICAL PRESSURE GAUGE, WIKA 100mm DIAL AND FILLED WITH GLYCERINE, WITH A RANGE FROM 200 TO 1 200kPa, COMPLETE WITH BALL ISOLATING VALVE AND PIPING.	Ø65	-	1
J	HEAVY DUTY GALVANIZED REDUCING TEE FOR PRESSURE GAUGE	Ø65	-	1
K	TILT DISC NON-RETURN VALVE	Ø65	-	1
L	BRASS TYPE ISOLATING VALVE	Ø65	-	1

[illegible]



SECTION C-C



SECTION D-D

STRUCTURAL STEEL MEMBERS

- a - Column legs – 60x60x5 angle made from commercial steel.
- b - Horizontal brace – 40x40x5 angle made from commercial steel.
- c - Top platform main support beam – 150x75x10 angle made from EN10025-2-
- d - S355JR steel.
Cross brace – 30x5 flat bar made from commercial steel.
- f - Top platform secondary support beams – 125x75x20x3 lipped channel made from commercial steel.

NOTES:

1. Use two M16 grade 4.8 bolts for the each of the column to platform connections.
2. Use one M12 grade 4.8 bolt for all other connections.
3. The cold formed lipped channels are to be bolted to the main support angle with two M10 grade 4.8 bolts at both ends of the lipped channel.
4. All steel to be coated with SANS approved corrosion protection galvanized paint for engineer's approval.

