Upgrading & Additions to NG Dlukulu, Middle Terrace, V Shumane & Raglan Road Clinics
BID NO: SCMU3-23/24-0619-HO

NAME OF COMPANY:

_____

CSD Nr:

_____

CRS Nr (CIDB):

_____

CLOSING DATE: 16 February 2024 TIME: 11:00 am

Deliver to:

EASTERN CAPE DEPARTMENT OF HEALTH: SUPPLY CHAIN MANAGEMENT OFFICE,

situated at the following address:

Room 102
Laboria House
16 Grace Street
Port Elizabeth Central
Gqeberha

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THE TENDER

PART T1

TENDERING PROCEDURES

PART T1.1: TENDER NOTICE AND INVITATION TO TENDER

T1.1 Tender Notice and Invitation to Tender

The Eastern Cape Department of Health invites contractors with a CIDB Grading of **CIDB 7GB** or higher in the following Class of works **(CIDB 7GB or higher)** to tender for the **"*Upgrading & Additions to NG Dlukulu, Middle Terrace, V Shumane & Raglan Road Clinics*"** for a **(16) Sixteen-month** contract (Excluding builder's holidays). The contract will be based on the JBCC Edition 6.2 of 2018 with Government Clauses and **The Eastern Cape Department of Health** will enter a contract with the successful tenderer.

BID DOCUMENTS MAY BE OBTAINED FROM THE ECDOH & TREASURY WEB SITES AT NO COST:

There will be a compulsory briefing meeting on **31 January 2024 @ 11h00, at N.G. Dlukulu Clinic, Sani Street, Makanda Sub District, Makanda.** Prospective bidders to meet at the at the main visitors parking area inside the Clinic Site, **11h00**

Queries & Technical enquiries relating to the issue of these documents may be addressed in writing to Ms. Stella Tshwane via email: Stella.Tshwane@echealth.gov.za cc Mr. Welile Tsewu via email: Welile.tsewu80@gmail.com Phone: 041 408 8031/30

The closing time for receipt of tenders by **The Eastern Cape Department of Health** is 11:00am on **16 February 2024**. Telegraphic, telephonic, telex, facsimile, e-mail and late tenders will not be accepted. Bids must be submitted in sealed envelopes clearly marked **"TENDER: Upgrading & Additions to NG Dlukulu, Middle Terrace, V Shumane & Raglan Road Clinics BID NO: SCMU3-23/24-0619-HO"** must be deposited in the bid/tender box of:

EASTERN CAPE DEPARTMENT OF HEALTH: SUPPLY CHAIN MANAGEMENT OFFICE,

situated at the following address:

Room 102
Laboria House
16 Grace Street
Port Elizabeth Central
Gqeberha
6001

It is the responsibility of the tenderer/s to ensure that bid documents /proposals are submitted on or before closing time and the correct location as the department will not take responsibility of wrong delivery. Tenderers using courier services for delivery of their bid documents must ensure the delivery is at the correct place / location and time as the department will not be held responsible for wrong delivery. Not delivered to Departmental officials. The Department will not accept responsibility if bids received by officials are not timely deposited in the Bid Box.

Tenders may only be submitted on the tender documentation that is issued. Tenderers must be registered on the National Treasury Central Supplier Data Base and proof of registration must be submitted with the proposal (https://secure.csd.gov.za). Requirements for sealing, addressing, delivery, opening and assessment of tenders are stated in the Tender Data.

B. BID EVALUATION:
This bid will be evaluated in Two (2) Phases as follows:

Phase One: Compliance, responsiveness to the bid rules and conditions, thereafter they will be evaluated in terms of Price & Specific Goals

Phase Two: Price & Specific Goals in terms of the Preferential procurement regulations of 2022.

PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT (PPPFA) Price & Specific Goals

POINTS WILL BE AWARDED AS FOLLOWS:

Maximum points on price	-	**80 points**
Maximum points for Specific Goals	**-**	**20 points**
Maximum points	**-**	**100 points**

C. BID SPECIFICATIONS, CONDITIONS AND RULES

The minimum specifications, bid conditions and rules are detailed in the bid document under Tender Data.
The specifications, rules, special conditions of bid, evaluation criteria, and rules for evaluation for compliance to local content and other bid conditions are detailed in the document.

Tender validity period is **90 days.**

D. TENDER SUBMISSIONS:

Bids must be submitted in sealed envelopes clearly marked**: "Upgrading & Additions to NG Dlukulu, Middle Terrace, V Shumane & Raglan Road Clinics" SCMU3-23/24-0619-HO** must be deposited in the tender / bid box:

EASTERN CAPE DEPARTMENT OF HEALTH: SUPPLY CHAIN MANAGEMENT OFFICE,

situated at the following address:

Room 102
Laboria House
16 Grace Street
Port Elizabeth Central
Gqeberha
6001

E. ENQUIRIES WITH REGARD TO THIS ADVERT MAY BE DIRECTED TO:
Ms. Stella Tshwane via email: Stella.Tshwane@echealth.gov.za and Mr. Welile Tsewu via email: Welile.tsewu80@gmail.com

PART T1.2: TENDER DATA

T1.2 Tender Data

The conditions of tender are the latest edition of SANS 10845-3, *Standard conditions of tender*.
SANS 10845-3 makes several references to the Tender Data for details that apply specifically to this tender. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the provisions of SANS 10845-3 *and* as contained in **Annexure C** of **Standard for Uniformity in Construction Procurement (Board Notice 423 of 2009 Government Gazette No 42622 of August 2019)**.
Each item of data given below is cross-referenced to the clause in SANS 10845-3 to which it mainly applies.

Clause number	Tender Data
3.1	The Employer is the Eastern Cape Department of Health
3.2	The tender documents issued by the employer comprise the following documents: **THE TENDER** **Part T1: Tendering procedures** T1.1 - Tender notice and invitation to tender. T1.2 - Tender data **Part T2: Returnable documents** T2.1 - List of returnable documents T2.2 - Returnable schedules **THE CONTRACT** **Part C1: Agreements and Contract data** C1.1 - Form of offer and acceptance C1.2 - Contract data C1.3 - Dispute Resolution Mechanism **Part C2: Pricing data** C2.1 - Pricing Instructions C2.2 - Bills of Quantities **Part C3: Scope of work** C3 - Scope of work **Part C4: Site information** C4 - Site information
3.3	The tender documents issued by the employer comprise the documents listed on the contents page
3.4	The employer's agent is: **EASTERN CAPE DEPARTMENT OF HEALTH** **Room 102** **Laboria House** **16 Grace Street** **Port Elizabeth Central** **Gqeberha** **6001** Ms. Stella Tshwane via email: Stella.Tshwane@echealth.gov.za Mr. Welile Tsewu via email: welile.tsewu80@gmail.com Phone No. 041 408 8031/30
3.5	The language for communications is English
3.6	The competitive negotiation procedure shall be applied.
3.7	Procurement Method: Two (2) stage procurement procedure shall be applied.
4	**Tenderer's obligations**

4.1	The following tenderers who are registered with the CIDB, or are capable of being so registered prior to the evaluation of submissions, are eligible to have their tenders evaluated: a) contractors who have a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) of 25(7A) of the Construction Industry Development Regulations, for a CIDB **CIDB 7GB or Higher** class of construction work; and Joint ventures are eligible to submit tenders provided that: 1. every member of the joint venture is registered with the CIDB; in GB class of works. 2. the lead partner has a contractor grading designation in the CIDB **7GB or higher** class of construction work; and 3. the combined contractor grading designation calculated in accordance with the Construction industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a CIDB **7GB or higher** class of construction work or a value determined in accordance with Regulation 25 (1B) of 25(7A) of the Construction Industry Development Regulations. 4.Joint Venture Agreement. 5.Combined CSD Report in the case of Joint Venture.
4.2	The employer will compensate the tenderer as follows JBCC Edition 6.2 of 2018 with Government Clauses. The employer **will not** compensate the tenderer for any costs incurred in attending interviews or making any submissions in the office of the employer.
4.3	It is the responsibility of the tenderer to check the tender documents on receipt for completeness and notify the employer of any discrepancy or omission.
4.4	**Confidentiality and copyright of documents** Treat as confidential all matters arising in connection with the tender. Use and copy the documents issued by the employer only for the purpose of preparing and submitting a tender offer in response to the invitation.
4.5	Obtain, as necessary for submitting a tender offer, copies of the latest versions of standards, specifications, conditions of contract and other publications, which are incorporated into the tender documents by reference.
4.6	Acknowledge receipt of addenda to the tender documents, which the employer may issue, and, if necessary, apply for an extension to the closing time stated in the tender data, in order to take the addenda into account.
4.7	The arrangements for a compulsory clarification meeting are as stated in the Tender Notice and Invitation to Tender. Tenderers must sign the attendance list in the name of the tendering entity. Addenda will be issued to and tenders will be received only from those tendering entities appearing on the attendance list. **Tender documents will not be made available at the clarification meeting**
4.8	**Seek clarification** *Request clarification of the tender documents, if necessary, by notifying the employer at least **5 (Five) working days** **before the closing time stated in the tender data.***
4.9	Tenderers are required to state the rates and currencies in Rands. Include in the rates, prices, and the tendered total of the prices (if any), all duties, taxes which the law requires to be paid [except value added tax (VAT)], and other levies payable by the successful tenderer, that are applicable 14 days before the closing time stated in the tender data. Show the VAT payable by the employer separately as an addition to the tendered total of the prices. Provide rates and prices that are fixed for the duration of the contract and not subject to adjustment except as provided for in the conditions of contract identified in the contract data. State the rates and prices in monetary value of the contract unless otherwise instructed in the tender data.
4.10	Do not make any alterations or additions to the tender documents, except to comply with instructions issued by the employer or to correct errors made by the tenderer and ensure that all signatories to the tender offer initial all such alterations. Do not make erasures using masking fluid.
4.11	Main tender offers are not required to be submitted together with alternative tenders.

4.12	No alternative tender offers will be considered
4.13.1	Parts of each tender offer communicated on paper shall be submitted as an original. Submit a) the parts of the tender offer communicated on paper as an original plus the number of copies stated in the tender data, with a translation of any documentation in a language other than the language of communication established in 3.5, and b) the parts communicated electronically by the employer of its agents on paper format with the tender.
4.13.2	Sign the original and all copies of the tender offer where required in terms of the tender data. State in the case of a joint venture which of the signatories is the lead partner whom the employer shall hold liable for the purpose of the tender offer. NOTE The employer holds all authorized signatories liable on behalf of the tenderer.
4.13.3	A tender security in the amount of **N/A** is required and shall remain valid for a period not exceeding N**/A** days after the closing date for tender offers. The form of the tender security shall not differ substantially from the sample provided in Annex D of SANS 10845-3.
4.13.4	The employer's details and address for delivery of tender offers and identification details that are to be shown on each tender offer package are: **EASTERN CAPE DEPARTMENT OF HEALTH: SUPPLY CHAIN MANAGEMENT OFFICE,** **situated at the following address:** **Room 102** **Laboria House** **16 Grace Street** **Port Elizabeth Central** **Gqeberha** **6001** **Tender / Bid identification details:** **Upgrading & Additions to NG Dlukulu, Middle Terrace, V Shumane & Raglan Road Clinics** **Closing time and date: As per Tender advertisement**
4.13.5	**The tenderer is required to submit with his tender the following compulsory certificates:** **1) a copy of the CSD report showing, amongst other things, that tax matters of the service provider are in order with the South African Revenue Services. *In the case of a Joint Venture/Consortium/Sub-contractors each party must submit a separate* CSD report showing, amongst other things, that tax matters of the service provider are in order with the South African Revenue Services.** **2) CIDB Grading certificate or CRS number.** **3) COIDA Letter of Good standing from the Department of Labour**
4.13.6	A two-envelope procedure will not be required.
4.13.7	Telephonic, telegraphic, telex, facsimile or e-mailed tender offers will not be accepted. The tenderer accepts that the employer does not assume any responsibility for the misplacement or premature opening of the tender offer if the outer package is not sealed and marked as stated.
4.14	The closing time for submission of tender offers is as stated in the Tender Notice and Invitation to Tender. Ensure that the employer receives the tender offer at the address specified in the tender data not later than the closing time stated in the tender data. Proof of posting shall not be accepted as proof of delivery. Accept that, if the employer extends the closing time stated in the tender data for any reason, the requirements of the standard conditions of tender in this part of SANS 10845 apply equally to the extended deadline.

4.15.1	The tender offer validity period is **90 days**. Hold the tender offer(s) valid for acceptance by the employer at any time during the validity period stated in the tender data after the closing time stated in the tender data. If requested by the employer, consider extending the validity period stated in the tender data for an agreed additional period, with or without any conditions attached to such extension. Extend the period of the tender security, if any, to cover any agreed extension requested by the employer.
4.15.2	**Placing of contractors under restrictions / withdrawal of tenders** If any tenderer who has submitted a tender offer or a contractor who has concluded a contract has, as relevant: withdrawn such tender or quotation after the advertised closing date and time for the receipt of submissions; after having been notified of the acceptance of his tender, failed or refused to commence the contract; had their contract terminated for reasons within their control without reasonable cause; offered, promised or given a bribe in relation to the obtaining or the execution of such contract; acted in a fraudulent, collusive or anti-competitive or improper manner or in bad faith towards the Provincial Government; or, made any incorrect statement in any affidavit or declaration with regard to a preference claimed and is unable to prove to the satisfaction of the Provincial Government that the statement was made in good faith or reasonable steps were taken to confirm the correctness of the statements, such tenderer/s may be placed under restriction from tendering with the state. Procedures are outlined in the EC SCM Policy for Infrastructure procurement and Delivery Management and also on **cidb** Inform Practice Note #30. Excerpts of the policy can be availed on request of any interested tenderer.
4.16	Access shall be provided for the following inspections, tests and analysis: **N/A**
4.17	the preferred tenderer will be required to submit an approved insurer undertaking to provide the Performance Bond / Guarantee / Surety / Security to the format and/or standard
5	**Employer's undertakings**
5.1	The Employer will respond to requests for clarification received up to **Five (5)** working days before the tender closing time. If, as a result of the issuing of addenda, it is necessary to extend the closing time stated in the tender data, grant such extension and notify all respondents accordingly.
5.2	The employer shall issue addenda until **Five (5)** working days before tender closing time.
5.3	Tenders will be opened immediately after the closing time for tenders at **11:00am hours.**
5.4	Do not disclose to tenderers, or to any person not officially concerned with such processes, information relating to the evaluation and comparison of tender offers, the final evaluation price and recommendations for the award of a contract, until after the award of the contract to the successful tenderer.
5.5	Determine, after opening and before detailed evaluation, whether each tender offer that was properly received a) complies with the requirements of the standard conditions of tender in this part of SANS 10845, b) has been properly and fully completed and signed, and c) is responsive to the other requirements of the tender documents. A responsive tender is one that conforms to all the terms, conditions, and scope of work of the tender documents, without material deviation or qualification. A material deviation or qualification is one which, in the employer's opinion, would d) detrimentally affect the scope, quality, or performance of the works, services or supply identified in the scope of work, e) significantly change the employer's or the tenderer's risks and responsibilities under the contract, or f) affect the competitive position of other tenderers presenting responsive tenders, if it were to be rectified. Reject a non-responsive tender offer, and do not allow it to be subsequently made responsive by correction or withdrawal of the non-conforming deviation or reservation.
5.6	**Arithmetical errors, omission and discrepancies** Check responsive tenders for discrepancies between amounts in words and amounts in figures. Where there is a discrepancy between the amounts in figures and the amount in words, the amount in words shall govern. For Vat related discrepancies, National and Provincial Treasury prescripts in relation to VAT procedures apply.

5.7.1 The financial offer will be reduced to a comparative basis using the Tender Assessment Schedule.

Table F.1: Formulae for calculating the value of A

Formula	Comparison aimed at achieving	Option 1[a]	Option 2[a]
1	Highest price or discount	$A = \left(1 + \frac{(P - P_m)}{P_m}\right)$	$A = P/P_m$
2	Lowest price or percentage commission / fee	$A = \left(1 - \frac{(P - P_m)}{P_m}\right)$	$A = P_m/P$
a	P_m is the comparative offer of the most favourable comparative offer. P is the comparative offer of the tender offer under consideration.		

5.7.2 The procedure for the evaluation of responsive tenders is **Method 2: Administrative compliance, Price and Preference**
Phase 1: Administrative requirements and Mandatory requirements
Phase 2: Price and preference (80/20 system)

1. PHASE ONE:

A. Bidders' proposals must meet the following minimum requirements and supporting documents must be submitted with the completed bid document in a sealed envelope in the bid box at the closing date and time. Failure to comply will automatically eliminate the bid for further consideration:

1. Bid Document (This Document must be submitted in its original format)
2. Bids which are late, incomplete, unsigned or submitted by facsimile or electronically, will not be accepted.
3. Bidder must be registered with CIDB in the correct grading and class of works as per the tender notice and requirements. And must the status on CIDB be active during award stage. It is the responsibility of the bidder to keep the status on CIDB active throughout bidding process (advert till award stage).
4. Bidders must be a legal entity.
5. Form of offer and Acceptance (fully completed and signed)
6. SBD4 must be duly completed and signed. Does the bidder or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract, such interest must be disclosed on question 2.3.1.
7. Compulsory Enterprise Questionnaire (Completed and signed) (JV partners must complete separate Questionnaire forms and submit) (% split to be indicated for each JV partner)
8. If the offer is "Vat Inclusive", the VAT registration number of service provider must be indicated and if a service provider is not a VAT Vendor but include VAT in its prices, the successful service provider will be given 21 days to register as a VAT Vendor with SARS, after the issuing of an appointment letter. If a bidder is a VAT vendor/registered, the bidder is required to explicitly state the VAT amount. VAT vendors must include VAT at 15% in the bid offer(s).
9. Resolution to Sign (if applicable)
10. Attendance at compulsory briefing meeting
11. This tender will be awarded as a whole. All trades listed in the Bills of Quantities or Pricing schedule must be priced for (except provisional sums and allowances), failure to do so will result increase commercial risk of the bid and may lead to elimination or passing over of the bidder.
12. **Other Conditions of bid**
13. Particulars of Electrical installation subcontractor & Schedule of materials offered, to be provided
14. Particulars of Fire Detection Installation subcontractor & Schedule of materials offered, to be provided
15. Particulars of HVAC installation subcontractor & Schedule of materials offered, to be provided
16. The tenderer is required to submit with his tender the following compulsory certificates:

17. A copy of the CSD report showing, amongst other things, that tax matters of the service provider are in order with the South African Revenue Services. In the case of a Joint Venture/Consortium/Sub-contractors each party must submit a separate CSD report showing, amongst other things, that tax matters of the service provider are in order with the South African Revenue Services.
18. CIDB Grading certificate or CRS number.

19. COIDA Letter of Good standing from the Department of Labour
20. ECDOH SCM Policy applies.
21. Returnable Schedule: SBD1-Invitation to bid must be completed and signed
22. The bidder must be registered on the Central Supplier Database (CSD) before the Tender Closing Date.
23. All bidders' tax matters must be in order prior award. Bidders' tax matters will be verified through CSD.
24. Declaration of Employees of the State or other State Institutions.
25. Due Diligence In-Loco Inspection of the Bidder / or JV. As part of its due diligence obligations, the Department of Health reserves the right to do an In-Loco inspection of the offices and premises of the Bidder / or JV to verify the existence of the business ENTERPRISE as declared on the SBD1 form.
26. In the event where the In-Loco Inspections find inconsistencies and or misrepresentation in terms of what has been declared on the SBD 1, the Bidder will be notified of such inconsistencies and or misrepresentations in writing and allowed 7 (seven) days to rectify such.
27. The Bidder who complies with the Due Diligence In-Loco Inspection evaluation criteria, may then be considered for recommendation for award.
28. In the event where the Bidder has failed to rectify the inconsistencies and or misrepresentations within the 7 (seven) day period, the Health Department shall consider the Bidder who scored the 2nd highest points to be considered for award.
29. The Department will contract with the successful bidder by signing a formal contract.

30. Wherever a brand name is specified in this document (i.e. specifications, pricing schedule, bill of quantities or anywhere), the department requires an item similar/equivalent or better.
31. Protection of personal information: Consent (POPIA)

32. The successful tenderer (after being informed) will be required to bring along an unsigned copy of the form of contract to be signed by parties (e.g. JBCC Edition 6.2 of 2018 with Government Clauses)

2. PHASE TWO: EVALUATION POINTS ON PRICE AND SPECIFIC GOALS / PPPFA OF 2022

The **80/20 preference point system** shall be applied for the purposes of this bid as per the requirements of the *Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000)* and B-BBEE/ PPPFA Regulations *of 2022*

Criteria	Points
POINTS ON PRICE	**80**
B-BBEE	**20**
TOTAL	**100**

The 90/10 preference point system for acquisition of services, works or goods exceeding Rand value of R50 million:

(a) The following formula must be used to calculate the points for price in respect of tenders (including price quotation) with a Rand value equal to, or above R 30 000 and up to Rand value of R 50 000 000 (all applicable taxes included):

The financial offer will be scored using the following formula:

$$A = (1 - (\underline{P - Pm}))$$
$$Pm$$

The value of value of W_1 is:

	1) **90** where the financial value inclusive of VAT of all responsive tenders received have a value in **excess of R50 000 000** or 2) **80** where the financial value inclusive of VAT of one or more responsive tender offers have a value that **equals or is less than R 50 000 000**.
5.7.3	The procedure for the evaluation of responsive tenders is **Method 2** (Administrative, price and preference)
5.7.4	The quality criteria and maximum score in respect of each of the criteria are as follows: **N/A**
5.7.5	Each evaluation criteria will be assessed in terms of five indicators – **N/A**
5.7.6	The prompts for judgment and the associated scores used in the evaluation of quality shall be as follows: **N/A**
5.8	**Tender offers will only be accepted if:** a) the tenderer is registered on the Central Supplier Database (CSD) for the South African government (see https://secure.csd.gov.za/) unless it is a foreign supplier with no local registered entity b) the tenderer is in good standing with SARS according to the Central Supplier Database. Bidders must submit a CSD no. or tax status compliance pin. c) the tenderer is registered with the Construction Industry Development Board in an appropriate contractor grading designation; d) the tenderer or any of its directors/shareholders is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector. e) the tenderer has not: i) abused the Employer's Supply Chain Management System; or ii) failed to perform on any previous contract and has been given a written notice to this effect. f) the tenderer has completed the Compulsory Declaration and there are no conflicts of interest which may impact on the tenderer's ability to perform the contract in the best interests of the employer or potentially compromise the tender process. g) the tenderer has completed the Compulsory Enterprise Questionnaire and there are no conflicts of interest which may impact on the tenderer's ability to perform the contract in the best interests of the employer or potentially compromise the tender process and persons in the employ of the state are permitted to submit tenders or participate in the contract. h) Bids which are late, incomplete, unsigned or submitted by facsimile or electronically will not be accepted. i) the tenderer is registered and in good standing with the compensation fund or with a licensed compensation insurer. j) the employer is reasonably satisfied that the tenderer has in terms of the Construction Regulations, 2014, issued in terms of the Occupational Health and Safety Act, 1993, the necessary competencies and resources to carry out the work safely. A letter of Good standing from the Labour Department is a compulsory mandatory requirement. k) the tender has offered a market related offer. If the offer is believed not to be market related, the department through its Supply Chain Management bid committees will attempt to negotiate the offer with identified bidder/s to a reasonable amount. Bidders are not allowed to increase their tender offers during this process. l) A Resolution of signatory form has been completed and signed by director/s or a letter bearing a letterhead of the tenderer has been attached (specific to this bid) to the bid submission; it must be duly signed by all directors and submitted the bid. Only a duly authorized official can sign the bid. m) Prospective bidders must register on CSD prior submitting bids (open tenders). Any prospective bidder found to have Tax matters not in order with SARS (verified through CSD) during the evaluation process (after being given an opportunity to rectify tax matters) will be eliminated and not be considered further in the process. Preferred bidder/s will be afforded an opportunity to

	rectify their tax affairs within 7 days. A bidder that fails to rectify its tax matters with SARS will be eliminated. n) **NOTE:** The amount reflected on the Form of Offer and Acceptance takes precedence over any other total amount indicated elsewhere in bidder's tender submission. If the Form of Offer and Acceptance has no value or figure, the bidder will be regarded as having made no offer. o) The department reserves the right not to award the bid to the most favourable tenderer, if any of the situations occur: if it is not assisting in the advancement of designated groups; risk profile of the favourable firm is too high; the bidder has been awarded a considerable number of projects by the department or provincial government; has performed unsatisfactorily in the past, etc.
5.9	The number of paper copies of the signed contract to be provided by the employer is 1.
	The additional conditions of tender are: • Wherever a brand name is specified in this document (i.e., specifications, pricing schedule, bill of quantities or anywhere), the department requires an item similar/equivalent or better.
T.2.1	List of returnable documents
1	**Documentation to demonstrate eligibility to have tenders evaluated i.e.** *List all documentation to demonstrate eligibility to have a submission evaluated.* • Appropriate CIDB grading suitable for the works (as stated in 4.1).
2	**Returnable Schedules required for tender evaluation purposes.** The tenderer must fully and appropriately complete and sign the following returnable schedules as relevant: • SBD 1, SBD 4 • SBD 6.1 PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022 • Proposed amendments and qualifications. • Schedule of Proposed Subcontractors • Protection of personal content: Consent POPIA • Valid CIDB Certificate of Tenderer • Valid Department of Labour COIDA Letter of Good Standing Certificate. • Proof of Specific Goals Claimed • Proof of Registration on the National Treasury Central Supplier Data Base (CSD) • Particulars of Electrical installation subcontractor & Schedule of materials offered • Particulars of Fire Detection Installation subcontractor & Schedule of materials offered • Particulars of HVAC installation subcontractor & Schedule of materials offered • Part C1.1 Form of Offer and Acceptance • Part C1.2 Contract Data • Part C2.2 Bills of Quantities (Handwritten Priced. Not Typed Priced) • Compulsory enterprise questionnaire (In the case of a joint venture, separate enterprise questionnaires in respect of each partner must be completed and submitted). • Record of addenda issued (Only if addenda is issued) • Resolution for Signatory • Certificate of authority for joint ventures (Only where the tender/ quotation is submitted by a joint venture) • Proof of Registration on the National Treasury Central Supplier Data Base (CSD). A CSD Report for a contractor with valid and correct information
3	**Other documents required for tender evaluation purposes.** The tenderer must provide the following returnable documents: • None
4	Only authorized signatories may sign the original and all copies of the tender offer where required. In the case of a ONE-PERSON CONCERN submitting a tender, this shall be clearly stated. In the case of a **COMPANY** submitting a tender, include a copy of a **resolution by its board of directors** authorizing a director or other official of the company to sign the documents on behalf of the company.

	In the case of a **CLOSE CORPORATION** submitting a tender, include a copy of a **resolution by its members** authorizing a member or other official of the corporation to sign the documents on each member's behalf. In the case of a **PARTNERSHIP** submitting a tender, **all the partners** shall sign the documents, unless one partner or a group of partners has been authorized to sign on behalf of each partner, in which case **proof of such authorization** shall be included in the Tender. In the case of a **JOINT VENTURE/CONSORTIUM** submitting a tender, include **a resolution of each company** of the joint venture together with a **resolution by its members** authorizing a member of the joint venture to sign the documents on behalf of the joint venture. **Accept that failure to submit proof of authorization to sign the tender shall result in the tender offer being regarded as non-responsive.**
5	**Information and data to be completed in all respects** Accept that tender offers, which do not provide all the data or information requested completely and, in the form, required, may be regarded by the employer as nonresponsive.
6	**Canvassing and obtaining of additional information by tenderers** The Tenderer shall not make any attempt either directly or indirectly to canvass any of the Employer's officials or the Employer's agent in respect of his tender, after the opening of the tenders but prior to the Employer arriving at a decision thereon. The Tenderer shall not make any attempt to obtain particulars of any relevant information, other than that disclosed at the opening of tenders.
7	**Prohibitions on awards to persons in service of the state** The Employer is prohibited to award a tender to a person - a) who is in the service of the state; or *b)* if that person is not a natural person, of which any director, manager, principal shareholder or stakeholder is a person in the service of the state; or *c)* a person who is an advisor or consultant contracted with the Department or municipal entity. **In the service of the state** means to be - a) a member of:- *a* any municipal council; *b* any provincial legislature; or *c* the National Assembly or the National Council of Provinces; *d)* a member of the board of directors of any municipal entity; *e)* an official of any Department or municipal entity; *f)* an employee of any national or provincial department; *g)* provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999); *h)* a member of the accounting authority of any national or provincial public entity; or *i)* an employee of Parliament or a provincial legislature. In order to give effect to the above, the questionnaire for the declaration of interests in the tender of persons in service of state in part T2 of this procurement document must be completed.
8	**Awards to close family members of persons in the service of the state** Accept that the notes to the Employer's annual financial statements must disclose particulars of any award of more than R2000 to a person who is a spouse, child, or parent of a person in the service of the state (defined in clause 8 above), or has been in the service of the state in the previous twelve months, including - *a)* the name of that person; *b)* the capacity in which that person is in the service of the state; and *c)* the amount of the award.

	In order to give effect to the above, the questionnaire for the declaration of interests in the tender of persons in service of state in part T2 of this procurement document must be completed.
9	**Respond to requests from the tenderer** The employer will respond to requests for clarification up to **5 (five) working days** before the tender closing time.
10	**Opening of tender submissions** Tenders will be opened immediately after the closing time for tenders
11	**Scoring quality / functionality:** Not applicable to this tender
12	**Cancellation and re-invitation of tenders** An organ of state may, prior to the award of the tender, cancel the tender if- (a) due to changed circumstances, there is no longer a need for the services, works or goods requested; or (b) funds are no longer available to cover the total envisaged expenditure; or (c) no acceptable tenders are received. (d) Tender validity period has expired. (e) Gross irregularities in the tender processes and/or tender documents. (f) No market related offer received (after attempts of negotiation processes) Where applicable, the decision to cancel the tender will be published in on the Tender Notice Board of the SCM Department and if applicable, on the CIDB website and in the Tender Bulletin or the media in which the original tender invitation as advertised.
13	Dispute resolution mechanism will be done through the SCM Department and thereafter the **Adjudication** route**.**
14	The department, when it takes action against the tenderer or person awarded the contract on a fraudulent basis, considers the provisions of Regulation 14: The remedies provided for in Preferential Procurement Regulations 2022 do not prevent an institution from instituting remedies arising from any other prescripts or contract.
15	Where the employer terminates the contract due to default of the contractor in whole or in part, the employer may decide to: a) Refer the breach in contract to the **CIDB** for investigation as a breach of the **CIDB Code of Conduct** in terms of the **CIDB Regulations**; or b) may impose a restriction penalty on the contractor in terms of Section 14 of the Preferential Procurement Regulations. The outcomes of such investigations in terms of both the CIDB Regulations and the Preferential Procurement Regulations may prohibit the contractor from doing business with the public sector for a period not exceeding 10 years.

PART T2 - RETURNABLE DOCUMENTS

ASSESMENT OF PHASE 1 ADMINISTRATIVE REQUIREMENTS AND MANDATORY REQUIREMENTS:

The bidder shall not proceed to the next stage of evaluation if the bidder fails to submit all the mandatory information as listed here below:

BIDDER TO INDICATE BELOW IF MANDATORY DOCUMENTS WERE SUBMITTED WITH TENDER:

	MANDATORY DOCUMENT TO BE SUBMITTED WITH BID:	**YES**	**NO**
16	SBD 1 Part of invitation to bid and terms and conditions for bidding		
	SBD 4 Declaration of interest		
	SBD 6.1 Preference points claim form in terms of the Preferential procurement regulations 2022		
	Proposed amendments and qualifications		
	Schedule of Proposed Subcontractors		
	Protection of personal content: Consent		
	Valid CIDB Certificate of Tenderer		
	Valid Department of Labour COIDA Letter of Good Standing Certificate		
	Proof of Specific Goals Claimed		
	Part C1.1 Form of Offer and Acceptance (Fully signed and completed)		
	Part C1.2 Contract Data		
	Part C2.2 Bills of Quantities (Fully priced) (Handwritten Priced. Not typed Priced)		
	Compulsory enterprise questionnaire (In the case of a joint venture, separate enterprise questionnaires in respect of each partner must be completed and submitted).		
	Record of addenda issued (Only if addenda is issued)		
	Resolution for Signatory		
	Certificate of authority for joint ventures (Only where the tender/ quotation is submitted by a joint venture)		
	Proof of Registration on the National Treasury Central Supplier Data Base (CSD) Full CSD report)		
	Particulars of Electrical installation subcontractor & Schedule of materials offered		
	Particulars of Fire Detection Installation subcontractor & Schedule of materials offered		
	Particulars of ICT and Access Control Installation subcontractor & Schedule of materials offered	N/A	N/A
	Particulars of HVAC installation subcontractor & Schedule of materials offered		

T2.1 List of Returnable Documents

The tenderer must complete the following returnable documents:

1 Returnable Schedules required for bid/quotation evaluation purposes.

- SBD 1, SBD 4
- SBD 6.1 PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022
- Proposed amendments and qualifications.
- Schedule of Proposed Subcontractors
- Particulars of Electrical installation subcontractor & Schedule of materials offered
- Particulars of Fire Detection Installation subcontractor & Schedule of materials offered
- Particulars of HVAC installation subcontractor & Schedule of materials offered
- Protection of personal content: Consent
- Valid CIDB Certificate of Tenderer
- Valid Department of Labour COIDA Letter of Good Standing Certificate.
- Proof of Specific Goals Claimed
- Part C1.1 Form of Offer and Acceptance
- Part C1.2 Contract Data
- Part C2.2 Bills of Quantities
- Compulsory enterprise questionnaire (In the case of a joint venture, separate enterprise questionnaires in respect of each partner must be completed and submitted).
- Record of addenda issued (Only if addenda is issued)
- Resolution for Signatory
- Certificate of authority for joint ventures (Only where the tender/ quotation is submitted by a joint venture)
- Proof of Registration on the National Treasury Central Supplier Data Base (CSD)

2 Other documents required for bid/quotation evaluation purposes.

- Nil

3 Returnable Schedules that will be incorporated into the contract

- SBD 1, SBD 4
- SBD 6.1 PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022
- Proposed amendments and qualifications.
- Schedule of Proposed Subcontractors
- Particulars of Electrical installation subcontractor & Schedule of materials offered
- Particulars of Fire Detection Installation subcontractor & Schedule of materials offered
- Particulars of HVAC installation subcontractor & Schedule of materials offered
- Protection of personal content: Consent
- Valid CIDB Certificate of Tenderer
- Valid Department of Labour COIDA Letter of Good Standing Certificate.
- Proof of Specific Goals Claimed
- Part C1.1 Form of Offer and Acceptance
- Part C1.2 Contract Data
- Part C2.2 Bills of Quantities

2.1 SBD 1 – PART A – INVITATION TO BID

PART A

SBD 1

INVITATION TO BID

CSD registered service providers (CIDB Grading of CIDB 7GB Contractor or higher) are hereby invited to bid for the services required by the Eastern Cape Department of Health					
BID NUMBER:	**SCMU3-23/24-0619-HO**	CLOSING DATE:	**16 February 2024**	CLOSING TIME:	**11:00**
DESCRIPTION:	**Upgrading & Additions to NG Dlukulu, Middle Terrace, V Shumane & Raglan Road Clinics**				
BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT					
EASTERN CAPE DEPARTMENT OF HEALTH: SUPPLY CHAIN MANAGEMENT OFFICE, situated at the following address: Room 102, Laboria House ,16 Grace Street, Port Elizabeth Central, Gqeberha, 6001					
BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO:		**TECHNICAL ENQUIRIES MAY BE DIRECTED TO:**			
CONTACT PERSON	**Ms. Stella Tshwane**	CONTACT PERSON	**Mr. Welile Tsewu**		
TELEPHONE NUMBER	**041 408 8031/30**	TELEPHONE NUMBER	**041 408 8031/30**		
E-MAIL ADDRESS	**Stella.Tshwane@echealth.gov.za**	E-MAIL ADDRESS	**Welile.tsewu80@gmail.com**		
SUPPLIER INFORMATION					
NAME OF BIDDER					
POSTAL ADDRESS					
STREET ADDRESS					
TELEPHONE NUMBER	CODE		NUMBER		
CELLPHONE NUMBER					
FACSIMILE NUMBER	CODE		NUMBER		
E-MAIL ADDRESS					
VAT REGISTRATION NUMBER					
SUPPLIER COMPLIANCE STATUS	TAX COMPLIANCE SYSTEM PIN:	**OR**	CENTRAL SUPPLIER DATABASE No:	MAAA	

An SBD 6.1 PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022 IS TO BE SUBMITTED TO CLAIM DEPARTMENTAL SPECIFIC GOAL POINTS

a) Service providers must submit proof of its Specific Goals points claimed / status of contributor.

b) The Specific Goals supporting documents required to verify claimed points are in line with the specified requirements include:

- *Historically Disadvantaged Individuals Ownership: Proof of ownership (CIPRO certificate) with id no.*
- *Women Ownership: Ownership: Proof of ownership (CIPRO certificate) with id no.*
- *Youth Ownership: Ownership: Proof of ownership (CIPRO certificate) with id no.*
- *Disability Ownership: Proof of ownership (CIPRO certificate) with valid medical documentary proof.*
- *Military Veterans Ownership: Proof of ownership (CIPRO certificate) with valid proof of veteran status.*
- *Locality Ownership: Proof of business address (municipal account or valid lease agreement)*
- *Updated CSD report*

SBD 1 – PART B – INVITATION TO BID

PART B

TERMS AND CONDITIONS FOR BIDDING

1. BID SUBMISSION:

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

1.2. **ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED–(NOT TO BE RE-TYPED) OR IN THE MANNER PRESCRIBED IN THE BID DOCUMENT.**

1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT, 2000 AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2022, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.

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

2. TAX COMPLIANCE REQUIREMENTS

2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.

2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VERIFY THE TAXPAYER'S PROFILE AND TAX STATUS.

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

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

2.5 SUBMISSION OF A COIDA LETTER OF GOOD STANDING FROM DEPARTMENT OF LABOUR IS MANDATORY

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

2.7 WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.

2.8 NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE, COMPANIES WITH DIRECTORS WHO ARE PERSONS IN THE SERVICE OF THE STATE, OR CLOSE CORPORATIONS WITH MEMBERS PERSONS IN THE SERVICE OF THE STATE."

3. SPECIAL CONDITIONS OF BID

3.1 The Eastern Cape Department of Health shall do an In-Loco inspection of the Bidders premises, to verify the following details:

i. The existence of the business ENTERPRISE as declared on the SBD1 form.

ii. The existence of the resources as declared on the SBD1 forms, Pricing Schedules and relevant mandatory returnable schedules.

3.2 In the event where the In-Loco Inspections find inconsistencies and or misrepresentation in terms of what has been declared on the SBD1 forms, Pricing Schedules and relevant mandatory information, the Bidder will be notified of such inconsistencies and or misrepresentations in writing and allowed 7 (seven) days to rectify such.

3.3 The Bidder who complies with the In-Loco Inspection evaluation criteria, may then be considered to proceed to the Evaluation Stage 2.

3.4. In the event where the Bidder has failed to rectify the inconsistencies and or misrepresentations within the 7 (seven) day period, the Health Department shall consider the Bidder who scored the 2nd highest points to be inspected, and if compliant, recommended to proceed to the Evaluation Stage 2.

3.5. In the event where the recommended Bidder has failed to comply with the conditions as set out in the letter of award, the client shall notify the recommended Bidder of his/her failure to comply and recommend for award the next bidder that scored the highest points. The Conditions as set out in the letter of award are as follow:

i. Proof of having All risk, public liability and support insurances as stipulated in the contract.
ii. Submission of a Construction Safety, Health and Environmental Plan.
iii. Contract Guarantee (as selected in the tender document)

3.6. An appointment letter/acceptance letter does not constitute a contract or commencement date of a contract. The recommended Bidder is required to sign an official contract with the Department.

SIGNATURE OF BIDDER: DATE:

…… ……

CAPACITY UNDER WHICH THIS BID IS SIGNED: ……

(Proof of authority must be submitted e.g., company resolution)

Compulsory Enterprise Questionaire

Compulsory Enterprise questionnaire

The following particulars must be furnished. In the case of a joint venture, separate enterprise questionnaires in respect of each partner must be completed and submitted.

Section 1: Name of enterprise: . . . . . .

Section 2: VAT registration number, if any: . . . . . .

Section 3: CIDB registration number, if any: . . . . . .

Section 4: Particulars of sole proprietors and partners in partnerships

Name*	**Identity number***	**Personal income tax number***

***** *Complete only if sole proprietor or partnership and attach separate page if more than 3 partners*

Section 5: Particulars of companies and close corporations

Company registration number . . . . . .

Close corporation number . . . . . Tax reference number . . . . . .

Section 6: The attached SBD 4 must be completed for each tender and be attached as a tender requirement.

Section 7: The attached SBD 6.1 must be completed for each tender and be attached as a requirement.

The undersigned, who warrants that he / she is duly authorized to do so on behalf of the enterprise:

i) authorizes the Employer to obtain a tax clearance certificate from the South African Revenue Services that my / our tax matters are in order;

ii) confirms that the neither the name of the enterprise or the name of any partner, manager, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears on the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004; iii) confirms that no partner, member, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears, has within the last five years been convicted of fraud or corruption;

iv) confirms that I / we are not associated, linked or involved with any other tendering entities submitting tender offers and have no other relationship with any of the tenderers or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest; and

iv) confirms that the contents of this questionnaire are within my personal knowledge and are to the best of my belief both true and correct.

Signed ..... Date .....

Name ..... Position .....

SBD 4

SBD 4

BIDDER'S DISCLOSURE

1. PURPOSE OF THE FORM

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

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

2. Bidder's declaration

2.1 Is the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest[1] in the enterprise, employed by the state? **YES/NO**

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

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

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

2.2.1 If so, furnish particulars:

……

……

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

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

2.3.1 If so, furnish particulars:

……

……

3 DECLARATION

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

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

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

3.3 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium[2] will not be construed as collusive bidding.

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

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

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

3.6 I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.
I CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 1, 2 and 3 ABOVE IS CORRECT.

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

…… ……

Signature Date

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

…… ……
Position Name of bidder

RECORD OF ADDENDA TO BID DOCUMENTS

BID DESCRIPTION	**Upgrading & Additions to NG Dlukulu, Middle Terrace, V Shumane & Raglan Road Clinics**
SCMU NUMBER	**SCMU3-23/24-0619-HO**

I / We confirm that the following communications received from the Department of Health before the submission of this tender offer, amending the tender documents, have been taken into account in this bid offer: (Attach additional pages if more space is required)

Item	Date	Title or Details	No. of Pages
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Attach additional pages if more space is required.

Signed ..... Date .....

Name ..... Position .....

Tenderer .....

PROPOSED AMENDMENTS AND QUALIFICATIONS

The Tenderer should record any deviations or qualifications he may wish to make to the tender documents in this Returnable Schedule. Alternatively, a tenderer may state such deviations and qualifications in a covering letter to his tender and reference such letter in this schedule. The Tenderer's attention is drawn to clause 5.8 of SANS 10845-3 regarding the employer's handling of material deviations and qualifications.

BID DESCRIPTION	**Upgrading & Additions to NG Dlukulu, Middle Terrace, V Shumane & Raglan Road Clinics**
SCMU NUMBER	**SCMU3-23/24-0619-HO**

Page	**Clause /Item**	**Proposal**

The undersigned, who warrants that she/ he is duly authorised to do so on behalf of the enterprise, confirms that the content of this schedule that presented by the tenderer are within my personal knowledge and are to the best of my knowledge both true and correct

Signed ---------- Date ----------

Name ---------- Position ----------

Enterprise name

RESOLUTION FOR SIGNATORY

BID DESCRIPTION	**Upgrading & Additions to NG Dlukulu, Middle Terrace, V Shumane & Raglan Road Clinics**
SCMU NUMBER	**SCMU3-23/24-0619-HO**

A: **CERTIFICATE OF AUTHORITY FOR SIGNATORY**

Signatory for companies shall confirm their authority hereto by attaching a duly signed and dated copy of the relevant resolution of the board of directors to this form or on company letter head.

An example is given below:

"By resolution of the board of directors passed at a meeting held on _____

Mr/Ms_____, whose signature appears below, has been duly authorised to

sign all documents in connection with the tender for Contract No. _____

and any Contract which may arise there from on behalf of (Block Capitals) _____

_____

_____

SIGNED ON BEHALF OF THE COMPANY: _____

IN HIS/HER CAPACITY AS: _____

DATE:_____

SIGNATURE OF SIGNATORY: _____

WITNESSES:

DIRECTOR (NAMES)		SIGNATURE	
DIRECTOR (NAMES)		SIGNATURE	
DIRECTOR (NAMES)		SIGNATURE	
DIRECTOR (NAMES)		SIGNATURE	
DIRECTOR (NAMES)		SIGNATURE	
DIRECTOR (NAMES)		SIGNATURE	

If you cannot complete this form, attach a separate sheet (in a company letter head, project specific and signed by all directors):

B: CERTIFICATE OF AUTHORITY FOR JOINT VENTURES

This Returnable Schedule is to be completed by joint ventures. We, the undersigned, are submitting this tender offer in Joint Venture and hereby authorize Mr/Ms . . . ., authorized signatory of the company . . . . , acting in the capacity of lead partner, to sign all documents in connection with the tender offer and any contract resulting from it on our behalf.	
BID DESCRIPTION	**Upgrading & Additions to NG Dlukulu, Middle Terrace, V Shumane & Raglan Road Clinics**
SCMU NUMBER	**SCMU3-23/24-0619-HO**

NAME OF FIRM	**ADDRESS**	**DULY AUTHORISED SIGNATORY**
Lead partner: …… .		Signature. . ……... . . . . . . Name …….... Designation……
…… .		Signature. . ……... . . . . . . Name …….... Designation……
…… .		Signature. . ……... . . . . . . Name …….... Designation……
…… .		Signature. . ……... . . . . . . Name …….... Designation……

SCHEDULE OF PROPOSED SUBCONTRACTORS

BID DESCRIPTION	**Upgrading & Additions to NG Dlukulu, Middle Terrace, V Shumane & Raglan Road Clinics**
SCMU NUMBER	**SCMU3-23/24-0619-HO**

We notify you that it is our intention to employ the following Subcontractors for work in this contract. The Subcontractors will all be CIDB registered and their CIDB Registration number shall be submitted below. This should also be declared on **SBD 6.1 form.**

If we are awarded a contract, we agree that this notification does not change the requirement for us to submit the names of proposed subcontractors in accordance with requirements in the contract for such appointments. If there are no such requirements in the contract, then your written acceptance of this list shall be binding between us.

We confirm that all subcontractors who are or to be contracted are registered on Central Supplier Database (CSD).

No.	**Name and address of proposed Subcontractor**	**Sub-Contractor CIDB Grading**	**Sub-Contractor CIDB No.**	**Nature, extent of work, Year completed, Value of sub-contract**	**Contact details:** **Name of person and phone No.**
1					
2					
3					

4					
The undersigned, who warrants that she/ he is duly authorised to do so on behalf of the enterprise, confirms that the content of this schedule that presented by the tenderer are within my personal knowledge and are to the best of my knowledge both true and correct					

Signed ---------- Date ----------

Name ---------- Position ----------

Enterprise name

PARTICULARS OF ELECTRICAL CONTRACTOR

Project Name:	**Upgrading & Additions to NG Dlukulu, Middle Terrace, V Shumane & Raglan Road Clinics**
Tender No:	**SCMU3-23/24-0619-HO**

Name of Electrical Contractor:	
Address:	
Electrical Contractor registration number at the Electrical Contracting Board of S.A.:	

The required CIDB grading is: **4EB or higher**

Bidders are required to provide contactable references as below.

NAME OF EMPLOYER	NAME OF PROJECT	CONTRACT PERIOD (Start and End Date)	VALUE OF WORK	REFERENCE NAME AND CONTACT NUMBER

Signed …….. Date …….

Name …… Position …….

Tenderer…….....

ELECTRICAL INSTALLATIONS

SCHEDULE OF MATERIAL OFFERED

THE FOLLOWING SCHEDULE OF EQUIPMENT AND MANUFACTURE SHALL BE COMPLETED IN FULL.

FAILURE TO DO SO WILL INVALIDATE THE TENDER

Completion of the schedule below does not relieve the Subcontractor of his obligation to provide full details of all equipment prior to the placing of the orders.

	EQUIPMENT	MANUFACTURE

NAME OF TENDER : .....

NAME OF COMPANY : .....

SIGNATURE OF TENDERER : .....

ICT INSTALLATION CONTRACTOR

Project Name:	**Upgrading & Additions to NG Dlukulu, Middle Terrace, V Shumane & Raglan Road Clinics**
Tender No:	**SCMU3-23/24-0619-HO**

ICT Contractor:	**N/A**
Address:	**N/A**
ICT Contractor registration number: Data Installation Contractor must be a HP approved installer Access Control Contractor registration number at PSIRA (Private Security Industry Regulatory Authority)	**N/A**

Bidders are required to provide contactable references as below.

NAME OF EMPLOYER	NAME OF PROJECT	CONTRACT PERIOD (Start and End Date)	VALUE OF WORK	REFERENCE NAME AND CONTACT NUMBER

Signed …….. Date …….

Name ……. Position …….

Tenderer…….....

PARTICULARS OF FIRE DETECTION CONTRACTOR

Project Name:	**Upgrading & Additions to NG Dlukulu, Middle Terrace, V Shumane & Raglan Road Clinics**
Tender No:	**SCMU3-23/24-0619-HO**

Name of Fire Detection Contractor:	
Address:	
Fire Detection Contractor registration number at SAQCC-FIRE:	

The required CIDB grading is: **1SF or higher**

Bidders are required to provide contactable references as below.

NAME OF EMPLOYER	NAME OF PROJECT	CONTRACT PERIOD (Start and End Date)	VALUE OF WORK	REFERENCE NAME AND CONTACT NUMBER

Signed …….. Date ……..

Name …… Position …….

Tenderer…….....

SECTION 11.5 SCHEDULE OF MATERIALS OFFERED

AUTOMATIC FIRE DETECTION INSTALLATIONS

The Tenderer must complete the following schedules and submit them with the priced Bill of Quantities. The schedules will be scrutinised by the Engineer and should any material offered not comply with the requirements contained in the specification, the Contractor will be required to supply material in accordance with the contract at no additional cost.

NB : **Only one manufacturer's name to be inserted for each item.**

Item	Material	Make or trade name	Country of Origin
1.	ADDRESSABLE FIRE CONTROL PANEL		
2.	ADDRESSABLE OPTICAL SMOKE DETECTORS		
3.	ADDRESSABLE REMOTE LIGHT EMITTING DIODE (LED)		
4.	ADDRESSABLE OPTICAL HEAT DETECTORS		
5.	ADDRESSABLE MANUAL CALL POINTS		
6.	WEATHER PROOF ADDRESSABLE MANUAL CALL POINTS		
7.	ADDRESSABLE SIREN		
8.	ADDRESSABLE FLASHING STROBE WARNING LIGHT		
9.	LINE ISOLATORS		
10.	FIRE RESISTANT CABLE		
11.	GSM Unit		
12.	25 DIAM BOSAL CONDUIT		
13.	VOLTAGE FREE CONTACTORS		

NOTE : Tenderers are to note that under no circumstances may materials be installed other than offered in the above materials schedule, which has been approved and accepted by the Contractor. Should the successful tenderer wish to supply materials other than those originally offered, prior written approval must be obtained from the Contractor before any orders are placed.

PARTICULARS OF HVAC CONTRACTOR

Project Name:	**Upgrading & Additions to NG Dlukulu, Middle Terrace, V Shumane & Raglan Road Clinics**
Tender No:	**SCMU3-23/24-0619-HO**

Name of Electrical Contractor:	
Address:	
HVAC Contractor registration number at SARACCA (South African Refrigeration & Air Conditioning Contractors Association:	

The required CIDB grading is: **2ME or higher**

Bidders are required to provide contactable references as below.

NAME OF EMPLOYER	NAME OF PROJECT	CONTRACT PERIOD (Start and End Date)	VALUE OF WORK	REFERENCE NAME AND CONTACT NUMBER

Signed …….. Date ……..

Name …… Position …….

Tenderer…….....

SECTION 13.5 SCHEDULE OF MATERIALS OFFERED

HEATING VENTILATION AND AIR CONDITIONING INSTALLATION

SCHEDULE OF MATERIALS OFFERED

The Tenderer must complete the following schedules and submit them with the priced Bill of Quantities.

The schedules will be scrutinised by the Engineer and should any material offered not comply with the requirements contained in the specification, the Contractor will be required to supply material in accordance with the contract at no additional cost.

NB : **Only one manufacturer's name to be inserted for each item.**

Item	Material	Make or trade name	Country of Origin
1.	VRV Condensers		
2.	Ceiling Cassette units		
3.	Branch Selector units		
4.	Refnet Piping Kits		
5.	Copper Piping		
6.	Cable Tray		
7.	Extraction & Supply Air Fans		
8.	Diffusers		
9.	Ceiling disc diffusers		
10.	Back Draught Shutters		
11.	Fire Dampers		
12.	Flexible Ducting		
13.	Balancing Dampers		
14.	Door grilles		

NOTE : Tenderers are to note that under no circumstances may materials be installed other than offered in the above materials schedule, which has been approved and accepted by the Contractor.

Should the successful tenderer wish to supply materials other than those originally offered, prior written approval must be obtained from the Contractor before any orders are placed.

SBD 6.1

SBD 6.1

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

BID DESCRIPTION	**Upgrading & Additions to NG Dlukulu, Middle Terrace, V Shumane & Raglan Road Clinics**
SCMU NUMBER	**SCMU3-23/24-0619-HO**

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

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

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1. GENERAL CONDITIONS

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

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

1.2 To be completed by the organ of state

(*delete whichever is not applicable for this tender*).

The applicable preference point system for this tender is the 80/20 or 90/10 preference point system.

The lowest/ ~~highest~~ acceptable tender will be used to determine the accurate system once tenders are received.

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

(a) Price; and

(b) Specific Goals.

1.4 To be completed by the organ of state:

The maximum points for this tender are allocated as follows:

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

1.5 Failure on the part of a tenderer to submit proof or documentation required in terms of this tender to claim points for specific goals with the tender, will be interpreted to mean that preference points for specific goals are not claimed.

1.6 The organ of state reserves the right to require of a tenderer, either before a tender is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the organ of state.

2. DEFINITIONS

(a) **"tender"** means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations, competitive tendering process or any other method envisaged in legislation;

(b) **"price"** means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts;

(c) **"rand value"** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;

(d) **"tender for income-generating contracts"** means a written offer in the form determined by an organ of state in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the organ of state and a third party that produces revenue for the organ of state, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions; and

(e) **"the Act"** means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

3.1. POINTS AWARDED FOR PRICE

3.1.1 THE 80/20 PREFERENCE POINT SYSTEMS

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

80/20

$$Ps = 80\left(1 - \frac{Pt - P\,min}{P\,min}\right)$$

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmin = Price of lowest acceptable tender

3.2. FORMULAE FOR DISPOSAL OR LEASING OF STATE ASSETS AND INCOME GENERATING PROCUREMENT

3.2.1. POINTS AWARDED FOR PRICE

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

80/20

$$Ps = 80\left(1 + \frac{Pt - P\,max}{P\,max}\right)$$

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmax = Price of highest acceptable tender

4. POINTS AWARDED FOR SPECIFIC GOALS

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

4.2. In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that,

if it is unclear whether the 80/20 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of—

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

(b) any other invitation for tender, that either the 80/20 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system,

then the organ of state must indicate the points allocated for specific goals for both the 80/20 preference point system.

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

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

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

The specific goals allocated points in terms of this tender	**Number of points allocated (80/20 system) (To be completed by the organ of state)**	**Number of points claimed (80/20 system) (To be completed by the tenderer)**
Historically Disadvantaged Individuals Ownership	20% (4)	
Women Ownership	20% (4)	
Youth Ownership	20% (4)	
Disability Ownership	20% (4)	
Military Veterans Ownership	10% (2)	
Locality (Eastern Cape Contractors can claim 2 points)	10% (2)	
TOTAL	100% (20)	

Table 2: Detailed description and definition of various categories of the specific goal points that can be claimed.

No.	Detailed description and definition of various categories o	Portfolio of Evidence as part of the returnables
1	**Historically Disadvantaged Individuals Ownership:** [Historically Disadvantaged Individual (HDI). Means a South African citizen who, due to the apartheid policy that had been in place, had no franchise in national elections prior to the introduction of the Constitution of the Republic of South Africa, 1983 (Act No. 110 of 1983) or the Constitution of the Republic of South Africa, 1993 (Act No. 200 of 1993) ("The Interim Constitution") and /orWho is a female; and/orWho has a disability]. A South African ID number is a 13-digit number which is defined by the following format: YYMMDDSSSSCAZ. • The first 6 digits (YYMMDD) are based on your date of birth. 20 February 1992 is displayed as 920220. • The next 4 digits (SSSS) are used to define your gender. Females are assigned numbers in the range 0000-4999 and males from 5000-9999. • The next digit (C) shows if you're an SA citizen status with 0 denoting that you were born a SA citizen and 1 denoting that you're a permanent resident.	1)Proof of ownership (CIPRO certificate) with id no. 2)Proof of ownership (CSD report) with id no. 3)Certified copy of ID of all owners.
2	**Women Ownership**: A South African ID number is a 13-digit number which is defined by the following format: YYMMDDSSSSCAZ. • The first 6 digits (YYMMDD) are based on your date of birth. 20 February 1992 is displayed as 920220. • The next 4 digits (SSSS) are used to define your gender. Females are assigned numbers in the range 0000-4999 and males from 5000-9999.	1)Proof of ownership (CIPRO certificate) with id no. 2)Proof of ownership (CSD report) with id no. 3)Certified copy of ID of all owners.
3	**Military Veterans Ownership:** According to the 2011 Military Veterans act, a military veteran is any South African who rendered military service to any of the military organisations, former statutory and liberation armies, which were involved on all sides of South Africa's liberation war from 1960 to 1993; served in the then Union Defence Force.	1)Proof of ownership (CIPRO certificate) with id no. with valid proof of veteran status. 2)Proof of ownership (CSD report) with id no. with valid proof of veteran status. 3)Certified copy of ID of all owners.

4	**Disability Ownership:** The CRPD (Convention on the Rights of Persons with Disabilities) defines persons with disabilities to include those who have long term physical, mental, intellectual or sensory impairments, which in interaction with various barriers may hinder their full and effective participation in society on an equal basis.	1)Proof of ownership (CIPRO certificate) with id no. with valid medical documentary proof. 2)Proof of ownership (CSD report) with id no. with valid medical documentary proof. 3)Certified copy of ID of all owners.
5	**Youth Ownership:** Who are Youth in South Africa? The national Youth Policy defines youth as any persons between the ages of 14 and 35 years.	1)Proof of ownership (CIPRO certificate) with id no. 2)Proof of ownership (CSD report) with id no. 3)Certified copy of ID of all owners.
6	**Locality Ownership:** Proof of business address (municipal account or valid lease agreement) (Eastern Cape Contractors can claim 2 points)	1) Copy of Municial billing account with an address in the Eastern Cape Province. 2)Copy of a Lease Agreement with an addrss in the Eastern Cape Province.

DECLARATION WITH REGARD TO COMPANY/FIRM

4.3. Name of company/firm…….

4.4. Company registration number: ……...

4.5. TYPE OF COMPANY/ FIRM

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

[TICK APPLICABLE BOX]

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

i) The information furnished is true and correct;

ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;

iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 4.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that the claims are correct;

iv) If the specific goals have been claimed or obtained on a fraudulent basis or any of the

conditions of contract have not been fulfilled, the organ of state may, in addition to any other remedy it may have –

(a) disqualify the person from the tendering process;

(b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;

(c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;

(d) recommend that the tenderer or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and

(e) forward the matter for criminal prosecution, if deemed necessary.

…… **SIGNATURE(S) OF BIDDER(S)**
SURNAME AND NAME: …… **DATE:** ……
ADDRESS: ……

PROOF OF REGISTRATION ON THE NATIONAL TREASURY CENTRAL SUPPLIER DATABASE (CSD REPORT)

(ATTACH HERE)

VALID CIDB CERTIFICATE OF A TENDERER (ATTACH HERE)

VALID DEPARTMENT OF LABOUR COIDA LETTER OF GOOD STANDING CERTIFICATE
(ATTACH HERE)

SERVICE PROVIDERS MUST SUBMIT PROOF OF ITS SPECIFIC GOALS POINTS CLAIMED / STATUS OF CONTRIBUTOR.

(ATTACH HERE)

Table 2: Detailed description and definition of various categories of the specific goal points that can be claimed.

No.	Detailed description and definition of various categories o	Portfolio of Evidence as part of the returnables
1	**Historically Disadvantaged Individuals Ownership:** [Historically Disadvantaged Individual (HDI). Means a South African citizen who, due to the apartheid policy that had been in place, had no franchise in national elections prior to the introduction of the Constitution of the Republic of South Africa, 1983 (Act No. 110 of 1983) or the Constitution of the Republic of South Africa, 1993 (Act No. 200 of 1993) ("The Interim Constitution") and /orWho is a female; and/orWho has a disability]. A South African ID number is a 13-digit number which is defined by the following format: YYMMDDSSSSCAZ. • The first 6 digits (YYMMDD) are based on your date of birth. 20 February 1992 is displayed as 920220. • The next 4 digits (SSSS) are used to define your gender. Females are assigned numbers in the range 0000-4999 and males from 5000-9999. • The next digit (C) shows if you're an SA citizen status with 0 denoting that you were born a SA citizen and 1 denoting that you're a permanent resident.	1)Proof of ownership (CIPRO certificate) with id no. 2)Proof of ownership (CSD report) with id no. 3)Certified copy of ID of all owners.
2	**Women Ownership**: A South African ID number is a 13-digit number which is defined by the following format: YYMMDDSSSSCAZ. • The first 6 digits (YYMMDD) are based on your date of birth. 20 February 1992 is displayed as 920220. • The next 4 digits (SSSS) are used to define your gender. Females are assigned numbers in the range 0000-4999 and males from 5000-9999.	1)Proof of ownership (CIPRO certificate) with id no. 2)Proof of ownership (CSD report) with id no. 3)Certified copy of ID of all owners.
3	**Military Veterans Ownership:** According to the 2011 Military Veterans act, a military veteran is any South African who rendered military service to any of the military organisations, former statutory and liberation armies, which were involved on all sides of South Africa's liberation war from 1960 to 1993; served in the then Union Defence Force.	1)Proof of ownership (CIPRO certificate) with id no. with valid proof of veteran status. 2)Proof of ownership (CSD report) with id no. with valid proof of veteran status. 3)Certified copy of ID of all owners.

4	**Disability Ownership:** The CRPD (Convention on the Rights of Persons with Disabilities) defines persons with disabilities to include those who have long term physical, mental, intellectual or sensory impairments, which in interaction with various barriers may hinder their full and effective participation in society on an equal basis.	1)Proof of ownership (CIPRO certificate) with id no. with valid medical documentary proof. 2)Proof of ownership (CSD report) with id no. with valid medical documentary proof. 3)Certified copy of ID of all owners.
5	**Youth Ownership:** Who are Youth in South Africa? The national Youth Policy defines youth as any persons between the ages of 14 and 35 years.	1)Proof of ownership (CIPRO certificate) with id no. 2)Proof of ownership (CSD report) with id no. 3)Certified copy of ID of all owners.
6	**Locality Ownership:** Proof of business address (municipal account or valid lease agreement) (Eastern Cape Contractors can claim 2 points)	1) Copy of Municial billing account with an address in the Eastern Cape Province. 2)Copy of a Lease Agreement with an addrss in the Eastern Cape Province.

