



**KAVANGO EAST REGIONAL COUNCIL
DIRECTORATE OF EDUCATION, ARTS AND CULTURE**

REQUEST FOR SEALED QUOTATION FOR WORKS

FOR

**CONSTRUCTION OF ABL2 (ABLUTION FACILITY) AT
SIGURUGURU JPS**

Procurement Reference No: W/RFQ/DOEAC-KERC/107/104/2023/2024

Cost: None

Bidder:.....
Address:.....
Tel:.....
Email Address:.....
Bid Price:.....



**KAVANGO EAST REGIONAL COUNCIL
DIRECTORATE OF EDUCATION, ARTS AND CULTURE**

Letter of Invitation

09 October 2023

.....

Procurement Reference No: W/RFQ/DOEAC-KERC/107/104/2023/2024

**CONSTRUCTION OF ABL2 (ABLUTION FACILITY) AT
SIGURUGURU JPS**

Dear Sir/Madam

The Kavango East Regional Council - Directorate of Education, Arts and Culture, will provide you with specification for the items described in details.

Any resulting contract shall be subject to the terms and conditions referred to in the document.

Queries, if any, should be addressed to Mr. V. S. Martin @ 0662589017 for Technical issues and Mr. J Kangumbe @ 066266000 for administrative issues during working hours from 0800 to 1700hours.

Please prepare and submit your quotation in accordance with the specifications and instructions given or inform the undersigned if you will not be submitting a quotation.

Yours faithfully,

J. Kangumbe

Mr. J.M. Kangumbe

Head: Procurement Management Unit



SECTION I: INSTRUCTIONS TO BIDDERS

1. Rights of Public Entity

Kavango East Regional Council – Directorate of Education, Arts and Culture reserves the right:

- (a) to split the contract as per the lowest evaluated cost per lot; and
- (b) to accept or reject any quotation or to cancel the quotation process and reject all quotations at any time prior to contract award.

Please Note: Section:27 (2B) (A) of Public Procurement Amendment Act, 2022 will apply

2. Preparation of Quotations

You are requested to quote for the works mentioned in Section III, by completing, signing and returning:

- (a) the Quotation Letter in Section II with its annex for Bid Securing Declaration, where applicable;
- (b) the Priced Activity Schedule in Section IV;
- (c) the Specifications and Compliance Sheet in Section V; and
- (d) any other attachment as deemed appropriate

You are advised to carefully read the complete Request for Quotations document, including the Special Conditions of Contract in Section VII, before preparing your Quotation. The standard forms in this document may be retyped for completion but the Bidder is responsible for their accurate reproduction.

PLEASE NOTE: Compliance to the Public Procurement Act, 2015 (Act. 15 of 2015) as amended. Section 66 (2B) (a) will apply

3. Validity of Quotations

The quotation validity period shall be **180 days** from the date of bid submission deadline.

4. Eligibility Criteria

To be eligible to participate in this Quotation exercise, you should:

- (a) **have a valid copy of company Registration Certificate;**
- (b) **have a valid original/certified copy of good Standing Tax Certificate;**
- (c) **have a valid original/certified copy of good Standing Social Security Certificate;**
- (d) **have a valid certified copy of Affirmative Action Compliance Certificate, proof from Employment Equity Commissioner that bidder is not a relevant employer, or exemption issued in terms of Section 42 of the Affirmative Action Act, 1998;**
- (e) **have a copy of certificate indicating SME Status (for Bids reserved for SMEs);**
- (f) **Written undertaking in terms of section 138 of Labour Act, 2015 and section 50(2)(D) of the Public Procurement Act, 2015 and that it will abide to sub-clause 4.6 of the General conditions of Contract if it is awarded the contract or part thereof;**

(g) **Certified Copy of the National Identity Document. In case the company is owned by more than one person, all of them should submit certified copy of National Identity Document.**

(h) **Site Foreman to supervise the works must have experience in related works for at least two projects (attach complete curriculum vitae, list of projects with testimonials accompanied with contact details). Where the owner indicates that he/she will be the site Forman, he/she should attach the same.**

(i) **Electrician to do the works MUST attach valid certified NORED Licence. NB: The same licence to be availed during construction and practical completion as well as issuance of certificate of compliance**

(j) **Provide Company experience in related works for at least two projects**

(k) **Business Principal must be in line with the nature of procurement**

5. Bid Securing Declaration

Bidders are required to subscribe to a Bid Securing Declaration for this procurement process.

6. Works Completion Period

The completion period for works shall be **four (4) months** after acceptance and issue of Purchase Order. Deviation in completion period shall not be accepted

Sealing and Marking of Quotations

Quotations should be sealed in a single envelope, clearly marked with the Procurement Reference Number, addressed to the Public Entity with the Bidder's name at the back of the envelope.

7. Submission of Quotations

Quotations should be deposited in the Quotation/Bid Box located at **Kavango East Regional Council, Rundu, for Attention Mr. J.M. Kangumbe not later than 30 October 2023 at 11H00**. Quotations by post or hand delivered should reach this office by the same date and time at latest. Late quotations will be rejected. Quotations received by e-mail will not be considered.

8. Opening of Quotations

Quotations will be opened internally by the Public Entity immediately after the closing time referred to in section 7 above. A record of the Quotation Opening stating the name of the bidders, the amount quoted the presence or absence of a Bid Securing Declaration. Opening register will be made available on request after three days of opening.

9. Evaluation of Quotations

The Public Entity shall have the right to request for clarifications in writing during evaluation. Offers that are substantially responsive shall be compared on the basis of evaluated cost, subject to Margin of Preference where applicable, to determine the lowest evaluated quotation.

10. Technical Compliance

The Specifications and Compliance Sheet details the minimum specifications of the works to be carried out. The specifications have to be met, but no credit will be given for exceeding the specifications.

11. Prices and Currency of Payment

Prices for the execution of works shall be fixed in Namibian Dollars as quoted.

Quotations shall cover all costs of labour, materials, equipment, overheads, profits and all associated costs for performing the works, and shall include all duties. The whole cost of performing the works shall be included in the items stated, and the cost of any incidental works shall be deemed to be included in the prices quoted.

12. Margin of Preference

12.1 Bids are reserved for Service Providers (SME's)

13. Award of Contract

The Bidder having submitted the lowest evaluated responsive quotation and qualified to perform the works shall be selected for award of contract. Award of contract shall be by issue of a Purchase Order/Letter of Acceptance in accordance with terms and conditions contained in Section VI: Contract Agreement and General Conditions of Contract.

14. Notification of Award and Debriefing

The Public Entity shall after award of contract promptly inform all unsuccessful bidders in writing of the name and address of the successful bidder and the contract amount. Furthermore, the Public Entity shall attend to all requests for debriefing made in writing within 7 days of the unsuccessful bidders being informed of the award.

SECTION II: QUOTATION LETTER

(to be completed by Bidders)

[Complete this form with all the requested details and submit it as the first page of your quotation with the Priced Activity Schedule and documents requested above. A signature and authorisation on this form will confirm that the terms and conditions of the RFQ prevail over any attachments. **If your quotation is not authorised, it will be rejected.**

Quotation addressed to:	
Procurement Reference Number:	
Subject matter of Procurement:	

We offer to execute the Works detailed in the Statement of Requirements, in accordance with the terms and conditions stated in your Request for Sealed Quotations referenced above.

We confirm that we are eligible to participate in this Quotation exercise and meet the eligibility criteria specified in Section 1: Instructions to Bidders

We undertake to abide by the Conduct of Bidders and Suppliers as provided under the Public Procurement Act during the procurement process and the execution of any resulting contract.

We have read and understood the content of the Bid Security/Bid Securing Declaration (BSD) attached hereto and subscribe fully to the terms and conditions contained therein. We further understand that this subscription could lead [forfeiture of the security amount / disqualification on the grounds mentioned in the BDS]

The validity period of our Quotation is _____ days *[insert number of days]* from the date of the bid submission deadline.

We confirm that the prices quoted in the Priced Activity Schedule are fixed and firm and will not be subject to revision or variation, if we are awarded the contract **prior to the expiry** date of the quotation validity.

Works will commence within _____ *[insert number]* days from date of issue of Purchase Order/ Letter of Acceptance.

Works will be completed within _____ *[insert number]* days from date of issue of Purchase Order/ Letter of acceptance.

Quotation Authorised by:

Name of Bidder		Company's Address and seal	
Contact Person			
Name of Person Authorising the Quotation:		Position:	Signature:
Date		Phone No./E-mail	

BID SECURING DECLARATION
(Section 45 of Act) (Regulation
37(1) (b) and 37(5))

Date:
[Day | month | year]

Procurement Ref No.: W/RFQ/DOEAC-KERC/107/104/2023/2024

To: Kavango East Regional Council – Directorate of Education, Arts and Culture

I/We* understand that in terms of section 45 of the Act a public entity must include in the bidding document the requirement for a declaration as an alternative form of bid security.

I/We* accept that under section 45 of the Act, I/we* may be suspended or disqualified in the event of

- (a) a modification or withdrawal of a bid after the deadline for submission of bids during the period of validity;
- (b) refusal by a bidder to accept a correction of an error appearing on the face of a bid;
- (c) failure to sign a procurement contract in accordance with the terms and conditions set forth in the bidding document, should I/We* be successful bidder; or
- (d) failure to provide security for the performance of the procurement contract if required to do so by the bidding document.

I/We* understand this bid securing declaration ceases to be valid if I am/We are* not the successful Bidder

Signed:
[insert signature of person whose name and capacity are shown]

Capacity of:.....
[indicate legal capacity of person(s) signing the Bid Securing Declaration]

Name:
[insert complete name of person signing the Bid Securing Declaration]

Duly authorized to sign the bid for and on behalf of:.....
[insert complete name of Bidder]

Dated on _____ day of _____
[insert date of signing]

Corporate Seal (where appropriate)

[Note*: In case of a joint venture, the bid securing declaration must be in the name of all partners to the joint venture that submits the bid.]



Republic Of Namibia

Ministry of Labour, Industrial Relations and Employment Creation

Written undertaking in terms of section 138 of the Labour Act, 2015 and section 50(2)(D) of the Public Procurement Act, 2015

1. EMPLOYERS DETAILS

Company Trade Name:.....

Registration Number :.....

Vat Number:

Industry/Sector:

Place of Business:.....

Physical Address:.....

Tell No.:.....

Fax No.:.....

Email Address:.....

Postal Address:.....

Full name of Owner/Accounting Officer:.....

.....

Email Address:.....

2. PROCUREMENT DETAILS

Procurement Reference No.:

Procurement Description:

.....

.....

Anticipated Contract Duration:

Location where work will be done, good/services will be delivered:

.....

3. UNDERTAKING

I

[insert full name], owner/representative

of

[insert full name of company]

hereby undertake in writing that my company will at all relevant times comply fully with the relevant provisions of the Labour Act and the Terms and Conditions of Collective Agreements as applicable.

I am fully aware that failure to abide to such shall lead to the action as stipulated in section 138 of the labour Act, 2007, which include but not limited to the cancellation of the contract/licence/grant/permit or concession.

Signature:

Date:

Seal:.....

Please take note:

- 1. A labour inspector may conduct unannounced inspections to assess the level of compliance*
- 2 This undertaking must be displayed at the workplace where it will be readily accessible and visible by the employees rendering service(s) in relations to the goods and services being procured under this contract*

A. SCOPE OF WORKS, SPECIFICATIONS AND PERFORMANCE REQUIREMENTS

B. BILL OF QUANTITY IS ATTACHED

SECTION IV: PRICED ACTIVITY SCHEDULE

Procurement Reference Number: **W/RFQ/DOEAC-KERC/107/104/2023/2024**

[Complete the unit and total prices for each item listed below. Authorise the prices quoted in the signature block below.]

The quantities shown below are approximate and not subject to re-measurement for payment purposes.

Item No	Brief Description of Works	Quantity	Unit of Measure	Unit Price (NS)	Total Price (NS)
A*	B*	C*	D*	E	F
1	CONSTRUCTION OF ABL2 (ABLUTION FACILITY) AT SIGURUGURU JPS AS PER ATTACHED BILL OF QUANTITY	1			
Enter 0% VAT rate if VAT exempt.				Subtotal	
				VAT @ 15 %	
				Total	

*Columns A to D to be completed as applicable by the Public Entity

Priced Activity Schedule Authorised By:

Name:		Signature:	
Position:		Date:	
Authorised for and on behalf of:	Company		

SECTION V: SPECIFICATIONS AND COMPLIANCE SHEET

Procurement Reference Number: **W/RFQ/DOEAC-KERC/107/104/2023/2024**

[Bidders should complete columns C and D with the specifications and performance of the Works offered. Also state “comply” or “not comply” and give details of any non-compliance/deviation to the specifications required. Attach detailed technical literature if required. Authorise the specifications offered in the signature block below]

Item No	Specifications and Performance Required	Compliance of Specifications and Performance Offered	Details of Non-Compliance/ Deviation (if applicable)
<i>A*</i>	<i>B*</i>	<i>C</i>	<i>D</i>
1	CONSTRUCTION OF ABL2 (ABLUTION FACILITY) AT SIGURUGURU JPS AS PER ATTACHED BILL OF QUANTITY		

* Columns A and B to be completed by Public Entity.

Specifications and Compliance Sheet Authorised By:

Name:		Signature:	
Position:		Date:	
Authorised for and on behalf of:		Company	

SECTION VI: GENERAL CONDITIONS OF CONTRACT AND CONTRACT AGREEMENT

Any resulting contract shall be placed by means of a Purchase Order/Letter of Acceptance and shall be subject to the General Conditions of Contract (GCC) for the **Procurement of works – Ref. W/RFQ/DOEAC-KERC/107/104/2023/2024**

SECTION VIII SPECIAL CONDITIONS OF CONTRACT

Procurement Reference Number: **W/RFQ/DOEAC-KERC/107/104/2023/2024**

The clause numbers given in the first column correspond to the relevant clause number of the General Conditions of Contract.

GCC Clause Reference	Special Conditions
Employer GCC 1.1(r)	Kavango East Regional Council – Directorate of Education, Arts and Culture
Intended Completion Date GCC	The intended completion date is: February 2024
Project Manager GCC 1.1(y)	The Project Manager is: Mr. G. Sikoka
Site GCC 1.1(aa)	The site is at: SIGURUGURU JPS
Start Date GCC 1.1(dd)	The Start Date shall be: November 2023
The Works GCC 1.1(hh)	The Works consist of: CONSTRUCTION OF ABL2 (ABLUTION FACILITY)
Interpretation GCC 2.2	The project will be completed in the following sections: Four (4) Months
Interpretation GCC2.3	The following additional documents shall form part of the contract: Bill of Quantity, Standard Drawings, Purchase Order and appointment letter
Language and Law GCC 3.1	The language of the contract is English The law that applies to the Contract is the law of Namibia.
Project Manager's	The Project Manager shall obtain specific approval from the Employer before carrying out any of his duties under the Contract which in the Project Manager's

GCC Clause Reference	Special Conditions
Decisions 4.1	opinion will cause the amount finally due under the Contract to exceed the Contract Price or will give entitlement to extension of time. This requirement shall be waived in an emergency affecting safety of personnel or the Works or adjacent property.
Delegation GCC 5.1	The Project Manager may delegate his/her duties.
Notices GCC 6	<p>Any notice shall be sent to the following addresses:</p> <p>For the Employer, the address shall be as given on the page 2 of this Bidding Document and the contact name shall be</p> <p>Ms. Ludgela Nangura P/bag 2124, Rundu</p> <p>For the Contractor, the address shall be as given on the first page of the Purchase Order/Letter of Acceptance and the contact name shall be</p> <p>_____</p> <p>_____</p>
Insurance GCC 13.1	Not applicable
Site Date GCC 14.1	Not applicable
Possession of the Site GCC 20.1	The Site Possession Date shall be: February 2024
Procedure for Disputes GCC 24	No Adjudicator shall be appointed under the contract and arbitration shall not apply. If any dispute arises between the Employer and the Contractor in connection with or arising out of the Contract, the parties shall seek to resolve any such dispute by amicable agreement. If the parties fail to resolve such dispute by amicable agreement, within 14 days after one party has notified the other in writing of the dispute, then the dispute shall be referred to court by either party.
Program GCC 25.1	The Contractor shall submit for approval a Program for the Works within 5 days from the date of the Letter of Acceptance or issue of Purchase Order Agreement.
GCC 25.3	Program updates shall be required.
Defects Liability Period GCC 33.1	The Defects Liability Period is: 12 Months.
Payment Certificates GCC 39.7	Payment shall be made as per progress of works

GCC Clause Reference	Special Conditions
Payments GCC 40	The amount certified by the Project Manager shall be paid in full within 30 days of receipt by the Employer of an invoice, supported by: (a) the payment certificate; and (b) a certificate of Completion of the Works.
Adverse weather Conditions GCC 41.1 (I)	Rain, Storm, Flood
Price Adjustment GCC 44.	The Contract is not subject to price adjustment.
Retention GCC 45.	(ii) 5% of the amount shall be retained from any payment. Half of the retention money will be released after formal taking over of the Works and the remaining shall be released after the Defect Liability Period subject to the Contractor making good all defects.*
Liquidated Damages GCC 46.1	0.05% of the amount shall be retained from the total amount per day as penalties
Bonus GCC 47.1	Not applicable
Advance Payment GCC 48.1	No advance payment shall be made
Performance Security GCC 49.1	Not applicable
GCC 56.1	Not applicable
GCC 59.1	Not applicable

QUOTATION CHECKLIST SCHEDULE

Procurement Reference No.: W/RFQ/DOEAC-KERC/107/104/2023/2024

Description	Attached	Not Attached
Bid Letter		
List of Goods and Price Schedule		
Specification and Compliance Sheet		
Bid Securing Declaration		
Quotation		
Valid Original or Certified Good Standing Tax Certificate		
Valid Original or Certified Good Standing Social Security Certificate		
Valid Company Registration		

Disclaimer: The list defined above is meant to assist the Bidder in submitting the relevant documents and shall not be a ground for the bidder to justify its non-submission of major documents for its quotation to be responsive. The onus remains on the Bidder to ascertain that it has submitted all the documents that have been requested and are needed for its submission to be complete and responsive.

BILLS OF QUANTITIES

FOR: CONSTRUCTION OF ABLUTION FACILITY (ABL2) AT SIGURUGURU J.P.

NOTES:

- 1. Please take note that this ablution block is based on drawings and specifications as attached**
- 2. Items have been coded for procurement for ablution block (ABL2) at SIGURGUR J.P.**
- 3. Descriptions and specifications in the Bill of Quantity to be read in conjunction with the drawings**
- 4. Some descriptions and specifications on the drawings have been replaced as indicated in the Bill of Quantity. Bidders are hereby advised to ignore the information on the drawings which have been changed. Information regarding soil conditions, the supply and availability of water and electricity is responsibility of the contractor.
All unforeseen items to be measured and adjusted by the client's representative in this regard to reflect "as per built in" project upon completion of construction.**
- 5. A contingency allowance has been made to cover unforeseen items, but will be reviewed assessed by client representative. But will have to be reviewed by the client representative once the construction process commences.**

Item No	Quantity	Rate	Amount
<p><u>SECTION NO. 1</u></p>			
<p><u>BILL NO. 1</u></p>			
<p><u>FOUNDATIONS (PROVISIONAL)</u></p>			
<p>For Preambles refer to "Model Preambles for Trades"</p>			
<p><u>SUPPLEMENTARY PREAMBLES</u></p>			
<p><u>Nature of ground</u></p>			
<p>The nature of the ground is assumed to be loose sandy material, therefore "earth"</p>			
<p><u>Earth</u></p>			
<p>All material which is pickable or which can be excavated by means of a backactor (complete with all equipment and accessories and in good condition, producing not less than 57kw (gross) at the flywheel and with a bare tractor mass of not less than 7900kg, equipped with 600mm wide bucket with matching teeth) will be classified as "earth". All boulders not exceeding 0,3m3 in volume will also be classified as "earth"</p>			
<p><u>Soft rock</u></p>			
<p>All material which can not be removed as described above, but the removal of which necessitates the use of jack hammers with moil points, will be classified as "soft rock"</p>			
<p><u>Hard rock</u></p>			
<p>All very hard material which can not be removed as described above, but the removal of which necessitates the use of explosives or heavy duty hydraulic percussion hammers (peckers), will be classified as "hard rock"</p>			
<p><u>Risk of collapse</u></p>			
<p>No risk of collapse will be measured or paid. It is the responsibility of the Contractor to ensure that the sides of the excavations are supported and that they do not collapse. In the event of the sides of the excavations collapsing, the Contractor must at his own cost remove all loose material and compact the bottoms of the trenches, holes, etc.</p>			
<p>Carried to Collection</p>			
<p>Section No. 1 Bill No. 1 Foundations (Provisional)</p>			
		N\$	

Carting away of excavated material

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

Concrete

Prices for concrete cast against excavated surfaces shall include for casting against all types of material in the excavations and shall include for additional concrete required in filling to irregularities.

EARTHWORKS

EXCAVATION, FILLING, ETC

Excavation in earth exceeding 1m deep for:

1	Trenches and holes	m3	31	
---	--------------------	----	----	--

Extra over trench and hole excavations in earth for excavation in:

Selected earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% Mod AASHTO density in layers not exceeding 150mm

2	Under floors, steps, pavings, etc	m3	5	
---	-----------------------------------	----	---	--

Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 98% Mod AASHTO density in layers not exceeding 150mm

3	Backfilling to trenches, holes, etc	m3	16	
---	-------------------------------------	----	----	--

Earth filling supplied by the Contractor compacted to 93% Mod AASHTO density in layers not exceeding 150mm

4	Under floors, steps, pavings, etc	m3	16	
---	-----------------------------------	----	----	--

Carried to Collection

N\$

Section No. 1
 Bill No. 1
 Foundations (Provisional)

<u>Coarse river sand filling supplied by the contractor</u>				
5	Approved clean earth filling laid over poisoned areas under floors	m3	2	
<u>Compaction of surfaces</u>				
6	Compaction of ground surface under apron slabs, ramps, etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting at Optimum Moisture Content (OMC) to 90% Mod AASHTO density	m2	46	
<u>CARTING AWAY</u>				
<u>Extra over all excavations for loading, carting and dumping surplus excavated material :</u>				
7	Off site to a dumping ground to be located by the Contractor	m3	11	
<u>SOIL POISONING</u>				
<u>"Shell-Chem" or other approved anti-termite chemical soil poison</u>				
8	Under floors, etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming	m2	47	
9	To bottoms and sides of trenches, etc	m2	140	
<u>CONCRETE, FORMWORK AND REINFORCEMENT</u>				
<u>UN-REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u>				
<u>25MPa/19mm concrete in:</u>				
10	Strip footings	m3	9	
<u>STEEL REINFORCEMENT</u>				
<u>High tensile steel reinforcement to structural concrete work</u>				
11	12mm Diameter bars	kg	337	
12	10mm Diameter bars	kg	132	
Carried to Collection				
Section No. 1				
Bill No. 1				
Foundations (Provisional)				
				N\$

BRICKWORK

Brickwork in 14 MPa cement bricks in Class I mortar

13	Half brick walls	m2	29
14	One brick walls	m2	33

BRICKWORK SUNDRIES

Brickwork reinforcement

15	75mm Wide reinforcement built in horizontally	m	339
16	150mm Wide reinforcement built in horizontally	m	393

Carried to Collection

Section No. 1
 Bill No. 1
 Foundations (Provisional)

N\$

Section No. 1
Bill No. 1
Foundations (Provisional)
COLLECTION

Total Brought Forward from Page No.
Total Brought Forward from Page No.
Total Brought Forward from Page No.
Total Brought Forward from Page No.

Page No	Amount
---------	--------

-2-	
-3-	
-4-	
-5-	

Carried Forward to Summary of Section No. 1

Section No. 1
Bill No. 1
Foundations (Provisional)

N\$

Item
No

Quantity Rate Amount

SECTION NO. 1

BILL NO. 2

CONCRETE, FORMWORK AND REINFORCEMENT

For Preambles refer to "Model Preambles for Trades"

SUPPLEMENTARY PREAMBLES

Cost of tests

The costs of making, storing and testing of concrete test cubes as required under clause 7 "Tests" of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the Engineer. The testing shall be undertaken by an independent firm or institution nominated by the Contractor to the approval of the Engineer. (Test cubes are measured separately)

Formwork

Description of formwork shall be deemed to include use and waste only (except where described as "left in" or "permanent"), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use

Formwork to soffits of solid slabs, etc shall be deemed to be slabs not exceeding 250mm thick unless otherwise described

Formwork to sides of bases, pile caps, ground beams, etc will only be measured where it is prescribed by the Engineer for design reasons. Formwork necessitated by irregularity or collapse of excavated faces will not be measured and the cost thereof shall be deemed to be included in the allowance for taking the risk of collapse of the sides of the excavations, provision for which is made in "Earthworks"

UNREINFORCED CONCRETE

Carried to Collection

N\$

Section No. 1
Bill No. 2
Concrete, Formwork & Reinforcement

<u>25MPa/19mm concrete in:</u>				
1	Surface beds cast in panels on waterproofing	m3	4	
2	Apron slabs and ramps cast in panels	m3	5	
3	Steps, urinal steps, cupboard platforms, etc	m3		
			0.3	
4	Extra for thickening out 100mm thick apron slab to form toe size 200mm x 400mm deep overall tapering to 150mm wide x 400mm deep overall with one chamfered edge including all necessary excavation, formwork and dressing of damp proof material around same as required	m	41	
<u>REINFORCED CONCRETE</u>				
<u>25MPa/19mm concrete in:</u>				
5	Pockets	m3	2	
<u>TEST BLOCKS</u>				
<u>Test Cubes</u>				
<p>The costs of making, storing and testing of concrete test cubes as required under clause 7 "Tests" of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the Department of Works. The testing shall be undertaken by an independent firm or institution nominated by the contractor to the approval of the Department of Works.</p>				
6	Making and testing 150 x 150 x 150mm concrete strength test cube a	No	12	
<u>CONCRETE SUNDRIES</u>				
<u>Finishing top surfaces of concrete smooth with a wood float</u>				
7	Ramps, aprons, etc to falls	m2	46	
<u>Finishing top surfaces of concrete smooth with a steel float</u>				
8	Surfacebeds, slabs, etc	m2	47	
Carried to Collection				
Section No. 1				N\$
Bill No. 2				
Concrete, Formwork & Reinforcement				

ROUGH FORMWORK (DEGREE OF ACCURACY II)

Rough formwork not exceeding 3,5m high to sides of:

9	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	45
10	Both exposed sides of pockets in one brick recess size 450mm x 4 courses high overall	No	6

MOVEMENT JOINTS, ETC

One layer of 250 micron "USB Green" or similar approved waterproof sheeting in slip joints between horizontal concrete and steel surfaces

11	In short lengths not exceeding 300mm wide	m	1
----	---	---	---

Vertical construction joints through concrete

12	Surface beds and/or apron slabs not exceeding 300mm thick	m	19
----	---	---	----

Carried to Collection

N\$

Section No. 1
 Bill No. 2
 Concrete, Formwork & Reinforcement

Section No. 1

Bill No. 2

Concrete, Formwork & Reinforcement

COLLECTION

Total Brought Forward from Page No.

Total Brought Forward from Page No.

Total Brought Forward from Page No.

Page
No

Amount

-7-

-8-

-9-

Carried Forward to Summary of Section No. 1

Section No. 1

Bill No. 2

Concrete, Formwork & Reinforcement

N\$

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 1</u>			
	<u>BILL NO. 3</u>			
	<u>MASONRY</u>			
	For Preambles refer to "Model Preambles for Trades"			
	<u>BRICKWORK</u>			
	<u>Sizes in descriptions</u>			
	Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick			
	<u>Brickwork in 7 MPa cement bricks in Class II mortar</u>			
1	Half brick walls	m2	63	
2	One brick walls	m2	93	
3	Half brick walls in beamfilling	m2	4	
	<u>BRICKWORK SUNDRIES</u>			
	<u>Joint forming material in movement joints</u>			
4	10mm Thick bitumen impregnated softboard expansion joint filling built through brick walls	m2	1	
	<u>Brickwork reinforcement</u>			
5	75mm Wide reinforcement built in horizontally	m	186	
6	150mm Wide reinforcement built in horizontally	m	393	
	<u>Prestressed fabricated lintels</u>			
7	110mm x 75mm Lintels in lengths not exceeding 3m	m	18	
	<u>Brick-on-edge header course copings, sills, etc</u>			
8	220mm Wide sill set sloping and slightly projecting	m	6	
	Carried to Collection			N\$
	Section No. 1			
	Bill No. 3			
	Masonry			

Vermin proof air bricks and vents including forming opening in wall and rendering smooth all round in cement mortar

9	230mm x 160mm Galvanised air brick	No	6
10	Leave opening in half brick wall for air vent 110mm wide x one course high	No	10

PAVING

Paving of 55mm thick 25MPa rectangular paving bricks with butt joints on river sand bed (elsewhere) on compacted soil (elsewhere) with sand and cement mixture swept into joints and hosed down including preparation of ground or filling

11	Paving to duct areas in herringbone pattern	m2	6
----	---	----	---

Carried to Collection

N\$

Section No. 1
Bill No. 3
Masonry

Section No. 1

Bill No. 3

Masonry

COLLECTION

Total Brought Forward from Page No.