REV	DATE	CHK	APP	DESCRIPTION

CLIENT

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA
DEPARTMENT OF
PUBLIC WORKS, ROADS & INFRASTRUCTURE

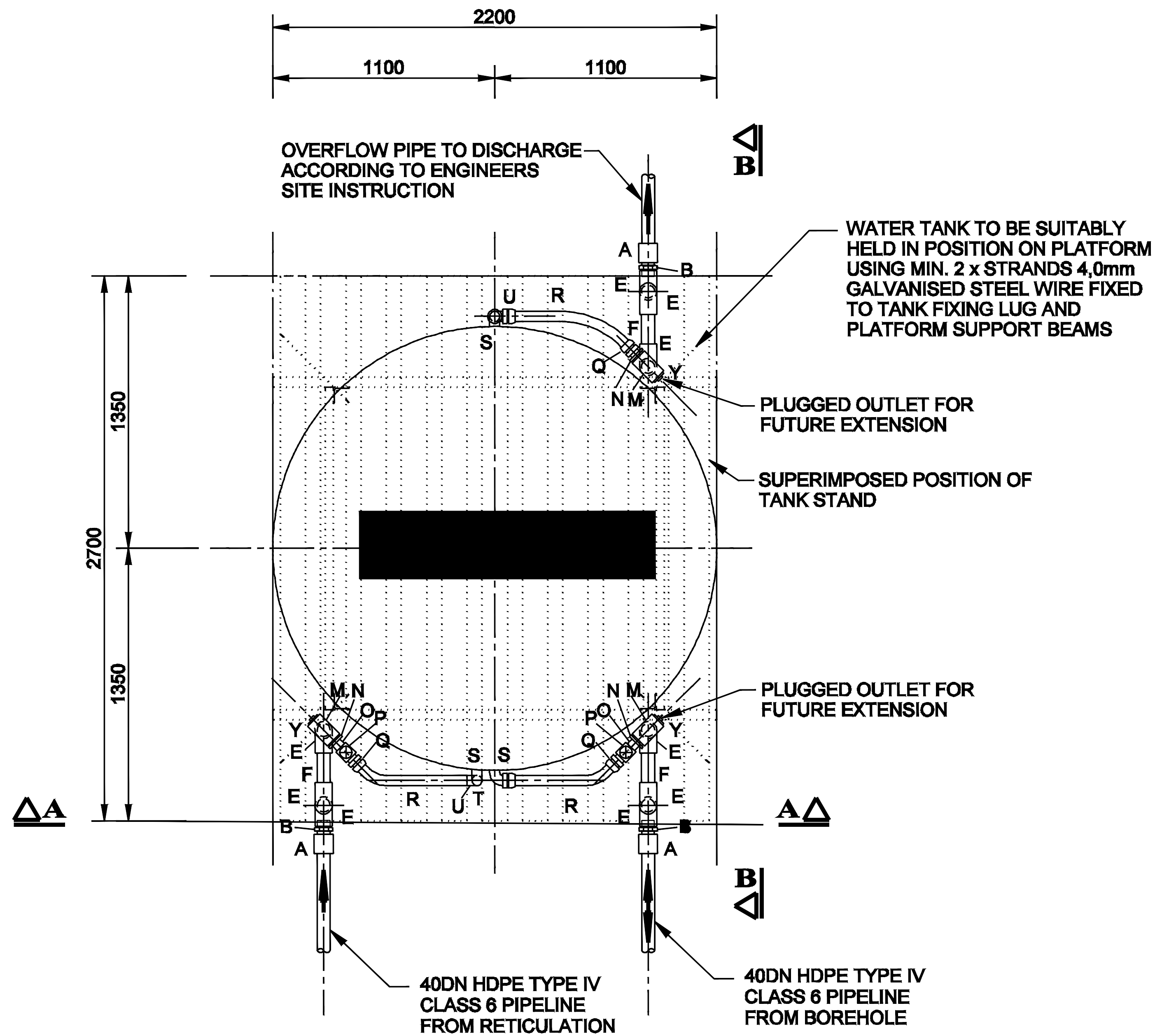
MUTEO CONSULTING

MUTEO
CONSULTING

39 GROBLER STREET
POLOKWANE 0699
P.O. BOX 6196
POLOKWANE NORTH
0750
TEL : (015) 291 4065
FAX : (015) 291 4043
website: www.muteo.co.za

PROJECT APPR.	DATE	BY	SIGNATURE