PROTECTION OF PERSONAL INFORMATION: CONSENT (POPIA)

PROTECTION OF PERSONAL INFORMATION: CONSENT (POPIA)

The introduction of The Protection of Personal Information Act (POPIA) ensures the regulation of personal information through its entire life cycle of collection, transfer, storing and deletion.
As part of its business activities, the Department of Health obtains and requires access to personal data from a wide range of internal and external parties, including without limitation bidders who respond to requests for proposals that are published by the Department of Health from time to time. The Department of Health confirms that it shall process the information disclosed by Bidders for the purpose of evaluating and subsequently awarding/appointing a successful Bidder.

The Department of Health hereby states that it does not and will never modify, amend, or alter any personal information submitted to it by a Bidder. Not unless directed to do so by an order of court, the Department of Health does not disclose or permit the disclosure of any personal information to any Third Party without the prior written consent of the owner of the information.

Similarly, Bidders will from time-to-time access and be seized with information of a personal nature pertaining to the Department of Health. Some of the information may because of legislative compliances be available in the public domain, whilst some is uniquely provided to bidders in pursuit of procurement or other business-related activities. In this regard, the Department of Health requires that Bidders which receive or have access to its personal information, process any such information in a manner compliant with the requirements of the POPIA.

AGREEMENT

1. The Department of Health and the Bidder (the Parties) agree and undertake that upon obtaining and having access to personal information relating to either of them, they shall always ensure that:
   a) They process the information only for the express purpose for which it was obtained.
   b) Information is provided only to designated and authorized personnel who require the personal information to carry out the Parties' respective obligations in terms of the Procurement processes.
   c) They will introduce, and implement all reasonable measures ensure the protection of all personal information from unauthorized access and/or use.
   d) They have taken appropriate measures to safeguard the security, integrity, and authenticity of all personal information in its possession or under its control.
   e) The Parties agree that if personal information will be processed for any other purpose other than the one for which the accessing of the information was intended, explicit written consent will be obtained prior to the execution of such reason.
   f) The Parties shall carry out regular assessments to identify all reasonably foreseeable internal and external risks to the interception of personal information in its possession or under its control and shall implement and maintain appropriate controls in mitigation of such risks.

2. The Parties agree that they will promptly return or destroy any personal data in their possession or control which belongs to the other Party once it no longer serves the purpose for which it was collected, subject to any legal retention requirements. The information will be destroyed in such a manner that it cannot be reconstructed to its original form, linking it to any individual or organization.
3. Bidder's Obligations

a) The Bidder is required to notify the Information Officer of Department of Health, in writing as soon as possible after it becomes aware of or suspects any loss, unauthorized access or unlawful use of any of the Department of Health's personal information.
b) The Bidder shall, at its own cost, promptly and without delay take all necessary steps to mitigate the extent of the loss or compromise of personal data.
c) The Bidder shall be required to provide the Department of Health with details of the persons affected by the compromise and the nature and extent of the compromise, including details of the identity (if known) of the unauthorized person who may have accessed or acquired the personal data.
d) The Bidder undertakes to co-operate with any investigation relating to security breach which is carried out by or on behalf of Department of Health.

On behalf of the Bidder:

…….. ..……
Signature Date

…….. ……
Position Name of the Bidder

On behalf of the Client:

…….. ..……
Signature Date

…….. ..……
Position Name of Client Representative

THE CONTRACT

PART C1

AGREEMENTS AND CONTRACT DATA

PART C1.1: FORM OF OFFER AND ACCEPTANCE

FORM OF OFFER AND ACCEPTANCE

Bid Description	**Upgrading & Additions to NG Dlukulu, Middle Terrace, V Shumane & Raglan Road Clinics**
SCMU number	**SCMU3-23/24-0619-HO**

OFFER
The employer, identified in the acceptance signature block, has solicited offers to enter into a contract for the procurement of:

Upgrading & Additions to NG Dlukulu, Middle Terrace, V Shumane & Raglan Road Clinics

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

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

THE OFFERED TOTAL OF THE PRICES INCLUSIVE OF VALUE ADDED TAX IS

……

……

……Rand (in words);

R ……(in figures) (or

other suitable wording)

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

Signature
……
Name
……...
Capacity
……...
for the tenderer
……...
(Name and address of organization)
Name and signature
of witness ……..…. ….. Date ……

ACCEPTANCE

By signing this part of this form of offer and acceptance, the employer identified below accepts the tenderer's offer. In consideration thereof, the employer shall pay the contractor the amount due in accordance with the conditions of contract identified in the contract data. Acceptance of the tenderer's offer shall form an agreement between the employer and the tenderer upon the terms and conditions contained in this agreement and in the contract that is the subject of this agreement.
The terms of the contract, are contained in:

Part C1 Agreements and contract data, (which includes this agreement)

Part C2 Pricing data
Part C3 Scope of work.
Part C4 Site information and drawings and documents or parts thereof, which may be incorporated by reference into the above listed Parts.

Deviations from and amendments to the documents listed in the tender data and any addenda thereto as listed in the returnable schedules as well as any changes to the terms of the offer agreed by the tenderer and the employer during this process of offer and acceptance, are contained in the schedule of deviations attached to and forming part of this form of offer and acceptance. No amendments to or deviations from said documents are valid unless contained in this schedule.

The tenderer shall within 3 weeks after receiving a completed copy of this agreement, including the schedule of deviations (if any), contact the employer's agent (whose details are given in the contract data) to arrange the delivery of any securities, bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the conditions of contract identified in the contract data. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Notwithstanding anything contained herein, this agreement comes into effect on the date when the tenderer receives one fully completed original copy of this document, including the schedule of deviations (if any). Unless the tenderer (now contractor**)** within five working days of the date of such receipt notifies the employer in writing of any reason why he cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the parties.[1]

Signature

……

Name Ms S Gede

Capacity:
Acting Head of the Eastern Cape Department of Health

for the Employer

Eastern Cape Department of Health
Dukumbana Building, Independence Avenue
BHISHO

(Name and address of organization)

Name and signature
of witness …… Date ……

Schedule of Deviations

1 Subject _____
Details
_____

2 Subject _____
Details
_____

3 Subject _____
Details
_____

4 Subject _____
Details
_____

By the duly authorized representatives signing this agreement, the employer and the tenderer agree to and accept the foregoing schedule of deviations as the only deviations from and amendments to the documents listed in the tender data and addenda thereto as listed in the tender schedules, as well as any confirmation, clarification or changes to the terms of the offer agreed by the tenderer and the employer during this process of offer and acceptance.

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

[1] *As an alternative, the following wording may be used:*

*Notwithstanding anything contained herein, this agreement comes into effect two working days after the submission by the employer of one fully completed original copy of this document including the schedule of deviations (if any), to a courier-to-counter delivery / counter-to-counter delivery / door-to counter delivery /door-to-door delivery /courier service (delete that which is not applicable), provided that the employer notifies the tenderer of the tracking number within 24 hours of such submission. Unless the tenderer (now contractor**)** within seven working days of the date of such submission notifies the employer in writing of any reason why he cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the parties*

PART C1.2: CONTRACT DATA

The Joint Building Contracts Committee® - NPC
CONTRACT DATA
For use by ORGANS OF STATE and other PUBLIC SECTOR BODIES
Principal Building Agreement
Edition 6.2 - May 2018

A PROJECT INFORMATION

A1.0 Works [1.1]

Project name	**Upgrading & Additions to NG Dlukulu, Middle Terrace, V Shumane & Raglan Road Clinics**
Reference number	**SCMU3-23/24-0619-HO**
Works description	Refer to document C3 – Scope of Work

A2.0 Site [1.1]

Erf / stand number	Refer to document C4 – Site Information
Township / Suburb	**Makanda Sub District**
Site address	Refer to document C4 – Site Information
Local authority	Makanda Sub District, Makhanda

A3.0 Employer [1.1]

Official Name of Organ of State / Public Sector Body	**Eastern Cape Department of Health**
Business registration number	N/A
VAT/ number	N/A
Country	South Africa
Employer's representative: Name	Stella Tshwane / Mr. Welile Tsewu
Telephone number	041 408 8031/30
Physical address	**Room 102** **Laboria House** **16 Grace Street** **Port Elizabeth Central** **Gqeberha** **6001**

A4.0 Principal Agent [1.1]

Name	Sakhiwo FM Consortium (Pty) Ltd			
Legal entity of above	Sakhiwo FM Consortium (Pty) Ltd	Contact person	Benjy Mokgothu	
Practice number		Telephone number	043-727 0791	
		Mobile number	043 727 0791	
Country	South Africa	E-mail	mail@sakhiwo.com	
Postal address	1 Rochester Street, Vincent, East London		Postal Code	5201
Physical address	1 Rochester Street, Vincent, East London		Postal Code	5201

A5.0 Agent [1.1]

Discipline	Architect			
Name	MDA Architects			
Legal entity of above	MDA Architects	Contact Person	Warren Bigara	
Practice number		Telephone number	041 372 0228	
		Mobile number	082 780 5587	
Country	South Africa	E-mail	warren@mdaarch.co.za	
Postal address	18 Park Ln, Central, Gqeberha, 6001		Postal Code	6001
Physical address	18 Park Ln, Central, Gqeberha, 6001		Postal Code	6001

A6.0 Agent [1.1]

Discipline	Quantity Surveyor			
Name	BHC Built Environment Professionals			
Legal entity of above	BHC Built Environment Professionals			
Practice number		Contact Person	Admire Moyo / admire@bhcbep.co.za	
		Telephone	041 373 0703	
Country	South Africa	Mobile Number	078 445 7609	
Postal address	2 Salisbury Road, Mill Park, Gqeberha, 6001		Postal Code	6001
Physical address	2 Salisbury Road, Mill Park, Gqeberha, 6001		Postal Code	6001

A7.0 Agent [1.1]

Discipline	Structural Engineer
Name	Lukhozi Consulting Engineers (Pty) Ltd

Legal entity of above	Lukhozi Consulting Engineers Pty (Ltd)	Contact person	Conrad Bezuidenhout	
Practice number	2000/006344/07	Telephone number	041 363 1984	
		Mobile number	081 264 8063	
Country	South Africa	E-mail	c.bezuidenhout@lukhozi.co.za	
Postal address	Same as physical		Postal Code	6045
Physical address	36 Pickering Street, Newton Park, Gqeberha		Postal Code	6045

A8.0 Agent [1.1]

Discipline	Civil Engineer			
Name	Lukhozi Consulting Engineers (Pty) Ltd			
Legal entity of above	Lukhozi Consulting Engineers Pty (Ltd)	Contact person	Conrad Bezuidenhout	
Practice number	2000/006344/07	Telephone number	041 363 1984	
		Mobile number	081 264 8063	
Country	South Africa	E-mail	c.bezuidenhout@lukhozi.co.za	
Postal address	Same as physical		Postal Code	
Physical address	36 Pickering Street, Newton Park, Gqeberha		Postal Code	6045

A9.0 Agent [1.1]

Discipline	Electrical Engineer			
Name	RNA Consulting Engineers			
Legal entity of above	RNA Consulting Engineers	Contact person	Boitumelo Geelbooi	
Practice number		Telephone number	+27 (0)41 581 2807	
		Mobile number	+27 (0)61 694 4808	
Country	South Africa	E-mail	bvincent@rnaconsulteng.co.za	
Postal address	87 Heugh Road, Walmer, Gqeberha		Postal Code	6070
Physical address	87 Heugh Road, Walmer, Gqeberha		Postal Code	6070

A10.0 Agent [1.1]

Discipline	Mechanical Engineer		
Name	Lukhozi Consulting Engineers (Pty) Ltd		
Legal entity of above	Lukhozi Consulting Engineers Pty (Ltd)	Contact person	Bruce Maliti
Practice number	2000/006344/07	Telephone number	043 721 1321

		Mobile number	073 796 9069	
Country	South Africa	E-mail	b.maliti@lukhozi.co.za	
Postal address	Same as physical		Postal Code	
Physical address	Kwa-Lukhozi, Quartzite Drive, The Quarry, Selborne, East London		Postal Code	5201

A11.0 Agent [1.1]

Discipline	Occupational Health and Safety Agent			
Name	L Mzamo and Associates			
Legal entity of above	L Mzamo and Associates	Contact person	Lukhanyiso Mzamo	
Practice number		Telephone number		
		Mobile number	072 256 8902	
Country		E-mail	mfundomaweni@gmail.com	
Postal address			Postal Code	6200
Physical address	3rd Floor Regus House Fairview Office Park Ring Road Greenacres, Ggeberha, 6001		Postal Code	6200

A12.0 Agent [1.1]

Discipline	Social Facilitator			
Name	Mfundo Maweni			
Legal entity of above		Contact person	Mfundo Maweni	
Practice number		Telephone number		
		Mobile number	072 256 8902	
Country		E-mail	mfundomaweni@gmail.com	
Postal address			Postal Code	6200
Physical address	48 Teya Street, New Brighton, Port Elizabeth		Postal Code	6200

B CONTRACT INFORMATION

B 1.0 Definitions [1.1]

Bills of quantities: System/Method of measurement	**Standard System of Measuring Building Work (Seventh Edition) as amended**

B 2.0 Law, regulations, and notices [2.0]

Law applicable to the **works**, state country [2.1]	**Republic of South Africa**

B 3.0 Offer and acceptance [3.0]

Currency applicable to this **agreement** [3.2]	**South African Rand**

B 4.0 Documents [5.0]

The original signed **agreement** is to be held by the **principal agent** [5.2], if not, indicate by whom	**Employer**
Number of copies of **construction information** issued to the **contractor** at no cost [5.6]	**Three (3)**

Documents comprising the **agreement**	Page numbers
The **JBCC®** Principal Building Agreement, Edition 6.2 May 2018	1 to 30
The JBCC® Principal Building Agreement - Contract Data for Organs of State and other Public Sector Bodies, Edition 6.2 May 2018	1 to 18
The JBCC® General Preliminaries for use with the JBCC® Principal Building Agreement, Edition 6.2 May 2018	1 to 30

Contract drawings – description	Number	Revision	Date
As per Drawings listed C3			

B 5.0 Employer's Agents [6.0]

Authority is delegated to the following **agents** to issue **contract instructions** and perform duties for specific aspects of the **works** [6.2]
As delegated by the Principal Agent

Principal agent's and **agents'** interest or involvement in the **works** other than a professional interest [6.3]
None

B 6.0 Insurances [10.0]

Insurances by **employer**		Amount including tax	Deductible amount including tax
Yes / No:	**No**		
Contract works insurance:			
	New **works** [10.1.1] (**Contract sum** or amount)		
or	**Works** with **practical completion** in **sections** [10.2] (**contract sum** or amount		

or	**Works** with alterations and additions [10.3] (reinstatement value of existing structures with or including new **works**)			
	Direct contractors [10.1.1; 10.2] where applicable, to be included in the contract works insurance			
	Free issue [10.1.1; 10.2] where applicable, to be included in the contract works insurance			
	Escalation, professional fees and reinstatement costs if not included above			
Total of the above contract works insurance amount				
Supplementary insurance [10.1.2; 10.2]				
Public liability insurance [10.1.3; 10.2]				
Removal of lateral support insurance [10.1.4; 10.2]				
Other insurances [10.1.5]				
Yes/ No?	No	If yes, description 1		
Yes/ No?	No	If yes, description 2		

and/or

Insurances by **Contractor**			Amount including tax	Deductible amount including tax
Yes / No:	**Yes**			
	New **works** [10.1.1] (**Contract sum** or amount)		Contract sum + 10%	R 15 000
or	**Works** with **practical completion** in **sections** [10.2] (**contract sum** or amount)		Contract sum + 10%	R 15 000
or	**Works** with alterations and additions [10.3] (reinstatement value of existing structures with or including new **works**)		**To the minimum value of the contract sum + 10%**	**With a deductible not exceeding 5% of each and every claim**
	Direct contractors [10.1.1; 10.2] where applicable, to be included in the contract works insurance		N/A	
	Free issue [10.1.1; 10.2] where applicable, to be included in the contract works insurance		N/A	
	Escalation, professional fees and reinstatement costs if not included above		N/A	
Total of the above contract works insurance amount			To the minimum value of the contract sum + 10%	**With a deductible not exceeding 5% of each and every claim**
Supplementary insurance [10.1.2; 10.2]			No	
Public liability insurance [10.1.3; 10.2]			R15 million	
Removal of lateral support insurance [10.1.4; 10.2]			No	
Other insurances [10.1.5]				
Yes/ No?	**Yes**	If yes, description 1	Uncontrolled Collapse / Strike/	

			Riot/ Business Forum	
Hi Risk Insurance [10.1.5.1]				
Yes/ No?	**Yes**	If yes, description 2	Structural Failure	

B 7.0 Obligations of the employer [12.1]

Existing premises will be in use and occupied [12.1.2]		**Yes / No?**	**Yes**
If yes, description	The Sites consist of various functional clinics and construction will take place within these premises. The Contractor will, throughout the entire period of the works, be responsible for the proper and adequate protection of property, the public and ECDOHs personnel from damage or injury. The contractor will be responsible for the proper security and OHS requirements of the sites at all times during the course of the contract period. Further, the Contractor must allow for all temporary hoardings, required by the Local Authorities, National Building Regulations and OHS Act. All allowances for the safe removal and disposal of asbestos material are deemed to be priced in the removal of existing roofing, waterproofing and other asbestos containing material in all clinics. Allowance must be made for periodic adjustment of any hoardings aligned to the project phasing and for their eventual removal and for making good at more than one site. All temporary fencing hoardings, and safe removal and disposal of asbestos etc. required must be priced for in the Preliminaries of these Bills of Quantities (Refer to OHS agents specification and bills). The contractor shall keep the site, structures etc. well-watered during operations to prevent dust and shall provide, erect and remove on completion of the works all necessary temporary dust screens all to the satisfaction of the principal agent.		
Restriction of working hours [12.1.2]		**Yes / No?**	**Yes**
If yes, description	7h00 until 16h00 daily excluding weekends. Work required to be executed outside of these hours must be arranged with the Facilities Manager and the management of the Clinics, in advance. No costs shall be claimable connected thereto		
Natural features and known services to be preserved by the contractor [12.1.3]		**Yes / No?**	**Yes – Vegetation/trees**
If yes, description			
Restrictions to the site or areas that the contractor may not occupy [12.1.4]		**Yes / No?**	**Yes**
If yes, description	Work areas and restricted areas shall be defined at Site Handover		
Supply of free issue [12.1.10]		Yes / No?	**No**
If yes, description			

B 8.0 Nominated subcontractors [14.0]

Yes / No?	**No**	**If yes, description of specialisation**
Specialisation 1		
Specialisation 2		
Specialisation 3		
Specialisation 4		
Specialisation 5		
Specialisation 6		

Specialisation 7	
Specialisation 8	
Specialisation 9	

B 9.0 Selected subcontractors [15.0]

Yes / No?	**No**	**If yes, description of specialisation**
Specialisation 1		
Specialisation 2		
Specialisation 3		
Specialization 4		
Specialization 5		
Specialisation 6		
Specialisation 7		
Specialisation 8		
Specialisation 9		
Specialisation 10		

B 10.0 Direct contractors [16.0]

Yes / No?	**No**	**If yes, description of extent of work**
Extent of work [12.1.11]		
Extent of work [12.1.11]		
Extent of work [12.1.11]		
Extent of work [12.1.11]		
Extent of work [12.1.11]		

B 11.0 Description of sections [20.1]

Section 1	Sectional practical completion of Raglan Road Clinic
Section 2	Sectional practical completion of Phase 1 at NG Dlukulu Clinic
Section 3	Sectional practical completion of Middle Terrace Clinic
Section 4	Sectional practical completion of Phase 2 at NG Dlukulu clinic
Section 5	Sectional practical completion of V Shumane Clinic
Section 6	N/A
Section 7	N/A

B 12.0 Possession of site [12.1.5], practical completion [19.0; 20.0] and penalty [24.0]

Practical completion for the works as a whole	Intended date of possession of the site Refer B17.0 [12.1.5; 12.2.22]	Period for inspection by the principal agent [19.3]	The date for practical completion shall be the period as indicated below from the date of possession of the site by the contractor [12.2.7; 24.1]	Penalty for late completion [24.1]
		working days	Period in months	Penalty amount per calendar day (excl. tax)
		10 Working days	**16 Calendar months (Shutdown period included)**	**2.25c/R100 of Contract amount**

or where **sections** are applicable Sections apply

Practical completion of a section of the works	Intended date of possession of the site Refer B17.0 [12.1.5; 12.2.22]	Period for inspection by the principal agent [19.3]	The date for practical completion shall be the period as indicated below from the date of possession of the site by the contractor (Refer to C3.1) [12.2.7; 24.1]	Penalty for late completion [24.1]
		Working days	Period in months	Penalty amount per calendar day (excl. tax)
Section 1		**10 Working days**	**7 months**	**2.25c/R100 of Contract amount**
Section 2		**10 Working days**	**7 months**	**2.25c/R100 of Contract amount**
Section 3		**10 Working days**	**7 months**	**2.25c/R100 of Contract amount**
Section 4		**10 Working days**	**7 months**	**2.25c/R100 of Contract amount**
Section 5		**10 Working days**	**7 months**	**2.25c/R100 of Contract amount**
Section 6				
Section 7				
Section 8				
Remainder of the				

Criteria to achieve **practical completion** not covered in the definition of **practical completion**
Facilities to be fit for purpose as agreed upon and signed off by the professional team in writing – scope of work to be complete as per C3 of the contract. Inclusive of: Receipt by PA of Roof Completion certificates, Electrical certification, Facility safe for occupation certification, warranties and guarantees and training of staff records where appropriate and issue of approval of sectional and completion lists by PA

B 13.0 Defects liability period [21.0]

Extended defects liability period: Refer B17.0 [21.13]	**Yes / No?**	**Yes**
If yes, description of applicable elements	**All works**	

B 14.0 Payments [25.0]

Date of month for issue of regular **payment certificates** [25.2]	**25th**		
Contract price adjustment / Cost fluctuations [25.3.4; 26.9.5]	**Yes / No?**	**Yes**	**Base date = Tender closing date**
If yes, method to calculate	**CPAP calculated with Haylett formulae based on indices as provided by Stats SA**		
Employer shall pay the **contractor** within: [25.10]	**Thirty (30) calendar days**		

B 15.0 Dispute resolution [30.0]

Adjudication [30.6.1; 30.10] Name of nominating body	**Refer to Part C1.3 Dispute Resolution Mechanism**	
Applicable rules for adjudication [30.6.2]	**Adjudication in accordance with the CIDB adjudication process**	
Arbitration [30.7.4; 30.10]	**Yes / No?**	**Yes**
If Yes, name of nominating body *****If No, then dispute will be referred to litigation	**Association of Arbitrators SA**	
Applicable rules for arbitration [30.7.5]	2021	

B 16.0 JBCC® General Preliminaries – selections

Provisional bills of quantities [B2.2]		**Yes / No?**	**No**
Availability of construction information – is the construction information complete? [B2.3]		**Yes / No?**	**Yes**
Previous work - dimensional accuracy - details of previous contract(s) [B3.1]		N/A	
Previous work - **defects** - details of previous contract(s) [B3.2]		N/A	
Inspection of adjoining properties - details [B3.3]		Yes – Photograph record by PC	
Handover of **site** in stages - specific requirements [B4.1]		Refer to B11 (Contract Data)	
Enclosure of the **works** - specific requirements [B4.2]		Hoarding to working areas.	
Geotechnical and other investigations - specific requirements [B4.3]		N/A	
Existing premises occupied - details [B4.5]		Working Areas will be occupied and PC must liase with Facilities to Decant	
Services - known - specific requirements [B4.6]		Yes, isolate and make safe	
Water [B8.1]	By **contractor**	**Yes / No?**	**Yes**
	By **employer**	**Yes / No?**	**No**
	By **employer** – metered	**Yes / No?**	**No**
Electricity [B8.2]	By **contractor**	**Yes / No?**	**Yes**
	By **employer**	**Yes / No?**	**No**
	By **employer** – metered	**Yes / No?**	**No**
Ablution and welfare facilities [B8.3]	By **contractor**	**Yes / No?**	**Yes**
	By **employer**	**Yes / No?**	**No**
Communication facilities - specific requirements [B8.4]		No specific requirements	
Protection of the works - specific requirements [B11.1]		Contractors responsibility	
Protection / isolation of existing works and works occupied in sections - specific requirements [B11.2]		Contractors responsibility	
Disturbance - specific requirements [B11.5]		Contractors responsibility	
Environmental disturbance - specific requirements [B11.6]		Contractors responsibility	

B 17.0 Changes made to JBCC® documentation

Reference may be made to other documents forming part of this **agreement**

1.1 Definitions

AGREEMENT: The completed Form of Offer and Acceptance, the completed **JBCC®** Principal Building Agreement and **JBCC® contract data for organs of state and other public sector bodies, the contract drawings, the priced document** and any other documents reduced to writing and signed by the authorised representatives of the **parties**

CONSTRUCTION PERIOD: The period commencing on the date of possession of the **site** by the **contractor** and ending on the date of **practical completion**

CONTRACT PERIOD: The period commencing on the date of the letter of acceptance and ending on the date of final completion

COST FLUCTUATION shall mean contract price adjustment provision (CPAP) for the adjustment of fluctuation in the cost of labour, plant, material and goods as stated in the schedule

DEFAULT INTEREST: No Clause

GUARANTEE FOR CONSTRUCTION: A security in terms of the ECDOH's Guarantee for Construction form/s, obtained by the contractor from an institution approved by the employer [CD]

CONTRACT DATA FOR ORGANS OF STATE AND OTHER PUBLIC SECTOR BODIES: The document listing the Organs of State and other Public Sector Bodies' requirements and the project specific information

INTEREST: The interest rates applicable on this contract, whether specifically indicated in the relevant clauses or not, will be the rate as determined by the Minister of Finance from time to time, in terms of section 80(1)(b) of the Public Finance Management Act, 1999 (Act No 1 of 1999), calculated as simple interest, in respect of debts owing to the State, and will be the rate as determined by the Minister of Justice and Constitutional Development from time to time 80(1)(b) of the Public Finance Management Act, 1999 (Act No 1 of 1999), calculated as simple interest, in respect of debts owing by the State

LETTER OF ACCEPTANCE: The letter of formal acceptance of the Contractor's or Service Provider's Tender / Bid, issued and signed by the Employer

PAYMENT CERTIFICATE: A certificate issued at regular agreed intervals [CD] by the principal agent to the parties certifying the amount due and payable in terms of Clause 25.3

PRINCIPAL AGENT: The person or entity appointed by the **employer** and named in the **contract data for organs of state and other public sector bodies**. In the event of a principal agent not being appointed, then all the duties and obligations of a **principal agent** as detailed in the **agreement** shall be fulfilled by the employer's representative as named in the **contract data for organs of state and other public sector bodies**

3.0 Offer and Acceptance

Amend 3.3 to read as follows:
This **agreement** shall come into force on the date as stated on the Form of Offer and Acceptance and continue to be of force and effect until the end of the **latent defects** liability period [22.0] notwithstanding termination [29.0] or the certification of **final completion** [21.0] and final payment [25.0]

4.0 Cession and Assignment

Replace Clause 4.3 with the following:

Where a contractor cedes any right or any monies due to or to become due under this agreement as security in favour of a financial institution, the prior written consent of the employer, which consent shall not be unreasonably withheld, must be obtained

5.0 Documents

Replace Clause 5.4 with the following:

The Bills of Quantities shall not be used as a specification of material and goods or methods unless so instructed by the Principal Agent. The contractor may not use the Bills of Quantities for purpose of ordering material. All dimensions and quantities must be determined on site before ordering. In the event of discrepancy between the drawings and Bills of Quantity, the drawings shall take preference

Replace Clause 5.5 with the following:

The parties may publish or disclose on any platform only the contract scope and contract amount

6.0 Employer's Agents

Replace Clause 6.5 with the following:

Where the principal agent and/or an agent fails to act or is unable to act or ceases to be the principal agent or an agent in terms of this agreement, the employer shall appoint another principal agent and/or an agent

Add the following as 6.7:

In terms of the clauses listed hereunder, the **employer** has retained its authority and has not given a mandate to the **principal agent**. The **employer** shall sign all documents in relation to clauses 4.2, 14.1.2,14.1.4, 14.4.1, 14.6, 23.1, 23.2, 23.3, 23.7, 23.8, 26.1, 26.7, 26.12 and 28.4

8.0 Works Risk

Replace Clause 8.4 with the following**:**

The **contractor** shall bear the full risk of damage to and/or destruction of the **works** by whatever cause during construction of the **works** and hereby indemnifies and holds harmless the **employer** against any such damage. The **contractor** shall take such precautions and security measures and other steps for the protection and security of the **works** as the **contractor** may deem necessary

9.0 Indemnities

9.2.7: Add the following to the end of the first sentence: "…. due to no fault of the **contractor**"
9.2.9 No Clause
9.2.10 No Clause

Add the following as clause 9.3**:**

The employer's rights to claim damages for the contractor's omissions and actions will not be affected.

10.0 Insurances

Add the following as 10.1.5.1:

Hi risk Insurance

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

10.1.5.1.1 Damage to **the works**

The contractor shall, from the date of possession of the **site** until the date of the **certificate of practical completion**, bear the full risk of and hereby indemnifies and holds harmless the **employer** against any damage to and/or destruction of the **works** consequent upon a catastrophic ground movement as mentioned

above. The **contractor** shall take such precautions and security measures and other steps for the protection of the **works** as he may deem necessary

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

10.1.5.1.2 Injury **to persons or loss of or damage to property**

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

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

10.1.5.1.3

It is the responsibility of the **contractor** to ensure that he has adequate insurance to cover his risk and liability as mentioned in 10.1.5.1.1 and 10.1.5.1.2. Without limiting the **contractor's** obligations in terms of the contract, the **contractor** shall, within twenty-one (21) **calendar days** of the date of possession of the site, but before commencement of the **works**, submit to the **employer** proof of such insurance policy, if requested to do so

10.1.5.1.4
The **employer** shall be entitled to recover any and all losses and/or damages of whatever nature suffered or incurred consequent upon the **contractor's** default of his obligations as set out in 10.1.5.1.1; 10.1.5.1.2 and 10.1.5.1.3. Such losses or damages may be recovered from the **contractor** or by deducting the same from any amounts still due under this contract or under any other contract presently or hereafter existing between the **employer** and the **contractor** and for this purpose all these contracts shall be considered one indivisible whole

11.0 Securities

Amend 11.10 to read as follows:

There shall be no lien or right of retention held by any **contractor** in respect of the works executed on **site**

12.0 Obligations of the Parties

12.1.1 No Clause

Replace Clause 12.1.5 with the following:

Give possession of the site to the contractor within ten (10) working days after approval of the Health and Safety Plan or the issue of a construction permit by the Department of Labour, if applicable, after the contractor complied with the terms of 12.2.22

12.1.6 No Clause

12.1.8 No Clause

Replace Clause 12.2.2 with the following:
The priced Bills must be submitted as part of the returnable documents. Where the priced document contains errors or discrepancies and/or prices considered by the employer or principal agent to be imbalanced or unreasonable the employer or principal agent and the contractor shall adjust such prices without any change to the contract sum

Replace Clause 12.2.5 with the following:
Effect and keep in force insurances in favour of the employer as beneficiary where the contractor is responsible for providing insurances [10.0) [CD]

Replace Clause 12.2.13 with the following:
Designate a competent person full time on site to continuously administer and control the works on site and to receive and implement notices and contract instructions on behalf of the contractor

Add the following as Clause 12.2.22:
Within fourteen (14) working days of the date of the letter of acceptance submit to the principal agent an acceptable health and safety plan, required in terms of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993)

Add the following as Clause 12.2.23:
The contractor shall within reasonable time inform the agents regarding inspection of the works before covering / closing [B 12.0]

19.0 Practical Completion

Replace Clause 19.5 with the following:

On issue of the only or last certificate of practical completion the employer shall be entitled to possession of the works and the site. On issue of the certificate of practical completion for a section, the employer shall be entitled to possession of such section

21.0 Defects Liability Period and Final Completion

Clause 21.0

Replace Clause 21.1 with the following:
The defects liability period for the works shall commence on the calendar day following the date of works completion and end at midnight (00:00) ninety (90) calendar days from the date of works completion [CD] or when work on the list for completion has been satisfactorily attended to [21.6), whichever is the later (if we use works completion)

Replace Clause 21.6 with the following:
On the expiry of the ninety (90) calendar days defects liability period [21.1] for items not indicated as items with an extended liability as indicated in B14 and on receipt of the contractor's notice to the principal agent

And/or

On the expiry of the defects liability period as indicated in B14, for items indicated in B14 and on receipt of the contractor's notice to the principal agent, the principal agent shall:

(1) inspect the works and within ten (10) working days either issue a list for final completion detailing all outstanding work or defects that must be attended to, or rectified to achieve final completion or
(2) issue the certificate of final completion to the contractor with a copy to the employer for that part of the works where defects liability period has expired

21.6.1 Omit Clause

21.6.2 Omit Clause

Add the following as Clause 21.13:
The ninety (90) calendar days defects liability period for the works [21.1] is replaced with an extended defects liability period of three hundred and sixty-five (365) calendar days in respect of the listed applicable elements in B14

Add the following as Clause 21.14:
Penalties will be applied if the items on the completion list have not been attended to within a period of ninety (90) calendar days [21.1]. If additional defect items have being added to the list during this period, then the Principal Agent and Contractor will agree on a revised completion date. Failing in achieving the revised date will result in penalties being applied.[B12.0

23.0 Latent Defects Liability Period

22.3.2 No Clause

24.0 Penalty for Late and Non-completion

Replace Clause 24.1 with the following:
Where the contractor fails to bring the works, or a section thereof, to practical or final- completion by the applicable completion date [CD], or the revised applicable completion date, the contractor shall be liable to the employer for the penalty [CD]

Replace Clause 24.2 with the following:
Where the employer elects to levy such penalty the employer, or the principal agent on instruction from the employer, shall give notice thereof to the contractor. The principal agent shall determine the penalty due from the later of the date for practical- works-, or final- completion [CD], or the revised date for practical- works-, or final- completion, up to and including the earlier of:

Replace Clause 24.2.1 with the following:
The actual or deemed date of practical or final- completion, of the works, or a section thereof [23.7.1]

25.0 Payment

Replace Clause 25.2 with the following:

The principal agent shall issue at regular agreed intervals [CD] payment certificates, to the contractor with a copy to the employer, up to and including practical completion. Interim Payment certificates may be issued to the contractor between practical completion and the final payment certificate. A payment certificate may be for a nil or negative amount

Add the following to Clause 25.3:
25.3.12 Tax Invoice

25.5 No Clause

Replace Clause 25.6 with the following:

Materials and goods will only be certified and paid for upon providing proof of full payment to the supplier and proof of transfer of ownership from the supplier to the contractor by the contractor. Once paid, material and goods shall become the property of the employer and shall not be removed from site without the written authority of the Employer.

25.7.5 No clause.

Replace Clause 25.10 with the following:

The employer shall pay the contractor the amount stipulated in an issued payment certificate, correct in all material respects, within thirty (30) calendar days from the date of receiving the payment certificate, invoice and all other substantiating documentation for items certified in the payment certificate

25.10: Delete the words “and/or **compensatory interest**”

Replace Clauses 25.12 to 25.12.3 with the following:

Clause 25.12

The value of the works in terms of 25.1 and of the materials and goods in terms of 25.4 shall be certified in full. The value certified shall be subject to the following percentage adjustments:

25.12.1 Ninety-five per cent (95%) of such value in interim payment certificates issued up to the date of practical completion

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

25.12.3 Ninety-nine per cent (99%) of such value in interim payment certificates issued on the date of final completion and up to but excluding the final payment certificate in terms of 26

25.12.4 One hundred per cent (100%) of such value in the final payment certificate in terms of 26 except where the amount certified is in favour of the employer. In such an event the payment reduction shall remain at the adjustment level applicable to the final payment certificate.

25.12.5 Where there is sectional practical completion, the reduction of retention will be based on the value of each contractual sectional practical completion in terms of clause 20.0.

25.14.2: Not applicable

26.0 Adjustment of the Contract Value and Final Account

Ref Clause 6.7 [CD] – Clause 26.1

Omit Clause 26.4.3

Ref Clause 6.7 [CD] – Clause 26.7

Replace Clause 26.10 with the following**:**

The principal agent shall prepare the final account in consultation with the employer and issue the final account, to the contractor within sixty (60) working days of the date of practical completion

27.0 Recovery of Expense and/or Loss

Clause 27.0

Replace Clause 27.1.2 with the following:
Interest due to late payment only

Replace Clause 27.1.4 with the following:
Interest due to late payment only

27.1.5 No Clause

Replace Clause 27.5 with the following:
Where the employer decides to recover an amount due in terms of 27.2 from a construction guarantee, cash deposit or retention money held as security, the employer shall issue a written demand to the contractor before recovering the amount. Should such amount not be paid to the employer within fourteen (14) calendar days of the date-of notice by the employer, the employer may recover such an amount from the security

29.0 Termination

Clause 29.0

Add the following as Clause 29.1.4:
The contractor's estate has been sequestrated, liquidated or surrendered in terms of the insolvency laws in force within the Republic of South Africa

Add the following as Clause 29.1.5:
The contractor has engaged in corrupt or fraudulent practices in competing for or in executing the contract.

Add the following as Clause 29.1.6:
Honour his obligations in terms of Clauses 10.1.5.1.3, 11.4.1 and 12.2. sub-Clauses 5, 6, 8, 9, 10, 11, 12, 13, 15, 16, 19, 20, 22.

Replace Clause 29.7 with the following:
The employer, on notice to the contractor, may recover damages from the contractor from the date of termination including, but not limited to, additional costs incurred in the completion, consultant cost, rental of alternative accommodation, invitation of completion tenders, salaries of officials and safeguarding the site, of the remaining work [25.3.7; 27.1.3]

Replace Clause 29.9 with the following:
The employer has the right of recovery against the contractor, where applicable, [CD] from:

The payment reduction until the final payment is made;

29.14.1 No Clause

29.14.3 No Clause

29.14.4 No Clause

29.14.5 No Clause

29.14.6 No Clause

29.14.7 No Clause

29.15 No Clause

29.16 No Clause

29.17.3 No Clause

29.17.6 No Clause

29.21.5 No Clause

29.22 No Clause

29.23 No Clause

29.25.3 No Clause

29.25.4 No Clause

29.27 No Clause

30.0 Dispute Resolution

Replace Clause 30.2 with the following:

Where such disagreement is not resolved within ten (10) working days of receipt of such notice it shall be deemed to be a dispute and shall be submitted to Mediation as a first method of dispute resolution failing which the parties will resort to Litigation

30.3 to 30.7.7 No Clauses

Replace Clause 30.8 with the following:
The parties may, by agreement and at any time before Litigation, refer a dispute to mediation, in which event:

30.8.1 No Clause

Replace Clause 30.8.2 with the following:
The appointment of a mediator, the procedure, and the status of the outcome shall be agreed between the parties

Replace Clause 30.8.3 with the following:
Regardless of the outcome of a mediation the parties shall bear their own costs concerning the Mediation and equally share the costs of the mediator and related expenses.

Replace Clause 30.9 with the following:
Institution of Litigation shall be commenced, and process served within three (3) year from the date of existence of the dispute, failing which the dispute shall lapse

30.10 No Clause

30.12 No Clause

C TENDERER'S SELECTIONS

C 1.0 Security [11.0]

Guarantee for construction: Option A only	**Option:**	**A**

Option A	**Fixed construction guarantee of 10% of the contract sum.**

Guarantee for payment by **employer** [11.5.1; 11.10]	Not Applicable

Advance payment, subject to a **guarantee for advance payment** [11.2.2; 11.3]	Not Applicable

C 2.0 Contractor's annual holiday periods during the construction period

Year 1 **contractor's** annual holiday period	start date	Mid December 2024	end date	Start Jan 2025
Year 2 **contractor's** annual holiday period	start date		end date	
Year 3 **contractor's** annual holiday period	start date		end date	

C 3.0 Payment of preliminaries [25.0]

Contractor's selection: Select Option A or B	**Option:**	

Where the contractor does not select an option, Option A shall apply

Payment methods

Option A	The **preliminaries** shall be paid in accordance with an amount prorated to the value of the **works** executed in the same ratio as the amount of the **preliminaries** to the **contract sum**, which **contract sum** shall exclude the amount of **preliminaries**. Contingency sum(s) and any provision for cost fluctuations shall be excluded for the calculation of the aforesaid ratio
Option B	The **preliminaries** shall be paid in accordance with an amount agreed by the **principal agent** and the **contractor** in terms of the **priced document** to identify an initial establishment charge, a time-related charge and a final dis-establishment charge. Payment of the time-related charge shall be assessed by the **principal agent** and adjusted from time to time as may be necessary to take into account the rate of progress of the **works**

Lump sum contract

Where the amount of **preliminaries** is not provided it shall be taken as 7.5% (seven and a half per cent) of the **contract sum**, excluding contingency sum(s) and any provision for cost fluctuations.

C 4.0 Adjustment of preliminaries [26.9.4]

Contractor's selection: Select Option A or B	**Option:**	

Where the contractor does not select an option, Option A shall apply

Provision of particulars

The **contractor** shall provide the particulars for the purpose of the adjustment of **preliminaries** in terms of his selection. Where completion in sections **is** required, the **contractor** shall provide an apportionment of **preliminaries** per **section**

Option A	An allocation of the **preliminaries** amounts into Fixed, Value-related and Time-related amounts as defined for adjustment method Option A below, within fifteen (15) **working days** of the date of acceptance of the tender
Option B	A detailed breakdown of the preliminaries amounts within fifteen (15) working **days of** possession of the site. Such breakdown shall include, inter alia, the administrative and supervisory staff, the use of **construction equipment**, establishment and dis-establishment charges, insurances and guarantees, all in terms of the **programme**

Adjustment Methods

The amount of **preliminaries** shall be adjusted to take account of the effect which changes in time and/or value have on **preliminaries**. Such adjustment shall be based on the particulars provided by the **contractor** for this purpose in terms of Options A or B, shall preclude any further adjustment of the amount of **preliminaries** and shall apply notwithstanding the actual employment of resources by the **contractor** in the execution of the **works**

Option A	The **preliminaries** shall be adjusted in accordance with the allocation of **preliminaries** amounts provided by the **contractor,** apportioned to **sections** where completion in **sections** is required Fixed - An amount which shall not be varied Value-related - An amount varied in proportion to the **contract value** as compared to the **contract sum**. Both the **contract sum** and the **contract value** shall exclude the amount of **preliminaries**, contingency sum(s) and any provision for cost fluctuations Time-related - An amount varied in proportion to the number of **calendar days** extension to the date of **practical completion** to which the **contractor** is entitled with an adjustment of the **contract value** [23.2; 23.3] as compared to the number of **calendar days** in the initial **construction period** [26.9.4]
Option B	The adjustment of **preliminaries** shall be based on the number of **calendar days** extension to the date of **practical completion** to which the **contractor** is entitled with an adjustment of the **contract value** [23.2; 23.3] as compared to the number of **calendar days** in the initial **construction period** [26.9.4] The adjustment shall take into account the resources as set out in the detailed breakdown of the **preliminaries** for the period of construction during which the delay occurred

Failure to provide particulars within the period stated

Option A	Where the allocation of **preliminaries** amounts for Option A is not provided, the following allocation of **preliminaries** amounts shall apply: Fixed - Ten per cent (10%) Value-related - Fifteen per cent (15%) Time-related - Seventy-five per cent (75%) Where the apportionment of the **preliminaries** per **section** is not provided, the categorized amounts shall be prorated to the cost of each **section** within the **contract sum** as determined by the **principal agent**

Option B	Where the detailed breakdown of **preliminaries** amounts for Option B is not provided, Option A shall apply

Lump sum contract

Where the amount of **preliminaries** is not provided it shall be taken as 7.5% (seven and a half per cent) Of the **contract sum**, excluding contingency sum(s) and any provision for cost fluctuations

JBCC GUARANTEE FOR CONSTRUCTION (PRO-FORMA)

Province of the
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Guarantee for Construction

For use with the JBCC® **Principal Building Agreement** edition /date

GUARANTOR DETAILS AND DEFINITIONS

Guarantor:			
Physical Address:			
Guarantor's signatory 1:		Capacity	
Guarantor's signatory 2:		Capacity	
Employer:			
Contractor:			
Principal Agent:			
Works:			
Site:			
Contract Sum:	Accepted amount inclusive of tax	Currency	
Amount in words:			
Guaranteed Sum:	The maximum aggregate amount	Currency	
Amount in words:			
Guarantee for Construction:	*(Insert Variable or Fixed)*		
Expiry Date:			

AGREEMENT DETAILS

Sections:	Total number / not applicable	Last Section	
Principal Agent issues	JBCC® format Recovery Statement, Interim Payment Certificates, the Final Payment Certificate, the Certificate of Practical Completion and the Certificate of Final Completion		

1.0 GUARANTEE FOR CONSTRUCTION (Variable)

1.1 Where a Guarantee for Construction (Variable) in terms of the Agreement has been selected this clause 1.0 and 3.0 to 13.0 shall apply. The Guarantor's liability shall be limited to the diminishing amounts of the Guaranteed Sum as follows:-

GUARANTOR'S LIABILITY	PERIOD OF LIABILITY
1.1.1 Maximum Guaranteed Sum (not exceeding 10.0% of the contract sum) in the amount of:	From and including the date of issue of this Guarantee for Construction and up to and including the date of issue of the Interim Payment Certificate certifying in excess of 50% of the contract sum

Amount in words:

1.1.2 Reducing to the Guaranteed Sum (not exceeding 6.0% of the contract sum) in the amount of:

From and including the day after the date of the aforesaid Interim Payment Certificate and up to and including the date of issue of the only Certificate of Practical Completion or last Certificate of Practical Completion where there are sections

Amount in words:

1.1.3 Reducing to the Guaranteed Sum (not exceeding 4.0% of the contract sum) in the amount of:

From and including the day after the date of the applicable Certificate of Practical Completion and up to and including the date of issue of the only Certificate of Final Completion or the last Certificate of Final Completion where there are sections

Amount in words:

1.1.4 Reducing to the Guaranteed Sum (not exceeding 2.0% of the contract sum) in the amount of:

From and including the day after the date of the applicable Certificate of Final Completion and up to and including the date of issue of the Final Payment Certificate where payment is due to the Contractor, whereafter this Guarantee for Construction shall expire. Where the Final Payment Certificate reflects payment due to the Employer, this Guarantee for Construction shall expire upon payment of the full amount certified

Amount in words:

1.2 The Guarantor's liability limits set out in 1.1.1 to 1.1.4 shall apply in respect of any claim received by the Guarantor during the guarantee validity period

2.0 GUARANTEE FOR CONSTRUCTION (Fixed)

2.1 Where a Guarantee for Construction (fixed) in terms of the Agreement has been selected this clause 2.0 and 3.0 to 13.0 shall apply. The Guarantor's liability shall be limited to the amount of the Guaranteed Sum as follows:

GUARANTOR'S LIABILITY	**PERIOD OF LIABILITY**
Maximum Guaranteed Sum (not exceeding 5.0% of the contract sum) in the amount of:	From and including the date of issue of this Guarantee for Construction and up to and including the date of the only Certificate of Practical Completion or the last Certificate of Practical Completion where there are sections, whereafter this Guarantee for Construction shall expire

Amount in words:

3.0 The Guarantor acknowledges that:

3.1 Any reference in this Guarantee for Construction to the Agreement is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention to create a suretyship;

3.2 Its obligation under this Guarantee for Construction is restricted to the payment of money; and

3.3 Reference to a Recovery Statement or an Interim or Final Payment Certificate, or a Certificate(s) of Practical or Final Completion shall mean such certificate issued by the Principal Agent.

4.0 Subject to the Guarantor's maximum liability referred to in 1.0 or 2.0, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 4.1 to 4. 3:

4.1 A copy of a first written demand notice issued by the Employer to the Contractor stating that payment of a sum certified by the Principal Agent in an Interim or Final Payment Certificate has not been made in terms of the Agreement and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 4.2;

4.2 A first written demand notice issued by the Employer to the Guarantor at the Guarantor's Physical Address with a copy to the Contractor stating that a period of seven (7) calendar days has elapsed since the issue of the first written demand notice in terms of 4.1 and that the sum certified has not been paid to date. The Employer herewith calls up this Guarantee for Construction and demands payment of the sum certified from the Guarantor; and

4.3 A copy of the applicable payment certificate which entitles the Employer to receive payment in terms of the Agreement of the sum certified in 4.0

5.0. Subject to the Guarantor's maximum liability referred to in 1.0 or 2.0, the Guarantor undertakes to pay the Employer the Guaranteed Sum or the full outstanding balance upon receipt of a first written demand notice from the Employer to the Guarantor at the Guarantor's Physical Address calling up this Guarantee for Construction stating that:

5.1 The Agreement has been terminated due to the Contractor's default and that the Guarantee for Construction is called up in terms of 5.0. The demand shall enclose a copy of the notice of termination; or

5.2 A provisional sequestration or liquidation court order has been granted against the Contractor and that the Guarantee for Construction is called up in terms of 5.0. The demand notice shall enclose a copy of the court order.

6.0 The aggregate amount of payments to be made by the Guarantor in terms of 4.0 and 5.0 shall not exceed the Guarantor's maximum liability in terms of 1.0 or 2.0.

7.0 Where the Guarantor is a registered insurer and has made payment in terms of 5.0, the Employer shall within one hundred and eighty (180) calendar days of receipt of payment submit an expense account to the Guarantor showing how all monies received in terms of the Guarantee for Construction have been expended, or will be expended, and shall refund to the Guarantor any surplus amount. All monies refunded to the Guarantor in terms of this Guarantee for Construction shall bear interest at the prime overdraft rate of the Employer's bank compounded monthly and calculated from the date of payment by the Guarantor to the Employer until the date of refund.

8.0 Payment by the Guarantor in terms of 4.0 or 5.0 shall be made within seven (7) calendar days upon receipt of the first written demand notice to the Guarantor.

9.0 The Employer shall have the absolute right to arrange its affairs with the Contractor in any manner which the Employer deems fit and the Guarantor shall not have the right to claim its release from this Guarantee for Construction on account of any conduct alleged to be prejudicial to the Guarantor.

10.0 The Guarantor chooses the Physical Address stated above for all notices and correspondences in relation to this Guarantee.

11.0 This Guarantee for Construction is neither negotiable nor transferable and shall expire in terms of either 1.1.4 or 2.1, or payment in full of the Guaranteed Sum or on the Expiry Date, whichever is the earlier, whereafter no claims will be considered by the Guarantor. This original Guarantee for Construction shall be returned to the Guarantor after it has expired.

12.0 This Guarantee for Construction, with the required demand notices in terms of 4.0 or 5.0, shall be regarded as a liquid document for the purpose of obtaining a court order.

13.0 Where this Guarantee for Construction is issued in the Republic of South Africa this Guarantee for Construction shall be governed by the laws of the Republic of South Africa. A competent court in the Republic of South Africa shall have sole jurisdiction in terms of this Guarantee for Construction. Where this Guarantee for Construction is issued outside the Republic of South Africa, the laws of the guarantor who issued this Guarantee for Construction shall prevail. A competent court, in the jurisdiction in which the guarantor is domiciled shall prevail.

Signed at: _____ Date: _____

Guarantor's Signatory 1: _____ Guarantor's Signatory 2: _____

Witness: _____ Witness: _____

Guarantor's seal or stamp

PART C1.3: DISPUTE RESOLUTION MECHANISM

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CIDB ADJUDICATOR'S AGREEMENT

Province of the
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C1.3 CIDB ADJUDICATOR'S AGREEMENT

This agreement is made on the . . . . . day of . . . . . between:. . . . . .

Name:		Name		Name:	
Address:		Address:		Address:	
Date:		Date:		Date:	

Contract Data

1	The Adjudicator shall be paid at the hourly rate of R. . . . . in respect of all time spent upon, or in connection with, the adjudication including time spent travelling.
2	The Adjudicator shall be reimbursed in respect of all disbursements properly made including, but not restricted to: (a) Printing, reproduction and purchase of documents, drawings, maps, records and photographs. (b) Telegrams, telex, faxes, and telephone calls. € Postage and similar delivery charges. (d) Travelling, hotel expenses and other similar disbursements. € Room charges. (f) Charges for legal or technical advice obtained in accordance with the Procedure.
3	The Adjudicator shall be paid an appointment fee of R . . . . . This fee shall become payable in equal amounts by each Party within ….. days of the appointment of the Adjudicator, subject to an Invoice being provided. This fee will be deducted from the final statement of any sums which shall become payable under item 1 and/or item 2 of the Contract Data. If the final statement is less than the appointment fee the balance shall be refunded to the Parties.
4	The Adjudicator is/is not* currently registered for VAT.
5	Where the Adjudicator is registered for VAT it shall be charged additionally in accordance with the rates current at the date of invoice.
6	All payments, other than the appointment fee (item 3) shall become due in 30 days after receipt of invoice, thereafter interest shall be payable at 5% per annum above the Reserve Bank base rate for every day the amount remains outstanding.

* Delete as necessary

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PART C2 - PRICING DATA

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PART C2.1: PRICING INSTRUCTIONS

C2.1 Pricing Instructions

1 The Bills of Quantities have been drawn up in accordance with the Standard System of Measuring Building Work as amended) published and issued by the Association of South African Quantity Surveyors (Sixth Edition (Revised)), 1999. Where applicable the:

a) Civil engineering work has been drawn up in accordance with the provisions of the latest edition of SABS 1200 Standardised Specifications for Civil Engineering Works.
b) Mechanical work has been drawn up in accordance with the provisions of the latest edition of SABS 1200 Standardised Specifications for Mechanical Engineering Works.
c) Electrical work has been drawn up in accordance with the provisions of the latest edition of SABS 1200 Standardised Specifications for Electrical Engineering Works.

2 The agreement is based on the JBCC Edition 6.2 of 2018 with Government Clauses, prepared by the Joint Building Contracts Committee, The additions, deletions and alterations to the JBCC Principal Building Agreement as well as the contract specific variables are as stated in the Contract Data. Only the headings and clause numbers for which allowance must be made in the Bills of Quantities are recited.

3 Preliminary and general requirements are based on the preliminaries for the use of JBCC Edition 6.2– May 2018. Only the headings and clause numbers for which allowance must be made in the Bills of Quantities are recited.

4 It will be assumed that prices included in the Bills of Quantities are based on Acts, Ordinances, Regulations, By-laws, International Standards and National Standards that were published 28 days before the closing date for tenders. (Refer to www.stanza.org.za or www.iso.org for information on standards).

5 The drawings listed in the Scope of Works used for the setting up of these Bills of Quantities are kept by the Principal Agent or Engineer and can be viewed at any time during office hours up until the completion of the works.

6 Reference to any particular trademark, name, patent, design, type, specific origin or producer is purely to establish a standard for requirements. Products or articles of an equivalent standard may be substituted.

7 The bills of quantities forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, The Standard Conditions of Tender, Conditions of Contract, Specifications, Drawings, The document "Construction Works: Specifications: General Specification (PW371-A) Edition 2.0" is obtainable on the Department's website (http://www.publicworks.gov.za/ under "Consultants Guidelines"), and shall be read in conjunction with the **bills of quantities** / lump sum document and be referred to for the full descriptions of work to be done and materials to be used The document "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.0" is issued together with the drawings and shall be read in conjunction with the drawings and the **bills of quantities** / lump sum document

8 Where any item is not relevant to this specific contract, such item is marked N/A (signifying "not applicable")

9 The Contract Data and the standard form of contract referenced therein must be studied for the full extent and meaning of each and every clause set out in Section 1 (Preliminaries) of the Bills of Quantities

10 The Bills of Quantities is not intended for the ordering of materials. Any ordering of materials, based on the Bills of Quantities, is at the Contractor's risk.

11 The amount of the Preliminaries to be included in each monthly payment certificate shall be assessed as an amount prorated to the value of the work duly executed in the same ratio as the preliminaries bears to the total of prices excluding any contingency sum, the amount for the Preliminaries and any amount in respect of contract price adjustment provided for in the contract.

12 Where the initial contract period is extended, the monthly charge shall be calculated on the basis as set out in 11 but taking into account the revised period for completing the works.

13 The amount or items of the Preliminaries shall be adjusted to take account of the theoretical financial effect which changes in time or value (or both) have on this section. Such adjustments shall be based on adjustments in the following categories as recorded in the Bills of Quantities:

a) an amount which is not to be varied, namely Fixed (F)
b) an amount which is to be varied in proportion to the contract value, namely Value Related (V); and
c) an amount which is to be varied in proportion to the contract period as compared to the initial construction period excluding revisions to the construction period for which no adjustment to the contractor is not entitled to in terms of the contract, namely Time Related (T).

14 Where no provision is made in the Bills of Quantities to indicate which of the three categories in 13 apply or where no selection is made, the adjustments shall be based on the following breakdown:

a) 10 percent is Fixed
b) 15 percent is Value Related
c) 75 percent is Time Related

15 The adjustment of the Preliminaries shall apply notwithstanding the actual employment of resources in the execution of the works. The contract value used for the adjustment of the Preliminaries shall exclude any contingency sum, the amount for the Preliminaries and any amount in respect of contract price adjustment provided for in the contract. Adjustments in respect of any staged or sectional completion shall be prorated to the value of each section.

16 The tender price must include Value Added Tax (VAT). All rates, provisional sums, etc. in the bills of quantities must however be net (exclusive of VAT) with VAT calculated and added to the Total Value thereof in the Final Summary.

17. The Contractor shall adhere to "The national minimum wage determined by the Minister in accordance with the National Minimum Wage Act (NMWA)", and yearly pronounced increases for duration of contract.

18. Voting day / Election day 2024 will be a statutory public holiday and contractor must make provision in his bid. No further claims will be entertained in this regard.

