CONTRACT No. LDPWRI-B/20291

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

BID NUMBER: LDPWRI-B/20291

APPOINTMENT OF A CONTRACTOR FOR DEMOLITION OF 4 CLASSROOMS, COOKING ROOM AND 12 PIT TOILETS, REFURBISHMENT OF 4 CLASSROOMS AND 4 SEATER ENVIROLOO TOILETS, CONSTRUCTION OF 4 CLASSROOMS, NUTRITION CENTRE, NEW 8 SEATER ENVIROLOO TOILETS, GUARD HOUSE, STEEL PALISADE FENCE AND EXTERNAL WORKS AT PFUMBADA PRIMARY SCHOOL IN MAMOHOHI VILLAGE, VHEMBEDISTRICT

for

LIMPOPO DEPARTMENT OF EDUCATION (LDOE),

LIMPOPO PROVINCE

FRAMEWORK CATEGORY A (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 :……

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

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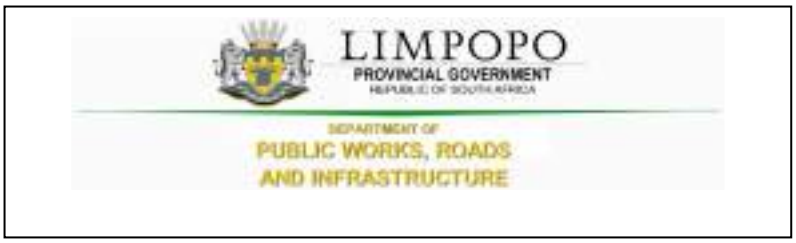
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PART T1: TENDERING PROCEDURE

			Amount
33	Attendance	Item	
	WORK EXECUTED BY SEPARATE DIRECT CONTRACTORS (SF)		
	The following work will be executed by contractors under direct agreement with the employer. The contractor is to accommodate these direct contractors and allow them to execute their work unhindered and allow them the use of water and toilet facilities. Damage caused by these contractors to work completed by the principal contractor is to be recorded in detail to enable the employer to counter-charge the direct contractors the cost of making good such damages.		
34	Social Facilitator	Item	250 000 00
35	Profit	Item	
36	Attendance	Item	
	Carried To Section Summary	**R**	

Section No. 9
Bill No. 1
Provisional Sums

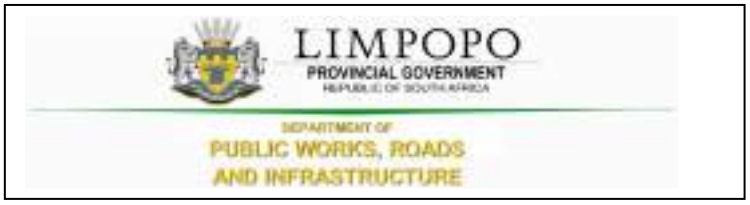
T1.1 Tender Notice and Invitation to Tender

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 DEMOLITION OF 4 CLASSROOMS, COOKING ROOM AND 12 PIT TOILETS, REFURBISHMENT OF 4 CLASSROOMS AND 4 SEATER ENVIROLOO TOILETS, CONSTRUCTION OF 4 CLASSROOMS, NUTRITION CENTRE, NEW 8 SEATER ENVIROLOO TOILETS, GUARD HOUSE, STEEL PALISADE FENCE AND EXTERNAL WORKS AT PFUMBADA PRIMARY SCHOOL IN MAMOHOHI VILLAGE, VHEMBEDISTRICT FOR LIMPOPO DEPARTMENT OF EDUCATION (LDOE)** for a period of 24 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 for Indirect Targeting for Enterprise Development through Construction Works Contracts **Gazette Notice No. 36190 of 25 February 2013** will be applicable on this project

<table>
<tr><td>Project Name</td><td colspan="2">APPOINTMENT OF A CONTRACTOR FOR DEMOLITION OF 4 CLASSROOMS, COOKING ROOM AND 12 PIT TOILETS, REFURBISHMENT OF 4 CLASSROOMS AND 4 SEATER ENVIROLOO TOILETS, CONSTRUCTION OF 4 CLASSROOMS, NUTRITION CENTRE, NEW 8 SEATER ENVIROLOO TOILETS, GUARD HOUSE, STEEL PALISADE FENCE AND EXTERNAL WORKS AT PFUMBADA PRIMARY SCHOOL IN MAMOHOHI VILLAGE, VHEMBEDISTRICT FOR LIMPOPO DEPARTMENT OF EDUCATION (LDOE) for a period of 24 months</td></tr>
<tr><td>Tender Number</td><td colspan="2">LDPWRI- B/20291</td></tr>
<tr><td>Tender documents availability</td><td colspan="2">Limpopo Department of Public Works, Roads and Infrastructure website</td></tr>
<tr><td>Address for submission of tenders</td><td colspan="2">DEPARTMENT OF PUBLIC WORKS, ROADS & INFRASTRUCTURE.

Physical address: Corner River and Blaauwberg Streets, Ladanna, 0699.</td></tr>
<tr><td>Closing date of the tender</td><td colspan="2">As per Tender invite</td></tr>
<tr><td>Closing time of the tender</td><td colspan="2">As per Tender invite</td></tr>
<tr><td rowspan="4">Compulsory briefing meeting (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)</td><td colspan="2">Yes □ No ☒</td></tr>
<tr><td>Meeting venue</td><td>As per Tender invite</td></tr>
<tr><td>Date</td><td>As per Tender invite</td></tr>
<tr><td>Time:</td><td>As per Tender invite</td></tr>
<tr><td>Evaluation criteria</td><td colspan="2">1. Compliance with mandatory or compulsory requirements
2. Risk assessment on current projects
3. Price
4. Preference</td></tr>
<tr><td rowspan="8">Mandatory or Compulsory Requirements (failure to submit or comply with these requirements will lead to automatic disqualification)</td><td colspan="2">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</td></tr>
<tr><td colspan="2">Completed and signed Form of Offer</td></tr>
<tr><td colspan="2">Priced Bills of Quantities</td></tr>
<tr><td colspan="2">Record of addenda to tender documents</td></tr>
<tr><td colspan="2">Proposed amendments and qualifications</td></tr>
<tr><td colspan="2">Declaration on the status of Administration compliance</td></tr>
<tr><td colspan="2">CIDB grading certificate (Valid CIDB)</td></tr>
<tr><td colspan="2">Declaration of current projects</td></tr>
</table>



T1.2 Tender Data

Clause number	Tender Data
	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. 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. 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. 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:
C.1.1	The Employer is the Department of Public Works, Roads and Infrastructure

C.1.2	**The Tender** **Part T1: Tendering procedures** T1.1 Tender notice and invitation to tender T1.2 Tender data **Part T2: Returnable documents** T2.1 List of returnable documents T2.2 Returnable schedules **The Contract Part C1: Agreements and contract data** C1.1 Form of offer and acceptance C1.2 Contract data C1.3 Joint Venture Agreement (If Applicable) **The Contract Part C2: Pricing data** C2.1 Pricing instructions C2.2 Bills of Quantities **Part 3: Scope of work** C3.1 Special Notes to Bidders C3.2 OHS Specifications **Part 4: Site information** C4 Drawings
C.1.4	The employer's representative is: Name : Mr K Modjadji Tel No. : 083 673 5436 Email : ModjadjiM@dpw.limpopo.gov.za However, all communications related to this bid should be directed to the persons indicated under Enquires on this tender document. 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.
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	**Eligibility in respect of CIDB grading** 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.
C2.2	**Cost of tendering** 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.

C.2.7	**Compulsory site briefing** A compulsory briefing meeting will be held **as per Tender invite** Failure to attend the site briefing will result in the bidders not being considered for the project 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.
C.2.11	**Alterations to the documents** 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
C.2.12	**Alternative tender offer** No alternative tender offer is permitted in this tender.
C.2.13.2	***Replace sub-clause C.2.13.2 with the following;*** Return all returnable documents to the employer after completing them in by writing in **non-erasable black ink** ***(Black pen)***
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	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: **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.
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 **120 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	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: - 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

	CIDB Grading Certificate 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. ***Letter of Good Standing*** 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.
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	The tenderers will be evaluated in four stages (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 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. 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. The total value of current projects for a contractor under consideration cannot exceed twice the maximum value of their relevant CIDB grade.[1]
	a) Stage 1: Administrative Compliance: The Compliance or compulsory documents and returnables 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 The total value of current projects for a contractor under consideration cannot exceed twice the maximum value of their relevant CIDB grade. Should it exceed, the bidder will therefore not be appointed.

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:

$$! = \# * \% \ 1 - \frac{(" \mid \# " ")}{" "}($$

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

$!_{\%}$ is the lowest Comparative bid price

$!_{\&}$ 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

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DEPARTMENT OF
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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 of not)
2.5 Declaration on the status of Administration compliance (Fully completed, circled and signed)
2.6 CIDB grading certificate (Valid CIDB)
2.7 Declaration of current projects (Fully completed, circled and signed)

B – NON- MANDATORY REQUIREMENTS

2.8 SBD 1 (Fully Completed and Signed)
2.9 SBD 4 (Fully Completed and Signed). False declaration by the bidder will render the proposal non-responsive and will not be considered
2.9 SBD 6.1 (Failure on the part of a bidder to complete 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	Bidder with disability must attach medical certificate completed by registered medical practitioner which is registered with Health Professions Council of South Africa (HPCSA) 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 Attach full CSD Report (For verification of the required attachments above)
2.11 Proposed amendments and qualifications (Proposed amendments and qualifications must be captured in full, whether applicable of not)

Failure by the service provider to submit or complete item 2.1, 2.2, 2.3, 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:

I.1 LDPWR&I reserve the right to call interviews with short-listed bidders before final selection.

I.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.

I.3 LDPWR&I reserves the right to appoint the bidder that proves to be fully capable and qualifies to handle and execute the job.

I.4 The proposals submitted must be in line with the detailed specification.

I.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 bods 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.

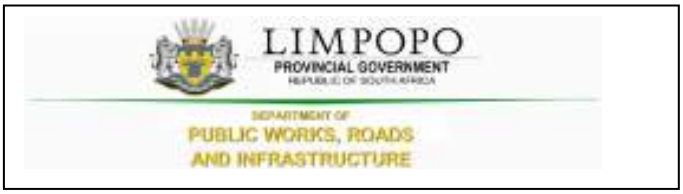
1.12 Quotations/Tenders received after the closing date and time will not be accepted for consideration.

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

	Document Name	Returnable document
1.	Fully completed Form of Offer	□ Yes □ No
2.	Priced Bills of Quantities	□ Yes □ No
3.	Record of Addenda to tender documents	□ Yes □ No
4.	Proposed amendments and qualifications	□ Yes □ No
5.	Proof of specific goals for award of the preference points	☐ Yes ☐ No
6.	SBD 1. Invitation to Tender	□ Yes □ No
7.	SBD 6.1: Reference Points claim form in terms of the Preferential Procurement Regulations 2022 or amended	□ Yes □ No
8.	Declaration on the status of Administration compliance.	□ Yes □ No
9.	Proof of CIDB class grading: 7GB or higher.	□ Yes □ No
10.	Full CSD Report	□ Yes □ No
11.	Declaration of current projects	□ Yes □ 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.

……

……

……

……

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 ----------

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

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/20291**	**CLOSING DATE**	**As per Tender Advert**	**CLOSING TIME:**	**As per Tender Advert**
DESCRIPTION	REFURBISHMENT AND ADDITIONS AT PFUMBADA PRIMARY SCHOOL				
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?	☐Yes ☐No [IF YES ENCLOSE PROOF]	ARE YOU A FOREIGN BASED SUPPLIER FOR **THE GOODS /SERVICES /WORKS OFFERED?**	☐Yes ☐No [IF YES, ANSWER THE QUESTIONNAIRE BELOW]

QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS	
IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)?	☐ YES ☐ NO
DOES THE ENTITY HAVE A BRANCH IN THE RSA?	☐ YES ☐ NO
DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA?	☐ YES ☐ NO
DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA?	☐ YES ☐ NO
IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION?	☐ YES ☐ 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:

1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.

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.**

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.

1.4. **THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM.**

2. TAX COMPLIANCE REQUIREMENTS

2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.

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.

2.3 APPLICATION FOR TAX COMPLIANCE STATUS (TCS) PIN MAY BE MADE VIA E-FILING THROUGH THE SARS WEBSITE WWW.SARS.GOV.ZA.

2.4 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.

2.5 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.

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.

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."

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

BIDDER'S DISCLOSURE

1. PURPOSE OF THE FORM

Any person (natural or juristic) may make an offer or offers in terms of this invitation to bid. In line with the principles of transparency, accountability, impartiality, and ethics as enshrined in the Constitution of the Republic of South Africa and further expressed in various pieces of legislation, it is required for the bidder to make this declaration in respect of the details required hereunder.

Where a person/s are listed in the Register for Tender Defaulters and / or the List of Restricted Suppliers, that person will automatically be disqualified from the bid process.

2. Bidder's declaration

2.1 Is the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest2 in the enterprise,

employed by the state? **YES/NO**

2.1.1 If so, furnish particulars of the names, individual identity numbers, and, if applicable, state employee numbers of sole proprietor/ directors / trustees / shareholders / members/ partners or any person having a controlling interest in the enterprise, in table below.

Full Name	**Identity Number**	**Name of State institution**

2.2 Do you, or any person connected with the bidder, have a relationship with any person who is employed by the procuring institution? **YES/NO**

2.2.1 If so, furnish particulars:

……

……

[2] the power, by one person or a group of persons holding the majority of the equity of an enterprise, alternatively, the person/s having the deciding vote or power to influence or to direct the course and decisions of the enterprise.

2.3 Does the bidder or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract? **YES/NO**

2.3.1 If so, furnish particulars:

……

……

3 DECLARATION

I, the undersigned, (name)…… in submitting the accompanying bid, do hereby make the following statements that I certify to be true and complete in every respect:

3.1 I have read and I understand the contents of this disclosure;

3.2 I understand that the accompanying bid will be disqualified if this disclosure is found not to be true and complete in every respect;

3.3 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium3 will not be construed as collusive bidding.

3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates.

3.4 The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.

3.5 There have been no consultations, communications, agreements or arrangements made by the bidder with any official of the procuring institution in relation to this procurement process prior to and during the bidding process except to provide clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid.

3.6 I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting

business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

[3] Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

I CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 1, 2 and 3 ABOVE IS CORRECT.

I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 6 OF PFMA SCM INSTRUCTION 03 OF 2021/22 ON PREVENTING AND COMBATING ABUSE IN THE SUPPLY CHAIN MANAGEMENT SYSTEM SHOULD THIS DECLARATION PROVE TO BE FALSE.

…… ……

Signature Date

…… ……

Position Name of bidder

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

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

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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:

80/20 **or** **90/10**

$$Ps = 80\left(1 - \frac{Pt - Pmin}{Pmin}\right) \text{ or } \quad Ps = 90\left(1 - \frac{Pt - Pmin}{Pmin}\right)$$

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:

80/20 **or** **90/10**

$$Ps = 80\left(1 + \frac{Pt - Pmax}{Pmax}\right) \text{ or } \quad Ps = 90\left(1 + \frac{Pt - Pmax}{Pmax}\right)$$

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

(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]

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: ……..

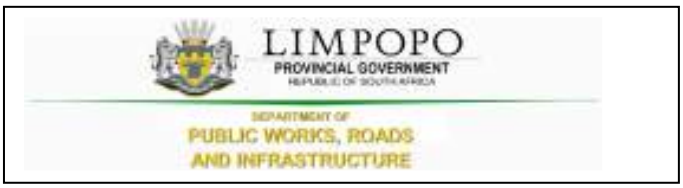
DATE: ……..

ADDRESS: ……..

……..

……..

……..



RATION OF CURRENT PROJECTS

alue 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 bidder must indicate/write on this table.

sentation of facts will render your bid non-responsive.

ist of current projects executed by the bidder

o you have the current projects being executed Yes/No? (circle the correct answer)

ease note that it is compulsory to answer the question above and if the answer is yes, complete the table below. Failure by the service
ovider/bidder to answer the question above or complete the table below will render their proposal not responsive and will not be consid

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

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 PFUMBADA PRIMARY SCHOOL IN MAMOHOHI VILLAGE, VHEMBE 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 . . . . . .

. . . . . .

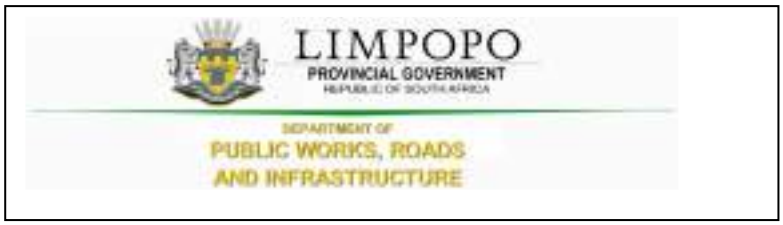
. . . . . .

. . . . . .

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.

……..



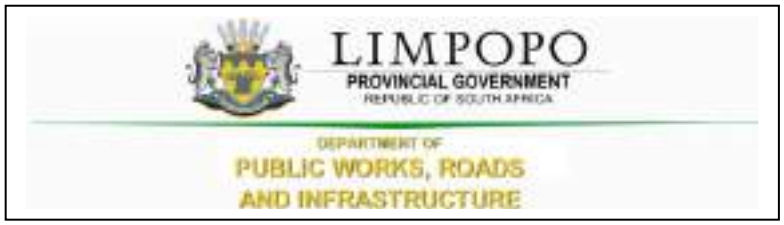
C2.1 CONTRACT DATA

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**		

DEFINITIONS

1 **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:_____	item			
	OBJECTIVE AND PREPARATION				
2	**A2 OFFER, ACCEPTANCE AND PERFORMANCE** Clause 2.0 Fixed:_____Value related:_____ Time related:_____	item			
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:_____	item			
4	**A4 DESIGN RESPONSIBILITY** Clause 4.0 Fixed:_____Value related:_____ Time related:_____	item			
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:_____	item			
	Carried to Collection	**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

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(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

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	10.7.3 It is the responsibility of the **contractor** to ensure that he has adequate insurance to cover his risk and liability as mentioned in 10.7.1 and 10.7.2. Without limiting the **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)			
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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**

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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**

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	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:_____	item		
	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:_____	item		
16	**A16 ACCESS TO THE WORKS** Clause 16.0 Fixed:_____Value related:_____ Time related:_____	item		
17	**A17 CONTRACT INSTRUCTIONS** Clause 17.0 Fixed:_____Value related:_____ Time related:_____	item		
	Carried to Collection	**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:_____		item		
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:_____		item		
	Carried to Collection		**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 Nothwistanding 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:_____	item		
38	**A39 CESSATION- CANCELLATION OF THE WORKS** Clause 39.0 Fixed:_____Value related:_____ Time related:_____	item		
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:_____	item		
	Carried to Collection	**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		
	THE SITE			
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 premised 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 CONTRACT			
60	***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 PLANT			
69	***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 SERVICES			
75	***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 AMOUNTS			
80	***Responsibility for prime cost amounts***			
	Fixed:_____Value related:_____ Time related:_____	item		
	ATTENDANCE ON N/S SUBCONTRACTORS			
81	***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 ASPECTS			
84	***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		
	GENERAL			
88	***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	 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:_____	item		
	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	**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 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

Carried to Collection **R**

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	Main notice board				
[6.5]	Specific requirements: 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.				
12.1.15	***Subcontractor's notice board***				
[6.6]	Specific requirements:				
		YES/NO			
12.1.16	***Water***				
[7.2]	Option A (by contractor)				
		YES			
	Option B (by employer - free of charge)				
		NO			
	Option C (by employer - metered)				
		NO			
12.1.17	***Electricity***				
[7.3]	Option A (by contractor)				
		YES			
	Option B (by employer - free of charge)				
		NO			
	Option C (by employer - metered)				
		NO			
12.1.18	***Telecommunications***				
[7.4]	Telephone				
		YES			
	Facsimile				
		YES			
	E-mail				
		YES			
12.1.19	***Ablution facilities***				
[7.5]	Option A (by contractor)				
		YES			
	Option B (by employer)				
		NO			
12.1.20	***Protection of existing/sectionally occupied works***				
[11.2]	Protection is required				
		NO			
	Carried to Collection		**R**		

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

104	**C4**	**IMPORTED MATERIALS AND EQUIPMENT** 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 Nothwistanding 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) Fixed:_____Value related:_____ Time related:_____	item		
105	**C5**	**VIEWING THE SITE IN SECURITY AREAS** 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 Fixed:_____Value related:_____ Time related:_____	item		
106	**C6**	**COMMENCEMENT OF WORKS IN SECURITY AREAS** 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 Fixed:_____Value related:_____ Time related:_____	item		
		Carried to Collection	**R**		

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	**R**		

	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 explicity 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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Section No.1

PRELIMINARIES

Bill No.1

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PRELIMINARIES

Bill No.1

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SECTION NO. 2

Demo(4CR,12Pit,C-RM) and Renovation(4CR,4Enviro)

		Unit	Quantity	Rate	Amount
	SECTION NO. 2				
	Demo(4CR,12Pit,C-RM) and Renovation(4CR,4Enviro)				
	BILL NO. 1				
	DEMOLITIONS				
	PREAMBLES				
	Preambles see "Specifications and methods to be used - PW371"				
	DEMOLITIONS				
	Demolishing and removing				
1	Single storey building with pitched roof, 330m2 on plan and 3m high at eaves, comprising unreinforced concrete surface bed, one brick external walls, 230mm thick internal walls and corrugated roof covering on timber trusses	No	1		
2	12 seat pit toilets, 2.7m high at eaves, comprising unreinforced concrete surface bed, one brick external walls, 115mm thick internal walls, corrugated roof covering on timber rafters including sucking waste, backfilling and level the ground	No	1		
3	Temporary kitchen of corrugated sheeting 30m2 on plan including corrugated roof coverings and concrete slab	No	1		
	Carried To Section Summary			**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 2				
	Demo(4CR,12Pit,C-RM) and Renovation(4CR,4Enviro)				
	BILL NO. 2				
	ALTERATIONS				
	PREAMBLES				
	For preambles see "Specifications and methods to be used - PW371"				
	TEMPORARY BARRICADES, SCREENS, ETC				
	Temporary barricades, screens, roofs, etc including removal				
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		
	Taking out and removing fencing, gates, etc				
2	1800mm high steel fence	m	835		
	REMOVAL OF EXISTING WORK				
	Taking down and removing roofs, floors, panelling, ceilings, partitions, etc:				
3	10 x 250mm fascia and barge boards	m	105		
4	Take out and remove roof sheeting from roof trusses	m²	403		
	Taking out and removing sundry joinery work, fittings, etc				
5	Chalk boards size 4800 x 1220mm high from brick wall.	No	4		
6	Pinning boards size 2440 x 1220mm high from brick walls.	No	8		
	Taking out/off and removing glass and mirrors				
7	Glass from steel windows, including cleaning out rebates and preparing for new glass	m²	55		
	Taking down and removing roofs, floors, panelling, ceilings, partitions, etc				
8	Nutec fibre cement ceilings, including cornices, timber brandering, etc	m²	350		
	Taking out doors, windows, etc				
9	Timber single door size 813 x 2032mm high overall from steel frames.	No	10		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
10	Steel gate size 813 x 2032mm high overall from steel frames.	No	6		
	Breaking up and removing unreinforced concrete				
11	100mm Thick surface beds	m²	240		
12	Concrete paving	m²	87		
	Hack up and removing granolithic screeds, plaster , etc from concrete or brickwork and preparing surfaces for new screed, plaster, etc				
13	30mm screed from floors	m²	350		
	Clean existing surfaces				
14	Clean existing face brick surfaces	m²	321		
	Carried to Collection			**R**	

			Amount
BILL NO. 2			
ALTERATIONS			
COLLECTION			
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		Unit	Quantity	Rate	Amount
	SECTION NO. 2				
	Demo(4CR,12Pit,C-RM) and Renovation(4CR,4Enviro)				
	BILL NO. 3				
	EARTHWORKS				
	PREAMBLES				
	Preambles see "Specifications and methods to be used - PW371"				
	COMPACTION				
	Compaction of surfaces				
1	Compaction of surfaces	m²	417		
	WEED KILLERS, INSECTICIDES, ETC				
	Soil insecticide in accordance with SANS 5859				
2	Under floors etc, including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming	m²	417		
	Carried To Section Summary			**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 2				
	Demo(4CR,12Pit,C-RM) and Renovation(4CR,4Enviro)				
	BILL NO. 4				
	CONCRETE, FORMWORK AND REINFORCEMENT				
	PREAMBLES				
	Preambles see "Specifications and methods to be used - PW371"				
	UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES				
	15Mpa/19mm concrete				
1	Ramps	m³	2		
2	Pavings cast in panels	m³	9		
3	Thickening down the edge of apron 150mm deep, 200mm top and tapering to 100mm at bottom including all excavations, formwork, backfilling, etc	m	90		
	REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES				
	25MPa/19mm concrete				
4	Surface beds cast in panels	m³	24		
	TEST CUBES				
	Test Cubes				
5	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	8		
	CONCRETE SUNDRIES				
	Finishing top surfaces of concrete smooth with a wood float				
6	Pavings to falls	m²	90		
	REINFORCEMENT				
	Fabric reinforcement				
7	Type 193 fabric reinforcement in concrete surface beds etc	m²	417		
	Carried To Section Summary			**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 2				
	Demo(4CR,12Pit,C-RM) and Renovation(4CR,4Enviro)				
	BILL NO. 5				
	MASONRY				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371"				
	BRICKWORK				
	Sizes in descriptions:				
	Where sizes in descriptions are given in brick units, 'one brick' shall represent the length and 'half brick' the width of a brick.				
	Face bricks:				
	Bricks shall be ordered timeously to obtain uniformity in size and colour.				
	Pointing:				
	Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc.				
	SAMPLES				
	Samples of all masonry building units, except those for walls described as 'load bearing', shall consist of a minimum of 6 units. Samples of building units to be used in walls described as 'load bearing' shall consist of 30 units from every 30 000 units delivered to site.				
	FACE BRICKWORK COPINGS, SILLS, ETC.				
	Brick-on-edge header course copings, sills, etc of face bricks prime cost R5500/1000 delivered to site excluding VAT and pointed with recessed joints on all exposed faces:				
1	230mm Wide sill set sloping and slightly projecting.	m	2		
	Carried To Section Summary			**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 2				
	Demo(4CR,12Pit,C-RM) and Renovation(4CR,4Enviro)				
	BILL NO. 6				
	ROOF COVERINGS				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW 371				
	PROFILED METAL SHEETING AND ACCESSORIES				
	0.58mm "Klip-lok light industrial" galvanised troughed sheet steel with "chromadek" finish one side,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				
1	Roof covering with pitch not exceeding 25 degrees.	m²	480		
	0.58mm galvanised sheet iron, with "chromadek" one side in:				
2	Standard type FK3 ridge or hip flashing	m	34		
	Carried To Section Summary			**R**	

	Unit	Quantity	Rate	Amount

SECTION NO. 2

Demo(4CR,12Pit,C-RM) and Renovation(4CR,4Enviro)

BILL NO. 7

CARPENTRY AND JOINERY

PREAMBLES

For preambles see "Specification of materials and methods to be used - PW371

SUPPLEMENTARY PREAMBLES

Particle board:

Particle board shall comply with the following specifications: a) SABS 1300 Particle board: exterior and flooring type b) SABS 1301 Particle board: interior type.

Joinery:

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.

Fixing:

Items described as nailed shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete.

Decorative laminate finish:

Laminate finish shall be glued under pressure. Edge strips shall be butt jointed at junctions with adjacent similar finish.

PREFABRICATED ROOF TRUSSES, ETC.

Plate nailed timber roof truss construction:

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 quarantee that the trusses are designed, manufactured,and erected, to support the roof coverings specified. The quarntee shall be valid for 10(ten) years .

Carried to Collection **R**

		Unit	Quantity	Rate	Amount
	Sawn Softwood				
1	Roof construction to double pitched roof with two gable ends approximately 330m2 (four classrooms) on plan overall including trusses, rafters, purlins, permanent bracing, etc (measured flat).				
	Description				
	Roof construction to double pitched roof with two gable ends approximately 483m2 (five classrooms) on plan overall including trusses, rafters, purlins, permanent bracing, etc (measured flat).	No	1		
	ROOF SUNDRIES				
	Sundries:				
2	Two coats creosote on sawn timbers.	m²	91		
	EAVES, VERGES, ETC				
	Everite FC77 or equal approved pressed fibre-cement:				
3	10 x 250mm Fascias and barge boards including galvanised steel H-profile jointing strips.	m	105		
	Wrought meranti doors:				
	Wrought meranti doors hung to steel frames:				
4	44mm Framed batten door 813 x 2032mm high of 44 x 150m 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	6		
	SEMI SOLID CORE FLUSH DOORS				
	Description				
	SEMI SOLID CORE FLUSH DOORS				
	44 semi-solid flush doors with 3,2mm standard hardboard covering on both sides hung to steel frames:				
5	40mm Door 813 x 2032mm high.				
	Description				
	Carried to Collection			**R**	

	Unit	Quantity	Rate	Amount
40mm Door 813 x 2032mm high.	No	4		
Carried to Collection			R	

BILL NO. 7

CARPENTRY AND JOINERY

COLLECTION

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		Unit	Quantity	Rate	Amount
	SECTION NO. 2				
	Demo(4CR,12Pit,C-RM) and Renovation(4CR,4Enviro)				
	BILL NO. 8				
	CEILINGS PARTITIONS AND ACCESS FLOORING				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	SUPPLEMENTARY PREAMBLES				
	Descriptions:				
	Items described as nailed shall be deemed to be fixed with hardened steel nails or pins or shot pinned to brickwork or concrete.				
	Items described as plugged shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres, and where described as bolted the bolts have been given.				
	INSULATION				
	Aerolite insulation:				
1	100mm Insulation closely fitted and laid on top of brandering between roof timbers etc.	m²	350		
	Wrought softwood				
2	19 x 76mm cornices nailed	m	190		
	NAILED UP AND SCREW UP CEILINGS				
	6mm Everite Nutec or equal approved fibre-cement boards with H-type steel cover strips over joints:				
3	Ceilings including 38 x 38mm sawn softwood brandering at 400mm centres.	m²	350		
4	Extra over ceiling for hinged trap door size 610 x 610mm	No	4		
	Carried To Section Summary			**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 2				
	Demo(4CR,12Pit,C-RM) and Renovation(4CR,4Enviro)				
	BILL NO. 9				
	IRONMONGERY				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	SUPPLEMENTARY PREAMBLES				
	Finishes to ironmongery:				
	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.				
	SUNDRIES				
	Brass or equal approved:				
1	Sliding stay plugged.	No	49		
2	Window handle plugged.	No	49		
	Locks or equal approved:				
	Solid or equal approved:				
3	CZ682-24-95SC"Gower" or equal approved three lever lockset.	No	10		
	CATCHES, CABIN HOOKS, ETC				
	Solid or equal approved				
4	100mm cabin hook and eye including 70 x 70 x 20mm chamfered hardwood block twice oiled and plugged	No	6		
	LOCKS				
	Solid or equal approved				
5	'Code 63' or equal approved padlock plugged.	No	6		
	PINNING BOARDS, WRITING BOARDS, PROJECTION SCREENS, ETC				
	Vitrex or or equal approved				
6	Pinning board 2400 x 1200mm high plugged.	No	8		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
7	White magnetic writing board 2400 x 1200mm high with anodised alumnium frame plugged.	No	4		
	Greenfield steel lockers with standard baked enamel finish				
8	Double door steel cupboard 914 x 457 x 1828mm high with five shelves bolted to brickwork.	No	4		
	Carried to Collection			**R**	

		Amount
BILL NO. 9		
IRONMONGERY		
COLLECTION		
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Carried To Section Summary	**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 2				
	Demo(4CR,12Pit,C-RM) and Renovation(4CR,4Enviro)				
	BILL NO. 10				
	METALWORK				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	SUPPLEMENTARY PREAMBLES				
	Descriptions:				
	Descriptions of bolts shall be deemed to include nuts and washers.				
	Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.				
	Metalwork described as holed for bolt(s) shall be deemed to exclude the bolts unless otherwise described.				
	MILD STEEL HANDRAILS AND BALUSTRADING				
	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 openning 3No. In each upright, top rail to be 30mm thick x 100mm wide steel				
1	Balustrading and handrails approximately 1000mm high fixed to concrete.	m	52		
	WELDED SCREENS, GATES, ETC.				
	Gates to external doors				
2	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	4		
	Repair to existing door frames				
3	Repair to existing door frames and including replacing of striking plates	No	10		
	Carried To Section Summary			**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 2				
	Demo(4CR,12Pit,C-RM) and Renovation(4CR,4Enviro)				
	BILL NO. 11				
	PLASTERING				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	SCREEDS				
	Screeds on concrete:				
	Screeds of wood floated on concrete to receive ceramic tiles:				
1	30mm Thick on floors and landings.	m²	240		
	GRANOLITHIC				
	Untinted wood floated granolithic on concrete				
2	30mm Thick on floors and landings.	m²	61		
	INTERNAL PLASTER				
	Cement plaster wood floated for tiles, on brickwork				
3	On walls	m²	321		
	Carried To Section Summary			**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 2				
	Demo(4CR,12Pit,C-RM) and Renovation(4CR,4Enviro)				
	BILL NO. 12				
	TILING				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	FLOOR TILING				
	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				
1	On floors and landings.	m²	260		
2	Skirting formed of ceramic tile cut to 300 x 75mm high	m	105		
	Carried To Section Summary			**R**	

	Unit	Quantity	Rate	Amount

SECTION NO. 2

Demo(4CR,12Pit,C-RM) and Renovation(4CR,4Enviro)

BILL NO. 13

PLUMBING AND DRAINAGE

PREAMBLES

For preambles see "Specification of materials and methods to be used - PW371

SUPPLEMENTARY PREAMBLES

Concrete pipes:

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

uPVC pressure pipes and fittings:

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.

Copper pipes:

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.

Fixing of pipes

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**	

	Unit	Quantity	Rate	Amount

Reducing fittings:

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

Wire gratings:

Descriptions of gutter outlets etc shall be deemed to include wire balloon gratings.

Septic tanks:

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.

Exposed concrete surfaces:

Exposed surfaces of concrete stormwater channels, cover slabs, inspection eye marker slabs, gulley tops, cleaning eye tops, catchpits, inspection chambers, etc shall be finished smooth with plaster.

Excavations:

No claim for rock excavation will be entertained unless the Contractor has timeously notified the quantity surveyor thereof prior to backfilling.

'Soft rock' and 'hard rock' shall be as defined in 'Earthworks'.

Laying, backfilling, bedding, etc of pipes:

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

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

Flush pans:

Flush pans shall have straight or side outlets and 'P' or 'S' traps as necessary.

Carried to Collection **R**

		Unit	Quantity	Rate	Amount
	Stainless steel basins, sinks, wash troughs, urinals, etc:				
	Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable.				
	Waste unions:				
	Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings.				
	RAINWATER DISPOSAL				
	Approved .6mm galvanised sheet iron with "chromadek" finish ,in:				
1	100 x 100mm Eaves gutters	m	105		
2	Extra over eaves gutter for stopped end	No	8		
3	Extra over eaves gutter for outlet for 75mm pipe.	No	12		
4	75mm Diameter rainwater pipes.	m	48		
5	Extra over rainwater pipe for bend.	No	12		
6	Extra over rainwater pipe for shoe.	No	12		
	Repair to enviro-loo units				
7	Allow an amount of R2 000.00 per each (Two Thousand Rands) to repair enviro-loo units and leave in good order	No	4		
	FIRE APPLIANCES ETC.				
	'Chubb' or equal approved:				
8	9kg Dry chemical fire extinguisher plugged.	No	5		
	RAINWATER HARVESTING				
	Rainwater Harvesting				
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	2		
	Carried to Collection			**R**	

BILL NO. 13

PLUMBING AND DRAINAGE

COLLECTION

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		Unit	Quantity	Rate	Amount
	SECTION NO. 2				
	Demo(4CR,12Pit,C-RM) and Renovation(4CR,4Enviro)				
	BILL NO. 14				
	GLAZING				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	GLAZING TO STEEL WITH PUTTY				
	5mm Clear float glass:				
1	Panes not exceeding 0,1m2.	m²	55		
	Carried To Section Summary			**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 2				
	Demo(4CR,12Pit,C-RM) and Renovation(4CR,4Enviro)				
	BILL NO. 15				
	PAINTWORK				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	ON FLOATED PLASTER				
	Prepare , etc as specified and apply two coats of super acrylic paint:				
1	On interior walls.	m²	321		
	ON FIBRE-CEMENT, ETC.				
	Prepare , etc as specified and apply two coats of super acrylic Pva paint:				
2	On ceilings and cornices.	m²	350		
3	On fascias and barge boards.	m	105		
	ON METAL				
	Prepare, etc as specified and apply two coats of gloss enamel paint on :				
4	Door frames	m²	15		
5	On windows with burglar bars (both sides measured).	m²	139		
6	On gates, grilles, burglar screens, balustrades, etc (both sides measured over the full flat area).	m²	124		
7	Palisade Fence (both sides measured over the full flat area).	m²	4 008		
	Inside eaves gutters				
8	Inside eaves gutters with waterproofing based paint	m²	37		
	ON WOOD, WOOD BOARD				
	Prepare, etc as specified and apply two coats of polyurethane suede varnish:				
9	On general surfaces of doors.	m²	20		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	ON EXISTING WOOD SURFACES				
	Prepare, etc as specified and apply two coats of gloss enamel paint on				
10	Doors	m²	13		
	Carried to Collection			**R**	

BILL NO. 15

PAINTWORK

COLLECTION

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SECTION NO. 2

Demo(4CR,12Pit,C-RM) and Renovation(4CR,4Enviro)

SECTION SUMMARY

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Section No. 2
SECTION SUMMARY

SECTION NO. 3

1 x 4 Classroom Block

		Unit	Quantity	Rate	Amount
	SECTION NO. 3				
	1 x 4 Classroom Block				
	BILL NO. 2				
	FOUNDATIONS				
	PREAMBLES				
	For preambles see " Specification of materials and methods to be used - PW371"				
	SITE CLEARANCE ETC				
	Site clearance:				
1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc.	m²	444		
	REMOVAL OF TREES, ETC.				
	Taking out and removing, grubbing up roots and filling in holes:				
2	Tree stump exceeding 200mm and not exceeding 500mm girth.	No	1		
	EXCAVATION, FILLING, ETC OTHER THAN BULK				
	Excavation in earth not exceeding 2m deep:				
3	Trenches.	m³	184		
	Extra over trench and hole excavations in earth for excavation:				
4	Soft rock.	m³	10		
5	Hard rock.	m³	5		
	Risk of collapse of excavations:				
6	Sides of trench and hole excavations not exceeding 1,5m deep.	m²	350		
	Keeping excavations free of water:				
7	Keeping excavations free of all water other than subterranean water.	Item			
	Earth filling obtained from excavations and/or prescribed stock piles on site compacted to 93% Mod AASHTO:				
8	Backfilling to trenches, holes, etc.	m³	46		
9	Under floors, steps, pavings, etc.	m³	60		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	Earth filling supplied by the Contractor and compacted to 95% Mod AASHTO density):				
10	Under floors, steps, pavings, etc.	m³	141		
11	Trenches	m³	55		
	Cart Away				
	Extra over excavation for cart away:				
12	Surplus material from excavations on site to a dumping site be located by the contractor	m³	17		
	Coarse river sand filling supplied by the Contractor:				
13	Under floors etc.	m³	19		
	COMPACTION				
	Compaction of surfaces:				
14	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90%.Mod AASHTO density.	m²	337		
	Prescribed density tests on filling:				
15	Modified AASHTO Density test.	No	16		
	SOIL POISONING				
	Soil insecticide:				
16	Under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming.	m²	337		
17	To bottoms and sides of trenches etc.	m²	510		
	Carried to Collection			**R**	

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FOUNDATIONS		
COLLECTION		
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		Unit	Quantity	Rate	Amount
	SECTION NO. 3				
	1 x 4 Classroom Block				
	BILL NO. 3				
	CONCRETE, FORMWORK AND REINFORCEMENT				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371"				
	UNREINFORCED CONCRETE				
	15Mpa/19mm Concrete				
1	Aprons cast in panels.	m³	10		
2	Ramps.	m³	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	95		
	REINFORCED CONCRETE				
	25 MPa/19mm Concrete:				
4	Footings.	m³	31		
5	Surface beds cast in panels on waterproofing.	m³	34		
	TEST BLOCKS				
	Test blocks:				
6	Making and testing set of three 150 x 150 x 150mm concrete strength test cubes (Provisional).	Sets	10		
	FINISHING TOP SURFACE OF CONCRETE				
7	Paving to falls.	m²	95		
8	Ramps to falls.	m²	4		
	ROUGH FORMWORK (DEGREE OF ACCURACY III) (CPAP Work Group No 111)				
	Rough Formwork to Sides:				
9	Edges and reveals not exceeding 300mm high or wide.	m	99		
	MOVEMENT JOINTS ETC				
	Two layers of .5mm galvanised mild steel slip joints between horizontal concrete and brick surfaces including cement mortar bed:				
10	Not exceeding 300mm wide.	m	40		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	Expansion joints with bitumen impregnated softboard between vertical concrete and brick surfaces:				
11	12mm Joints not exceeding 300mm high.	m	55		
	Dividing Strips ,etc				
12	6 x 38mm Angle iron step guard cast into concrete with 3x 6mm anchors	m	2		
	REINFORCEMENT(PROVISIONAL)				
	Fabric reinforcement:				
13	Type 193 fabric reinforcement in concrete surface beds, slabs, etc.	m²	337		
	Steel reinforcement to structural concrete work:				
14	Various sizes	Tonnes	5		
	Carried to Collection			**R**	

		Amount
BILL NO. 3		
CONCRETE, FORMWORK AND REINFORCEMENT		
COLLECTION		
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		Unit	Quantity	Rate	Amount
	SECTION NO. 3				
	1 x 4 Classroom Block				
	BILL NO. 4				
	MASONRY				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371"				
	BRICKWORK				
	Sizes in descriptions:				
	Where sizes in descriptions are given in brick units, 'one brick' shall represent the length and 'half brick' the width of a brick.				
	Face bricks:				
	Bricks shall be ordered timeously to obtain uniformity in size and colour.				
	Pointing:				
	Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc.				
	SAMPLES				
	Samples of all masonry building units, except those for walls described as 'load bearing', shall consist of a minimum of 6 units. Samples of building units to be used in walls described as 'load bearing' shall consist of 30 units from every 30 000 units delivered to site.				
	BRICKWORK IN FOUNDATIONS (PROVISIONAL)				
	Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar:				
1	One brick walls	m²	195		
	BRICKWORK IN SUPERSTRUCTURE				
	Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar:				
2	One brick walls	m²	589		
	BRICKWORK SUNDRIES				
	Brickwork reinforcement:				
3	75mm Wide reinforcement built in horizontally.	m	94		
4	150mm Wide reinforcement built in horizontally.	m	2 512		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	Turning pieces:				
5	220mm Wide turning piece to lintels etc.	m	46		
	Galvanised wire ties etc:				
6	4mm Diameter roof tie 2m girth bent double with one end fixed to timber and other end built into brickwork.(Provisional)	No	95		
	Galvanised hoop iron cramps, ties, etc:				
7	30 x 1,6mm Cramp 500mm long with one end fixed to wood and other end built into brickwork.(Provisional)	No	95		
	Prestressed fabricated concrete lintels including necessary temporary supports				
8	115 x 100mm Lintels in lengths not exceeding 3m	m	4		
	FACE BRICKWORK				
	Face bricks (Prime cost R5 500/1000 delivered to site excluding VAT) pointed with flush horizontal and vertical joints:				
9	Extra over brickwork for face brickwork.	m²	536		
10	Extra over brickwork for face brickwork in foundations (Provisional).	m²	63		
11	Half brick in facings in beamfilling	m²	23		
	FACE BRICKWORK COPINGS, SILLS, ETC.				
	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:				
12	Extra over brickwork for brick-on-edge header course lintel pointed on face and 110mm soffit.	m	50		
13	230mm Wide sill set sloping and slightly projecting.	m	46		
14	Coping on top of one brick wall pointed on exposed faces	m	42		
	NUTEC-CEMENT/FIBRE-CEMENT WINDOW SILLS				
	Natural grey sills in single lengths bedded in class I mortar including metal fixing lugs etc:				
15	12 x 152mm Wide sills set flat and slightly projecting.	m	46		
	Carried to Collection			**R**	

		Amount
BILL NO. 4		
MASONRY		
COLLECTION		
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		Unit	Quantity	Rate	Amount
	SECTION NO. 3				
	1 x 4 Classroom Block				
	BILL NO. 5				
	WATERPROOFING				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	DAMPPROOFING OF WALLS AND FLOORS				
	One layer of 375 micron Consol Plastics Brikgrip DPC embossed damp proof course:				
1	In walls.	m²	40		
	One layer of 250 micron Consol Plastics Gunplas USB Green waterproof sheeting sealed at laps with Gunplas Pressure Sensitive Tape:				
2	Under surface beds.	m²	337		
	JOINT SEALANTS ETC				
	silicone sealing compound including backing cord, bond breaker,primer,etc				
3	12 x 20mm in expansion joints in floors including raking out expansion joint filler as necessary (Provisional)	m	178		
4	12 x 20mm in vertical expansion joints in walls including raking out expansion joint filler as necessary	m	68		
	Carried To Section Summary			**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 3				
	1 x 4 Classroom Block				
	BILL NO. 6				
	ROOF COVERINGS				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW 371				
	PROFILED METAL SHEETING AND ACCESSORIES				
	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				
1	Roof covering with pitch not exceeding 25 degrees.	m²	388		
	0.58mm galvanised sheet iron, with "Globalcoat" one side in:				
2	Standard type FK3 ridge or hip flashing	m	43		
	Carried To Section Summary			**R**	

	Unit	Quantity	Rate	Amount

SECTION NO. 3

1 x 4 Classroom Block

BILL NO. 7

CARPENTRY AND JOINERY

PREAMBLES

For preambles see "Specification of materials and methods to be used - PW371

SUPPLEMENTARY PREAMBLES

Particle board:

Particle board shall comply with the following specifications: a) SABS 1300 Particle board: exterior and flooring type b) SABS 1301 Particle board: interior type.

Joinery:

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.

Fixing:

Items described as nailed shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete.

Decorative laminate finish:

Laminate finish shall be glued under pressure. Edge strips shall be butt jointed at junctions with adjacent similar finish.

PREFABRICATED ROOF TRUSSES, ETC.

Plate nailed timber roof truss construction:

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 quarantee that the trusses are designed, manufactured,and erected, to support the roof coverings specified. The quarntee shall be valid for 10(ten) years .

Carried to Collection **R**

		Unit	Quantity	Rate	Amount
	Sawn softwood:				
1	Roof construction to double pitched roof with two hipped ends approximately 370m2 (four classrooms) on plan overall including trusses, rafters, purlins, permanent bracing, etc (measured flat).	No	1		
	ROOF CONSTRUCTION				
	Sawn softwood :				
2	114 x 38mm Wall plates.	m	75		
3	114 x 38mm rafters exceeding 2.4m and not exceeding 3.9m.	m	15		
4	50 x 76mm purlins.	m	140		
5	50 x 250mm laminated beam.	m	43		
	ROOF SUNDRIES				
	Sundries:				
6	Two coats creosote on sawn timbers.	m²	26		
	EAVES, VERGES, ETC				
	Everite FC77 or equal approved pressed fibre-cement:				
7	10 x 250mm Fascias and barge boards including galvanised steel H-profile jointing strips.	m	80		
	Wrought meranti doors:				
	Wrought meranti doors hung to steel frames:				
8	44mm Framed batten door 914 x 2032mm high of 44 x 150m 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	4		
	DOORS ETC				
	40mm semi-solid flush doors with veneer				
9	40mm Door 813 x 2032mm high	No	4		
	FITTINGS				
	Fittings to Classroom Store				
10	Shelving 400mm wide made up of 25mm thick hardwood top and 250 x 250mm high triangular mild steel brackets bolted to wall	m	38		
	Carried to Collection			**R**	

BILL NO. 7

CARPENTRY AND JOINERY

COLLECTION

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		Unit	Quantity	Rate	Amount
	SECTION NO. 3				
	1 x 4 Classroom Block				
	BILL NO. 8				
	CEILINGS PARTITIONS AND ACCESS FLOORING				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	SUPPLEMENTARY PREAMBLES				
	Descriptions:				
	Items described as nailed shall be deemed to be fixed with hardened steel nails or pins or shot pinned to brickwork or concrete.				
	Items described as plugged shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres, and where described as bolted the bolts have been given.				
	INSULATION				
	Aerolite insulation:				
1	100mm Insulation closely fitted and laid on top of brandering between roof timbers etc.	m²	337		
	Wrought meranti				
2	19 x 76mm covedccornice nailed to brickwalls	m	169		
	NAILED UP AND SCREW UP CEILINGS				
	6mm Everite Nutec or equal approved fibre-cement boards with H-type steel cover strips over joints:				
3	Ceilings including 38 x 38mm sawn softwood brandering at 400mm centres.	m²	337		
4	Extra over ceiling for hinged trap door size 610 x 610mm	No	4		
	Carried To Section Summary			**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 3				
	1 x 4 Classroom Block				
	BILL NO. 9				
	IRONMONGERY				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	SUPPLEMENTARY PREAMBLES				
	Finishes to ironmongery:				
	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.				
	CATCHES, CABIN HOOKS, ETC				
	Solid or equal approved:				
1	100mm cabin hook and eye including 70 x 70 x 20mm chamfered hardwood block twice oiled and plugged.	No	4		
	LOCKS				
	Solid or equal approved:				
2	"Code 630" padlock.	No	4		
	'Solid" or equal approved				
3	CZ6822461 "Gower" Four lever lockset.	No	8		
	SUNDRIES				
	Solid or equal approved:				
4	38mm Diameter rubber door stop plugged.	No	8		
	PINNING BOARDS, WRITING BOARDS, PROJECTION SCREENS, ETC				
	Vitrex or equal approved:				
5	Pinning board 2400 x 1200mm high plugged.	No	8		
6	White Magnetic Writing Board 4000 x 1200mm	No	4		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	SHELVES ETC				
	Proprietary type steel shelving with standard powder coated finish				
7	Heavy duty double slot wall band 1800mm long, plugged	No	63		
8	Heavy duty shelf bracket for 300mm shelf plugged	No	252		
	Carried to Collection			**R**	

BILL NO. 9

IRONMONGERY

COLLECTION

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		Unit	Quantity	Rate	Amount
	SECTION NO. 3				
	1 x 4 Classroom Block				
	BILL NO. 10				
	METALWORK				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	SUPPLEMENTARY PREAMBLES				
	Descriptions:				
	Descriptions of bolts shall be deemed to include nuts and washers.				
	Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.				
	Metalwork described as holed for bolt(s) shall be deemed to exclude the bolts unless otherwise described.				
	STEEL BALUSTRADES AND HANDRAILS				
	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 openning 3No. In each upright, top rail to be 30mm thick x 100mm wide steel				
1	Steel handrails and balustrades 1000mm high	m	10		
	Mild Steel Poles				
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	13		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	COMBINATION DOOR FRAME WITH SECURITY GATE				
	Classroom combination door frame with security gate				
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	4		
	PRESSED STEEL DOOR FRAMES				
	1,2mm Rebated frames suitable for one brick walls:				
4	Frame for door 813 x 2032mm high.	No	4		
	STEEL WINDOWS, DOORS, ETC.				
	Standard residential windows with 12 x 12(B33) solid burglar bars to all sashes:				
5	Window Code 5/2 (NTY or equal approved), 1143 x 1332mm high.	No	36		
6	Window Code 5 (NTY or equal approved), 1143 x 846mm high.	No	4		
	STEEL LOUVRES, ETC				
	Purpose made louvres:				
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**	

			Amount
BILL NO. 10			
METALWORK			
COLLECTION			
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		Unit	Quantity	Rate	Amount
	SECTION NO. 3				
	1 x 4 Classroom Block				
	BILL NO. 11				
	PLASTERING				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	SCREEDS				
	Screeds on concrete:				
	Screeds of wood floated on concrete to receive ceramic tiles:				
1	30mm Thick on floors to receive ceramic tiling.	m²	268		
	GRANOLITHIC				
	Untinted wood floated granolithic on concrete				
2	30mm Thick on floors and landings.	m²	69		
	INTERNAL PLASTER				
	Cement plaster steel trowelled, on brickwork				
3	On walls	m²	517		
4	On narrow widths not exceeding 300mm wide	m²	22		
	CORNER PROTECTORS, DIVIDING STRIPS, ETC				
5	30 x 3mm Flat section brass dividing strips between different floor finishes.	m	4		
	Carried To Section Summary			**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 3				
	1 x 4 Classroom Block				
	BILL NO. 12				
	TILING				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	FLOOR TILING				
	300 x 300 x 11.5mm glazed 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				
1	On floors and landings.	m²	268		
2	Skirting formed of ceramic tile cut to 300 x 75mm high	m	169		
	Carried To Section Summary			**R**	

	Unit	Quantity	Rate	Amount

SECTION NO. 3

1 x 4 Classroom Block

BILL NO. 13

PLUMBING AND DRAINAGE

PREAMBLES

For preambles see "Specification of materials and methods to be used - PW371

SUPPLEMENTARY PREAMBLES

Concrete pipes:

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

uPVC pressure pipes and fittings:

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.

Copper pipes:

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.

Fixing of pipes

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**

	Unit	Quantity	Rate	Amount

Reducing fittings:

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

Wire gratings:

Descriptions of gutter outlets etc shall be deemed to include wire balloon gratings.

Septic tanks:

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.

Exposed concrete surfaces:

Exposed surfaces of concrete stormwater channels, cover slabs, inspection eye marker slabs, gulley tops, cleaning eye tops, catchpits, inspection chambers, etc shall be finished smooth with plaster.

Excavations:

No claim for rock excavation will be entertained unless the Contractor has timeously notified the quantity surveyor thereof prior to backfilling.

'Soft rock' and 'hard rock' shall be as defined in 'Earthworks'.

Laying, backfilling, bedding, etc of pipes:

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

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

Flush pans:

Flush pans shall have straight or side outlets and 'P' or 'S' traps as necessary.

