



INTERGOVERNMENTAL AUTHORITY ON DEVELOPMENT (IGAD)

ICPALD

BID DOCUMENT

**Construction of Proposed Office Block for
Kurmuk-Benishangul-Gumuz Region
(Ethiopia)**

Ref: ICPALD/WRKS/KURM/1/25

INVITATION FOR BIDS

**Construction of Proposed Office Block for Kurmuk-Benishangul-Gumuz Region
(Ethiopia)**

SUBJECT: INVITATION FOR BIDS FOR THE CONSTRUCTION OF PROPOSED OFFICE BLOCK
FOR KURMUK-BENISHANGUL-GUMUZ REGION (ETHIOPIA)

You are invited to submit your most competitive bid for the Construction of Proposed Office Block for Kurmuk-Benishangul-Gumuz Region (Ethiopia) to be contracted by IGAD CENTER FOR PASTORAL AREAS AND LIVESTOCK DEVELOPMENT (ICPALD)

1. To assist you in the preparation of your bid, we are enclosing the following :
 - i. Bill of Quantities
 - ii. Description of the Works/Drawings
 - iii. Instructions to Bidders
2. You are requested to provide your offer latest by Tuesday 13th May 2025, 04:00 pm
3. We look forward to receiving your bid and thank you for your interest in this project.

Instructions to Bidders

1. Scope of Works

ICPALD invites bids for the Construction of Proposed Office Block for Kurmuk-Benishangul-Gumuz Region (Ethiopia)

The successful bidder will be expected to complete the works within Sixty (60) days from contract signing. (Provide the proposed work plan/schedule)

2. Qualification of the Bidder:

- (a) The bidder shall provide qualification information which shall include:-
- (b) Total monetary value of construction works performed for each year of the last 3 years;
- (c) Income tax clearance certificate;
- (d) Report on his financial standing; and
- (e) Details of any litigation, current or during the last 3 years in which the bidder is involved, the parties concerned and disputed amount or awards in each case.
- (f) A copy of certificate of registration from the relevant Authority
- (g) A copy of trading license;
- (h) The bidder should have satisfactorily completed at least one similar works in the last three years. (Provide copy of the certificate of completion for the previous works)

2.1 Eligibility - Conflict of Interest*

Any Bidder found to have a conflict of interest shall be disqualified. A Bidder may be considered to have a conflict of interest for the purpose of this bidding process, if the Bidder:

- i. directly or indirectly controls, is controlled by or is under common control with another Bidder; or
- ii. receives or has received any direct or indirect subsidy from another Bidder; or
- iii. has the same legal representative as another Bidder; or
- iv. has a relationship with another Bidder, directly or through common third parties, that puts it in a position to influence the bid of another Bidder, or influence the decisions of the Employer regarding this bidding process; or
- v. any of its affiliates has been hired (or is proposed to be hired) by the Employer or Borrower as Engineer for the Contract implementation;
- vi. has a close business or family relationship with the concerned professional staff of the project implementing agency

3. Bid Price

The contract shall be for the whole works as described in the Bill of quantities, drawings

- a) The rates quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
- b) All duties, taxes and other levies payable by the contractor under the contract shall be included in the total price.
- c) The rates quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
- d) The Bidder shall fill in rates and prices and line item total for all items of the Works described in the Bill of Quantities along with total bid price (both in figures and words). Items for which no rate or price is entered by the Bidder shall be deemed covered by the other rates and prices in the Bill of Quantities.

4. Submission of bids

4.1 The bidder is advised to visit the site of works at his own expense and obtain all information that may be necessary for preparing the Bid.

4.2 Each bidder shall submit only one Bid which incorporates the labor.

4.3 The set of bidding documents comprise of the following:

- i. Layout Drawings of the works;
- ii. Structural Details;
- iii. Detailed Bill of Quantities;
- iv. Technical Specifications;
- v. Instructions to Bidders
- vi. Draft Contract Agreement format which will be used for finalizing the agreement for this Contract.

4.4 The Bid submitted by the bidder shall comprise the following:-

- a) Bid in the format given in Section **B**.
- b) Signed and Stamped Bill of Quantities- to be filled in as attached;
- c) Qualification information duly completed; and
- d) Bid Security, in original form for the amount 2% of the total amount in form of .
 - A bank guarantee issued by a nationalized/scheduled bank located in your home country in the form given in Section B; or Certified cheque or Bank draft payable to ICPALD

4.5 The bidder shall send the Bid via email addressed to:

beverlyne.nyanchera@igad.int with a cc to icpaldprocurement@igad.int

Samples may be requested by the engineer at any stage, they should be provided then.

- 4.6** Any Bid received by after the deadline for submission of Bids will be rejected.

5. Validity of Bid

Bid shall remain valid for a period not less than 120 days after the deadline date specified for submission.

6. Evaluation of Bids

Bids that are responsive, qualified and technically compliant will thereafter be ranked according to price. Award of contract will be made to the lowest evaluated priced Bid.

- 7.** Information relating to evaluation of Bids and recommendations for the award of contract shall not be disclosed to bidders or any other persons not officially concerned with the process until the award to the successful bidder is announced.

8. Evaluation of Bids

IGAD will evaluate and compare the Bids determined to be substantially responsive i.e. which

- (a) meet the qualification criteria specified in clause 2 above;
- (b) are properly signed; and
- (c) conform to the terms and conditions, specifications and drawings without material deviations.

9. Award of contract

IGAD will award the contract to the bidder whose Bid has been determined to be substantially responsive and who has offered the lowest evaluated Bid price and who meets the specified qualification criteria.

- 9.1** Notwithstanding the above, IGAD reserves the right to accept or reject any Bids and to cancel the bidding process and reject all Bids at any time prior to the award of contract.

- 10.2** The bidder whose bid is accepted will be notified of the award of contract by IGAD prior to expiration of the Bid validity period.

11. Performance Security

Within 15 days of receiving letter of acceptance, the successful bidder shall deliver to the ICPALD the performance security (either a bank guarantee or a bank draft in favour of the Employer) for an amount equivalent of 2% of the contract price. The Performance Security shall be valid till the expiry of the period of maintenance of the work, specified in clause 12.

Failure of the successful Bidder to furnish performance security and signing the agreement within the period stipulated shall constitute sufficient grounds for annulment of award and forfeiture of the Bid Security, in which case the Employer may make the award to the next lowest evaluated bidder or call for new bids.

12. Period of Maintenance:

The "Period of Maintenance" for the work will be three (6) months from the date of taking over the works. During the period of maintenance, the contractor will be responsible for rectifying any defects at no cost.

13. Payment:

Any payments for the works completed will be made against a certificated approved by the engineer designated by IGAD.

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**SECTION B
FORMAT FOR BID**

Description of the Works:

To:

Subject : Bid for

.....

Reference : Letter No.....dated.....from.....

Sir,

We offer to execute the Works described in your letter referred above in accordance with the Conditions of Contract enclosed therewith at a total Contract Price of –

USD _____ [in figures]

USD _____ [in words]

This Bid and your written acceptance of it shall constitute a binding contract between us. We understand that you are not bound to accept the lowest or any Bid you receive.

We hereby confirm that this Bid is valid for 120 days as required in Clause 6 of the Instructions to Bidders.

Yours faithfully,

Authorized Signature : Date: _____

Name & Title of Signatory : _____

Name of Bidder : _____

Address : _____

1. Performance Security

[The Bank, as requested by the successful Bidder, shall fill in this form in accordance with the instructions indicated]

Date: *[insert date (as day, month, and year) of Bid Submission]*

Contract No. and title: *[insert number and title of the contract]*

Bank's Branch or Office: *[insert complete name of Guarantor]*

Beneficiary: *[insert complete name of Contracting Authority]*

PERFORMANCE GUARANTEE No.: *[insert Performance Guarantee number]*

We have been informed that *[insert complete name of Contractor]* (hereinafter called "the Contractor") has entered into Contract No. *[insert number]* dated *[insert day and month]*, *[insert year]* with you, for the supply of *[description of Goods and related Services]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a Performance Guarantee is required.

At the request of the Contractor, we hereby irrevocably undertake to pay you any sum(s) not exceeding *[insert amount(s)²⁷ in figures and words]* upon receipt by us of your first demand in writing declaring the Contractor to be in default under the Contract, without cavil or argument, or your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This Guarantee shall expire no later than the *[insert number]* day of *[insert month]* *[insert year]*,²⁸ and any demand for payment under it must be received by us at this office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458, except that subparagraph (ii) of Sub-article 20(a) is hereby excluded.

[signatures of authorized representatives of the bank and the Contractor]

²⁷ The Bank shall insert the amount(s) specified in the SCC and denominated, as specified in the SCC, either in the currency(ies) of the Contract or a freely convertible currency acceptable to the Contracting Authority.

²⁸ Dates established in accordance with Clause 17.4 of the General Conditions of Contract ("GCC"), taking into account any warranty obligations of the Contractor under Clause 15.2 of the GCC intended to be secured by a partial Performance Guarantee. The Contracting Authority should note that in the event of an extension of the time to perform the Contract, the Contracting Authority would need to request an extension of this Guarantee from the Bank. Such request must be in writing and must be made prior to the expiration date established in the Guarantee. In preparing this Guarantee, the Contracting Authority might consider adding the following text to the Form, at the end of the penultimate paragraph: "We agree to a one-time extension of this Guarantee for a period not to exceed [six months] [one year], in response to the Contracting Authority's written request for such extension, such request to be presented to us before the expiry of the Guarantee."

2. Bank Guarantee for Advance Payment

[The Bank, as requested by the successful Bidder, shall fill in this form in accordance with the instructions indicated.]

Date: *[insert date (as day, month, and year) of Bid Submission]*
Contract No. and title: *[insert number and title of the contract]*

[bank's letterhead]

Beneficiary: *[insert legal name and address of Contracting Authority]*

ADVANCE PAYMENT GUARANTEE No.: *[insert Advance Payment Guarantee no.]*

We, *[insert legal name and address of bank]*, have been informed that *[insert complete name and address of Contractor]* (hereinafter called "the Contractor") has entered into Contract No. *[insert number]* dated *[insert date of Agreement]* with you, for the supply of *[insert types of Goods to be delivered]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, an advance is to be made against an advance payment guarantee.

At the request of the Contractor, we hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of *[insert amount(s)²⁹ in figures and words]* upon receipt by us of your first demand in writing declaring that the Contractor is in breach of its obligation under the Contract because the Contractor used the advance payment for purposes other than toward delivery of the Goods.

It is a condition for any claim and payment under this Guarantee to be made that the advance payment referred to above must have been received by the Contractor on its account *[insert number and domicile of the account]*

This Guarantee shall remain valid and in full effect from the date of the advance payment received by the Contractor under the Contract until *[insert date³⁰]*.

This Guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458.

²⁹ *The bank shall insert the amount(s) specified in the SCC and denominated, as specified in the SCC, either in the currency(ies) of the Contract or a freely convertible currency acceptable to the Contracting Authority.*

³⁰ *Insert the Delivery date stipulated in the Contract Delivery Schedule. The Contracting Authority should note that in the event of an extension of the time to perform the Contract, the Contracting Authority would need to request an extension of this Guarantee from the bank. Such request must be in writing and must be made prior to the expiration date established in the Guarantee. In preparing this Guarantee, the Contracting Authority might consider adding the following text to the Form, at the end of the penultimate paragraph: "We agree to a one-time extension of this Guarantee for a period not to exceed [six months][one year], in response to the Contracting Authority's written request for such extension, such request to be presented to us before the expiry of the Guarantee."*

[signature(s) of authorized representative(s) of the bank]

Draft Contract Agreement

This Agreement (hereinafter referred to as the “**Agreement**”) is made this

BETWEEN, IGAD Centre for Pastoral Areas and Livestock Development based in Nairobi, Kenya and of PO Box 47824 – 00100 (hereinafter referred to as “**ICPALD**” which expression where the context so admits includes its successors and assigns) of one part; **AND** is a company incorporated in (hereinafter referred to as the “**Contractor**” which expression where the context so admits includes its successors and assigns), of the second part.

WHEREAS:

- A. ICPALD being a Statutory Body of IGAD, established by an agreement between Member States and charged with the responsibility of development in the region wishes to engage for the Construction following;
-
- B. is experienced in such matters, able, competent and willing to carry out the works specified under Annex 3 of this Agreement

NOW THEREFORE, the Parties hereto agree as follows:

Clause 1 Definitions

Unless the context otherwise requires, the following terms whenever used in this Agreement, shall have the following meaning: -

- (a) “**Applicable Law**” means the laws and other instruments having the force of law in the
- (b) “**Agreement**” means this Agreement and the attached annexures executed by the parties hereto now and any future addendum;
- (c) “**ICPALD**” means the IGAD Centre For Pastoral Areas and Livestock Development, an approved agent of IGAD, authorised to take possession of the Works or supplies and administer to the related service requirements;
- (d) “**Contractor**” means, its authorised personnel and equipment that is within its scope and control.
- (e) “**Party**” means the ICPALD or the Contractor as the case may be and “**Parties**” means both of them;
- (f) “**Works**” means the which are to be constructed by the Contractor pursuant to this Agreement.
- (g) “**Officials**” means the persons stated under paragraph 1.4 or as may be specified from time to time.

1.1 Purpose

The purpose of this Agreement is for the Contractor to

1.2 Laws Governing the Agreement

This Agreement, its meaning and interpretation, and the relations between the Parties hereto shall be governed by the Laws of the Federal Democratic Republic of Ethiopia.

1.3 Language

This Agreement has been executed in English, which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Agreement.

1.4 Notices

Any notice, request or consent made pursuant to this Agreement shall be in writing and shall be deemed to have been made when delivered in person to an authorized representative of the Party to whom the communication is addressed, or when sent by registered mail, telex, telegram, email or facsimile to such Party at the Address specified *herein below*.

CONTRACTOR:

ICPALD:

1.5 Location

.....

1.6 Authorized Representative

Any action required or permitted to be taken and any document required or permitted to be executed under this Agreement by either Party may be taken or executed by the Officials as may be specified by the Parties, but the Contractor shall work under the technical guidance of the county engineer answerable to the ICPALD Director.

Clause 2 Commencement, Completion, Modification and Termination of Agreement

2.1 Execution of this Agreement

This Agreement shall come into effect upon the date of signature of the last party (herein known as the date of execution) and shall expire afterCalendar days unless otherwise extended by mutual agreement.

2.2 Contractual Term

Unless terminated earlier pursuant to Clause 2.5, this Agreement shall be valid from the date of its execution and shall remain enforce for a duration ofCalendar days unless subjected to renewal or extension on such terms and conditions as the case may require.

2.3 Modification

Modification of the terms and conditions of this Agreement, and any addendum, including any modification to this Agreement or the fees (if at all), may only be done by a written agreement between the Parties.

2.4 Force Majeure

2.4.1 Definition

For the purposes of this Agreement, "*Force Majeure*" means any event which is beyond reasonable anticipation and control of a Party and which makes a Party's performance of its obligations under the Agreement impossible or so impractical as to be considered impossible under the circumstances.

2.4.2 No Breach of Contract

The failure of a Party to fulfil any of its obligations under the Agreement shall not be considered a breach of, or default under this Agreement in so far as such liability arises from an event of *Force Majeure*, provided that the Party affected by such an event: -

- a) Has taken all reasonable precautions, due care and reasonable alternative measures in order to carry out all the terms and conditions of this Agreement; and
- b) Has informed the other Party as soon as possible about the occurrence of such an event.

2.4.3 Payments

The payment shall be made by ICPALD to the Contractor as described in the Clause 8.

During the period of inability to perform the obligations as a result of an event of *Force Majeure*, the Contractor shall not be entitled to be paid for arising expenses if any save as herein stated below.

2.5 Termination

2.5.1 By ICPALD

ICPALD may terminate this Agreement by not less than **Two (2) Working Weeks** written notice of termination to the Contractor, to be given after the occurrence of any of the events specified in paragraphs (a) through (d) of this Clause 2.5.1.

- (a) If the Contractor does not remedy a failure in the performance of his obligations under the Agreement within **Two (2) Working Weeks** after being notified or within any further period as ICPALD may have subsequently approved in writing;
- (b) If the Contractor fails to demonstrate the ability to carry out this assignment to the satisfaction of ICPALD within the agreed period or to the expected standard.
- (c) If the Contractor becomes insolvent or bankrupt;
- (d) If, as a result of *Force Majeure*, the Contractor is unable to perform a material portion of the Services for a period of not less than One (1) Week; or
- (e) If the Contractor, in the judgment of ICPALD, has engaged in corrupt or fraudulent practices in executing this Agreement.

For the Purpose of this Clause:

"Corrupt Practice" means but is not limited to the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the selection process or in execution of obligations under this Agreement.

“Fraudulent Practice” means a misrepresentation of facts in order to influence a selection process for the execution of an agreement to the detriment of ICPALD, and includes collusive practice among service providers (prior to or after submission of quotations) designed to establish prices at artificial levels and to deprive IGAD of the benefits of free and open competition.

2.5.2 Notwithstanding anything else in this Agreement, this Agreement may however be terminated summarily without notice in case of gross misconduct or negligence of either professional or personal nature which include but are not limited to:

- a. the other Party fails to perform any of its material obligations under this Agreement and does not rectify such failure within **Two (2) Working Weeks** of a written notice from the Terminating Party stating such failure; or
- b. proceedings in insolvency, bankruptcy, corporate reorganization, winding up or any other similar procedure is initiated (or threatened) by or against the other Party, or a receiver is appointed over all or a material part of the business or assets of the other Party, or liquidation proceeding is commenced by or against the other Party; or
- c. the other Party becomes unable to pay its debts generally as they become due; or
- d. the other Party holds a meeting of creditors or makes a general assignment for the benefit of its creditors; or
- e. the whole or material part of the business of the other Party is transferred to a third party by merger, amalgamation, agreement, order of court or otherwise, or the other Party ceases to do business

For the Purpose of this Clause:

“Gross misconduct” means but is not limited to the following circumstances:

any intentional act or series of actions which leads to a reasonably foreseeable outcome, and results in irreparable harm befalling ICPALD, its property or its personnel.

“Negligence” means but is not limited to the following circumstances:

any accidental act or series of actions which leads to a reasonably foreseeable outcome, and results in irreparable harm befalling ICPALD, its property or its personnel.

2.5.3 By the Contractor

The Contractor may terminate this Agreement by giving a written notice of not less than **Two (2) Working Weeks** to ICPALD, such notice to be given after the occurrence of any of the events specified in paragraphs (a) and (b) of this Clause 2.5.3.

- (a) If ICPALD fails to pay monies due to the services provided pursuant to this Agreement and not subject to dispute within **Thirty (30) Calendar days** after receiving written notice from the Contractor that such payment is overdue; or
- (b) If, as a result of *“Force Majeure”*, the Contractor is unable to perform a material portion of the Services for a period of not less than **Two (2) Working Weeks**.

2.5.4 Payment upon Termination

In the event of termination of this Agreement pursuant to Clause 2.5.1 or 2.5.2, ICPALD shall remunerate the Contractor for services duly performed prior to the effective date of termination.

Clause 3. Obligation of the Contractor

- 3.1 The Contractor shall perform the specifics as set out in the obligations to this Agreement, which include:
- 3.1.1 Ensuring all document surrounding the Works including but not limited to the materials supplied and it's are genuine and authentic.
 - 3.1.2 Ensuring that the materials supplied in the construction of the Works are free from any lien, charge, hire purchase agreement or such instrument.
 - 3.1.3 Guaranteeing that the materials supplied in the construction of the Works are free from any and all defects, either prior to or during the duration of this contract.
 - 3.1.4 Guaranteeing that when the Contractor is carrying out the process of construction. That the Contractor will obtain the necessary permits (if required) and will exercise normal construction standards, as per the industry.
 - 3.1.5 The Contractor should correctly supply the material necessary to construct the Works, as well as, items in support of the Works, and this includes but is not limited to; cables and other peripheral devices and installation services related to the equipment and/or the installation of peripheral devices. Furthermore, the Contractor shall bear the responsibility of rectifying any mistake or defect during the aforementioned process.
 - 3.1.6 Ensuring that the Contractor exercises a reasonable standard of care, while the Works are in the Contractors custody up to and till delivery is completed.
 - 3.1.7 Transferring ownership and control of the Works into ICPALD's custody upon Delivery and installation
 - 3.1.8 Promptly informing ICPALD of any event or conditions, which might materially and adversely affect the transfer of the Works. This includes but is not limited to; fire, theft, damage or any such event in which the Contractor may, or may not be deemed to have contributed to the event.
 - 3.1.9 Where fire, theft or damage occurs, the Contractor covenants to return the Works to its original state prior to the event, or refund monies paid back to ICPALD.
 - 3.1.10 Processing the transfer of Works free from any taxes due and payable to the Federal Democratic Republic of Ethiopia.

Clause 4. Contractor Actions Requiring ICPALDs Prior Approval

The Contractor shall obtain ICPALD's prior approval in writing before entering into any subcontract for the performance of any part of this contract. Where the Contractor subcontracts part of the construction of the Works, the Contractor shall bear liability for

defect(s) caused by the subcontractor and/or injurious harm that is caused or befalls the subcontractor(s).

Clause 5. Obligations of ICPALD

- 5.1 ICPALD shall use its best efforts to ensure that the Contractor successfully Construct the housing units using the Works listed.
- 5.2 ICPALD shall make payment in the format prescribed in Clause 8.2 and upon the satisfaction of ICPALD is satisfied that it has passed a successful inspection.
- 5.3 ICPALD shall, if and when requested by the Contractor, secure a duly executed exemption from duty certificate in the favour of the Contractor.
- 5.4 ICPALD shall pay the Contractor the sum stated in Clause 8 of the Agreement as specified herein.

Clause 6. Change in the Applicable Law

If, after the date of this Agreement, there is any change in the Applicable Law in whatever respect the same shall not affect the agreed sums of payment herein.

Clause 7. Delivery

The Works will be considered to have been completed once all of the following conditions have been completed:

- 7.1. The Contractor has physically transported the materials necessary to construct the Works and items in support of the Works under this Agreement, and any other supplemental equipment to physical location requested by ICPALD.
- 7.2. The Contractor shall construct the Works on the sites requested by ICPALD.
- 7.3. The Construction has successfully been completed and approved by ICPALD, and that the Contractor shall hand over possession to ICPALD.

Completion of the works shall be expected on or before the expiry of this Agreement.

Clause 8. Contract Price

8.1 The Contractor shall be paid a sum ofupon delivery without any other benefits.

8.2 The Contractor shall be paid the said amount in the format prescribed:

- (i) **Payments against Progress:** The engineer, appointed by ICPALD will determine the satisfaction of works and the payments due as per the implementation progress and against a certified completion certificate signed by all the parties.
- (ii) **Retention Fees:** 5% of the total cost will be paid after issuance of final acceptance certificate and upon the expiry of the defect liability period of six (6) months.

8.3 The Contractor shall be responsible for any related ancillary financial obligations, including but not limited to; taxes, clearing and forwarding, custom charges and any such related expenses.

Clause 9. Confidentiality

The Contractor may not communicate at any time to any other person, government or authority external to ICPALD any information known to him by reason of his association with ICPALD which has not been made public, except in the course of his duty or by authority of the Director of ICPALD or his designate; nor shall the Contractor at any time use such information for private purpose. This obligation shall not lapse upon termination of this Agreement with ICPALD for a period of two (2) years.

Clause 10. Indemnity

10.1 Each party (the "Indemnifying Party") shall be responsible for, and shall indemnify and hold harmless the other party (the "Indemnified Party") against claims in respect of loss or damage to property (excluding, for the avoidance of doubt, the Works supplied whether delivered or not) of, incurred by the Indemnified Party and its directors, and/or officers, employees resulting from the negligence or intentional act or omission of the Indemnifying Party in the performance of or otherwise in connection with this Agreement. Notwithstanding the foregoing, the aforesaid indemnity obligation of the Indemnifying Party shall be excluded to the extent of the Indemnified Party's negligence, and except for any claim arising out of or in relation to the Indemnifying Party's intentional act or omission or fraud, no party shall be liable for any special, incidental, consequential or indirect loss or damages, including, but not limited to, damages for loss of revenue.

10.2 This indemnity shall cease upon the termination or expiration of this Agreement.

Clause 11. Liability

Under no circumstances will the Contractor have any liability to ICPALD of whatever kind for

11.1 any defects resulting from wear and tear, accident, improper use by ICPALD of the said Works

11.2 the fitness of the Works for any purpose other than purpose under which it was constructed for;

11.3 any warranties other than those derived from the manufacturer;

11.4 any adjustments, modification or repairs outside of the default period to the Works

Clause 12. Settlement of Disputes

12.1 Amicable Settlement

The Parties shall use their best efforts to settle amicably any dispute arising out of or incidental thereto in connection with this Agreement or its interpretation.

12.2 Any dispute between the Parties as to matters arising pursuant to this Agreement that cannot be settled amicably within thirty (30) days after receipt by one Party of the other Party's request for such amicable settlement shall be submitted for Arbitration by either Party for settlement in accordance with the laws of the Republic of Kenya

Parties shall exhaust all avenues of conciliation and mediation before filing any proceedings to resolve any dispute.

Clause 13. Assignment

No Party may assign any of its rights, or delegate any of its obligations or duties under this Agreement without the prior written consent of the other Party.

Clause 14. Amendments and Waivers

No provision of this Agreement may be amended or waived, except in a writing signed by the Parties to be charged therewith.

Clause 15. Severability

If any of the provisions contained in this Agreement shall be declared invalid, illegal or unenforceable in whole or in part under any applicable law, the validity, legality and enforceability of the remaining provisions or part thereof shall not in any way be affected or impaired.

Clause 16. Entire Agreement

This Agreement (including the Annex) constitutes the entire agreement between the Parties in respect to the subject matter hereof and supersedes all previous negotiations and communications in respect thereto.

This Agreement and its annexures are stated in the sequences of documents below:

- (a) the Agreement
- (b) Letter of Acceptance,
- (c) Contractor's Bid
- (d) Bill of Quantities, Designs and Drawings

IN WITNESS WHEREOF the Parties hereto have caused their hands to be affixed the date month and year hereinabove shown in two originals.

For IGAD

For Contractor

Date

Date

Signature

Signature



CENTRE FOR PASTORAL AREAS & LIVESTOCK DEVELOPMENT

BILL OF QUANTITIES

OEPN COMPETITIVE BIDDING

LOT 1

Subject of Procurement:	Proposed Office Block for Kurmuk-Benishangul-Gumuz Region(Ethiopia)
Procurement Reference Number:	ICPALD/WRKS /KURM./01/25
Date of Issue:	APRIL, 2025

ITEM	DESCRIPTION	AMOUNT (USD)
	<p style="text-align: center;">Bill No.1</p> <p>PRELIMINARIES</p> <p><u>Sufficiency of Tender</u></p> <p>A The Contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the Works and of the rates and prices used in arriving at the lump sum price(s) stated in the priced Bills of Quantities which rates and prices shall cover all his obligations under the contract and all matters and things necessary for the proper completion and maintenance of the works.</p> <p><u>Definitions and Abbreviations</u></p> <p>B Abbreviations used in these Bills of Quantities shall be interpreted as follows: "Approved" shall mean approved by the Project Manager "as directed" shall mean as directed by the Project Manager. "B.S" shall mean The Current British Standard Specifications published by the British Standards Institution, 2 Park Street London, W.1, England. "Kg" shall mean kilogramme "No" shall mean number "M" shall mean Linear metres "M2" shall mean square metres "M3" shall mean cubic metres "Do" shall mean the whole of the preceding description except as qualified in the (M.S) SHALL MEAN Measured Separately. "VAT" shall mean Value Added Tax. "Net Contract Sum" or "Net Tender Sum" shall mean the Tender / Contract Sum or adjustments thereto before the addition of Value Added Tax.</p> <p><u>Site levels</u></p> <p>C Before commencing work, the Contractor must arrange for and agree with the Project Manager the existing site levels and similarly establish and agree a bench mark.</p> <p><u>Contractual Requirements</u></p> <p>D Performance Security clause</p> <p>E Advance payment guarantee</p> <p>F Insurance of works covering all installations during and up to 28 days after the end of the defects liability period</p> <p>G All contractor insurance; Third party insurance, Equipment Personnel</p>	
	COLLECTION -1 CARRIED TO SUMMARY	

ITEM	DESCRIPTION	AMOUNT (USD)
	<p><u>Setting out</u></p> <p>A The Contractor shall set out the Works in accordance with the dimensions and levels shown on the drawings and shall be responsible for the correctness of all dimensions and levels so set out by him and will be required to amend all errors arising from inaccurate setting out at his own cost and expense. In the event of any error or discrepancy in the dimensions or levels marked on the drawings being discovered, such errors or discrepancies must be reported by the Contractor to the Project Manager for his immediate attention.</p> <p>B No work shall be commenced by the Contractor until he has received written instruction from the Project Manager to adjust such discrepancies which may be proved. Upon receipt of such instruction, the Contractor shall thereupon be responsible for adjustments necessary to comply with such instruction, and no claim for extra expense or relief from the provisions of the Conditions of Contract based on any discrepancy or error in the dimension or levels shown on the drawings may be made thereafter.</p> <p>C Before any work is commenced by sub-contractors or specialist firms, dimensions must be checked on the site and / or buildings and agreed with the Contractor, irrespective of the comparable dimensions shown on the drawings. The Contractor shall be responsible for the accuracy of such dimensions.</p> <p><u>Materials, goods and workmanship to conform to description, testing and inspection, samples</u></p> <p>D I) The standard of workmanship shall not be inferior to the current country Standards or where none are available the Equivalent British Codes of Practice. No Material for use in the permanent construction are to be used for any temporary or other purpose than that for which they are provided.</p> <p>ii) The Contractor shall furnish at his own cost any samples of materials or workmanship or any tests that may be called for by the Project Manager for approval or rejection and for any further samples or tests in the case of rejection until they are approved by the Project Manager unless otherwise provided for herein.</p> <p>iii) The Contractor shall submit detailed schedules stating order and delivery dates along with regular updates to the Project Manager, as required.</p> <p><u>Existing property</u></p> <p>E The Contractor shall take every precaution to avoid damage to all existing property including roads, cables, drains, other services and landscaping and he will be held responsible for all damage thereto arising from the execution of this Contract and he shall make good all such damage when directed at his own expense.</p> <p><u>Existing services</u></p> <p>F Prior to the commencement of any work the Contractor is to ascertain from the relevant authorities the exact position, depth and level of all existing electric cables, water pipes or other services in the area and he shall make whatever provisions may be required by the authorities concerned for the support and protection of such services.</p>	
	COLLECTION -2 CARRIED TO SUMMARY	