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PART C2.2 – BILLS OF QUANTITIES

Item No		Quantity	Rate	Amount R
	SECTION NO. 1			
	BILL NO. 1			
	PREAMBLES			
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles			
	Tenderers are to refer to scope of work item C3.1 in the Bid document			
	Carried to Abstract		R	
	PRELIMINARIES AND GENERAL Bill No. 1 Preliminaries and General			

NOTE : THE WORKS WILL BE PHASED AS PER THE PRINCIPALS AGENTS PHASING DIAGRAM. THE CONTRACTOR MUST LIAISE WITH THE PRINCIPAL AGENT AND EACH FACILITY'S HEAD DURING THE TENDER PERIOD TO NEGOTIATE AND DETERMINE HIS PROGRAMME IN ACCORDANCE TO THE PHASING DIAGRAM AND IN SO DOING THE CONTRACTOR SHALL ESTABLISH HIS CONSTRUCTION WORKS PROGRAMME THAT WILL FORM PART OF THE CONTRACT DOCUMENTS. AS A MINIMUM REFERENCE IS TO BE MADE THAT THE CONTRACTOR MUST HAVE A PERMANENT SITE ESTABLISHMENT FOR EACH FACILITY EACH UNDER THE CARE AND CONTROL OF A PERMANENT CONSTRUCTION WORKS SUPERVISOR (4 IN TOTAL) FOR THE DURATION OF THE WORKS AS A CONDITION OF CONTRACT. ALLOWANCES FOR OVERTIME WORK, NIGHT WORK ETC SHALL BE DEEMED TO BE INCLUDED IN THE CONTRACTORS PRELIMINARY AND GENERAL ALLOWANCES

Carried to Abstract R

PRELIMINARIES AND GENERAL
Bill No. 1
Preliminaries and General

NOTE : Compulsory subcontracting is applicable to the tender as per the PPPFA (2017) . The Contractor must therefore enter into subcontract agreements with SMME contractors who are listed in a list made available by the Employer at tender. The Contractor is obliged as an additional term of contract to issue the Employer with copies of such contracts with and including monthly proof of payment to the SMME contractors. 30 PERCENT OF THE VALUE OF THE CONTRACT EXCLUDING VAT AND CONTIGENCY ALLOWANCES MUST BE ALLOCATED TO SMME's. Further, The Contractor permits the Employer to conduct impromptu audits of the site or the contractors financial statements and records to confirm compliance with this requirement. Failure to comply which inter alia includes fronting or window dressing will result in the Employer taking legal action against the contractor and or recovering the allocated 30% allowance from the Contractors guarantee, retention or both without prior notice

NOTE: All site specific health and safety allowances as per the Health and Safety Agents health and safety specification and bill of quantities shall be presented as a lump sum in the final summary

Carried to Abstract R

PRELIMINARIES AND GENERAL
Bill No. 1
Preliminaries and General

PRELIMINARIES

The JBCC Principal Building Agreement (Edition 6.2 - May 2018) prepared by the Joint Building Contracts Committee shall be the applicable building agreement, amended as hereinafter described BUILDING AGREEMENT AND PRELIMINARIES The JBCC Principal Building Agreement contract data form an integral part of this agreement The JBCC General Preliminaries (May 2018) published by the Joint Building Contracts Committee for use with the JBCC Principal Building Agreement (Edition 6.2 - May 2018) shall be deemed to be incorporated in these bills of quantities, amended as hereinafter described The contractor is deemed to have referred to the above mentioned documents for the full intent and meaning of each clause The clauses in the above mentioned documents are hereinafter referred to by clause number and heading only Where any item is not relevant to this agreement such item is marked N/A signifying "not applicable" Where standard clauses or alternatives are not entirely applicable to this agreement such amendments, modifications, corrections or supplements as will apply are given under each relevant clause heading and such amendments, modifications, corrections or supplements shall take precedence notwithstanding anything to the contrary contained in the above mentioned documents

PREAMBLES FOR TRADES

Carried to Abstract R

The General Preambles for Trades 2017 published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained.Supplementary preambles and/or specifications are incorporated in these bills of quantities to satisfy the requirements of this project. Such supplementary preambles and/or specifications shall take precedence over the provisions of the General Preambles The contractor's prices for all items throughout these bills of quantities shall take account of and include where applicable for all of the obligations, requirements and specifications given in the General Preambles and in any supplementary preambles and/or specifications If any discrepancy in any of the documents forming part of the contract is found, then the contract data and or amendments within the special conditions of contract and herein shall prevail in cases of conflict between any of the documents

STRUCTURE OF THIS PRELIMINARIES BILL

Section A : A recital of the headings of the individual clauses in the aforementioned JBCC Principal Building Agreement
Section B : A recital of the headings of the individual clauses in the aforementioned JBCC General Preliminaries Section C : Any special clauses to meet the particular circumstances of the project

PRICING OF PRELIMINARIES

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	Contractors are required to price all individual items in the preliminary and general section of the bill of quantities and should not lump the items into a single sum or amount. This fully priced schedule must be included as part of the priced bill of quantities returnable with tender submission In the event that the contractor, due to causes of his own making, fails to achieve the targets set out in his construction programme and his performance is not in accordance with the contract, payment of the time related Preliminaries will be paid in proportion to the value of the monthly progress payment and not in accordance with the projected cash flow for this item. The principal agent shall review the status quo and revert to paying the contractor in accordance with the contract once the contractor has demonstrated improvement of their performance and the principal agent is satisfied that the contractor is performing diligently. Similarly the full amount of the fixed portion of the Preliminaries will be paid only once the successful contractor has fully complied with deliverables under this section Should the contractor select Option A in the contract data for the adjustment of preliminaries, the amounts entered against the relevant items in these preliminaries are to be divided into one or more of the three categories provided namely fixed (F), value related (V) and time related (T)				
	SECTION A: PRINCIPAL BUILDING AGREEMENT				
	Interpretation (A1-A7				
1	Clause 1.0 - Definitions and interpretation	Item			
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2	The contractor is to allow opposite each item for all costs in connection therewith. All prices to include, unless otherwise stated, for all materials, fabrication, conveyance and delivery, unloading, storing, unpacking, hoisting, labour, setting, fitting and fixing in position, cutting and waste (except where to be measured in accordance with the standard system of measurement), patterns, models and templates, plant, temporary works, returning of packaging, duties, taxes (other than Value Added Tax), imposts, establishment charges, overheads, profit and all other obligations arising out of this agreement. Value Added Tax (VAT) is to be separately stated on the summary page of these bills of quantities Items left unpriced will be deemed to be covered in prices against other items throughout these bills of quantities and no claim for any extras arising out of the contractor's omission to price any item will be entertained Prices for all construction equipment, temporary works, services and other items shall include for the supply, maintenance, operating cost and subsequent removal and making good as necessary Contractors are reminded that some of the works are to be undertaken under restrictive site conditions, over steep terrain, in dense vegetation, protected environments etc. In addition to the usual rates priced for standard measured items in the bills of quantities, contractors shall provide for all additional plant, labour, equipment, temporary works, temporary access ways and any additional supervision, transport, security, special plant and equipment to navigate restrictive site conditions and all things necessary for the completion of the works within this bills of quantities. The rates or amounts tendered for these items shall also include for the contractors management, attendance, profit, costs for removal and reinstatement of the ground conditions, vegetation, etc. in the state and condition prior to the works being undertaken. In addition to the usual rates priced for compliance with law and regulation in relation to inspections, warranties	Item		
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guarantees, tests, analysis, commissioning and all things necessary for compliance, the contractor is expected to include in the rates, prices and the tendered total of the prices for all inspections, warranties, guarantees, tests, analysis, commissioning and all things necessary for compliance, payable by the contractor. Such items include but are not limited to: - Electrical Compliance Certificate - Plumbing Compliance Certificate - Structural Steel Compliance Certificate - Lightning Certificate - Soil Protection Certificate - Concrete test results and cube certificates - Compaction Test results and certificates - Waterproofing guarantee certificates - TR1 and TR2 prefabricated roof truss certificates - Roof covering certificate - Soil compaction certificates - Electrical and Mechanical test certificates - Plumbing and drainage pressure test certificates - Fire Compliance Certificate - Entomology Certificate - SANS 10400-A:2010 compliance certificates - Any other requirement as per the latest National Building Regulation Contractors are reminded and hereby given the opportunity to allow for and price all costs related to the abnormal working conditions referred to herein as no claims for additional costs will be entertained for any omission on the part of contractor Clause 3.9 amended to read 'The priced document shall not be used as a specification for material and goods and the quantities should not be used for procurement purposes. All procurement of material will be based on actual site measurements and not on drawings, specifications or the bill of quantities				
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	Abbreviated descriptions				
3	The items in these bills of quantities utilise abbreviated descriptions. It is the intention that the abbreviated descriptions be fully described when read with the applicable measuring system and the relevant preambles and/or specifications. However, should the full intent and meaning of any description not be clear, the contractor shall, before submission of his tender, call for a written directive from the principal agent, failing which it shall be assumed that the contractor has allowed in his pricing for materials and workmanship in terms of international best practice Legal status of contractor If the contractor constitutes a joint venture, consortium or other unincorporated grouping of two or more persons then: 1. These persons are deemed to be jointly and severally liable to the employer for the performance of this agreement 2. These persons shall notify the employer of their leader who has assigned authority to bind the contractor and each of these persons 3. The contractor shall not alter its composition or legal status without the prior written consent of the employer F:..... V:..... T:.....				
			Item		
4	Clause 2.0 - Law, regulations and notices F:..... V:.....				
	T:.....		Item		
5	Clause 3.0 - Offer and acceptance F:..... V:.....				
	T:.....	m			
6	Clause 4.0 - Cession and assignment F:..... V:.....				
	T:.....		Item		
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7	Clause 5.0 - Documents Value Added Tax Provision is made in the summary page of these bills of quantities for the inclusion of Value Added Tax (VAT) Priced document as specification Clause 5.4 is deemed to be deleted The principal agent shall decide which portion of the priced document may be used as a specification of materials and goods or methods, if any Electronic issue of drawings Some drawings for this project will be issued electronically and the contractor shall be deemed to have received such drawings on the date that such drawings have been dispatched electronically F:..... V:..... T:.....	Item			
8	Clause 6.0 - Employer's agents Delegated authority The authority of the principal agent to issue contract instructions [17.1] and perform duties for specific aspects of the works is delegated to agents as follows [6.2]. This does not preclude the principal agent from issuing such contract instructions: 1. Architect 1.1 Duties [6.2] : The architect is responsible for the architectural design, functional design and quality inspection of the works 1.2 Contract instructions [6.2; 17.1] : 1.2.1 Rectification of discrepancies, errors in description or quantity or omission of items in the agreement other than in the JBCC Principal Building Agreement 1.2.2 Alteration to design, standards or quantity of the works provided that such contract instructions shall not substantially change the scope of the works 1.2.3 The site [13.0] 1.2.4 Compliance with the law, regulations and by laws [2.1] 1.2.5 Provision and testing of samples of materials and goods and/or of finishes and assemblies of elements of the works 1.2.6 Opening up of work for inspection, removal or re-execution [23.2.4; 26.4.2] 1.2.7 Removal or re-execution of work 1.2.8 Removal or substitution of any materials and goods 1.2.9 Protection of the works 1.2.10 Making good physical loss and repairing damage to the works [23.2.2] 1.2.11 Rectification of defects [21.2] 1.2.12 A list for practical completion specifying				
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outstanding or defective work to be rectified to achieve practical completion, a list for completion and a list for final completion specifying outstanding or defective work to be rectified to achieve final completion 1.2.13 Expenditure of budgetary allowances, prime cost amounts and provisional sums 1.2.14 Appointment of a subcontractor [14.0; 15.0] 1.2.15 Work by direct contractors [16.0] 1.2.16 On suspension or termination, protection of the works, removal of construction equipment and surplus materials and goods [29.0]

2. Quantity surveyor 2.1 Duties [6.2] : The quantity surveyor is responsible for all measurements, valuations, financial assessments and all other quantity surveying and cost control functions of the works 2.2 Contract instructions [6.2; 17.1] : 2.2.1 No contract instructions delegated to the quantity surveyor 3. Civil and structural engineer 3.1 Duties [6.2] : The civil and structural engineer is responsible for all aspects of civil and structural engineering design and quality inspection of the works 3.2 Contract instructions [6.2; 17.1] :

3.2.1 Rectification of discrepancies, errors in description or quantity or omission of items in the agreement other than in the JBCC Principal Building Agreement 3.2.2 Alteration to design, standards or quantity of the works provided that such contract instructions shall not substantially change the scope of the works 3.2.3 The site [13.0] 3.2.4 Compliance with the law, regulations and bylaws [2.1] 3.2.5 Provision and testing of samples of materials and goods and/or of finishes and assemblies of elements of the works 3.2.6 Opening up of work for inspection, removal or re-execution [23.2.4; 26.4.2] 3.2.7 Removal or re-execution of work 3.2.8 Removal or substitution of any materials and goods 3.2.9 Protection of the works 3.2.10 Making good physical loss and repairing damage to the works [23.2.2] 3.2.11 Rectification of defects [21.2] 3.2.12 A list for practical completion specifying outstanding or defective work to be rectified to achieve practical completion, a list for completion and a list for final completion specifying outstanding or defective work to be rectified to achieve final completion 3.2.13 Expenditure of budgetary allowances, prime cost amounts and provisional sums

4. Mechanical engineer 4.1 Duties [6.2] : The mechanical engineer is responsible for all aspects of mechanical engineering design and quality inspection of the works and, where appointed by the employer for quantity surveying services in respect of the mechanical

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installations, for all measurements, valuations, financial assessments and all other quantity surveying and cost control functions 4.2 Contract instructions [6.2; 17.1] : 4.2.1 Rectification of discrepancies, errors in description or quantity or omission of items in the agreement other than in the JBCC Principal Building Agreement 4.2.2 Alteration to design, standards or quantity of the works provided that such contract instructions shall not substantially change the scope of the works 4.2.3 Compliance with the law, regulations and bylaws [2.1] 4.2.4 Provision and testing of samples of materials and goods and/or of finishes and assemblies of elements of the works 4.2.5 Opening up of work for inspection, removal or re-execution [23.2.4; 26.4.2] 4.2.6 Removal or re-execution of work 4.2.7 Removal or substitution of any materials and goods 4.2.8 Protection of the works 4.2.9 Making good physical loss and repairing damage to the works [23.2.2]

4.2.10 Rectification of defects [21.2] 4.2.11 A list for practical completion specifying outstanding or defective work to be rectified to achieve practical completion, a list for completion and a list for final completion specifying outstanding or defective work to be rectified to achieve final completion 4.2.12 Expenditure of budgetary allowances, prime cost amounts and provisional sums 5. Electrical/Electronics engineer 5.1 Duties [6.2] : The electrical engineer is responsible for all aspects of electrical and electronics engineering design and quality inspection of the works and, where appointed by the employer for quantity surveying services in respect of the electrical installations, for all measurements, valuations, financial assessments and all other quantity surveying and cost control functions 5.2 Contract instructions [6.2; 17.1] : 5.2.1 Rectification of discrepancies, errors in description or quantity or omission of items in the agreement other than in the JBCC Principal Building Agreement 5.2.2 Alteration to design, standards or quantity of the works provided that such contract instructions shall not substantially change the scope of the works 5.2.3 Compliance with the law, regulations and bylaws [2.1] 5.2.4 Provision and testing of samples of materials and goods and/or of finishes and assemblies of elements of the works 5.2.5 Opening up of work for inspection, removal or re-execution [23.2.4; 26.4.2]

5.2.6 Removal or re-execution of work 5.2.7 Removal or substitution of any materials and goods 5.2.8 Protection

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	of the works 5.2.9 Making good physical loss and repairing damage to the works [23.2.2] 5.2.10 Rectification of defects [21.2] 5.2.11 A list for practical completion specifying outstanding or defective work to be rectified to achieve practical completion, a list for completion and a list for final completion specifying outstanding or defective work to be rectified to achieve final completion 5.2.12 Expenditure of budgetary allowances, prime cost amounts and provisional sums 6. Health and safety consultant 6.1 Duties [6.2] : The health and safety consultant is responsible for all aspects of health and safety of the works. Without derogating from the generality thereof, the health and safety consultant will perform the following specific functions and duties in respect of the health and safety aspects of the works. He shall: 6.1.1 Act as the employer's agent in terms of the Construction Regulations issued in terms of the Occupational Health and Safety Act, 1993 as amended 6.1.2 Prepare and update the health and safety specification for the works 6.1.3 Agree with the contractor the health and safety plan for the works 6.1.4 Carry out regular audits to ensure adherence to the safety plan and compliance with the act and regulations 6.1.5 Stop the execution of the works where the agreed specification or plan is not adhered to F:..... V:..... T:.....				
			Item		
9	Clause 7.0 - Design responsibility F:..... V:..... T:.....	m			
10	**Insurances and securities (A8-A11)** Clause 8.0 - Works risk F:..... V:..... T:.....	m			
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11	Clause 9.0 - Indemnities F:..... V:..... T:.....		Item		
12	Clause 10.0 - Insurances Clause 10.1.1 - Contracts Works Insurance 'the contractor shall be responsible for effecting and maintaining the contract works insurance for the full duration of the contract period. The insured amount for the full scope of works shall be 120% of the contract amount Clause 10.1.2 - Supplementary Insurance Clause 10.1.3 - Public Liability Insurance Clause 10.1.4 - Removal of Lateral Support Insurance - N/A Clause 10.1.5 - Other Insurances - N/A F:..... V:..... T:.....	m			
13	Clause 11.0 - Securities Clause 11.1 - Guarantee for construction F:..... V:..... T:.....		Item		
14	The contractor shall provide to the employer a guarantee for construction within fifteen (15) working days of acceptance of the contractor's tender. Clause 11.5 - Guarantee for payment The employer shall not provide to the contractor a guarantee for payment. The contractor shall waive his lien or right of continuing possession of the works [11.10] Extension of waiver of lien The contractor shall ensure that a waiver of lien is included in all subcontracts and that the works executed on the site are kept free of all liens and other encumbrances at all times [11.10] F:..... V:..... T:.....	m			
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15	**Clause 12.0 - Obligations of the parties Execution (A12 - A17)** Office accommodation The contractor shall provide, maintain and remove on practical completion air conditioned office accommodation with suitable tables and chairs for meetings to be held on the site. Such offices shall be kept clean and fit for use at all times [12.2.18]	Item			
16	Notice board The contractor shall erect in a position approved by the principal agent, maintain and remove on practical completion a notice board recommended by the South African Institute of Architects and as approved by the principal agent listing the names and logos of the employer, the contractor and the professional consultants. No subcontractor or supplier notice boards may be erected unless permission is granted by the principal agent for such notice boards to be erected [12.2.18] Statutory and other notices The contractor shall submit and/or comply with all statutory and other notices that may be required by any local or other authority in order not to cause any delay to the commencement of the works by the contractor. The contractor shall pay all deposits or fees in this regard It is, however, specifically recorded that the employer shall be responsible for the timeous approval of building plans by any local or other authorities and the payment of any fees or charges related thereto Item F:..... V:..... T:.....	Item			
17	Clause 13.0 - Setting out F:..... V:..... T:.....	Item			
18	Clause 14.0 - Nominated subcontractors F:..... V:..... T:.....	Item			
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19	Clause 15.0 - Selected subcontractors F:..... V:..... T:.....	Item		
20	Clause 16.0 - Direct contractors In respect of direct contractors the contractor shall: 1. Designate an area for the direct contractor to establish a temporary office and workshop and storage of equipment and materials 2. Allow the use of personnel welfare facilities, where provided 3. Provide water, lighting and single phase electric power to a position within 50m of the place where the direct contract work is to be carried out, other than fuel or power for commissioning of any installation 4. Permit the direct contractor to use erected scaffolding, hoisting facilities, etc. provided by the contractor, in common with others having the like right, while it remains erected on the site [16.1] Item F:..... V:..... T:.....	Item		
21	Clause 17.0 - Contract instructions Site instructions Instructions issued on site are to be recorded in a site instruction book which is to be supplied and maintained on site by the contractor F:..... V:..... T:.....	Item		
22	**Completion (A18 - A24)** Clause 18.0 - Interim completion	N/A		
23	Clause 19.0 - Practical completion F:..... V:..... T:..... ***NB : enderers are to refer to scope of work item C3.1 in the Bid document. Works to be completed in sections with penalty specific for each section and PC for the works as a whole determined after completion of all sections***	Item		
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24	Clause 20.0 - Completion in sections F:..... V:..... T:..... ***NB : Tenderers are to refer to scope of work item C3.1 in the Bid document. Works to be completed in sections with penalty specific for each section and PC for the works as a whole determined after completion of all sections***	Item		
25	Clause 21.0 - Defects liability period and final completion A 2.5% retention shall apply. The maintenance period shall be 12 months. B Item F:..... V:..... T:.....	Item		
26	Clause 22.0 - Latent defects liability period F:..... V:..... T:.....	Item		
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27	Clause 23.0 - Revision of the date for practical completion Adverse weather conditions The contract duration includes a monthly allowance of 3 working days for adverse weather conditions [23.1.1] during which rainfall exceeds 10mm per day. These days shall be reflected on the critical path of the construction programme. Where the programmed delays for adverse weather conditions exceed the actual delays incurred the date for practical completion will not be adjusted. Where the actual delays incurred for adverse weather conditions exceed the programmed delays and such delays have impacted on the critical path of the construction programme, the date for practical completion will be adjusted should the requirements of Clause 23.0 be satisfied Substitution of materials, goods and or workman Substitution of materials and goods The removal or substitution of any materials and goods which do not conform to the specification or the contract drawings shall not constitute grounds for the extension of the construction period nor for the adjustment of the contract value [17.1.8; 23.1 & 2] F:..... V:..... T:.....	Item		
28	Clause 24.0 - Penalty for late or non-completion F:..... V:..... T:.....	Item		
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29	**Clause 25.0 - <u>Payment (A25 - A27)</u>** Prices submitted Where prices are submitted by the contractor or subcontractor during the progress of the works in respect of contract instructions or in regard to a claim under the terms of this agreement and notwithstanding the fact that such prices may be used in an interim payment certificate, there is to be no presumption of acceptance. Should the principal agent wish to accept any such prices prior to the issue of the certificate of final completion, it shall be in writing Clause 25 amended to read 'The employer shall pay to the contractor the amount certified in interim payment certificate within thirty (30) calendar days of the date of issue of the payment certificate or the contractors tax invoice whichever is the later date' Materials and goods stored off site shall not be included in the amount authorised for payment unless the requirements for an Advanced Payment Guarantee are met Item F:..... V:..... T:.....		Item		
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30	**Clause 26.0 - Adjustment of the contract value and final account** Fluctuations in costs All fluctuations in costs, with the exception of fluctuations in the rate of Value Added Tax, shall be for the account of the contractor [26.9.5] Tenant installation/user requirements delayed There is a possibility that certain works related to tenant installation/user requirements may have to be delayed and may consequently not be executed prior to practical completion Should the contractor be instructed to do so he shall execute this work under the conditions pertaining to this agreement on the basis that a separate amount for preliminaries appurtenant to this work (if applicable) is agreed to between the contractor and the principal agent and on condition that instruction to proceed with such work is given to him within a period of three (3) calendar months after the date of practical completion of the works The contractor shall not receive any mark-up for overheads and profit on any omission of tenant installation work or tenant installation work by others. Claims of loss of profit shall not be considered The employer reserves the right to omit such work without compensation to the contractor for loss of profit or any other loss which the contractor may suffer as a result of such omission Cost of claims All costs incurred by the contractor in the preparation of claims shall be borne by the contractor. This provision shall not preclude an adjudicator or an arbitrator appointed in terms of this agreement [30.6 & 7] from making a determination on costs Claims from subcontractors The contractor shall review, assess and adjudicate any claims received by him from any subcontractor and thereafter submit same to the principal agent with a recommendation in order to assist the principal agent in adjudicating the claim [26.6] F:..... V:..... T:.....		Item		
31	Clause 27.0 - Recovery of expense and/or loss F:..... V:..... T:.....		Item		
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32	Clause 28.0 - Suspension by the contractor Suspension and termination (A28 - A29) F:..... V:..... T:..... **NB : Contractor is to have permanent qualified and experienced works supervisors at each facility for the duration of the works**	Item			
33	Clause 29.0 - Termination F:..... V:..... T:.....	Item			
34	**Dispute resolution (A30)** Clause 30.0 - Dispute resolution F:..... V:..... T:..... NB: As per Contract Data	Item			
35	Agreement Item The required information of the parties and the amount of the contract sum shall be inserted in the agreement for signature of the agreement by the parties F:..... V:..... T:.....	Item			
36	**<u>Contract data</u>** Tenderer's selections Before submission of his tender the contractor is to complete the tenderer's selections in the contract data Item F:..... V:..... T:.....	Item			
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37	**SECTION B:** **GENERAL PRELIMINARIES** Clause 1.1 - Definitions F:..... V:..... T:.....	Item		
38	Clause 1.2 - Interpretation F:..... V:..... T:.....	Item		
39	**<u>Documents (B2)</u>** Clause 2.1 - Checking of documents F:..... V:..... T:.....	Item		
40	Clause 2.2 -Provisional Bills of quantities : Yes F:..... V:..... T:..... Multiple procurement A portion of the works are also measured in SMME Packages as a separate Section F:..... V:..... T:.....	Item		
41	Clause 2.3 - Availability of construction information F:..... V:..... T:.....	Item		
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42	Clause 2.4 - Ordering of materials and goods F:..... V:..... T:.....	Item			
43	**Previous work and adjoining properties (B3)** Clause 3.1 - Previous work - dimensional accuracy F:..... V:..... T:.....	Item			
44	Clause 3.3 - Inspection of adjoining properties F:..... V:..... T:.....	Item			
45	**The site (B4)** Clause 4.1 - Handover of site in stages F:..... V:..... T:.....	Item			
46	Clause 4.2 - Enclosure of the works Hoarding will be required to isolate areas; this hoarding has been allowed for in the Bills of Quantities. F:..... V:..... T:.....	Item			
47	Clause 4.3 - Geotechnical and other investigations F:..... V:..... T:..... **NB: Available upon request from the Civil Engineer**	Item			
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48	Clause 4.4 - Encroachments The contractor shall notify the principal agent if any encroachments of adjoining foundations, buildings, structures, pavements, boundaries, etc. exist in order that the necessary arrangements may be made for the rectification of any such encroachment			
	F:..... V:.....			
	T:.....	Item		
49	Clause 4.5 - Existing premises occupied			
	F:..... V:.....			
	T:.....	Item		
50	Clause 4.6 - Services - known			
	F:..... V:.....			
	T:.....	Item		
51	**Management of contract (B5)**			
	Clause 5.1 - Management of the works			
	F:..... V:.....			
	T:.....	Item		
52	Clause 5.2 - Progress meetings			
	F:..... V:.....			
	T:.....	Item		
53	Clause 5.3 - Technical meetings			
	F:..... V:.....			
	T:.....	Item		
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54	**Samples, shop drawings and manufacturer's instructions (B6)**				
	Clause 6.1 - Samples of materials				
	F:..... V:.....				
	T:.....		Item		
55	Clause 6.2 - Workmanship samples				
	F:..... V:.....				
	T:.....		Item		
56	Clause 6.3 - Shop drawings				
	F:..... V:.....				
	T:.....		Item		
57	Clause 6.4 - Compliance with manufacturer's instructions				
	F:..... V:.....				
	T:.....		Item		
58	**Deposits and fees (B7)**				
	Clause 7.1 - Deposits and fees				
	F:..... V:.....				
	T:.....		Item		
59	**Temporary services (B8)**				
	Clause 8.1 - Water				
	F:..... V:.....				
	T:.....		Item		
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60	Clause 8.2 - Electricity F:..... V:..... T:.....	Item		
61	Clause 8.3 - Ablution and welfare facilities Clause 8.3 - Ablution and welfare facilities in compliance to the provisions of the Construction Regulations 2014 issued in terms of the Occupational Health and Safety Act, 1993 as amended: Section (30): Sub-section (1)(a) - Shower facilities after consultation with the employees or the employees representatives, or at least one shower facility for every 15 persons; Sub-section (1)(b) - at least one sanitary facility for each sex and for every 30 workers; Sub-section (1)(c) - changing facilities for each sex and Sub-section (1)(d) - sheltered eating areas F:..... V:..... T:.....	Item		
62	Clause 8.4 - Communication facilities F:..... V:..... T:.....	Item		
63	**Prime cost amounts (B9)** Clause 9.1 - prime cost amounts F:..... V:..... T:.....	Item		
64	**<u>Attendance on subcontractors (B10)</u>** Clause 10.1 - General attendance F:..... V:..... T:.....	Item		
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65	Clause 10.2 - Special attendance F:..... V:..... T:.....	Item		
66	**General (B11)** Clause 11.1 - Protection of the works F:..... V:..... T:.....	Item		
67	Clause 11.2 - Protection/isolation of existing works and works occupied in sections F:..... V:..... T:.....	Item		
68	Clause 11.3 - Security of the works The contractor shall be briefed on the restrictions of movement, servitudes, access control, buildings in use, security requirements and security clearances, working hours due to the right being occupied and under the employers control at all times. The contractor shall not extend his operations into any restricted or undefined areas. Work shall be carried out during normal working hours. Any extended times or approval or overtime work shall be considered and approved by the PA. The contractor shall comply with the employers rules for the control of delivery of materials and goods into the site and for the removal of such items from the site. The Contractor will be responsible for ensuring the security and protection of all material, hand tools, power tools, plant, equipment, machinery, etc. stored on the site. The Contractor will be required to make arrangements with the Employer, through the Principal Agent, for the use of and reimbursement for the security measures currently in force and operational on the site F:..... V:..... T:.....	Item		
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69	Clause 11.4 - Notice before covering work			
	F:..... V:.....			
	T:.....	Item		
70	Clause 11.5 - Disturbance Disturbance All work is to be carried out in such a manner as to cause no unacceptable or unreasonable dust, noise, vibrations, nuisance, inconvenience, annoyance and the like to the public, others, other properties and traffic in so far as they exceed the permissible limitations set by government legislation or by the local authority. Any delays, stoppages and the like arising from or in order to comply with the above will not constitute grounds for an adjustment to the construction period or contract value whatsoever			
	F:..... V:.....T:.....	Item		
71	Clause 11.6 - Environmental disturbance Controlling all forms of pollution The contractor shall be responsible for and take all precautions in controlling by whatever means necessary all forms of pollution emanating from the site during the construction period due inter alia to noise, artificial light, wind-blown sand, dust, deposits of mud, etc. The contractor is to ensure that all roads which border the site and are used by the contractor during the execution of the works are kept clean and free of any dirt or debris caused by the execution of the works			
	F:..... V:.....T:.....	Item		
72	Clause 11.7 - Works cleaning and clearing			
	F:..... V:.....			
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73	Clause 11.8 - Vermin			
	F:..... V:.....			
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74	Clause 11.9 - Overhand work F:..... V:..... T:.....	Item			
75	Clause 11.10 - Tenant installations F:..... V:..... T:.....	Item			
76	Clause 11.11 - Advertising F:..... V:..... T:.....	Item			
77	**SECTION C: SPECIFIC PRELIMINARIES** Warranties for materials and workmanship Where warranties for materials and/or workmanship are called for, the contractor shall obtain a written warranty, addressed to the employer, from the entity supplying the materials and/or executing the work and shall deliver same to the principal agent on final completion of the contract The warranty shall state that workmanship, materials and installation are warranted for a specific period from the date of practical completion and that any defects that may arise during the specified period shall be made good at the expense of the entity supplying the materials and/or doing the work, upon written notice to do so The warranty will not be enforced if the work is damaged by defects in the execution of the works, in which case the responsibility for replacement shall rest entirely with the contractor F:..... V:..... T:.....	Item			
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78	Overtime Should overtime be required to be worked for any reason whatsoever, the cost of such overtime is to be borne by the contractor unless the principal agent has specifically authorised, prior to execution thereof, that costs for such overtime are to be borne by the employer			
	F:..... V:.....T:.....	Item		
79	Cooperation of the contractor for cost management It is specifically agreed that the contractor accepts the obligation of assisting the principal agent in implementing proper cost management. The contractor will be advised by the principal agent of all cost management procedures which will be implemented to ensure that the contract value does not exceed the budget			
	F:..... V:.....T:.....	Item		
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80	Health and safety Without limiting the generality of the provisions of clause 2.0, the contractor's attention is drawn to the provisions of the Construction Regulations issued in terms of the Occupational Health and Safety Act, 1993 as amended. It is specifically stated that the employer shall prepare a documented health and safety specification for the works and that the employer shall ensure that the contractor has made provision for the cost of health and safety measures during the execution of the works. The contractor shall price the OHS health and safety bill of quantities as provided elsewhere in this document. Provision for pricing of the Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification is made under this clause and under the OHS bills of quantities (total price carried over to final summary) and it is explicitly pointed out that all requirements of the aforementioned are deemed to be priced hereunder and in the bills of quantities and no additional claims in this regard shall be entertained. The contractor shall: 1. Comply with the health and safety specification for the works 2. Prepare and agree with the health and safety consultant the health and safety plan for the works 3. Cooperate with the health and safety consultant in all respects 4. Manage the compliance of all subcontractors with the regulations and with the health and safety plan and specification 5. Conform to the conditions contained in the employer's health and safety specification F:..... V:..... T:.....	Item		
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81	Reporting by the Contractor The Contractor is required to complete a CONTRACTOR MONTHLY REPORT which is to be submitted together with the Contractor's payment claim. Payment of the Contractor is conditional on this information being accurate and timeously provided. Payment shall be subject to the Employer giving the Contractor a tax invoice for the amount due. The Contractor is to take note of the following requirements - At the bottom of the CONTRACTOR MONTHLY REPORT, the Site Agent, Clerk of Works, CLO or Contractor must sign the document as proof that the people indicated have worked the number of days.			
	F:..... V:.....T:.....	Item		
82	Advertising rights The employer may elect to contract with advertising agencies for the erection of advertising hoardings, banners, wraps or the like for the duration of the contract. The contractor shall not prevent such an arrangement and will assist in the facilitation of same. The position and type of advertising structure to be agreed with the principal agent so as not to hinder the contractor in meeting his obligations under this agreement			
	F:..... V:.....T:.....	Item		
83	Confidentiality The contractor undertakes to maintain in confidence any and all information regarding this project and shall obtain appropriate similar undertakings from all subcontractors and suppliers. Such information shall not be used in any way except in connection with the execution of the works No information regarding this project shall be published or disclosed without the prior written consent of the employer			
	F:..... V:.....T:.....	Item		
84	Media releases All rights of publication of articles in the media, together with any advertising relating thereto or in any way connected with this project, shall vest with the employer The contractor together with his subcontractors shall not, without the prior written consent of the employer, cause any statement or advertisement connected with this project to be printed, screened or aired by the media			
	F:..... V:.....T:.....	Item		
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85	Socio-Economic Deliverables The Tenderer must allow for all costs (including any profit or attendance) associated with the administration, appointment, training and/or payment of the CLO, Built Environment Interns, Training of Local Labour, Students as applicable and included in this tender document (refer PROVISIONAL SUMS section). No additional claims in this regard shall be entertained. F:..... V:.....T:.....	Item		
86	**SMME Contractors as Sub-Contractors to the Principal Contractor** The Tenderer must allow for all costs applicable that they deem is associated with the successful integration, development of and completion of SMME Sub-contractors' work to the approval of the Principal Agent on this project (Whether forseen and unforseen). A portion of the building work is allocated to SMME Sub-contractors (refer SMME PACKAGES section). Contractors will be required to supply verified monthly statements/schedules (verified by their registered auditors) indicating the % achieved for that month. A cumulative schedule also needs to be maintained for each month that has passed. The Tenderer must also note that some SMME Packages as specified in the SMME PACKAGES section may consist of various smaller SMME sub-contractors within each specified package (split per link), the cost for this must be included in this item. Any additional costs that the Tenderer may deem applicable due to the use of SMME Sub-contractors, should be allowed for in this item (Preliminaries, OHS, Profit and Attendance, etc.), as no claim for any additional costs attributable to the incorporation and development of SMME Sub-contractors on this project will be entertained after the tenders are submitted. F:..... V:.....T:.....	Item		
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87	**SMME Monitoring** Provision for pricing for the employment, on a full time basis for the duration of the contract, SMME Monitoring. All costs associated with the completion of the SMME Monitoring duties, provision of office facilities and tools of trade are deemed to be priced hereunder. No additional claims in this regard shall be entertained. The above is in strict accordance with the Specification for the Employment of SMME Sub-contractors and all costs should be included in this item for the employment for Monitoring F:..... V:.....T:..... Category : Fixed R..... Category : Value R..... Category : Time R.....	Item		
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SECTION NO. 2

ALTERATIONS

BILL NO. 1

PREAMBLES

For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles

For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev Oct. 1993) as well as to the "Model Preambles for Trades" (1998) and Supplemetary preambles below.

Tenderers are advised to visit the site and to inspect the works in conjunction with the drawings in order to ascertain the exact nature and extent of the work to be done. The work is to be carried out in sections in accordance with the Architect's instructions in such a manner as to cause the minimum of nuisance and delay and the various sections are to be handed over for occupation as soon as they are completed and Tenderers must allow accordingly for this in their pricing.

The Contractor will be held solely responsible for checking all floor levels and dimensions in the existing building in order that the new extensions may be correctly lined up. Should any discrepancies be found in the Architect's drawings he should be asked for a decision before continuing with the work.

The Contractor will be held solely responsible for any damage to persons and property, for the safety of the new and existing structure throughout the whole of the contract and must make good at his own expense any damage that may occur.

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Old materials described as "carefully take out, set aside for re-use and later refix in new position" are to be carefully removed, stored and protected from injury, made good as required and if broken or damaged through taking out, removing, storage, etc, are to be replaced by the Contractor at his own expense. Tenderers are advised to inspect these materials to ascertain their condition and allow accordingly for this in their pricing.

Old materials, which are to become the property of the Contractor as they are pulled down, together with all building debris from any cause whatsoever, are to be immediately carted away and the site left clean and unencumbered. Allow for watering the works sufficiently to prevent nuisance from dust.

Allow for giving notice to local or other authorities for disconnecting electric light, water and drainage mains and removing telephone wires, etc, and pay all fees in connection therewith and afford every facility to the workmen carrying out this work.

All materials in this section are measured as new except where old material is specifically mentioned as being re-used.

Old materials, if sound and suitable and approved by the Architect, may be re-used in the new structure. This applies particularly to timber which may be re-used for joists, brandering, fittings, etc and broken bricks and other similar material which may be used as filling and hardcore.

Wherever old materials are used instead of the new materials measured, an adjustment will be made by the Quantity Surveyor in the final settlement of accounts by deducting the net cost of the new materials and crediting the Contractor with the amount, if any, allowed by him for the old materials.

When pricing, Tenderers are to allow as follows:

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Where door and window openings, etc, are specified to be filled in, or where jambs, cills, etc are specified to be built up, brickwork shall be of hard burnt clay stock bricks in 5.1 cement mortar unless otherwise specified, cut, toothed and bonded into existing brickwork and pinned up as required with slates or other hard materials. Brickwork built to fair face or in facings is to be of Travetine facebricks and pointed to match existing. Plaster is to be 5.1 cement plaster unless otherwise specified.

Where lintols are specified as reinforced concrete the prices are to include for breaking out brickwork over for and inserting cement concrete (20MPa) lintol with 230mm bearing on each end and 254mm deep and reinforced with and including one 12mm diameter mild steel rod for each half brick thickness of wall and including formwork. The steel rods are to be hooked at ends and embedded 25mm up from bottom of lintols. Lintols exceeding 1370mm span to be similarly reinforced but with 20mm diameter mild steel rods.

Where lintols are specified as precast concrete the prices are to include for breaking out brickwork over for and inserting precast prestressed cement concrete (30MPa) lintol with 230mm bearing on each end size 108 x 75mm deep for each half brick thickness of wall.

The term "take out" includes all work taken out, taken up, taken down, taken off, etc ; the term "break up" includes all work broken up, broken down, broken off, etc and the term "hack off" includes all work hacked off, hacked up, hacked down, etc.

The term "make good" is to include all labour and material required to match existing work.

The terms "take out and remove door", "take out and remove window", "carefully take out, set aside for re-use and later refix window in new position", etc are to include all materials connected with such door or window such as doors, windows, fanlights, frames, ironmongery, glass, architraves, beads, fillets, cramps, dowels, etc.

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	The terms "take out and remove sink unit", "take out and remove lavatory basin", "carefully take out, set aside for re-use and later refix W.C. suite in new position", etc are to include all materials connected with such sanitary fittings such as brackets, cisterns, taps, traps, flushing valves, flush pipes, etc and are to include for the cutting back and stopping off of supply and waste pipes. ---------- ----------				
	The contractors unit rates must allow for disposal of disposal or carting away of material,fittings or fixtures so described to a prescibed dumping site as instructed by the Architect ----------				
	Wire mesh were referenced shall be as follows: Wire thickness = 3.0mm thick Strand width = 4.5mm thick Diamond size = 25mm x 50mm				
	GENERAL ALTERATIONS				
	Carefully take out and remove the following asbestos material complete by ad approved Asbestos Removal Contractor under the direction and supervision of an Approved Asbestos Removal Authority				
1	Roof sheets, with and including fascias, barge boards, gutters and downpipes and leave roof structure ready to receive new sheeting and rainwater goods(sheeting and rainwater goods elsewhere measured)	m²	800		
2	Ceiling boards including brandering and leave trusses ready to receive new ceiling boards and brandering	m²	575		
	Carried to Abstract			R	

3	Extra over for cost of Approved Asbestos Inspection Authority (AIA) to be procured and paid in advance by the Contractor. The AIA to undertake all tasks and obligations as fully detailed in the latest published asbestos laws which entails as a minimum, identifying asbestos material on site, planning and implementation of the careful removal and disposal of all asbestos material, including reporting and submission or all licences, permits and certifications to the health and safety agent for the duration of the works			SUM	
	Break up and remove				
4	Half brick wall	m²	7		
5	One brick wall	m²	47		
6	Reinforced concrete slab and leave opening ready to receive new foundations for new brick walls (foundations and brick walls elsewhere measured)	m³	4		
7	Tarmac surfaces approximately 25mm thick and leave ground ready to be compacted (compaction elsewhere measured)	m²	359		
8	Concrete tank stand complete	m³	1		
	Take out and remove				
9	Pedestrian gate size approximately 1000 x 2100mm high	No	2		
10	Single door size 900 x 2100mm high and leave opening ready to be bricked up (bricking up elsewhere measured)	No	22		
11	Door size approximately 900 X 2100mm	No	4		
12	Alter existing door opening size 900 x 2100mm high in half brick wall to form a door size 1455 x 2050 mm, break out at head for a height of 2000mm,insert prestressed concrete lintel over, and make good including to plaster.	No	1		
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13	Alter existing window opening size approximately 600 x 600mm high in a one brick wall to form an Aluminium window opening size 840 x 2100mm high, break back at one jamb for a width of 300mm and under cill insert a pre stressed concrete lintel over, build in pretressed steel window frame, form 100 wide 10mpa concrete threshold and make good including to plaster both sides and to reveals.	No	2		
14	Alter existing window opening size approximately 600 x 600mm high in a one brick wall to form a door opening size 832 x 2032mm high, break back at one jamb for a width of 300mm and under cill insert a pre stressed concrete lintel over, build in pretressed steel window frame, form 100 wide 10mpa concrete threshold and make good including to plaster both sides and to reveals.	No	4		
15	Galvanised steel window size 600 x 600mm high and make good leaving the opening ready to receive door size 900 x 2125mm, else where measured.	No	2		
16	Take out and remove existing double door and make good to the opening and finish.	No	2		
17	Single door size 900 x 2100mm high and leave opening ready to be bricked up (bricking up elsewhere measured)	No	1		
18	Drywall partition including studs and tracks complete	m	13		
19	Single bowl sink size 650 x 450mm including removing brackets, piping from wall, capping water pipes, etc and leaving wall and floor ready to receive new single bowl sink (New single bowl sink,waste pipes etc elsewhere measured)	No	7		
20	Blinds for windows measuring 2125 x 840 and make good finish and leave it ready for new blinds	No	24		
21	Boundary fence and posts complete and leave ready to receive new fence (new fence elsewhere measured)	m	197		
22	Jojo tank and accessories and erect as directed by the PA	No	1		
	Carried to Abstract			R	

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23	Signage including posts and brickwork support size 3 000 x 3000mm high overall	No	1		
24	Waste cage size 4 000 x 1 800mm high overall	No	1		
	Making Good to Existing				
25	Envirowall Blocks size 275mm x 300mm (approx 25kg per block / +/- 27 blocks per m2) and repack at 70° angle to a height between 1.6 to 3.5m high	m²	117		
	Hack out and remove				
26	Ceramic tiles	m²	575		
	Carefully prepare floors to receive moisture barrier by light grit blasting or high pressure water blasting floor surfaces to produce a lightly exposed aggregate surface (ICRI CSP3) that will absorb water. Stop, rinse the treated substrate with clean water and ensure the substrate is in a saturat ed surface dry (damp) condition before the application of X Shield VaporStop HB or other barrier (elsewhere measured). Any cracks or bug holes should be filled with X-Shield BugFill or other suitable filler after application of X-Shield Va porStop HB. Note: Cementitious under layment and patching should only be installed over X-Shield VaporStop HB or other recommended barrier.				
27	On concrete floors	m²	575		
	Carefully Take Out and Remove				
	The contractor must make all necessary allowances e.g. scaffolding for a height exceeding 3m and n.e. 10m. , health and safety etc and must factor in the costs of any direct or indirect damage to floors, walls, the existing roof and ceilings etc that may result during the execution of this work				
28	Clerestory IBR roof sheeting and insulation, inspect roof structure and provide a written report to the Principal Agent and leave existing structure ready to receive new insulation and roof sheeting (Insulation and roof sheeting elsewhere measured)	m²	234		
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29	125 x 125mm gutters and leave fascia boars ready to receive new gutters (new gutters elsewhere measured)	m	60		
	The contractor must request for a written instruction concerning the relocation of joinery fittings as described below. The contractor must make the necessary allowances for the complete replacement or reinstatement of joinery that may be damaged during the removal, reinstatement or transit of joinery				
30	Timber shelving size approximately 3500 x 3000mm high and reassemble in new position as directed by the architect	No	3		
31	Break out one brick wall for counter opening size approximately 1500 x 1200mm high , insert concrete lintol size 75 x 150mm, make plaster and paintwork both sides and leave opening ready to receive new roll up door (door elsewhere measured)	No	4		
32	Take out and remove existing stainless steel sink and tap	No	7		
33	Take out and remove, stop, service parts and replace consumables pertaining to the wall mounted elbow action tap and CP waste	No	6		
34	Ditto but to wall mounted hot and cold elbow action taps	No	3		
35	Take off and remove 15mm diameter bib tap, remove pipework from wall, cap piping and leave wall ready to receive new tap and pipework (elsewhere measured)	No	1		
36	Take out and remove shower set including shower rose, mixer unit with hot and cold connections, remove all pipework from wall, cap piping and leave wall ready to receive plaster and paint (elsewhere measured)	No	1		
37	Take off and remove existing 590 x 420mm ceramic medical basin including removing and capping piping and make good wall and leave wall ready to receive new basin (elsewhere measured)	No	1		
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38	Take off and remove ceramic washhand basin size 525 x 420mm complete with taps, traps, etc., including piping and make good wall and leave wall ready to receive new finishes (elsewhere measured)	No	2		
39	Take out and remove ceramic WC and cistern complete including removing piping from wall, capping water pipes and leave wall and floor ready to receive new WC and cistern (elsewhere measured)	No	5		
40	Take out and remove sink size 1300 x 400mm and cupboard under including two pillar cocks from fitting and set aside for re-use and temporarily stop off water and waste	No	1		
41	Take out and remove sluice sink size 3600 x 500mm including removing brackets, piping from wall, capping water pipes and make good wall	No	1		
	<u>Major crack - width more than 5.0 mm</u>				
42	Remove the plaster in the vicinity of the crack (350mm width on each side of crack) exposing the brickwork and chisel out a V shape,clean the crack with compressed air and ensure that dirt,fine and loose material are removed completely,fix in grouting nipples in the V-groove on both faces of the wall at spacing of 150-200 mm c/c, seal the crack on both the faces of the wall with ABE epidermix 365 or other equally approved crack injection compound, nail fix a diamond wire meshover the sealed crack (spanning at least 300mm diameter on either side of the crack) with and including holding it to the wall through spikes or bolts at 300mm c/c and leave surface ready to receive new plaster (Plaster elsewhere measured)	m²	132		
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	BILL NO 2				
	EARTHWORKS				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	No allowance has been made in the measurements for bulking. The contractor must make allowance for bukling in his/her unit rates.				
	Excavation in earth not exceeding 2m deep				
43	Trenches	m^3	47		
44	Reduced levels under floors	m^3	39		
	Extra over all excavations for carting away				
45	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m^3	1		
	EXCAVATIONS IN STRATA OF A MORE DIFFICULT CHARACTER				
	Extra over trench and hole excavations in earth for excavation in				
46	Soft rock	m^3	1		
47	Hard rock	m^3	7		
	Risk of collapse of excavations				
48	Sides of trench and hole excavations not exceeding 1,5m deep	m^2	131		
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	Keeping excavations free of water				
49	Keeping excavations free of water		Item		
	FILLING ETC				
	Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 93% Mod AASHTO density				
50	Backfilling to trenches, holes, etc	m³	22		
	G5 Earth filling material supplied by the contractor, compacted to 93% Mod AASHTO density				
51	Backfilling to trenches, holes, etc	m³	10		
52	Under floors, steps, pavings, etc	m³	43		
	G7 Earth filling supplied by the contractor, compacted to 98% Mod AASHTO density				
53	Under floors, steps, pavings, etc	m³	55		
	Bedding				
54	50mm Thick bed of approved sand.	m²	85		
	Compaction of surfaces				
55	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density	m²	79		
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Bill No. 2
EARTHWORKS

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EARTHWORKS

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EARTHWORKS

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	BILL NO 3				
	CONCRETE, FORMWORKAND REINFORCEMENT				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES				
	15MPa/19mm concrete				
56	50mm thick surface blinding under footings and bases	m^3	2		
	REINFORCED CONCRETE				
	25MPa/19mm concrete				
57	Strip footings	m^3	29		
58	Ramps including landings	m^3	11		
	30MPa/19mm concrete				
59	Seamless surface beds	m^3	23		
60	Stairs, including landings, beams and inverted beams	m^3	8		
	CONCRETE SUNDRIES				
61	Extra for steel power floating surface bed to a non slip finish including any additional cement necessary	m^2	79		
62	Extra for floating up to non slip finish to treads of steps including any additional cement necessary.	m^2	5		
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63	Sika or other equally approved floor hardener	m²	79		
	FORMWORK				
	SMOOTH FORMWORK (DEGREE OF ACCURACY 1)				
	Smooth off shutter formwork (use and waste) to concrete				
	Sides, edges, risers, etc.				
64	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	38		
65	Edges exceeding 300mm high	m²	11		
	EXPANSION JOINTS				
	Expansion joints with softboard between vertical concrete and brick surfaces to SABS 1077				
66	10mm Thick Jointex expansion joint filler vertically between concrete or brick surfaces not exceeding 300 mm high	m	294		
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	REINFORCEMENT (PROVISIONAL)				
	High tensile steel reinforcement to structural concrete work				
67	Reinforcement in all bar sizes	t	1.73		
	Fabric reinforcement				
68	Reference 617 welded mesh reinforcement lapped 200mm at edge of adjoining sheets and bound with annealed wire and laying in concrete surface beds / ramps (Measured nett - no allowance made for laps)	m²	82		
	Carried to Abstract			R	

V.G. SHUMANE CLINIC
Bill No. 3
CONCRETE, FORMWORK AND REINFORCEMENT

V.G. SHUMANE CLINIC

Bill No. 3

CONCRETE, FORMWORK AND REINFORCEMENT

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Bill No. 3
CONCRETE, FORMWORK AND REINFORCEMENT

Item No			Quantity	Rate	Amount R
	BILL NO 4				
	CONCRETE, FORMWORKAND REINFORCEMENT				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	NOTE: Prices are to include for building in surrounds as single units or in combinations of two or more units to the required patterns.----------				
	Precast Vibrated Cement Concrete (30MPa) Winblok Window Surrounds Finished Smooth From The Mould On Exposed Surfaces, Built Into Brickwork As The Work Proceeds, Bedded And Jointed In 4.1 Cement Mortar And Pointed With Ruled-In Vertical And Horizontal Joints Both Sides (Glazing And Vents Elsewhere Measured)				
69	Window size 2125 x 840mm high	No	28		
70	Window size 600 x 500mm high	No	3		
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Item No			Quantity	Rate	Amount R
	BILL NO 5				
	MASONRY				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	Samples of all masonry building units, shall consist of a minimum of 6 units				
	FOUNDATIONS				
	Brickwork of NFX(E) bricks (28 MPa minimum compressive strength) in class II mortar in loadbearing walls etc				
71	Half brick walls	m²	2		
72	270mm Hollow walls of two half brick skins with cavities filled in with and including 15MPa/20mm concrete	m²	80		
73	Piers with cavities filled in with and including 15MPa/20mm concrete	m³	1		
	SUPERSTRUCTURE				
	Brickwork of NFX(E) bricks (28 MPa minimum compressive strength) in class II mortar in loadbearing walls etc				
74	Piers with cavities filled in with and including 15MPa/20mm concrete	m³	2		
75	One brick walls	m²	36		
	Carried to Abstract			R	

76	270mm Hollow wall formed of two half brick thicknesses with 50mm cavity between tied together with and including galvanized wire ties of the Butterfly or Modified PWD type in accordance with SABS 28 spaced at not more than one metre centres alternately to every third course and staggered.	m²	254		
77	Ditto but in bricking up openings etc	m²	20		
78	Build 50mm wide cavity closed for two courses at top of wall.	m	20		
79	Build 50mm wide cavity of wall solid half brick wide at jambs or ends of wall.	m	46		
80	Build 50mm wide cavity of wall solid half brick wide at head of opening	m	8		
	Miscellaneous				
81	Cut toothings and bond new brickwork to existing.	m²	7		
82	Bag down face of new brickwork with 1:3 cement slurry.	m²	117		
83	75mm wide welded high tensile steel wire brick reinforcing fabric and building into walls.	m	1 604		
84	154mm Wide ditto.	m	106		
85	75 x 110mm Wide presstressed precast concrete lintol not exceeding 3m and building into brickwork	m	75		
86	2 x 30mm Galvanised hoop iron tie 450mm girth with one end twice screwed to timber frame and other end built into brickwork and turned up into joint.	No	168		
87	1,6 x 40mm Galvanised hoop iron tie 1000mm girth, once bent and with one end wrapped around rafter ends, and another end built into brickwork.	No	40		
88	30 x 1,6mm Roof tie 1,5m long with one end fixed to brickwork or concrete and other end built into new brickwork	No	20		
	Carried to Abstract			R	

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Bill No. 5
MASONRY

89	4mm Galvanised wire in ties for wall plate 1500mm girth built into brickwork	No	122		
90	Galvanized Storm Clip framing anchor designed for the connection of structural timber members at angles to each other.	No	490		
	FACINGS				
	FBS facing bricks and pointing with 10 mm square recessed joints to match existing				
91	Allow for constructing a sample face brick panel of half brick thickness and and 2 square metres in area in a north facing position to the Representative/ "Agent's approval maintain, protect and" remove at completion of contract or when directed by the Representative/ Agent.	No	1		
92	Extra over ordinary brickwork for facing in stretcher bond and pointing.	m²	399		
93	Face brick on edge door cill size 230mm wide x 110mm high, bedded in 1:5 cement mortar including cutting and fitting between reveals and pointing on top and front face.	m	3		
94	Face brick soldier course band size 110mm wide x 255mm high recessed inbetween outer skins of cavity wall and build against internal brick lining, bedded in 1:5 cement mortar and pointing to front face.	m	117		
95	Face brick on edge lintol above window head size 230mm wide x 110mm high, bedded in 1:5 cement mortar including cutting and fitting between reveals and pointing on bottom and front face.	m	24		
96	Face brick on edge lintol above door head size 230mm wide x 110mm high, bedded in 1:5 cement mortar including cutting and fitting between reveals and pointing on bottom and front face.	m	17		
97	Face brick on edge window cill set sloping and slightly projecting on bottom edge in 1:5 cement mortar including cutting and fitting between reveals, fair splay cutting under and pointing on top, edge and projecting soffit (In No. 28)	m	33		
	Carried to Abstract			R	

	CONCRETE				
	Cement concrete (25 MPa - 19 mm stone) in				
98	Filling to cavity of hollow wall	m^3	4		
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MASONRY

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Bill No. 5
MASONRY

Item No			Quantity	Rate	Amount R
	BILL NO 6				
	WATERPROOFING				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	MEMBRANE WATERPROOFING				
	Damp-proof courses				
99	250 Micron polyethylene sheeting in accordance with SABS 952 Type C lapped 150 mm at joints and sealed with pressure sensitive tape and laying under concrete surface bed complete with condensation barrier	m²	81		
100	375 Micron embossed black polyethylene sheeting in accordance with SABS 952 Type B lapped 150 mm at ends and full widths of walls at angles and building into walls as dampproof course.	m²	183		
	Pointing, sealants, etc.				
101	Rake out 10mm wide expansion joint for a depth of 15mm, clean, prime and seal with an approved external quality polyurethane sealing compound applied with a pressure caulking gun.	m	294		
102	Polysulphide cover to jointex to finish flush with face of recessed square mortar joints in facebrick	m	294		
103	Silicon pointing to aluminium windows	m	264		
104	Ditto to aluminium doors	m	78		
105	Ditto to timber door frame	m	58		
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Item No			Quantity	Rate	Amount R
	BILL NO 7				
	ROOF COVERINGS ETC				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	0.8mm Z275 Prepainted factory coated finished galv. IBR sheeting in continues lengths on double sided reflective aluminium foil faced insulation barrier(reflective facing to be exposed to roof sheets) colour to match existing and Fittings Fixed To Timber purlins				
106	0.8mm Z275 Prepainted factory coated finished galv. IBR sheeting in continues lengths on double sided reflective aluminium foil faced insulation barrier(reflective facing to be exposed to roof sheets) colour to match existing not exceeding 25° fixed to timber purlins (elsewhere measured) with hook bolts, including plastic washers, etc.	m²	670		
107	Ridge capping 550mm girth three times bent and notched on site to suit profile roof	m	32		
108	625mm IBR flashing 3 times bent and fixing under roof covering	m	10		
	Insulation tested for conformance with SABS 1381:Part IV-1985,with a class one fire rating in accordance with accordance with SABS 0177:Part III-1981 and BS 476 part 5,6,7,				
109	40mm thick flexible faced insulation board, white washable coated fibre glass tissue faced.	m²	670		
	Carried to Abstract			R	

	0.8mm Klip-Lok 406 G550 ZINCAL® / COLORPLUS finished sheeting on 40mm thick flexible faced POLYISOCYANURATE insulation board, white washable coated fiberglass tissue faced and Fittings Fixed To Timber purlins				
110	0.8mm Klip-Lok 406 G550 ZINCAL® / COLORPLUS finished sheeting on 40mm thick flexible faced POLYISOCYANURATE insulation board, white washable coated fiberglass tissue faced.not exceeding 25° fixed to timber purlins (elsewhere measured) with hook bolts, including plastic washers, etc.	m²	84		
111	Head wall flashings 350mm girth	m	27		
	Insulation tested for conformance with SABS 1381:Part IV-1985,with a class one fire rating in accordance with accordance with SABS 0177:Part III-1981 and BS 476 part 5,6,7,				
112	Sisalation FR 405 multi-purpose grade reinforced aluminium foil insulation double sided,light grammage,durable reflective foil laminate incorporating layers of aluminium foil,high strength kraft paper and reinforcing scrim bonded together with low density polyethylene,drawn tautly across rafters (rafters elsewhere measured) with purlins (purlins elsewhere measured) spaced at less than 1500mm centres and secured to each rafter with 3.2mm thick 38mm x 1100mm hardboard counter batten strips (herein measured) positioned flush with bottom edge of the material thus leaving 150mm overlap exposed at the top for the next layer and lapped 150mm at ends	m²	84		
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Bill No. 7

ROOF COVERINGS

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Bill No. 7
ROOF COVERINGS

Item No			Quantity	Rate	Amount R
	BILL NO. 8				
	CARPENTRY AND JOINERY				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	TIMBER ROOF STRUCTURE				
	Monoplaner Prefabricated Connector Plate Roof Trusses at 1000mm maximum centres with a pitch of 25 Degrees and suitable for IBR roof sheeting or other with 50 x 76mm purlins (elsewhere measured) at 1050mm centres and Gypsum plasterboard ceiling (Gypsum plasterboard ceiling elsewhere measured) with and including brandering herein measured at 450mm centres				
113	Truss size 3 920 mm span x 1500mm high with 650mm overhang both ends.	No	11		
114	Truss size 9 000 mm span x 1500mm high with 650mm overhang both ends.	No	4		
115	Truss size 9 700 mm span x 1500mm high with 650mm overhang both ends.	No	3		
	Structural Timber				
	Sawn SA Pine tanalith treated Grade M4				
116	3500mm long, 150 x 50mm SAP exposed timber rafter @ 1050mm centres treated with approved timber preservative paint	No	12		
	Carried to Abstract			R	

117	50 x 50mm battens,bolted	m	60		
118	75 x 50mm SAP bracing and runners	m	42		
119	75 x 50mm SAP Purlins,bolted	m	138		
120	38 x 114mm Wall plate bolted to brickwork	m	69		
	Fascias etc.				
	Fibre reinfoced cement				
121	12 x 225mm Fascia plain (ungrooved) screwed with two countersunk brass screws into and including vertical 50 x 50mm SAP batten fixed to rafter also fixed with two x countersunk brass screws	m	99		
122	210 x 210mm Pressed winged bardgeboard, butt jointed with and including H-profile plastic jointing strips and screwed to ends of purlins with two brass screws at 1000mm centres	m	74		
	DOORS, ETC.				
	Wrot Meranti				
123	44mm Framed and ledged batten door 0,81 x 2,03m high of 44 x 144mm top rail and stiles, 22 x 144mm middle ledge and 22 x 219mm bottom ledge filled in with 22mm V-jointed one side boarding (D04)	No	3		
	SABS Semi Solid core flush doors with 10mm hardwood edges faced with tempered smooth faced hardboard for painting hung to timber frames including No 3 PVC buffers to closing				
124	44mm thick semi solid core flush door (DO2) size approximately 900 x 2125mm high as per Architects drawing MDA/290 E	No	23		
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125	44mm thick semi solid core flush door (D02a) size approximately 900 x 2125mm high as per Architects drawing MDA 290 C	No	5		
126	44mm thick semi solid core flush door (D02b) size approximately 900 x 2125mm high as per Architects drawing MDA 290 C	No	1		
127	44mm thick semi solid core flush door (DO3) size approximately 1455 x 2125mm high as per Architects drawing MDA/290 E	No	1		
	SABS Solid core flush doors with 10mm hardwood edges faced with tempered smooth faced hardboard for painting hung to timber frames No 3 PVC buffers to closing				
128	44mm thick solid core door (DO3) with horizontal grooved solid core interior, faced with tempered veneer faced hardboard placed horizontally for painting size approximately 1445 x 2050mm high overall as per Architects drawing MDA/290 B	No	2		
	JAMB AND SOFFIT LININGS AND FRAMED FRAMES				
	Note:				
	The linings and frames are to include for securing in openings in drywall partitioning with self tapping screws drilled and fixed to the steel studding or to openings in brick walls, with screws and nylon inserts in drilled mortices. The heads of screws are to be countersunk and pelleted.				
	Wrot Meranti framed frames				
	Carried to Abstract			R	

	Framed frames to doors formed out of 75 x 100mm meranti frame with lugs at every fifth brick course for building into 230 /270mm wall with and including 3 x no. PVC buffers for closing				
129	Plain frame for door opening size 900 x 2100mm fixed to brickwork	No	28		
130	Plain frame for door opening size 1455 x 2100mm fixed to brickwork	No	1		
	BEADS, ARCHITRAVES, ETC.				
	Wrot Meranti				
131	19mm quadrant beads	m	112		
132	12 x 44mm Stop	m	54		
	SKIRTINGS, RAILS, ETC.				
133	38 x 220mm twice angle rounded saligna hardwood bump rail plugged and screwed to wall with two x countersunk screws at approximately 70mm centres, the bump rail 1000mm affl as per Architects drawing MDA 290/301	m	294		
	Carried to Abstract			R	

JOINERY FITTINGS

134	Guard House (Ref:MDA290E-206) - Rectangular shaped fitting size approximately 2000mm long x 600mm wide x 750mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Drawer and Door: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 22mm supawood seen end with Max on Top HPL (Solid colour) finish with impact edge trim to match 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1	
135	Patient Vitals and Observation Room (Ref: MDA290E-206:) - Open shelving size approximately 2000mm long x 400mm wide x 1500mm high, 22mm thick supawood (Approx 4 in number), including 1150mm x 2000mm x 22mm supawood supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood continuous support batten with Max on Top HPL (Solid colour: White) 22mm supawood shelf and carcass with Max on Top HPL (Solid colour: White). 2mm pvc impact edge to all exposed edges	No	1	
	Carried to Abstract			R

V.G. SHUMANE CLINIC
Bill No. 8
CARPENTRY AND JOINERY

136	Reception 01 (Ref: MDA290E-206) - L - shaped fitting size approximately 2880mm long x 2975mm wide x 900mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 2880mm x 600mm x 22mm thick supawood fixed on mild steel gallows bracket Drawer and Door: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions 22mm supawood seen end with Max on Top HPL (Solid colour) finish with impact edge trim to match	No	1		
	Carried to Abstract			R	

137	MCWH Consulting Room (Ref: MDA290E-206) - Rectangular - shaped fitting size approximately 1950mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) Door: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

V.G. SHUMANE CLINIC
Bill No. 8
CARPENTRY AND JOINERY

138	Emergency Treatment Room (Ref: MDA290E-206) (Shelving and Fitting as herein described) - Open shelving size approximately 2795mm long x 400mm wide x 1500mm high, 22mm thick supawood (Approx 4 in number), including 1150mm x 2000mm x 22mm supawood supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood continuous support batten with Max on Top HPL (Solid colour: White) 22mm supawood shelf and carcass with Max on Top HPL (Solid colour: White). 2mm pvc impact edge to all exposed edges Rectangular shaped fitting size approximately 2795mm long x 600mm wide x 900mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) Door: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

139	Staff Room / Meeting (Ref: MDA290E-206) - Rectangular shaped fitting size approximately 3660mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: Door: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
140	Visiting Doctors Counselling Room (Ref:MDA290E-206) - Rectangular shaped fitting size approximately 2655mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) Door: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

V.G. SHUMANE CLINIC
Bill No. 8
CARPENTRY AND JOINERY

141	Admin Managers Office (Ref:MDA290E-206) (Shelving and Fitting as herein described) - Open shelving size approximately 1950mm long x 400mm wide x 616 mm high with 22mm thick supawood (Approx 4 in number), including 100mm brass drop bolt, fitted to internal fixed leaf of cupboard door Door Lock: Union 22mm Brass Cylinder Cupboard dead lock (Product Code: 452-22PL) 16mm white melamine internal carcass Door: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) Fitting Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Door: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
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142	Consulting Room 01 (Ref: MDA290E-206) - Rectangular shaped fitting size approximately 2655mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
143	Consulting Room 02 (Ref: MDA290E-206) - Rectangular shaped fitting size approximately 2655mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

144	Chronic Consulting Room (Ref:MDA290E-206) - Rectangular shaped fitting size approximately 2655mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
145	Store Room 04 (Ref:MDA290E-206) - U - shaped fitting size approximately 3100mm long x 2330mm wide x 2300mm the other side x 2172mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm SA Pine Slatted shelf fixed to 22mmx50mm support struts 22mm SA Pine solid support panels spaced at max 720mm cc 22mm SA Pine solid base, fixed to concrete floor surface 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
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146	Acute Consulting Room (Ref: MDA290E-206) - Rectangular shaped fitting size approximately 2655mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
147	Archives Room (Ref:MDA290E-206) - U - shaped fitting size approximately 3660mm long x 1830mm wide x 2480mm the other side x 2172mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm PAR SA Pine shelves, fixed to baked Enamel finished mild steel wall bands Baked Enamel finished mild steel wall band fixed to wall 22mm SA Pine Slatted shelf fixed to 22mmx50mm support struts 22mm SA Pine solid support panels spaced at max 720mm cc 22mm SA Pine solid base, fixed to concrete floor surface 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
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V.G. SHUMANE CLINIC
Bill No. 8
CARPENTRY AND JOINERY

148	MCRHS Consulting Room Ref: MDA290E-206 - Rectangular shaped fitting size approximately 2655mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
149	Counselling Room 01 (Ref: MDA290E-206) - Rectangular shaped fitting size approximately 1815mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

150	Staff Room (Ref: MDA290E-206) - Rectangular shaped fitting size approximately 1815mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
151	Counselling Room 02 (Ref: MDA290E-206) - Rectangular shaped fitting size approximately 1815mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

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152	Emergency Treatment Room (Ref: MDA290E-206) - Rectangular shaped fitting size approximately 2655mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
153	Consulting Room 03 (Ref: MDA290E-206) - Rectangular shaped fitting size approximately 2655mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

154	Chronic Consulting Room (Ref: MDA290E-206) - Rectangular shaped fitting size approximately 2655mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
155	Consulting Room 04 (Ref: MDA290E-206) - Rectangular shaped fitting size approximately 2655mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