Carried to Collection **R**

		Unit	Quantity	Rate	Amount
	Stainless steel basins, sinks, wash troughs, urinals, etc:				
	Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable.				
	Waste unions:				
	Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings.				
	RAINWATER DISPOSAL				
	Approved .6mm galvanised sheet iron with "chromadek" finish ,in:				
1	100 x 100mm Eaves gutters	m	97		
2	Extra over eaves gutter for angle/corner.	No	4		
3	Extra over eaves gutter for outlet for 75mm pipe.	No	26		
4	75mm Diameter rainwater pipes.	m	104		
5	Extra over rainwater pipe for bend.	No	26		
6	Extra over rainwater pipe for shoe.	No	26		
	FIRE APPLIANCES ETC.				
	'Chubb' or equal approved:				
7	9kg Dry chemical fire extinguisher fixed on and including 22mm thick x 400 x 200mm wide meranti timber back plate with chamfered edges	No	4		
	RAINWATER HARVESTING				
	Rainwater Harvesting				
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**	

BILL NO. 13

PLUMBING AND DRAINAGE

COLLECTION

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		Unit	Quantity	Rate	Amount
	SECTION NO. 3				
	1 x 4 Classroom Block				
	BILL NO. 14				
	GLAZING				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	GLAZING TO STEEL WITH PUTTY				
	5 mm Clear float glass:				
1	Panes not exceeding 0,1m2.	m²	39		
	5 mm obscure glass:				
2	Panes not exceeding 0,1m2.	m²	20		
	Carried To Section Summary			**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 3				
	1 x 4 Classroom Block				
	BILL NO. 15				
	PAINTWORK				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	ON NEW INTERNAL FLOATED PLASTER SURFACES				
	One coat alkali resistant primer and two coats PVA emulsion paint for interior use				
1	Walls	m²	517		
	ON FIBRE-CEMENT, ETC.				
	Prepare , etc as specified and apply two coats of super acrylic Pva paint:				
2	On ceilings and cornices.	m²	337		
3	On fascias and barge boards.	m	97		
	ON METAL				
	Prepare, etc as specified and apply two coats of gloss enamel paint on :				
4	Door frames	m²	12		
5	On windows with burglar bars (both sides measured).	m²	113		
6	On gates, grilles, burglar screens, balustrades, etc (both sides measured over the full flat area).	m²	35		
7	Steel poles	m	39		
	Eaves Gutter				
8	Inside eaves gutter with waterproofing paint	m²	34		
	Prepare,etc as specified and apply two coats of super acrylic Pva paint on:				
9	General surfaces of doors (interior).	m²	13		
	ON WOOD, WOOD BOARD				
	Prepare, etc as specified and apply two coats of polyurethane suede varnish:				
10	On general surfaces of doors.	m²	13		
11	On laminated beam.	m²	23		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
12	On shelves.	m²	52		
13	On general surfaces of timber	m²	8		
	Carried to Collection			R	

BILL NO. 15

PAINTWORK

COLLECTION

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SECTION NO. 3

1 x 4 Classroom Block

SECTION SUMMARY

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Section No. 3
SECTION SUMMARY

SECTION NO. 4

1 x Grade R Facility

		Unit	Quantity	Rate	Amount
	SECTION NO. 4				
	1 x Grade R Facility				
	BILL NO. 1				
	FOUNDATIONS				
	PREAMBLES				
	For preambles see " Specification of materials and methods to be used - PW371"				
	SITE CLEARANCE, ETC				
	Site Clearance				
1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc.	m²	292		
	REMOVAL OF TREES, ETC.				
	Taking out and removing, grubbing up roots and filling in holes:				
2	Tree stump exceeding 200mm and not exceeding 500mm girth.	No	1		
	EXCAVATION, FILLING, ETC OTHER THAN BULK				
	Excavation in earth not exceeding 2m deep:				
3	Trenches.	m³	157		
	Extra over trench and hole excavations in earth for excavation:				
4	Soft rock.	m³	13		
5	Hard rock.	m³	5		
	Risk of collapse of excavations:				
6	Sides of trench and hole excavations not exceeding 1,5m deep.	m²	430		
	Keeping excavations free of water:				
7	Keeping excavations free of all water other than subterranean water.	Item			
	Earth filling obtained from excavations and/or prescribed stock piles on site compacted to 93% Mod AASHTO:				
8	Backfilling to trenches, holes, etc.	m³	90		
9	Under floors, steps, pavings, etc.	m³	73		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	Earth filling supplied by the Contractor and compacted to 95% Mod AASHTO density):				
10	Under floors, steps, pavings, etc.	m³	103		
11	Trenches	m³	85		
	Cart Away				
	Extra over excavation for cart away:				
12	Surplus material from excavations on site to a dumping site be located by the contractor	m³	30		
	Coarse river sand filling supplied by the Contractor:				
13	Under floors etc.	m³	13		
	COMPACTION				
	Compaction of surfaces:				
14	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90%.Mod AASHTO density.	m²	255		
	Prescribed density tests on filling:				
15	Modified AASHTO Density test.	No	16		
	SOIL POISONING				
	Soil insecticide:				
16	Under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming.	m²	255		
17	To bottoms and sides of trenches etc.	m²	384		
	Carried to Collection			**R**	

BILL NO. 1

FOUNDATIONS

COLLECTION

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		Unit	Quantity	Rate	Amount
	SECTION NO. 4				
	1 x Grade R Facility				
	BILL NO. 2				
	CONCRETE, FORMWORK AND REINFORCEMENT				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371"				
	UNREINFORCED CONCRETE				
	15Mpa/19mm Concrete				
1	Aprons cast in panels.	m³	7		
2	Ramps.	m³	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	71		
	REINFORCED CONCRETE				
	25MPa/19mm Concrete:				
4	Surface beds cast in panels on waterproofing.	m³	26		
5	Footings.	m³	23		
	TEST BLOCKS				
	Test blocks:				
6	Making and testing set of three 150 x 150 x 150mm concrete strength test cubes (Provisional).	Sets	15		
	FINISHING TOP SURFACE OF CONCRETE				
	Finishing top surfaces				
7	Paving to falls.	m²	76		
	ROUGH FORMWORK				
	Rough Formwork to Sides:				
8	Edges and reveals not exceeding 300mm high or wide.	m	91		
	MOVEMENT JOINTS ETC				
	Two layers of .5mm galvanised mild steel slip joints between horizontal concrete and brick surfaces including cement mortar bed:				
9	Not exceeding 300mm wide.	m	70		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	Expansion joints with bitumen impregnated softboard between vertical concrete and brick surfaces:				
10	12mm Joints not exceeding 300mm high.	m	75		
	Dividing Strips ,etc				
11	6 x 38mm Angle iron step guard cast into concrete with 3x 6mm anchors	m	9		
	REINFORCEMENT(PROVISIONAL)				
	Fabric reinforcement:				
12	Type 193 fabric reinforcement in concrete surface beds, slabs, etc.	m²	255		
	Mild steel reinforcement to structural concrete work:				
13	10mm Diameter bars.	Tonnes	1.00		
	High tensile steel reinforcement to structural concrete work:				
14	20mm Diameter bars.	Tonnes	1.00		
15	16mm Diameter bars.	Tonnes	3.00		
16	12mm Diameter bars.	Tonnes	1.00		
	Carried to Collection			**R**	

BILL NO. 2

CONCRETE, FORMWORK AND REINFORCEMENT

COLLECTION

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		Unit	Quantity	Rate		Amount
	SECTION NO. 4					
	1 x Grade R Facility					
	BILL NO. 3					
	MASONRY					
	PREAMBLES					
	For preambles see "Specification of materials and methods to be used - PW371"					
	BRICKWORK					
	Sizes in descriptions:					
	Where sizes in descriptions are given in brick units, 'one brick' shall represent the length and 'half brick' the width of a brick.					
	Face bricks:					
	Bricks shall be ordered timeously to obtain uniformity in size and colour.					
	Pointing:					
	Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc.					
	SAMPLES					
	Samples of all masonry building units, except those for walls described as 'load bearing', shall consist of a minimum of 6 units. Samples of building units to be used in walls described as 'load bearing' shall consist of 30 units from every 30 000 units delivered to site.					
	BRICKWORK IN FOUNDATIONS (PROVISIONAL)					
	Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar:					
1	Half brick walls.	m²	19			
2	One brick walls	m²	131			
	BRICKWORK IN SUPERSTRUCTURE					
	Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar:					
3	Half brick walls	m²	58			
4	One brick walls	m²	398			
	BRICKWORK SUNDRIES					
	Brickwork reinforcement:					
5	75mm Wide reinforcement built in horizontally.	m	255			
	Carried to Collection				**R**	

		Unit	Quantity	Rate	Amount
6	150mm Wide reinforcement built in horizontally.	m	1 964		
	Prestressed fabricated lintels:				
7	110 x 75mm Lintels in lengths not exceeding 3m.	m	15		
	Turning pieces:				
8	220mm Wide turning piece to lintels etc.	m	18		
	Galvanised wire ties etc:				
9	4mm Diameter roof tie 2m girth bent double with one end fixed to timber and other end built into brickwork.(Provisional)	No	71		
	Galvanised hoop iron cramps, ties, etc:				
10	30 x 1,6mm Cramp 500mm long with one end fixed to wood and other end built into brickwork.(Provisional)	No	71		
	FACE BRICKWORK				
	Face bricks (Prime cost R5 500/1000 delivered to site excluding VAT) pointed with flush horizontal and vertical joints:				
11	Extra over brickwork for face brickwork.	m²	217		
12	Extra over brickwork for face brickwork in foundations (Provisional).	m²	91		
13	Half brick in facings in beamfilling	m²	65		
	FACE BRICKWORK COPINGS, SILLS, ETC.				
	Brick-on-edge header course copings, sills, etc of face bricks (Prime cost R5 5 00/1000 delivered to site excluding VAT) and pointed with recessed joints on all exposed faces:				
14	Extra over brickwork for brick-on-edge header course lintel pointed on face and 110mm soffit.	m	20		
15	230mm Wide sill set sloping and slightly projecting.	m	26		
16	Coping on top of one brick wall pointed on exposed faces	m	33		
	NUTEC-CEMENT/FIBRE-CEMENT WINDOW SILLS				
	Natural grey sills in single lengths bedded in class I mortar including metal fixing lugs etc:				
17	12 x 152mm Wide sills set flat and slightly projecting.	m	31		
	Weedkiller				
18	Weedkiller under paving	m²	40		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	PAVING ETC				
	60mm thick precast concrete paving blocks with butt joints on 25mm thick river sand bed with sand-and-cement mixture swept into joints and hosed down, including preparation of ground or filling				
19	Paving in stretcher bond	m²	40		
20	220mm Wide brick-on-flat header course edgings on 10mm thick mortar bed, including necessary excavation	m	30		
	Carried to Collection			**R**	

BILL NO. 3

MASONRY

COLLECTION

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		Unit	Quantity	Rate	Amount
	SECTION NO. 4				
	1 x Grade R Facility				
	BILL NO. 4				
	WATERPROOFING				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	DAMPPROOFING OF WALLS AND FLOORS				
	One layer of 375 micron Consol Plastics Brikgrip DPC embossed damp proof course:				
1	In walls.	m²	30		
	One layer of 250 micron Consol Plastics Gunplas USB Green waterproof sheeting sealed at laps with Gunplas Pressure Sensitive Tape:				
2	Under surface beds.	m²	255		
	JOINT SEALANTS ETC				
	Silicone sealing compound including backing cord, bond breaker,primer,etc				
3	12 x 20mm in expansion joints in floors including raking out expansion joint filler as necessary (Provisional)	m	44		
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**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 4				
	1 x Grade R Facility				
	BILL NO. 5				
	ROOF COVERINGS				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW 371				
	PROFILED METAL SHEETING AND ACCESSORIES				
	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				
1	Roof covering with pitch not exceeding 25 degrees.	m²	400		
	0.58mm galvanised sheet iron, with "Globalcoat" one side in:				
2	Standard type FK3 ridge or hip flashing	m	36		
	Carried To Section Summary			**R**	

	Unit	Quantity	Rate	Amount

SECTION NO. 4

1 x Grade R Facility

BILL NO. 6

CARPENTRY AND JOINERY

PREAMBLES

For preambles see "Specification of materials and methods to be used - PW371

SUPPLEMENTARY PREAMBLES

Particle board:

Particle board shall comply with the following specifications: a) SABS 1300 Particle board: exterior and flooring type b) SABS 1301 Particle board: interior type.

Joinery:

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.

Fixing:

Items described as nailed shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete.

Decorative laminate finish:

Laminate finish shall be glued under pressure. Edge strips shall be butt jointed at junctions with adjacent similar finish.

PREFABRICATED ROOF TRUSSES, ETC.

Plate nailed timber roof truss construction:

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 quarantee that the trusses are designed, manufactured,and erected, to support the roof coverings specified. The quarntee shall be valid for 10(ten) years .

Carried to Collection **R**

		Unit	Quantity	Rate	Amount
	Sawn softwood:				
1	Roof construction to double pitched roof with two hipped ends approximately 255m2 (Grade R 2 Classroom) on plan including trusses, hipped ends, jack rafters, purlins, permanent bracing, etc (measured flat).	No	1		
	ROOF CONSTRUCTION				
	Sawn softwood :				
2	114 x 38mm Wall plates.	m	120		
3	50 x 228mm laminated beam	m	30		
	ROOF SUNDRIES				
	Sundries:				
4	Two coats creosote on sawn timbers.	m²	25		
	EAVES, VERGES, ETC				
	Everite FC77 pressed fibre-cement:				
5	10 x 250mm Fascias and barge boards including galvanised steel H-profile jointing strips.	m	78		
	SKIRTINGS				
	Wrought meranti				
6	20 x 75mm Skirtings including 40mm quadrant bead, nailed	m	24		
	DOORS ETC				
	Wrought meranti doors hung to steel frames:				
7	44mm Framed batten door 914 x 2032mm high of 44 x 150m 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		
	SEMI SOLID CORE FLUSH DOORS				
	44 semi-solid flush doors with 3,2mm standard hardboard covering on both sides hung to steel frames:				
8	40mm Door 813 x 2032mm high.	No	3		
9	40mm Door 900 x 2032mm high.	No	1		
	Carried to Collection			**R**	

BILL NO. 6

CARPENTRY AND JOINERY

COLLECTION

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		Unit	Quantity	Rate	Amount
	SECTION NO. 4				
	1 x Grade R Facility				
	BILL NO. 7				
	CEILINGS PARTITIONS AND ACCESS FLOORING				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	SUPPLEMENTARY PREAMBLES				
	Descriptions:				
	Items described as nailed shall be deemed to be fixed with hardened steel nails or pins or shot pinned to brickwork or concrete.				
	Items described as plugged shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres, and where described as bolted the bolts have been given.				
	INSULATION				
	Aerolite insulation:				
1	100mm Insulation closely fitted and laid on top of brandering between roof timbers etc.	m²	243		
	Meranti cornice				
2	19 x 76mm coved cornice nailed to brickwork	m	173		
	NAILED UP AND SCREW UP CEILINGS				
	6mm Everite Nutec fibre-cement boards with H-type steel cover strips over joints:				
3	Ceilings including 38 x 38mm sawn softwood brandering at 400mm centres.	m²	243		
4	Extra over ceiling for hinged trap door size 610 x 610mm	No	2		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	TOILET CUBICLES (CPAP WORK GROUP NO. 138)				
	"Vitrex" cubicles consisting of 20mm thick partitions, doors and stiles of laminated construction with outer skins of vitreous enamelled steel sheets bonded to wood particle board, all framed in natural anodised aluminium channel section beading, top rails and fixing components and fitted with all necessary ironmongery comprising standard indicating bolts, combined coat hooks and door stops, toilet roll holders and rubber buffers				
5	Partition 1800 x 1800mm high	No	3		
6	Door 750 x 1800mm high	No	4		
7	Full stile 210 x 2000mm high	No	6		
8	End stile 145 x 2000mm high	No	5		
9	Wall stile 105 x 2000mm high	No	4		
10	Extra over for chromium plated rising butt hinge	No	4		
11	Extra over for powder coating to aluminium beading, brackets and ironmongery - per cubicle	No	4		
	Carried to Collection			**R**	

BILL NO. 7

CEILINGS PARTITIONS AND ACCESS FLOORING

COLLECTION

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Carried To Section Summary	**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 4				
	1 x Grade R Facility				
	BILL NO. 8				
	FLOOR COVERINGS				
	FLOOR COVERINGS				
	300 x 300 x 2.5mm semi flexible vinyl tiles				
1	On floors	m²	18		
	POLISH, SEALERS, ETC				
	Polish				
2	Wax polish on vinyl flooring	m²	18		
	Carried To Section Summary			**R**	

		Unit	Quantity	Rate		Amount
	SECTION NO. 4					
	1 x Grade R Facility					
	BILL NO. 9					
	IRONMONGERY					
	PREAMBLES					
	For preambles see "Specification of materials and methods to be used - PW371					
	SUPPLEMENTARY PREAMBLES					
	Finishes to ironmongery:					
	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.					
	HINGES, FLOOR SPRING HINGES, BOLTS, PANIC BOLTS, ETC					
	"Solid" or equal approved:					
1	CZ 80941 or equal approved WC indicator bolt with keep fixed to metal.	No	4			
	CATCHES, CABIN HOOKS, ETC					
	Solid or equal approved					
2	100mm cabin hook and eye including 70 x 70 x 20mm chamfered hardwood block twice oiled and plugged.	No	4			
	LOCKS					
	Solid or equal approved					
3	"Code 630" or equal approved padlock.	No	4			
	'Solid' or equal approved					
4	CZ6822461 "Gower" Four lever lockset.	No	6			
	DOOR CLOSERS					
	"Yale" or equal approved					
5	Y202RC Door closer with cover fixed to metal	No	1			
	BATHROOM FITTINGS					
	Kimberley-Clark or equal approved:					
6	19mm Diameter chromium plated towel rail 900mm long including flanged end brackets.	No	4			
	Carried to Collection				**R**	

		Unit	Quantity	Rate	Amount
7	Lockable toilet roll holder plugged.	No	4		
	Chairman Industries or equal approved brushed stainless steel grab rails:				
8	32mm Code DL2 side grab rail, plugged	No	1		
9	32mm Code DL2 rear grab rail, plugged	No	1		
	SUNDRIES				
	Solid or equal approved:				
10	38mm Diameter rubber door stop plugged.	No	4		
	PINNING BOARDS, WRITING BOARDS, PROJECTION SCREENS, ETC				
	Vitrex or equal approved:				
11	Pinning board 2400 x 1200mm high plugged.	No	8		
12	White Magnetic Writing Board 4000 x 1200mm	No	2		
	Carried to Collection			**R**	

		Amount
BILL NO. 9		
IRONMONGERY		
COLLECTION		
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		Unit	Quantity	Rate	Amount
	SECTION NO. 4				
	1 x Grade R Facility				
	BILL NO. 10				
	STRUCTURAL STEELWORK				
	STEEL COLUMNS AND BEAMS				
	Mild steel beams in single lengths with flat section bearer and connection plates bolted to 76mm columns				
1	150 x 150 x 75mm beam	m	90.00		
	BOLTS, FASTENERS, ETC				
	Bolts				
2	High tensile bolts (class 8.8)	Tonnes	1.00		
	Carried To Section Summary			**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 4				
	1 x Grade R Facility				
	BILL NO. 11				
	METALWORK				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	SUPPLEMENTARY PREAMBLES				
	Descriptions:				
	Descriptions of bolts shall be deemed to include nuts and washers.				
	Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.				
	Metalwork described as holed for bolt(s) shall be deemed to exclude the bolts unless otherwise described.				
	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 openning 3no in each upright, top rail to be 30mm thick x 100mm wide steel				
1	Balustrades including steel handrails approximately 1000mm high fixed to concrete.	m	46		
	Mild steel poles				
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	12		
	WELDED SCREENS, GATES, ETC.				
	Gates to external doors				
3	Double gate and frame 1535 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	1		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	COMBINATION DOOR FRAME WITH SECURITY GATE				
	Classroom combination door frame with security gate				
4	"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	2		
	PRESSED STEEL DOOR FRAMES				
	1,2mm Rebated frames suitable for half brick walls:				
5	Frame for door 813 x 2032mm high.	No	3		
6	Frame for door 914 x 2032mm high.	No	1		
	1,2mm Rebated frames suitable for one brick walls:				
7	Frame for door 813 x 2032mm high.	No	1		
	STEEL WINDOWS, DOORS, ETC.				
	Standard residential windows with 12 x 12(B33) solid burglar bars to all sashes:				
8	Window type NE1, size 533 X 654mm high.	No	9		
9	Window type NG5, 359 x 533mm high.	No	4		
10	Window type 14B-4, 854 x 889mm high.	No	20		
	STEEL LOUVRES,ETC				
	Purpose made louvres:				
11	Ditto but approximately 3700 x 1000mm high overall	No	2		
	Carried to Collection			**R**	

BILL NO. 11

METALWORK

COLLECTION

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		Unit	Quantity	Rate	Amount
	SECTION NO. 4				
	1 x Grade R Facility				
	BILL NO. 12				
	PLASTERING				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	SCREEDS				
	Screeds on concrete:				
	Screeds of wood floated on concrete to receive ceramic tiles:				
1	30mm Thick on floors to receive vinyl tiles	m²	18		
2	30mm Thick on floors to receive tiles	m²	168		
	GRANOLITHIC				
	Untinted wood floated granolithic on concrete				
3	30mm Thick on floors and landings.	m²	60		
4	Granolithic skirting	m	16		
	INTERNAL PLASTER				
	Cement plaster on brickwork:				
5	On walls.	m²	413		
6	On narrow widths.	m²	9		
	CORNER PROTECTORS, DIVIDING STRIPS, ETC				
7	30 x 3mm Flat section brass dividing strips between different floor finishes.	m	6		
	Carried To Section Summary			**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 4				
	1 x Grade R Facility				
	BILL NO. 13				
	TILING				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	WALL TILING				
	200 x 200 x 10mm White glazed ceramic tiles fixed with adhesive to plaster (plaster elsewhere):				
1	On walls in isolated panels, splashbacks, etc.	m²	45		
2	On narrow widths.	m²	1		
	FLOOR TILING				
	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				
3	On floors and landings.	m²	168		
4	Skirting formed of ceramic tile cut to 300 x 75mm high	m	94		
	Carried To Section Summary			**R**	

	Unit	Quantity	Rate	Amount

SECTION NO. 4

1 x Grade R Facility

BILL NO. 14

PLUMBING AND DRAINAGE

PREAMBLES

For preambles see "Specification of materials and methods to be used - PW371

SUPPLEMENTARY PREAMBLES

Concrete pipes:

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

uPVC pressure pipes and fittings:

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.

Copper pipes:

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.

Fixing of pipes

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**

	Unit	Quantity	Rate	Amount

Reducing fittings:

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

Wire gratings:

Descriptions of gutter outlets etc shall be deemed to include wire balloon gratings.

Septic tanks:

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.

Exposed concrete surfaces:

Exposed surfaces of concrete stormwater channels, cover slabs, inspection eye marker slabs, gulley tops, cleaning eye tops, catchpits, inspection chambers, etc shall be finished smooth with plaster.

Excavations:

No claim for rock excavation will be entertained unless the Contractor has timeously notified the quantity surveyor thereof prior to backfilling.

'Soft rock' and 'hard rock' shall be as defined in 'Earthworks'.

Laying, backfilling, bedding, etc of pipes:

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

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

Flush pans:

Flush pans shall have straight or side outlets and 'P' or 'S' traps as necessary.

Carried to Collection **R**

		Unit	Quantity	Rate	Amount
	Stainless steel basins, sinks, wash troughs, urinals, etc:				
	Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable.				
	Waste unions:				
	Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings.				
	RAINWATER DISPOSAL				
	Approved .6mm galvanised sheet iron with "chromadek" finish ,in:				
1	100 x 100mm Eaves gutters	m	78		
2	Extra over eaves gutter for angle/corner.	No	4		
3	Extra over eaves gutter for stopped end	No	4		
4	Extra over eaves gutter for outlet for 75mm pipe.	No	20		
5	75mm Diameter rainwater pipes.	m	88		
6	Extra over rainwater pipe for bend.	No	20		
7	Extra over rainwater pipe for shoe.	No	20		
	SANITARY FITTINGS				
	'Citimetal' stainless steel:				
8	Series single end bowl overlay sink, size 1200 x 535mm fitted to top of cabinet.	No	2		
	"Vaal" or equal approved				
9	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		
10	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	5		
11	Protea 750246 or equal approved wall hung paraplegic WC pan with cradle bracket and legs and Kestrel double flap or equal approved white epoxy painted wooden seat (flush valve elsewhere)	No	1		
	WASTE UNIONS ETC				
	'Cobra Watertech" or equal approved				
12	38mm "Cobra 316" unslotted waste and plug with chain	No	4		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	TRAPS ETC				
	"Marley' or equal approved				
13	40mm Flexi butyl rubber trap with reseal "P" trap	No	2		
	"Cobra Watertech" or equal approved				
14	"Cobra Ref. 365/40" CP Bottle trap.	No	2		
	TAPS, VALVES, ETC				
	'Cobra Watertech' or equal approved:				
15	15mm basin mixer plugged	No	4		
16	15mm Gate valves plugged	No	11		
17	"Cobra Ref. 232/350' Angle regulating valve	No	4		
18	"Cobra Ref. 166/041 wall type "Star" sink mixer with overarm swivel outlet	No	2		
	SANITARY PLUMBING				
	uPVC pipes:				
19	50mm Pipes	m	100		
20	110m Pipes.	m	75		
21	50mm Pipes laid in and including trenches not exceeding 1m deep.	m	50		
22	110mm Pipes laid in and including trenches not exceeding 1m deep under surface beds.	m	55		
	Extra over uPVC pipes for fittings:				
23	50mm Bend.	No	20		
24	100mm Bend.	No	18		
25	110mm Junction.	No	9		
26	50mm Junction.	No	24		
27	110mm Reducing junction.	No	9		
28	110mm Double junction.	No	18		
29	110mm Pan connector	No	6		
30	110mm "G1 Two-way " vent valve	No	9		
	Sundries:				
31	Testing waste pipe system.	Item			
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	WATER SUPPLIES				
	Class 9 uPVC pressure pipes:				
32	63mm Pipes laid in and including trenches not exceeding 1000mmm deep	m	80		
	Extra over uPVC pressure pipes for solvent welded pressure fittings:				
33	63mm Elbow	No	15		
34	63mm Tee	No	8		
35	63mm Reducer.	No	4		
	Class o copper pipes:				
36	15mm Pipes	m	100		
37	22mm Pipes.	m	80		
	Extra over class o copper pipes for capillary fittings:				
38	15mm Fittings.	No	40		
39	22mm Fittings.	No	35		
	Copper overflow and service pipes:				
40	15mm Service pipe 300mm girth.	No	1		
	Sundries:				
41	450 x 450m cast iron stopcock box including brick chamber below not exceeding 750mm deep internally.	No	1		
42	'ZIP Hydroboil code 3800' 25 litre white powder coated water boiler as manufactured by Franke Kitchen Systems, plugged and screwed to wall.	No	1		
	ELECTRICAL WATER HEATERS				
	"Kwikot" or equal approved				
43	150 litre Horizontally floor mounted electric water heater	No	1		
	Testing:				
44	Testing water pipe system.	Item			
	FIRE APPLIANCES ETC.				
	'Chubb' or equal approved:				
45	9kg Dry chemical fire extinguisher fixed on and including 22mm thick x 400 x 200mm wide meranti timber back plate with chamfered edges	No	3		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	RAINWATER HARVESTING				
	Rainwater Harvesting				
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		
	Carried to Collection			**R**	

BILL NO. 14

PLUMBING AND DRAINAGE

COLLECTION

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		Unit	Quantity	Rate	Amount
	SECTION NO. 4				
	1 x Grade R Facility				
	BILL NO. 15				
	GLAZING				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	GLAZING TO STEEL WITH PUTTY				
	5mm Clear float glass:				
1	Panes exceeding 0,1m2 and not exceeding 0,5m2.	m²	16		
	5mm Rough cast glass:				
2	Panes exceeding 0,1m2 and not exceeding 0,5m2.	m²	3		
	TOPS, SHELVES, DOORS, MIRRORS, ETC.				
	6mm Silvered float glass copper backed mirrors with polished edges fixed with double sided adhesive tape:				
3	Mirror 450 x 600 mm high.	No	4		
	Carried To Section Summary			**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 4				
	1 x Grade R Facility				
	BILL NO. 16				
	PAINTWORK				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	ON FLOATED PLASTER				
	Prepare , etc as specified and apply two coats of super acrylic paint:				
1	On interior walls.	m²	413		
	ON FIBRE-CEMENT, ETC.				
	Prepare , etc as specified and apply two coats of super acrylic Pva paint:				
2	On ceilings and cornices.	m²	255		
3	On fascias and barge boards.	m	78		
	ON METAL				
	Prepare, etc as specified and apply two coats of gloss enamel paint on :				
4	Door frames	m²	9		
5	On windows with burglar bars (both sides measured).	m²	38		
6	On gates, grilles, burglar screens, balustrades, etc (both sides measured over the full flat area).	m²	13		
7	On steel poles and members	m	126		
	Inside eaves gutters				
8	Inside eaves gutters with waterproofing based paint	m²	28		
	Prepare,etc as specified and apply two coats of super acrylic Pva paint on:				
9	General surfaces of doors (interior).	m²	27		
	ON WOOD, WOOD BOARD				
	Prepare, etc as specified and apply two coats of polyurethane suede varnish:				
10	On doors	m²	7		
11	On laminated beam.	m²	13		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
12	On slatted seating	m²	6		
13	General surfaces of timber	m²	1		
	Carried to Collection			R	

BILL NO. 16

PAINTWORK

COLLECTION

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SECTION NO. 4

1 x Grade R Facility

SECTION SUMMARY

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15	GLAZING	139	
16	PAINTWORK	142	

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SECTION NO. 5

1 x Multipurpose Classroom

		Unit	Quantity	Rate	Amount
	SECTION NO. 5				
	1 x Multipurpose Classroom				
	BILL NO. 1				
	FOUNDATIONS				
	PREAMBLES				
	For preambles see " Specification of materials and methods to be used - PW371"				
	SITE CLEARANCE ETC				
	Site clearance:				
1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc.	m²	186		
	REMOVAL OF TREES, ETC.				
	Taking out and removing, grubbing up roots and filling in holes:				
2	Tree stump exceeding 200mm and not exceeding 500mm girth.	No	2		
	EXCAVATION, FILLING, ETC OTHER THAN BULK				
	Excavation in earth not exceeding 2m deep:				
3	Trenches.	m³	32		
	Extra over trench and hole excavations in earth for excavation:				
4	Soft rock.	m³	2		
5	Hard rock.	m³	2		
	Risk of collapse of excavations:				
6	Sides of trench and hole excavations not exceeding 1,5m deep.	m²	106		
	Keeping excavations free of water:				
7	Keeping excavations free of all water other than subterranean water.	Item			
	Earth filling obtained from excavations and/or prescribed stock piles on site compacted to 93% Mod AASHTO:				
8	Backfilling to trenches, holes, etc.	m³	45		
9	Under floors, steps, pavings, etc.	m³	20		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	Earth filling supplied by the Contractor and compacted to 95% Mod AASHTO density):				
10	Under floors, steps, pavings, etc.	m³	20		
	Cart Away				
	Extra over excavation for cart away:				
11	Surplus material from excavations on site to a dumping site be located by the contractor	m³	8		
	Coarse river sand filling supplied by the Contractor:				
12	Under floors etc.	m³	10		
	COMPACTION				
	Compaction of surfaces:				
13	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90%.Mod AASHTO density.	m²	20		
	Prescribed density tests on filling:				
14	Modified AASHTO Density test.	No	9		
	SOIL POISONING				
	Soil insecticide:				
15	Under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming.	m²	98		
16	To bottoms and sides of trenches etc.	m²	138		
	Carried to Collection			**R**	

		Amount
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FOUNDATIONS		
COLLECTION		
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		Unit	Quantity	Rate	Amount
	SECTION NO. 5				
	1 x Multipurpose Classroom				
	BILL NO. 3				
	CONCRETE, FORMWORK AND REINFORCEMENT				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371"				
	UNREINFORCED CONCRETE				
	15Mpa/19mm Concrete				
1	Aprons cast in panels.	m³	11		
2	Ramps.	m³	2		
3	Thickening down the edge of apron 150mm deep, 200mm top and tapering to 100mm at bottom including all excavations, formwork, backfilling etc	m	3		
	REINFORCED CONCRETE				
	25 MPa/19mm Concrete:				
4	Footings.	m³	8		
5	Surface beds cast in panels on waterproofing.	m³	15		
	TEST BLOCKS				
	Test blocks:				
6	Making and testing set of three 150 x 150 x 150mm concrete strength test cubes (Provisional).	Sets	10		
	FINISHING TOP SURFACE OF CONCRETE				
7	Paving to falls.	m²	61		
8	Ramps to falls.	m²	4		
	ROUGH FORMWORK (DEGREE OF ACCURACY III) (CPAP Work Group No 111)				
	Rough Formwork to Sides:				
9	Edges and reveals not exceeding 300mm high or wide.	m	4		
	MOVEMENT JOINTS ETC				
	Two layers of .5mm galvanised mild steel slip joints between horizontal concrete and brick surfaces including cement mortar bed:				
10	Not exceeding 300mm wide.	m	15		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	Expansion joints with bitumen impregnated softboard between vertical concrete and brick surfaces:				
11	12mm Joints not exceeding 300mm high.	m	20		
	Dividing Strips ,etc				
12	6 x 38mm Angle iron step guard cast into concrete with 3x 6mm anchors	m	1		
	REINFORCEMENT(PROVISIONAL)				
	Fabric reinforcement:				
13	Type 193 fabric reinforcement in concrete surface beds, slabs, etc.	m²	98		
	Steel reinforcement to structural concrete work:				
14	Various sizes	Tonnes	2		
	Carried to Collection			**R**	

BILL NO. 3

CONCRETE, FORMWORK AND REINFORCEMENT

COLLECTION

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		Unit	Quantity	Rate	Amount
	SECTION NO. 5				
	1 x Multipurpose Classroom				
	BILL NO. 4				
	MASONRY				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371"				
	BRICKWORK				
	Sizes in descriptions:				
	Where sizes in descriptions are given in brick units, 'one brick' shall represent the length and 'half brick' the width of a brick.				
	Face bricks:				
	Bricks shall be ordered timeously to obtain uniformity in size and colour.				
	Pointing:				
	Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc.				
	SAMPLES				
	Samples of all masonry building units, except those for walls described as 'load bearing', shall consist of a minimum of 6 units. Samples of building units to be used in walls described as 'load bearing' shall consist of 30 units from every 30 000 units delivered to site.				
	BRICKWORK IN FOUNDATIONS (PROVISIONAL)				
	Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar:				
1	One brick walls	m²	51		
	BRICKWORK IN SUPERSTRUCTURE				
	Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar:				
2	One brick walls	m²	145		
	BRICKWORK SUNDRIES				
	Brickwork reinforcement:				
3	150mm Wide reinforcement built in horizontally.	m	678		
	Turning pieces:				
4	220mm Wide turning piece to lintels etc.	m	1		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	Galvanised wire ties etc:				
5	4mm Diameter roof tie 2m girth bent double with one end fixed to timber and other end built into brickwork.(Provisional)	No	1 325		
	Galvanised hoop iron cramps, ties, etc:				
6	30 x 1,6mm Cramp 500mm long with one end fixed to wood and other end built into brickwork.(Provisional)	No	825		
	Prestressed fabricated concrete lintels including necessary temporary supports				
7	115 x 100mm Lintels in lengths not exceeding 3m	m	2		
	FACE BRICKWORK				
	Face bricks (Prime cost R5 500/1000 delivered to site excluding VAT) pointed with flush horizontal and vertical joints:				
8	Extra over brickwork for face brickwork.	m²	163		
9	Extra over brickwork for face brickwork in foundations (Provisional).	m²	12		
10	Half brick in facings in beamfilling	m²	8		
	FACE BRICKWORK COPINGS, SILLS, ETC.				
	Brick-on-edge header course copings, sills, etc of face bricks (Prime cost R3500/1000 delivered to site excluding VAT) and pointed with recessed joints on all exposed faces:				
11	Extra over brickwork for brick-on-edge header course lintel pointed on face and 110mm soffit.	m	163		
12	230mm Wide sill set sloping and slightly projecting.	m	10		
13	Coping on top of one brick wall pointed on exposed faces	m	603		
	NUTEC-CEMENT/FIBRE-CEMENT WINDOW SILLS				
	Natural grey sills in single lengths bedded in class I mortar including metal fixing lugs etc:				
14	12 x 152mm Wide sills set flat and slightly projecting.	m	10		
	Carried to Collection			**R**	

		Amount
BILL NO. 4		
MASONRY		
COLLECTION		
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		Unit	Quantity	Rate	Amount
	SECTION NO. 5				
	1 x Multipurpose Classroom				
	BILL NO. 5				
	WATERPROOFING				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	DAMPPROOFING OF WALLS AND FLOORS				
	One layer of 375 micron Consol Plastics Brikgrip DPC embossed damp proof course:				
1	In walls.	m²	12		
	One layer of 250 micron Consol Plastics Gunplas USB Green waterproof sheeting sealed at laps with Gunplas Pressure Sensitive Tape:				
2	Under surface beds.	m²	98		
	JOINT SEALANTS ETC				
	silicone sealing compound including backing cord, bond breaker,primer,etc				
3	12 x 20mm in expansion joints in floors including raking out expansion joint filler as necessary (Provisional)	m	24		
4	12 x 20mm in vertical expansion joints in walls including raking out expansion joint filler as necessary	m	10		
	Carried To Section Summary			**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 5				
	1 x Multipurpose Classroom				
	BILL NO. 6				
	ROOF COVERINGS				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW 371				
	PROFILED METAL SHEETING AND ACCESSORIES				
	.5mm "Klip-lok light industrial" galvanised troughed sheet steel with "chromadek" finish one side,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				
1	Roof covering with pitch not exceeding 25 degrees.	m²	130		
	.8mm galvanised sheet iron, with "chromadek" one side in:				
2	Standard type FK3 ridge or hip flashing	m	21		
	Carried To Section Summary			**R**	

	Unit	Quantity	Rate	Amount

SECTION NO. 5

1 x Multipurpose Classroom

BILL NO. 7

CARPENTRY AND JOINERY

PREAMBLES

For preambles see "Specification of materials and methods to be used - PW371

SUPPLEMENTARY PREAMBLES

Particle board:

Particle board shall comply with the following specifications: a) SABS 1300 Particle board: exterior and flooring type b) SABS 1301 Particle board: interior type.

Joinery:

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.

Fixing:

Items described as nailed shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete.

Decorative laminate finish:

Laminate finish shall be glued under pressure. Edge strips shall be butt jointed at junctions with adjacent similar finish.

PREFABRICATED ROOF TRUSSES, ETC.

Plate nailed timber roof truss construction:

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 quarantee that the trusses are designed, manufactured,and erected, to support the roof coverings specified. The quarntee shall be valid for 10(ten) years .

		Unit	Quantity	Rate	Amount
	Sawn softwood:				
1	Roof construction to double pitched roof with two hipped ends approximately 130m2 (One classrooms) on plan overall including trusses, rafters, purlins, permanent bracing, etc (measured flat).	No	1		
	ROOF CONSTRUCTION				
	Sawn softwood:				
2	114 x 38mm Wall plates.	m	44		
3	50 x 220mm support beam.	m	11		
	ROOF SUNDRIES				
	Sundries:				
4	Two coats creosote on sawn timbers.	m²	12		
	EAVES, VERGES, ETC				
	Everite FC77 or equal approved pressed fibre-cement:				
5	10 x 250mm Fascias and barge boards including galvanised steel H-profile jointing strips.	m	43		
	Wrought meranti doors:				
	Wrought meranti doors hung to steel frames:				
6	44mm Framed batten door 914 x 2032mm high of 44 x 150m 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	1		
	DOORS ETC				
	40mm semi-solid flush doors with veneer				
7	40mm Door 813 x 2032mm high	No	1		
	FITTINGS				
8	Shelving 400mm wide made up of 25mm thick hardwood top and 250 x 250mm high triangular mild steel brackets bolted to				
	wall	m	27		
	Carried to Collection			**R**	

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CARPENTRY AND JOINERY		
COLLECTION		
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		Unit	Quantity	Rate	Amount
	SECTION NO. 5				
	1 x Multipurpose Classroom				
	BILL NO. 8				
	CEILINGS PARTITIONS AND ACCESS FLOORING				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	SUPPLEMENTARY PREAMBLES				
	Descriptions:				
	Items described as nailed shall be deemed to be fixed with hardened steel nails or pins or shot pinned to brickwork or concrete.				
	Items described as plugged shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres, and where described as bolted the bolts have been given.				
	INSULATION				
	Aerolite insulation:				
1	100mm Insulation closely fitted and laid on top of brandering between roof timbers etc.	m²	87		
	Wrought softwood				
2	19 x 76mm cornices nailed	m	36		
	NAILED UP AND SCREW UP CEILINGS				
	6mm Everite Nutec or equal approved fibre-cement boards with H-type steel cover strips over joints:				
3	Ceilings including 38 x 38mm sawn softwood brandering at 400mm centres.	m²	98		
4	Extra over ceiling for hinged trap door size 610 x 610mm	No	98		
	Carried To Section Summary			**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 5				
	1 x Multipurpose Classroom				
	BILL NO. 9				
	IRONMONGERY				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	SUPPLEMENTARY PREAMBLES				
	Finishes to ironmongery:				
	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.				
	CATCHES, CABIN HOOKS, ETC				
	Solid or equal approved:				
1	100mm cabin hook and eye including 70 x 70 x 20mm chamfered hardwood block twice oiled and plugged.	No	2		
	LOCKS				
	Solid or equal approved:				
2	"Code 630" or equal approved padlock.	No	1		
	'Solid" or equal approved				
3	CZ6822461 "Gower" Four lever lockset.	No	1		
	SUNDRIES				
	Solid or equal approved:				
4	38mm Diameter rubber door stop plugged.	No	1		
	PINNING BOARDS, WRITING BOARDS, PROJECTION SCREENS, ETC				
	Vitrex or equal approved:				
5	Pinning board 2400 x 1200mm high plugged.	No	2		
6	White Magnetic Writing Board 4000 x 1200mm	No	1		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	SHELVES ETC				
	Proprietary type steel shelving with standard powder coated finish				
7	Heavy duty double slot wall band 1800mm long, plugged	No	15		
8	Heavy duty shelf bracket for 300mm shelf plugged	No	45		
	Carried to Collection			**R**	

BILL NO. 9

IRONMONGERY

COLLECTION

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		Unit	Quantity	Rate	Amount
	SECTION NO. 5				
	1 x Multipurpose Classroom				
	BILL NO. 10				
	METALWORK				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	SUPPLEMENTARY PREAMBLES				
	Descriptions:				
	Descriptions of bolts shall be deemed to include nuts and washers.				
	Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.				
	Metalwork described as holed for bolt(s) shall be deemed to exclude the bolts unless otherwise described.				
	STEEL BALUSTRADES AND HANDRAILS				
	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 openning 3No. In each upright, top rail to be 30mm thick x 100mm wide steel				
1	Steel handrails and balustrades 1000mm high	m	10		
	Mild Steel Poles				
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	8		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	COMBINATION DOOR FRAME WITH SECURITY GATE				
	Classroom combination door frame with security gate				
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	1		
	PRESSED STEEL DOOR FRAMES				
	1,2mm Rebated frames suitable for one brick walls:				
4	Frame for door 813 x 2032mm high.	No	1		
	STEEL WINDOWS, DOORS, ETC.				
	Standard residential windows with 12 x 12(B33) solid burglar bars to all sashes:				
5	Window Code 5 (NTY or equal approved), 1143 x 846mm high.	No	9		
	STEEL LOUVRES,ETC				
	Purpose made louvres:				
6	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**	

BILL NO. 10

METALWORK

COLLECTION

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		Unit	Quantity	Rate	Amount
	SECTION NO. 5				
	1 x Multipurpose Classroom				
	BILL NO. 11				
	PLASTERING				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	SCREEDS				
	Screeds on concrete:				
	Screeds of wood floated on concrete to receive ceramic tiles:				
1	30mm Thick on floors to receive ceramic tiling.	m²	98		
	GRANOLITHIC				
	Untinted wood floated granolithic on concrete				
2	30mm Thick on floors and landings.	m²	98		
	INTERNAL PLASTER				
	Cement plaster steel trowelled, on brickwork				
3	On walls	m²	309		
4	On narrow widths not exceeding 300mm wide	m²	2		
	CORNER PROTECTORS, DIVIDING STRIPS, ETC (CPAP Work Group No 136)				
5	30 x 3mm Flat section brass dividing strips between different floor finishes.	m	1		
	Carried To Section Summary			**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 5				
	1 x Multipurpose Classroom				
	BILL NO. 12				
	TILING				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	FLOOR TILING				
	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				
1	On floors and landings.	m²	87		
2	Skirting formed of ceramic tile cut to 300 x 75mm high	m	36		
	Carried To Section Summary			**R**	

	Unit	Quantity	Rate	Amount

SECTION NO. 5

1 x Multipurpose Classroom

BILL NO. 13

PLUMBING AND DRAINAGE

PREAMBLES

For preambles see "Specification of materials and methods to be used - PW371

SUPPLEMENTARY PREAMBLES

Concrete pipes:

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

uPVC pressure pipes and fittings:

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.

Copper pipes:

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.

Fixing of pipes

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**	

	Unit	Quantity	Rate	Amount

Reducing fittings:

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

Wire gratings:

Descriptions of gutter outlets etc shall be deemed to include wire balloon gratings.

Septic tanks:

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.

Exposed concrete surfaces:

Exposed surfaces of concrete stormwater channels, cover slabs, inspection eye marker slabs, gulley tops, cleaning eye tops, catchpits, inspection chambers, etc shall be finished smooth with plaster.

Excavations:

No claim for rock excavation will be entertained unless the Contractor has timeously notified the quantity surveyor thereof prior to backfilling.

'Soft rock' and 'hard rock' shall be as defined in 'Earthworks'.

Laying, backfilling, bedding, etc of pipes:

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

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

Flush pans:

Flush pans shall have straight or side outlets and 'P' or 'S' traps as necessary.

Carried to Collection **R**

Section No. 5

Bill No. 13

Plumbing And Drainage

		Unit	Quantity	Rate	Amount
	Stainless steel basins, sinks, wash troughs, urinals, etc:				
	Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable.				
	Waste unions:				
	Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings.				
	RAINWATER DISPOSAL				
	Approved .6mm galvanised sheet iron with "chromadek" finish ,in:				
1	100 x 100mm Eaves gutters	m	44		
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	12		
5	Extra over rainwater pipe for bend.	No	8		
6	Extra over rainwater pipe for shoe.	No	4		
	FIRE APPLIANCES ETC.				
	'Chubb' or equal approved:				
7	9kg Dry chemical fire extinguisher.	No	1		
	RAINWATER HARVESTING				
	Rainwater Harvesting				
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	1		
	Carried to Collection			**R**	

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PLUMBING AND DRAINAGE		
COLLECTION		
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		Unit	Quantity	Rate	Amount
	SECTION NO. 5				
	1 x Multipurpose Classroom				
	BILL NO. 14				
	GLAZING				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	GLAZING TO STEEL WITH PUTTY				
	5mm Clear float glass:				
1	Panes not exceeding 0,1m2.	m²	9		
	Carried To Section Summary			**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 5				
	1 x Multipurpose Classroom				
	BILL NO. 15				
	PAINTWORK				
	PREAMBLES				
	Description				
	PREAMBLES				
	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				
	ON NEW INTERNAL FLOATED PLASTER SURFACES				
	One coat alkali resistant primer and two coats PVA emulsion paint for interior use				
1	Walls	m²	152		
	ON FIBRE-CEMENT, ETC.				
	Prepare , etc as specified and apply two coats of super acrylic Pva paint:				
2	On ceilings and cornices.	m²	98		
3	On fascias and barge boards.	m	44		
	ON METAL				
	Prepare, etc as specified and apply two coats of gloss enamel paint on :				
4	Door frames	m²	1		
5	On windows with burglar bars (both sides measured).	m²	9		
6	On gates, grilles, burglar screens, balustrades, etc (both sides measured over the full flat area).	m²	4		
7	Steel poles	m	13		
	Eaves Gutter				
8	Inside eaves gutter with waterproofing based paint	m²	8		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	Prepare,etc as specified and apply two coats of super acrylic Pva paint on:				
9	General surfaces of doors (interior).	m²	5		
	ON WOOD, WOOD BOARD				
	Prepare, etc as specified and apply two coats of polyurethane suede varnish:				
10	On general surfaces of doors.	m²	6		
11	On laminated beam.	m²	3		
12	On shelves.	m²	12		
	Carried to Collection			**R**	

BILL NO. 15

PAINTWORK

COLLECTION

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SECTION NO. 5

1 x Multipurpose Classroom

SECTION SUMMARY

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15	PAINTWORK	175	

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Section No. 5
SECTION SUMMARY

SECTION NO. 6

Nutritional Centre

		Unit	Quantity	Rate	Amount
	SECTION NO. 6				
	Nutritional Centre				
	BILL NO. 1				
	FOUNDATIONS				
	PREAMBLES				
	For preambles see " Specification of materials and methods to be used - PW371"				
	SITE CLEARANCE ETC				
	Site clearance:				
1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc.	m²	221		
	REMOVAL OF TREES, ETC.				
	Taking out and removing, grubbing up roots and filling in holes:				
2	Tree stump exceeding 200mm and not exceeding 500mm girth.	No	1		
	EXCAVATION, FILLING, ETC OTHER THAN BULK				
	Excavation in earth not exceeding 2m deep:				
3	Trenches.	m³	152		
	Extra over trench and hole excavations in earth for excavation:				
4	Soft rock.	m³	8		
5	Hard rock.	m³	4		
	Risk of collapse of excavations:				
6	Sides of trench and hole excavations not exceeding 1,5m deep.	m²	230		
	Keeping excavations free of water:				
7	Keeping excavations free of all water other than subterranean water.	Item			
	Earth filling obtained from excavations and/or prescribed stock piles on site compacted to 93% Mod AASHTO:				
8	Backfilling to trenches, holes, etc.	m³	40		
9	Under floors, steps, pavings, etc.	m³	26		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	Earth filling supplied by the Contractor and compacted to 95% Mod AASHTO density):				
10	Under floors, steps, pavings, etc.	m³	72		
	Cart Away				
	Extra over excavation for cart away:				
11	Surplus material from excavations on site to a dumping site be located by the contractor	m³	14		
	Coarse river sand filling supplied by the Contractor:				
12	Under floors etc.	m³	9		
	COMPACTION				
	Compaction of surfaces:				
13	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90%.Mod AASHTO density.	m²	184		
	Prescribed density tests on filling:				
14	Modified AASHTO Density test.	No	16		
	SOIL POISONING				
	Soil insecticide:				
15	Under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming.	m²	184		
16	To bottoms and sides of trenches etc.	m²	347		
	Carried to Collection			**R**	

BILL NO. 1

FOUNDATIONS

COLLECTION

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		Unit	Quantity	Rate	Amount
	SECTION NO. 6				
	Nutritional Centre				
	BILL NO. 2				
	CONCRETE, FORMWORK AND REINFORCEMENT				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371"				
	UNREINFORCED CONCRETE				
	15Mpa/19mm Concrete				
1	Aprons cast in panels.	m³	8		
2	Ramps.	m³	5		
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		
	REINFORCED CONCRETE				
	25MPa/19mm Concrete:				
4	Footings.	m³	20		
5	Surface beds cast in panels on waterproofing.	m³	18		
6	Slabs.	m³	1		
	TEST BLOCKS				
	Test blocks:				
7	Making and testing set of three 150 x 150 x 150mm concrete strength test cubes (Provisional).	Sets	10		
	FINISHING TOP SURFACE OF CONCRETE				
8	Paving to falls.	m²	99		
	ROUGH FORMWORK (DEGREE OF ACCURACY III)				
	Rough Formwork to Sides:				
9	Edges and reveals not exceeding 300mm high or wide.	m	99		
10	Soffits	m²	4		
	MOVEMENT JOINTS ETC				
	Two layers of .5mm galvanised mild steel slip joints between horizontal concrete and brick surfaces including cement mortar bed:				
11	Not exceeding 300mm wide.	m	70		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	Expansion joints with bitumen impregnated softboard between vertical concrete and brick surfaces:				
12	12mm Joints not exceeding 300mm high.	m	75		
	Dividing Strips ,etc				
13	6 x 38mm Angle iron step guard cast into concrete with 3x 6mm anchors	m	35		
	REINFORCEMENT(PROVISIONAL)				
	Fabric reinforcement:				
14	Type 395 fabric reinforcement in concrete surface beds, slabs, etc.	m²	184		
	Mild steel reinforcement to structural concrete work:				
15	10mm Diameter bars.	Tonnes	1.00		
	High tensile steel reinforcement to structural concrete work:				
16	20mm Diameter bars.	Tonnes	1.00		
17	16mm Diameter bars.	Tonnes	3.00		
18	12mm Diameter bars.	Tonnes	1.00		
	Carried to Collection			**R**	

BILL NO. 2

CONCRETE, FORMWORK AND REINFORCEMENT

COLLECTION

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		Unit	Quantity	Rate		Amount
	SECTION NO. 6					
	Nutritional Centre					
	BILL NO. 3					
	MASONRY					
	PREAMBLES					
	For preambles see "Specification of materials and methods to be used - PW371"					
	BRICKWORK					
	Sizes in descriptions:					
	Where sizes in descriptions are given in brick units, 'one brick' shall represent the length and 'half brick' the width of a brick.					
	Face bricks:					
	Bricks shall be ordered timeously to obtain uniformity in size and colour.					
	Pointing:					
	Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc.					
	SAMPLES					
	Samples of all masonry building units, except those for walls described as 'load bearing', shall consist of a minimum of 6 units. Samples of building units to be used in walls described as 'load bearing' shall consist of 30 units from every 30 000 units delivered to site.					
	BRICKWORK IN FOUNDATIONS (PROVISIONAL)					
	Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar:					
1	Half brick walls.	m²	28			
2	One brick walls	m²	118			
	BRICKWORK IN SUPERSTRUCTURE					
	Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar:					
3	Half brick walls	m²	86			
4	One brick walls	m²	269			
	BRICKWORK SUNDRIES					
	Brickwork reinforcement:					
5	75mm Wide reinforcement built in horizontally.	m	376			
	Carried to Collection				**R**	

		Unit	Quantity	Rate	Amount
6	150mm Wide reinforcement built in horizontally.	m	1 179		
	Prestressed fabricated lintels:				
7	110 x 75mm Lintels in lengths not exceeding 3m.	m	5		
	Turning pieces:				
8	220mm Wide turning piece to lintels etc.	m	72		
	Galvanised wire ties etc:				
9	4mm Diameter roof tie 2m girth bent double with one end fixed to timber and other end built into brickwork.(Provisional)	No	79		
	Galvanised hoop iron cramps, ties, etc:				
10	30 x 1,6mm Cramp 500mm long with one end fixed to wood and other end built into brickwork.(Provisional)	No	79		
	FACE BRICKWORK				
	Face bricks (Prime cost R5 500/1000 delivered to site excluding VAT) pointed with flush horizontal and vertical joints:				
11	Extra over brickwork for face brickwork.	m²	242		
12	Extra over brickwork for face brickwork in foundations (Provisional).	m²	56		
13	Half brick in facings in beamfilling	m²	24		
	FACE BRICKWORK COPINGS, SILLS, ETC.				
	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:				
14	Extra over brickwork for brick-on-edge header course lintel pointed on face and 110mm soffit.	m	72		
15	230mm Wide sill set sloping and slightly projecting.	m	30		
16	Coping on top of one brick wall pointed on exposed faces	m	18		
	NUTEC-CEMENT/FIBRE-CEMENT WINDOW SILLS				
	Natural grey sills in single lengths bedded in class I mortar including metal fixing lugs etc:				
17	12 x 152mm Wide sills set flat and slightly projecting.	m	30		
	Carried to Collection			**R**	

		Amount
BILL NO. 3		
MASONRY		
COLLECTION		
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		Unit	Quantity	Rate	Amount
	SECTION NO. 6				
	Nutritional Centre				
	BILL NO. 4				
	WATERPROOFING				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	DAMPPROOFING OF WALLS AND FLOORS				
	One layer of 375 micron Consol Plastics Brikgrip DPC embossed damp proof course:				
1	In walls.	m²	27		
	One layer of 250 micron Consol Plastics Gunplas USB Green waterproof sheeting sealed at laps with Gunplas Pressure Sensitive Tape:				
2	Under surface beds.	m²	184		
	JOINT SEALANTS ETC				
	Silicone sealing compound including backing cord, bond breaker,primer,etc				
3	12 x 20mm in expansion joints in floors including raking out expansion joint filler as necessary (Provisional)	m	44		
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**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 6				
	Nutritional Centre				
	BILL NO. 5				
	ROOF COVERINGS				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW 371				
	PROFILED METAL SHEETING AND ACCESSORIES				
	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				
1	Roof covering with pitch not exceeding 25 degrees.	m²	212		
	0.58mm galvanised sheet iron, with "chromadek" one side in:				
2	Standard type FK3 ridge or hip flashing	m	28		
	Carried To Section Summary			**R**	

	Unit	Quantity	Rate	Amount

SECTION NO. 6

Nutritional Centre

BILL NO. 6

CARPENTRY AND JOINERY

PREAMBLES

For preambles see "Specification of materials and methods to be used - PW371

SUPPLEMENTARY PREAMBLES

Particle board:

Particle board shall comply with the following specifications: a) SABS 1300 Particle board: exterior and flooring type b) SABS 1301 Particle board: interior type.

Joinery:

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.

Fixing:

Items described as nailed shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete.

Decorative laminate finish:

Laminate finish shall be glued under pressure. Edge strips shall be butt jointed at junctions with adjacent similar finish.

PREFABRICATED ROOF TRUSSES, ETC.

Plate nailed timber roof truss construction:

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 quarantee that the trusses are designed, manufactured,and erected, to support the roof coverings specified. The quarntee shall be valid for 10(ten) years .