ITEM	DESCRIPTION	AMOUNT (USD)
A	Any damage or disturbance caused to any service shall be reported immediately to the Project Manager and the relevant authority and shall be made good to their satisfaction at the Contractor's expense.	
	<u>Materials, tools, plant and scaffolding</u>	
B	All materials and workmanship used in the execution of the works shall be of the best quality and description unless otherwise described. Any materials for the Works condemned by the Project Manager shall immediately be removed from the site at the Contractor's expense. The Contractor shall be responsible for the provision of all materials, scaffolding, tools, plants, transport and workmen required for the Works except insofar as may be stated otherwise herein and he shall allow for the provision of the foregoing except for such items specifically and only required for the use of the Nominated Sub-Contractors as described herein.	
C	No timber used for scaffolding, formwork or similar purpose shall be used afterwards in the Permanent work.	
D	All such plant, tools and scaffolding shall comply with all regulations whether general or local in force throughout the period of the Contract and shall be altered or adapted during the Contract as may be necessary to comply with any amendments in or additions to such regulations.	
	<u>Statutory obligations, notices, fees, charges, local regulations and Bye-laws</u>	
E	The Contractor is to comply with all local regulations and bye-laws of the Local Authority including serving of notices and paying fees.	
F	The Contractor shall allow for paying and obtaining all approvals including those of Local Authorities, City Council, Occupation Permit and all other legally demandable statutory fees, rates or taxes. No adjustment of the Contract Sum will be made in respect of such payments, unless expressly stated to the contrary in these Bills of Quantities.	
	<u>Supervision</u>	
G	The said works shall be executed under the direction and to the entire satisfaction of the Project Manager and the Clerk of Works, who shall have the Project Manager's specifically delegated authority, and who shall at all times have access to the works and to the yards and workshops of the Contractor or other places where work is being prepared for the building works.	
	<u>Transport to and from sites</u>	
H	The Contractor shall include in his prices for the transport of materials, workmen etc. to and from the sites of the proposed works, at such hours and such routes as are permitted by the authorities.	
	COLLECTION -3 CARRIED TO SUMMARY	

ITEM	DESCRIPTION	AMOUNT (USD)
	<p><u>Fair wages</u></p> <p>A The Contractor shall pay rates of wages and observe hours and conditions of labour not less favourable than the minimum rates or remuneration and minimum conditions of employment applicable in the district in which the work is carried out. The relevant notice must be posted up and kept posted upon the site where it can conveniently be read by the employees concerned.</p> <p>B The Contractor is to comply with the Regulation of Wages and Conditions of Employment Act, Building and Construction Industry Wages council and is to be responsible for compliance by Sub-contractors employed in the execution of the Contract. If required, he is to notify the Project Manager of the names and addresses of all such sub-contractors. Any Contractor or sub-contractor not so complying will not be permitted to tender for other work for such period as the Project Manager may determine.</p> <p>C Should a claim be made to the Project Manager alleging the Contractor's default in payment of Fair Wages of any workman employed on the Contract and if proof therefore satisfactory to the Project Manager is furnished by the Labour Department, the Project Manager may, failing payment by the contractor pay the claim out of any monies due or which may become due to the Contractor under this contract.</p> <p>D The Contractor is to furnish to the Project Manager, if called upon to do so, such particulars of the rates of wages, hours and conditions of labour referred above, as the Project Manager may direct.</p> <p><u>Relevant Labour Laws</u></p> <p>E The Contractor's attention is called to the relevant labour laws in the country and the Contractor should allow in the Preliminaries of this Contract for all costs arising or resulting there from.</p> <p><u>Security of the works and fencing</u></p> <p>F The Contractor shall be entirely responsible for the security of all the Works, stores, materials, plant, personnel etc. both his own and sub-contractors and shall provide all necessary watching, lighting and other precautions as necessary to ensure the security and protection of the public. The Contractor shall provide identification cards with Photographs of all workers on the site to the satisfaction of the Project Managers.</p> <p><u>Public and private roads, pavement, etc</u></p> <p>G The Contractor will be required to make good at his own expenses any damage he may cause to the present approach road surfaces during the period of the Works.</p> <p><u>Police regulations</u></p> <p>H The Contractor is to allow for complying with all instructions and regulations of the Police Authorities.</p>	
	COLLECTION -4 CARRIED TO SUMMARY	

ITEM	DESCRIPTION	AMOUNT (USD)
	<p><u>Area to be occupied by contractor</u></p> <p>A The areas of the sites which may be occupied by the Contractor for use as storage and for the purpose of erecting workshops, etc. shall be defined on the site by the Project Manager.</p> <p><u>Progress schedule</u></p> <p>B Immediately after signing the Contract the Contractor is to prepare a Time and Progress Chart showing the time and order in which he proposes to carry out the Works within the total construction time stated in the Contract. The Chart shall show in detail the construction time, order in which each section of the work is to be carried out and be sub-divided into trades or tasks.</p> <p>Monthly progress reports shall be prepared by the Contractor and submitted to the Project Manager in six copies. The first report shall cover the period up to the end of the first calendar month following the Commencement Date. Reports shall be submitted monthly thereafter, each within 7 days after the last day of the period to which it relates.</p> <p>Reporting shall continue until the Contractor has completed all work which is known to be outstanding at the completion date stated in the certificate of practical completion for the Works.</p> <p>Each report shall include but not limited to:</p> <p>(a) a programme and progress chart devised in such a way that the approved contract work program is shown and progress can be marked up against it as the work proceeds,</p> <p>(b) photographs showing the status of progress on the Site,</p> <p>(c) records of the Contractor's Personnel and Equipment,</p> <p>(d) Site Weather Records duly certified by the Clerk of Works/Site Engineer</p> <p>(e) copies of quality assurance documents, test results and certificates of materials,</p> <p>(f) updated cash flow projection,</p> <p>(g) procurement schedule,</p> <p>(h) safety statistics,</p> <p>(i) comparisons of actual and planned progress, with details of any events or circumstances which may jeopardise the completion in accordance with the Contract, and the measures being (or to be) adopted to overcome the delays.</p> <p>Following receipt of such a notice, the Contractor shall take such steps as may be necessary, and as the Project Manager may approve, to remedy or mitigate the likely delay, including revision of the programme. The Contractor shall not be entitled to any additional payment for taking such steps.</p> <p>C The Contractor shall obtain the Project Manager's approval of the Chart and then shall supply copies to the employer and Project Manager, as requested.</p>	
	COLLECTION -5 CARRIED TO SUMMARY	

ITEM	DESCRIPTION	AMOUNT (USD)
	<p><u>Overtime</u></p> <p>A The Contractor shall be responsible for any extra costs for overtime working he considers will be necessary in order to complete the work within the contract period or time for completion apart from the overtime working which may be authorised by the Project Manager.</p> <p>B If overtime is worked in accordance with a written instruction issued by the Project Manager, the Contractor will be reimbursed in respect of such overtime to the extent only of the additional net cost of unproductive time payable over and above the basic hourly rates as laid down by the Regulation of wages and Conditions of Employment Act, Building and Construction Industry Wages Council and excluding any bonuses, profits and overheads.</p> <p><u>Water</u></p> <p>C The Contractor shall allow for providing all temporary water supplies required for the works, including Sub-Contract Works, together with all necessary storage tanks and distribution systems for the same and must allow for bearing all expenses incurred and paying for all water consumed without charge to any Sub-Contractor. Expenses in connection with Nominated Sub-Contractors should be allowed for in the attendance items under the relevant P.C. Sums.</p> <p>D All water shall be fresh, clean and pure, free from earthy, vegetable or organic matter, acid or alkaline substance in solution or suspension.</p> <p><u>Lighting and power</u></p> <p>E The Contractor shall allow for providing all temporary lighting and power supplies required for the works, including Sub-Contract works, together with all necessary distribution systems for the same and must allow for bearing all expenses incurred and paying for all current consumed without charge to any Sub-Contractor. Expenses in connection with Nominated Sub-Contractors should be allowed for in the attendance items under the relevant P.C. Sums.</p> <p>No guarantee or warranty is given as to the availability or suitability of power at the site.</p> <p><u>Testing</u></p> <p>F The Contractor shall allow for all testing of materials as required, and he shall be responsible for all expenses incurred in completing such tests, including costs of materials and labour equipment, transport and charges of the testing authority etc.</p> <p><u>Temporary works</u></p> <p><u>Access to sites and temporary roads</u></p> <p>G Means of access to the site shall be agreed with the Project Manager prior to commencement of the Work and the Contractor must allow building temporary access roads for the transport of materials, plant and workmen as may be required for the complete execution of the Works including the provision of temporary culverts, crossings, bridges or any other means of gaining access.</p>	
	COLLECTION -6 CARRIED TO SUMMARY	

ITEM	DESCRIPTION	AMOUNT (USD)
A	Upon completion of the works, the Contractor shall remove such temporary roads, temporary culverts, bridges etc. and make good and reinstate all works and services distributed to the satisfaction of the Project Manager. <u>Temporary buildings for use by the Contractor</u>	
B	The Contractor shall at his own cost, supply and erect all temporary buildings, sheds, mess rooms and stores with floors at least 150mm above ground level. No office, stores or other temporary buildings shall be erected on Site without first obtaining the consent from the Project Manager as to the type of temporary building to be supplied and the position in which they are to be erected. <u>Sheds for storage of Materials</u>	
C	The Contractor shall provide and maintain on the Site, ample weather-proof sheds for storage of cement and other perishable materials and shall clear the same away on completion and make good any disturbed surfaces.	
	COLLECTION -7 CARRIED TO SUMMARY	
D	Upon completion all temporary buildings are to be removed and cleared away. <u>Communication</u>	
E	All communications will be to the contractors offices, and the contractor shall provide effective means of communication, including voice and facsimile facilities from Administration office to site and this will be made available for the use of the project manager and his representative and the contractor will pay all costs and connection charges.	
	COLLECTION -8 CARRIED TO SUMMARY	

ITEM	DESCRIPTION	AMOUNT (USD)
	<p><u>Sanitation of the works</u></p> <p>A The sanitation of the works shall be provided, maintained and removed on completion by the contractor to the satisfaction of the project manager and local authorities.</p> <p>B The latrines shall be enclosed with framing and corrugated roofing sheets, sides and partitions with concrete floors, steel trowelled smooth to falls to facilitate washing. Their location shall be agreed with the Project Manager and the works shall not be commenced before the sanitary accommodation has been approved by the above -mentioned authorities.</p> <p>C The Project Manager will be required to pay all conservancy charges and shall ensure clean daily maintenance and disinfecting of the latrines, and not less than once per week, the whole area shall be sprayed with disinfectant and on completion of the works the latrines and any temporary drains shall be removed and all works and surfaces disturbed made good and the whole area disinfected and left clean and free from pollution to the satisfaction of the Project Manager and local authorities.</p> <p><u>Notice boards/ Sign boards</u></p> <p>D The contractor shall provide and erect where directed and maintain during the whole period of building operations and remove at completion, one approved temporary notice board to the project Manager's design and giving a brief description of the works and showing the names of the employer, Project Manager and Contractor.</p> <p><u>Temporary Hoardings, Fencing and the like</u></p> <p>E The Contractor shall be entirely responsible for all temporary hoarding and fencing which shall be required by either the Project Manager or the Local Authority. The Contractor should ascertain the extent of such temporary hoardings and fencing and include the costs in his bid.</p> <p>F The contractor is to obtain any necessary permits, maintain in position, pay all necessary fees and finally clear away on completion.</p> <p><u>Protection of the works</u></p> <p>G The contractor shall cover up and protect all finished works liable to damage including provision of temporary roof, gutters, drains, etc. until the completion of the works.</p>	
	COLLECTION -9 CARRIED TO SUMMARY	

ITEM	DESCRIPTION	AMOUNT (USD)
A	<p>In the event of any damage occurring to the works, materials, sewers, drains, gullies, paths or other works on the site in temporary possession of the contractor for the purpose of this contract, either from the weather, want of proper protection, defects, or insufficiency of works or any other cause whatsoever during the progress of the works, the contractor alone shall be responsible and shall without extra charge, make good all damage and pay all costs which may be levied.</p> <p><u>Prevention of nuisance</u></p> <p>B The works and such sections of the site necessary therefore, shall be under the entire care and control of the contractor during the whole period of the contract and he shall take all possible precautions to prevent any nuisance, inconvenience or injury to the holders or occupiers of the existing or surrounding properties and to the public generally, and shall at all times keep all paths and roads affected by the works in a safe and clear state, and shall use proper precautions to ensure the safety of all wheeled traffic and pedestrians.</p> <p><u>Removal of plant, rubbish, etc.</u></p> <p>C The contractor shall, upon completion of the works, remove and clear away all temporary buildings, plants, rubbish and unused material and shall leave the whole of the site of works in a clean and tidy state to the satisfaction of the Project Manager. He shall also remove all rubbish and dirt from the site at weekly intervals or as directed by the Project Manager.</p> <p>D Particular care shall be taken in leaving windows clean and the removal of all paint and cement stains therefrom.</p> <p><u>Records</u></p> <p>E The contractor shall allow for keeping all records relevant to the works and shall keep on site a daily recording of weather conditions, temperature, rainfall, visitors, Plant, workforce, to the site etc.</p> <p><u>Training and standard levies</u></p> <p>F The contractor shall allow for all costs related to training and standard levies, and the like, as required by the Laws.</p> <p>Engineers Accommodation and Attendance Upon Engineer and His/her site Personnel</p> <p>I The Contractor shall allow for Cost for payment of surveyor support staff and laboratory technicians</p>	
	COLLECTION -10 CARRIED TO SUMMARY	

ITEM	DESCRIPTION	AMOUNT (USD)
	<p><u>Occupational Health and Safety, HIV/AIDS and Gender</u></p> <p>A The Contract shall provide a qualified safety officer to deal with OHS, HIV/AIDS and Gender Management and provide all necessary facilities including transport. HIV/AIDS and STD prevention and counseling shall include information, education and counseling campaigns including regular distribution of condoms. The Contractor shall provide, maintain and operate a HIV/AIDS and STD clinic or make alternative arrangements with an existing facility to the approval of the Project Manager. The Contractor shall also carry out Gender sensitisation and awareness raising meetings and workshops and provide gender sensitive monitoring and reporting.</p> <p>The Contractor (including his sub-contractors) or any sub-contractor directly employed by the client shall ensure that all health and safety provisions are in place and are functional prior to doing any work on site on a daily basis. Non compliance shall attract an express penalty of USD 1,000 (United state Dollar one thousand Thousand only) per day per item listed on the health and safety plan that is not implemented. Such amounts shall be deducted from payment due to main contractor in the valuation that will be issued in the period after the incidence. A letter informing the responsible contractor/sub-contractor of the said undertaking shall be issued by the consultants immediately when the non-compliance is identified.</p> <p><u>Compliance with NEMA Regulations and the Environment Impact Assessment Report Recommendations</u></p> <p>B The Contractor shall comply with all the regulations set out by the National Environmental Management Authority (NEMA). The contractor should familiarize himself with the Recommendations of the Environmental Impact Assessment and comply with them during execution of the work.</p> <p><u>As-built drawings and operating & Maintenance Manuals</u></p> <p>C "As built" drawings and/or operating and maintenance manuals shall be supplied by the Contractor by the date stated in the Conditions of Contract and Contract Data.</p> <p><u>Copyright</u></p> <p>D The Copyright of these documents is vested in the Project Manager and they may not be reproduced in whole or in part without the Project Manager's Written Permission.</p>	
	COLLECTION -11 CARRIED TO SUMMARY	

ITEM	DESCRIPTION	AMOUNT (USD)
	BILL NO.1 Collection	
	Brought forward from page 1/1	
	Brought forward from page 1/2	
	Brought forward from page 1/3	
	Brought forward from page 1/4	
	Brought forward from page 1/5	
	Brought forward from page 1/6	
	Brought forward from page 1/7	
	Brought forward from page 1/8	
	Brought forward from page 1/9	
	Brought forward from page 1/10	
	Brought forward from page 1/11	
Total to be carried to Main Summary		

ITEM	DESCRIPTION	PAGE		AMOUNT (USD)
	<p>PROPOSED BORDER POST AT KURMUK</p> <p>BILL NO.2</p> <p>BORDER POST AT ETHIOPIA</p> <p>BILL SUMMARY</p> <p>A ELEMENT A: SUBSTRUCTURES</p> <p>B ELEMENT B: SUPERSTRUCTURE</p> <p>C ELEMENT C: ROOFING</p> <p>D ELEMENT D: DOORS & WINDOWS</p> <p>E ELEMENT E: FINISHES</p>			<p>-</p> <p>-</p> <p>-</p> <p>-</p> <p>-</p>
TOTAL BILL NO.2 CARRIED TO MAIN SUMMARY				-

ITEM	DESCRIPTION		PAGE		AMOUNT (USD)
Item	Description	Unit	QTY	Rate (USD)	AMOUNT (USD)
	Bill No.2				
	Element A - SUBSTRUCTURE				
A	Clear area of new construction of all undergrowth small bushes, grub up all trees not exceeding 200mm girth and remove existing structure and any obstructions as directed.	m ²	182		
B	Excavate over site to remove vegetable soil 150mm deep and take away debris from site.	m ²	182		
C	Excavate to reduce levels. (provisional)	m ³	46		
D	Excavate foundation trench not exceeding 1.50m deep.	m ³	82		
E	Do. But for column base.	m ³	6		
F	Return, fill in and ram imported approved murram around foundations.	m ³	48		
G	Fill in and ram imported murram infilling to make up levels under floor well consolidated in 150mm thick layers.	m ³	25		
	<u>Cart away</u>				
H	Load, wheel and deposit surplus soil on site average 100m from excavations.	m ³	144		
	<u>Keep excavations free from water:-</u>				
I	Allow for keeping the whole of the excavations free from mud, silt and water by bailing, pumping or otherwise	Item	1		
	<u>Planking and strutting to sides of excavations</u>				
J	Allow for the provision, maintaining and subsequent removal of all required planking and strutting to uphold sides of all excavations and for keeping same free from fallen materials	Item	1		
	<u>150mm Thick bed of approved imported murram well spread levelled, rammed and consolidated in layers not exceeding 100mm.</u>				
K	Filling to Make up levels	m ³	30		
	<u>Approved hard-core filling as described</u>				
L	200mm Bed of approved imported hard core well spread, rammed and consolidated under floor slab and blinded with and including 30mm layer of sand well watered and rolled to receive concrete (measured separately).	m ²	105		
	Total Carried to Collection (SUBSTRUCTURE)				

ITEM	DESCRIPTION		PAGE		AMOUNT (USD)
	<u>Termidor 25 EC' or other approved anti-termite chemical treatment: applied by an approved professional pest control specialist: strictly in accordance with the manufacture`s instructions to</u>				
A	Sides and bottoms of column bases	m ²	28		
B	Ditto: of strip foundations	m ²	327		
C	Surfaces of Hardcore bed	m ²	102		
	<u>Damp proof membrane</u>				
D	1000 Gauge diothene or other equal approved polythene sheeting as damp proof membrane laid on blinded hard core (measured separately) with weltd joints and minimum 200mm end and side laps.	m ²	126		
	<u>Plain in-situ concrete (Class 10/25mm aggregates of assumed mix 1:4:8) as described in:-</u>				
E	50mm thick Concrete blinding:	m ²	4		
	<u>Plain in-situ concrete (Class 20/25mm aggregates of assumed mix 1:2:4) as described in:-</u>				
F	Strip foundations.	m ³	11		
	<u>Vibrated Reinforced concrete (Class 25/19mm aggregates of Assumed mix 1:1.5:2) as described in:-</u>				
G	Column bases.	m ³	1		
H	Columns stub.	m ³	1		
I	150mm Floor bed laid on damp proof membrane. (m/s)	m ²	126		
J	200mm average concrete ramp	m ²	3		
	<u>High yield twisted bars reinforcement to BS 4449</u>				
K	8mm Diameter bar.	Kg	17		
L	12mm Ditto.	Kg	69		
	<u>Welded fabric reinforcement to BS 4483</u>				
M	Steel wire fabric mesh reinforcement to B.S 4483 Ref. A142 weighing 2.22kg/m2 in concrete floor bed with minimum 300mm end and side laps.(measured net)	m ²	126		
	Total Carried to Collection (SUBSTRUCTURE)				

ITEM	DESCRIPTION		PAGE		AMOUNT (USD)
	<u>Sawn formwork as described to:-</u>				
A	Sides of column base	m ²	4		
B	Sides of column stud	m ²	8		
C	Edge of slab 150 - 225mm high.	m	56		
	<u>Solid Blockwork in cement mortar (1:4) Reinforced with 25 x 3 mm hick iron strips at alternative course to:-</u>				
D	200mm Thick plinth walling	m ²	75		
	<u>Hessian based bituminous felt or other approved damp proof course laid on and including 25mm cement and (1:3) mortar as described under:-</u>				
E	200mm wall	m	78		
	<u>Plinth wall Finnish</u>				
F	15mm thick cement and sand (1:4) rendering to plinths externally.	m ²	28		
G	Prepare and apply three coats of bitumastic or equal approved water resistant paint rendered plinths externally.	m ²	28		
	<u>Splash apron</u>				
H	100mm Thick concrete grade 20 splash apron on and including 100mm compacted murram base and 150mm thick brick wall edge to detail.	m ²	25		
I	Sawn formwork to edge of slab 75 - 150mm high.	m	49		
J	10mm Cement sand (1:3) screed on splash apron steel trowelled hard and smooth.	m ²	30		
Total Carried to Collection (SUBSTRUCTURE)					
	Collection (Substructure)				
	Total page 2/2				
	Total page 2/3				
	Total page 2/4				
TOTAL BILL NO.2 (SUBSTRUCTURE) CARRIED TO BILL SUMMARY					

ITEM	DESCRIPTION		PAGE		AMOUNT (USD)
	ELEMENT B: SUPERSTRUCTURE				
	<u>WALLING AND FRAME</u>				
	<u>Vibrated Reinforced concrete (Class 25/19mm aggregates of Assumed mix 1:1.5:2) as described in:-</u>				
A	Beam	m	4		
B	Column	m ³	1		
	<u>High yield twisted bars reinforcement to BS 4449</u>				
C	8mm Diameter bar.	Kg	131		
D	12mm Ditto.	Kg	355		
	<u>Sawn formwork as described to:-</u>				
F	Sides of column	m ²	10		
G	Sides and soffit of beam	m ²	53		
	<u>Precast Concrete (Class 30/ 20mm aggregate) of assumed mix 1:1:2 as described:</u>				
H	Lintel size 200mm x 200mm High: with and including 4No 12mm diameter mild steel bars and 6mm mild steel links at 200mm centres including hoisting and bedding in position in cement:sand mortar (1:3)	m	15		
	<u>WALLING</u>				
	<u>Hollow Concrete Block work in cement mortar (1:4)</u>				
	<u>Reinforced with 25 x 3 mm thick hoop iron strips at alternative couesto:-</u>				
I	200mm Thick walling:	m ²	106		
J	150mm Thick walling:	m ²	24		
TOTAL BILL NO.2 (SUPERSTRUCTURE) CARRIED TO BILL SUMMARY					

ITEM	DESCRIPTION		PAGE		AMOUNT (USD)
	ELEMENT C				
	<u>ROOF CONSTRUCTION AND COVERING</u>				
	<u>Treated timber trusses</u>				
A	100x50mm rafters	m	65		
B	100x50mm tie beam	m	52		
C	75x 100 wall plate	m	24		
D	150x50mm Purlins	m	137		
E	100x50mm struts & ties	m	65		
	<u>ROOF COVERING</u>				
F	28 Gauge pre-painted galvanized IT4 sheet of approved colour, profile and and fixing accessories as (including filler blocks for bat proofing) fixed to timber purlins with roofing nails in accordance with the manufacturers instructions.	m ²	140		
	<u>Fascia and Barge Boards</u>				
G	225mm fascia & Barge boards ; primed and painted on the outside surface in three coats paint to approval	m	27		
	<u>RAINWATER DISPOSAL</u>				
H	100mm PVC gutter; fixed to fascia board	m	30		
I	100mm Diameter PVC PN10 down pipe complete with and including all necessary fixing accessories fixed with approved holder bats.	m	8		
J	Extra over for shoes.	No.	2		
L	Extra over for bends.	No.	2		
TOTAL BILL NO.2 (ROOFING) CARRIED TO BILL SUMMARY					

ITEM	DESCRIPTION		PAGE		AMOUNT (USD)
	ELEMENT D - DOORS & WINDOWS				
	DOORS				
	STEEL PANELLED DOORS				
	<u>Purpose made door : 50mm Thick Standard Steel door complete with and including all Iron-mongery and accessories; one coat red oxide primer; ; all to Architect's detailed drawing.</u>				
A	Door D1 overall size 2700 x 2400mm high composite steel casement door double leaf on steel frame comprising of: 2mm thick mild steel plate to details include all accessories	No	1		
	<u>Prepare surface and apply Etching Primer; apply one coat primer, one undercoat and two Gloss finishing coats; on metal work : to</u>				
B	Steel door surfaces	m ²	13		
C	Surfaces 200 - 300mm girth	m	8		
	Timber doors				
D	45mm thick Single leaf Door D2 900x2100 mm high solid cored flush door faces both sides with 6mm plywood veneer.	No	2		
E	Ditto D3 800x2400mm high	No	2		
	<u>Wrought hardwood, selected, treated and kept clean in</u>				
F	200 x 50mm frame, one labour, plugged	m	20		
G	40 x 20mm architrave ditto	m	40		
H	20 x 20 mm Beading; one labour: ditto	m	40		
	IRONMONGERY				
	Supply and Fix the following ironmongery				
I	100mm Pressed stainless steel butt hinges	prs	6		
J	3-Lever (Union) mortice lock	No	2		
K	2-Lever (Union) bathroom lock ditto.	No	2		
L	Door stopper	No	4		
M	Overhead door closers Briton series	No	3		
	WINDOWS				
	METAL WORK				
	<u>Purpose made window standard Steel Section vent fixed, comprising of, one coat powder : ; as per Architect's detail</u>				
F	Window (W1) Size 2100 x 1500mm high	No	5		
G	Window (W2) Size 1400 x 1500mm high	No	2		
H	Window (W3) Size 900 x 1200mm high	No	2		
	<u>Prepare surface and apply Etching Primer; apply one coat primer, one undercoat and two Gloss finishing coats; on metal work : to</u>				
I	General surfaces	m ²	44		
TOTAL BILL NO.2 (DOOR & WINDOWS) CARRIED TO BILL SUMMARY					

ITEM	DESCRIPTION		PAGE		AMOUNT (USD)
	ELEMENT E: FINISHES				
	INTERNAL WALL FINISHES				
A	20mm cement, lime and sand (1:2:9) wall plaster in two coats steel trowelled hard and smooth on walls internally.	m ²	185		
B	Prepare and apply one plaster primer and two coats of vinyl emulsion paint on plastered walls internally.	m ²	185		
	EXTERNAL WALL FINISHES				
	<u>Cement and washed sand (1:3) render trowelled smooth</u>				
C	18mm cement and sand (1:3) wall rendering in woad trowelled hard on walls externally.	m ²	115		
	<u>Painting and Decorating</u> <u>Prepare and Apply three coats first grade</u> <u>weatherguard emulsion paint : externally; on</u>				
D	Rendered surfaces	m ²	115		
	FLOOR FINISHES				
	<u>Cement and sand (1:4) Screed</u>				
E	25mm Thick floor screed with approved hardener; steel trowelled:	m ²	101		
F	25mm thick polished terrazzo floor finish	m ²	101		
G	150mm high polished terrazzo skirting	m	120		
TOTAL BILL NO.2 (FINISHES) CARRIED TO BILL SUMMARY					

Item	Description	Unit	Quantity	Rate (USD)	Amount (USD)
	BILL NO.3 EXTERNAL WORKS				
	<u>GENERAL EXCAVATION</u>				
	<u>Clearing, Grubbing and removal of Top soil:</u>				
A	Clear site of all bushes, shrubs and under growth and cutting down trees not exceeding 1500mm girth, including grubbing up roots and removing away from site for the parking as instructed by the Engineer	Ha	0.50		
B	Remove Top soil including ant hills, to average depth and area to be Instructed by the Engineer and measured in place prior to the removal	m ³	743		
C	Load and cart away surplus excavated material from site.	m ³	743		
D	Applying approved Pesticides to Ant and Termites' nests to the manufacturer's instructions.	Litres	60		
	<u>PARKING AND DRIVE WAY</u>				
	<u>Earthwoks to Subgrade Leval:</u>				
	Excavations:				
E	Common Excavation to spoil	m ³	0		
F	Fill to Subgrade Layers to required minimum GC quality Gravel or better compacted	m ³	0		
G	80 mm Thick heavy duty concrete block size 205 x 110 mm laid on falls and including 30 mm thick sand bed, allow for compaction, rolling and vibration, spread and brush into joints and compact.	m ²	0		
TOTAL CARRIED TO COLLECTION-1					

Item	Description	Unit	Quantity	Rate (USD)	Amount (USD)
	BILL NO.3 EXTERNAL WORKS				
	<u>ROAD MARKINGS-PARKING</u>				
	<u>Road marking using retroreflective road-marking paint</u>				
	<u>White lines (broken or unbroken)</u>				
A	100 mm wide	m	0		
	<u>Yellow lines (broken or unbroken)</u>				
B	100 mm wide	m	0		
C	White lettering and symbols	m ²			
	<u>WALKWAYS</u>				
	<u>PRECAST CONCRETE heavy duty paving blocks or any other equal and approved : quad block pattern.</u>				
D	60 mm Thick heavy duty concrete (class 25/19) block size 205 x 110 mm laid on falls and including 50 mm thick sand bed, allow for compaction, rolling and vibration, spread and brush into joints and compact.	m ²	-		
	<u>Concrete Kerbing, Channeling and Lining for walkways</u>				
	<u>PRECAST CONCRETE Class "20" as described finished fair on all exposed surfaces including bedding, jointing and pointing in cement and sand (1:3) mortar</u>				
E	250 x 125 mm Splayed kerb to BS 340 including 125 x 100 mm channel on and including 100mm thick concrete Class 20 mass concrete bed and haunching, including all necessary excavation, formwork and disposal. As per Architects detailed drawing	m	0		
F	Allow Provisional sum for the drainage of parking yards and drive (approx area sq.m)	ITEM	0		
TOTAL CARRIED TO COLLECTION-2					
	COLLECTION				
	Total page 3/1				
	Total page 3/2				
TOTAL PARKING & EXCAVATION CARRIED TO BILL SUMMARY					

Item	Description	Unit	Quantity	Rate (USD)	Amount (USD)
	BILL NO.3 EXTERNAL WORKS				
	<u>LANDSCAPING AND GRASSING</u>				
A	Topsoiling within the road reserve: Topsoil obtained from within the road reserve or borrow areas (free haul 1,0 km)	m ³	-		
B	Dig out to break existing ground and all weeds and roots, supply, spread and level 300mm red imported soil and mix with manure and general fertilizer including planting approved grass tufts at 100mm centres in each direction including watering until established.	m ²	100		
C	Position approved small tree in pit and spread and pack around roots with finely broken soil and water until established.	No	-		
D	Ditto approved medium tree ditto	No	27.00		
TOTAL LANDSCAPING CARRIED TO BILL SUMMARY					

Item	Description	Unit	Quantity	Rate (USD)	Amount (USD)
	BILL NO.3 EXTERNAL WORKS				
	<u>FENCING AND GATES</u>				
	FENCING AND GATES Chainlink fencing to B.S 1722 Part 1 table 1 and 2 on posts at 3.00m centres and struts set 600mm below ground and surrounded in 450 x 450 x 450mm plain concrete grade 15 on and including straining fittings, holes in posts for line wires and barbed wires on top and all excavations, backfilling and disposal of surplus spoil.				
A	Heavy grade galvanized chainlink 1800mm high on 50 x 50 x 5mm cranked Angle lines 2100mm high with 3No. 26.5mm Ø galvanized line wires and 3 no. strands of galvanized barbed wire to B.S 4102	m	60		
B	Extra over for end post with 1No. 50 x 50 x 5mm strut.	No	8		
C	Extra over for straining post with 2No. 50 x 50 x 5mm struts	No	2		
D	Extra over for angle post with 2No. 50 x 50 x 5mm struts.	No	2		
	GATES				
E	Supply and fixing boom gate	LS	1		
TOTAL GATES AND FENCING CARRIED TO BILL SUMMARY					