156	Reception shelving (Ref: MDA290E-207) - Fitting size approximately 4355mm long x 400mm wide x 2172mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 16mm white melamine shelf and carcass with 2mm pvc impact edge to all exposed edges Handle: Roco 212mm Atlante stainless steel bar handle, code: RTSL28192SS. Handle: Roco 148mm Atlante stainless steel bar handle, code: RTSL28128SS 30mm thick Formica top, colour: White Myria Mild steel gallows brackets 22mm SA Pine Slatted shelf fixed to 22mmx50mm support struts 22mm SA Pine solid support panels spaced at max 720mm cc 22mm SA Pine solid base, fixed to concrete floor surface 6mm White melamine doors 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

157	Pharmacy Shelving (Ref:MDA290E-207) - W - shaped shelving fitting 600mm wide overall with sides approximately 5000mm x 2080 x 2000mm x 490mm x 2000mm wide x 1200mm x 2000mm long x 2172mm high overall supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 16mm white melamine shelf and carcass with 2mm pvc impact edge to all exposed edges Handle: Roco 212mm Atlante stainless steel bar handle, code: RTSL28192SS. Handle: Roco 148mm Atlante stainless steel bar handle, code: RTSL28128SS 30mm thick Formica top, colour: White Myria Mild steel gallows brackets 22mm SA Pine Slatted shelf fixed to 22mmx50mm support struts 22mm SA Pine solid support panels spaced at max 720mm cc 22mm SA Pine solid base, fixed to concrete floor surface 6mm White melamine doors 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

158	Pharmacy Shelving (Ref:MDA290E- 207) - L - shaped shelving fitting 4000mm x 2000mm x 2172mm high overall supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 16mm white melamine shelf and carcass with 2mm pvc impact edge to all exposed edges Handle: Roco 212mm Atlante stainless steel bar handle, code: RTSL28192SS. Handle: Roco 148mm Atlante stainless steel bar handle, code: RTSL28128SS 30mm thick Formica top, colour: White Myria Mild steel gallows brackets 22mm SA Pine Slatted shelf fixed to 22mmx50mm support struts 22mm SA Pine solid support panels spaced at max 720mm cc 22mm SA Pine solid base, fixed to concrete floor surface 6mm White melamine doors 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

159	Mobile Counter (Ref: MDA290E-207) - size approximately 1033mm long x 566mm wide x 900mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 30mm thick Formica top, colour: White Myriad 16mm white melamine trim with 2mm pvc impact edge to all exposed edges 16mm white melamine shelf and carcass with 2mm pvc impact edge to all exposed edges 2mm brushed aluminium kick plate glued to 16mm Marine Ply timber frame Heavy duty nylon casters with brakes 2mm brushed aluminium kick plate glued to 16mm Marine Ply timber frame Open shelf bin to fit size 508 mm x 491 mm x 900mm high	No	1		
160	High level cupboard 01 (Ref: MDA290E-207) - Open shelving size approximately 1245mm long x 400mm wide x 1500mm high, 22mm thick supawood (Approx 4 in number), including 1150mm x 2000mm x 22mm supawood supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood continuous support batten with Max on Top HPL (Solid colour: White) 22mm supawood shelf and carcass with Max on Top HPL (Solid colour: White). 2mm pvc impact edge to all exposed edges	No	1		
	Carried to Abstract			R	

161	High level cupboard 02 (Ref:MDA290E-207) - Open shelving size approximately 2000mm long x 400mm wide x 1500mm high, 22mm thick supawood (Approx 4 in number), including 1150mm x 2000mm x 22mm supawood supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood continuous support batten with Max on Top HPL (Solid colour: White) 22mm supawood shelf and carcass with Max on Top HPL (Solid colour: White). 2mm pvc impact edge to all exposed edges	No	2		
162	Reception 02 (Ref: MDA290E-207) - L - shaped fitting size approximately 2880mm long x 2975mm wide x 900mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 2880mm x 600mm x 22mm thick supawood fixed on mild steel gallows bracket Drawer and Door: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions 22mm supawood seen end with Max on Top HPL (Solid colour) finish with impact edge trim to match	No	1		
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CARPENTRY AND JOINERY

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CARPENTRY AND JOINERY

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CARPENTRY AND JOINERY

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Bill No. 8
CARPENTRY AND JOINERY

Item No			Quantity	Rate	Amount R
	BILL NO 9				
	CEILINGS, PARTITIONSAND ACCESS FLOORING				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	NAILED UP CEILINGS				
	9.5mm plasterboard fixed to 38 x 50mm SAP battens with drywall screws at minimum 400 centres. All joints to be covered with 25mm x 6mm hardwood cover strip,fixed to ceiling board				
163	Horizontal ceilings suspended not exceeding 1m below purlins	m²	375		
	Sundries				
164	75mm extruded polystyrene cove cornice to match existing	m	389		
165	102mm cavity bat insulation installed over ceilings	m²	375		
	PARTITIONS				
	GypRoc Standard System 3 partitions with two layers of wall board on each side with framing and the board layers full height				
166	114mm Thick partition 2835mm high	m	37		
	Sundries				
167	75mm Aerolite glass fibre insulation in partitions	m²	21		
	Carried Forward to Summary of Section No.			R	

Item No			Quantity	Rate	Amount R
	BILL NO. 10				
	FLOOR COVERINGS, PLASTIC LININGS, ETC.				
	SHEET VINYL FLOORING				
	Note:				
	NB: Vinyl sheeting to be laid by specialist sub-contractor who is to be a certified and approved / accredited applicator by material supplier. Manufactures and installers warranty will be required as a condition of contract. The flooring Sub-Contractor is to ensure that the screed is of sufficiently good finish to provide a perfect even level surface for the laying of floor covering. Any floor coverings showing waves or imperfections on finished surfaces will not be acceptable.				
	New Floorworx or similar approved 2mm heavy duty homogeneous non-directional "Canvas PUR" 2000 wide vinyl floor sheeting with welded joints by specialist approved applicator. Sheeting must be rolled in both directions with an articulated 68kg three sectional roller immediately after being laid in the adhesive				
168	On floors	m²	454		
169	Vinyl skirtings	m	250		
	WALL LININGS				
	Carried to Abstract			R	

	2mm heavy duty homogeneous non directional "Canvas PUR" 2000 wide vinyl floor sheeting with welded joints by specialist approved applicator. Sheeting must be rolled in both directions with an articulated 68kg three sectional roller immediately after being laid in the adhesive with welded joints in one colour				
170	On face and both edges of bump rail 220mm girth including mitres, ends, etc.	m	294		
	Floorworx MCF22 vinyl cove former by specialist applicator.				
171	Vinyl skirtings (Height: 200 mm, Radius: 30 mm) with and including flexible full cove former with a colored lip, maximum floor covering thickness: 4 mm, rigid clipped finishing profile capping strip with 1 flexible lip Maximum floor covering thickness: 4 mm fixed with double bonding adhesive, dispersion contact adhesive compatible with the skirting.MCS18 capping strip to finish top of vinyl skirting.	m	241		
	EPOXY FLOORS, POLISH, SEALERS, ETC.				
	ABE Cote 337 or other equally approved tough epoxy paint with high build vapor barrier for concrete floors. Supplier to scrub the product into the pores with a long handle scrub brush and then use a short hair roller to achieve uniform coverage. Stop and apply one coat and thereafter two coats of resin floor epoxy 12 to 16 hours after appli cation each application. Each coat to achieve dry film thickness 14 to 19 mils (350 to 450 microns) at the specified application rate and thickness using a long notched squeegee.				
172	On floors and turn-ups	m²	454		
	Non-slip acrylic emulsion dressing as (SABS 1042) buffed after each coat on vinyl sheeting				
173	Ditto to bump rail not exceeding 300 mm girth	m	294		
174	Ditto three coats dressing on floors and turn-ups	m²	454		
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Bill No. 10

FLOOR COVERINGS

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Bill No. 10
FLOOR COVERINGS

Item No			Quantity	Rate	Amount R
	BILL NO 11				
	PLASTERING				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	SCREEDS				
	The following in self levelling screed				
175	± 5 mm thick self-levelling screed to receive vinyl floors laid by the specialist flooring sub-contractor	m²	188		
	1:3 Cement mortar screed finished smooth on concrete to receive floor finishes				
176	30mm Thick to receive vinyl sheeting	m²	563		
	INTERNAL PLASTER				
	One coat 1:4 internal plaster finished to a true and even surface with a steel trowel				
	On brickwork				
177	15mm thick plaster to walls	m²	110		
178	Walls in narrow widths not exceeding 300mm wide	m²	94		
	EXTERNAL PLASTER				
	One coat 1:5 external plaster finished to a true and even surface with a wood float, and filler coat sanded to an approved smooth finish ready to receive paint (elsewhere measured)				
	Carried to Abstract			R	

	On brickwork (small part on flush concrete surfaces)				
179	Walls	m²	576		
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Bill No. 11

PLASTERING

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Bill No. 11
PLASTERING

Item No			Quantity	Rate	Amount R
	BILL NO. 12				
	TILING				
	INTERNAL FLOOR TILING				
	600 x 600 x 10 mm thick rectified nonslip full bodied porcelain tile. Tile to be T 003047 Chicago Loop by Tile Africa with fixed to floors with the recommended tile adhesive with a notched trowel to a minimum bedded thickness of 8mm and tap down on 25mm screeded surface (screed elsewhere measured) with maximum 2mm joints in both directions grouted strictly complete to manufacturers specification (NB: tiling grout to be white antifungal mixed to the ratio prescribed by tile supplier with bonding liquid)				
180	On floors and landings with continuous joints in both directions.	m²	128		
181	In door openings in narrow widths not exceeding 300mm wide	m²	1		
	WALL TILING				
	600 x 600 x10 mm rectified Porcelain wall (Tile code: T 003047 Chicago Loop as supplied by Tile Africa) tile to 2100mm AFFL as detailed elsewhere laid onto TAL gold star adhesive. Grout colour by architect, grout to be mixed with bonding liquid, ratio as specified by tile supplier				
182	On Walls	m²	280		
183	On Walls in narrow widths not exceeding 300mm wide	m²	4		
184	9mm "Kirk Marketing" aluminium straight edge trim (product code: ASE090) (Provisional)	m	70		
	Carried to Abstract			R	

	200 x 200 x 8mm white glazed wall tile splash back as detailed elsewhere laid onto TAL gold star adhesive. White anti fungal grout, to be mixed with bonding liquid, ratio as specified by tile supplier.				
185	Walls as splashbacks (300mm high) behind basins and sink	m²	68		
186	Tile dado 100mm high tiles, with and including all necessary cutting, waste, etc.	m	121		
187	9mm "Kirk Marketing" aluminium straight edge trim (product code: ASE090) (Provisional)	m	89		
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TILING

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Bill No. 12
TILING

Item No			Quantity	Rate	Amount R
	BILL NO. 13				
	IRONMONGERY				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	HINGES, BOLTS, ETC.				
188	100mm x 75mm x 3mm stainless steel ball bearing butt hinges with 2 security pins (in 1.5 pairs) - 8352 – 100 SS/2	No	84		
	LOCKS				
189	Union lockset comprising (SET 1): Bishop Euro Profile Cylinder (Pair) - AL684-09AS - S.C Europrofile spring latch and dead bolt - Q60 X 85MM - SS 5 pin tumbler double cylinder - Europrofile 2 x 18 SC	No	22		
190	Union lockset comprising (SET 2): Bishop Euro Profile Cylinder (Pair) - AL684-09AS - S.C Europrofile spring latch and dead bolt inclusive of rebate set for double leaf door - Q35 X 85MM – SS 200mm Flush recessed bolt - 8052-200SC (2 in no.) Dust proof strike - 8852SC 5 pin tumbler double cylinder - Europrofile 2 x 18 SC	No	1		
	Carried to Abstract			R	

191	Union lock set comprising (SET 3): 300mm Pull Handle with flange (Pair) - AL5512-300FLAS Europrofile narrow stile cylinder swingbolt and latch set; QR35 X 85MM - SS Stainless steel escutcheon on rose (pair) - SS305-05SS 200mm Flush recessed bolt - 8052-200SC (2 in no.) Dust proof strike - 8852SC 5 pin tumbler double cylinder - Europrofile 2 x 18 SC	No	6		
192	Union lockset comprising (SET 4): 1 x Union AL8098AS S.C Bathroom indicator bolt 1 x Union AL8253AS S.C Rubber tipped coat hook 1 x Union AL5063-06AS AS Push plate	No	5		
193	Union lockset comprising (SET 5): 1 x Union 37651AS AS Helping hand paraplegic facility indicator bolt 1 x Union AL8253AS S.C Rubber tipped coat hook 1 x Union AL5515-300BB AS Pull Handle	No	1		
194	Union lockset comprising (Set 6): 1 x Dormakaba Two point locking panic bar – single door, door leaf 813 wide x 2125 high (2201. 2104. PHX02. PHX04 : PHA2 S SD	No	3		
195	Union lockset comprising: 1 x Union AL684-09AS S.C Bishop Euro Profile Cylinder (Pair) 1 x Union Q60 X 85MM - SS - Europrofile spring latch and dead bolt 1 x Union Europrofile 2 x 18 SC S.S 5 pin tumbler double cylinder	No	3		
196	78mm armoured brass padlock	No	1		
197	Master keys (Provisional)	No	2		
198	Grand master keys (Provisional)	No	2		
	PUSH PLATES AND KICKING PLATES				
	Carried to Abstract			R	

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IRONMONGERY

	Dorma DPP-430-BL-SF 170xWOD composed of 1,2mm thick satin finished 430 stainless steel push, kicking and trolley plates and edge protectors, linings, with machined edges, etc., fixed to wood doors, frames, etc., to be fixed with 10 countersunk stainless steel screws, placed at 200mm centres with adhesive including edges and forming all cut outs, holes, slots, checks, notches, etc. as required to accommodate door ironmongery				
199	Push plate 200mm high	m	73		
200	Kick plate 300mm high	m	73		
	DOOR CLOSERS				
	Dorma - TS 73N				
201	Transom mounted internally delayed action overhead door closer	No	29		
	BATHROOM FITTINGS				
202	Franke 355x168x460mm Rodan stainless steel wall mounted waste bin (product code: 359983)	No	18		
203	Franke CNTXBR 750x260 stainless steel disabled grab rail mounted at 800mm above FFL (code: 359912)	No	1		
204	Franke CNTX700A stainless steel angle disabled grab rail mounted at 800mm above FFL (code: 359877)	No	1		
	The following in 304 grade stainless steel				
205	Franke 275x112x355mm Rodan RODX600 stainless steel wall mounted paper towel dispenser (product code: 359985)	No	18		
206	Franke 144x138x301mm Rodan RODX672 stainless steel wall mounted double toilet roll holder with spindle system (product code: 359987)	No	15		
207	Medical innovations (or equal approved) 245mm 304 grade stainless steel soap dispenser bracket (for 500ml hibiscrub bottle) (product code: 341-00-00C) to be wall mounted above medical wash hand basin	No	18		
	Carried to Abstract			R	

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IRONMONGERY

	SIGNAGE				
	SIGNS				
	Note: All directional and information signs as well as door numbers are to conform with the NBARI document 48/3 "Directional information in Hospitals". Type face BN Helvetic medium. Signs are to consist of self adhesive vinyl letters on plastic laminate with white lettering on dark grey backgrounds.				

	Door signs or numbers to be of an approved grey ultra high impact acryllic plastic construction plugged to wall or screwed to door with 15mm countersunk raised head chromium plated screws at each corner or hung from ceilings with two chromium plated chains				
208	200 x 70 x 2.5mm Sign with 40mm high letters to centre of door 1850mm above ffl to read "as instructed by the principal agent"(Note: name of signage to be confirmed on site)	No	26		
	Photo-luminescent emergency signs plugged to wall or screwed to door with 15mm countersunk raised head chromium plated screws at each corner or suspended from ceiling including two chromium plated chains				
209	190 x 190mm "No smoking" sign in white and red to door (type F27)	No	4		
	The following signage comprising of 9mm backing hardboard with 6mm felt infill, set into a 75mm meranti hard wood frame				
210	2500 x 900mm notice boards	No	6		
	CURTAIN AND BED CUBICLE TRACKS				
211	Single curtain track complete with fixing brackets, stop ends, runners, etc., set up and fixed complete to concrete soffits	m	15		
	Carried to Abstract			R	

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	Forwin hospital cubicle curtain track complete with twelve nylon wheeled runners per meter and all necessary brackets, stopped ends, etc., and hangers at one and a half metre centres passing through suspended ceiling and fixed to soffit of concrete slab or timber trusses				
212	Track suspended not exceeding 800mm long below timber trusses	m	15		
	BLINDS				
	The following in 50mm aluminium venetian blind (colour by architect) inclusive of fitment, fixing brackets, controls and associated parts fixed to top of lintel on wall face				
213	Blind to window 2950mm wide x 1360mm high	No	3		
214	Blind to window 2946mm wide x 900mm high	No	8		
	SUNDRIES				
215	300mm window stay (brass)	No	7		
216	Ditto but window latch (Brass)	No	14		
217	Union - 87001SS:SC door stop, floor mounted door stop	No	21		
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Item No			Quantity	Rate	Amount R
	BILL NO 14				
	METALWORK				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	ALUMINIUM DOORS				
	The following natural anodized aluminium extrusion by specialist aluminium door units as per the Architects diagrams, details and specifications bound into the back of these bills of quantities. Prices for all units measured herein to include all glass, ironmongery, assembly, fixing and sealing				
218	Natural anodised Aluminium door size 1625 x 2125mm high overall in two equal leaves, comprising of aluminium frame system to manufacturers specification with 2 x panel size composed of 6,38mm H.P.R laminated glazing size approximately 585 x 950mm and 2 x panel size composed of 6,38mm safety laminated glazing with translucent vinyl interlayer size approximately 585 x 845mm complete 100mm aluminium kick rail in natural anodised finish (Refer to Architects drawing no. MDA/290-E, Type D01)	No	2		
	Sundries				
219	300 x 300mm aluminium louvres fixed to both sides of door with self taping screws	No	6		
	STEEL WINDOWS, DOORS, ETC				
	Carried to Abstract			R	

	Factory manufactured steel frame window with factory primer and lugs for building				
220	Window type W01 size 600 x 600mm high	No	1		
221	Window type W02 size 1200 x 1200mm high consisting of 2 x fixed glazed panels size 600 x 600mm and 2 x outward opening panels size 600 x 600mm, the outward opening panels including 2 x brass latches as per manufacturers instruction	No	1		
222	Window type W03 size 1590 x 1490mm high consisting of 2 x outward opening panels size 800 x 600mm, the outward opening panels including 2 x brass latches as per manufacturers instruction	No	2		
223	Window type W04 size 1020 x 1490mm high consisting of 2 x outward opening panels size 800 x 600mm, the outward opening panels including 2 x brass latches as per manufacturers instruction	No	2		
224	Window type W05 size 1200 x 1200mm high consisting of 1 x fixed glazed panels size 1200 x 850mm and 1 x void size 1200 x 250mm	No	4		
225	Window type W06 size 600 x 500mm high	No	3		
226	Window type W04 size 840 x 2125mm high	No	7		
	The following natural anodized aluminium extrusion by specialist aluminium window units as per the Architects diagrams, details and specifications bound into the back of these bills of quantities. Prices for all units measured herein to include all glass, ironmongery, assembly, fixing and sealing and attached rubberised buffers at rebate				
227	Screen size 935 x 2125mm high consisting of 2 x glazed panel size 835 x 1565mm Frosted with 6.38mm HPR Laminated safety glass, 2 x no. 935 x 460mm voids as per MDA "A"- 04/04/2019	No	2		
	Carried to Abstract			R	

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METALWORK

	PRESSED STEEL DOOR FRAMES				
	1,8mm Rebated frames suitable for brick walls				
228	Frame for door size approximately 813 x 2032mm high	No	27		
229	Frame for door size approximately 1455 x 2032mm high	No	1		
	STEEL HANDRAILS, BALUSTRADES, ETC				
	The following in hot dip galvanised balustrades				
230	50mm Diameter. x 3mm Thick rounds hollow section in handrail welded to 50mm diameter. tube (Posts elsewhere measured)	m	10		
231	Extra over handrail for forming 90 degree angle	No	19		
232	Extra over handrail for forming 45 degree angle intersection	No	9		
233	50mm Diameter. x 3mm Thick round section tube post 2000mm high with 200 x 200x 3mm thick plate welded to bottom of post,plate four times holed for 10mm diameter bolt for fixing to top of ramp or landing (bolts elsewhere measured)	No	15		
	Bolts, etc				
	Descriptions of bolts shall be deemed to include nuts and washers.Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.				
	Metalwork described as "holed for bolt(s)" shall be deemed to exclude the bolts unless otherwise described.				
234	10mm Diameter x 125mm long Rawl bolt	No	60		
	ROLLER SHUTTER DOORS				
	Carried to Abstract			R	

	Fire Rated (SABS 1253) chain operated heavy duty metal slatted roller shutter composed of 76mm interlocking slats with slide bolts fitted to padlock				
235	1 200 mm x 1 200mm high heavy duty roller shutter steel roll-up door, manually operated, including centre lift lock and rubber weather strips, handles, roll guides, hinges, fixing bolts, tracks etc, fixed to brickwork or concrete with a minimum of 100mm side room and 500mm headroom MDA/RSD01	No	4		
236	1 500 mm x 1 200mm high heavy duty roller shutter steel roll-up door, manually operated, including centre lift lock and rubber weather strips, handles, roll guides, hinges, fixing bolts, tracks etc, fixed to brickwork or concrete with a minimum of 100mm side room and 500mm headroom MDA/RSD02	No	1		
	SECURITY GATES				
	The following in hot dip galvanised security gates strictly as per the Architects drawings attached to these bills of quantities				
237	Security gate (GO1) size 900 x 2125mm high overall composed of 30 x 30 x 3mm mild steel hollow framework with 70 x 30mm horizontal cross members and 12 x 12mm solid bar vertical members spaced at 100mm centres,70 x 30 x 3mm latch mechanism housing with and including 3 x mild steel hinges both sides as per the Architects drawing No. MDA 290/E with and including · 1 Galvanized mild steel heavy duty sliding bolt for padlock bolt · 1 Galvanized mild steel heavy duty drop bolt · 3 Galvanized mild steel heavy duty hinges as supplied by gate manufacturer · Padlock by Client	No	4		
	Carried to Abstract			R	

238	Entrance gate (GO2) size 1 800 x 2 125mm high overall composed of 50 x 50 x 3mm mild steel hollow framework with 70 x 30mm horizontal cross members and 12 x 12mm solid bar vertical members spaced at 100mm centres, 70 x 30 x 3mm latch mechanism housing with and including 3 x mild steel hinges both sides as per the Architects drawing No. MDA 290/E with and including: · 1 Galvanized mild steel heavy duty sliding bolt for padlock bolt · 1 Galvanized mild steel heavy duty drop bolt · 3 Galvanized mild steel heavy duty hinges as supplied by gate manufacturer · Padlock by Client	No	2		
239	Security gate (GO3) size 1190 x 2125mm high overall composed of 30 x 30 x 3mm mild steel hollow framework with 70 x 30mm horizontal cross members and 12 x 12mm solid bar vertical members spaced at 100mm centres,70 x 30 x 3mm latch mechanism housing with and including 3 x mild steel hinges both sides as per the Architects drawing No. MDA 290/E· with and including 1 Galvanized mild steel heavy duty sliding bolt for padlock bolt · 1 Galvanized mild steel heavy duty drop bolt · 3 Galvanized mild steel heavy duty hinges as supplied by gate manufacturer · Padlock by Client	No	1		
240	Security gate (SC01) size 1190 x 2125mm high overall composed of 30 x 30 x 3mm mild steel hollow framework with 70 x 30mm horizontal cross members and 12 x 12mm solid bar vertical members spaced at 100mm centres,70 x 30 x 3mm latch mechanism housing with and including 3 x mild steel hinges both sides as per the Architects drawing No. MDA 290/E with and including 1 Galvanized mild steel heavy duty sliding bolt for padlock bolt · 1 Galvanized mild steel heavy duty drop bolt · 3 Galvanized mild steel heavy duty hinges as supplied by gate manufacturer · Padlock by Client	No	1		
	SECURITY SCREENS				
	Carried to Abstract			R	

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	The following in hot dip galvanised security screens strictly as per the Architects drawings attached to these bills of quantities				
241	Galvanised mesh screens size overall 1400 x 460mm high composed of 50 x 50 x 2.5mm galvanised angle frame and galvanised mesh panel to form window (type SC02 - MDA/290E with and including 4 x no. 50 x 50mm Galv. m.s. angle flat bar fixed and welded to frame for wall fixing	No	4		
242	Curved window security screen size 1 500 x 1 500mm high overall, tangential angle approximately 45 degrees composed of 3 x 20mm diameter galvanised horizontal solid rod with 50mm steel knob shaped decorative end cap both sides, welded to 10mm diameter solid square sections,spaced at 100mm centres as per Architects drawing No. MDA 290/A (S01) with and including 4 x no. 50 x 50mm Galv. m.s. angle flat bar fixed and welded to frame for wall fixing	No	7		
243	Curved window security screen size 600 x 500mm high overall, tangential angle approximately 45 degrees composed of 3 x 20mm diameter galvanised horizontal solid rod with 50mm steel knob shaped decorative end cap both sides, welded to 10mm diameter solid square sections,spaced at 100mm centres as per Architects drawing with and including 4 x no. 50 x 50mm Galv. m.s. angle flat bar fixed and welded to frame for wall fixing	No	3		
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METALWORK

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METALWORK

Item No		Quantity	Rate	Amount R

BILL NO 15

PLUMBING AND DRAINAGE(PROVISIONAL)

PREAMBLES

For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles

SUPPLEMENTARY PREAMBLES

"Polycop" polypropylene pipes

Polypropylene pipes 54mm diameter and under shall be seamless copper coloured class 16 pipes jointed with "Fast-fuse" heat welded thermoplastic or brass compression fittings as designed for use with copper pipes as stated.

Pipes shall be firmly fixed to walls, etc. with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions.

All pipe diameters are nominal external.

Carried to Abstract R

"Polylink" polypropylene pipes

Polypropylene pipes 63mm diameter and over shall be class 12 pipes jointed with cast iron "Supraclamp" running joints.

Fusion welded bends, once or twice mitred as necessary, and tees shall be factory manufactured.

Fusion welded bends and tees shall include jointing to pipes with PVC rubber ring double Z joint couplers.

Branch tees shall include flanged and bolted joints to "Polycop" branch pipes in addition and for brass compression male iron to copper straight couplers.

Reducers shall include jointing to pipes with PVC rubber ring double Z joint couplers and reducers shall be of sufficient overall length to accommodate same.

All pipes shall be jointed and fixed strictly in accordance with the manufacturer's instructions.

All pipe diameters are nominal external.

Concrete pipes

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

uPVC pipes and fittings

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

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

Carried to Abstract R

uPVC pressure pipes and fittings

Pipes for water supply shall be of the class stated.

Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings.

Pipes of 50mm diameter and greater shall have sockets and spigots with push in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push in type joints.

Copper pipes

Pipes shall be hard drawn and half hard pipes of the class stated. Class O (thin walled hard drawn) pipes shall not be bent. Class 1 thin walled half hard), class 2 (half hard) and Class 3 (heavy walled half hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be "Cobra Watertech" type. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or in ground.

Fixing of pipes

Unless specifically otherwise stated, descriptions of pipes shall be deemed to include fixing to walls, etc., casting in, building in or suspending not exceeding 1m below suspension level.

Lead pipes and traps

All soldered joints shall be wiped and brass unions shall be used for jointing lead to steel.

Carried to Abstract R

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PLUMBING AND DRAINAGE

Reducing fittings

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

Wire gratings

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

Exposed concrete surfaces

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

Excavations

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

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

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PLUMBING AND DRAINAGE

Laying, backfilling, bedding, etc. of pipes

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

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

SABS 1200 L	:	Medium pressure pipelines
LD	:	Sewers
LE	:	Stormwater drainage

Pipe trenches etc. shall be backfilled in accordance with clauses 3, 5.5, 5.6, 5. and 7 of SABS 1200 DB : Earthworks (Pipe trenches). Pipes shallvbe bedded in accordance with clause 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SABS 1200 LG : Bedding (Pipes). Unless otherwise described bedding of rigid pipes shall be class B bedding.

Flush pans

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

Stainless steel basins, sinks, wash troughs, urinals, etc.

Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable.

Waste unions

Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings.

Steel sectional water tanks

Tanks shall comply with SABS CKS 114

Carried to Abstract R

	"Densyl" petrolatum anti corrosion tape as manufactured by Denso SA (Pty) Ltd				
	Prices for wrapping of pipes shall include for all work as described to couplings in the length.				
	User note: Dependent on soil or environmental conditions laps may require to be increased to a maximum of 55% (which results in a double layer)				
	RAINWATER GOODS, ETC				
	0.8mm rectangular pre-coated aluminium seamless gutter with 10 year guarantee with architect approved coloured finish including colour-coded rivet-fixed internal and external mitres and end caps internally sealed using silicone sealant, hung by screw fixed internal aluminium hangers at 600mm				
244	Purpose made 300mm x 175mm precoated seamless eaves gutter and fixing to falls on and including aluminium alloy gutter brackets bolted to fascia at not exceeding 1,5m centres.	m	99		
245	Extra for stopped end	No	17		
246	Extra for outlet with nozzel for 140mm x 140mm rainwater pipe with leafguard including additional gutter bracket	No	16		
247	Extra for eaves offset 400mm projection including additional downpipe clip	No	16		
248	150 x 150mm Rainwater downpipe and fixing to walls with pre-painted downpipe cleats using nail-in anchor fixings and fixed to gutter outlets with domestic snap seals, including all necessary bends, elbows, etc including securing to structural steel columns (columns elsewere measured)	m	20		
	WATER SUPPLY				
	Copper Pipes				
	Carried to Abstract			R	

	Class 0				
249	35mm Pipe and fixing to walls, floors, in roofs, soffit of concrete slab, in chases (including chases), in concrete, etc.	m	75		
	Class 2				
250	15mm Pipe and fixing to walls, floors, in roofs, soffit of concrete slab, in chases (including chases), in concrete, etc.	m	50		
251	22mm Pipe and fixing to walls, floors, in roofs, soffit of concrete slab, in chases (including chases), in concrete, etc.	m	63		
252	32mm Pipe and fixing to walls, floors, in roofs, soffit of concrete slab, in chases (including chases), in concrete, etc.	m	10		
	Extra over class 0 copper for Copcal Capillary type fittings with soldered joints				
253	35mm Elbow.	No	2		
254	35 x 28 x 15mm Reducing tee.	No	1		
	Extra over class 2 copper pipes for brass compression fittings				
255	15mm Fittings	No	25		
256	22mm Fittings	No	25		
257	32 x 32 x 15mm Reducing tee for 15mm branch pipe	No	1		
258	Cut into existing 28mm copper rising main and fit 28 x 28 x 15mm reducing tee for 15mm copper branch pipe	No	1		
	SANITARY PLUMBING				
	PVC pipes				
259	50mm Pipe and fixing to walls, floors, in roofs, soffit of concrete slab, in chases (including chases), in concrete, etc.	m	10		
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260	110mm Pipe and fixing to walls, floors, in roofs, soffit of concrete slab, in chases (including chases), in concrete, etc.	m	15		
	PVC, waste or vent piping				
261	50 mm Pipe.	m	15		
	Extra over 40 mm PVC pipe for:				
262	40 mm Bend.	No	10		
	Extra over 50 mm PVC pipe for:				
263	50 mm Bend.	No	10		
	Extra over 110 mm PVC pipe for:				
264	110 mm I.E. Bend.	No	1		
	Traps, gratings, etc.				
265	Cut into existing 110mm PVC stack and fit 110mm double reducing junction	No	10		
266	Chrome plated bottle trap with and including 32mm basin waste unslotted, 62mm flange and 80mm tail piece	No	11		
	SANITARY FITTINGS				
267	Franke or other equally approved 545 x 450 x 220.5 Rondo VM wall mounted basin (product code: 362964) basin fixed to wall using 4x8mm anchor bolts	No	1		
268	Vaal Sanitaryware vitreous China “Hibiscus Elite Vandal Proof” close coupled suite (product Code: 772404) complete with front push button, lid fitments and low level flush pipe	No	5		
269	Cobra Welcome Medium round wall hung basin. 430mm long X 390mm wide, no tap hole required (product code: 709100WH	No	11		
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270	Vaal Sanitaryware vitreous China Lavatera Wall Hung Bowl back inlet urinal (product code: 705427) supplied complete with all fittings, concealed back inlet flush valve cobra FJ8. 102 complete with flush pipes and fittings Product code 7054Z2	No	1		
271	Franke 300mm undermount vanity basin manufactured from 305 grade stainless steel with and including black rubber waste to be fitted to basin unit	No	1		
	<u>Stainless steel sinks, wash troughs, etc.</u>				
	NOTE: All products are to be manufactured from 1,2 mm thick Grade 304 Stainless Steel unless otherwise stated.				
272	Stainless steel drinking fountain approximately 311 x 489 x 1500mm high complete with bubbler and goose-neck taps including a 2 stage in-line filtration system consisting of sediment and carbon filtration, fixed to the wall next to an electrical point and connected to the external drainage.	No	1		
273	1160 x 460mm inset sink, mounted to joinery as detailed elsewhere	No	3		
274	Solid wood particle moisture proof white lacquered toilet seat	No	6		
275	Stainless steel slop hopper unit 965 x 550 mm manufactured from grade 304 (18/10) stainless steel 1,2 mm thick with a 100 mm high integral splash back to the rear and both sides, with an integral flushing rim in the cone and a 110 mm waste outlet for pan connector, the inlet fitted with a 38 x 250 mm long vertical flush pipe for a standard flush valve. Unit fitted with a hinged bucket grid manufactured from 10 mm diameter grade 304 (18/10) stainless steel round bar. Unit complete with two 40 x 40 mm square stainless steel wall mounting gallows brackets. Unit fixed to the wall.	No	1		
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276	Franke Nouveau NVN621 1160 x 460mm inset sink, mounted to joinery as detailed elsewhere (product code: 811024)	No	4		
277	§Franke grade 304 stainless steel grade 1,2mm NCH Slop Hopper 540x540 integral with 100mm high splash back § Product Code: 2630035-004 § Cobra FM 1-000/N Flush Master Valve	No	1		
278	Franke model "S1" Catering Sink single right hand bowl manufactured from grade 304 stainless steel 1,2mm thick with a 150mm high integral splash back to the rear and 50x10mm turndown with a beaded edge on the remaining sides. Sink with pressed 500x500x230mm deep bowl with a 40mm waste outlet. The underside sprayed with vermin proof bitumastic sound deadening and supported with a 30x30x3mm framework and galvanised mild steel backing sheet. Unit fixed 900mm high from the top of the front apron to the finish floor level with anchor bolts	No	1		
	Overflow pipes, traps etc.				
	uPVC				
279	Cobra Watertech chrome platted bottle trap (product code: 340) and 32mm basin waste un slotted, 62mm flange and 80mm tail piece (product code: 308)	No	11		
280	Trap Extendible Gio 32x40mm Universal PVC White	No	1		
	ELECTRIC WATER HEATERS				
281	200 Litre Kwikot 600 Dual horizontal ceiling mounted type electric hot water copper cylinder with 22mm connections and fitted with 4 kilowatt monel metal electrical element complete with vacuum breaker, pressure reducing valve and relief valve including all joints to copper pipes and fixing in position and connect up.	No	1		
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282	0,60mm Galvanised sheet iron tray size 500 x 1000mm with riveted and soldered seams and joints, turned up all round to form kerb 75mm high with beaded edge, including outlet with nozzle for 50mm diameter overflow pipe and fix in position.	No	1		
283	Ditto size 700 x 1500mm, ditto.	No	1		
284	50mm PVC overflow and fixing to falls to roof timbers.	m	1		
285	Extra for 50mm bend	No	1		
286	38mm Sawn Pine boarding for geyser platform formed of 38 x 228mm boards butt-jointed and nailed to bearers.	m²	2		
287	38 x 114mm Sawn Pine bearers	m	3		
	TAPS, VALVES, ETC				
288	Cobra KM2-200 or other approved metering bib tap with non hold open feature and flow controller fitted to basin (Basin elsewhere measured)	No	1		
289	Cobra Watertech Medical elbow action wall type mixer with swivel outlet (product code: 500-21B/N and 500-21R/N)	No	12		
290	Cobra Watertech Metered Tap, non hold open with outlet (product code: KM2-100FS/N)	No	6		
291	Cobra Watertech ½"rough brass hose bibtap (product code: 108-15)	No	1		
292	Watertech Kitchen Classic Star wall mounded mixer with aerated swivel outlet (product code: 266/041/10)	No	1		
293	Cobra Watertech Medical Elbow action pillar tap with raised nose and blue indice (product code: 503-21B) cold water supply only	No	1		
	FIRE SERVICE				
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	Sundries				
294	"Chubb" or other approved turnable hosereel bearing SABS mark and brackets with patent swivel joints, fitted with 30m length of 19mm diameter SABS red PVC hose with gunmetal 'shut-off' control nozzle and chromium plated wheelhead valve and fix reel and nozzle bracket to plastered walls with and including 6 x 76mm expanding bolts in mortices in wall	No	2		
295	Wrot Red Meranti framed fire hose cupboard size 1250 x 300 x 1250mm high overall with bottom, ends and sloping top (set projecting 38mm along front and both ends) formed of 22mm tongued, grooved and V-jointed one side boarding; ledged,braced and battened double doors formed of 22mm V-jointed boarding with 22 x 50mm chamfered cover fillet planted on at meeting stiles, hung folding on two pairs of 150mm black japanned iron tee hinges, with a 50mm brass cupboard lock and two 75mm brass barrel bolts; in door form 100 x 100mm aperture rebated for and glazed with 3mm clear sheet glass fixed with beads; drill six 20mm diameter holes in bottom and two in ends near top of cupboard for ventilation, bottom holed to it over hydrant; cover top with 0,63mm galvanised sheet iron turned down at edges and close nailed; cupboard bolted three times on to concrete wall at the top centre and bottom of the cupboard with 16 x 140mm Dynabolt masonry anchor with nut and washer and including mortice/s in concrete	No	2		
	LAGGING				
296	Two layers of thermoflex or other approved preformed self extinguishing polyethylene tightly wrapped around 22mm pipe and couplings and tied with wire prior to building in	m	63		
297	Extra for wrapping around 22mm fittings	No	25		
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	TESTING				
298	Provide all necessary apparatus, water, etc. for and test the sanitary plumbing, water supplies, sanitary fittings and fire services to the satisfaction of the Representative/Agent and the Local Authorities, replace any defective work free of charge and leave perfect.		Item		
	BUILDERS WORK				
299	500 x 500mm 20MPa/19mm stone,Concrete encasing to soil pipes in high traffic zones	m	4		
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Bill No. 15

PLUMBING AND DRAINAGE

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PLUMBING AND DRAINAGE

Item No			Quantity	Rate	Amount R
	BILL NO 16				
	GLAZING				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev Oct. 1993) as well as to the "Model Preambles for Trades" (1998) and Supplemetary preambles below.				
	GLAZING				
	6.38mm Normal strength clear laminated safety glass				
300	6.38mm H.P.R clear Panes exceeding 0,1 square metres and not exceeding 0,5 square metres	m²	93		
301	6.38mm H.P.R clear Panes exceeding 0,5 square metres and not exceeding 2.0 square metres	m²	52		
302	6.38mm laminated safety glass exceeding 0,5m2 and not exceeding 2m2, with translucent vinyl interlayer colour to be confirmed with the Principal Agent	m²	41		
	PUTTY TO GLAZED ALUMINIUM WINDOWS				
	30mm thick type II putty on				
303	Steel windows	m	71		
	MIRRORS				
304	6mm Float glass silver backed mirror size 400 x 600mm with bevelled and polished edges fixed with double sided tape and chromium plated mirror screws and cork washers	No	4		
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Item No			Quantity	Rate	Amount R
	BILL NO 17				
	PAINTWORK				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	PAINTWORK, ETC. ON PREVIOUSLY PAINTED WORK				
	ON PLASTER ETC.				
	Clean down to remove all loose paint,including sandblasting or wire brushing where necessary, wash with sugar soap, rinse, make good where necessary and fill cracks with Polyfilla (Brickwalls / Rhinolight for plasterboard) and sand down clean down, prepare and apply one coat Plascon Professional Gypsum Plaster Primer (PP700) on brick walls and Rhino light is used on plasterboard, stop and apply two coats Plascon Plascon TLL 100 pastel base professional hygiene low sheen acrylic PVA paint on				
305	Internal plastered walls	m²	1 262		
	ON METAL				
	Carried to Abstract			R	

	Clean down steel substrate to a clean exposed state by removing all loose and friable matter,old paint, dust,oil,grease and soluble solvents with detergent solution and rinse with portable water to achieve a PH of 7,dry abrasive blast surface (sandblast) to a near "white metal" and further remove all traces of previous protective coating from Galvanised Surfaces with Galvanised Iron Cleaner, Prepare And Apply One Coat Galvanised Iron Primer, One Universal Undercoat And Two Coats coats polyurethane non drip enamel on				
306	Steel door frames	m²	30		
307	Existing steel window frames	m²	37		
	ON WOOD				
	Sand and clean down to bare surface, remove all dust, stop and apply one coat varnish diluted 20% with mineral turpentine and three coats matt varnish lightly sanded on				
308	On timber surfaces	m²	20		
	PAINTWORK, ETC TO NEW WORK ON				
	ON PLASTER OR PLASTERBOARD				
	Clean down, prepare and apply one coat Plascon Professional Gypsum Plaster Primer (PP700) on brick walls and Rhino light is used on plasterboard, stop and apply two coats Plascon Plascon TLL 100 pastel base professional hygiene low sheen acrylic PVA paint				
309	Plastered walls	m²	1 136		
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	Prepare and apply one coat Plascon plaster acrylic filler coat, fill with interior Polyfilla, sand and touch up filler coat and apply one coat wood primer including to hardwood cover strips, one universal undercoat and two coats Plascon acrylic PVA (Colour: White) with approved anti-fungicide on				
310	Plastered ceilings.	m²	375		
	Carried to Abstract			R	

	ON WOOD				
	Clean down to bare surface, remove all dust, stop and apply one coat wood primer, one coat universal undercoat and two coats Plascon Velvaglo Satin enamel paint on				
311	On backs of grounds, frames, linings, etc. not exceeding 300mm wide	m²	5		
312	PVA paint to dry walls	m²	54		
313	On door frames, etc.	m²	23		
314	On doors	m²	98		
	Sand and clean down to bare surface, remove all dust, stop and apply one coat varnish diluted 20% with mineral turpentine and three coats matt varnish lightly sanded on				
315	Doors	m²	6		
	METAL SURFACES WITH				
	Clean down steel substrate to a clean exposed state by removing all loose and friable matter,old paint, dust,oil,grease and soluble solvents with detergent solution and rinse with portable water to achieve a PH of 7,dry abrasive blast surface (sandblast) to a near "white metal" and further remove all traces of previous protective coating from Galvanised Surfaces with Galvanised Iron Cleaner, Prepare And Apply One Coat Galvanised Iron Primer, One Universal Undercoat And Two Coats coats polyurethane non drip enamel Enamel On				
316	Windows	m²	6		
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V.G. SHUMANE CLINIC

Bill No. 17

PAINTWORK

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PAINTWORK

V.G. SHUMANE CLINIC

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V.G. SHUMANE CLINIC

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	BILL NO. 1				
	STAINLESS STEEL FURNITURE				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	The following in square silver stainless steel benches suitable for public seating in external areas in all weather conditions. Each seat to carry a minimum weight per seat of 110kg				
1	Seven seater stainless steel seating size approximately 3890 x 670 x 785mm high overall suitable for all weather conditions, each seated epoxy bolted four times with stainless steel bolt to concrete floors with vinyl sheeting finish (floor and floor finish elsewhere measured)	No	3		
2	Six seater stainless steel seating size approximately 2850 x 670 x 785mm high overall suitable for all weather conditions, each seated epoxy bolted four times with stainless steel bolt to concrete floors with vinyl sheeting finish (floor and floor finish elsewhere measured)	No	4		
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FITTINGS
Bill No. 1
STAINLESS STEEL SEATING

Item No			Quantity	Rate	Amount R
	BILL NO. 2				
	BUILT IN CUPBOARDS AND SHELVING ETC				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	PINNING BOARDS AND WHITE BOARDS				
3	600 x 900mm magnetic white board, with pen tray	No	16		
4	Allow for a 600 x 900mm felt pinboard, in 25mm aluminium	No	16		
5	2 500 x 900mm notice boards comprising of 9mm backing hardboard with 6mm felt infill, set into a 75mm meranti hard wood frame finished off with 2 coats clear varnish finish (to match existing notice board)	No	6		
	Sand and clean down to bare surface, remove all dust, stop and apply one coat varnish diluted 20% with mineral turpentine and three coats matt varnish lightly sanded on				
6	On frames	m	19		
	BULK FILLERS				
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	The following in hammertone grey steel bulk filers				
7	10 Bay heavy duty steel bulk filing cabinets including 50 shelves size overall 2130mm (H) x 1100mm(W) x 5100mm(L) with and including 800mm walk in space, with each bay x 430mm deep bolted to concrete floors with suitable anchors	No	1		
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FITTINGS
Bill No. 2
PINNING BOARDS ETC

FITTINGS

Bill No. 2

PINNING BOARDS ETC

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PINNING BOARDS ETC

FITTINGS

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SECTION NO. 4

BILL NO. 1

EXTERNAL PLUMBING

SUPPLEMENTARY PREAMBLES

PREAMBLES

For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles

"Polycop" polypropylene pipes

Polypropylene pipes 54mm diameter and under shall be seamless copper coloured class 16 pipes jointed with "Fast-fuse" heat welded thermoplastic or brass compression fittings as designed for use with copper pipes as stated.

Pipes shall be firmly fixed to walls, etc. with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions.

All pipe diameters are nominal external.

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"Polylink" polypropylene pipes

Polypropylene pipes 63mm diameter and over shall be class 12 pipes jointed with cast iron "Supraclamp" running joints.

Fusion welded bends, once or twice mitred as necessary, and tees shall be factory manufactured.

Fusion welded bends and tees shall include jointing to pipes with PVC rubber ring double Z joint couplers.

Branch tees shall include flanged and bolted joints to "Polycop" branch pipes in addition and for brass compression male iron to copper straight couplers.

Reducers shall include jointing to pipes with PVC rubber ring double Z joint couplers and reducers shall be of sufficient overall length to accommodate same.

All pipes shall be jointed and fixed strictly in accordance with the manufacturer's instructions.

All pipe diameters are nominal external.

Concrete pipes

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

uPVC pipes and fittings

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

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

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uPVC pressure pipes and fittings

Pipes for water supply shall be of the class stated.

Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings.

Pipes of 50mm diameter and greater shall have sockets and spigots with push in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push in type joints.

Copper pipes

Pipes shall be hard drawn and half hard pipes of the class stated. Class O (thin walled hard drawn) pipes shall not be bent. Class 1 thin walled half hard), class 2 (half hard) and Class 3 (heavy walled half hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be "Cobra Watertech" type. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or in ground.

Fixing of pipes

Unless specifically otherwise stated, descriptions of pipes shall be deemed to include fixing to walls, etc., casting in, building in or suspending not exceeding 1m below suspension level.

Lead pipes and traps

All soldered joints shall be wiped and brass unions shall be used for jointing lead to steel.

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Bill No. 1
EXTERNAL PLUMBING

Reducing fittings

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

Wire gratings

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

Exposed concrete surfaces

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

Excavations

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

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

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EXTERNAL WORKS
Bill No. 1
EXTERNAL PLUMBING

Laying, backfilling, bedding, etc. of pipes

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

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

SABS 1200 L	:	Medium pressure pipelines
LD	:	Sewers
LE	:	Stormwater drainage

Pipe trenches etc. shall be backfilled in accordance with clauses 3, 5.5, 5.6, 5. and 7 of SABS 1200 DB : Earthworks (Pipe trenches). Pipes shallvbe bedded in accordance with clause 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SABS 1200 LG : Bedding (Pipes). Unless otherwise described bedding of rigid pipes shall be class B bedding.

Flush pans

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

Stainless steel basins, sinks, wash troughs, urinals, etc.

Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable.

Waste unions

Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings.

Steel sectional water tanks

Tanks shall comply with SABS CKS 114

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EXTERNAL WORKS
Bill No. 1
EXTERNAL PLUMBING

	"Densyl" petrolatum anti corrosion tape as manufactured by Denso SA (Pty) Ltd				
	Prices for wrapping of pipes shall include for all work as described to couplings in the length.				
	User note: Dependent on soil or environmental conditions laps may require to be increased to a maximum of 55% (which results in a double layer)				
	SOIL DRAINAGE				
	Demolitions				
1	Excavate for and cut into existing 150mm drain for new 110mm PVC drain including all necessary fittings and backfill and compact with material obtained from excavations to 95% Mod AASTO density.	No	1		
2	Excavate for and leave existing 150mm drain ready to be encased in concrete (concrete encasing elsewhere measured) and backfill and compact with material obtained from excavations to 95% Mod AASTO density.	m	2		
	uPVC Class 34 drainpipes and fittings with spigot and socket joints with 0 ring seals complying with SABS791				
3	110 mm Pipe vertically in ground (no excavation)	m	65		
4	110 mm Pipe and laying in ground not exceeding 1m deep including excavating trench, granular sand bedding 150mm thick under, around and above pipe compacted in multiple layers not exceeding 150mm thick to 93% Mod AASHTO density and filling to ground level with G5 base course material complying with SABS 1200 ME compacted in multiple layers not exceeding 150mm thick to 95% modified AASHTO density	m	43		
5	110mm Pipe and excavation exceeding 1000mm and not exceeding 2000mm deep.	m	23		
	Extra over uPVC pipes for the following uPVC fittings				
6	110mm 45° Bend	No	8		
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7	110mm 90° Bend	No	3		
8	110mm Junction	No	3		
9	110mm Access junction	No	1		
	Sundries				
10	Plain concrete 15MPa/19mm stone encasement 150mm thick round existing 150mm diameter horizontal pipe including additional excavation, formwork, etc.	m	10		
11	Plain concrete 15MPa/19mm stone encasement 150mm thick round 110mm diameter horizontal pipe including additional excavation, formwork, etc.	m	3		
12	Ditto but around 110mm bend	No	4		
13	ABC cast iron 45° type cleaning eye cover and frame and fix to top of 110mm uPVC pipe	No	3		
14	110mm Gulley exceeding 750mm and not exceeding 1000mm deep complete with concrete gully top 400 x 400 x 120mm	No	1		
15	Cement concrete 15MPa/19mm stone apron size 450 x 450 x 100mm thick around cleaning eye cover and frame (elsewhere measured) and set to finish flush with paving or ground including excavation to formwork, etc.	No	6		
	Inspection chambers				
16	Inspection chamber size internally 1200 x 960 x exceeding 500 not exceeding 750mm deep to invert having 150mm thick plain concrete 20MPa/19mm stone bottom projecting 150mm beyond face of external walls all around 230mm brick sides in 1:3 cement mortar rendered internally in 1:3 cement plaster steel trowelled smooth 100mm thick plain concrete 20MPa/19mm stone cover slab rebated for and fitted with and including 450 x 600mm x 72kg cast iron manhole cover and frame type 8A including fine cement concrete benching in bottom around and including vitrified clay main and branch inlet channels including excavation, backfilling, formwork, holes through sides, etc.	No	2		
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EXTERNAL WORKS
Bill No. 1
EXTERNAL PLUMBING

17	Stormwater double grid inlet as per 1574-77-STW-030 Inspection chamber ditto size internally 1250 x 760 x exceeding 1000 not exceeding 1250mm deep to invert ditto.	No	1		
	SUNDRIES				
18	Extra over excavation in earth for trenches, inspection chambers, etc. for excavation in soft rock	m³	12		
19	Ditto but in hard rock	m³	4		
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EXTERNAL PLUMBING

EXTERNAL WORKS

Bill No. 1

EXTERNAL PLUMBING

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EXTERNAL WORKS, ETC.

PREAMBLES

For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles

NOTE:

Prices for filling, etc., shall include for the costs of any compaction tests as required by the Representative/Agent.

Cost of tests

Descriptions of concrete items shall be deemed to include for all necessary testing of concrete components and trail mixes

The costs of making, storing and testing of concrete test cubes as required shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the principal agent. The testing shall be undertaken by an independent firm or institution nominated by the contractor to the approval of the principal agent. (Test cubes are measured separately)

NOTE: Should the strength required for the concrete in anyportion of the structure not be attained in the test cubes, orshould any concrete whatsoever be defective the portion inquestion is to be demolished and replaced at the expense ofthe Contractor.

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	TEMPORARY HOARDING AND FENCING				
20	Hoarding 2500mm high formed of timber boarding, blockboard sheeting or similar splinter free material painted one side with two coats PVA, including poles, bearers, bracing, etc. firmly secured, with and including taping hoardings all round to form a dust proof screen, all removed upon completion of sections of work and including making good floors and walls where applicable	m	315		
21	Extra on hoarding for single builders access door 1 m wide	No	3		
	ENTRANCE SIGNAGE				
22	Entrance sign composed of 75mm diameter galvanised mild steel pipe to create frame size 2550 x 2100mm. The frame to be fixed into concrete bases of 500 x 500 x 500mm (Foundations and bases etc elsewhere measured) with and including a new chromadek signage panel size 2420 x 1225mm fixed welded to frame. The chromodek sign to be affixed to 20 x 20 x 1mm galvanised mild steel square tube frame, which is welded into main 75mm diameter main frame.			SUM	
23	Allow for frosted vinyl lettering at the main entrance doors letter height 35mm, font type: Tahoma for the following complete: Clinic name Clinic operating hours Clinic Emergency contact number			SUM	
	ELEVATED WATER TANK STAND				
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	The following in galvanised steel elevated water tank stands at a height of approximately +/- 10m from ground level				
24	Abeco or other equally approved elevated water tank size 4 000 x 3 900 x 6 100mm overall (7000litre capacity or higher) with and including 2.5 mm thick x 610 mm wide roof sheeting, hot-dip galvanising support towers (15m high), standard accessories including but not limited to caged external access ladder, Internal access ladder, Hinged lockable manhole, float and pointer type water level indicator and screened ventilator, pressure pump and booster pump to match tank capacity complete	No	1		
25	Column legs composed of equal angle size 60 x 60 x 5 kg/m angle	t	0.60		
26	Cross bracing composed of 30 × 5 x 1.18kg/m flat bar	t	2.69		
27	Horizontal bracing comprised from 40 x 40 x 1.6kg/m equal angle	t	0.70		
28	Top platform main support beam comprised of 150 x 75 x 10 angle	t	0.70		
29	Top platform secondary support beams – 125 x 75 x 20 x3 lipped channel	t	1.00		
	Bolts etc				
30	M16 grade 4.8 bolts	No	32		
31	M12 grade 4.8 bolt	No	160		
	Foundations				
32	Excavate for holes n.e 2m deep	m³	4		
33	Cartaway excavated material	m³	2		
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34	Approved G6 material as filling compacted in 150 mm layers to 93% Mod. AASHTO density.	m^3	2		
35	Concrete blinding under footings (10mpa/19mm stone)	m^3	0.2		
36	Ditto but in bases (25mpa/19mm stone)	m^3	2		
37	Reinforcement in all bar sizes	kg	72		
	220 x 110 x 75mm Brick paving in soldier course to match existing				
38	220mm wide clay brick paving soldier course margin to match existing, set flush with top of concrete slab and jointed in cement mortar on and including 50mm thick concrete (20Mpa - 19mm stone) mortar bed and pointing to top and edge.	m	10		
	Sundries				
39	5000 litre polythene water storage tank size 1800 diameter x 1850mm high, fitted with access lid and inlet hole, with and including flanged or screwed connections for inlet, 15mm outlet and 15mm overflow pipes, hoist and set in position on concrete plinth, approximately 1000mm high above ground level	No	1		
	MOTHER AND CHILD PLAY AREA				
40	Excavate in earth to reduce levels not exceeding 2 m deep.	m^3	17		
41	Extra over all excavations for carting surplus excavated material from the site.	m^3	17		
42	Approved G6 material as filling compacted in 150 mm layers to 93% Mod. AASHTO density.	m^3	28		
43	10mpa concrete in blinding layer	m^3	6		
44	12mm artificial grass	m^2	56		
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	EXCAVATIONS				
45	Excavate in clay soil to reduce levels not exceeding 2 m deep.	m³	59		
46	Extra over excavations in earth for excavation in soft rock.	m³	6		
47	Ditto in hard rock.	m³	3		
48	Extra over all excavations for carting surplus excavated material from the site.	m³	60		
49	Scarify ground to a depth of 150 mm and re compact to 93% Mod. AASHTO density.	m²	59		
50	Approved G5 material as base course 100 mm thick compacted to 95% Mod. AASHTO density under surface bed.	m²	59		
	Cement concrete (25 MPa - 19 mm stone) in				
51	Ground beams	m³	18		
	FENCING				
	NOTE				
	The price for the fencing must include allowances for Stainless Steel Grade 304 sundries such as bolts, nuts and washers				
	Large established trees on the inside of the boundary and forming an obstruction to a straight line must be left undisturbed unless otherwise specified or described in the specification				
	Builder's work in connection with ClearVu fencing				
52	Roughly clear, grade and level ground along fence line between fence poles for a width of 1m both sides including clearing of all vegetation, trees, rocks, rubble and rubbish	m²	296		
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	The following in Hot Dipped Galvanized and PVC coated 100 x 55 x 2 mm profile Bekafix Super Secure Posts - with holes in side flanges for lateral fixation of the ClearVu panel with mini securifor brackets and plastic caps ,Yield strenght : min 320 N/mm2 complete with minimum zinc coating :275 g/m2 (double side determined) Colour : Anthracite RAL 7021				
53	Post size 3200mm long including 600 x 600mm reinforced concrete 20mpa footings, complete with excavations, backfilling etc	No	99		
	''Cochrane ClearVu" similar or equally approved ZincAlu and PVC coated security fencing, gates, etc and setting out Fence system to be maintenance free and carry a 10 year anti-corrosion guarantee. Supplier to be ISO 9001 & Green Building Council approved.				
54	Supply and erect 2.4m high " ClearVu" or other equally approved fence to boundary comprised of 3050 x 2400 mm panels made out of welded mesh, with rectangular apertures size 76.2 x 12.7mm,horizontal and vertical wire diameter size 3.00mm,weld strength: 60% of the minimum tensile strength of the wire,and tensile strength range of wire: 540-690N/m² complete made from Zincalu® super wire and PVC coated - Anthracite RAL 7021	m	197		
	Serrated Top Rail Saw Tooth				
55	3050mm x 100 mm thick top rail with serrated tooth spike 2.5mm thickhot dip galvanised and PVC coated, bolted to panel top as per manufacturer's specification - Anthracite RAL 7021	m	197		
	Underdig				
56	"''Cochrane ClearVu" " or similar 3510 Singleskin Flat Zincalu size 3050 x 450mm high	m	197		
	Galvanised mild steel security gates				
57	Galvanised main vehicular steel gate size 6000 x 2200mm ditto(**Labour Intensive**)	No	1		
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58	64mm Union 3102 or other approved brass padlock	No	1		

ROADWORK INCLUDING PATCHING, REPAIRING POTHOLES AND EDGEBREAKS

NOTE:

All work is to be carried out in accordance with SABS 1200 ME, MF, MH & MK.

SCOPE

This section covers the patching of existing pavement layers, repairing potholes and edgebreaks and includes the follows:

(a) Patching (Local repairwork)
Patching shall be any rehabilitation work to pavement layers (and in exceptional cases to fills and the roadbed) with the purpose of repairing local failures, and which is carried out in an area having a length of less than 25 m, a width less than 1 m or an area of less than 100 m2.

(b) Potholes
The repair of local failures with a surface area of less than 1m2.

(c) Edgebreaks/raised areas
The repair of broken or raised edges requiring reinstatement.

MATERIALS

(a) Patching agent.
i) Bitumen stabilising 60% Stable-grade anionic emulsion complying with SABS 309.

ii) Prime One of the following as directed by the engineer: - MC 30 - MSPI

iii) Chemical stabilising agent. OPC

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iv) Continously graded asphalt. As specified for medium grade, with 80/100 penetration grade bitumen as binder to SABS 1200 as specified in Table 2 and 6.

(b) Potholes i) Prime 60% Stable-grade anionic emulsion complying with SABS 309 diluted 1:1 with water.

ii) Continously graded asphalt. 80/100 Pen/Bit medium grade SABS 1200 as specified in Table 2 and 6.

(c) Edgebreaks and raised areas i) Prime One of the following as directed by the engineer: - MC 30 - MSPI ii) Continously graded asphalt. 80/100 Pen/Bit medium grade SABS 1200 as specified in Table 2 and 6.

(d) Crack sealing Materials for crack sealing can be any of the following:- Hot poured - Nat Pro Lastic (ABE Industrial Product) or similar Cold poured - Petroseal (Abecol) or similar - Inverted emulsion/latex compounds

CLASSIFYING THE MATERIAL

All material excavated from the existing roadprism including subgrade, subbase, base seals and shoulders shall be classified as soft material. No additional payment will be made for various types of material.

PLANT AND EQUIPMENT

The equipment to be used for the conventional breaking-up and excavation of existing pavement layers will be determined by the size and depth of the pavement section to be processed or excavated, taking into consideration the fact that work may have to be carried out in restricted areas.

Only approved cutting or sawing equipment shall be used for cutting or sawing the asphalt and stabilised base layers.

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CONSTRUCTION

(a) Patching (Local repairwork)
The Engineer will demarcate any failed areas to be patched, and shall instruct the contractor regarding the other details of the patching work to be done.

i) Excavating pavement material

Unless otherwise instructed by the Engineer, the patch shall have a neat rectangular shape. The bituminous surfacing shall be cut with an approved cutting device.

Initially 150 mm shall be excavated. After completion of the initial excavation, the Engineer shall be afforded the opportunity to examine it to determine whether further layers shall be removed. The floor of the excavation shall be watered and compacted to 93% modified AASHTOdensity.

ii) Backfilling excavations

The backfill material shall be imported gravel as ordered by the Engineer. The compacted density for each lower layer shall be for:

SSG layer 93% Mod. AASHTO
Subbase layer 95% Mod. AASHTO Base 86% Apparent density

The emulsion-establised base shall be compacted to 100% modified AASHTO density.

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iii) Crack Sealing
Surface cracks in the existing road surface to be sealed as follows:

a) Cracks over 5 mm wide.
The crack to be reamed out using hot lance operations to a minimum depth of 15 mm.

The cracks to be air blasted and cleaned out.

The cracks to be primed using primer as specified by manufacturers.

The cracks to be sealed using a rubber bitumen compound as specified by manufacturers.

b) Cracks 0 - 5 mm wide

The crack to be air blasted and cleaned out.

The crack to be treated using an inverted bitumen emulsion and 3% by mass of SBR latex emulsion.

Crack sealing is not to be carried out during wet conditions.

iv) Restrictions
All excavations for patching shall be backfilled on the same day.

(b) Potholes
The Engineer will indicate the potholes requiring repair.

The contractor shall demonstrate for approval by the Engineer his intended method for backfilling and compacting the continously graded asphalt in potholes.

Unless otherwise ordered by the Engineer, the existing material shall be removed to a depth of 50mm or to the bottom of the pothole, whichever is the grater, in the smallest rectangular area encompassing the pothole.

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The surface of the sides and bottom shall be primed at a rate of 0.7 litre/m2 with diluted emulsion, which shall be allowed to dry.

The continously graded asphalt shall then be placed in layers not exceeding 30 mm, compacted by the approved method and finished off level with the adjacent surfacing.

(c) Edgebreaks / raised areas

This treatment is intended for use where the repair of the edges of the surfaced area is required, including restoring the road edges to the true edge lines and levels of the original road to such other line as may be ordered by the Engineer.