		Unit	Quantity	Rate	Amount
	Sawn softwood:				
1	Roof construction to double pitched roof with two hipped ends approximately 184m2 (Nutritional centre) on plan including trusses, hipped ends, jack rafters, purlins, permanent bracing, etc (measured flat).	No	1		
	ROOF CONSTRUCTION				
	Sawn softwood :				
2	114 x 38mm Wall plates.	m	120		
3	50 x 228mm support beam	m	18		
	ROOF SUNDRIES				
	Sundries:				
4	Two coats creosote on sawn timbers.	m²	42		
	EAVES, VERGES, ETC				
	Everite FC77 pressed fibre-cement:				
5	10 x 250mm Fascias and barge boards including galvanised steel H-profile jointing strips.	m	79		
	DOORS ETC				
	Wrought meranti doors hung to steel frames:				
6	44mm Framed batten door 914 x 2032mm high of 44 x 150m 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	3		
7	44mm Framed batten double door size 3 380 x 4 128mm high of 44 x 150m 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	1		
	SEMI SOLID CORE FLUSH DOORS				
	44 semi-solid flush doors with 3,2mm standard hardboard covering on both sides hung to steel frames:				
8	40mm Door 813 x 2032mm high.	No	3		
	Carried to Collection			**R**	

BILL NO. 6

CARPENTRY AND JOINERY

COLLECTION

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		Unit	Quantity	Rate	Amount
	SECTION NO. 6				
	Nutritional Centre				
	BILL NO. 7				
	CEILINGS PARTITIONS AND ACCESS FLOORING				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	SUPPLEMENTARY PREAMBLES				
	Descriptions:				
	Items described as nailed shall be deemed to be fixed with hardened steel nails or pins or shot pinned to brickwork or concrete.				
	Items described as plugged shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres, and where described as bolted the bolts have been given.				
	INSULATION				
	Aerolite insulation:				
1	100mm Insulation closely fitted and laid on top of brandering between roof timbers etc.	m²	184		
	Wrought softwood				
2	19 x 76mm cornices nailed	m	153		
	NAILED UP AND SCREW UP CEILINGS				
	6mm Everite Nutec fibre-cement boards with H-type steel cover strips over joints:				
3	Ceilings including 38 x 38mm sawn softwood brandering at 400mm centres.	m²	184		
4	Extra over ceiling for hinged trap door size 610 x 610mm	No	2		
	Carried To Section Summary			**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 6				
	Nutritional Centre				
	BILL NO. 8				
	IRONMONGERY				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	SUPPLEMENTARY PREAMBLES				
	Finishes to ironmongery:				
	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.				
	HINGES, FLOOR SPRING HINGES, BOLTS, PANIC BOLTS, ETC				
	"Solid":				
1	150mm 8052-150 Brass flush bolt with keep fixed to metal.	No	3		
2	150mm 8052-150 Brass flush bolt with keep let into concretet.	No	3		
3	CZ 80941WC indicator bolt with keep fixed to metal.	No	2		
	CATCHES, CABIN HOOKS, ETC				
	Solid:				
4	100mm cabin hook and eye including 70 x 70 x 20mm chamfered hardwood block twice oiled and plugged.	No	6		
	LOCKS				
	Solid:				
5	"Code 630" padlock.	No	3		
	'Solid"				
6	CZ6822461 "Gower" Four lever lockset.	No	9		
	DOOR CLOSERS				
	"Yale"				
7	Y202RC Door closer with cover fixed to metal	No	3		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	BATHROOM FITTINGS				
	Kimberley-Clark:				
8	19mm Diameter chromium plated towel rail 900mm long including flanged end brackets.	No	2		
9	Lockable toilet roll holder plugged.	No	2		
	SUNDRIES				
	Solid:				
10	38mm Diameter rubber door stop plugged.	No	9		
	PINNING BOARDS, WRITING BOARDS, PROJECTION SCREENS, ETC				
	Vitrex:				
11	Pinning board 2400 x 1200mm high plugged.	No	1		
	Carried to Collection			**R**	

BILL NO. 8

IRONMONGERY

COLLECTION

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		Unit	Quantity	Rate	Amount
	SECTION NO. 6				
	Nutritional Centre				
	BILL NO. 9				
	METALWORK				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	SUPPLEMENTARY PREAMBLES				
	Descriptions:				
	Descriptions of bolts shall be deemed to include nuts and washers.				
	Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.				
	Metalwork described as holed for bolt(s) shall be deemed to exclude the bolts unless otherwise described.				
	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 openning 3no in each upright, top rail to be 30mm thick x 100mm wide steel				
1	Balustrades including steel handrails approximately 1000mm high fixed to concrete.	m	4		
	Mild steel poles				
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	4		
	PRESSED STEEL DOOR FRAMES				
	1,2mm Rebated frames suitable for half brick walls:				
3	Frame for door 813 x 2032mm high.	No	5		
	1,2mm Rebated frames suitable for one brick walls:				
4	Frame for door 813 x 2032mm high.	No	1		
5	Frame for door 3 380 x 4 128mm high.	No	1		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	STEEL WINDOWS, DOORS, ETC.				
	Standard residential windows with 12 x 12(B33) solid burglar bars to all sashes:				
6	Window type NE1, size 1 066 x 1 302mm high.	No	4		
7	Window type W1, SS41/SS41, size 2 604 x 1 956mm high.	No	6		
8	Window type W2, SS42, size 2 604 x 1 956mm high.	No	4		
	WELDED SCREENS, GATES, ETC.				
	Mild steel frame out of 50 x 25 x 1.6mm rectangular tubing mitre 45 degrees at corner before welded and secured in opening with brackets welded to gate and bolted to wall.				
9	Frame including double steel gate size 1 710 x 4 370mm high (D6).	No	1		
10	Frame size 4 000 x 4 370mm high with and including double steel gates 2No. x 2 000 x 4 320mm high (D7)	No	1		
	STEEL ROLLER SHUTTERS ETC				
	Galvanised steel roller shutters with 76mm slats, fixed to brickwork or concrete				
11	Manual push-up slatted roller shutter for 2 185 x 2 400mm high opening	No	1		
12	Manual push-up slatted roller shutter for 4 800 x 4 370mm high opening	No	6		
	STEEL LOUVRES,ETC				
	Purpose made louvres:				
13	Ditto but approximately 3700 x 1000mm high overall	No	2		
	Carried to Collection			**R**	

BILL NO. 9

METALWORK

COLLECTION

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		Unit	Quantity	Rate	Amount
	SECTION NO. 6				
	Nutritional Centre				
	BILL NO. 10				
	PLASTERING				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	SCREEDS				
	Screeds on concrete:				
	Screeds of wood floated on concrete to receive ceramic tiles:				
1	30mm Thick on floors and landings.	m²	152		
	GRANOLITHIC				
	Untinted wood floated granolithic on concrete				
2	30mm Thick on floors and landings.	m²	32		
	INTERNAL PLASTER				
	Cement plaster on brickwork:				
3	On walls.	m²	468		
4	On narrow widths.	m²	6		
	CORNER PROTECTORS, DIVIDING STRIPS, ETC				
5	30 x 3mm Flat section brass dividing strips between different floor finishes.	m	34		
	Carried To Section Summary			**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 6				
	Nutritional Centre				
	BILL NO. 11				
	TILING				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	WALL TILING				
	200 x 200 x 5mm White glazed ceramic tiles fixed with adhesive to plaster (plaster elsewhere):				
1	On walls in isolated panels, splashbacks, etc.	m²	40		
2	On narrow widths.	m²	1		
	FLOOR TILING				
	300 x 300 x 11.5mm glazed 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				
3	On floors and landings.	m²	152		
4	Skirting formed of ceramic tile cut to 300 x 75mm high	m	153		
	Carried To Section Summary			**R**	

	Unit	Quantity	Rate	Amount

SECTION NO. 6

Nutritional Centre

BILL NO. 12

PLUMBING AND DRAINAGE

PREAMBLES

For preambles see "Specification of materials and methods to be used - PW371

SUPPLEMENTARY PREAMBLES

Concrete pipes:

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

uPVC pressure pipes and fittings:

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.

Copper pipes:

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.

Fixing of pipes

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**

	Unit	Quantity	Rate	Amount

Reducing fittings:

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

Wire gratings:

Descriptions of gutter outlets etc shall be deemed to include wire balloon gratings.

Septic tanks:

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.

Exposed concrete surfaces:

Exposed surfaces of concrete stormwater channels, cover slabs, inspection eye marker slabs, gulley tops, cleaning eye tops, catchpits, inspection chambers, etc shall be finished smooth with plaster.

Excavations:

No claim for rock excavation will be entertained unless the Contractor has timeously notified the quantity surveyor thereof prior to backfilling.

'Soft rock' and 'hard rock' shall be as defined in 'Earthworks'.

Laying, backfilling, bedding, etc of pipes:

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

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

Flush pans:

Flush pans shall have straight or side outlets and 'P' or 'S' traps as necessary.

Carried to Collection **R**

		Unit	Quantity	Rate	Amount
	Stainless steel basins, sinks, wash troughs, urinals, etc:				
	Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable.				
	Waste unions:				
	Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings.				
	RAINWATER DISPOSAL				
	Approved .6mm galvanised sheet iron with "chromadek" finish ,in:				
1	100 x 100mm Eaves gutters	m	79		
2	Extra over eaves gutter for angle/corner.	No	6		
3	Extra over eaves gutter for stopped end	No	6		
4	Extra over eaves gutter for outlet for 75mm pipe.	No	6		
5	75mm Diameter rainwater pipes.	m	24		
6	Extra over rainwater pipe for bend.	No	6		
7	Extra over rainwater pipe for shoe.	No	6		
	SANITARY FITTINGS				
	'Citimetal' stainless steel:				
8	Series single end bowl overlay sink, size 1200 x 535mm fitted to top of cabinet.	No	1		
	"Vaal"				
9	510 x 405mm "Hibiscus" (code 7050) white vitreous china rounded lavatory basin with two tapholes supported on and including two bolts(code 84467Z0)	No	3		
10	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	2		
	Precast concrete				
11	Double precast concrete wash trough size 1000 x 600 x 320mm, (bowl size 430 x 320 x 320mm deep) complete with pair of PCC stand size 508mm high x 390mm wide including fittings fixed to walls.	No	1		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	WASTE UNIONS ETC				
	'Cobra Watertech"				
12	38mm "Cobra 316" unslotted waste and plug with chain	No	1		
	TRAPS ETC				
	"Marley'				
13	40mm Flexi butyl rubber trap with reseal "P" trap	No	1		
	"Cobra Watertech"				
14	"Cobra Ref. 365/40" CP Bottle trap.	No	2		
	TAPS, VALVES, ETC				
	'Cobra Watertech':				
15	"Cobra Rf. 107EC-15" Bib tap	No	5		
16	15mm Gate valves	No	6		
17	"Cobra Ref. 232/350' Angle regulating valve	No	2		
18	"Cobra Ref. 166/041 wall type "Star" sink mixer with overarm swivel outlet	No	1		
	SANITARY PLUMBING				
	uPVC pipes:				
19	50mm Pipes	m	60		
20	110m Pipes.	m	55		
21	50mm Pipes laid in and including trenches not exceeding 1m deep.	m	25		
22	110mm Pipes laid in and including trenches not exceeding 1m deep under surface beds.	m	25		
	Extra over uPVC pipes for fittings:				
23	50mm Bend.	No	10		
24	100mm Bend.	No	8		
25	110mm Junction.	No	6		
26	50mm Junction.	No	12		
27	110mm Reducing junction.	No	6		
28	110mm Double junction.	No	5		
29	110mm Pan connector	No	2		
30	110mm "G1 Two-way " vent valve	No	2		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	Sundries:				
31	Testing waste pipe system.	Item			
	WATER SUPPLIES				
	Class 9 uPVC pressure pipes:				
32	63mm Pipes laid in and including trenches not exceeding 1000mmm deep	m	60		
	Extra over uPVC pressure pipes for solvent welded pressure fittings:				
33	63mm Elbow	No	6		
34	63mm Tee	No	4		
35	63mm Reducer.	No	4		
	Class o copper pipes:				
36	15mm Pipes	m	30		
37	22mm Pipes.	m	40		
	Extra over class o copper pipes for capillary fittings:				
38	15mm Fittings.	No	20		
39	22mm Fittings.	No	15		
	Copper overflow and service pipes:				
40	15mm Service pipe 300mm girth.	No	1		
	Sundries:				
41	450 x 450m cast iron stopcock box including brick chamber below not exceeding 750mm deep internally.	No	1		
42	'ZIP Hydroboil code 3800' 25 litre white powder coated water boiler as manufactured by Franke Kitchen Systems, plugged and screwed to wall.	No	1		
	ELECTRICAL WATER HEATERS				
	"Kwikot"				
43	150 litre Horizontally floor mounted electric water heater	No	1		
	Testing:				
44	Testing water pipe system.	Item			
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	FIRE APPLIANCES ETC.				
	'Chubb':				
45	'Everyway' hose reel complete with 30m plastic hose, chromium plated stopcock, shut-off nozzle and wall bracket.	No	1		
46	9kg Dry chemical fire extinguisher.	No	2		
	Rainwater Harvesting				
47	5000 litre 'JOJO' tank complete with lid and including, fittings, tap, concrete plinth as per Architect details.	No	2		
	Carried to Collection			**R**	

BILL NO. 12

PLUMBING AND DRAINAGE

COLLECTION

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		Unit	Quantity	Rate	Amount
	SECTION NO. 6				
	Nutritional Centre				
	BILL NO. 13				
	GLAZING				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	GLAZING TO STEEL WITH PUTTY				
	5 mm Clear float glass:				
1	Panes exceeding 0,1m2 and not exceeding 0,5m2.	m²	51		
	5 mm Rough cast glass:				
2	Panes exceeding 0,1m2 and not exceeding 0,5m2.	m²	6		
	TOPS, SHELVES, DOORS, MIRRORS, ETC.				
	6 mm Silvered float glass copper backed mirrors with polished edges fixed with double sided adhesive tape:				
3	Mirror 450 x 600 mm high.	No	2		
	Carried To Section Summary			**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 6				
	Nutritional Centre				
	BILL NO. 14				
	PAINTWORK				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	SUPPLEMENTARY PREAMBLES				
	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'.				
	ON FLOATED PLASTER				
	Prepare , etc as specified and apply two coats of super acrylic paint:				
1	On interior walls.	m²	468		
	ON FIBRE-CEMENT, ETC.				
	Prepare , etc as specified and apply two coats of super acrylic Pva paint:				
2	On ceilings and cornices.	m²	173		
3	On fascias and barge boards.	m	79		
	ON METAL				
	Prepare, etc as specified and apply two coats of gloss enamel paint on :				
4	Door frames	m²	11		
5	On windows with burglar bars (both sides measured).	m²	113		
6	On gates, grilles, burglar screens, balustrades, etc (both sides measured over the full flat area).	m²	52		
7	On steel poles	m	12		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	Inside eaves gutters				
8	Inside eaves gutters	m²	28		
	Prepare,etc as specified and apply two coats of super acrylic Pva paint on:				
9	General surfaces of doors (interior).	m²	17		
	ON WOOD, WOOD BOARD				
	Prepare, etc as specified and apply two coats of polyurethane suede varnish:				
10	On open slatted seating.	m²	9		
11	On doors	m²	31		
12	On laminated beam.	m²	16		
	Carried to Collection			**R**	

BILL NO. 14

PAINTWORK

COLLECTION

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SECTION NO. 6

Nutritional Centre

SECTION SUMMARY

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Carried to Final Summary **R**

Section No. 6
SECTION SUMMARY

SECTION NO. 7

Guard House

		Unit	Quantity	Rate	Amount
	SECTION NO. 7				
	Guard House				
	BILL NO. 1				
	FOUNDATIONS				
	PREAMBLES				
	For preambles see " Specification of materials and methods to be used - PW371"				
	SITE CLEARANCE ETC				
	Site clearance:				
1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc.	m²	11		
	REMOVAL OF TREES, ETC.				
	Taking out and removing, grubbing up roots and filling in holes:				
2	Tree stump exceeding 200mm and not exceeding 500mm girth.	No	1		
	EXCAVATION, FILLING, ETC OTHER THAN BULK				
	Excavation in earth not exceeding 2m deep:				
3	Trenches.	m³	18		
	Extra over trench and hole excavations in earth for excavation:				
4	Soft rock.	m³	2		
5	Hard rock.	m³	1		
	Risk of collapse of excavations:				
6	Sides of trench and hole excavations not exceeding 1,5m deep.	m²	25		
	Keeping excavations free of water:				
7	Keeping excavations free of all water other than subterranean water.	Item			
	Earth filling obtained from excavations and/or prescribed stock piles on site compacted to 93% Mod AASHTO:				
8	Backfilling to trenches, holes, etc.	m³	9		
9	Under floors, steps, pavings, etc.	m³	3		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	Earth filling supplied by the Contractor and compacted to 95% Mod AASHTO density):				
10	Under floors, steps, pavings, etc.	m³	3		
	Cart Away				
	Extra over excavation for cart away:				
11	Surplus material from excavations on site to a dumping site be located by the contractor	m³	4		
	Coarse river sand filling supplied by the Contractor:				
12	Under floors etc.	m³	1		
	COMPACTION				
	Compaction of surfaces:				
13	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90%.Mod AASHTO density.	m²	9		
	Prescribed density tests on filling:				
14	Modified AASHTO Density test.	No	2		
	SOIL POISONING				
	Soil insecticide:				
15	Under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming.	m²	9		
16	To bottoms and sides of trenches etc.	m²	70		
	Carried to Collection			**R**	

		Amount
BILL NO. 1		
FOUNDATIONS		
COLLECTION		
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		Unit	Quantity	Rate	Amount
	SECTION NO. 7				
	Guard House				
	BILL NO. 2				
	CONCRETE, FORMWORK AND REINFORCEMENT				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371"				
	UNREINFORCED CONCRETE				
	15Mpa/19mm Concrete				
1	Aprons cast in panels.	m³	1		
2	Ramps.	m³	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.	m³	4		
	REINFORCED CONCRETE				
	25MPa/19mm Concrete:				
5	Surface beds cast in panels on waterproofing.	m³	1		
	TEST BLOCKS				
	Test blocks:				
6	Making and testing set of three 150 x 150 x 150mm concrete strength test cubes (Provisional).	Sets	2		
7	Paving to falls.	m²	11		
	FINISHING TOP SURFACE OF CONCRETE				
	ROUGH FORMWORK (DEGREE OF ACCURACY III)				
	Rough Formwork to Sides:				
8	Edges and reveals not exceeding 300mm high or wide.	m	11		
	MOVEMENT JOINTS ETC				
	Two layers of .5mm galvanised mild steel slip joints between horizontal concrete and brick surfaces including cement mortar bed:				
9	Not exceeding 300mm wide.	m	5		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	Expansion joints with bitumen impregnated softboard between vertical concrete and brick surfaces:				
10	12mm Joints not exceeding 300mm high.	m	4		
	Dividing Strips ,etc				
11	6 x 38mm Angle iron step guard cast into concrete with 3x 6mm anchors	m	1		
	REINFORCEMENT(PROVISIONAL)				
	Fabric reinforcement:				
12	Type 193 fabric reinforcement in concrete surface beds, slabs, etc.	m²	9		
	Carried to Collection			**R**	

BILL NO. 2

CONCRETE, FORMWORK AND REINFORCEMENT

COLLECTION

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		Unit	Quantity	Rate	Amount
	SECTION NO. 7				
	Guard House				
	BILL NO. 3				
	MASONRY				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371"				
	BRICKWORK				
	Sizes in descriptions:				
	Where sizes in descriptions are given in brick units, 'one brick' shall represent the length and 'half brick' the width of a brick.				
	Face bricks:				
	Bricks shall be ordered timeously to obtain uniformity in size and colour.				
	Pointing:				
	Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc.				
	SAMPLES				
	Samples of all masonry building units, except those for walls described as 'load bearing', shall consist of a minimum of 6 units. Samples of building units to be used in walls described as 'load bearing' shall consist of 30 units from every 30 000 units delivered to site.				
	BRICKWORK IN FOUNDATIONS (PROVISIONAL)				
	Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar:				
1	Half brick walls.	m²	3		
2	One brick walls	m²	11		
	BRICKWORK IN SUPERSTRUCTURE				
	Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar:				
3	Piers	m³	1		
4	Half brick walls	m²	9		
5	One brick walls	m²	34		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	BRICKWORK SUNDRIES				
	Brickwork reinforcement:				
6	75mm Wide reinforcement built in horizontally.	m	36		
7	150mm Wide reinforcement built in horizontally.	m	149		
	Prestressed fabricated lintels:				
8	110 x 75mm Lintels in lengths not exceeding 3m.	m	1		
	Turning pieces:				
9	220mm Wide turning piece to lintels etc.	m	6		
	Galvanised wire ties etc:				
10	4mm Diameter roof tie 2m girth bent double with one end fixed to timber and other end built into brickwork.(Provisional)	No	11		
	Galvanised hoop iron cramps, ties, etc:				
11	30 x 1,6mm Cramp 500mm long with one end fixed to wood and other end built into brickwork.(Provisional)	No	11		
	FACE BRICKWORK				
	Face bricks (Prime cost R5 500/1000 delivered to site excluding VAT) pointed with flush horizontal and vertical joints:				
12	Extra over brickwork for face brickwork.	m²	34		
13	Extra over brickwork for face brickwork in foundations (Provisional).	m²	5		
14	Extra over brickwork for face brickwork to piers.	m²	12		
15	Half brick in facings in beamfilling	m²	5		
	FACE BRICKWORK COPINGS, SILLS, ETC.				
	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:				
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**	

		Unit	Quantity	Rate	Amount
	NUTEC-CEMENT/FIBRE-CEMENT WINDOW SILLS				
	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.	m	5		
	Carried to Collection			**R**	

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MASONRY			
COLLECTION			
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		Unit	Quantity	Rate	Amount
	SECTION NO. 7				
	Guard House				
	BILL NO. 4				
	WATERPROOFING				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	DAMPPROOFING OF WALLS AND FLOORS				
	One layer of 375 micron Consol Plastics Brikgrip DPC embossed damp proof course:				
1	In walls.	m²	6		
	One layer of 250 micron Consol Plastics Gunplas USB Green waterproof sheeting sealed at laps with Gunplas Pressure Sensitive Tape:				
2	Under surface beds.	m²	9		
	JOINT SEALANTS ETC				
	Silicone sealing compound including backing cord, bond breaker,primer,etc				
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**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 7				
	Guard House				
	BILL NO. 5				
	ROOF COVERINGS				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW 371				
	General				
	PROFILED METAL SHEETING AND ACCESSORIES				
	.5mm "Klip-lok light industrial" galvanised troughed sheet steel with "chromadek" finish one side,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				
1	Roof covering with pitch not exceeding 25 degrees.	m²	12		
	.8mm galvanised sheet iron, with "chromadek" one side in:				
2	Standard type FK3 ridge or hip flashing	m	10		
	Carried To Section Summary			**R**	

	Unit	Quantity	Rate	Amount

SECTION NO. 7

Guard House

BILL NO. 6

CARPENTRY AND JOINERY

PREAMBLES

For preambles see "Specification of materials and methods to be used - PW371

SUPPLEMENTARY PREAMBLES

Particle board:

Particle board shall comply with the following specifications: a) SABS 1300 Particle board: exterior and flooring type b) SABS 1301 Particle board: interior type.

Joinery:

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.

Fixing:

Items described as nailed shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete.

Decorative laminate finish:

Laminate finish shall be glued under pressure. Edge strips shall be butt jointed at junctions with adjacent similar finish.

PREFABRICATED ROOF TRUSSES, ETC.

Plate nailed timber roof truss construction:

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 quarantee that the trusses are designed, manufactured,and erected, to support the roof coverings specified. The quarntee shall be valid for 10(ten) years .

		Unit	Quantity	Rate	Amount
	Sawn softwood:				
1	Roof construction to double pitched roof with two hipped ends approximately 9m2 (Guard House) on plan including trusses, hipped ends, jack rafters, purlins, permanent bracing, etc (measured flat).	No	1		
	ROOF CONSTRUCTION				
	Sawn softwood :				
2	114 x 38mm Wall plates.	m	11		
	ROOF SUNDRIES				
	Sundries:				
3	Two coats creosote on sawn timbers.	m²	2		
	EAVES, VERGES, ETC				
	Everite FC77 pressed fibre-cement:				
4	10 x 250mm Fascias and barge boards including galvanised steel H-profile jointing strips.	m	16		
	JOINERY SUNDRIES				
	Wrought Meranti				
5	450mm wide slatted seats, etc of 76 x 38mm thick (50mm centres) screwed under and including steel 50 x 50 x 3mm L section steel holed to concrete fixed with bolts	m²	1		
	SEMI SOLID CORE FLUSH DOORS				
	44 semi-solid flush doors with 3,2mm standard hardboard covering on both sides hung to steel frames:				
6	40mm Door 813 x 2032mm high.	No	1		
	Carried to Collection			**R**	

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CARPENTRY AND JOINERY		
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		Unit	Quantity	Rate	Amount
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	Guard House				
	BILL NO. 7				
	CEILINGS PARTITIONS AND ACCESS FLOORING				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	SUPPLEMENTARY PREAMBLES				
	Descriptions:				
	Items described as nailed shall be deemed to be fixed with hardened steel nails or pins or shot pinned to brickwork or concrete.				
	Items described as plugged shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres, and where described as bolted the bolts have been given.				
	INSULATION				
	Aerolite insulation:				
1	100mm Insulation closely fitted and laid on top of brandering between roof timbers etc.	m²	9		
	Wrought softwood				
2	19 x 76mm cornices nailed	m	16		
	NAILED UP AND SCREW UP CEILINGS				
	6mm Everite Nutec fibre-cement boards with H-type steel cover strips over joints:				
3	Ceilings including 38 x 38mm sawn softwood brandering at 400mm centres.	m²	9		
4	Extra over ceiling for hinged trap door size 610 x 610mm	No	1		
	Carried To Section Summary			**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 7				
	Guard House				
	BILL NO. 8				
	IRONMONGERY				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	SUPPLEMENTARY PREAMBLES				
	Finishes to ironmongery:				
	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.				
	HINGES, FLOOR SPRING HINGES, BOLTS, PANIC BOLTS, ETC				
	"Solid":				
1	CZ 80941WC indicator bolt with keep fixed to metal.	No	1		
	LOCKS				
	'Solid"				
2	CZ6822461 "Gower" Four lever lockset.	No	2		
	DOOR CLOSERS				
	"Yale"				
3	Y202RC Door closer with cover fixed to metal	No	1		
	BATHROOM FITTINGS				
	Kimberley-Clark:				
4	19mm Diameter chromium plated towel rail 900mm long including flanged end brackets.	No	1		
5	Lockable toilet roll holder plugged.	No	1		
	SUNDRIES				
	Solid:				
6	38mm Diameter rubber door stop plugged.	No	2		
	Carried To Section Summary			**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 7				
	Guard House				
	BILL NO. 9				
	METALWORK				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	SUPPLEMENTARY PREAMBLES				
	Descriptions:				
	Descriptions of bolts shall be deemed to include nuts and washers.				
	Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.				
	Metalwork described as holed for bolt(s) shall be deemed to exclude the bolts unless otherwise described.				
	PRESSED STEEL DOOR FRAMES				
	1,2mm Rebated frames suitable for half brick walls:				
1	Frame for door 813 x 2032mm high.	No	1		
	1,2mm Rebated frames suitable for one brick walls:				
2	Frame for door 813 x 2032mm high.	No	1		
	STEEL WINDOWS, DOORS, ETC.				
	Standard residential windows with 12 x 12(B33) solid burglar bars to all sashes:				
3	Window type NCTX7S, size 1022 x 944mm high.	No	2		
4	Window type NCTX7S, size 1022 x 949mm high.	No	2		
5	Window type NCTX7S5, size 1511 x 949mm high.	No	1		
	STEEL LOUVRES,ETC				
	Purpose made louvres:				
6	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 Section Summary			**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 7				
	Guard House				
	BILL NO. 10				
	PLASTERING				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	GRANOLITHIC				
	Untinted wood floated granolithic on concrete				
1	30mm Thick on floors and landings.	m²	9		
2	75mm thick high grano skirting	m	14		
	INTERNAL PLASTER				
	Cement plaster on brickwork:				
3	On walls.	m²	43		
4	On narrow widths.	m²	2		
5	30 x 3mm Flat section brass dividing strips between different floor finishes.	m	1		
	CORNER PROTECTORS, DIVIDING STRIPS, ETC				
	Carried To Section Summary			**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 7				
	Guard House				
	BILL NO. 11				
	TILING				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	WALL TILING				
	200 x 200 x 5mm White glazed ceramic tiles fixed with adhesive to plaster (plaster elsewhere):				
1	On walls in isolated panels, splashbacks, etc.	m²	1		
	Carried To Section Summary			**R**	

	Unit	Quantity	Rate	Amount

SECTION NO. 7

Guard House

BILL NO. 12

PLUMBING AND DRAINAGE

PREAMBLES

For preambles see "Specification of materials and methods to be used - PW371

SUPPLEMENTARY PREAMBLES

Concrete pipes:

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

uPVC pressure pipes and fittings:

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.

Copper pipes:

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.

Fixing of pipes

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**	

	Unit	Quantity	Rate	Amount

Reducing fittings:

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

Wire gratings:

Descriptions of gutter outlets etc shall be deemed to include wire balloon gratings.

Septic tanks:

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.

Exposed concrete surfaces:

Exposed surfaces of concrete stormwater channels, cover slabs, inspection eye marker slabs, gulley tops, cleaning eye tops, catchpits, inspection chambers, etc shall be finished smooth with plaster.

Excavations:

No claim for rock excavation will be entertained unless the Contractor has timeously notified the quantity surveyor thereof prior to backfilling.

'Soft rock' and 'hard rock' shall be as defined in 'Earthworks'.

Laying, backfilling, bedding, etc of pipes:

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

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

Flush pans:

Flush pans shall have straight or side outlets and 'P' or 'S' traps as necessary.

Carried to Collection **R**

		Unit	Quantity	Rate	Amount
	Stainless steel basins, sinks, wash troughs, urinals, etc:				
	Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable.				
	Waste unions:				
	Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings.				
	RAINWATER DISPOSAL				
	Approved .6mm galvanised sheet iron with "chromadek" finish ,in:				
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		
	SANITARY FITTINGS				
	"Vaal"				
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		
	WASTE UNIONS ETC				
	'Cobra Watertech"				
9	38mm "Cobra 316" unslotted waste and plug with chain	No	1		
	TRAPS ETC				
	"Marley'				
10	40mm Flexi butyl rubber trap with reseal "P" trap	No	1		
	TAPS, VALVES, ETC				
	'Cobra Watertech':				
11	"Cobra Rf. 107EC-15" Bib tap	No	1		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
12	15mm Gate valves	No	2		
	SANITARY PLUMBING				
	uPVC pipes:				
13	50mm Pipes	m	10		
14	110m 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		
	Extra over uPVC pipes for fittings:				
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		
	Sundries:				
25	Testing waste pipe system.	Item			
	WATER SUPPLIES				
	Class 9 uPVC pressure pipes:				
26	63mm Pipes laid in and including trenches not exceeding 1000mmm deep	m	30		
	Extra over uPVC pressure pipes for solvent welded pressure fittings:				
27	63mm Elbow	No	2		
28	63mm Tee	No	2		
29	63mm Reducer.	No	1		
	Class o copper pipes:				
30	15mm Pipes	m	15		
31	22mm Pipes.	m	10		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	Extra over class o copper pipes for capillary fittings:				
32	15mm Fittings.	No	5		
33	22mm Fittings.	No	5		
	Copper overflow and service pipes:				
34	15mm Service pipe 300mm girth.	No	1		
	Sundries:				
35	450 x 450m cast iron stopcock box including brick chamber below not exceeding 750mm deep internally.	No	1		
	Testing:				
36	Testing water pipe system.	Item			
	FIRE APPLIANCES ETC.				
	'Chubb':				
37	9kg Dry chemical fire extinguisher.	No	1		
	Carried to Collection			**R**	

BILL NO. 12

PLUMBING AND DRAINAGE

COLLECTION

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		Unit	Quantity	Rate	Amount
	SECTION NO. 7				
	Guard House				
	BILL NO. 13				
	GLAZING				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	GLAZING TO STEEL WITH PUTTY				
	5 mm Clear float glass:				
1	Panes exceeding 0,1m2 and not exceeding 0,5m2.	m²	4		
	5 mm Rough cast glass:				
2	Panes exceeding 0,1m2 and not exceeding 0,5m2.	m²	1		
	TOPS, SHELVES, DOORS, MIRRORS, ETC.				
	6 mm Silvered float glass copper backed mirrors with polished edges fixed with double sided adhesive tape:				
3	Mirror 450 x 600 mm high.	No	1		
	Carried To Section Summary			**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 7				
	Guard House				
	BILL NO. 14				
	PAINTWORK				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	SUPPLEMENTARY PREAMBLES				
	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'.				
	ON FLOATED PLASTER				
	Prepare , etc as specified and apply two coats of super acrylic paint:				
1	On interior walls.	m²	43		
	ON FIBRE-CEMENT, ETC.				
	Prepare , etc as specified and apply two coats of super acrylic Pva paint:				
2	On ceilings and cornices.	m²	9		
3	On fascias and barge boards.	m	16		
	ON METAL				
	Prepare, etc as specified and apply two coats of gloss enamel paint on :				
4	Door frames	m²	3		
5	On windows with burglar bars (both sides measured).	m²	10		
	Inside eaves gutter				
6	Inside eaves gutter with waterproofing based paint	m²	6		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	Prepare,etc as specified and apply two coats of super acrylic Pva paint on:				
7	General surfaces of doors (interior).	m²	3		
	ON WOOD, WOOD BOARD				
	Prepare, etc as specified and apply two coats of polyurethane suede varnish:				
8	On doors	m²	3		
	Carried to Collection			**R**	

BILL NO. 14

PAINTWORK

COLLECTION

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SECTION NO. 7

Guard House

SECTION SUMMARY

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10	PLASTERING	232	
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13	GLAZING	240	
14	PAINTWORK	243	

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Section No. 7
SECTION SUMMARY

SECTION NO. 8

2 x 4 Enviroloo Toilets

		Unit	Quantity	Rate	Amount
	SECTION NO. 8				
	2 x 4 Enviroloo Toilets				
	BILL NO. 1				
	FOUNDATIONS				
	PREAMBLES				
	For preambles see " Specification of materials and methods to be used - PW371"				
	SITE CLEARANCE ETC				
	Site clearance:				
1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc.	m²	19		
	REMOVAL OF TREES, ETC.				
	Taking out and removing, grubbing up roots and filling in holes:				
2	Tree stump exceeding 200mm and not exceeding 500mm girth.	No	1		
	EXCAVATION, FILLING, ETC OTHER THAN BULK				
	Excavation in earth not exceeding 2m deep:				
3	Trenches.	m³	28		
4	Pit.	m³	4		
	Extra over trench and hole excavations in earth for excavation:				
5	Soft rock.	m³	3		
6	Hard rock.	m³	1		
	Risk of collapse of excavations:				
7	Sides of trench and hole excavations not exceeding 1,5m deep.	m²	23		
	Keeping excavations free of water:				
8	Keeping excavations free of all water other than subterranean water.	Item			
	Earth filling obtained from excavations and/or prescribed stock piles on site compacted to 93% Mod AASHTO:				
9	Backfilling to trenches, holes, etc.	m³	4		
10	Under floors, steps, pavings, etc.	m³	5		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	Earth filling supplied by the Contractor and compacted to 95% Mod AASHTO density):				
11	Under floors, steps, pavings, etc.	m³	11		
	Cart Away				
	Extra over excavation for cart away:				
12	Surplus material from excavations on site to a dumping site be located by the contractor	m³	14		
	Coarse river sand filling supplied by the Contractor:				
13	Under floors etc.	m³	6		
	COMPACTION				
	Compaction of surfaces:				
14	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90%.Mod AASHTO density.	m²	26		
	Prescribed density tests on filling:				
15	Modified AASHTO Density test.	No	8		
	SOIL POISONING				
	Soil insecticide:				
16	Under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming.	m²	26		
17	To bottoms and sides of trenches etc.	m²	38		
	Carried to Collection			**R**	

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BILL NO. 1		
FOUNDATIONS		
COLLECTION		
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		Unit	Quantity	Rate	Amount
	SECTION NO. 8				
	2 x 4 Enviroloo Toilets				
	BILL NO. 2				
	CONCRETE, FORMWORK AND REINFORCEMENT				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371"				
	UNREINFORCED CONCRETE				
	15Mpa/19mm Concrete				
1	Aprons cast in panels.	m³	2		
2	Ramps.	m³	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		
	REINFORCED CONCRETE				
	25 MPa/19mm Concrete:				
4	Surface beds cast in panels on waterproofing.	m³	2		
5	Footings.	m³	7		
6	Slabs	m³	2		
	TEST BLOCKS				
	Test blocks:				
7	Making and testing set of three 150 x 150 x 150mm concrete strength test cubes (Provisional).	Sets	5		
	FINISHING TOP SURFACE OF CONCRETE				
8	Paving to falls.	m²	17		
9	Ramps to falls.	m²	2		
	ROUGH FORMWORK (DEGREE OF ACCURACY III) (CPAP Work Group No 111)				
	Rough Formwork to Sides:				
10	Edges and reveals not exceeding 300mm high or wide.	m	6		
11	Formwork to soffits of slabs	m²	9		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	MOVEMENT JOINTS ETC				
	Two layers of .5mm galvanised mild steel slip joints between horizontal concrete and brick surfaces including cement mortar bed:				
12	Not exceeding 300mm wide.	m	6		
	Expansion joints with bitumen impregnated softboard between vertical concrete and brick surfaces:				
13	12mm Joints not exceeding 300mm high.	m	6		
	Dividing Strips ,etc				
14	6 x 38mm Angle iron step guard cast into concrete with 3x 6mm anchors	m	2		
	REINFORCEMENT(PROVISIONAL)				
	Fabric reinforcement:				
15	Type 193 fabric reinforcement in concrete surface beds, slabs, etc.	m²	26		
	Mild steel reinforcement to structural concrete work:				
16	10mm Diameter bars.	Tonnes	1		
	High tensile steel reinforcement to structural concrete work:				
17	20mm Diameter bars.	Tonnes	1		
18	16mm Diameter bars.	Tonnes	1		
	Carried to Collection			**R**	

BILL NO. 2

CONCRETE, FORMWORK AND REINFORCEMENT

COLLECTION

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		Unit	Quantity	Rate	Amount
	SECTION NO. 8				
	2 x 4 Enviroloo Toilets				
	BILL NO. 3				
	MASONRY				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371"				
	BRICKWORK				
	Sizes in descriptions:				
	Where sizes in descriptions are given in brick units, 'one brick' shall represent the length and 'half brick' the width of a brick.				
	Face bricks:				
	Bricks shall be ordered timeously to obtain uniformity in size and colour.				
	Pointing:				
	Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc.				
	SAMPLES				
	Samples of all masonry building units, except those for walls described as 'load bearing', shall consist of a minimum of 6 units. Samples of building units to be used in walls described as 'load bearing' shall consist of 30 units from every 30 000 units delivered to site.				
	BRICKWORK IN FOUNDATIONS (PROVISIONAL)				
	Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar:				
1	Half brick walls	m²	11		
2	One brick walls	m²	11		
	BRICKWORK IN SUPERSTRUCTURE				
	Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar:				
3	Half brick walls	m²	18		
4	Half brick walls in beam filling.	m²	2		
5	One brick walls	m²	69		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	BRICKWORK SUNDRIES				
	Brickwork reinforcement:				
6	75mm Wide reinforcement built in horizontally.	m	64		
7	150mm Wide reinforcement built in horizontally.	m	194		
	Turning pieces:				
8	110mm Wide turning piece to lintels etc.	m	5		
9	220mm Wide turning piece to lintels etc.	m	2		
	Galvanised wire ties etc:				
10	4mm Diameter roof tie 2m girth bent double with one end fixed to timber and other end built into brickwork.(Provisional)	No	24		
	Galvanised hoop iron cramps, ties, etc:				
11	30 x 1,6mm Cramp 500mm long with one end fixed to wood and other end built into brickwork.(Provisional)	No	24		
	FACE BRICKWORK				
	Face bricks (Prime cost R5 500/1000 delivered to site excluding VAT) pointed with flush horizontal and vertical joints:				
12	Extra over brickwork for face brickwork.	m²	79		
13	Extra over brickwork for face brickwork in foundations (Provisional).	m²	6		
14	Extra over brickwork for face brickwork to piers.	m²	2		
15	Half brick in facings in beamfilling	m²	5		
	FACE BRICKWORK COPINGS, SILLS, ETC.				
	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:				
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**	

		Unit	Quantity	Rate	Amount
	NUTEC-CEMENT/FIBRE-CEMENT WINDOW SILLS				
	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.	m	4		
	Carried to Collection			**R**	

BILL NO. 3

MASONRY

COLLECTION

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		Unit	Quantity	Rate	Amount
	SECTION NO. 8				
	2 x 4 Enviroloo Toilets				
	BILL NO. 4				
	WATERPROOFING				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	DAMPPROOFING OF WALLS AND FLOORS				
	One layer of 375 micron Consol Plastics Brikgrip DPC embossed damp proof course:				
1	In walls.	m²	10		
	One layer of 250 micron Consol Plastics Gunplas USB Green waterproof sheeting sealed at laps with Gunplas Pressure Sensitive Tape:				
2	Under surface beds.	m²	16		
	JOINT SEALANTS ETC				
	silicone sealing compound including backing cord, bond breaker,primer,etc				
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**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 8				
	2 x 4 Enviroloo Toilets				
	BILL NO. 5				
	ROOF COVERINGS				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW 371				
	General				
	PROFILED METAL SHEETING AND ACCESSORIES				
	.5mm "Klip-lok light industrial" galvanised troughed sheet steel with "chromadek" finish one side,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				
1	Roof covering with pitch not exceeding 25 degrees.	m²	20		
	.8mm galvanised sheet iron, with "chromadek" one side in:				
2	Standard type FK3 ridge or hip flashing	m	8		
	Carried To Section Summary			**R**	

	Unit	Quantity	Rate	Amount

SECTION NO. 8

2 x 4 Enviroloo Toilets

BILL NO. 6

CARPENTRY AND JOINERY

PREAMBLES

For preambles see "Specification of materials and methods to be used - PW371

SUPPLEMENTARY PREAMBLES

Particle board:

Particle board shall comply with the following specifications: a) SABS 1300 Particle board: exterior and flooring type b) SABS 1301 Particle board: interior type.

Joinery:

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.

Fixing:

Items described as nailed shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete.

Decorative laminate finish:

Laminate finish shall be glued under pressure. Edge strips shall be butt jointed at junctions with adjacent similar finish.

PREFABRICATED ROOF TRUSSES, ETC.

Plate nailed timber roof truss construction:

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 quarantee that the trusses are designed, manufactured,and erected, to support the roof coverings specified. The quarntee shall be valid for 10(ten) years .

Carried to Collection **R**

		Unit	Quantity	Rate	Amount
	Sawn softwood:				
1	Roof construction to double pitched roof with two gable ends approximately 16m2 on plan overall including trusses, rafters, purlins, permanent bracing, etc (measured flat).	No	1		
	ROOF CONSTRUCTION				
	Sawn softwood :				
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		
	ROOF SUNDRIES				
	Sundries:				
5	Two coats creosote on sawn timbers.	m²	6		
	EAVES, VERGES, ETC				
	Everite FC77 or equal approved pressed fibre-cement:				
6	10 x 250mm Fascias and barge boards including galvanised steel H-profile jointing strips.	m	20		
	Wrought meranti doors:				
	Wrought meranti doors hung to steel frames:				
7	44mm Framed batten door 813 x 2032mm high of 44 x 150m 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		
	Semi-solid flush doors				
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**	

BILL NO. 6

CARPENTRY AND JOINERY

COLLECTION

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		Unit	Quantity	Rate	Amount
	SECTION NO. 8				
	2 x 4 Enviroloo Toilets				
	BILL NO. 7				
	CEILINGS PARTITIONS AND ACCESS FLOORING				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	SUPPLEMENTARY PREAMBLES				
	Descriptions:				
	Items described as nailed shall be deemed to be fixed with hardened steel nails or pins or shot pinned to brickwork or concrete.				
	Items described as plugged shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres, and where described as bolted the bolts have been given.				
	INSULATION				
	Aerolite insulation:				
1	100mm Insulation closely fitted and laid on top of brandering between roof timbers etc.	m²	16		
	Wrought softwood				
2	19 x 76mm cornices nailed	m	16		
	NAILED UP AND SCREW UP CEILINGS				
	6mm Everite Nutec or equal approved fibre-cement boards with H-type steel cover strips over joints:				
3	Ceilings including 38 x 38mm sawn softwood brandering at 400mm centres.	m²	16		
4	Extra over ceiling for hinged trap door size 610 x 610mm	No	1		
	Carried To Section Summary			**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 8				
	2 x 4 Enviroloo Toilets				
	BILL NO. 8				
	IRONMONGERY				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	SUPPLEMENTARY PREAMBLES				
	Finishes to ironmongery:				
	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.				
	CATCHES, CABIN HOOKS, ETC				
	Solid or equal approved:				
1	100mm cabin hook and eye including 70 x 70 x 20mm chamfered hardwood block twice oiled and plugged.	No	2		
	LOCKS				
	Solid or equal approved:				
2	"Code 630" padlock.	No	2		
	'Solid" or equal approved				
3	CZ682-24-95SC"Gower" two lever lockset.	No	4		
4	CZ682-24-95SC"Gower" three lever lockset.	No	2		
	SUNDRIES				
	Solid or equal approved:				
5	38mm Diameter rubber door stop plugged.	No	6		
	Lockable toilet roll holder				
6	Vandal proof lockable toilet roll holder plugged	No	4		
	Carried To Section Summary			**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 8				
	2 x 4 Enviroloo Toilets				
	BILL NO. 9				
	METALWORK				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	SUPPLEMENTARY PREAMBLES				
	Descriptions:				
	Descriptions of bolts shall be deemed to include nuts and washers.				
	Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.				
	Metalwork described as holed for bolt(s) shall be deemed to exclude the bolts unless otherwise described.				
	WELDED SCREENS, GATES, ETC.				
	Gates to external doors				
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		
	PRESSED STEEL DOOR FRAMES				
	1,2mm Rebated frames suitable for half brick walls:				
2	Frame for door 813 x 2032mm high.	No	4		
	1,2mm Rebated frames suitable for one brick walls:				
3	Frame for door 813 x 2032mm high	No	2		
	STEEL WINDOWS, DOORS, ETC.				
	Standard residential windows with 12 x 12(B33) solid burglar bars to all sashes:				
4	Window type NE1, 533 x 654mm high	No	4		
	Carried to Collection			**R**	

		Unit	Quantity	Rate	Amount
	STEEL LOUVRES,ETC				
	Purpose made louvres:				
5	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**	

			Amount
BILL NO. 9			
METALWORK			
COLLECTION			
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		Unit	Quantity	Rate	Amount
	SECTION NO. 8				
	2 x 4 Enviroloo Toilets				
	BILL NO. 10				
	PLASTERING				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	SCREEDS				
	Screeds on concrete:				
	Screeds of wood floated on concrete to receive ceramic tiles:				
1	30mm Thick on floors to receive ceramic tiling.	m²	16		
	Carried To Section Summary			**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 8				
	2 x 4 Enviroloo Toilets				
	BILL NO. 11				
	TILING				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	FLOOR TILING				
	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				
1	On floors and landings.	m²	16		
2	Skirting formed of ceramic tile cut to 300 x 75mm high	m	16		
	Carried To Section Summary			**R**	

	Unit	Quantity	Rate	Amount

SECTION NO. 8

2 x 4 Enviroloo Toilets

BILL NO. 12

PLUMBING AND DRAINAGE

PREAMBLES

For preambles see "Specification of materials and methods to be used - PW371

SUPPLEMENTARY PREAMBLES

Concrete pipes:

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

uPVC pressure pipes and fittings:

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.

Copper pipes:

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.

Fixing of pipes

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**	

	Unit	Quantity	Rate	Amount

Reducing fittings:

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

Wire gratings:

Descriptions of gutter outlets etc shall be deemed to include wire balloon gratings.

Septic tanks:

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.

Exposed concrete surfaces:

Exposed surfaces of concrete stormwater channels, cover slabs, inspection eye marker slabs, gulley tops, cleaning eye tops, catchpits, inspection chambers, etc shall be finished smooth with plaster.

Excavations:

No claim for rock excavation will be entertained unless the Contractor has timeously notified the quantity surveyor thereof prior to backfilling.

'Soft rock' and 'hard rock' shall be as defined in 'Earthworks'.

Laying, backfilling, bedding, etc of pipes:

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

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

Flush pans:

Flush pans shall have straight or side outlets and 'P' or 'S' traps as necessary.

Carried to Collection **R**

		Unit	Quantity	Rate	Amount
	Stainless steel basins, sinks, wash troughs, urinals, etc:				
	Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable.				
	Waste unions:				
	Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings.				
	RAINWATER DISPOSAL				
	Approved .6mm galvanised sheet iron with "chromadek" finish ,in:				
1	100 x 100mm Eaves gutters	m	16		
2	Extra over eaves gutter for angle/corner.	No	4		
3	Extra over eaves gutter for stopped end	No	4		
4	Extra over eaves gutter for outlet for 75mm pipe.	No	4		
5	75mm Diameter rainwater pipes.	m	16		
6	Extra over rainwater pipe for bend.	No	4		
7	Extra over rainwater pipe for shoe.	No	4		
	Sanitary fittings				
	Vaal or equal approved:				
8	510 x 405mm Hibiscus (Code 7050) white vitreous china rounded lavatory basin with two tapholes supported on and including two bolts	No	2		
9	"Cobra Rf. 107EC-15" basin tap plugged.	No	2		
10	Allow a sum of R5000 for water supplies, etc	Item			
11	Allow a sum of R5000 for soil drainage, etc	Item			
	Enviro-loo set:				
12	Enviro-loo set supplied and installed complete.	Sets	4		
13	Allow for training	Item			5 000 00
	FIRE APPLIANCES ETC.				
	'Chubb' or equal approved:				
14	9kg Dry chemical fire extinguisher plugged	No	2		
	Carried to Collection			**R**	

		Amount
BILL NO. 12		
PLUMBING AND DRAINAGE		
COLLECTION		
	Page No	
Brought Forward from Page	268	
	269	
	270	
Carried To Section Summary	**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 8				
	2 x 4 Enviroloo Toilets				
	BILL NO. 13				
	GLAZING				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	GLAZING TO STEEL WITH PUTTY				
	5mm obscure glass:				
1	Panes not exceeding 0,1m2.	m²	4		
	Carried To Section Summary			**R**	

		Unit	Quantity	Rate	Amount
	SECTION NO. 8				
	2 x 4 Enviroloo Toilets				
	BILL NO. 14				
	PAINTWORK				
	PREAMBLES				
	For preambles see "Specification of materials and methods to be used - PW371				
	ON FIBRE-CEMENT, ETC.				
	Prepare , etc as specified and apply two coats of super acrylic Pva paint:				
1	On ceilings and cornices.	m²	16		
2	On fascias and barge boards.	m	16		
	ON METAL				
	Prepare, etc as specified and apply two coats of gloss enamel paint on :				
3	Door frames	m²	9		
4	On windows with burglar bars (both sides measured).	m²	4		
5	On gates, grilles, burglar screens, balustrades, etc (both sides measured over the full flat area).	m²	7		
	Inside eaves gutter				
6	Inside eaves gutter with waterproofing paint	m²	6		
	Prepare,etc as specified and apply two coats of super acrylic Pva paint on:				
7	General surfaces of doors (interior).	m²	13		
	ON WOOD, WOOD BOARD				
	Prepare, etc as specified and apply two coats of polyurethane suede varnish:				
8	On general surfaces of doors.	m²	7		
	Carried To Section Summary			**R**	

SECTION NO. 8

2 x 4 Enviroloo Toilets

SECTION SUMMARY

Bill No.		Page	Amount
1	FOUNDATIONS	248	
2	CONCRETE, FORMWORK AND REINFORCEMENT	251	
3	MASONRY	255	
4	WATERPROOFING	256	
5	ROOF COVERINGS	257	
6	CARPENTRY AND JOINERY	260	
7	CEILINGS PARTITIONS AND ACCESS FLOORING	261	
8	IRONMONGERY	262	
9	METALWORK	265	
10	PLASTERING	266	
11	TILING	267	
12	PLUMBING AND DRAINAGE	271	
13	GLAZING	272	
14	PAINTWORK	273	
	Section Factor		x 2
	Carried to Final Summary	**R**	

Section No. 8
SECTION SUMMARY

SECTION NO. 9

Provisional Sum

			Amount
	SECTION NO. 9		
	Provisional Sum		
	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 R15 000.00 (Fifty Thousand Rands) for signage	Item	15 000 00
5	Profit	Item	
6	Attendance	Item	
	School furniture		
7	Provide the sum of R500 000.00 (Five Hundred Thousand Rands) for supply of school furniture	Item	500 000 00
8	Profit	Item	
9	Attendance	Item	
	Community liason officer		
10	Provide the budgetary allowance of R120 000.00 (One Hundred and Twenty Thousand Rands) for employement of a community liason officer for labour requirements by the contractor and deducted in whole or part if not required.	Item	120 000 00
11	Attendance	Item	
12	Profit	Item	
	Project Steering Committee (PSC)		
13	Provide the budgetary allowance of R12 000.00 (Twelve Thousand Rands) for employement of a PSC for labour requirements by the contractor and deducted in whole or part if not required.	Item	12 000 00
14	Profit	Item	
15	Attendance	Item	
	Carried To Section Summary	**R**	

			Amount	
	Joinery fittings			
16	Provide the sum of R250 000 (Two Hundred and Fifty Thousand Rands) for joinery fittings	Item	250 000	00
17	Profit	Item		
18	Attendance	Item		
	Grade R Play Area			
19	Provide the sum of R200 000.00 (Two Hundred Thousand Rands) for provision of Grade R play area	Item	200 000	00
20	Profit	Item		
21	Attendance	Item		
	Loose Chairs			
22	Provide the sum of R40 000.00 (Forty Thousand Rands) for supply of loose chairs	Item	40 000	00
23	Profit	Item		
24	Attendance	Item		
	Relocation of mobile classrooms			
25	Allow a sum R500 000.00 (Five Hundred Thousand Rands) for relocation of 10 mobile classrooms within a radius of 50km	Item	500 000	00
26	Profit	Item		
27	Attendance	Item		
	Occupational Health and Safety Provisions			
28	Provide the sum of R500 000.00 (Five Hundred Thousand Rands) for occupational health and safety Provisions to be instituted by appointed OHS	Item	500 000	00
29	Profit	Item		
30	Attendance	Item		
	WORK EXECUTED BY SEPARATE DIRECT CONTRACTORS (OHS)			
	The following work will be executed by contractors under direct agreement with the employer. The contractor is to accommodate these direct contractors and allow them to execute their work unhindered and allow them the use of water and toilet facilities. Damage caused by these contractors to work completed by the principal contractor is to be recorded in detail to enable the employer to counter-charge the direct contractors the cost of making good such damages.			
31	Occupational Health and Safety Consultant	Item	350 000	00
32	Profit	Item		
	Carried To Section Summary	**R**		

			Amount
33	Attendance	Item	
	WORK EXECUTED BY SEPARATE DIRECT CONTRACTORS (SF)		
	The following work will be executed by contractors under direct agreement with the employer. The contractor is to accommodate these direct contractors and allow them to execute their work unhindered and allow them the use of water and toilet facilities. Damage caused by these contractors to work completed by the principal contractor is to be recorded in detail to enable the employer to counter-charge the direct contractors the cost of making good such damages.		
34	Social Facilitator	Item	250 000 00
35	Profit	Item	
36	Attendance	Item	
	Carried To Section Summary	**R**	

Section No. 9
Bill No. 1
Provisional Sums

SECTION NO. 9

Provisional Sum

SECTION SUMMARY

		Page	Amount
	Brought forward from page	276	
	Brought forward from page	277	
	Brought forward from page	278	
	Carried to Final Summary	**R**	

Section No.	**FINAL SUMMARY**	Page		
1	Preliminaries and Generals	40		
2	Demo(4CR,12Pit,C-RM) and Renovation(4CR,4Enviro)	69		
3	1 x 4 Classroom Block	102		
4	1 x Grade R Facility	143		
5	1 x Multipurpose Classroom	176		
6	Nutritional Centre	212		
7	Guard House	244		
8	2 x 4 Enviroloo Toilets	274		
9	Provisional Sum	279		
	ADD: CONTINGENCIES			
	Allow the Amount of R700 000 (Seven Hundred Thousand Rands) for contingencies, to be used by the Architect in terms of Clause 17 of the Principal Building Agreement.		700 000	00
	ADD: CPAP ALLOWANCE			
	Allow the amount of R700 000 (Seven 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.		700 000	00
	Carried to Next	**R**		
	FINAL SUMMARY			

Brought from Previous	R	
ADD: PART B & PART C		
ELECTRICAL INSTALLATIONS AND CIVIL WORKS		
SubTotal excluding Value Added Tax		
ADD VAT @ 15%:		
Carried to Tender	R	

FINAL SUMMARY

REPUBLIC OF SOUTH AFRICA

LIMPOPO DEPARTMENT OF PUBLIC WORKS INFRASTRUCTURE

PFUMBADA PRIMARY SCHOOL

LDPWRI-B/20291

PART B
ELECTRICAL INSTALLATIONS
BILLS OF QUANTITIES

Summary- Pfumbada School

BILL	DESCRIPTION	AMOUNT
1A and 1B	Preliminary and General and Transport	
2	Internal Installation	
3	Site Reticulation	
4	PVC Sleeves for Electric Installation	
5	HVAC	
6	Prov Sum for Eskom Bulk Power Supply	R 750 000,00
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- Pfumbada 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	1600		0,00
2,2	Installation	m	1600		0,00
	50 mm dia PVC				
2,3	Material	m	800		0,00
2,4	Installation	m	800		0,00
3	**STEEL BOXES AND COVER PLATES**				
	20mm PVC Round conduit boxes				
3,1	Material	No	68		0,00
3,2	Installation	No	68		0,00
	Galvanized Steel wall boxes with cover plates				
	100 x 50 x 50 mm				
3,3	Material	No	22		0,00
3,4	Installation	No	22		0,00
	TOTAL CARRIED FORWARD				**0,00**

NB. EXECUTION METHOD: L = LABOUR USE, M = MACHINERY USE

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	3200		0,00
4,4	Installation	m	3200		0,00
	4sq mm				
4,5	Material	m	1600		0,00
4,6	Installation	m	1600		0,00
	6sq mm				
4,7	Material	m	0		0,00
4,8	Installation	m	0		0,00
	TOTAL CARRIED FORWARD				**0,00**