DESIGNED	10/08/2021	V.M	
CHECKED	10/08/2021	E.M	
DRAWN	10/08/2021	V.M	
PROJECT MNG.			
APPROVED			
CLIENT			

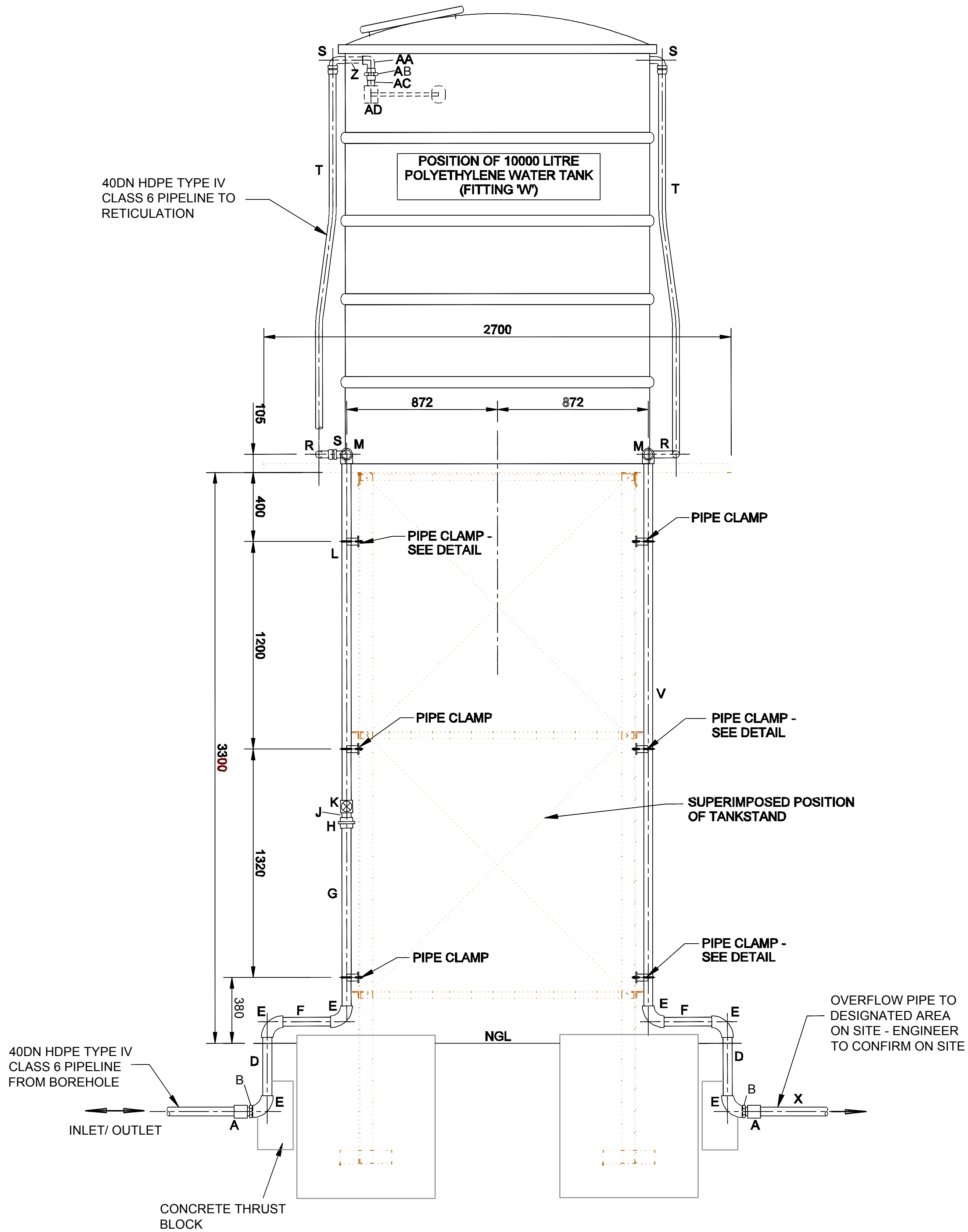
SCALE		ALL DIMENSION IN mm UNLESS SPECIFIED OTHERWISE	
DO NOT SCALE IF IN DOUBT ASK.		TITLE LDPWRI STORM DAMAGED SCHOOLS PVC TANK STAND DETAILS	
PROJECT No. LDPWRI-PROF/16003B		DRAWING No. LDPWRI SCHOOLS/B&C/03A	
DRG SIZE	A1	REV	0