Total Brought Forward from Page No.

Page
No

Amount

-11-

-12-

Carried Forward to Summary of Section No. 1

Section No. 1

Bill No. 3

Masonry

N\$

Item No		Quantity	Rate	Amount
<u>SECTION NO. 1</u>				
<u>BILL NO. 4</u>				
<u>WATERPROOFING</u>				
For Preambles refer to "Model Preambles for Trades"				
<u>DAMPPROOFING OF WALLS AND FLOORS</u>				
<u>One layer of 375 micron "Brikgrip DPC" or similar approved embossed damp proof course</u>				
1	In walls	m2	11	
<u>One layer of 250 micron "USB Green" or other similar waterproof sheeting sealed at laps with "Pressure Sensitive Tape" or similar approved</u>				
2	Under surface beds, apron slabs, etc	m2	47	
<u>JOINT SEALANTS, ETC</u>				
<u>Approved polyurethane sealing compound including backing cord, bond breaker, primer, etc</u>				
3	10mm x 20mm In vertical expansion joints including raking out 20mm softboard in joints as necessary	m	11	
Carried Forward to Summary of Section No. 1				N\$
Section No. 1 Bill No. 4 Waterproofing REVISED MODULES (2008)				

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 1</u>			
	<u>BILL NO. 5</u>			
	<u>ROOF COVERINGS, ETC</u>			
	For Preambles refer to "Model Preambles for Trades"			
	<u>PROFILED METAL SHEETING AND ACCESSORIES</u>			
	<u>0,5mm "IBR " galvanised steel profiled sheeting and accessories fixed to steel/timber purlins in accordance with the manufacturer's instructions</u>			
1	Roof covering in single lengths with pitch not exceeding 25 degrees fixed to steel purlins	m2	89	
2	Standard "IBR" galvanised half-round ridge capping including flute closers both sides	m	8	
	<u>ROOF INSULATION</u>			
	<u>"Sisalation 400" or similar approved industrial grade aluminium foil based insulation</u>			
3	Insulation laid taut over purlins (at approximately 1 200mm centres) and fixed concurrent with roof covering including galvanised steel straining wires	m2	60	
	<u>SUNDRIES</u>			
	<u>Approved oil/grease</u>			
4	Apply one layer approved oil to roof sheeting bedded on brickwork (Provisional)	m2	5	
	Carried Forward to Summary of Section No. 1			N\$
	Section No. 1			
	Bill No. 5			
	Roof coverings			

Item
No

Quantity

Rate

Amount

SECTION NO. 1

BILL NO. 6

CARPENTRY AND JOINERY

For Preambles refer to "Model Preambles for all Trades"

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, transomes, mullions, rails, etc

1

No

FRAMED FRAMES, ETC

Carried to Collection

N\$

Section No. 1
Bill No. 6
Carpentry & Joinery

MODULE: ABL 2

DOORS, ETC

Solid core flush panel doors with lipped hardwood edge strips all round and commercial veneer both sides suitable for painting, hung to steel frame

2	40mm Door size 813mm x 2 032mm high	m	29
		No	7

Carried to Collection

N\$

Section No. 1
 Bill No. 6
 Carpentry & Joinery
 REVISED MODULES (2008)

Section No. 1

Bill No. 6

Carpentry & Joinery

COLLECTION

Total Brought Forward from Page No.

Total Brought Forward from Page No.

Page
No

Amount

-16-

-17-

N\$

Carried Forward to Summary of Section No. 1

Section No. 1

Bill No. 6

Carpentry & Joinery

Item No	Quantity	Rate	Amount
<u>SECTION NO. 1</u>			
<u>BILL NO. 7</u>			
<u>CEILING, PARTITIONS AND ACCESS FLOORING</u>			
For Preambles refer to "Model Preambles for Trades"			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Descriptions</u>			
Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins or shot pinned to brickwork or concrete			
Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres, and where described as "bolted" the bolts have been given elsewhere			
<u>METAL CEILINGS</u>			
<u>0,5mm Thick "I.B.R." profile "Alu Zinc AZ 185" galvanised sheet steel fixed to steel purlins</u>			
1	Ceilings pop riveted to steel purlins (elsewhere):	m2	52
<u>Metal cornice</u>			
2	50mm x 50mm x 3mm x 2,24kg/m Mild steel cornice to suit horizontal ceilings screwed with 6mm diameter x 20mm long stainless steel self-tapping screws to sheet steel ceiling and plugged with 5mm thick sawn softwood spacer to brickwork/concrete at maximum 500mm centres	m	23
<u>Sundries</u>			
3	Extra over "I.B.R." ceiling for access hatch 800mm x 800mm formed of 30mm x 30mm x 2,5mm thick mild steel frame filled in with "I.B.R." sheeting and set into 30mm x 30mm x 2,5mm mild steel frame riveted to steel purlin	No	1
Carried to Collection			N\$
Section No. 1 Bill No. 7 Ceilings, Partitions & Access flooring			

4 Apply one layer approved oil to ceiling sheeting bedded on brickwork

m2

3

Carried to Collection

N\$

Section No. 1
Bill No. 7
Ceilings, Partitions & Access flooring

Section No. 1

Bill No. 7

Ceilings, Partitions & Access flooring

COLLECTION

Total Brought Forward from Page No.

Total Brought Forward from Page No.

Page
No

Amount

-19-

-20-

N\$

Carried Forward to Summary of Section No. 1

Section No. 1

Bill No. 7

Ceilings, Partitions & Access flooring

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 1</u>			
	<u>BILL NO. 8</u>			
	<u>IRONMONGERY</u>			
	For Preambles refer to "Model Preambles for Trades"			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	Prices must allow for fixing to timber, steel and plastered or tiled walls as may be necessary.			
	All locks are to have consecutive numbers stamped on the forend and to be supplied with two keys attached to and including an approved chromium plated split ring; in addition prices are to include for the supply of one standard plastic tag key ring with number written on paper strip and one 35mm diameter circular key tags formed of 3mm thick perspex plates engraved in black with 6mm high numerals and letters corresponding with the respective lock numbers, holed for and fitted to split ring.			
	All locks to be fitted with pattern screws.			
	<u>HINGES</u>			
1	100 x 75mm Brass butt hinge with brass pin and nylon washers	No	14	
	<u>HANDLES</u>			
	<u>"Union" or other approved</u>			
2	"Waterbok" lever handle on concealed fixing backplate, code AL6W45-24AS (SET)			
3	"Waterbok" lever handle on concealed fixing backplate, code AL6W45-73AS (SET)			
	<u>LOCKS</u>			
	<u>"Union" or other approved</u>			
4	Four lever lock set, code 2261-76PL	No	4	
5	Bathroom lock set , code 22314-76PL	No	7	
	Carried to Collection			N\$
	Section No. 1			
	Bill No. 8			
	Ironmongery			

6 "UN337800000000" or similar approved brass padlock
No 1

LETTERS, NAMEPLATES, ETC

1,2mm Thick natural anodised aluminium signage numberplate black engraved in 15mm high "Bold Condensed Helvetica" letters screwed to doors with aluminium counters sunk screws and sealed with approved silicone sealant as follows:

7 50mm x 25mm with 2 letters and/or numerals
No 12

Pictograms

8 152mm x 152mm x 3mm "Union AL5066E-06AS-E14" or other approved natural aluminium door sign with disabled motif engraved in black and screwed to timber door
No 1

9 152mm x 152mm x 3mm "Union AL5066E-06AS-E10/E11" or other approved natural aluminium door sign with male/female motif engraved in black and screwed to timber door
No 3

BATHROOM FITTINGS

10 "Holdit" or similar approved chromium plated thief-proof toilet roll holder plugged
No 9

"Chairman Industries" or other approved

11 "Code SR2" stainless steel rear grab rail around cistern plugged to brickwork
No 1

12 "Code DL2" satin polished stainless steel side grab rail plugged to brickwork
No 1

SUNDRIES

13 "Union" AL8730 AS or similar approved 38mm diameter black rubber door stop, plugged
No 5

14 "Union" AL8253 AS or similar approved rubber tipped hat hook
No 7

Carried to Collection

N\$

Section No. 1
Bill No. 8
Ironmongery

Section No. 1

Bill No. 8

Ironmongery

COLLECTION

Total Brought Forward from Page No.

Total Brought Forward from Page No.

Page
No

-22-

-23-

Amount

N\$

Carried Forward to Summary of Section No. 1

Section No. 1

Bill No. 8

Ironmongery

Item
No

Quantity Rate Amount

SECTION NO. 1

BILL NO. 9

STRUCTURAL STEELWORK

For Preambles refer to "Model Preambles for Trades"

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

Descriptions of L-shaped and U-shaped anchor bolts shall be deemed to include bending, threading, nuts and washers and embedding in concrete. Where anchor bolts are described as embedded in sides or soffits of concrete it shall be deemed to include holes through formwork.

Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.

All steel to be painted with two coats red oxide primer before delivery to site

Structural steel components and the calculation of masses are in accordance with "Structural Steel Tables" issued by the South African Institute of Steel Construction.

Prices for structural steelwork are to include for all cutting, fitting, welding, drilling of holes or slotted holes, bolts, nuts, washers, etc. and for bolting and welding components together either in the place of manufacture or on the site.

Carried to Collection

N\$

Section No. 1
Bill No. 9
Structural Steelwork

All steel work build into brickwork or concrete to be wrapped in two layers with DPC extending for a minimum of 150mm both sides of brickwork or concrete.

STEEL RAFTERS, TRUSSES, ETC

Welded roof trusses of 50mm x 50mm x 5mm angle section top- and bottom cords and 40mm x 40mm x 5mm angle section intermediate members including all angle rails, struts, braces, cleats, etc and flat section bearer, gusset and connection plates bolted to steel or fixed to concrete

1	Double pitched trusses 10,440m x 1,095m high extreme	kg	311
---	--	----	-----

Baseplates, bolts to trusses, etc

2	150mm x 85mm x 6mm Base plate	kg	4
---	-------------------------------	----	---

3	12mm diameter mild steel U-bolt 700mm girth with 75mm threaded ends cast into concrete ringbeam	No	6
---	---	----	---

4	M8 "Rawl" bolt 100mm long	No	24
---	---------------------------	----	----

PURLINS, GIRTS, BRACING, ETC

Purlins and girts welded to steel

5	100mm x 50mm x 20mm x 2,5mm Lipped channel section purlins	kg	370
---	--	----	-----

6	75mm x 50mm x 20mm x 2,5mm 3,85kg/m Lipped channel section purlins	kg	560
---	--	----	-----

Carried to Collection

N\$

Section No. 1
 Bill No. 9
 Structural Steelwork

Section No. 1

Bill No. 9

Structural Steelwork

COLLECTION

Total Brought Forward from Page No.

Total Brought Forward from Page No.

Page
No

Amount

-25-

-26-

N\$

Carried Forward to Summary of Section No. 1

Section No. 1

Bill No. 9

Structural Steelwork

Item No	Quantity	Rate	Amount
<u>SECTION NO. 1</u>			
<u>BILL NO. 10</u>			
<u>METALWORK</u>			
For Preambles refer to "Model Preambles for Trades"			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Descriptions</u>			
Descriptions of bolts shall be deemed to include nuts and washers			
Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete			
Metalwork described as "holed for bolt(s)" shall be deemed to exclude the bolts unless otherwise described			
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			
All steelwork to be primed and to receive two coats cold galvanised paint			
<u>PRESSED STEEL DOOR FRAMES</u>			
<u>1,2mm Double rebated frames suitable for one brick walls supplied with 100mm steel hinges, rubber buffers and strike plate complete</u>			
1	Frame for door 813mm x 2 032mm high	No	2
2	Frame for door 813mm x 2 032mm high and fixed fanlight 305mm high	No	2
<u>PRESSED STEEL SINGLE PANEL STEEL CHAWL DOORS AND FRAMES</u>			
Carried to Collection			N\$
Section No. 1 Bill No. 10 Metalwork			

<u>1,2mm "Wispeco Single Panel Steel Chawl" or similar approved doors</u>			
3	Door 813mm x 2 032mm high with rebated frame suitable for one brick wall with padlatch with independant operation from inside fitted with standard steel hinges and striking plate	No	1
<u>STEEL WINDOWS, DOORS, ETC</u>			
<u>Standard residential windows with NBP33 burglar bars to all sections</u>			
4	Window type ES2H, 1 022mm x 654mm high	No	6
<u>GALVANIZED STEEL LOUVRE PANELS</u>			
<u>"Wispeco" or similar approved standard adjustable louvre units type LC screwed into steel frames</u>			
5	Louvre unit for 813mm x 305mm high fanlight opening fitted with 4mm thick "Ampaguard" louvre blades	No	2

Carried to Collection

N\$

Section No. 1
 Bill No. 10
 Metalwork

Section No. 1

Bill No. 10

Metalwork

COLLECTION

Total Brought Forward from Page No.

Total Brought Forward from Page No.

Page
No

Amount

-28-

-29-

Carried Forward to Summary of Section No. 1

Section No. 1

Bill No. 10

Metalwork

N\$

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 1</u>			
	<u>BILL NO. 11</u>			
	<u>PLASTERING</u>			
	For Preambles refer to "Model Preambles for Trades"			
	<u>SCREEDS</u>			
	<u>1:3 Cement plaster screeds steel trowelled smooth on concrete</u>			
1	25mm Thick on floors and landings	m2	43	
	<u>INTERNAL PLASTER</u>			
	<u>1:5 Cement plaster on brickwork</u>			
2	On walls	m2	228	
3	On narrow widths	m2	8	
	<u>EXTERNAL PLASTER</u>			
	<u>1:5 Cement plaster on brickwork</u>			
4	On walls	m2	80	
5	On walls in foundations (Provisional)	m2	7	
6	On narrow widths	m2	2	
7	On sloping top, edge and projecting soffit of sills 300mm girth	m	6	
	<u>CORNER PROTECTORS, DIVIDING STRIPS, ETC</u>			
8	25mm x 25mm x 3mm Mild steel angle section corner protectors in varying lengths with 25mm x 3mm fish tail lugs 50mm long welded on at 500mm centres including embedding in concrete	kg	1	
9	50mm x 50mm x 5mm Mild steel angle section corner protectors in varying lengths with 30mm x 3mm fish tail lugs 200mm long welded on at 400mm centres including embedding in concrete	kg	57	
	Carried to Collection			
	Section No. 1		N\$	
	Bill No. 11			
	Plastering			

MODULE: ABL 2

10	0,5mm "Mentis" or similar approved galvanised internal corner protectors in 1 500mm lengths including embedding in plaster in accordance with the manufacturer's specifications	No	4
11	3mm x 20mm Flat section brass dividing strips between different floor finishes	m	4
12	5mm x 50mm Flat section brass weatherbar cut to lengths, set on edge and embedded in concrete threshold	m	4

Carried to Collection

N\$

Section No. 1
 Bill No. 11
 Plastering

Section No. 1

Bill No. 11

Plastering

COLLECTION

Total Brought Forward from Page No.

Total Brought Forward from Page No.

Page
No

Amount

-31-

-32-

Carried Forward to Summary of Section No. 1

Section No. 1

Bill No. 11

Plastering

N\$

Item No	SECTION NO. 1	Quantity	Rate	Amount
	<u>BILL NO. 12</u>			
	<u>TILING</u>			
	For Preambles refer to "Model Preambles for Trades"			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Descriptions</u>			
	Unless described as "fixed with adhesive to plaster (plaster elsewhere)" descriptions of tiling on brick or concrete walls, columns, etc shall be deemed to include 1:4 cement plaster backing and descriptions of tiling on concrete floors, etc shall be deemed to include 1:3 cement plaster bedding			
	<u>WALL TILING</u>			
	<u>200mm x 200mm "Samca OSH 1000" or other similar approved white glazed ceramic tiles fixed with adhesive to plaster (plaster elsewhere) including jointing and pointing with Dove Grey tile grout in strict accordance with the manufacturer's instructions</u>			
1	On walls as Item No: 1417.00	m2	183	
2	On narrow widths as Item No: 1419.00	m2	7	
	<u>FLOOR TILING</u>			
	<u>300mm x 300mm "porcelain fully body" ceramic tiles laid on screeds (elsewhere measured) with adhesive and including jointing and pointing with Dove Grey tile grout in strict accordance with the manufacturer's instructions</u>			
3	On floors and landings	m2	42	
4	Skirting 100mm high	m	79	
5	Floor to patterns	m2	42	
	<u>SUNDRIES</u>			
	<u>"Schlüter" or similar approved</u>			
6	Type "Rondec RO 60 AE" or similar approved natural anodized aluminum tile edge trim cut to lengths and bedded in tile adhesive	m	79	
	Carried to Collection			
	Section No. 1			
	Bill No. 12			
			N\$	

5 Type "DECO M 80 D" or similar approved solid brass tile edge trim cut to lengths and bedded in tile adhesive

m

3

Carried to Collection

N\$

Section No. 1
Bill No. 12
Tiling

Section No. 1

Bill No. 12

Tiling

COLLECTION

Total Brought Forward from Page No.

Total Brought Forward from Page No.

Page
No

Amount

-34-

-35-

NS

Carried Forward to Summary of Section No. 1

Section No. 1

Bill No. 12

Tiling

Item
No

Quantity Rate Amount

SECTION NO. 1

BILL NO. 13

PLUMBING AND DRAINAGE

For Preambles refer to "Model Preambles for Trades"

SUPPLEMENTARY PREAMBLES

uPVC pipes and fittings:

Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings

Soil, waste and vent pipes and fittings shall be solvent weld jointed

uPVC pressure pipes and fittings:

Pipes for water supply shall be of the class stated and shall comply with SABS 967

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 as described, 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

Carried to Collection

N\$

Section No. 1
Bill No. 13
Plumbing & Drainage

Fixing of pipes

Unless specifically otherwise stated, descriptions of pipes shall be deemed to include chasing into new and existing walls, etc, casting in, building in or suspending not exceeding 1m below suspension level

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

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 clauses 3, 5.5, 5.6, 5.7 and 7 of SABS 1200

DB : Earthworks (Pipe trenches)

Pipes shall be bedded in accordance with clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SABS 1200

LB : Bedding (Pipes).

Unless otherwise described bedding of rigid pipes shall be class B bedding

Carried to Collection

Section No. 1
 Bill No. 13
 Plumbing & Drainage

N\$

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

Flush pans

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

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

Pipes to be taped shall be coated with the appropriate primer and the tape shall be applied with minimum 15mm lap per spiral unless otherwise described

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

SOIL DRAINAGE

uPVC class 9 heavy duty pipes

1	110mm Pipes laid in and including trenches not exceeding 1m deep	m	10
---	--	---	----

Extra over uPVC class 9 heavy duty pipes for fittings

2	110mm Long radius bend	No	6
3	110mm Access junction	No	5

"Marley" or similar approved gulleys

4	110mm Gulley P-trap (UGB 40) complete with gulley head (SGH 4) and head grate (UGA 40) cast into 470mm x 470mm x 500mm deep unreinforced 25MPa concrete support complete with 250mm high half brick surround on three sides, including joint to uPVC pipe and all necessary additional excavation, formwork and backfilling		
---	---	--	--

Carried to Collection

N\$

Section No. 1
Bill No. 13
Plumbing & Drainage

Inspection chambers formed of 110mm perimeter brickwork to receive cover (manhole cover elsewhere measured) plastered on inside, top and for a height of 250mm on the external face, built on top of 100mm thick 25MPa/19mm concrete base extending 100mm wider than external face of brickwork on all sides with and including 1:2 cement mortar benching to 1:6 fall; the whole inspection chamber inclusive of all excavation, filling, compaction, formwork, etc:

5	Inspection chamber size 900mm x 600mm internally not exceeding 500mm deep internally	No	1
---	--	----	---

Covers, etc

6	900mm x 600mm Light duty Type 14B "Saint-Gobain" (product no.:2040) or similar approved manhole cover and frame set in position on top of brickwork in 1:3 cement mortar	No	1
---	--	----	---

Sundries

7	Extra over excavation in earth for pipe trenches, chambers, etc for excavation in soft rock	m3	1
---	---	----	---

8	Allow for testing the whole of the soil drainage installation		Item
---	---	--	------

SANITARY FITTINGS

All joints between edges of sanitary fittings and walls, etc. must be filled with white silicone sealant as Bostik 2525 sanitary ware sealant or similar approved.

Standard polyethylene fittings

9	"Atlas Plastic type Aries Pan" or similar approved polyethylene WC suite and remote flushing control "Shires Lynx" duranite low level cistern (9l) complete with conversion bend and "NIP" polypropelene white double flap hinged seat	No	7
---	--	----	---

10	"Ballam Waterslot" or similar approved polyethylene WC suite and duranite low level cistern (9l) complete with conversion bend and "NIP" polypropelene white double flap hinged seat	No	2
----	--	----	---

Carried to Collection

N\$

Section No. 1
 Bill No. 13
 Plumbing & Drainage

Citimetal Products as supplied by Franke Kitchen Systems or similar approved

11 wall hung urinal bowl complete with spreader,40mm waster outlet and domical fixed to wall no

12 "Franke model WB001" or similar approved wash hand basin, size 520mm x 435mm fitted with 32mm x 10mm apron all round and fixed to wall with pair of galvanised steel Eagle brackets as Item No: 1474.00 No 6

TRAPS, ETC

Pliable rubber

13 32mm "Castle 32x32P YDI.001" or similar approved P-trap as Item No: 1513.00 No 6

Brass

14 38mm "Cobra 370" or similar approved shallow seal P-trap as Item No: 1512.00 No 3

Chromium plated

TAPS, VALVES, ETC

Brass

15 32mm "Cobra 1001/125-32" or other approved gate valve including joint to 32mm HDPE on both sides including all fittings and adaptors required to execute joint as No 1

"Cobra Watertech" or similar approved

16 15mm Chromium plated extension angle valve with short length of chromium plated pipe 350mm long (code 232/350) or similar approved with joint to fitting and copper pipe No 11

Carried to Collection

N\$

Section No. 1
Bill No. 13
Plumbing & Drainage

17	15mm "Star" pillar tap (code 111) or similar approved with joint to fitting and copper pipe	No	6
<u>SANITARY PLUMBING</u>			
<u>uPVC pipes and fittings (SABS 967)</u>			
18	40mm Pipes	m	4
19	50mm Pipes	m	2
20	110mm Pipes	m	14
21	50mm Pipe laid under solid floors not exceeding 1m deep	m	6
<u>Extra over uPVC pipes for fittings</u>			
22	32mm x 40mm BSP adaptor	No	6
23	38mm x 40mm BSP adaptor	No	2
24	40mm Bend	No	10
25	40mm Bend with inspection eye	No	5
26	110mm Bend with inspection eye	No	4
27	50mm x 40mm Reducer	No	4
28	110mm x 50mm Reducer	No	5
29	110mm Junction	No	4
30	110mm Junction with inspection eye	No	5
31	110mm x 50mm Double reducing junction with inspection eye	No	2
32	110mm Pan connector with Neoprene collar	No	9
33	50mm Diameter "Marley SAV 50" two way vent valve	No	5

Carried to Collection

N\$

Section No. 1
 Bill No. 13
 Plumbing & Drainage

<u>Sundries</u>				
34	Allow for testing the whole of the sanitary plumbing installation			
35	<u>WATER SUPPLIES</u>	Item		
	<u>Note:</u>			
	The hot and cold water services installations are to be executed in strict accordance with the latest revision of the "Code of Practice for Copper Plumbing" issued by the S.A Copper Development Association			
	All surface mounted piping is to be supported at maximum 1,5m centres			
	Fittings to pipes with diameters not exceeding 30mm have not been separated and the Contractor is to allow for this in his prices			
	External Water reticulation has only been measured from the outside of the building up to the edge of the apron as no indication is given of quantities pertaining to site reticulation			
	<u>H.D.P.E. type IV Class 10 pressure pipes with "Plasson" compression type joints</u>			
36	32mm Pipes laid in and including trenches	m	200	
	<u>Class O copper pipes</u>			
37	15mm Pipes	m	45	
38	22mm Pipes	m	11	
	<u>Extra over class O copper pipes for capillary fittings</u>			
39	15mm Fittings	No	20	
40	22mm	No	15	
	<u>Pipe joints</u>			
41	Form joint of 32mm HDPE pipe to 22 mm copper pipe including all necessary fittings, adaptors etc to execute joint	No	1	
	Carried to Collection			N\$
	Section No. 1			
	Bill No. 13			
	Plumbing & Drainage			
	REVISED MODULES (2008)			

Sundries

42	Stopcock box size 450mm x 450mm internally and not less than 700mm deep to invert complete with rectangular cast iron stopcock box 225mm x 225mm type 11B (SABS 558-1973)	No	1
43	Allow for testing the whole of the water supply installation		Item

PIPE PROTECTION

Paper lagging

44	Two layers of stout brown paper tightly wrapped around 15mm pipe and couplings and tied with wire prior to building in	m	19
45	Extra for wrapping around fittings	No	9
46	galvanized mild steel medium grade pipes including all joints <u>And connector</u>		
47	20mm pipe fixed	no	4
48	<u>brass tap</u>		
49	20mm hose bib tap	no	4
50	valve box	no	1

Section No. 1
Bill No. 13
Plumbing & Drainage

Carried to Collection

N\$

Section No. 1

Bill No. 13

Plumbing & Drainage

COLLECTION

Total Brought Forward from Page No.

Total Brought Forward from Page No.

Total Brought Forward from Page No.

Total Brought Forward from Page No.

Total Brought Forward from Page No.

Total Brought Forward from Page No.

Total Brought Forward from Page No.

Total Brought Forward from Page No.

Page
No

Amount

-37-

-38-

-39-

-40-

-41-

-42-

-43-

-44-

N\$

Carried Forward to Summary of Section No. 1

Section No. 1

Bill No. 13

Plumbing & Drainage

Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 1</u></p> <p><u>BILL NO. 14</u></p> <p><u>GLAZING</u></p> <p>For Preambles refer to "Model Preambles for Trades"</p> <p><u>GLAZING TO STEEL WITH PUTTY</u></p> <p><u>4mm "Ampaguard"</u></p>			
1	Panes exceeding 0,1m2 and not exceeding 0,5m2	m2	4	
	<p>Carried Forward to Summary of Section No. 1</p> <p>Section No. 1</p> <p>Bill No. 14</p> <p>Glazing</p>			N\$

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 1</u>			
	<u>BILL NO. 15</u>			
	<u>PAINTWORK</u>			
	For Preambles refer to "Model Preambles for Trades"			
	<u>ON FLOATED PLASTER</u>			
	<u>Prepare and apply one coat plaster primer and two coats "Plascon Double Velvet" or similar approved paint</u>			
1	On internal walls	m2	43	
	<u>Prepare and apply one coat plaster primer and two coats exterior quality "Plascon Polvin" or similar approved super acrylic PVA paint</u>			
2	On external walls	m2	83	
3	On external walls in foundations (Provisional)	m2	7	
	<u>ON METAL</u>			
	<u>Prepare, touch up factory primer and apply one coat universal undercoat and two coats high gloss enamel paint</u>			
4	On door frames	m2	11	
5	On doors	m2	4	
6	On windows with burglar bars (both sides measured over the full flat area)	m2	8	
7	On exposed members of roof trusses, purlins, etc,	m2	19	
	<u>Prepare, remove storage oil with galvanised roof cleaner, rinse with clean water and apply two coats acrylic PVA</u>			
8	On profiled metal sheet ceilings and cornices (measured on flat)	m2	55	
	<u>ON WOOD</u>			
	Carried to Collection			N\$
	Section No. 1			
	Bill No. 15			
	Painting			

Prepare and apply two coats pink wood primer

9 On backs of frames, linings, etc not exceeding 300mm girth

m 29

Prepare, knot, prime with oil based wood primer, stop, apply one coat universal undercoat and two coats high gloss enamel

10 On doors

m2 38

11 On skirtings, rails, etc not exceeding 300mm girth

Carried to Collection

N\$

Section No. 1
Bill No. 15
Painting

Section No. 1

Bill No. 15

Painting

COLLECTION

Total Brought Forward from Page No.