Item	Description	Unit	Quantity	Rate (USD)	Amount (USD)
	BILL NO.3 EXTERNAL WORKS BILL SUMMARY PARKING, DRIVE WAY AND GENERAL EXCAVATION SOFT LANDSCAPING FENCING AND GATES				
TOTAL BILL.3 CARRIED TO GRAND SUMMARY					

DESCRIPTION		PAGE NO	AMOUNT (USD)
<u>BILL NO.4</u> <u>PIT LATRINE</u> <u>SUMMARY</u>			
1	SUBSTRUCTURES		
2	WALLING		
3	ROOFING		
4	OPENING		
5	FINISHING		
TOTAL BILL No. 4 CARRIED TO SUMMARY			

Item	Description	Unit	Quantity	Rate (USD)	Amount (USD)
	4 STANCE PIT LATRINE BLOCK ELEMENT NO.1 Substructure				
	Site preparation				
A	Excavate oversite to remove vegetable soil average 250mm deep and remove from site.	m ²	53		
B	Treat surface of subsoil or filling and surroundings with approved chemical anti-termite solution: provide ten year guarantee.	m ²	53		
	Excavation and Earthworks.Note: Rates for excavation to include for keeping excavations free from water and planking and strutting to sides of excavation.				
C	Excavate to reduce levels and remove from site	m ³	13		
D	Excavate trenches for wall foundations: commencing from reduced levels: not exceeding 1.5m deep	m ³	13		
E	Ditto but pit for latrine	m ³	18		
	Disposal of excavated material				
F	Removal surplus excavated material from site	m ³	44		
	Insitu concrete grade 25/20mm aggregate as described				
G	Foundations in trenches	m ³	2		
	Vibrated, reinforced concrete as described,				
H	150mm thick ground floor slab tamped to fabric reinforcement	m ²	28		
	Total element no.1 carried to collection-1				

	Mesh reinforcement Ref No. A98 size 200x200mm weighing 1.54kg per square metre: in floor slab including all necessary supports				
A	In suspended slab	m ²	28		
B	12mm diameter high tensile bars	kg	492		
	Sawn treated formwork to: Sawn formwork as described to:				
C	Soffites of suspended slab	m ²	17		
D	Vertical edges of surface bed: over 5mm but not exceeding 150mm high.	m	22		
	Brick in burnt clay bricks in cement and sand mortar (1:3) mix; with and including 25x3mm hoop iron strips laid horizontally every alternate course.				
E	200mm thick Plinth walling & pit walls	m ²	32		
	Sundrilles				
F	One layer 1000 gauge polythene sheet damp proof membrane	m ²	28		
	Damp proof course: Hessian based bituminous felt: bedded in cement and sand (1:4) mortar: 300mm laps.				
G	Horizontal: 150mm ditto	m	0		
H	Horizontal: 230mm ditto	m	30		
	Plinth wall and splash apron				
I	15mm thick cement and sand plaster to plinth walls with steel float finish.	m ²	13		
J	Prepare and apply three coats of black bituminous paint to plastered surfaces	m ²	13		
K	75mm (average) thick concrete class 25/18mm aggregate splash apron reinforced with and including formwork and fabric mesh reinforcement ref A98 as before described and all necessary formwork	m ²	13		

	Total element no.1 carried to collection-2				
	collection-1 brought forward				
	collection -2 brought forward				
	Total element no.1 carried to bill summary				
	<p>Element no.2</p> <p>WALLING</p> <p>Brick in burnt clay bricks in cement an sand mortar(1:3) mix; with and including 25x3mm hoop iron strips laid horizontally every alternate course</p> <p>200mm thick walling reinforced with and including 25x3mm hoo iron strips laid horizontally every alternate course</p> <p>150mm thick walling reinforced with and including 25x3mm hoo iron strips laid horizontally every alternate course</p> <p>External wall finishes</p> <p>Cement and sand (1:4) render trowelled smooth on concrete or masonry</p> <p>15mm to walls</p> <p>Two coats tyrolene rendering on:</p> <p>Walls and concrete surfaces</p> <p>Insitu concrete grade 25/20mm aggregate as described</p> <p>Ring Beam</p> <p>12mm diameter high tensile bars</p> <p>8mm diameter round bars</p> <p>Sawn treated formwork to:</p> <p>Sawn formwork as described to:</p> <p>Soffites and sides of ring beam</p>	<p>m²</p> <p>m²</p> <p>m²</p> <p>m²</p> <p>m³</p> <p>kg</p> <p>kg</p> <p>m²</p>	<p>95</p> <p>0</p> <p>94</p> <p>94</p> <p>1</p> <p>89</p> <p>39</p> <p>15</p>		

	Total element no.3 carried to bill summary				
	ELEMENT NO.4				
	Doors				
	Concrete Work				
	Precast Class 28/12mm lintel reinforced with 4no. 12mm high tensile steel bars and 8mm steel stirrups at 200mm centres and including all necessary formwork and hoisting and fixing in position.				
A	150x200mm high	m	4		
B	Wrot Mahogany: selected and kept clean.				
	45mm thick framed door size 850x2075mm high comprising 45x125mm stiles, top, bottom and middle rails filled in with 100mm wide tongued and grooved battens all to Architects details.				
C		no.	4		
D	25x50mm Architrave	m	41		
E	50x150mm Door Frame: two labours: plugged	m	20		
	Supply and fix the following ironmongery of "UNION" Manufacture and to Architects approval complete with matching fixing to hardwood or steel				
F	Butt Hinges, 75x100mm: heavy duty: finished stainless steel	prs	6		
G	Purpose made padbolt 150mm long	no.	4		
	Prepare, Knot prime, stop and apply three coats of gloss oil paint: on woodwork:				
H	General Surfaces: doors	m ²	14		
I	Ditto: over 200 but not exceeding 300mm girth	m	20		
J	Prime back of frame before fixing	m	41		

	Total element no.4 carried to bill summary				
	ELEMENT NO.5 FINISHES Floor Finishes Cement and sand (1:4) screeds and paving: one coat: steel trowel finish: laid on concrete A 25mm thick cement sand sreed (1:4)	m ²	21		
	B Ditto but skirting	m	23		
	Wall Finishies Internal cement and sand plaster: steel trowel finish C 15mm thick to walls	m ²	84		
	Painting Prepare and apply one undercoat and three D finishings coats of matt vinyl paint to plastered surface.	m ²	84		
	Soil and vent pipe 100mm diameter UPVC soil and vent pipe E 3500mm high with and including wire ballon grating	no.	2		

	Total Element no.5 carried to bill summary				

DESCRIPTION: GUARD HOUSES					
ITEM	DESCRIPTION	UNIT	QTY	RATE (USD)	AMOUNT (USD)
1	SUBSTRUCTURE				
2	FRAME				
3	ROOF				
4	WALLING				
5	WINDOWS				
6	DOORS				
7	FINISHES				
TOTAL BILL FOR GUARD HOUSE: SUMMARY					
	<p>ELEMENT No.1</p> <p>SUBSTRUCTURE</p> <p>Note: Substructure includes all the elements below ground level, including the basement</p> <p><u>Site Preparation</u></p> <p><u>Excavation and Earthworks</u></p> <p>Note: Rates for excavation to include for keeping excavations free from water and planking and strutting to the sides of excavations.</p>				
1.01	Excavate trenches for wall foundations: commencing from reduced levels: not exceeding 1.5m deep.	m ³	10		
1.02	<p>Disposal of excavated material</p> <p>Return, fill and ram selected excavated materials around foundations in 150mm layers and compact to 98% MDD</p>	m ³	7		

1.03	Load, cart, deposit, spread, level surplus excavated material where directed on site	m ³	6		
	<u>Hardcore</u>				
1.04	200mm filling: deposit, spread, level and compact: 25mm selected quarry dust blinding.	m ²	3.00		
	<u>Insitu concrete class 15/20mm aggregate as described</u>				
1.05	Foundation in trenches	m ³	1.20		
	<u>Insitu concrete class 25/20mm: vibrated, reinforced as described</u>				
1.06	150mm thick ground floor slab tamped to fabric reinforcement	m ²	7		
	Mesh fabric reinforcement reference A 142 to BS 4483: weighing 2.22kg per square meter: 200mm laps				
1.07	In surface beds	m ²	7		
Total Collection-1 Carried forward					
1.08	<u>Sawn formwork as described to:</u> Vertical edges of surface bed: over 75mm but not exceeding 150mm high	m	11		
	<u>Solid concrete block walling load bearing (3.5N/mm²) to BS 6073 in cement and sand (1:3) mortar as described.</u>				
1.09	230mm thick walling	m ²	15		
	<u>Sundries</u>				
1.10	One layer 1000 gauge polythene sheet damp proof mebrane: Under bed: 300mm laps.	m ²	7		
1.11	50mm thick sand blinding	m ²	7		
1.12	Approved anti termite treatment	m ²	36		

	Damp proof course: hessian based bituminous felt: bedded in cement and sand (1:4) mortar: 300mm laps				
1.13	Horizontal: 200mm ditto	m	11		
	<u>Plinth wall and splash apron</u>				
1.14	200mm thick walling to sides of splash apron including the necessary excavation and foundation concrete.	m ²	8		
1.15	150mm thick imported Murram filling compacted, rolled and watered	m ³	1		
1.16	15mm thick rendering to plinths externally	m ²	3		
Total Collection-2 Carried forward					
	COLLECTION				
	Total collection-1 Brought Forward				
	Total collection-2 Brought Forward				
TOTAL ELEMENT No.1 (SUBSTRUCTURE) TO SUMMARY					
	ELEMENT No.2 FRAME				
	<u>Insitu concrete class 20/20mm: vibrated, reinforced, as described</u>				
2.01	Ring beam	m ³	0.50		
2.02	100mm thick concrete counter reinforced with BRC	m ²	5.83		
2.03	200mm thick support wall	m ²	2.00		
2.04	150mm thick suspended solid slab	m ²	2.00		
	Mild steel rod reinforcement to BS 4461 as describrd				

2.05	8mm Ø bar	kg	23		
	High yield tensile steel bar reinforcement to BS 4449 as described including cutting to lengths, bending, hoisting and fixing including all necessary tying wire and spacing blocks				
2.06	12mm Ø bar	kg	38		
	<u>Sawn formwork as described to:</u>				
2.07	Sides and soffites of beams	m ²	6		
2.08	Soffit of suspended	m ²	-		
2.09	Edges of slab girth 150mm	m	-		
2.1	Sika waterproof treatement to the top of the slab	m ²	-		
TOTAL ELEMENT No.2 (FRAME) TO SUMMARY					
	ELEMENT No.3 ROOF <u>Roof construction</u> <u>Carpentry</u> The following in roof construction including hoisting and fixing approximately 3.0mm above ground level Sawn cypress pressure impregnated with preservative:				
3.01	50 x75mm purlins	m	10		
3.02	75x100mm strut & ties	m	12		
3.03	50x150mm tie beam	m	8		
3.04	75x100 rafters	m	11		
3.05	100x150mm wall plate	m	6		

	<u>Carpentry work</u> <u>The following in sawn timber</u>				
3.06	230x25mm fascia & berge board	m	3		
	<u>Roof covering</u>				
3.07	Gauge 26 GCI sheets fixed on timber purlins with roofing rails	m ²	10		
	<u>Painting</u>				
3.07	Prepare and apply three coats of gloss oil paint to wood surfaces over 200 but not exceeding 300mm girth	m	3		
TOTAL ELEMENT No.3 (ROOFING) TO SUMMARY					
	ELEMENT No.4 WALLING				
	<u>Solid concrete block walling load bearing (3.5N/mm²) to BS 6073 in cement and sand (1:4) mortar as described</u>				
4.01	200mm thick walling	m ²	25		
TOTAL ELEMENT No.4 (WALLING) CARRIED TO SUMMARY					
	ELEMENT No.5 WINDOWS				
	<p>Purpose made steel casement windows manufactured from standard window casement sections: manufacture, assemble and deliver to site: supply and fix ironmongery comprising approved hinges, pivoting mechanisms, stays, fasteners to opening lights: provide permanent vents: frames drilled, plugged and screwed or built into walling: one coat red oxide primer before delivery</p> <p>The bidder is advised to study the architectural drawings carefully and consult the architect in case of doubt as no claim will be entertained on ground of inadequacy of description of any item.</p>				

5.01	Windows type W1: Size 1200x1300mm high	no	2		
5.02	Windows type W1: Size 800x1300mm high	no	-		
TOTAL ELEMENT No.5 (WINDOWS) TO SUMMARY					
	ELEMENT No.6 DOORS Steel casement Doors Pupose made Door Purpose made Door Standard Steel Section for glazing with putty, permanent ventilation comprising T-bar hood, standard transomes and mullions, 300mm high vents at the top comprising 3mm thick mild steel sheet cranked louvers, 120mm wide bent to shape and welded to door frame including one coat red oxide etching primer : ALL iron mongery and accessories as per Architect's detailed drawings				
6.01	Door D1 overall size 900 x 2400mm high to Door schedule.	no.	1		
TOTAL ELEMENT No. 6 (DOORS) CARRIED TO SUMMARY					
	ELEMENT No. 7 FINISHES EXTERNAL & INTERNAL FINISHES Floor Finishes <u>Cement and Sand (1:3) screeds and</u> <u>pavings: one coat: steel trowell finish:</u> <u>laid on concrete</u>				
7.01	25mm thick paving	m ²	5		
7.02	25x150mm skirting with square top edge and coved junction at bottom of paving	m	9		
	Wall Finishes Rendering & Plastering: steel trowell finish				

7.03	18mm thick to walls	m ²	-		
	Painting				
7.04	Prepare and apply one undercoat and two finishing coats of silk vinyl paint to plastered surfaces.	m ²	-		
	<u>Ceiling Finishes</u>				
	<u>Painting</u>				
	<u>Prepare and apply three coats of first grade emulsion paint on:</u>				
7.09	Ceiling	m ²	14		
7.10	Cornice	m	12		
TOTAL ELEMENT No.7 (FINISHES) CARRIED TO SUMMARY					

ELECTRICAL INSTALLATION - BILLS OF QUANTITIES

No.	Description and Specification	Unit	Qty	Rate (USD)	Amount (USD)
	POWER CABLES.				
A	600/1000V 3Run x 16 mm sq 3-core-PVC-I copper cables connected from Electrical supply to Consumers unit,(CU!) complete with	L/m	15		
B	6-Way SPN MCB-type flush mounted Distribution Board for (CU) with 63A SP main integral isolator switch, busbars, neutral and earth terminal blocks, complete with but not limited to 315-40A and 315-22A	set	1		
	LIGHTING FITTINGS				
B	Suspended decorative Pendant luminaire, for use with 11W-18W Energy saving Bulbs or	No.	6		
C	Enclosed IP65 vandal resistant wall mounting luminaire for 18W TC-TEL lamps with polycarbonate body, large prismatic diffuser and E3 emergency control gear. As Thorn	No.	5		
D	1200mm 18-36W Economy: Diffuser in extruded opal polystyrene with external reeding with finely embossed prismatic	No.	7		
	WIRING ACCESSORIES				
A	10A/240V SP 1-Gang 1-Way white moulded plate switches complete with but not limited to, flush mounting box, as to CRABTREE List	No.	5		
B	10A/240V SP 1-Gang 2-Way white moulded plate switches complete with but not limited to, flush mounting box, as to CRABTREE List	No.	2		
C	10A/240V SP 2-Gang 2-Way white moulded plate switches complete with but not limited to, flush mounting box, as to CRABTREE List	No.	0		
D	INTERMEDIATE plate switches c/w mounting box, as to Approved manufacturer	No.	0		
E	13A SP 2-Gang white moulded plate switched socket outlets complete with but not limited to, neon indicator and flush mounting box, as	No.	10		
F	24-Hour programme time switch complete with but not limited to, fixing accessories and back-up battery (150 hours), as to LEGRAND or	No.	1		
	WIRING				
	Lighting points:				
A	Lighting points to be connected complete and ready from 16A SP miniature circuit breakers of floor distribution boards or nearest consumer unit using 1.5mm ² SC PVC-Insulated copper cables in radial circuits, drawn in uPVC	No.	11		
	Power points:				
B	Power points to be connected complete and ready from 32A SP miniature circuit breakers of floor distribution boards or nearest consumer unit using 2.5mm ² SC PVC-Insulated stranded copper cables in Radial circuits,	No.	10		

ELECTRICAL INSTALLATION - BILLS OF QUANTITIES

No.	Description and Specification	Unit	Qty	Rate (USD)	Amount (USD)
EL-01	Total carried to COLLECTION PAGE				

ELECTRICAL INSTALLATION - BILLS OF QUANTITIES

No.	Description and Specification	Unit	Qty	Rate (USD)	Amount (USD)
	FIRE DETECTION AND ALARM SYSTEM All No.s are to be supplied and installed complete with but not limited to, all the required mounting/fixing/clipping/testing/connecting accessories: tested and commissioned to the Supply and install the following elements (complete with but not limited to, fixing accessories) of the HONEYWELL				
A	Addressable Ivory Optical Smoke detector complete with but not limited to, base as to Honeywell manufacture, S200A Series model,	No.	0		
C	Addressable wall mounted Manual Break Glass unit complete with but not limited to, base, Shell, door, molded using durable polycarbonate material with red textured	No.	0		
D	IP44 Addressable red AV wall mounted sound strobes complete with but not limited to, base, as to Honeywell manufacture, S200A	No.	0		
E	ZX5Se 1-5 loop control panel. 230Vac, 4 sounder circuits, 4 line display and networking capability. 6 Amp PSU with 460mA loop	No.	0		
F	Loop driver card for Morley-IAS protocol as to Honeywell manufacture, Cat. No. 795-072	No.	0		
G	Loop wiring of Detection Elements using 1.5mm sq 2-core Firetec OHLS 300/500V stranded copper cables to AEI CABLES LTD ref	No.	0		
H	Allowance for installation, Commissioning and	No.	0		
I	Copies for the Electrical Installation to be handed over to the Project Manager (and Client) for maintenance and records.	item	0		
EL-02	Total carried to Floor Collection Page				
	SOLAR SYSTEM.				
A	or Equal Approved.	No	0		
B	of 200AH, 12V/24V as Delco 2000 by Stecca or Approved Equivalent.	No	0		
C	Solar Panel, with Peak power of 220W.	No	0		
D	DC, Max Module and Load Current of 80A. As Per Memingea (Germany) or Equal approved.	No	0		
E	Cabling from Inverter to Battery Banks.	Item	0		
F	Cabling from Inverter to charge controller	Item	0		
G	controller UV, DC copper cable	Item	0		
H	Anti-theft lockable Battery cage.	Item	0		
I	Anti-theft lockable panel frames.	Item	0		
	COMPOUND SECURITY LIGHTS				

ELECTRICAL INSTALLATION - BILLS OF QUANTITIES

No.	Description and Specification	Unit	Qty	Rate (USD)	Amount (USD)
J	Install only PoleCo solar powered lighting system for single arm comprising 123W solar panel, 1 x 100Ah, luminair 28W LED ,12V AGM batteries, PWM charge controller,solar panel bracket, aluminium electronics enclosure, wiring harness and fuse block, underground battery enclosure ,unpainted, fasteners, or	No.	3		
EL-03	Total carried to Floor Collection Page				
	LIGHTNING PROTECTION SCHEME;				
A	25mm x 3mm Insulated copper tape as to FURSE manufacture, or approved equivalent.	L/m	50		
B	25mm x 3mm copper square test clamp, as to FURSE Cat.No. CT 105, or approved	No.	1		
C	2000mm x 15mm air rod, as to FURSE Cat. No. RA 240 c/w multiple point, as to FURSE Cat. No. RA 600, air terminal base, as to FURSE Cat. No. SD 105, and ridge saddle, as to FURSE	No.	1		
D	25mm x 3mm tape clip as FURSE cat CP210	No.	3		
E	1200mm x 20mm solid copper earth rod, as to FURSE Cat.No. RC 015, complete with driving	No.	1		
F	Concrete inspection chamber, as to FURSE Cat. No. PT005 or approved equivalent.	No.	1		
EL-04	Total carried to Floor Collection Page				
	COLLECTION PAGE :				
	ELETRICAL INSTALLATIONS				
	FIRE DETECTION				
	SOLAR SUPPLY SYSTEM				
	LIGHTNING PROTECTION				
EL-05	Total carried to MAIN COLLECTION PAGE				

MECHANICAL INSTALLATION - BILLS OF QUANTITIES

MECHANICAL WORKS

Item	Description	Unit	Qty	Rate (USD)	Amount (USD)
	<p>The Contractor shall supply, deliver,install, test and commission to the satisfaction of the Engineer the following including builders works:-</p> <p>The Tenderers must allow in their prices for all couplings,connectors as required in the running lengths of pipes.</p> <p><u>INTERNAL WATER SUPPLY AND DISTRIBUTION</u></p> <p>All Cold and Hot Water piping shall be PPR pipe PN16.Complete with Tees,Sockets,Elbows,Threaded adapters,Threaded elbows,Reducers and all associated fittings.</p> <p><u>PPR Pipes PN25</u></p> <p>A 20mm M 5</p> <p>B 25mm M 15</p> <p>C 32mm M 10</p> <p>D 40mm M 0</p> <p>E 50mm M 0</p> <p>F 63mm M 0</p> <p><u>Isolating Valves</u></p> <p>G 25mm No 1</p> <p>H 32mm No 0</p> <p>I 40mm No 0</p> <p>J 50mm No 0</p> <p>K 15mm(1/2") flexible tubing 450mm long No 2</p> <p>L 15mm angle valves as Pex England Grohe or equal and approved No 2</p>				
M-01	TOTAL CARRIED TO COLLECTION				

MECHANICAL INSTALLATION - BILLS OF QUANTITIES

MECHANICAL WORKS

Item	Description	Unit	Qty	Rate (USD)	Amount (USD)
	<u>INTERNAL DRAINAGE</u>				
	<u>Supply and Install the following including clamps/ brackets for supporting pipes, builders works which involves making good to any openings made in floor slabs and chiselling of walls</u>				
	<u>uPVC Pipes PN6</u>				
A	40mm Complete with Tees, Bends, Reducers, Access plugs, necessary fittings and accessories.	M	9		
B	50mm Complete with Tees, Bends, Reducers, Access plugs, necessary fittings and accessories.	M	6		
C	110mm Complete with Tees, Bends, Reducers, Access plugs, necessary fittings and accessories.	M	25		
	<u>SANITARY FITTINGS</u>				
	<u>Supply and install the following sanitary fittings as specified "OR " Equal and Approved including all necessary fittings and accessories. The contractor shall submit for approval a shedule of fitings before orders for the fittings are placed.</u>				
A	<u>WC pan</u>				
	Ideal standard SHOPIA A/S white viterous W.C sitting pan complete including fixing pan to floor cistern to wall with screws and plags	No	1		
B	<u>Wash Hand Basin</u>				
	Wash hand basin as ideal standard complete with 1No. tap holes and chain stay holes	No	1		
	<u>Wall Mirrors</u>				
C	Wall mirrors 700 x 500mm with bevelled edges polished with chrome plated dome shaped screws	No	1		
D	<u>Shower fitting</u>				
	Wall mounted bath shower mixer with rigid riser chrome Complete with fixed shower head 150mm (6") and rigid riser chrome.	No	1		
E	Nylon coated aluminium grab rails 600mm long as 'twyforde' AV 6802 WH	No	1		
G	Stainless steel kitchen sink S/D S/B size 2000 x 550mm sink mixer pillar cock with overan swivel outlet 615/041, 40mm chain waste bricon 365/50 40mm C.P bottle trap	No	0		
M-02	TOTAL CARRIED TO COLLECTION				

MECHANICAL INSTALLATION - BILLS OF QUANTITIES

MECHANICAL WORKS

Item	Description	Unit	Qty	Rate (USD)	Amount (USD)
H	Soap dish as Vado Eclipse ECL-182-C/P	No	1		
I	Double coat Hooks as Vado Eclipse ECL-186-C/P	No	0		
J	Towel Rail as Vado Eclipse 24"(600mm) ECL-184-C/P	No	1		
K	Toilet roll holder as Vado Eclipse ECL-180-C/P	No	1		
<u>SITE SERVICES/GENERAL WORKS</u>					
<u>The Contractor shall supply, deliver, install, test and commission to the satisfaction of the Engineer the following including builders works:</u>					
<u>WATER SUPPLY, STORAGE AND DISTRIBUTION</u>					
A	Excavate trench 0.6M wide ,Max and 1M deep back fill ram and cart away excess soil to lay rising main and HDPE pipes for Water distribution and Hosereels and Stand pipes.	M	25		
B	25mm HDPE pipe PN10 laid in ground for water distribution from NWSC meters to private tanks.Complete with Tees,Elbows,Reducers, Unions, Reducers, Adapters and all associated fittings and accessories.	M	35		
C	Ditto but 20mm	M	10		
D	25mm PPR rising/distribution mains to the water tank complete accessories.	M	10		
E	ditto but 40GI	M	0		
F	Lockable Taps /Stand pipes 15mm for gardening.	No	1		
G	Valve chamber 400x 400 by 300mm deep, Complete v	No	1		
<u>Gate Valves</u>					
H	ditto but 25mm	No	1		
I	1,250L Stainless steel tanks as size 1.05m diameter, 1.2m High Complete with 25mm ball valve, 25mm washout, one 63mm outlet.	No	1		
M-03	TOTAL CARRIED TO COLLECTION				

MECHANICAL INSTALLATION - BILLS OF QUANTITIES

MECHANICAL WORKS

Item	Description	Unit	Qty	Rate (USD)	Amount (USD)
	<u>FOUL EXTERNAL DRAINAGE SYSTEM- PIPES AND FITTINGS</u> <u>The Contractor is to supply ,install and commission to the satisfaction of the Engineer the followingincluding builders works.</u>				
A	Excavate trench 0.6M wide ,Max and 1M deep back fill ram and cart away excess soil to lay drainage	M	65		
C	uPVC pipe 110mm PN 6 to be laid as detailed.	M	65		
D	Manhole as 600 x 450mm (internally) inspection chambers 600mm deep invert consisting of 150mm thick concrete block wall, benched and channeled in concrete Class "Q' and rendered and trowelled smooth in 20mm thick water proofed cement/sand screed including excavation and medium duty approved cast iron cover and frame	No	8		
E	Manhole as 900 x 750 mm(internally) inspection chambers 800 to 1500mm deep invert consisting of 150mm thick concrete block wall, benched and channeled in concrete Class "Q' and rendered and trowelled smooth in 20mm thick water proofed cement/sand screed including excavation and Heavy duty approved cast iron cover and frame.	No	0		
F	Manhole as 1200 x 900 mm(internally) inspection chambers 1500 to 2500mm deep invert consisting of 150mm thick concrete block wall, benched and channeled in concrete Class "Q' and rendered and trowelled smooth in 20mm thick water proofed cement/sand screed including excavation, bitumen coated cast iron steps and Heavy duty approved cast iron cover and frame.	No	0		
G	Ditto but 2500 to 6000mm deep invert	No	0		
H	Gully trap 300 x300 complete with Gulley piece concrete surround and grating and 300 x 300 cast iron cover	No	2		
I	Soakpit size 3.5M diam 5M deep filled with hard core and covered with 1000 guage polythene and top made good to match surroundings	No	0		
J	ditto but 2.5M diam 3M deep filled with hard core and covered with 1000 guage polythene and top made good to match surroundings	No	1		
M-04	TOTAL CARRIED TO COLLECTION				

MECHANICAL INSTALLATION - BILLS OF QUANTITIES

MECHANICAL WORKS

Item	Description	Unit	Qty	Rate (USD)	Amount (USD)
K	Allow for testing the whole of the internal & external water supply pipe installation to 200 psi to the satisfaction of the Engineer.	Item	1		
L	Allow for testing the entire drainage system.	Item	1		
	<u>FIRE EXTINGUISHERS</u>				
A	4.5kg capacity manganese steel portable CO ₂ gas fire extinguishers conforming to BS 1288, including the appropriate nominal gas content.	No	1		
B	4.5kg capacity dry powder portable fire extinguisher conforming to BS 1288 including the appropriate nominal content.	No	1		
C	1M x 1M Fire Blanket	No	1		
	<u>RAIN WATER DISPOSAL</u>				
	<u>PVC Key terrain fixed in accordance with manufacturer's instructions:-</u>				
A	200mm uPVC PN10 Storm water drainage pipe. Complete with all fixing brackets, swan necks offsets, and all associated fittings and accessories.	M	45		
	<u>Down pipes</u>				
B	80mm diameter fulbora outlet.	M	12		
C	Floor drain as Blucher type 110.300.075. Complete with	No	4		
D	Roof drain as Blucher type 402.10. Complete with clasp	No	4		
E	Roof drain as Zurn Z185 6" Diameter Cornice drain. Complete with	No	4		
F	Heavy duty drain as Zurn Z556 8" .Complete with all	No	4		
G	Square heavy duty adjustable drain as Zurn Z610 12"	No	4		
M-05	TOTAL CARRIED TO COLLECTION				
	COLLECTION PAGE				
	Total collected from Page M-01				
	Total collected from Page M-02				
	Total collected from Page M-03				
	Total collected from Page M-04				
	Total collected from Page M-05				
M-12	TOTAL CARRIED TO GRAND SUMMARY				

ITEM	DESCRIPTION	PAGE	AMOUNT (USD)
	<p align="center">GRAND SUMMARY</p> <p align="center">PROPOSED BORDER POST AT ETHIOPIA</p> <p>1 01- Preliminaries</p> <p>2 Bill No. 2 Border post</p> <p>3 Bill No.3 External Works</p> <p>4 Bill No.4 4 Stance Pit Latrine</p> <p>5 Bill No.5 Gate House</p> <p>6 Bill No.6 Electricals</p> <p>7 Bill No.7 Mechanical</p> <p>SUB- TOTAL -1</p>		
	<p>ADD: CONTINGENCY 5%</p> <p>SUB- TOTAL -2</p>		
	<p>ADD: VAT 18%</p>		
TOTAL THIS BILL			

KURMUK: ETHIOPIA

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14	FOR SOIL AND WATERDRAINAGE REFER TO MECHANICAL ENGINEERS DRAWINGS

PROJECT NAME
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Client: <div><div></div><div>CENTRE FOR PASTORAL AREAS AND LIVESTOCK DEVELOPMENT.</div></div>

Project Particulars:
PROPOSED BORDER POST
Location: KURMUK
Country: REPUBLIC OF ETHIOPIA

Consultant MATOVU JOHN .R P.O.BOX 3694 KAMPALA ARB.REG.No.257.	
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Drawing no.:	Drawn by: MATOVU JOHN.R
Units: mm	
Date: DECEMBER 2024	Checked by: M.J.R