PLAN
NTS

SCHEDULE OF FITTINGS							
REF	NB	DESCRIPTION	WALL T mm	FLANGE DRILLING	TREATMENT		QTY
					GALVA NISED	EPOXY RESIN PAINT	
A	40	'PLASSON' MALE ADAPTOR COMPRESSION FITTING					3no
B	65x40	65 x 40 DN MGI REDUCING BUSH			*		3no
D	65	475mm LONG MGI PIPE PIECE THREADED BOTH ENDS	4.5		*		3no
E	65	90 DEGREE MGI FEMALE BEND			*		9no
F	65	330mm LONG MGI PIPE PIECE THREADED BOTH ENDS	4.5		*		3no
G	65	1020mm LONG MGI PIPE PIECE THREADED BOTH ENDS	4.5		*		2no
H	65	MGI CONICAL SEAT UNION			*		2no
J	65	MGI BARREL NIPPLE			*		2no
K	65	BRASS FEMALE THREADED FULLWAY GATE VALVE					2no
L	65	2000mm LONG MGI PIPE PIECE THREADED BOTH ENDS	4.5		*		2no
M	65	65x65x65ND MGI FEMALE EQUAL TEE			*		3no
N	65x50	65x50ND MGI REDUCING BUSH			*		3no
O	50	MGI BARREL NIPPLE			*		2no
P	50	BRASS FEMALE THREADED FULLWAY GATE VALVE					2no
Q	50	50NDx50BSP MALE ADAPTOR COMPRESSION FITTING					3no
R	50	600mm LONG HIGH DENSITY POLYETHYLENE TYPE IV CLASS 6 PIPE (TO SABS 533)					3no
S	50x40	50NDx40BSP MALE ELBOW COMPRESSION FITTING					3no
T	50	2800mm LONG HIGH DENSITY POLYETHYLENE TYPE IV CLASS 6 PIPE (TO SABS 533)					2no
U	50	90 DEGREE ELBOW COMPRESSION FITTING					2no
V	65	3150mm LONG MGI PIPE PIECE THREADED BOTH ENDS	4.5		*		1no
W	-	10 000 LITRE POLYETHYLENE WATER TANK (3040mm HIGH x 2200mm DIAMETER). COMPLETE WITH 50x40ND NYLON REDUCING BUSHES SEALED INTO ALL INLETS AND OUTLETS. TANK TO BE SUPPLIED COMPLETE WITH SUFFICIENT 4mm DIA GALVANISED STEEL WIRE FOR ANCHORING TO THE TANK STAND PLATFORM AS DETAILED ON PLAN NO. 0310A.25.4					1set
X	40	HDPE TYPE IV CLASS 6 PIPING (PROVISIONAL)					12m
Y	65	MGI HOLLOW PLUG			*		3no
Z	40	100 mm LONG GALVANISED STEEL PIPE THREADED BOTH ENDS	4.5		*		1no
AA	40	90 DEGREE MGI MALE / FEMALE ELBOW			*		1no
AB	40	MGI CONICAL SEAT UNION			*		1no
AC	40	MGI BARREL NIPPLE			*		1no
AD	40	STAINLESS STEEL 'BALEM' FLOAT VALVE, MODEL BLBS 040 COMPLETE WITH FLOW INDUCTION TUBE					1set
		MISCELLANEOUS FITTINGS 1) PIPE CLAMPS AS DETAILED ON PLAN NO. 0310.25.3					9no