Total Brought Forward from Page No.

Page
No

Amount

-47-

-48-

Carried Forward to Summary of Section No. 1

Section No. 1
Bill No. 15
Painting

N\$

Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 1</u></p> <p><u>BILL NO. 16</u></p> <p><u>EXTERNAL WORKS</u></p> <p>For Preambles refer to "Model Preambles for Trades".</p> <p>The Contractor is referred to the previous Sections for the full descriptions of labour and material which apply equally to the items in this Section unless otherwise described</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Bedding and jointing sand</u></p> <p>All bedding and jointing sand under interlocking paving to be in accordance to SABS specifications. A sample of the bedding and jointing sand is to be tested in accordance to the Engineers requirements.</p> <p><u>Joint between road kerb and interlocking</u></p> <p>The Contractor is to ensure that the interlocking pavers are cut straight to form a neat joint between the road kerb and the paving. This joint is to be filled with jointing sand to the approval of the Engineer</p> <p><u>SITE CLEARANCE</u></p> <p><u>Site clearance</u></p> <p>1 Clear the site of all rubbish, rubble, vegetable matter, bushes (includes all trees with girths less than 200mm) grub up all roots and removal, transporting and disposal of material, break open and poison all termite nests found, level and prepare for roads upon, including all backfilling of cavities as specified in this section</p>	m2	0.00	
	<p><u>SEPTIC TANK AND FRENCH DRAIN</u></p> <p><u>Refer to Architect's drawing No. B24 and B25 or B16 and B17 when pricing the following septic tank (the drawings are attached to these Bills of Quantities)</u></p>			
	<p style="text-align: right;">Carried to Collection</p>			N\$
	<p>Section No. 1 Bill No. 16 External Work</p>			

Septic tank formed of 100mm thick 25MPa/19mm reinforced concrete cover slab to receive covers (manhole covers elsewhere measured), cover slab reinforced with 12mm diameter high tensile steel bars @ 150mm c/c in both directions, fitted on top of 330mm perimeter brickwork plastered on inside, built on top of 150mm thick 25MPa/19mm concrete base extending 200mm wider than external face of brickwork on all sides with and including 110mm internal plastered brickwork divisions with 150mm x 150mm openings and 110mm uPVC inlet and outlets with junctions and short lengths of pipes built into brickwork; the whole inspection chamber inclusive of all excavation, filling, compaction, formwork, etc :

2 Septic tank size 3 550mm x 2 400mm externally exceeding 2 000mm deep and not exceeding 2 250mm deep internally (B16 and B17)

No 1

Covers, etc

3 600mm x 600mm Double seal Type 6 "Saint-Gobain" (product no.:2280) or similar approved manhole cover and frame set in position on concrete slab in 1:3 cement mortar

No 2

Carried to Collection

N\$

Section No. 1
 Bill No. 16
 External Work
 REVISED MODULES (2008)

Section No. 1

Bill No. 16

External Work

COLLECTION

Total Brought Forward from Page No.

Total Brought Forward from Page No.

Total Brought Forward from Page No.

**Page
No**

Amount

-50-

-51-

-52-

N\$

Carried Forward to Summary of Section No. 1

Section No. 1
Bill No. 16
External Work

SECTION SUMMARY - Building Works

Bill No		Page No	Amount
1	Foundations (Provisional)	-6-	
2	Concrete, Formwork & Reinforcement	-10-	
3	Masonry	-13-	
4	Waterproofing	-14-	
5	Roof coverings	-15-	
6	Carpentry & Joinery	-18-	
7	Ceilings, Partitions & Access flooring	-21-	
8	Ironmongery	-24-	
9	Structural Steelwork	-27-	
10	Metalwork	-30-	
11	Plastering	-33-	
12	Tiling	-36-	
13	Plumbing & Drainage	-45-	
14	Glazing	-46-	
15	Painting	-49-	
16	External Work	-53-	
Section No. 1 Carried to Final Summary			N\$

MODULE: ABL 2

Item No

MODULE: ABL 2

Amount

Section No. 2
Bill No. 1
Electrical Installation

Carried to Final Summary

N\$

FINAL SUMMARY

**Section
No**

- 1 Building Works
- 2 Specialist Installations

**Page
No**

- 54-
- 55-

Amount

Sub-total for net building works

N\$

Nett Location factor value

Item

Sub-total for net building works including location factor

N\$

Contingencies

Allow for contingencies to be used as directed by the client's representative to be deducted in whole or in part if not required

10%

Sub-total for net building works including contingencies

N\$

VAT on net building cost (15%)

N\$

Carried to Form of Tender

N\$

ELECTRICAL WORK OF ABL2 SIGURUGURU PRIMARY SCHOOL

SECTION IV: PRICED ACTIVITY SCHEDULE

Procurement Reference Number: _____

The quantities shown below are approximate, and subject to re-measurement for payment purpose.

Item No.	Brief Description of Works	Unit of Measure	Quantity	Unit of Price N\$	Total Price N\$
	ELECTRICAL INSTALLATION FOR MODULE ABL2				
1.0	Supply & install flush white epoxy powder coated sheet steel DB-8A (MOD-10) complete as specified but excluding equipment listed below	Lot	1.00		
1.1	40A DP 5kA Isolator	No	1.00		
1.2	5A SP 5kA MCB	No	1.00		
1.3	10A SP 5kA MCB	No	1.00		
1.4	60A SP 5KA MCB	No	1.00		
1.5	DB Labelling	No	1.00		
1.6	Surge Arresters	No	2.00		
1.7	Blank cover	No	2.00		
2.0	Supply & install 600/1000V PVCAS supply cable drawn into conduits or in ground				
2.1	16mm ² x 2c Cu	M	80.00		
	Terminate 600/1000V PVCAS cables in DBs, including glands, etc				
2.2	16mm ² x 2c Cu	No	2.00		
	Supply & install Bare Copper Earth wire cable drawn into conduits or in ground				
2.3	10mm ²	M	80.00		
3.0	Supply & install heavy gauge PVC conduit, including adapters, glueing, terminations, etc				
3.1	ø20mm flush in wall (chasing included), surface in ceiling, cast in concrete	M	72.00		
3.2	ø25mm flush in wall (chasing included), surface in ceiling, cast in concrete	M	6.00		

4.0	Supply & install Class 9 uPVC sleeves for supply cables to DBs				
4.1	ø50mm flush in wall (chasing included), surface in ceiling, cast in concrete, in ground	M	5.00		
4.2	ø50mm slow bends	No	1.00		
5.0	Supply & install light switches & socket outlets complete with cover plates & connection to circuit wiring				
5.0	Light switches				
5.1	16A flush 1-lever, 1-way	No	3.00		
5.2	Photocell	No	1.00		
6.0	Supply & install luminaire, including control gear & lamp complete & connect to circuit wiring				
6.1	Type A	No	8.00		
7.0	Supply & install grade 600/1000V PVC insulated stranded copper wiring drawn into conduits, sleeves & trunking				
7.1	2.5mm ²	M	150.00		
	Supply & install grade 600/1000V PVC insulated stranded copper earth wiring drawn into conduits, sleeves & trunking				
7.3	2.5mm ²	M	50.00		
8.0	Supply & install galvanised mild steel conduit outlet boxes, draw boxes & cover plates as required				
8.1	Ø20mm flush in wall (chasing included), surface in ceiling, cast in concrete	No	8.00		
8.2	100x50x50 flush in wall (chasing included), surface in ceiling, cast in concrete	No	4.00		
9.0	LV cable trenches 600 mm wide x 500 mm deep including backfilling & compaction				
9.1	In earth	M	80.00		
10.0	Supply and install 1.5m copper earth spikes to detail, including excavation, backfilling, compaction and connection to BCEW				
10.1	1.5m Copper earth spikes	No	2.00		

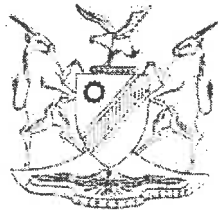
	Connect 50mm² earth wire to roof, stud in earth test point box and earth spike, including lugs and fixing hardware				
10.2	Connections 50mm ² insulated earth wire	No	6.00		
	Supply and install 50mm² insulated earth from earth test point to roof earth point and to earth spike				
10.3	50mm ² insulated earth	M	8.00		
	Earth terminal box complete with earth bar and clearly labelled "Earth Terminal"				
10.4	Terminal box	No	2.00		

Subtotal:	
Contingencies 10%	
VAT@15%	
Total	

MODULE

ABL2

LARGE ABLUTION BLOCK



MINISTRY OF WORKS,
TRANSPORT & COMMUNICATION

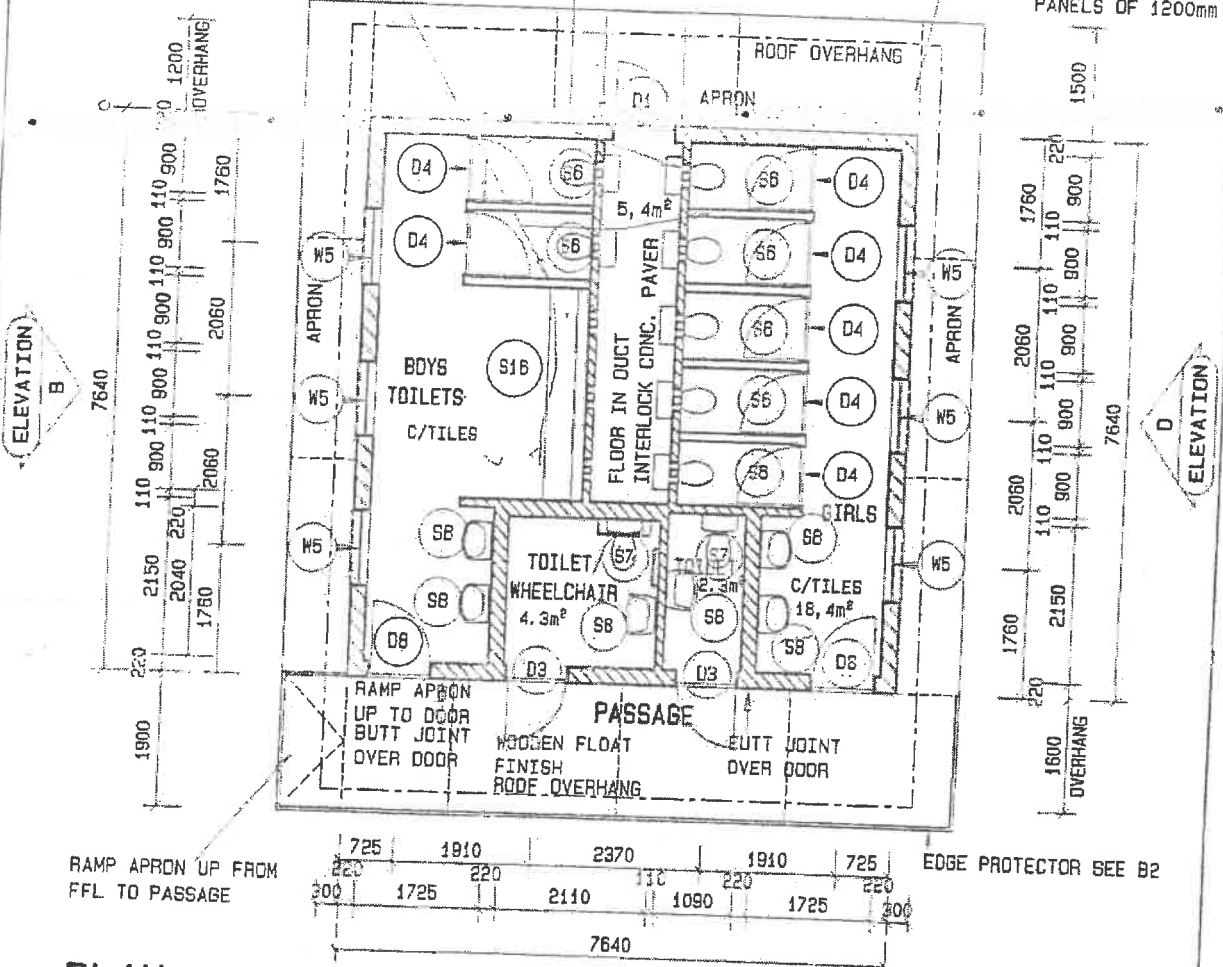
NOTE:
CERAMIC WALL TILES TO
CEILING HEIGHT TO ALL
INTERNAL WALLS
SEE TILE SPEC 'B42'

NOTE: BUTT JOINT IN WALLS
UNDER ALL WINDOWS

NOTE:
INTERNAL WC DIVIDING
WALLS 2100 HIGH

NOTE: AIR VENTS SEE DWG S6
BUTT JOINT OVER DOOR

NOTE: 900mm WIDE
APRON WITH MAX.
PANELS OF 1200mm



PLAN
Scale 1:100

NOTE:
SPECIFICATION FOR WHEELCHAIR TOILET
ACCESSORIES:

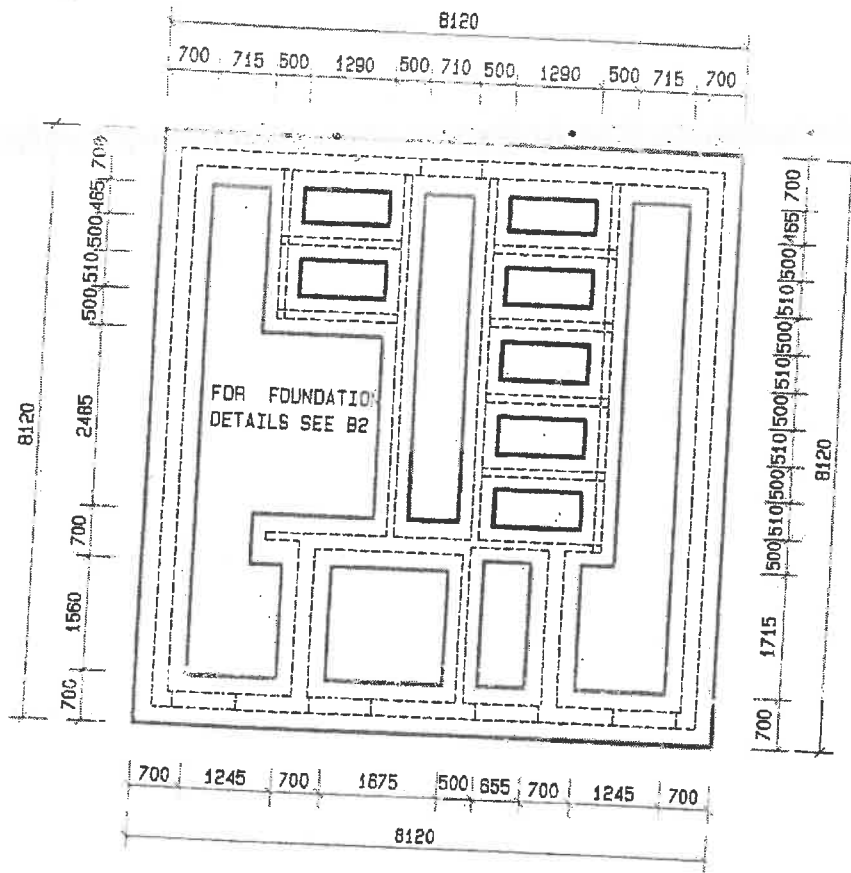
- GRAB RAILS - 1x ST. ST. DL2
- 1x ST. ST. SR2
- AS SUPPLIED BY CHAIRMAN INDUSTRIES &
- 1x 'SOLID' IGS 150x150mm ALUMINIUM
- ENGRAVED & FILLED WITH BLACK WHEELCHAIR
- PICTOGRAM DOOR SIGN

NETT AREA : =48,8m²
GROSS AREA : =58,4m²



SCALE	DATE	DRAWN	REVISIONS	PROJECT NUMBER	MODULE	DRAWING NUMBER	PROPERTY OF
1:100	JAN08	ESAD	JAN08	ABL2	ABL2	01	GOVERNMENT OF NAMIBIA
LARGE ABLUTION BLOCK STRUCTURE PLAN				ABL2 2008			PROJECT CONSULTANT
USER: MINISTRY MINISTRY OF BASIC EDUCATION, SPORT & CULTURE							MINISTRY OF WORKS, TRANSPORT & COMMUNICATION
							TEL :




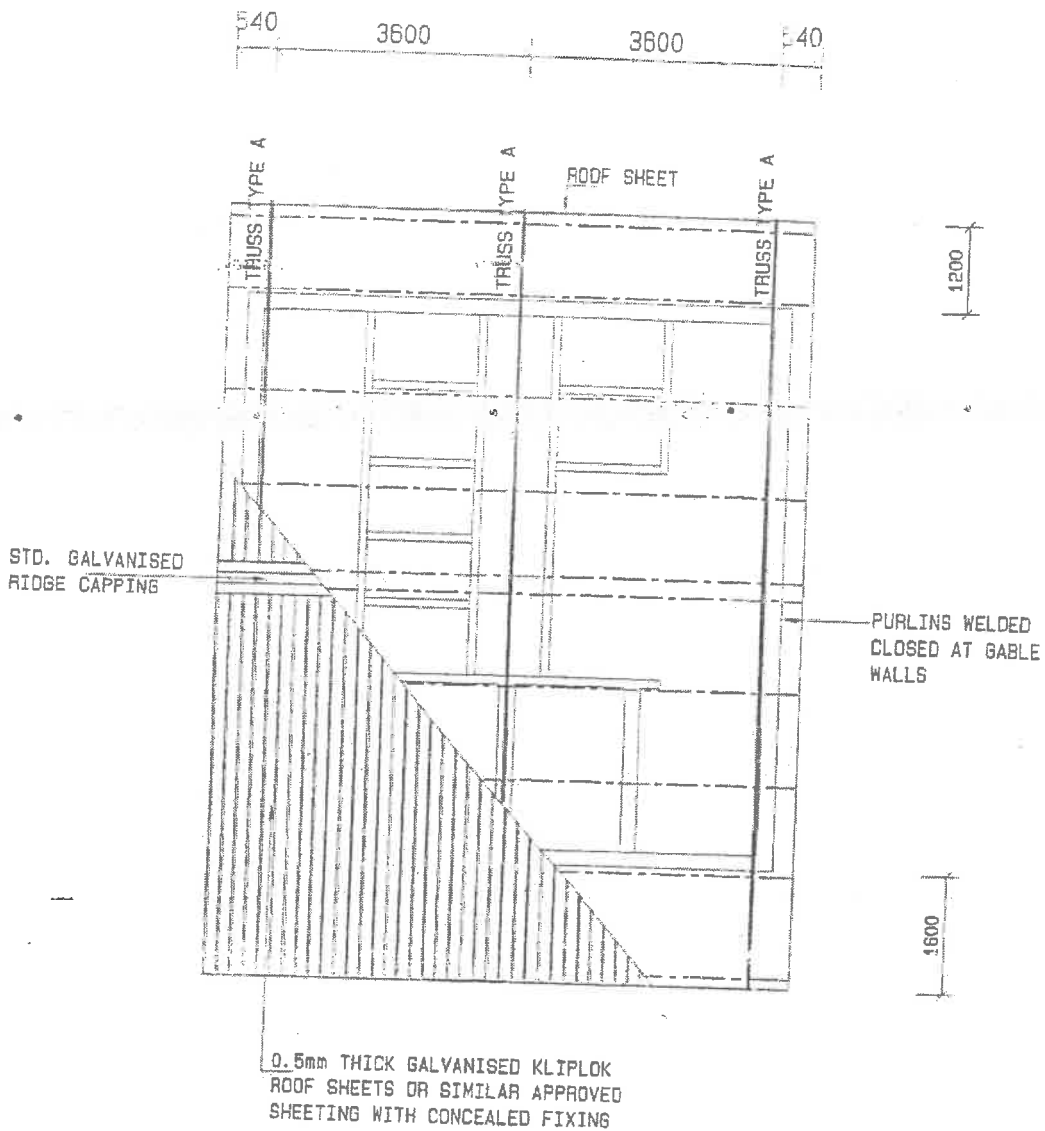


FOUNDATION LAYOUT

Scale 1:100

FOR COLLAPSING SOIL AND CLAY
CONDITIONS REFER TO DETAIL B 41


SCALE	DATE	DRAWN	REVISIONS	PROJECT NUMBER	MODULE	DRAWING NUMBER	PROPERTY OF
1:100	AUG03	ESAD					GOVERNMENT OF NAMIBIA
LARGE ABLUTION BLOCK FOUNDATION PLAN					ABL2	ABL2 02	PROJECT CONSULTANT
USER MINISTRY MINISTRY OF BASIC EDUCATION, SPORT & CULTURE					2008		TEL :
							 MINISTRY OF WORKS, TRANSPORT & COMMUNICATION

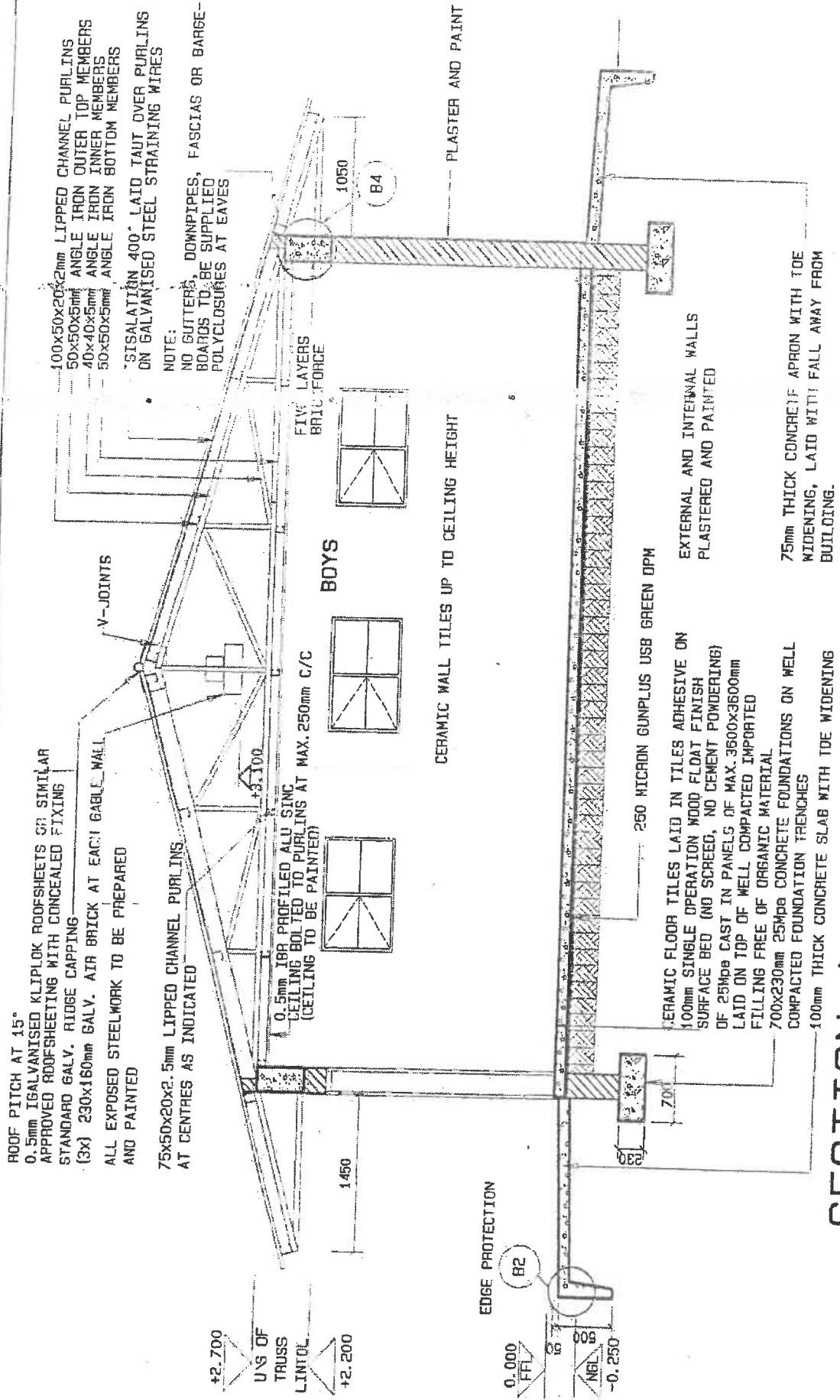


ROOF LAYOUT
Scale 1:100

LEGEND

- 100x50x20x2mm LIPPED CHANNEL PURLINS
- 50x50x5mm ANGLE
- IRON TRUSSES

SCALE	DATE	DRAWN	REVISIONS	PROJECT NUMBER	MODULE	DRAWING NUMBER	PROPERTY OF
1:100	JAN08	ESAD	JAN08		ABL2	ABL2 03	GOVERNMENT OF NAMIBIA
LARGE ABLUTION BLOCK ROOF LAYOUT					ABL2 2008		PROJECT CONSULTANT
USER MINISTRY MINISTRY OF BASIC EDUCATION, SPORT & CULTURE						TEL :	 MINISTRY OF WORKS, TRANSPORT & COMMUNICATION



ROOF PITCH AT 15°
 0.5mm GALVANISED KLIPLOK ROOFSHEETS OR SIMILAR
 APPROVED ROOFSHEETING WITH CONCEALED FIXING
 STANDARD GALV. RIDGE CAPPING
 (3x) 230x160mm GALV. AIR BRICK AT EACH GABLE WALL
 ALL EXPOSED STEELWORK TO BE PREPARED
 AND PAINTED

75x50x20x2.5mm LIPPED CHANNEL PURLINS
 AT CENTRES AS INDICATED

100x50x20x2mm LIPPED CHANNEL PURLINS
 50x50x5mm ANGLE IRON OUTER TOP MEMBERS
 40x40x5mm ANGLE IRON INNER MEMBERS
 50x50x5mm ANGLE IRON BOTTOM MEMBERS

*SISALATION 400° LAID TAUT OVER PURLINS
 ON GALVANISED STEEL STRAINING WIRES

NOTE:
 NO GUTTERS, DOWNPIPES, FASCIAS OR BARGE-
 BOARDS TO BE SUPPLIED
 POLYCLOSEURES AT EAVES

FIVE LAYERS
 BRICK FORCE

BOYS

CERAMIC WALL TILES UP TO CEILING HEIGHT

PLASTER AND PAINT

250 MICRON GUNPLUS USB GREEN DPM

CERAMIC FLOOR TILES LAID IN TILES ADHESIVE ON
 100mm SINGLE OPERATION WOOD FLOAT FINISH
 SURFACE BED (NO SCREED, NO CEMENT POWDERING)
 OF 25Mpa CAST IN PANELS OF MAX. 3600x3600mm
 LAID ON TOP OF WELL COMPACTED IMPORTED
 FILLING FREE OF ORGANIC MATERIAL
 700x230mm 25Mpa CONCRETE FOUNDATIONS ON WELL
 COMPACTED FOUNDATION TRENCHES
 100mm THICK CONCRETE SLAB WITH TOE WIDENING

EXTERNAL AND INTERNAL WALLS
 PLASTERED AND PAINTED

75mm THICK CONCRETE APRON WITH TOE
 WIDENING, LAID WITH FALL AWAY FROM
 BUILDING.