SITE LOCATION MAP

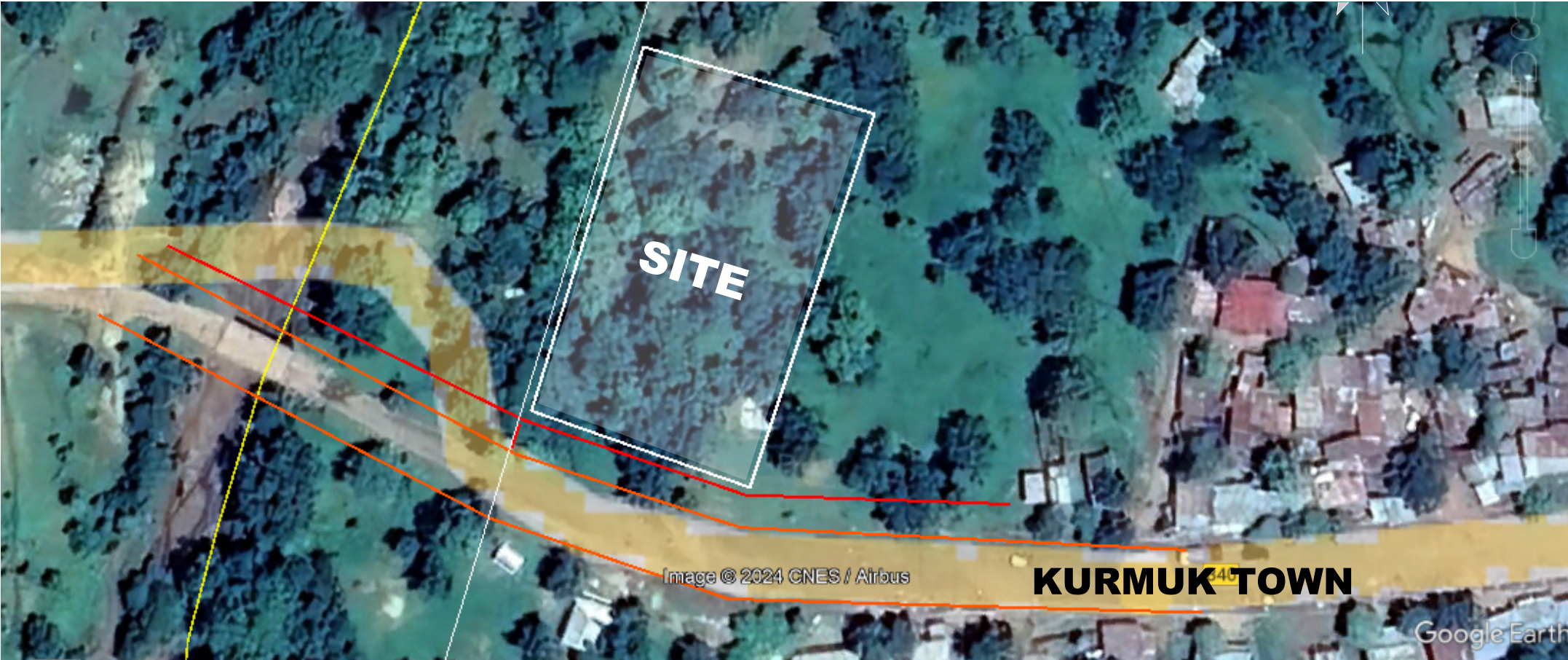
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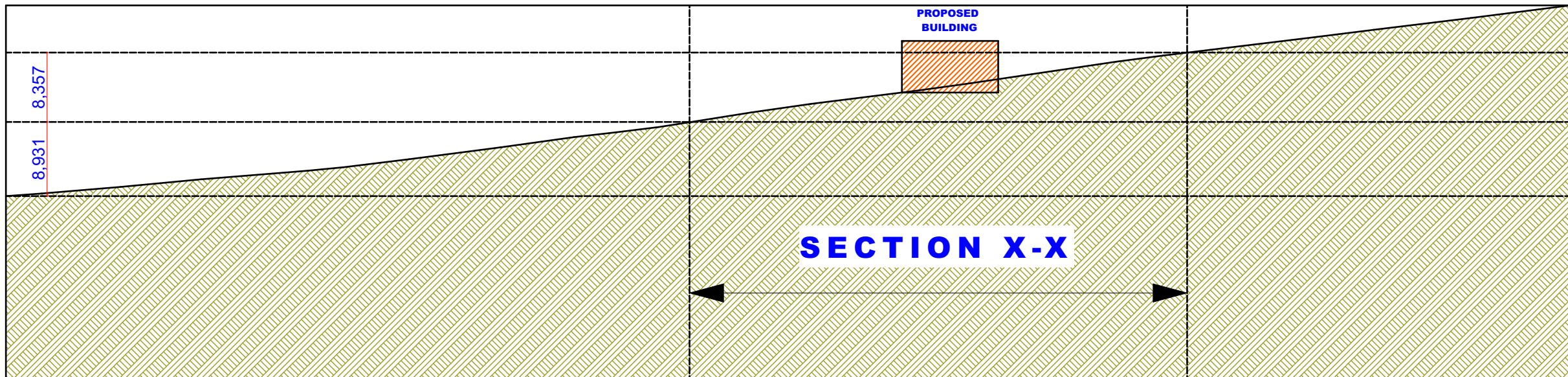
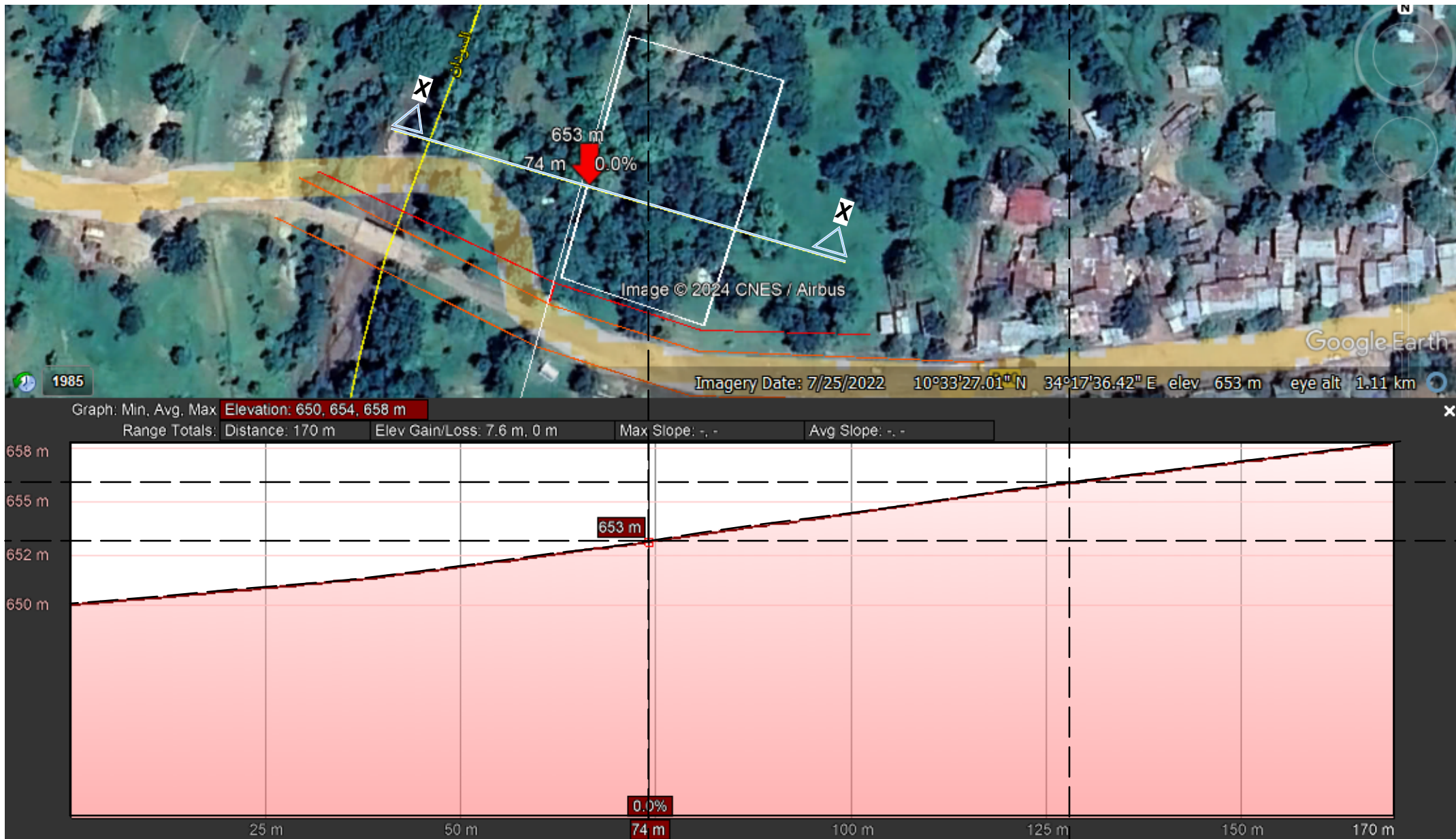
AERIAL MAPS OF SITE. nts

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SITE TOPOGRAPHY: nts

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Client:



CENTRE FOR PASTORAL AREAS AND LIVESTOCK DEVELOPMENT.

Project Particulars:

PROPOSED BORDER POST

Location:

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Country:

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Consultant

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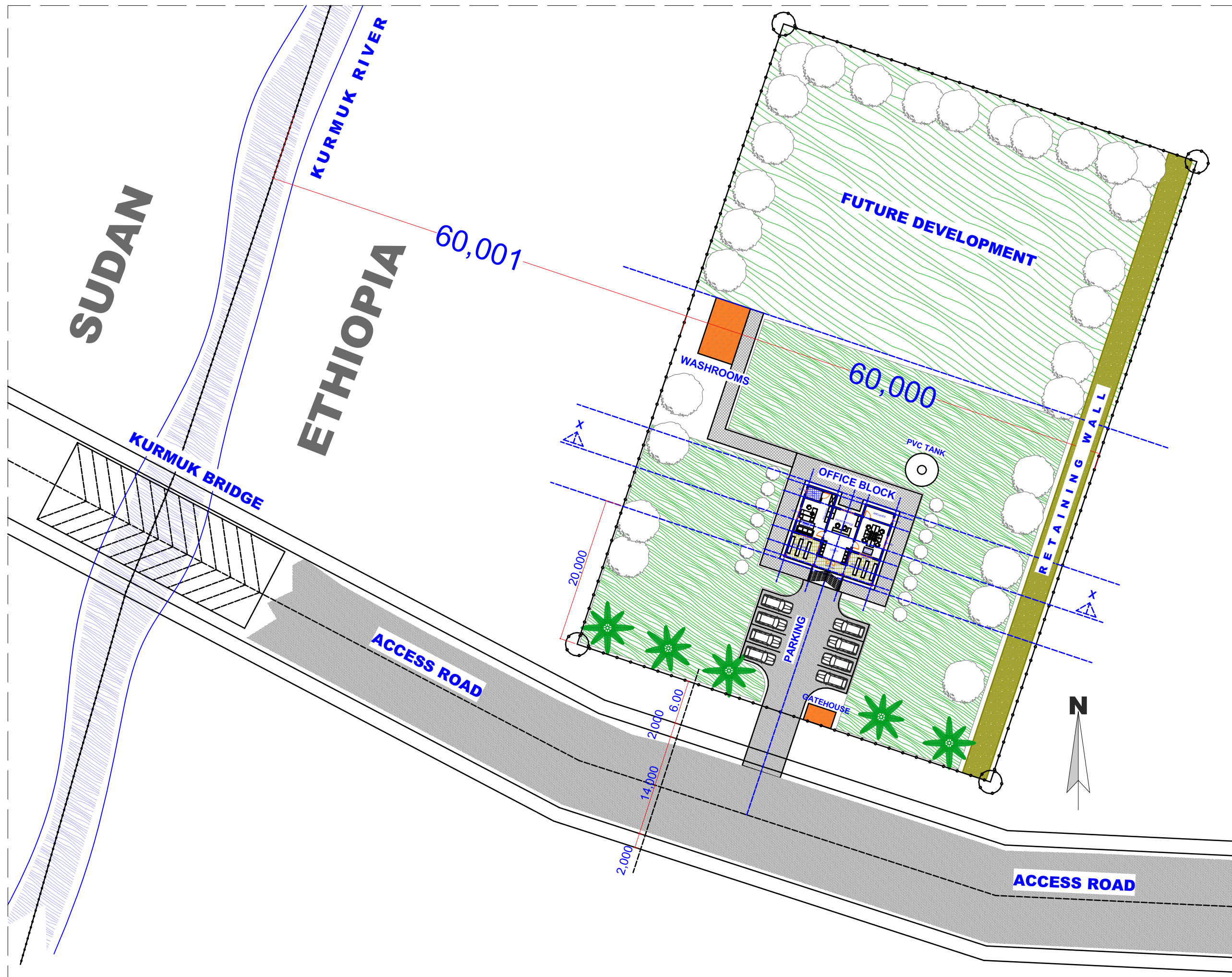
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SITE LAYOUT PLAN: nts

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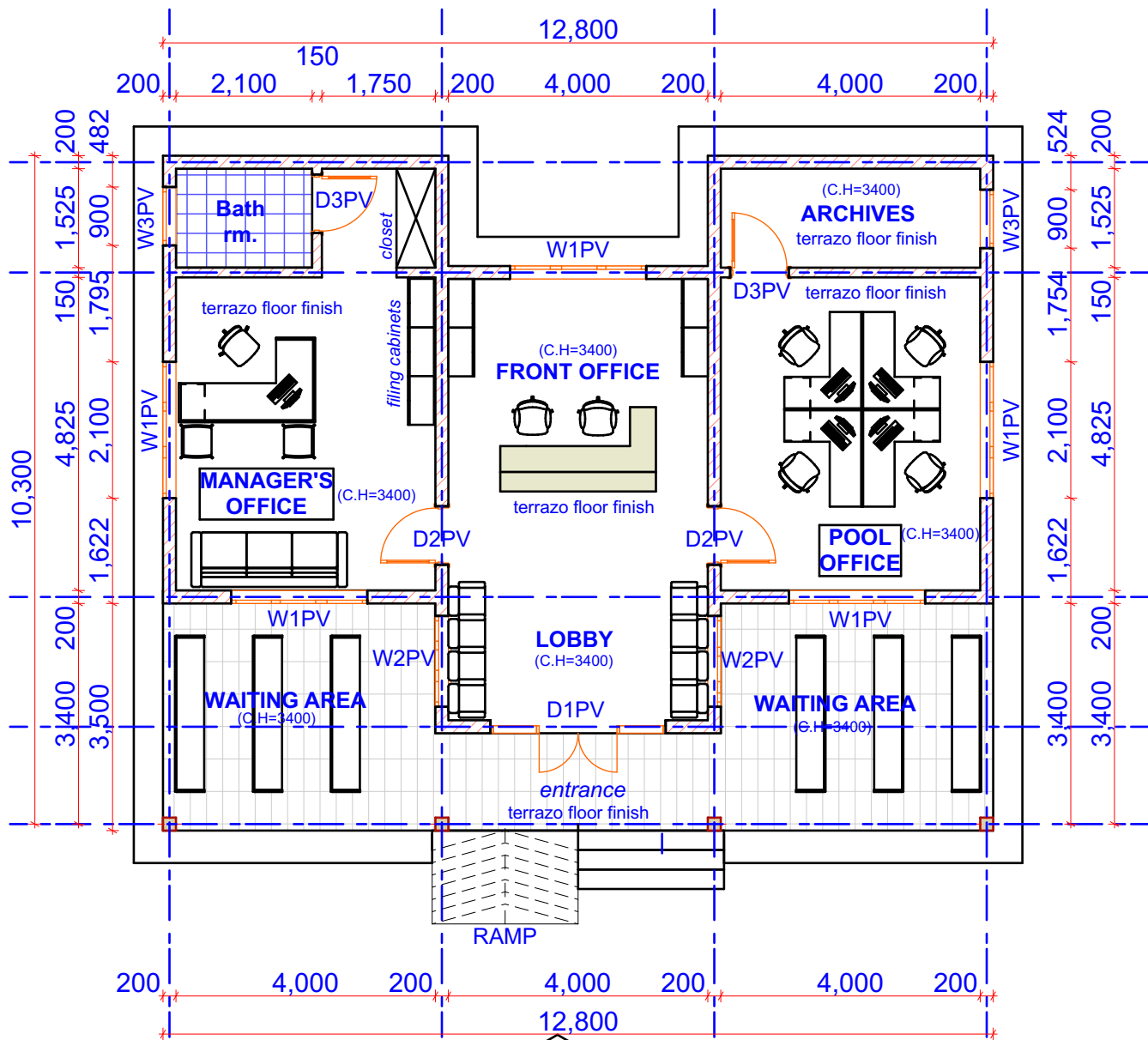
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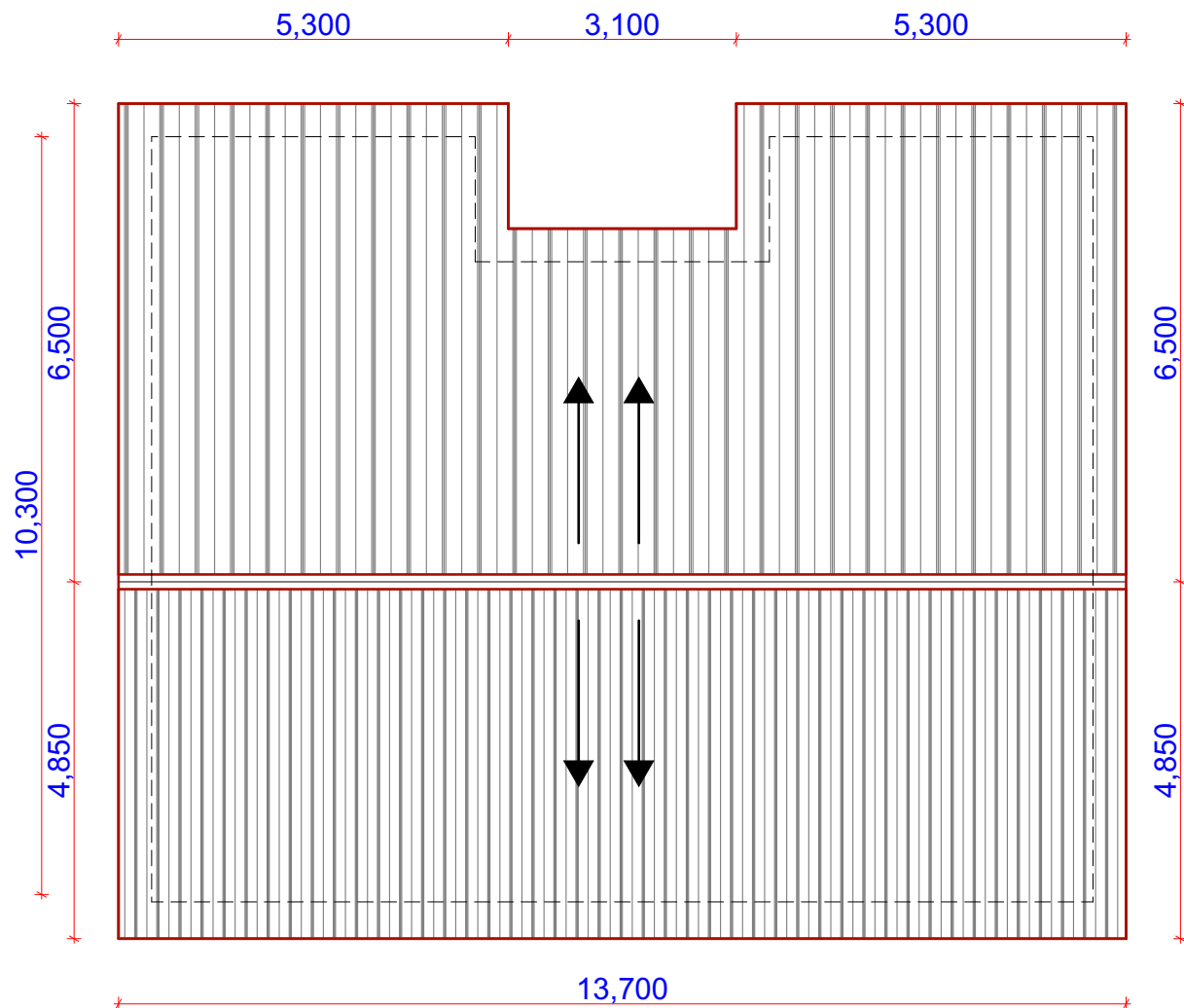
PROJECT NAME
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ELEVATION E1
FLOOR PLAN
OFFICE BLOCK SCALE 1:100



ROOF PLAN
OFFICE BLOCK SCALE 1:100

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- 8 WALLS BELOW 200MM THICK ARE TO BE REINFORCED WITH HOOPIRON AT EVERY ALTERNATE COURSE
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- 12 ALL SANITARY WORKS TO BE TO SATISFACTION OF MoH
- 13 ALL ROADS TO BE TO CIVIL ENGINEER'S DETAILS
- 14 FOR SOIL AND WATERDRAINAGE REFER TO MECHANICAL ENGINEERS DRAWINGS

PROJECT NAME

CONSULTANCY SERVICES *for* DETAILED ARCHITECTURAL AND ENGINEERING DESIGNS & TECHNICAL SUPERVISION *of* BORDER POST BETWEEN ETHIOPIA and SUDAN, BUSINESS INCUBATION CENTRES IN MORUNGOLE, KAABONG DISTRICT, (UGANDA) AND NARUS, KAPOETA EAST COUNTY, (SOUTH SUDAN), A POULTRY-HOUSE FOR AKANDEYU, ETHIOPIA *and* AN ACCESS ROAD FROM MORUNGULE TO NATINGA

Client:



CENTRE FOR PASTORAL AREAS AND LIVESTOCK DEVELOPMENT.

Project Particulars:

PROPOSED BORDER POST

Location:

KURMUK

Country:

REPUBLIC OF ETHIOPIA

Consultant

MATOVU JOHN .R

P.O.BOX 3694 KAMPALA
ARB.REG.No.257.

Drg. Title:

Sheet no.:

6/13

Scale:

As Indicated

Drawing no.:

Drawn by:

MATOVU JOHN.R

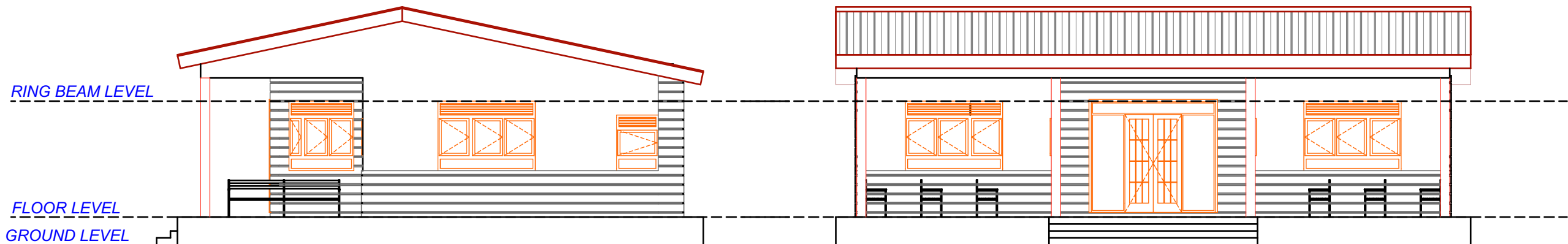
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Date:

DECEMBER 2024

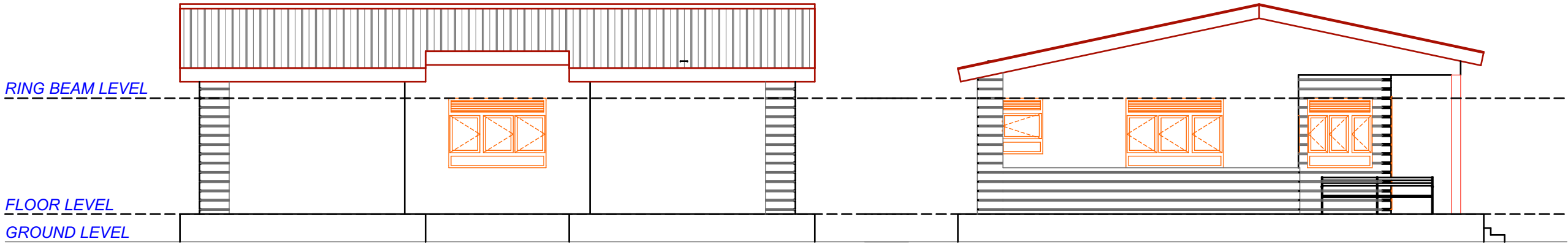
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M.J.R



ELEVATION E-04
OFFICE BLOCK SCALE 1:100

ELEVATION E-01
OFFICE BLOCK SCALE 1:100




ELEVATION E-03
OFFICE BLOCK SCALE 1:100

ELEVATION E-02
OFFICE BLOCK SCALE 1:100

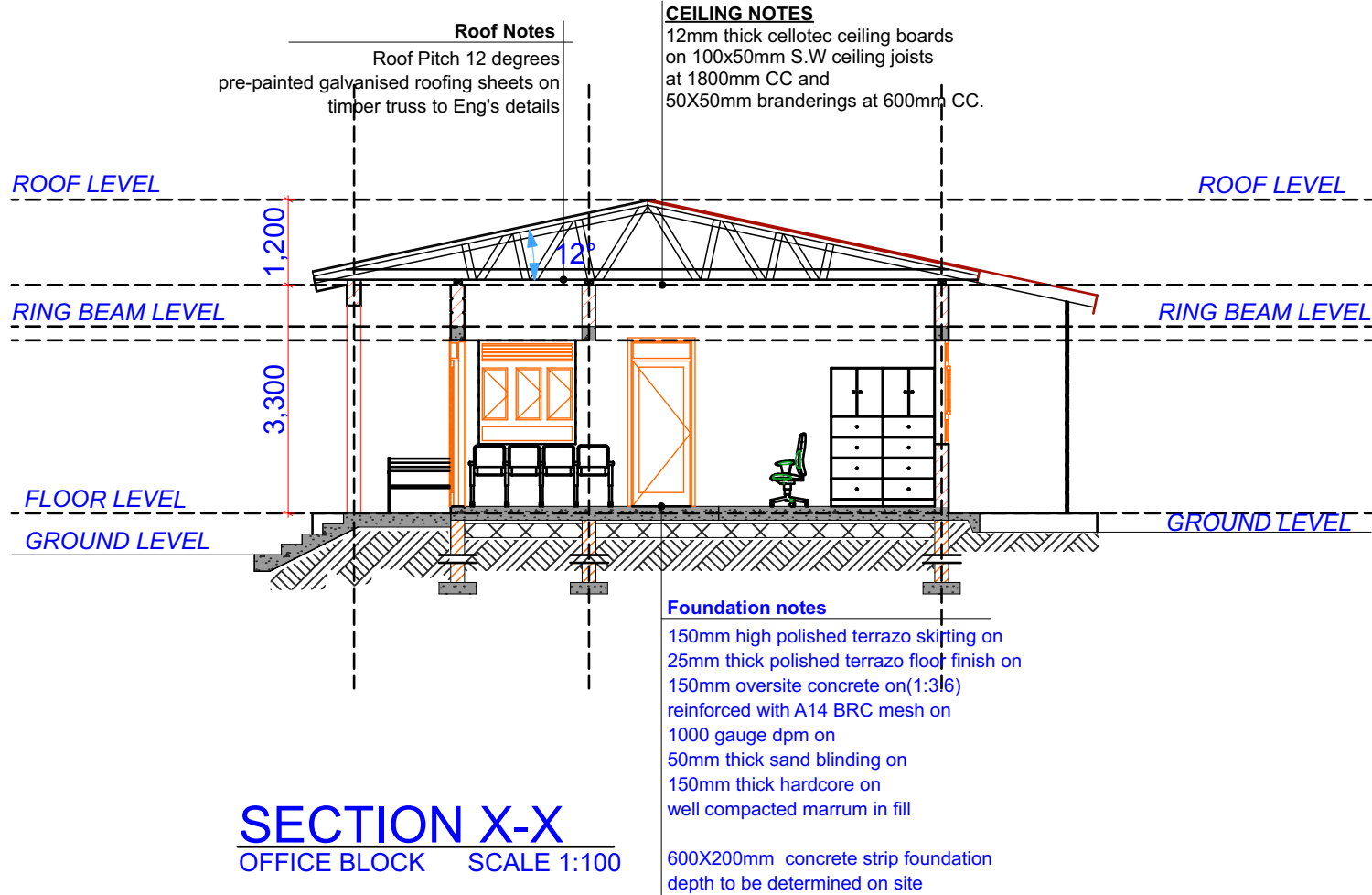
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Client:	 CENTRE FOR PASTORAL AREAS AND LIVESTOCK DEVELOPMENT.
---------	---

Project Particulars:
PROPOSED BORDER POST
<u>Location:</u> KURMUK
<u>Country:</u> REPUBLIC OF ETHIOPIA

<u>Consultant</u> MATOVU JOHN .R P.O.BOX 3694 KAMPALA ARB.REG.No.257.	
<u>Drg. Title:</u>	
Sheet no.: 7/13	Scale: As Indicated
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Date: DECEMBER 2024	




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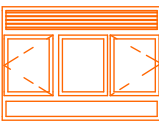
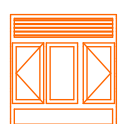

Consultant

MATOVU JOHN .R
P.O.BOX 3694 KAMPALA
ARB.REG.No.257.