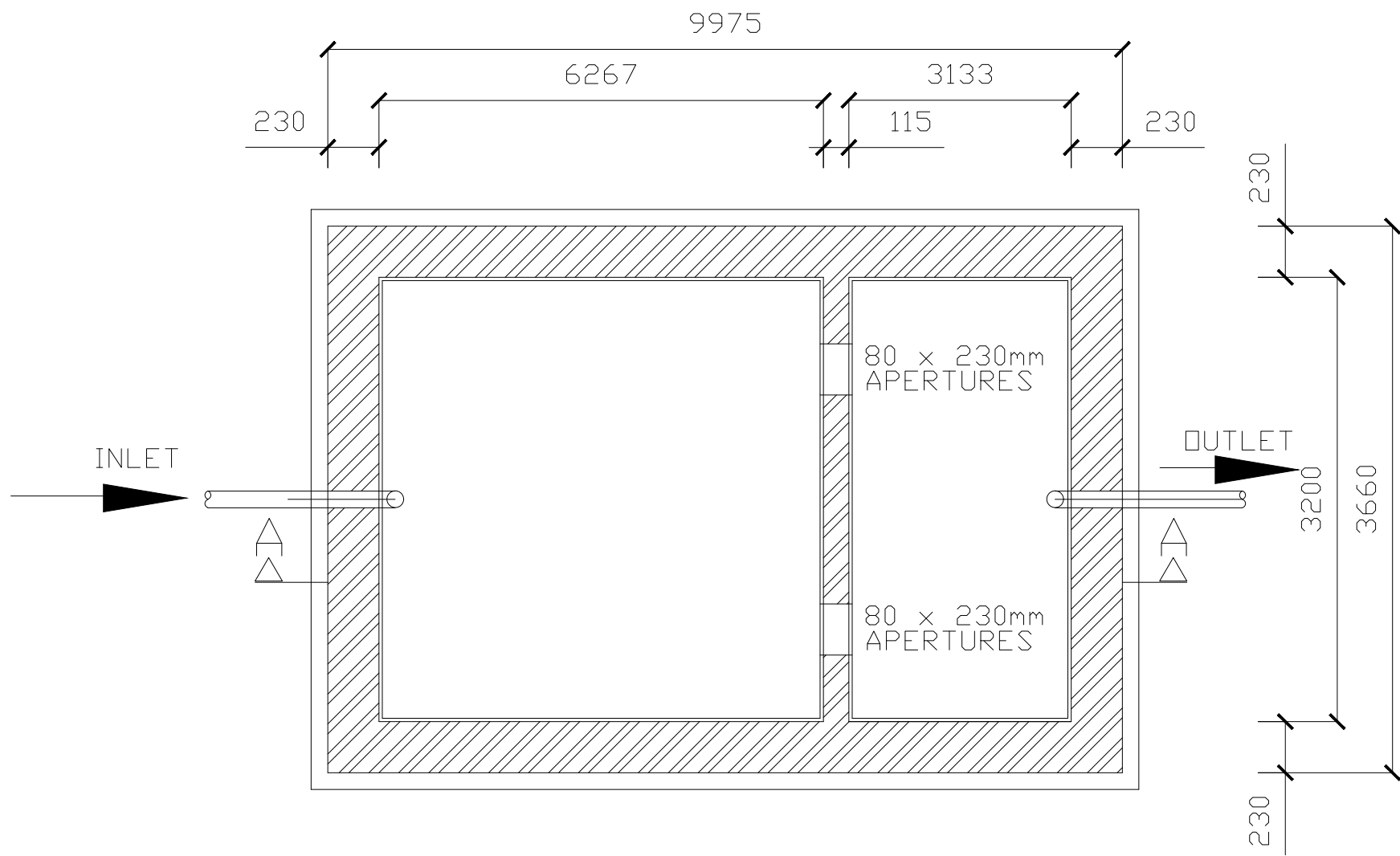
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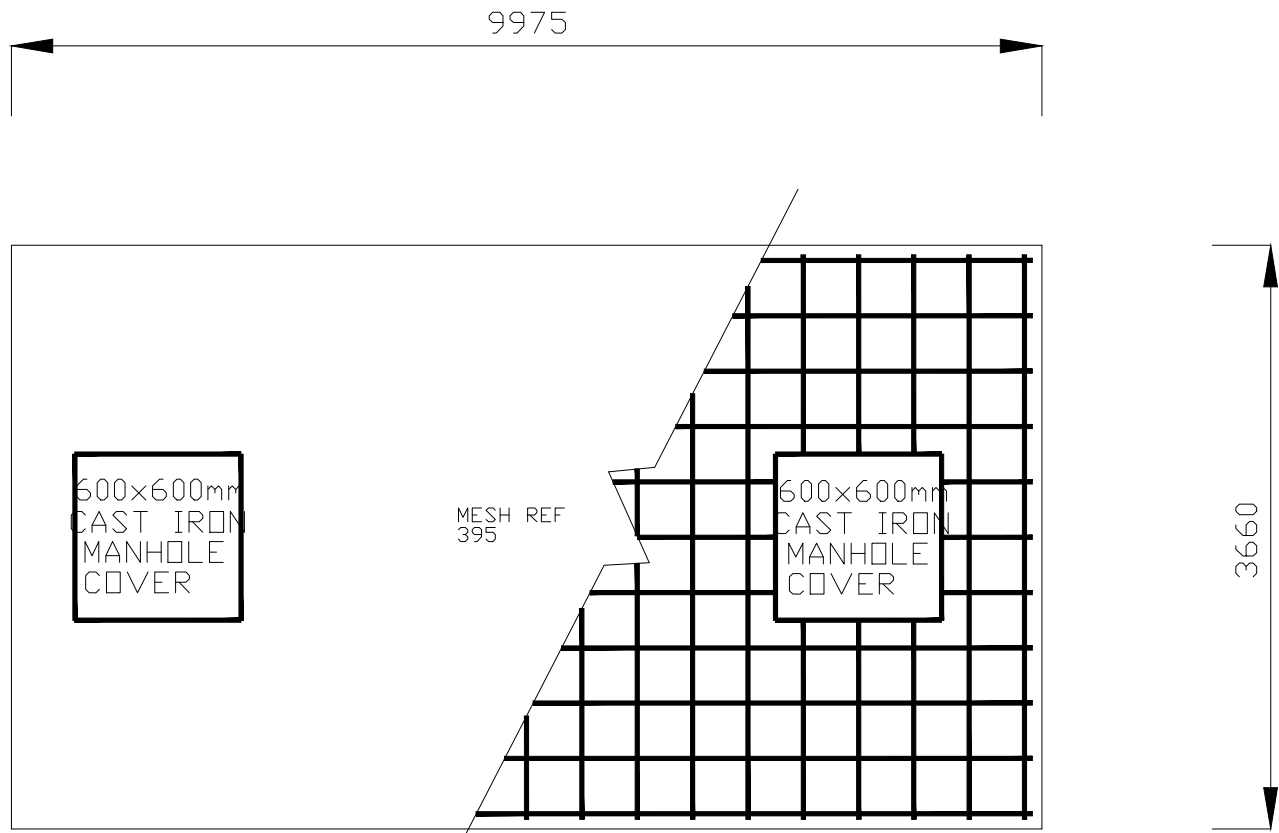
REF	NB	DESCRIPTION	WALL T mm	FLANGE DRILLING	TREATMENT		QTY
					GALVA NISED	EPOXY RESIN PAINT	
A	40	'PLASSON' MALE ADAPTOR COMPRESSION FITTING					3no
B	65x40	65 x 40 DN MGI REDUCING BUSH			*		3no
D	65	475mm LONG MGI PIPE PIECE THREADED BOTH ENDS	4.5		*		3no
E	65	90 DEGREE MGI FEMALE BEND			*		9no
F	65	330mm LONG MGI PIPE PIECE THREADED BOTH ENDS	4.5		*		3no
G	65	1020mm LONG MGI PIPE PIECE THREADED BOTH ENDS	4.5		*		2no
H	65	MGI CONICAL SEAT UNION			*		2no
J	65	MGI BARREL NIPPLE			*		2no
K	65	BRASS FEMALE THREADED FULLWAY GATE VALVE					2no
L	65	2000mm LONG MGI PIPE PIECE THREADED BOTH ENDS	4.5		*		2no
M	65	65x65x65ND MGI FEMALE EQUAL TEE			*		3no
N	65x50	65x50ND MGI REDUCING BUSH			*		3no
O	50	MGI BARREL NIPPLE			*		2no
P	50	BRASS FEMALE THREADED FULLWAY GATE VALVE					2no
Q	50	50NDx50BSP MALE ADAPTOR COMPRESSION FITTING					3no
R	50	600mm LONG HIGH DENSITY POLYETHYLENE TYPE IV CLASS 6 PIPE (TO SABS 533)					3no