NB. EXECUTION METHOD: L = LABOUR USE, M = MACHINERY USE

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	1600		0,00
		m	1600		0,00
	4,0sq mm				
4,13	Material	m	800		0,00
4,14	Installation	m	800		0,00
	Galvanized Draw wire				
	1,5sq mm				
4,15	Material	m	1000		0,00
4,16	Installation	m	1000		0,00
5	**SWITCHES, SOCKET OUTLETS AND ISOLATORS FOR FLUSH INSTALLATION INCLUDING COVERPLATES**				
	Switches				
	16 A Single Lever 1 way				
5,1	Material	No	22		0,00
5,2	Installation	No	22		0,00
	16A 1 Lever 2 way				
5,3	Material				
5,4	Installation				

NB. EXECUTION METHOD: L = LABOUR USE, M = MACHINERY USE

	Socket Outlets with switch				
	16A 3 pin Double 100 x 100				
5,5	Material	No	27		0,00
5,6	Installation	No	27		0,00
	Isolators				
	20A 2 pole, 100 x 100				
5,6	Material	No	13		0,00
5,7	Installation	No	13		0,00
	40A 2 pole, 100 x 100				
5,8	Material	No	13		0,00
5,9	Installation	No	13		0,00
	TOTAL CARRIED FORWARD				**0,00**

NB. EXECUTION METHOD: L = LABOUR USE, M = MACHINERY USE

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	3		0,00
7,2	Installation	No	3		0,00
8	**BONDING OF DISTRIBUTION BOARDS TO WATER AND ROOF**				
	Installation	lot	3		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	3		0,00
9,2	Installation	lot	3		0,00
10	**TESTS OF THE COMPLETE ELECTRICAL INSTALLATION AND ISSUING OF COC'S**				
10,1	Installation	lot	3		0,00
	Total for Bill 2 carried to summary sheet				**0,00**

NB. EXECUTION METHOD: L = LABOUR USE, M = MACHINERY USE

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	76		0,00
	Installation	No	76		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	0		0,00
	Installation	No	0		0,00
11,3	TYPE B1 - IP65 Wall and ceiling mounted mounted bulkhead complete with 1 x 30W LED bulb .				
	Material	No	53		0,00
	Installation	No	53		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**

NB. EXECUTION METHOD: L = LABOUR USE, M = MACHINERY USE

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	3		0,00
12,4	Installation	No	3		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	0		0,00
12,8	Installation	No	0		0,00
	Computer point				
12,9	Material	No	0		0,00
12,10	Installation	No	0		0,00
	Total for Bill 4 carried to summary sheet				**0,00**

NB. EXECUTION METHOD: L = LABOUR USE, M = MACHINERY USE

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**

NB. EXECUTION METHOD: L = LABOUR USE, M = MACHINERY USE

Site Reticulation Bill- Pfumbada School

ITEM	DESCRIPTION	UNIT	Scheduled Qty	Rate	TOTAL
	BILL 5				
13	**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	100		0,00
13,2	Installation	m	100		0,00
	16mm sq x 2 core				
13,3	Material	m	200		0,00
13,4	Installation	m	200		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	No	12		0,00
13,8	Installation	No	12		0,00
	TOTAL CARRIED FORWARD				**0,00**

NB. EXECUTION METHOD: L = LABOUR USE, M = MACHINERY USE

ITEM	DESCRIPTION	UNIT	Scheduled Qty		TOTAL
	TOTAL BROUGHT FORWARD				**0,00**
14	**COPPER EARTH WIRE**				
	25mm sq				
14,1	Material	m	100		0,00
14,2	Installation	m	100		0,00
	16mm sq				
14,3	Material	m	200		0,00
14,40	Installation	m	200		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**

NB. EXECUTION METHOD: L = LABOUR USE, M = MACHINERY USE

Site Reticulation Bill- Pfumbada 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	100		0,00
16,4	Installation	m	100		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**

ITEM	DESCRIPTION	UNIT	Qty		TOTAL
	BILL 7				
	HVAC				
20					
	HVAC: Supply, delivery, installation, commissioning and testing of a 2.4 kW cooling capacity high wall split units complete with insulated refrigerant piping, condensate drains, trunking, electric wiring and connection and controls (heat pump) , RECOMMENDED BRANDS are GREE , CARRIER , YORK AND LG				
20,1	High-wall split units, 2.4 kW cooling capacity/ 9000 BTU (heat pump) unit.				
	Material	No.	6		0,00
	Installation	No.	6		0,00
20,2	Refrigerant piping pair (liquid and gas)	m			
	Material	m	100		0,00
	Installation	m	100		0,00
20,3	Drain piping				
	Material	m	100		0,00
	Installation	m	100		0,00
	Hand Dryers				
21,1	Hand drier (XLERATOR or equivalent) at toilets (1400W high speed air jet, motor speed of at least 20000 RPM)				
21,2					
	Material	No	2		0,00
23	Installation	No	2		0,00
	TOTAL CARRIED FORWARD TO SUMMARY				**0,00**

SUMMARY OF QUANTITIES

BILL	DESCRIPTION	Scheduled Value
6	PVC SLEEVES FOR ELECTRIC AND COMMUNICATION	0,00
7	HVAC	0,00
	SUB TOTAL	**0,00**

REPUBLIC OF SOUTH AFRICA

LIMPOPO DEPARTMENT OF PUBLIC WORKS INFRASTRUCTURE

PFUMBADA PRIMARY SCHOOL

LDPWRI-B/20291

PART C
CIVIL WORKS
BILLS OF QUANTITIES

Item	Payment Reference	Description	Unit	Qty	Rate	Amount
	SABS 1200 D	**SCHEDULE 1: EARTHWORKS**				
		SITE CLEARANCE				
Alternative see 1200C 1200DM	8.3.1	Clear and grub area for				
		Buildings	m²	1483.5		
Alternative see 1200DB 1200DM		**PREPARATION AND STRIPPING OF SITE**				
	8.3.1	Remove topsoil to a depth of 150mm and				
		Stockpile on site within freehaul distance and maintain	m³	222.53		
		Spoil at designated spoil site	m³	89.01		
		EXCAVATION				
	8.3.2	Excavate in all materials and use as fill, compacted to 90% mod				
		Platforms	m³	267.03		
	8.3.2	Extra over item 8.3.2 (a) for				
		Intermediate excavation	m³	80.11		
		Hard rock excavation	m³	53.41		
		Boulder excavation class A	m³	5.34		
		Boulder excavation class B	m³	5.34		
		COMMERCIAL MATERIAL				
	8.3.4	Extra over item 8.3.2 (a) for importation of materials from:				
		Commercial sources selected by the Contractor	m³	178.02		
					TOTAL CARRIED FORWARD	

Item	Payment Reference	Description	Unit	Qty	Rate	Amount
ITEM NO.	**PAYMENT REFER.**	**DESCRIPTION**	**UNIT**	**QUANTITY**	**RATE**	**AMOUNT**
		TOTAL BROUGHT FORWARD				
		DESIGNATED BORROW PIT (ARRANGED BY EMPLOYER)				
	8.3.4	Extra over item 8.3.2 (a) for importation of materials from				
		Designated borrow pits	m³	890.10		
	8.3.4	Opening up and closing down of designated borrow pit	sum	1.00		
		OVERHAUL				
	8.3.6	Overhaul (Provisional)				
		Limited overhaul	m³	267.03		
		Long overhaul	m³.km	178.02		
		COMPACTION OF BACKFILLING				
	8.3.9	Selected material compacted to 93% mod AASHTO density	m³	1,068.12		
		Mod AASHTO Tests	No.	22.00		
Carried forward to Summary of Schedules						

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	189.60		
1.2.2	8.3.3(b)	In-place treatment of road-bed in intermediate or hard material				
		Ripping	m^3	37.92		
1.3		**EARTHWORKS**				
1.3.1	8.3.4	Cut to fill				
		Compact to 90 % mod. AASHTO maximum density	m^3	94.80		
		Selected layer compacted to 93 % mod. AASHTO maximum density	m^3	94.80		
1.3.2	8.3.6	Extra-over items 1.3.1 inclusive for excavating and breaking down material in:				
		Intermediate excavation	m^3	18.96		
		Hard excavation	m^3	9.48		
1.3.3	**8.3.7**	Cut to spoil from				
		Soft excavation	m^3	189.60		
		Intermediate excavation	m^3	37.92		
		Hard excavation	m^3	5.69		
1.3.4	8.3.8	Removal of oversize material	m^3	2.84		
				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 allong 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	189.60		
	8.3.4	Extra over items .1 to .2 inclusive for class of excavation				
		Intermediate excavation	m^3	37.92		
		Hard rock excavation	m^3	28.44		
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	189.60		
1.7	8.3.4	**Stabilizing Agent**				
		(b) Portland Cement	m^3	5.69		
1.8	**SANS 1200 MJ**	**SEGMENTED BLOCK PAVING TO THE ACCESS ROAD**				
	8.2.2	80mm Type S-A 35mPa for roadway (Grey Colouring)	m^2	0.00		
	8.2.2	60mm Type S-A 35mPa for roadway (Grey Colouring)	m^2	1,264.00		
	8.2.1	The construction of edge restraints	m	56.18		
		TOTAL CARRIED FORWARD				

SCHEDULE 2: EARTHWORKS (ROADS AND SUBGRADE)

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	140.00		
		b) 330mm Length on curves	m	20.00		
1.8.2		**300X150 Barrier Kerb (SABS 927 Fig 3).**	m	90.00		
1.8.3		**Mountable Kerb (SABS 927 Fig 3).**	m	18.00		
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.	m²	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.	m²	44.00		
9.4	1200 DK 8.2	Supply and install A7 **Bidim** Geosynthetic **proetction** layer to channel liner, as per drawings.	m²	60.00		
9.5	SANS 1200 AH	**CONCRETE**				
9.5.1	8.4.3	Supply, place and shape 25MPa c**oncrete in hyson cells** on the A10 **Bidim** Geosynthetic proetction layer , as per drawings.	m³	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.	m³	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 8.3.2	Excavate and prepare all cut off trenches and berms around the site as shown on the drawings and as directed by the Engineer.	m^3	7.50		
10.1.2		Disposal of unsuitable or surplus material off site	m^3	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	m^3	2.25		
10.2.2	8.4.2	Blinding layer, 50 mm minimum, prescribed mix, Grade 15MPa/20 mm	m^2	2.50		
10.2.3	8.4.3	Strength concrete Grade 25 MPa/20 mm for:				
10.3		**Concrete Channels**	m^3	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	m^2	50.00		
					TOTAL CARRIED TO SUMMARY	

Item No.	Payment Refers	Short Description	Unit	Quantity	Rate	Amount
2	**SABS 1200A**	**SCHEDULE 3 - STEEL PALISADE FENCING**				
2.1	PCC-4.1	School Yard - Steel palisade fencingn 2,4m high according to specification including excavations, foundation concreting, posts, pales and ground beams. All as per drawing.	m	835.00		
2.2	PCC-4.1	Grdae R - Steel palisade fencingn 2,4m high according to specification including excavations, foundation concreting, posts, pales and ground beams. All as per drawing.	m	136.00		
2.3	PCC-4.1	Supply and install according to specification a 6m wide vehicular gate	No	1.00		
2.4	PCC-4.1	Supply and install according to specification 1.5m wide pedestrian gate as per drawing	No	1.00		
2.5	PCC-4.1	Grdae R - Supply and install according to specification 1.5m wide pedestrian gate as per drawing	No	1.00		
2.6	PCC-4.1	Repainting of the existing fence	m^2	0.00		
SUB - TOTAL CARRIED TO SUMMARY						

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	1,500.00		
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	1,300.00		
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	1,600.00		
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	**SABS1200LB**	**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						

ITEM NO.	PAYMENT REFRES	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	80.00		
		b) 50 mm class 6	m	300.00		
		c) 75 mm class 10	m	120.00		
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 REFRES	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	m³	3.00		
		b) Rough formwork	m²	3.00		
3.2.14		**BOREHOLE DEVELOPMENT**				
		Geohydrological Servies				
		Sitting of drilling sites. Alowance 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	2.00		
		Drilling				
		Drilling of 165mm diameter borehole in non-collapsible material.	m	240.00		
		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	240.00		
		Steel casing (plain), 165 mm (state wall thickness here as 3 mm)	m	70.00		
		Steel casing (slotted), 165 mm (state wall thickness here as 4 mm)	m	170.00		
		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	2.00		
		Sampling for water quality testing	No	2.00		
		Site finishing				
		Borehole finishing, rate to include borehole disinfection, concrete collar in Grade 20Mpa concrete, normal saintary seal, borehole making.	No	2.00		
		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 REFRES	DESCRIPTION	UNIT	Estimated QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
		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	No	1.00		
		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		
		BOREHOLE PUMPS AND APPURTENANCES				
3.2.16		**NEW BOREHOLE INSTALLATION** *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 accodance to manufactures and Engineers' specification.*				
		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. *Engineer to approve prior to installation.* Pump Installation, Head & Flow fas per borehole test report	No	2.00		
		Electric Motor installation, as per pump size requirements determined in item above.	No	2.00		
		Pump Protection				
		Mechanical pressure switch, PN16, Complete with cabling to panel : Limits between 160m and 80m, WIKA PSM-550 or Equivalent	No	2.00		
		Mechanical flow switch, PN16, Complete with cabling to panel	No	2.00		
		Float Switch for Switching off Pump on Low Level, c/w wiring to panel's liquid level control relay.	No	2.00		
		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 and0-24 hour timer.	No	2.00		
		Pipework *Supply and install borehole discharge pipework complete with flow meter, non return and pressure valves on the following pipework.*				
		Submersed pipe: Ø 63mm HDPE, Class 12, 7,1mm Wall thickness, SANS 4427, Borehole to Surface	m	220.00		
		Metal Base plate - Double choke	No.	2.00		
		65 NB Schedule 40 pipe discharge Galvanised Steel pipe, Incl Elbows and fittings	m	5.00		
		65 NB Threaded Brass Type Isolation valve, PN10	No.	2.00		
TOTAL CARRIED FORWARD						

ITEM NO.	PAYMENT REFRES	DESCRIPTION	UNIT	Estimated QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
		65 NB Flanged Non Return Valve,tilted disc type, PN 10	No.	2.00		
		65 NB Flanged Mechanical flow meter, PN 10	No.	2.00		
		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.	2.00		
		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	2.00		
3.2.18		**TESTING AND COMMISSIONING**				
		Testing and commission borehole installation includibg pumps, motrs, control system and verify discharge and head characteristics	No	2.00		
		Eletricity 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.	%	########		
TOTAL CARRIED FORWARD						

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

ITEM NO.	PAYMENT REFRES	DESCRIPTION	UNIT	Estimated QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD						R -
		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						

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	190.00		
	b) Exceeding 1,0m but not exceeding 2.0m	m^3	38.00		
4.2	**Extra-over all excavations in pickable material irrespective of depth, for excavating in:-**				
4.2.1	Intermediate excavation	m^3	30.00		
4.2.2	Hard rock excavation	m^3	25.00		
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					

Item	Description	Unit	Qty	Rate	Amount
Amount Brought Forward					
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	220.00		
	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					

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	2.00		
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	2.00		
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					

Item	Description	Unit	Qty	Rate	Amount
Amount Brought Forward					
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 shatters	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					

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	35		
	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 REF	DESCRIPTION	UNIT	Estimated QTY	RATE	AMOUNT
	SABS 1200 GB	**SCHEDULE 6 : CARPORTS**				
5.1		**FORMWORK**				
5.1.1	8.2.1(b)	Normal formwork to				
		c) Column Foundations	m^3	92.16		
5.2		**REINFORCEMENT**				
5.2.1	8.2.4	Mild steel bars of nominal diameter				
5.2.1.1		12mm	t	3.69		
5.2.2		High-tensile steel bars of nominal diameter				
5.2.2.1		16mm	t	5.53		
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	9.22		
5.3.2		Blinding layer, Grade 10/19,0 mm	m^3	1.15		
5.3.4	8.2.6	Unformed surface finishes				
5.3.4.1		Wood-float to all floors except	m^2	23.04		
	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	1.06		
5.5.2.2		Square Tubing Beams - beams (welded)	t	0.37		
5.5.2.3		Square Tubing purlins	t	1.08		
5.5.2.4		Unequal Angle rafter bracing	t	1.25		
5.5.2.5		200 x 200 x 6mm Base Plates	No.	60.00		
		Fasteners for angles hexhead bolts with washers - Grade 8.8	No.	180.00		
		Sika Non-shrink grout or Similar	m^3	0.48		
		M12 Holding Down Bolta - Grade 8.8 hexhead bolts	No.	240.00		
		b) Using steel to SABS 1431 Grade 350WA for assembly				
		Simple Square Tubing - columns (welded)	t	1.43		
		Square Tubing Beams - beams (welded)	t	1.14		
		Square Tubing purlins	t	1.43		

		Unequal Angle rafter bracing	t	1.46		
		200 x 200 x 6mm Base Plates	No.	70.00		
		Fasteners for angles hexhead bolts with washers - Grade 8.8	No.	210.00		
		Sika Non-shrink grout or Similar	m^3	0.56		
		M12 Holding Down Bolta - Grade 8.8 hexhead bolts	No.	280.00		
		c) Using steel to SABS 1431 Grade 350WA for carports				
		Simple Square Tubing - columns (welded)	t	0.51		
		Square Tubing Beams - beams (welded)	t	0.32		
		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.	14.00		
		Fasteners for angles hexhead bolts with washers - Grade 8.8	No.	42.00		
		Sika Non-shrink grout or Similar	m^3	0.11		
		M12 Holding Down Bolta - Grade 8.8 hexhead bolts	No.	56.00		
TOTAL CARRIED FORWARD						

ITEM NO.	PAYMENT REFRES	DESCRIPTION	UNIT	Estimated QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
5.5.5	8.3.5	**SITE WELDING**				
5.5.5.1		Site weld items inclusive	m	43.20		
		CLADDING AND SHEETING				
		ROOF CLADDING				
5.6		Supply, deliver to Site, erect and fix green chromedeck sheeting/cladding etc, including the supply of all necessary fasteners etc. and cutting and notching: (See Drawings)	m^2	678.00		
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	42.00		
	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	162.00		
		Extra for stopped end	no	6.00		
		Extra for 150mm diameter outlet	no	18.50		
		1mm Thick 150mm diameter rainwater pipe including straps, fixed to steel columns	m	48.10		
		Extra for 45° bend	no	18.50		
	SABS 1200 HC	**CORROSION PROTECTION OF STRUCTURAL STEELWORK**				
		Steelwork included under Items 1 to 7inclusive, of Section 1200H (Supply, Fabrication and Erection)	t	9.22		
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	9.22		
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	9.22		
5.7.2		Sitework. Clean down surfaces, touch up damaged shop coats and apply finish coats as specified	t	9.22		
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	9.22		
TOTAL CARRIED TO SUMMARY						

DEPARTMENT OF EDUCATION : LIMPOPO

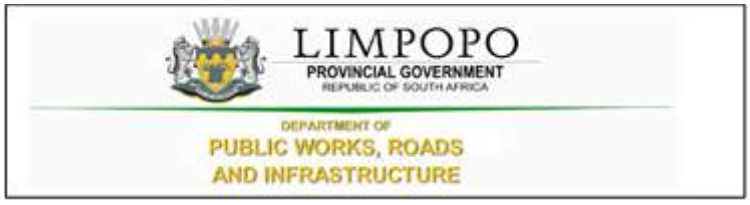
STORM DAMAGED SCHOOL: PFUMBADA PRIMARY SCHOOL

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)	

PART C3 SCOPE OF WORKS



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.

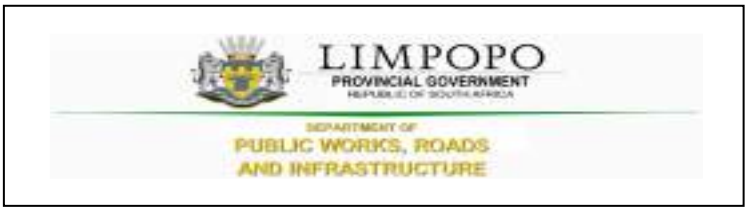
1.12. Quotations received after the closing date and time will not be accepted for consideration.

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

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

PART C4 SITE INFORMATION

SCOPE OF WORKS

BID NUMBER: LDPWRI-B/20291

APPOINTMENT OF A CONTRACTOR FOR DEMOLITION OF 4 CLASSROOMS, COOKING ROOM AND 12 PIT TOILETS, REFURBISHMENT OF 4 CLASSROOMS AND 4 SEATER ENVIROLOO TOILETS, CONSTRUCTION OF 4 CLASSROOMS, NUTRITION CENTRE, NEW 8 SEATER ENVIROLOO TOILETS, GUARD HOUSE, STEEL PALISADE FENCE AND EXTERNAL WORKS AT PFUMBADA PRIMARY SCHOOL IN MAMOHOHI VILLAGE, VHEMBE DISTRICT.

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
PUBLIC WORKS, ROADS
AND INFRASTRUCTURE

C4.1 DRAWINGS



SITE DEVELOPMENT PLAN

1 : 500



LOCALITY

TABLE 2A: EXISTING FACILITIES

No.	BUILDING USAGE	m²	Quantity
01	**BLOCK A -** 4 CLASSROOM		01
02	**BLOCK B -** 4 CLASSROOM		01
03	**BLOCK C -** 12 PIT TOILETS		12
04	**BLOCK D -** COOKING ROOM		01
05	**BLOCK E -** 4 ENVIRO-LOO TOILETS		01

TABLE 2B: DEMOLITION WORKS

No.	BUILDING USAGE	m²	Quantity
01	**BLOCK A -** 4 CLASSROOM	185	01
02	**BLOCK C -** PIT TOILETS		12
03	**BLOCK D -** COOKING ROOM	90	01
04			
05			
06			
07			

TABLE 2C: RENOVATION/REFURBRISHMENT WORKS

No.	BUILDING USAGE	m²	Quantity
01	**BLOCK B -** 4 CLASSROOM	185	01
02	**BLOCK E -** ENVIRO-LOO TOILET		04
03			
04			
05			
06			
07			

TABLE 2D: NEW WORKS

No.	BUILDING USAGE	m²	Quantity
01	**BLOCK L -** 4 CLASSROOM	222	01
02	**BLOCK C -** 1 CLASSROOM GRADE 'R' CLASSROOM	142	01
03	**BLOCK D -** 1 CLASSROOM MULTI-PURPOSE CLASSROOM	104	01
04	**BLOCK F -** NUTRITION CENTRE	200	01
05	**BLOCK G -** ENVIRO-LOOS TOILETS 8 SEATS	39	01
06	**BLOCK H -** GUARD HOUSE AND FENCING	11	01
07	**BLOCK I -** ASSEMBLY AREA	200	01
08	**BLOCK J -** 10 PARKING BAYS, 5 COVERED	322	10
09			
10			

TABLE 2E: FUTURE WORKS

No.	BUILDING USAGE	m²	Quantity
01	**BLOCK K -** MULTIPURPOSE HALL	715	01
02	**BLOCK L -** 5 CLASSROOMS	471	01
03	**BLOCK M -** P/SCIENCE LABS	519	01
04	**BLOCK N -** COMPUTER-LIBRARY COMBO	624	01
05	**SPORT GROUNDS**	-	01

TABLE 2F: CLASSROOM SUMMARY

TABLE 01: SUMMARY FOR HUMAN CAPITAL

TABLE 1A: Grade Enrolment Figures For:
Number Of Pupils

GRADES	BOYS	GIRLS	TOTAL
R	12	13	25
1	09	15	24
2	07	09	16
3	05	11	16
4	16	11	27
5	18	06	24
6	13	13	26
7	17	14	31
TOTAL PUPILS	**97**	**92**	189
TEACHERS			10

LEGEND

- NEW BLOCKS - NOTE 2 Jojo tanks on each block
- FUTURE BLOCKS - NOTE 2 Jojo tanks on each block, Phase 2
- EXISTING BUILDING TO REMAIN UNCHANGED
- EXISTING BUILDING TO BE RENOVATED - NOTE 2 Jojo tanks on each block
- EXISTING BUILDING TO BE DEMOLISHED
- NEW WALKWAYS
- EXISTING WALKWAYS
- FUTURE WALKWAYS
- EXISTING MOBILE CLASSROOMS
- WATER SUPPLY PIPES - HDPE CLASS 6
- SEWER PIPES - PVC CLASS 6
- ELEVATED WATER TANKS
- ISOLATION VALVE
- STANDPIPE
- BOREHOLE

ELECTRICAL NOTES

1. 2 core XLPE copper cable to be used for site reticulation buried at 1200mm below surface ground level
2. Cables installation to be 800mm away from road edge and at least 3000mm away from nearest building wall.
3. manholes to be used at road crossing and at cable bends of 90 degrees.
4. PVC sleeves to be used to connect manholes
5. Switching station to be finalised once ESKOM has defined the bulk power supply philosophy.

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION	QUANTITY
	16KVA Dedicated transformer with an associated Meter Box	1
	25mm² PVC Cu Cable	75m
	16mm² PVC Cu Cable	200m
	10mm² PVC Cu Cable	0m
	Kiosk	1

GENERAL DRAWING NOTES

1) RKMANSHIP TO COMPLY WITH STANDARD SPECIFICATION OF MATERIALS AND METHODS TO BE USED - sabs 0400
2) IGHT SWITCH IN DISABLED TOILET TO BE AT 1200MM ABOVE FFL
3) IF STEP OVER 900MM BUILD IN BALUSTRADE
4) GULLEY POSITIONS TO BE DETRMINED AS PER SITE PRESCRIBED OVERALL DRAINAGE DESIGN
5) 2 X COATS SEALANT O ALL EXPOSED TRUSSES (SAND OFF ALL sabs & OTHER MARKINGS)
6) 50MM MINERAL WOOL INSULATION TO BE INSTALLED WHERE THERE ARE CEILINGS. BUBBLE PLASTIC INSULATION WITH FALL BACKING TO BE INSTALLED WITH WIRE SUPPORTS IN ALL AREAS THAT DO NOT HAVE CEILINGS
7) WEST FACING FACADES TO HAVE STANDARDISED ALUMINIUM LOUVRES FROM BELOW EAVES TO DROP OF 1200MM
8) 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		
ENVIROMENTAL OFFICER		
ROADS/STORMWATER		
WATER AND SANITATION		
ENVIRONMENTAL OFFICER		

REV No.	DATE:	DESCRIPTION

REVISIONS

SIZE ON ORIGINAL DRAWING 100MM

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA
Department of
Public Works

INSTITUTION
PFUMBADA PRIMARY SCHOOL

INSTITUTION EMIS NUMBER
9212305573

SERVICE
NEW BUILDINGS & ALTERATIONS

CONTACT - SECTION
DOCUMENTATION & PROCUREMENT

DISPLINE: ARCHITECTURAL | PROJECT STAGE: 04

WORK DESCRIPTION - SUB DIVISION
SITE DEVELOPMENT PLAN (SDP)

DRAWING DESCRIPTION

DATE	WORK DESCRIPTION - SUB DIVISION		
2023.06.19	Y.YAHED		7812

DRAWING CO-ORDINATED

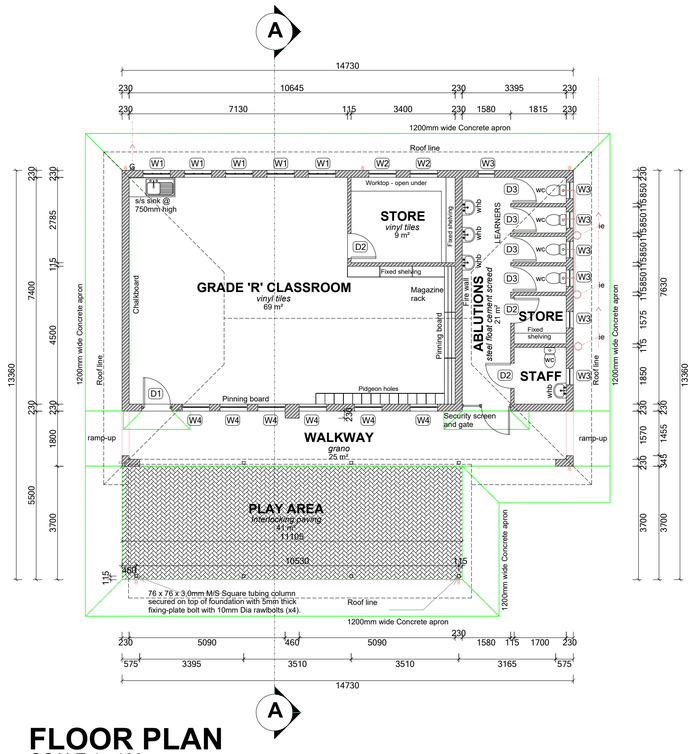
CONSULTANT:

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C: +27 82 828 3952

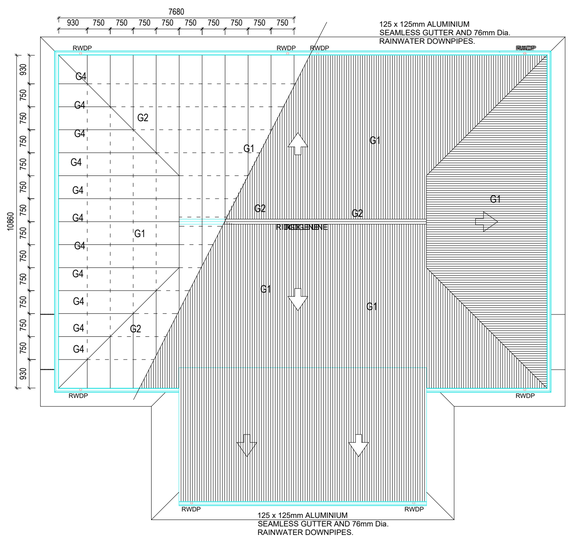
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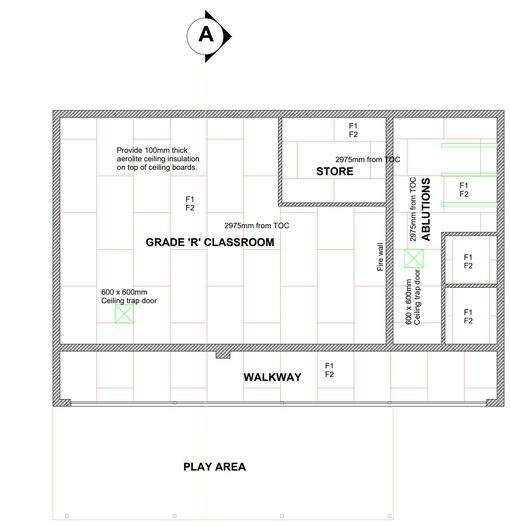
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FLOOR PLAN
SCALE 1 : 100



ROOF PLAN
SCALE 1 : 100



CEILING 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 Aqualsolv 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 - 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 brandering 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 - 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 Al5066-06ASE08 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 fhr 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) Gulley 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 louvres 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
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

LIMPOPO PROVINCIAL GOVERNMENT REPUBLIC OF SOUTH AFRICA
Department of Public Works

INSTITUTION
PFUMBADA PRIMARY SCHOOL

INSTITUTION EMIS NUMBER
921230573

SERVICE
NEW BUILDINGS & ALTERATIONS

CONTRACT - SECTION
DOCUMENTATION & PROCUREMENT

DISCIPLINE: ARCHITECTURAL | PROJECT STAGE: 4

WORK DESCRIPTION - SUB DIVISION
1 GRADE R CLASSROOM BLOCK

DRAWING DESCRIPTION
FLOOR AND ROOF PLAN

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

RESPONSIBLE PROFESSIONAL

DATE	NAME	SIGNATURE	PR NUMBER
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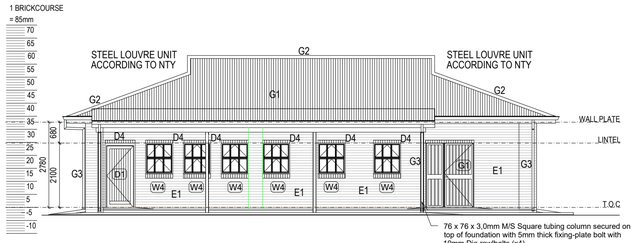
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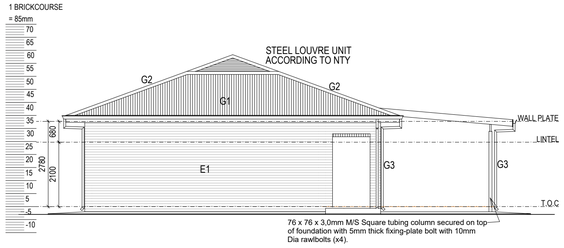
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CONTRACTOR :

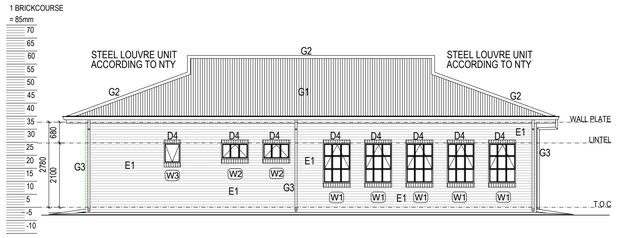
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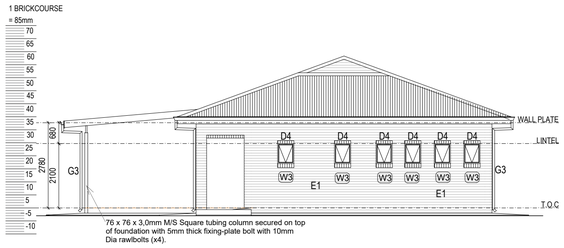
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SCALE 1 : 100



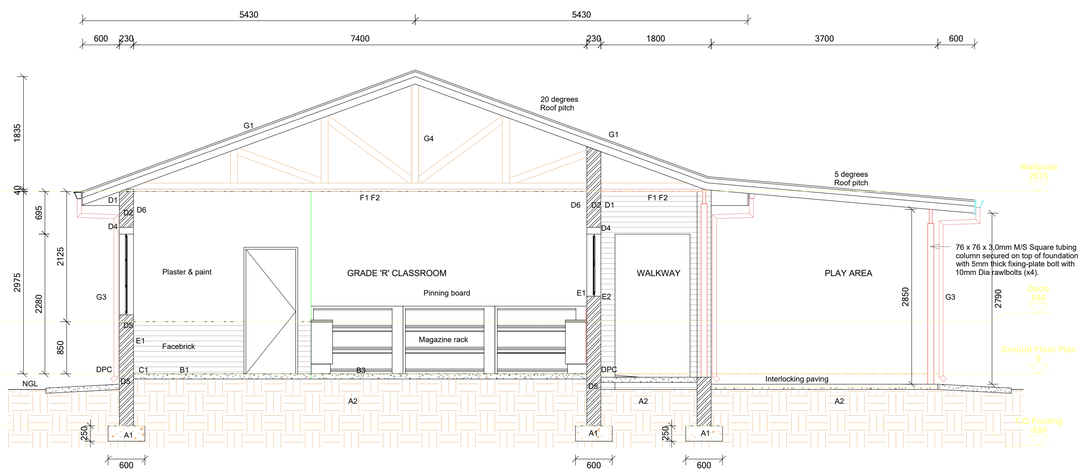
SIDE ELEVATION
SCALE 1 : 100



BACK ELEVATION
SCALE 1 : 100



SIDE ELEVATION
SCALE 1 : 100



SECTION A-A
SCALE 1 : 50

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 Aqualsolv 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 - 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 brandering 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)

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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

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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 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 fhr 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) Gulley positions to be determined as per site prescribed overall drainage design
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8) Trusses to be designed in accordance with SABS 0400 & approved by Project Engineers

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REV No	DATE :	DESCRIPTION :

REVISIONS
SIZE ON ORIGINAL DRAWING 100 mm

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA
Department of
Public Works

INSTITUTION
PFUMBADA PRIMARY SCHOOL

INSTITUTION EMIS NUMBER
921230573

SERVICE
NEW BUILDINGS & ALTERATIONS

CONTRACT - SECTION
DOCUMENTATION & PROCUREMENT

DISCIPLINE: ARCHITECTURAL | PROJECT STAGE: 4

WORK DESCRIPTION - SUB DIVISION
1 GRADE R CLASSROOM BLOCK

DRAWING DESCRIPTION
SECTION AND ELEVATIONS

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

RESPONSIBLE PROFESSIONAL

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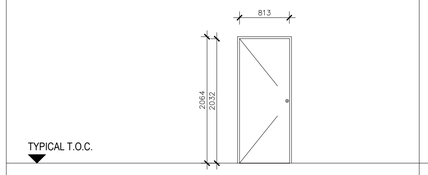
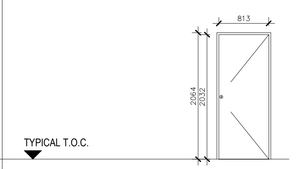
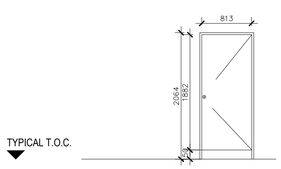
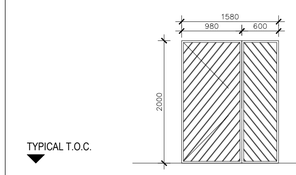
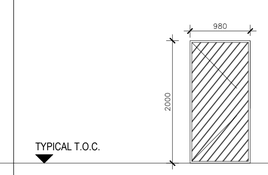
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Web: www.rubenreddyarch.co.za

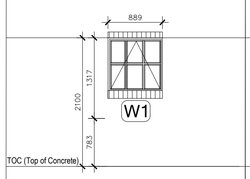
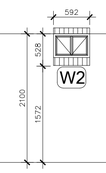
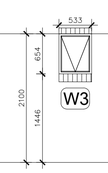
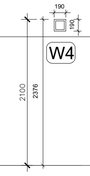
CONTRACTOR :

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SIZE	DRAWING NUMBER		REV2
A 1	2020_68- 1GR- 101		A

DOOR SCHEDULE

	TYPE D01	TYPE D02	TYPE D03	TYPE G01	TYPE G02
					
POSITION:	ALL EXTERIOR DOORS	ALL INTERNAL DOORS:	TOILET CUBICLES	ABLUTIONS GATE	SECURITY GATE
DOOR TYPE :	813mm x 2032mm Framed, ledged, braced and battened timber door	813mm x 2032mm solid timber door	813mm x 2032mm solid timber door 150mm UNDERCUT	1580mm x 2000mm	980mm x 2000mm
DOOR FINISH:	3 x coats clear varnish	3 x coats clear varnish	AS PER MANUFACTURERS SPEC.	3 x coats clear varnish	3 x coats clear varnish
FRAME:	1.2mm double rebated frames suitable for 230mm wall, to accommodate 813 x 2032 door leaf	1.2mm double rebated frames suitable for 110mm wall, to accommodate 813 x 2032 door leaf	VITREX	1.2mm double rebated frames suitable for 230mm wall, to accommodate 936 x 2032 door leaf	1.2mm double rebated frames suitable for 230mm wall, to accommodate 936 x 2032 door leaf
FRAME FINISH:	1 X coat Zinc Chromate primer 2 x coat approved enamel paint	1 X coat Zinc Chromate primer 2 x coat approved enamel paint	AS PER MANUFACTURERS SPEC.	1 X coat Zinc Chromate primer 2 x coat approved enamel paint	1 X coat Zinc Chromate primer 2 x coat approved enamel paint
DOOR:	Standard approved 'meranti' ledged and braced door	2032x813x40mm solid flush panel door with hardboard both side and 2 concealed edges	VITREX	painted mild steel gate consisting of 10x10mm mild steel bars placed at 100mm centres at a 45° angle, colour to architect's specification	painted mild steel gate consisting of 10x10mm mild steel bars placed at 100mm centres at a 45° angle, colour to architect's specification
FANLIGHT:	NONE	NONE	NONE	NONE	NONE
IRONMONGERY:	4 Lever security lockset and satin - chromed handles all approved	4 Lever security lockset and satin - chromed handles all approved	INDICATOR LOCK	4 Lever security lockset and satin - chromed handles all approved	4 Lever security lockset and satin - chromed handles all approved
COUNT:	2	3	4	1	2

WINDOW SCHEDULE

				
NUMBER	W01	W02	W03	W04
TYPE				
COUNT	20	4	9	8
WINDOW	Standard horizontal pivot type steel school window type 5/8, 889mm x 1317mm high	Standard horizontal pivot type steel school window type 5/8, 889mm x 528mm high	Standard horizontal pivot type steel school window type 5/8, 533mm x 654mm high	Terracota airbrick
GLASS	6.38mm Laminated clear safety glass	6.38mm Laminated clear safety glass	6.38mm Laminated clear safety glass	
FITTINGS	STANDARD BRASS FITTINGS	STANDARD BRASS FITTINGS	STANDARD BRASS FITTINGS	
BURGLAR BARS	12 x 12mm solid burglar bars to all sashes to line up with vertical and horizontal section of window	12 x 12mm solid burglar bars to all sashes to line up with vertical and horizontal section of window	12 x 12mm solid burglar bars to all sashes to line up with vertical and horizontal section of window	
FINISH	Spot prime defects in pre-primed surfaces with Plascon Metal Primer (UC501) and two coats Plascon Enamel Doors & Trims high gloss enamel paint - colour Bryce Canyon (RC4-C1-2)	Spot prime defects in pre-primed surfaces with Plascon Metal Primer (UC501) and two coats Plascon Enamel Doors & Trims high gloss enamel paint - colour Bryce Canyon (RC4-C1-2)	Spot prime defects in pre-primed surfaces with Plascon Metal Primer (UC501) and two coats Plascon Enamel Doors & Trims high gloss enamel paint - colour Bryce Canyon (RC4-C1-2)	
NOTES	HEAVY STEEL SECTION	HEAVY STEEL SECTION	HEAVY STEEL SECTION	

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) Gulley 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 louvres 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
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

LIMPOPO PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA
Department of
Public Works

INSTITUTION
PFUMBADA PRIMARY SCHOOL

INSTITUTION EMIS NUMBER
921230573

SERVICE
NEW BUILDINGS & ALTERATIONS

CONTRACT - SECTION
DOCUMENTATION & PROCUREMENT

DISCIPLINE	PROJECT STAGE
ARCHITECTURAL	4

WORK DESCRIPTION - SUB DIVISION
1 GRADE R CLASSROOM BLOCK

DRAWING DESCRIPTION
SECTION AND ELEVATIONS

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

RESPONSIBLE PROFESSIONAL

DATE	NAME	SIGNATURE	PR NUMBER
2023.06.20	YUSUF VAHED		PA7812

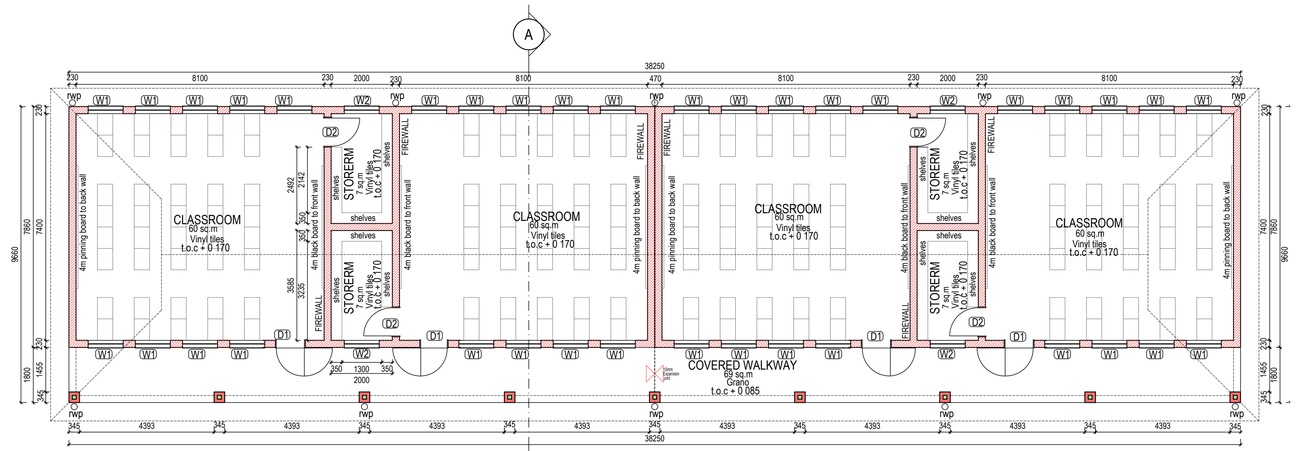
DRAWING CO-ORDINATED

CONSULTANT :

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CONTRACTOR :

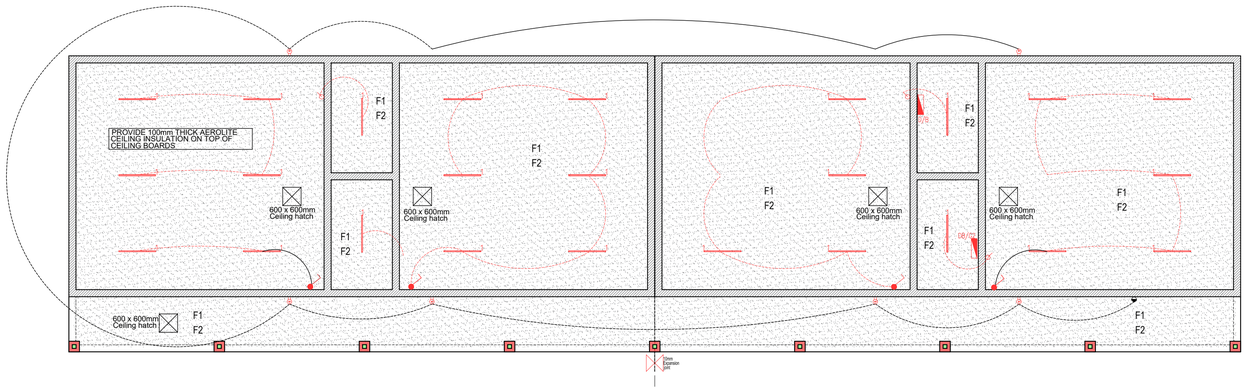
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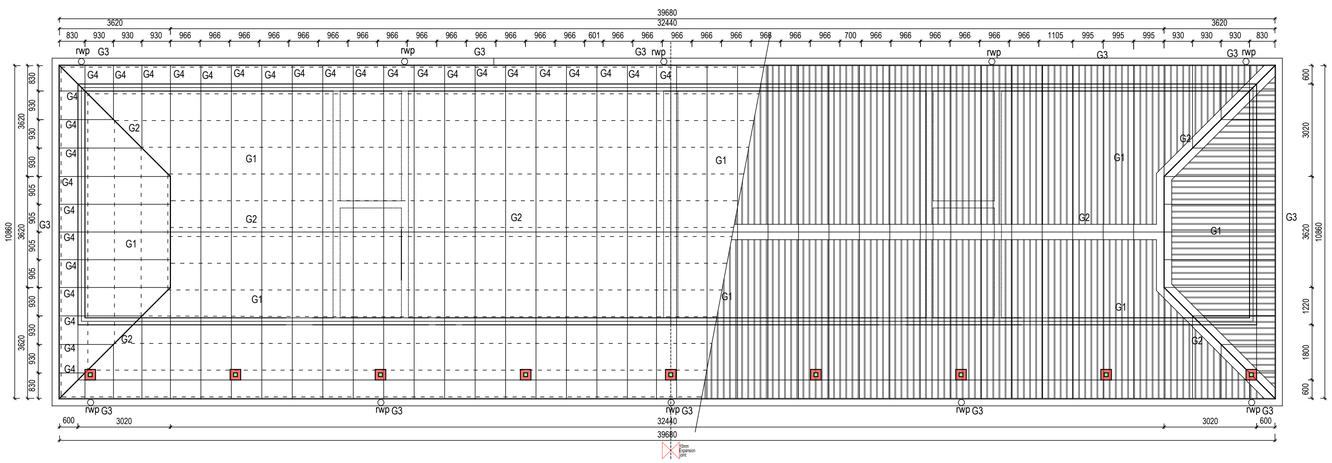
FLOOR PLAN
SCALE 1 : 100

NOTES:

SHELVING
STORE ROOM (4 off per block)
4 Rows 300mm wide x 16mm thick melamine shelving on 1800 high wall bands and brackets at 600mm centres.



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 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 Aqualsolv 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 - 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 brandering 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 - 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 Al5066-06ASE08 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 fhr 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) Gulley 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 louvres 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
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

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA
DEPARTMENT OF
EDUCATION

INSTITUTION
PFUMBADA PRIMARY SCHOOL

INSTITUTION EMIS NUMBER
921230573

SERVICE
NEW BUILDINGS & ALTERATIONS

CONTRACT - SECTION
DOCUMENTATION & PROCUREMENT

DISCIPLINE: ARCHITECTURAL | PROJECT STAGE: 4

WORK DESCRIPTION - SUB DIVISION
4 CLASSROOM WITH STORE BLOCK

DRAWING DESCRIPTION
FLOOR, CEILING AND ROOF PLAN

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

RESPONSIBLE PROFESSIONAL

DATE	NAME	SIGNATURE	PR NUMBER
2025.06.20	YUSUF VAHED		PA7812

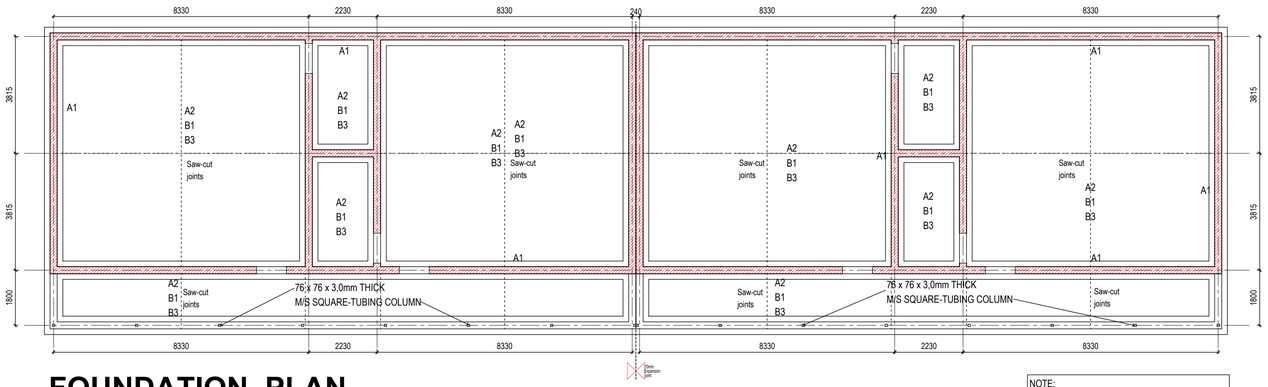
DRAWING CO-ORDINATED

CONSULTANT :

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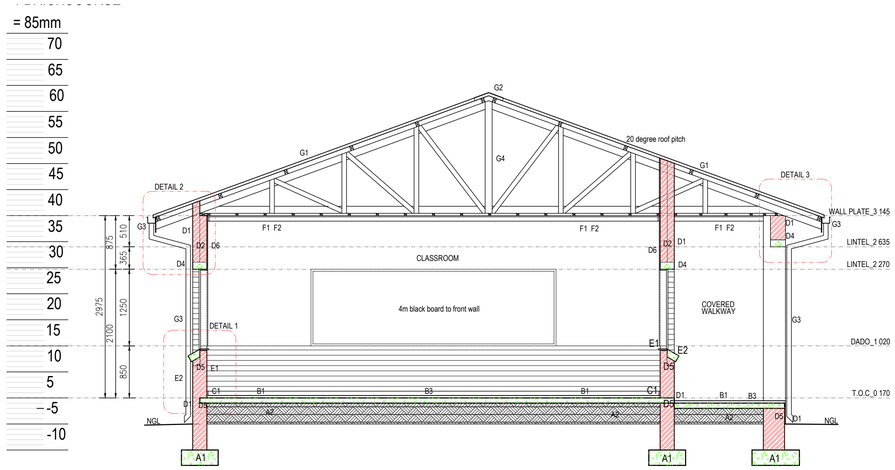
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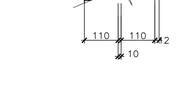


FOUNDATION PLAN
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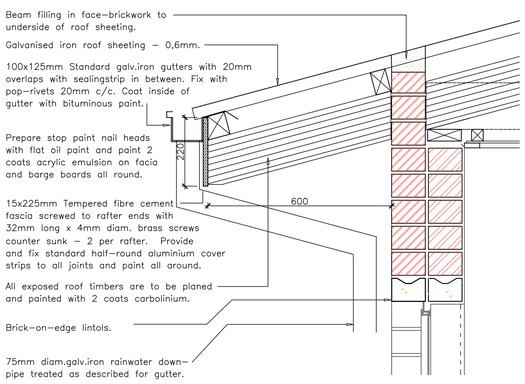
NOTE:
FOUNDATION PLAN & DETAILS - WHERE APPLICABLE REFER TO ENGINEERS DRAWINGS & DETAIL FOR REINFORCED CONCRETE FOUNDATIONS.