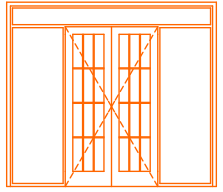
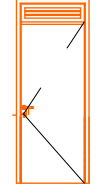
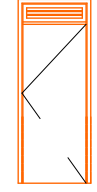
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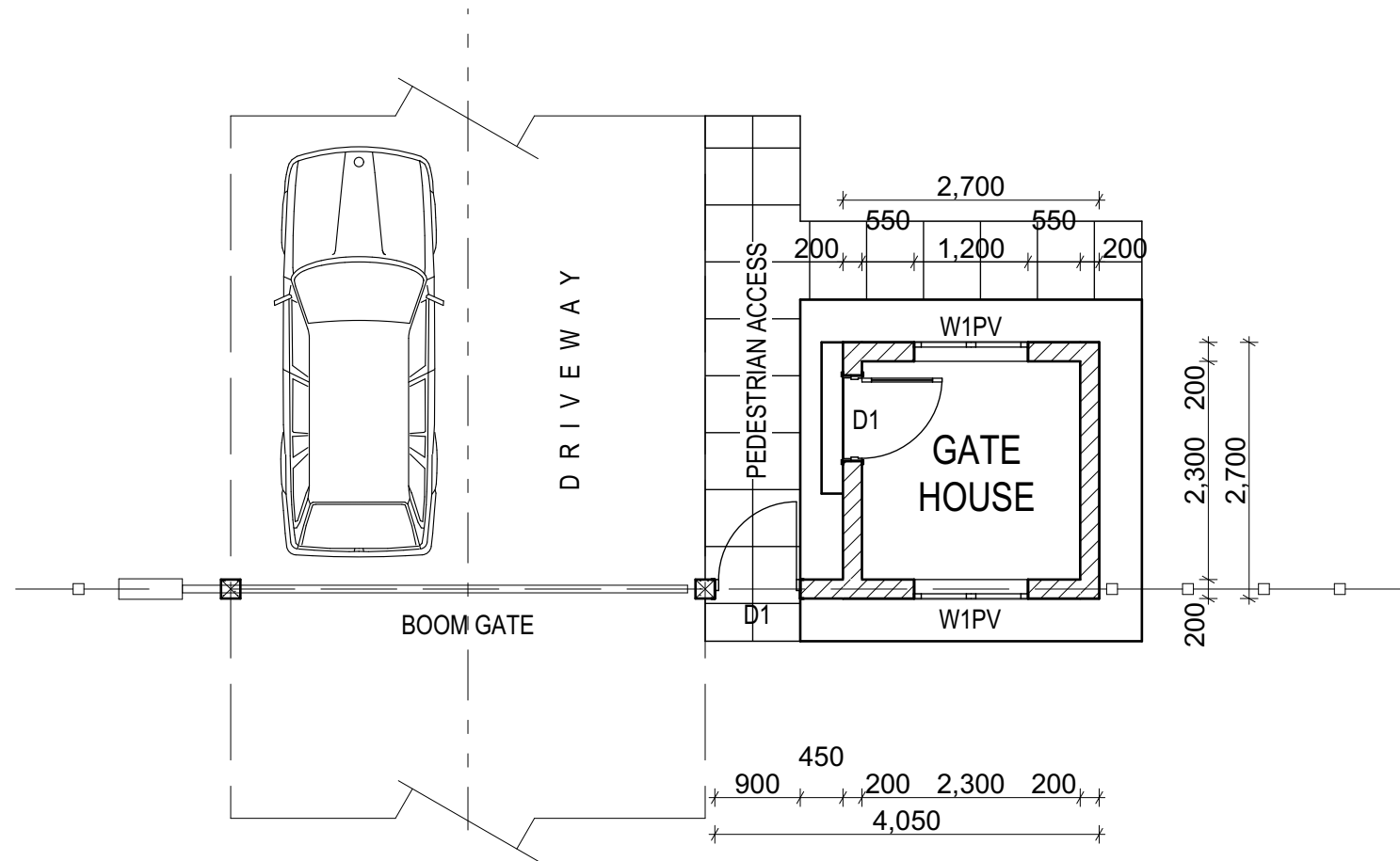
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Units: **mm**
Date: **DECEMBER 2024** Checked by: **M.J.R**

WINDOW SCHEDULE

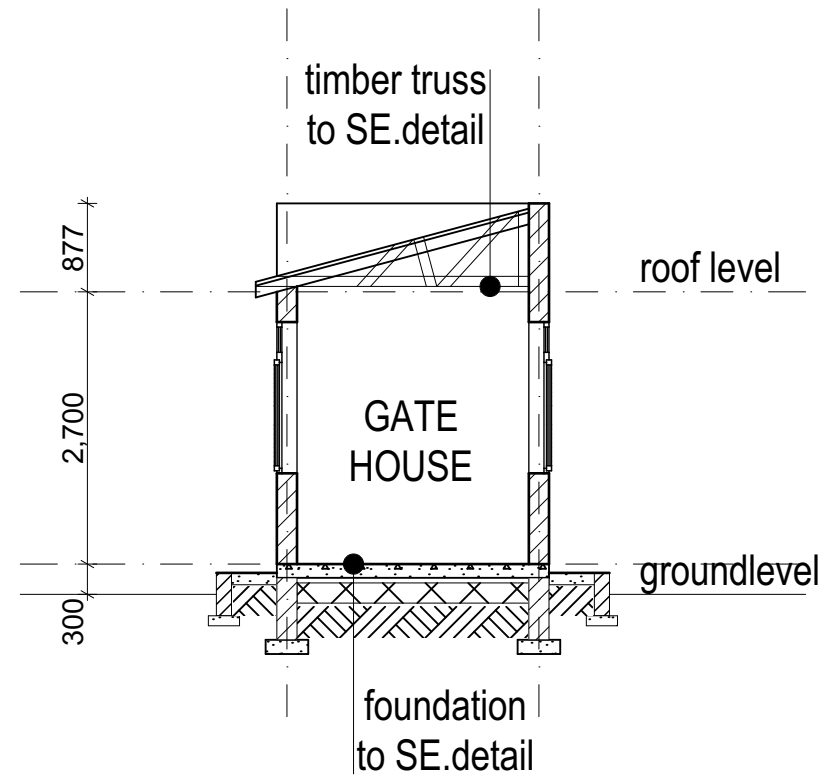
MARK	W1PV	W2PV	W3PV
ELEVATION			
SIZE(WXH)	2100 X 1500 mm	1400 X 1500 mm	900 X 1200 mm
TOTAL No.	05	02	02
DESCRIPTION	Steel casement window.100x75mm anodised steel section with 8mm thick clear glazing	Steel casement window.100x75mm anodised steel section with 8mm thick clear glazing	Steel tophung window.100x75mm anodised steel section with 8mm thick clear glazing
STAYS AND FASTENERS	Steel to Architect's approval	Steel to Architect's approval	Steel to Architect's approval

DOOR SCHEDULE

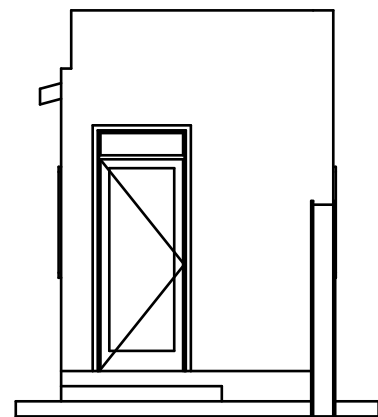
MARK	D1 PV	D2PV	D3PV
ELEVATION			
SIZE(WXH)	2700x2400mm	900x2400mm	800x2400mm
TOTAL No.	01	02	02
DESCRIPTION	Composite Steel casement door double leaf on Steel frame to detail ,include all accessories	45mm THICK SOLID CORED FLUSH DOORS faced both sides with 6mm plywood veneer: to Architect's approval.	45mm THICK SOLID CORED FLUSH DOORS faced both sides with 6mm plywood veneer: to Architect's approval.
IRONMONGERY	3 pairs of heavy duty action steel hinges Fixed with steel screws Steel mortice lock with 1 1/2 pairs of keys	Steel to Architect's approval	Steel to Architect's approval



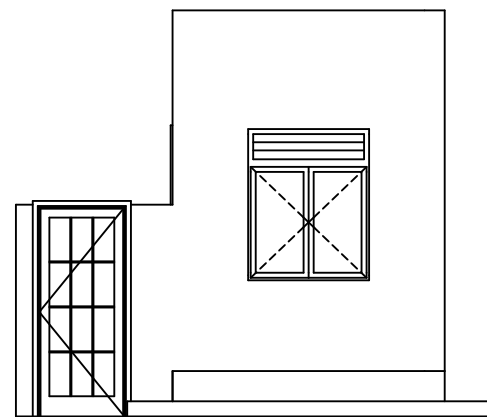
GATE/GATE HSE.DESIGN



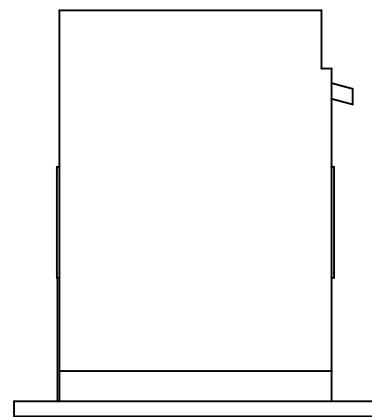
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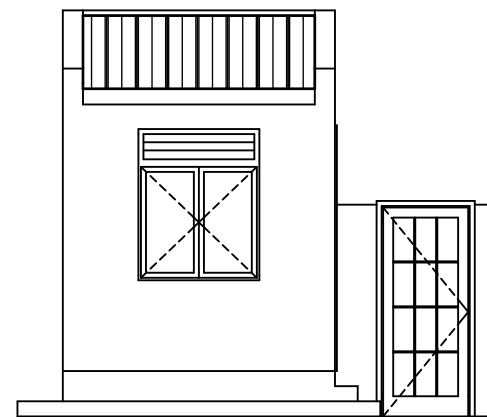
SIDE ELEVATION: 1:100



BACK ELEVATION: 1:100



SIDE ELEVATION: 1:100



FRONT ELEVATION: 1:100

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CENTRE FOR PASTORAL AREAS AND LIVESTOCK DEVELOPMENT.

Project Particulars:

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Location:

KURMUK

Country:

REPUBLIC OF ETHIOPIA

Consultant

MATOVU JOHN .R
P.O.BOX 3694 KAMPALA
ARB.REG.No.257.

Drg. Title:

DETAILS OF GATE HOUSE

Sheet no.: 9/13

Scale:
As Indicated

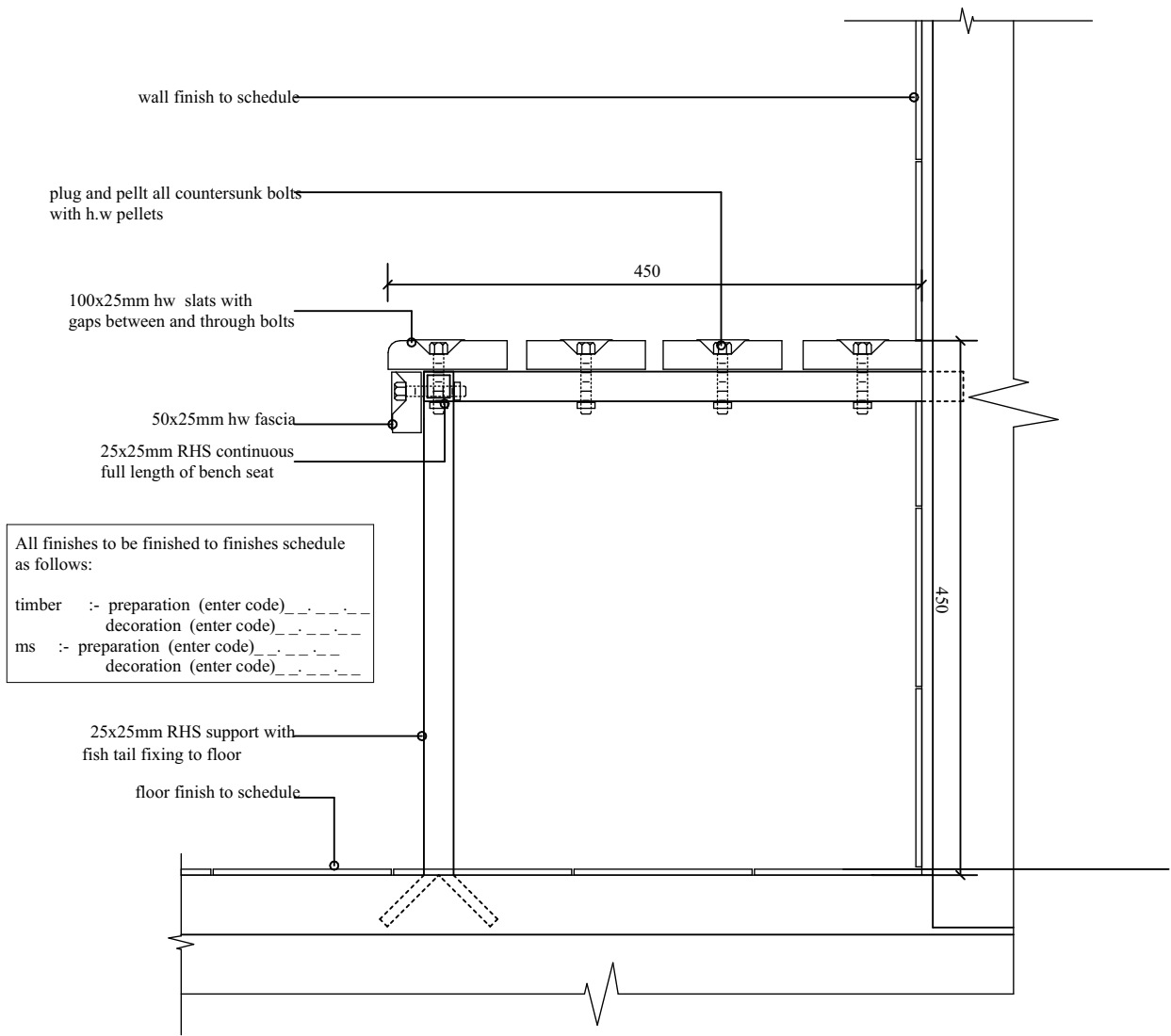
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Drawn by:
MATOVU JOHN.R

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Date:
DECEMBER 2024

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M.J.R

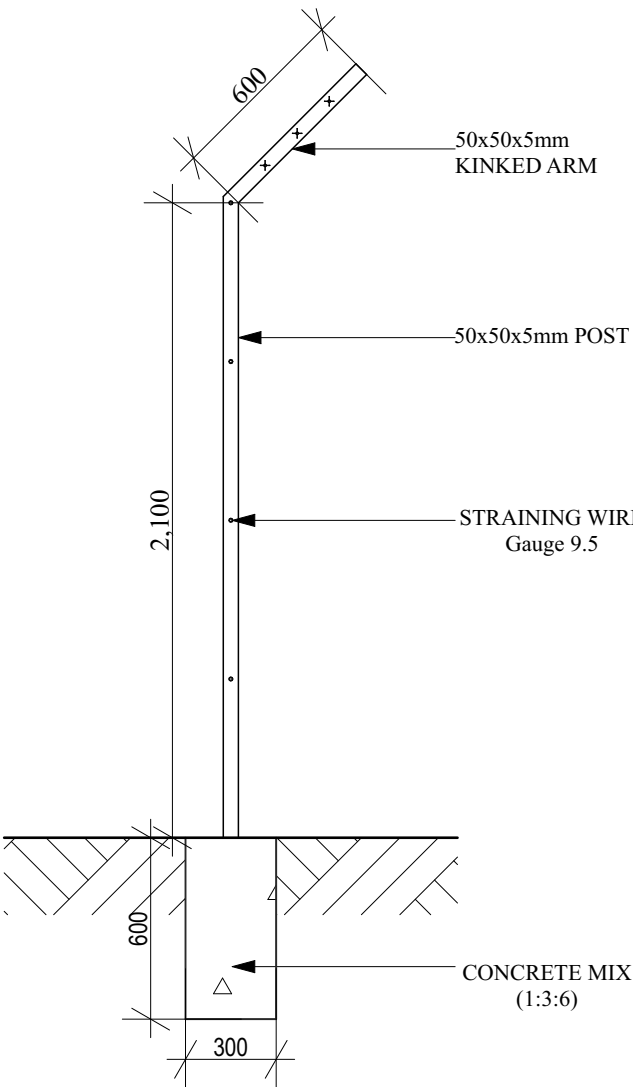


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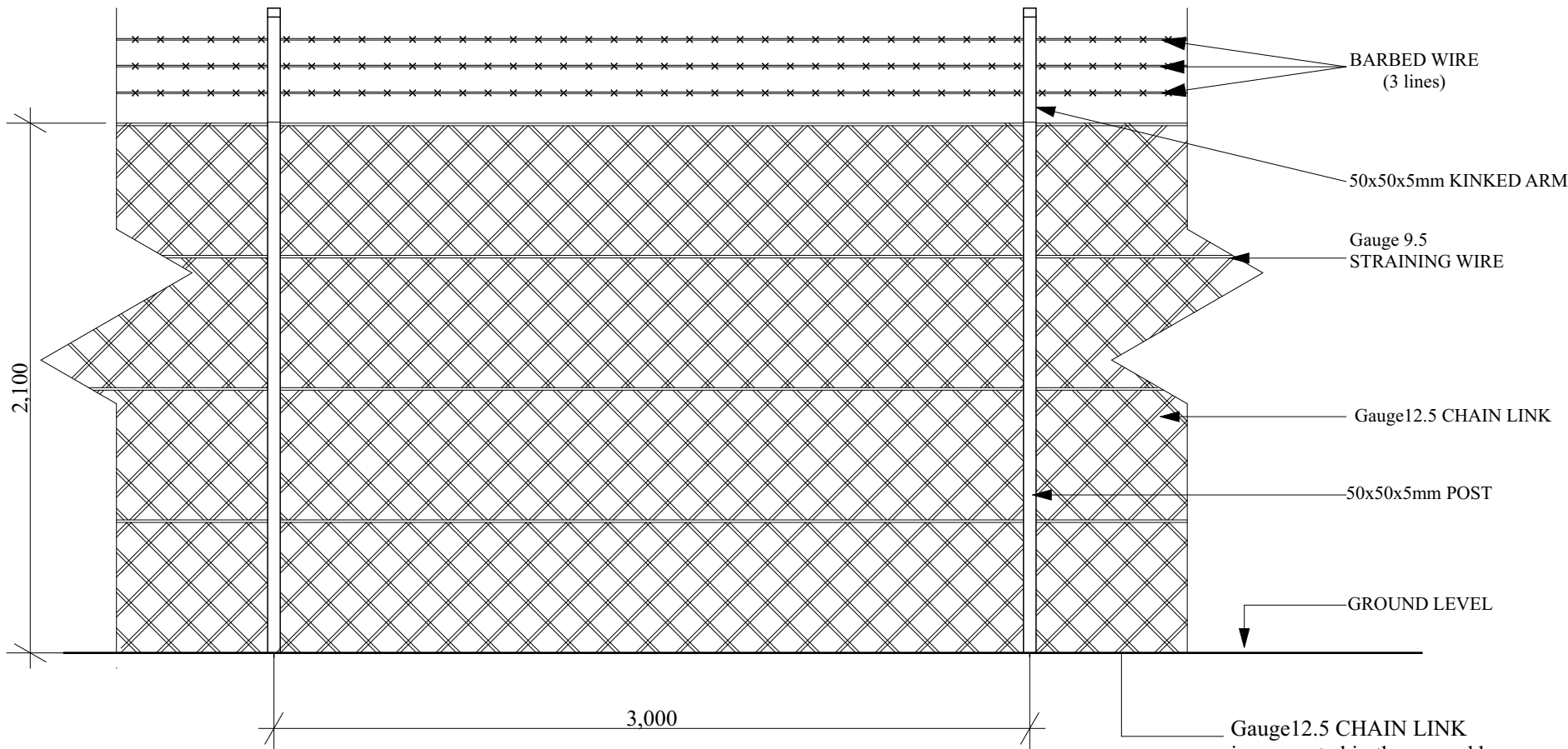
PROJECT NAME
CONSULTANCY SERVICES <i>for</i> DETAILED ARCHITECTURAL AND ENGINEERING DESIGNS & TECHNICAL SUPERVISION <i>of</i> BORDER POST BETWEEN ETHIOPIA <i>and</i> SUDAN, BUSINESS INCUBATION CENTRES IN MORUNGOLE, KAABONG DISTRICT, (UGANDA) AND NARUS, KAPOETA EAST COUNTY, (SOUTH SUDAN), A POULTRY-HOUSE FOR AKANDEYU, ETHIOPIA <i>and</i> AN ACCESS ROAD FROM MORUNGULE TO NATINGA
Client:
 CENTRE FOR PASTORAL AREAS AND LIVESTOCK DEVELOPMENT.

Project Particulars:
PROPOSED BORDER POST
<u>Location:</u> KURMUK
<u>Country:</u> REPUBLIC OF ETHIOPIA

<u>Consultant</u> MATOVU JOHN .R P.O.BOX 3694 KAMPALA ARB.REG.No.257.	
<u>Drg. Title:</u> DETAILS OF FIXED BENCH FOR WAITING LOBBY	
<u>Sheet no.:</u> 10/13	<u>Scale:</u> As Indicated
<u>Drawing no.:</u>	<u>Drawn by:</u> MATOVU JOHN.R
<u>Units:</u> mm	<u>Checked by:</u> M.J.R
<u>Date:</u> DECEMBER 2024	



SECTION OF CHAIN LINK
SCALE 1:25



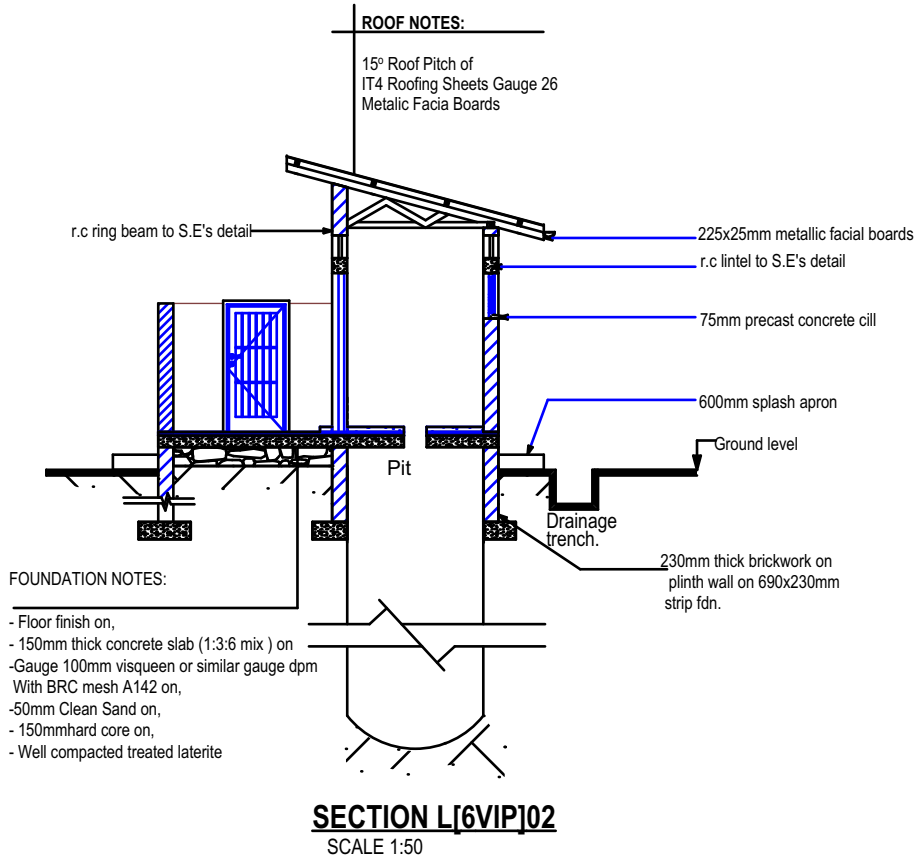
ELEVATION OF CHAIN LINK
SCALE 1:25

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

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Client:
 CENTRE FOR PASTORAL AREAS AND LIVESTOCK DEVELOPMENT.

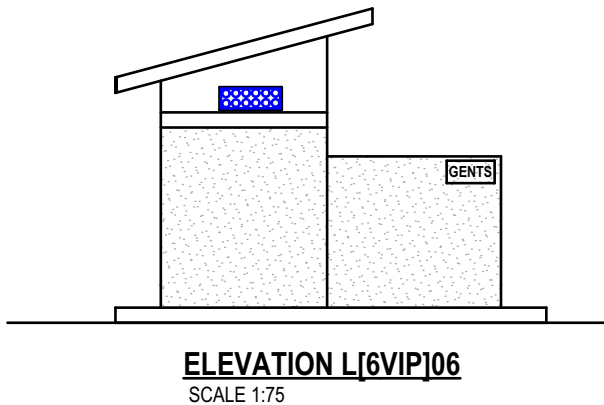
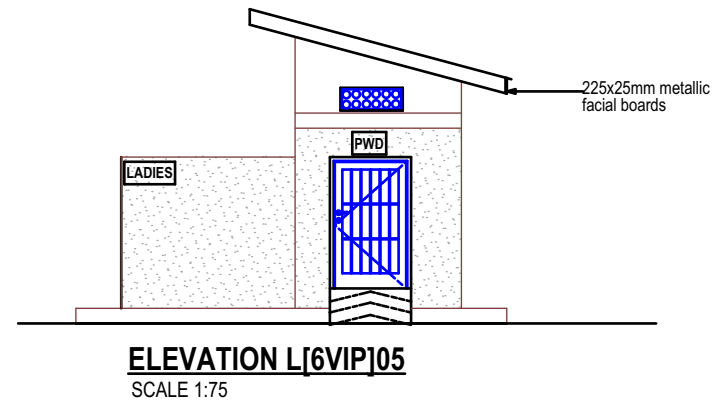
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PROPOSED BORDER POST
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Country:
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Consultant	MATOVU JOHN .R P.O.BOX 3694 KAMPALA ARB.REG.No.257.
Drg. Title:	CHAINLINK FENCING
Sheet no.: 11/13	Scale: As Indicated
Drawing no.:	Drawn by: MATOVU JOHN.R
Units: mm	Checked by: M.J.R
Date: DECEMBER 2024	



DOOR SCHEDULE - C[6VIP]01 ; 6-STANCE VIP BLOCK			
MARK	D1	D2	D3
ELEVATION			
	SIZE(WXH)	800X2100 mm	800X2100 mm
	TOTAL No.	2	4
DESCRIPTION	Metalic Steel grille door side hung double swinging thru 90° fixed on Steel frame to detail ,include all accessories. Include door sinage	Timber framed and battened hardwood door well varnished 40mm thick, side hung swinging thru 90° fixed on an galvanised steel frame. Include door sinage	Solid core mahogany veneered Timber flush door 50mm thick, doubleside hung swinging thru 90° well varnished fixed on galvanised steel frame. Include door sinage
LOCATION	Entrance	VIP	PWDs
IRONMONGERY	3 pairs of heavy duty single action steel hinges. heavy duty Steel Bolt and padlock system	3No. single action aluminium hinges. 2 No. drop bolts 2 Lever Union door handle ,indicator lock system with all accessories	3No.single action aluminium hinges. 2 No. drop bolts 2 Lever Union door handle and lock system complete with all accessories

WINDOW SCHEDULE - C[6VIP]02 ; 6-STANCE VIP BLOCK	
MARK	W1
ELEVATION	<div><div>Ring Beam Soffit</div></div>
	<div><div>F.F.L</div></div>
	SIZE(WXH)
TOTAL No.	6
DESCRIPTION	Steel casement window,100x75mm anodised steel section with single 4mm thick clear glazing to Detail Precast concrete Window Cill 240mmW X 75mmH
STAYS AND FASTENERS	Steel fabricated to Architect's Detail




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Client:



ICPALD

CENTRE FOR PASTORAL AREAS AND LIVESTOCK DEVELOPMENT.

Project Particulars:

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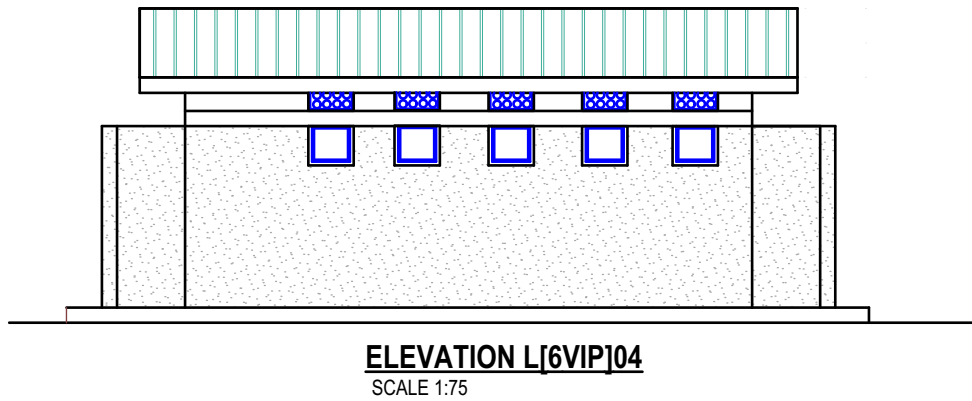
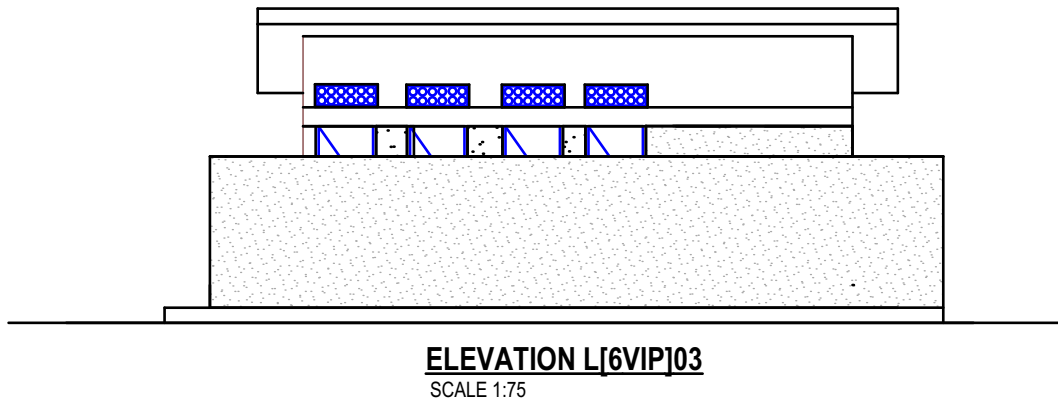
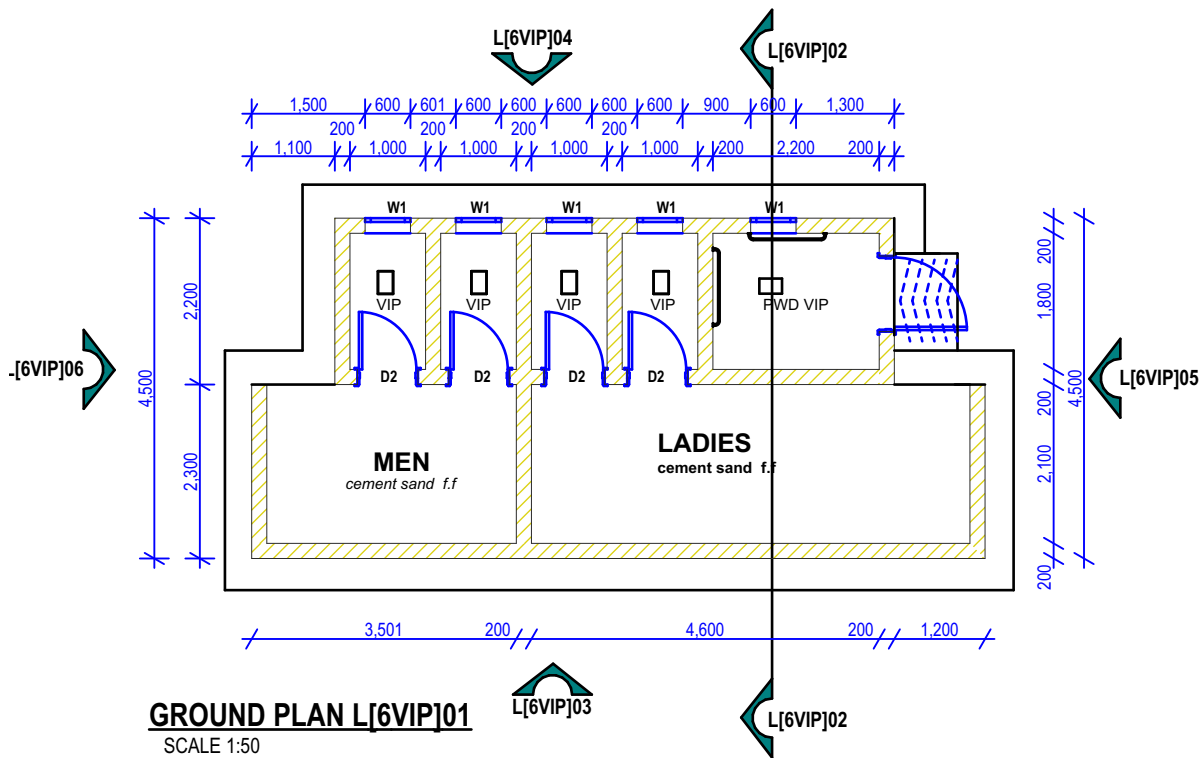
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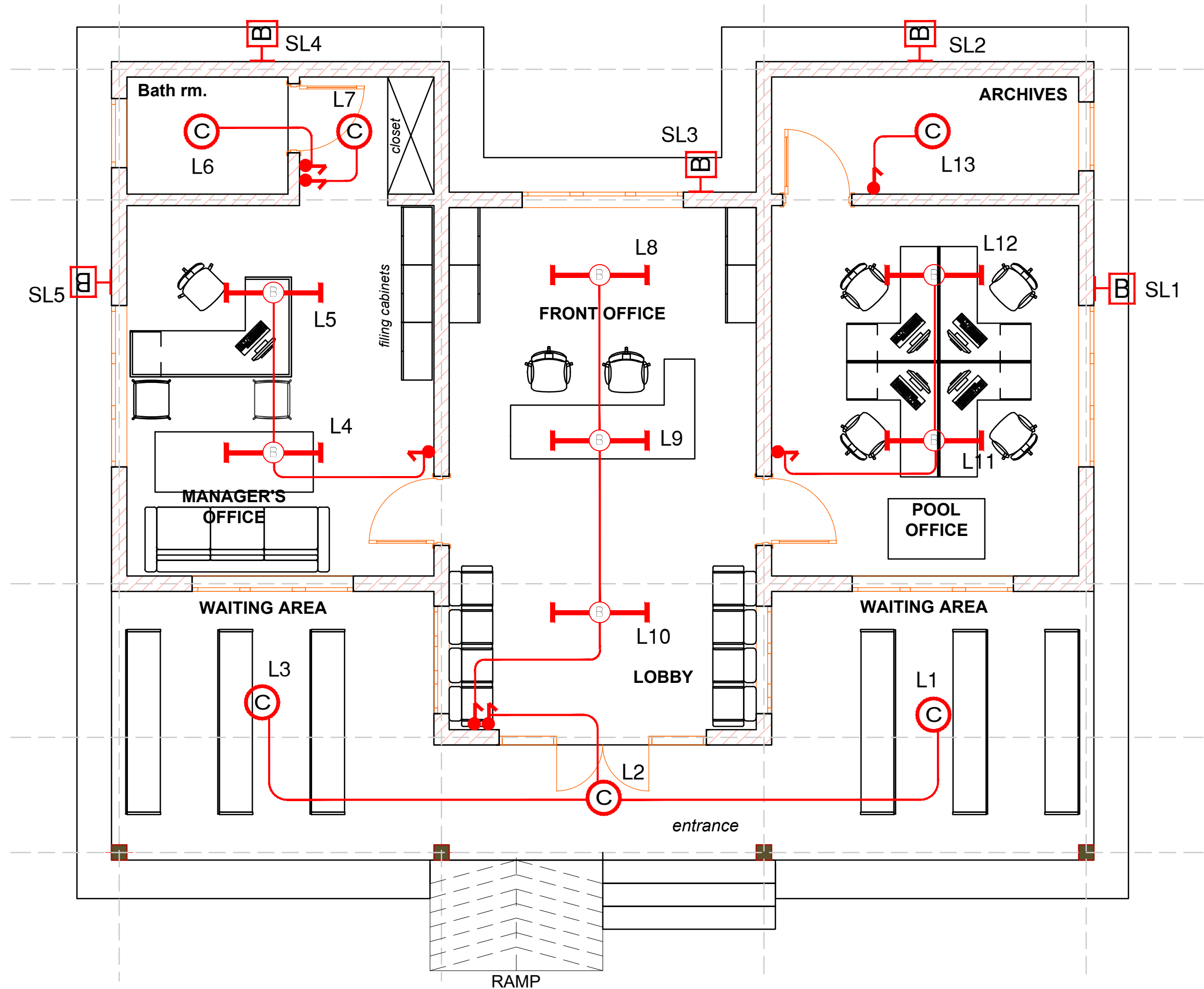
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MATOVU JOHN.R