S	50x40	50NDx40BSP MALE ELBOW COMPRESSION FITTING					3no
T	50	2800mm LONG HIGH DENSITY POLYETHYLENE TYPE IV CLASS 6 PIPE (TO SABS 533)					2no
U	50	90 DEGREE ELBOW COMPRESSION FITTING					2no
V	65	3150mm LONG MGI PIPE PIECE THREADED BOTH ENDS	4.5		*		1no
W	-	10 000 LITRE POLYETHYLENE WATER TANK (3040mm HIGH x 2200mm DIAMETER). COMPLETE WITH 60x40ND NYLON REDUCING BUSHES SEALED INTO ALL INLETS AND OUTLETS. TANK TO BE SUPPLIED COMPLETE WITH SUFFICIENT 4mm DIA GALVANISED STEEL WIRE FOR ANCHORING TO THE TANK STAND PLATFORM AS DETAILED ON PLAN NO. 0310A.25.4					1set
X	40	HDPE TYPE IV CLASS 6 PIPING (PROVISIONAL)					12m
Y	65	MGI HOLLOW PLUG			*		3no
Z	40	100 mm LONG GALVANISED STEEL PIPE THREADED BOTH ENDS	4.5		*		1no
AA	40	90 DEGREE MGI MALE / FEMALE ELBOW			*		1no
AB	40	MGI CONICAL SEAT UNION			*		1no
AC	40	MGI BARREL NIPPLE			*		1no
AD	40	STAINLESS STEEL 'BALEM' FLOAT VALVE, MODEL BLBS 040 COMPLETE WITH FLOW INDUCTION TUBE					1set
		MISCELLANEOUS FITTINGS					
		1) PIPE CLAMPS AS DETAILED ON PLAN NO. 0310.25.3					9no