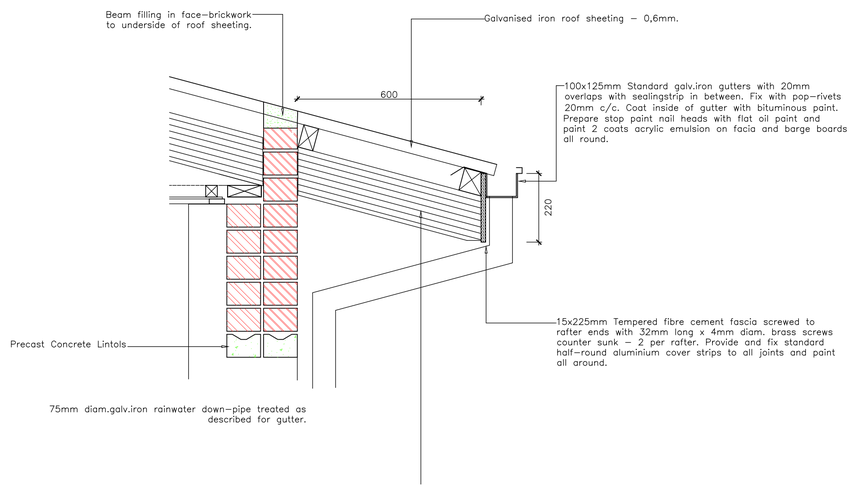
SECTION A-A
SCALE 1 : 50



DETAIL 1
SCALE 1 : 10



DETAIL 2
SCALE 1 : 10



DETAIL 3
SCALE 1 : 10

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 Aqualsolv 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 - 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 brandering 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 - 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 Al5066-06ASE08 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 fhr 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) Gulley 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 louvres 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
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

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA
DEPARTMENT OF
EDUCATION

INSTITUTION
PFUMBADA PRIMARY SCHOOL

INSTITUTION EMIS NUMBER
921230573

SERVICE
NEW BUILDINGS & ALTERATIONS

CONTRACT - SECTION
DOCUMENTATION & PROCUREMENT

DISCIPLINE	PROJECT STAGE
ARCHITECTURAL	4

WORK DESCRIPTION - SUB DIVISION
4 CLASSROOM WITH STORE BLOCK

DRAWING DESCRIPTION
FOUNDATION PLAN,SECTION&DETAIL

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

RESPONSIBLE PROFESSIONAL

DATE	NAME	SIGNATURE	PR NUMBER
2026.06.20	YUSUF VAHED		PA7812

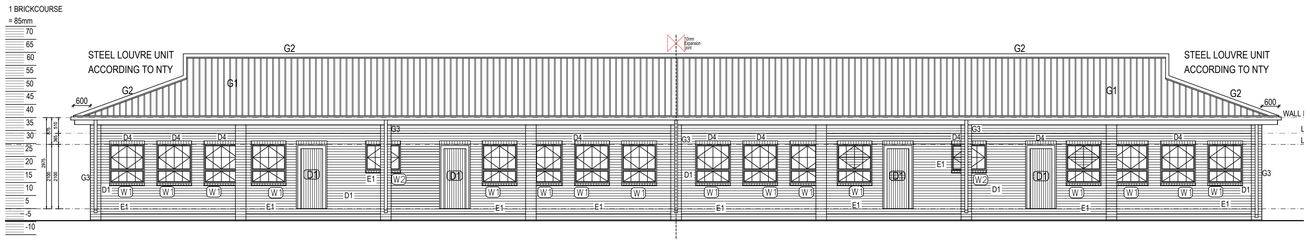
DRAWING CO-ORDINATED

CONSULTANT :

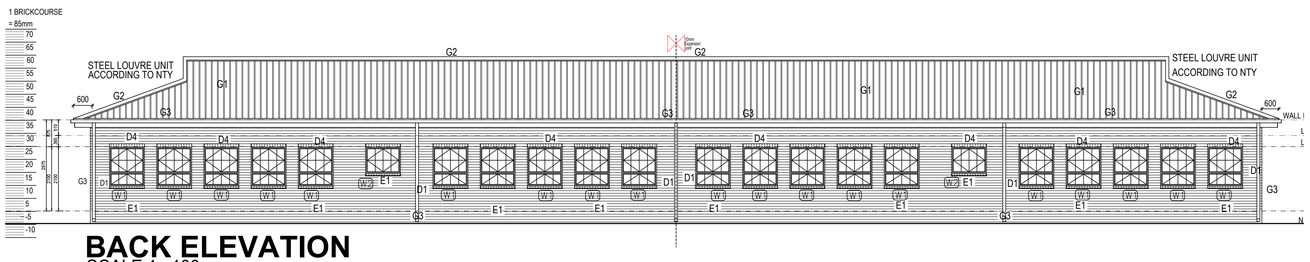
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CONTRACTOR :

CADD SYSTEM	AUTO CAD		FILE NAME
SIZE	DRAWING NUMBER		REV2
A 1	2020_68- 4CLS- 102		A



FRONT ELEVATION
SCALE 1 : 100



BACK ELEVATION
SCALE 1 : 100



SIDE ELEVATION
SCALE 1 : 100

SIDE ELEVATION
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 Aqualsolv 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 - 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 brandering 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 - 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 Al5066-06ASE08 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 fhr 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) Gulley 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 louvres 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
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

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA
DEPARTMENT OF
EDUCATION

INSTITUTION
PFUMBADA PRIMARY SCHOOL

INSTITUTION EMIS NUMBER
921230573

SERVICE
NEW BUILDINGS & ALTERATIONS

CONTRACT - SECTION
DOCUMENTATION & PROCUREMENT

DISCIPLINE: ARCHITECTURAL
PROJECT STAGE: 4

WORK DESCRIPTION - SUB DIVISION
4 CLASSROOM WITH STORE BLOCK

DRAWING DESCRIPTION
ELEVATIONS

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

RESPONSIBLE PROFESSIONAL

DATE	NAME	SIGNATURE	PR NUMBER
2020.06.26	YUSUF VAHED		PA7812

DRAWING CO-ORDINATED

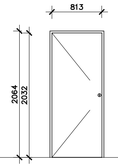
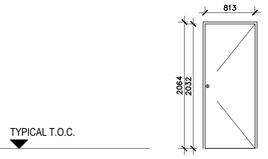
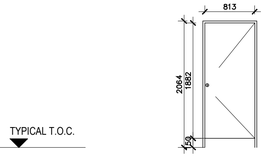
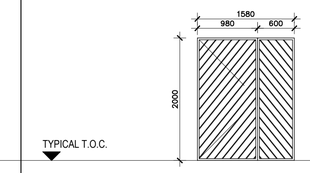
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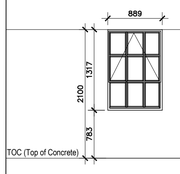
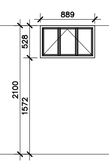
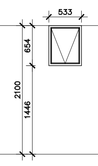
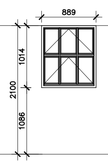
CONTRACTOR :

CADD SYSTEM	AUTO CAD		FILE NAME
SIZE	DRAWING NUMBER		REV2
A 1	2020_68- 4CLS- 103		A

DOOR SCHEDULE

TYPE D01		TYPE D02		TYPE D03		TYPE G01	
							
POSITION:	ALL EXTERIOR DOORS	POSITION:	ALL INTERNAL DOORS:	POSITION:	TOILET CUBICLES	POSITION:	ABLUTIONS GATE
DOOR TYPE :	813mm x 2032mm Framed, ledged, braced and battened timber door	DOOR TYPE :	813mm x 2032mm solid timber door	DOOR TYPE :	813mm x 2032mm solid timber door 150mm UNDERCUT	DOOR TYPE :	1580mm x 2000mm
DOOR FINISH:	3 x coats clear varnish	DOOR FINISH:	3 x coats clear varnish	DOOR FINISH:	3 x coats clear varnish	DOOR FINISH:	3 x coats clear varnish
FRAME:	1.2mm double rebated frames suitable for 230mm wall, to accommodate 813 x 2032 door leaf	FRAME:	1.2mm double rebated frames suitable for 110mm wall, to accommodate 813 x 2032 door leaf	FRAME:	1.2mm double rebated frames suitable for 110mm wall, to accommodate 813 x 2032 door leaf	FRAME:	1.2mm double rebated frames suitable for 230mm wall, to accommodate 936 x 2032 door leaf
FRAME FINISH:	1 X coat Zinc Chromate primer 2 x coat approved enamel paint	FRAME FINISH:	1 X coat Zinc Chromate primer 2 x coat approved enamel paint	FRAME FINISH:	1 X coat Zinc Chromate primer 2 x coat approved enamel paint	FRAME FINISH:	1 X coat Zinc Chromate primer 2 x coat approved enamel paint
DOOR:	Standard approved 'meranti' ledged and braced door	DOOR:	2032x813x40mm solid flush panel door with hardboard both side and 2 concealed edges	DOOR:	2032x813x40mm solid flush panel door with hardboard both side and 2 concealed edges	DOOR:	painted mild steel gate consisting of 10x10mm mild steel bars placed at 100mm centres at a 45° angle, colour to architect's specification
FANLIGHT:	NONE	FANLIGHT:	NONE	FANLIGHT:	NONE	FANLIGHT:	NONE
IRONMONGERY:	4 Lever security lockset and satin - chromed handles all approved	IRONMONGERY:	4 Lever security lockset and satin - chromed handles all approved	IRONMONGERY:	4 Lever security lockset and satin - chromed handles all approved	IRONMONGERY:	4 Lever security lockset and satin - chromed handles all approved

WINDOW SCHEDULE

			
NUMBER W01	NUMBER W02	NUMBER W03	NUMBER W04
TYPE	TYPE	TYPE	TYPE
AREA	AREA	AREA	AREA
WINDOW: Standard horizontal pivot type steel school window type 5/8, 889mm x 1317mm high	WINDOW: Standard horizontal pivot type steel school window type 5/8, 889mm x 528mm high	WINDOW: Standard horizontal pivot type steel school window type 5/8, 533mm x 654mm high	WINDOW: Standard horizontal pivot type steel school window type 5/8, 889mm x 1014mm high
GLASS: 6.3mm Clear safety glass	GLASS: 6.3mm Clear safety glass	GLASS: 6.3mm Clear safety glass	GLASS: 6.3mm Clear safety glass
FITTINGS: STANDARD BRASS FITTINGS	FITTINGS: STANDARD BRASS FITTINGS	FITTINGS: STANDARD BRASS FITTINGS	FITTINGS: STANDARD BRASS FITTINGS
BURGLAR BARS: 12 x 12mm solid burglar bars to all sashes to line up with vertical and horizontal section of window	BURGLAR BARS: 12 x 12mm solid burglar bars to all sashes to line up with vertical and horizontal section of window	BURGLAR BARS: 12 x 12mm solid burglar bars to all sashes to line up with vertical and horizontal section of window	BURGLAR BARS: 12 x 12mm solid burglar bars to all sashes to line up with vertical and horizontal section of window
FINISH: Spot prime defects in pre-primed surfaces with Plascon Metal Primer (UC501) and two coats Plascon Enamel Doors & Trims high gloss enamel paint - colour Bryce Canyon (RC4-C1-2)	FINISH: Spot prime defects in pre-primed surfaces with Plascon Metal Primer (UC501) and two coats Plascon Enamel Doors & Trims high gloss enamel paint - colour Bryce Canyon (RC4-C1-2)	FINISH: Spot prime defects in pre-primed surfaces with Plascon Metal Primer (UC501) and two coats Plascon Enamel Doors & Trims high gloss enamel paint - colour Bryce Canyon (RC4-C1-2)	FINISH: Spot prime defects in pre-primed surfaces with Plascon Metal Primer (UC501) and two coats Plascon Enamel Doors & Trims high gloss enamel paint - colour Bryce Canyon (RC4-C1-2)
NOTES: HEAVY STEEL SECTION	NOTES: HEAVY STEEL SECTION	NOTES: HEAVY STEEL SECTION	NOTES: HEAVY STEEL SECTION

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) Gulley 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 louvres 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
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

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA
DEPARTMENT OF
EDUCATION

INSTITUTION
PFUMBADA PRIMARY SCHOOL

INSTITUTION EMIS NUMBER
921230573

SERVICE
NEW BUILDINGS & ALTERATIONS

CONTRACT - SECTION
DOCUMENTATION & PROCUREMENT

DISCIPLINE: ARCHITECTURAL | PROJECT STAGE: 4

WORK DESCRIPTION - SUB DIVISION
4 CLASSROOM WITH STORE BLOCK

DRAWING DESCRIPTION
DOOR AND WINDOW SCHEDULES

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

RESPONSIBLE PROFESSIONAL

DATE	NAME	SIGNATURE	PR NUMBER
2020.06.26	YUSUF VAHED		PA7812

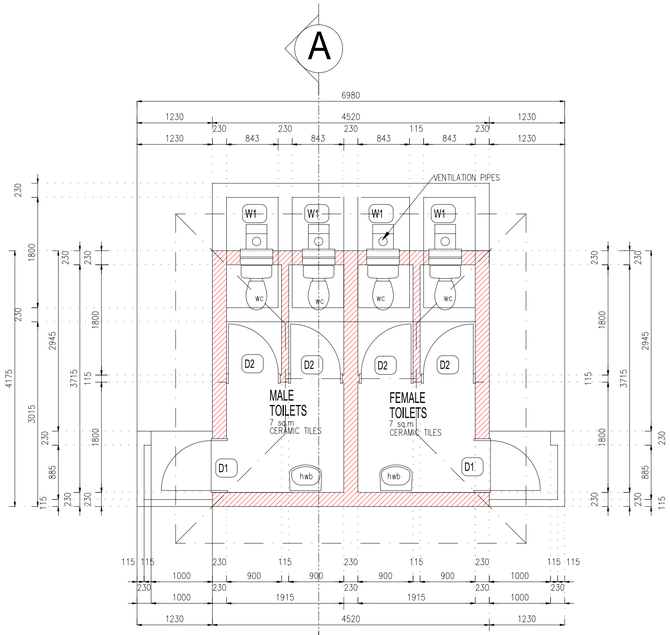
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CONSULTANT :

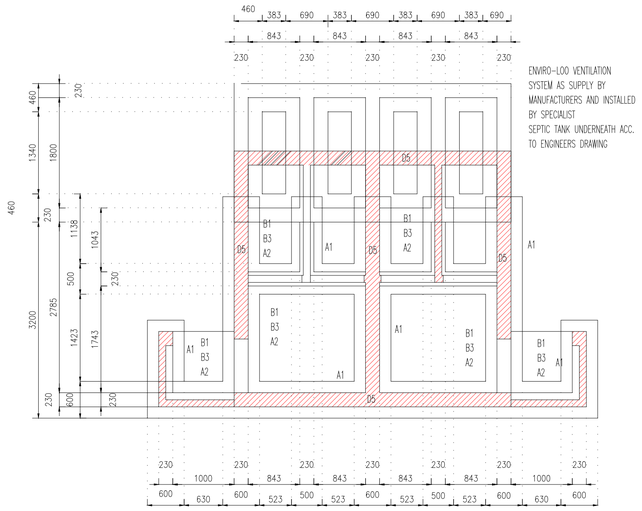
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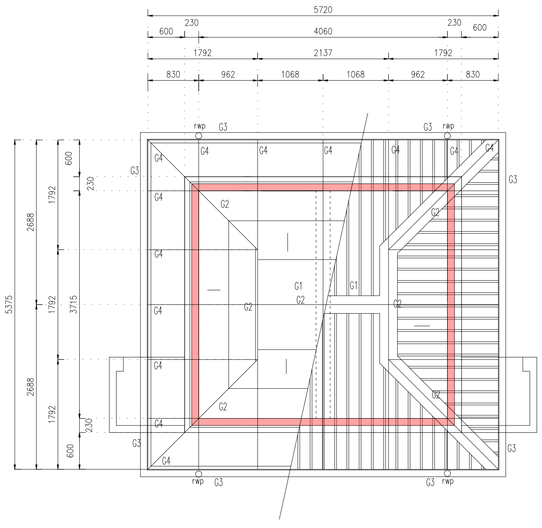
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SIZE	DRAWING NUMBER		REV2
A 1	2020_68- 4CLS- 104		A



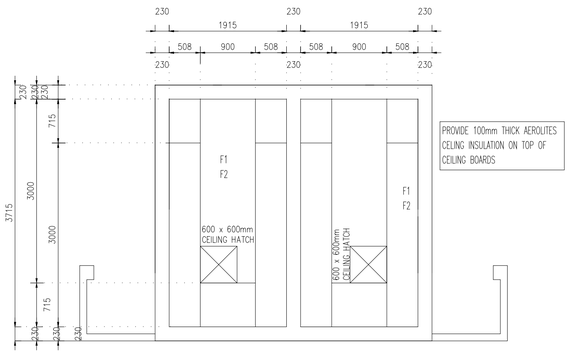
FLOOR PLAN
SCALE 1 : 50



FOUNDATION LAYOUT
SCALE 1 : 50



CEILING PLAN
SCALE 1 : 50



ROOF PLAN
SCALE 1 : 50

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 Aqualsolv 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 - 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 brandering 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 - 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 Al5066-06ASE08 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 fhr 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) Gulley 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)
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8) Trusses to be designed in accordance with SABS 0400 & approved by Project Engineers

REVISIONS		
REV No	DATE	DESCRIPTION

ISSUED FOR TENDER

SIGNATURE TABLE

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

REVISIONS		
REV No	DATE :	DESCRIPTION :

SIZE ON ORIGINAL DRAWING 100 mm

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA
DEPARTMENT OF
EDUCATION

INSTITUTION
PFUMBADA PRIMARY SCHOOL

INSTITUTION EMIS NUMBER
921230573

SERVICE
NEW BUILDINGS & ALTERATIONS

CONTRACT - SECTION
CONSTRUCTION

DISCIPLINE	PROJECT STAGE
ARCHITECTURAL	4

WORK DESCRIPTION - SUB DIVISION
4 CUBICLE ENVIROLOO ABLUTION BLOCK

DRAWING DESCRIPTION
FLOOR PLAN

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

RESPONSIBLE PROFESSIONAL

DATE	NAME	SIGNATURE	PR NUMBER
2023.06.20	Y.VAHED		7812

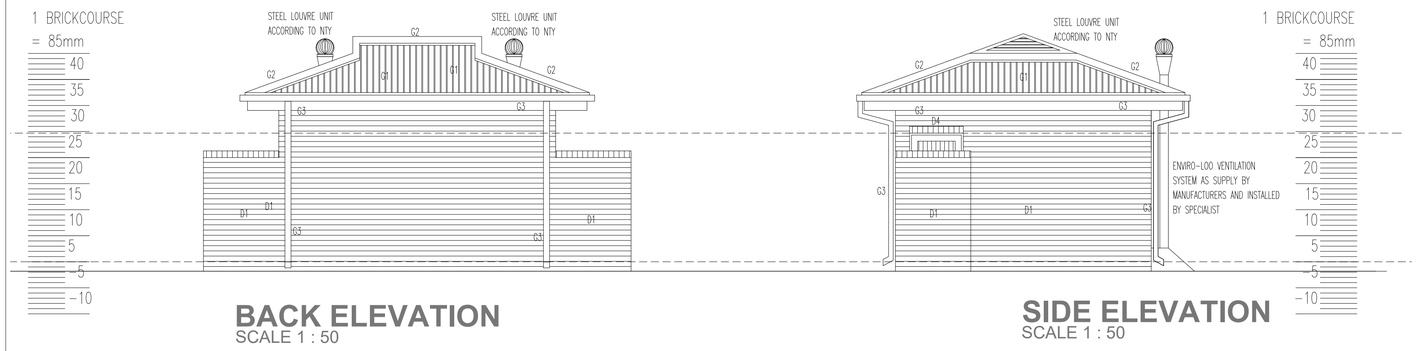
2023.06.20 DRAWING CO-ORDINATED

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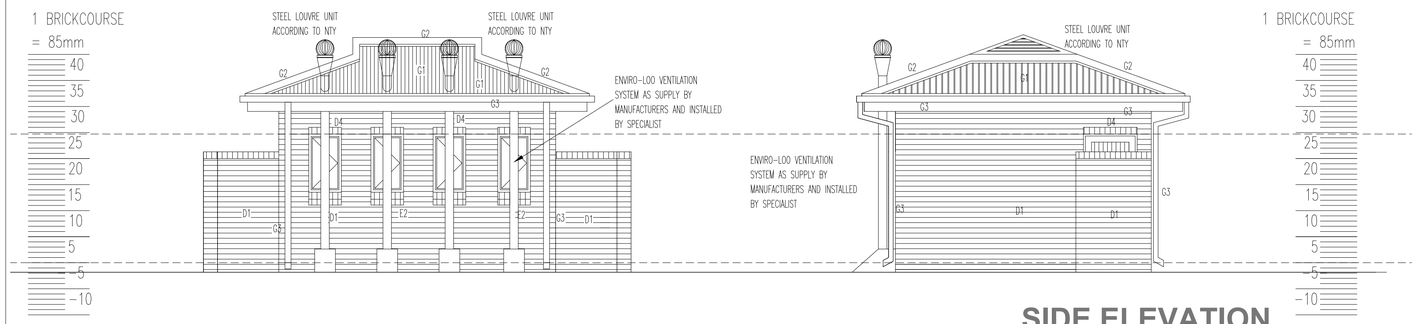
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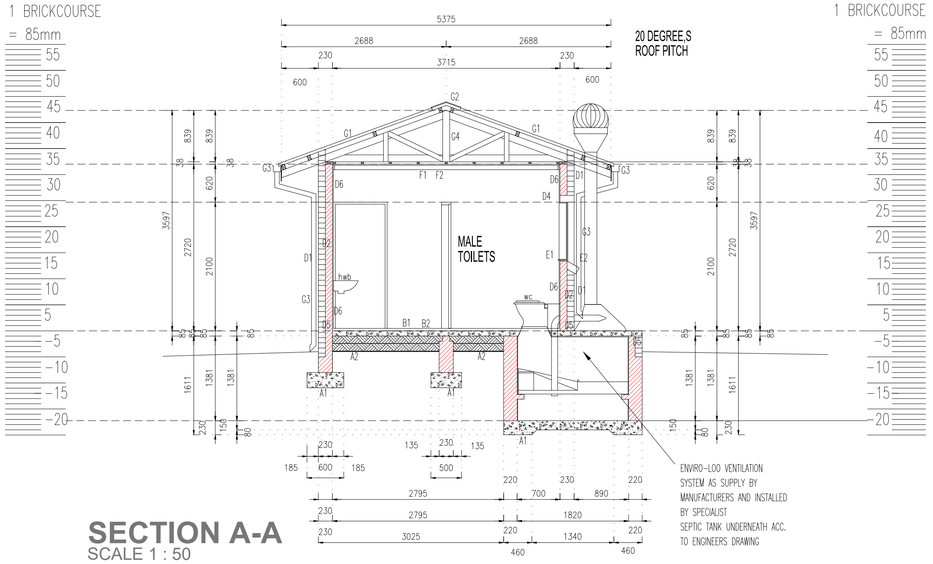
BACK ELEVATION
SCALE 1 : 50

SIDE ELEVATION
SCALE 1 : 50



FRONT ELEVATION
SCALE 1 : 50

SIDE ELEVATION
SCALE 1 : 50



SECTION A-A
SCALE 1 : 50

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 Aqualsolv 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 - 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 brandering 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 - 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 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 fhr 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) Gulley 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 louvres from below eaves to drop of 1200 mm
8) Trusses to be designed in accordance with SABS 0400 & approved by Project Engineers

REVISIONS		
REV No	DATE	DESCRIPTION

ISSUED FOR TENDER

SIGNATURE TABLE

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

REVISIONS		
REV No	DATE :	DESCRIPTION :

SIZE ON ORIGINAL DRAWING 100 mm

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA
DEPARTMENT OF
EDUCATION

INSTITUTION
PFUMBADA PRIMARY SCHOOL

INSTITUTION EMIS NUMBER
921230573

SERVICE
NEW BUILDINGS & ALTERATIONS

CONTRACT - SECTION
CONSTRUCTION

DISCIPLINE	PROJECT STAGE
ARCHITECTURAL	4

WORK DESCRIPTION - SUB DIVISION
4 CUBICLE ENVIROLOO ABLUTION BLOCK

DRAWING DESCRIPTION
SECTION AND ELEVATION

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

RESPONSIBLE PROFESSIONAL

DATE	NAME	SIGNATURE	PR NUMBER
2023.06.20	Y.VAHED		7812

DRAWING CO-ORDINATED

CONSULTANT :

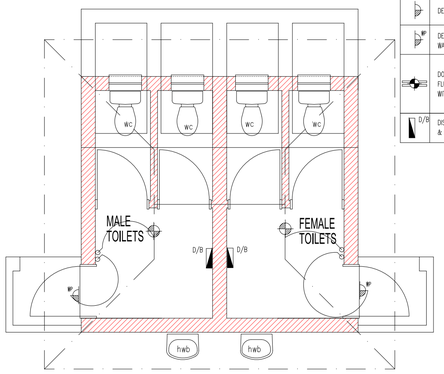
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CONTRACTOR :

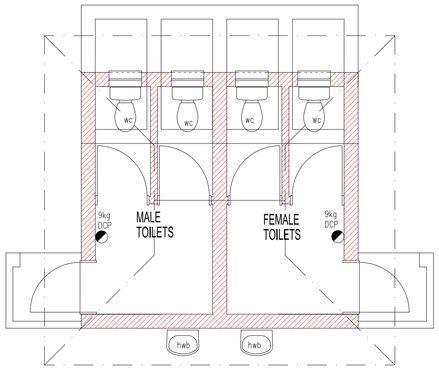
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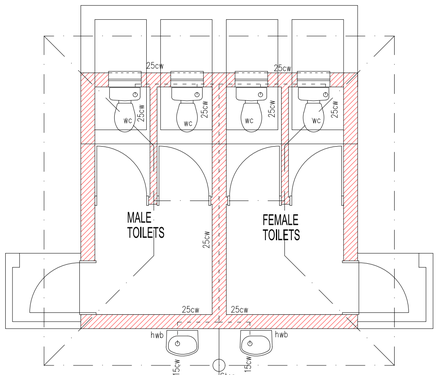
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	DECORATIVE WALL LIGHT FITTING		15 AMP DOUBLE PLUG POINT BUILT IN 1000mm ABOVE FFL
	DECORATIVE WATERPROOF EXTERNAL WALL MOUNTED LIGHT FITTING	TEL	TELEPHONE POINT
	DOUBLE TUBE FLUSH FITTING FLUORESCENT LIGHT COMPLETE WITH DIFFUSER	12 A/C	12 Amp ISOLATOR FOR A/C UNIT MOUNTED 150mm BELOW CEILING
		40 A/C	40 Amp ISOLATOR FOR A/C UNIT MOUNTED 500mm BELOW ROOFS EAVE
	DISTRIBUTION BOARD & PRE PAID METERBOX		LIGHT SWITCH



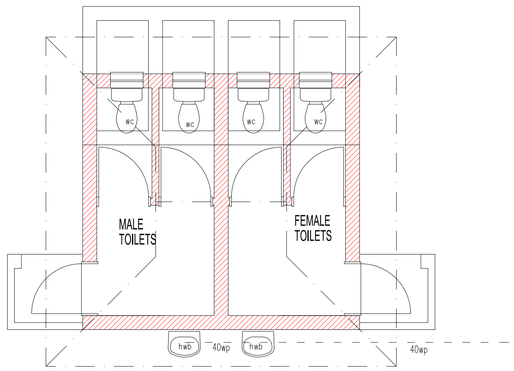
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SCALE 1 : 100



FIRE LAYOUT
SCALE 1 : 100



WATER LAYOUT
SCALE 1 : 100



SEWER LAYOUT
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 Aqualsolv 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 - 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 brandering 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 - 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 Al5066-06ASE08 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 fhr 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) Gulley 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 louvres from below eaves to drop of 1200 mm
8) Trusses to be designed in accordance with SABS 0400 & approved by Project Engineers

REVISIONS

REV No	DATE	DESCRIPTION

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

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA
DEPARTMENT OF
EDUCATION

INSTITUTION
PFUMBADA PRIMARY SCHOOL

INSTITUTION EMIS NUMBER
921230573

SERVICE
NEW BUILDINGS & ALTERATIONS

CONTRACT - SECTION
CONSTRUCTION

DISCIPLINE	PROJECT STAGE
ARCHITECTURAL	4

WORK DESCRIPTION - SUB DIVISION
4 CUBICLE ENVIROLOO ABLUTION BLOCK

DRAWING DESCRIPTION
FIRE, SEWER, WATER, ELECTRICAL

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

RESPONSIBLE PROFESSIONAL

DATE	NAME	SIGNATURE	PR NUMBER
2023.06.20	Y.VAHED		7812

DRAWING CO-ORDINATED

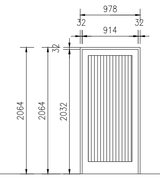
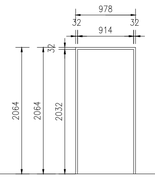
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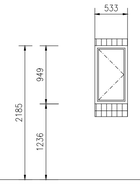
CONTRACTOR :

CADD SYSTEM	AUTO CAD		FILE NAME
SIZE	DRAWING NUMBER		REV2
A 1	2020_68- 4ENV- 102		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. – COLOUT TO ARCHITECT.	1/RED OXIDE PRIMER + 1/COAT UNIVERSAL UNDERCOAT + 2/COATS PLASCON GLOSS ENAMEL PAINT. – COLOUT 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
POSITION:	TOILET
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 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 Aqualsolv 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 - 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 brandering 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 - 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)

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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 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 fhr 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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8) Trusses to be designed in accordance with SABS 0400 & approved by Project Engineers

REVISIONS

REV No	DATE	DESCRIPTION

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

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA
DEPARTMENT OF
EDUCATION

INSTITUTION
PFUMBADA PRIMARY SCHOOL

INSTITUTION EMIS NUMBER
921230573

SERVICE
NEW BUILDINGS & ALTERATIONS

CONTRACT - SECTION
CONSTRUCTION

DISCIPLINE	PROJECT STAGE
ARCHITECTURAL	4

WORK DESCRIPTION - SUB DIVISION
4 CUBICLE ENVIROLOO ABLUTION BLOCK

DRAWING DESCRIPTION
DOOR & WINDOW SCHEDULE

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

RESPONSIBLE PROFESSIONAL

DATE	NAME	SIGNATURE	PR NUMBER
2023.06.20	Y.VAHED		7812

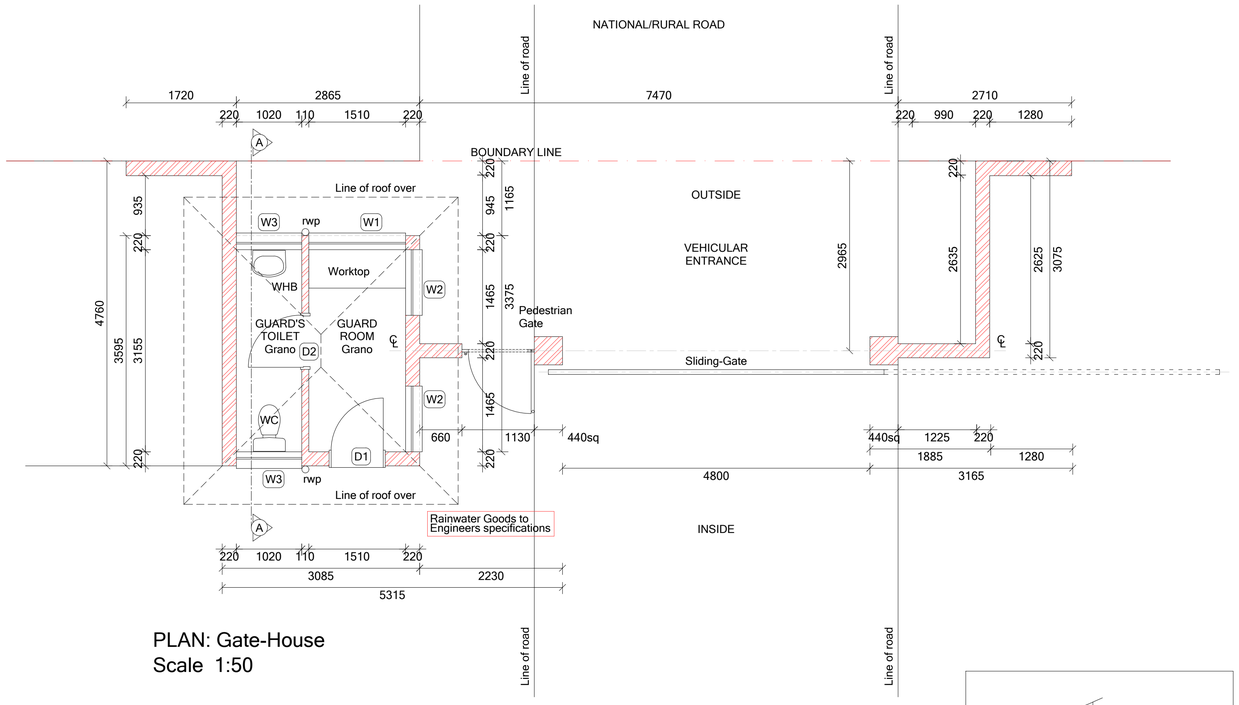
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CONSULTANT :

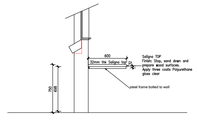
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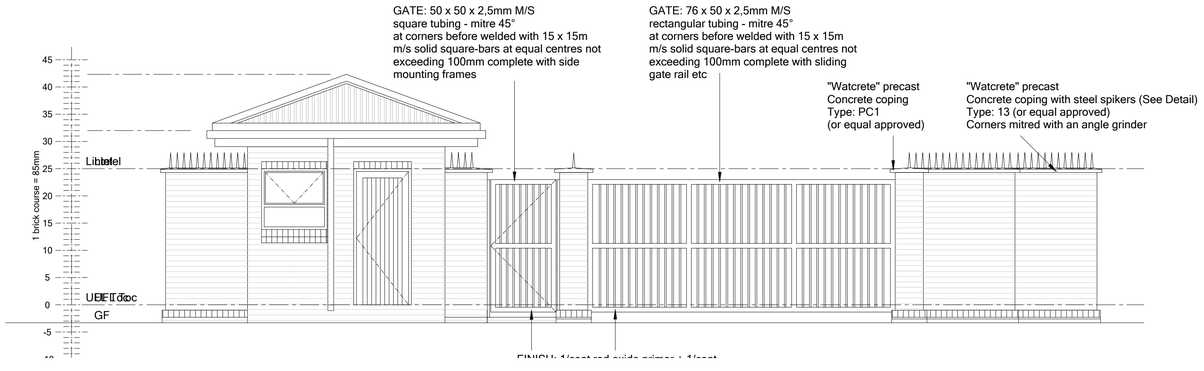
CONTRACTOR :

CADD SYSTEM	AUTO CAD		FILE NAME
SIZE	DRAWING NUMBER		REV2
A 1	2020_68- 4ENV- 103		A



PLAN: Gate-House
Scale 1:50





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 Aqualsolv Degreaser (GR1)", remove rust with "Plascon Rust Remover (RR1)", prime with Plascon Métal Primer (UC501) and apply two coats Plascon Enamel Door & Trims high gloss enamel paint - colour as per finishes schedule.
50 x 226mm 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 - 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 brandering 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 - 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 AI5066-06ASE08 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 fhr 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) Gulley 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 louvres 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
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

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA
DEPARTMENT OF
EDUCATION

INSTITUTION
PFUMBADA PRIMARY SCHOOL

INSTITUTION EMIS NUMBER
921230573

SERVICE
NEW BUILDINGS

CONTRACT - SECTION
DOCUMENTATION & PROCUREMENT

DISCIPLINE	PROJECT STAGE
ARCHITECTURAL	4

WORK DESCRIPTION - SUB DIVISION
GUARD HOUSE

DRAWING DESCRIPTION
PLAN, ELEVATIONS AND JOINERY

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

RESPONSIBLE PROFESSIONAL

DATE	NAME	SIGNATURE	PR NUMBER
2020.06.20	YUSUF VAHED		PA7812

DRAWING CO-ORDINATED

CONSULTANT :

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Email: info@rubenreddyarch.co.za
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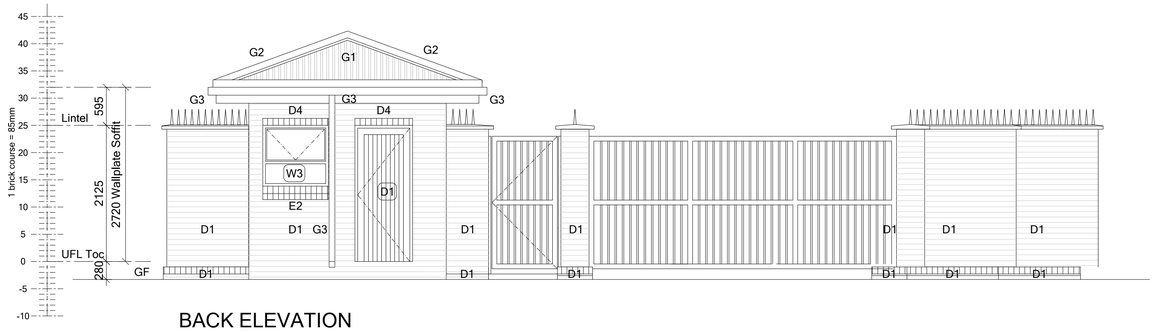
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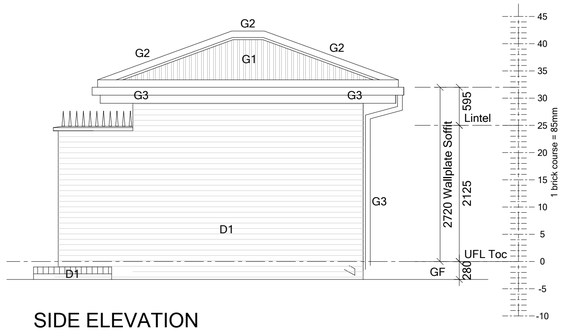
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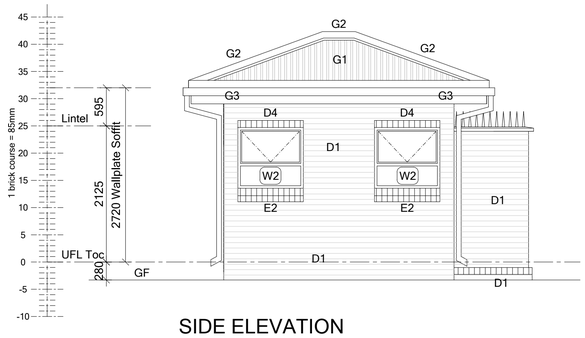
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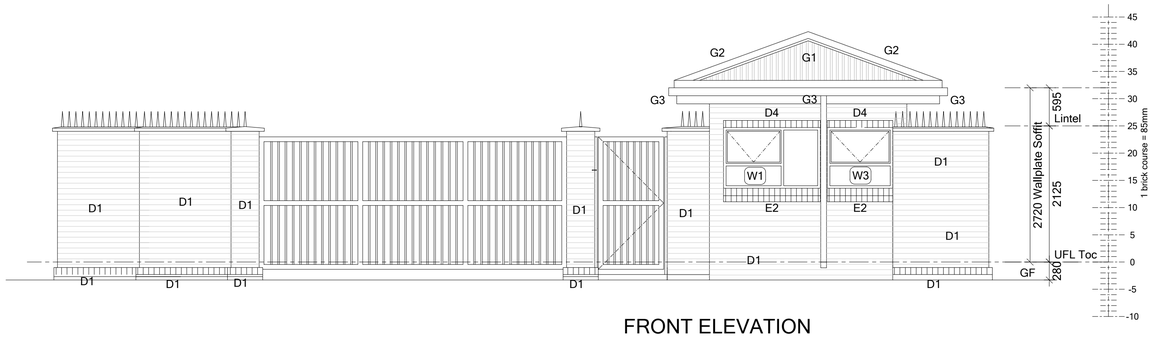
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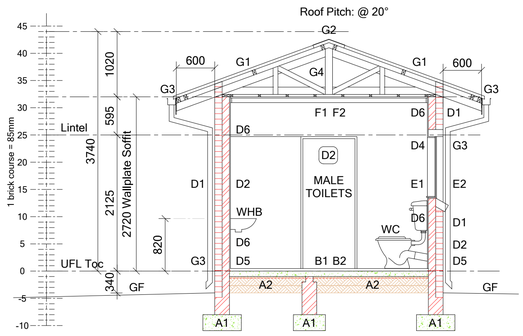
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Scale 1:50



SIDE ELEVATION
Scale 1:50

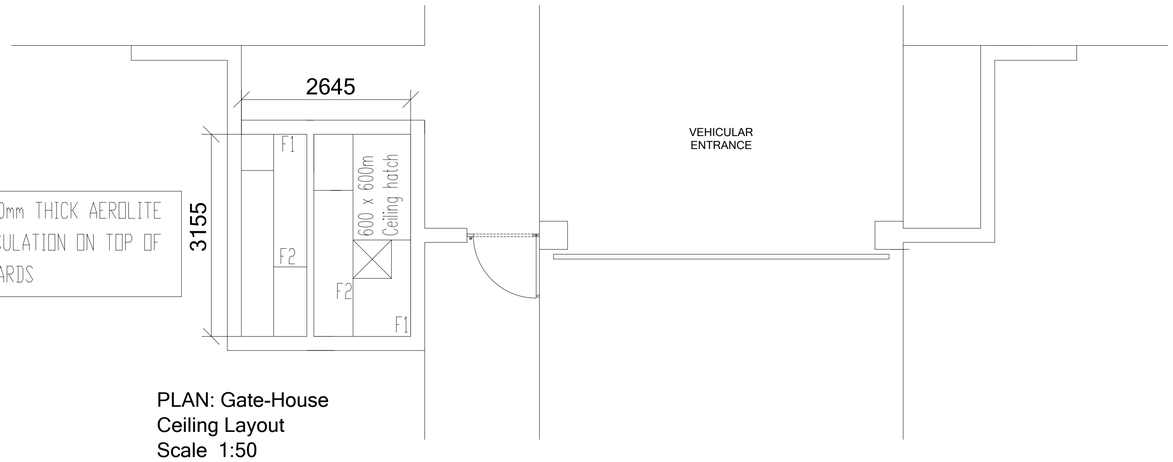


FRONT ELEVATION
Scale 1:50



SECTION A-A
Scale 1:50

PROVIDE 100mm THICK AEROLITE CEILING INSULATION ON TOP OF CEILING BOARDS



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 900 mm Build in Balustrade
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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 louvres 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

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FIRE CONTROL		
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ROADS / STORMWATER		
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REV No	DATE :	DESCRIPTION :

REVISIONS

SIZE ON ORIGINAL DRAWING 100 mm

LIMPOPO
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WORK DESCRIPTION - SUB DIVISION
GUARD HOUSE

DRAWING DESCRIPTION
SECTION, ELEVATIONS AND CEILING

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

RESPONSIBLE PROFESSIONAL

DATE	NAME	SIGNATURE	PR NUMBER
2023.06.20	YUSUF VAHED		PA7812

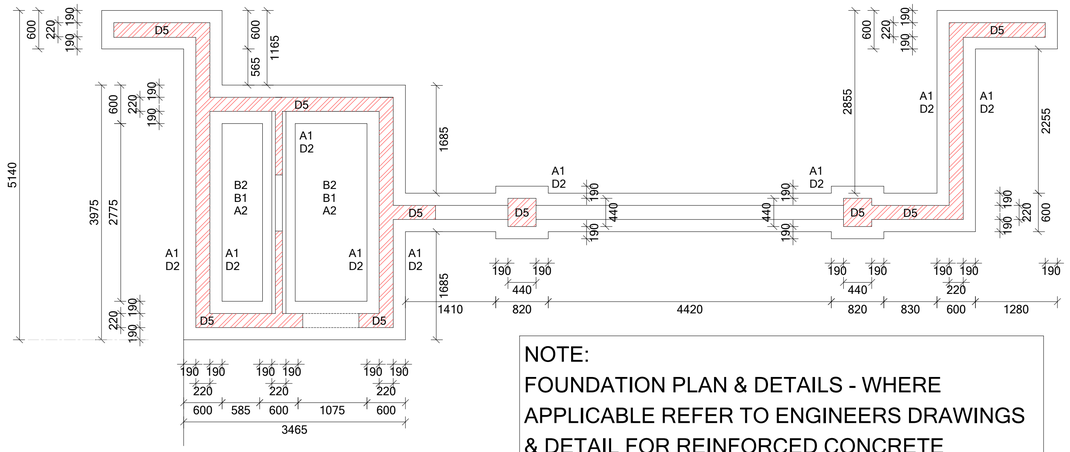
DRAWING CO-ORDINATED

CONSULTANT :

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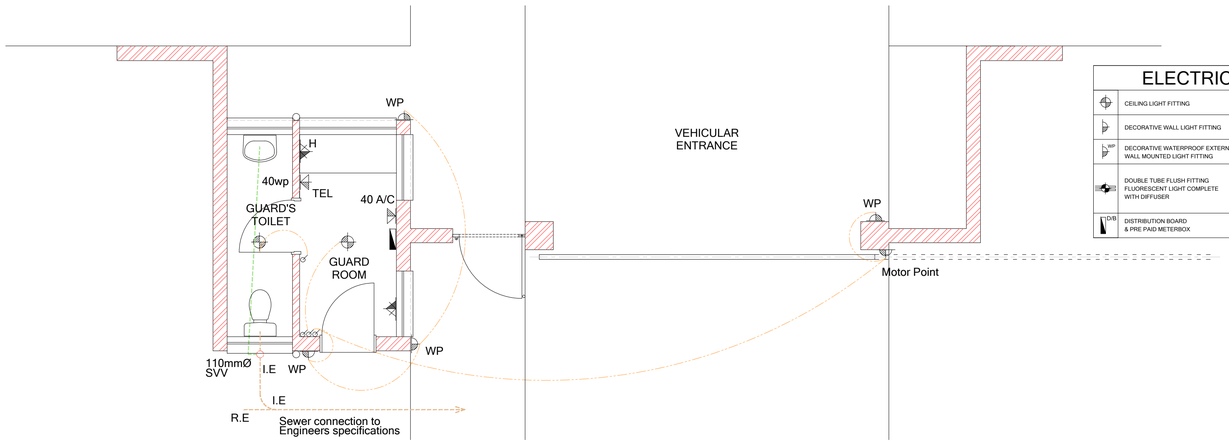
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FOUNDATION PLAN - Gate-House
Scale 1:50

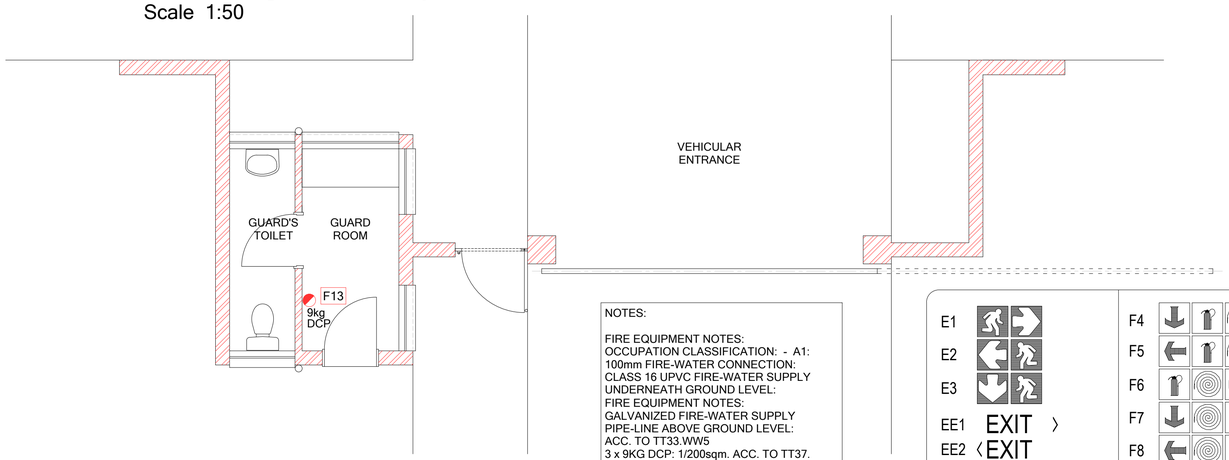
NOTE:
FOUNDATION PLAN & DETAILS - WHERE APPLICABLE REFER TO ENGINEERS DRAWINGS & DETAIL FOR REINFORCED CONCRETE FOUNDATIONS.



PLAN: Gate-House
Sewer Drainage & Electrical Layout
Scale 1:50

ELECTRICAL LEGEND

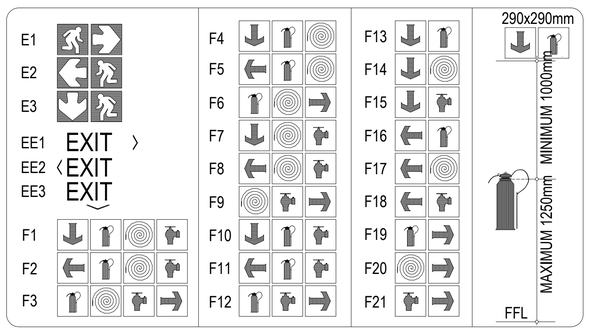
	CEILING LIGHT FITTING		15 AMP DOUBLE PLUG BUILT IN 340mm ABOVE FFL
	DECORATIVE WALL LIGHT FITTING		15 AMP DOUBLE PLUG POINT BUILT IN 1000mm ABOVE FFL
WP	DECORATIVE WATERPROOF EXTERNAL WALL MOUNTED LIGHT FITTING	TEL	TELEPHONE POINT
	DOUBLE TUBE FLUSH FITTING FLUORESCENT LIGHT COMPLETE WITH DIFFUSER	12 A/C	12 Amp ISOLATOR FOR A/C UNIT MOUNTED 150mm BELOW CEILING
		40 A/C	40 Amp ISOLATOR FOR A/C UNIT MOUNTED 500mm BELOW ROOFS EAVE
DB	DISTRIBUTION BOARD & PRE PAID METERBOX		LIGHT SWITCH



PLAN: Gate-House
Water & Fire Equipment Layout
Scale 1:50

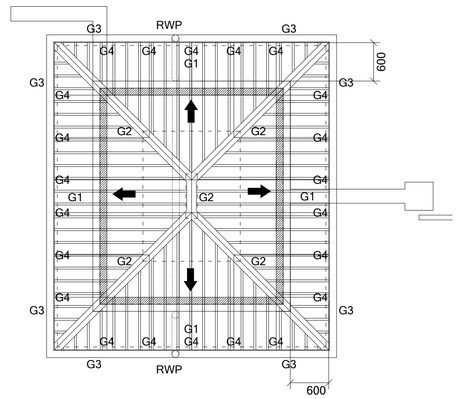
NOTES:

FIRE EQUIPMENT NOTES:
OCCUPATION CLASSIFICATION: - A1:
100mm FIRE-WATER CONNECTION:
CLASS 16 UPVC FIRE-WATER SUPPLY UNDERNEATH GROUND LEVEL:
FIRE EQUIPMENT NOTES:
GALVANIZED FIRE-WATER SUPPLY PIPE-LINE ABOVE GROUND LEVEL:
ACC. TO TT33.WW5
3 x 9KG DCP: 1/200sqm. ACC. TO TT37.
2 x 30m FIRE HOSE REEL ACC. TO TT34
SIGNAGE & EQUIPMENT ACC. TO TT32
SIZES OF SIGNAGE MINIMUM 150x150mm PROVIDED BY SPECIALIST ACC. NBR & MUNICIPAL APROVAL.
SIZES OF STEPS: RISERS: 170mm
TREADS: 250mm
ACC. TO MM2.3 & 2.4 REF TO SECTION.



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 Aqualsolv 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 Unicon 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 brandering 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 sockelless 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 Al5066-06ASE08 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 fhr sign & Union AL5066-E08/2AS aluminium red down arrow sign above fire hose reel.



ROOF PLAN: Gate-House
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 900 mm Build in Balustrade
4) Gulley 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 louvres 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
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

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA
DEPARTMENT OF
EDUCATION

INSTITUTION
PFUMBADA PRIMARY SCHOOL

INSTITUTION EMIS NUMBER
921230573

SERVICE
NEW BUILDINGS

CONTRACT - SECTION
DOCUMENTATION & PROCUREMENT

DISCIPLINE: ARCHITECTURAL | PROJECT STAGE: 4

WORK DESCRIPTION - SUB DIVISION
GUARD HOUSE

DRAWING DESCRIPTION
FOUNDATION, SEWER, FIRE AND ROOF

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

RESPONSIBLE PROFESSIONAL

DATE	NAME	SIGNATURE	PR NUMBER
2023.06.20	YUSUF VAHED		PA7812

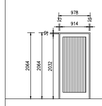
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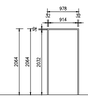
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CONTRACTOR :

CADD SYSTEM	AUTO CAD		FILE NAME
SIZE	DRAWING NUMBER		REV
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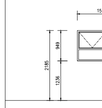
DOOR SCHEDULE: Scale 1:50.

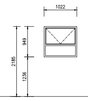


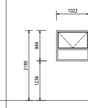


	D1	D2
DOOR NUMBER:		
POSITION:	BULK STOREROOM, DAY STORE AREA TOILET	ENTRANCE TO TOILET
QUANTITY:	1 (1=LH) (0 = RH)	1 (0 = LH) (1 = RH)
DOOR-FRAME DESCRIPTION:	1.2mm THICK STANDARD STEEL DOUBLE REBATED DOORFRAME FOR 115MM WALL TO RECEIVE PLASTER ON ONE-SIDE	1.2mm THICK STANDARD STEEL DOUBLE REBATED DOORFRAME FOR 115MM WALL TO RECEIVE PLASTER ON ONE-SIDE
FINISHES:	1/RED OXIDE PRIMER + 1/COAT UNIVERSAL UNDERCOAT + 2/COATS PLASCON GLOSS ENAMEL PAINT. - COLOUT TO ARCHITECT.	1/RED OXIDE PRIMER + 1/COAT UNIVERSAL UNDERCOAT + 2/COATS PLASCON GLOSS ENAMEL PAINT. - COLOUT TO ARCHITECT.
DOOR DESCRIPTION:	2032 x 914 x 44mm THICK SOLID HARDWOOD DOOR WITH MASONITE BACKING. IYPE 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.







	W1	W2	W3
WINDOW NUMBER:			
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.	1/COAT RED OXIDE PRIMER + 1/COAT UNIVERSAL UNDERCOAT + 2/COATS PLASCON GLOSS ENAMEL PAINT - COLOUR ACCORDING TO ARCHITECT.	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	4mm THICK CLEAR FLOATED SHEET GLAZING SECURED IN FRAME WITH SABS APPROVED GLAZING PUTTY	5mm THICK PACIFIC OBSCURED 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 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 Aqualsolv 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 - 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 brandering 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 sockетless 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 AI5066-06ASE08 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 fhr 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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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 louvres 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
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

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA
DEPARTMENT OF
EDUCATION

INSTITUTION
PFUMBADA PRIMARY SCHOOL

INSTITUTION EMIS NUMBER
921230573

SERVICE
NEW BUILDINGS

CONTRACT - SECTION
DOCUMENTATION & PROCUREMENT

DISCIPLINE	PROJECT STAGE
ARCHITECTURAL	4

WORK DESCRIPTION - SUB DIVISION
GUARD HOUSE

DRAWING DESCRIPTION
WINDOW AND DOOR SCHEDULES

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

RESPONSIBLE PROFESSIONAL

DATE	NAME	SIGNATURE	PR NUMBER
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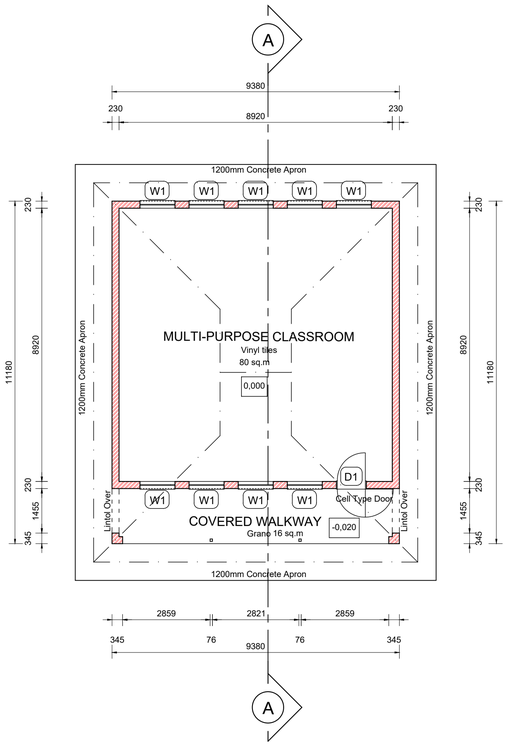
DRAWING CO-ORDINATED

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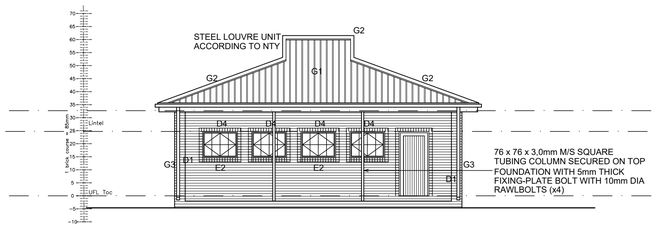
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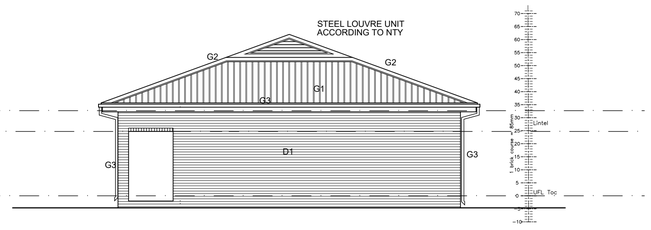
GROUND FLOOR PLAN

1 : 100



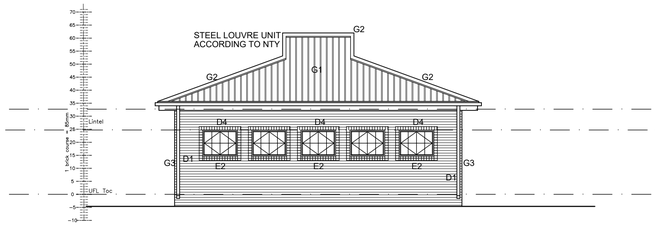
FRONT ELEVATION

1 : 100



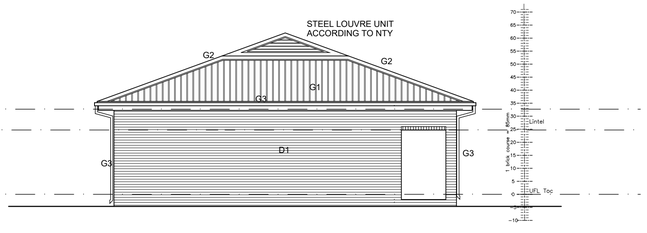
SIDE ELEVATION

1 : 100



BACK ELEVATION

1 : 100



SIDE ELEVATION

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 Aqualsolv 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 226mm 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 - 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 brandering 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 - 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 AI5066-06ASE08 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 fhr 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) Gulley 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 louvres 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
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

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA
DEPARTMENT OF
EDUCATION

INSTITUTION

PFUMBADA PRIMARY SCHOOL

INSTITUTION EMIS NUMBER

921230573

SERVICE

NEW BUILDINGS

CONTRACT - SECTION

DOCUMENTATION & PROCUREMENT

DISCIPLINE	PROJECT STAGE
ARCHITECTURAL	4

WORK DESCRIPTION - SUB DIVISION

1MULTI-PURPOSE CLASSROOM

DRAWING DESCRIPTION

WINDOW AND DOOR SCHEDULES

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

RESPONSIBLE PROFESSIONAL

DATE	NAME	SIGNATURE	PR NUMBER
2023.06.20	YUSUF VAHED		PA7812

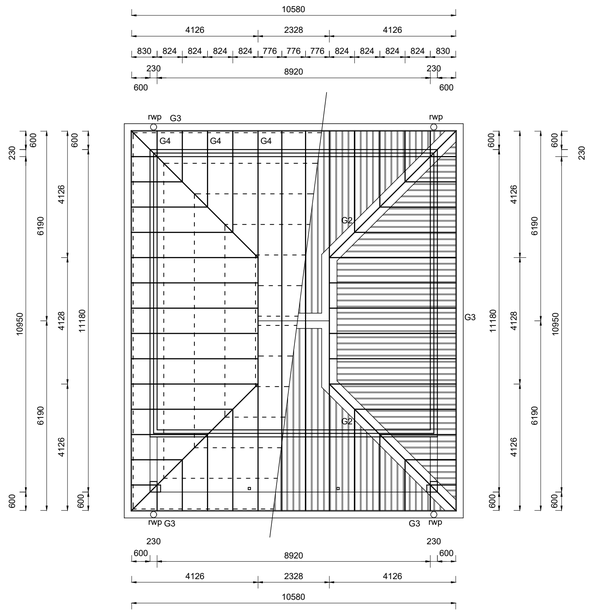
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CONSULTANT :

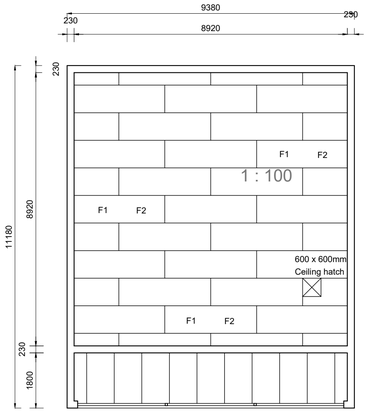
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Web: www.rubenreddyarch.co.za

CONTRACTOR :

CADD SYSTEM	AUTO CAD		FILE NAME
SIZE	DRAWING NUMBER		REV
A 1	2020_68-1MP-001		A



ROOF PLAN
1 : 100



PROVIDE 100mm THICK AEROLITE CEILING INSULATION ON TOP OF CEILING BOARDS

CEILING PLAN
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 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 bituminen 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 bituminen 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/m 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 Aqualsolv 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 226mm 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 - 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 brandering 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 - 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)

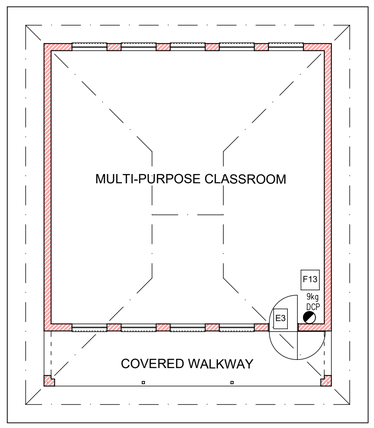
H3. Greenfield G25 double door steel cupboard with standard baked enameled finish, 760 x 610 x 1700mm high with four shelves (2 per classroom)

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

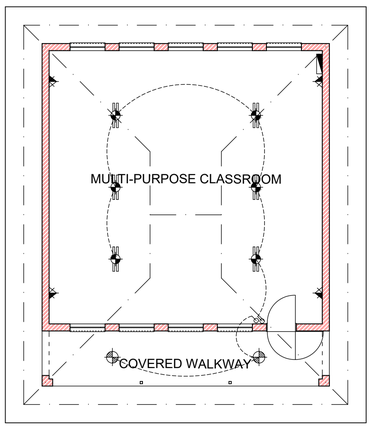
Miscellaneous

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 AL5066-06ASE08 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 fhr sign & Union AL5066-E08/2AS aluminium red down arrow sign above fire hose reel.