Before the repair of edgebreaks/raised areas is carried out and, where the edges of the surfacing have broken away, the existing broken edges shall be cut back in neat lines until a sound edge is obtained.

All material between the edge of the surfacing and the line to which the surfacing has to be built up, shall be removed to a depth of 60 mm below the final road surface or until firm material is found, and the surface so exposed shall be cleaned and primed at a rate of 0.70 litre/m2.

The contractor shall demonstrate for approval by the Engineer his intended method for backfilling and compacting continously graded asphalt in edgebreaks/ raised areas.

The edges shall then be built up with continously graded asphalt as ordered by the Engineer and shall be well compacted by the approved method.

The built-up edges shall be finished neatly to the required line and levels

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	Raising and Levelling of Existing Manholes Where re-surfacing is to take place and the existing manhole covers will be covered by the new layer. The said manhole cover will be raised to the appropriate level to be flush with the surface of the re-sealed level.				
	Protection of Existing Services Where remedial layer works are to be carried out the depth and position of the relevant service is to be determined by hand excavation. In the case where the affected services have a cover of less than 300mm the services will be encased in a soil-crete mix.				
	Road Signs and Markings Where re-surfacing and related operations incorporated in this contract require the removal of traffic signs the affected sign shall be removed and stored in a safe place until such time as the work done in the area is complete. The said sign is then to be replaced in its original position. Road, paint markings are to be re-painted after completion of the re-sealing operation in the affected areas.				
59	Precast cement concrete (20 MPa - 6 mm stone) barrier kerb size 150 x 250 mm with one side splayed back 25 mm for a height of 125 mm including exposed angle rounded to a 20 mm radius, the kerb jointed in cement mortar on and including 75 mm concrete (20 MPa - 19 mm stone) bed haunched up on both sides, with 300 x 125mm average precast concrete channel including all necessary excavations, backfilling, formwork, etc.	m	112		
	High quality road marking paint in accordance with SABS 731				
60	Ditto in 100 mm wide yellow lines (ditto).	m	30		
61	Ditto in 300 mm wide white lines (ditto).	m	92		
62	Ditto directional arrow in white paint in accordance with the South African Road Traffice Manual.	No	2		
63	Ditto STOP ditto.	No	1		
64	Ditto Zebra crossing ditto.	m	1		
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65	Ditto Disabled Parking ditto.	No	1		
	PAVING				
66	Excavate in earth to reduce levels not exceeding 2 m deep.	m³	296		
67	Extra over all excavations for carting surplus excavated material from the site.	m³	118		
68	Scarify ground to a depth of 150 mm and re-compact to 93% Mod. AASHTO density.	m²	591		
69	Approved G5 material as filling compacted in 150 mm layers to 93% Mod. AASHTO density.	m³	177		
70	Approved G7 material as filling compacted in 150 mm layers to 93% Mod. AASHTO density.	m³	177		
	220 x 110 x 60mm concrete brick paving with minimum longitudinal fall of 1% on a tranverse fall of at least 2% on 25mm compacted sand bed with 10mm joints filled with 1:10 cement sand fine jointing sand swept and vibrated into joints,all laid on subgrade conforming to SANS 1200 D Degree of Accurancy 1 including inspection and re-sanding after 3 months.				
71	Paving to Herringbone Bond pattern	m²	591		
72	Pointing only to edge of paving.	m	156		
73	220mm Wide brick-on-flat tread including 10mm thick mortar bed and pointing to top and one face.	m	156		
	One Layer 250 Micron Waterproof Sheeting				
74	One layer 250 micron polyethylene waterproof sheeting in accordance with SABS 952 Type C lapped 150 mm at joints and sealed with pressure sensitive tape and laying under paving.	m²	591		
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	Sundries				
75	Tricate or other approved weed killer in proportion 168kg to 1124 litres of water per hectare plus Agrol 90 sprayed onto surfaces of ground under floors, etc.	m²	591		
	RETAINING WALLS				
76	Enviro-wall or other equally approved blocks size approximately 275 x 300mm laid at a 70 degree slope (23kg per block / +/- 27 blocks per m2)	m²	83		
77	50mm thick topsoil	m²	33		
78	100mm thick G5 material	m²	40		
79	300mm wide, 19mm crushed stone drainage layer	m²	10		
80	300mm wide precast concrete U-Drain on 100mm thick concrete bed	m	119		
81	A4 Bidim geotextile membrane	m²	83		
82	20mpa reinforced concrete base and backing	m³	5		
83	Reinforcement in all bar sizes	t	0.49		
84	Approved G5 material as filling compacted in 150 mm layers to 93% Mod. AASHTO density.	m³	165		
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SECTION NO. 5

ALTERATIONS

BILL NO. 1

PREAMBLES

For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles

For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev Oct. 1993) as well as to the "Model Preambles for Trades" (1998) and Supplemetary preambles below.

Tenderers are advised to visit the site and to inspect the works in conjunction with the drawings in order to ascertain the exact nature and extent of the work to be done. The work is to be carried out in sections in accordance with the Architect's instructions in such a manner as to cause the minimum of nuisance and delay and the various sections are to be handed over for occupation as soon as they are completed and Tenderers must allow accordingly for this in their pricing.

The Contractor will be held solely responsible for checking all floor levels and dimensions in the existing building in order that the new extensions may be correctly lined up. Should any discrepancies be found in the Architect's drawings he should be asked for a decision before continuing with the work.

The Contractor will be held solely responsible for any damage to persons and property, for the safety of the new and existing structure throughout the whole of the contract and must make good at his own expense any damage that may occur.

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Old materials described as "carefully take out, set aside for re-use and later refix in new position" are to be carefully removed, stored and protected from injury, made good as required and if broken or damaged through taking out, removing, storage, etc, are to be replaced by the Contractor at his own expense. Tenderers are advised to inspect these materials to ascertain their condition and allow accordingly for this in their pricing.

Old materials, which are to become the property of the Contractor as they are pulled down, together with all building debris from any cause whatsoever, are to be immediately carted away and the site left clean and unencumbered. Allow for watering the works sufficiently to prevent nuisance from dust.

Allow for giving notice to local or other authorities for disconnecting electric light, water and drainage mains and removing telephone wires, etc, and pay all fees in connection therewith and afford every facility to the workmen carrying out this work.

All materials in this section are measured as new except where old material is specifically mentioned as being re-used.

Old materials, if sound and suitable and approved by the Architect, may be re-used in the new structure. This applies particularly to timber which may be re-used for joists, brandering, fittings, etc and broken bricks and other similar material which may be used as filling and hardcore.

Wherever old materials are used instead of the new materials measured, an adjustment will be made by the Quantity Surveyor in the final settlement of accounts by deducting the net cost of the new materials and crediting the Contractor with the amount, if any, allowed by him for the old materials.

When pricing, Tenderers are to allow as follows:

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Where door and window openings, etc, are specified to be filled in, or where jambs, cills, etc are specified to be built up, brickwork shall be of hard burnt clay stock bricks in 5.1 cement mortar unless otherwise specified, cut, toothed and bonded into existing brickwork and pinned up as required with slates or other hard materials. Brickwork built to fair face or in facings is to be of Travetine facebricks and pointed to match existing. Plaster is to be 5.1 cement plaster unless otherwise specified.

Where lintols are specified as reinforced concrete the prices are to include for breaking out brickwork over for and inserting cement concrete (20MPa) lintol with 230mm bearing on each end and 254mm deep and reinforced with and including one 12mm diameter mild steel rod for each half brick thickness of wall and including formwork. The steel rods are to be hooked at ends and embedded 25mm up from bottom of lintols. Lintols exceeding 1370mm span to be similarly reinforced but with 20mm diameter mild steel rods.

Where lintols are specified as precast concrete the prices are to include for breaking out brickwork over for and inserting precast prestressed cement concrete (30MPa) lintol with 230mm bearing on each end size 108 x 75mm deep for each half brick thickness of wall.

The term "take out" includes all work taken out, taken up, taken down, taken off, etc ; the term "break up" includes all work broken up, broken down, broken off, etc and the term "hack off" includes all work hacked off, hacked up, hacked down, etc.

The term "make good" is to include all labour and material required to match existing work.

The terms "take out and remove door", "take out and remove window", "carefully take out, set aside for re-use and later refix window in new position", etc are to include all materials connected with such door or window such as doors, windows, fanlights, frames, ironmongery, glass, architraves, beads, fillets, cramps, dowels, etc.

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	The terms "take out and remove sink unit", "take out and remove lavatory basin", "carefully take out, set aside for re-use and later refix W.C. suite in new position", etc are to include all materials connected with such sanitary fittings such as brackets, cisterns, taps, traps, flushing valves, flush pipes, etc and are to include for the cutting back and stopping off of supply and waste pipes. ---------- ----------				
	The contractors unit rates must allow for disposal of disposal or carting away of material,fittings or fixtures so described to a prescibed dumping site as instructed by the Architect ----------				
	Wire mesh were referenced shall be as follows: Wire thickness = 3.0mm thick Strand width = 4.5mm thick Diamond size = 25mm x 50mm				
	GENERAL ALTERATIONS				
	Carefully take out and remove the following asbestos material complete by ad approved Asbestos Removal Contractor under the direction and supervision of an Approved Asbestos Removal Authority				
1	Roof sheets, with and including fascias, barge boards, gutters and downpipes and leave roof structure ready to receive new sheeting and rainwater goods(sheeting and rainwater goods elsewhere measured)	m²	418		
2	Ceiling boards including brandering and leave trusses ready to receive new ceiling boards and brandering	m²	493		
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3	Extra over for cost of Approved Asbestos Inspection Authority (AIA) to be procured and paid in advance by the Contractor. The AIA to undertake all tasks and obligations as fully detailed in the latest published asbestos laws which entails as a minimum, identifying asbestos material on site, planning and implementation of the careful removal and disposal of all asbestos material, including reporting and submission or all licences, permits and certifications to the health and safety agent for the duration of the works			SUM	
	Break up and remove				
4	Half brick wall	m²	7		
5	One brick wall	m²	47		
6	Reinforced concrete slab and leave opening ready to receive new foundations for new brick walls (foundations and brick walls elsewhere measured)	m³	4		
7	Tarmac surfaces approximately 25mm thick and leave ground ready to be compacted (compaction elsewhere measured)	m²	359		
8	Concrete tank stand complete	m³	1		
	Take out and remove				
9	Pedestrian gate size approximately 1000 x 2100mm high	No	2		
10	Single door size 900 x 2100mm high and leave opening ready to be bricked up (bricking up elsewhere measured)	No	39		
11	Door size approximately 900 X 2100mm	No	4		
12	Alter existing door opening size 900 x 2100mm high in half brick wall to form a door size 1455 x 2050 mm, break out at head for a height of 2000mm,insert prestressed concrete lintel over, and make good including to plaster.	No	1		
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13	Alter existing window opening size approximately 600 x 600mm high in a one brick wall to form an Aluminium window opening size 840 x 2100mm high, break back at one jamb for a width of 300mm and under cill insert a pre stressed concrete lintel over, build in pretressed steel window frame, form 100 wide 10mpa concrete threshold and make good including to plaster both sides and to reveals.	No	2		
14	Alter existing window opening size approximately 600 x 600mm high in a one brick wall to form a door opening size 832 x 2032mm high, break back at one jamb for a width of 300mm and under cill insert a pre stressed concrete lintel over, build in pretressed steel window frame, form 100 wide 10mpa concrete threshold and make good including to plaster both sides and to reveals.	No	4		
15	Galvanised steel window size 600 x 600mm high and make good leaving the opening ready to receive door size 900 x 2125mm, else where measured.	No	12		
16	Take out and remove existing double door and make good to the opening and finish.	No	2		
17	Single door size 900 x 2100mm high and leave opening ready to be bricked up (bricking up elsewhere measured)	No	1		
18	Drywall partition including studs and tracks complete	m	13		
19	Single bowl sink size 650 x 450mm including removing brackets, piping from wall, capping water pipes, etc and leaving wall and floor ready to receive new single bowl sink (New single bowl sink,waste pipes etc elsewhere measured)	No	7		
20	Blinds for windows measuring 2125 x 840 and make good finish and leave it ready for new blinds	No	24		
21	Boundary fence and posts complete and leave ready to receive new fence (new fence elsewhere measured)	m	183		
22	Jojo tank and accessories and erect as directed by the PA	No	1		
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23	Signage including posts and brickwork support size 3 000 x 3000mm high overall	No	1		
24	Waste cage size 4 000 x 1 800mm high overall	No	1		
	Making Good to Existing				
25	Envirowall Blocks size 275mm x 300mm (approx 25kg per block / +/- 27 blocks per m2) and repack at 70° angle to a height between 1.6 to 3.5m high	m²	117		
	Hack out and remove				
26	Ceramic tiles	m²	492		
	Carefully prepare floors to receive moisture barrier by light grit blasting or high pressure water blasting floor surfaces to produce a lightly exposed aggregate surface (ICRI CSP3) that will absorb water. Stop, rinse the treated substrate with clean water and ensure the substrate is in a saturat ed surface dry (damp) condition before the application of X Shield VaporStop HB or other barrier (elsewhere measured). Any cracks or bug holes should be filled with X-Shield BugFill or other suitable filler after application of X-Shield Va porStop HB. Note: Cementitious under layment and patching should only be installed over X-Shield VaporStop HB or other recommended barrier.				
27	On concrete floors	m²	492		
	Carefully Take Out and Remove				
	The contractor must make all necessary allowances e.g. scaffolding for a height exceeding 3m and n.e. 10m. , health and safety etc and must factor in the costs of any direct or indirect damage to floors, walls, the existing roof and ceilings etc that may result during the execution of this work				
28	Clerestory IBR roof sheeting and insulation, inspect roof structure and provide a written report to the Principal Agent and leave existing structure ready to receive new insulation and roof sheeting (Insulation and roof sheeting elsewhere measured)	m²	234		
	Carried to Abstract			R	

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ALTERATIONS

29	125 x 125mm gutters and leave fascia boars ready to receive new gutters (new gutters elsewhere measured)	m	60		
	The contractor must request for a written instruction concerning the relocation of joinery fittings as described below. The contractor must make the necessary allowances for the complete replacement or reinstatement of joinery that may be damaged during the removal, reinstatement or transit of joinery				
30	Timber shelving size approximately 3500 x 3000mm high and reassemble in new position as directed by the architect	No	3		
31	Break out one brick wall for counter opening size approximately 1500 x 1200mm high , insert concrete lintol size 75 x 150mm, make plaster and paintwork both sides and leave opening ready to receive new roll up door (door elsewhere measured)	No	4		
32	Take out and remove existing stainless steel sink and tap	No	7		
33	Take out and remove, stop, service parts and replace consumables pertaining to the wall mounted elbow action tap and CP waste	No	6		
34	Ditto but to wall mounted hot and cold elbow action taps	No	3		
35	Take off and remove 15mm diameter bib tap, remove pipework from wall, cap piping and leave wall ready to receive new tap and pipework (elsewhere measured)	No	4		
36	Take out and remove shower set including shower rose, mixer unit with hot and cold connections, remove all pipework from wall, cap piping and leave wall ready to receive plaster and paint (elsewhere measured)	No	1		
37	Take off and remove existing 590 x 420mm ceramic medical basin including removing and capping piping and make good wall and leave wall ready to receive new basin (elsewhere measured)	No	8		
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38	Take off and remove ceramic washhand basin size 525 x 420mm complete with taps, traps, etc., including piping and make good wall and leave wall ready to receive new finishes (elsewhere measured)	No	17		
39	Take out and remove ceramic WC and cistern complete including removing piping from wall, capping water pipes and leave wall and floor ready to receive new WC and cistern (elsewhere measured)	No	9		
40	Take out and remove sink size 1300 x 400mm and cupboard under including two pillar cocks from fitting and set aside for re-use and temporarily stop off water and waste	No	5		
41	Take out and remove sluice sink size 3600 x 500mm including removing brackets, piping from wall, capping water pipes and make good wall	No	2		
	<u>Major crack - width more than 5.0 mm</u>				
42	Remove the plaster in the vicinity of the crack (350mm width on each side of crack) exposing the brickwork and chisel out a V shape,clean the crack with compressed air and ensure that dirt,fine and loose material are removed completely,fix in grouting nipples in the V-groove on both faces of the wall at spacing of 150-200 mm c/c, seal the crack on both the faces of the wall with ABE epidermix 365 or other equally approved crack injection compound, nail fix a diamond wire meshover the sealed crack (spanning at least 300mm diameter on either side of the crack) with and including holding it to the wall through spikes or bolts at 300mm c/c and leave surface ready to receive new plaster (Plaster elsewhere measured)	m²	132		
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ALTERATIONS

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ALTERATIONS

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MIDDLE TERRACE CLINIC
Bill No. 1
ALTERATIONS

Item No			Quantity	Rate	Amount R
	BILL NO 2				
	EARTHWORKS				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	No allowance has been made in the measurements for bulking. The contractor must make allowance for bukling in his/her unit rates.				
	Excavation in earth not exceeding 2m deep				
43	Trenches	m^3	82		
44	Reduced levels under floors	m^3	46		
	Extra over all excavations for carting away				
45	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m^3	3		
	EXCAVATIONS IN STRATA OF A MORE DIFFICULT CHARACTER				
	Extra over trench and hole excavations in earth for excavation in				
46	Soft rock	m^3	1		
47	Hard rock	m^3	11		
	Risk of collapse of excavations				
48	Sides of trench and hole excavations not exceeding 1,5m deep	m^2	218		
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	Keeping excavations free of water				
49	Keeping excavations free of water		Item		
	FILLING ETC				
	Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 93% Mod AASHTO density				
50	Backfilling to trenches, holes, etc	m³	38		
	G5 Earth filling material supplied by the contractor, compacted to 93% Mod AASHTO density				
51	Backfilling to trenches, holes, etc	m³	13		
52	Under floors, steps, pavings, etc	m³	67		
	G7 Earth filling supplied by the contractor, compacted to 98% Mod AASHTO density				
53	Under floors, steps, pavings, etc	m³	64		
	Bedding				
54	50mm Thick bed of approved sand.	m²	106		
	Compaction of surfaces				
55	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density	m²	92		
	Carried to Abstract			R	

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Bill No. 2
EARTHWORKS

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Bill No. 2

EARTHWORKS

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Bill No. 2
EARTHWORKS

Item No			Quantity	Rate	Amount R
	BILL NO 3				
	CONCRETE, FORMWORKAND REINFORCEMENT				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES				
	15MPa/19mm concrete				
56	50mm thick surface blinding under footings and bases	m^3	3		
	REINFORCED CONCRETE				
	25MPa/19mm concrete				
57	Strip footings	m^3	24		
58	Ramps including landings and generator plinths	m^3	18		
	30MPa/19mm concrete				
59	Seamless surface beds	m^3	26		
60	Stairs, including landings, beams and inverted beams	m^3	21		
	CONCRETE SUNDRIES				
61	Extra for steel power floating surface bed to a non slip finish including any additional cement necessary	m^2	92		
62	Extra for floating up to non slip finish to treads of steps including any additional cement necessary.	m^2	13		
	Carried to Abstract			R	

MIDDLE TERRACE CLINIC
Bill No. 3
CONCRETE, FORMWORK AND REINFORCEMENT

63	Sika or other equally approved floor hardener	m²	92		
	FORMWORK				
	SMOOTH FORMWORK (DEGREE OF ACCURACY 1)				
	Smooth off shutter formwork (use and waste) to concrete				
	Sides, edges, risers, etc.				
64	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	103		
65	Edges exceeding 300mm high	m²	11		
	EXPANSION JOINTS				
	Expansion joints with softboard between vertical concrete and brick surfaces to SABS 1077				
66	10mm Thick Jointex expansion joint filler vertically between concrete or brick surfaces not exceeding 300 mm high	m	294		
	Carried to Abstract			R	

	REINFORCEMENT (PROVISIONAL)				
	High tensile steel reinforcement to structural concrete work				
67	Reinforcement in all bar sizes	t	3.61		
	Fabric reinforcement				
68	Reference 617 welded mesh reinforcement lapped 200mm at edge of adjoining sheets and bound with annealed wire and laying in concrete surface beds / ramps (Measured nett - no allowance made for laps)	m²	107		
	Carried to Abstract			R	

MIDDLE TERRACE CLINIC
Bill No. 3
CONCRETE, FORMWORK AND REINFORCEMENT

MIDDLE TERRACE CLINIC

Bill No. 3

CONCRETE, FORMWORK AND REINFORCEMENT

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Bill No. 3
CONCRETE, FORMWORK AND REINFORCEMENT

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	BILL NO 4				
	CONCRETE, FORMWORKAND REINFORCEMENT				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	NOTE: Prices are to include for building in surrounds as single units or in combinations of two or more units to the required patterns.----------				
	Precast Vibrated Cement Concrete (30MPa) Winblok Window Surrounds Finished Smooth From The Mould On Exposed Surfaces, Built Into Brickwork As The Work Proceeds, Bedded And Jointed In 4.1 Cement Mortar And Pointed With Ruled-In Vertical And Horizontal Joints Both Sides (Glazing And Vents Elsewhere Measured)				
69	Window size 2125 x 840mm high	No	4		
70	Window size 600 x 500mm high	No	10		
	Carried Forward to Summary of Section No.			R	

Item No			Quantity	Rate	Amount R
	BILL NO 5				
	MASONRY				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	Samples of all masonry building units, shall consist of a minimum of 6 units				
	FOUNDATIONS				
	Brickwork of NFX(E) bricks (28 MPa minimum compressive strength) in class II mortar in loadbearing walls etc				
71	Half brick walls	m²	2		
72	270mm Hollow walls of two half brick skins with cavities filled in with and including 15MPa/20mm concrete	m²	121		
73	Piers with cavities filled in with and including 15MPa/20mm concrete	m³	1		
	SUPERSTRUCTURE				
	Brickwork of NFX(E) bricks (28 MPa minimum compressive strength) in class II mortar in loadbearing walls etc				
74	Piers with cavities filled in with and including 15MPa/20mm concrete	m³	2		
75	One brick walls	m²	36		
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76	270mm Hollow wall formed of two half brick thicknesses with 50mm cavity between tied together with and including galvanized wire ties of the Butterfly or Modified PWD type in accordance with SABS 28 spaced at not more than one metre centres alternately to every third course and staggered.	m²	254		
77	300mm Hollow wall formed of two half brick thicknesses with 80mm cavity between tied together with and including galvanized wire ties of the Butterfly or Modified PWD type in accordance with SABS 28 spaced at not more than one metre centres alternately to every third course and staggered.	m	227		
78	Ditto but in bricking up openings etc	m²	20		
79	Build 50mm wide cavity closed for two courses at top of wall.	m	20		
80	Build 50mm wide cavity of wall solid half brick wide at jambs or ends of wall.	m	46		
81	Build 50mm wide cavity of wall solid half brick wide at head of opening	m	8		
	<u>Miscellaneous</u>				
82	Cut toothings and bond new brickwork to existing.	m²	7		
83	Bag down face of new brickwork with 1:3 cement slurry.	m²	117		
84	75mm wide welded high tensile steel wire brick reinforcing fabric and building into walls.	m	1 604		
85	154mm Wide ditto.	m	493		
86	75 x 110mm Wide presstressed precast concrete lintol not exceeding 3m and building into brickwork	m	120		
87	2 x 30mm Galvanised hoop iron tie 450mm girth with one end twice screwed to timber frame and other end built into brickwork and turned up into joint.	No	252		
	Carried to Abstract			R	

MIDDLE TERRACE CLINIC
Bill No. 5
MASONRY

88	1,6 x 40mm Galvanised hoop iron tie 1000mm girth, once bent and with one end wrapped around rafter ends, and another end built into brickwork.	No	40		
89	4mm Galvanised wire in ties for wall plate 1500mm girth built into brickwork	No	122		
90	Galvanized Storm Clip framing anchor designed for the connection of structural timber members at angles to each other.	No	490		
	FACINGS				
	FBS facing bricks and pointing with 10 mm square recessed joints to match existing				
91	Allow for constructing a sample face brick panel of half brick thickness and and 2 square metres in area in a north facing position to the Representative/ "Agent's approval maintain, protect and" remove at completion of contract or when directed by the Representative/ Agent.	No	1		
92	Face brick on edge door cill size 230mm wide x 110mm high, bedded in 1:5 cement mortar including cutting and fitting between reveals and pointing on top and front face.	m	3		
93	Face brick soldier course band size 110mm wide x 255mm high recessed inbetween outer skins of cavity wall and build against internal brick lining, bedded in 1:5 cement mortar and pointing to front face.	m	117		
94	Face brick on edge lintol above window head size 230mm wide x 110mm high, bedded in 1:5 cement mortar including cutting and fitting between reveals and pointing on bottom and front face.	m	24		
95	Face brick on edge lintol above door head size 230mm wide x 110mm high, bedded in 1:5 cement mortar including cutting and fitting between reveals and pointing on bottom and front face.	m	17		
96	Face brick on edge window cill set sloping and slightly projecting on bottom edge in 1:5 cement mortar including cutting and fitting between reveals, fair splay cutting under and pointing on top, edge and projecting soffit (In No. 28)	m	33		
	Carried to Abstract			R	

MIDDLE TERRACE CLINIC
Bill No. 5
MASONRY

97	Extra over ordinary brickwork for facing in stretcher bond and pointing.	m²	329		
	CONCRETE				
	Cement concrete (25 MPa - 19 mm stone) in				
98	Filling to cavity of hollow wall	m³	4		
	Carried to Abstract			R	

MIDDLE TERRACE CLINIC

Bill No. 5

MASONRY

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MIDDLE TERRACE CLINIC
Bill No. 5
MASONRY

Item No			Quantity	Rate	Amount R
	BILL NO 6				
	WATERPROOFING				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	MEMBRANE WATERPROOFING				
	Damp-proof courses				
99	250 Micron polyethylene sheeting in accordance with SABS 952 Type C lapped 150 mm at joints and sealed with pressure sensitive tape and laying under concrete surface bed complete with condensation barrier	m²	94		
100	375 Micron embossed black polyethylene sheeting in accordance with SABS 952 Type B lapped 150 mm at ends and full widths of walls at angles and building into walls as dampproof course.	m²	325		
	Pointing, sealants, etc.				
101	Rake out 10mm wide expansion joint for a depth of 15mm, clean, prime and seal with an approved external quality polyurethane sealing compound applied with a pressure caulking gun.	m	353		
102	Polysulphide cover to jointex to finish flush with face of recessed square mortar joints in facebrick	m	353		
103	Silicon pointing to aluminium windows	m	138		
104	Ditto to aluminium doors	m	78		
105	Ditto to timber door frame	m	88		
	Carried Forward to Summary of Section No.			R	

MIDDLE TERRACE CLINIC
Bill No. 6
WATERPROOFING

Item No			Quantity	Rate	Amount R
	BILL NO 7				
	ROOF COVERINGS ETC				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	0.8mm Z275 Prepainted factory coated finished galv. IBR sheeting in continues lengths on double sided reflective aluminium foil faced insulation barrier(reflective facing to be exposed to roof sheets) colour to match existing and Fittings Fixed To Timber purlins				
106	0,8mm Thick IBR roof sheeting not exceeding 25° fixed to timber purlins (elsewhere measured) with hook bolts, including plastic washers, etc.	m²	548		
107	Ridge capping 550mm girth three times bent and notched on site to suit profile roof	m	32		
108	625mm IBR flashing 3 times bent and fixing under roof covering	m	10		
	Insulation tested for conformance with SABS 1381:Part IV-1985,with a class one fire rating in accordance with accordance with SABS 0177:Part III-1981 and BS 476 part 5,6,7,				
109	40mm thick flexible faced insulation board, white washable coated fibre glass tissue faced.	m²	548		
	Carried to Abstract			R	

	0.8mm Klip-Lok 406 G550 ZINCAL® / COLORPLUS finished sheeting on 40mm thick flexible faced POLYISOCYANURATE insulation board, white washable coated fiberglass tissue faced and Fittings Fixed To Timber purlins			
110	0.8mm Klip-Lok 406 G550 ZINCAL® / COLORPLUS finished sheeting on 40mm thick flexible faced POLYISOCYANURATE insulation board, white washable coated fiberglass tissue faced.not exceeding 25° fixed to timber purlins (elsewhere measured) with hook bolts, including plastic washers, etc.	m²	104	
111	Head wall flashings 350mm girth	m	27	
	Insulation tested for conformance with SABS 1381:Part IV-1985,with a class one fire rating in accordance with accordance with SABS 0177:Part III-1981 and BS 476 part 5,6,7,			
112	Sisalation FR 405 multi-purpose grade reinforced aluminium foil insulation double sided,light grammage,durable reflective foil laminate incorporating layers of aluminium foil,high strength kraft paper and reinforcing scrim bonded together with low density polyethylene,drawn tautly across rafters (rafters elsewhere measured) with purlins (purlins elsewhere measured) spaced at less than 1500mm centres and secured to each rafter with 3.2mm thick 38mm x 1100mm hardboard counter batten strips (herein measured) positioned flush with bottom edge of the material thus leaving 150mm overlap exposed at the top for the next layer and lapped 150mm at ends	m²	104	
	Carried to Abstract			R

MIDDLE TERRACE CLINIC
Bill No. 7
ROOF COVERINGS

MIDDLE TERRACE CLINIC

Bill No. 7

ROOF COVERINGS

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MIDDLE TERRACE CLINIC
Bill No. 7
ROOF COVERINGS

Item No			Quantity	Rate	Amount R
	BILL NO. 8				
	CARPENTRY AND JOINERY				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	TIMBER ROOF STRUCTURE				
	Monoplaner Prefabricated Connector Plate Roof Trusses at 1000mm maximum centres with a pitch of 25 Degrees and suitable for IBR roof sheeting or other with 50 x 76mm purlins (elsewhere measured) at 1050mm centres and Gypsum plasterboard ceiling (Gypsum plasterboard ceiling elsewhere measured) with and including brandering herein measured at 450mm centres				
113	Truss size 3 920 mm span x 1500mm high with 650mm overhang both ends.	No	11		
114	Truss size 9 000 mm span x 1500mm high with 650mm overhang both ends.	No	4		
115	Truss size 9 700 mm span x 1500mm high with 650mm overhang both ends.	No	3		
	Structural Timber				
	Sawn SA Pine tanalith treated Grade M4				
116	4500mm long, 150 x 50mm SAP exposed timber rafter @ 1050mm centres treated with approved timber preservative paint	No	12		
	Carried to Abstract			R	

117	50 x 50mm battens,bolted	m	68		
118	75 x 50mm SAP bracing and runners	m	42		
119	75 x 50mm SAP Purlins,bolted	m	138		
120	38 x 114mm Wall plate bolted to brickwork	m	69		
	Fascias etc.				
	Fibre reinfoced cement				
121	12 x 225mm Fascia plain (ungrooved) screwed with two countersunk brass screws into and including vertical 50 x 50mm SAP batten fixed to rafter also fixed with two x countersunk brass screws	m	99		
122	210 x 210mm Pressed winged bardgeboard, butt jointed with and including H-profile plastic jointing strips and screwed to ends of purlins with two brass screws at 1000mm centres	m	74		
	DOORS, ETC.				
	SABS Semi Solid core flush doors with 10mm hardwood edges faced with tempered smooth faced hardboard for painting hung to timber frames No 3 PVC buffers to closing				
123	44mm thick semi solid core flush door (D02) size approximately 900 x 2125mm high as per Architects drawing MDA 290 C	No	23		
124	44mm thick semi solid core flush door (D02a) size approximately 900 x 2125mm high as per Architects drawing MDA 290 C	No	6		
125	44mm thick semi solid core flush door (D02b) size approximately 900 x 2125mm high as per Architects drawing MDA 290 C	No	1		
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126	44mm thick solid core interior door (DO3) by solid doors (Pty) Ltd or equal approved with wide horizontal grooves (Product code: 12E0180), faced with 10mm tempered veneer faced hardboard placed horizontally for painting size approximately 1455 x 2125mm high as per Architects drawing MDA 290 C	No	6		
	SABS Solid core flush doors with 10mm hardwood edges faced with tempered smooth faced hardboard for painting hung to timber frames No 3 PVC buffers to closing				
127	44mm thick solid core door (DO3) with horizontal grooved solid core interior, faced with tempered veneer faced hardboard placed horizontally for painting size approximately 1445 x 2050mm high overall as per Architects drawing MDA/290 B	No	2		
	Wrot Meranti				
128	44 mm Framed, ledged, braced and batten double door size 900 x 2125mm overall (D04 & 4a) each leaf consisting of 22 x 150mm top and bottom rail,22 x 70mm tongue and groove vee jointed boarding with 3mm thick meranti ply panel to internal face of door,44 x 70mm grooved and splayed meranti weatherboard,32 x 108mm twice rebated selected meranti lining with 32 x 108mm transom and 12 x 32mm meranti planted stop as per Architects drawing MDA 290 C	No	6		
	JAMB AND SOFFIT LININGS AND FRAMED FRAMES				
	Note:				
	The linings and frames are to include for securing in openings in drywall partitioning with self tapping screws drilled and fixed to the steel studding or to openings in brick walls, with screws and nylon inserts in drilled mortices. The heads of screws are to be countersunk and pelleted.				
	Wrot Meranti framed frames				
	Carried to Abstract			R	

	Framed frames to doors formed out of 75 x 100mm meranti frame with lugs at every fifth brick course for building into 230 /270mm wall with and including 3 x no. PVC buffers for closing				
129	Plain frame for door opening size 900 x 2100mm fixed to brickwork	No	36		
130	Plain frame for door opening size 1455 x 2100mm fixed to brickwork	No	6		
	BEADS, ARCHITRAVES, ETC.				
	Wrot Meranti				
131	19mm quadrant beads	m	124		
132	12 x 44mm Stop	m	58		
	SKIRTINGS, RAILS, ETC.				
133	38 x 220mm twice angle rounded saligna hardwood bump rail plugged and screwed to wall with two x countersunk screws at approximately 70mm centres, the bump rail 1000mm affl as per Architects drawing MDA 290/301	m	294		
	Carried to Abstract			R	

JOINERY FITTINGS

134	Guard House (Ref: MDA290C-206) - Rectangular shaped fitting size approximately 2000mm long x 600mm wide x 750mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Drawer and Door: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 22mm supawood seen end with Max on Top HPL (Solid colour) finish with impact edge trim to match 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1	
135	Patient Vitals and Observation Room (Ref: MDA290C-206) - Open shelving size approximately 2000mm long x 400mm wide x 1500mm high, 22mm thick supawood (Approx 4 in number), including 1150mm x 2000mm x 22mm supawood supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood continuous support batten with Max on Top HPL (Solid colour: White) 22mm supawood shelf and carcass with Max on Top HPL (Solid colour: White). 2mm pvc impact edge to all exposed edges	No	1	
	Carried to Abstract			R

MIDDLE TERRACE CLINIC
Bill No. 8
CARPENTRY AND JOINERY

136	Reception (Ref: MDA290C-206) - L - shaped fitting size approximately 4315mm long x 2392mm wide x 750mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 4315mm x 600mm x 22mm thick supawood fixed on mild steel gallows bracket Drawer and Door: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions 22mm supawood seen end with Max on Top HPL (Solid colour) finish with impact edge trim to match M	No	1		
	Carried to Abstract			R	

137	MCWH Consulting Room (Ref: MDA290C-207) - Rectangular - shaped fitting size approximately 1950mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) Door: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

MIDDLE TERRACE CLINIC
Bill No. 8
CARPENTRY AND JOINERY

138	Emergency Treatment Room (Ref: MDA290C-207) (Shelving and Fitting as herein described) - Open shelving size approximately 2795mm long x 400mm wide x 1500mm high, 22mm thick supawood (Approx 4 in number), including 1150mm x 2000mm x 22mm supawood supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood continuous support batten with Max on Top HPL (Solid colour: White) 22mm supawood shelf and carcass with Max on Top HPL (Solid colour: White). 2mm pvc impact edge to all exposed edges Rectangular shaped fitting size approximately 2795mm long x 600mm wide x 900mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) Door: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

139	Staff Room / Meeting (Ref: MDA290C-207) - Rectangular shaped fitting size approximately 3660mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: Door: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
140	Visiting Doctors Counselling Room (Ref: MDA290C-207) - Rectangular shaped fitting size approximately 2655mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) Door: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

MIDDLE TERRACE CLINIC
Bill No. 8
CARPENTRY AND JOINERY

141	Admin Managers Office (Ref: MDA290C-207) (Shelving and Fitting as herein described) - Open shelving size approximately 1950mm long x 400mm wide x 616 mm high with 22mm thick supawood (Approx 4 in number), including 100mm brass drop bolt, fitted to internal fixed leaf of cupboard door Door Lock: Union 22mm Brass Cylinder Cupboard dead lock (Product Code: 452-22PL) 16mm white melamine internal carcass Door: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) Fitting Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Door: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
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142	Consulting Room 01 (Ref: MDA290C-208) - Rectangular shaped fitting size approximately 2655mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
143	Consulting Room 02 (Ref: MDA290C-208) - Rectangular shaped fitting size approximately 2655mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
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MIDDLE TERRACE CLINIC
Bill No. 8
CARPENTRY AND JOINERY

144	Consulting Room 03 (Ref: MDA290C-208) - Rectangular shaped fitting size approximately 2655mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
145	Consulting Room 04 (Ref: MDA290C-208) - Rectangular shaped fitting size approximately 2655mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
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MIDDLE TERRACE CLINIC
Bill No. 8
CARPENTRY AND JOINERY

146	Store Room 02 (Ref: MDA290C-208) - U - shaped fitting size approximately 3693mm long x 1915mm wide x 1915mm the other side x 2172mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm SA Pine Slatted shelf fixed to 22mmx50mm support struts 22mm SA Pine solid support panels spaced at max 720mm cc 22mm SA Pine solid base, fixed to concrete floor surface 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
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147	Pharmacy Shelving (Ref: MDA290C-209) - U - shaped fitting size approximately 6500mm long x 2080mm wide x 5500mm the other side x 2172mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 16mm white melamine shelf and carcass with 2mm pvc impact edge to all exposed edges Handle: Roco 212mm Atlante stainless steel bar handle, code: RTSL28192SS. Handle: Roco 148mm Atlante stainless steel bar handle, code: RTSL28128SS 30mm thick Formica top, colour: White Myria Mild steel gallows brackets 22mm SA Pine Slatted shelf fixed to 22mmx50mm support struts 22mm SA Pine solid support panels spaced at max 720mm cc 22mm SA Pine solid base, fixed to concrete floor surface 6mm White melamine doors 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
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MIDDLE TERRACE CLINIC
Bill No. 8
CARPENTRY AND JOINERY

148	Mobile Counter (Ref: MDA290C-209) - size approximately 1033mm long x 491mm wide x 900mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 30mm thick Formica top, colour: White Myriad 16mm white melamine trim with 2mm pvc impact edge to all exposed edges 16mm white melamine shelf and carcass with 2mm pvc impact edge to all exposed edges 2mm brushed aluminium kick plate glued to 16mm Marine Ply timber frame Heavy duty nylon casters with brakes 2mm brushed aluminium kick plate glued to 16mm Marine Ply timber frame Open shelf bin to fit size 508 mm x 491 mm x 900mm high	No	1		
149	High level cupboard 01 (Ref: MDA290C-209) - Open shelving size approximately 1245mm long x 400mm wide x 1500mm high, 22mm thick supawood (Approx 4 in number), including 1150mm x 2000mm x 22mm supawood supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood continuous support batten with Max on Top HPL (Solid colour: White) 22mm supawood shelf and carcass with Max on Top HPL (Solid colour: White). 2mm pvc impact edge to all exposed edges	No	1		
	Carried to Abstract			R	

MIDDLE TERRACE CLINIC
Bill No. 8
CARPENTRY AND JOINERY

150	High level cupboard 02 (Ref: MDA290C-209) - Open shelving size approximately 2000mm long x 400mm wide x 1500mm high, 22mm thick supawood (Approx 4 in number), including 1150mm x 2000mm x 22mm supawood supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood continuous support batten with Max on Top HPL (Solid colour: White) 22mm supawood shelf and carcass with Max on Top HPL (Solid colour: White). 2mm pvc impact edge to all exposed edges	No	2		
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MIDDLE TERRACE CLINIC
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CARPENTRY AND JOINERY

MIDDLE TERRACE CLINIC

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CARPENTRY AND JOINERY

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MIDDLE TERRACE CLINIC
Bill No. 8
CARPENTRY AND JOINERY

Item No			Quantity	Rate	Amount R
	BILL NO 9				
	CEILINGS, PARTITIONSAND ACCESS FLOORING				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	NAILED UP CEILINGS				
	9.5mm plasterboard fixed to 38 x 50mm SAP battens with drywall screws at minimum 400 centres. All joints to be covered with 25mm x 6mm hardwood cover strip,fixed to ceiling board				
151	Horizontal ceilings suspended not exceeding 1m below purlins	m²	493		
	Sundries				
152	75mm extruded polystyrene cove cornice to match existing	m	389		
153	102mm cavity bat insulation installed over ceilings	m²	493		
	PARTITIONS				
	GypRoc Standard System 3 partitions with two layers of wall board on each side with framing and the board layers full height				
154	114mm Thick partition 2835mm high	m	97		
	Sundries				
155	75mm Aerolite glass fibre insulation in partitions	m²	297		
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Item No			Quantity	Rate	Amount R
	BILL NO. 10				
	FLOOR COVERINGS, PLASTIC LININGS, ETC.				
	SHEET VINYL FLOORING				
	Note:				
	NB: Vinyl sheeting to be laid by specialist sub-contractor who is to be a certified and approved / accredited applicator by material supplier. Manufactures and installers warranty will be required as a condition of contract. The flooring Sub-Contractor is to ensure that the screed is of sufficiently good finish to provide a perfect even level surface for the laying of floor covering. Any floor coverings showing waves or imperfections on finished surfaces will not be acceptable.				
	New Floorworx or similar approved 2mm heavy duty homogeneous non-directional "Canvas PUR" 2000 wide vinyl floor sheeting with welded joints by specialist approved applicator. Sheeting must be rolled in both directions with an articulated 68kg three sectional roller immediately after being laid in the adhesive				
156	On floors	m²	584		
157	Vinyl skirtings	m	250		
	WALL LININGS				
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	2mm heavy duty homogeneous non directional "Canvas PUR" 2000 wide vinyl floor sheeting with welded joints by specialist approved applicator. Sheeting must be rolled in both directions with an articulated 68kg three sectional roller immediately after being laid in the adhesive with welded joints in one colour				
158	On face and both edges of bump rail 220mm girth including mitres, ends, etc.	m	294		
	Floorworx MCF22 vinyl cove former by specialist applicator.				
159	Vinyl skirtings (Height: 200 mm, Radius: 30 mm) with and including flexible full cove former with a colored lip, maximum floor covering thickness: 4 mm, rigid clipped finishing profile capping strip with 1 flexible lip Maximum floor covering thickness: 4 mm fixed with double bonding adhesive, dispersion contact adhesive compatible with the skirting.MCS18 capping strip to finish top of vinyl skirting.	m	241		
	EPOXY FLOORS, POLISH, SEALERS, ETC.				
	ABE Cote 337 or other equally approved tough epoxy paint with high build vapor barrier for concrete floors. Supplier to scrub the product into the pores with a long handle scrub brush and then use a short hair roller to achieve uniform coverage. Stop and apply one coat and thereafter two coats of resin floor epoxy 12 to 16 hours after appli cation each application. Each coat to achieve dry film thickness 14 to 19 mils (350 to 450 microns) at the specified application rate and thickness using a long notched squeegee.				
160	On floors and turn-ups	m²	584		
	Non-slip acrylic emulsion dressing as (SABS 1042) buffed after each coat on vinyl sheeting				
161	Ditto to bump rail not exceeding 300 mm girth	m	294		
	Carried to Abstract			R	

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Bill No. 10
FLOOR COVERINGS

162	Ditto three coats dressing on floors and turn-ups	m²	584		

Carried to Abstract R

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Bill No. 10
FLOOR COVERINGS

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Bill No. 10

FLOOR COVERINGS

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Bill No. 10
FLOOR COVERINGS

Item No			Quantity	Rate	Amount R
	BILL NO 11				
	PLASTERING				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	SCREEDS				
	The following in self levelling screed				
163	± 5 mm thick self-levelling screed to receive vinyl floors laid by the specialist flooring sub-contractor	m²	246		
	1:3 Cement mortar screed finished smooth on concrete to receive floor finishes				
164	30mm Thick to receive vinyl sheeting	m²	739		
	INTERNAL PLASTER				
	One coat 1:4 internal plaster finished to a true and even surface with a steel trowel				
	On brickwork				
165	15mm thick plaster to walls	m²	110		
166	Walls in narrow widths not exceeding 300mm wide	m²	94		
	EXTERNAL PLASTER				
	One coat 1:5 external plaster finished to a true and even surface with a wood float, and filler coat sanded to an approved smooth finish ready to receive paint (elsewhere measured)				
	Carried to Abstract			R	

	On brickwork (small part on flush concrete surfaces)				
167	Walls	m²	576		
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Bill No. 11
PLASTERING

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Bill No. 11

PLASTERING

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Bill No. 11
PLASTERING

Item No			Quantity	Rate	Amount R
	BILL NO. 12				
	TILING				
	INTERNAL FLOOR TILING				
	600 x 600 x 10 mm thick rectified nonslip full bodied porcelain tile. Tile to be T 003047 Chicago Loop by Tile Africa with fixed to floors with the recommended tile adhesive with a notched trowel to a minimum bedded thickness of 8mm and tap down on 25mm screeded surface (screed elsewhere measured) with maximum 2mm joints in both directions grouted strictly complete to manufacturers specification (NB: tiling grout to be white antifungal mixed to the ratio prescribed by tile supplier with bonding liquid)				
168	On floors and landings with continuous joints in both directions.	m²	128		
169	Tile dado 100mm high tiles, with and including all necessary cutting, waste, etc.	m	121		
170	Plastic corner bead or edging to tiling (Provisional)	m	4		
	WALL TILING				
	600 x 600 x10 mm rectified Porcelain wall (Tile code: T 003047 Chicago Loop as supplied by Tile Africa) tile to 2100mm AFFL as detailed elsewhere laid onto TAL gold star adhesive. Grout colour by architect, grout to be mixed with bonding liquid, ratio as specified by tile supplier				
171	On Walls	m²	266		
172	On Walls in narrow widths not exceeding 300mm wide	m²	4		
173	9mm "Kirk Marketing" aluminium straight edge trim (product code: ASE090) (Provisional)	m	55		
	Carried to Abstract			R	

	200 x 200 x 8mm white glazed wall tile splash back as detailed elsewhere laid onto TAL gold star adhesive. White anti fungal grout, to be mixed with bonding liquid, ratio as specified by tile supplier.				
174	Walls as splashbacks (300mm high) behind basins and sink	m²	29		
175	Tile dado 100mm high tiles, with and including all necessary cutting, waste, etc.	m	121		
176	9mm "Kirk Marketing" aluminium straight edge trim (product code: ASE090) (Provisional)	m	69		
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TILING

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TILING

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TILING

Item No			Quantity	Rate	Amount R
	BILL NO. 13				
	IRONMONGERY				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	HINGES, BOLTS, ETC.				
177	100mm x 75mm x 3mm stainless steel ball bearing butt hinges with 2 security pins (in 1.5 pairs) - 8352 – 100 SS/2	No	126		
	LOCKS				
178	Union lockset comprising (SET 1): Bishop Euro Profile Cylinder (Pair) - AL684-09AS - S.C Europrofile spring latch and dead bolt - Q60 X 85MM - SS 5 pin tumbler double cylinder - Europrofile 2 x 18 SC	No	33		
179	Union lockset comprising (SET 2): Bishop Euro Profile Cylinder (Pair) - AL684-09AS - S.C Europrofile spring latch and dead bolt inclusive of rebate set for double leaf door - Q35 X 85MM – SS 200mm Flush recessed bolt - 8052-200SC (2 in no.) Dust proof strike - 8852SC 5 pin tumbler double cylinder - Europrofile 2 x 18 SC	No	1		
	Carried to Abstract			R	

180	Union lock set comprising (SET 3): 300mm Pull Handle with flange (Pair) - AL5512-300FLAS Europrofile narrow stile cylinder swingbolt and latch set; QR35 X 85MM - SS Stainless steel escutcheon on rose (pair) - SS305-05SS 200mm Flush recessed bolt - 8052-200SC (2 in no.) Dust proof strike - 8852SC 5 pin tumbler double cylinder - Europrofile 2 x 18 SC	No	1		
181	Union lockset comprising (SET 4): 1 x Union AL8098AS S.C Bathroom indicator bolt 1 x Union AL8253AS S.C Rubber tipped coat hook 1 x Union AL5063-06AS AS Push plate	No	6		
182	Union lockset comprising (SET 5): 1 x Union 37651AS AS Helping hand paraplegic facility indicator bolt 1 x Union AL8253AS S.C Rubber tipped coat hook 1 x Union AL5515-300BB AS Pull Handle	No	1		
183	Union lockset comprising (Set 6): 1 x Dormakaba Two point locking panic bar – single door, door leaf 813 wide x 2125 high (2201. 2104. PHX02. PHX04 : PHA2 S SD	No	1		
184	Union lockset comprising: 1 x Union AL684-09AS S.C Bishop Euro Profile Cylinder (Pair) 1 x Union Q60 X 85MM - SS - Europrofile spring latch and dead bolt 1 x Union Europrofile 2 x 18 SC S.S 5 pin tumbler double cylinder	No	1		
185	78mm armoured brass padlock	No	1		
186	Master keys (Provisional)	No	2		
187	Grand master keys (Provisional)	No	2		
	PUSH PLATES AND KICKING PLATES				
	Carried to Abstract			R	

MIDDLE TERRACE CLINIC
Bill No. 13
IRONMONGERY

	Dorma DPP-430-BL-SF 170xWOD composed of 1,2mm thick satin finished 430 stainless steel push, kicking and trolley plates and edge protectors, linings, with machined edges, etc., fixed to wood doors, frames, etc., to be fixed with 10 countersunk stainless steel screws, placed at 200mm centres with adhesive including edges and forming all cut outs, holes, slots, checks, notches, etc. as required to accommodate door ironmongery				
188	Push plate 200mm high	m	100		
189	Kick plate 300mm high	m	100		
	DOOR CLOSERS				
	Dorma DPP-430-BL-SF 170xWOD composed of 1,2mm thick satin finished 430 stainless steel push, kicking and trolley plates and edge protectors, linings, with machined edges, etc., fixed to wood doors, frames, etc., to be fixed with 10 countersunk stainless steel screws, placed at 200mm centres with adhesive including edges and forming all cut outs, holes, slots, checks, notches, etc. as required to accommodate door ironmongery				
190	Transom mounted internally delayed action overhead door closer	No	39		
	Dorma - TS 83 PA				
191	EN 3-6 Parallel Arm non hold open door closer, adjustable strength, push side fixing. EN3 850-950, EN4 950-1100, EN5 110- 1250, EN6 1250-1400.	No	5		
	BATHROOM FITTINGS				
192	Franke 355x168x460mm Rodan stainless steel wall mounted waste bin (product code: 359983)	No	27		
193	Franke CNTXBR 750x260 stainless steel disabled grab rail mounted at 800mm above FFL (code: 359912)	No	1		
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194	Franke CNTX700A stainless steel angle disabled grab rail mounted at 800mm above FFL (code: 359877)	No	1		
	The following in 304 grade stainless steel				
195	Franke 275x112x355mm Rodan RODX600 stainless steel wall mounted paper towel dispenser (product code: 359985)	No	25		
196	Franke 144x138x301mm Rodan RODX672 stainless steel wall mounted double toilet roll holder with spindle system (product code: 359987)	No	27		
197	Medical innovations (or equal approved) 245mm 304 grade stainless steel soap dispenser bracket (for 500ml hibiscrub bottle) (product code: 341-00-00C) to be wall mounted above medical wash hand basin	No	28		
	SIGNAGE				
	SIGNS				
	Note: All directional and information signs as well as door numbers are to conform with the NBARI document 48/3 "Directional information in Hospitals". Type face BN Helvetic medium. Signs are to consist of self adhesive vinyl letters on plastic laminate with white lettering on dark grey backgrounds.				

	Door signs or numbers to be of an approved grey ultra high impact acryllic plastic construction plugged to wall or screwed to door with 15mm countersunk raised head chromium plated screws at each corner or hung from ceilings with two chromium plated chains				
198	200 x 70 x 2.5mm Sign with 40mm high letters to centre of door 1850mm above ffl to read "as instructed by the principal agent"(Note: name of signage to be confirmed on site)	No	39		
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IRONMONGERY

	Photo-luminescent emergency signs plugged to wall or screwed to door with 15mm countersunk raised head chromium plated screws at each corner or suspended from ceiling including two chromium plated chains				
199	190 x 190mm "No smoking" sign in white and red to door (type F27)	No	4		
	The following signage comprising of 9mm backing hardboard with 6mm felt infill, set into a 75mm meranti hard wood frame				
200	2500 x 900mm notice boards	No	6		
	CURTAIN AND BED CUBICLE TRACKS				
201	Single curtain track complete with fixing brackets, stop ends, runners, etc., set up and fixed complete to concrete soffits	m	55		
	Forwin hospital cubicle curtain track complete with twelve nylon wheeled runners per meter and all necessary brackets, stopped ends, etc., and hangers at one and a half metre centres passing through suspended ceiling and fixed to soffit of concrete slab or timber trusses				
202	Track suspended not exceeding 800mm long below timber trusses	m	55		
	BLINDS				
	The following in 50mm aluminium venetian blind (colour by architect) inclusive of fitment, fixing brackets, controls and associated parts fixed to top of lintel on wall face				
203	Blind to window 2950mm wide x 1360mm high	No	3		
204	Blind to window 2946mm wide x 900mm high	No	8		
	SUNDRIES				
205	300mm window stay (brass)	No	12		
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206	Ditto but window latch (Brass)	No	24		
207	Union - 87001SS:SC door stop, floor mounted door stop	No	44		
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IRONMONGERY

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IRONMONGERY

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Bill No. 13
IRONMONGERY

Item No			Quantity	Rate	Amount R
	BILL NO 14				
	METALWORK				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	ALUMINIUM DOORS				
	The following natural anodized aluminium extrusion by specialist aluminium door units as per the Architects diagrams, details and specifications bound into the back of these bills of quantities. Prices for all units measured herein to include all glass, ironmongery, assembly, fixing and sealing				
208	Natural anodised Aluminium door size 1625 x 2125mm high overall in two equal leaves, comprising of aluminium frame system to manufacturers specification with 2 x panel size composed of 6,38mm H.P.R laminated glazing size approximately 585 x 950mm and 2 x panel size composed of 6,38mm safety laminated glazing with translucent vinyl interlayer size approximately 585 x 845mm complete 100mm aluminium kick rail in natural anodised finish (Refer to Architects drawing no. MDA 290 C, Type D01)	No	2		
	Sundries				
209	300 x 300mm aluminium louvres fixed to both sides of door with self taping screws	No	5		
	STEEL WINDOWS, DOORS, ETC				
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	Factory manufactured steel frame window with factory primer and lugs for building with and including ironmongery complete				
210	Window type W01 size 600 x 500mm high with 120mm plaster band around window plastered and painted	No	10		
211	Window type W02 size 1200 x 1090mm high with 120mm plaster band around window plastered and painted	No	2		
212	Window type W02a size 1200 x 1090mm high with 120mm plaster band around window plastered and painted	No	2		
213	Window type W03 size 1900 x 1090mm high with 120mm plaster band around window plastered and painted	No	1		
214	Window type W04 size 1960 x 1090mm high with 120mm plaster band around window plastered and painted	No	2		
215	Window type W05 size 1200 x 850mm high with 120mm, and 1100 x 250 void, the window with plaster band around window plastered and painted	No	4		
216	Window type W06 size 1200 x 1090mm high with 120mm plaster band around window plastered and painted and 935 x 1200 below cills	No	1		
	PRESSED STEEL DOOR FRAMES				
	1,8mm Rebated frames suitable for brick walls				
217	Frame for door size approximately 813 x 2032mm high	No	41		
218	Frame for door size approximately 1455 x 2032mm high	No	3		
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METALWORK

	STEEL HANDRAILS, BALUSTRADES, ETC				
	The following in hot dip galvanised balustrades				
219	50mm Diameter. x 3mm Thick rounds hollow section in handrail welded to 50mm diameter. tube (Posts elsewhere measured)	m	40		
220	Extra over handrail for forming 90 degree angle	No	19		
221	Extra over handrail for forming 45 degree angle intersection	No	9		
222	50mm Diameter. x 3mm Thick round section tube post 2000mm high with 200 x 200x 3mm thick plate welded to bottom of post,plate four times holed for 10mm diameter bolt for fixing to top of ramp or landing (bolts elsewhere measured)	No	15		
	Bolts, etc				
	Descriptions of bolts shall be deemed to include nuts and washers.Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.				
	Metalwork described as "holed for bolt(s)" shall be deemed to exclude the bolts unless otherwise described.				
223	10mm Diameter x 125mm long Rawl bolt	No	60		
	ROLLER SHUTTER DOORS				
	Fire Rated (SABS 1253) chain operated heavy duty metal slatted roller shutter composed of 76mm interlocking slats with slide bolts fitted to padlock				
224	1 200 mm x 1 200mm high heavy duty roller shutter steel roll-up door, manually operated, including centre lift lock and rubber weather strips, handles, roll guides, hinges, fixing bolts, tracks etc, fixed to brickwork or concrete with a minimum of 100mm side room and 500mm headroom MDA/RSD01	No	4		
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225	1 500 mm x 1 200mm high heavy duty roller shutter steel roll-up door, manually operated, including centre lift lock and rubber weather strips, handles, roll guides, hinges, fixing bolts, tracks etc, fixed to brickwork or concrete with a minimum of 100mm side room and 500mm headroom MDA/RSD02	No	1		
	SECURITY GATES				
	The following in hot dip galvanised security gates strictly as per the Architects drawings attached to these bills of quantities				
226	Security gate (GO1) size 900 x 2125mm high overall composed of 30 x 30 x 3mm mild steel hollow framework with 70 x 30mm horizontal cross members and 12 x 12mm solid bar vertical members spaced at 100mm centres,70 x 30 x 3mm latch mechanism housing with and including 3 x mild steel hinges both sides as per the Architects drawing No. MDA 290/E	No	9		
227	Entrance gate (GO2) size 1 625 x 2 125mm high overall composed of 50 x 50 x 3mm mild steel hollow framework with 70 x 30mm horizontal cross members and 12 x 12mm solid bar vertical members spaced at 100mm centres, 70 x 30 x 3mm latch mechanism housing with and including 3 x mild steel hinges both sides as per the Architects drawing No. MDA 290/E	No	1		
228	Security gate (GO3) size 1190 x 2125mm high overall composed of 30 x 30 x 3mm mild steel hollow framework with 70 x 30mm horizontal cross members and 12 x 12mm solid bar vertical members spaced at 100mm centres,70 x 30 x 3mm latch mechanism housing with and including 3 x mild steel hinges both sides as per the Architects drawing No. MDA 290/E	No	2		
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229	Security gate (GO4) size 1190 x 2125mm high overall composed of 30 x 30 x 3mm mild steel hollow framework with 70 x 30mm horizontal cross members and 12 x 12mm solid bar vertical members spaced at 100mm centres,70 x 30 x 3mm latch mechanism housing with and including 3 x mild steel hinges both sides as per the Architects drawing No. MDA 290/E	No	1		
	SECURITY SCREENS				
	The following in hot dip galvanised security screens strictly as per the Architects drawings attached to these bills of quantities				
230	Galvanised mesh screens size overall 1200 x 1090mm high composed of 50 x 50 x 2.5mm galvanised angle frame and galvanised mesh panel to form window (type SC02 - MDA/W01	No	8		
231	Galvanised mesh screens size overall 1900 x 1090mm high composed of 50 x 50 x 2.5mm galvanised angle frame and galvanised mesh panel to form window	No	3		
232	Galvanised mesh screens size overall 1400 x 460mm high composed of 50 x 50 x 2.5mm galvanised angle frame and galvanised mesh panel to form window (type SC02 - MDA/290E	No	4		
233	Curved window security screen size 1200 x 1090mm high overall, tangential angle approximately 45 degrees composed of 3 x 20mm diameter galvanised horizontal solid rod with 50mm steel knob shaped decorative end cap both sides, welded to 10mm diameter solid square sections,spaced at 100mm centres as per Architects drawing W06	No	9		
234	Curved window security screen size 600 x 500mm high overall, tangential angle approximately 45 degrees composed of 3 x 20mm diameter galvanised horizontal solid rod with 50mm steel knob shaped decorative end cap both sides, welded to 10mm diameter solid square sections,spaced at 100mm centres as per Architects drawing	No	10		
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METALWORK

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Bill No. 14
METALWORK

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BILL NO 15

PLUMBING AND DRAINAGE(PROVISIONAL)

PREAMBLES

For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles

SUPPLEMENTARY PREAMBLES

"Polycop" polypropylene pipes

Polypropylene pipes 54mm diameter and under shall be seamless copper coloured class 16 pipes jointed with "Fast-fuse" heat welded thermoplastic or brass compression fittings as designed for use with copper pipes as stated.

Pipes shall be firmly fixed to walls, etc. with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions.

All pipe diameters are nominal external.

Carried to Abstract R

"Polylink" polypropylene pipes

Polypropylene pipes 63mm diameter and over shall be class 12 pipes jointed with cast iron "Supraclamp" running joints.

Fusion welded bends, once or twice mitred as necessary, and tees shall be factory manufactured.

Fusion welded bends and tees shall include jointing to pipes with PVC rubber ring double Z joint couplers.

Branch tees shall include flanged and bolted joints to "Polycop" branch pipes in addition and for brass compression male iron to copper straight couplers.

Reducers shall include jointing to pipes with PVC rubber ring double Z joint couplers and reducers shall be of sufficient overall length to accommodate same.

All pipes shall be jointed and fixed strictly in accordance with the manufacturer's instructions.

All pipe diameters are nominal external.

Concrete pipes

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

uPVC pipes and fittings

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

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

Carried to Abstract R

MIDDLE TERRACE CLINIC
Bill No. 15
PLUMBING AND DRAINAGE

uPVC pressure pipes and fittings

Pipes for water supply shall be of the class stated.

Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings.

Pipes of 50mm diameter and greater shall have sockets and spigots with push in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push in type joints.

Copper pipes

Pipes shall be hard drawn and half hard pipes of the class stated. Class O (thin walled hard drawn) pipes shall not be bent. Class 1 thin walled half hard), class 2 (half hard) and Class 3 (heavy walled half hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be "Cobra Watertech" type. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or in ground.

Fixing of pipes

Unless specifically otherwise stated, descriptions of pipes shall be deemed to include fixing to walls, etc., casting in, building in or suspending not exceeding 1m below suspension level.

Lead pipes and traps

All soldered joints shall be wiped and brass unions shall be used for jointing lead to steel.

Carried to Abstract R

MIDDLE TERRACE CLINIC
Bill No. 15
PLUMBING AND DRAINAGE

Reducing fittings

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

Wire gratings

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

Exposed concrete surfaces

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

Excavations

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

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

Carried to Abstract R

MIDDLE TERRACE CLINIC
Bill No. 15
PLUMBING AND DRAINAGE

Laying, backfilling, bedding, etc. of pipes

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

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

SABS 1200 L	:	Medium pressure pipelines
LD	:	Sewers
LE	:	Stormwater drainage

Pipe trenches etc. shall be backfilled in accordance with clauses 3, 5.5, 5.6, 5. and 7 of SABS 1200 DB : Earthworks (Pipe trenches). Pipes shallvbe bedded in accordance with clause 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SABS 1200 LG : Bedding (Pipes). Unless otherwise described bedding of rigid pipes shall be class B bedding.

Flush pans

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

Stainless steel basins, sinks, wash troughs, urinals, etc.

Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable.

Waste unions

Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings.