[illegible]

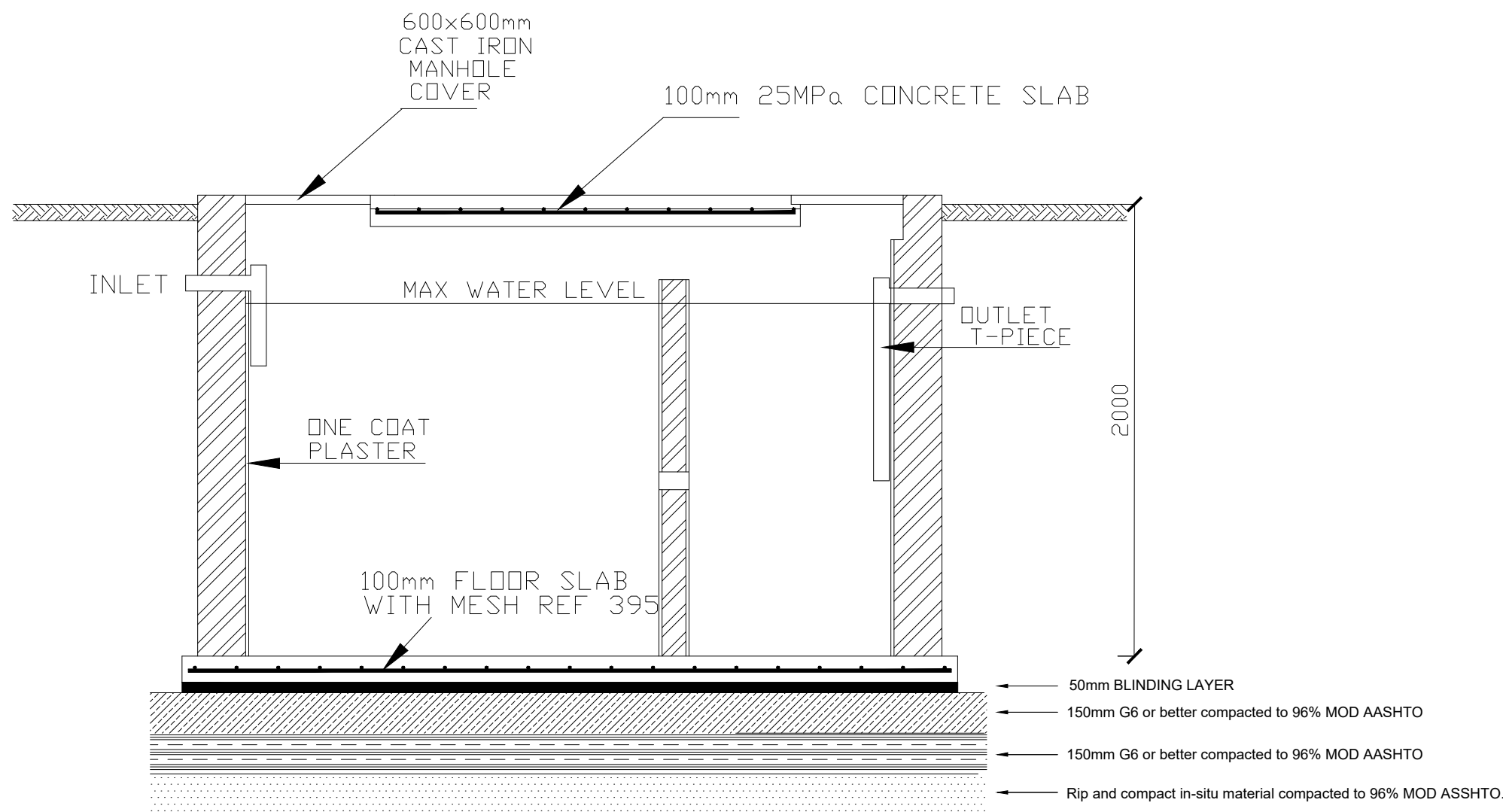
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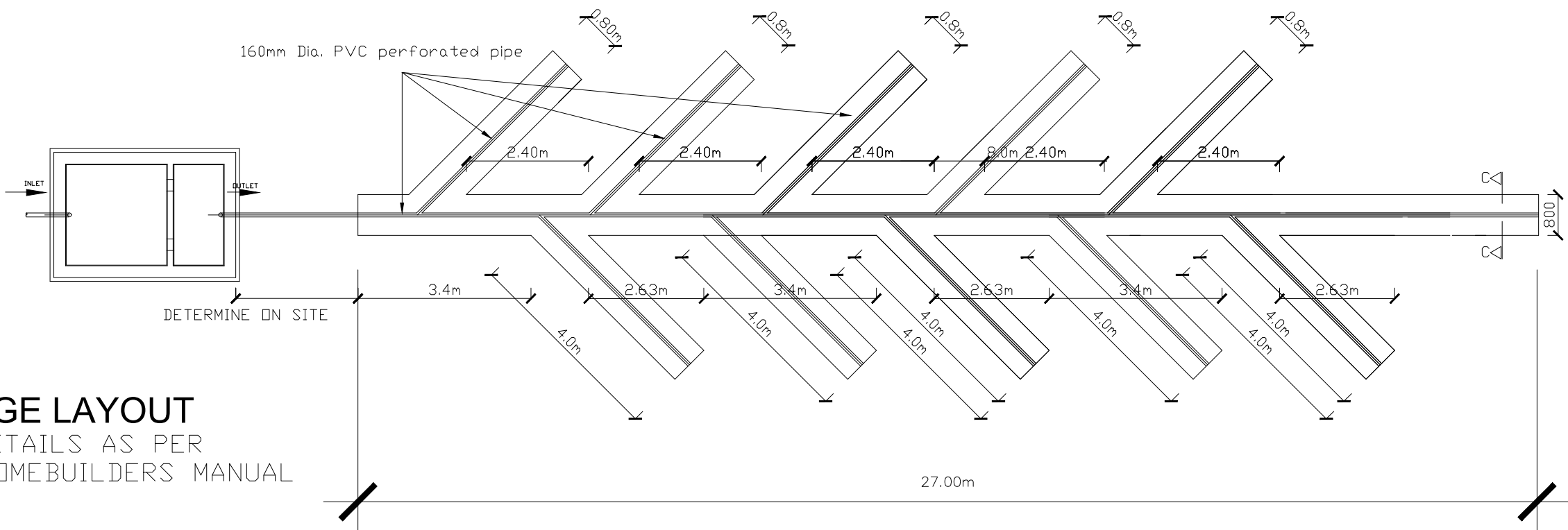
PLAN