FIRE EQUIPMENT LAYOUT
1 : 100



ELECTRICAL LEGEND			
	CEILING LIGHT FITTING		16 AMP DOUBLE PLUG SOUTH AFRICAN ROUTE (PL)
	DECORATIVE WALL LIGHT FITTING		16 AMP DOUBLE PLUG POINT SOUTH AFRICAN ROUTE (PL)
	DECORATIVE WATERPROOF EXTERNAL WALL MOUNTED LIGHT FITTING		TELEPHONE POINT
	DOUBLE TUBE FLUSH FITTING WITH OPAL DIFFUSER LIGHT COMPLETE WITH DIFFUSER		12 Amp ISOLATOR FOR A/C UNIT MOUNTED 150mm BELOW CEILING
			40 Amp ISOLATOR FOR A/C UNIT MOUNTED 500mm BELOW ROOFS EAVE
	DISTRIBUTION BOARD & FIRE PAID METERBOX		LIGHT SWITCH

ELECTRICAL LAYOUT
1 : 100

NOTES :

1) Workmanship to comply with Standard Specification of materials and methods to be used - SABS 0400
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3) If Step over 900 mm Build in Balustrade
4) Gulley 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 louvres 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
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

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA
DEPARTMENT OF
EDUCATION

INSTITUTION
PFUMBADA PRIMARY SCHOOL

INSTITUTION EMIS NUMBER
921230573

SERVICE
NEW BUILDINGS

CONTRACT - SECTION
DOCUMENTATION & PROCUREMENT

DISCIPLINE: ARCHITECTURAL | PROJECT STAGE: 4

WORK DESCRIPTION - SUB DIVISION
1MULTI-PURPOSE CLASSROOM

DRAWING DESCRIPTION
WINDOW AND DOOR SCHEDULES

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

RESPONSIBLE PROFESSIONAL

DATE	NAME	SIGNATURE	PR NUMBER
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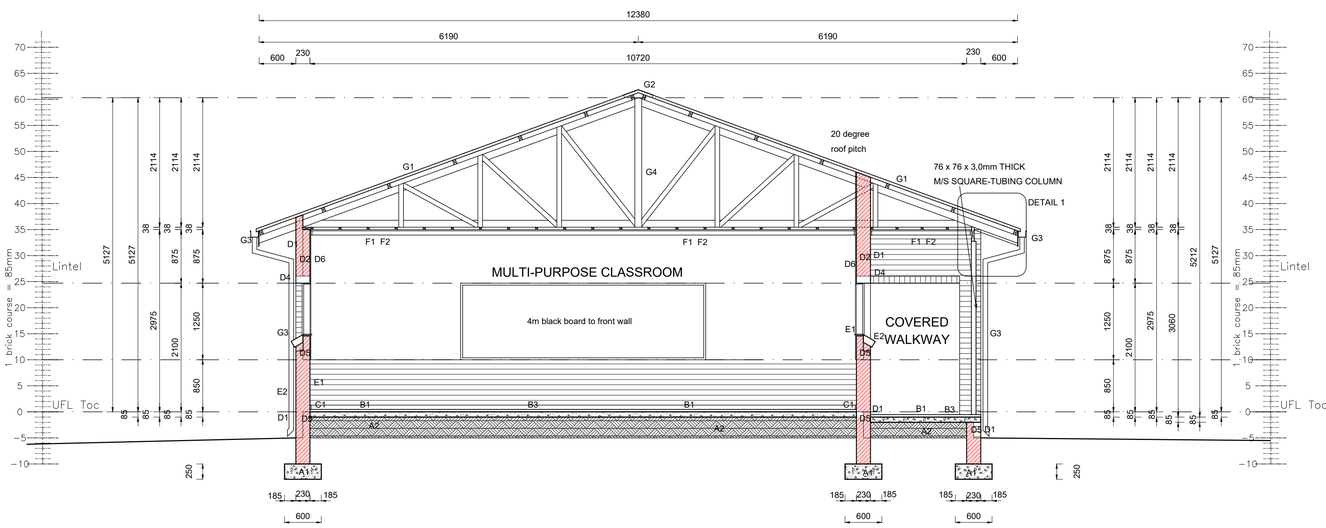
DRAWING CO-ORDINATED

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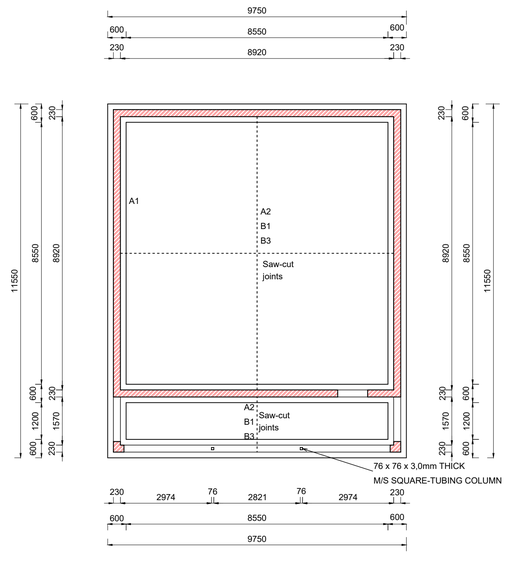
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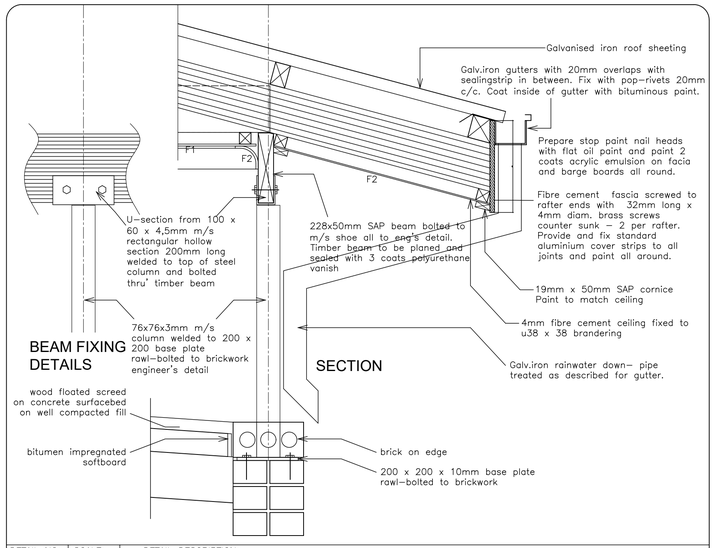


SECTION A-A
1 : 100

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



FOUNDATION PLAN
1 : 100



DETAIL NO:	SCALE:	DETAIL DESCRIPTION:
DETAIL1	1/10	EAVES

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 bituminen 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 Aqualsolv 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 226mm 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 - 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 brandering 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 - 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
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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 fhr 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) Gulley 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)
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8) 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

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA
DEPARTMENT OF
EDUCATION

INSTITUTION
PFUMBADA PRIMARY SCHOOL

INSTITUTION EMIS NUMBER
921230573

SERVICE
NEW BUILDINGS

CONTRACT - SECTION
DOCUMENTATION & PROCUREMENT

DISCIPLINE	PROJECT STAGE
ARCHITECTURAL	4

WORK DESCRIPTION - SUB DIVISION
1MULTI-PURPOSE CLASSROOM

DRAWING DESCRIPTION
WINDOW AND DOOR SCHEDULES

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SCALE	1: 100		CHECKED

RESPONSIBLE PROFESSIONAL

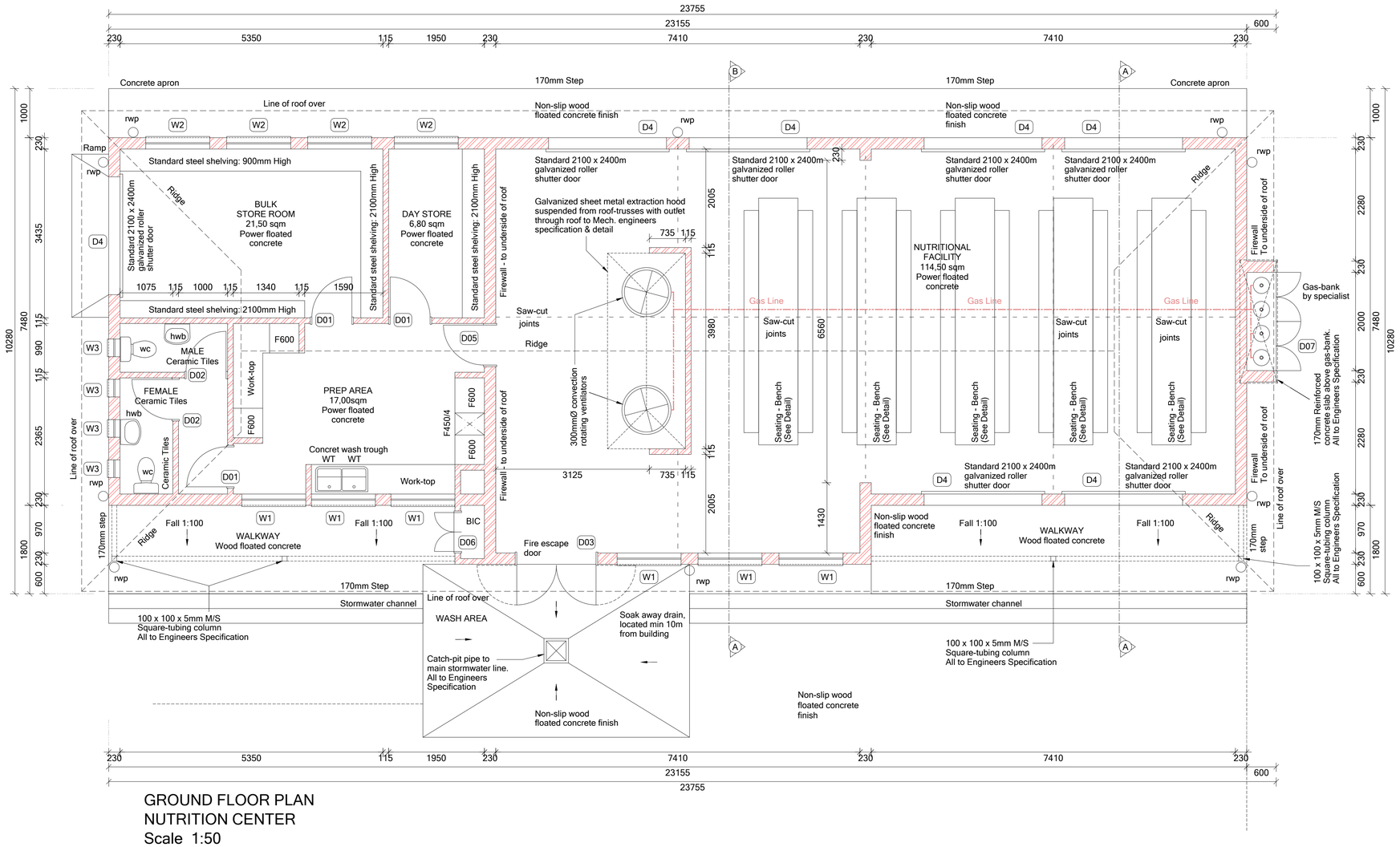
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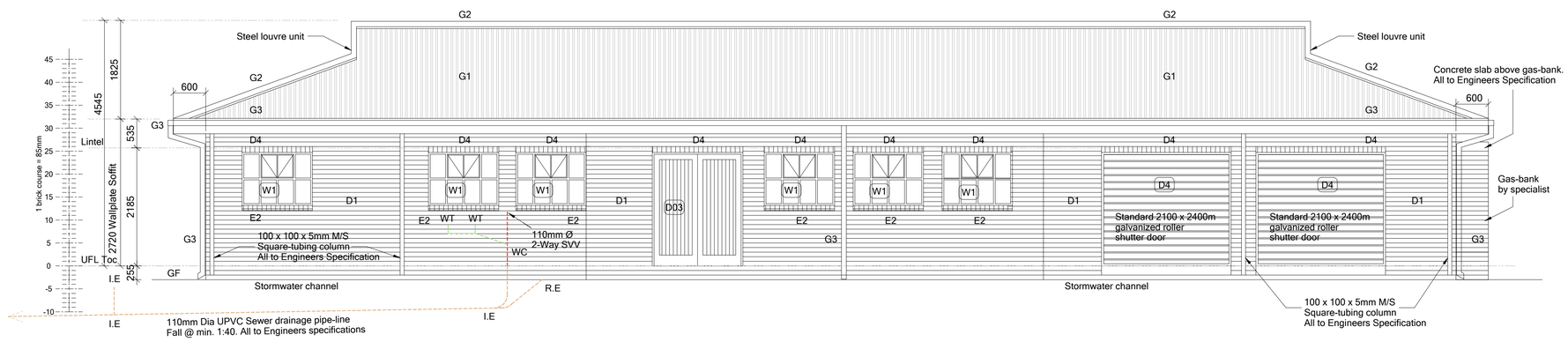
CONSULTANT :
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CONTRACTOR :

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SIZE	DRAWING NUMBER		REV
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GROUND FLOOR PLAN
NUTRITION CENTER
Scale 1:50



FRONT ELEVATION
NUTRITION CENTRE
Scale 1:50

NOTES :

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ENVIRONMENTAL OFFICER		

REV No	DATE :	DESCRIPTION :

REVISIONS

SIZE ON ORIGINAL DRAWING 100 mm

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA
DEPARTMENT OF
EDUCATION

INSTITUTION
PFUMBADA PRIMARY SCHOOL

INSTITUTION EMIS NUMBER
921230573

SERVICE
NEW BUILDINGS

CONTRACT - SECTION
DOCUMENTATION & PROCUREMENT

DISCIPLINE	PROJECT STAGE
ARCHITECTURAL	4

WORK DESCRIPTION - SUB DIVISION
NUTRITION BLOCK

DRAWING DESCRIPTION
PLAN AND ELEVATION

FILE No.			ITEM No.
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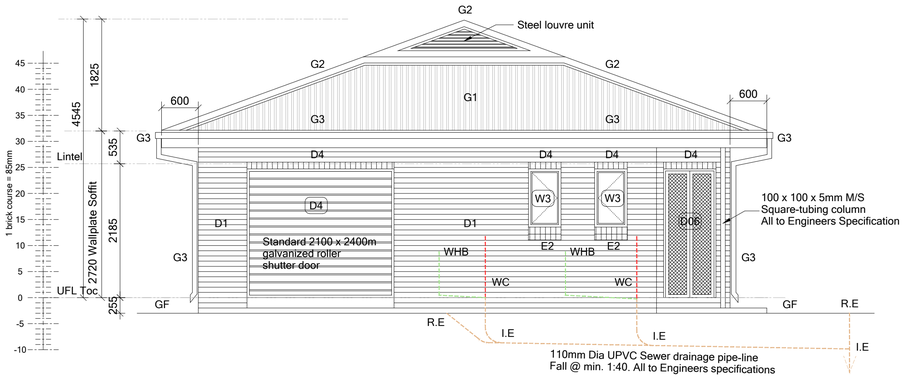
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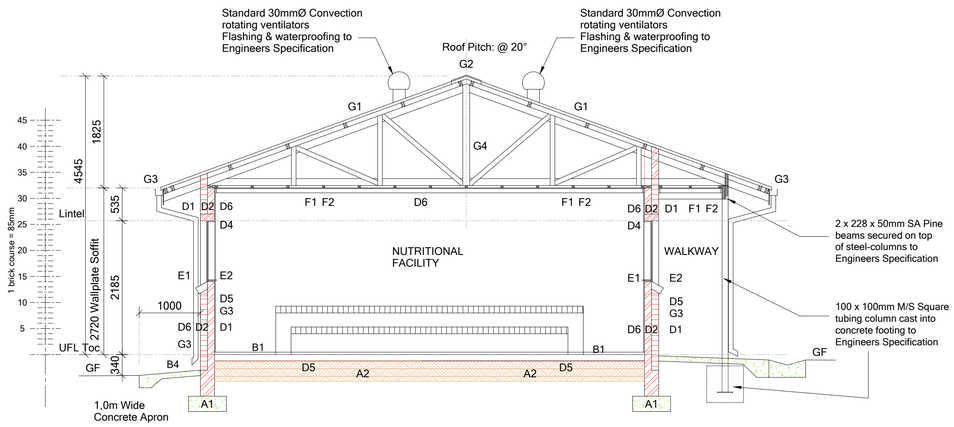
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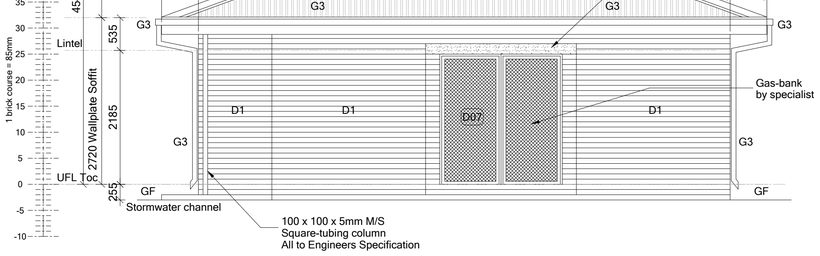
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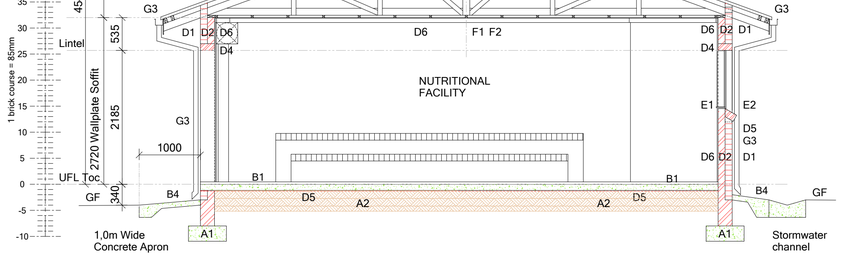
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NUTRITION CENTRE
Scale 1:50



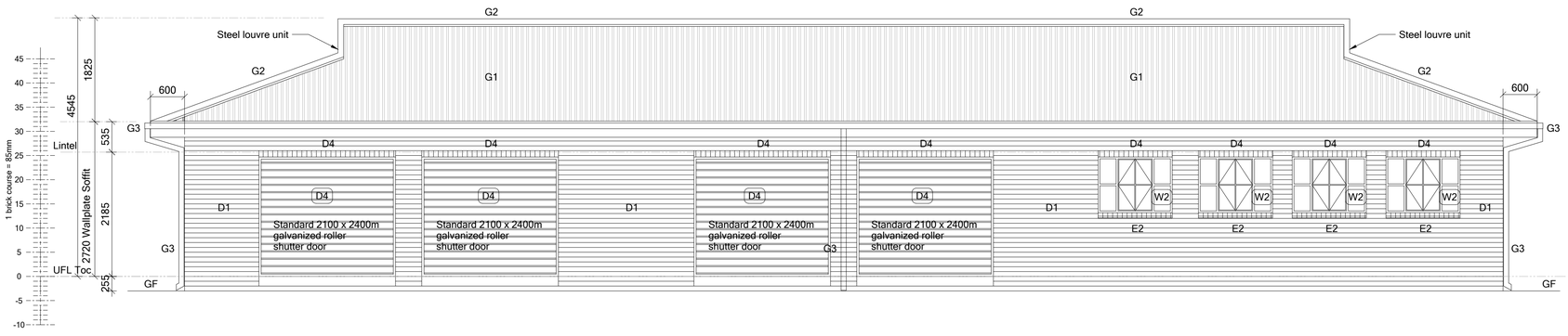
SECTION B-B
Scale 1:50



SIDE ELEVATION:
NUTRITION CENTRE
Scale 1:50



SECTION A-A
Scale 1:50



REAR ELEVATION:
NUTRITION CENTRE
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 900 mm Build in Balustrade
4) Gulley 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 louvres 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
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

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA
DEPARTMENT OF
EDUCATION

INSTITUTION
PFUMBADA PRIMARY SCHOOL

INSTITUTION EMIS NUMBER
921230573

SERVICE
NEW BUILDINGS

CONTRACT - SECTION
DOCUMENTATION & PROCUREMENT

DISCIPLINE	PROJECT STAGE
ARCHITECTURAL	4

WORK DESCRIPTION - SUB DIVISION
NUTRITION BLOCK

DRAWING DESCRIPTION
SECTIONS AND ELEVATIONS

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

RESPONSIBLE PROFESSIONAL

DATE	NAME	SIGNATURE	PR NUMBER
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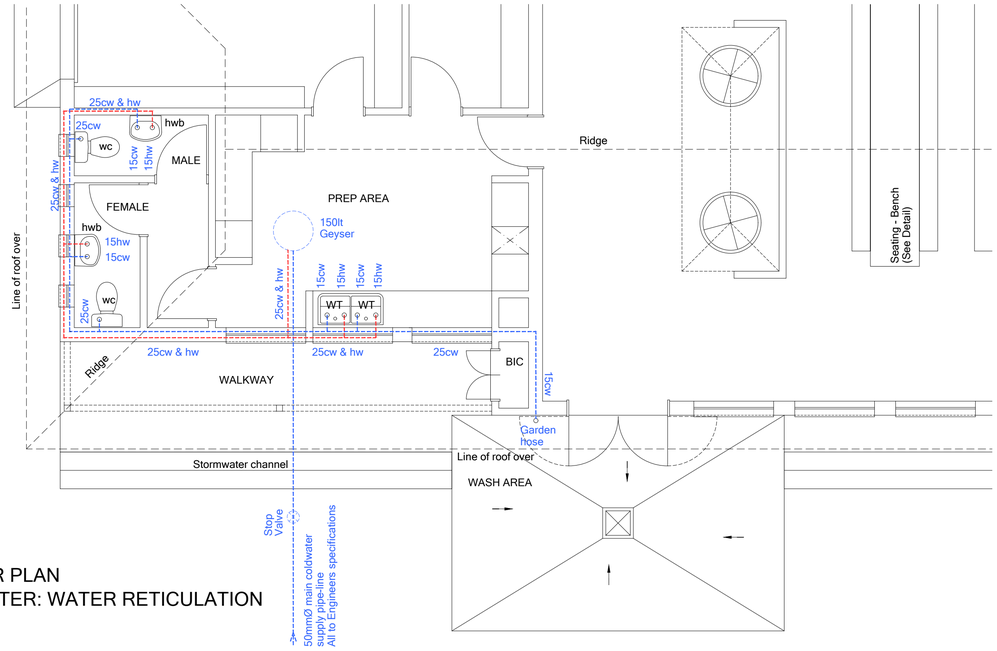
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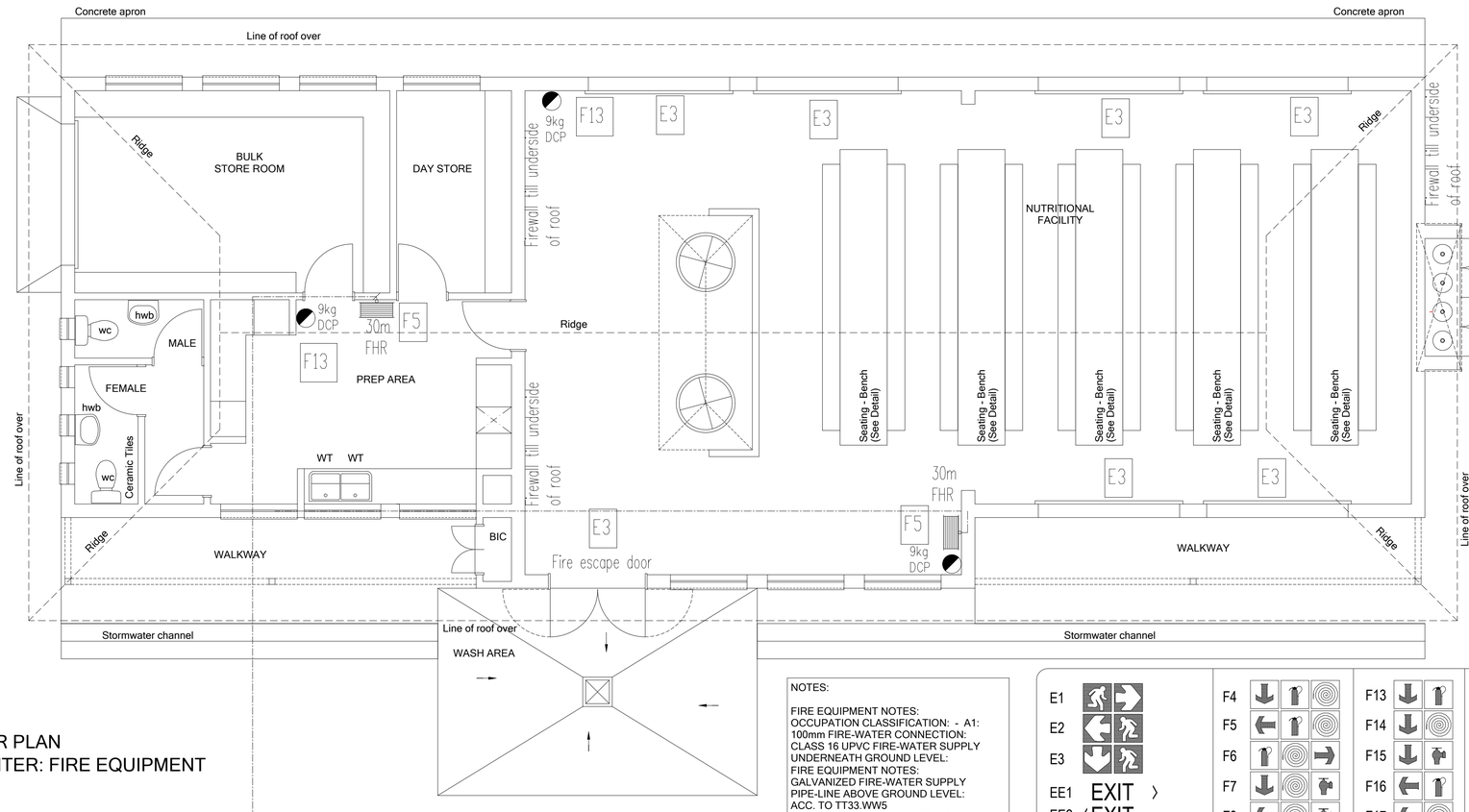
ruben reddy architects
Suite 4 No 6 Ismini Office Building,
6 Ismini Street, Polokwane, 0699 South Africa
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Email: info@rubenreddyarch.co.za
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CONTRACTOR :

CADD SYSTEM	AUTO CAD		FILE NAME
SIZE	DRAWING NUMBER		REV2
A 1	2020_68-NU-002		A



GROUND FLOOR PLAN
NUTRITION CENTER: WATER RETICULATION
Scale 1:50

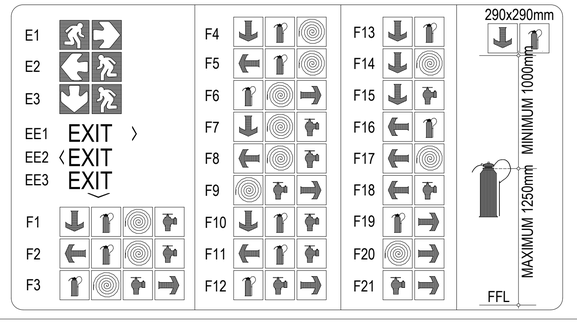


GROUND FLOOR PLAN
NUTRITION CENTER: FIRE EQUIPMENT
Scale 1:50

50mm Dia UPVC Class 16 underneath
ground level & galvanized pipes
above floor level.
Refer to engineers drawings & detail

NOTES:

FIRE EQUIPMENT NOTES:
OCCUPATION CLASSIFICATION: - A1:
100mm FIRE-WATER CONNECTION:
CLASS 16 UPVC FIRE-WATER SUPPLY
UNDERNEATH GROUND LEVEL:
FIRE EQUIPMENT NOTES:
GALVANIZED FIRE-WATER SUPPLY
PIPE-LINE ABOVE GROUND LEVEL:
ACC. TO TT33.WW5
3 x 9KG DCP: 1/200sqm. ACC. TO TT37.
2 x 30m FIRE HOSE REEL ACC. TO TT34
SIGNAGE & EQUIPMENT ACC. TO TT32
SIZES OF SIGNAGE MINIMUM 150x150mm
PROVIDED BY SPECIALIST ACC. NBR &
MUNICIPAL APROVAL.
SIZES OF STEPS: RISERS: 170mm
TREADS: 250mm
ACC. TO MM2.3 & 2.4 REF TO SECTION.



NOTES :

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7) West Facing Facades to have standardised aluminium louvres from below eaves to drop of 1200 mm
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PLAN EXAMINER		
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ROADS / STORMWATER		
WATER AND SANITATION		
ENVIRONMENTAL OFFICER		

REV No	DATE :	DESCRIPTION :

REVISIONS
SIZE ON ORIGINAL DRAWING 100 mm

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA
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SERVICE
NEW BUILDINGS

CONTRACT - SECTION
DOCUMENTATION & PROCUREMENT

DISCIPLINE: ARCHITECTURAL | PROJECT STAGE: 4

WORK DESCRIPTION - SUB DIVISION
NUTRITION BLOCK

DRAWING DESCRIPTION
WATER RETICULATION AND FIRE

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

RESPONSIBLE PROFESSIONAL

DATE	NAME	SIGNATURE	PR NUMBER
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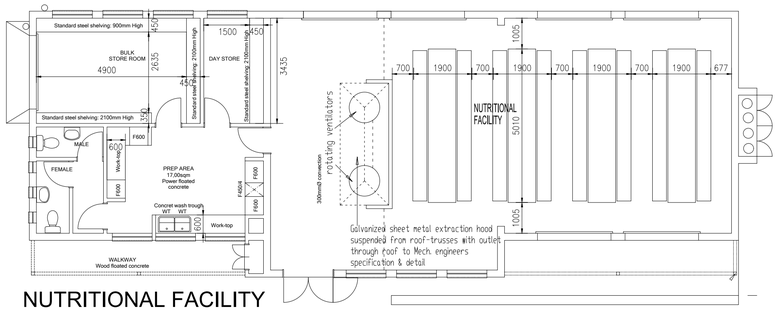
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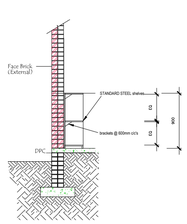
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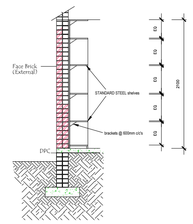
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SIZE	DRAWING NUMBER		REV2
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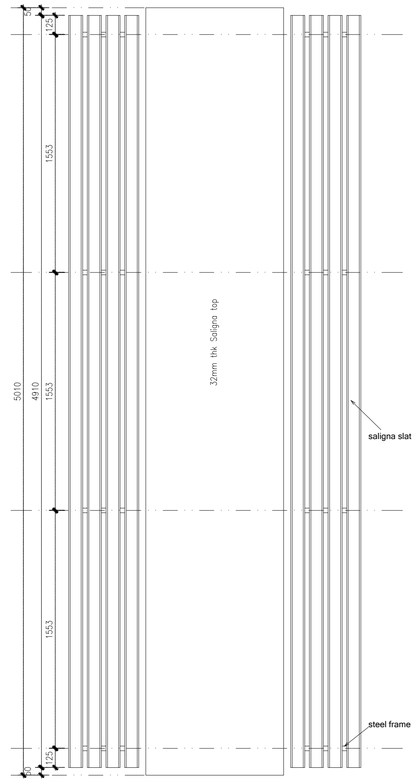
NUTRITIONAL FACILITY
JOINERY LAYOUT



DETAIL (STEEL SHELVES)
Section Scale 1:20



DETAIL 3 (STORE ROOM SHELVES)
Section Scale 1:20

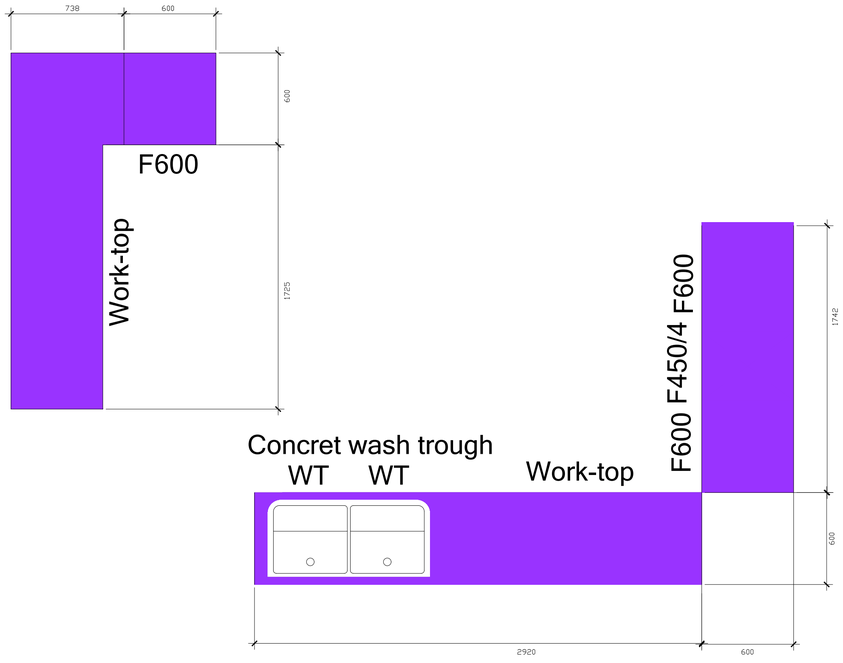


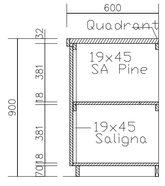
PLAN
NUTRITION CENTRE BENCHES

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

NOTES: FURNITURE:

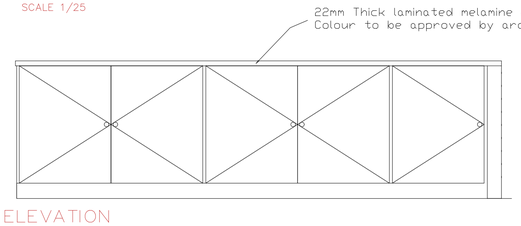
FORMICA TOPS WITH WHITE MELAMINE
CUPBOARD ACC TO DETAIL LAYOUT PROVIDED BY CUPBOARD CONNECTIONS.
SHELVING: CODE SST2100/300 & SST2100/450 WITH MILD STEEL SHELVING
SHELVING COMPLETE WITH WALLBANDS & BRACKETS AS SUPPLY BY CUPBOARD CONNECTIONS.



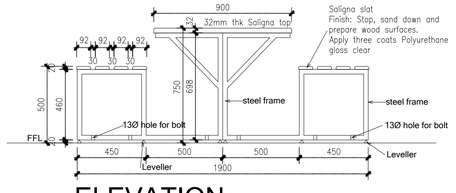


SECTION
SCALE 1/25

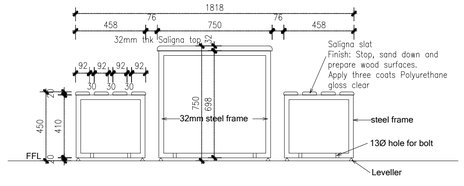
SCALE 1/25



ELEVATION
SCALE 1/25



ELEVATION
NUTRITION CENTRE BENCHES



ELEVATION
NUTRITION CENTRE BENCHES

NOTES :

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REV No	DATE :	DESCRIPTION :

REVISIONS
SIZE ON ORIGINAL DRAWING 100 mm

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SERVICE
NEW BUILDINGS

CONTRACT - SECTION
DOCUMENTATION & PROCUREMENT

DISCIPLINE	PROJECT STAGE
ARCHITECTURAL	4

WORK DESCRIPTION - SUB DIVISION
NUTRITION BLOCK

DRAWING DESCRIPTION
JOINERY AND DETAILS

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

RESPONSIBLE PROFESSIONAL

DATE	NAME	SIGNATURE	PR NUMBER
2023.06.20	YUSUF VAHED		PA7812

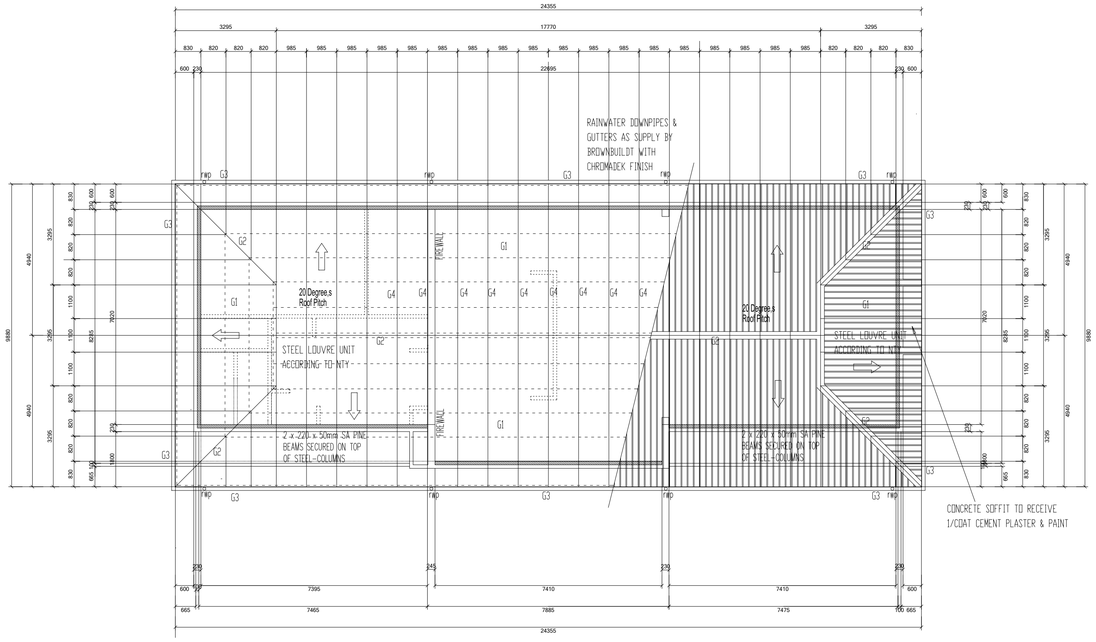
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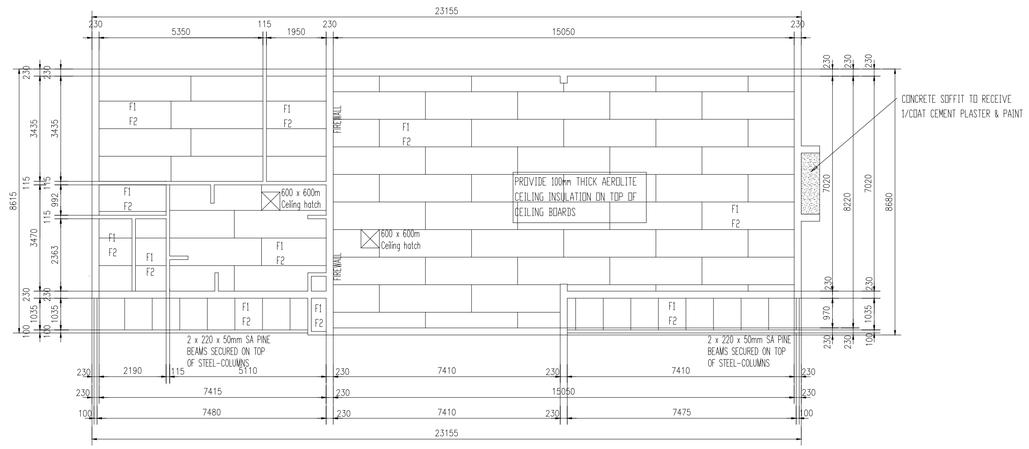
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CONTRACTOR :

CADD SYSTEM	AUTO CAD		FILE NAME
SIZE	DRAWING NUMBER		REV'Z
A 1	2020_68-NU-005		A



ROOF PLAN:
NUTRITION CENTRE:
Scale 1:50



CEILING PLAN:
NUTRITION CENTRE:
Scale 1:100.

NOTES :

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REV No	DATE :	DESCRIPTION :

REVISIONS

SIZE ON ORIGINAL DRAWING 100 mm

LIMPOPO
PROVINCIAL GOVERNMENT
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SERVICE
NEW BUILDINGS

CONTRACT - SECTION
DOCUMENTATION & PROCUREMENT

DISCIPLINE	PROJECT STAGE
ARCHITECTURAL	4

WORK DESCRIPTION - SUB DIVISION
NUTRITION BLOCK

DRAWING DESCRIPTION
ROOF PLAN AND CEILING LAYOUT

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

RESPONSIBLE PROFESSIONAL

DATE	NAME	SIGNATURE	PR NUMBER
2023.06.20	YUSUF VAHED		PA7812

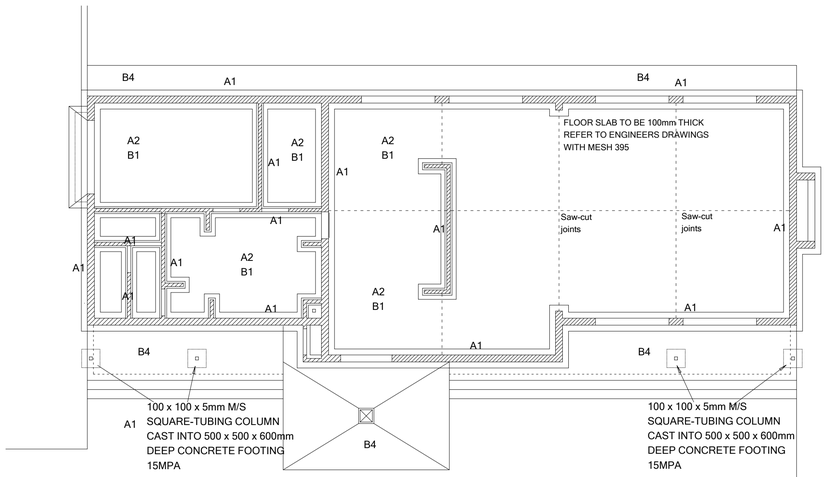
DRAWING CO-ORDINATED

CONSULTANT :

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CONTRACTOR :

CADD SYSTEM	AUTO CAD		FILE NAME
SIZE	DRAWING NUMBER		REV2
A 1	2020_68-NU-006		A



FOUNDATION PLAN:
NUTRITION CENTRE:
Scale 1:100.

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

NOTES: FURNITURE:

FORMICA TOPS WITH WHITE MELAMINE
CUPBOARD ACC TO DETAIL LAYOUT PROVIDED BY CUPBOARD CONNECTIONS.
SHELVING: CODE SST2100/300 & SST2100/450 WITH MILD STEEL SHELVING
SHELVING COMPLETE WITH WALLBANDS & BRACKETS AS SUPPLY BY CUPBOARD CONNECTIONS.

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 Aqualsolv 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 sat 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 brandering 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 - 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 Al5066-08ASE08 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 fhr 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) Gulley 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 louvres 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
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

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA
DEPARTMENT OF
EDUCATION

INSTITUTION
PFUMBADA PRIMARY SCHOOL

INSTITUTION EMIS NUMBER
921230573

SERVICE
NEW BUILDINGS

CONTRACT - SECTION
DOCUMENTATION & PROCUREMENT

DISCIPLINE	PROJECT STAGE
ARCHITECTURAL	4

WORK DESCRIPTION - SUB DIVISION
NUTRITION BLOCK

DRAWING DESCRIPTION
FOUNDATION LAYOUT

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

RESPONSIBLE PROFESSIONAL

DATE	NAME	SIGNATURE	PR NUMBER
2023.06.20	YUSUF VAHED		PA7812

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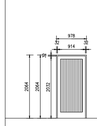
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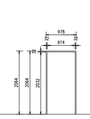
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Tel: +27 15 065 0645, Fax: +27 11 475 8364,
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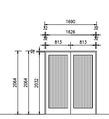
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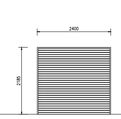
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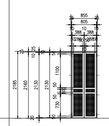
DOOR SCHEDULE: Scale 1:50.





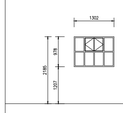


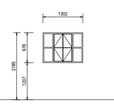


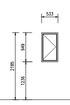


	D1	D2	D3	D4	D6
DOOR NUMBER:					
POSITION:	BULK STOREROOM, DAY STORE AREA TOILET	ENTRANCE TO TOILET	ENTRANCE TO NUTRITION FACILITY	NUTRITION FACILITY	BIC
QUANTITY:	3 (2=RH) (1=LH)	2 (2 = LH) (0 = RH)	1	7	1
DOOR-FRAME DESCRIPTION:	1,2mm THICK STANDARD STEEL DOUBLE REBATED DOORFRAME FOR 115MM WALL TO RECEIVE PLASTER ON ONE-SIDE	1,2mm THICK STANDARD STEEL DOUBLE REBATED DOORFRAME FOR 115MM WALL TO RECEIVE PLASTER ON ONE-SIDE	1,2mm THICK STANDARD STEEL DOUBLE REBATED DOORFRAME FOR 230MM WALL TO RECEIVE PLASTER ON ONE-SIDE	STANDARD WISPECO 2185 x 2400mm ROLLERSHUTTER DOOR WITH CHROMADEK FINISH COMPLETE WITH FITTINGS AS SUPPLY BY MANUFACTURER.	FRAME OUT OF 50 x 25 x 1,6mm M/S RECTANGULAR TUBING MITRE 45 DEGREE,S AT CORNER BEFORE WELDED AND SECURED IN OPENING WITH BRACKETS WELDED TO GATE & BOLTED TO WALL
FINISHES:	1/RED OXIDE PRIMER + 1/COAT UNIVERSAL UNDERCOAT + 2/COATS PLASCON GLOSS ENAMEL PAINT. - COLOUT TO ARCHITECT.	1/RED OXIDE PRIMER + 1/COAT UNIVERSAL UNDERCOAT + 2/COATS PLASCON GLOSS ENAMEL PAINT. - COLOUT TO ARCHITECT.	1/RED OXIDE PRIMER + 1/COAT UNIVERSAL UNDERCOAT + 2/COATS PLASCON GLOSS ENAMEL PAINT. - COLOUT TO ARCHITECT.	FINISH: CROMADEK FINISH: - COLOUR BY ARCHITECT	1/RED OXIDE PRIMER + 1/COAT UNIVERSAL UNDERCOAT + 2/COATS PLASCON GLOSS ENAMEL PAINT. - COLOUT 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.	2032 x 1626 x 44mm THICK SOLID HARDWOOD DOOR WITH MASONITE BACKING. tYPE OF HARDWOOD DOOR ACCORDING TO OWNERS CHOICE.	STANDARD WISPECO 2185 x 2400mm ROLLERSHUTTER DOOR WITH CHROMADEK FINISH COMPLETE WITH FITTINGS AS SUPPLY BY MANUFACTURER. FINISH: CROMADEK FINISH: - COLOUR BY ARCHITECT	GATE OUT OF 25 x 25 x 1,6mm M/S SQUARE-TUBING SECTIONS WITH EXPANDED METAL MESH ON INSIDE OF OPENING ELDED TO FRAME WITH 10 x 10mm M/S SOLID BAR ON BOTH SIDES OF MESH 1/RED OXIDE PRIMER + 1/COAT UNIVERSAL UNDERCOAT + 2/COATS PLASCON GLOSS ENAMEL PAINT. - COLOUT TO ARCHITECT.
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.	HINGES - 4x100mm M/S PARLEMENT HINGES PER DOOR LEAF LOCKSET - "SOLID BLESBOK" 460/313 FOUR LEVER LOCKSET CABIN HOOK - 2x 150mm CHROME PLATED CABIN HOOK, MOUNTED ON REBATE CONVERSION SET. FINISH CHROME. 1X 100mm BARREL BOLT. FINISH. CHROME. 75x75x16mm MERANTI MOUNTING BLOCK. EDGES OF MOUNTING BLOCK TO RECEIVE 5mm CHAMVERS	STANDARD WISPECO 2185 x 2400mm ROLLERSHUTTER DOOR WITH CHROMADEK FINISH COMPLETE WITH FITTINGS AS SUPPLY BY MANUFACTURER.	2/PAIRS 100mm BULLET HINGES WELDED TO FRAME & GATE. 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.	PREPARE NEW DOOR & FRAME TO RECEIVE ONE UNDERCOAT PLUS 3/COATS POLYURETHANE VARNISH.	FINISH: CROMADEK FINISH: - COLOUR BY ARCHITECT	PREPARE NEW DOOR & FRAME TO RECEIVE ONE UNDERCOAT PLUS 3/COATS POLYURETHANE VARNISH.
GLASS:	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE

WINDOW SCHEDULE: Scale 1:50.



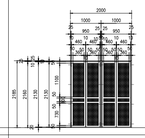




	W1	W2	W3
WINDOW NUMBER:			
POSITION:	PREP AREA , NUTRITION FACILITY , TOILET.	BULK & DAY STORE	TOILETS
DESCRIPTION:	6	4	4
WINDOW-FRAME DESCRIPTION:	STANDARD SS INDUSTRIAL TYPE STEEL WINDOW-FRAME CATALOGUE NUMBER SS41/SS41 COMPLETE WITH FITTINGS AS SUPPLY BY MANUFACTURER	STANDARD SS INDUSTRIAL TYPE STEEL WINDOW-FRAME CATALOGUE NUMBER SS42 COMPLETE WITH FITTINGS AS SUPPLY BY MANUFACTURER	STANDARD E-TYPE TOP-HUNG STEEL WINDOW-FRAME CATALOGUE NUMBER NE 1 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.	1/COAT RED OXIDE PRIMER + 1/COAT UNIVERSAL UNDERCOAT + 2/COATS PLASCON GLOSS ENAMEL PAINT - COLOUR ACCORDING TO ARCHITECT.	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	4mm THICK CLEAR FLOATED SHEET GLAZING SECURED IN FRAME WITH SABS APPROVED GLAZING PUTTY	5mm THICK PACIFIC OBSCURED GLAZING SECURED IN FRAME WITH SABS APPROVED GLAZING PUTTY

DOOR SCHEDULE: Scale 1:50.