SECTION A-A
 Scale 1:50

SCALE	DATE	DRAWN	REVISIONS
1:50	JAN08	ESAD	JAN08

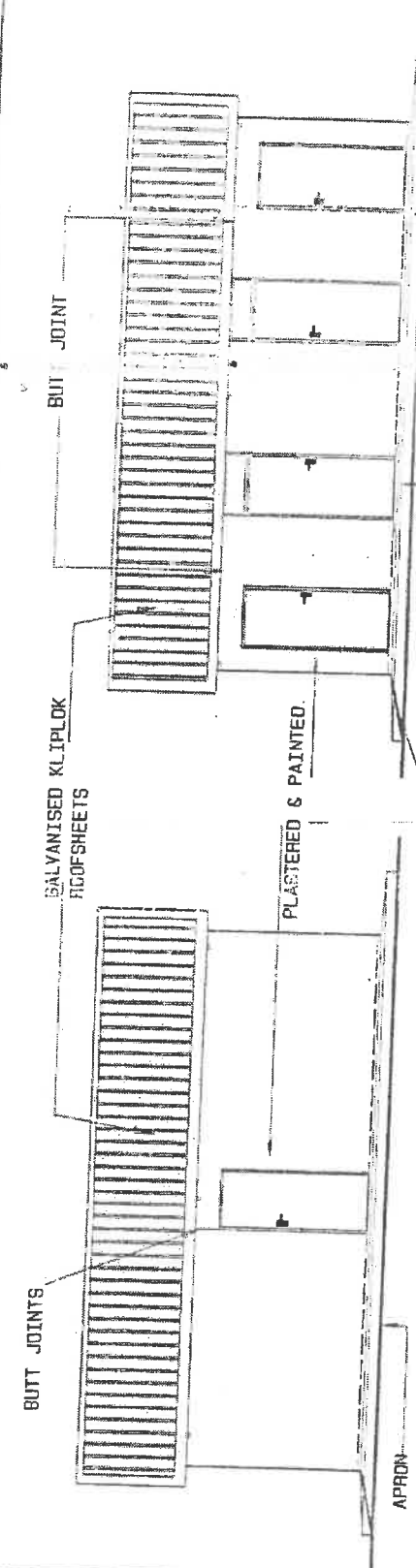
**LARGE ABLATION BLOCK
SECTION A-A**

USER MINISTRY
 MINISTRY OF BASIC EDUCATION, SPORT & CULTURE

PROJECT NUMBER	MODULE	DRAWING NUMBER	PROPERTY OF
ABL2 2008	ABL2 04	ABL2 04	GOVERNMENT OF NAMIBIA PROJECT CONSULTANT

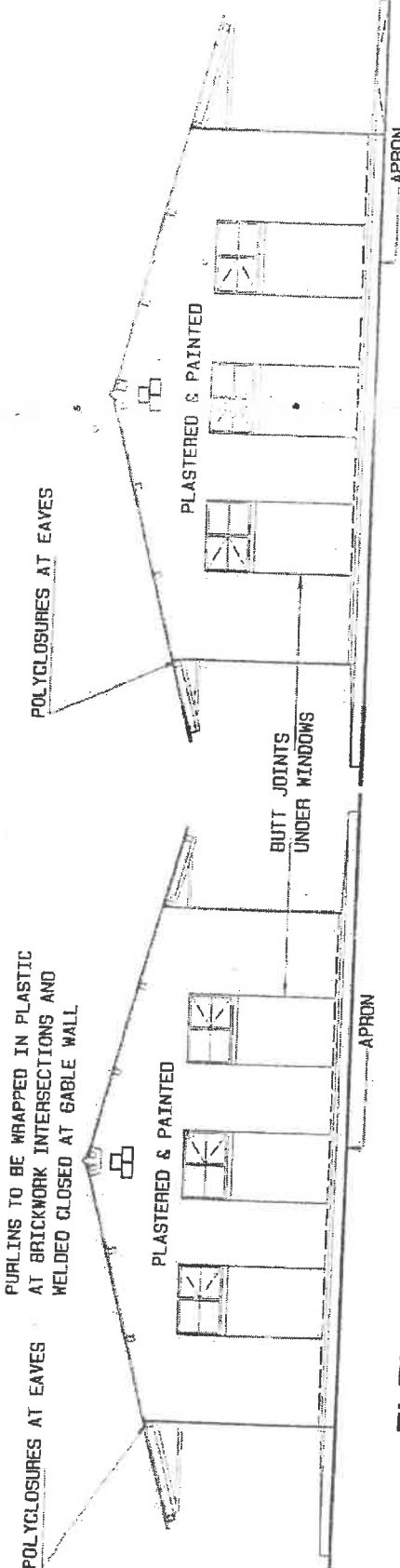
TEL :





ELEVATION C
Scale 1:100

RAMP UP APRON FROM NGL TO FFL PASSAGE
ELEVATION A
Scale 1:100



ELEVATION D
Scale 1:100

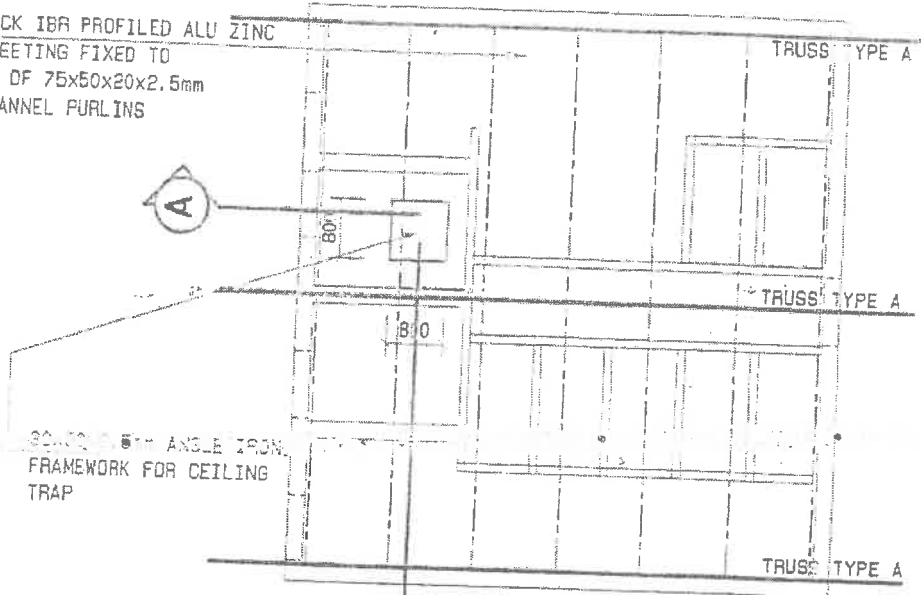
ELEVATION E
Scale 1:100

SCALE	DATE	DRAWN	REVISIONS	PROJECT NUMBER	MODULE	DRAWING NUMBER	PROPERTY OF
1:100	JAN08	ESAD	JAN08		ABL2	ABL 2	GOVERNMENT OF NAMIBIA
LARGE ABLUTION BLOCK ELEVATIONS					2008	05	PROJECT CONSULTANT
USER: MINISTRY OF BASIC EDUCATION, SPORT & CULTURE							MINISTRY OF WORKS, TRANSPORT & COMMUNICATION
						TEL :	



MINISTRY OF WORKS, TRANSPORT & COMMUNICATION

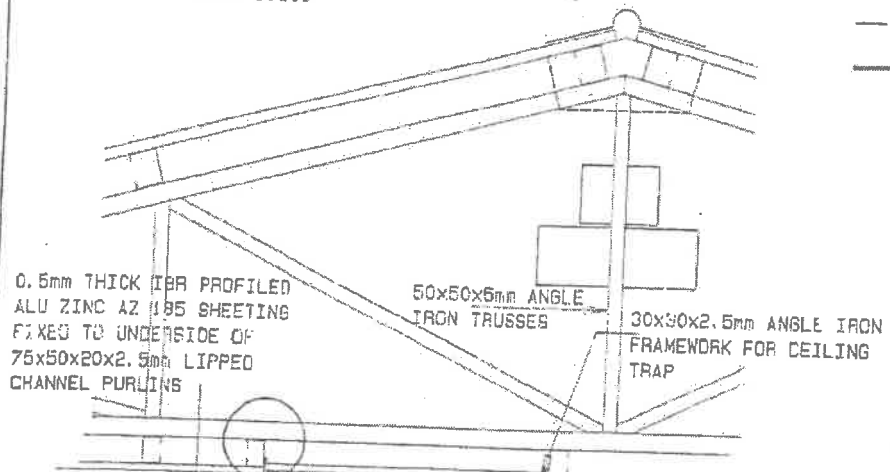
0.5mm THICK IFR PROFILED ALU ZINC
AZ 185 SHEETING FIXED TO
UNDERSIDE OF 75x50x20x2.5mm
LIPPED CHANNEL PURLINS



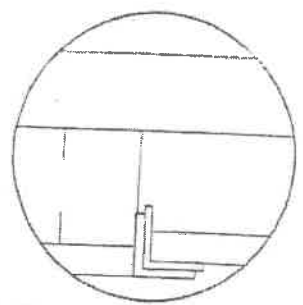
CEILING LAYOUT
Scale 1:100

LEGEND

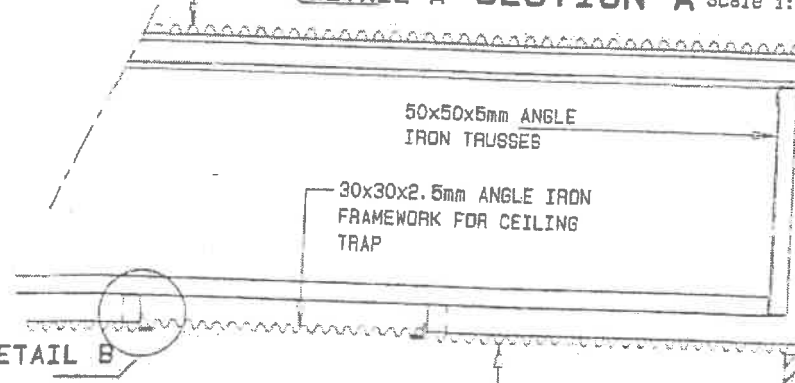
- 75x50x20x2.5mm LIPPED CHANNEL
- 50x50x5mm ANGLE IRON TRUSSES



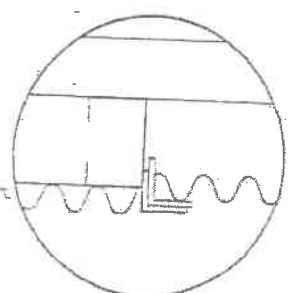
DETAIL A SECTION A Scale 1:100



DETAIL A
Scale 1:20



DETAIL B SECTION B Scale 1:100



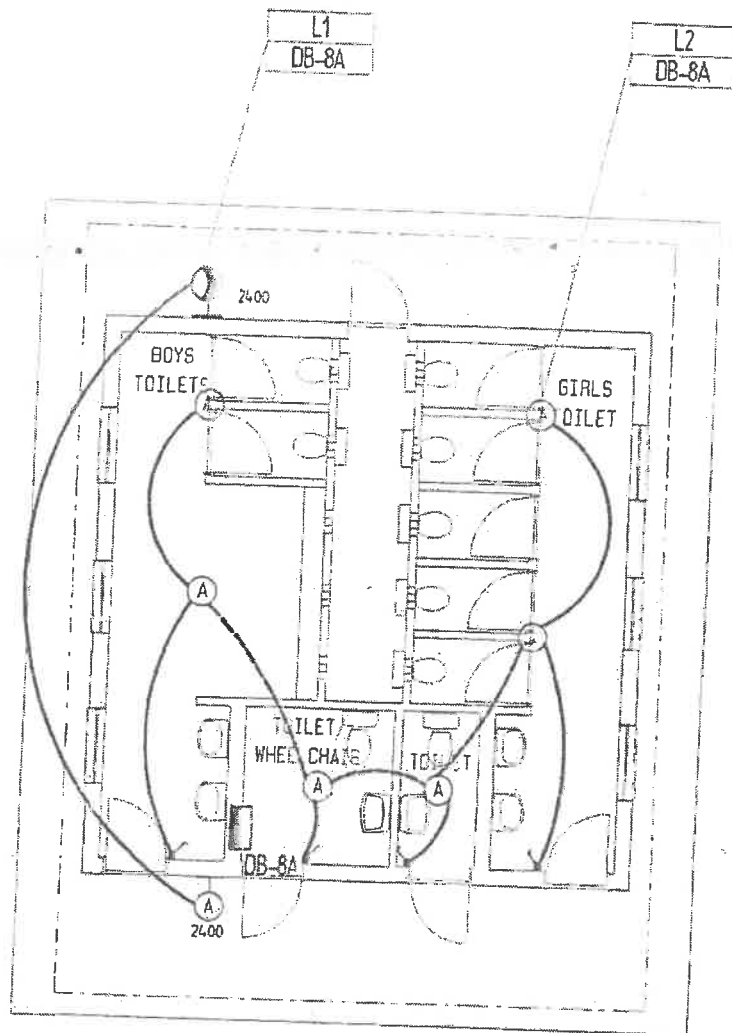
DETAIL B
Scale 1:20

0.5mm THICK IFR PROFILED ALU ZINC
AZ 185 SHEETING FIXED TO
UNDERSIDE OF 75x50x20x2.5mm
LIPPED CHANNEL PURLINS

SECTION B
Scale 1:100

SCALE	DATE	DRAWN	REVISIONS	PROJECT NUMBER	MODULE	DRAWING NUMBER	PROPERTY OF
1:100	AUG03	ESAD	JAN08		ABL2	ABL 2	GOVERNMENT OF NAMIBIA
LARGE ABLUTION BLOCK CEILING LAYOUT & DETAILS					2008	06	PROJECT CONSULTANT
USER MINISTRY MINISTRY OF BASIC EDUCATION, SPORT & CULTURE							MINISTRY OF WORKS TRANSPORT & COMMUNICATION
							TEL :



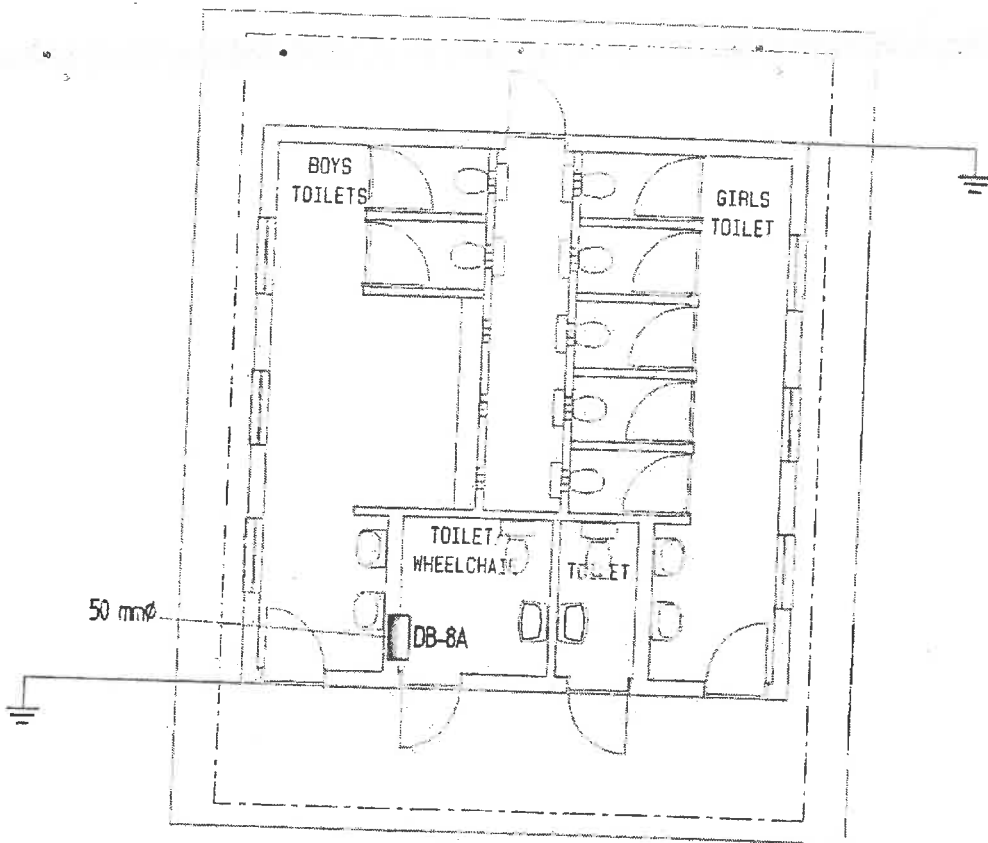


LIGHTING LAYOUT

Scale 1:100

SCALE	DATE	DRAWN	REVISIONS	PROJECT NUMBER	MODULE	DRAWING NUMBER	PROPERTY OF
1:100	JAN08	ESAD	JAN08		ABL2	ABL 2	GOVERNMENT OF NAMIBIA
LARGE ABLUTION BLOCK						07	PROJECT CONSULTANT
LIGHTING INSTALLATION							
USER MINISTRY MINISTRY OF BASIC EDUCATION, SPORT & CULTURE							MINISTRY OF WORKS TRANSPORT & COMMUNICATION
							TEL :





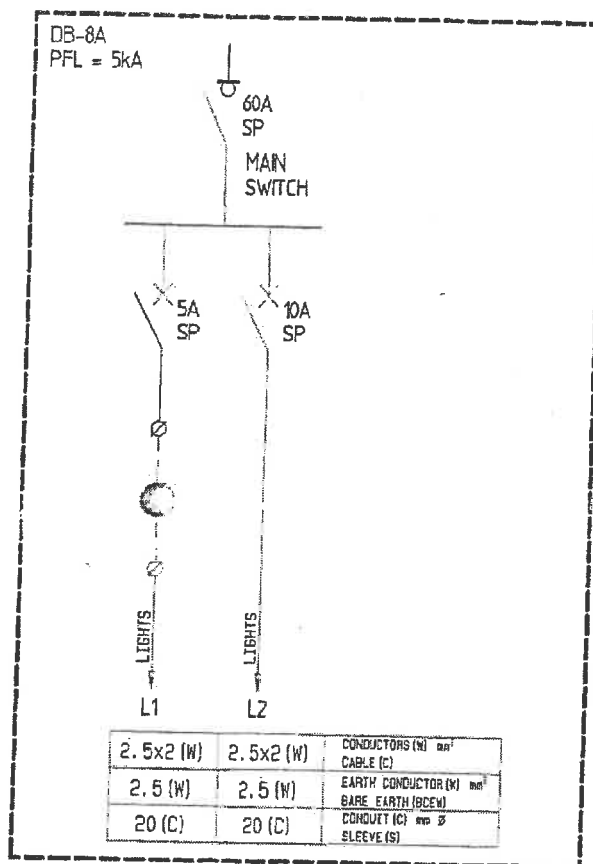
POWER LAYOUT

Scale 1:100

SCALE	DATE	DRAWN	REVISIONS	PROJECT NUMBER	MODULE	DRAWING NUMBER	PROPERTY OF
1:100	JAN08	ESAD	JAN08		ABL2	ABL 2	GOVERNMENT OF NAMIBIA
LARGE ABLUTION BLOCK POWER INSTALLATION					2008	08	PROJECT CONSULTANT
USER MINISTRY MINISTRY OF BASIC EDUCATION, SPORT & CULTURE							TEL :



MINISTRY OF WORKS
TRANSPORT & COMMUNICATION

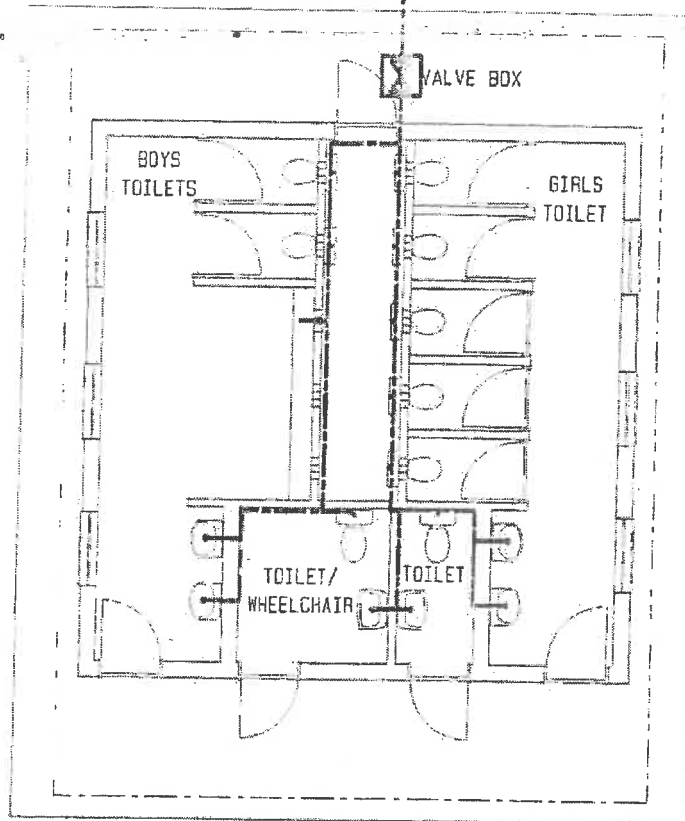


SCALE	DATE	DRAWN	REVISIONS	PROJECT NUMBER	MODULE	DRAWING NUMBER	PROPERTY OF
N. T. S.	AUG03	ESAD			ABL2	ABL 2	GOVERNMENT OF NAMIBIA
LARGE ABLUTION BLOCK SINGLE LINE DIAGRAM					2008	09	PROJECT CONSULTANT
USER MINISTRY MINISTRY OF BASIC EDUCATION, SPORT & CULTURE							MINISTRY OF WORKS, TRANSPORT & COMMUNICATION
							TEL :




- NOTE: 1-ALL WC, WHB, URINAL OUTLET
TO BE 15mm \varnothing .
- 2-ALL INTERNAL PIPING TO BE
COPPER TYPE CLASS O.
- 3-ALL EXTERNAL VALVES SHALL BE
PLACED INTO VALVE BOX WITH
CAST IRON LID.

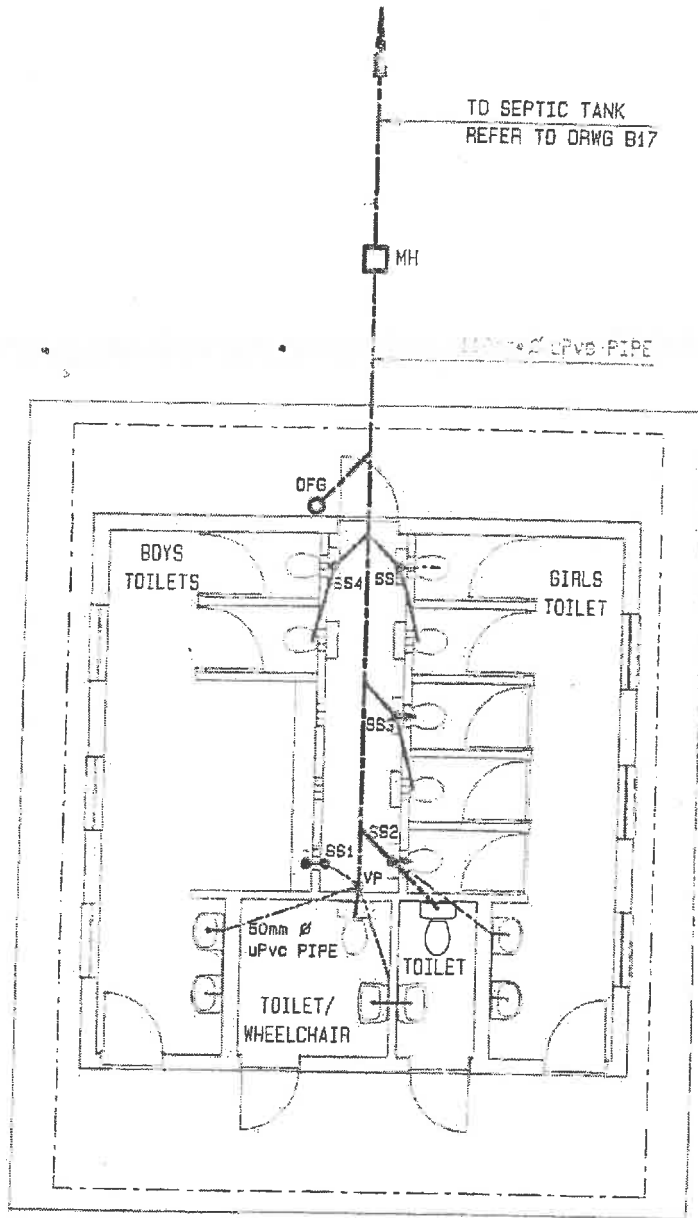
32mm \varnothing UPVC PIPE



WATER LAYOUT


Scale 1:100

SCALE	DATE	DRAWN	REVISIONS	PROJECT NUMBER	MODULE	DRAWING NUMBER	PROPERTY OF
1:100	JAN08	ESAD	JAN08		ABL2	ABL 2	GOVERNMENT OF NAMIBIA
LARGE ABLUTION BLOCK					2008	10	PROJECT CONSULTANT
USER: MINISTRY MINISTRY OF BASIC EDUCATION, SPORT & CULTURE							TEL :
							 MINISTRY OF WORKS, TRANSPORT & COMMUNICATION



DRAINAGE LAYOUT

Scale 1:100

SCALE	DATE	DRAWN	REVISIONS	PROJECT NUMBER	MODULE	DRAWING NUMBER	PROPERTY OF
1:100	JAN08	ESAD	JAN08		ABL2	ABL 2	GOVERNMENT OF NAMIBIA
LARGE ABLUTION BLOCK DRAINAGE LAYOUT					2008	11	PROJECT CONSULTANT
USER MINISTRY MINISTRY OF BASIC EDUCATION, SPORT & CULTURE							TEL :
							 MINISTRY OF WORKS TRANSPORT & COMMUNICATION

LIST OF DETAILS


CONSTRUCTION B 1
 DETAILS: B 2
 B 3
 B 4
 B 5
 B 6
 B 8
 B16
 B17
 B18
 B32
 B33
 B41
 B42

DOORS: D 1
 D 3
 D 4
 D 8

WINDOWS: W 5

ELECTRICAL: E01
 E02

SANITARY: S 6
 S 7
 S 8
 S16

SCALE	DATE	DRAWN	REVISIONS	PROJECT NUMBER	MODULE	DRAWING NUMBER	PROPERTY OF GOVERNMENT OF NAMIBIA
N/A	AUG03	ESAD	JAN08		ABL2 2008	ABL 2 12	PROJECT CONSULTANT
LARGE ABLUTION BLOCK LIST OF DETAILS							 MINISTRY OF WORKS TRANSPORT & COMMUNICATION
USER: MINISTRY MINISTRY OF BASIC EDUCATION, SPORT & CULTURE							TEL :

ROOF PITCH AT 15 DEG
 0.5mm GALVANISED KLIPLOK ROOF SHEETS (OR SIMILAR APPROVED SHEETING WITH CONCEALED FIXING)
 ROOF SHEETS TO BE FIXED WITH K65 CLIPS TO PURLINS
 STANDARD GALV. HALF-ROUND RIDGE CAPPING WITH POLY CLOSURES
 (3x) 230x160mm CEMENT AIR BRICK EITHER SIDE
 ALL EXPOSED STEELWORK TO BE PREPARED AND PAINTED
 75x50x20x2.5mm LIPPED CHANNEL PURLINS
 AT CENTRES AS INDICATED

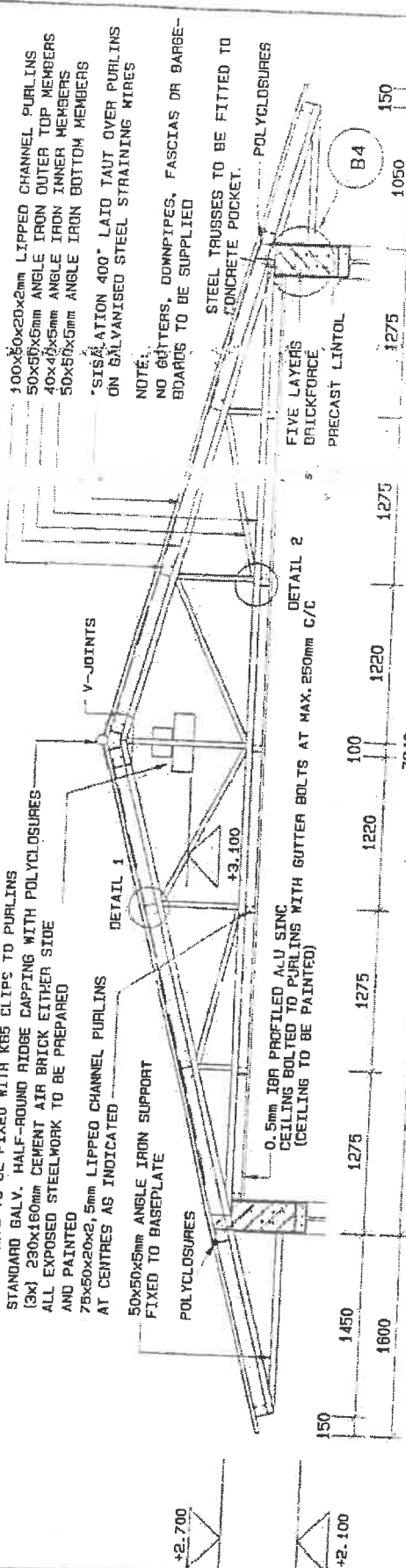
50x50x5mm ANGLE IRON SUPPORT
 FIXED TO BASEPLATE
 POLY CLOSURES
 0.5mm IFR PROFILED A.U. SINC
 CEILING BOLTED TO PURLINS WITH GUTTER BOLTS AT MAX. 250mm C/C
 (CEILING TO BE PAINTED)