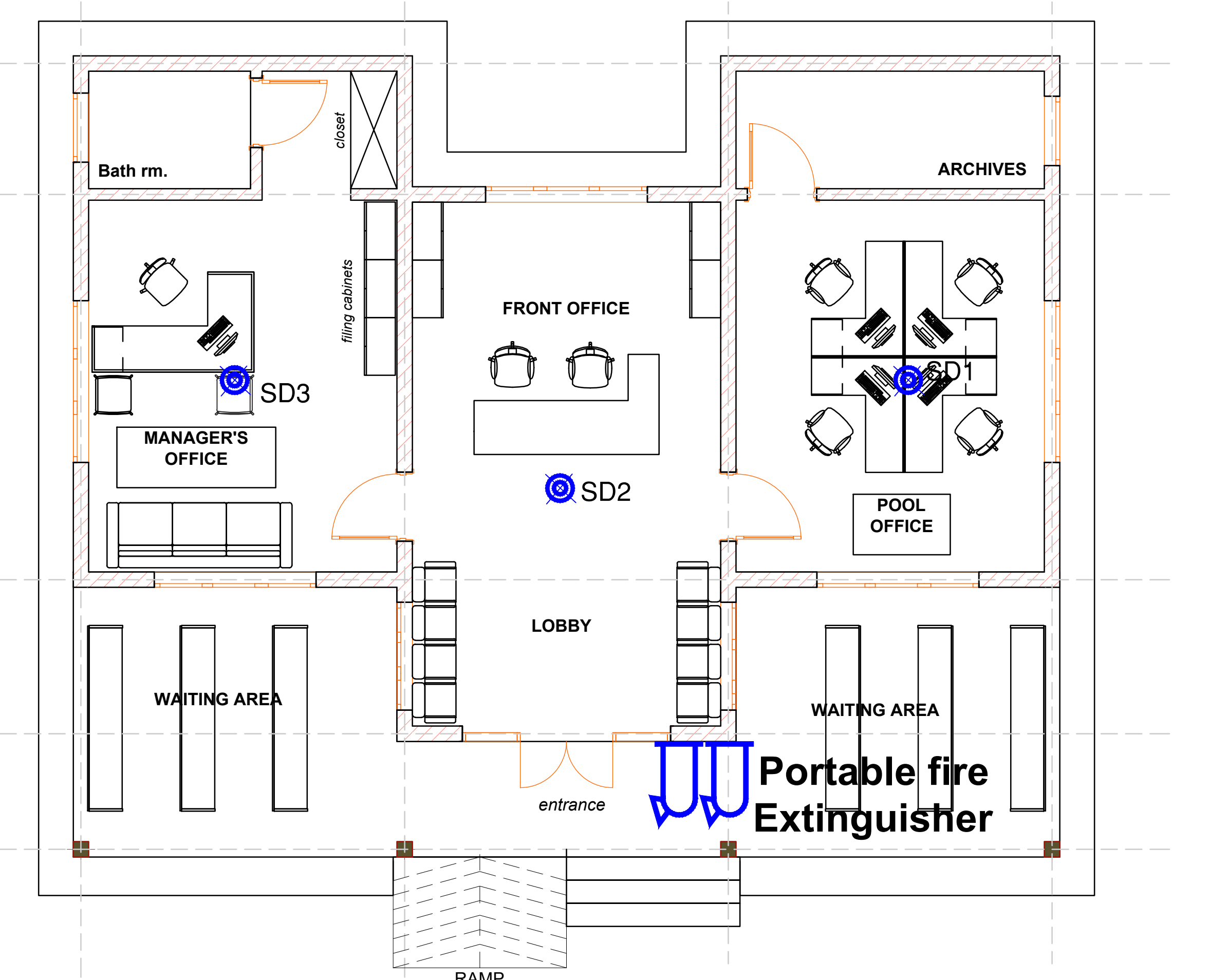
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Date: **DECEMBER 2024** Checked by:
M.J.R





GROUND FLOOR PLAN
OFFICE BLOCK , LIGHTING INSTALLATION LAYOUT.



GROUND FLOOR PLAN
OFFICE BLOCK , SMOKE DETECTION INSTALLATION LAYOUT.

SYMBOLS	DESCRIPTIONS
	Wireless Smoke detector
	Fire panel
	Alarm sounder
	Breakglass manual call point
	Heat detector
	Portable fire Extinguisher

SYMBOLS	DESCRIPTIONS
	ONE GANG, ONE WAY WALL SWITCH
	ONE GANG, TWO WAY WALL SWITCH
	TWO GANG, TWO WAY WALL SWITCH
	DECORATIVE WATER RESISTANT CIRCULAR FITTING.
	DECORATIVE PENDANT CIRCULAR FITTING.
	1200MM, 1X36W BARE BATTEN FLUORESCENT LIGHT FIXTURE
	COMBINED SHAVER AND LIGHTING FITTING
	DECORATIVE WALL BRACKET MOUNTED LIGHT FITTING.
	DECORATIVE WALL MOUNTED SECURITY LIGHT FITTING.
	45A DP COOKER CONTROL UNIT C/W 13A AUXILLIARY SOCKET OUTLET.
	13A 2-GANG SWITCHED SOCKET OUTLET C/W PILOT LAMP
	WATER HEATER,WH
	CONSUMER UNIT
	20A DP SWITCH
	DISTRIBUTION BOARD/ UMEME ADAPTABLE BOX.

NOTES	
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6	THIS DRAWING MUST BE READ IN CONJUNCTION WITH DRAWINGS CODED THEREIN.
7	PV DENOTES PERMANENT AIR VENTS OVER DOORS AND WINDOWS AS SHOWN ON THE DRAWING
8	WALLS BELOW 200MM THICK ARE TO BE REINFORCED WITH HOPIRON AT EVERY ALTERNATE COURSE
9	DEPTH OF FOUNDATION TO BE DETERMINED ON SITE
10	DRAINAGE PIPES PASSING UNDER TARMAC, DRIVEWAYS AND BUILDINGS TO BE ENCASED IN 150MM CONCRETE SURROUND
11	ALL REINFORCED CONCRETE WORKS TO BE TO STRUCTURAL ENGINEER'S DETAILS
12	ALL SANITARY WORKS TO BE TO SATISFACTION OF MoH
13	ALL ROADS TO BE TO CIVIL ENGINEER'S DETAILS
14	FOR SOIL AND WATER DRAINAGE REFER TO MECHANICAL ENGINEERS DRAWINGS

PROJECT NAME

CONSULTANCY SERVICES for DETAILED ARCHITECTURAL AND ENGINEERING DESIGNS & TECHNICAL SUPERVISION of BORDER POST BETWEEN ETHIOPIA and SUDAN, BUSINESS INCUBATION CENTRES IN MORUNGULE, KAABONG DISTRICT, (UGANDA) AND NARUS, KAPOETA EAST COUNTY, (SOUTH SUDAN), A POULTRY-HOUSE FOR AKANDEYU, ETHIOPIA and AN ACCESS ROAD FROM MORUNGULE TO NATINGA

Client:

CENTRE FOR PASTORAL AREAS AND LIVESTOCK DEVELOPMENT.

Project Particulars:

PROPOSED BORDER POST

Location: KURMUK

Country: REPUBLIC OF ETHIOPIA.

Consultant

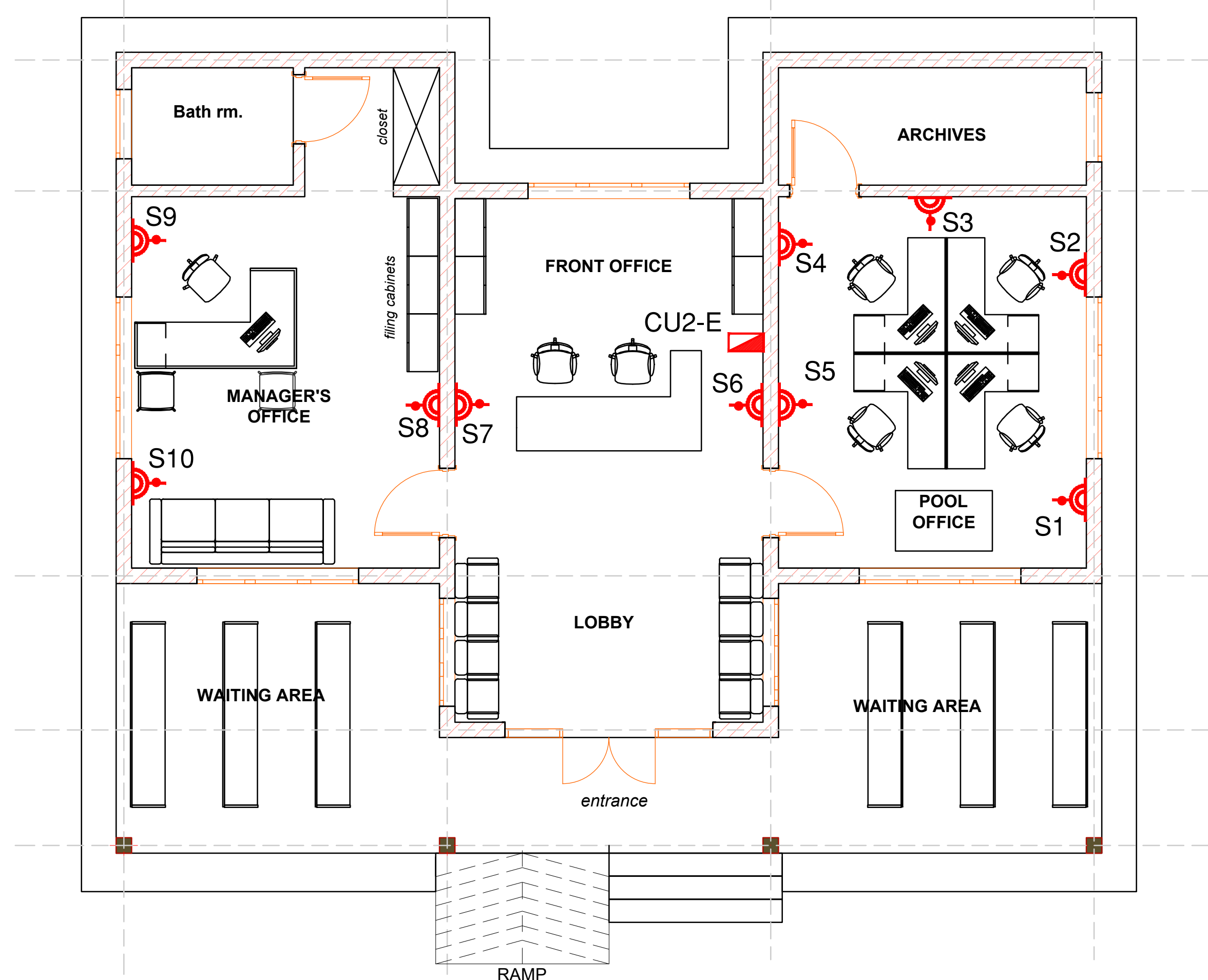
MATOVU JOHN .R

P.O.BOX 3694 KAMPALA
ARB.REG.No.257.

Drg. Title:

ELECTRICAL INSTALLATION LAYOUT.

Sheet no.: EL/01	Scale: As Indicated
Drawing no.:	Drawn by:
Units: mm	N.M.Z
Date: DECEMBER 2024	Checked by: M.J.R



GROUND FLOOR PLAN
OFFICE BLOCK , SMALL POWER INSTALLATION LAYOUT.

8No.Solar panel @ 220W

80A, MPPT Solar,
Charge Controller.

50mm sq.SC PVC-I
Copper cable in conduit.

2500W,240V,50Hz,pure
Auto-sine wave inverter

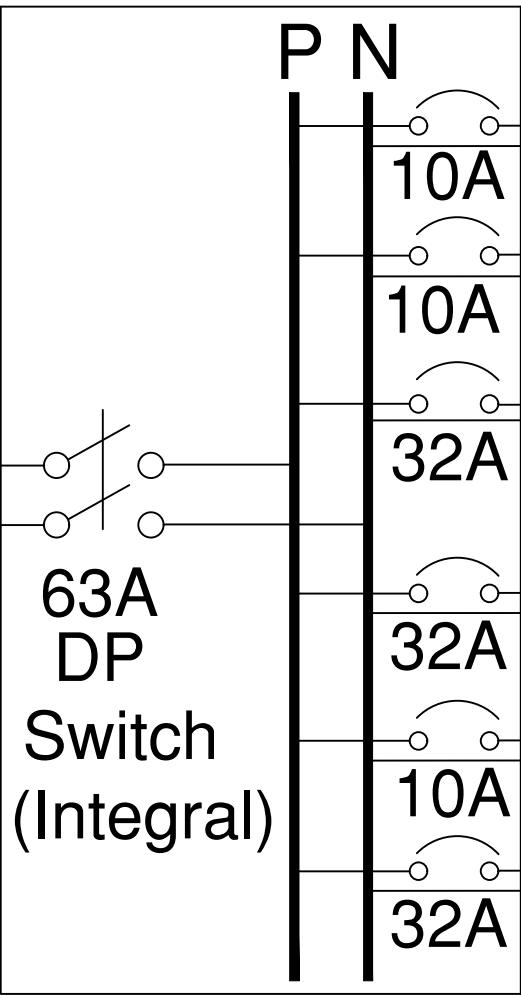
DC supply

Inverter

25mm sq.SC PVC-I Copper
Cables in Conduit.

50mm sq.DC
Copper Cables in Trunking / conduit.

8No.Battery
bank @ 200Ah



3X1.5mm sq.SC PVC-I Copper Cables in Conduit.

LIGHTS L1-L13

-ditto-

SECURITY LIGHTS SL1-SL5(THRU' PHOTO CABLE)

3X2.5mm sq.SC PVC-I Copper Cables in Conduit.

SOCKETOUTLET S1-S5(Ring Circuit).

3X2.5mm sq.SC PVC-I Copper Cables in Conduit.

SOCKETOUTLET S6-S10(Ring Circuit).

SPARES.

63A;12-WAY SPN MCB-TYPE CONSUMER UNIT CU2-E, GROUND FLOOR.

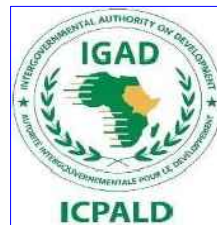
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- ALL SANITORY WORKS TO BE TO SATISFACTION OF MoH
- ALL ROADS TO BE TO CIVIL ENGINEER'S DETAILS
- FOR SOIL AND WATER DRAINAGE REFER TO MECHANICAL ENGINEERS DRAWINGS

PROJECT NAME

CONSULTANCY SERVICES *for* DETAILED ARCHITECTURAL AND ENGINEERING DESIGNS & TECHNICAL SUPERVISION *of* BORDER POST BETWEEN ETHIOPIA *and* SUDAN, BUSINESS INCUBATION CENTRES IN MORUNGULE, KAABONG DISTRICT, (UGANDA) AND NARUS, KAPOETA EAST COUNTY, (SOUTH SUDAN), A POULTRY-HOUSE FOR AKANDEYU, ETHIOPIA *and* AN ACCESS ROAD FROM MORUNGULE TO NATINGA

Client:



CENTRE FOR PASTORAL AREAS AND LIVESTOCK DEVELOPMENT.

Project Particulars:

PROPOSED BORDER POST

Location:

KURMUK

Country:

REPUBLIC OF ETHIOPIA.

Consultant

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ARB.REG.No.257.

Drq. Title:

ELECTRICAL INSTALLATION LAYOUT.

Sheet no.:

EL/02

Scale:

As Indicated

Drawing no.:

Drawn by:

Units: mm

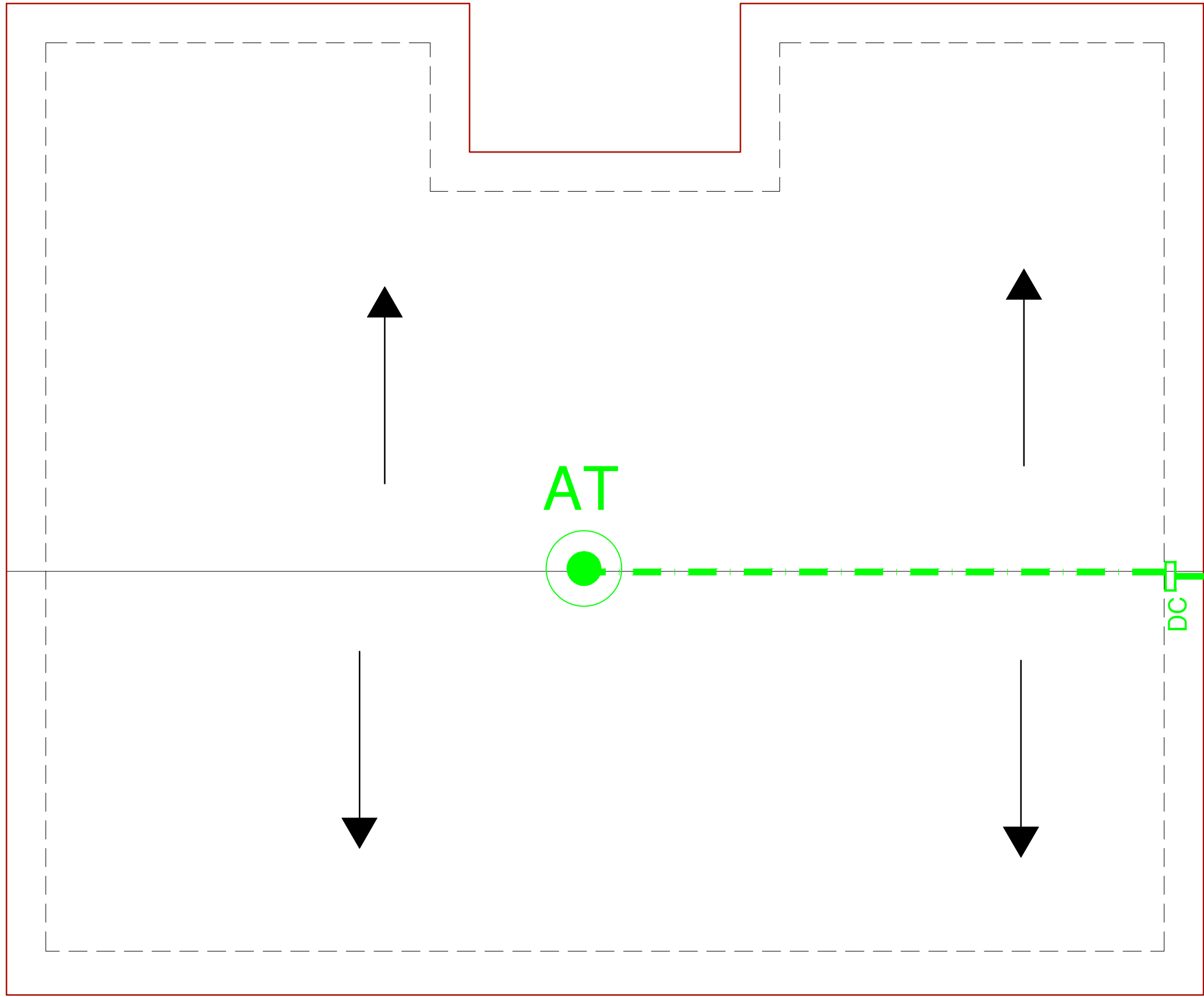
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Date:

DECEMBER 2024

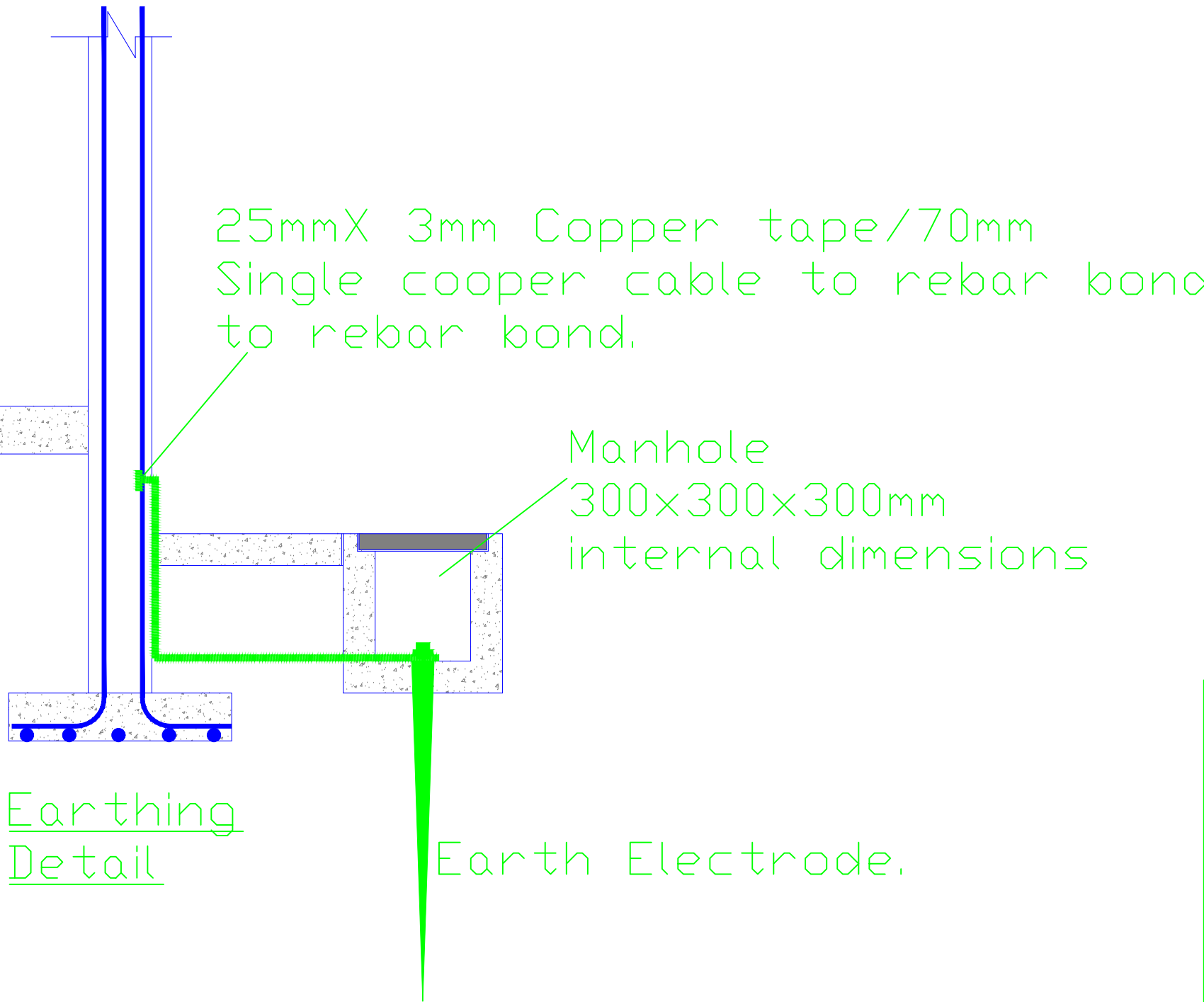
Checked by:

M.J.R






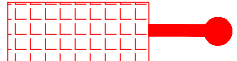
ROOF FLOOR PLAN

OFFICE BLOCK , LIGHTNING PROTECTION INSTALLATION LAYOUT.



LEGEND

- ⊙ AT AIR TERMINAL
- TB TEST BLOCK
- ◻ MH INSPECTION MANHOLE
- ≡ EE EARTH ELECTRODE
- HC HORIZONTAL CONDUCTOR
COPPER TAPE 3x25mm
- DC DOWN CONDUCTOR COPPER
TAPE 3x25mm/50MMSQ
COPPER CABLE.


SYMBOLS	DESCRIPTIONS
	ONE GANG, ONE WAY WALL SWITCH
	ONE GANG, TWO WAY WALL SWITCH
	TWO GANG, TWO WAY WALL SWITCH
	4M FREE STANDING SOLAR SECURITY LIGHT FIXTURE.

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Client:



CENTRE FOR PASTORAL AREAS AND LIVESTOCK DEVELOPMENT.

Project Particulars:

PROPOSED BORDER POST

Location:
KURMUK

Country:
REPUBLIC OF ETHIOPIA.