FLOOR SLAB REINFORCEMENT

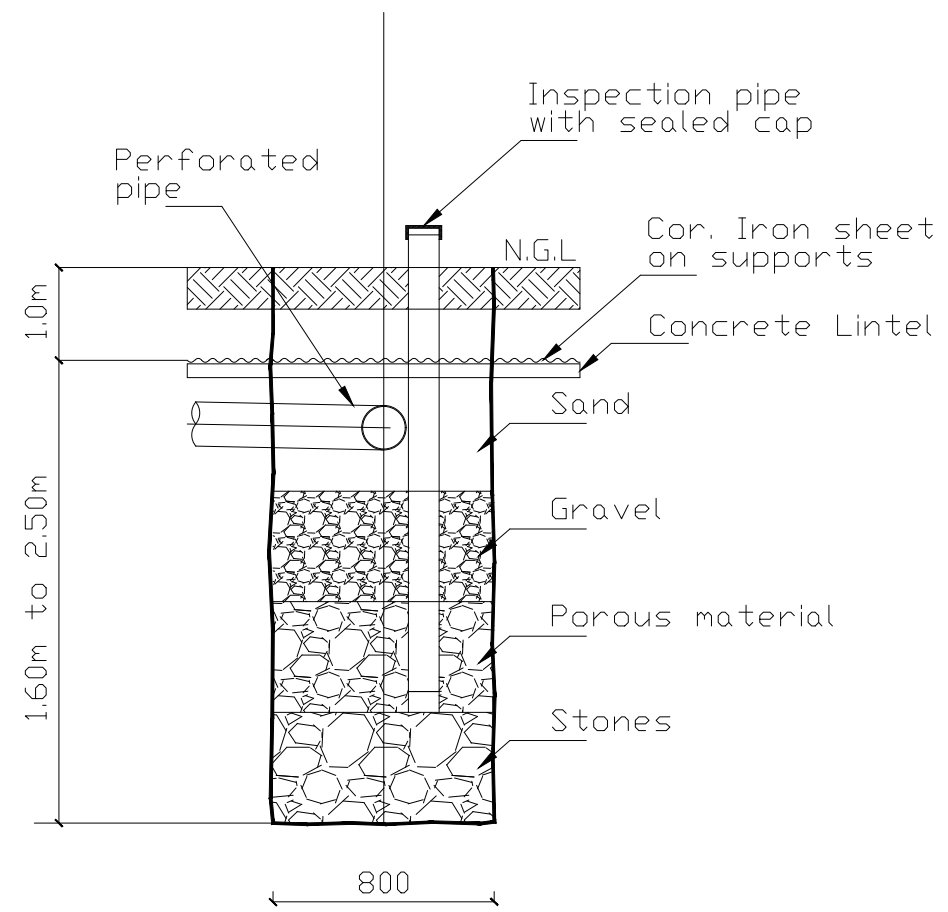


SECTION A-



DRAINAGE LAYOUT

SEPTIC DETAILS AS PER
NNHBBC HOMEBUILDERS MANUAL



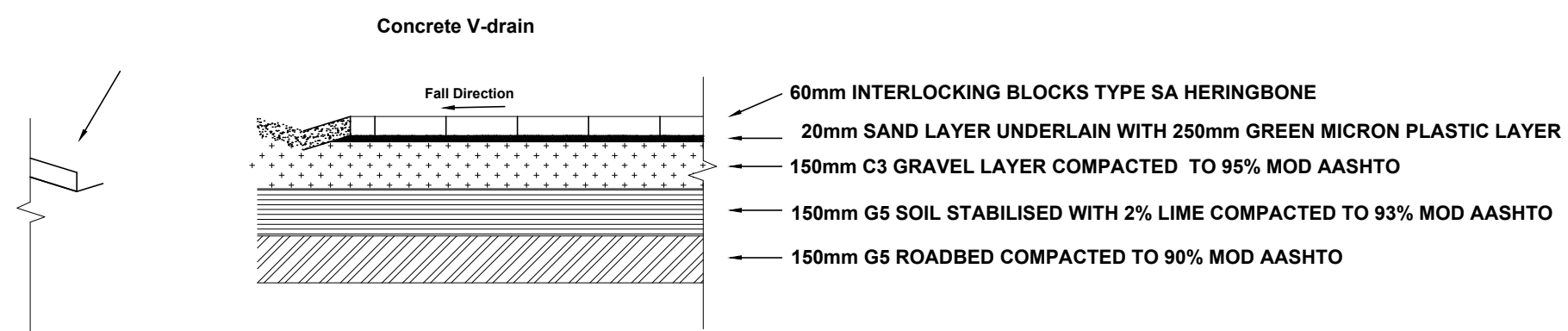
SECTION C-C

< STD FRENCH DRAIN SECTIONAL DETAIL >

					CLIENT	MUTEO CONSULTING	39 GROBLER STREET POLOKWANE 0699 P.O. BOX 6196 POLOKWANE NORTH 0750 TEL : (015) 291 4065 FAX : (015) 291 4043 website: www.muteo.co.za	PROJECT APPR. DESIGNED CHECKED DRAWN PROJECT MNG. APPROVED CLIENT	DATE 02 July 2021 02 July 2021 02 July 2021	BY V.M E.M V.M	SIGNATURE	SCALE DO NOT SCALE IF IN DOUBT ASK.	TITLE MOKHARI SECONDARY SCHOOL SEPTIC TANK	DRAWING No. LDPWRI SCHOOLS/B/MOKHARI/10	REV 0
REV	DATE	CHK	APP		DESCRIPTION										



PAVING DETAILS FOR ACCESS AND PARKING



- NOTES:**
1. Precast concrete beams to be placed every 15-20m in the paved area to prevent the paving blocks from sliding
 2. All free edges to be fitted with precast concrete edge beams
 3. All edges in the flow direction to be fitted with 600mm wide 15MPa Concrete V-drains

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