100x50x20x2mm LIPPED CHANNEL PURLINS
 50x50x5mm ANGLE IRON OUTER TOP MEMBERS
 40x40x5mm ANGLE IRON INNER MEMBERS
 50x50x5mm ANGLE IRON BOTTOM MEMBERS
 *SISALATION 400" LAID TAUT OVER PURLINS
 ON GALVANISED STEEL STRAINING WIRES

NOTE:
 NO GUTTERS, DOWNPIPES, FASCIAS OR BARGE-BOARDS TO BE SUPPLIED

STEEL TRUSSES TO BE FITTED TO CONCRETE POCKET.
 POLY CLOSURES

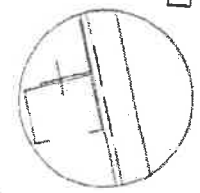
FIVE LAYERS BRICKWORK PRECAST LINTOL



SECTION - TRUSS TYPE A
 Scale 1:50

100 x 50 x 20 x 2mm LIPPED CHANNEL
 BOLTED TO CLEAT (NO WELDS WILL BE ALLOWED)
 75 x 75 x 5 L-SECT CLEAT 50mm LONG
 WELDED TO RAFTER
 50 x 50 x 5 L-SECT. RAFTER

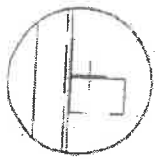
DETAIL 1
 Scale 1:10



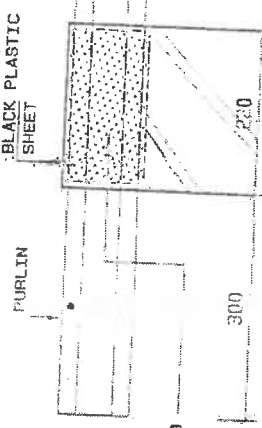
NOTE:
 1 - TRUSSES MUST BE PROPERLY PRIMED BEFORE ERECTING
 2 - PURLINS OR BRANGERS WILL ONLY BE BOLTED (NO WELDS BE ALLOWED)
 3 - PURLINS & TOP MEMBER OF TRUSSES MUST BE WRAPPED IN PLASTIC WHERE BUILT-IN WALL SEE DETAIL 3 & 4
 4 - PURLINS TO BE WELDED CLOSED AT GABLE WALLS

50 x 50 x 5 L-SECT BOTTOM CORD
 50 x 50 x 5 L-SECT CLEAT 50mm LONG
 WELDED TO BOTTOM CORD
 75 x 50 x 20 x 2.5mm LIPPED CHANNEL
 BOLTED TO CLEAT (NO WELD WILL BE ALLOWED)

DETAIL 2 Scale 1:10

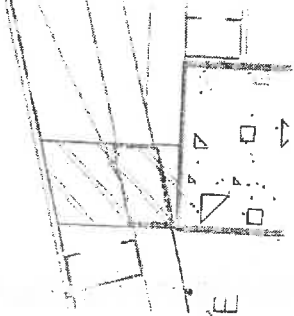


SAND/CEMENT MIX TO FILL GAP BETWEEN BRICKWORK & OPEN END PURLIN



DETAIL 3 AT GABLE WALL
 Scale 1:10

TOP MEMBER OF TRUSS WRAP IN BLACK PLASTIC SHEET

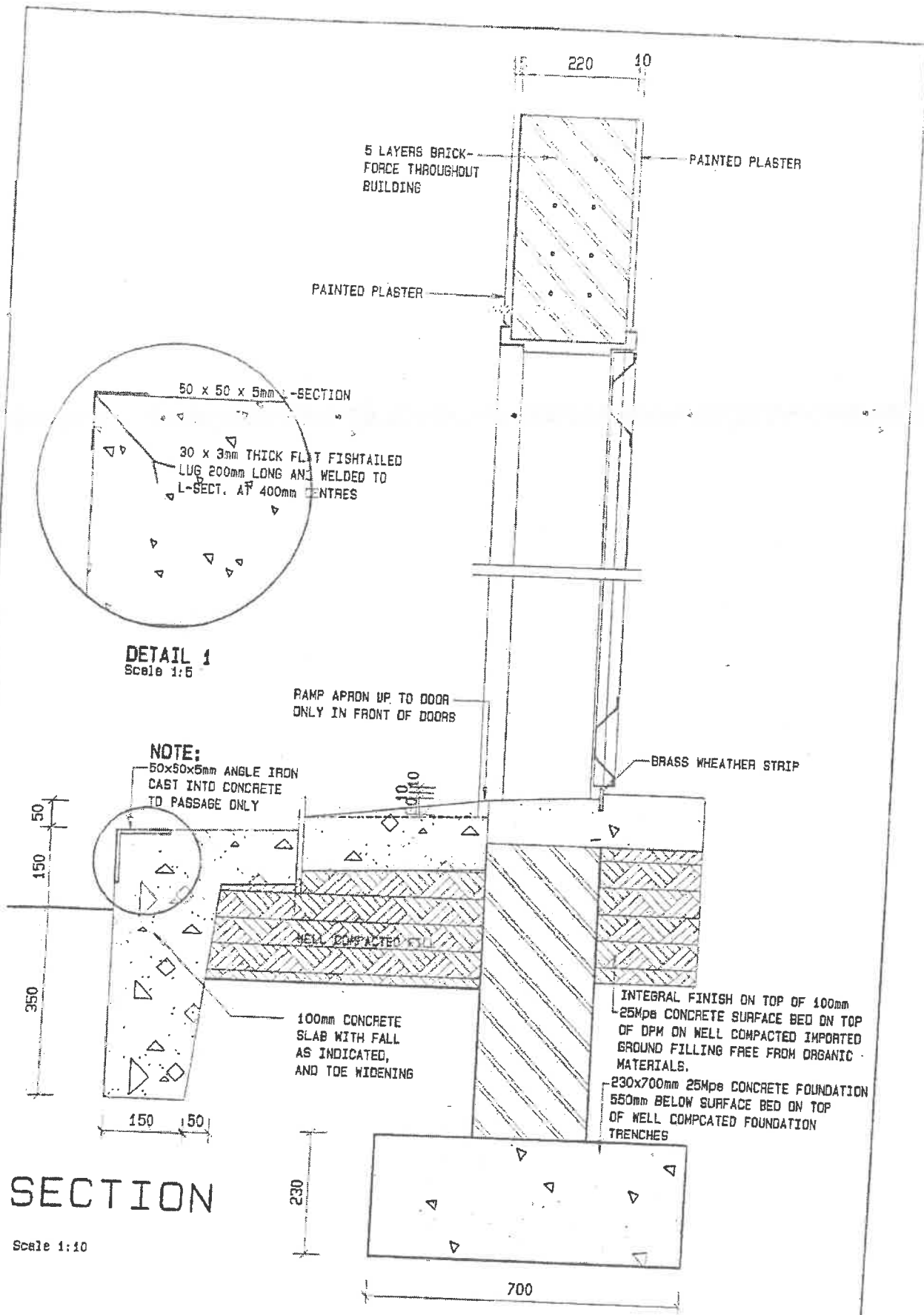


DETAIL 4 AT EAVE
 Scale 1:10

SCALE	DATE	DRAWN	REVISIONS
1:50/1:10	AUG03	ESAD	NOV07
SECTION THROUGH TRUSS TYPE A			
USER MINISTRY MINISTRY OF BASIC EDUCATION, SPORT & CULTURE			

PROJECT NUMBER	MODULE	DRAWING NUMBER	PROPERTY OF GOVERNMENT OF NAMIBIA
	CONSTR. DETAILS	B1	PROJECT CONSULTANT
	2008		TEL :




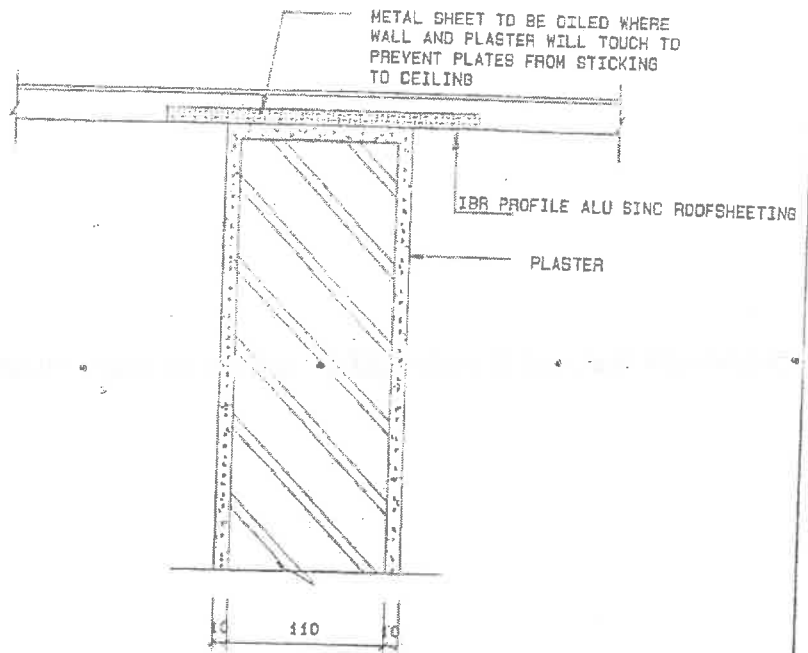


DETAIL 1
Scale 1:5

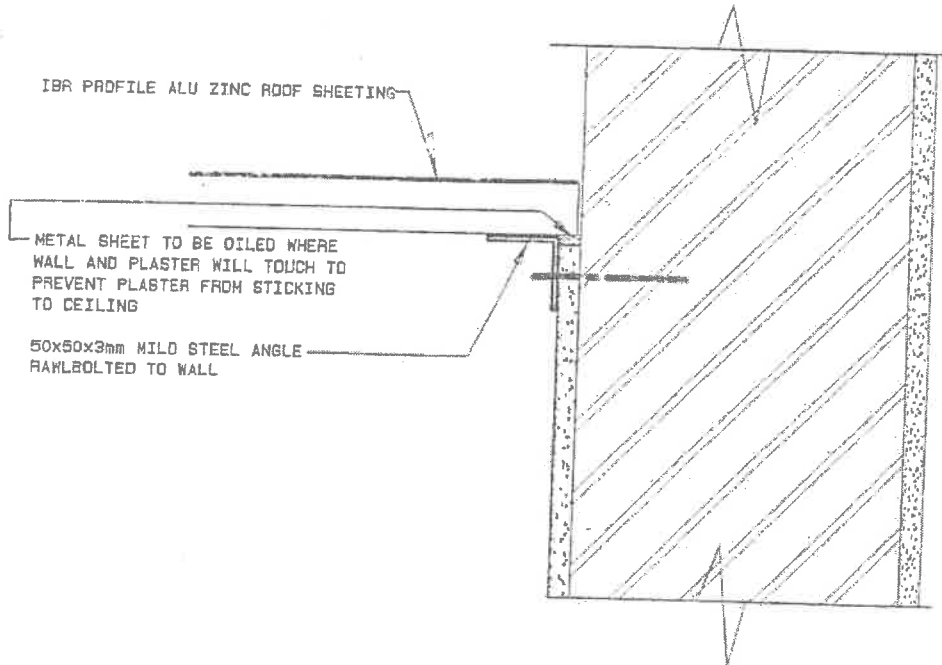
SECTION

Scale 1:10


SCALE, DATE	DRAWN	REVISIONS	PROJECT NUMBER	MODULE	DRAWING NUMBER	PROPERTY OF
1:10 AUG03	ESAD	NOV03		CONSTR. DETAILS	B2	GOVERNMENT OF NAMIBIA
SECTION THROUGH THRESHOLD AND PASSAGE						PROJECT CONSULTANT
USER MINISTRY MINISTRY OF BASIC EDUCATION, SPORT & CULTURE						 MINISTRY OF WORKS TRANSPORT & COMMUNICATION
						TEL :



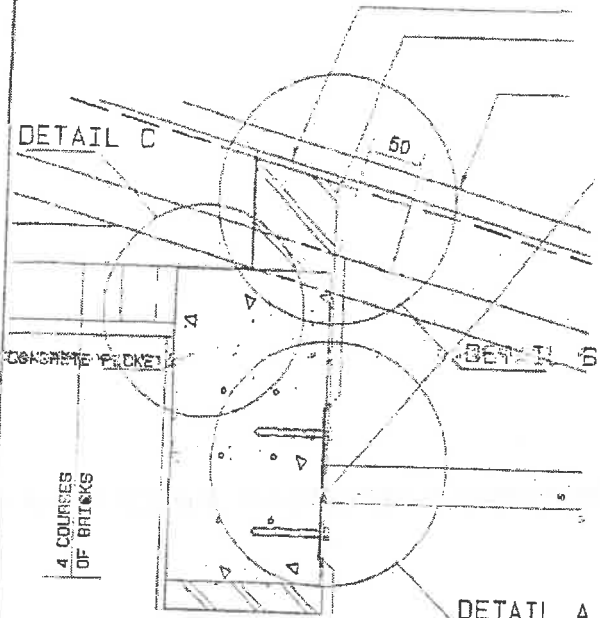
SECTION Scale 1:5
THROUGH INTERNAL WALLS



SECTION Scale 1:5
THROUGH CABLE END

SCALE	DATE	DRAWN	REVISIONS	PROJECT NUMBER	MODULE	DRAWING NUMBER	PROPERTY OF
1:2/5	AUG03	ESAD	NOV07				GOVERNMENT OF NAMIBIA
CEILING DETAIL AT WALL INTERSECTIONS					CONSTR. DETAILS 2008	B3	PROJECT CONSULTANT
USER MINISTRY MINISTRY OF BASIC EDUCATION, SPORT & CULTURE							 MINISTRY OF WORKS TRANSPORT & COMMUNICATION
						TEL :	

DETAIL C



SECTION THROUGH BACK & FRONT WALL

ROOFSHEETING TO BE DILED WHERE WALL AND SHEETS TOUCHES (PREVENTS STICKING & CRACKING)
POLYCLOSURES TO EAVES

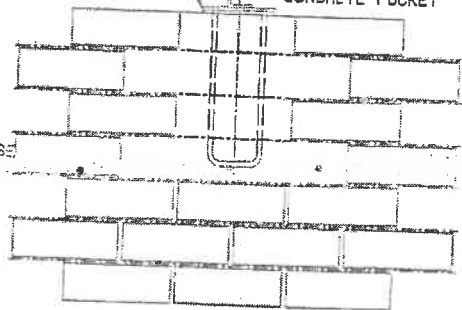
0.6mm GALVANISED KLIPLOK ROOFSHEETS FIXED TO 100x50x20x2mm LIPPED CHANNEL PURLINS
FIXED TO 50x50x5mm ANGLE IRON TRUSSES AT @3500mm c/c
ROOFSHEETS TO BE BOLTED AT MAX. 250mm C/C TO PURLINS

50x50x5mm ANGLE IRON TIE BEAM WELDED TO 200x200x6mm BASEPLATE. BASEPLATE TO BE RAWLBOLTED TO WALL WITH 4x MB RAWLBOLTS

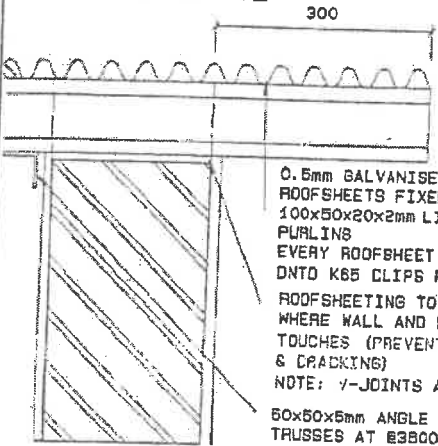
SINGLE LAYER DPC BETWEEN BASEPLATE AND CONC. POCKET

CENTRE LINE TO TRUSSES TRUSSES TO BE LAID ON CONCRETE POCKET

BRICKFORCE EVERY COURSE



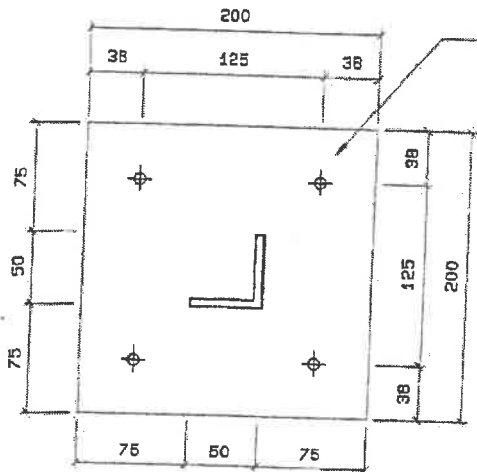
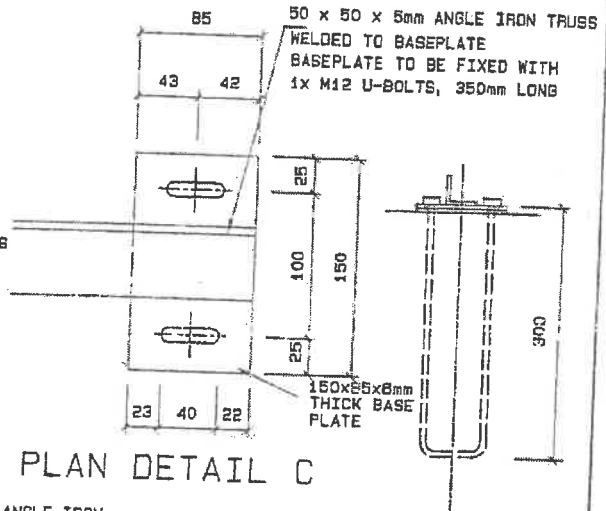
ELEVATION DETAIL C



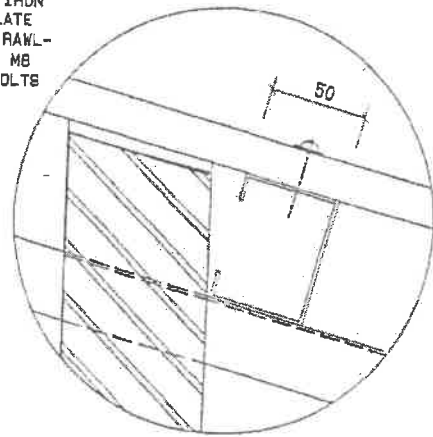
SECTION THROUGH GABLE END PLAN DETAIL C

0.6mm GALVANISED KLIPLOK ROOFSHEETS FIXED TO 100x50x20x2mm LIPPED CHANNEL PURLINS
EVERY ROOFSHEET TO BE CLIPPED ONTO K65 CLIPS FASTENED TO PURLINS
ROOFSHEETING TO BE DILED WHERE WALL AND SHEETS TOUCHES (PREVENT STICKING & CRACKING)
NOTE: V-JOINTS AT PITCH

50x50x5mm ANGLE IRON TRUSSES AT @3500mm c/c



50x50x5mm ANGLE IRON WELDED TO BASEPLATE
BASEPLATE TO BE RAWLBOLTED WITH (4x) MB 100mm LONG RAWLBOLTS



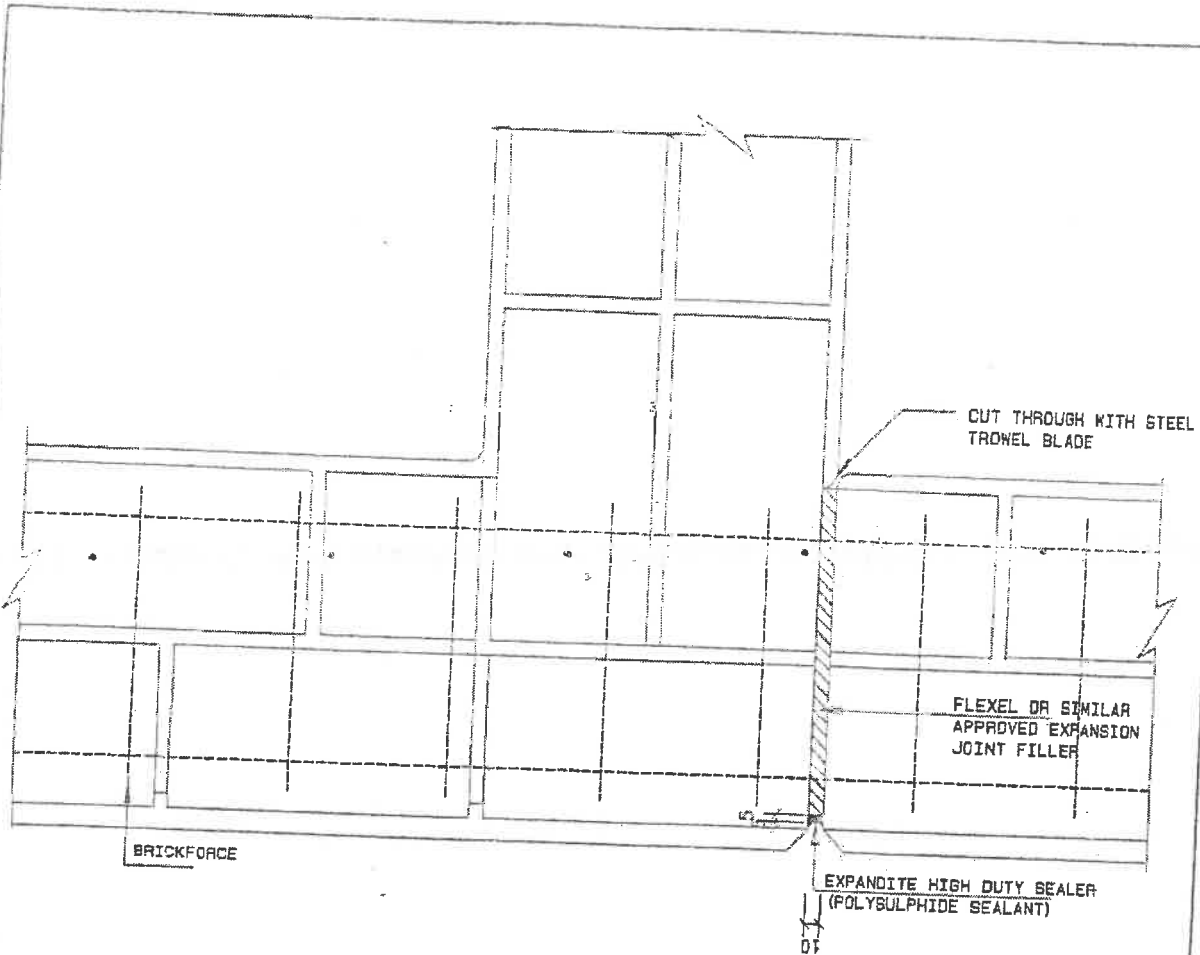
DETAIL A

DETAIL B

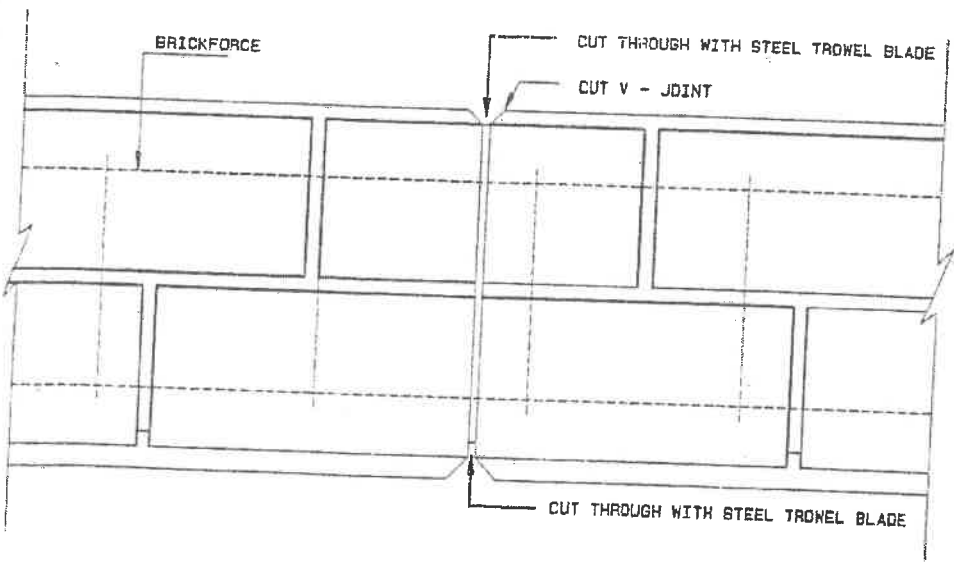
SCALE	DATE	DRAWN	REVISIONS	PROJECT NUMBER	MODULE	DRAWING NUMBER	PROPERTY OF
1:5/10	AUG09	ESAD	NCV07		CONSTR. DETAIL	84	GOVERNMENT OF NAMIBIA
DETAIL SECTIONS THROUGH PITCH ROOF					2008		PROJECT CONSULTANT
USER MINISTRY MINISTRY OF BASIC EDUCATION, SPORT & CULTURE							MINISTRY OF WORKS TRANSPORT & COMMUNICATION
							TEL :



MINISTRY OF WORKS
TRANSPORT & COMMUNICATION



PLAN - EXPANSION JOINT

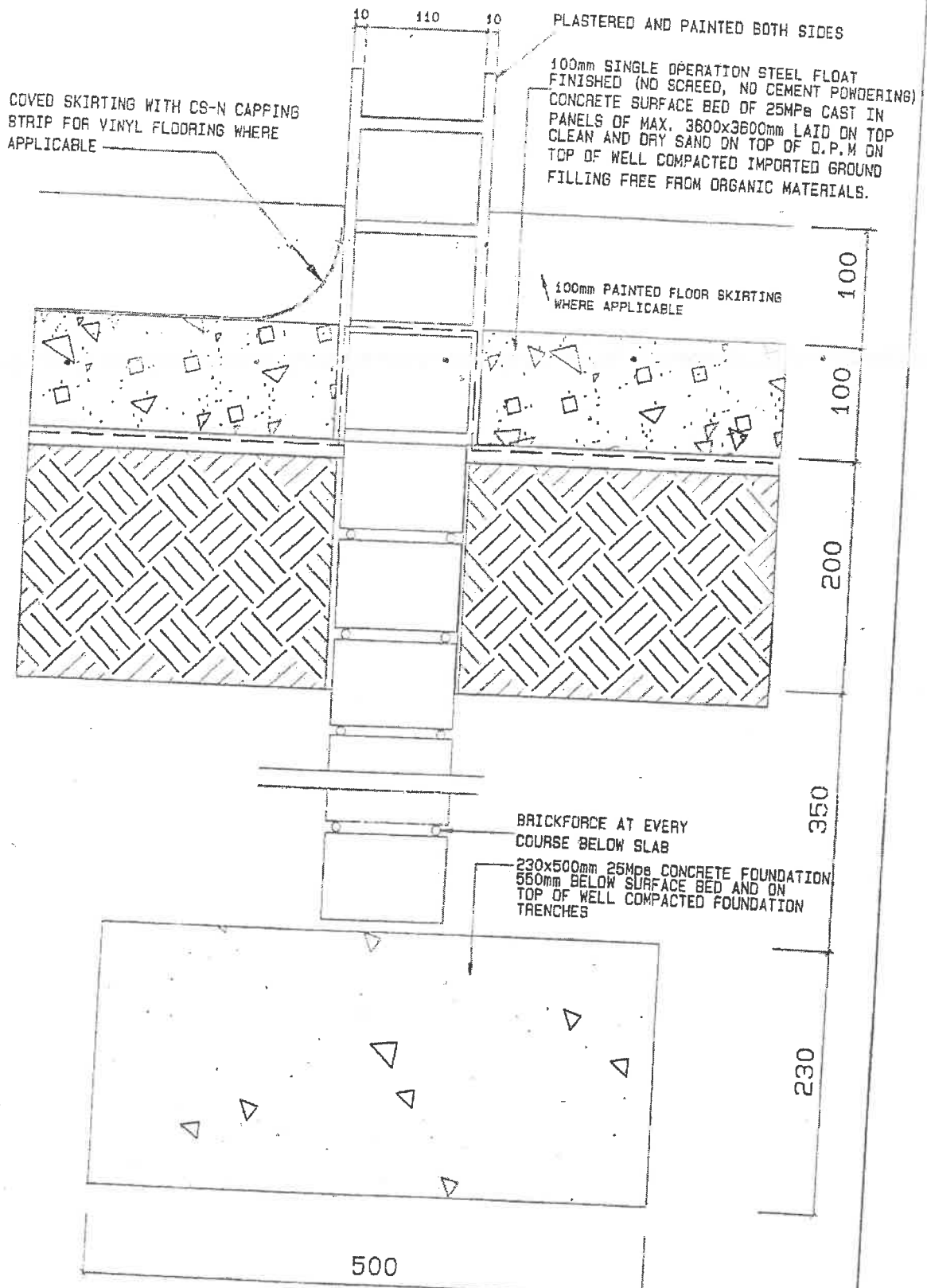


PLAN - BUTT JOINT


SCALE	DATE	DRAWN	REVISIONS	PROJECT NUMBER	MODULE	DRAWING NUMBER	PROPERTY OF
1:5	AUG03	ESAD	NOV07				GOVERNMENT OF NAMIBIA
TYPICAL EXPANSION AND BUTT JOINT					CONSTR. DETAILS	85	PROJECT CONSULTANT
USER: MINISTRY OF BASIC EDUCATION, SPORT & CULTURE					2008		TEL :