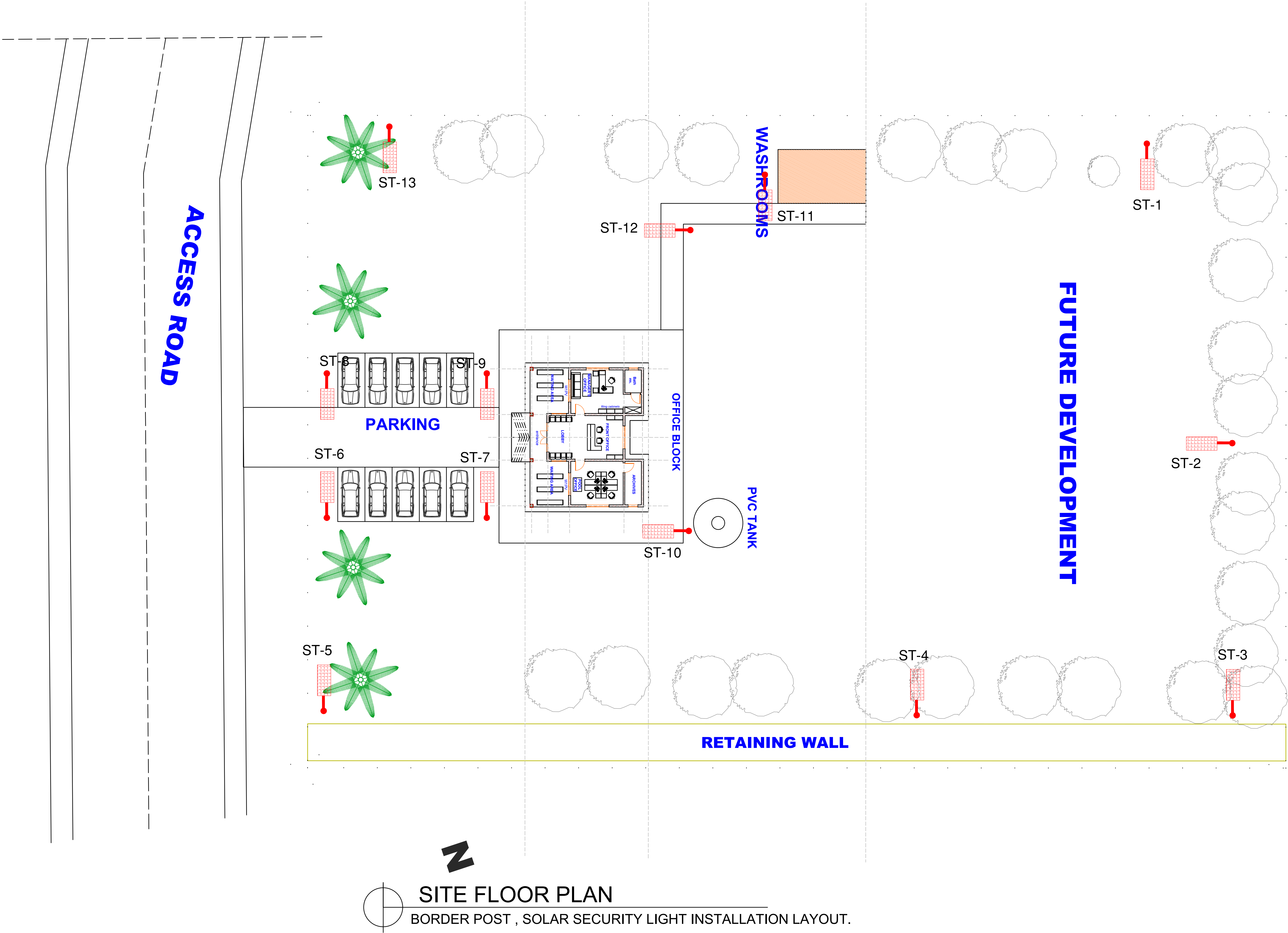
Consultant

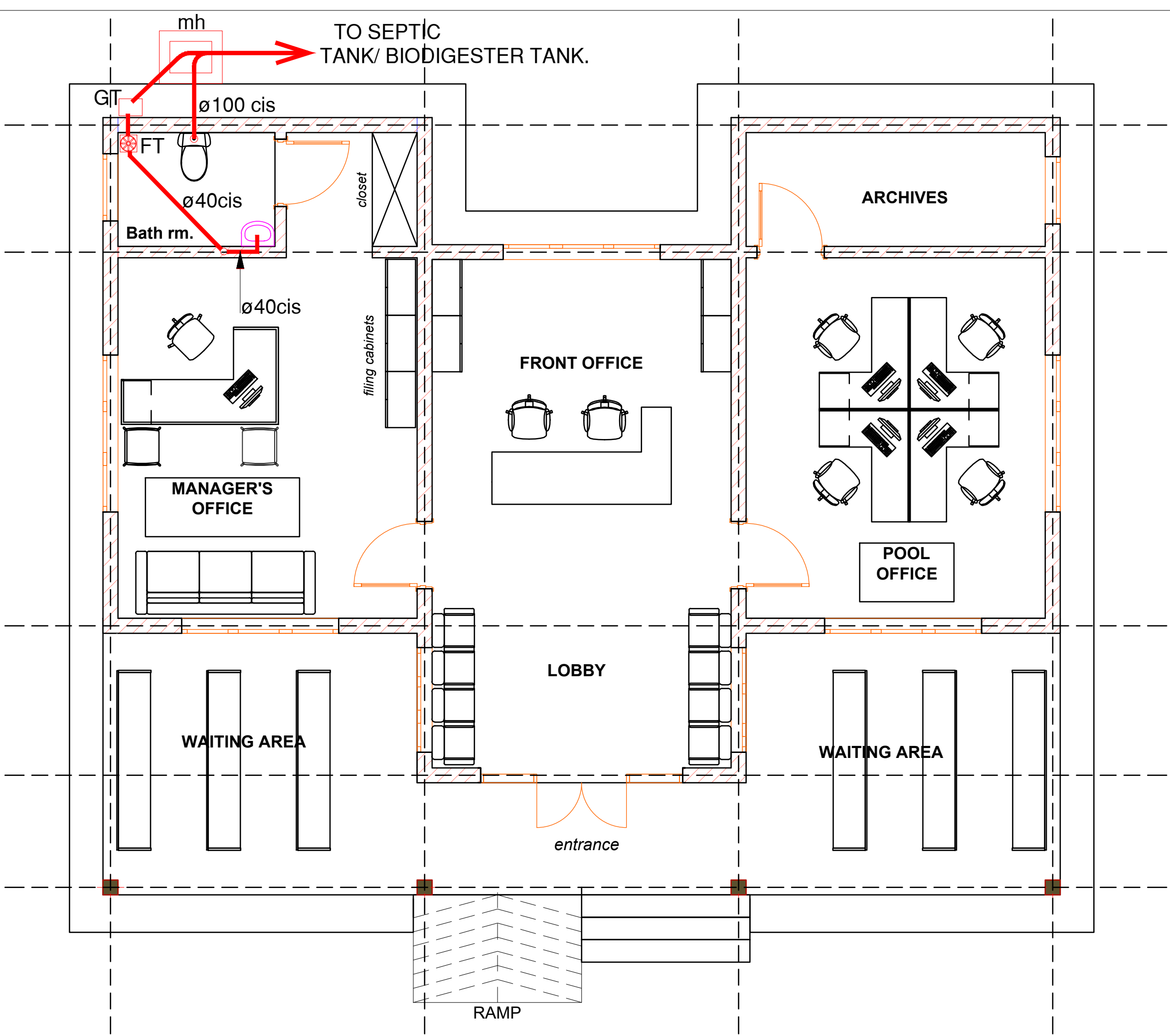
MATOVU JOHN .R
P.O.BOX 3694 KAMPALA
ARB.REG.No.257.

Drg. Title:

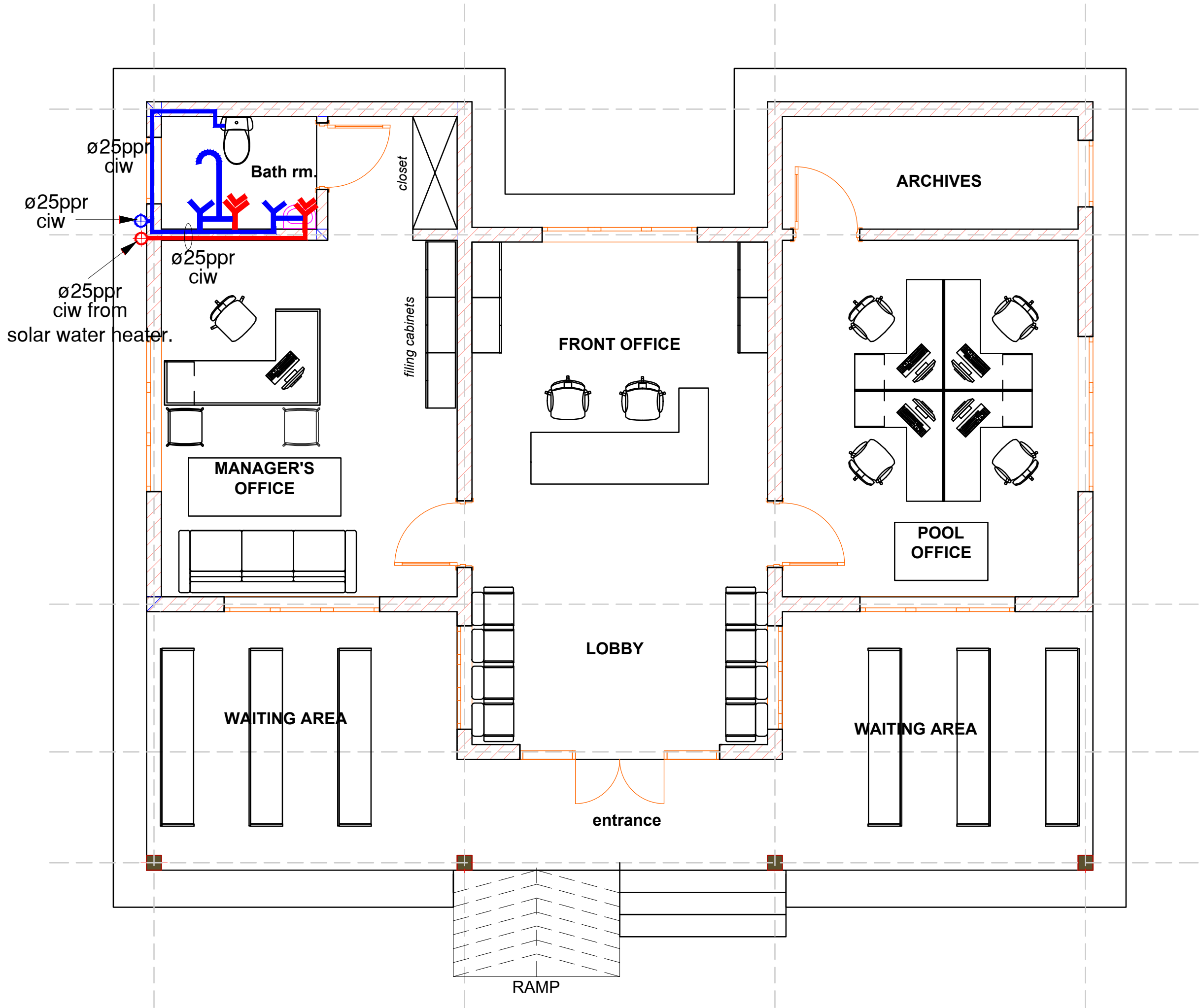
ELECTRICAL INSTALLATION LAYOUT.

Sheet no.:	EL/03	Scale:	As Indicated
Drawing no.:		Drawn by:	
Units: mm		N.M.Z	
Date: DECEMBER 2024		Checked by:	M.J.R





GROUND FLOOR PLAN
OFFICE BLOCK , DRAINAGE INSTALLATION LAYOUT.



GROUND FLOOR PLAN
OFFICE BLOCK , PLUMBING INSTALLATION LAYOUT.

Symbols	Descriptions
	Water Closet
	Wash hand basin
	Shower Try
	Double bowl sink
RE	Rodding eye
FA	From above
SVP	Soil vent pipe
FB	From below
ciw	Chassed in Wall
FT	Floor trap
	Bath/Shower mixer
	Wash hand basin mixer
	Gate valve
MH	Man hole
GT	Gully trap
	Portable fire Extinguisher

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PROJECT NAME

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Project Particulars:

PROPOSED BORDER POST

Location:

KURMUK

Country:

REPUBLIC OF ETHIOPIA.

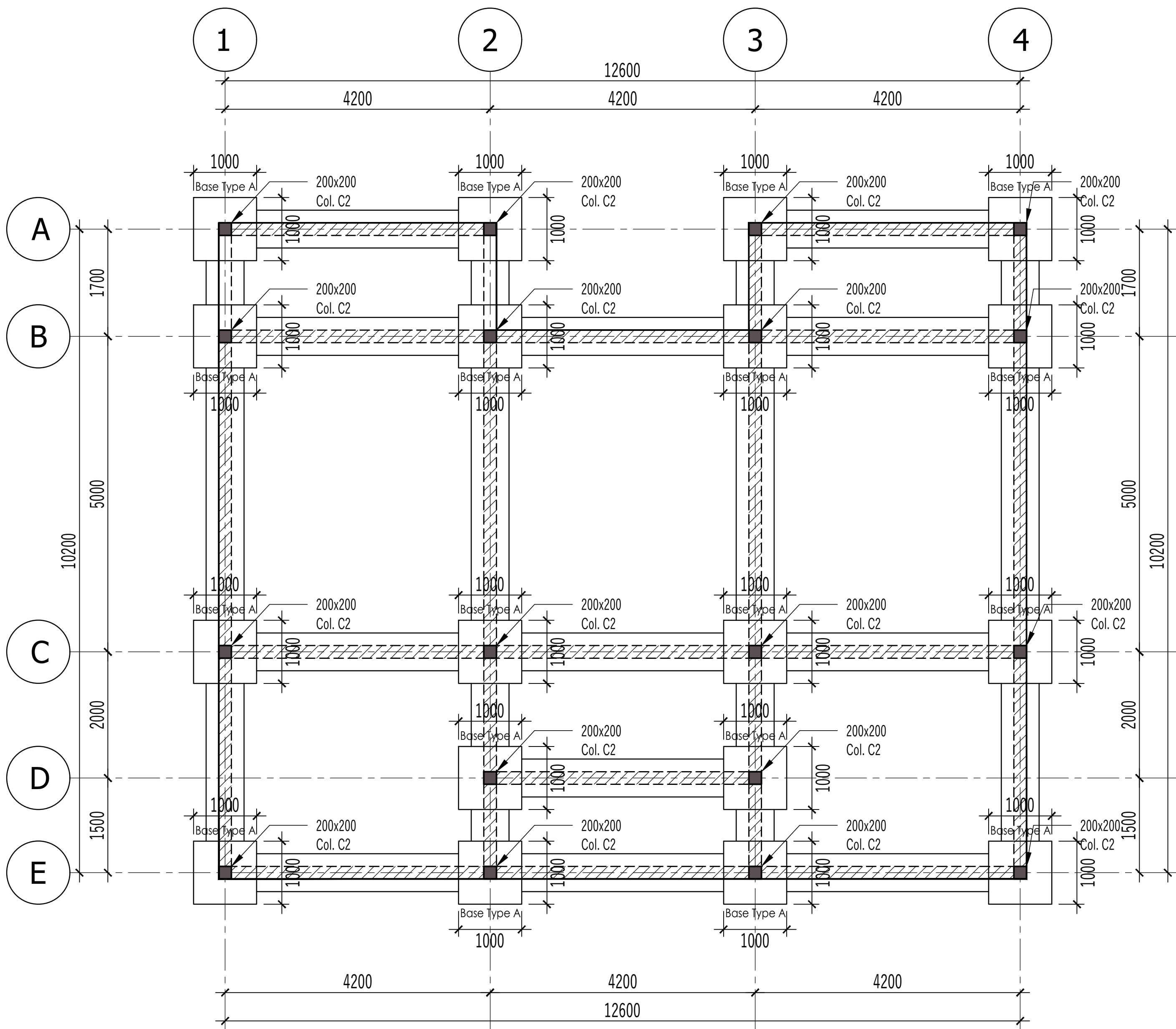
Consultant

MATOVU JOHN .R
P.O.BOX 3694 KAMPALA
ARB.REG.No.257.

Drq. Title:

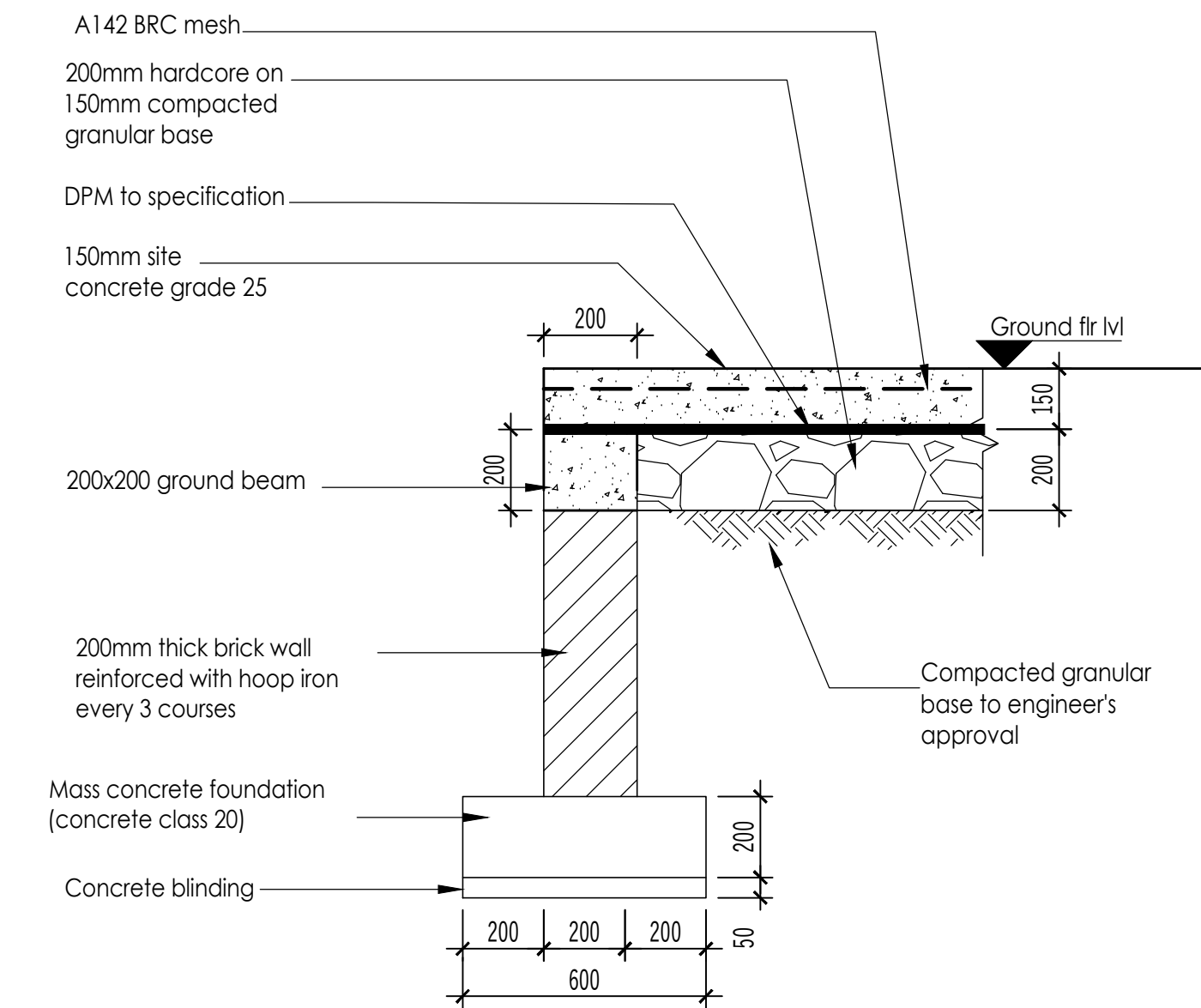
DRAINAGE & PLUMBING INSTALLATION LAYOUT.

Sheet no.:	EL/04	Scale:	As Indicated
Drawing no.:		Drawn by:	
Units: mm		N.M.Z	
Date: DECEMBER 2024		Checked by:	M.J.R



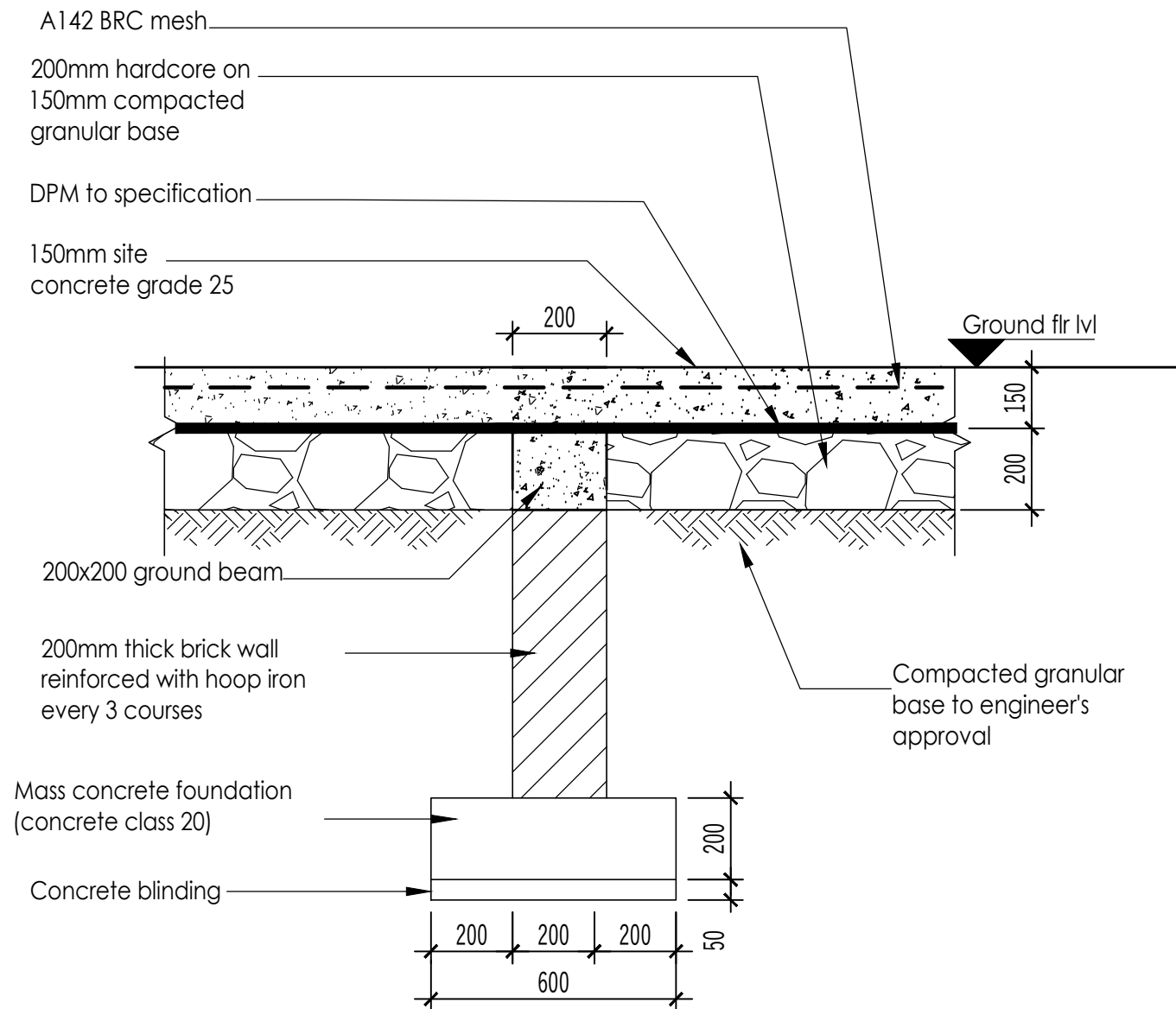
Foundation Layout

Scale 1:50



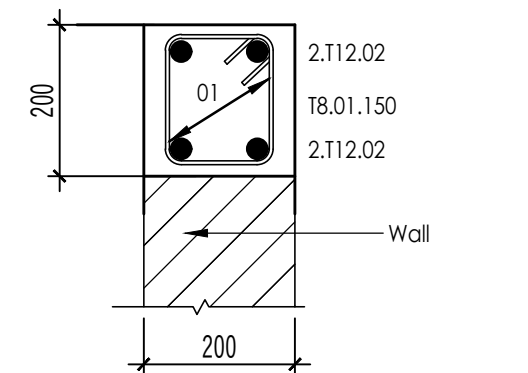
Section Thru External Footing

Scale 1:10



Section Thru Internal Footing

Scale 1:10



Section Through the 200x200 Ground Beam

CONSTRUCTION SUPERVISION:-

All construction works MUST be carried out under the supervision of the Design Structural Engineer, failure of which the latter shall hold no responsibility.

1. REFERENCE:-
All Engineers' drawings shall be read in conjunction with the Architects' and any discrepancies should be reported to the Architect and Engineer.

2. DIMENSIONS:-
All dimensions are in millimeters unless stated otherwise. All dimensions to be checked on site prior to construction. Written dimensions to be followed in preference to scaled dimensions i.e do not scale off the drawing.

3. FOUNDATIONS:-
Foundations have been designed on bearing pressure of 200kN/m sq.
Foundation depth to be determined by Engineer prior to placing concrete.
Minimum Foundation depth to be 1000mm below floor level or 600 mm below splash apron level, whichever is critical. Maximum allowable fill below ground slab = 500mm.

4. BLOCK WORK:-
All load bearing block walls are to be constructed from solid blocks of 3.5N/mm sq. minimum characteristic compression strength complying with BS5628 Part 1, 1978; Structural Use of unreinforced masonry. Mortar to conform to designation [III] of table 1, BS 5628, Part 1.

Proposed use	Grade	Permitted Aggregate type		Max. Agg size
		Coarse	Fine	
Reinforced Concrete (including ground bearing slab)	C 25	BS 882	BS 882	20mm
Concrete containing no embedded metal	C 15	BS 882	BS 882	40mm
Blinding Concrete	C 10	BS 882	BS 882	20mm
Foundation	C 25	BS 882	BS 882	20mm

Proposed use	Cover	Minimum Lap Lengths
To mesh in slabs	20mm	T25- 1200mm T20- 1000mm T16- 800mm T12- 600mm T10- 500mm
Columns (cover to links)	30mm	
Slabs (cover to main bars)	25mm	
Foundations (Top, Bottom & Sides)	50mm	
Beams (Cover to main bars)	25mm	

Concrete Ratios (CEM II)
C30 = 1: 1: 2
C25 = 1: 1½ : 3
C20 = 1: 2: 4
C15 = 1: 3: 6
C10 = 1: 4: 8

5. JOINTS:- Movement Joints to be as shown on drawing. Joint is slab to be carried through walls and beams.

7. WALL TIES:- Provide masonry anchors every 2 courses using mild steel hoop iron ties to BS 1243, 1978.

8. REINFORCEMENT:- Reinforcement to be in accordance with Consulting Engineer's Specifications.
R ----- denotes round mild steel
T ----- denotes high yield steel

Revision

No.	Date	Particulars	Initials

CONSULTANCY SERVICES for DETAILED ARCHITECTURAL AND ENGINEERING DESIGNS & TECHNICAL SUPERVISION of BORDER POST BETWEEN ETHIOPIA and SUDAN, BUSINESS INCUBATION CENTRES IN MORUNGOLE, KAABONG DISTRICT, (UGANDA) AND NARUS, KAPOETA EAST COUNTY, (SOUTH SUDAN), A POULTRY-HOUSE FOR AKANDEYU, ETHIOPIA and AN ACCESS ROAD FROM MORUNGULE TO NATINGA

PROPOSED BORDER POST LOCATED IN KURMUK IN THE REPUBLIC OF ETHIOPIA

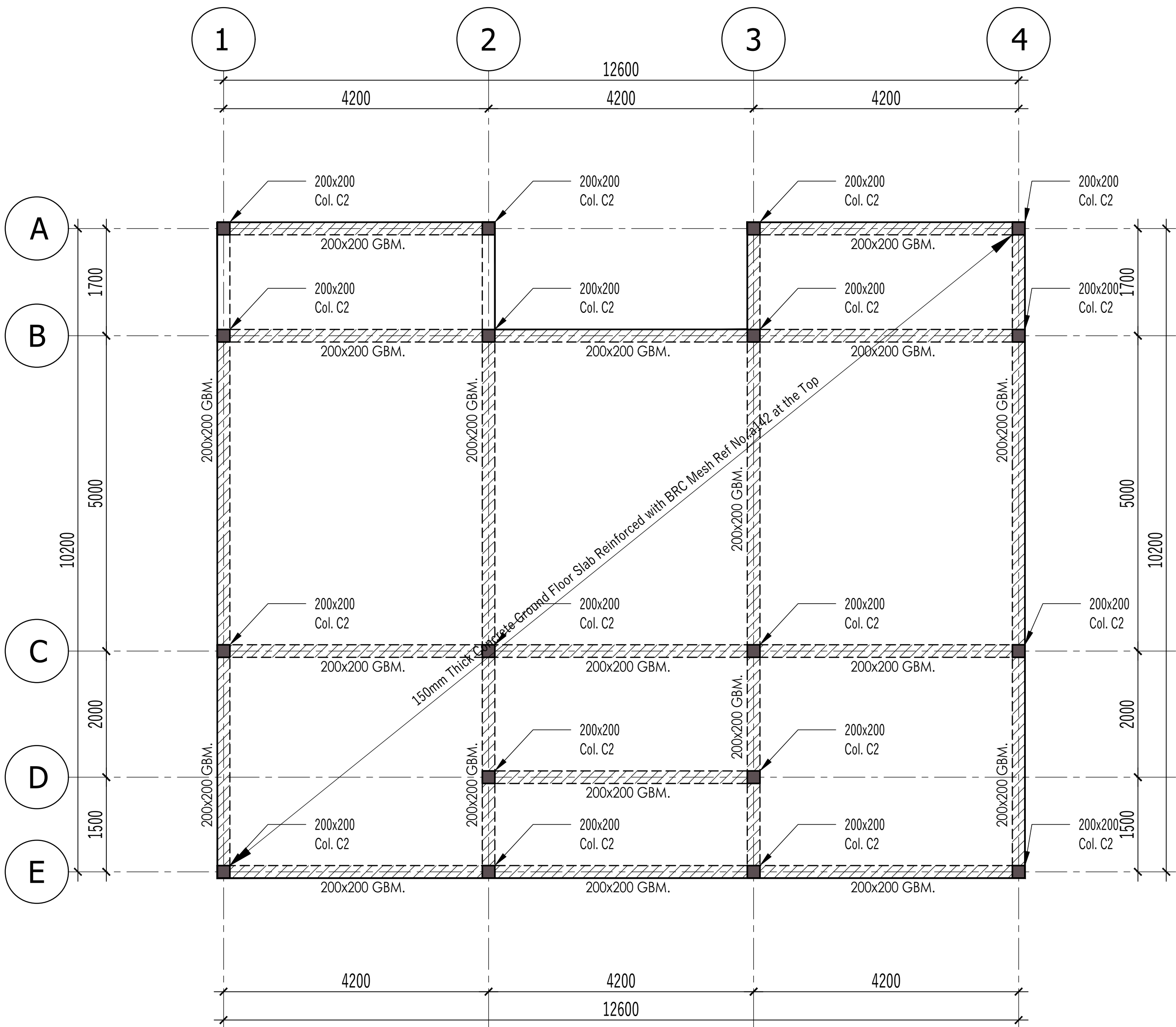
ARCHITECT: MATOVU JOHN .R
P.O.BOX 3694 KAMPALA
ARB.REG.No.257.

CLIENT
CENTRE FOR PASTORAL AREAS AND LIVESTOCK DEVELOPMENT.