Steel sectional water tanks

Tanks shall comply with SABS CKS 114

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	"Densyl" petrolatum anti corrosion tape as manufactured by Denso SA (Pty) Ltd				
	Prices for wrapping of pipes shall include for all work as described to couplings in the length.				
	User note: Dependent on soil or environmental conditions laps may require to be increased to a maximum of 55% (which results in a double layer)				
	RAINWATER GOODS, ETC				
	0.8mm rectangular pre-coated aluminium seamless gutter with 10 year guarantee with architect approved coloured finish including colour-coded rivet-fixed internal and external mitres and end caps internally sealed using silicone sealant, hung by screw fixed internal aluminium hangers at 600mm				
235	Purpose made 300mm x 175mm precoated seamless eaves gutter and fixing to falls on and including aluminium alloy gutter brackets bolted to fascia at not exceeding 1,5m centres.	m	99		
236	Extra for stopped end	No	17		
237	Extra for outlet with nozzel for 140mm x 140mm rainwater pipe with leafguard including additional gutter bracket	No	16		
238	Extra for eaves offset 400mm projection including additional downpipe clip	No	16		
239	150 x 150mm Rainwater downpipe and fixing to walls with pre-painted downpipe cleats using nail-in anchor fixings and fixed to gutter outlets with domestic snap seals, including all necessary bends, elbows, etc including securing to structural steel columns (columns elsewere measured)	m	20		
	WATER SUPPLY				
	Copper Pipes				
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	Class 0				
240	35mm Pipe and fixing to walls, floors, in roofs, soffit of concrete slab, in chases (including chases), in concrete, etc.	m	75		
	Class 2				
241	15mm Pipe and fixing to walls, floors, in roofs, soffit of concrete slab, in chases (including chases), in concrete, etc.	m	50		
242	22mm Pipe and fixing to walls, floors, in roofs, soffit of concrete slab, in chases (including chases), in concrete, etc.	m	63		
243	32mm Pipe and fixing to walls, floors, in roofs, soffit of concrete slab, in chases (including chases), in concrete, etc.	m	10		
	Extra over class 0 copper for Copcal Capillary type fittings with soldered joints				
244	35mm Elbow.	No	2		
245	35 x 28 x 15mm Reducing tee.	No	1		
	Extra over class 2 copper pipes for brass compression fittings				
246	15mm Fittings	No	25		
247	22mm Fittings	No	25		
248	32 x 32 x 15mm Reducing tee for 15mm branch pipe	No	1		
249	Cut into existing 28mm copper rising main and fit 28 x 28 x 15mm reducing tee for 15mm copper branch pipe	No	1		
	SANITARY PLUMBING				
	PVC pipes				
250	50mm Pipe and fixing to walls, floors, in roofs, soffit of concrete slab, in chases (including chases), in concrete, etc.	m	10		
	Carried to Abstract			R	

MIDDLE TERRACE CLINIC
Bill No. 15
PLUMBING AND DRAINAGE

251	110mm Pipe and fixing to walls, floors, in roofs, soffit of concrete slab, in chases (including chases), in concrete, etc.	m	15		
	PVC, waste or vent piping				
252	50 mm Pipe.	m	15		
	Extra over 40 mm PVC pipe for:				
253	40 mm Bend.	No	10		
	Extra over 50 mm PVC pipe for:				
254	50 mm Bend.	No	10		
	Extra over 110 mm PVC pipe for:				
255	110 mm I.E. Bend.	No	1		
	Traps, gratings, etc.				
256	Cut into existing 110mm PVC stack and fit 110mm double reducing junction	No	10		
257	Chrome plated bottle trap with and including 32mm basin waste unslotted, 62mm flange and 80mm tail piece	No	11		
	SANITARY FITTINGS				
258	Franke or other equally approved 545 x 450 x 220.5 Rondo VM wall mounted basin (product code: 362964) basin fixed to wall using 4x8mm anchor bolts	No	1		
259	Vaal Sanitaryware vitreous China “Hibiscus Elite Vandal Proof” close coupled suite (product Code: 772404) complete with front push button, lid fitments and low level flush pipe	No	9		
260	Cobra Welcome Medium round wall hung basin. 430mm long X 390mm wide, no tap hole required (product code: 709100WH	No	17		
	Carried to Abstract			R	

MIDDLE TERRACE CLINIC
Bill No. 15
PLUMBING AND DRAINAGE

261	Vaal Sanitaryware vitreous China Lavatera Wall Hung Bowl back inlet urinal (product code: 705427) supplied complete with all fittings, concealed back inlet flush valve cobra FJ8. 102 complete with flush pipes and fittings Product code 7054Z2	No	2		
262	Franke 300mm undermount vanity basin manufactured from 305 grade stainless steel with and including black rubber waste to be fitted to basin unit	No	1		
	Stainless steel sinks, wash troughs, etc.				
	NOTE: All products are to be manufactured from 1,2 mm thick Grade 304 Stainless Steel unless otherwise stated.				
263	Stainless steel drinking fountain approximately 311 x 489 x 1500mm high complete with bubbler and goose-neck taps including a 2 stage in-line filtration system consisting of sediment and carbon filtration, fixed to the wall next to an electrical point and connected to the external drainage.	No	1		
264	1160 x 460mm inset sink, mounted to joinery as detailed elsewhere	No	3		
265	Solid wood particle moisture proof white lacquered toilet seat	No	6		
266	Stainless steel slop hopper unit 965 x 550 mm manufactured from grade 304 (18/10) stainless steel 1,2 mm thick with a 100 mm high integral splash back to the rear and both sides, with an integral flushing rim in the cone and a 110 mm waste outlet for pan connector, the inlet fitted with a 38 x 250 mm long vertical flush pipe for a standard flush valve. Unit fitted with a hinged bucket grid manufactured from 10 mm diameter grade 304 (18/10) stainless steel round bar. Unit complete with two 40 x 40 mm square stainless steel wall mounting gallows brackets. Unit fixed to the wall.	No	1		
	Carried to Abstract			R	

267	Franke Nouveau NVN621 1160 x 460mm inset sink, mounted to joinery as detailed elsewhere (product code: 811024)	No	5		
268	§Franke grade 304 stainless steel grade 1,2mm NCH Slop Hopper 540x540 integral with 100mm high splash back § Product Code: 2630035-004 § Cobra FM 1-000/N Flush Master Valve	No	1		
269	Franke model "S1" Catering Sink single right hand bowl manufactured from grade 304 stainless steel 1,2mm thick with a 150mm high integral splash back to the rear and 50x10mm turndown with a beaded edge on the remaining sides. Sink with pressed 500x500x230mm deep bowl with a 40mm waste outlet. The underside sprayed with vermin proof bitumastic sound deadening and supported with a 30x30x3mm framework and galvanised mild steel backing sheet. Unit fixed 900mm high from the top of the front apron to the finish floor level with anchor bolts	No	1		
	Overflow pipes, traps etc.				
	uPVC				
270	Cobra Watertech chrome platted bottle trap (product code: 340) and 32mm basin waste un slotted, 62mm flange and 80mm tail piece (product code: 308)	No	17		
271	Trap Extendible Gio 32x40mm Universal PVC White	No	8		
	ELECTRIC WATER HEATERS				
272	200 Litre Kwikot 600 Dual horizontal ceiling mounted type electric hot water copper cylinder with 22mm connections and fitted with 4 kilowatt monel metal electrical element complete with vacuum breaker, pressure reducing valve and relief valve including all joints to copper pipes and fixing in position and connect up.	No	1		
	Carried to Abstract			R	

273	0,60mm Galvanised sheet iron tray size 500 x 1000mm with riveted and soldered seams and joints, turned up all round to form kerb 75mm high with beaded edge, including outlet with nozzle for 50mm diameter overflow pipe and fix in position.	No	1		
274	Ditto size 700 x 1500mm, ditto.	No	1		
275	50mm PVC overflow and fixing to falls to roof timbers.	m	1		
276	Extra for 50mm bend	No	1		
277	38mm Sawn Pine boarding for geyser platform formed of 38 x 228mm boards butt-jointed and nailed to bearers.	m²	2		
278	38 x 114mm Sawn Pine bearers	m	3		
	TAPS, VALVES, ETC				
279	Cobra Watertech Metered Tap, non hold open with outlet (product code: KM2-100FS/N)	No	4		
280	Cobra Watertech ½"rough brass hose bibtap (product code: 108-15)	No	1		
281	Watertech Kitchen Classic Star wall mounded mixer with aerated swivel outlet (product code: 266/041/10)	No	5		
282	Cobra Watertech Medical Elbow action pillar tap with raised nose and blue indice (product code: 503-21B) cold water supply only	No	18		
	FIRE SERVICE				
	Sundries				
283	"Chubb" or other approved turnable hosereel bearing SABS mark and brackets with patent swivel joints, fitted with 30m length of 19mm diameter SABS red PVC hose with gunmetal 'shut-off' control nozzle and chromium plated wheelhead valve and fix reel and nozzle bracket to plastered walls with and including 6 x 76mm expanding bolts in mortices in wall	No	2		
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284	Wrot Red Meranti framed fire hose cupboard size 1250 x 300 x 1250mm high overall with bottom, ends and sloping top (set projecting 38mm along front and both ends) formed of 22mm tongued, grooved and V-jointed one side boarding; ledged,braced and battened double doors formed of 22mm V-jointed boarding with 22 x 50mm chamfered cover fillet planted on at meeting stiles, hung folding on two pairs of 150mm black japanned iron tee hinges, with a 50mm brass cupboard lock and two 75mm brass barrel bolts; in door form 100 x 100mm aperture rebated for and glazed with 3mm clear sheet glass fixed with beads; drill six 20mm diameter holes in bottom and two in ends near top of cupboard for ventilation, bottom holed to it over hydrant; cover top with 0,63mm galvanised sheet iron turned down at edges and close nailed; cupboard bolted three times on to concrete wall at the top centre and bottom of the cupboard with 16 x 140mm Dynabolt masonry anchor with nut and washer and including mortice/s in concrete	No	2		
	LAGGING				
285	Two layers of thermoflex or other approved preformed self extinguishing polyethylene tightly wrapped around 22mm pipe and couplings and tied with wire prior to building in	m	63		
286	Extra for wrapping around 22mm fittings	No	25		
	TESTING				
287	Provide all necessary apparatus, water, etc. for and test the sanitary plumbing, water supplies, sanitary fittings and fire services to the satisfaction of the Representative/Agent and the Local Authorities, replace any defective work free of charge and leave perfect.		Item		
	BUILDERS WORK				
288	500 x 500mm 20MPa/19mm stone,Concrete encasing to soil pipes in high traffic zones	m	4		
	Carried to Abstract			R	

MIDDLE TERRACE CLINIC
Bill No. 15
PLUMBING AND DRAINAGE

MIDDLE TERRACE CLINIC

Bill No. 15

PLUMBING AND DRAINAGE

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MIDDLE TERRACE CLINIC
Bill No. 15
PLUMBING AND DRAINAGE

Item No			Quantity	Rate	Amount R
	BILL NO 16				
	GLAZING				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev Oct. 1993) as well as to the "Model Preambles for Trades" (1998) and Supplemetary preambles below.				
	GLAZING				
	6.38mm Normal strength clear laminated safety glass				
289	6.38mm H.P.R clear Panes exceeding 0,1 square metres and not exceeding 0,5 square metres	m²	64		
290	6.38mm H.P.R clear Panes exceeding 0,5 square metres and not exceeding 2.0 square metres	m²	32		
291	6.38mm laminated safety glass exceeding 0,5m2 and not exceeding 2m2, with translucent vinyl interlayer colour to be confirmed with the Principal Agent	m²	49		
	PUTTY TO GLAZED ALUMINIUM WINDOWS				
	30mm thick type II putty on				
292	Steel windows	m	71		
	MIRRORS				
293	6mm Float glass silver backed mirror size 400 x 600mm with bevelled and polished edges fixed with double sided tape and chromium plated mirror screws and cork washers	No	4		
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Item No			Quantity	Rate	Amount R
	BILL NO 17				
	PAINTWORK				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	PAINTWORK, ETC. ON PREVIOUSLY PAINTED WORK				
	ON PLASTER ETC.				
	Clean down to remove all loose paint,including sandblasting or wire brushing where necessary, wash with sugar soap, rinse, make good where necessary and fill cracks with Polyfilla (Brickwalls / Rhinolight for plasterboard) and sand down clean down, prepare and apply one coat Plascon Professional Gypsum Plaster Primer (PP700) on brick walls and Rhino light is used on plasterboard, stop and apply two coats Plascon Plascon TLL 100 pastel base professional hygiene low sheen acrylic PVA paint on				
294	Internal plastered walls	m²	1 262		
	ON METAL				
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	Clean down steel substrate to a clean exposed state by removing all loose and friable matter,old paint, dust,oil,grease and soluble solvents with detergent solution and rinse with portable water to achieve a PH of 7,dry abrasive blast surface (sandblast) to a near "white metal" and further remove all traces of previous protective coating from Galvanised Surfaces with Galvanised Iron Cleaner, Prepare And Apply One Coat Galvanised Iron Primer, One Universal Undercoat And Two Coats coats polyurethane non drip enamel on				
295	Steel door frames	m²	30		
296	Existing steel window frames	m²	37		
	ON WOOD				
	Sand and clean down to bare surface, remove all dust, stop and apply one coat varnish diluted 20% with mineral turpentine and three coats matt varnish lightly sanded on				
297	On timber surfaces	m²	20		
	PAINTWORK, ETC TO NEW WORK ON				
	ON PLASTER OR PLASTERBOARD				
	Clean down, prepare and apply one coat Plascon Professional Gypsum Plaster Primer (PP700) on brick walls and Rhino light is used on plasterboard, stop and apply two coats Plascon Plascon TLL 100 pastel base professional hygiene low sheen acrylic PVA paint on				
298	Plastered walls	m²	1 136		
	Carried to Abstract			R	

	Prepare and apply one coat Plascon plaster acrylic filler coat, fill with interior Polyfilla, sand and touch up filler coat and apply one coat wood primer including to hardwood cover strips, one universal undercoat and two coats Plascon acrylic PVA (Colour: White) with approved anti-fungicide on				
299	Plastered ceilings.	m²	493		
	Carried to Abstract			R	

	ON WOOD				
	Clean down to bare surface, remove all dust, stop and apply one coat wood primer, one coat universal undercoat and two coats Plascon Velvaglo Satin enamel paint on				
300	On backs of grounds, frames, linings, etc. not exceeding 300mm wide	m²	6		
301	PVA paint to dry walls	m²	54		
302	On door frames, etc.	m²	25		
303	On doors	m²	161		
	Sand and clean down to bare surface, remove all dust, stop and apply one coat varnish diluted 20% with mineral turpentine and three coats matt varnish lightly sanded on				
304	Doors	m²	6		
	METAL SURFACES WITH				
	Clean down steel substrate to a clean exposed state by removing all loose and friable matter,old paint, dust,oil,grease and soluble solvents with detergent solution and rinse with portable water to achieve a PH of 7,dry abrasive blast surface (sandblast) to a near "white metal" and further remove all traces of previous protective coating from Galvanised Surfaces with Galvanised Iron Cleaner, Prepare And Apply One Coat Galvanised Iron Primer, One Universal Undercoat And Two Coats coats polyurethane non drip enamel on				
305	Windows	m²	11		
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MIDDLE TERRACE CLINIC

Bill No. 17

PAINTWORK

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Bill No. 17
PAINTWORK

MIDDLE TERRACE CLINIC

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MIDDLE TERRACE CLINIC

Item No			Quantity	Rate	Amount R
	SECTION NO. 6				
	BILL NO. 1				
	STAINLESS STEEL FURNITURE				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	The following in square silver stainless steel benches suitable for public seating in external areas in all weather conditions. Each seat to carry a minimum weight per seat of 110kg				
1	Nine seater stainless steel seating size approximately 3890 x 670 x 785mm high overall suitable for all weather conditions, each seated epoxy bolted four times with stainless steel bolt to concrete floors with vinyl sheeting finish (floor and floor finish elsewhere measured)	No	4		
2	Six seater stainless steel seating size approximately 2850 x 670 x 785mm high overall suitable for all weather conditions, each seated epoxy bolted four times with stainless steel bolt to concrete floors with vinyl sheeting finish (floor and floor finish elsewhere measured	No	2		
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Item No			Quantity	Rate	Amount R
	BILL NO. 2				
	BUILT IN CUPBOARDS AND SHELVING ETC				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	PINNING BOARDS AND WHITE BOARDS				
3	600 x 900mm magnetic white board, with pen tray	No	16		
4	Allow for a 600 x 900mm felt pinboard, in 25mm aluminium	No	16		
5	2 500 x 900mm notice boards comprising of 9mm backing hardboard with 6mm felt infill, set into a 75mm meranti hard wood frame finished off with 2 coats clear varnish finish (to match existing notice board)	No	6		
	Sand and clean down to bare surface, remove all dust, stop and apply one coat varnish diluted 20% with mineral turpentine and three coats matt varnish lightly sanded on				
6	On frames	m	19		
	BULK FILLERS				
	Carried to Abstract			R	

	<u>The following in hammertone grey steel bulk filers</u>				
7	10 Bay heavy duty steel bulk filing cabinets including 50 shelves size overall 2130mm (H) x 1100mm(W) x 5100mm(L) with and including 800mm walk in space, with each bay x 430mm Deep	No	1		
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FITTINGS
Bill No. 2
PINNING BOARDS ETC

FITTINGS

Bill No. 2

PINNING BOARDS ETC

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PINNING BOARDS ETC

FITTINGS

SECTION SUMMARY - FITTINGS

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FITTINGS

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SECTION NO. 7

BILL NO. 1

EXTERNAL PLUMBING

SUPPLEMENTARY PREAMBLES

PREAMBLES

For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles

"Polycop" polypropylene pipes

Polypropylene pipes 54mm diameter and under shall be seamless copper coloured class 16 pipes jointed with "Fast-fuse" heat welded thermoplastic or brass compression fittings as designed for use with copper pipes as stated.

Pipes shall be firmly fixed to walls, etc. with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions.

All pipe diameters are nominal external.

Carried to Abstract R

"Polylink" polypropylene pipes

Polypropylene pipes 63mm diameter and over shall be class 12 pipes jointed with cast iron "Supraclamp" running joints.

Fusion welded bends, once or twice mitred as necessary, and tees shall be factory manufactured.

Fusion welded bends and tees shall include jointing to pipes with PVC rubber ring double Z joint couplers.

Branch tees shall include flanged and bolted joints to "Polycop" branch pipes in addition and for brass compression male iron to copper straight couplers.

Reducers shall include jointing to pipes with PVC rubber ring double Z joint couplers and reducers shall be of sufficient overall length to accommodate same.

All pipes shall be jointed and fixed strictly in accordance with the manufacturer's instructions.

All pipe diameters are nominal external.

Concrete pipes

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

uPVC pipes and fittings

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

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

Carried to Abstract R

uPVC pressure pipes and fittings

Pipes for water supply shall be of the class stated.

Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings.

Pipes of 50mm diameter and greater shall have sockets and spigots with push in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push in type joints.

Copper pipes

Pipes shall be hard drawn and half hard pipes of the class stated. Class O (thin walled hard drawn) pipes shall not be bent. Class 1 thin walled half hard), class 2 (half hard) and Class 3 (heavy walled half hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be "Cobra Watertech" type. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or in ground.

Fixing of pipes

Unless specifically otherwise stated, descriptions of pipes shall be deemed to include fixing to walls, etc., casting in, building in or suspending not exceeding 1m below suspension level.

Lead pipes and traps

All soldered joints shall be wiped and brass unions shall be used for jointing lead to steel.

Carried to Abstract R

EXTERNAL WORKS
Bill No. 1
EXTERNAL PLUMBING

Reducing fittings

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

Wire gratings

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

Exposed concrete surfaces

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

Excavations

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

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

Carried to Abstract R

EXTERNAL WORKS
Bill No. 1
EXTERNAL PLUMBING

Laying, backfilling, bedding, etc. of pipes

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

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

SABS 1200 L	:	Medium pressure pipelines
LD	:	Sewers
LE	:	Stormwater drainage

Pipe trenches etc. shall be backfilled in accordance with clauses 3, 5.5, 5.6, 5. and 7 of SABS 1200 DB : Earthworks (Pipe trenches). Pipes shallvbe bedded in accordance with clause 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SABS 1200 LG : Bedding (Pipes). Unless otherwise described bedding of rigid pipes shall be class B bedding.

Flush pans

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

Stainless steel basins, sinks, wash troughs, urinals, etc.

Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable.

Waste unions

Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings.

Steel sectional water tanks

Tanks shall comply with SABS CKS 114

Carried to Abstract R

EXTERNAL WORKS
Bill No. 1
EXTERNAL PLUMBING

	"Densyl" petrolatum anti corrosion tape as manufactured by Denso SA (Pty) Ltd				
	Prices for wrapping of pipes shall include for all work as described to couplings in the length.				
	User note: Dependent on soil or environmental conditions laps may require to be increased to a maximum of 55% (which results in a double layer)				
	SOIL DRAINAGE				
	Demolitions				
1	Excavate for and cut into existing 150mm drain for new 110mm PVC drain including all necessary fittings and backfill and compact with material obtained from excavations to 95% Mod AASTO density.	No	1		
2	Excavate for and leave existing 150mm drain ready to be encased in concrete (concrete encasing elsewhere measured) and backfill and compact with material obtained from excavations to 95% Mod AASTO density.	m	2		
	uPVC Class 34 drainpipes and fittings with spigot and socket joints with 0 ring seals complying with SABS791				
3	110 mm Pipe vertically in ground (no excavation)	m	65		
4	110 mm Pipe and laying in ground not exceeding 1m deep including excavating trench, granular sand bedding 150mm thick under, around and above pipe compacted in multiple layers not exceeding 150mm thick to 93% Mod AASHTO density and filling to ground level with G5 base course material complying with SABS 1200 ME compacted in multiple layers not exceeding 150mm thick to 95% modified AASHTO density	m	43		
5	110mm Pipe and excavation exceeding 1000mm and not exceeding 2000mm deep.	m	23		
	Extra over uPVC pipes for the following uPVC fittings				
6	110mm 45° Bend	No	8		
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7	110mm 90° Bend	No	3		
8	110mm Junction	No	3		
9	110mm Access junction	No	1		
	Sundries				
10	Plain concrete 15MPa/19mm stone encasement 150mm thick round existing 150mm diameter horizontal pipe including additional excavation, formwork, etc.	m	10		
11	Plain concrete 15MPa/19mm stone encasement 150mm thick round 110mm diameter horizontal pipe including additional excavation, formwork, etc.	m	3		
12	Ditto but around 110mm bend	No	4		
13	ABC cast iron 45° type cleaning eye cover and frame and fix to top of 110mm uPVC pipe	No	3		
14	110mm Gulley exceeding 750mm and not exceeding 1000mm deep complete with concrete gully top 400 x 400 x 120mm	No	1		
15	Cement concrete 15MPa/19mm stone apron size 450 x 450 x 100mm thick around cleaning eye cover and frame (elsewhere measured) and set to finish flush with paving or ground including excavation to formwork, etc.	No	6		
	Inspection chambers				
16	Inspection chamber size internally 1200 x 1000 x exceeding 1000 not exceeding 15000mm deep to invert having 150mm thick plain concrete 20MPa/19mm stone bottom projecting 150mm beyond face of external walls all around 230mm brick sides in 1:3 cement mortar rendered internally in 1:3 cement plaster steel trowelled smooth 100mm thick plain concrete 20MPa/19mm stone cover slab rebated for and fitted with and including 450 x 600mm x 72kg cast iron manhole cover and frame type 8A including fine cement concrete benching in bottom around and including vitrified clay main and branch inlet channels including excavation, backfilling, formwork, holes through sides, etc.	No	4		
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17	Inspection chamber size internally 600 x 760 x exceeding 500 not exceeding 750mm deep to invert having 150mm thick plain concrete 20MPa/19mm stone bottom projecting 150mm beyond face of external walls all around 230mm brick sides in 1:3 cement mortar rendered internally in 1:3 cement plaster steel trowelled smooth 100mm thick plain concrete 20MPa/19mm stone cover slab rebated for and fitted with and including 450 x 600mm x 72kg cast iron manhole cover and frame type 8A including fine cement concrete benching in bottom around and including vitrified clay main and branch inlet channels including excavation, backfilling, formwork, holes through sides, etc.	No	2		
18	Stormwater double grid inlet as per 1574-77-STW-030 Inspection chamber ditto size internally 1250 x 760 x exceeding 1000 not exceeding 1250mm deep to invert ditto.	No	1		
	SUNDRIES				
19	Extra over excavation in earth for trenches, inspection chambers, etc. for excavation in soft rock	m^3	12		
20	Ditto but in hard rock	m^3	4		
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EXTERNAL WORKS

Bill No. 1

EXTERNAL PLUMBING

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EXTERNAL WORKS
Bill No. 1
EXTERNAL PLUMBING

Item No		Quantity	Rate	Amount R

BILL NO 2

EXTERNAL WORKS, ETC.

PREAMBLES

For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles

NOTE:

Prices for filling, etc., shall include for the costs of any compaction tests as required by the Representative/Agent.

Cost of tests

Descriptions of concrete items shall be deemed to include for all necessary testing of concrete components and trail mixes

The costs of making, storing and testing of concrete test cubes as required shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the principal agent. The testing shall be undertaken by an independent firm or institution nominated by the contractor to the approval of the principal agent. (Test cubes are measured separately)

NOTE: Should the strength required for the concrete in anyportion of the structure not be attained in the test cubes, orshould any concrete whatsoever be defective the portion inquestion is to be demolished and replaced at the expense ofthe Contractor.

Carried to Abstract R

	TEMPORARY HOARDING AND FENCING				
21	Hoarding 2500mm high formed of timber boarding, blockboard sheeting or similar splinter free material painted one side with two coats PVA, including poles, bearers, bracing, etc. firmly secured, with and including taping hoardings all round to form a dust proof screen, all removed upon completion of sections of work and including making good floors and walls where applicable	m	315		
22	Extra on hoarding for single builders access door 1 m wide	No	3		
	ENTRANCE SIGNAGE				
23	Entrance sign composed of 75mm diameter galvanised mild steel pipe to create frame size 2550 x 2100mm. The frame to be fixed into concrete bases of 500 x 500 x 500mm (Foundations and bases etc elsewhere measured) with and including a new chromadek signage panel size 2420 x 1225mm fixed welded to frame. The chromodek sign to be affixed to 20 x 20 x 1mm galvanised mild steel square tube frame, which is welded into main 75mm diameter main frame.			SUM	
24	Allow for frosted vinyl lettering at the main entrance doors letter height 35mm, font type: Tahoma for the following complete: Clinic name Clinic operating hours Clinic Emergency contact number			SUM	
	ELEVATED WATER TANK STAND				
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	The following in galvanised steel elevated water tank stands at a height of approximately +/- 10m from ground level				
25	Abeco or other equally approved elevated water tank size 4 000 x 3 900 x 6 100mm overall (7000litre capacity or higher) with and including 2.5 mm thick x 610 mm wide roof sheeting, hot-dip galvanising support towers (15m high), standard accessories including but not limited to caged external access ladder, Internal access ladder, Hinged lockable manhole, float and pointer type water level indicator and screened ventilator, pressure pump and booster pump to match tank capacity complete	No	1		
26	Column legs composed of equal angle size 60 x 60 x 5 kg/m angle	t	0.60		
27	Cross bracing composed of 30 × 5 x 1.18kg/m flat bar	t	2.69		
28	Horizontal bracing comprised from 40 x 40 x 1.6kg/m equal angle	t	0.70		
29	Top platform main support beam comprised of 150 x 75 x 10 angle	t	0.70		
30	Top platform secondary support beams – 125 x 75 x 20 x3 lipped channel	t	1.00		
	Bolts etc				
31	M16 grade 4.8 bolts	No	32		
32	M12 grade 4.8 bolt	No	160		
	Foundations				
33	Excavate for holes n.e 2m deep	m³	4		
34	Cartaway excavated material	m³	2		
	Carried to Abstract			R	

35	Approved G6 material as filling compacted in 150 mm layers to 93% Mod. AASHTO density.	m^3	2		
36	Concrete blinding under footings (10mpa/19mm stone)	m^3	0.2		
37	Ditto but in bases and stands (25mpa/19mm stone)	m^3	16		
38	Reinforcement in all bar sizes	kg	74		
	220 x 110 x 75mm Brick paving in soldier course to match existing				
39	220mm wide clay brick paving soldier course margin to match existing, set flush with top of concrete slab and jointed in cement mortar on and including 50mm thick concrete (20Mpa - 19mm stone) mortar bed and pointing to top and edge.	m	10		
	Sundries				
40	5000 litre polythene water storage tank size 1800 diameter x 1850mm high, fitted with access lid and inlet hole, with and including flanged or screwed connections for inlet, 15mm outlet and 15mm overflow pipes, hoist and set in position on concrete plinth, approximately 1000mm high above ground level	No	1		
	MOTHER AND CHILD PLAY AREA				
41	Excavate in earth to reduce levels not exceeding 2 m deep.	m^3	24		
42	Extra over all excavations for carting surplus excavated material from the site.	m^3	24		
43	Approved G6 material as filling compacted in 150 mm layers to 93% Mod. AASHTO density.	m^3	40		
44	10mpa concrete in blinding layer	m^3	8		
45	12mm artificial grass	m^2	80		
	Carried to Abstract			R	

	EXCAVATIONS				
46	Excavate in clay soil to reduce levels not exceeding 2 m deep.	m³	55		
47	Extra over excavations in earth for excavation in soft rock.	m³	5		
48	Ditto in hard rock.	m³	3		
49	Extra over all excavations for carting surplus excavated material from the site.	m³	56		
50	Scarify ground to a depth of 150 mm and re compact to 93% Mod. AASHTO density.	m²	55		
51	Approved G5 material as base course 100 mm thick compacted to 95% Mod. AASHTO density under surface bed.	m²	55		
	Cement concrete (25 MPa - 19 mm stone) in				
52	Ground beams	m³	17		
	FENCING				
	NOTE				
	The price for the fencing must include allowances for Stainless Steel Grade 304 sundries such as bolts, nuts and washers				
	Large established trees on the inside of the boundary and forming an obstruction to a straight line must be left undisturbed unless otherwise specified or described in the specification				
	Builder's work in connection with ClearVu fencing				
53	Roughly clear, grade and level ground along fence line between fence poles for a width of 1m both sides including clearing of all vegetation, trees, rocks, rubble and rubbish	m²	275		
	Carried to Abstract			R	

	The following in Hot Dipped Galvanized and PVC coated 100 x 55 x 2 mm profile Bekafix Super Secure Posts - with holes in side flanges for lateral fixation of the ClearVu panel with mini securifor brackets and plastic caps ,Yield strenght : min 320 N/mm2 complete with minimum zinc coating :275 g/m2 (double side determined) Colour : Anthracite RAL 7021				
54	Post size 3200mm long including 600 x 600mm reinforced concrete 20mpa footings, complete with excavations, backfilling etc	No	92		
	''Cochrane ClearVu" similar or equally approved ZincAlu and PVC coated security fencing, gates, etc and setting out Fence system to be maintenance free and carry a 10 year anti-corrosion guarantee. Supplier to be ISO 9001 & Green Building Council approved.				
55	Supply and erect 2.4m high " ClearVu" or other equally approved fence to boundary comprised of 3050 x 2400 mm panels made out of welded mesh, with rectangular apertures size 76.2 x 12.7mm,horizontal and vertical wire diameter size 3.00mm,weld strength: 60% of the minimum tensile strength of the wire,and tensile strength range of wire: 540-690N/m² complete made from Zincalu® super wire and PVC coated - Anthracite RAL 7021	m	183		
	Serrated Top Rail Saw Tooth				
56	3050mm x 100 mm thick top rail with serrated tooth spike 2.5mm thickhot dip galvanised and PVC coated, bolted to panel top as per manufacturer's specification - Anthracite RAL 7021	m	183		
	Underdig				
57	"''Cochrane ClearVu" " or similar 3510 Singleskin Flat Zincalu size 3050 x 450mm high	m	183		
	Galvanised mild steel security gates				
58	Galvanised main vehicular steel gate size 6000 x 2200mm ditto(**Labour Intensive**)	No	1		
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59	64mm Union 3102 or other approved brass padlock	No	1		

ROADWORK INCLUDING PATCHING, REPAIRING POTHOLES AND EDGEBREAKS

NOTE:

All work is to be carried out in accordance with SABS 1200 ME, MF, MH & MK.

SCOPE

This section covers the patching of existing pavement layers, repairing potholes and edgebreaks and includes the follows:

(a) Patching (Local repairwork)
Patching shall be any rehabilitation work to pavement layers (and in exceptional cases to fills and the roadbed) with the purpose of repairing local failures, and which is carried out in an area having a length of less than 25 m, a width less than 1 m or an area of less than 100 m2.

(b) Potholes
The repair of local failures with a surface area of less than 1m2.

(c) Edgebreaks/raised areas
The repair of broken or raised edges requiring reinstatement.

MATERIALS

(a) Patching agent. i) Bitumen stabilising 60% Stable-grade anionic emulsion complying with SABS 309.

ii) Prime One of the following as directed by the engineer: - MC 30 - MSPI

iii) Chemical stabilising agent. OPC

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iv) Continously graded asphalt. As specified for medium grade, with 80/100 penetration grade bitumen as binder to SABS 1200 as specified in Table 2 and 6.

(b) Potholes i) Prime 60% Stable-grade anionic emulsion complying with SABS 309 diluted 1:1 with water.

ii) Continously graded asphalt. 80/100 Pen/Bit medium grade SABS 1200 as specified in Table 2 and 6.

(c) Edgebreaks and raised areas i) Prime One of the following as directed by the engineer: - MC 30 - MSPI ii) Continously graded asphalt. 80/100 Pen/Bit medium grade SABS 1200 as specified in Table 2 and 6.

(d) Crack sealing Materials for crack sealing can be any of the following:- Hot poured - Nat Pro Lastic (ABE Industrial Product) or similar Cold poured - Petroseal (Abecol) or similar - Inverted emulsion/latex compounds

CLASSIFYING THE MATERIAL

All material excavated from the existing roadprism including subgrade, subbase, base seals and shoulders shall be classified as soft material. No additional payment will be made for various types of material.

PLANT AND EQUIPMENT

The equipment to be used for the conventional breaking-up and excavation of existing pavement layers will be determined by the size and depth of the pavement section to be processed or excavated, taking into consideration the fact that work may have to be carried out in restricted areas.

Only approved cutting or sawing equipment shall be used for cutting or sawing the asphalt and stabilised base layers.

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CONSTRUCTION

(a) Patching (Local repairwork)
The Engineer will demarcate any failed areas to be patched, and shall instruct the contractor regarding the other details of the patching work to be done.

i) Excavating pavement material

Unless otherwise instructed by the Engineer, the patch shall have a neat rectangular shape. The bituminous surfacing shall be cut with an approved cutting device.

Initially 150 mm shall be excavated. After completion of the initial excavation, the Engineer shall be afforded the opportunity to examine it to determine whether further layers shall be removed. The floor of the excavation shall be watered and compacted to 93% modified AASHTOdensity.

ii) Backfilling excavations

The backfill material shall be imported gravel as ordered by the Engineer. The compacted density for each lower layer shall be for:

SSG layer 93% Mod. AASHTO
Subbase layer 95% Mod. AASHTO Base 86% Apparent density

The emulsion-establised base shall be compacted to 100% modified AASHTO density.

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iii) Crack Sealing
Surface cracks in the existing road surface to be sealed as follows:

a) Cracks over 5 mm wide.
The crack to be reamed out using hot lance operations to a minimum depth of 15 mm.

The cracks to be air blasted and cleaned out.

The cracks to be primed using primer as specified by manufacturers.

The cracks to be sealed using a rubber bitumen compound as specified by manufacturers.

b) Cracks 0 - 5 mm wide

The crack to be air blasted and cleaned out.

The crack to be treated using an inverted bitumen emulsion and 3% by mass of SBR latex emulsion.

Crack sealing is not to be carried out during wet conditions.

iv) Restrictions
All excavations for patching shall be backfilled on the same day.

(b) Potholes
The Engineer will indicate the potholes requiring repair.

The contractor shall demonstrate for approval by the Engineer his intended method for backfilling and compacting the continously graded asphalt in potholes.

Unless otherwise ordered by the Engineer, the existing material shall be removed to a depth of 50mm or to the bottom of the pothole, whichever is the grater, in the smallest rectangular area encompassing the pothole.

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EXTERNAL WORKS
Bill No. 2
EXTERNAL WORKS

The surface of the sides and bottom shall be primed at a rate of 0.7 litre/m2 with diluted emulsion, which shall be allowed to dry.

The continously graded asphalt shall then be placed in layers not exceeding 30 mm, compacted by the approved method and finished off level with the adjacent surfacing.

(c) Edgebreaks / raised areas

This treatment is intended for use where the repair of the edges of the surfaced area is required, including restoring the road edges to the true edge lines and levels of the original road to such other line as may be ordered by the Engineer.

Before the repair of edgebreaks/raised areas is carried out and, where the edges of the surfacing have broken away, the existing broken edges shall be cut back in neat lines until a sound edge is obtained.

All material between the edge of the surfacing and the line to which the surfacing has to be built up, shall be removed to a depth of 60 mm below the final road surface or until firm material is found, and the surface so exposed shall be cleaned and primed at a rate of 0.70 litre/m2.

The contractor shall demonstrate for approval by the Engineer his intended method for backfilling and compacting continously graded asphalt in edgebreaks/ raised areas.

The edges shall then be built up with continously graded asphalt as ordered by the Engineer and shall be well compacted by the approved method.

The built-up edges shall be finished neatly to the required line and levels

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	Raising and Levelling of Existing Manholes Where re-surfacing is to take place and the existing manhole covers will be covered by the new layer. The said manhole cover will be raised to the appropriate level to be flush with the surface of the re-sealed level.				
	Protection of Existing Services Where remedial layer works are to be carried out the depth and position of the relevant service is to be determined by hand excavation. In the case where the affected services have a cover of less than 300mm the services will be encased in a soil-crete mix.				
	Road Signs and Markings Where re-surfacing and related operations incorporated in this contract require the removal of traffic signs the affected sign shall be removed and stored in a safe place until such time as the work done in the area is complete. The said sign is then to be replaced in its original position. Road, paint markings are to be re-painted after completion of the re-sealing operation in the affected areas.				
60	Precast cement concrete (20 MPa - 6 mm stone) barrier kerb size 150 x 250 mm with one side splayed back 25 mm for a height of 125 mm including exposed angle rounded to a 20 mm radius, the kerb jointed in cement mortar on and including 75 mm concrete (20 MPa - 19 mm stone) bed haunched up on both sides, with 300 x 125mm average precast concrete channel including all necessary excavations, backfilling, formwork, etc.	m	102		
	High quality road marking paint in accordance with SABS 731				
61	Ditto in 100 mm wide yellow lines (ditto).	m	30		
62	Ditto in 300 mm wide white lines (ditto).	m	78		
63	Ditto directional arrow in white paint in accordance with the South African Road Traffice Manual.	No	2		
64	Ditto STOP ditto.	No	1		
65	Ditto Zebra crossing ditto.	m	1		
	Carried to Abstract			R	

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EXTERNAL WORKS

66	Ditto Disabled Parking ditto.	No	1		
	PAVING				
67	Excavate in earth to reduce levels not exceeding 2 m deep.	m³	183		
68	Extra over all excavations for carting surplus excavated material from the site.	m³	73		
69	Scarify ground to a depth of 150 mm and re-compact to 93% Mod. AASHTO density.	m²	366		
70	Approved G5 material as filling compacted in 150 mm layers to 93% Mod. AASHTO density.	m³	110		
71	Approved G7 material as filling compacted in 150 mm layers to 93% Mod. AASHTO density.	m³	110		
	220 x 110 x 60mm concrete brick paving with minimum longitudinal fall of 1% on a tranverse fall of at least 2% on 25mm compacted sand bed with 10mm joints filled with 1:10 cement sand fine jointing sand swept and vibrated into joints,all laid on subgrade conforming to SANS 1200 D Degree of Accurancy 1 including inspection and re-sanding after 3 months.				
72	Paving to Herringbone Bond pattern	m²	366		
73	Pointing only to edge of paving.	m	190		
74	220mm Wide brick-on-flat tread including 10mm thick mortar bed and pointing to top and one face.	m	190		
	One Layer 250 Micron Waterproof Sheeting				
75	One layer 250 micron polyethylene waterproof sheeting in accordance with SABS 952 Type C lapped 150 mm at joints and sealed with pressure sensitive tape and laying under paving.	m²	366		
	Carried to Abstract			R	

	Sundries				
76	Tricate or other approved weed killer in proportion 168kg to 1124 litres of water per hectare plus Agrol 90 sprayed onto surfaces of ground under floors, etc.	m²	366		
	RETAINING WALLS				
77	Enviro-wall or other equally approved blocks size approximately 275 x 300mm laid at a 70 degree slope (23kg per block / +/- 27 blocks per m2)	m²	83		
78	50mm thick topsoil	m²	33		
79	100mm thick G5 material	m²	40		
80	300mm wide, 19mm crushed stone drainage layer	m²	10		
81	300mm wide precast concrete U-Drain on 100mm thick concrete bed	m	119		
82	A4 Bidim geotextile membrane	m²	83		
83	20mpa reinforced concrete base and backing	m³	5		
84	Reinforcement in all bar sizes	t	0.49		
85	Approved G5 material as filling compacted in 150 mm layers to 93% Mod. AASHTO density.	m³	165		
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EXTERNAL WORKS

Bill No. 2

EXTERNAL WORKS

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EXTERNAL WORKS

EXTERNAL WORKS

SECTION SUMMARY - EXTERNAL WORKS

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EXTERNAL WORKS

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SECTION NO. 8

ALTERATIONS

BILL NO. 1

PREAMBLES

For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles

For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev Oct. 1993) as well as to the "Model Preambles for Trades" (1998) and Supplemetary preambles below.

Tenderers are advised to visit the site and to inspect the works in conjunction with the drawings in order to ascertain the exact nature and extent of the work to be done. The work is to be carried out in sections in accordance with the Architect's instructions in such a manner as to cause the minimum of nuisance and delay and the various sections are to be handed over for occupation as soon as they are completed and Tenderers must allow accordingly for this in their pricing.

The Contractor will be held solely responsible for checking all floor levels and dimensions in the existing building in order that the new extensions may be correctly lined up. Should any discrepancies be found in the Architect's drawings he should be asked for a decision before continuing with the work.

The Contractor will be held solely responsible for any damage to persons and property, for the safety of the new and existing structure throughout the whole of the contract and must make good at his own expense any damage that may occur.

Carried to Abstract R

N.G. DLUKULU
Bill No. 1
ALTERATIONS

Old materials described as "carefully take out, set aside for re-use and later refix in new position" are to be carefully removed, stored and protected from injury, made good as required and if broken or damaged through taking out, removing, storage, etc, are to be replaced by the Contractor at his own expense. Tenderers are advised to inspect these materials to ascertain their condition and allow accordingly for this in their pricing.

Old materials, which are to become the property of the Contractor as they are pulled down, together with all building debris from any cause whatsoever, are to be immediately carted away and the site left clean and unencumbered. Allow for watering the works sufficiently to prevent nuisance from dust.

Allow for giving notice to local or other authorities for disconnecting electric light, water and drainage mains and removing telephone wires, etc, and pay all fees in connection therewith and afford every facility to the workmen carrying out this work.

All materials in this section are measured as new except where old material is specifically mentioned as being re-used.

Old materials, if sound and suitable and approved by the Architect, may be re-used in the new structure. This applies particularly to timber which may be re-used for joists, brandering, fittings, etc and broken bricks and other similar material which may be used as filling and hardcore.

Wherever old materials are used instead of the new materials measured, an adjustment will be made by the Quantity Surveyor in the final settlement of accounts by deducting the net cost of the new materials and crediting the Contractor with the amount, if any, allowed by him for the old materials.

When pricing, Tenderers are to allow as follows:

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N.G. DLUKULU
Bill No. 1
ALTERATIONS

Where door and window openings, etc, are specified to be filled in, or where jambs, cills, etc are specified to be built up, brickwork shall be of hard burnt clay stock bricks in 5.1 cement mortar unless otherwise specified, cut, toothed and bonded into existing brickwork and pinned up as required with slates or other hard materials. Brickwork built to fair face or in facings is to be of Travetine facebricks and pointed to match existing. Plaster is to be 5.1 cement plaster unless otherwise specified.

Where lintols are specified as reinforced concrete the prices are to include for breaking out brickwork over for and inserting cement concrete (20MPa) lintol with 230mm bearing on each end and 254mm deep and reinforced with and including one 12mm diameter mild steel rod for each half brick thickness of wall and including formwork. The steel rods are to be hooked at ends and embedded 25mm up from bottom of lintols. Lintols exceeding 1370mm span to be similarly reinforced but with 20mm diameter mild steel rods.

Where lintols are specified as precast concrete the prices are to include for breaking out brickwork over for and inserting precast prestressed cement concrete (30MPa) lintol with 230mm bearing on each end size 108 x 75mm deep for each half brick thickness of wall.

The term "take out" includes all work taken out, taken up, taken down, taken off, etc ; the term "break up" includes all work broken up, broken down, broken off, etc and the term "hack off" includes all work hacked off, hacked up, hacked down, etc.

The term "make good" is to include all labour and material required to match existing work.

The terms "take out and remove door", "take out and remove window", "carefully take out, set aside for re-use and later refix window in new position", etc are to include all materials connected with such door or window such as doors, windows, fanlights, frames, ironmongery, glass, architraves, beads, fillets, cramps, dowels, etc.

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N.G. DLUKULU
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ALTERATIONS

	The terms "take out and remove sink unit", "take out and remove lavatory basin", "carefully take out, set aside for re-use and later refix W.C. suite in new position", etc are to include all materials connected with such sanitary fittings such as brackets, cisterns, taps, traps, flushing valves, flush pipes, etc and are to include for the cutting back and stopping off of supply and waste pipes. ---------- ----------				
	The contractors unit rates must allow for disposal of disposal or carting away of material,fittings or fixtures so described to a prescibed dumping site as instructed by the Architect ----------				
	Wire mesh were referenced shall be as follows: Wire thickness = 3.0mm thick Strand width = 4.5mm thick Diamond size = 25mm x 50mm				
	GENERAL ALTERATIONS				
	Carefully take out and remove the following asbestos material complete by ad approved Asbestos Removal Contractor under the direction and supervision of an Approved Asbestos Removal Authority				
1	Roof sheets, with and including fascias, barge boards, gutters and downpipes and leave roof structure ready to receive new sheeting and rainwater goods(sheeting and rainwater goods elsewhere measured)	m²	659		
2	Ceiling boards including brandering and leave trusses ready to receive new ceiling boards and brandering	m²	450		
	Carried to Abstract			R	

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ALTERATIONS

3	Extra over for cost of Approved Asbestos Inspection Authority (AIA) to be procured and paid in advance by the Contractor. The AIA to undertake all tasks and obligations as fully detailed in the latest published asbestos laws which entails as a minimum, identifying asbestos material on site, planning and implementation of the careful removal and disposal of all asbestos material, including reporting and submission or all licences, permits and certifications to the health and safety agent for the duration of the works			SUM	
	Break up and remove				
4	Half brick wall	m²	7		
5	One brick wall	m²	47		
6	Reinforced concrete slab and leave opening ready to receive new foundations for new brick walls (foundations and brick walls elsewhere measured)	m³	14		
7	Tarmac surfaces approximately 25mm thick and leave ground ready to be compacted (compaction elsewhere measured)	m²	359		
8	Concrete tank stand complete	m³	1		
	Take out and remove				
9	Pedestrian gate size approximately 1000 x 2100mm high	No	2		
10	Single door size 900 x 2100mm high and leave opening ready to be bricked up (bricking up elsewhere measured)	No	34		
11	Door size approximately 900 X 2100mm	No	4		
12	Alter existing door opening size 900 x 2100mm high in half brick wall to form a door size 1455 x 2050 mm, break out at head for a height of 2000mm,insert prestressed concrete lintel over, and make good including to plaster.	No	1		
	Carried to Abstract			R	

N.G. DLUKULU
Bill No. 1
ALTERATIONS

13	Alter existing window opening size approximately 600 x 600mm high in a one brick wall to form an Aluminium window opening size 840 x 2100mm high, break back at one jamb for a width of 300mm and under cill insert a pre stressed concrete lintel over, build in pretressed steel window frame, form 100 wide 10mpa concrete threshold and make good including to plaster both sides and to reveals.	No	2		
14	Alter existing window opening size approximately 600 x 600mm high in a one brick wall to form a door opening size 832 x 2032mm high, break back at one jamb for a width of 300mm and under cill insert a pre stressed concrete lintel over, build in pretressed steel window frame, form 100 wide 10mpa concrete threshold and make good including to plaster both sides and to reveals.	No	4		
15	Galvanised steel window size 600 x 600mm high and make good leaving the opening ready to receive door size 900 x 2125mm, else where measured.	No	11		
16	Take out and remove existing double door and make good to the opening and finish.	No	2		
17	Single door size 900 x 2100mm high and leave opening ready to be bricked up (bricking up elsewhere measured)	No	1		
18	Drywall partition including studs and tracks complete	m	13		
19	Single bowl sink size 650 x 450mm including removing brackets, piping from wall, capping water pipes, etc and leaving wall and floor ready to receive new single bowl sink (New single bowl sink,waste pipes etc elsewhere measured)	No	7		
20	Blinds for windows measuring 2125 x 840 and make good finish and leave it ready for new blinds	No	24		
21	Boundary fence and posts complete and leave ready to receive new fence (new fence elsewhere measured)	m	321		
22	Garden areas and leave ground ready to be landscaped		Item		
	Carried to Abstract			R	

N.G. DLUKULU
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ALTERATIONS

23	Jojo tank and accessories and erect as directed by the PA	No	2		
24	Signage including posts and brickwork support size 3 000 x 3000mm high overall	No	1		
25	Waste cage size 4 000 x 1 800mm high overall	No	1		
	Making Good to Existing				
26	Envirowall Blocks size 275mm x 300mm (approx 25kg per block / +/- 27 blocks per m2) and repack at 70° angle to a height between 1.6 to 3.5m high	m²	117		
	Hack out and remove				
27	Ceramic tiles	m²	452		
	Carefully prepare floors to receive moisture barrier by light grit blasting or high pressure water blasting floor surfaces to produce a lightly exposed aggregate surface (ICRI CSP3) that will absorb water. Stop, rinse the treated substrate with clean water and ensure the substrate is in a saturat ed surface dry (damp) condition before the application of X Shield VaporStop HB or other barrier (elsewhere measured). Any cracks or bug holes should be filled with X-Shield BugFill or other suitable filler after application of X-Shield Va porStop HB. Note: Cementitious under layment and patching should only be installed over X-Shield VaporStop HB or other recommended barrier.				
28	On concrete floors	m²	452		
	Carefully Take Out and Remove				
	Carried to Abstract			R	

	The contractor must make all necessary allowances e.g. scaffolding for a height exceeding 3m and n.e. 10m. , health and safety etc and must factor in the costs of any direct or indirect damage to floors, walls, the existing roof and ceilings etc that may result during the execution of this work				
29	Clerestory IBR roof sheeting and insulation, inspect roof structure and provide a written report to the Principal Agent and leave existing structure ready to receive new insulation and roof sheeting (Insulation and roof sheeting elsewhere measured)	m²	234		
30	125 x 125mm gutters and leave fascia boars ready to receive new gutters (new gutters elsewhere measured)	m	60		
	The contractor must request for a written instruction concerning the relocation of joinery fittings as described below. The contractor must make the necessary allowances for the complete replacement or reinstatement of joinery that may be damaged during the removal, reinstatement or transit of joinery				
31	Timber shelving size approximately 3500 x 3000mm high and reassemble in new position as directed by the architect	No	3		
32	Break out one brick wall for counter opening size approximately 1500 x 1200mm high , insert concrete lintol size 75 x 150mm, make plaster and paintwork both sides and leave opening ready to receive new roll up door (door elsewhere measured)	No	4		
33	Take out and remove existing stainless steel sink and tap	No	7		
34	Take out and remove, stop, service parts and replace consumables pertaining to the wall mounted elbow action tap and CP waste	No	6		
35	Ditto but to wall mounted hot and cold elbow action taps	No	3		
36	Take off and remove 15mm diameter bib tap, remove pipework from wall, cap piping and leave wall ready to receive new tap and pipework (elsewhere measured)	No	2		
	Carried to Abstract			R	

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Bill No. 1
ALTERATIONS

37	Take out and remove shower set including shower rose, mixer unit with hot and cold connections, remove all pipework from wall, cap piping and leave wall ready to receive plaster and paint (elsewhere measured)	No	2		
38	Take off and remove existing 590 x 420mm ceramic medical basin including removing and capping piping and make good wall and leave wall ready to receive new basin (elsewhere measured)	No	1		
39	Take off and remove ceramic washhand basin size 525 x 420mm complete with taps, traps, etc., including piping and make good wall and leave wall ready to receive new finishes (elsewhere measured)	No	6		
40	Take out and remove ceramic WC and cistern complete including removing piping from wall, capping water pipes and leave wall and floor ready to receive new WC and cistern (elsewhere measured)	No	5		
41	Take out and remove sink size 1300 x 400mm and cupboard under including two pillar cocks from fitting and set aside for re-use and temporarily stop off water and waste	No	3		
42	Take out and remove sluice sink size 3600 x 500mm including removing brackets, piping from wall, capping water pipes and make good wall	No	1		
	<u>Major crack - width more than 5.0 mm</u>				
43	Remove the plaster in the vicinity of the crack (350mm width on each side of crack) exposing the brickwork and chisel out a V shape,clean the crack with compressed air and ensure that dirt,fine and loose material are removed completely,fix in grouting nipples in the V-groove on both faces of the wall at spacing of 150-200 mm c/c, seal the crack on both the faces of the wall with ABE epidermix 365 or other equally approved crack injection compound, nail fix a diamond wire meshover the sealed crack (spanning at least 300mm diameter on either side of the crack) with and including holding it to the wall through spikes or bolts at 300mm c/c and leave surface ready to receive new plaster (Plaster elsewhere measured)	m²	132		
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Item No			Quantity	Rate	Amount R
	BILL NO 2				
	EARTHWORKS				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	No allowance has been made in the measurements for bulking. The contractor must make allowance for bukling in his/her unit rates.				
	Excavation in earth not exceeding 2m deep				
44	Trenches	m^3	82		
45	Reduced levels under floors	m^3	146		
	Extra over all excavations for carting away				
46	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m^3	3		
	EXCAVATIONS IN STRATA OF A MORE DIFFICULT CHARACTER				
	Extra over trench and hole excavations in earth for excavation in				
47	Soft rock	m^3	4		
48	Hard rock	m^3	20		
	Risk of collapse of excavations				
49	Sides of trench and hole excavations not exceeding 1,5m deep	m^2	218		
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EARTHWORKS

	Keeping excavations free of water				
50	Keeping excavations free of water		Item		
	FILLING ETC				
	Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 93% Mod AASHTO density				
51	Backfilling to trenches, holes, etc	m³	38		
	G5 Earth filling material supplied by the contractor, compacted to 93% Mod AASHTO density				
52	Backfilling to trenches, holes, etc	m³	13		
53	Under floors, steps, pavings, platforms etc	m³	237		
	G7 Earth filling supplied by the contractor, compacted to 98% Mod AASHTO density				
54	Under floors, steps, pavings, etc	m³	204		
	Bedding				
55	50mm Thick bed of approved sand.	m²	306		
	Compaction of surfaces				
56	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density	m²	292		
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EARTHWORKS

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EARTHWORKS

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	BILL NO 3				
	CONCRETE, FORMWORKAND REINFORCEMENT				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES				
	15MPa/19mm concrete				
57	50mm thick surface blinding under footings and bases	m^3	3		
	REINFORCED CONCRETE				
	25MPa/19mm concrete				
58	Strip footings	m^3	24		
59	Ramps including landings and generator plinths	m^3	18		
	30MPa/19mm concrete				
60	Seamless surface beds	m^3	56		
61	Roof slabs	m^3	6		
62	Stairs, including landings, beams and inverted beams	m^3	21		
	CONCRETE SUNDRIES				
63	Extra for steel power floating surface bed to a non slip finish including any additional cement necessary	m^2	292		
	Carried to Abstract			R	

64	Extra for floating up to non slip finish to treads of steps including any additional cement necessary.	m²	13		
65	Sika or other equally approved floor hardener	m²	292		
	FORMWORK				
	SMOOTH FORMWORK (DEGREE OF ACCURACY 1)				
	Smooth off shutter formwork (use and waste) to concrete				
	Sides, edges, risers, etc.				
66	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	103		
67	Edges exceeding 300mm high	m²	11		
68	Soffits of slabs	m²	30		
	EXPANSION JOINTS				
	Expansion joints with softboard between vertical concrete and brick surfaces to SABS 1077				
69	10mm Thick Jointex expansion joint filler vertically between concrete or brick surfaces not exceeding 300 mm high	m	294		
	Carried to Abstract			R	

	REINFORCEMENT (PROVISIONAL)				
	High tensile steel reinforcement to structural concrete work				
70	Reinforcement in all bar sizes	t	5.11		
	Fabric reinforcement				
71	Reference 617 welded mesh reinforcement lapped 200mm at edge of adjoining sheets and bound with annealed wire and laying in concrete surface beds / ramps (Measured nett - no allowance made for laps)	m²	307		
	Carried to Abstract			R	

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Bill No. 3
CONCRETE, FORMWORK AND REINFORCEMENT

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CONCRETE, FORMWORK AND REINFORCEMENT

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	BILL NO 4				
	CONCRETE, FORMWORKAND REINFORCEMENT				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	NOTE: Prices are to include for building in surrounds as single units or in combinations of two or more units to the required patterns.----------				
	Precast Vibrated Cement Concrete (30MPa) Winblok Window Surrounds Finished Smooth From The Mould On Exposed Surfaces, Built Into Brickwork As The Work Proceeds, Bedded And Jointed In 4.1 Cement Mortar And Pointed With Ruled-In Vertical And Horizontal Joints Both Sides (Glazing And Vents Elsewhere Measured)				
72	Window size 2125 x 840mm high	No	8		
73	Window size 600 x 500mm high	No	9		
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Item No			Quantity	Rate	Amount R
	BILL NO 5				
	MASONRY				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	Samples of all masonry building units, shall consist of a minimum of 6 units				
	FOUNDATIONS				
	Brickwork of NFX(E) bricks (28 MPa minimum compressive strength) in class II mortar in loadbearing walls etc				
74	Half brick walls	m²	2		
75	270mm Hollow walls of two half brick skins with cavities filled in with and including 15MPa/20mm concrete	m²	121		
76	Piers with cavities filled in with and including 15MPa/20mm concrete	m³	1		
	SUPERSTRUCTURE				
	Brickwork of NFX(E) bricks (28 MPa minimum compressive strength) in class II mortar in loadbearing walls etc				
77	Piers	m³	2		
78	One brick walls	m²	36		
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79	270mm Hollow wall formed of two half brick thicknesses with 50mm cavity between tied together with and including galvanized wire ties of the Butterfly or Modified PWD type in accordance with SABS 28 spaced at not more than one metre centres alternately to every third course and staggered.	m²	276		
80	300mm Hollow wall formed of two half brick thicknesses with 80mm cavity between tied together with and including galvanized wire ties of the Butterfly or Modified PWD type in accordance with SABS 28 spaced at not more than one metre centres alternately to every third course and staggered.	m	227		
81	Ditto but in bricking up openings etc	m²	20		
82	Build 50mm wide cavity closed for two courses at top of wall.	m	20		
83	Build 50mm wide cavity of wall solid half brick wide at jambs or ends of wall.	m	46		
84	Build 50mm wide cavity of wall solid half brick wide at head of opening	m	8		
	<u>Miscellaneous</u>				
85	Cut toothings and bond new brickwork to existing.	m²	7		
86	Bag down face of new brickwork with 1:3 cement slurry.	m²	128		
87	75mm wide welded high tensile steel wire brick reinforcing fabric and building into walls.	m	1 737		
88	154mm Wide ditto.	m	493		
89	75 x 110mm Wide presstressed precast concrete lintol not exceeding 3m and building into brickwork	m	167		
90	2 x 30mm Galvanised hoop iron tie 450mm girth with one end twice screwed to timber frame and other end built into brickwork and turned up into joint.	No	246		
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MASONRY

91	1,6 x 40mm Galvanised hoop iron tie 1000mm girth, once bent and with one end wrapped around rafter ends, and another end built into brickwork.	No	40		
92	30 x 1,6mm Roof tie 1,5m long with one end fixed to brickwork or concrete and other end built into new brickwork	No	20		
93	4mm Galvanised wire in ties for wall plate 1500mm girth built into brickwork	No	122		
94	Galvanized Storm Clip framing anchor designed for the connection of structural timber members at angles to each other.	No	490		
	FACINGS				
	FBS facing bricks and pointing with 10 mm square recessed joints to match existing				
95	Allow for constructing a sample face brick panel of half brick thickness and and 2 square metres in area in a north facing position to the Representative/ "Agent's approval maintain, protect and" remove at completion of contract or when directed by the Representative/ Agent.	No	1		
96	Face brick on edge door cill size 230mm wide x 110mm high, bedded in 1:5 cement mortar including cutting and fitting between reveals and pointing on top and front face.	m	3		
97	Face brick soldier course band size 110mm wide x 255mm high recessed inbetween outer skins of cavity wall and build against internal brick lining, bedded in 1:5 cement mortar and pointing to front face.	m	117		
98	Face brick on edge lintol above window head size 230mm wide x 110mm high, bedded in 1:5 cement mortar including cutting and fitting between reveals and pointing on bottom and front face.	m	24		
99	Face brick on edge lintol above door head size 230mm wide x 110mm high, bedded in 1:5 cement mortar including cutting and fitting between reveals and pointing on bottom and front face.	m	17		
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MASONRY

100	Extra over ordinary brickwork for facing in stretcher bond and pointing.	m^2	402		
101	220mm Wide sills set level and slightly projecting	m	32		
	CONCRETE				
	Cement concrete (25 MPa - 19 mm stone) in				
102	Filling to cavity of hollow wall	m^3	4		
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MASONRY

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Item No			Quantity	Rate	Amount R
	BILL NO 6				
	WATERPROOFING				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	MEMBRANE WATERPROOFING				
	Damp-proof courses				
103	250 Micron polyethylene sheeting in accordance with SABS 952 Type C lapped 150 mm at joints and sealed with pressure sensitive tape and laying under concrete surface bed complete with condensation barrier	m²	294		
104	375 Micron embossed black polyethylene sheeting in accordance with SABS 952 Type B lapped 150 mm at ends and full widths of walls at angles and building into walls as dampproof course.	m²	711		
	Pointing, sealants, etc.				
105	Rake out 10mm wide expansion joint for a depth of 15mm, clean, prime and seal with an approved external quality polyurethane sealing compound applied with a pressure caulking gun.	m	397		
106	Polysulphide cover to jointex to finish flush with face of recessed square mortar joints in facebrick	m	397		
107	Silicon pointing to aluminium windows	m	106		
108	Ditto to aluminium doors	m	83		
109	Ditto to timber door frame	m	73		
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Bill No. 6
WATERPROOFING

Item No			Quantity	Rate	Amount R
	BILL NO 7				
	ROOF COVERINGS ETC				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	0.8mm Z275 Prepainted factory coated finished galv. IBR sheeting in continues lengths on double sided reflective aluminium foil faced insulation barrier(reflective facing to be exposed to roof sheets) colour to match existing and Fittings Fixed To Timber purlins				
110	0,8mm Thick IBR roof sheeting not exceeding 25° fixed to timber purlins (elsewhere measured) with hook bolts, including plastic washers, etc.	m²	569		
111	Ridge capping 550mm girth three times bent and notched on site to suit profile roof	m	36		
112	625mm IBR flashing 3 times bent and fixing under roof covering	m	10		
	Insulation tested for conformance with SABS 1381:Part IV-1985,with a class one fire rating in accordance with accordance with SABS 0177:Part III-1981 and BS 476 part 5,6,7,				
113	40mm thick flexible faced insulation board, white washable coated fibre glass tissue faced.	m²	569		
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ROOF COVERINGS