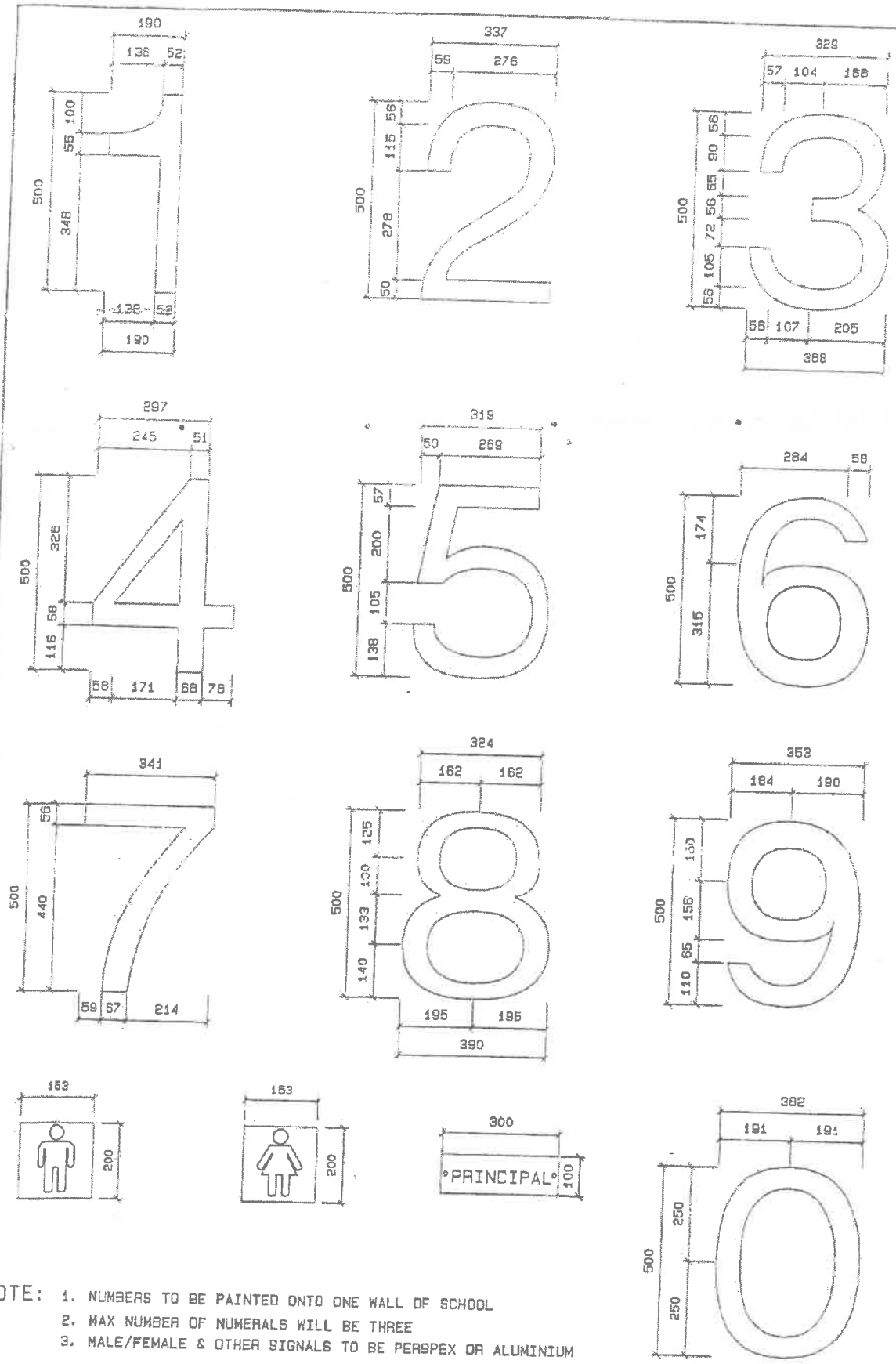


MINISTRY OF WORKS
TRANSPORT & COMMUNICATION



SECTION

SCALE	DATE	DRAWN	REVISIONS	PROJECT NUMBER	MODULE	DRAWING NUMBER	PROPERTY OF
1:5	AUG03	ESAD	NOV07			B6	GOVERNMENT OF NAMIBIA
SECTION THROUGH INTERNAL WALLS					CONSTR. DETAILS		PROJECT CONSULTANT
USER: MINISTRY MINISTRY OF BASIC EDUCATION, SPORT & CULTURE					2008		TEL :
							 MINISTRY OF WORKS TRANSPORT & COMMUNICATION

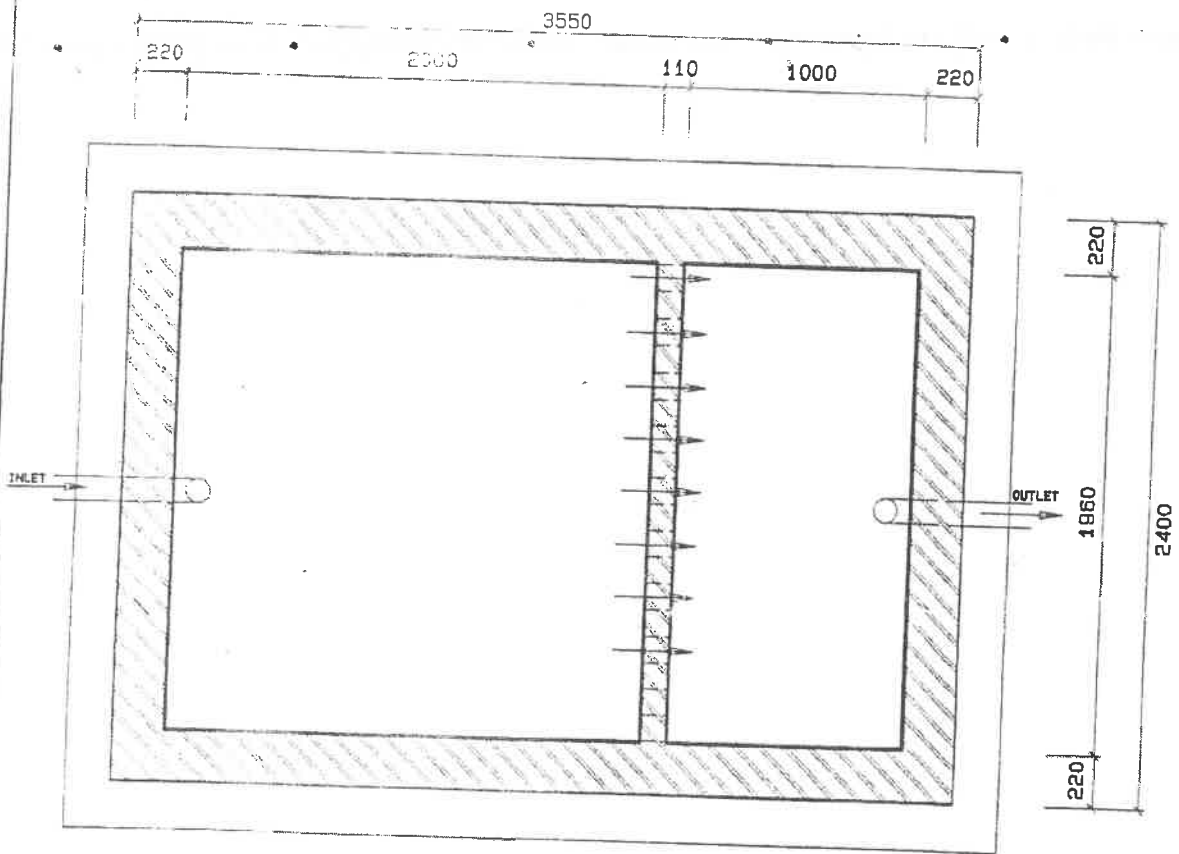


NOTE: 1. NUMBERS TO BE PAINTED ONTO ONE WALL OF SCHOOL
 2. MAX NUMBER OF NUMERALS WILL BE THREE
 3. MALE/FEMALE & OTHER SIGNALS TO BE PERSPEX OR ALUMINIUM

SCALE	DATE	DRAWN	REVISIONS	PROJECT NUMBER	MODULE	DRAWING NUMBER	PROPERTY OF
1:15	AUG03	ESAD				B8	GOVERNMENT OF NAMIBIA
STANDARD HELVETICA				CONSTR. DETAILS			PROJECT CONSULTANT
USER MINISTRY MINISTRY OF BASIC EDUCATION, SPORT & CULTURE				2008			MINISTRY OF WORKS TRANSPORT & COMMUNICATION



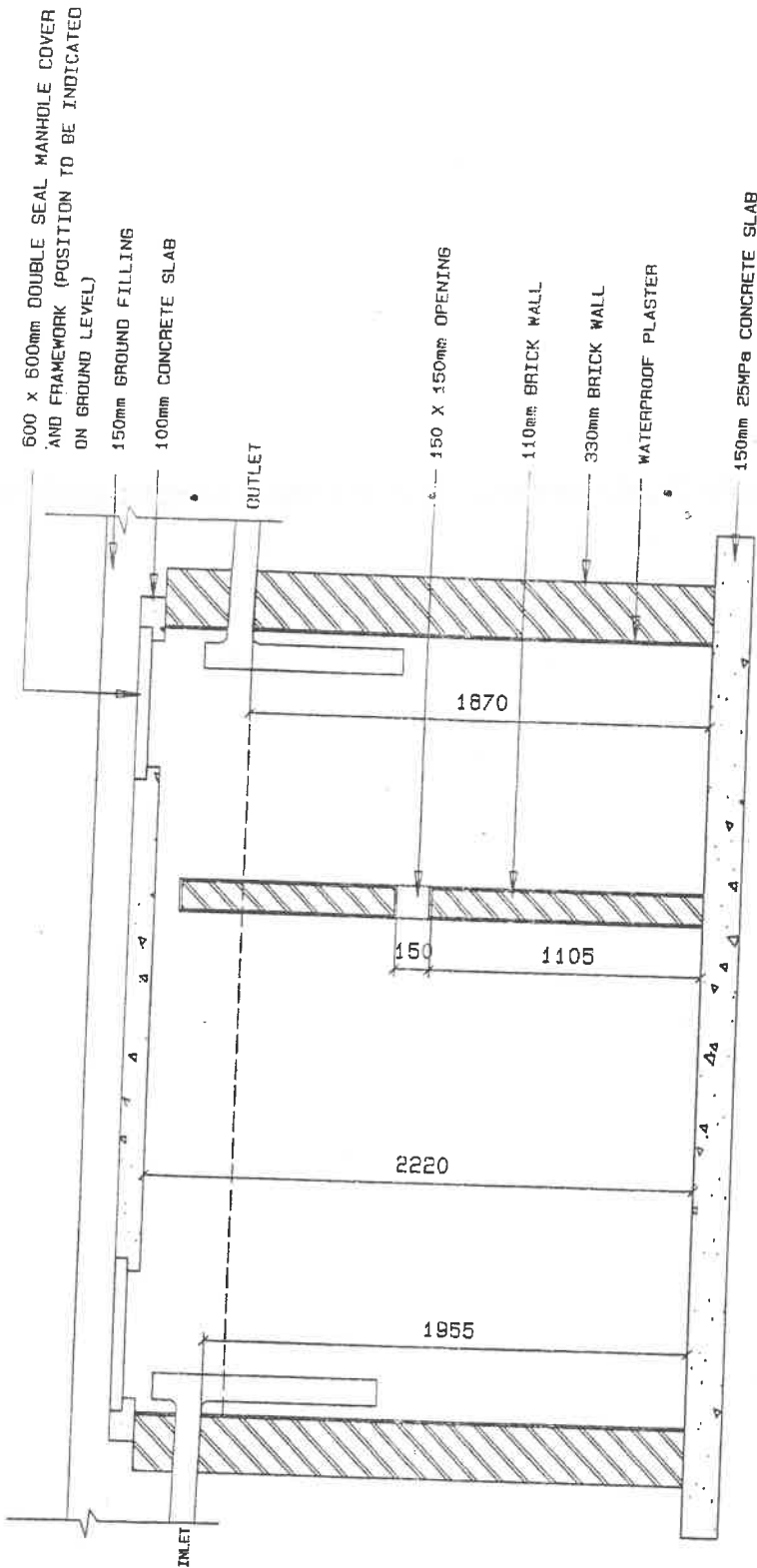
MINISTRY OF WORKS
TRANSPORT & COMMUNICATION




PLAN

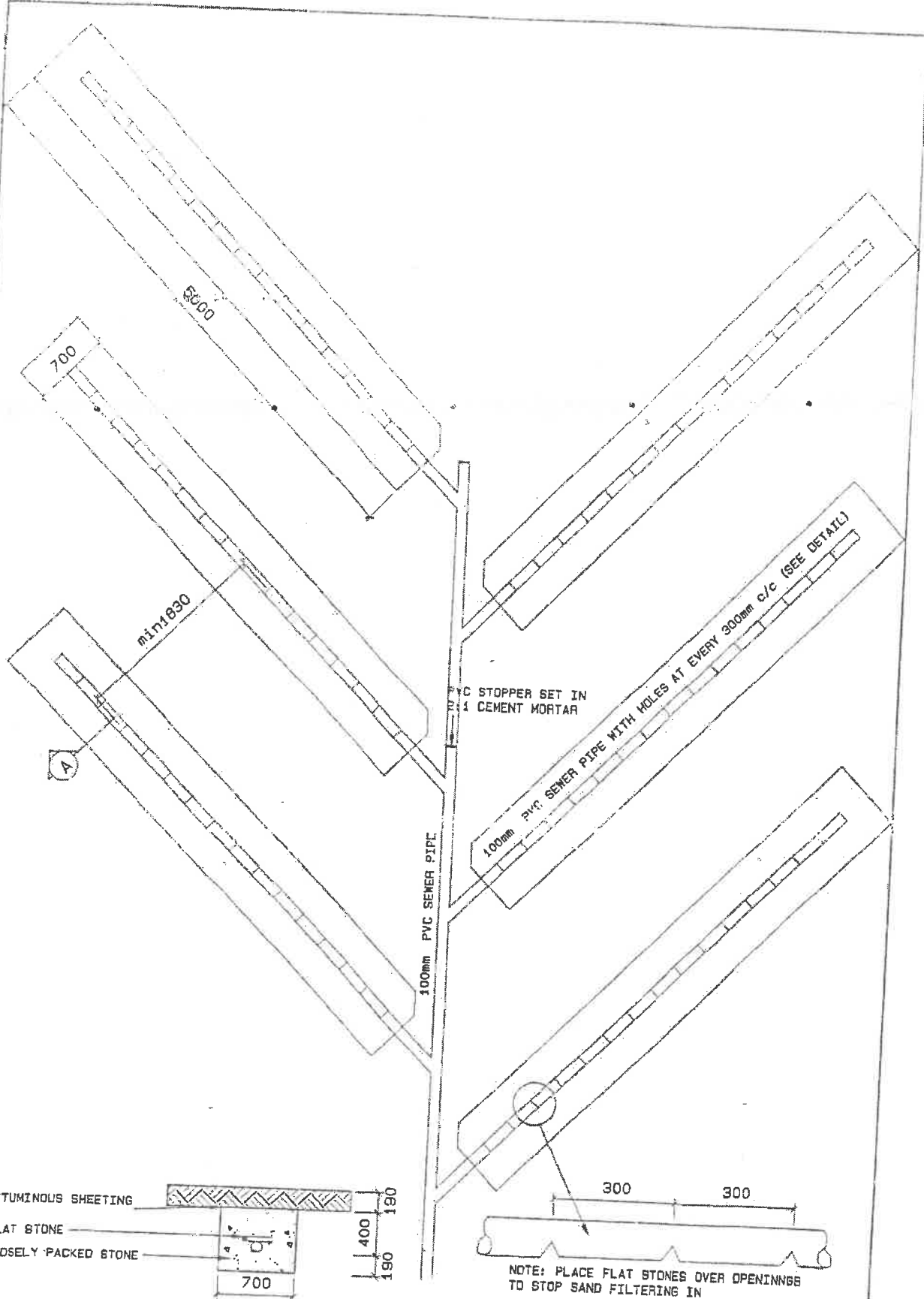
SCALE	DATE	DRAWN	REVISIONS	PROJECT NUMBER	MODULE	DRAWING NUMBER	PROPERTY OF
1:30	AUG03	ESAD				B16	GOVERNMENT OF NAMIBIA
PLAN OF SEPTIC TANK					CONSTR. DETAILS		PROJECT CONSULTANT
USER MINISTRY MINISTRY OF BASIC EDUCATION, SPORT & CULTURE					2008		MINISTRY OF WORKS TRANSPORT & COMMUNICATION
						TEL :	






SECTION A--A

SCALE	DATE	DRAWN	REVISIONS	PROJECT NUMBER	MODULE	DRAWING NUMBER	PROPERTY OF GOVERNMENT OF NAMIBIA
1:30	AUG03	ESAO					
SECTION THROUGH SEPTIC TANK					CONSTR. DETAILS	B17	PROJECT CONSULTANT
USER MINISTRY MINISTRY OF BASIC EDUCATION, SPORT & CULTURE					2008		TEL :
							 MINISTRY OF WORKS TRANSPORT & COMMUNICATION

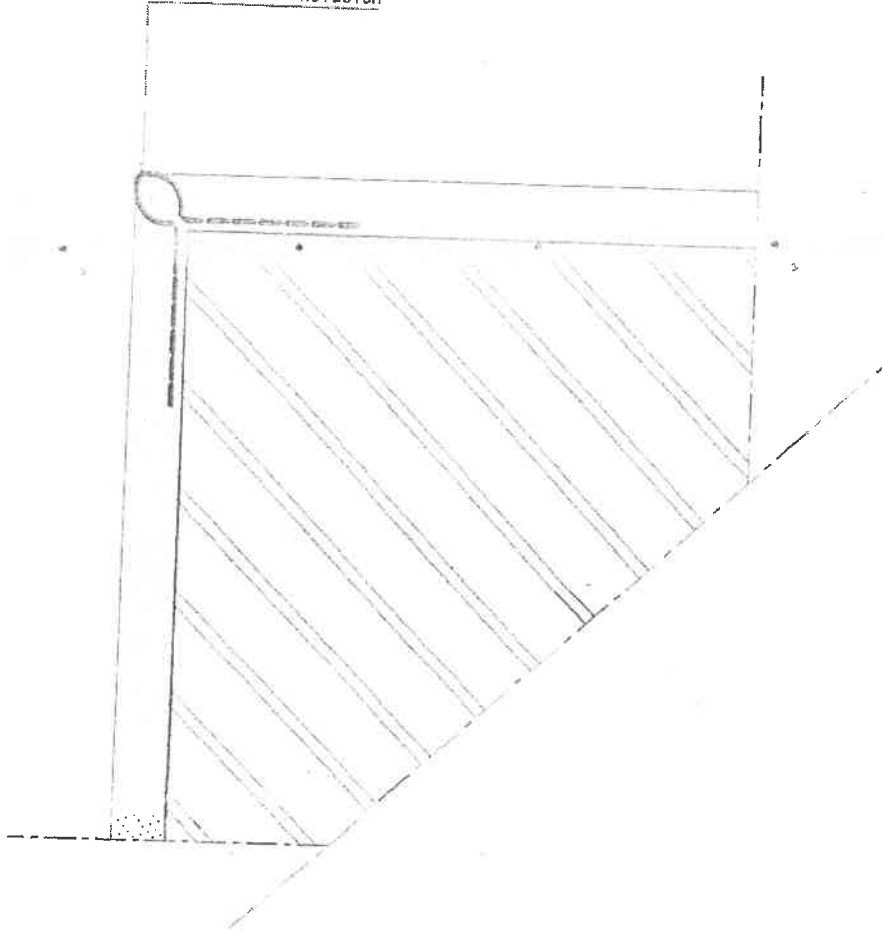


SECTION A-A

DETAIL A


SCALE	DATE	DRAWN	REVISIONS	PROJECT NUMBER	MODULE	DRAWING NUMBER	PROPERTY OF
1:30	AUG03	ESAD					GOVERNMENT OF NAMIBIA
DETAIL PLAN OF FRENCH DRAIN				CONSTR. DETAILS		B18	PROJECT CONSULTANT
USER: MINISTRY OF BASIC EDUCATION, SPORT & CULTURE				2008		TEL :	 MINISTRY OF WORKS, TRANSPORT & COMMUNICATION

MENTEX CORNER PROTECTOR



DETAIL PLAN
Scale 1:2

CORNER PROTECTOR TO ALL
INTERNAL EXPOSED CORNERS
TO 1500mm ABOVE FFL.

SCALE 1:2	DATE SEPT03	DRAWN ESAD	REVISIONS	PROJECT NUMBER	MODULE	DRAWING NUMBER	PROPERTY OF GOVERNMENT OF NAMIBIA	 MINISTRY OF WORKS TRANSPORT & COMMUNICATION
CORNER PROTECTOR					CONSTR. DETAILS	832	PROJECT CONSULTANT	
USER MINISTRY MINISTRY OF BASIC EDUCATION, SPORT & CULTURE					2008		TEL :	

GENERAL PAINT SPECIFICATION

1. PAINT SPECIFICATION FOR INTERNAL PLASTERED WALLS, PRIMER & 2 COATS DOUBLE VELVET PAINT TO ALL INTERNAL WALLS OF CLASS ROOMS, OFFICES, STORES, CORRIDOR, BEDROOMS, ETC. THE PAINT SPECIFICATION MUST COMPLY WITH SABS REQUIREMENTS AND APPLIED ACCORDING TO MANUFACTURER'S SPECIFICATION.
ALL SHOWERS TO BE TILED TO CEILING HEIGHT WITH STANDARD 200x200 WHITE CERAMIC TILES.
2. WHERE SKIRTING SPECIFIED PAINTED ON PLASTERED WALL, PAINT MUST BE HIGH GLOSS ENAMEL.
3. ALL STEEL DOOR FRAME, CHAWL DOORLEAF AND WINDOW FRAMES MUST BE FACTORY PRIMED AND FINISHED WITH UNDER COAT AND TWO COATS HIGH GLOSS ENAMEL PAINT.
4. PAINT TO ALUZINC CEILING, ACRYLIC PVA WHITE, 2 COATS (PRIOR TO PAINT, CEILING MUST BE CLEANED WITH GALVANISED ROOF CLEANER)
5. ALL TRUSSES AND PURLINS AND EXPOSED STEELWORK MUST BE PRIMED WITH METAL PRIMER AND FINISHED WITH TWO COATS HIGH GLOSS ENAMEL.
6. EXTERNAL PAINT TO CONSIST OF PRIMER AND TWO COATS OF EXTERIOR QUALITY PVA AND APPLIED ACCORDING TO MANUFACTURER'S INSTRUCTION. ALL COLOURS MUST BE APPROVED BY PROJECT MANAGER OR REPRESENTATIVE OF THE CLIENT.

SCALE	DATE	DRAWN	REVISIONS	PROJECT NUMBER	MODULE	DRAWING NUMBER	PROPERTY OF
N/A	SEPT03	ESAD	NOV07				GOVERNMENT OF NAMIBIA
PAINT SPECIFICATION					CONSTR. DETAILS	B33	PROJECT CONSULTANT
USER MINISTRY MINISTRY OF BASIC EDUCATION, SPORT & CULTURE					2008		TEL :

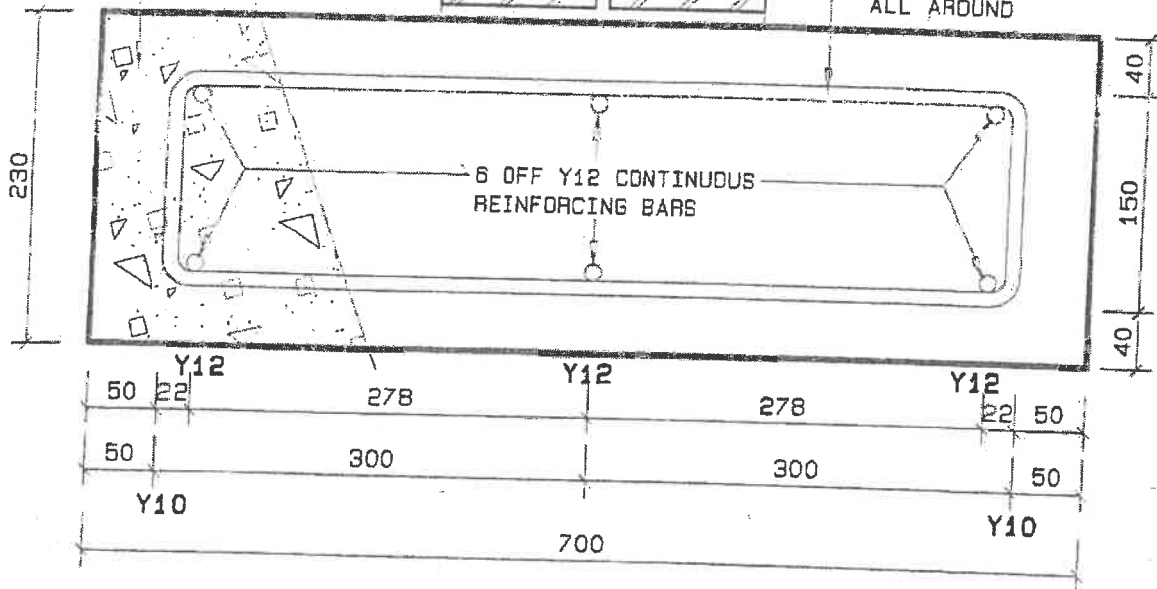


MINISTRY OF WORKS
TRANSPORT & COMMUNICATION

FOUNDATION
BRICKWORK TO
DETAIL ELSEWHERE

CONCRETE TO BE MIN.
25 MPA STRENGTH

Y10 REINFORCING BARS
AT 500mm INTERVALS
ALL AROUND



SCALE	DATE	DRAWN	REVISIONS	PROJECT NUMBER	MODULE	DRAWING NUMBER	PROPERTY OF
1:5	SEP03	ESAD					GOVERNMENT OF NAMIBIA
FOUNDATION REINFORCING DETAIL - B41					CONSTR. DETAILS	B41	PROJECT CONSULTANT
USER MINISTRY MINISTRY OF BASIC EDUCATION, SPORT & CULTURE					2008		MINISTRY OF WORKS TRANSPORT & COMMUNICATION
							TEL :




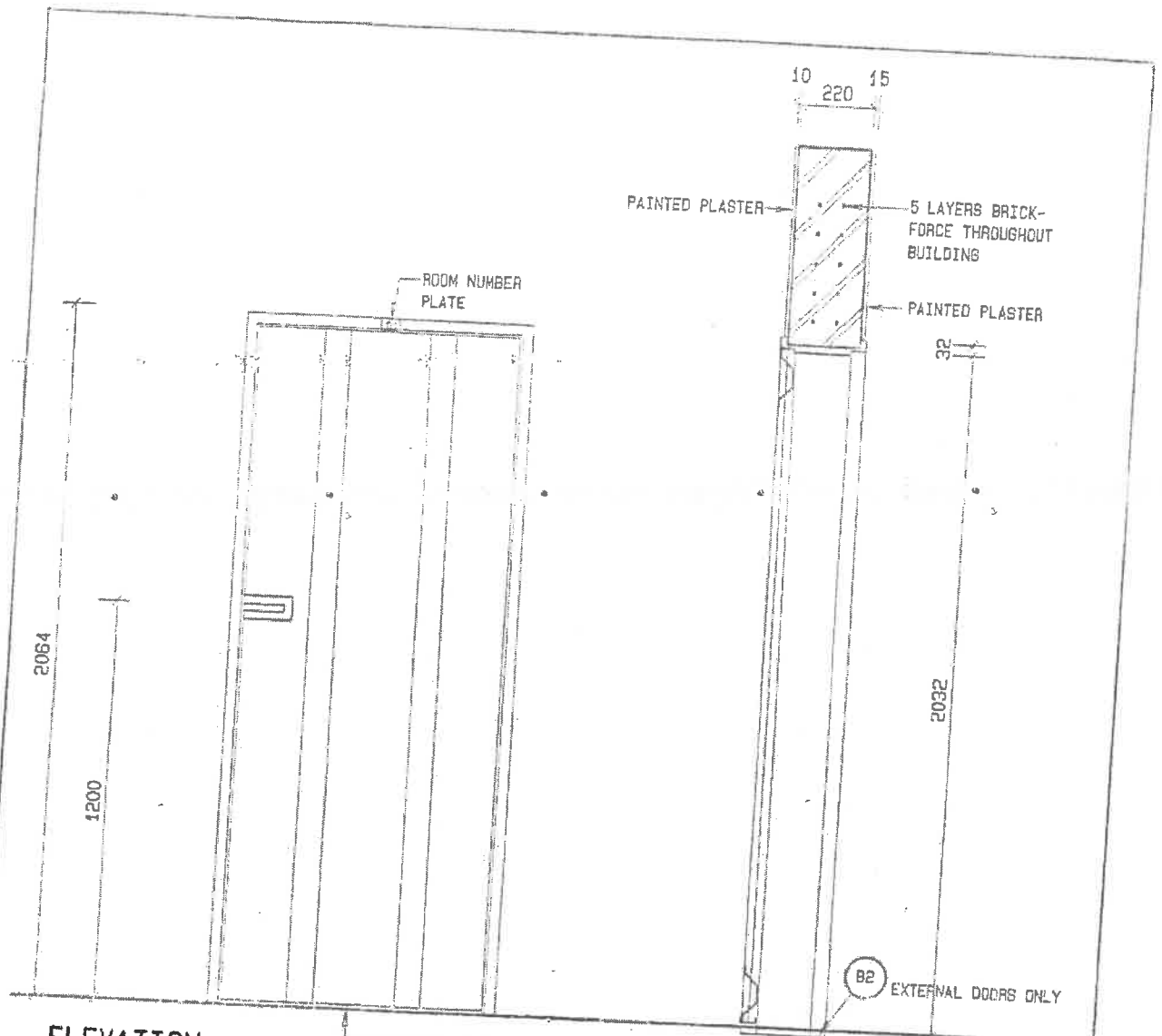
MINISTRY OF WORKS
TRANSPORT & COMMUNICATION

GENERAL TILE AND VINYL SHEETING SPECIFICATION

1. FLOOR TILES: 300 X 300mm CERAMIC FLOOR TILES 'JOHNSON GN-572' LAID ON 100mm STEEL TROWELED CEMENT SCREED WITH APPROVED TILE ADHESIVE. ALL JOINTS MUST BE GROUTED WITH DOVE GREY GROUTING.