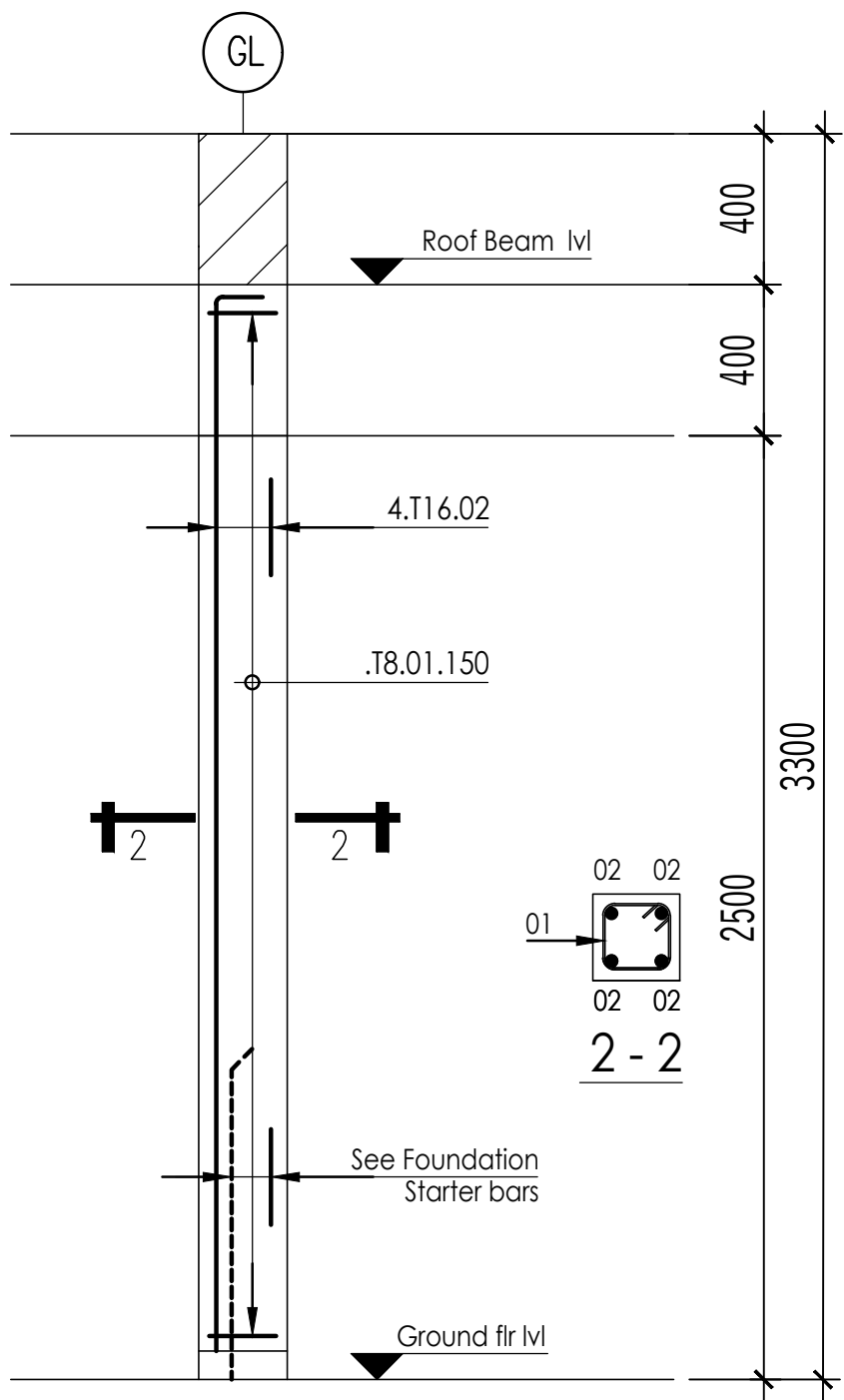
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DRAWING DESCRIPTION	Foundation Layout and Foundation Details			
DRAWING NO.	STR.28.12.2024.K			
SHEET NO.	S.01.K			
SCALE	DATE	DRAWN BY	DESIGN BY	ENG. CHECKED BY
AS SHOWN	DEC. 2024	KK	KK	HMW



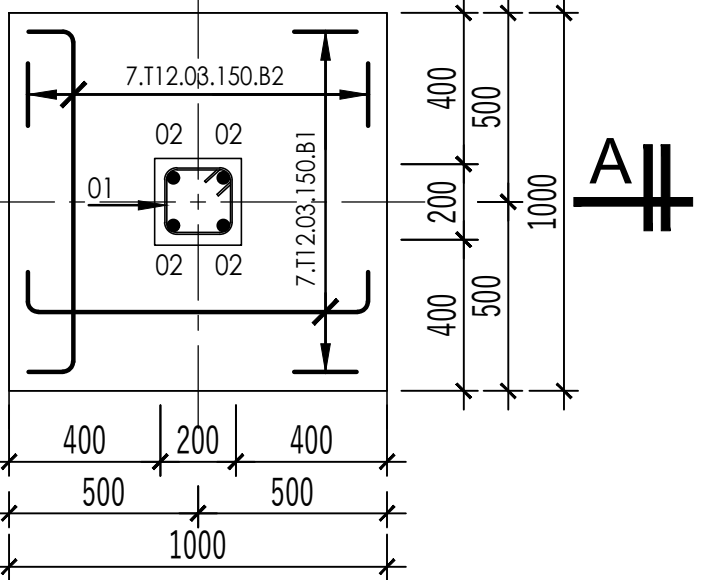
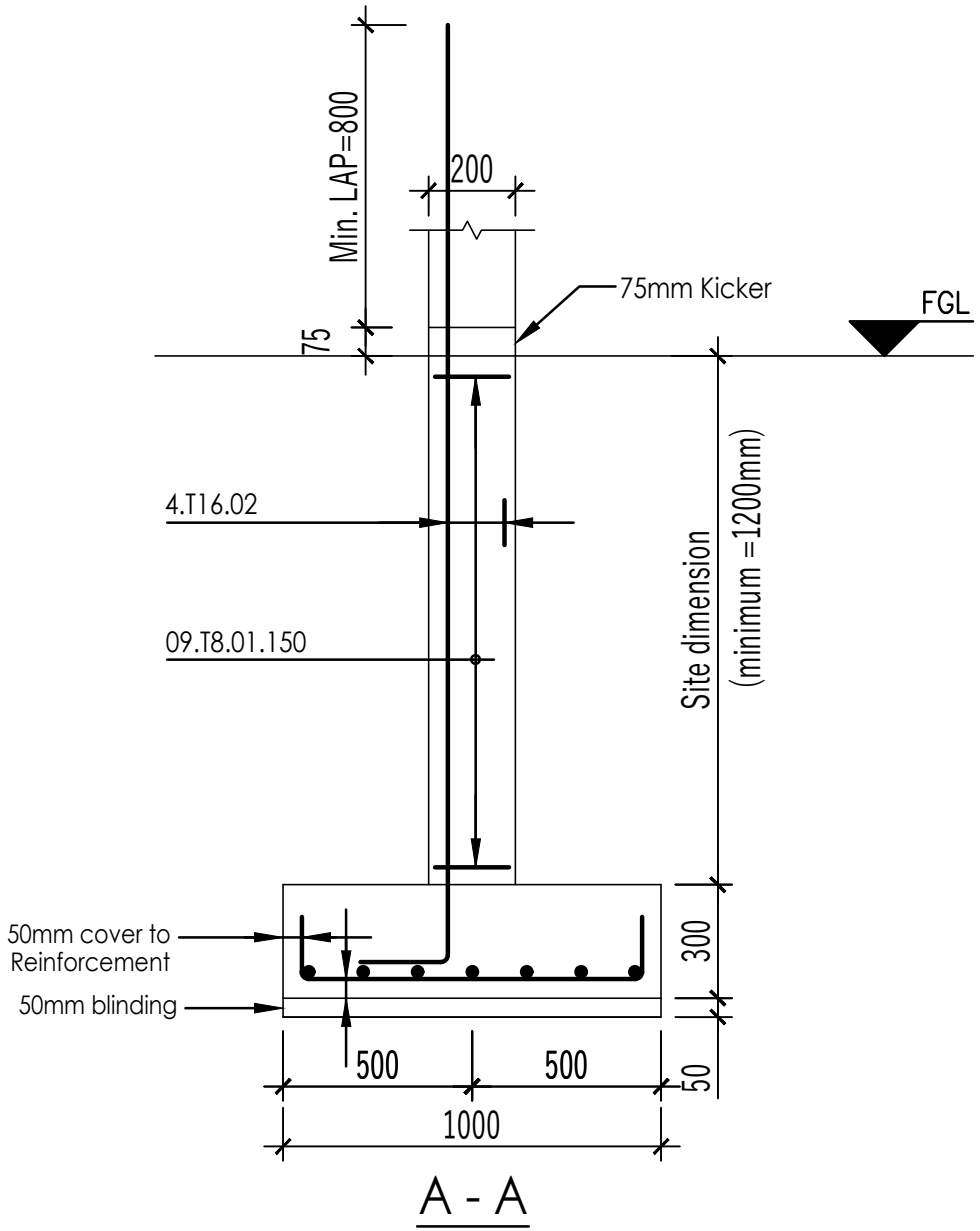
Ground Beam / Over site Slab Layout

Scale 1:50



200x200mm Cols C2

Scale 1:25



1000x1000x300 Pad Type A

Scale 1:25

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R -----denotes round mild steel
T -----denotes high yield steel

Revision

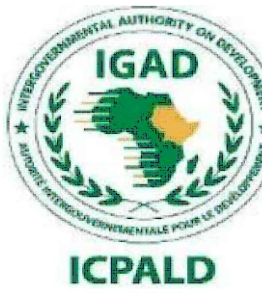
No.	Date	Particulars	Initials

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PROPOSED BORDER POST LOCATED IN KURMUK IN THE REPUBLIC OF ETHIOPIA

ARCHITECT: MATOVU JOHN .R
P.O.BOX 3694 KAMPALA
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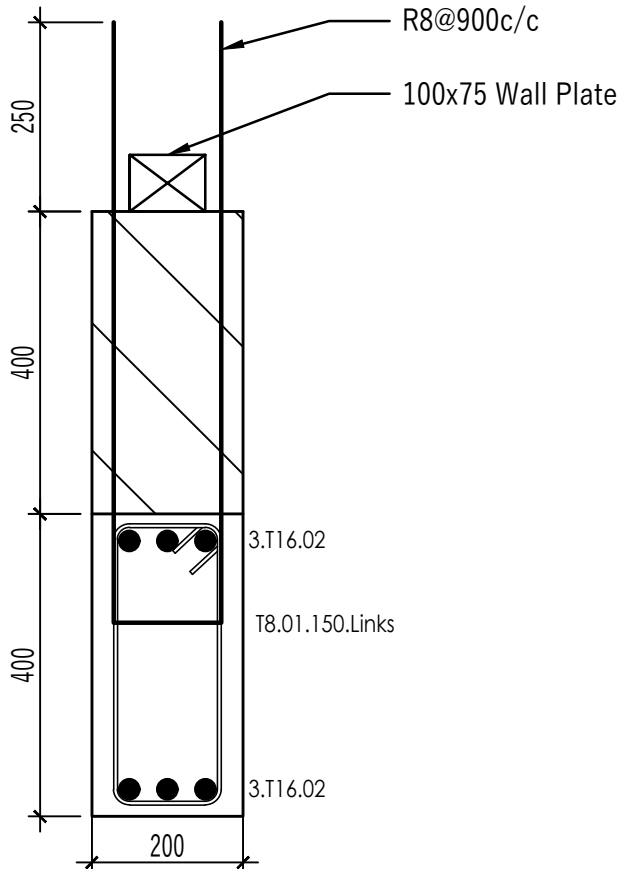
CLIENT
CENTRE FOR PASTORAL AREAS AND LIVESTOCK DEVELOPMENT.



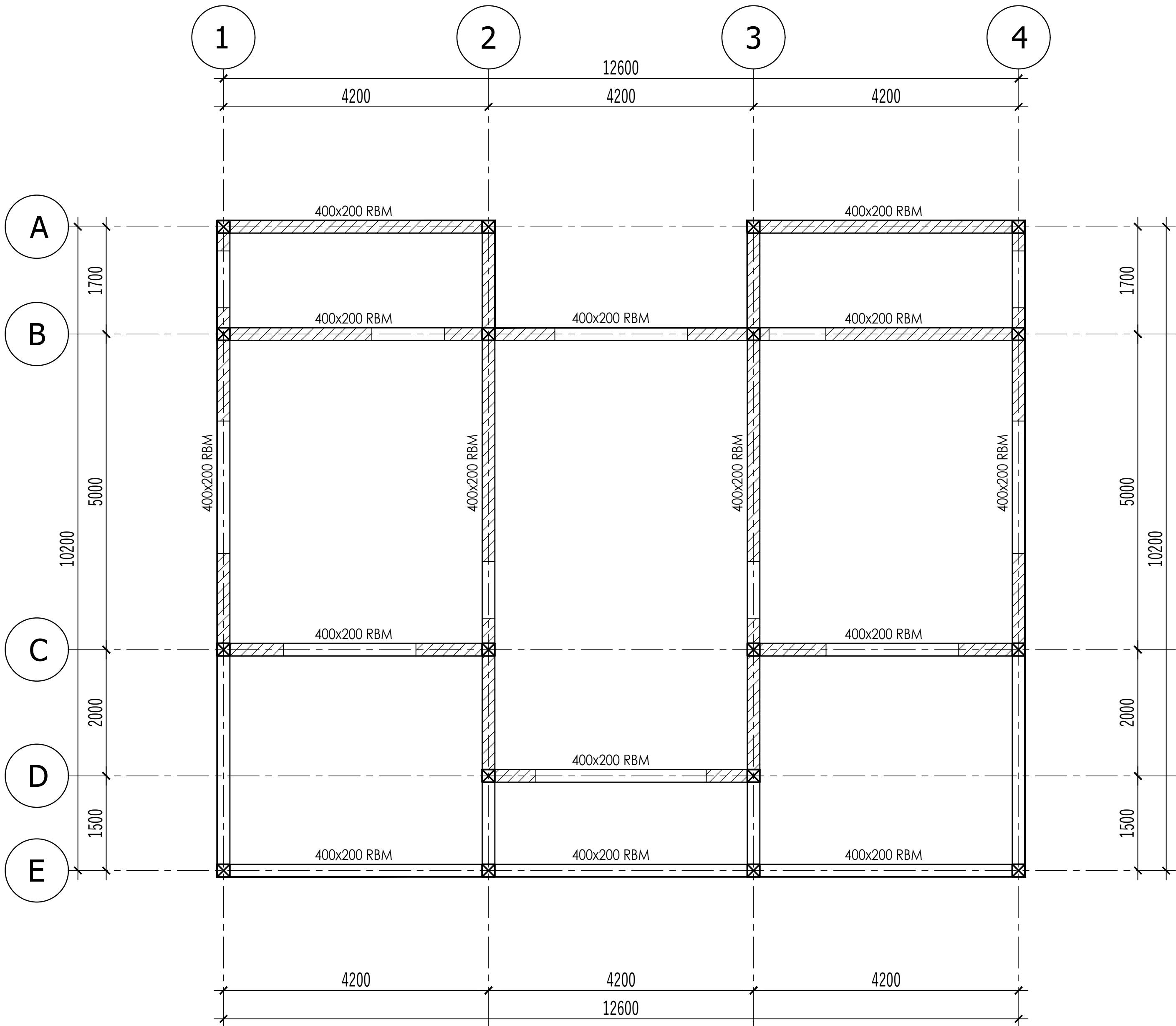
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	<input checked="" type="checkbox"/> APPROVAL DRAWINGS
DRAWING DESCRIPTION	<input type="checkbox"/> CONSTRUCTION DRAWINGS
	Ground Beam / Over site Slab Layout, Bases and Columns, RC Details
DRAWING NO.	STR.28.12.2024.K
SHEET NO.	S.02.K

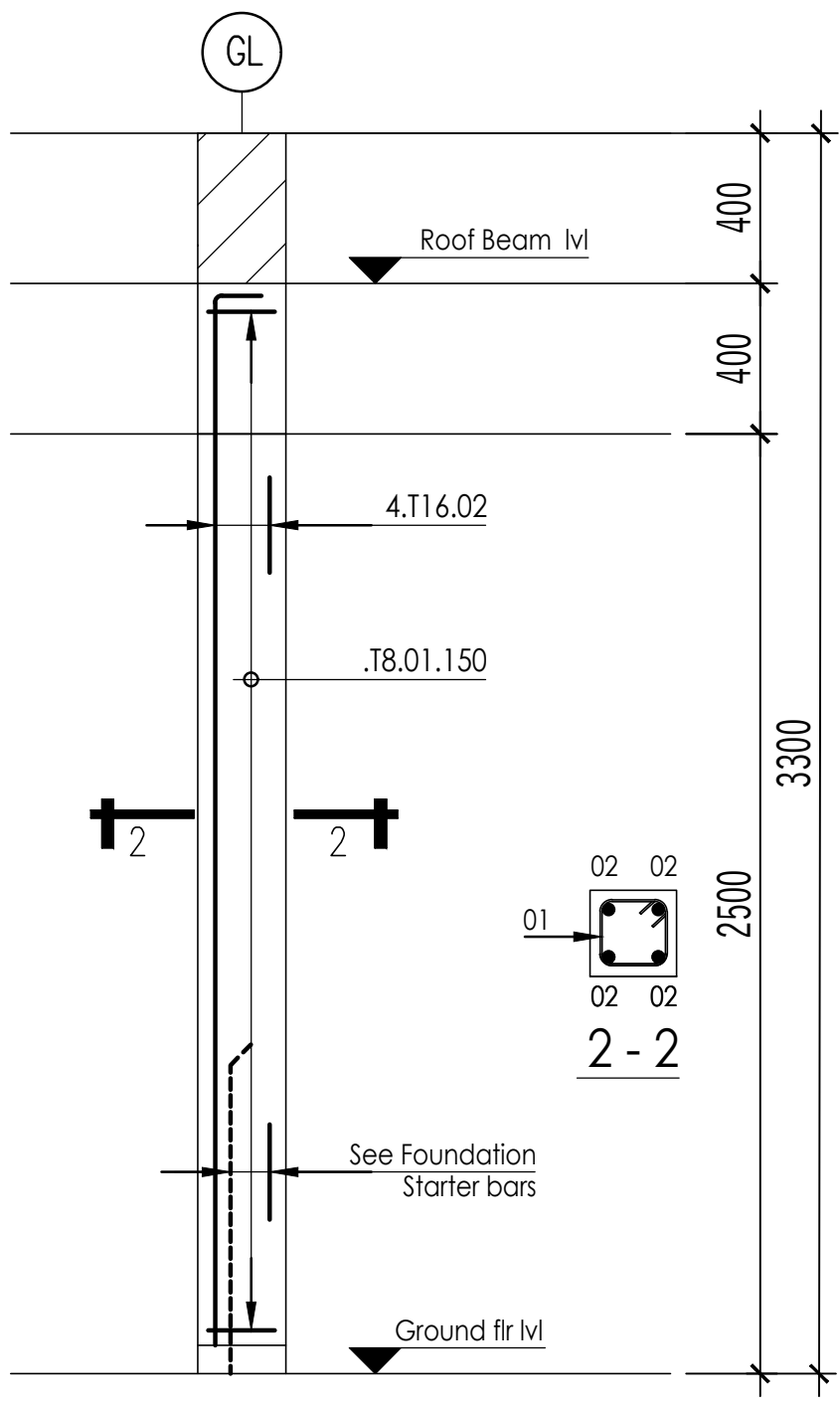
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AS SHOWN	DEC. 2024	KK	KK	HMW



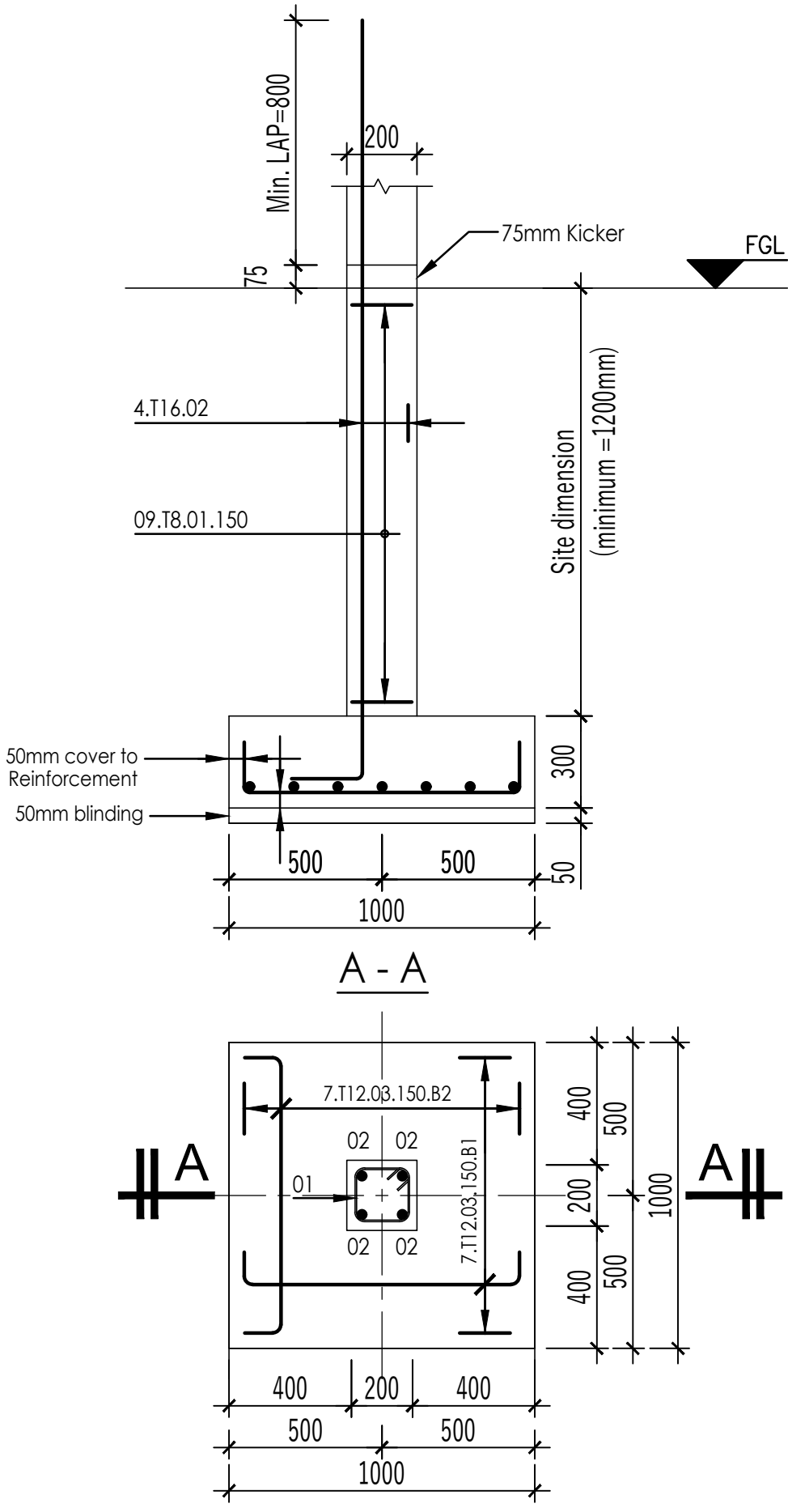
Typical 400x200 Ring Beam
Scale 1:10



Roof Beam Layout
Scale 1:50



200x200mm Cols C2
Scale 1:25



1000x1000x300 Pad Type A
Scale 1:25

CONSTRUCTION SUPERVISION:-

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Foundations have been designed on bearing pressure of 200kN/m sqr.
Foundation depth to be determined by Engineer prior to placing concrete.
Minimum Foundation depth to be 1000mm below floor level or 600 mm below splash apron level, whichever is critical. Maximum allowable fill below ground slab = 500mm.
- BLOCK WORK:-
All load bearing block walls are to be constructed from solid blocks of 3.5N/mm sqr minimum characteristic compression strength complying with BS5628 Part 1, 1978; Structural Use of unreinforced masonry. Mortar to conform to designation [iii] of table 1, BS 5628, Part 1.

CONCRETE:-				
Proposed use	Grade	Permitted Aggregate type		Max.Agg size
		Coarse	Fine	
Reinforced Concrete (including ground bearing slab)	C 25	BS 882	BS 882	20mm
Concrete containing no embedded metal	C 15	BS 882	BS 882	40mm
Blinding Concrete	C 10	BS 882	BS 882	20mm
Foundation	C 25	BS 882	BS 882	20mm

Proposed use	Cover	Minimum Lap Lengths	
		T25- 1200mm	T20- 1000mm
To mesh in slabs	20mm	T16- 800mm	T12- 600mm
Columns (cover to links)	30mm	T10- 500mm	
Slabs (cover to main bars)	25mm		
Foundations (Top, Bottom & Sides)	50mm		
Beams (Cover to main bars)	25mm		

Concrete Ratios (CEM II)
C30 = 1: 1: 2
C25 = 1: 1½ :3
C20 = 1: 2: 4
C15 = 1: 3: 6
C10 = 1: 4: 8

- JOINTS:- Movement Joints to be as shown on drawing. Joint is slab to be carried through walls and beams.
- WALL TIES:- Provide masonry anchors every 2 courses using mild steel hoop iron ties to BS 1243,1978.
- REINFORCEMENT:-Reinforcement to be in accordance with Consulting Engineer's Specifications.
R -----denotes round mild steel
T -----denotes high yield steel

Revision			
No.	Date	Particulars	Initials

CONSULTANCY SERVICES for DETAILED ARCHITECTURAL AND ENGINEERING DESIGNS & TECHNICAL SUPERVISION of BORDER POST BETWEEN ETHIOPIA and SUDAN, BUSINESS INCUBATION CENTRES IN MORUNGOLE, KAAPONG DISTRICT, (UGANDA) AND NARUS, KAPOETA EAST COUNTY, (SOUTH SUDAN), A POULTRY-HOUSE FOR AKANDEYU, ETHIOPIA and AN ACCESS ROAD FROM MORUNGULE TO NATINGA

PROPOSED BORDER POST LOCATED IN KURMUK IN THE REPUBLIC OF ETHIOPIA

ARCHITECT: MATOVU JOHN .R
P.O.BOX 3694 KAMPALA
ARB.REG.No.257.

CLIENT
CENTRE FOR PASTORAL AREAS AND LIVESTOCK DEVELOPMENT.



SIGNATURE:	
<div><div><div><input type="checkbox"/> TENDER DRAWINGS</div><div><input checked="" type="checkbox"/> APPROVAL DRAWINGS</div><div><input type="checkbox"/> CONSTRUCTION DRAWINGS</div></div><div>DRAWING STAGE</div></div> <div><div>DRAWING DESCRIPTION</div><div>Roof Beam Layout, Bases and Columns, RC Details</div></div> <div><div>DRAWING NO.</div><div>STR.28.12.2024.K</div></div> <div><div>SHEET NO.</div><div>S.03.K</div></div>	
SCALE	DATE
AS SHOWN	DEC. 2024
DRAWN BY	DESIGN BY
KK	KK
ENG. CHECKED BY	HWV

All construction works MUST be carried out under the supervision of the Design Structural Engineer, failure of which the latter shall hold no responsibility

REFERENCE:-
All Engineers' drawings shall be read in conjunction with the Architects' and any discrepancies should be reported to the Architect and Engineer.

2. DIMENSIONS:-
All dimensions are in millimeters unless stated otherwise
All dimensions to be checked on site prior to construction
Written dimensions to be followed in preference to scaled
dimensions i.e do not scale off the drawing.

FOUNDATIONS:-
Foundations have been designed on bearing pressure of 200KN/m sq.
Foundation depth to be determined by Engineer prior to placing concrete.
Minimum Foundation depth to be 1000mm below floor level or 600 mm below splash apron level, whichever is critical.
Maximum allowable fill below ground slab = 600mm

BLOCK WORK:-
All load bearing block walls are to be constructed from solid blocks of 3.5N/mm² minimum characteristic compression strength complying with BS5628 Part 1, 1978; Structural Use of unreinforced masonry. Mortar to conform to designation [III] of table 1, BS 5628, Part 1.

5. CONCRETE:-

Proposed use	Grade	Permitted Aggregate type		Max.Agg size
		Coarse	Fine	
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Proposed use	Cover	Minimum Lap Lengths
To mesh in slabs	20mm	T25 = 1200mm
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		Concrete Ratios (CEM II)
		C30 = 1 : 1 : 2
		C25 = 1 : 1½ : 3
		C20 = 1 : 2 : 4
		C15 = 1 : 3 : 6
		C10 = 1 : 4 : 8

4. JOINTS:- Movement Joints to be as shown on drawing
Joint is slab to be carried through walls and beams.

7. WALL TIES:- Provide masonry anchors every 2 courses using mild steel hoop iron ties to BS 1243,1978.

REINFORCEMENT:—Reinforcement to be in accordance
with Consulting Engineer's Specifications
-----denotes round mild steel
-----denotes high yield steel

[illegible]

CONSULTANCY SERVICES *for* DETAILED
ARCHITECTURAL AND ENGINEERING DESIGNS &
TECHNICAL SUPERVISION OF BORDER POST
BETWEEN ETHIOPIA *and* SUDAN, BUSINESS
INCUBATION CENTRES IN MORUNGULE, KAABONG
DISTRICT, (UGANDA) AND NARUS, KAPOETA EAST
COUNTY, (SOUTH SUDAN), A POULTRY-HOUSE
FOR AKANDEYU, ETHIOPIA *AND* AN ACCESS ROAD
FROM MORUNGULE TO NATINGA

PROPOSED BORDER POST LOCATED IN KURMUK IN THE REPUBLIC OF ETHIOPIA

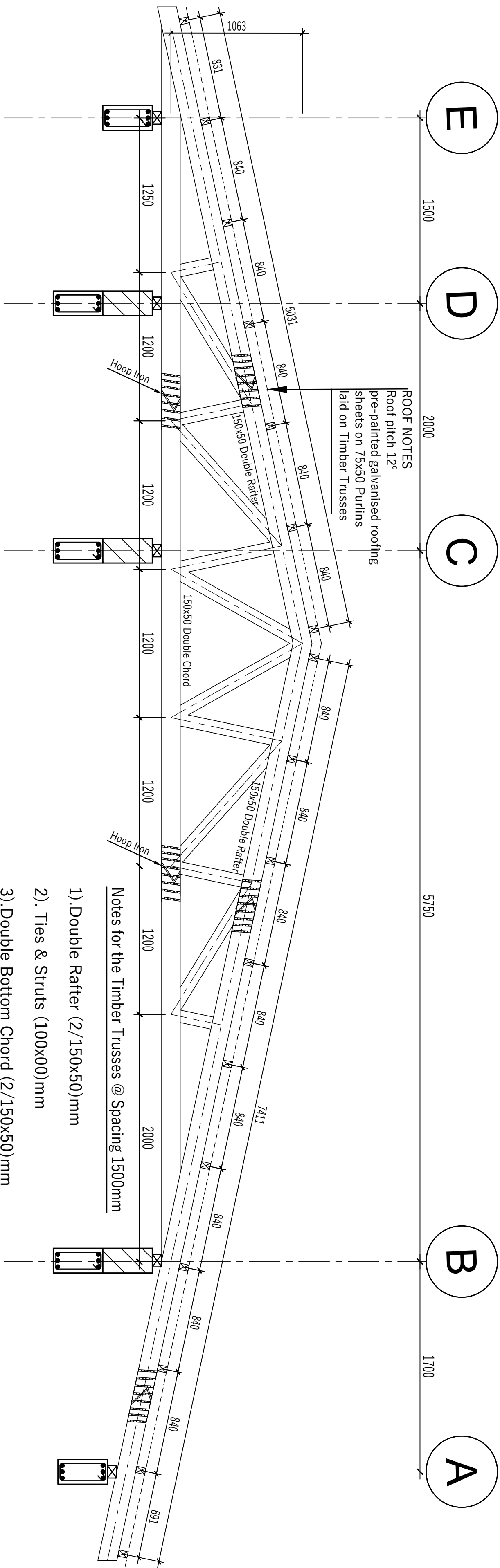
ARCHITECT: MATOVU JOHN .R
O.BOX 3694 KAMPALA
RB.REG.No.257.

CLIENT
CENTRE FOR PASTORAL
AREAS AND LIVESTOCK
DEVELOPMENT.

GNATURE: **ICPALD**

	<input type="checkbox"/> TENDER DRAWINGS
DRAWING STAGE	<input checked="" type="checkbox"/> APPROVAL DRAWINGS
	<input type="checkbox"/> CONSTRUCTION DRAWINGS
DRAWING DESCRIPTION	Roof Truss Layout and Trusses Details
DRAWING NO.	STR.28.12.2024.K
SHEET NO.	S.04.K

SCALE	DATE	DRAWN BY	DESIGN BY	ENG. CHECKED BY
AS SHOWN	DEC. 2024	KK	KK	HMW



- 1). Double Rafter (2/150x50)mm
- 2). Ties & Struts (100x00)mm
- 3). Double Bottom Chord (2/150x50)mm
- 4). Purlins (75x50) mm @ 600mm
- 5). All Timber must be Treated
- 6). All joints are connected by Hoop Iron