	0.8mm Klip-Lok 406 G550 ZINCAL® / COLORPLUS finished sheeting on 40mm thick flexible faced POLYISOCYANURATE insulation board, white washable coated fiberglass tissue faced and Fittings Fixed To Timber purlins				
114	0.8mm Klip-Lok 406 G550 ZINCAL® / COLORPLUS finished sheeting on 40mm thick flexible faced POLYISOCYANURATE insulation board, white washable coated fiberglass tissue faced.not exceeding 25° fixed to timber purlins (elsewhere measured) with hook bolts, including plastic washers, etc.	m²	324		
115	Head wall flashings 350mm girth	m	27		
	Insulation tested for conformance with SABS 1381:Part IV-1985,with a class one fire rating in accordance with accordance with SABS 0177:Part III-1981 and BS 476 part 5,6,7,				
116	Sisalation FR 405 multi-purpose grade reinforced aluminium foil insulation double sided,light grammage,durable reflective foil laminate incorporating layers of aluminium foil,high strength kraft paper and reinforcing scrim bonded together with low density polyethylene,drawn tautly across rafters (rafters elsewhere measured) with purlins (purlins elsewhere measured) spaced at less than 1500mm centres and secured to each rafter with 3.2mm thick 38mm x 1100mm hardboard counter batten strips (herein measured) positioned flush with bottom edge of the material thus leaving 150mm overlap exposed at the top for the next layer and lapped 150mm at ends	m²	324		
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ROOF COVERINGS

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ROOF COVERINGS

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Bill No. 7
ROOF COVERINGS

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	BILL NO. 8				
	CARPENTRY AND JOINERY				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	TIMBER ROOF STRUCTURE				
	Monoplaner Prefabricated Connector Plate Roof Trusses at 1000mm maximum centres with a pitch of 25 Degrees and suitable for IBR roof sheeting or other with 50 x 76mm purlins (elsewhere measured) at 1050mm centres and Gypsum plasterboard ceiling (Gypsum plasterboard ceiling elsewhere measured) with and including brandering herein measured at 450mm centres				
117	Truss size 3 920 mm span x 1500mm high with 650mm overhang both ends.	No	11		
118	Truss size 9 000 mm span x 1500mm high with 650mm overhang both ends.	No	4		
119	Truss size 9 700 mm span x 1500mm high with 650mm overhang both ends.	No	3		
	Structural Timber				
	Sawn SA Pine tanalith treated Grade M4				
120	4500mm long, 150 x 50mm SAP exposed timber rafter @ 1050mm centres treated with approved timber preservative paint	No	12		
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121	50 x 50mm battens,bolted	m	85		
122	75 x 50mm SAP bracing and runners	m	42		
123	75 x 50mm SAP Purlins,bolted	m	138		
124	38 x 114mm Wall plate bolted to brickwork	m	69		
	Fascias etc.				
	Fibre reinfoced cement				
125	12 x 225mm Fascia plain (ungrooved) screwed with two countersunk brass screws into and including vertical 50 x 50mm SAP batten fixed to rafter also fixed with two x countersunk brass screws	m	99		
126	210 x 210mm Pressed winged bardgeboard, butt jointed with and including H-profile plastic jointing strips and screwed to ends of purlins with two brass screws at 1000mm centres	m	74		
	DOORS, ETC.				
	Wrot Meranti				
127	44 mm Framed, ledged, braced and batten double door size 900 x 2125mm overall (D04 & 4a) each leaf consisting of 22 x 150mm top and bottom rail,22 x 70mm tongue and groove vee jointed boarding with 3mm thick meranti ply panel to internal face of door,44 x 70mm grooved and splayed meranti weatherboard,32 x 108mm twice rebated selected meranti lining with 32 x 108mm transom and 12 x 32mm meranti planted stop as per Architects drawing MDA 290 C	No	6		
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Bill No. 8
CARPENTRY AND JOINERY

	SABS Semi Solid core flush doors with 10mm hardwood edges faced with tempered smooth faced hardboard for painting hung to timber frames No 3 PVC buffers to closing				
128	44mm thick semi solid core flush door (DO2) size approximately 900 x 2125mm high as per Architects drawing MDA/290 E	No	23		
129	44mm thick semi solid core flush door (D02a) size approximately 900 x 2125mm high as per Architects drawing MDA 290 C	No	6		
130	44mm thick semi solid core flush door (D02b) size approximately 900 x 2125mm high as per Architects drawing MDA 290 C	No	1		
131	44mm thick semi solid core flush door (DO3) size approximately 1455 x 2125mm high as per Architects drawing MDA/290 E	No	1		
	SABS Solid core flush doors with 10mm hardwood edges faced with tempered smooth faced hardboard for painting hung to timber frames No 3 PVC buffers to closing				
132	44mm thick solid core door (DO5) with horizontal grooved solid core interior, faced with tempered veneer faced hardboard placed horizontally for painting size approximately 1700 x 2125mm high overall as per Architects drawing MDA/D05	No	1		
	Carried to Abstract			R	

	JAMB AND SOFFIT LININGS AND FRAMED FRAMES				
	Note:				
	The linings and frames are to include for securing in openings in drywall partitioning with self tapping screws drilled and fixed to the steel studding or to openings in brick walls, with screws and nylon inserts in drilled mortices. The heads of screws are to be countersunk and pelleted.				
	Wrot Meranti framed frames				
	Framed frames to doors formed out of 75 x 100mm meranti frame with lugs at every fifth brick course for building into 230 /270mm wall with and including 3 x no. PVC buffers for closing				
133	Plain frame for door opening size 900 x 2100mm fixed to brickwork	No	36		
134	Plain frame for door opening size 1455 x 2100mm fixed to brickwork	No	2		
135	Plain frame for door opening size 1700 x 2125mm fixed to brickwork	No	1		
	BEADS, ARCHITRAVES, ETC.				
	Wrot Meranti				
136	19mm quadrant beads	m	124		
137	12 x 44mm Stop	m	58		
	SKIRTINGS, RAILS, ETC.				
138	38 x 220mm twice angle rounded saligna hardwood bump rail plugged and screwed to wall with two x countersunk screws at approximately 70mm centres, the bump rail 1000mm affl as per Architects drawing MDA 290/301	m	294		
	Carried to Abstract			R	

JOINERY FITTINGS

139	Guard House (Ref:MDA290D-303) - Rectangular shaped fitting size approximately 2000mm long x 600mm wide x 750mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Drawer and Door: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 22mm supawood seen end with Max on Top HPL (Solid colour) finish with impact edge trim to match 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
140	Patient Vitals and Observation Room (Ref: MDA290D-303) - Open shelving size approximately 2000mm long x 400mm wide x 1500mm high, 22mm thick supawood (Approx 4 in number), including 1150mm x 2000mm x 22mm supawood supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood continuous support batten with Max on Top HPL (Solid colour: White) 22mm supawood shelf and carcass with Max on Top HPL (Solid colour: White). 2mm pvc impact edge to all exposed edges	No	1		
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Bill No. 8
CARPENTRY AND JOINERY

141	Reception (Ref: MDA290D-303) - L - shaped fitting size approximately 2647mm long x 2740mm wide x 750mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 2647mm x 600mm x 22mm thick supawood fixed on mild steel gallows bracket Drawer and Door: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions 22mm supawood seen end with Max on Top HPL (Solid colour) finish with impact edge trim to match	No	1		
	Carried to Abstract			R	

142	Reception 01 (Ref: MDA290D-303) - L - shaped fitting size approximately 1740mm long x 1740mm wide x 750mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 1740mm x 600mm x 22mm thick supawood fixed on mild steel gallows bracket Drawer and Door: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions 22mm supawood seen end with Max on Top HPL (Solid colour) finish with impact edge trim to match M	No	1		
	Carried to Abstract			R	

143	MCWH Consulting Room (Ref:MDA290D-303) - Rectangular - shaped fitting size approximately 1950mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) Door: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

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CARPENTRY AND JOINERY

144	Emergency Treatment Room (Ref:MDA290D-303) (Shelving and Fitting as herein described) - Open shelving size approximately 2795mm long x 400mm wide x 1500mm high, 22mm thick supawood (Approx 4 in number), including 1150mm x 2000mm x 22mm supawood supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood continuous support batten with Max on Top HPL (Solid colour: White) 22mm supawood shelf and carcass with Max on Top HPL (Solid colour: White). 2mm pvc impact edge to all exposed edges Rectangular shaped fitting size approximately 2795mm long x 600mm wide x 900mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) Door: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

145	Staff Room / Meeting (Ref: MDA290D-303) - Rectangular shaped fitting size approximately 3660mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: Door: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
146	Visiting Doctors Counselling Room (Ref:MDA290D-303) - Rectangular shaped fitting size approximately 2655mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) Door: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

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CARPENTRY AND JOINERY

147	Admin Managers Office (Ref:MDA290D-303) (Shelving and Fitting as herein described) - Open shelving size approximately 1950mm long x 400mm wide x 616 mm high with 22mm thick supawood (Approx 4 in number), including 100mm brass drop bolt, fitted to internal fixed leaf of cupboard door Door Lock: Union 22mm Brass Cylinder Cupboard dead lock (Product Code: 452-22PL) 16mm white melamine internal carcass Door: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) Fitting Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Door: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

148	Consulting Room 01 (Ref: MDA290D-303) - Rectangular shaped fitting size approximately 2655mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
149	Consulting Room 02 (Ref: MDA290D-303) - Rectangular shaped fitting size approximately 2655mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

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CARPENTRY AND JOINERY

150	Chronic Consulting Room (Ref: MDA290D-303) - Rectangular shaped fitting size approximately 2655mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
151	Store Room 04 (Ref:MDA290D-303) - U - shaped fitting size approximately 3100mm long x 2330mm wide x 2300mm the other side x 2172mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm SA Pine Slatted shelf fixed to 22mmx50mm support struts 22mm SA Pine solid support panels spaced at max 720mm cc 22mm SA Pine solid base, fixed to concrete floor surface 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

152	Acute Consulting Room (Ref: MDA290D-303) - Rectangular shaped fitting size approximately 2655mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
153	Archives Room (Ref: MDA290D-303) - U - shaped fitting size approximately 3660mm long x 1830mm wide x 2480mm the other side x 2172mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm PAR SA Pine shelves, fixed to baked Enamel finished mild steel wall bands Baked Enamel finished mild steel wall band fixed to wall 22mm SA Pine Slatted shelf fixed to 22mmx50mm support struts 22mm SA Pine solid support panels spaced at max 720mm cc 22mm SA Pine solid base, fixed to concrete floor surface 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

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154	MCRHS Consulting Room Ref: MDA290D-303 - Rectangular shaped fitting size approximately 2655mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

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CARPENTRY AND JOINERY

155	Pharmacy Shelving (Ref:MDA290D-304) - W - shaped shelving fitting 600mm wide overall with sides approximately 5000mm x 2080 x 2000mm x 490mm x 2000mm wide x 1200mm x 2000mm long x 2172mm high overall supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 16mm white melamine shelf and carcass with 2mm pvc impact edge to all exposed edges Handle: Roco 212mm Atlante stainless steel bar handle, code: RTSL28192SS. Handle: Roco 148mm Atlante stainless steel bar handle, code: RTSL28128SS 30mm thick Formica top, colour: White Myria Mild steel gallows brackets 22mm SA Pine Slatted shelf fixed to 22mmx50mm support struts 22mm SA Pine solid support panels spaced at max 720mm cc 22mm SA Pine solid base, fixed to concrete floor surface 6mm White melamine doors 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

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156	Pharmacy Shelving (Ref:MDA290D-304) - L - shaped shelving fitting 4000mm x 2000mm x 2172mm high overall supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 16mm white melamine shelf and carcass with 2mm pvc impact edge to all exposed edges Handle: Roco 212mm Atlante stainless steel bar handle, code: RTSL28192SS. Handle: Roco 148mm Atlante stainless steel bar handle, code: RTSL28128SS 30mm thick Formica top, colour: White Myria Mild steel gallows brackets 22mm SA Pine Slatted shelf fixed to 22mmx50mm support struts 22mm SA Pine solid support panels spaced at max 720mm cc 22mm SA Pine solid base, fixed to concrete floor surface 6mm White melamine doors 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
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157	Mobile Counter (Ref: MDA290D-304) - size approximately 1033mm long x 491mm wide x 900mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 30mm thick Formica top, colour: White Myriad 16mm white melamine trim with 2mm pvc impact edge to all exposed edges 16mm white melamine shelf and carcass with 2mm pvc impact edge to all exposed edges 2mm brushed aluminium kick plate glued to 16mm Marine Ply timber frame Heavy duty nylon casters with brakes 2mm brushed aluminium kick plate glued to 16mm Marine Ply timber frame Open shelf bin to fit size 508 mm x 491 mm x 900mm high	No	1		
158	High level cupboard 01 (Ref: MDA290D-304) - Open shelving size approximately 1245mm long x 400mm wide x 1500mm high, 22mm thick supawood (Approx 4 in number), including 1150mm x 2000mm x 22mm supawood supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood continuous support batten with Max on Top HPL (Solid colour: White) 22mm supawood shelf and carcass with Max on Top HPL (Solid colour: White). 2mm pvc impact edge to all exposed edges	No	1		
	Carried to Abstract			R	

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CARPENTRY AND JOINERY

159	High level cupboard 02 (Ref:MDA290D-304) - Open shelving size approximately 2000mm long x 400mm wide x 1500mm high, 22mm thick supawood (Approx 4 in number), including 1150mm x 2000mm x 22mm supawood supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood continuous support batten with Max on Top HPL (Solid colour: White) 22mm supawood shelf and carcass with Max on Top HPL (Solid colour: White). 2mm pvc impact edge to all exposed edges	No	2		
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CARPENTRY AND JOINERY

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CARPENTRY AND JOINERY

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CARPENTRY AND JOINERY

Item No			Quantity	Rate	Amount R
	BILL NO 9				
	CEILINGS, PARTITIONSAND ACCESS FLOORING				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	NAILED UP CEILINGS				
	9.5mm plasterboard fixed to 38 x 50mm SAP battens with drywall screws at minimum 400 centres. All joints to be covered with 25mm x 6mm hardwood cover strip,fixed to ceiling board				
160	Horizontal ceilings suspended not exceeding 1m below purlins	m²	450		
	Sundries				
161	75mm extruded polystyrene cove cornice to match existing	m	389		
162	102mm cavity bat insulation installed over ceilings	m²	450		
	PARTITIONS				
	GypRoc Standard System 3 partitions with two layers of wall board on each side with framing and the board layers full height				
163	114mm Thick partition 2835mm high	m	192		
	Sundries				
164	75mm Aerolite glass fibre insulation in partitions	m²	548		
	Carried Forward to Summary of Section No.			R	

Item No			Quantity	Rate	Amount R
	BILL NO. 10				
	FLOOR COVERINGS, PLASTIC LININGS, ETC.				
	SHEET VINYL FLOORING				
	Note:				
	NB: Vinyl sheeting to be laid by specialist sub-contractor who is to be a certified and approved / accredited applicator by material supplier. Manufactures and installers warranty will be required as a condition of contract. The flooring Sub-Contractor is to ensure that the screed is of sufficiently good finish to provide a perfect even level surface for the laying of floor covering. Any floor coverings showing waves or imperfections on finished surfaces will not be acceptable.				
	New Floorworx or similar approved 2mm heavy duty homogeneous non-directional "Canvas PUR" 2000 wide vinyl floor sheeting with welded joints by specialist approved applicator. Sheeting must be rolled in both directions with an articulated 68kg three sectional roller immediately after being laid in the adhesive				
165	On floors	m²	453		
166	Vinyl skirtings	m	250		
	WALL LININGS				
	Carried to Abstract			R	

	2mm heavy duty homogeneous non directional "Canvas PUR" 2000 wide vinyl floor sheeting with welded joints by specialist approved applicator. Sheeting must be rolled in both directions with an articulated 68kg three sectional roller immediately after being laid in the adhesive with welded joints in one colour				
167	On face and both edges of bump rail 220mm girth including mitres, ends, etc.	m	294		
	Floorworx MCF22 vinyl cove former by specialist applicator.				
168	Vinyl skirtings (Height: 200 mm, Radius: 30 mm) with and including flexible full cove former with a colored lip, maximum floor covering thickness: 4 mm, rigid clipped finishing profile capping strip with 1 flexible lip Maximum floor covering thickness: 4 mm fixed with double bonding adhesive, dispersion contact adhesive compatible with the skirting.MCS18 capping strip to finish top of vinyl skirting.	m	241		
	EPOXY FLOORS, POLISH, SEALERS, ETC.				
	ABE Cote 337 or other equally approved tough epoxy paint with high build vapor barrier for concrete floors. Supplier to scrub the product into the pores with a long handle scrub brush and then use a short hair roller to achieve uniform coverage. Stop and apply one coat and thereafter two coats of resin floor epoxy 12 to 16 hours after appli cation each application. Each coat to achieve dry film thickness 14 to 19 mils (350 to 450 microns) at the specified application rate and thickness using a long notched squeegee.				
169	On floors and turn-ups	m²	453		
	Non-slip acrylic emulsion dressing as (SABS 1042) buffed after each coat on vinyl sheeting				
170	Ditto to bump rail not exceeding 300 mm girth	m	294		
	Carried to Abstract			R	

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FLOOR COVERINGS

171	Ditto three coats dressing on floors and turn-ups	m²	744		

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FLOOR COVERINGS

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FLOOR COVERINGS

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Item No			Quantity	Rate	Amount R
	BILL NO 11				
	PLASTERING				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	SCREEDS				
	The following in self levelling screed				
172	± 5 mm thick self-levelling screed to receive vinyl floors laid by the specialist flooring sub-contractor	m²	226		
	1:3 Cement mortar screed finished smooth on concrete to receive floor finishes				
173	30mm Thick to receive vinyl sheeting	m²	679		
	INTERNAL PLASTER				
	One coat 1:4 internal plaster finished to a true and even surface with a steel trowel				
	On brickwork				
174	15mm thick plaster to walls	m²	110		
175	Walls in narrow widths not exceeding 300mm wide	m²	99		
	EXTERNAL PLASTER				
	One coat 1:5 external plaster finished to a true and even surface with a wood float, and filler coat sanded to an approved smooth finish ready to receive paint (elsewhere measured)				
	Carried to Abstract			R	

	On brickwork (small part on flush concrete surfaces)				
176	Walls	m²	620		
	Carried to Abstract			R	

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Bill No. 11

PLASTERING

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Item No			Quantity	Rate	Amount R
	BILL NO. 12				
	TILING				
	INTERNAL FLOOR TILING				
	600 x 600 x 10 mm thick rectified nonslip full bodied porcelain tile. Tile to be T 003047 Chicago Loop by Tile Africa with fixed to floors with the recommended tile adhesive with a notched trowel to a minimum bedded thickness of 8mm and tap down on 25mm screeded surface (screed elsewhere measured) with maximum 2mm joints in both directions grouted strictly complete to manufacturers specification (NB: tiling grout to be white antifungal mixed to the ratio prescribed by tile supplier with bonding liquid)				
177	On floors and landings with continuous joints in both directions.	m²	128		
	WALL TILING				
	200 x 200 x 8mm white glazed wall tile splash back as detailed elsewhere laid onto TAL gold star adhesive. White anti fungal grout, to be mixed with bonding liquid, ratio as specified by tile supplier.				
178	Walls as splashbacks (300mm high) behind basins and sink	m²	22		
179	9mm "Kirk Marketing" aluminium straight edge trim (product code: ASE090) (Provisional)	m	45		
	600 x 600 x10 mm rectified Porcelain wall (Tile code: T 003047 Chicago Loop as supplied by Tile Africa) tile to 2100mm AFFL as detailed elsewhere laid onto TAL gold star adhesive. Grout colour by architect, grout to be mixed with bonding liquid, ratio as specified by tile supplier				
180	On Walls	m²	300		
	Carried to Abstract			R	

181	On Walls in narrow widths not exceeding 300mm wide	m²	4		
182	Tile dado 100mm high tiles, with and including all necessary cutting, waste, etc.	m	121		
183	9mm "Kirk Marketing" aluminium straight edge trim (product code: ASE090) (Provisional)	m	94		
	Carried to Abstract			R	

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Bill No. 12
TILING

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Bill No. 12

TILING

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Item No			Quantity	Rate	Amount R
	BILL NO. 13				
	IRONMONGERY				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	HINGES, BOLTS, ETC.				
184	100mm x 75mm x 3mm stainless steel ball bearing butt hinges with 2 security pins (in 1.5 pairs) - 8352 – 100 SS/2	No	123		
	LOCKS				
185	Union lockset comprising (SET 1): Bishop Euro Profile Cylinder (Pair) - AL684-09AS - S.C Europrofile spring latch and dead bolt - Q60 X 85MM - SS 5 pin tumbler double cylinder - Europrofile 2 x 18 SC	No	28		
186	Union lockset comprising (SET 2): Bishop Euro Profile Cylinder (Pair) - AL684-09AS - S.C Europrofile spring latch and dead bolt inclusive of rebate set for double leaf door - Q35 X 85MM – SS 200mm Flush recessed bolt - 8052-200SC (2 in no.) Dust proof strike - 8852SC 5 pin tumbler double cylinder - Europrofile 2 x 18 SC	No	1		
	Carried to Abstract			R	

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Bill No. 13
IRONMONGERY

187	Union lock set comprising (SET 3): 300mm Pull Handle with flange (Pair) - AL5512-300FLAS Europrofile narrow stile cylinder swingbolt and latch set; QR35 X 85MM - SS Stainless steel escutcheon on rose (pair) - SS305-05SS 200mm Flush recessed bolt - 8052-200SC (2 in no.) Dust proof strike - 8852SC 5 pin tumbler double cylinder - Europrofile 2 x 18 SC	No	1		
188	Union lockset comprising (SET 4): 1 x Union AL8098AS S.C Bathroom indicator bolt 1 x Union AL8253AS S.C Rubber tipped coat hook 1 x Union AL5063-06AS AS Push plate	No	6		
189	Union lockset comprising (SET 5): 1 x Union 37651AS AS Helping hand paraplegic facility indicator bolt 1 x Union AL8253AS S.C Rubber tipped coat hook 1 x Union AL5515-300BB AS Pull Handle	No	1		
190	Union lockset comprising (Set 6): 1 x Dormakaba Two point locking panic bar – single door, door leaf 813 wide x 2125 high (2201. 2104. PHX02. PHX04 : PHA2 S SD	No	1		
191	Union lockset comprising: 1 x Union AL684-09AS S.C Bishop Euro Profile Cylinder (Pair) 1 x Union Q60 X 85MM - SS - Europrofile spring latch and dead bolt 1 x Union Europrofile 2 x 18 SC S.S 5 pin tumbler double cylinder	No	1		
192	78mm armoured brass padlock	No	4		
193	Master keys (Provisional)	No	2		
194	Grand master keys (Provisional)	No	2		
	PUSH PLATES AND KICKING PLATES				
	Carried to Abstract			R	

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IRONMONGERY

	Dorma DPP-430-BL-SF 170xWOD composed of 1,2mm thick satin finished 430 stainless steel push, kicking and trolley plates and edge protectors, linings, with machined edges, etc., fixed to wood doors, frames, etc., to be fixed with 10 countersunk stainless steel screws, placed at 200mm centres with adhesive including edges and forming all cut outs, holes, slots, checks, notches, etc. as required to accommodate door ironmongery				
195	Push plate 200mm high	m	88		
196	Kick plate 300mm high	m	88		
	DOOR CLOSERS				
	Dorma - TS 73N				
197	Transom mounted internally delayed action overhead door closer	No	45		
	Dorma - TS 83 PA				
198	EN 3-6 Parallel Arm non hold open door closer, adjustable strength, push side fixing. EN3 850-950, EN4 950-1100, EN5 110- 1250, EN6 1250-1400.	No	1		
	BATHROOM FITTINGS				
199	Franke 355x168x460mm Rodan stainless steel wall mounted waste bin (product code: 359983)	No	27		
200	Ref MM22 triple mounted grab rail to WC fixed to wall and floor	No	1		
201	Franke CNTX700A stainless steel angle disabled grab rail mounted at 800mm above FFL (code: 359877)	No	1		
	The following in 304 grade stainless steel				
202	Franke 275x112x355mm Rodan RODX600 stainless steel wall mounted paper towel dispenser (product code: 359985)	No	25		
	Carried to Abstract			R	

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IRONMONGERY

203	Franke 144x138x301mm Rodan RODX672 stainless steel wall mounted double toilet roll holder with spindle system (product code: 359987)	No	27		
204	Medical innovations (or equal approved) 245mm 304 grade stainless steel soap dispenser bracket (for 500ml hibiscrub bottle) (product code: 341-00-00C) to be wall mounted above medical wash hand basin	No	28		

SIGNAGE

SIGNS

Note: All directional and information signs as well as door numbers are to conform with the NBARI document 48/3 "Directional information in Hospitals". Type face BN Helvetic medium. Signs are to consist of self adhesive vinyl letters on plastic laminate with white lettering on dark grey backgrounds.

Door signs or numbers to be of an approved grey ultra high impact acryllic plastic construction plugged to wall or screwed to door with 15mm countersunk raised head chromium plated screws at each corner or hung from ceilings with two chromium plated chains

205	200 x 70 x 2.5mm Sign with 40mm high letters to centre of door 1850mm above ffl to read "as instructed by the principal agent"(Note: name of signage to be confirmed on site)	No	41		

Photo-luminescent emergency signs plugged to wall or screwed to door with 15mm countersunk raised head chromium plated screws at each corner or suspended from ceiling including two chromium plated chains

206	190 x 190mm "No smoking" sign in white and red to door (type F27)	No	4		

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	The following signage comprising of 9mm backing hardboard with 6mm felt infill, set into a 75mm meranti hard wood frame				
207	2500 x 900mm notice boards	No	6		
	CURTAIN AND BED CUBICLE TRACKS				
208	Single curtain track complete with fixing brackets, stop ends, runners, etc., set up and fixed complete to concrete soffits	m	55		
	Forwin hospital cubicle curtain track complete with twelve nylon wheeled runners per meter and all necessary brackets, stopped ends, etc., and hangers at one and a half metre centres passing through suspended ceiling and fixed to soffit of concrete slab or timber trusses				
209	Track suspended not exceeding 800mm long below timber trusses	m	55		
	BLINDS				
	The following in 50mm aluminium venetian blind (colour by architect) inclusive of fitment, fixing brackets, controls and associated parts fixed to top of lintel on wall face				
210	Blind to window 2950mm wide x 1360mm high	No	3		
211	Blind to window 2946mm wide x 900mm high	No	8		
	SUNDRIES				
212	300mm window stay (brass)	No	28		
213	Ditto but window latch (Brass)	No	56		
214	Union - 87001SS:SC door stop, floor mounted door stop	No	39		
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Item No			Quantity	Rate	Amount R
	BILL NO 14				
	METALWORK				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	ALUMINIUM DOORS				
	The following powder coated aluminium door units as per the Architects diagrams, details and specifications bound into the back of these bills of quantities. Prices for all units measured herein to include all glass, ironmongery, assembly, fixing and sealing				
215	Natural anodised Aluminium door size 1625 x 2125mm high overall in two equal leaves, comprising of aluminium frame system to manufacturers specification with 2 x panel size composed of 6,38mm H.P.R laminated glazing size approximately 585 x 950mm and 2 x panel size composed of 6,38mm safety laminated glazing with translucent vinyl interlayer size approximately 585 x 845mm complete 100mm aluminium kick rail in natural anodised finish (Refer to Architects drawing no. MDA/290-E, Type D01)	No	5		
	Sundries				
216	300 x 300mm aluminium louvres fixed to both sides of door with self taping screws	No	5		
	WINDOWS, DOORS, ETC				
	Carried to Abstract			R	

	Factory manufactured steel frame window with factory primer and lugs for building				
217	Window type W01 size 600 x 500mm high with 120mm plaster band around window plastered and painted	No	10		
218	Window type W02 size 1200 x 1090mm high with 120mm plaster band around window plastered and painted	No	2		
219	Window type W02a size 1200 x 1090mm high with 120mm plaster band around window plastered and painted	No	2		
220	Window type W03 size 1900 x 1090mm high with 120mm plaster band around window plastered and painted	No	1		
221	Window type W04 size 1960 x 1090mm high with 120mm plaster band around window plastered and painted	No	2		
222	Window type W05 size 1200 x 850mm high with 120mm, and 1100 x 250 void, the window with plaster band around window plastered and painted	No	4		
223	Window type W06 size 1200 x 1090mm high with 120mm plaster band around window plastered and painted and 935 x 1200 below cills	No	1		
	PRESSED STEEL DOOR FRAMES				
	1,8mm Rebated frames suitable for brick walls				
224	Frame for door size approximately 813 x 2032mm high	No	37		
225	Frame for door size approximately 1455 x 2032mm high	No	3		
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	STEEL HANDRAILS, BALUSTRADES, ETC				
	The following in hot dip galvanised balustrades				
226	50mm Diameter. x 3mm Thick rounds hollow section in handrail welded to 50mm diameter. tube (Posts elsewhere measured)	m	66		
227	Extra over handrail for forming 90 degree angle	No	19		
228	Extra over handrail for forming 45 degree angle intersection	No	9		
229	50mm Diameter. x 3mm Thick round section tube post 2000mm high with 200 x 200x 3mm thick plate welded to bottom of post,plate four times holed for 10mm diameter bolt for fixing to top of ramp or landing (bolts elsewhere measured)	No	28		
	Bolts, etc				
	Descriptions of bolts shall be deemed to include nuts and washers.Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.				
	Metalwork described as "holed for bolt(s)" shall be deemed to exclude the bolts unless otherwise described.				
230	10mm Diameter x 125mm long Rawl bolt	No	60		
	ROLLER SHUTTER DOORS				
	Fire Rated (SABS 1253) chain operated heavy duty metal slatted roller shutter composed of 76mm interlocking slats with slide bolts fitted to padlock				
231	1 200 mm x 1 200mm high heavy duty roller shutter steel roll-up door, manually operated, including centre lift lock and rubber weather strips, handles, roll guides, hinges, fixing bolts, tracks etc, fixed to brickwork or concrete with a minimum of 100mm side room and 500mm headroom MDA/RSD01	No	1		
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232	1 500 mm x 1 200mm high heavy duty roller shutter steel roll-up door, manually operated, including centre lift lock and rubber weather strips, handles, roll guides, hinges, fixing bolts, tracks etc, fixed to brickwork or concrete with a minimum of 100mm side room and 500mm headroom MDA/RSD02	No	3		
	SECURITY GATES				
	The following in hot dip galvanised security gates strictly as per the Architects drawings attached to these bills of quantities				
233	Security gate (GO1) size 900 x 2125mm high overall composed of 30 x 30 x 3mm mild steel hollow framework with 70 x 30mm horizontal cross members and 12 x 12mm solid bar vertical members spaced at 100mm centres,70 x 30 x 3mm latch mechanism housing with and including 3 x mild steel hinges both sides as per the Architects drawing No. MDA 290/E	No	6		
234	Entrance gate (GO2) size 1 800 x 2 125mm high overall composed of 50 x 50 x 3mm mild steel hollow framework with 70 x 30mm horizontal cross members and 12 x 12mm solid bar vertical members spaced at 100mm centres, 70 x 30 x 3mm latch mechanism housing with and including 3 x mild steel hinges both sides as per the Architects drawing	No	4		
235	Security gate (GO3) size 1192 x 2125mm high overall composed of 30 x 30 x 3mm mild steel hollow framework with 70 x 30mm horizontal cross members and 12 x 12mm solid bar vertical members spaced at 100mm centres,70 x 30 x 3mm latch mechanism housing with and including 3 x mild steel hinges both sides as per the Architects drawing	No	1		
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236	Security gate (GO4) size 1192 x 2125mm high overall composed of 30 x 30 x 3mm mild steel hollow framework with 70 x 30mm horizontal cross members and 12 x 12mm solid bar vertical members spaced at 100mm centres,70 x 30 x 3mm latch mechanism housing with and including 3 x mild steel hinges both sides as per the Architects drawing	No	1		
	SECURITY SCREENS				
	The following in hot dip galvanised security screens strictly as per the Architects drawings attached to these bills of quantities				
237	Galvanised mesh screens size overall 860 x 1245mm high composed of 50 x 50 x 2.5mm galvanised angle frame and galvanised mesh panel to form window	No	2		
238	Galvanised mesh screens size overall 1020 x 950mm high composed of 50 x 50 x 2.5mm galvanised angle frame and galvanised mesh panel to form window	No	4		
239	Galvanised mesh screens size overall 1245 x 1020mm high composed of 50 x 50 x 2.5mm galvanised angle frame and galvanised mesh panel to form window	No	8		
240	Galvanised mesh screens size overall 2000 x 655mm high composed of 50 x 50 x 2.5mm galvanised angle frame and galvanised mesh panel to form window	No	10		
241	Galvanised mesh screens size overall 1400 x 460mm high composed of 50 x 50 x 2.5mm galvanised angle frame and galvanised mesh panel to form window (type SC02 - MDA/290E	No	4		
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242	Curved window security screen size 1510 x 1245mm high overall, tangential angle approximately 45 degrees composed of 3 x 20mm diameter galvanised horizontal solid rod with 50mm steel knob shaped decorative end cap both sides, welded to 10mm diameter solid square sections,spaced at 100mm centres as per Architects drawing W06	No	6		
243	Curved window security screen size 655 x 535mm high overall, tangential angle approximately 45 degrees composed of 3 x 20mm diameter galvanised horizontal solid rod with 50mm steel knob shaped decorative end cap both sides, welded to 10mm diameter solid square sections,spaced at 100mm centres as per Architects drawing	No	9		
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METALWORK

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BILL NO 15

PLUMBING AND DRAINAGE(PROVISIONAL)

PREAMBLES

For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles

SUPPLEMENTARY PREAMBLES

"Polycop" polypropylene pipes

Polypropylene pipes 54mm diameter and under shall be seamless copper coloured class 16 pipes jointed with "Fast-fuse" heat welded thermoplastic or brass compression fittings as designed for use with copper pipes as stated.

Pipes shall be firmly fixed to walls, etc. with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions.

All pipe diameters are nominal external.

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"Polylink" polypropylene pipes

Polypropylene pipes 63mm diameter and over shall be class 12 pipes jointed with cast iron "Supraclamp" running joints.

Fusion welded bends, once or twice mitred as necessary, and tees shall be factory manufactured.

Fusion welded bends and tees shall include jointing to pipes with PVC rubber ring double Z joint couplers.

Branch tees shall include flanged and bolted joints to "Polycop" branch pipes in addition and for brass compression male iron to copper straight couplers.

Reducers shall include jointing to pipes with PVC rubber ring double Z joint couplers and reducers shall be of sufficient overall length to accommodate same.

All pipes shall be jointed and fixed strictly in accordance with the manufacturer's instructions.

All pipe diameters are nominal external.

Concrete pipes

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

uPVC pipes and fittings

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

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

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uPVC pressure pipes and fittings

Pipes for water supply shall be of the class stated.

Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings.

Pipes of 50mm diameter and greater shall have sockets and spigots with push in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push in type joints.

Copper pipes

Pipes shall be hard drawn and half hard pipes of the class stated. Class O (thin walled hard drawn) pipes shall not be bent. Class 1 thin walled half hard), class 2 (half hard) and Class 3 (heavy walled half hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be "Cobra Watertech" type. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or in ground.

Fixing of pipes

Unless specifically otherwise stated, descriptions of pipes shall be deemed to include fixing to walls, etc., casting in, building in or suspending not exceeding 1m below suspension level.

Lead pipes and traps

All soldered joints shall be wiped and brass unions shall be used for jointing lead to steel.

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Reducing fittings

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

Wire gratings

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

Exposed concrete surfaces

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

Excavations

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

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

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Laying, backfilling, bedding, etc. of pipes

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

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

SABS 1200 L	:	Medium pressure pipelines
LD	:	Sewers
LE	:	Stormwater drainage

Pipe trenches etc. shall be backfilled in accordance with clauses 3, 5.5, 5.6, 5. and 7 of SABS 1200 DB : Earthworks (Pipe trenches). Pipes shallvbe bedded in accordance with clause 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SABS 1200 LG : Bedding (Pipes). Unless otherwise described bedding of rigid pipes shall be class B bedding.

Flush pans

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

Stainless steel basins, sinks, wash troughs, urinals, etc.

Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable.

Waste unions

Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings.

Steel sectional water tanks

Tanks shall comply with SABS CKS 114

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	"Densyl" petrolatum anti corrosion tape as manufactured by Denso SA (Pty) Ltd				
	Prices for wrapping of pipes shall include for all work as described to couplings in the length.				
	User note: Dependent on soil or environmental conditions laps may require to be increased to a maximum of 55% (which results in a double layer)				
	RAINWATER GOODS, ETC				
	0.8mm rectangular pre-coated aluminium seamless gutter with 10 year guarantee with architect approved coloured finish including colour-coded rivet-fixed internal and external mitres and end caps internally sealed using silicone sealant, hung by screw fixed internal aluminium hangers at 600mm				
244	Purpose made 300mm x 175mm precoated seamless eaves gutter and fixing to falls on and including aluminium alloy gutter brackets bolted to fascia at not exceeding 1,5m centres.	m	99		
245	Extra for stopped end	No	17		
246	Extra for outlet with nozzel for 140mm x 140mm rainwater pipe with leafguard including additional gutter bracket	No	16		
247	Extra for eaves offset 400mm projection including additional downpipe clip	No	16		
248	150 x 150mm Rainwater downpipe and fixing to walls with pre-painted downpipe cleats using nail-in anchor fixings and fixed to gutter outlets with domestic snap seals, including all necessary bends, elbows, etc including securing to structural steel columns (columns elsewere measured)	m	20		
	WATER SUPPLY				
	Copper Pipes				
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	Class 0				
249	35mm Pipe and fixing to walls, floors, in roofs, soffit of concrete slab, in chases (including chases), in concrete, etc.	m	75		
	Class 2				
250	15mm Pipe and fixing to walls, floors, in roofs, soffit of concrete slab, in chases (including chases), in concrete, etc.	m	50		
251	22mm Pipe and fixing to walls, floors, in roofs, soffit of concrete slab, in chases (including chases), in concrete, etc.	m	63		
252	32mm Pipe and fixing to walls, floors, in roofs, soffit of concrete slab, in chases (including chases), in concrete, etc.	m	10		
	Extra over class 0 copper for Copcal Capillary type fittings with soldered joints				
253	35mm Elbow.	No	2		
254	35 x 28 x 15mm Reducing tee.	No	1		
	Extra over class 2 copper pipes for brass compression fittings				
255	15mm Fittings	No	25		
256	22mm Fittings	No	25		
257	32 x 32 x 15mm Reducing tee for 15mm branch pipe	No	1		
258	Cut into existing 28mm copper rising main and fit 28 x 28 x 15mm reducing tee for 15mm copper branch pipe	No	1		
	SANITARY PLUMBING				
	PVC pipes				
259	50mm Pipe and fixing to walls, floors, in roofs, soffit of concrete slab, in chases (including chases), in concrete, etc.	m	10		
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260	110mm Pipe and fixing to walls, floors, in roofs, soffit of concrete slab, in chases (including chases), in concrete, etc.	m	15		
	PVC, waste or vent piping				
261	50 mm Pipe.	m	15		
	Extra over 40 mm PVC pipe for:				
262	40 mm Bend.	No	10		
	Extra over 50 mm PVC pipe for:				
263	50 mm Bend.	No	10		
	Extra over 110 mm PVC pipe for:				
264	110 mm I.E. Bend.	No	1		
	Traps, gratings, etc.				
265	Cut into existing 110mm PVC stack and fit 110mm double reducing junction	No	10		
266	Chrome plated bottle trap with and including 32mm basin waste unslotted, 62mm flange and 80mm tail piece	No	11		
	SANITARY FITTINGS				
267	Glazed vitreous china wc suite comprising "Vaal Protea Din 750611" 90 degree low level low volume washdown pan with Shires Superlynx reversable narrow-projection low level cistern with syphonic valve discharge with flush mechanism, float and valve and internal 20mm overflow fittings, chromium plated handle, beading and screw down lid, complete with flush pipe and heavy duty double flap PVC seat.	No	6		
268	510 x 400mm vitreous china semi-rectangular medical basin (no tap hole configuration)	No	12		
269	Franke or other equally approved 545 x 450 x 220.5 Rondo VM wall mounted basin (product code: 362964) basin fixed to wall using 4x8mm anchor bolts	No	1		
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270	Vaal Sanitaryware vitreous China “Hibiscus Elite Vandal Proof” close coupled suite (product Code: 772404) complete with front push button, lid fitments and low level flush pipe	No	5		
271	Cobra Welcome Medium round wall hung basin. 430mm long X 390mm wide, no tap hole required (product code: 709100WH	No	6		
272	Vaal wall hung Sweetpea urinal sanware with top inlet. (product code: 705126Wh). Supplied with two hanger brackets including a 38mm c.p. domical grating and a spreader with a 20mm dia. thread.	No	2		
273	Franke 300mm undermount vanity basin manufactured from 305 grade stainless steel with and including black rubber waste to be fitted to basin unit	No	1		
	<u>Stainless steel sinks, wash troughs, etc.</u>				
	NOTE: All products are to be manufactured from 1,2 mm thick Grade 304 Stainless Steel unless otherwise stated.				
274	Stainless steel drinking fountain approximately 311 x 489 x 1500mm high complete with bubbler and goose-neck taps including a 2 stage in-line filtration system consisting of sediment and carbon filtration, fixed to the wall next to an electrical point and connected to the external drainage.	No	1		
275	1160 x 460mm inset sink, mounted to joinery as detailed elsewhere	No	3		
276	Solid wood particle moisture proof white lacquered toilet seat	No	6		
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277	Stainless steel slop hopper unit 965 x 550 mm manufactured from grade 304 (18/10) stainless steel 1,2 mm thick with a 100 mm high integral splash back to the rear and both sides, with an integral flushing rim in the cone and a 110 mm waste outlet for pan connector, the inlet fitted with a 38 x 250 mm long vertical flush pipe for a standard flush valve. Unit fitted with a hinged bucket grid manufactured from 10 mm diameter grade 304 (18/10) stainless steel round bar. Unit complete with two 40 x 40 mm square stainless steel wall mounting gallows brackets. Unit fixed to the wall.	No	1		
278	Franke Nouveau NVN621 1160 x 460mm inset sink, mounted to joinery as detailed elsewhere (product code: 811024)	No	3		
279	§Franke grade 304 stainless steel grade 1,2mm NCH Slop Hopper 540x540 integral with 100mm high splash back § Product Code: 2630035-004 § Cobra FM 1-000/N Flush Master Valve	No	1		
280	Franke model “S1” Catering Sink single right hand bowl manufactured from grade 304 stainless steel 1,2mm thick with a 150mm high integral splash back to the rear and 50x10mm turndown with a beaded edge on the remaining sides. Sink with pressed 500x500x230mm deep bowl with a 40mm waste outlet. The underside sprayed with vermin proof bitumastic sound deadening and supported with a 30x30x3mm framework and galvanised mild steel backing sheet. Unit fixed 900mm high from the top of the front apron to the finish floor level with anchor bolts	No	2		
	Overflow pipes, traps etc.				
	uPVC				
281	Cobra Watertech chrome platted bottle trap (product code: 340) and 32mm basin waste un slotted, 62mm flange and 80mm tail piece (product code: 308)	No	6		
282	Trap Extendible Gio 32x40mm Universal PVC White	No	8		
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	ELECTRIC WATER HEATERS				
283	200 Litre Kwikot 600 Dual horizontal ceiling mounted type electric hot water copper cylinder with 22mm connections and fitted with 4 kilowatt monel metal electrical element complete with vacuum breaker, pressure reducing valve and relief valve including all joints to copper pipes and fixing in position and connect up.	No	1		
284	0,60mm Galvanised sheet iron tray size 500 x 1000mm with riveted and soldered seams and joints, turned up all round to form kerb 75mm high with beaded edge, including outlet with nozzle for 50mm diameter overflow pipe and fix in position.	No	1		
285	Ditto size 700 x 1500mm, ditto.	No	1		
286	50mm PVC overflow and fixing to falls to roof timbers.	m	1		
287	Extra for 50mm bend	No	1		
288	38mm Sawn Pine boarding for geyser platform formed of 38 x 228mm boards butt-jointed and nailed to bearers.	m²	2		
289	38 x 114mm Sawn Pine bearers	m	3		
	TAPS, VALVES, ETC				
290	Wall mounted mixer with aerated swivel outlet	No	17		
291	Medical elbow action wall type mixer with swivel outlet	No	8		
292	Cobra KM2-200 or other approved metering bib tap with non hold open feature and flow controller fitted to basin (Basin elsewhere measured)	No	1		
293	Cobra Watertech ½"rough brass hose bibtap (product code: 108-15)	No	1		
294	Watertech Kitchen Classic Star wall mounded mixer with aerated swivel outlet (product code: 266/041/10)	No	3		
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295	Cobra Watertech Medical Elbow action pillar tap with raised nose and blue indice (product code: 503-21B) cold water supply only	No	12		
	FIRE SERVICE				
	Sundries				
296	"Chubb" or other approved turnable hosereel bearing SABS mark and brackets with patent swivel joints, fitted with 30m length of 19mm diameter SABS red PVC hose with gunmetal 'shut-off' control nozzle and chromium plated wheelhead valve and fix reel and nozzle bracket to plastered walls with and including 6 x 76mm expanding bolts in mortices in wall	No	2		
297	Wrot Red Meranti framed fire hose cupboard size 1250 x 300 x 1250mm high overall with bottom, ends and sloping top (set projecting 38mm along front and both ends) formed of 22mm tongued, grooved and V-jointed one side boarding; ledged,braced and battened double doors formed of 22mm V-jointed boarding with 22 x 50mm chamfered cover fillet planted on at meeting stiles, hung folding on two pairs of 150mm black japanned iron tee hinges, with a 50mm brass cupboard lock and two 75mm brass barrel bolts; in door form 100 x 100mm aperture rebated for and glazed with 3mm clear sheet glass fixed with beads; drill six 20mm diameter holes in bottom and two in ends near top of cupboard for ventilation, bottom holed to it over hydrant; cover top with 0,63mm galvanised sheet iron turned down at edges and close nailed; cupboard bolted three times on to concrete wall at the top centre and bottom of the cupboard with 16 x 140mm Dynabolt masonry anchor with nut and washer and including mortice/s in concrete	No	2		
	LAGGING				
298	Two layers of thermoflex or other approved preformed self extinguishing polyethylene tightly wrapped around 22mm pipe and couplings and tied with wire prior to building in	m	63		
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299	Extra for wrapping around 22mm fittings	No	25		
	TESTING				
300	Provide all necessary apparatus, water, etc. for and test the sanitary plumbing, water supplies, sanitary fittings and fire services to the satisfaction of the Representative/Agent and the Local Authorities, replace any defective work free of charge and leave perfect.		Item		
	BUILDERS WORK				
301	500 x 500mm 20MPa/19mm stone,Concrete encasing to soil pipes in high traffic zones	m	4		
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Item No			Quantity	Rate	Amount R
	BILL NO 16				
	GLAZING				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev Oct. 1993) as well as to the "Model Preambles for Trades" (1998) and Supplemetary preambles below.				
	GLAZING				
	6.38mm Normal strength clear laminated safety glass				
302	6.38mm H.P.R clear Panes exceeding 0,1 square metres and not exceeding 0,5 square metres	m²	121		
303	6.38mm H.P.R clear Panes exceeding 0,5 square metres and not exceeding 2.0 square metres	m²	47		
304	6.38mm laminated safety glass exceeding 0,5m2 and not exceeding 2m2, with translucent vinyl interlayer colour to be confirmed with the Principal Agent	m²	33		
	PUTTY TO GLAZED ALUMINIUM WINDOWS				
	30mm thick type II putty on				
305	Steel windows	m	71		
	MIRRORS				
306	6mm Float glass silver backed mirror size 400 x 600mm with bevelled and polished edges fixed with double sided tape and chromium plated mirror screws and cork washers	No	4		
	Carried Forward to Summary of Section No.			R	

Item No			Quantity	Rate	Amount R
	BILL NO 17				
	PAINTWORK				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	PAINTWORK, ETC. ON PREVIOUSLY PAINTED WORK				
	ON PLASTER ETC.				
	Clean down to remove all loose paint,including sandblasting or wire brushing where necessary, wash with sugar soap, rinse, make good where necessary and fill cracks with Polyfilla (Brickwalls / Rhinolight for plasterboard) and sand down clean down, prepare and apply one coat Plascon Professional Gypsum Plaster Primer (PP700) on brick walls and Rhino light is used on plasterboard, stop and apply two coats Plascon Plascon TLL 100 pastel base professional hygiene low sheen acrylic PVA paint on				
307	Internal plastered walls	m²	1 262		
	ON METAL				
	Carried to Abstract			R	

	Clean down steel substrate to a clean exposed state by removing all loose and friable matter,old paint, dust,oil,grease and soluble solvents with detergent solution and rinse with portable water to achieve a PH of 7,dry abrasive blast surface (sandblast) to a near "white metal" and further remove all traces of previous protective coating from Galvanised Surfaces with Galvanised Iron Cleaner, Prepare And Apply One Coat Galvanised Iron Primer, One Universal Undercoat And Two Coats coats polyurethane non drip enamel on				
308	Steel door frames	m²	30		
309	Existing steel window frames	m²	37		
	ON WOOD				
	Sand and clean down to bare surface, remove all dust, stop and apply one coat varnish diluted 20% with mineral turpentine and three coats matt varnish lightly sanded on				
310	On timber surfaces	m²	20		
	PAINTWORK, ETC TO NEW WORK ON				
	ON PLASTER OR PLASTERBOARD				
	Clean down, prepare and apply one coat Plascon Professional Gypsum Plaster Primer (PP700) on brick walls and Rhino light is used on plasterboard, stop and apply two coats Plascon Plascon TLL 100 pastel base professional hygiene low sheen acrylic PVA paint on				
311	Plastered walls	m²	1 181		
	Carried to Abstract			R	

	Prepare and apply one coat Plascon plaster acrylic filler coat, fill with interior Polyfilla, sand and touch up filler coat and apply one coat wood primer including to hardwood cover strips, one universal undercoat and two coats Plascon acrylic PVA (Colour: White) with approved anti-fungicide on				
312	Plastered ceilings.	m²	450		
	Carried to Abstract			R	

	ON WOOD				
	Clean down to bare surface, remove all dust, stop and apply one coat wood primer, one coat universal undercoat and two coats Plascon Velvaglo Satin enamel paint on				
313	On backs of grounds, frames, linings, etc. not exceeding 300mm wide	m²	6		
314	PVA paint to dry walls	m²	54		
315	On door frames, etc.	m²	25		
316	On doors	m²	137		
	Sand and clean down to bare surface, remove all dust, stop and apply one coat varnish diluted 20% with mineral turpentine and three coats matt varnish lightly sanded on				
317	Doors	m²	24		
	METAL SURFACES WITH				
	Clean down steel substrate to a clean exposed state by removing all loose and friable matter,old paint, dust,oil,grease and soluble solvents with detergent solution and rinse with portable water to achieve a PH of 7,dry abrasive blast surface (sandblast) to a near "white metal" and further remove all traces of previous protective coating from Galvanised Surfaces with Galvanised Iron Cleaner, Prepare And Apply One Coat Galvanised Iron Primer, One Universal Undercoat And Two Coats coats polyurethane non drip enamel on				
318	Windows	m²	25		
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Bill No. 17
PAINTWORK

N.G. DLUKULU

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PAINTWORK

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	SECTION NO. 9			
	BILL NO. 1			
	STAINLESS STEEL FURNITURE			
	PREAMBLES			
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles			
	The following in square silver stainless steel benches suitable for public seating in external areas in all weather conditions. Each seat to carry a minimum weight per seat of 110kg			
1	Nine seater stainless steel seating size approximately 3890 x 670 x 785mm high overall suitable for all weather conditions, each seated epoxy bolted four times with stainless steel bolt to concrete floors with vinyl sheeting finish (floor and floor finish elsewhere measured)	No 6		
2	Six seater stainless steel seating size approximately 2850 x 670 x 785mm high overall suitable for all weather conditions, each seated epoxy bolted four times with stainless steel bolt to concrete floors with vinyl sheeting finish (floor and floor finish elsewhere measured	No 4		
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Item No			Quantity	Rate	Amount R
	BILL NO. 2				
	BUILT IN CUPBOARDS AND SHELVING ETC				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	PINNING BOARDS AND WHITE BOARDS				
3	600 x 900mm magnetic white board, with pen tray	No	16		
4	Allow for a 600 x 900mm felt pinboard, in 25mm aluminium	No	16		
5	2 500 x 900mm notice boards comprising of 9mm backing hardboard with 6mm felt infill, set into a 75mm meranti hard wood frame finished off with 2 coats clear varnish finish (to match existing notice board)	No	6		
	Extra over frames				
6	Two coats clear varnish	m	19		
	BULK FILLERS				
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	The following in hammertone grey steel bulk filers				
7	10 Bay heavy duty steel bulk filing cabinets including 50 shelves size overall 2130mm (H) x 1100mm(W) x 5100mm(L) with and including 800mm walk in space, with each bay x 430mm Deep	No	1		
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PINNING BOARDS ETC

FITTINGS

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PINNING BOARDS ETC

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SECTION NO. 12

BILL NO. 1

EXTERNAL PLUMBING

SUPPLEMENTARY PREAMBLES

PREAMBLES

For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles

"Polycop" polypropylene pipes

Polypropylene pipes 54mm diameter and under shall be seamless copper coloured class 16 pipes jointed with "Fast-fuse" heat welded thermoplastic or brass compression fittings as designed for use with copper pipes as stated.

Pipes shall be firmly fixed to walls, etc. with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions.

All pipe diameters are nominal external.

Carried to Abstract R

"Polylink" polypropylene pipes

Polypropylene pipes 63mm diameter and over shall be class 12 pipes jointed with cast iron "Supraclamp" running joints.

Fusion welded bends, once or twice mitred as necessary, and tees shall be factory manufactured.

Fusion welded bends and tees shall include jointing to pipes with PVC rubber ring double Z joint couplers.

Branch tees shall include flanged and bolted joints to "Polycop" branch pipes in addition and for brass compression male iron to copper straight couplers.

Reducers shall include jointing to pipes with PVC rubber ring double Z joint couplers and reducers shall be of sufficient overall length to accommodate same.

All pipes shall be jointed and fixed strictly in accordance with the manufacturer's instructions.

All pipe diameters are nominal external.

Concrete pipes

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

uPVC pipes and fittings

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

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

Carried to Abstract R

uPVC pressure pipes and fittings

Pipes for water supply shall be of the class stated.

Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings.

Pipes of 50mm diameter and greater shall have sockets and spigots with push in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push in type joints.

Copper pipes

Pipes shall be hard drawn and half hard pipes of the class stated. Class O (thin walled hard drawn) pipes shall not be bent. Class 1 thin walled half hard), class 2 (half hard) and Class 3 (heavy walled half hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be "Cobra Watertech" type. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or in ground.

Fixing of pipes

Unless specifically otherwise stated, descriptions of pipes shall be deemed to include fixing to walls, etc., casting in, building in or suspending not exceeding 1m below suspension level.

Lead pipes and traps

All soldered joints shall be wiped and brass unions shall be used for jointing lead to steel.

Carried to Abstract R

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EXTERNAL PLUMBING

Reducing fittings

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

Wire gratings

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

Exposed concrete surfaces

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

Excavations

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

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

Carried to Abstract R

EXTERNAL WORKS
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EXTERNAL PLUMBING

Laying, backfilling, bedding, etc. of pipes

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

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

SABS 1200 L	:	Medium pressure pipelines
LD	:	Sewers
LE	:	Stormwater drainage

Pipe trenches etc. shall be backfilled in accordance with clauses 3, 5.5, 5.6, 5. and 7 of SABS 1200 DB : Earthworks (Pipe trenches). Pipes shallvbe bedded in accordance with clause 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SABS 1200 LG : Bedding (Pipes). Unless otherwise described bedding of rigid pipes shall be class B bedding.

Flush pans

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

Stainless steel basins, sinks, wash troughs, urinals, etc.

Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable.

Waste unions

Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings.

Steel sectional water tanks

Tanks shall comply with SABS CKS 114

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Bill No. 1
EXTERNAL PLUMBING

	"Densyl" petrolatum anti corrosion tape as manufactured by Denso SA (Pty) Ltd				
	Prices for wrapping of pipes shall include for all work as described to couplings in the length.				
	User note: Dependent on soil or environmental conditions laps may require to be increased to a maximum of 55% (which results in a double layer)				
	SOIL DRAINAGE				
	Demolitions				
1	Excavate for and cut into existing 150mm drain for new 110mm PVC drain including all necessary fittings and backfill and compact with material obtained from excavations to 95% Mod AASTO density.	No	1		
2	Excavate for and leave existing 150mm drain ready to be encased in concrete (concrete encasing elsewhere measured) and backfill and compact with material obtained from excavations to 95% Mod AASTO density.	m	2		
	uPVC Class 34 drainpipes and fittings with spigot and socket joints with 0 ring seals complying with SABS791				
3	110 mm Pipe vertically in ground (no excavation)	m	65		
4	110 mm Pipe and laying in ground not exceeding 1m deep including excavating trench, granular sand bedding 150mm thick under, around and above pipe compacted in multiple layers not exceeding 150mm thick to 93% Mod AASHTO density and filling to ground level with G5 base course material complying with SABS 1200 ME compacted in multiple layers not exceeding 150mm thick to 95% modified AASHTO density	m	43		
5	110mm Pipe and excavation exceeding 1000mm and not exceeding 2000mm deep.	m	23		
	Extra over uPVC pipes for the following uPVC fittings				
6	110mm 45° Bend	No	8		
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7	110mm 90° Bend	No	3		
8	110mm Junction	No	3		
9	110mm Access junction	No	1		
	Sundries				
10	Plain concrete 15MPa/19mm stone encasement 150mm thick round existing 150mm diameter horizontal pipe including additional excavation, formwork, etc.	m	10		
11	Plain concrete 15MPa/19mm stone encasement 150mm thick round 110mm diameter horizontal pipe including additional excavation, formwork, etc.	m	3		
12	Ditto but around 110mm bend	No	4		
13	ABC cast iron 45° type cleaning eye cover and frame and fix to top of 110mm uPVC pipe	No	3		
14	110mm Gulley exceeding 750mm and not exceeding 1000mm deep complete with concrete gully top 400 x 400 x 120mm	No	1		
15	Cement concrete 15MPa/19mm stone apron size 450 x 450 x 100mm thick around cleaning eye cover and frame (elsewhere measured) and set to finish flush with paving or ground including excavation to formwork, etc.	No	6		
	Inspection chambers				
16	Inspection chamber size internally 600 x 760 x exceeding 500 not exceeding 750mm deep to invert having 150mm thick plain concrete 20MPa/19mm stone bottom projecting 150mm beyond face of external walls all around 230mm brick sides in 1:3 cement mortar rendered internally in 1:3 cement plaster steel trowelled smooth 100mm thick plain concrete 20MPa/19mm stone cover slab rebated for and fitted with and including 450 x 600mm x 72kg cast iron manhole cover and frame type 8A including fine cement concrete benching in bottom around and including vitrified clay main and branch inlet channels including excavation, backfilling, formwork, holes through sides, etc.	No	2		
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17	Stormwater double grid inlet as per 1574-77-STW-030 Inspection chamber ditto size internally 1250 x 760 x exceeding 1000 not exceeding 1250mm deep to invert ditto.	No	1		
	SUNDRIES				
18	Extra over excavation in earth for trenches, inspection chambers, etc. for excavation in soft rock	m³	12		
19	Ditto but in hard rock	m³	4		
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EXTERNAL WORKS

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EXTERNAL WORKS, ETC.

PREAMBLES

For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles

NOTE:

Prices for filling, etc., shall include for the costs of any compaction tests as required by the Representative/Agent.

Cost of tests

Descriptions of concrete items shall be deemed to include for all necessary testing of concrete components and trail mixes

The costs of making, storing and testing of concrete test cubes as required shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the principal agent. The testing shall be undertaken by an independent firm or institution nominated by the contractor to the approval of the principal agent. (Test cubes are measured separately)

NOTE: Should the strength required for the concrete in anyportion of the structure not be attained in the test cubes, orshould any concrete whatsoever be defective the portion inquestion is to be demolished and replaced at the expense ofthe Contractor.