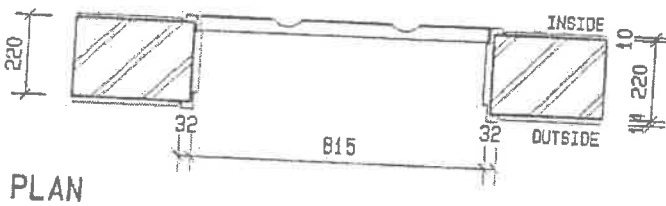
WHERE APPLICABLE TILES TO BE SET OUT FROM CONSTRUCTION JOINTS. JOINT OVER CONSTRUCTION JOINT TO BE FILLED WITH SILICON
2. SKIRTINGS: TILED SKIRTINGS OF 100mm HIGH CUT FLOOR TILES TO WALLS LAID WITH APPROVED TILE ADHESIVE. ALL JOINTS MUST BE GROUTED WITH DOVE GREY GROUTING
3. WALL TILES: 200 X 200mm CERAMIC WALL TILES 'SAMCA OSH 1000' UP TO CEILING HEIGHT WITH APPROVED TILE ADHESIVE TO ALL BATHROOMS AND ABLUTIONS. ALL JOINTS MUST BE GROUTED WITH DOVE GREY GROUTING.
4. SPLASHBACKS: 200 X 200mm CERAMIC WALL TILES 'SAMCA OSH 1000' AREAS AS INDICATED ON PLAN LAY WITH APPROVED TILE ADHESIVE. ALL JOINTS MUST BE GROUTED WITH DOVE GREY GROUTING.
5. PROVIDE 'SCHLUETER' TILE EDGING TYPE: 'RONDEC-AE' TO ALL CORNERS AND EDGES OF SPLASHBACKS
6. POLYFLOR 2000 VINYL FLOOR SHEETING GLUED ONTO STEEL FLOATED CONCRETE SURFACE WITH QUALITY TESTED ADHESIVE STRICTLY TO MANUFACTURERES SPEC. 76 x 19mm MERANTI SKIRTING FIXED TO WALL, PAINTED AS TO WALL. PROVIDE TO ALL CERAMIC FLOOR TILE EDGES 'SCHLUTER' ALUMINIUM RAILS TYPE: "DECO M 80 D".
9. ALL COLOURS MUST BE APPROVED BY PROJECT MANAGER OR REPRESENTATIVE OF THE CLIENT

SCALE	DATE	DRAWN	REVISIONS	PROJECT NUMBER	MODULE	DRAWING NUMBER	PROPERTY OF
N/A	DECO7	ESAD				B42	GOVERNMENT OF NAMIBIA
TITLE SPECIFICATION				CONSTR. DETAILS			PROJECT CONSULTANT
USER MINISTRY MINISTRY OF BASIC EDUCATION, SPORT & CULTURE				2008			 MINISTRY OF WORKS TRANSPORT & COMMUNICATION
						TEL :	




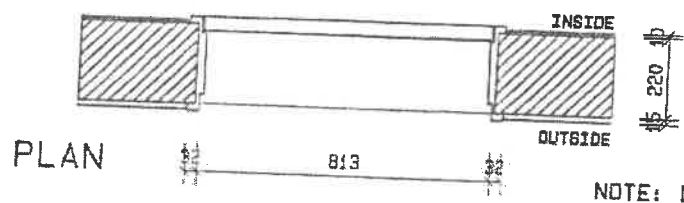
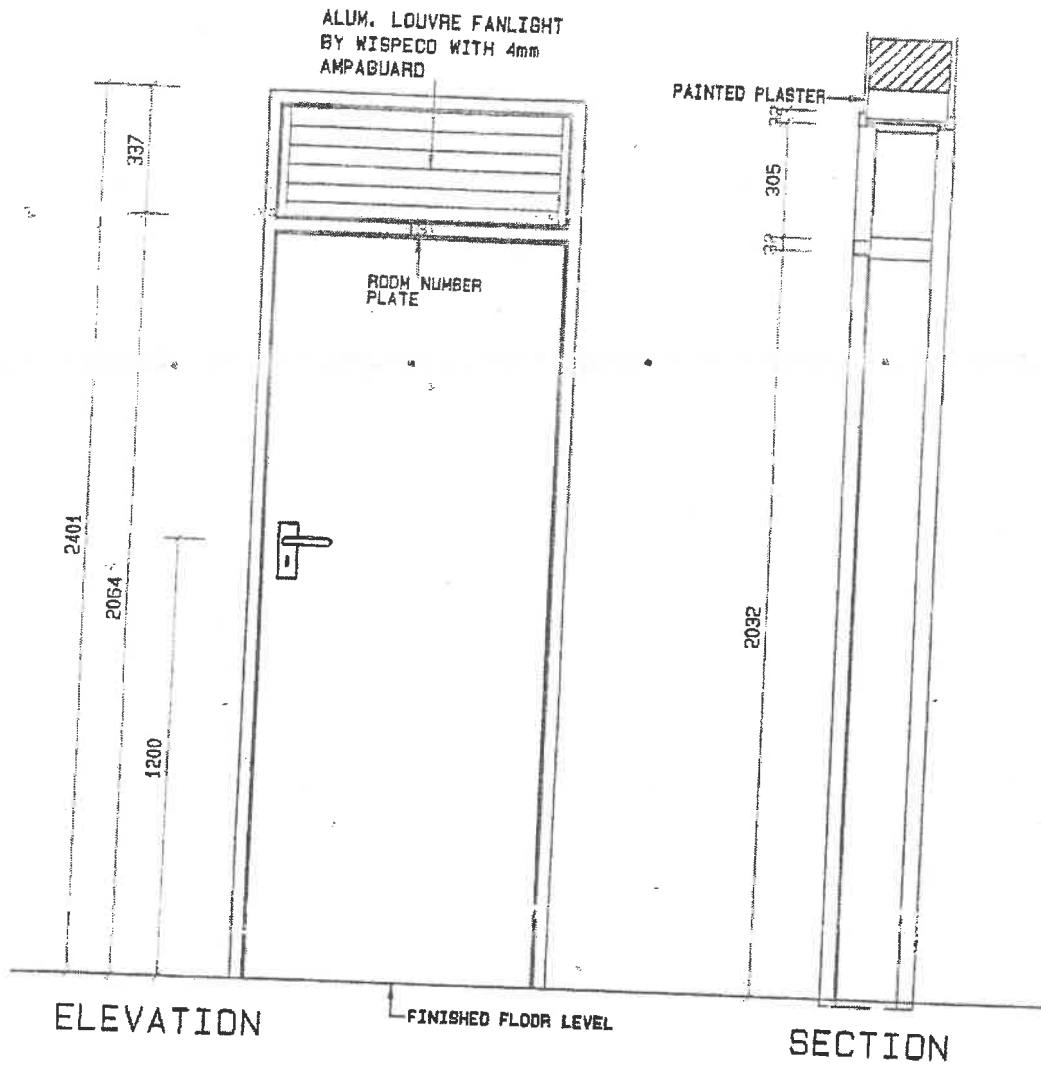
ELEVATION

SECTION



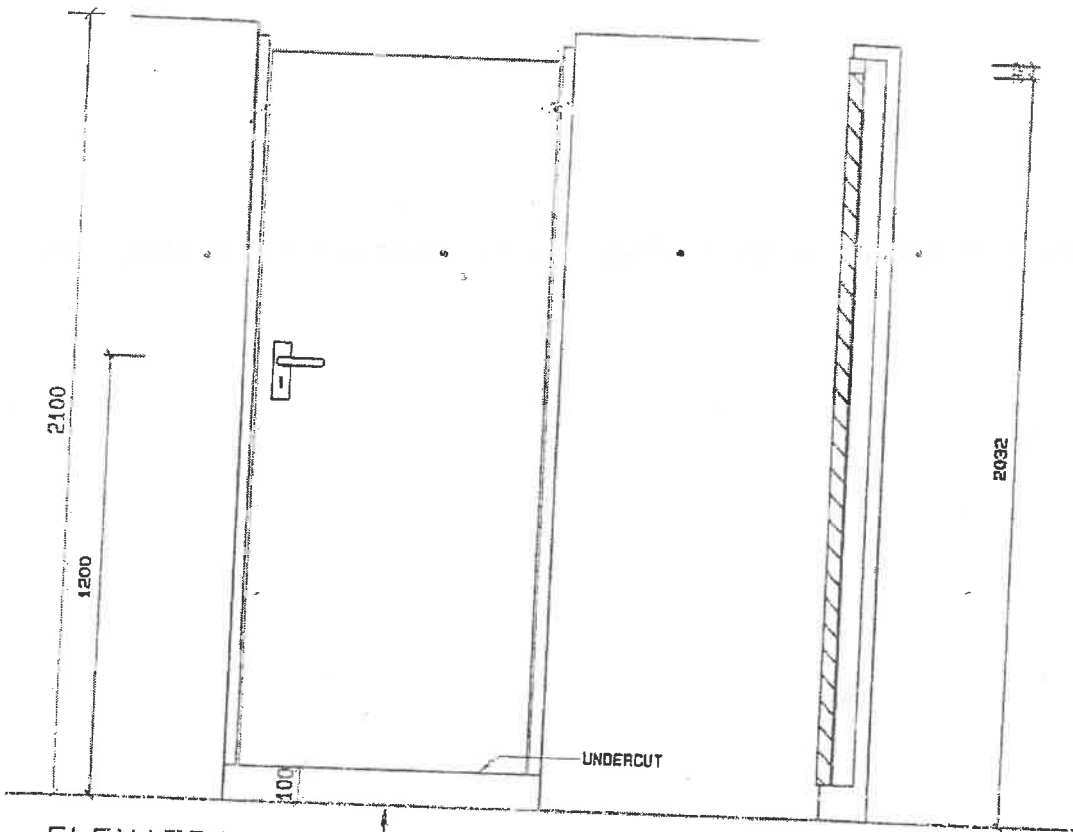
PLAN

CATALOGUE NO.	WISPECO CHAWL DOOR	CILL	N. A
ACTION/NO. REQD	BIDE HUNG WITH THREE HINGES / SEE KEY-PLANS	LINTOLS	5 LAYER BRICKFORCE
FRAME/BLAZ. BEAD	1.2mm MILD STEEL FRAME	BOLTS	PADLATCH WITH INDEPENDENT OPERATION FROM INSIDE
GLAZING	N. A	LOCK SETS	PADLOCK
SCREEN	N. A	HINGES/STOPS	STD HINGES/BLACK RUBBER DOOR STOP FIXED TO FLOOR
SOLID	SINGLE PANEL CHAWL DOOR	OTHER	ROOM NU. ABOVE DOOR - 20mm HIGH TYPE HELVETICA
FIXTURE	BUILT IN	FINISH	HIGH GLOSS ENAMEL
SCALE	DATE	DRAWN	REVISIONS
1:20	SEPT03	ESAD	NOV 07
PROJECT NUMBER		MODULE	DRAWING NUMBER
SINGLE PANEL CHAWL DOOR & FRAME 815X2032 TO SUIT 220MM WALL		DOORS 2008	D1
PROPERTY OF GOVERNMENT OF NAMIBIA		PROJECT CONSULTANT	
USER MINISTRY MINISTRY OF BASIC EDUCATION, SPORT & CULTURE		MINISTRY OF WORKS TRANSPORT & COMMUNICATION	
TEL :			



NOTE: LOCK TO BE FITTED WITH PATTERN SCREWS

CATALOGUE NO.	WISPECO CHAWL DOOR WITH OPENABLE FANLIGHT		CILL	N.A
ACTION NO. REQD	SIDE HUNG OPENING INWARD SEE KEY-PLANS		LINTOLS	PRECAST CONCRETE
FRAME/GLAZ. BEAD	1.2mm MILD STEEL FRAME		HANDLES	'UNION' WATERBOX LEVER ON ROSE ART: AL6W45-2445
GLAZING	4mm CLEAR GLASS IN ADJUST. ALUM. LOUVRE BY WISPECO TO FANLIGHT		LOCK SETS	'UNION' 4 LEVER LOCKSET ART: 2261-76PL
SCREEN			HINGES/STOPS	STD HINGES/BLACK RUBBER DOOR STOP FIXED TO FLOOR
LEAF	SOLID CORE FLUSH PANEL LEAF EXTERIOR QUALITY		OTHER	ROOM NO. ABOVE DOOR - 20mm HIGH TYPE: HELVETIC
FIXTURE	BUILT INTO BRICK WALLS		FINISH	HIGH GLOSS ENAMEL
SCALE	DATE	DRAWN	REVISIONS	PROJECT NUMBER
1:100	SEP03	ESAD		MODULE
DOOR: SOLID CORE FLUSH PANEL: 813x2401x110mm WALL		PROJECT NUMBER	DOORS 2008	DRAWING NUMBER
USER MINISTRY MINISTRY OF BASIC EDUCATION, SPORT & CULTURE				D3
				PROPERTY OF GOVERNMENT OF NAMIBIA PROJECT CONSULTANT
				MINISTRY OF WORKS TRANSPORT & COMMUNICATION
				TEL :



ELEVATION

SECTION

PLAN

NOTE: LOCK TO BE FITTED WITH PATTERN SCREWS

DATA/LOGUE NO.	PROPOSE MADE EX 114x76mm H/W MERANTI DOOR FRAME	CILL	N.A
ACTION/NO. REQD	SIDE HUNG / SEE KEY-PLANS	LINTOLS	N.A
FRAME/GLAZ. REQD	EX 114x76mm MERANTI FRAME	HANDLES	'UNION' WATERBOK LEVER ON ROSE ART: AL8M45-73AS
GLAZING	N.A	LOCK SETS	'UNION' BATHROOM WC LOCKSET ART: 22314-78PL
SCREEN	N.A	HINGES/STOPS	STD HINGES/RUBBER TIPPED HAT HOOK FIXED TO INSIDE OF DOOR BY 'UNION' ART: 'AL8253AS'
SOLID	SOLID CORE FLUSH PANEL LEAF EXT. QUALITY 100mm UNDERCUT	OTHER	ROOM NO. ABOVE DOOR - 20mm HIGH TYPE HELVETICA
FIXTURE	BUILT IN	FINISH	HIGH GLOSS ENAMEL

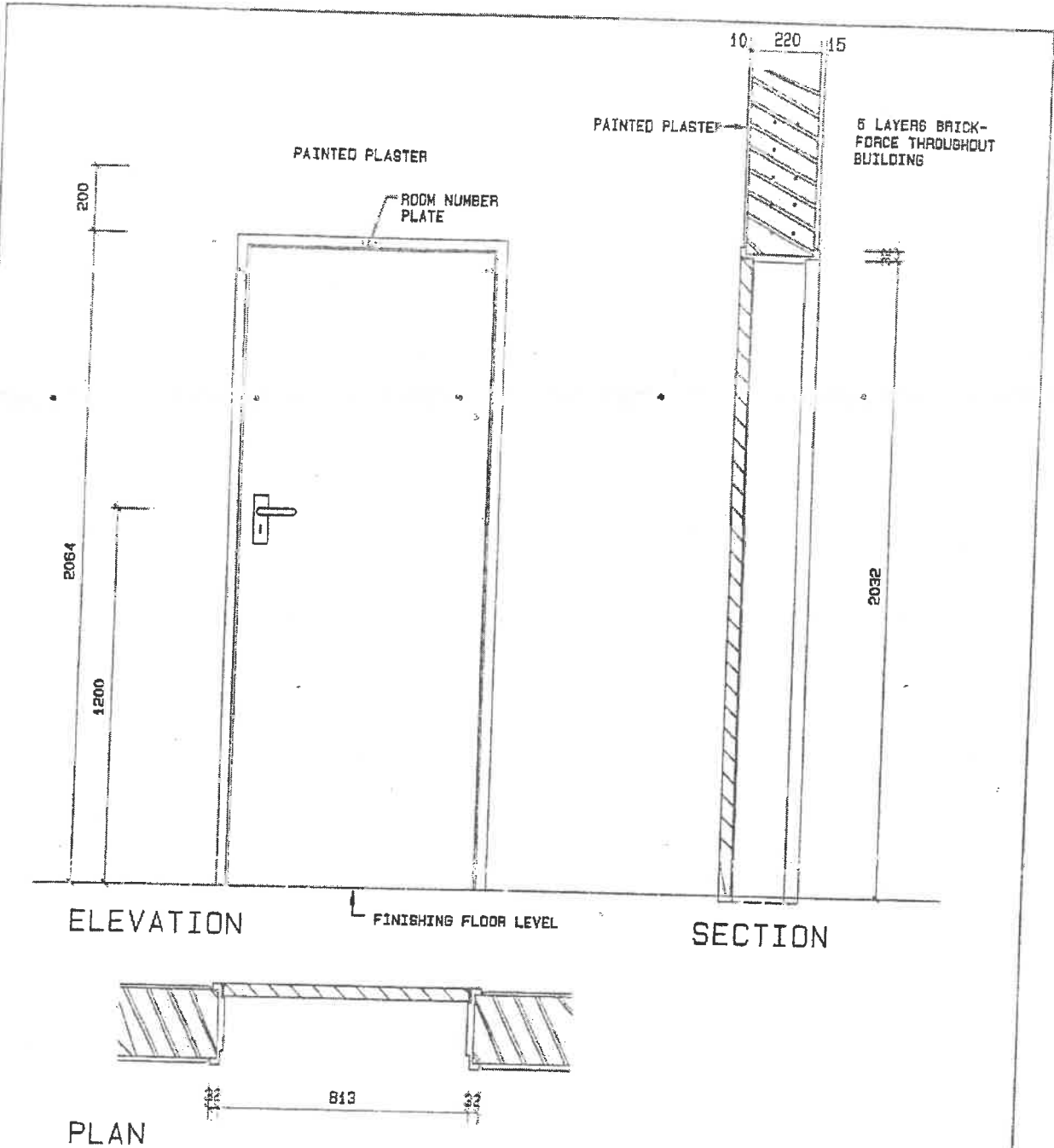
SCALE	DATE	DRAWN	REVISIONS
1:20	SEPT03	ESAD	DEC07
STANDARD WISPECO DOOR FRAME FOR 813 X 2032 DOOR & 110MM WALL			
USER MINISTRY MINISTRY OF BASIC EDUCATION, SPORT & CULTURE			

PROJECT NUMBER	MODULE	DRAWING NUMBER
	DOORS	04
	2008	

PROPERTY OF GOVERNMENT OF NAMIBIA
PROJECT CONSULTANT
TEL :



MINISTRY OF WORKS
TRANSPORT & COMMUNICATION



NOTE: LOCK TO BE FITTED WITH PATTERN SCREWS

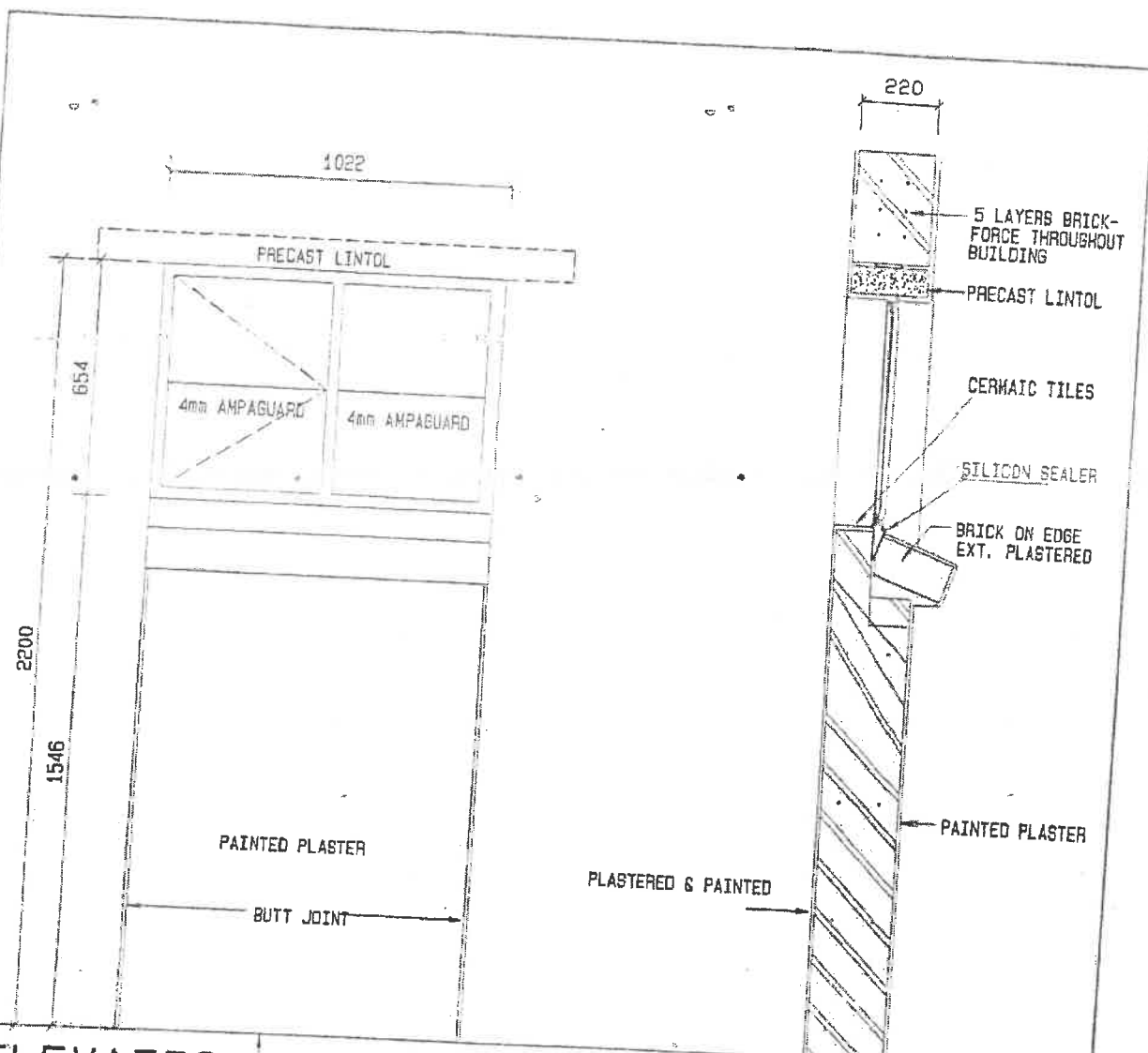
CATALOGUE NO.	STANDARD WISPECO FRAME	CTLL	N.A
ACTION/NO. REQD	SIDE HUNG / SEE KEY-PLANS	LINTOLS	5 LAYER BRICKFORCE
FRAME/GLAZ. BEAD	1.2mm MILD STEEL FRAME	HANDLES	'UNION' WATERBOX LEVER ON ROSE ART: ALW45-2445
GLAZING	N.A	LOCK SETS	'UNION' 4 LEVER LOCKSET ART: 2281-78PL
SCREEN	N.A	HINGES/STOPS	5TD HINGES/BLACK RUBBER DOOR STOP FIXED TO FLOOR
SOLID	SOLID CORE FLUSH PANEL LEAF EXT.GAULTY	OTHER	ROOM Nu. ABOVE DOOR - 20mm HIGH TYPE HELVETICA
FIXTURE	BUILT IN	FINISH	HIGH GLOSS ENAMEL

SCALE	DATE	DRAWN	REVISIONS
1:20	SEPT03	ESAD	DECC7
STANDARD WISPECO DOOR FRAME FOR 813 X 2032 DOOR & 220MM WALL			
USER MINISTRY MINISTRY OF BASIC EDUCATION, SPORT & CULTURE			

PROJECT NUMBER	MODULE	DRAWING NUMBER
	DOORS	08
	2008	

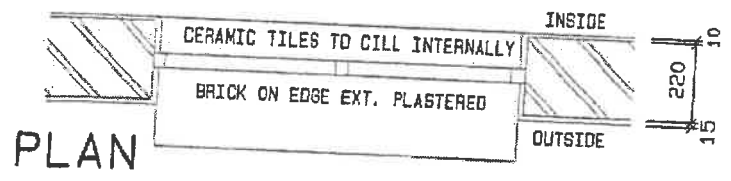
PROPERTY OF	GOVERNMENT OF NAMIBIA
PROJECT CONSULTANT	
TEL :	






ELEVATION — FINISHED FLOOR LEVEL


SECTION






PLAN

CATALOGUE NO.	STANDARD WISPECO ES2H	CILL	SEE SECTION
ACTION/NO. RECD	SIDE HUNG / SEE KEY-PLANS	LINTOLS	PRECAST LINTOL & 5 LAYERS BRICKFORCE THROUGHOUT BUILDING
FRAME/B. AT. REAR	STD. WISPECO / SILICON	HANDLES	STANDARD WISPECO
GLAZING	POLYCARBONATE	LOCK SETS	N. A
SCREEN	N. A	WINGS/STOPS	STANDARD WISPECO
SOLIC	N. A	OTHER	N. A
FIXTURE	BUILT IN	FINISH	HIGH GLOSS ENAMEL
SCALE	DATE	DRAWN	REVISIONS
1:20	SEP03	ESAD	NDV07
PROJECT NUMBER		MODULE	DRAWING NUMBER
WINDOW: TYPE ES2H		WINDOWS	W5
STD 1022x654x220mm WALL		2008	
USER MINISTRY		PROPERTY OF GOVERNMENT OF NAMIBIA	
MINISTRY OF BASIC EDUCATION, SPORT & CULTURE		PROJECT CONSULTANT	
		TEL :	
		 MINISTRY OF WORKS, TRANSPORT & COMMUNICATION	