	D5	D7
DOOR NUMBER:		
POSITION:	ENTRANCE PRE AREA	GAS-BANK
QUANTITY:	1 (1 = LH) (0 = RH)	1
DOOR-FRAME DESCRIPTION:	1,2mm THICK STANDARD STEEL DOUBLE REBATED DOORFRAME FOR 230MM WALL TO RECEIVE PLASTER ON ONE-SIDE	FRAME OUT OF 50 x 25 x 1,6mm M/S RECTANGULAR TUBING MITRE 45 DEGREE,S AT CORNER BEFORE WELDED AND SECURED IN OPENING WITH BRACKETS WELDED TO GATE & BOLTED TO WALL
FINISHES:	1/RED OXIDE PRIMER + 1/COAT UNIVERSAL UNDERCOAT + 2/COATS PLASCON GLOSS ENAMEL PAINT. - COLOUT TO ARCHITECT.	1/RED OXIDE PRIMER + 1/COAT UNIVERSAL UNDERCOAT + 2/COATS PLASCON GLOSS ENAMEL PAINT. - COLOUT TO ARCHITECT.
DOOR DESCRIPTION:	2032 x 914 x 40mm SOLID HARDWOOD DOOR WITH MASONITE FACINGS TO RECEIVE 1/COAT UNDERCOAT + 2/COATS PLASCON VELVAGLO PAINT.	GATE OUT OF 25 x 25 x 1.6mm M/S SQUARE-TUBING SECTIONS WITH EXPANDED METAL MESH ON INSIDE OF OPENING ELDED TO FRAME WITH 10 x 10mm M/S SOLID BAR ON BOTH SIDES OF MESH 1/RED OXIDE PRIMER + 1/COAT UNIVERSAL UNDERCOAT + 2/COATS PLASCON GLOSS ENAMEL PAINT. - COLOUT TO ARCHITECT.
IRON MONGERY: FITTINGS:	HINGES - 2x100mm M/S STEEEL BUTT HINGES PER DOOR LEAF LOCKSET - "SOLID BLESBOK" 460/313 FOUR LEVER LOCKSET.	2/PAIRS 100mm BULLET HINGES WELDED TO FRAME & GATE. LOCKSET - "SOLID BLESBOK" 460/313 FOUR LEVER LOCKSET.
FINISHES:	1/UNDERCOAT + 2/COATS PLASCON VELVAGLO PAINT FINISH.	PREPARE NEW DOOR & FRAME TO RECEIVE ONE UNDERCOAT PLUS 3/COATS POLYURETHANE VARNISH.
GLASS:	NOT APPLICABLE	NOT APPLICABLE

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) Gulley 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 louvres 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
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

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
EDUCATION

INSTITUTION
PFUMBADA PRIMARY SCHOOL

INSTITUTION EMIS NUMBER
921230573

SERVICE
NEW BUILDINGS

CONTRACT - SECTION
DOCUMENTATION & PROCUREMENT

DISCIPLINE	PROJECT STAGE
ARCHITECTURAL	4

WORK DESCRIPTION - SUB DIVISION
NUTRITION BLOCK

DRAWING DESCRIPTION
WINDOW AND DOOR SHEDULE

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

RESPONSIBLE PROFESSIONAL

DATE	NAME	SIGNATURE	PR NUMBER
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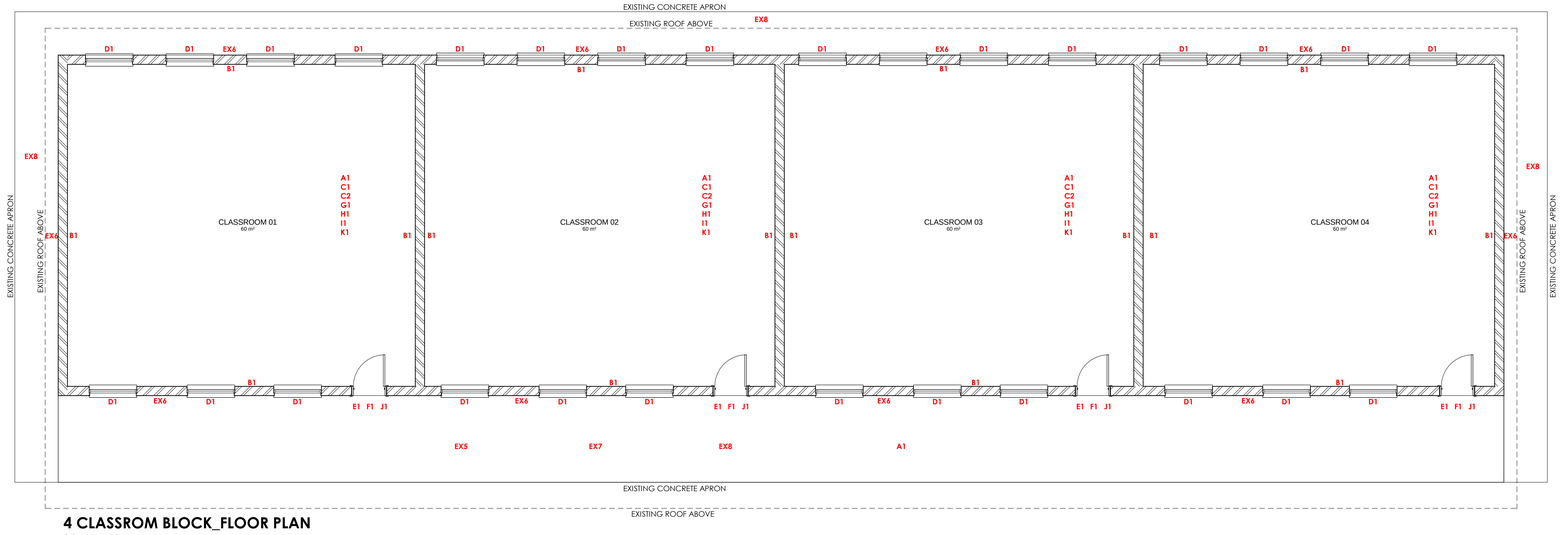
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CONSULTANT :

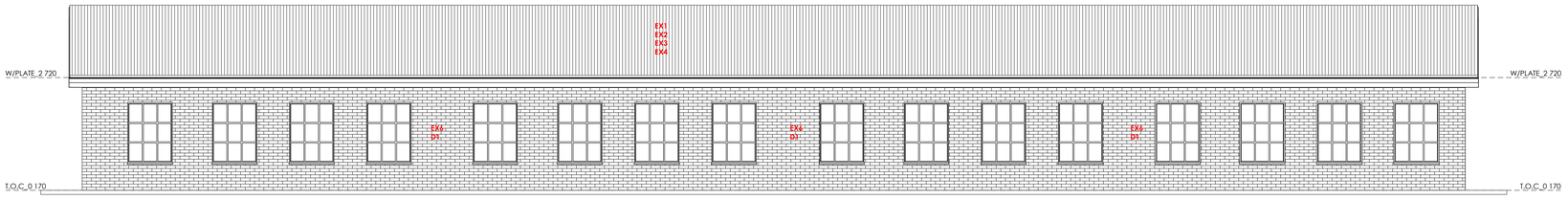
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CONTRACTOR :

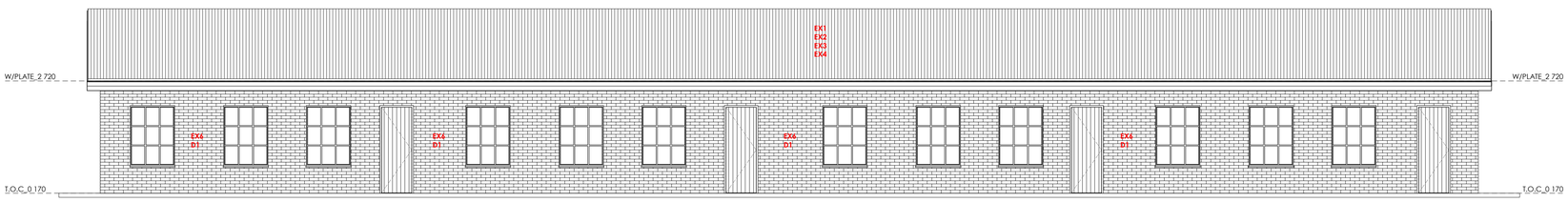
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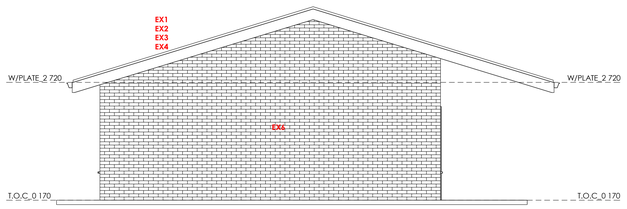
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SCALE 1:50



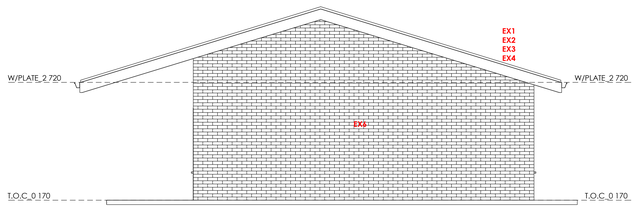
4 CLASSROM BLOCK_BACK ELEVATION
SCALE 1:50



4 CLASSROM BLOCK_FRONT ELEVATION
SCALE 1:50



4 CLASSROM BLOCK_SIDE ELEVATION
SCALE 1:50



4 CLASSROM BLOCK_SIDE ELEVATION
SCALE 1:50

REFURBISHMENT SCHEDULE

This schedule is provisional because each block will have to be based on site inspection and block type. ALL SPECIFICATIONS AND QUANTITIES TO BE CONFIRMED WITH QS AND ARCHITECT PRIOR TO PROCUREMENT. PROOF OF DAMAGED PORTIONS TO BE TAKEN NOTE OF WITH PICTURES PRIOR TO RENOVATIONS.

INTERNAL

- **A1- CEILING** Take down and remove existing damaged ceilings complete with cornices, brandering, hangers, etc., from trusses to remain and replace with 6mm Everite Nutec fibre-cement boards nailed to 38 x 38mm SAP brandering 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.
  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 (AZ11) and apply two finishing coats Plascon Woodcare Ultra (X44) suede varnish to cornices

- **B1 - WALLS** Repair and brush to remove all loose contaminants, fill existing cracks with crack filler apply one coat Masonry Sealant', one coat Masonry Primer' and two coats Super Acrylic' or other approved paint. Replace all broken / missing bricks to match existing.

- **C1 - FLOOR** Hack up/off and remove ,repair cracks out in granolithic finish, wet thoroughly and fill in with semi-dry 3:1 cement mortar well caulked. 'Pavelite' or other approved self-levelling screed on concrete; remove existing vinyl tile floor prepare floor to receive approved self-levelling screed finished with 300 x 300 x 2,5mm vinyl tiles or other approved semi-flexible vinyl flooring.

- **C2 -SKIRTING** Take up and remove defective skirting and replace with 19 x 70mm Skirting including 19mm quadrant bead nailed.

- **D1 - WINDOWS** Clean down existing steel windows and apply two coats Polyurethane Enamel' on existing enamel painted surfaces. Service and overhaul sash of steel window, including oiling and easing hinges, etc. retain existing burglar bars.
  Cracked glass in some places to be replaced.
  Window putty to be inspected and replaced where required.
  Burglar bars to be treated for rust and repainted.
  All ironmongery is to be replaced.

- **E1 - DOOR FRAME** Remove and replace existing door frame with DUROWIN or equal and approved single rebated with one shop coat red oxide pressed door frame 1,6 mm thick to 2032mm high door for 230m wall supplied with 1 pair welded steel hinges.

- **F1 - DOOR** Remove and repair existing door by Sand down, repair with wood filler and repaint reinstall as per door schedule, replace damaged doors with new doors.

- **G1 - STATIONARY CABINET Demolish** existing masonry cabinet remove door and frame then, Provide School Type 4 shelf metal lockable stationery cabinet 540707IK Ivory/ Karoo size 450 x 900 x 1 800mm high, bolted four times to wall with masonry expansion bolts.

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- **I1 - PINING BOARDS** Vitrex System 2000 Pin Boards overall size 1140 mm high x 4800 mm long to consist of Fliortime Premier pinning material / Belgotex Colour-Rib carpet surface laminated to a soft board core. the unit to be beaded all around with a natural anodised Aluminium channel surround mitered at the corners. Colour of the pinning material / carpet surface (2) to be [Colour name] (3) as selected by the Architect from the relevant standard colour range. Pin Boards supplied complete with necessary fixing components and fixed in position strictly in accordance with the manufacturer's instructions.

- **J1 - DOOR STOPPER** DDS-NP-018 nickel plated door stop.

- **K1 - SANITARY WARE**
  ALL Sanitaryware is to be replaced.
  Toilet seats need to be installed.
  Plumbing to be checked and replaced or repaired where required.
  All externall plumbing to be checked and replaced where needed.

EXTERNAL

- **EX1 - Remove and replace roof sheets as per specification** Take down and remove existing IBR roof coveringLay 0,8mm Thick Saflok/Kliplok 700 G4 Colortech aluminium interlocking roof covering fixed to purlins including approved stainless steel (Class 3) wafer head self-tapping fasteners with insulation including rainwater goods on existing structure.

- **EX2 - Install new fascia boards** Everite medium density plain ungrooved Nutec fascia boards (Code: 41-202), size 225 x 12mm, fixed to 38 x 38mm filter batten and 38 x 38mm support battens between rafters twice screwed with 12 x 40mm countersunk brass screws at 900mm centres to support battens with PVC H-profile fascia joiner between boards and PVC H-profile fascia corner joiners at board ends.

- **EX3 - Install new barge boards** Everite moulded Nutec moulded barge boards (Code: 721-740), size 275 x 80mm, fixed to 38 x 38mm trimmer batten twice screwed with 12 x 40mm countersunk brass screws with PVC H-profile barge board joiners between boards and at roof apex.

- **EX4 - Install new gutters and down pipes** Pre-coated aluminum seamless gutter, size 150 x 100 x 0,6mm thick in colour Marble White including matching rivet-fixed mitres and end caps internally sealed using Silicon Mastic, hung by nail fixed internal aluminium hangers at 600mm centres with rectangular fluted downpipes, size 100 x 75 x 0,6mm thick in colour Marble White fixed to walls with pre-painted downpipe cleats using nail-in anchor fixings.

- **EX5 - Verandah floor finish** Hack up/off and remove, repair cracks out in granolithic finish, wet thoroughly and fill in with semi-dry 3:1 cement mortar well caulked. Pavelite' or other approved self-levelling screed on concrete.

- **EX6 - Clean face brick** Clean down surfaces of face brick walls externally with a high pressure hose and a solution of 'Enterprise Cleaning Brick Cleaner' or similar approved and wash down with clean water. Existing painted bricks to be cleaned and re painted to match existing

- **EX7 - Wheelchair Access:**
  Existing rams to be refurbished and made good.
  New wheelchair access ramp to be installed where needed.
  Existing stairs to be made good.

- **EX8 - Concrete Apron** Clean down surfaces of apron externally with a high pressure hose and a solution of 'Enterprise Cleaning Brick Cleaner' or similar approved and wash down with clean water. Fix damaged concrete portions as per engineers specifications.

NOTE :

- **ALL DIMENSIONS TO BE CONFIRMED ON SITE**
- **ALL MECHANICAL AND ELECTRICAL SPECIFICATIONS TO ENGINEERS DETAIL AND APPROVAL**
- **ALL SHOP DRAWINGS TO BE SENT TO ENGINEERS AND ARCHITECTS FOR APPROVAL PRIOR TO MANUFACTURING AND INSTALLATION**

GENERAL DRAWING NOTES

1) RKWANSHIP TO COMPLY WITH STANDARD SPECIFICATION OF MATERIALS AND METHODS TO BE USED - sabs 0400
2) LIGHT SWITCH IN DISABLED TOILET TO BE AT 1200MM ABOVE FFL
3) IF STEP OVER 900MM BUILD IN BALUSTRADE
4) GULLEY POSITIONS TO BE DETRMINED AS PER SITE PRESCRIBED OVERALL DRAINAGE DESIGN
5) 2 X COATS SEALANT O ALL EXPOSED TRUSSES (SAND OFF ALL sabs & OTHER MARKINGS)
6) 50MM MINERAL WOOL INSULATION TO BE INSTALLED WHERE THERE ARE CEILINGS. BUBBLE PLASTIC INSULATION WITH FAIL BACKING TO BE INSTALLED WITH WIRE SUPPORTS IN ALL AREAS THAT DO NOT HAVE CEILINGS
7) WEST FACING FACADES TO HAVE STANDARDISED ALUMINIUM LOUVRES FROM BELOW EAVES TO DROP OF 1200MM
8) TRUSSES TO BE DESIGNED IN ACCORDANCE WITH SABS 0400 & APPROVED BY PROJECT ENGINEER

REVISIONS

REV No.	DATE	DESCRIPTION

ISSUED FOR TENDER

SIGNATURE TABLE:

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

REV No.	DATE:	DESCRIPTION

SIZE ON ORIGINAL DRAWING 420MM

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA
Department of
Public Works

INSTITUTION
PFUMBADA PRIMARY SCHOOL
INSTITUTION EMIS NUMBER
921230573
SERVICE
NEW BUILDINGS & ALTERATIONS
CONTACT - SECTION
CONSTRUCTION
DISPLINE: ARCHITECTURAL
PROJECT STAGE: 05
WORK DESCRIPTION - SUB DIVISION
RENOVATIONS
DRAWING DESCRIPTION
4 CLASSROOM BLOCK

DATE	WORK DESCRIPTION - SUB DIVISION		
2023.06.20	Y.VAHED		7852

DRAWING CO-ORDINATED

CONSULTANT

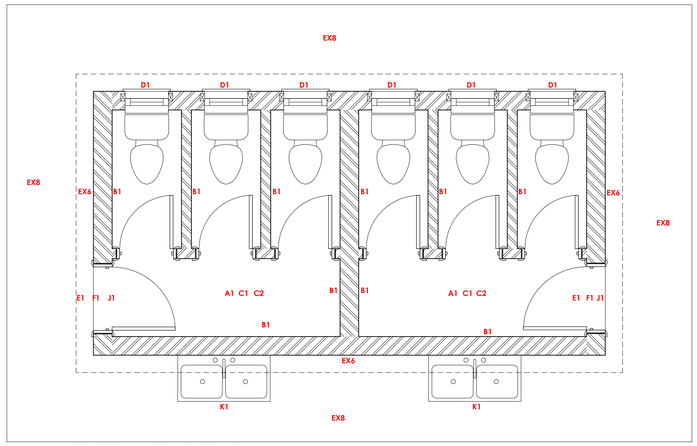
ruben reddy architects
Suite 4 No. 6 Eamon Office Building
Umhlanga Ridge, Umhlanga,4319,South Africa
TEL: +27 31 561 6122
CELL: +27 82 828 3992

CONTACTOR:

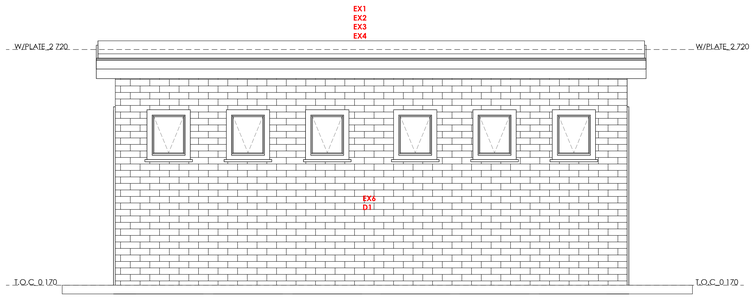
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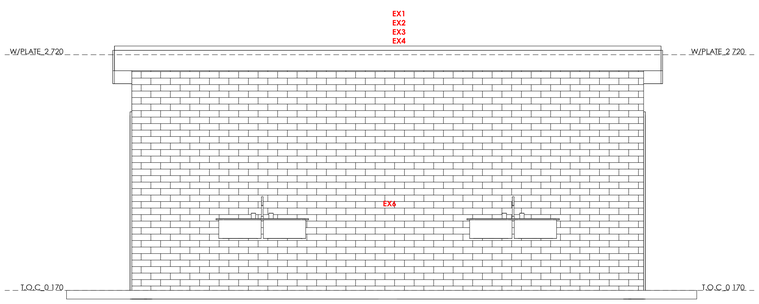
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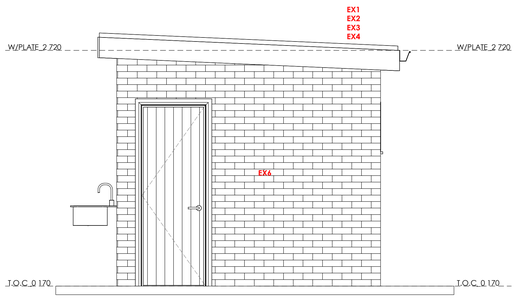
ENVIRO - LOO_FLOOR PLAN
SCALE 1:50



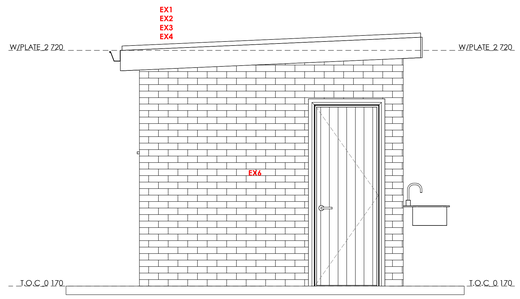
ENVIRO - LOO_BACK ELEVATION
SCALE 1:50



ENVIRO - LOO_FRONT ELEVATION
SCALE 1:50



ENVIRO - LOO_SIDE ELEVATION
SCALE 1:50



ENVIRO - LOO_SIDE ELEVATION
SCALE 1:50

REFURBISHMENT SCHEDULE

This schedule is provisional because each block will have to be based on site inspection and block type. ALL SPECIFICATIONS AND QUANTITIES TO BE CONFIRMED WITH QS AND ARCHITECT PRIOR TO PROCUREMENT. PROOF OF DAMAGED PORTIONS TO BE TAKEN NOTE OF WITH PICTURES PRIOR TO RENOVATIONS.

INTERNAL

- **A1- CEILING** Take down and remove existing damaged ceilings complete with cornices, brandering, hangers, etc., from trusses to remain and replace with 6mm Everite Nutec fibre-cement boards nailed to 38 x 38mm SAP brandering 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.
  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 (AZ11) and apply two finishing coats Plascon Woodcare Ultra (X44) suede varnish to cornices

- **B1 - WALLS** Repair and brush to remove all loose contaminants, fill existing cracks with crack filler apply one coat Masonry Sealant', one coat Masonry Primer' and two coats Super Acrylic' or other approved paint. Replace all broken / missing bricks to match existing.

- **C1 - FLOOR** Hack up/off and remove ,repair cracks out in granolithic finish, wet thoroughly and fill in with semi-dry 3:1 cement mortar well caulked. 'Pavelite' or other approved self-levelling screed on concrete; remove existing vinyl tile floor prepare floor to receive approved self-levelling screed finished with 300 x 300 x 2,5mm vinyl tiles or other approved semi-flexible vinyl flooring.

- **C2 -SKIRTING** Take up and remove defective skirting and replace with 19 x 70mm Skirting including 19mm quadrant bead nailed.

- **D1 - WINDOWS** Clean down existing steel windows and apply two coats Polyurethane Enamel' on existing enamel painted surfaces. Service and overhaul sash of steel window, including oiling and easing hinges, etc. retain existing burglar bars.
  Cracked glass in some places to be replaced.
  Window putty to be inspected and replaced where required.
  Burglar bars to be treated for rust and repainted.
  All ironmongery is to be replaced.

- **E1 - DOOR FRAME** Remove and replace existing door frame with DUROWIN or equal and approved single rebated with one shop coat red oxide pressed door frame 1,6 mm thick to 2032mm high door for 230m wall supplied with 1 pair welded steel hinges.

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REVISIONS

REV No.	DATE	DESCRIPTION

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

SIZE ON ORIGINAL DRAWING 420MM

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA
Department of
Public Works

INSTITUTION
PFUMBADA PRIMARY SCHOOL
INSTITUTION EMIS NUMBER
921230573
SERVICE
NEW BUILDINGS & ALTERATIONS
CONTACT - SECTION
CONSTRUCTION
DISIPLINE: ARCHITECTURAL
PROJECT STAGE: 05
WORK DESCRIPTION - SUB DIVISION
RENOVATIONS
DRAWING DESCRIPTION
ENVIRO-LOO TOILET BLOCK

DATE	WORK DESCRIPTION - SUB DIVISION		
2023.06.20	Y.VAHED		7812

DRAWING CO-ORDINATED

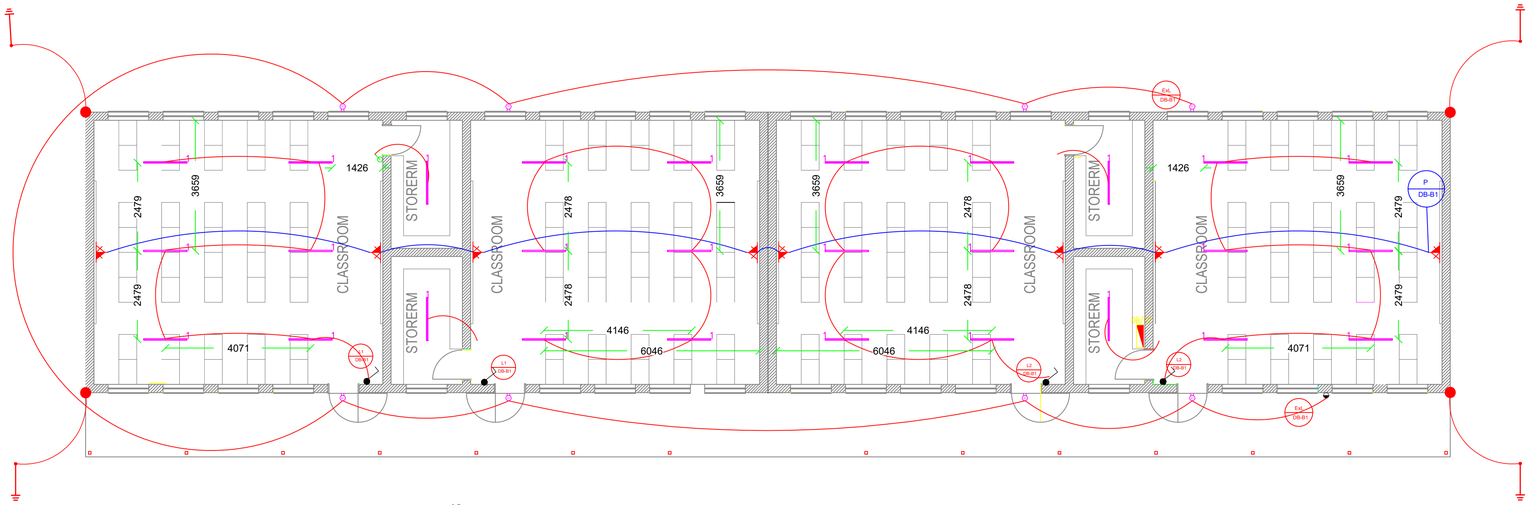
CONSULTANT

ruben reddy architects
Suite 4 No. 6 Samoi Office Building
6 Samoi Street Polokwane,0699,South Africa
Tel: +27 31 301 6122
C: +27 82 825 3932

CONTACTOR:

DRAWING SYSTEM:	REVIT	
SIZE:	DRAWING NUMBER:	REV NO:
A0	**2020_68-WBR-001**	**A**

21/06/2023 08:25:13



1.2m apron

SYMBOL	LIGHTING LEGEND.	QUANTITY
	TYPE 1 - 1200mm x 350mm 35W Surface LED channel complete with electronic ballast. Fittings to be equivalent to REGENT LIGHTING NANO CR180 fittings.	28
B1	TYPE B1 - IP65 Wall mounted 280mm diameter bulkhead complete with 2 x 18W CFL Fittings shall be equivalent to the BEKA series 31. Fittings to me mounted at 2200mm After Finished Floor Level.	9
	Photocell.	1
	1 lever 1 way switch. Mounting shall be 1400mm After Finished Floor Level.	9
	16A Flush mounted double socket outlet. Mounting at 300mm AFFL.	8
DB-B1	Flush Mounted Distribution Board	1

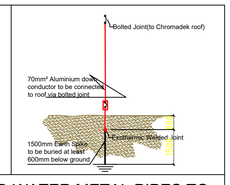
4 CLASSROOM BLOCK ELECTRICAL NOTES.

1. Install new electrical installation as per the design drawing.
2. All conduit to be used for small power and lighting installation shall be Ø25mm and Ø20mm SABS approved PVC conduit respectively.
3. 2.5mm2 and 4mm2 GP wire (with 2.5mm2 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 positions 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.

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 flash 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

BASIC LAYOUT
FOR ALL SHOWN EARTHING
CONNECTIONS



HOT AND/OR COLD WATER METAL PIPES TO BE BONDED TO MAIN EARTH

DETAIL SYMBOL

detail no
location sheet | detail sheet

REVISIONS DURING CONSTRUCTION

No	DATE	DESCRIPTION	SIGN

REVISIONS PRIOR CONSTRUCTION

No	DATE	DESCRIPTION	SIGN

KEY PLAN

ELECTRICAL ENGINEERS

NSK ELECTRICAL AND CONSTRUCTION MANAGERS PTY LTD
Physical Address : Block 7, 38 Burger Street, Polokwane, 0699.
Postal Address : Suite kkk133, Private Bag, X9700,Polokwane,0700
Tel : 015 295 2104
Cel : 082 459 9082 / 079 765 0921
Email : nsk_ecm@yahoo.com or prince@nskecm.co.za

ARCHITECT

CLIENT

LIMPOPO DEPARTMENT OF PUBLIC WORKS

PROJECT TITLE

Pfumbada Primary School

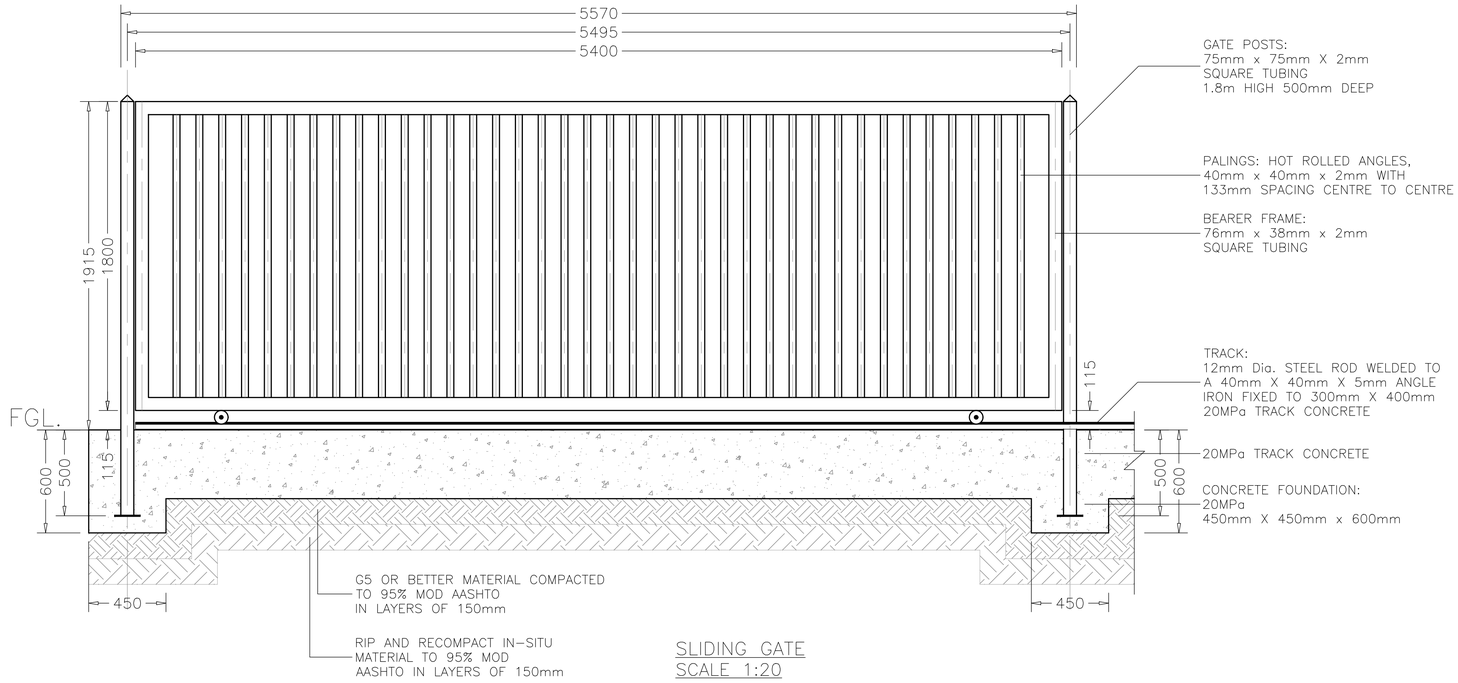
PROJECT ELECTRICAL ENGINEER PRINCE KWEMBEYA

DRAWING TITLE

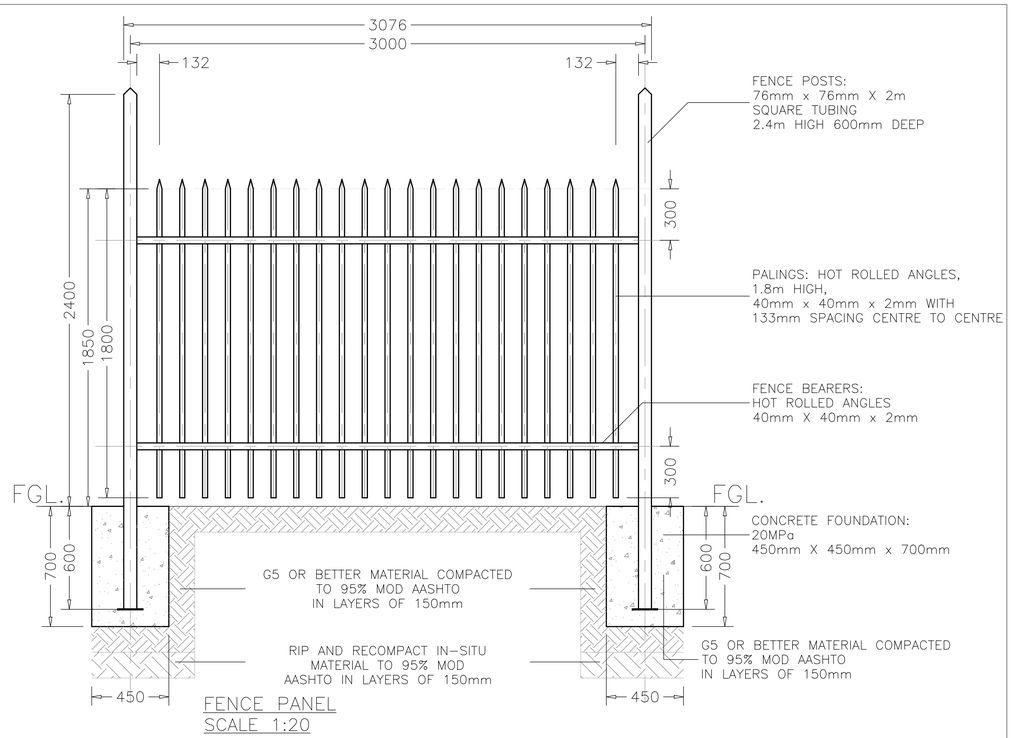
NEW 4 CLASSROOM BLOCK LIGHTING AND SMALL POWER

PROJECT No	DRG No	STAGE	REV
NSK-00028	NSK-MM-04	C	0

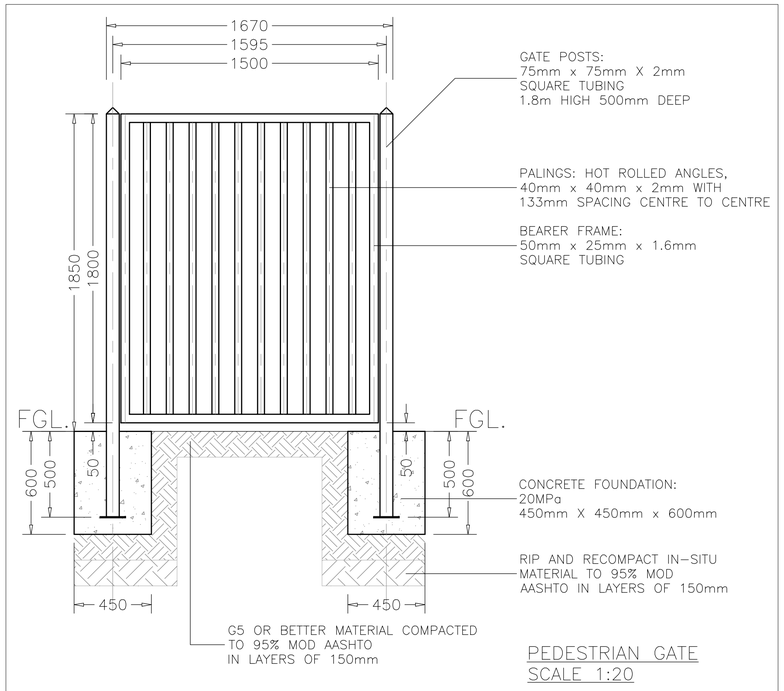
SCALE	DATE	DRAWN	CHECKED
NTS	13/07/2021	M.S	P.K



SLIDING GATE
SCALE 1:20



FENCE PANEL
SCALE 1:20



PEDESTRIAN GATE
SCALE 1:20

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.

REV	DATE	CHK	APP	DESCRIPTION

CLIENT: LIMPOPO PROVINCIAL GOVERNMENT, DEPARTMENT OF PUBLIC WORKS, ROADS & INFRASTRUCTURE

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	02 July 2021	V.M	
	CHECKED	02 July 2021	E.M	
	DRAWN	02 July 2021	V.M	
	PROJECT MNG.			
	APPROVED			
	CLIENT			

SCALE: DO NOT SCALE IF IN DOUBT ASK.

ALL DIMENSION IN mm UNLESS SPECIFIED OTHERWISE

PROJECT No. LDPWRI-PROF/16003B

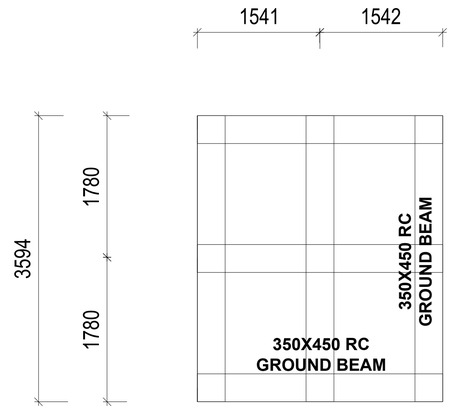
TITLE: LDPWRI STORM DAMAGED SCHOOLS
STEEL PALISADE FENCE DETAILS

DRG SIZE: A1

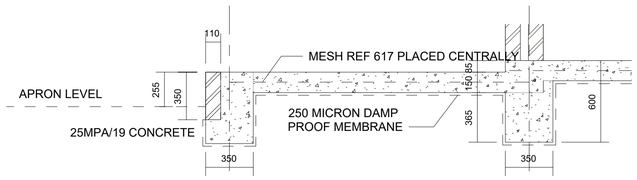
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REV 0

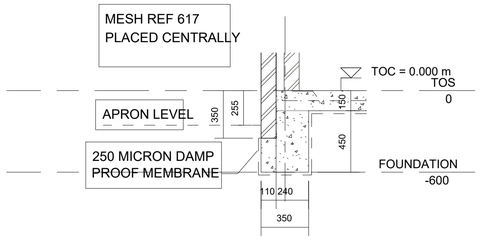
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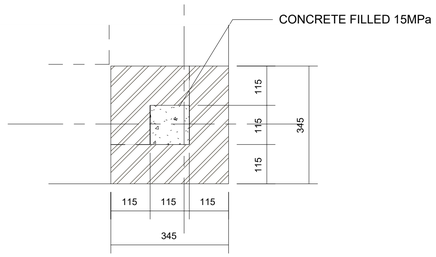
FOUNDATION LAYOUT - PLAN



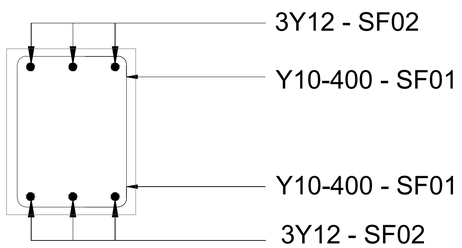
DETAIL A



DETAIL B

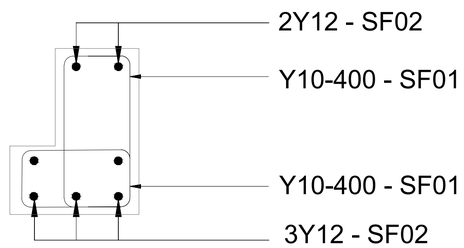


PLAN ON 345x345 PIER (2 No. PLACES)
DETAIL C



GROUND BEAMS REINFORCEMENT

See Bending Schedule for Details



GROUND BEAMS REINFORCEMENT

See Bending Schedule for Details

CONCRETE NOTES:

1. ALL CIVIL ENGINEERING WORK TO BE CARRIED OUT IN ACCORDANCE WITH SABS 1200
2. CONCRETE TO BE "STRENGTH CONCRETE" AS SPECIFIED BELOW ULNESS OTHERWISE NOTED.
   MASS CONCRETE GRADE 10/19
   BLINDING CONCRETE GRADE 10/19
   STRUCTURAL CONCRETE GRADE 25/19
3. 250 MICRON PVC SHEETING IN ACCORDANCE WITH SABS 952 -1985 TYPE C TO BE PROVIDED UNDER ALL GROUND SLABS.
4. EXPOSED UNFORMED SURFACES TO BE "STEEL FLOAT FINISH" UNLESS OTHERWISE NOTED.
5. THE MINIMUM DESIGN BEARING PRESSURE FOR FOUNDATIONS IS 150MPa UNLESS OTHERWISE NOTED.
6. ALL FOUNDATION EXCAVATIONS TO BE INSPECTED BY THE ENFINEER PRIOR TO CASTING OF BLINDING AND TO BE KEPT DRY AT ALL TIMES.

CONSTRUCTION NOTES:

1. CONSTRUCTION PROCEDURE, SEQUENCE AND POSITIONING OF COSTRUCTION JOINTS TO BE APPROVED BY THE ENGINEER PRIOR TO CASTING THE RAFT.
2. CONSTRUCTION JOINT PREPARATION: THE SURFACE OF THE FIRST CAST CONCRETE FORMING A CONSTRUCTION JOINT SHALL HAVE A LAITANCE REMOVED TO EXPOSE THE COARSE AGGREGATE AND A SOLID SURFACE. THIS MAY BE FACILITATED BY THE USE OF A SUITABLE EXPANDED METAL OR PROPRIETARY STOP END SHUTTER.
3. RAFT TO BE POWER FLOATED TO JUST SHORT OF BEIG POLISHED. METHOD TO BER APPROVED BY THE ENGINEER PRIOR TO IMPLEMENTATION.
4. RAFT TO BE CURED FOR 7 DAYS AFTER CONCRETE CASTING I.E KEEP WET OR COVER WITH PLASTIC MEMBRANE.

GEOTECHNICAL CONSIDERATIONS

1. COGNISANCE HAS BEEN TAKEN OF THE DOLOMITE CONDITIONS AND THE FOUNDATIONS HAVE BEEN ACCORDING TO THE FOLLOWING;
2. DOLOMITE AREA DESIGNATION - D3
3. SINKHOLE MAXIMUM SIZE - 5M DIAMETER

REV	DATE	CHK	APP	DESCRIPTION

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

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PROJECT APPR.	DATE	BY	SIGNATURE
DESIGNED	02 May 2023	S.D	
CHECKED	02 May 2023	E.M	
DRAWN	02 May 2023	S.D	
PROJECT MNG.			
APPROVED			
CLIENT			

SCALE: DO NOT SCALE IF IN DOUBT ASK.

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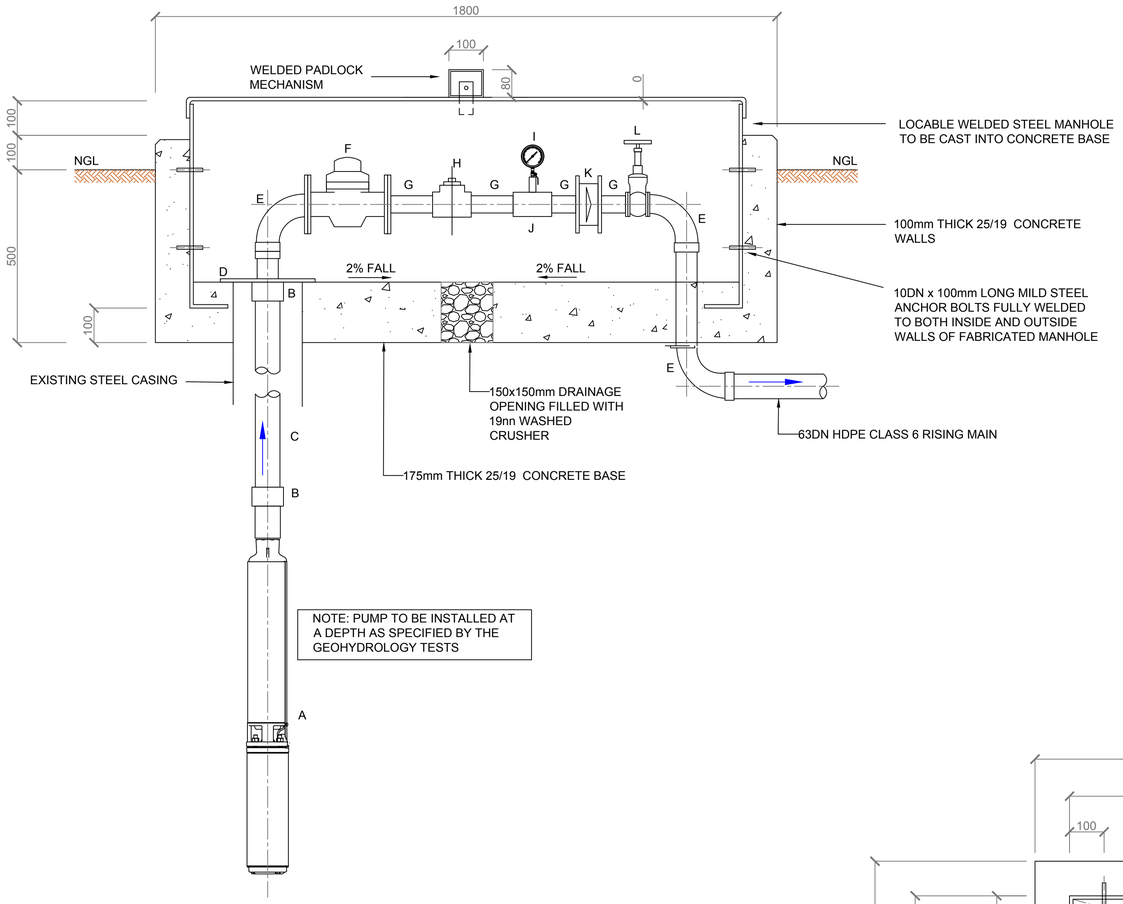
PROJECT No. LDPWRI-PROF/16003B

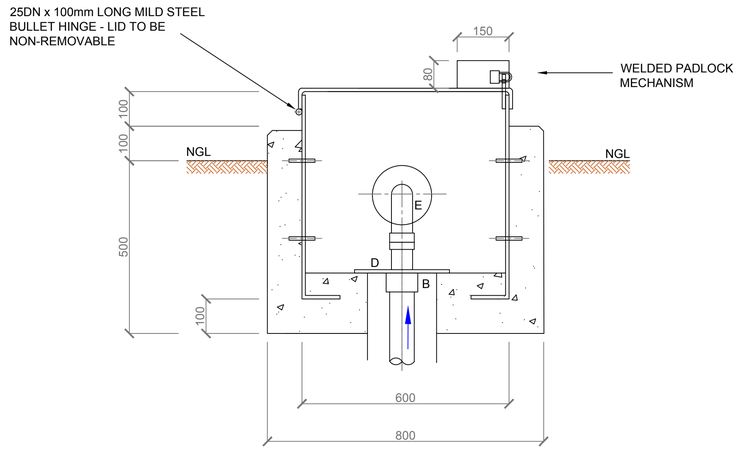
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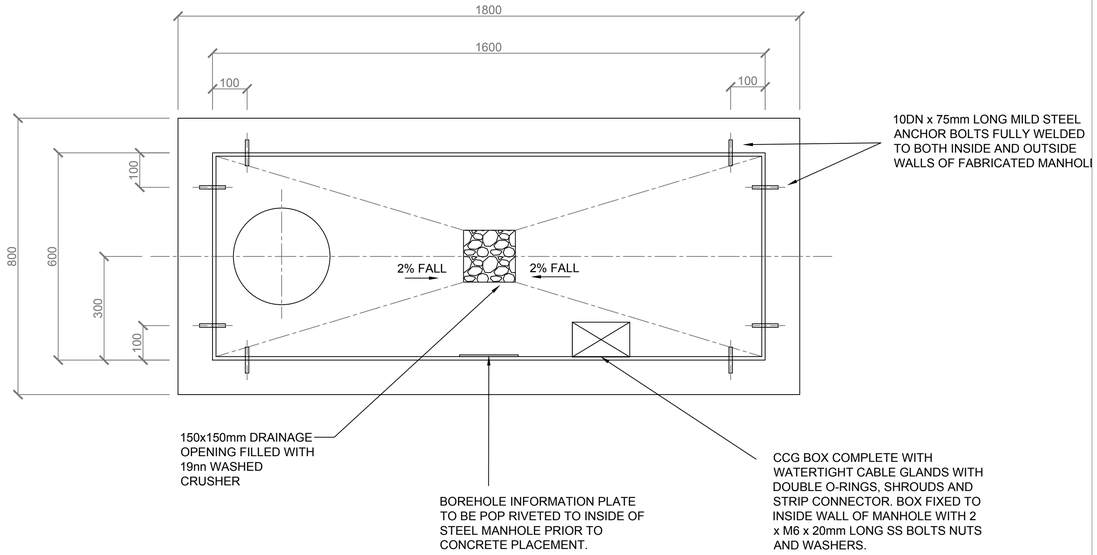
TITLE: GUARDHOUSE BLOCK FOUNDATION LAYOUT & DETAILS

DRAWING No. GUARDHOUSE/RAFT/001

REV 0







200

100

UNIVERSITY OF LIMPOPO, TURFLOOP CAMPUS

BOREHOLE No.	BH1	
BOREHOLE DEPTH	110	(m)
STATIC WATER LEVEL	1.15	(m)
PUMP INSTALLATION. DEPTH	110	(m)
RECOMMENDED . PUMP YIELD	0.5	(l/s)
RECOMMENDED PUMPING TIME	8	(hrs/day)
PUMP MODEL No.	Submersible	
MOTOR TYPE		
ELECTRICAL MOTOR SIZE		(kW)
DATE INSTALLED		

ISSUED FOR TENDER

GENERAL NOTES

1. ALL STEEL PIPES AND FITTINGS TO BE HEAVY DUTY HOT DIPPED GALVANIZED WITH A MINIMUM ZINC COATING OF 105 MICRON.
   ANY PIPES ORDERED WITHOUT THE APPROVAL OF THE ENGINEER WILL BE RECTIFIED AT THE CONTRACTORS OWN COST.
2. EACH ITEM IS TO BE CLEARLY MARKED ACCORDING TO THE NUMBERS GIVEN IN THE LIST.
3. ALL CONCRETE TO BE 25/19 MPa, AND CAST ON 93% MOD AASHTO COMPACTED IN-SITU SOIL.
4. ALL EXPOSED CONCRETE EDGES TO HAVE A 20mm CHAMFER.
5. ALL HDPE PIPES TO BE IN ACCORDANCE WITH SABS 4427 SPECIFICATIONS.
6. CORROSION PROTECTION:
   - 6.1. ALL STEEL ITEMS, INCLUDING THE STEEL CAGE TO BE COATED WITH CORROSION PROTECTION PAINT
   - 6.2. AFTER INSTALLATION ANY CHIPS AND SCRATCHES SHALL BE MADE GOOD ON SITE WITH BRUSH APPLIED GALVANIZED PAINT.

REF.	SCHEDULE OF FITTINGS	SIZE	LENGTH	QTY.
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

REV	DATE	CHK	APP	DESCRIPTION

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

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PROJECT MNG.			
APPROVED			
CLIENT			

SCALE: DO NOT SCALE IF IN DOUBT ASK.

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PROJECT No. LDPWRI-PROF/16003B

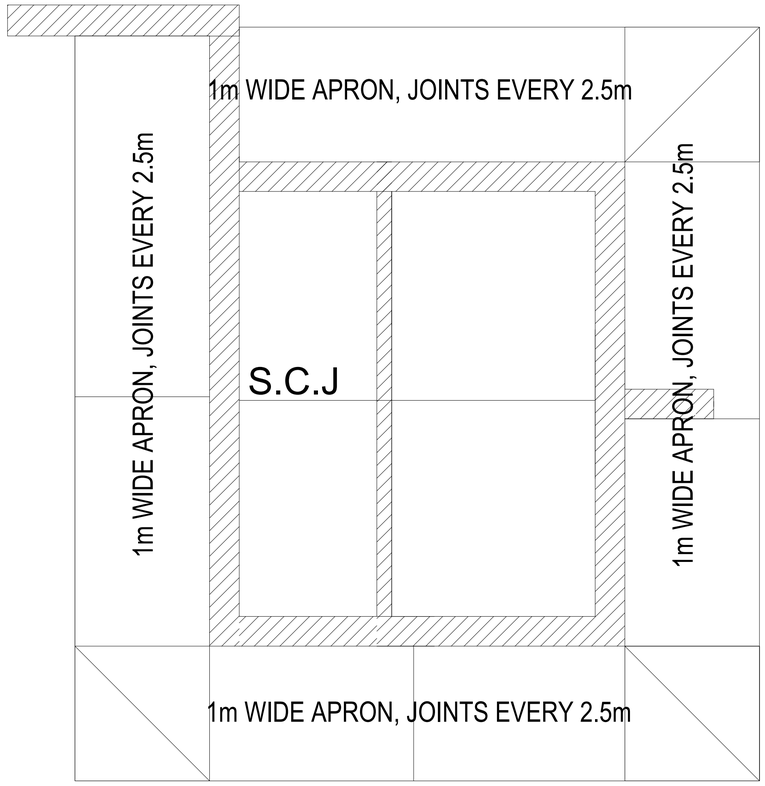
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TITLE: LDPWRI STORM DAMAGED SCHOOLS BOREHOLE SPECIFICATIONS

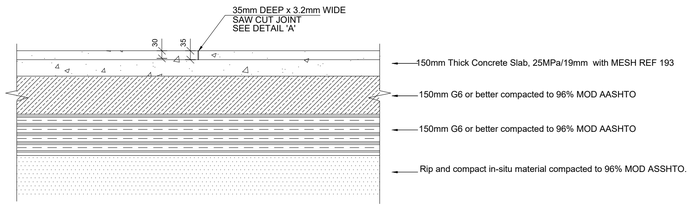
DRAWING No. LDPWRI SCHOOLS/B&C/02

REV 0

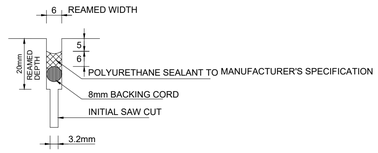
ISSUED FOR DISCUSSION



FLOOR JOINTS



SAW CUT JOINT
N.T.S.



SAW CUT JOINT
N.T.S.

JOINT DETAILS - SECTIONS

REV	DATE	CHK	APP	DESCRIPTION

CLIENT

LIMPOPO PROVINCIAL GOVERNMENT
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TITLE: GUARDHOUSE BLOCK FLOOR JOINTS

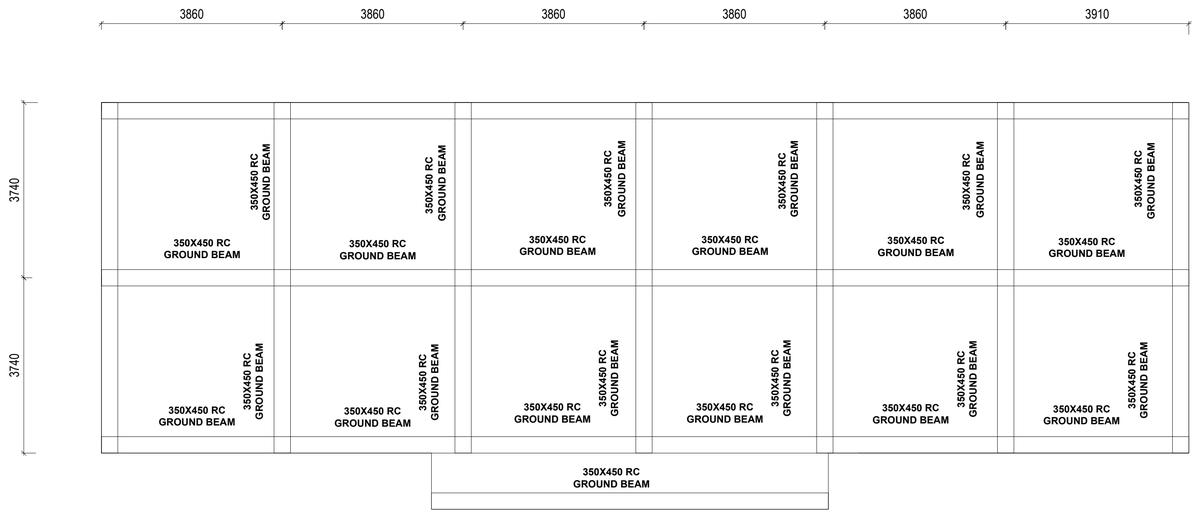
PROJECT No.: LDPWRI-PROF/16003B

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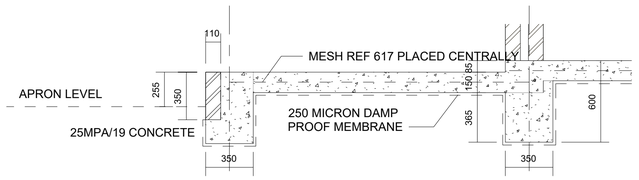
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REV: 0

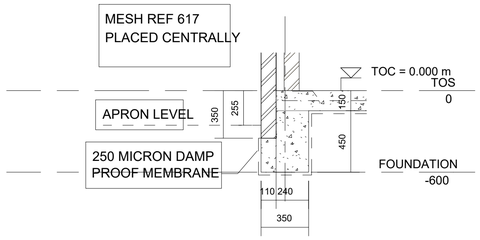
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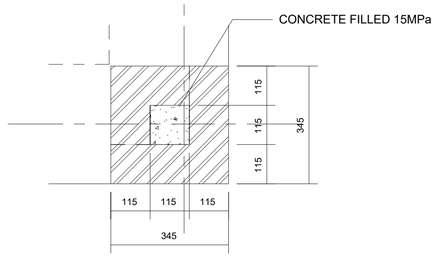
FLOOR JOINT LAYOUT - PLAN



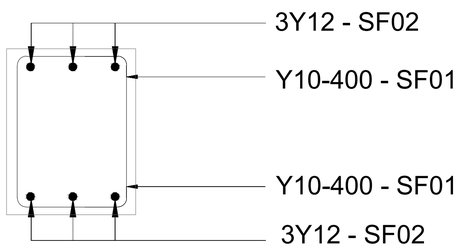
DETAIL A



DETAIL B

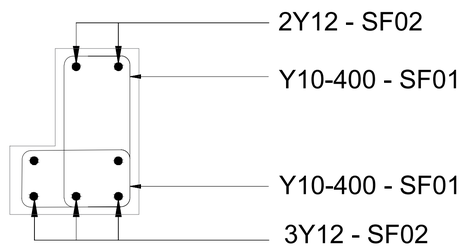


PLAN ON 345x345 PIER (2 No. PLACES)
DETAIL C



GROUND BEAMS REINFORCEMENT

See Bending Schedule for Details



GROUND BEAMS REINFORCEMENT

See Bending Schedule for Details

CONCRETE NOTES:

1. ALL CIVIL ENGINEERING WORK TO BE CARRIED OUT IN ACCORDANCE WITH SABS 1200
2. CONCRETE TO BE "STRENGTH CONCRETE" AS SPECIFIED BELOW ULNESS OTHERWISE NOTED.
   MASS CONCRETE GRADE 10/19
   BLINDING CONCRETE GRADE 10/19
   STRUCTURAL CONCRETE GRADE 25/19
3. 250 MICRON PVC SHEETING IN ACCORDANCE WITH SABS 952 -1985 TYPE C TO BE PROVIDED UNDER ALL GROUND SLABS.
4. EXPOSED UNFORMED SURFACES TO BE "STEEL FLOAT FINISH" UNLESS OTHERWISE NOTED.
5. THE MINIMUM DESIGN BEARING PRESSURE FOR FOUNDATIONS IS 150MPa UNLESS OTHERWISE NOTED.
6. ALL FOUNDATION EXCAVATIONS TO BE INSPECTED BY THE ENFINEER PRIOR TO CASTING OF BLINDING AND TO BE KEPT DRY AT ALL TIMES.