DRAWING SYMBOLS


(A)	BULKHEAD LUMINAIRE WITH CLEAR DIFFUSER AND 2xPL9 COOL WHITE LAMPS EQUAL OR SIMILAR APPROVED TO LASCON B10-2PL9							
	OPEN CHANNEL SINGLE TUBE FLUORESCENT LUMINAIRE WITH TELESCOPIC LAMPHOLDERS AND 1x58W COOL WHITE LAMP EQUAL OR SIMILAR APPROVED TO LASCON R1-158SS							
	OPEN CHANNEL DOUBLE TUBE FLUORESCENT LUMINAIRE WITH TELESCOPIC LAMPHOLDERS AND 2x58W COOL WHITE LAMPS EQUAL OR SIMILAR APPROVED TO LASCON R1-258SS							
(D)	MOTORISED SIREN, 230 V WITH AN AUDIBLE DISTANCE OF 1000m							
(E)	PILOT LIGHT WITH RED LENS AND 230V 15W PIGMY LAMP							
	16A SINGLE LEVER ONE WAY LIGHT SWITCH, WHITE COVER PLATE, 1200mm AFFL							
	16A TWO LEVER ONE WAY LIGHT SWITCH, WHITE COVER PLATE, 1200mm AFFL							
	16A SINGLE LEVER TWO WAY LIGHT SWITCH, WHITE COVER PLATE, 1200mm AFFL							
	16A TWO LEVER TWO WAY LIGHT SWITCH, WHITE COVER PLATE, 1200mm AFFL							
	16A SINGLE LEVER BELL PUSH LIGHT SWITCH, WHITE COVER PLATE, 1200mm AFFL							
	ELECTRICAL DISTRIBUTION BOARD, FLUSH MOUNTED ARCHITRAVE TYPE WHERE INSTALLED INDOOR AND SEMI-RECESSED WEATHERPROOF TYPE WHERE INSTALLED OUTDOORS. DOORS SHALL BE PADLOCKABLE, COLOUR WHITE							
	DAYLIGHT SWITCH, 10A, MOUNTED INSIDE EMPTY B10 BULKHEAD LIGHT FITTING							
A DB-B	CIRCUIT A OF DISTRIBUTION BOARD B							
	16A SINGLE SWITCHED SOCKET OUTLET 300mm AFFL (UNDERSIDE) EXCEPT WHERE OTHERWISE INDICATED, COLOUR WHITE							
	16A DOUBLE SWITCHED SOCKET OUTLET 300mm AFFL (UNDERSIDE) EXCEPT WHERE OTHERWISE INDICATED, COLOUR WHITE							
	LOW VOLTAGE DC TERMINALS WITH 5 A 2.5 KA-MCCB 300mm AFFL (UNDERSIDE) EXCEPT WHERE OTHERWISE INDICATED, COLOUR WHITE							
	30A DOUBLE POLE ISOLATOR FLUSH MOUNTED 1200mm AFFL (UNDERSIDE) AND 50mm Ø OUTLET BOX 200mm AFFL BEHIND STOVE FOR STOVE CONNECTION, COLOUR WHITE							
	25A DOUBLE POLE ISOLATOR WEATHERPROOF IP 55 SURFACE MOUNTED. KNOCKOUT HOLES WHERE CONDUCTORS ENTER AND EXIT THE ISOLATOR MUST BE SEALED WITH SEALANT							
	20A DOUBLE POLE CORD GRIP ISOLATOR FLUSH MOUNTED 1200mm AFFL (UNDERSIDE) EXCEPT WHERE OTHERWISE INDICATED, COLOUR WHITE							
	EARTHING OF ROOF, 25mm Ø PVC CONDUIT CHASED IN WALL FROM 300mm BELOW NGL TO ROOF, 1.5m x 16mm Ø COPPER PLATED EARTH ROD INSTALLED 300mm BELOW NGL, 50mm² INSULATED COPPER CONDUCTOR BOLTED TO ROOF AND CLAMPED TO EARTH ROD.							
	100x100x50mm OUTLET BOX WITH WHITE COVER PLATE							
	100x50x50mm OUTLET BOX FOR PRE-PAYMENT METER							
	100x100x50mm OUTLET BOX WITH WHITE COVER PLATE 300mm AFFL (UNDERSIDE) AND 20mm Ø PVC CONDUIT TO ROOF SPACE FOR TV ANTENNA CABLE							
SCALE	DATE	DRAWN	REVISIONS	PROJECT NUMBER	MODULE	DRAWING NUMBER	PROPERTY OF	 MINISTRY OF WORKS, TRANSPORT & COMMUNICATION
N. T. S.	JUL03	ESAD			E	E 01	GOVERNMENT OF NAMIBIA	
ELECTRICAL LEGEND FOR ALL MODULES - SHEET 1					2008		PROJECT CONSULTANT	
USER MINISTRY MINISTRY OF BASIC EDUCATION, SPORT & CULTURE							TEL :	

DRAWING SYMBOLS

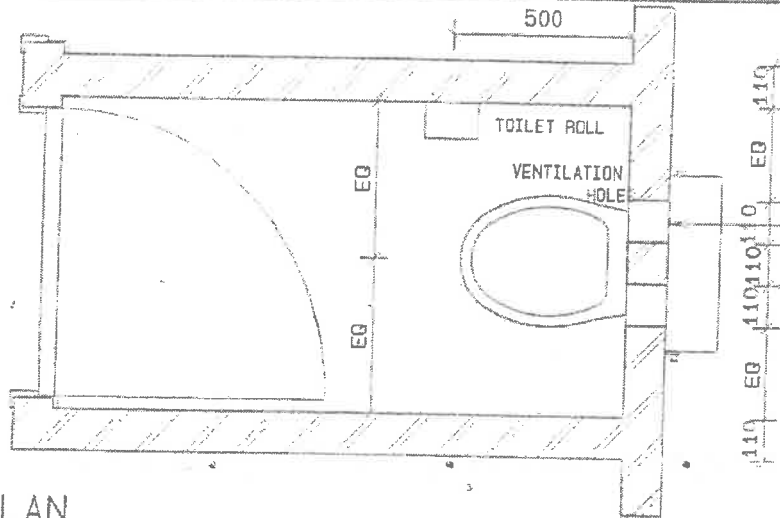
	100 VA, 230V AC TO 12V DC SWITCH MODE RECTIFIER POWER SUPPLY WITH LESS THAN 2.5% REGULATION FAULT AT FULL LOAD, MOUNTED INSIDE PADLOCKABLE VENTILATED SURFACE MOUNTED ENCLOSURE, COLOUR BEIGE
—————	25mmØ PVC CONDUIT
- - - - -	32mmØ PVC CONDUIT
—————	50mmØ PVC SLEEVE
	TELEPHONE DISTRIBUTION BOARD 510x410x110mm FLUSH INSTALLED, COLOUR WHITE
	100x100x50mm OUTLET BOX WITH WHITE COVER PLATE 300mm AFFL (UNDERSIDE) OR AS INDICATED FOR TELEPHONE OUTLET POINT

GENERAL NOTES:

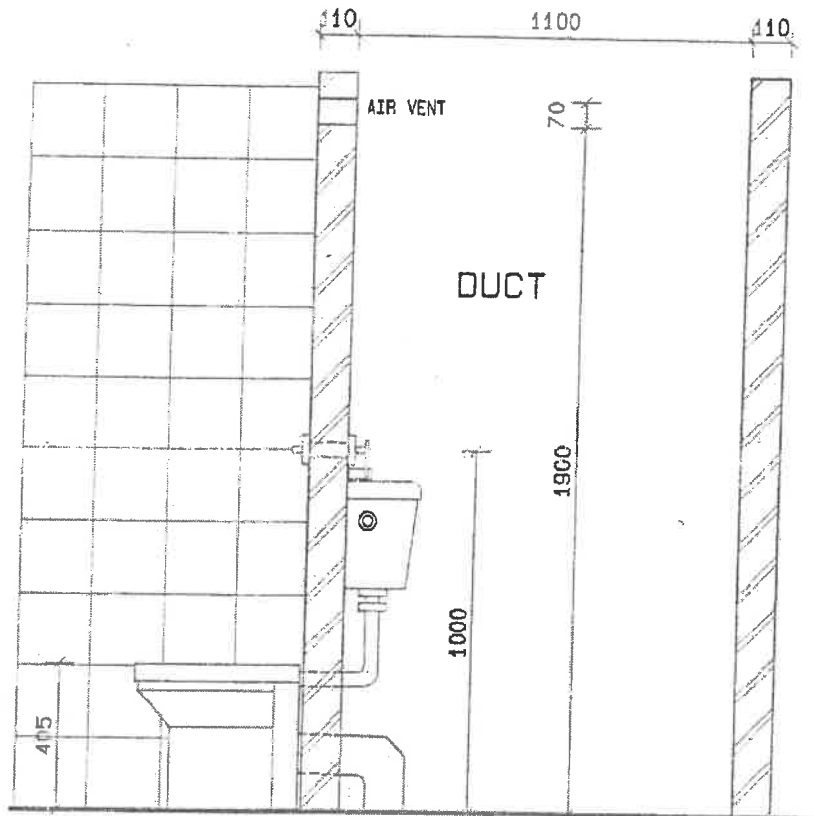
1. THE COMPLETE INSTALLATION SHALL BE FLUSH MOUNTED IN ACCORDANCE WITH THE LATEST 'SABS 0142': CODE OF PRACTICE FOR THE WIRING OF PREMISES.
2. ALL CONDUITS IN CEILING VOIDS SHALL BE BLACK MILD STEEL.
3. CONDUITS IN FLOORS TO BE PVC.
4. CONDUIT FROM FLOOR TO ANY OUTLET POINT SHALL BE PVC AND FROM ANY OUTLET POINT TO CEILING SHALL BE BLACK MILD STEEL.
5. NO DRAW BOXES SHALL BE INSTALLED EXCEPT IF APPROVED BY THE ARCHITECT OR CLIENT.
6. ALL SWITCH GEAR TO BE RATED 5 KA.
7. LIGHT FITTINGS TO BE APPROVED BY ARCHITECT OR CLIENT PRIOR TO ORDERING.
8. METAL ROOFS TO BE EARTHED WITH 50mm sq PVC INSULATED COPPER EARTHWIRE IN 25mm CONDUIT BETWEEN CEILING VOID AND 300mm BELOW GROUND LEVEL AND WITH 1.5m LONG COPPER EARTH ELECTRODES AT THE CENTRE OF TWO SHORT SIDES OF THE EXTERNAL BUILDING WALLS. THE JOINT AT THE EARTH SPIKE TO BE PROPERLY PROTECTED AGAINST CORROSION.
9. ALL OUTDOOR LUMINAIRES AND ISOLATORS SHALL BE SEALED WHERE CONDUCTORS ENTER AND EXIT THE ENCLOSURES TO PREVENT THE INGRESS OF INSECTS AND WATER.
10. ALL ITEMS TO BEAR THE SABS MARK IF AN SABS MARK EXISTS FOR THE ITEM CONCERNED.

SCALE	DATE	DRAWN	REVISIONS	PROJECT NUMBER	MODULE	DRAWING NUMBER	PROPERTY OF	 MINISTRY OF WORKS TRANSPORT & COMMUNICATION
N. T. S.	JUL03	ESAD			E	E 02	GOVERNMENT OF NAMIBIA	
ELECTRICAL LEGEND FOR ALL MODULES - SHEET 2							PROJECT CONSULTANT	
USER MINISTRY MINISTRY OF BASIC EDUCATION, SPORT & CULTURE					2008		TEL :	


NOTE:
 CERAMIC WALL TILES TO
 CEILING HEIGHT SEE
 TILE SPECIFICATION
 DWG "B4E"

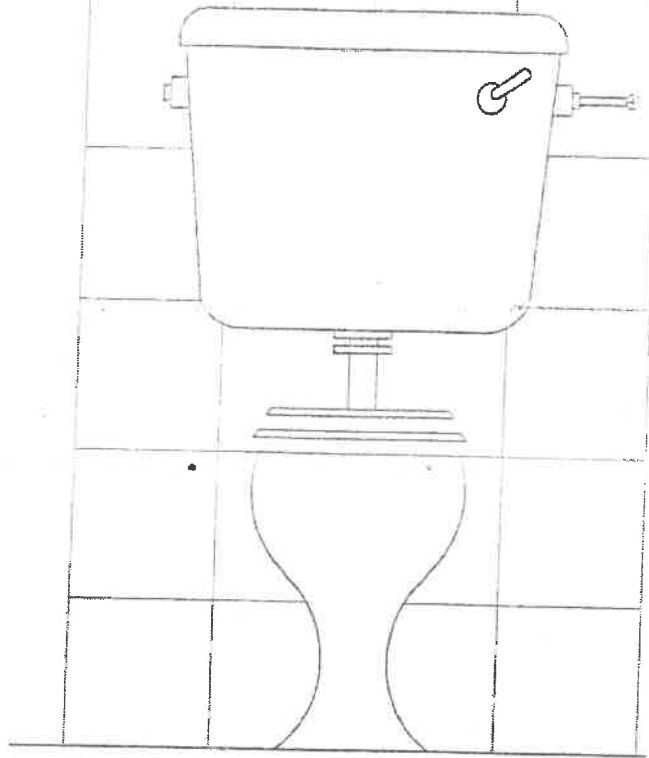


PLAN



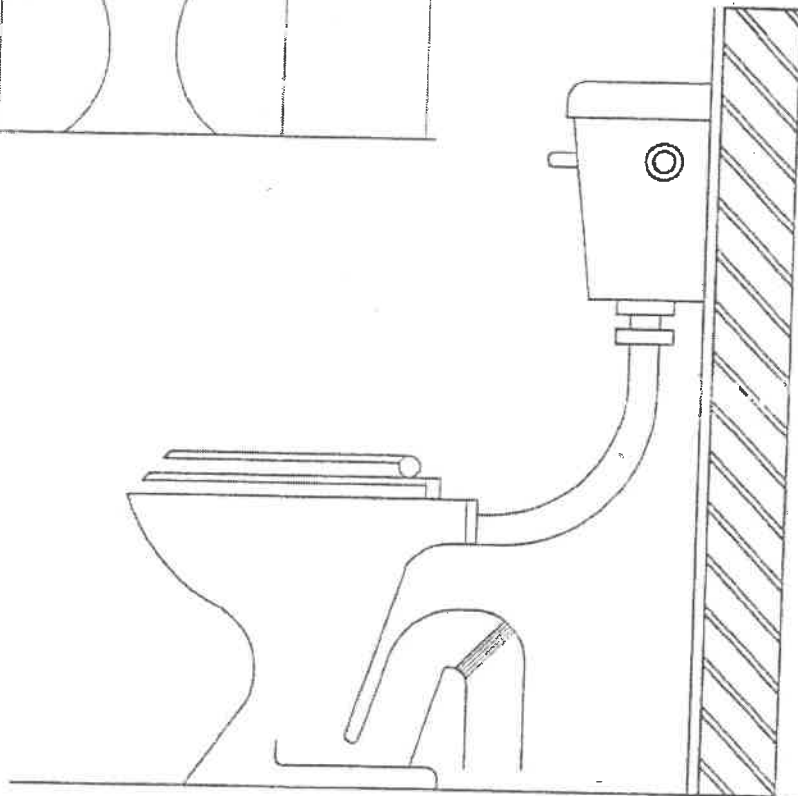
SECTION

FIXTURES	'ATLAS PLASTICS' 'ARIES PAN' POLYETHYLENE TOILET BOWL & SHIRES REMOTE FLUSHING CONTROL						
FURNITURE	'SHIRES LYNX' DURANITE LOW LEVEL CISTERN (8L) & COBRA NO 232/350 ANGLE REGULATING VALVE						
WASTE FITTINGS	110mm Ø TRAP AND INSPECTION EYE						
MISCELLANEOUS	HOLDIT THIEFPROOF TOILET ROLL HOLDER						
SCALE	DATE	DRAWN	REVISIONS	PROJECT NUMBER	MODULE	DRAWING NUMBER	PROPERTY OF GOVERNMENT OF NAMIBIA
1:20	SEP03	ESAD			SANITARY	S6	PROJECT CONSULTANT
WATERSLOT WC					2008		
USER MINISTRY MINISTRY OF BASIC EDUCATION, SPORT & CULTURE							TEL :
							 MINISTRY OF WORKS TRANSPORT & COMMUNICATION




ELEVATION

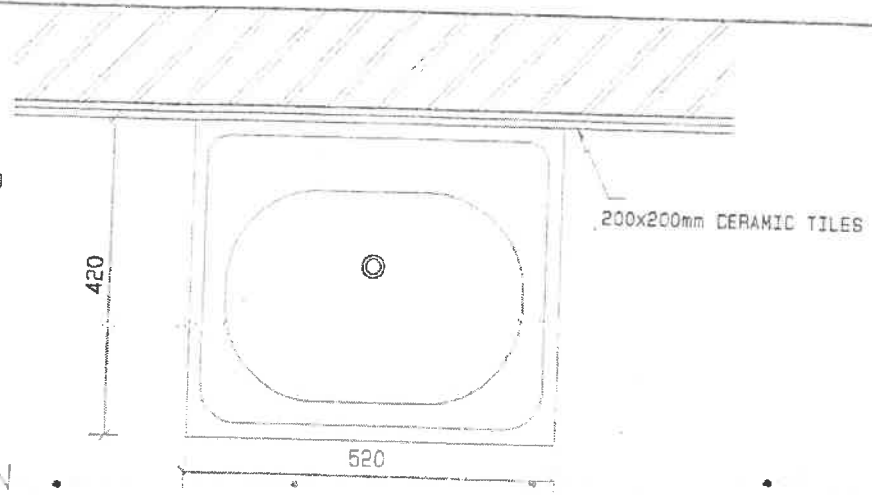
NOTE:
 CERAMIC WALL TILES TO
 CEILING HEIGHT SEE
 TILE SPECIFICATION
 DWG 'B42'



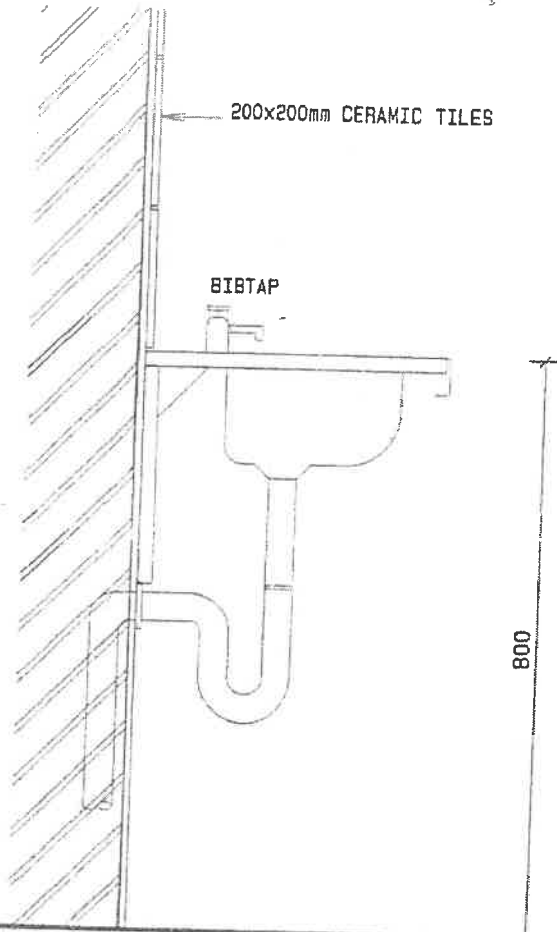
ELEVATION

FIXTURES	'BALLAM WATERSLOT' POLYETHYLENE WATER-SAVING TOILET & DURANITE LOW LEVEL CISTERN (6L)							
FURNITURE	ANGLE REGULATING VALVE COBRA NO 232/350							
WASTE FITTINGS	100mm Ø PVC PIPE							
MISCELLANEOUS	HOLDIT THIEFPROOF TOILET ROLL HOLDER							
SCALE	DATE	DRAWN	REVISIONS	PROJECT NUMBER	MODULE	DRAWING NUMBER	PROPERTY OF GOVERNMENT OF NAMIBIA	 MINISTRY OF WORKS TRANSPORT & COMMUNICATION
1:10	SEP03	ESAD			SANITARY 2008	S7	PROJECT CONSULTANT	
USER MINISTRY MINISTRY OF BASIC EDUCATION, SPORT & CULTURE							TEL :	


NOTE:
 CERAMIC WALL TILES TO
 CEILING HEIGHT SEE
 TILE SPECIFICATION
 DWG 'B42'

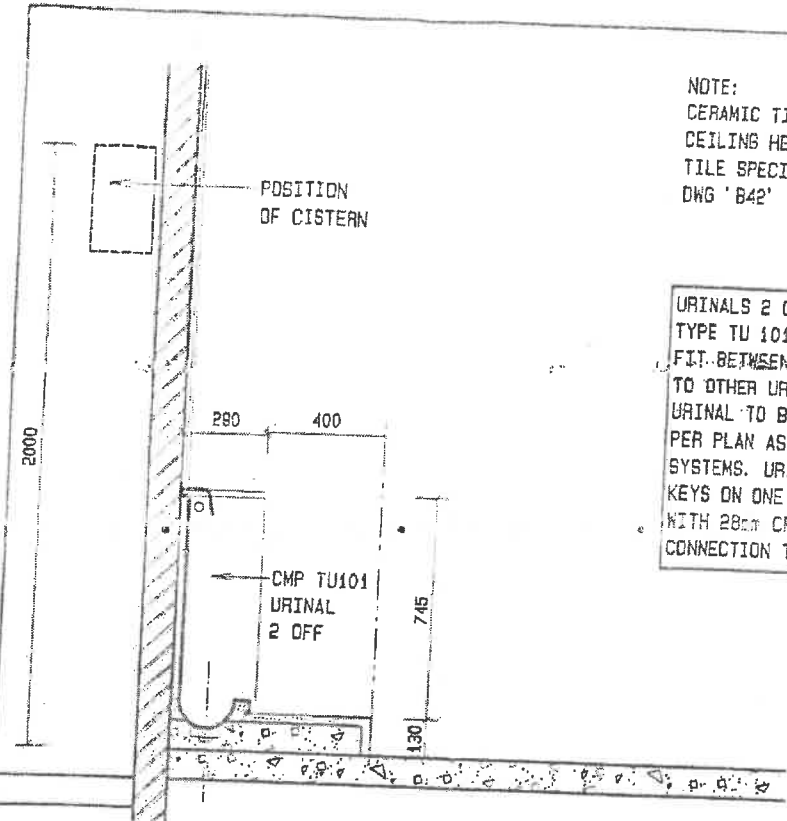


PLAN



SECTION

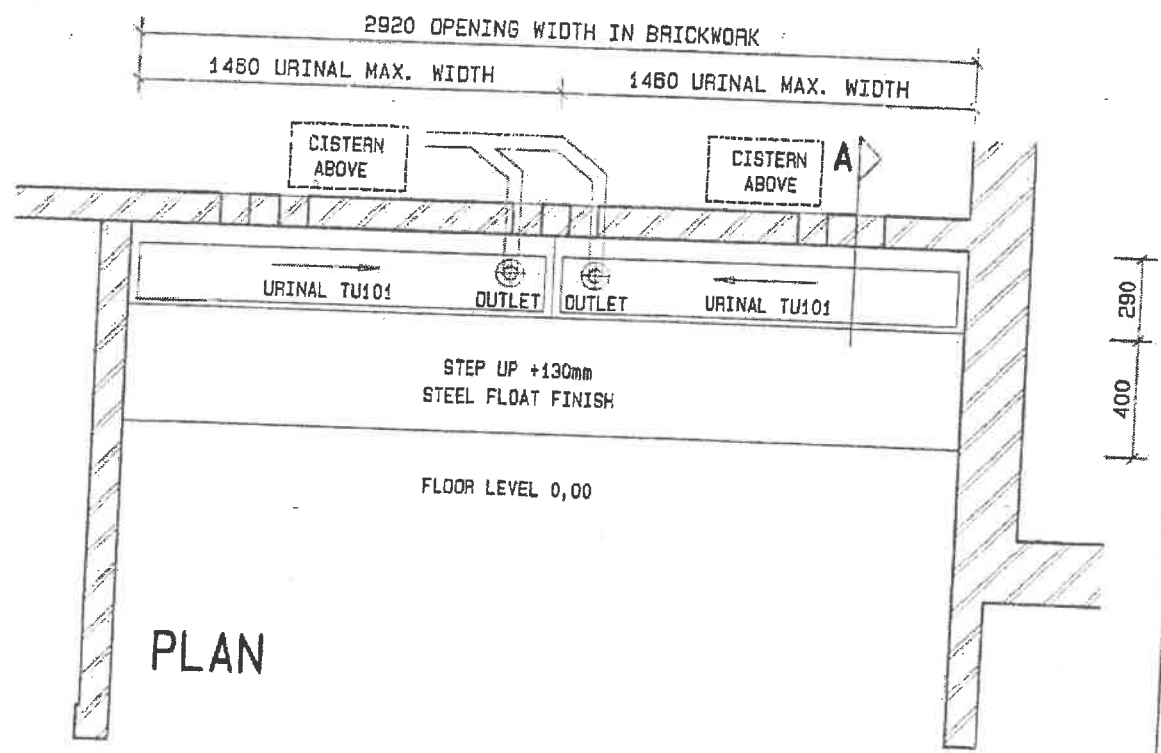
FIXTURES	PRESSED STAINLESS STEEL WASH HAND BASIN CMP W 800I WITH GUSSET BRACKET					
FURNITURE	'COBRA No. 232/350' 15mm Ø ANGLE REGULATING VALVE, CHROMIUM PLATED, ONE COBRA 111 PILLAR TAP STAR					
WASTE FITTINGS	'COBRA No. 310' 40mm Ø SINK WASTE & 'CASTLE PLAIBLE RUBBER 32x32P REF. YDI.001					
MISCELLANEOUS	PVC WASTEPIPE, 'COBRA' THIEFPROOF PLUG, 3 ROWS TILES ABOVE BASIN					
SCALE	DATE	DRAWN	REVISIONS	PROJECT NUMBER	MODULE	DRAWING NUMBER
1:10	SEPC3	ESAD			SANITARY 2008	S8
STAINLESS STEEL WASH HAND BASIN (520x420mm)				PROPERTY OF GOVERNMENT OF NAMIBIA		 MINISTRY OF WORKS, TRANSPORT & COMMUNICATION
USER MINISTRY				PROJECT CONSULTANT		
MINISTRY OF BASIC EDUCATION, SPORT & CULTURE				TEL :		



NOTE:
 CERAMIC TILES TO
 CEILING HEIGHT SEE
 TILE SPECIFICATION
 DWG 'B42'

URINALS 2 OFF: CITY METAL PRODUCTS
 TYPE TU 101, LENGTH 1460mm EACH AND TO
 FIT BETWEEN WALL ON ONE END AND BUTT UP
 TO OTHER URINAL ON OPPOSITE END. EACH
 URINAL TO BE FITTED WITH ONE OUTLET AS
 PER PLAN AS SUPPLIED BY FRANKE KITCHEN
 SYSTEMS. URINALS COMPLETE WITH TILING
 KEYS ON ONE SIDE AS PER PLAN. SUPPLY
 WITH 28mm CP CONEX COUPLING FOR
 CONNECTION TO FLUSHPIPE

SECTION A



PLAN

SCALE	DATE	DRAWN	REVISIONS	PROJECT NUMBER	MODULE	DRAWING NUMBER	PROPERTY OF
1:25	SEP03	ESAD	FEB08		SANITARY	S16	GOVERNMENT OF NAMIBIA
URINAL AT ABLUTION BLOCK TYPE CMP TU101 - 2 OFF					2008		PROJECT CONSULTANT
USER MINISTRY MINISTRY OF BASIC EDUCATION, SPORT & CULTURE							MINISTRY OF WORKS TRANSPORT & COMMUNICATION
							TEL :