CONSTRUCTION NOTES:

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3. RAFT TO BE POWER FLOATED TO JUST SHORT OF BEIG POLISHED. METHOD TO BER APPROVED BY THE ENGINEER PRIOR TO IMPLEMENTATION.
4. RAFT TO BE CURED FOR 7 DAYS AFTER CONCRETE CASTING I.E KEEP WET OR COVER WITH PLASTIC MEMBRANE.

GEOTECHNICAL CONSIDERATIONS

1. COGNISANCE HAS BEEN TAKEN OF THE DOLOMITE CONDITIONS AND THE FOUNDATIONS HAVE BEEN ACCORDING TO THE FOLLOWING;
2. DOLOMITE AREA DESIGNATION - D3
3. SINKHOLE MAXIMUM SIZE - 5M DIAMETER

REV	DATE	CHK	APP	DESCRIPTION

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

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APPROVED			
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PROJECT No. LDPWRI-PROF/16003B

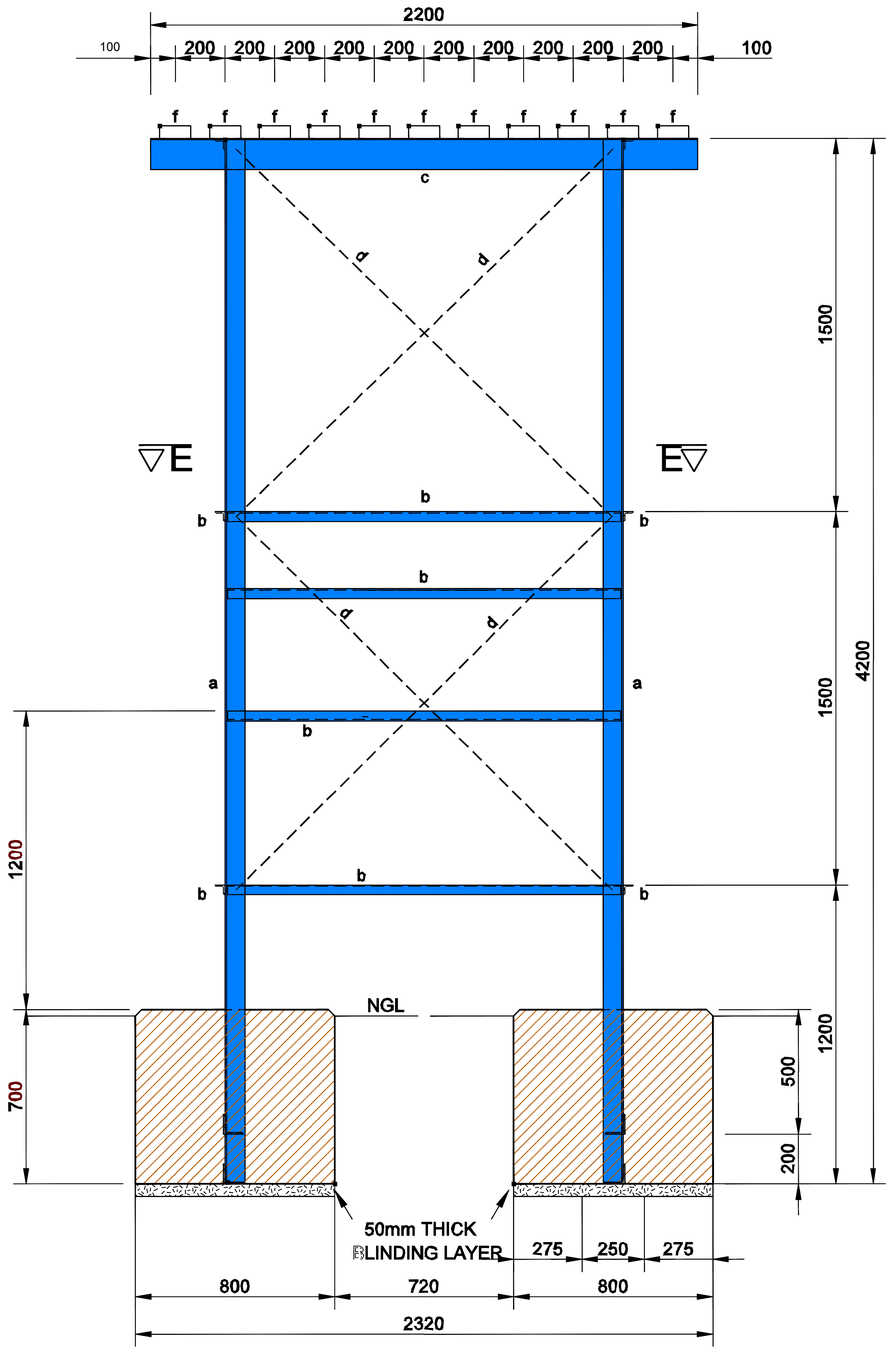
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TITLE: NUTRISION BLOCK FOUNDATION LAYOUT & DETAILS

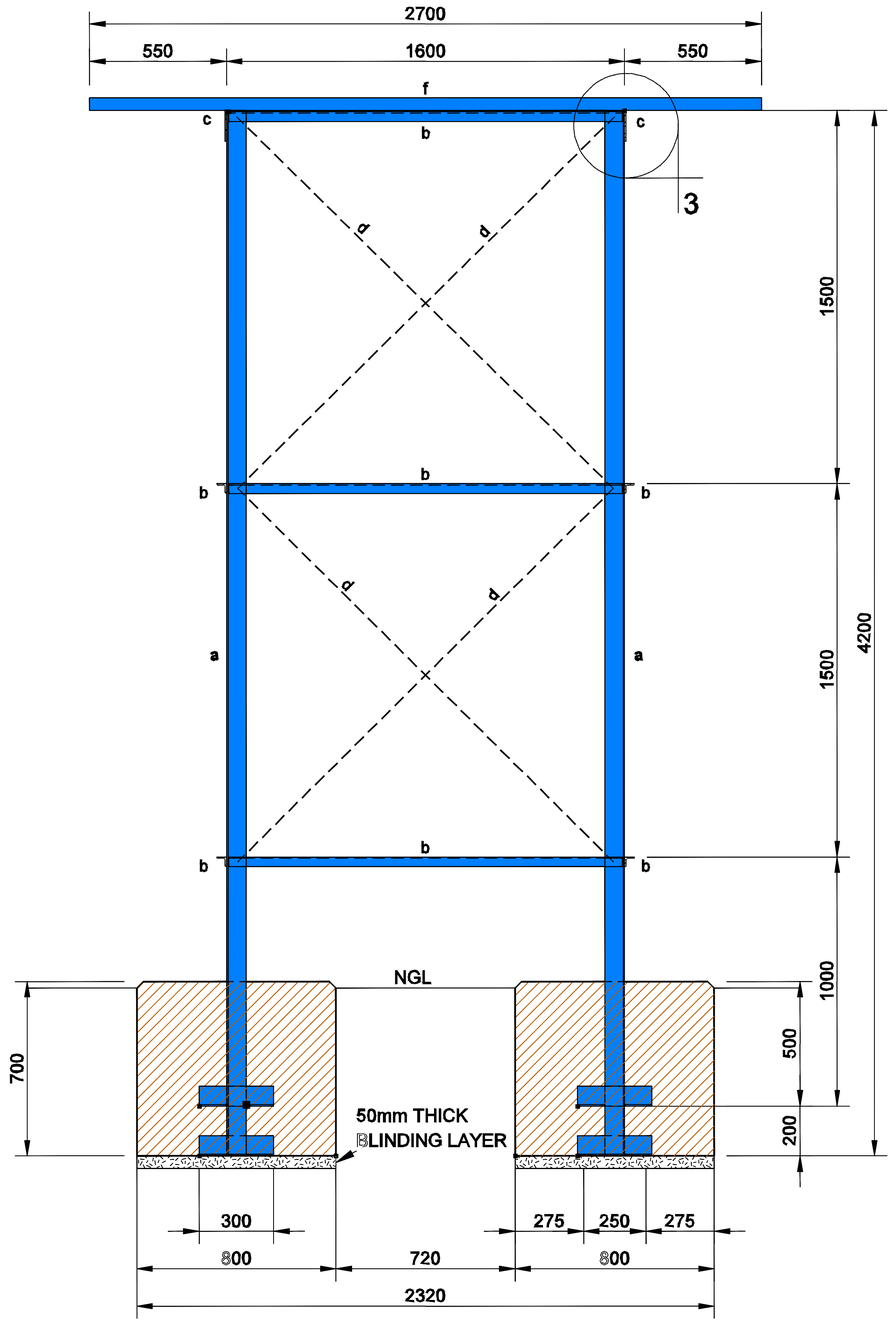
DRAWING No. NUTRISION/RAFT/003

REV 0

ISSUED FOR TENDER



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 – 30×5 flat bar made
f - 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

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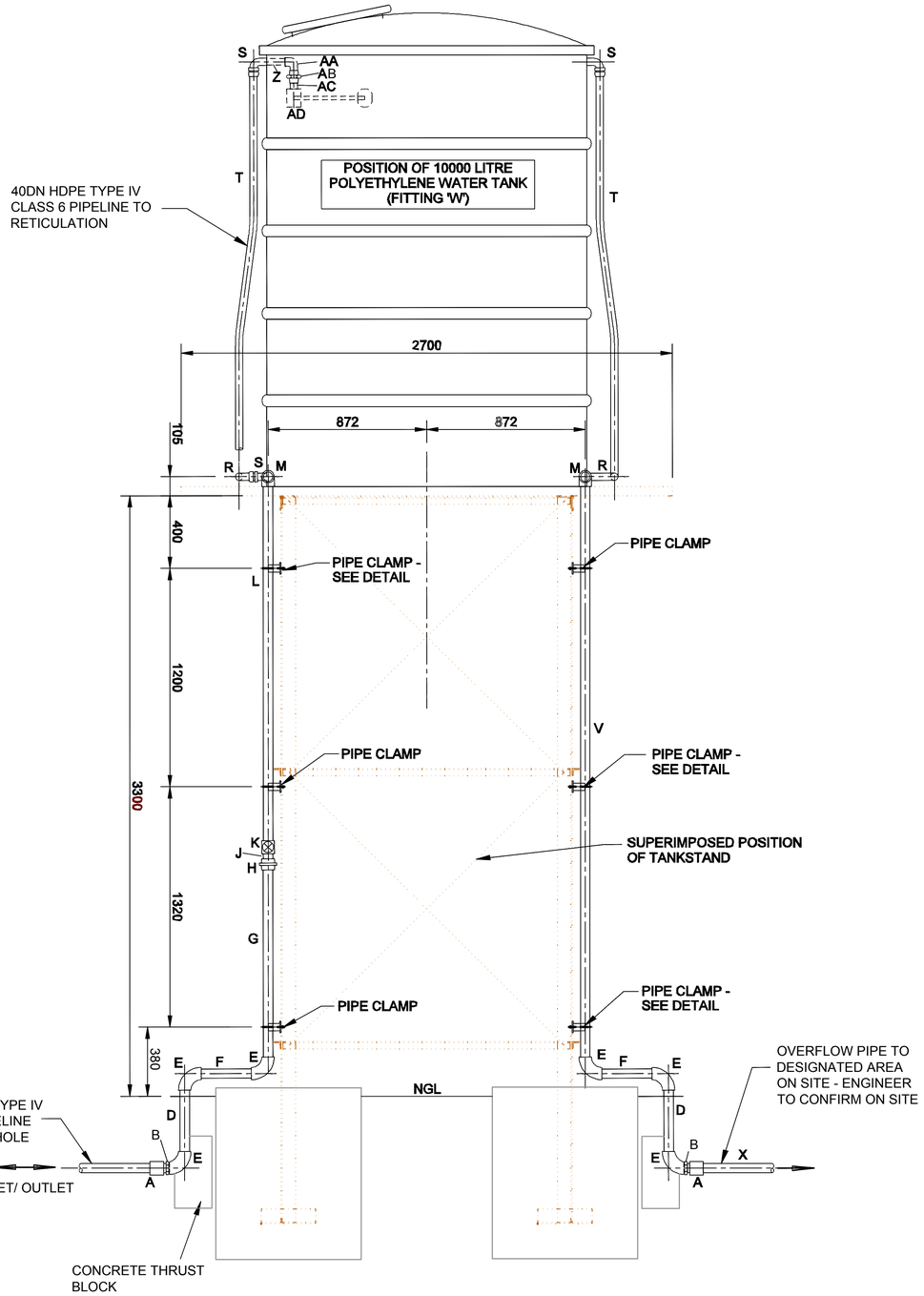
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SCALE: DO NOT SCALE IF IN DOUBT ASK.
ALL DIMENSION IN mm UNLESS SPECIFIED OTHERWISE
PROJECT No. LDPWRI-PROF/16003B
TITLE: LDPWRI STORM DAMAGED SCHOOLS PVC TANK STAND DETAILS
DRG SIZE: A1
DRAWING No. LDPWRI SCHOOLS/B&C/03A
REV 0

ISSUED FOR TENDER



SCHEDULE OF FITTINGS

REF	NB	DESCRIPTION		WALL ϒ mm	FLANGE DRILLING	TREATMENT: GALVANISED	TREATMENT: EPOXY RESIN PAINT	QTY
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

REV	DATE	CHK	APP	DESCRIPTION

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

MUTEO CONSULTING

39 GROBLER STREET
POLOKWANE 0699
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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: DO NOT SCALE IF IN DOUBT ASK.

ALL DIMENSION IN mm UNLESS SPECIFIED OTHERWISE

PROJECT No. LDPWRI-PROF/16003B

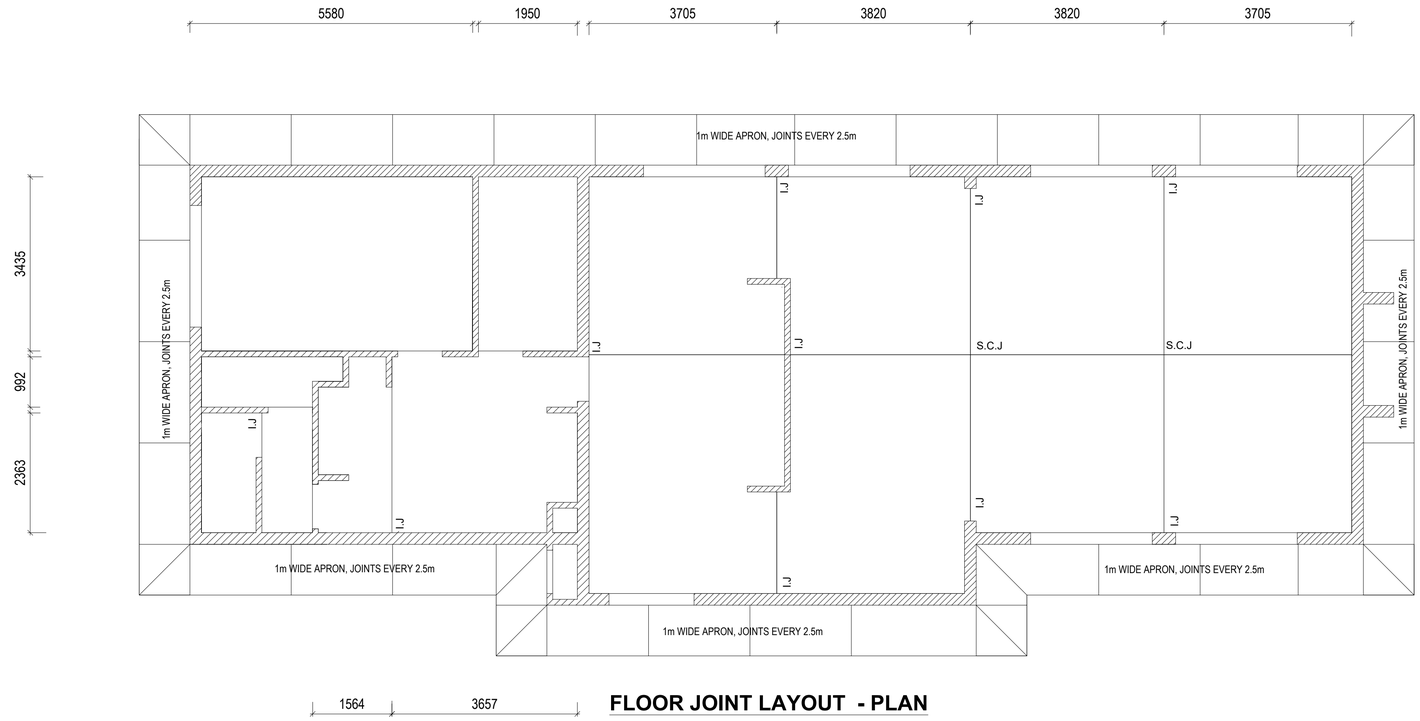
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TITLE: LDPWRI STORM DAMAGED SCHOOLS PVC TANK PIPE FITTINGS

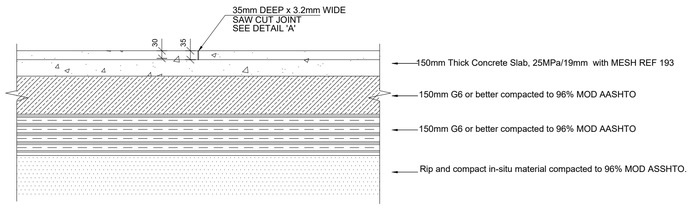
DRAWING No. LDPWRI SCHOOLS/B&C/03C

REV 0

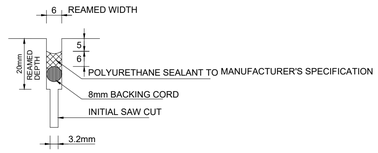
ISSUED FOR DISCUSSION



FLOOR JOINT LAYOUT - PLAN



SAW CUT JOINT
N.T.S.



SAW CUT JOINT
N.T.S.

JOINT DETAILS - SECTIONS

REV	DATE	CHK	APP	DESCRIPTION

CLIENT

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

MUTEO CONSULTING

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	DATE	BY	SIGNATURE
PROJECT APPR.			
DESIGNED	02 May 2023	S.D	
CHECKED	02 May 2023	E.M	
DRAWN	02 May 2023	S.D	
PROJECT MNG.			
APPROVED			
CLIENT			

SCALE: DO NOT SCALE IF IN DOUBT ASK.

ALL DIMENSION IN mm UNLESS SPECIFIED OTHERWISE

PROJECT No.: LDPWRI-PROF/16003B

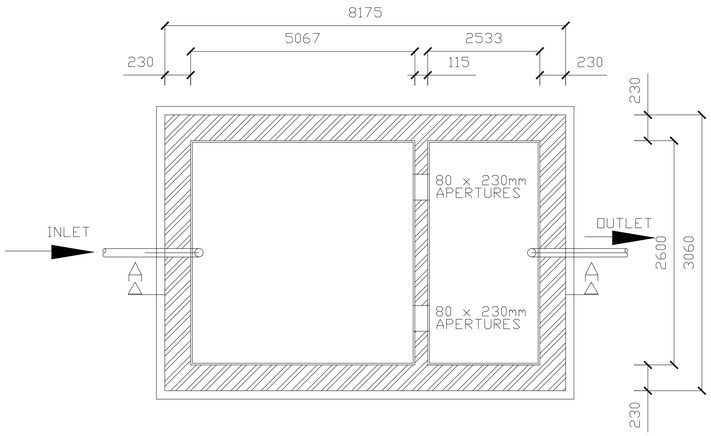
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TITLE: NUTRISION BLOCK FLOOR JOINTS

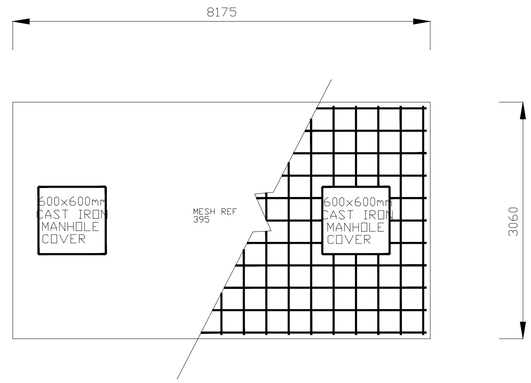
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REV: 0

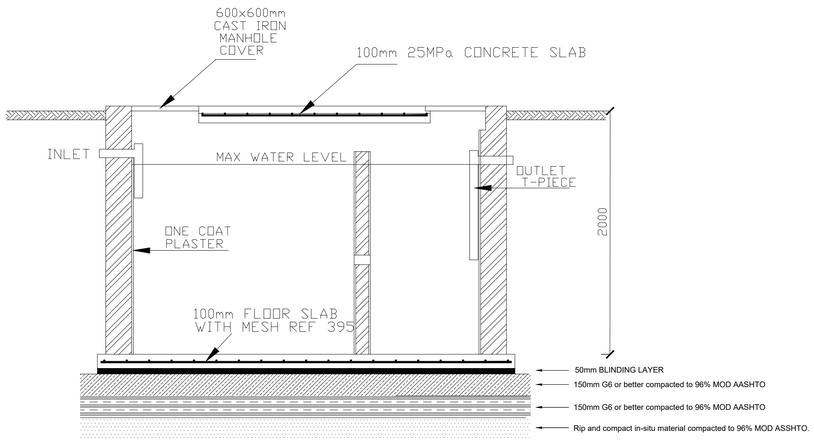
ISSUED FOR TENDER



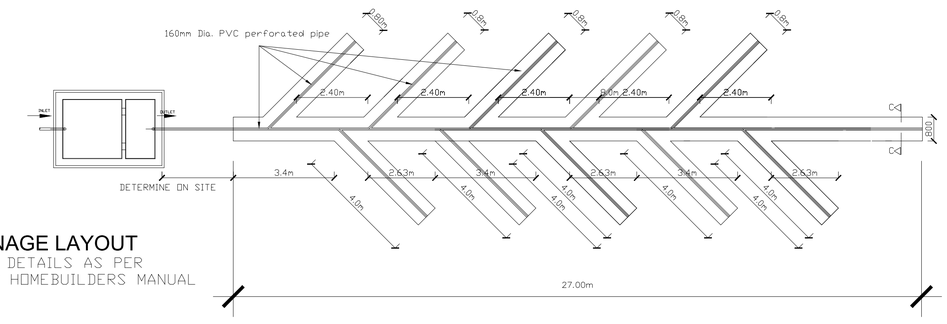
PLAN



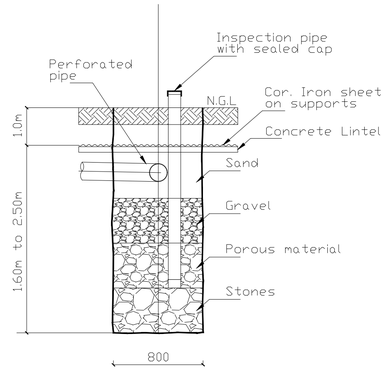
FLOOR SLAB REINFORCEMENT



SECTION A-A



DRAINAGE LAYOUT
SEPTIC DETAILS AS PER
NNHBBC HOMEBUILDERS MANUAL



SECTION C-C
(STD FRENCH DRAIN SECTIONAL DETAIL)

REV	DATE	CHK	APP	DESCRIPTION

CLIENT

..\..\LDPWRI Logo.png

MUTEO CONSULTING

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PROJECT APPR.	DATE	BY	SIGNATURE
DESIGNED	02 July 2021	V.M	
CHECKED	02 July 2021	E.M	
DRAWN	02 July 2021	V.M	
PROJECT MNG.			
APPROVED			
CLIENT			

SCALE: DO NOT SCALE IF IN DOUBT ASK.

ALL DIMENSION IN mm UNLESS SPECIFIED OTHERWISE

TITLE: PFUMBADA PRIMARY SCHOOL
SEPTIC TANK

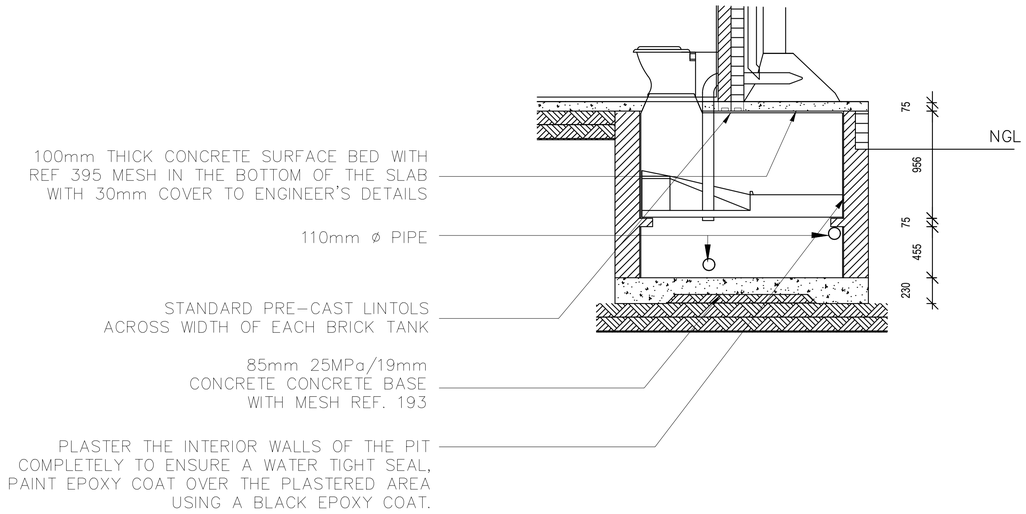
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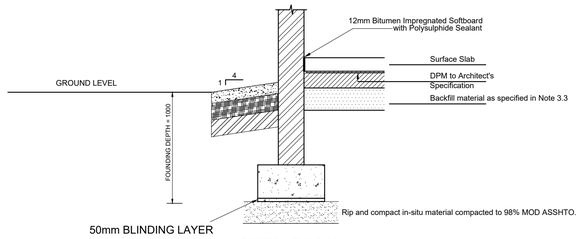
DRAWING No.: LDPWRI SCHOOLS/B/PFUMBADA/10

REV: 0

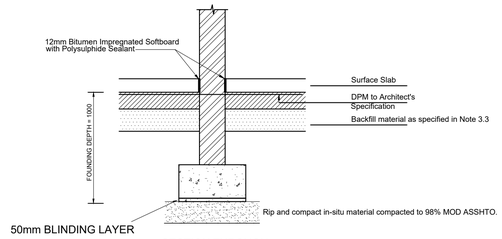
ISSUED FOR TENDER



PIT VAULT - SECTION



SECTION THROUGH
STRIP FOUNDATION - 600 x 250 Dp Base
230 WALLS EXTERNAL WALLS



SECTION THROUGH
STRIP FOUNDATION - 600 x 250 Dp Base
230 WALLS INTERNAL WALLS

1. GENERAL NOTES

1.1. All work to be done in accordance with the National Building Regulations and the relevant SABS Specifications.
1.2. All drawings to be read in conjunction with Architect's drawings and any discrepancies must be reported to the Engineer prior to any setting out of work.
1.3. No structural alterations are to be made without amended drawings.
1.4. All drawings must be checked by the Contractor and any discrepancies should be reported to the Engineer before any work commences
1.5. All waterproofing and drainage to be to Architect's details and instructions.
1.6. Contractor to ensure that stability of banks and excavations are continuously maintained throughout the construction period

2. R.C. CONSTRUCTION

2.1. No concrete is to be poured before the Engineer has inspected and approved the fixing of the reinforcement , 48 hours notice is required.
2.2. Breaks in concrete and construction joints are to be made only with Engineer's approval.
2.3. Shuttering and propping may be struck only after the lapse of the following times (in days):

Beam sides, walls and unloaded columns	2
Slab soffits without removal of slab props	4
Beam soffits without removal of beam props	7
Props unloaded slabs	10
Props unloaded beams	14

2.4. Minimum concrete cover to reinforcement (in mm)

piles	50	beams	30
pile caps	50	slabs	20
ground beams	50	retaining walls (earth face)	30
columns	30	retaining walls (exposed face)	30

2.5. Concrete cube strength at 28 days in (MPa)

blinding	15	beams	25
Mortar(Class A)	15	slabs	25
columns	30	walls	25

2.6. Concrete cover to reinforcing to be maintained by the use of either nylon spacers or precast concrete blocks with binding wires cast in.
2.7. All floor levels, unless otherwise indicated , are structural slab levels.

3. FOUNDING

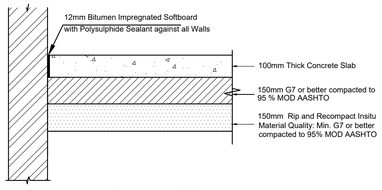
3.1. Foundations are subject to alterations as excavations proceed.
3.2. No foundations are to be cast or reinforcement fixed in bases until excavations have been approved by an Engineer.
3.3. All backfill material under foundations and floors to be as follows:
G6 Material or better
PI < 6
Compacted to 98% MOD AASHTO in layers of 150mm
Non-cohesive and free draining

4. ADDITIONAL NOTES

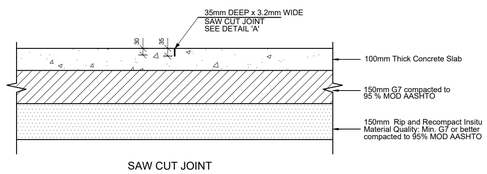
4.1. All exposed concrete slabs and beams bearing on brickwork to have a slip joint made up of 2 sheets of masonite with smooth faces abutting each other at top of brick-concrete interface. Joint to extend through plaster.
4.2. Special attention to be given to curing of concrete. Exact details to be discussed with Engineer on site prior to pouring of any concrete.
4.3. Two lintels plus five courses of brickwork to be built over all openings - reinforced every course with brickforce.
4.4. All brickwork to have a minimum compressive strength of 15MPa.
4.5. A construction joint sealed with suitable flexible sealant is to be formed at all junctions between new brickwork and existing brickwork.
4.6. No brickwork is to be built onto suspended slabs or beams until slabs/beams have attained their full strength and have been depropped
4.7. All deviations from architect's drawing to be confirmed by architect prior to construction.
4.8. All work to be carried out in accordance with the National Building Regulations, Environmental and Occupational Health and Safety Act, (latest revision) and the Construction Regulations.
4.9. The main contractor is to ensure that a competent person, approved by the South African Qualification Authority supervises and approves all aspects of the requirements of the Occupational Health and Safety Act, latest revision.
4.10. All temporary works to be designed, detailed, supervised and certified by a competent person or professional engineer as defined in the OHS ACT.
4.11. The works will be inspected from time to time by the consulting engineer to ascertain that the contractor is carrying out the work in general conformity with the engineering drawings and documents. Such inspections are not carried out for the benefit of the contractor, and do not relieve him of the responsibility for the proper construction of the works in accordance with the engineering drawings, documents & good building practice.

5. COMPLETION CERTIFICATE

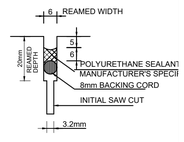
5.1. No completion certificate shall be issued if all material amd compaction test results are not submitted to the Engineer



ISOLATION JOINT DETAIL
NOT TO SCALE

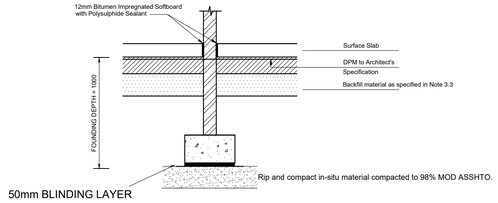


SAW CUT JOINT

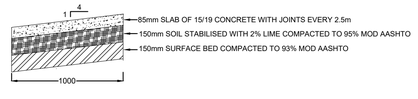


DETAIL A

CAW CUT JOINTS - SECTIONS



TYPICAL SECTION THROUGH
STRIP FOUNDATION - 450 x 250 Deep Base
115 INTERNAL WALLS



APRON DETAIL

FOUNDATION DETAILS - SECTIONS

REV	DATE	CHK	APP	DESCRIPTION

CLIENT

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

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PROJECT APPR.	DATE	BY	SIGNATURE
DESIGNED	22 June 2023	N.M	
CHECKED	22 June 2023	E.M	
DRAWN	22 June 2023	N.M	
PROJECT MNG.			
APPROVED			
CLIENT			

SCALE
DO NOT SCALE
IF IN DOUBT ASK.

ALL DIMENSION IN mm UNLESS SPECIFIED OTHERWISE

PROJECT No.
LDPWRI-PROF/16003B

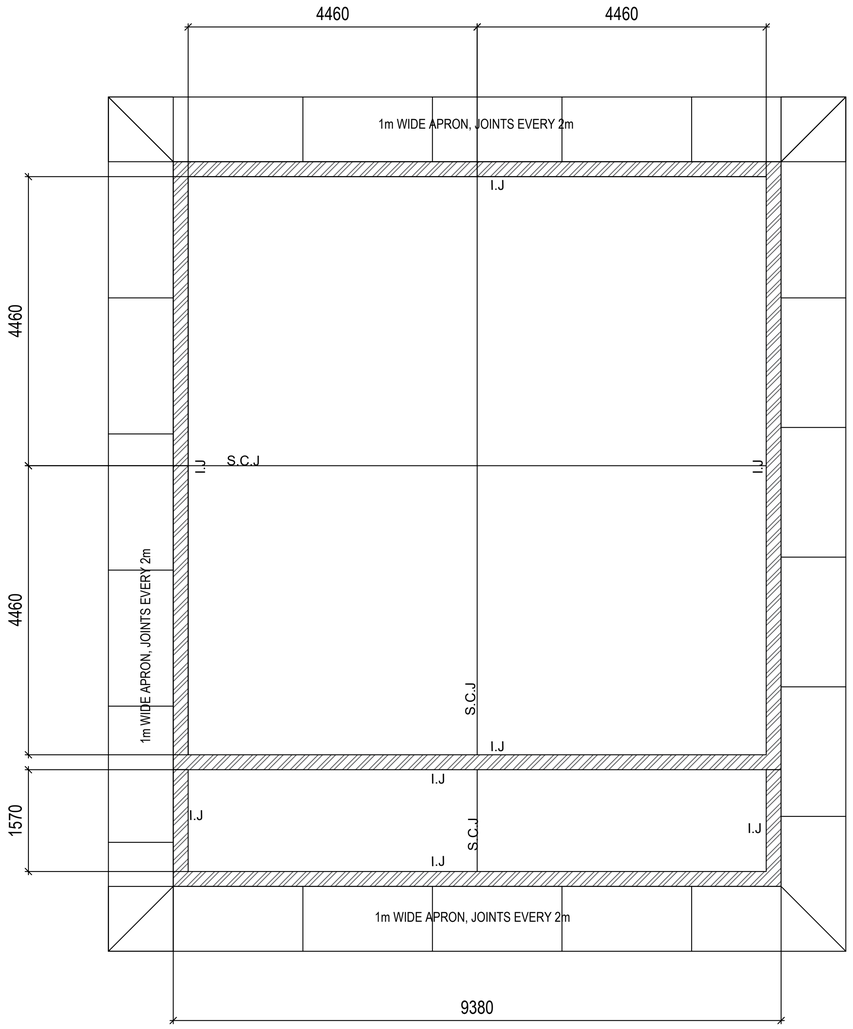
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TITLE
PFUMBADA PRIMARY SCHOOL
ENVIRO LOO TOILET BLOCK
FOUNDATION LAYOUT & DETAILS

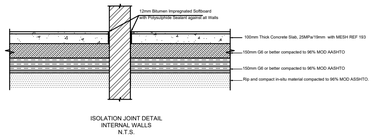
DRAWING No.
LDPWRI SCHOOLS/B/PFUMBADA/14

REV 0

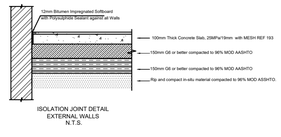
ISSUED FOR CONSTRUCTION



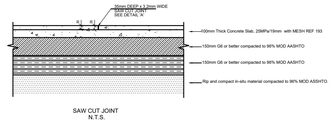
FLOOR JOINT LAYOUT - PLAN



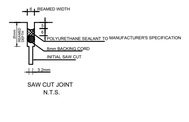
ISOLATION JOINT DETAIL
INTERNAL WALLS
N.T.S.



ISOLATION JOINT DETAIL
EXTERNAL WALLS
N.T.S.



SAW CUT JOINT
N.T.S.



SAW CUT JOINT
N.T.S.

JOINT DETAILS - SECTIONS

1. GENERAL NOTES

1.1. All work to be done in accordance with the National Building Regulations and the relevant SABS Specifications.

1.2. All drawings to be read in conjunction with Architect's drawings and any discrepancies must be reported to the Engineer prior to any setting out of work.

1.3. No structural alterations are to be made without amended drawings.

1.4. All drawings must be checked by the Contractor and any discrepancies should be reported to the Engineer before any work commences

1.5. All waterproofing and drainage to be to Architect's details and instructions.

1.6. Contractor to ensure that stability of banks and excavations are continuously maintained throughout the construction period

2. R.C. CONSTRUCTION

2.1. No concrete is to be poured before the Engineer has inspected and approved the fixing of the reinforcement , 48 hours notice is required.

2.2. Breaks in concrete and construction joints are to be made only with Engineer's approval.

2.3. Shuttering and propping may be struck only after the lapse of the following times (in days):

Beam sides, walls and unloaded columns	2
Slab soffits without removal of slab props	4
Beam soffits without removal of beam props	7
Props unloaded slabs	10
Props unloaded beams	14

2.4. Minimum concrete cover to reinforcement (in mm)

piles	50	beams	30
pile caps	50	slabs	20
ground beams	50	retaining walls (earth face)	30
columns	30	retaining walls (exposed face)	30

2.5. Concrete cube strength at 28 days in (MPa)

blinding	15	beams	25
Mortar(Class A)	15	slabs	25
columns	30	walls	25

2.6. Concrete cover to reinforcing to be maintained by the use of either nylon spacers or precast concrete blocks with binding wires cast in.

2.7. All floor levels, unless otherwise indicated , are structural slab levels.

3. FOUNDING

3.1. Foundations are subject to alterations as excavations proceed.

3.2. No foundations are to be cast or reinforcement fixed in bases until excavations have been approved by an Engineer.

3.3. All backfill material under foundations and floors to be as follows:
- G6 Material or better
- PI < 6
- Compacted to 96% MOD AASHTO in layers of 150mm
- Non-cohesive and free draining

4. ADDITIONAL NOTES

4.1. All exposed concrete slabs and beams bearing on brickwork to have a slip joint made up of 2 sheets of masonite with smooth faces abutting each other at top of brick-concrete interface. Joint to extend through plaster.

4.2. Special attention to be given to curing of concrete. Exact details to be discussed with Engineer on site prior to pouring of any concrete.

4.3. Two lintels plus five courses of brickwork to be built over all openings - reinforced every course with brickforce.

4.4. All brickwork to have a minimum compressive strength of 15MPa.

4.5. A construction joint sealed with suitable flexible sealant is to be formed at all junctions between new brickwork and existing brickwork.

4.6. No brickwork is to be built onto suspended slabs or beams until slabs/beams have attained their full strength and have been depropped

4.7. All deviations from architect's drawing to be confirmed by architect prior to construction.

4.8. All work to be carried out in accordance with the National Building Regulations, Environmental and Occupational Health and Safety Act, (latest revision) and the Construction Regulations.

4.9. The main contractor is to ensure that a competent person, approved by the South African Qualification Authority supervises and approves all aspects of the requirements of the Occupational Health and Safety Act, latest revision.

4.10. All temporary works to be designed, detailed, supervised and certified by a competent person or professional engineer as defined in the OHS ACT.

4.11. The works will be inspected from time to time by the consulting engineer to ascertain that the contractor is carrying out the work in general conformity with the engineering drawings and documents. Such inspections are not carried out for the benefit of the contractor, and do not relieve him of the responsibility for the proper construction of the works in accordance with the engineering drawings, documents & good building practice.

5. COMPLETION CERTIFICATE

5.1. No completion certificate shall be issued if all material amd compaction test results are not submitted to the Engineer

REV	DATE	CHK	APP	DESCRIPTION

CLIENT

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

MUTEO CONSULTING

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PROJECT APPR.	DATE	BY	SIGNATURE
DESIGNED	22/06/2023	N.M	
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DRAWN	22/06/2023	N.M	
PROJECT MNG.			
APPROVED			
CLIENT			

SCALE: DO NOT SCALE IF IN DOUBT ASK.

ALL DIMENSION IN mm UNLESS SPECIFIED OTHERWISE

PROJECT No. LDPWRI-PROF/16003B

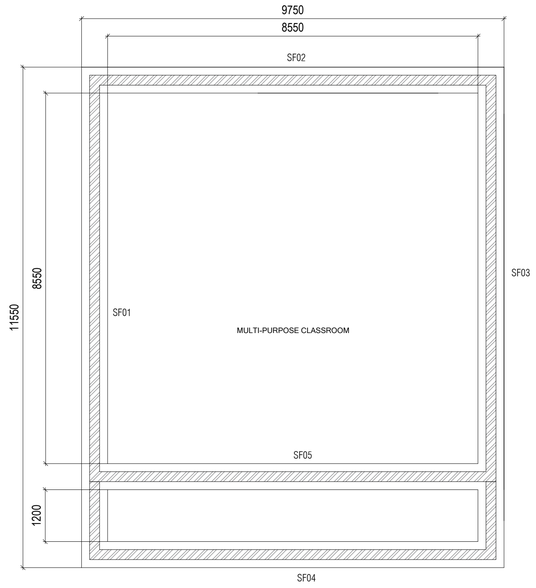
DRG SIZE: A1

TITLE
PFUMBADA PRIMARY SCHOOL
MULTI-PURPOSE 1 CLASSROOM BLOCK
FLOOR JOINTS & DETAILS

DRAWING No. LDPWRI SCHOOLS/B/PFUMBADA/04

REV 0

ISSUED FOR CONSTRUCTION



FOUNDATION LAYOUT - PLAN

1. GENERAL NOTES

1.1. All work to be done in accordance with the National Building Regulations and the relevant SABS Specifications.

1.2. All drawings to be read in conjunction with Architect's drawings and any discrepancies must be reported to the Engineer prior to any setting out of work.

1.3. No structural alterations are to be made without amended drawings.

1.4. All drawings must be checked by the Contractor and any discrepancies should be reported to the Engineer before any work commences

1.5. All waterproofing and drainage to be to Architect's details and instructions.

1.6. Contractor to ensure that stability of banks and excavations are continuously maintained throughout the construction period

2. R.C. CONSTRUCTION

2.1. No concrete is to be poured before the Engineer has inspected and approved the fixing of the reinforcement , 48 hours notice is required.

2.2. Breaks in concrete and construction joints are to be made only with Engineer's approval.

2.3. Shuttering and propping may be struck only after the lapse of the following times (in days):

Beam sides, walls and unloaded columns	2
Slab soffits without removal of slab props	4
Beam soffits without removal of beam props	7
Props unloaded slabs	10
Props unloaded beams	14

2.4. Minimum concrete cover to reinforcement (in mm)

piles	50	beams	30
pile caps	50	slabs	20
ground beams	50	retaining walls (earth face)	30
columns	30	retaining walls (exposed face)	30

2.5. Concrete cube strength at 28 days in (MPa)

blinding	15	beams	25
Mortar(Class A)	15	slabs	25
columns	30	walls	25

2.6. Concrete cover to reinforcing to be maintained by the use of either nylon spacers or precast concrete blocks with binding wires cast in.

2.7. All floor levels, unless otherwise indicated , are structural slab levels.

3. FOUNDING

3.1. Foundations are subject to alterations as excavations proceed.

3.2. No foundations are to be cast or reinforcement fixed in bases until excavations have been approved by an Engineer.

3.3. All backfill material under foundations and floors to be as follows:
- G6 Material or better
- PI < 6
- Compacted to 96% MOD AASHTO in layers of 150mm
- Non-cohesive and free draining

4. ADDITIONAL NOTES

4.1. All exposed concrete slabs and beams bearing on brickwork to have a slip joint made up of 2 sheets of masonite with smooth faces abutting each other at top of brick-concrete interface. Joint to extend through plaster.

4.2. Special attention to be given to curing of concrete. Exact details to be discussed with Engineer on site prior to pouring of any concrete.

4.3. Two lintels plus five courses of brickwork to be built over all openings - reinforced every course with brickforce.

4.4. All brickwork to have a minimum compressive strength of 15MPa.

4.5. A construction joint sealed with suitable flexible sealant is to be formed at all junctions between new brickwork and existing brickwork.

4.6. No brickwork is to be built onto suspended slabs or beams until slabs/beams have attained their full strength and have been depropped

4.7. All deviations from architect's drawing to be confirmed by architect prior to construction.

4.8. All work to be carried out in accordance with the National Building Regulations, Environmental and Occupational Health and Safety Act, (latest revision) and the Construction Regulations.

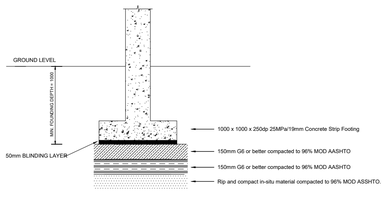
4.9. The main contractor is to ensure that a competent person, approved by the South African Qualification Authority supervises and approves all aspects of the requirements of the Occupational Health and Safety Act, latest revision.

4.10. All temporary works to be designed, detailed, supervised and certified by a competent person or professional engineer as defined in the OHS ACT.

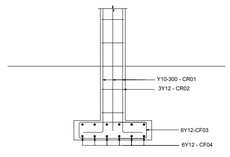
4.11. The works will be inspected from time to time by the consulting engineer to ascertain that the contractor is carrying out the work in general conformity with the engineering drawings and documents. Such inspections are not carried out for the benefit of the contractor, and do not relieve him of the responsibility for the proper construction of the works in accordance with the engineering drawings, documents & good building practice.

5. COMPLETION CERTIFICATE

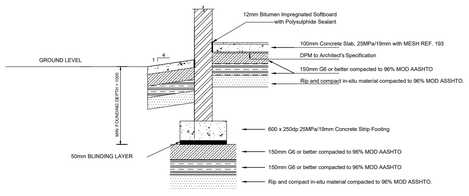
5.1. No completion certificate shall be issued if all material amd compaction test results are not submitted to the Engineer



SECTION THROUGH
STRIP FOUNDATION - 1000 x 1000 x 250 Dp Base
COLUMN C01



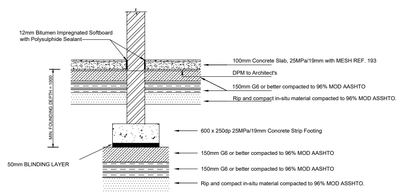
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See Bending Schedule for Details



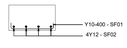
SECTION THROUGH
STRIP FOUNDATION - 600 x 250 Dp Base
230 WALLS EXTERNAL WALLS



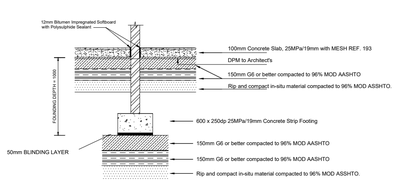
BASE REINFORCEMENT
See Bending Schedule for Details



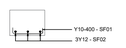
SECTION THROUGH
STRIP FOUNDATION - 600 x 250 Dp Base
230 WALLS INTERNAL WALLS



BASE REINFORCEMENT
See Bending Schedule for Details



TYPICAL SECTION THROUGH
STRIP FOUNDATION - 450 x 250 Deep Base
115 INTERNAL WALLS



BASE REINFORCEMENT
See Bending Schedule for Details

FOUNDATION DETAILS - SECTIONS

REV	DATE	CHK	APP	DESCRIPTION

CLIENT

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

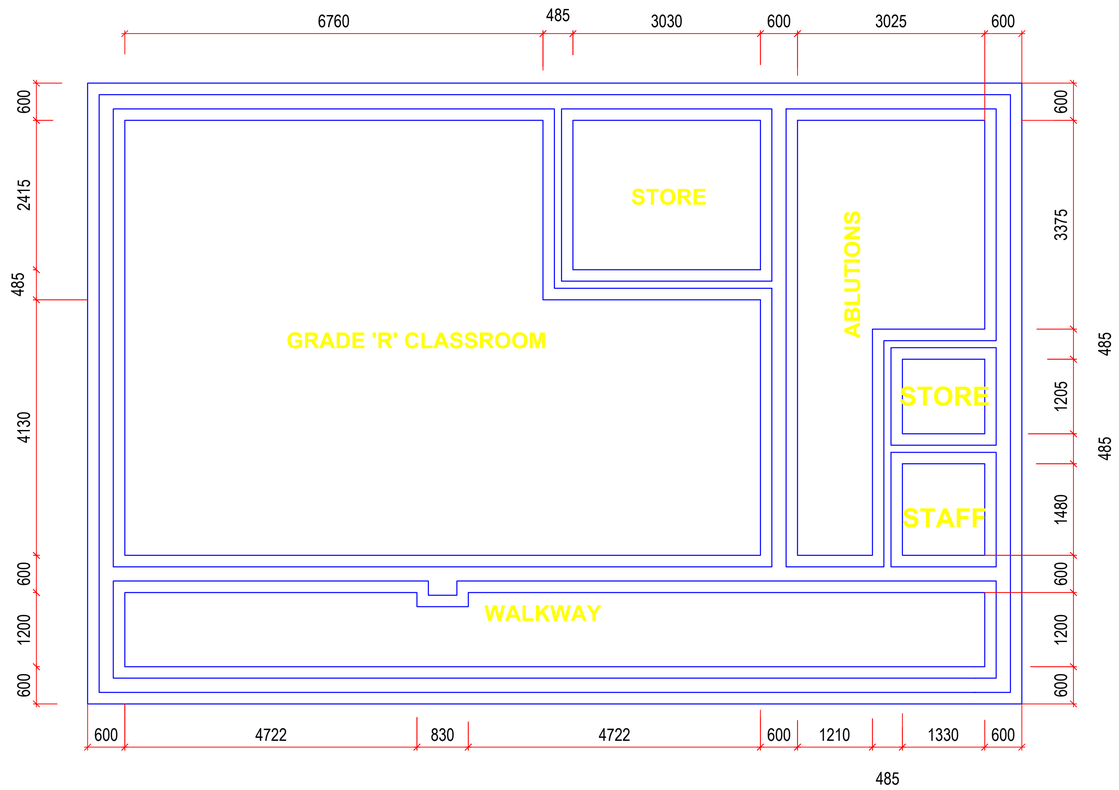
MUTEO CONSULTING

MUTEO CONSULTING

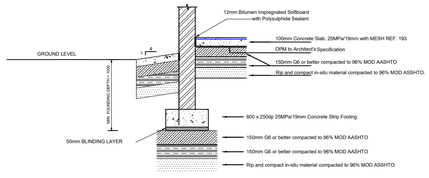
39 GROBLER STREET
POLOKWANE 0699
P.O. BOX 6196
POLOKWANE NORTH 0750
TEL : (015) 291 4065
FAX : (015) 291 4043
website: www.muteo.co.za

PROJECT APPR.	DATE	BY	SIGNATURE
DESIGNED	10/08/2022	S.D	
CHECKED	10/08/2022	E.M	
DRAWN	10/08/2022	S.D	
PROJECT MNG.			
APPROVED			
CLIENT			

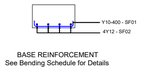
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DO NOT SCALE IF IN DOUBT ASK.	TITLE: PFUMBADA PRIMARY SCHOOL MULTI-PURPOSE 1 CLASSROOM BLOCK FOUNDATION LAYOUT & DETAILS
PROJECT No. LDPWRI-PROF/16003B	
DRG SIZE A1	DRAWING No. LDPWRI SCHOOLS/B/PFUMBADA/03 — REV 0



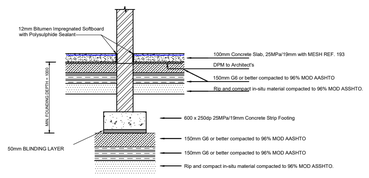
FOUNDATION LAYOUT - PLAN



SECTION THROUGH
STRIP FOUNDATION - 600 x 250 Dp Base
230 WALLS EXTERNAL WALLS



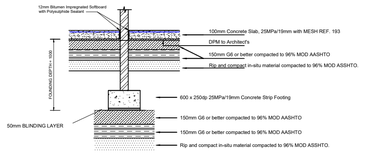
BASE REINFORCEMENT
See Bending Schedule for Details



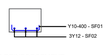
SECTION THROUGH
STRIP FOUNDATION - 600 x 250 Dp Base
230 WALLS INTERNAL WALLS



BASE REINFORCEMENT
See Bending Schedule for Details



TYPICAL SECTION THROUGH
STRIP FOUNDATION - 450 x 250 Deep Base
115 INTERNAL WALLS



BASE REINFORCEMENT
See Bending Schedule for Details

FOUNDATION DETAILS - SECTIONS

ISSUED FOR CONSTRUCTION

1. GENERAL NOTES

1.1. All work to be done in accordance with the National Building Regulations and the relevant SABS Specifications.

1.2. All drawings to be read in conjunction with Architect's drawings and any discrepancies must be reported to the Engineer prior to any setting out of work.

1.3. No structural alterations are to be made without amended drawings.

1.4. All drawings must be checked by the Contractor and any discrepancies should be reported to the Engineer before any work commences

1.5. All waterproofing and drainage to be to Architect's details and instructions.

1.6. Contractor to ensure that stability of banks and excavations are continuously maintained throughout the construction period

2. R.C. CONSTRUCTION

2.1. No concrete is to be poured before the Engineer has inspected and approved the fixing of the reinforcement , 48 hours notice is required.

2.2. Breaks in concrete and construction joints are to be made only with Engineer's approval.

2.3. Shuttering and propping may be struck only after the lapse of the following times (in days):

Beam sides, walls and unloaded columns	2
Slab soffits without removal of slab props	4
Beam soffits without removal of beam props	7
Props unloaded slabs	10
Props unloaded beams	14

2.4. Minimum concrete cover to reinforcement (in mm)

piles	50	beams	30
pile caps	50	slabs	20
ground beams	50	retaining walls (earth face)	30
columns	30	retaining walls (exposed face)	30

2.5. Concrete cube strength at 28 days in (MPa)

blinding	15	beams	25
Mortar(Class A)	15	slabs	25
columns	30	walls	25

2.6. Concrete cover to reinforcing to be maintained by the use of either nylon spacers or precast concrete blocks with binding wires cast in.

2.7. All floor levels, unless otherwise indicated , are structural slab levels.

3. FOUNDING

3.1. Foundations are subject to alterations as excavations proceed.

3.2. No foundations are to be cast or reinforcement fixed in bases until excavations have been approved by an Engineer.

3.3. All backfill material under foundations and floors to be as follows:
G6 Material or better
PI < 6
Compacted to 98% MOD AASHTO in layers of 150mm
Non-cohesive and free draining

4. ADDITIONAL NOTES

4.1. All exposed concrete slabs and beams bearing on brickwork to have a slip joint made up of 2 sheets of masonite with smooth faces abutting each other at top of brick-concrete interface. Joint to extend through plaster.

4.2. Special attention to be given to curing of concrete. Exact details to be discussed with Engineer on site prior to pouring of any concrete.

4.3. Two lintels plus five courses of brickwork to be built over all openings - reinforced every course with brickforce.

4.4. All brickwork to have a minimum compressive strength of 15MPa.

4.5. A construction joint sealed with suitable flexible sealant is to be formed at all junctions between new brickwork and existing brickwork.

4.6. No brickwork is to be built onto suspended slabs or beams until slabs/beams have attained their full strength and have been depropped

4.7. All deviations from architect's drawing to be confirmed by architect prior to construction.

4.8. All work to be carried out in accordance with the National Building Regulations, Environmental and Occupational Health and Safety Act, (latest revision) and the Construction Regulations.

4.9. The main contractor is to ensure that a competent person, approved by the South African Qualification Authority supervises and approves all aspects of the requirements of the Occupational Health and Safety Act, latest revision.

4.10. All temporary works to be designed, detailed, supervised and certified by a competent person or professional engineer as defined in the OHS ACT.

4.11. The works will be inspected from time to time by the consulting engineer to ascertain that the contractor is carrying out the work in general conformity with the engineering drawings and documents. Such inspections are not carried out for the benefit of the contractor, and do not relieve him of the responsibility for the proper construction of the works in accordance with the engineering drawings, documents & good building practice.

5. COMPLETION CERTIFICATE

5.1. No completion certificate shall be issued if all material amd compaction test results are not submitted to the Engineer

REV	DATE	CHK	APP	DESCRIPTION

CLIENT

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

MUTEO CONSULTING

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POLOKWANE 0699
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TEL : (015) 291 4065
FAX : (015) 291 4043
website: www.muteo.co.za

	PROJECT APPR.	DATE	BY	SIGNATURE
	DESIGNED	22/06/2023	N.M	
	CHECKED	22/06/2023	E.M	
	DRAWN	22/06/2023	N.M	
	PROJECT MNG.			
	APPROVED			
	CLIENT			

SCALE: ALL DIMENSION IN mm UNLESS SPECIFIED OTHERWISE

DO NOT SCALE IF IN DOUBT ASK.

PROJECT No. LDPWRI-PROF/16003B

DRG SIZE: A1

TITLE

PFUMBADA PRIMARY SCHOOL
GRADE R CLASSROOM BLOCK
FOUNDATION LAYOUT & DETAILS

DRAWING No. LDPWRI SCHOOLS/B/PFUMBADA/10

REV 0