Carried to Abstract R

	TEMPORARY HOARDING AND FENCING				
20	Hoarding 2500mm high formed of timber boarding, blockboard sheeting or similar splinter free material painted one side with two coats PVA, including poles, bearers, bracing, etc. firmly secured, with and including taping hoardings all round to form a dust proof screen, all removed upon completion of sections of work and including making good floors and walls where applicable	m	315		
21	Extra on hoarding for single builders access door 1 m wide	No	3		
	ENTRANCE SIGNAGE				
22	Entrance sign composed of 75mm diameter galvanised mild steel pipe to create frame size 2550 x 2100mm. The frame to be fixed into concrete bases of 500 x 500 x 500mm (Foundations and bases etc elsewhere measured) with and including a new chromadek signage panel size 2420 x 1225mm fixed welded to frame. The chromodek sign to be affixed to 20 x 20 x 1mm galvanised mild steel square tube frame, which is welded into main 75mm diameter main frame.			SUM	
23	Allow for frosted vinyl lettering at the main entrance doors letter height 35mm, font type: Tahoma for the following complete: Clinic name Clinic operating hours Clinic Emergency contact number			SUM	
	ELEVATED WATER TANK STAND				
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	The following in galvanised steel elevated water tank stands at a height of approximately +/- 10m from ground level				
24	Abeco or other equally approved elevated water tank size 4 000 x 3 900 x 6 100mm overall (7000litre capacity or higher) with and including 2.5 mm thick x 610 mm wide roof sheeting, hot-dip galvanising support towers (15m high), standard accessories including but not limited to caged external access ladder, Internal access ladder, Hinged lockable manhole, float and pointer type water level indicator and screened ventilator, pressure pump and booster pump to match tank capacity complete	No	1		
25	Column legs composed of equal angle size 60 x 60 x 5 kg/m angle	t	0.60		
26	Cross bracing composed of 30 × 5 x 1.18kg/m flat bar	t	2.69		
27	Horizontal bracing comprised from 40 x 40 x 1.6kg/m equal angle	t	0.70		
28	Top platform main support beam comprised of 150 x 75 x 10 angle	t	0.70		
29	Top platform secondary support beams – 125 x 75 x 20 x3 lipped channel	t	1.00		
	Bolts etc				
30	M16 grade 4.8 bolts	No	32		
31	M12 grade 4.8 bolt	No	160		
	Foundations				
32	Excavate for holes n.e 2m deep	m³	4		
33	Cartaway excavated material	m³	2		
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34	Approved G6 material as filling compacted in 150 mm layers to 93% Mod. AASHTO density.	m^3	2		
35	Concrete blinding under footings (10mpa/19mm stone)	m^3	0.2		
36	Ditto but in bases and stands (25mpa/19mm stone)	m^3	16		
37	Reinforcement in all bar sizes	kg	74		
	220 x 110 x 75mm Brick paving in soldier course to match existing				
38	220mm wide clay brick paving soldier course margin to match existing, set flush with top of concrete slab and jointed in cement mortar on and including 50mm thick concrete (20Mpa - 19mm stone) mortar bed and pointing to top and edge.	m	10		
	Sundries				
39	5000 litre polythene water storage tank size 1800 diameter x 1850mm high, fitted with access lid and inlet hole, with and including flanged or screwed connections for inlet, 15mm outlet and 15mm overflow pipes, hoist and set in position on concrete plinth, approximately 1000mm high above ground level	No	1		
	MOTHER AND CHILD PLAY AREA				
40	Excavate in earth to reduce levels not exceeding 2 m deep.	m^3	11		
41	Extra over all excavations for carting surplus excavated material from the site.	m^3	11		
42	Approved G6 material as filling compacted in 150 mm layers to 93% Mod. AASHTO density.	m^3	18		
43	10mpa concrete in blinding layer	m^3	4		
44	12mm artificial grass	m^2	35		
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	EXCAVATIONS				
45	Excavate in clay soil to reduce levels not exceeding 2 m deep.	m³	96		
46	Extra over excavations in earth for excavation in soft rock.	m³	10		
47	Ditto in hard rock.	m³	5		
48	Extra over all excavations for carting surplus excavated material from the site.	m³	97		
49	Scarify ground to a depth of 150 mm and re compact to 93% Mod. AASHTO density.	m²	96		
50	Approved G5 material as base course 100 mm thick compacted to 95% Mod. AASHTO density under surface bed.	m²	96		
	Cement concrete (25 MPa - 19 mm stone) in				
51	Ground beams	m³	29		
	FENCING				
	NOTE				
	The price for the fencing must include allowances for Stainless Steel Grade 304 sundries such as bolts, nuts and washers				
	Large established trees on the inside of the boundary and forming an obstruction to a straight line must be left undisturbed unless otherwise specified or described in the specification				
	Builder's work in connection with ClearVu fencing				
52	Roughly clear, grade and level ground along fence line between fence poles for a width of 1m both sides including clearing of all vegetation, trees, rocks, rubble and rubbish	m²	481		
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	The following in Hot Dipped Galvanized and PVC coated 100 x 55 x 2 mm profile Bekafix Super Secure Posts - with holes in side flanges for lateral fixation of the ClearVu panel with mini securifor brackets and plastic caps ,Yield strenght : min 320 N/mm2 complete with minimum zinc coating :275 g/m2 (double side determined) Colour : Anthracite RAL 7021				
53	Post size 3200mm long including 600 x 600mm reinforced concrete 20mpa footings, complete with excavations, backfilling etc	No	160		
	''Cochrane ClearVu" similar or equally approved ZincAlu and PVC coated security fencing, gates, etc and setting out Fence system to be maintenance free and carry a 10 year anti-corrosion guarantee. Supplier to be ISO 9001 & Green Building Council approved.				
54	Supply and erect 2.4m high " ClearVu" or other equally approved fence to boundary comprised of 3050 x 2400 mm panels made out of welded mesh, with rectangular apertures size 76.2 x 12.7mm,horizontal and vertical wire diameter size 3.00mm,weld strength: 60% of the minimum tensile strength of the wire,and tensile strength range of wire: 540-690N/m² complete made from Zincalu® super wire and PVC coated - Anthracite RAL 7021	m	321		
	Serrated Top Rail Saw Tooth				
55	3050mm x 100 mm thick top rail with serrated tooth spike 2.5mm thickhot dip galvanised and PVC coated, bolted to panel top as per manufacturer's specification - Anthracite RAL 7021	m	321		
	Underdig				
56	"''Cochrane ClearVu" " or similar 3510 Singleskin Flat Zincalu size 3050 x 450mm high	m	321		
	Galvanised mild steel security gates				
57	Galvanised main vehicular steel gate size 6000 x 2200mm ditto(**Labour Intensive**)	No	1		
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58	64mm Union 3102 or other approved brass padlock	No	1		

ROADWORK INCLUDING PATCHING, REPAIRING POTHOLES AND EDGEBREAKS

NOTE:

All work is to be carried out in accordance with SABS 1200 ME, MF, MH & MK.

SCOPE

This section covers the patching of existing pavement layers, repairing potholes and edgebreaks and includes the follows:

(a) Patching (Local repairwork)
Patching shall be any rehabilitation work to pavement layers (and in exceptional cases to fills and the roadbed) with the purpose of repairing local failures, and which is carried out in an area having a length of less than 25 m, a width less than 1 m or an area of less than 100 m2.

(b) Potholes
The repair of local failures with a surface area of less than 1m2.

(c) Edgebreaks/raised areas
The repair of broken or raised edges requiring reinstatement.

MATERIALS

(a) Patching agent. i) Bitumen stabilising 60% Stable-grade anionic emulsion complying with SABS 309.

ii) Prime One of the following as directed by the engineer: - MC 30 - MSPI

iii) Chemical stabilising agent. OPC

Carried to Abstract R

iv) Continously graded asphalt. As specified for medium grade, with 80/100 penetration grade bitumen as binder to SABS 1200 as specified in Table 2 and 6.

(b) Potholes i) Prime 60% Stable-grade anionic emulsion complying with SABS 309 diluted 1:1 with water.

ii) Continously graded asphalt. 80/100 Pen/Bit medium grade SABS 1200 as specified in Table 2 and 6.

(c) Edgebreaks and raised areas i) Prime One of the following as directed by the engineer: - MC 30 - MSPI ii) Continously graded asphalt. 80/100 Pen/Bit medium grade SABS 1200 as specified in Table 2 and 6.

(d) Crack sealing Materials for crack sealing can be any of the following:- Hot poured - Nat Pro Lastic (ABE Industrial Product) or similar Cold poured - Petroseal (Abecol) or similar - Inverted emulsion/latex compounds

CLASSIFYING THE MATERIAL

All material excavated from the existing roadprism including subgrade, subbase, base seals and shoulders shall be classified as soft material. No additional payment will be made for various types of material.

PLANT AND EQUIPMENT

The equipment to be used for the conventional breaking-up and excavation of existing pavement layers will be determined by the size and depth of the pavement section to be processed or excavated, taking into consideration the fact that work may have to be carried out in restricted areas.

Only approved cutting or sawing equipment shall be used for cutting or sawing the asphalt and stabilised base layers.

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CONSTRUCTION

(a) Patching (Local repairwork)
The Engineer will demarcate any failed areas to be patched, and shall instruct the contractor regarding the other details of the patching work to be done.

i) Excavating pavement material

Unless otherwise instructed by the Engineer, the patch shall have a neat rectangular shape. The bituminous surfacing shall be cut with an approved cutting device.

Initially 150 mm shall be excavated. After completion of the initial excavation, the Engineer shall be afforded the opportunity to examine it to determine whether further layers shall be removed. The floor of the excavation shall be watered and compacted to 93% modified AASHTOdensity.

ii) Backfilling excavations

The backfill material shall be imported gravel as ordered by the Engineer. The compacted density for each lower layer shall be for:

SSG layer 93% Mod. AASHTO
Subbase layer 95% Mod. AASHTO Base 86% Apparent density

The emulsion-establised base shall be compacted to 100% modified AASHTO density.

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iii) Crack Sealing
Surface cracks in the existing road surface to be sealed as follows:

a) Cracks over 5 mm wide.
The crack to be reamed out using hot lance operations to a minimum depth of 15 mm.

The cracks to be air blasted and cleaned out.

The cracks to be primed using primer as specified by manufacturers.

The cracks to be sealed using a rubber bitumen compound as specified by manufacturers.

b) Cracks 0 - 5 mm wide

The crack to be air blasted and cleaned out.

The crack to be treated using an inverted bitumen emulsion and 3% by mass of SBR latex emulsion.

Crack sealing is not to be carried out during wet conditions.

iv) Restrictions
All excavations for patching shall be backfilled on the same day.

(b) Potholes
The Engineer will indicate the potholes requiring repair.

The contractor shall demonstrate for approval by the Engineer his intended method for backfilling and compacting the continously graded asphalt in potholes.

Unless otherwise ordered by the Engineer, the existing material shall be removed to a depth of 50mm or to the bottom of the pothole, whichever is the grater, in the smallest rectangular area encompassing the pothole.

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The surface of the sides and bottom shall be primed at a rate of 0.7 litre/m2 with diluted emulsion, which shall be allowed to dry.

The continously graded asphalt shall then be placed in layers not exceeding 30 mm, compacted by the approved method and finished off level with the adjacent surfacing.

(c) Edgebreaks / raised areas

This treatment is intended for use where the repair of the edges of the surfaced area is required, including restoring the road edges to the true edge lines and levels of the original road to such other line as may be ordered by the Engineer.

Before the repair of edgebreaks/raised areas is carried out and, where the edges of the surfacing have broken away, the existing broken edges shall be cut back in neat lines until a sound edge is obtained.

All material between the edge of the surfacing and the line to which the surfacing has to be built up, shall be removed to a depth of 60 mm below the final road surface or until firm material is found, and the surface so exposed shall be cleaned and primed at a rate of 0.70 litre/m2.

The contractor shall demonstrate for approval by the Engineer his intended method for backfilling and compacting continously graded asphalt in edgebreaks/ raised areas.

The edges shall then be built up with continously graded asphalt as ordered by the Engineer and shall be well compacted by the approved method.

The built-up edges shall be finished neatly to the required line and levels

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	Raising and Levelling of Existing Manholes Where re-surfacing is to take place and the existing manhole covers will be covered by the new layer. The said manhole cover will be raised to the appropriate level to be flush with the surface of the re-sealed level.				
	Protection of Existing Services Where remedial layer works are to be carried out the depth and position of the relevant service is to be determined by hand excavation. In the case where the affected services have a cover of less than 300mm the services will be encased in a soil-crete mix.				
	Road Signs and Markings Where re-surfacing and related operations incorporated in this contract require the removal of traffic signs the affected sign shall be removed and stored in a safe place until such time as the work done in the area is complete. The said sign is then to be replaced in its original position. Road, paint markings are to be re-painted after completion of the re-sealing operation in the affected areas.				
59	Precast cement concrete (20 MPa - 6 mm stone) barrier kerb size 150 x 250 mm with one side splayed back 25 mm for a height of 125 mm including exposed angle rounded to a 20 mm radius, the kerb jointed in cement mortar on and including 75 mm concrete (20 MPa - 19 mm stone) bed haunched up on both sides, with 300 x 125mm average precast concrete channel including all necessary excavations, backfilling, formwork, etc.	m	968		
	High quality road marking paint in accordance with SABS 731				
60	Ditto in 100 mm wide yellow lines (ditto).	m	100		
61	Ditto in 300 mm wide white lines (ditto).	m	78		
62	Ditto directional arrow in white paint in accordance with the South African Road Traffice Manual.	No	2		
63	Ditto STOP ditto.	No	1		
64	Ditto Zebra crossing ditto.	m	1		
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65	Ditto Disabled Parking ditto.	No	1		
	PAVING				
66	Excavate in earth to reduce levels not exceeding 2 m deep.	m³	517		
67	Extra over all excavations for carting surplus excavated material from the site.	m³	207		
68	Scarify ground to a depth of 150 mm and re-compact to 93% Mod. AASHTO density.	m²	1 033		
69	Approved G5 material as filling compacted in 150 mm layers to 93% Mod. AASHTO density.	m³	310		
70	Approved G7 material as filling compacted in 150 mm layers to 93% Mod. AASHTO density.	m³	310		
	220 x 110 x 60mm concrete brick paving with minimum longitudinal fall of 1% on a tranverse fall of at least 2% on 25mm compacted sand bed with 10mm joints filled with 1:10 cement sand fine jointing sand swept and vibrated into joints,all laid on subgrade conforming to SANS 1200 D Degree of Accurancy 1 including inspection and re-sanding after 3 months.				
71	Paving to Herringbone Bond pattern	m²	1 033		
72	Pointing only to edge of paving.	m	206		
73	220mm Wide brick-on-flat tread including 10mm thick mortar bed and pointing to top and one face.	m	206		
	One Layer 250 Micron Waterproof Sheeting				
74	One layer 250 micron polyethylene waterproof sheeting in accordance with SABS 952 Type C lapped 150 mm at joints and sealed with pressure sensitive tape and laying under paving.	m²	1 033		
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	Sundries				
75	Tricate or other approved weed killer in proportion 168kg to 1124 litres of water per hectare plus Agrol 90 sprayed onto surfaces of ground under floors, etc.	m²	1 033		
	RETAINING WALLS				
76	Enviro-wall or other equally approved blocks size approximately 275 x 300mm laid at a 70 degree slope (23kg per block / +/- 27 blocks per m2)	m²	83		
77	50mm thick topsoil	m²	33		
78	100mm thick G5 material	m²	40		
79	300mm wide, 19mm crushed stone drainage layer	m²	10		
80	300mm wide precast concrete U-Drain on 100mm thick concrete bed	m	119		
81	A4 Bidim geotextile membrane	m²	83		
82	20mpa reinforced concrete base and backing	m³	5		
83	Reinforcement in all bar sizes	t	0.49		
84	Approved G5 material as filling compacted in 150 mm layers to 93% Mod. AASHTO density.	m³	165		
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PREAMBLES

For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles

For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev Oct. 1993) as well as to the "Model Preambles for Trades" (1998) and Supplemetary preambles below.

Tenderers are advised to visit the site and to inspect the works in conjunction with the drawings in order to ascertain the exact nature and extent of the work to be done. The work is to be carried out in sections in accordance with the Architect's instructions in such a manner as to cause the minimum of nuisance and delay and the various sections are to be handed over for occupation as soon as they are completed and Tenderers must allow accordingly for this in their pricing.

The Contractor will be held solely responsible for checking all floor levels and dimensions in the existing building in order that the new extensions may be correctly lined up. Should any discrepancies be found in the Architect's drawings he should be asked for a decision before continuing with the work.

The Contractor will be held solely responsible for any damage to persons and property, for the safety of the new and existing structure throughout the whole of the contract and must make good at his own expense any damage that may occur.

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Old materials described as "carefully take out, set aside for re-use and later refix in new position" are to be carefully removed, stored and protected from injury, made good as required and if broken or damaged through taking out, removing, storage, etc, are to be replaced by the Contractor at his own expense. Tenderers are advised to inspect these materials to ascertain their condition and allow accordingly for this in their pricing.

Old materials, which are to become the property of the Contractor as they are pulled down, together with all building debris from any cause whatsoever, are to be immediately carted away and the site left clean and unencumbered. Allow for watering the works sufficiently to prevent nuisance from dust.

Allow for giving notice to local or other authorities for disconnecting electric light, water and drainage mains and removing telephone wires, etc, and pay all fees in connection therewith and afford every facility to the workmen carrying out this work.

All materials in this section are measured as new except where old material is specifically mentioned as being re-used.

Old materials, if sound and suitable and approved by the Architect, may be re-used in the new structure. This applies particularly to timber which may be re-used for joists, brandering, fittings, etc and broken bricks and other similar material which may be used as filling and hardcore.

Wherever old materials are used instead of the new materials measured, an adjustment will be made by the Quantity Surveyor in the final settlement of accounts by deducting the net cost of the new materials and crediting the Contractor with the amount, if any, allowed by him for the old materials.

When pricing, Tenderers are to allow as follows:

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Where door and window openings, etc, are specified to be filled in, or where jambs, cills, etc are specified to be built up, brickwork shall be of hard burnt clay stock bricks in 5.1 cement mortar unless otherwise specified, cut, toothed and bonded into existing brickwork and pinned up as required with slates or other hard materials. Brickwork built to fair face or in facings is to be of Travetine facebricks and pointed to match existing. Plaster is to be 5.1 cement plaster unless otherwise specified.

Where lintols are specified as reinforced concrete the prices are to include for breaking out brickwork over for and inserting cement concrete (20MPa) lintol with 230mm bearing on each end and 254mm deep and reinforced with and including one 12mm diameter mild steel rod for each half brick thickness of wall and including formwork. The steel rods are to be hooked at ends and embedded 25mm up from bottom of lintols. Lintols exceeding 1370mm span to be similarly reinforced but with 20mm diameter mild steel rods.

Where lintols are specified as precast concrete the prices are to include for breaking out brickwork over for and inserting precast prestressed cement concrete (30MPa) lintol with 230mm bearing on each end size 108 x 75mm deep for each half brick thickness of wall.

The term "take out" includes all work taken out, taken up, taken down, taken off, etc ; the term "break up" includes all work broken up, broken down, broken off, etc and the term "hack off" includes all work hacked off, hacked up, hacked down, etc.

The term "make good" is to include all labour and material required to match existing work.

The terms "take out and remove door", "take out and remove window", "carefully take out, set aside for re-use and later refix window in new position", etc are to include all materials connected with such door or window such as doors, windows, fanlights, frames, ironmongery, glass, architraves, beads, fillets, cramps, dowels, etc.

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	The terms "take out and remove sink unit", "take out and remove lavatory basin", "carefully take out, set aside for re-use and later refix W.C. suite in new position", etc are to include all materials connected with such sanitary fittings such as brackets, cisterns, taps, traps, flushing valves, flush pipes, etc and are to include for the cutting back and stopping off of supply and waste pipes. ---------- ----------				
	The contractors unit rates must allow for disposal of disposal or carting away of material,fittings or fixtures so described to a prescibed dumping site as instructed by the Architect ----------				
	Wire mesh were referenced shall be as follows: Wire thickness = 3.0mm thick Strand width = 4.5mm thick Diamond size = 25mm x 50mm				
	GENERAL ALTERATIONS				
	Carefully take out and remove the following asbestos material complete by ad approved Asbestos Removal Contractor under the direction and supervision of an Approved Asbestos Removal Authority				
1	Roof sheets, with and including fascias, barge boards, gutters and downpipes and leave roof structure ready to receive new sheeting and rainwater goods(sheeting and rainwater goods elsewhere measured)	m²	858		
2	Ceiling boards including brandering and leave trusses ready to receive new ceiling boards and brandering	m²	904		
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3	Extra over for cost of Approved Asbestos Inspection Authority (AIA) to be procured and paid in advance by the Contractor. The AIA to undertake all tasks and obligations as fully detailed in the latest published asbestos laws which entails as a minimum, identifying asbestos material on site, planning and implementation of the careful removal and disposal of all asbestos material, including reporting and submission or all licences, permits and certifications to the health and safety agent for the duration of the works			SUM	
	Break up and remove				
4	Half brick wall	m²	127		
5	One brick wall	m²	47		
6	270mm brick walls	m²	120		
7	Reinforced concrete slabs, steps etc and leave opening ready to receive new foundations for new brick walls (foundations and brick walls elsewhere measured)	m³	34		
8	Tarmac surfaces approximately 25mm thick and leave ground ready to be compacted (compaction elsewhere measured)	m²	359		
9	Concrete tank stand complete	m³	1		
10	Brick building size approximately 10m x 5m x 3m high complete including foundations, structural frame, roof structure, fittings etc and dispose of contents at an approved disposal site approximately 100km away from site	No	1		
11	Temporary ablutions building size approximately 9m x 3m x 3m high complete including foundations, gumpole and corrugated steel frame, roof structure, fittings etc and dispose of contents at an approved disposal site approximately 100km away from site	No	1		
12	Walkways composed of metal roof sheets and timber posts 13m x 2m x 2.1m high complete	No	2		
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	Take out and remove				
13	Pedestrian gate size approximately 1000 x 2100mm high	No	2		
14	Single door size 900 x 2100mm high and leave opening ready to be bricked up (bricking up elsewhere measured)	No	22		
15	Door size approximately 813 X 2100mm	No	4		
16	Alter existing door opening size 900 x 2100mm high in half brick wall to form a door size 1455 x 2050 mm, break out at head for a height of 2000mm,insert prestressed concrete lintel over, and make good including to plaster.	No	1		
17	Alter existing window opening size approximately 600 x 600mm high in a one brick wall to form an Aluminium window opening size 840 x 2100mm high, break back at one jamb for a width of 300mm and under cill insert a pre stressed concrete lintel over, build in pretressed steel window frame, form 100 wide 10mpa concrete threshold and make good including to plaster both sides and to reveals.	No	2		
18	Alter existing window opening size approximately 600 x 600mm high in a one brick wall to form a door opening size 832 x 2032mm high, break back at one jamb for a width of 300mm and under cill insert a pre stressed concrete lintel over, build in pretressed steel window frame, form 100 wide 10mpa concrete threshold and make good including to plaster both sides and to reveals.	No	4		
19	Galvanised steel window size 600 x 600mm high and make good leaving the opening ready to receive door size 900 x 2125mm, else where measured.	No	2		
20	Take out and remove existing double door and make good to the opening and finish.	No	2		
21	Single door size 1800 x 2100mm high and leave opening ready to be bricked up (bricking up elsewhere measured)	No	1		
22	Drywall partition including studs and tracks complete	m	13		
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23	Single bowl sink size 650 x 450mm including removing brackets, piping from wall, capping water pipes, etc and leaving wall and floor ready to receive new single bowl sink (New single bowl sink,waste pipes etc elsewhere measured)	No	7		
24	Blinds for windows measuring 2125 x 840 and make good finish and leave it ready for new blinds	No	24		
25	Boundary fence and posts complete and leave ready to receive new fence (new fence elsewhere measured)	m	120		
26	Jojo tank and accessories and erect as directed by the PA	No	1		
27	Signage including posts and brickwork support size 3 000 x 3000mm high overall	No	1		
28	Waste cage size 4 000 x 1 800mm high overall	No	1		
	Making Good to Existing				
29	Envirowall Blocks size 275mm x 300mm (approx 25kg per block / +/- 27 blocks per m2) and repack at 70° angle to a height between 1.6 to 3.5m high	m²	117		
	Hack out and remove				
30	Ceramic tiles	m²	816		
	Carefully prepare floors to receive moisture barrier by light grit blasting or high pressure water blasting floor surfaces to produce a lightly exposed aggregate surface (ICRI CSP3) that will absorb water. Stop, rinse the treated substrate with clean water and ensure the substrate is in a saturat ed surface dry (damp) condition before the application of X Shield VaporStop HB or other barrier (elsewhere measured). Any cracks or bug holes should be filled with X-Shield BugFill or other suitable filler after application of X-Shield Va porStop HB. Note: Cementitious under layment and patching should only be installed over X-Shield VaporStop HB or other recommended barrier.				
31	On concrete floors	m²	575		
	Carefully Take Out and Remove				
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	The contractor must make all necessary allowances e.g. scaffolding for a height exceeding 3m and n.e. 10m. , health and safety etc and must factor in the costs of any direct or indirect damage to floors, walls, the existing roof and ceilings etc that may result during the execution of this work				
32	Clerestory IBR roof sheeting and insulation, inspect roof structure and provide a written report to the Principal Agent and leave existing structure ready to receive new insulation and roof sheeting (Insulation and roof sheeting elsewhere measured)	m²	234		
33	125 x 125mm gutters and leave fascia boars ready to receive new gutters (new gutters elsewhere measured)	m	60		
	The contractor must request for a written instruction concerning the relocation of joinery fittings as described below. The contractor must make the necessary allowances for the complete replacement or reinstatement of joinery that may be damaged during the removal, reinstatement or transit of joinery				
34	Timber shelving size approximately 3500 x 3000mm high and reassemble in new position as directed by the architect	No	3		
35	Break out one brick wall for counter opening size approximately 1500 x 1200mm high , insert concrete lintol size 75 x 150mm, make plaster and paintwork both sides and leave opening ready to receive new roll up door (door elsewhere measured)	No	4		
36	Take out and remove existing stainless steel sink and tap	No	7		
37	Take out and remove, stop, service parts and replace consumables pertaining to the wall mounted elbow action tap and CP waste	No	6		
38	Ditto but to wall mounted hot and cold elbow action taps	No	3		
39	Take off and remove 15mm diameter bib tap, remove pipework from wall, cap piping and leave wall ready to receive new tap and pipework (elsewhere measured)	No	1		
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40	Take out and remove shower set including shower rose, mixer unit with hot and cold connections, remove all pipework from wall, cap piping and leave wall ready to receive plaster and paint (elsewhere measured)	No	1		
41	Take off and remove existing 590 x 420mm ceramic medical basin including removing and capping piping and make good wall and leave wall ready to receive new basin (elsewhere measured)	No	1		
42	Take off and remove ceramic washhand basin size 525 x 420mm complete with taps, traps, etc., including piping and make good wall and leave wall ready to receive new finishes (elsewhere measured)	No	10		
43	Take out and remove ceramic WC and cistern complete including removing piping from wall, capping water pipes and leave wall and floor ready to receive new WC and cistern (elsewhere measured)	No	5		
44	Take out and remove sink size 1300 x 400mm and cupboard under including two pillar cocks from fitting and set aside for re-use and temporarily stop off water and waste	No	1		
45	Take out and remove sluice sink size 3600 x 500mm including removing brackets, piping from wall, capping water pipes and make good wall	No	1		
	<u>Major crack - width more than 5.0 mm</u>				
46	Remove the plaster in the vicinity of the crack (350mm width on each side of crack) exposing the brickwork and chisel out a V shape,clean the crack with compressed air and ensure that dirt,fine and loose material are removed completely,fix in grouting nipples in the V-groove on both faces of the wall at spacing of 150-200 mm c/c, seal the crack on both the faces of the wall with ABE epidermix 365 or other equally approved crack injection compound, nail fix a diamond wire meshover the sealed crack (spanning at least 300mm diameter on either side of the crack) with and including holding it to the wall through spikes or bolts at 300mm c/c and leave surface ready to receive new plaster (Plaster elsewhere measured)	m²	132		
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	EARTHWORKS				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	No allowance has been made in the measurements for bulking. The contractor must make allowance for bukling in his/her unit rates.				
	Excavation in earth not exceeding 2m deep				
47	Trenches	m^3	72		
48	Reduced levels under floors	m^3	26		
	Extra over all excavations for carting away				
49	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m^3	37		
	EXCAVATIONS IN STRATA OF A MORE DIFFICULT CHARACTER				
	Extra over trench and hole excavations in earth for excavation in				
50	Soft rock	m^3	2		
51	Hard rock	m^3	7		
	Risk of collapse of excavations				
52	Sides of trench and hole excavations not exceeding 1,5m deep	m^2	190		
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	Keeping excavations free of water				
53	Keeping excavations free of water		Item		
	FILLING ETC				
	Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 93% Mod AASHTO density				
54	Backfilling to trenches, holes, etc	m³	10		
	G5 Earth filling material supplied by the contractor, compacted to 93% Mod AASHTO density				
55	Backfilling to trenches, holes, etc	m³	62		
56	Under floors, steps, pavings, etc	m³	33		
	G7 Earth filling supplied by the contractor, compacted to 98% Mod AASHTO density				
57	Under floors, steps, pavings, etc	m³	36		
	Bedding				
58	50mm Thick bed of approved sand.	m²	107		
	Compaction of surfaces				
59	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density	m²	113		
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EARTHWORKS

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	CONCRETE, FORMWORKAND REINFORCEMENT				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES				
	15MPa/19mm concrete				
60	50mm thick surface blinding under footings and bases	m^3	3		
	REINFORCED CONCRETE				
	25MPa/19mm concrete				
61	Strip footings	m^3	35		
62	Ramps including landings	m^3	11		
	30MPa/19mm concrete				
63	Seamless surface beds	m^3	19		
64	Stairs, including landings, beams and inverted beams	m^3	8		
	CONCRETE SUNDRIES				
65	Extra for steel power floating surface bed to a non slip finish including any additional cement necessary	m^2	51		
66	Extra for floating up to non slip finish to treads of steps including any additional cement necessary.	m^2	15		
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Bill No. 3
CONCRETE, FORMWORK AND REINFORCEMENT

67	Sika or other equally approved floor hardener	m²	51		
	FORMWORK				
	SMOOTH FORMWORK (DEGREE OF ACCURACY 1)				
	Smooth off shutter formwork (use and waste) to concrete				
	Sides, edges, risers, etc.				
68	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	38		
69	Edges exceeding 300mm high	m²	11		
	EXPANSION JOINTS				
	Expansion joints with softboard between vertical concrete and brick surfaces to SABS 1077				
70	10mm Thick Jointex expansion joint filler vertically between concrete or brick surfaces not exceeding 300 mm high	m	294		
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	REINFORCEMENT (PROVISIONAL)				
	High tensile steel reinforcement to structural concrete work				
71	Reinforcement in all bar sizes	t	8.47		
	Fabric reinforcement				
72	Reference 617 welded mesh reinforcement lapped 200mm at edge of adjoining sheets and bound with annealed wire and laying in concrete surface beds / ramps (Measured nett - no allowance made for laps)	m²	55		
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CONCRETE, FORMWORK AND REINFORCEMENT

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CONCRETE, FORMWORK AND REINFORCEMENT

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CONCRETE, FORMWORK AND REINFORCEMENT

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	CONCRETE, FORMWORKAND REINFORCEMENT				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	NOTE: Prices are to include for building in surrounds as single units or in combinations of two or more units to the required patterns.----------				
	Precast Vibrated Cement Concrete (30MPa) Winblok Window Surrounds Finished Smooth From The Mould On Exposed Surfaces, Built Into Brickwork As The Work Proceeds, Bedded And Jointed In 4.1 Cement Mortar And Pointed With Ruled-In Vertical And Horizontal Joints Both Sides (Glazing And Vents Elsewhere Measured)				
73	Window size 2125 x 840mm high	No	28		
74	Window size 600 x 500mm high	No	3		
	Carried Forward to Summary of Section No.			R	

Item No			Quantity	Rate	Amount R
	BILL NO 5				
	MASONRY				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	Samples of all masonry building units, shall consist of a minimum of 6 units				
	FOUNDATIONS				
	Brickwork of NFX(E) bricks (28 MPa minimum compressive strength) in class II mortar in loadbearing walls etc				
75	Half brick walls	m²	31		
76	One brick wall	m²	63		
77	270mm Hollow walls of two half brick skins with cavities filled in with and including 15MPa/20mm concrete	m²	52		
78	Piers with cavities filled in with and including 15MPa/20mm concrete	m³	1		
	SUPERSTRUCTURE				
	Brickwork of NFX(E) bricks (28 MPa minimum compressive strength) in class II mortar in loadbearing walls etc				
79	Piers with cavities filled in with and including 15MPa/20mm concrete	m³	2		
	Carried to Abstract			R	

80	Half brick walls	m²	52		
81	One brick walls	m²	35		
82	270mm Hollow wall formed of two half brick thicknesses with 50mm cavity between tied together with and including galvanized wire ties of the Butterfly or Modified PWD type in accordance with SABS 28 spaced at not more than one metre centres alternately to every third course and staggered.	m²	219		
83	Ditto but in bricking up openings etc	m²	20		
84	Build 50mm wide cavity closed for two courses at top of wall.	m	20		
85	Build 50mm wide cavity of wall solid half brick wide at jambs or ends of wall.	m	46		
86	Build 50mm wide cavity of wall solid half brick wide at head of opening	m	8		
	Miscellaneous				
87	Cut toothings and bond new brickwork to existing.	m²	7		
88	Bag down face of new brickwork with 1:3 cement slurry.	m²	58		
89	75mm wide welded high tensile steel wire brick reinforcing fabric and building into walls.	m	974		
90	154mm Wide ditto.	m	194		
91	75 x 110mm Wide presstressed precast concrete lintol not exceeding 3m and building into brickwork	m	155		
92	2 x 30mm Galvanised hoop iron tie 450mm girth with one end twice screwed to timber frame and other end built into brickwork and turned up into joint.	No	354		
93	1,6 x 40mm Galvanised hoop iron tie 1000mm girth, once bent and with one end wrapped around rafter ends, and another end built into brickwork.	No	40		
	Carried to Abstract			R	

RAGLAN ROAD CLINIC
Bill No. 5
MASONRY

94	30 x 1,6mm Roof tie 1,5m long with one end fixed to brickwork or concrete and other end built into new brickwork	No	20		
95	4mm Galvanised wire in ties for wall plate 1500mm girth built into brickwork	No	122		
96	Galvanized Storm Clip framing anchor designed for the connection of structural timber members at angles to each other.	No	490		
	FACINGS				
	FBS facing bricks and pointing with 10 mm square recessed joints to match existing				
97	Allow for constructing a sample face brick panel of half brick thickness and and 2 square metres in area in a north facing position to the Representative/ "Agent's approval maintain, protect and" remove at completion of contract or when directed by the Representative/ Agent.	No	1		
98	Extra over ordinary brickwork for facing in stretcher bond and pointing.	m²	311		
99	Face brick on edge door cill size 230mm wide x 110mm high, bedded in 1:5 cement mortar including cutting and fitting between reveals and pointing on top and front face.	m	43		
100	Face brick soldier course band size 110mm wide x 255mm high recessed inbetween outer skins of cavity wall and build against internal brick lining, bedded in 1:5 cement mortar and pointing to front face.	m	117		
101	Face brick on edge lintol above window head size 230mm wide x 110mm high, bedded in 1:5 cement mortar including cutting and fitting between reveals and pointing on bottom and front face.	m	24		
102	Face brick on edge lintol above door head size 230mm wide x 110mm high, bedded in 1:5 cement mortar including cutting and fitting between reveals and pointing on bottom and front face.	m	17		
	Carried to Abstract			R	

103	Face brick on edge window cill set sloping and slightly projecting on bottom edge in 1:5 cement mortar including cutting and fitting between reveals, fair splay cutting under and pointing on top, edge and projecting soffit (In No. 28)	m	33		
	CONCRETE				
	Cement concrete (25 MPa - 19 mm stone) in				
104	Filling to cavity of hollow wall	m^3	4		
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MASONRY

COLLECTION PAGE

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MASONRY

Item No			Quantity	Rate	Amount R
	BILL NO 6				
	WATERPROOFING				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	MEMBRANE WATERPROOFING				
	Damp-proof courses				
105	250 Micron polyethylene sheeting in accordance with SABS 952 Type C lapped 150 mm at joints and sealed with pressure sensitive tape and laying under concrete surface bed complete with condensation barrier	m²	53		
106	375 Micron embossed black polyethylene sheeting in accordance with SABS 952 Type B lapped 150 mm at ends and full widths of walls at angles and building into walls as dampproof course.	m²	224		
	Pointing, sealants, etc.				
107	Rake out 10mm wide expansion joint for a depth of 15mm, clean, prime and seal with an approved external quality polyurethane sealing compound applied with a pressure caulking gun.	m	294		
108	Polysulphide cover to jointex to finish flush with face of recessed square mortar joints in facebrick	m	294		
109	Silicon pointing to aluminium windows	m	264		
110	Ditto to aluminium doors	m	78		
111	Ditto to timber door frame	m	58		
	Carried Forward to Summary of Section No.			R	

Item No			Quantity	Rate	Amount R
	BILL NO 7				
	ROOF COVERINGS ETC				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	0.8mm Z275 Prepainted factory coated finished galv. IBR sheeting in continues lengths on double sided reflective aluminium foil faced insulation barrier(reflective facing to be exposed to roof sheets) colour to match existing and Fittings Fixed To Timber purlins				
112	0.8mm Z275 Prepainted factory coated finished galv. IBR sheeting in continues lengths on double sided reflective aluminium foil faced insulation barrier(reflective facing to be exposed to roof sheets) colour to match existing not exceeding 25° fixed to timber purlins (elsewhere measured) with hook bolts, including plastic washers, etc.	m²	670		
113	Ridge capping 550mm girth three times bent and notched on site to suit profile roof	m	32		
114	625mm IBR flashing 3 times bent and fixing under roof covering	m	10		
	Insulation tested for conformance with SABS 1381:Part IV-1985,with a class one fire rating in accordance with accordance with SABS 0177:Part III-1981 and BS 476 part 5,6,7,				
115	40mm thick flexible faced insulation board, white washable coated fibre glass tissue faced.	m²	670		
	Carried to Abstract			R	

	0.8mm Klip-Lok 406 G550 ZINCAL® / COLORPLUS finished sheeting on 40mm thick flexible faced POLYISOCYANURATE insulation board, white washable coated fiberglass tissue faced and Fittings Fixed To Timber purlins				
116	0.8mm Klip-Lok 406 G550 ZINCAL® / COLORPLUS finished sheeting on 40mm thick flexible faced POLYISOCYANURATE insulation board, white washable coated fiberglass tissue faced.not exceeding 25° fixed to timber purlins (elsewhere measured) with hook bolts, including plastic washers, etc.	m²	942		
117	Head wall flashings 350mm girth	m	27		
	Insulation tested for conformance with SABS 1381:Part IV-1985,with a class one fire rating in accordance with accordance with SABS 0177:Part III-1981 and BS 476 part 5,6,7,				
118	Sisalation FR 405 multi-purpose grade reinforced aluminium foil insulation double sided,light grammage,durable reflective foil laminate incorporating layers of aluminium foil,high strength kraft paper and reinforcing scrim bonded together with low density polyethylene,drawn tautly across rafters (rafters elsewhere measured) with purlins (purlins elsewhere measured) spaced at less than 1500mm centres and secured to each rafter with 3.2mm thick 38mm x 1100mm hardboard counter batten strips (herein measured) positioned flush with bottom edge of the material thus leaving 150mm overlap exposed at the top for the next layer and lapped 150mm at ends	m²	942		
	Carried to Abstract			R	

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Bill No. 7

ROOF COVERINGS

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Item No			Quantity	Rate	Amount R
	BILL NO. 8				
	CARPENTRY AND JOINERY				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	TIMBER ROOF STRUCTURE				
	Monoplaner Prefabricated Connector Plate Roof Trusses at 1000mm maximum centres with a pitch of 25 Degrees and suitable for IBR roof sheeting or other with 50 x 76mm purlins (elsewhere measured) at 1050mm centres and Gypsum plasterboard ceiling (Gypsum plasterboard ceiling elsewhere measured) with and including brandering herein measured at 450mm centres				
119	Truss size 3 920 mm span x 1500mm high with 650mm overhang both ends.	No	11		
120	Truss size 9 000 mm span x 1500mm high with 650mm overhang both ends.	No	12		
121	Truss size 9 700 mm span x 1500mm high with 650mm overhang both ends.	No	9		
122	Truss size 12 700 mm span x 1500mm high with 650mm overhang both ends.	No	10		
	Structural Timber				
	Carried to Abstract			R	

	Sawn SA Pine tanalith treated Grade M4				
123	3500mm long, 150 x 50mm SAP exposed timber rafter @ 1050mm centres treated with approved timber preservative paint	No	12		
124	4500mm long, 150 x 50mm SAP exposed timber rafter @ 1050mm centres treated with approved timber preservative paint	No	10		
125	50 x 50mm battens,bolted	m	120		
126	75 x 50mm SAP bracing and runners	m	42		
127	75 x 50mm SAP Purlins,bolted	m	319		
128	150 x 50mm SAP rafters,bolted	m	114		
129	38 x 114mm Wall plate bolted to brickwork	m	69		
	Fascias etc.				
	Fibre reinfoced cement				
130	12 x 225mm Fascia plain (ungrooved) screwed with two countersunk brass screws into and including vertical 50 x 50mm SAP batten fixed to rafter also fixed with two x countersunk brass screws	m	364		
131	210 x 210mm Pressed winged bardgeboard, butt jointed with and including H-profile plastic jointing strips and screwed to ends of purlins with two brass screws at 1000mm centres	m	224		
	DOORS, ETC.				
	Carried to Abstract			R	

	Wrot Meranti				
132	44mm Framed and ledged batten door 0,81 x 2,03m high of 44 x 144mm top rail and stiles, 22 x 144mm middle ledge and 22 x 219mm bottom ledge filled in with 22mm V-jointed one side boarding (D01) as per Architects drawing MDA/290 E	No	13		
133	44mm Framed and ledged batten door 1460 x 2125m high of 44 x 144mm top rail and stiles, 22 x 144mm middle ledge and 22 x 219mm bottom ledge filled in with 22mm V-jointed one side boarding (D01) as per Architects drawing MDA/290H	No	1		
	SABS Semi Solid core flush doors with 10mm hardwood edges faced with tempered smooth faced hardboard for painting hung to timber frames including No 3 PVC buffers to closing				
134	44mm thick semi solid core flush door (DO2) size approximately 900 x 2125mm high as per Architects drawing MDA/290 E	No	23		
135	44mm thick semi solid core flush door (D02a) size approximately 900 x 2125mm high as per Architects drawing MDA 290 C	No	17		
136	44mm thick semi solid core flush door (D02b) size approximately 900 x 2125mm high as per Architects drawing MDA 290 C	No	1		
137	44mm thick semi solid core flush door (DO3) size approximately 1455 x 2125mm high as per Architects drawing MDA/290 E	No	1		
138	44mm thick semi solid core flush door (DO4) size approximately 1460 x 2125mm high as per Architects drawing MDA/290 H	No	2		
	Carried to Abstract			R	

	JAMB AND SOFFIT LININGS AND FRAMED FRAMES				
	Note:				
	The linings and frames are to include for securing in openings in drywall partitioning with self tapping screws drilled and fixed to the steel studding or to openings in brick walls, with screws and nylon inserts in drilled mortices. The heads of screws are to be countersunk and pelleted.				
	Wrot Meranti framed frames				
	Framed frames to doors formed out of 75 x 100mm meranti frame with lugs at every fifth brick course for building into 230 /270mm wall with and including 3 x no. PVC buffers for closing				
139	Plain frame for door opening size 900 x 2100mm fixed to brickwork	No	28		
140	Plain frame for door opening size 1455 x 2100mm fixed to brickwork	No	1		
	BEADS, ARCHITRAVES, ETC.				
	Wrot Meranti				
141	19mm quadrant beads	m	466		
142	12 x 44mm Stop	m	205		
	SKIRTINGS, RAILS, ETC.				
143	38 x 220mm twice angle rounded saligna hardwood bump rail plugged and screwed to wall with two x countersunk screws at approximately 70mm centres, the bump rail 1000mm affl as per Architects drawing MDA 290/301	m	294		
	Carried to Abstract			R	

JOINERY FITTINGS

144	Guard House (Ref:MDA) - Rectangular shaped fitting size approximately 2000mm long x 600mm wide x 750mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Drawer and Door: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 22mm supawood seen end with Max on Top HPL (Solid colour) finish with impact edge trim to match 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
145	Patient Vitals and Observation Room (Ref:MDA) - Open shelving size approximately 2000mm long x 400mm wide x 1500mm high, 22mm thick supawood (Approx 4 in number), including 1150mm x 2000mm x 22mm supawood supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood continuous support batten with Max on Top HPL (Solid colour: White) 22mm supawood shelf and carcass with Max on Top HPL (Solid colour: White). 2mm pvc impact edge to all exposed edges	No	1		
	Carried to Abstract			R	

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CARPENTRY AND JOINERY

146	Reception 01 (Ref:MDA) - L - shaped fitting size approximately 2880mm long x 2975mm wide x 900mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 2880mm x 600mm x 22mm thick supawood fixed on mild steel gallows bracket Drawer and Door: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions 22mm supawood seen end with Max on Top HPL (Solid colour) finish with impact edge trim to match	No	1		
	Carried to Abstract			R	

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CARPENTRY AND JOINERY

147	MCWH Consulting Room (Ref:MDA) - Rectangular - shaped fitting size approximately 1950mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) Door: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

148	Emergency Treatment Room (Ref:MDA) (Shelving and Fitting as herein described) - Open shelving size approximately 2795mm long x 400mm wide x 1500mm high, 22mm thick supawood (Approx 4 in number), including 1150mm x 2000mm x 22mm supawood supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood continuous support batten with Max on Top HPL (Solid colour: White) 22mm supawood shelf and carcass with Max on Top HPL (Solid colour: White). 2mm pvc impact edge to all exposed edges Rectangular shaped fitting size approximately 2795mm long x 600mm wide x 900mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) Door: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

149	Staff Room / Meeting (Ref:MDA) - Rectangular shaped fitting size approximately 3660mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: Door: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
150	Visiting Doctors Counselling Room (Ref:MDA) Rectangular shaped fitting size approximately 2655mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) Door: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

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CARPENTRY AND JOINERY

151	Admin Managers Office (Ref:MDA) (Shelving and Fitting as herein described) - Open shelving size approximately 1950mm long x 400mm wide x 616 mm high with 22mm thick supawood (Approx 4 in number), including 100mm brass drop bolt, fitted to internal fixed leaf of cupboard door Door Lock: Union 22mm Brass Cylinder Cupboard dead lock (Product Code: 452-22PL) 16mm white melamine internal carcass Door: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) Fitting Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Door: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

152	Consulting Room 01 (Ref:MDA) - Rectangular shaped fitting size approximately 2655mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
153	Consulting Room 02 (Ref:MDA) - Rectangular shaped fitting size approximately 2655mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

154	Chronic Consulting Room (Ref:MDA) - Rectangular shaped fitting size approximately 2655mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
155	Store Room 04 (Ref:MDA) - U - shaped fitting size approximately 3100mm long x 2330mm wide x 2300mm the other side x 2172mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm SA Pine Slatted shelf fixed to 22mmx50mm support struts 22mm SA Pine solid support panels spaced at max 720mm cc 22mm SA Pine solid base, fixed to concrete floor surface 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

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CARPENTRY AND JOINERY

156	Acute Consulting Room (Ref:MDA) - Rectangular shaped fitting size approximately 2655mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
157	Archives Room (Ref:MDA) - U - shaped fitting size approximately 3660mm long x 1830mm wide x 2480mm the other side x 2172mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm PAR SA Pine shelves, fixed to baked Enamel finished mild steel wall bands Baked Enamel finished mild steel wall band fixed to wall 22mm SA Pine Slatted shelf fixed to 22mmx50mm support struts 22mm SA Pine solid support panels spaced at max 720mm cc 22mm SA Pine solid base, fixed to concrete floor surface 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

RAGLAN ROAD CLINIC
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CARPENTRY AND JOINERY

158	MCRHS Consulting Room (Ref:MDA) - Rectangular shaped fitting size approximately 2655mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
159	Counselling Room 01 (Ref:MDA) - Rectangular shaped fitting size approximately 1815mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

160	Staff Room (Ref:MDA) - Rectangular shaped fitting size approximately 1815mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
161	Counselling Room 02 (Ref: MDA) - Rectangular shaped fitting size approximately 1815mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

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CARPENTRY AND JOINERY

162	Emergency Treatment Room (Ref: MDA) - Rectangular shaped fitting size approximately 2655mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
163	Consulting Room 03 (Ref: MDA) - Rectangular shaped fitting size approximately 2655mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

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164	Chronic Consulting Room (Ref: MDA) - Rectangular shaped fitting size approximately 2655mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
165	Consulting Room 04 (Ref: MDA) - Rectangular shaped fitting size approximately 2655mm long x 600mm wide x 980mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match 16mm white melamine internal carcass with 2mm PVC edge trim Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant Handle: Roco 200mm Edge Straight handle (Product Code: RF419720200IL) 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

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166	Reception shelving (Ref: MDA) - Fitting size approximately 4355mm long x 400mm wide x 2172mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 16mm white melamine shelf and carcass with 2mm pvc impact edge to all exposed edges Handle: Roco 212mm Atlante stainless steel bar handle, code: RTSL28192SS. Handle: Roco 148mm Atlante stainless steel bar handle, code: RTSL28128SS 30mm thick Formica top, colour: White Myria Mild steel gallows brackets 22mm SA Pine Slatted shelf fixed to 22mmx50mm support struts 22mm SA Pine solid support panels spaced at max 720mm cc 22mm SA Pine solid base, fixed to concrete floor surface 6mm White melamine doors 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

167	Pharmacy Shelving (Ref:MDA) - W - shaped shelving fitting 600mm wide overall with sides approximately 5000mm x 2080 x 2000mm x 490mm x 2000mm wide x 1200mm x 2000mm long x 2172mm high overall supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 16mm white melamine shelf and carcass with 2mm pvc impact edge to all exposed edges Handle: Roco 212mm Atlante stainless steel bar handle, code: RTSL28192SS. Handle: Roco 148mm Atlante stainless steel bar handle, code: RTSL28128SS 30mm thick Formica top, colour: White Myria Mild steel gallows brackets 22mm SA Pine Slatted shelf fixed to 22mmx50mm support struts 22mm SA Pine solid support panels spaced at max 720mm cc 22mm SA Pine solid base, fixed to concrete floor surface 6mm White melamine doors 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

168	Pharmacy Shelving (Ref:MDA) - L - shaped shelving fitting 4000mm x 2000mm x 2172mm high overall supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 16mm white melamine shelf and carcass with 2mm pvc impact edge to all exposed edges Handle: Roco 212mm Atlante stainless steel bar handle, code: RTSL28192SS. Handle: Roco 148mm Atlante stainless steel bar handle, code: RTSL28128SS 30mm thick Formica top, colour: White Myria Mild steel gallows brackets 22mm SA Pine Slatted shelf fixed to 22mmx50mm support struts 22mm SA Pine solid support panels spaced at max 720mm cc 22mm SA Pine solid base, fixed to concrete floor surface 6mm White melamine doors 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions	No	1		
	Carried to Abstract			R	

169	Mobile Counter (Ref: MDA) - size approximately 1033mm long x 566mm wide x 900mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 30mm thick Formica top, colour: White Myriad 16mm white melamine trim with 2mm pvc impact edge to all exposed edges 16mm white melamine shelf and carcass with 2mm pvc impact edge to all exposed edges 2mm brushed aluminium kick plate glued to 16mm Marine Ply timber frame Heavy duty nylon casters with brakes 2mm brushed aluminium kick plate glued to 16mm Marine Ply timber frame Open shelf bin to fit size 508 mm x 491 mm x 900mm high	No	1		
170	High level cupboard 01 (Ref: MDA) - Open shelving size approximately 1245mm long x 400mm wide x 1500mm high, 22mm thick supawood (Approx 4 in number), including 1150mm x 2000mm x 22mm supawood supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood continuous support batten with Max on Top HPL (Solid colour: White) 22mm supawood shelf and carcass with Max on Top HPL (Solid colour: White). 2mm pvc impact edge to all exposed edges	No	1		
	Carried to Abstract			R	

171	High level cupboard 02 (Ref:MDA) - Open shelving size approximately 2000mm long x 400mm wide x 1500mm high, 22mm thick supawood (Approx 4 in number), including 1150mm x 2000mm x 22mm supawood supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 22mm supawood continuous support batten with Max on Top HPL (Solid colour: White) 22mm supawood shelf and carcass with Max on Top HPL (Solid colour: White). 2mm pvc impact edge to all exposed edges	No	2		
172	Reception 02 (Ref: MDA) - L - shaped fitting size approximately 2880mm long x 2975mm wide x 900mm high supplied and installed complete by an industry approved Domestic Carpentry and Joinery subcontractor. The complete installation composed of the following: 2880mm x 600mm x 22mm thick supawood fixed on mild steel gallows bracket Drawer and Door: 22mm supawood panel with Max on Top HPL (Solid colour) finish with impact edge trim to match Counter: 30mm Rustenburg Granite top Splash Back: 80mmx22mm Rustenburg Granite splashback, fixed to brickwork, edges to be sealed with clear silicone sealant 150x16mm thick SA Pine kick plate, vinyl floor finish applied to surface of pine once cupboard base is fixed in place, vinyl application to be by specialist installer as per manufacturers instructions 22mm supawood seen end with Max on Top HPL (Solid colour) finish with impact edge trim to match	No	1		
173	Afrimart or other equally approved galvanised backless outdoor slatted wooden bench (garden park) four times bolted on floors size approximately 1 400mm x 500mm x 780mm high	No	9		
	Carried to Abstract			R	

RAGLAN ROAD CLINIC
Bill No. 8
CARPENTRY AND JOINERY

RAGLAN ROAD CLINIC

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CARPENTRY AND JOINERY

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CARPENTRY AND JOINERY

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Bill No. 8
CARPENTRY AND JOINERY

Item No			Quantity	Rate	Amount R
	BILL NO 9				
	CEILINGS, PARTITIONSAND ACCESS FLOORING				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	NAILED UP CEILINGS				
	9.5mm plasterboard fixed to 38 x 50mm SAP battens with drywall screws at minimum 400 centres. All joints to be covered with 25mm x 6mm hardwood cover strip,fixed to ceiling board				
174	Horizontal ceilings suspended not exceeding 1m below purlins	m²	728		
	Sundries				
175	75mm extruded polystyrene cove cornice to match existing	m	389		
176	102mm cavity bat insulation installed over ceilings	m²	704		
	PARTITIONS				
	GypRoc Standard System 3 partitions with two layers of wall board on each side with framing and the board layers full height				
177	114mm Thick partition 2835mm high	m	102		
	Sundries				
178	75mm Aerolite glass fibre insulation in partitions	m²	215		
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Item No			Quantity	Rate	Amount R
	BILL NO. 10				
	FLOOR COVERINGS, PLASTIC LININGS, ETC.				
	SHEET VINYL FLOORING				
	Note:				
	NB: Vinyl sheeting to be laid by specialist sub-contractor who is to be a certified and approved / accredited applicator by material supplier. Manufactures and installers warranty will be required as a condition of contract. The flooring Sub-Contractor is to ensure that the screed is of sufficiently good finish to provide a perfect even level surface for the laying of floor covering. Any floor coverings showing waves or imperfections on finished surfaces will not be acceptable.				
	New Floorworx or similar approved 2mm heavy duty homogeneous non-directional "Canvas PUR" 2000 wide vinyl floor sheeting with welded joints by specialist approved applicator. Sheeting must be rolled in both directions with an articulated 68kg three sectional roller immediately after being laid in the adhesive				
179	On floors	m²	667		
180	Vinyl skirtings	m	250		
	WALL LININGS				
	Carried to Abstract			R	

	2mm heavy duty homogeneous non directional "Canvas PUR" 2000 wide vinyl floor sheeting with welded joints by specialist approved applicator. Sheeting must be rolled in both directions with an articulated 68kg three sectional roller immediately after being laid in the adhesive with welded joints in one colour				
181	On face and both edges of bump rail 220mm girth including mitres, ends, etc.	m	294		
	Floorworx MCF22 vinyl cove former by specialist applicator.				
182	Vinyl skirtings (Height: 200 mm, Radius: 30 mm) with and including flexible full cove former with a colored lip, maximum floor covering thickness: 4 mm, rigid clipped finishing profile capping strip with 1 flexible lip Maximum floor covering thickness: 4 mm fixed with double bonding adhesive, dispersion contact adhesive compatible with the skirting.MCS18 capping strip to finish top of vinyl skirting.	m	241		
	EPOXY FLOORS, POLISH, SEALERS, ETC.				
	ABE Cote 337 or other equally approved tough epoxy paint with high build vapor barrier for concrete floors. Supplier to scrub the product into the pores with a long handle scrub brush and then use a short hair roller to achieve uniform coverage. Stop and apply one coat and thereafter two coats of resin floor epoxy 12 to 16 hours after appli cation each application. Each coat to achieve dry film thickness 14 to 19 mils (350 to 450 microns) at the specified application rate and thickness using a long notched squeegee.				
183	On floors and turn-ups	m²	51		
	Non-slip acrylic emulsion dressing as (SABS 1042) buffed after each coat on vinyl sheeting				
184	Ditto to bump rail not exceeding 300 mm girth	m	294		
185	Ditto three coats dressing on floors and turn-ups	m²	667		
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Bill No. 10

FLOOR COVERINGS

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Item No			Quantity	Rate	Amount R
	BILL NO 11				
	PLASTERING				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	SCREEDS				
	The following in self levelling screed				
186	± 5 mm thick self-levelling screed to receive vinyl floors laid by the specialist flooring sub-contractor	m²	308		
	1:3 Cement mortar screed finished smooth on concrete to receive floor finishes				
187	30mm Thick to receive vinyl sheeting	m²	924		
	INTERNAL PLASTER				
	One coat 1:4 internal plaster finished to a true and even surface with a steel trowel				
	On brickwork				
188	15mm thick plaster to walls	m²	496		
189	Walls in narrow widths not exceeding 300mm wide	m²	45		
	EXTERNAL PLASTER				
	One coat 1:5 external plaster finished to a true and even surface with a wood float, and filler coat sanded to an approved smooth finish ready to receive paint (elsewhere measured)				
	Carried to Abstract			R	

	On brickwork (small part on flush concrete surfaces)				
190	Walls	m²	904		
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Bill No. 11
PLASTERING

RAGLAN ROAD CLINIC

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PLASTERING

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RAGLAN ROAD CLINIC
Bill No. 11
PLASTERING

Item No			Quantity	Rate	Amount R
	BILL NO. 12				
	TILING				
	INTERNAL FLOOR TILING				
	600 x 600 x 10 mm thick rectified nonslip full bodied porcelain tile. Tile to be T 003047 Chicago Loop by Tile Africa with fixed to floors with the recommended tile adhesive with a notched trowel to a minimum bedded thickness of 8mm and tap down on 25mm screeded surface (screed elsewhere measured) with maximum 2mm joints in both directions grouted strictly complete to manufacturers specification (NB: tiling grout to be white antifungal mixed to the ratio prescribed by tile supplier with bonding liquid)				
191	On floors and landings with continuous joints in both directions.	m²	128		
192	In door openings in narrow widths not exceeding 300mm wide	m²	1		
	WALL TILING				
	600 x 600 x10 mm rectified Porcelain wall (Tile code: T 003047 Chicago Loop as supplied by Tile Africa) tile to 2100mm AFFL as detailed elsewhere laid onto TAL gold star adhesive. Grout colour by architect, grout to be mixed with bonding liquid, ratio as specified by tile supplier				
193	On Walls	m²	240		
194	On Walls in narrow widths not exceeding 300mm wide	m²	4		
195	9mm "Kirk Marketing" aluminium straight edge trim (product code: ASE090) (Provisional)	m	70		
	Carried to Abstract			R	

	200 x 200 x 8mm white glazed wall tile splash back as detailed elsewhere laid onto TAL gold star adhesive. White anti fungal grout, to be mixed with bonding liquid, ratio as specified by tile supplier.				
196	Walls as splashbacks (300mm high) behind basins and sink	m²	68		
197	Tile dado 100mm high tiles, with and including all necessary cutting, waste, etc.	m	121		
198	9mm "Kirk Marketing" aluminium straight edge trim (product code: ASE090) (Provisional)	m	89		
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TILING

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TILING

Item No			Quantity	Rate	Amount R
	BILL NO. 13				
	IRONMONGERY				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	HINGES, BOLTS, ETC.				
199	100mm x 75mm x 3mm stainless steel ball bearing butt hinges with 2 security pins (in 1.5 pairs) - 8352 – 100 SS/2	No	177		
	LOCKS				
200	Union lockset comprising (SET 1): Bishop Euro Profile Cylinder (Pair) - AL684-09AS - S.C Europrofile spring latch and dead bolt - Q60 X 85MM - SS 5 pin tumbler double cylinder - Europrofile 2 x 18 SC	No	33		
201	Union lockset comprising (SET 2): Bishop Euro Profile Cylinder (Pair) - AL684-09AS - S.C Europrofile spring latch and dead bolt inclusive of rebate set for double leaf door - Q35 X 85MM – SS 200mm Flush recessed bolt - 8052-200SC (2 in no.) Dust proof strike - 8852SC 5 pin tumbler double cylinder - Europrofile 2 x 18 SC	No	20		
	Carried to Abstract			R	

202	Union lock set comprising (SET 3): 300mm Pull Handle with flange (Pair) - AL5512-300FLAS Europrofile narrow stile cylinder swingbolt and latch set; QR35 X 85MM - SS Stainless steel escutcheon on rose (pair) - SS305-05SS 200mm Flush recessed bolt - 8052-200SC (2 in no.) Dust proof strike - 8852SC 5 pin tumbler double cylinder - Europrofile 2 x 18 SC	No	7		
203	Union lockset comprising (SET 4): 1 x Union AL8098AS S.C Bathroom indicator bolt 1 x Union AL8253AS S.C Rubber tipped coat hook 1 x Union AL5063-06AS AS Push plate	No	5		
204	Union lockset comprising (SET 5): 1 x Union 37651AS AS Helping hand paraplegic facility indicator bolt 1 x Union AL8253AS S.C Rubber tipped coat hook 1 x Union AL5515-300BB AS Pull Handle	No	1		
205	Union lockset comprising (Set 6): 1 x Dormakaba Two point locking panic bar – single door, door leaf 813 wide x 2125 high (2201. 2104. PHX02. PHX04 : PHA2 S SD	No	3		
206	Union lockset comprising: 1 x Union AL684-09AS S.C Bishop Euro Profile Cylinder (Pair) 1 x Union Q60 X 85MM - SS - Europrofile spring latch and dead bolt 1 x Union Europrofile 2 x 18 SC S.S 5 pin tumbler double cylinder	No	3		
207	78mm armoured brass padlock	No	1		
208	Master keys (Provisional)	No	2		
209	Grand master keys (Provisional)	No	2		
	PUSH PLATES AND KICKING PLATES				
	Carried to Abstract			R	

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	Dorma DPP-430-BL-SF 170xWOD composed of 1,2mm thick satin finished 430 stainless steel push, kicking and trolley plates and edge protectors, linings, with machined edges, etc., fixed to wood doors, frames, etc., to be fixed with 10 countersunk stainless steel screws, placed at 200mm centres with adhesive including edges and forming all cut outs, holes, slots, checks, notches, etc. as required to accommodate door ironmongery				
210	Push plate 200mm high	m	134		
211	Kick plate 300mm high	m	134		
	DOOR CLOSERS				
	Dorma - TS 73N				
212	Transom mounted internally delayed action overhead door closer	No	60		
	BATHROOM FITTINGS				
213	Franke 355x168x460mm Rodan stainless steel wall mounted waste bin (product code: 359983)	No	18		
214	Franke CNTXBR 750x260 stainless steel disabled grab rail mounted at 800mm above FFL (code: 359912)	No	1		
215	Franke CNTX700A stainless steel angle disabled grab rail mounted at 800mm above FFL (code: 359877)	No	1		
	The following in 304 grade stainless steel				
216	Franke 275x112x355mm Rodan RODX600 stainless steel wall mounted paper towel dispenser (product code: 359985)	No	18		
217	Franke 144x138x301mm Rodan RODX672 stainless steel wall mounted double toilet roll holder with spindle system (product code: 359987)	No	15		
218	Medical innovations (or equal approved) 245mm 304 grade stainless steel soap dispenser bracket (for 500ml hibiscrub bottle) (product code: 341-00-00C) to be wall mounted above medical wash hand basin	No	18		
	Carried to Abstract			R	

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Bill No. 13
IRONMONGERY

SIGNAGE

SIGNS

Note: All directional and information signs as well as door numbers are to conform with the NBARI document 48/3 "Directional information in Hospitals". Type face BN Helvetic medium. Signs are to consist of self adhesive vinyl letters on plastic laminate with white lettering on dark grey backgrounds.

Door signs or numbers to be of an approved grey ultra high impact acryllic plastic construction plugged to wall or screwed to door with 15mm countersunk raised head chromium plated screws at each corner or hung from ceilings with two chromium plated chains

219	200 x 70 x 2.5mm Sign with 40mm high letters to centre of door 1850mm above ffl to read "as instructed by the principal agent"(Note: name of signage to be confirmed on site)	No	26		

Photo-luminescent emergency signs plugged to wall or screwed to door with 15mm countersunk raised head chromium plated screws at each corner or suspended from ceiling including two chromium plated chains

220	190 x 190mm "No smoking" sign in white and red to door (type F27)	No	4		

The following signage comprising of 9mm backing hardboard with 6mm felt infill, set into a 75mm meranti hard wood frame

221	2500 x 900mm notice boards	No	6		

CURTAIN AND BED CUBICLE TRACKS

222	Single curtain track complete with fixing brackets, stop ends, runners, etc., set up and fixed complete to concrete soffits	m	15		

Carried to Abstract R

RAGLAN ROAD CLINIC
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IRONMONGERY

	Forwin hospital cubicle curtain track complete with twelve nylon wheeled runners per meter and all necessary brackets, stopped ends, etc., and hangers at one and a half metre centres passing through suspended ceiling and fixed to soffit of concrete slab or timber trusses				
223	Track suspended not exceeding 800mm long below timber trusses	m	15		
	BLINDS				
	The following in 50mm aluminium venetian blind (colour by architect) inclusive of fitment, fixing brackets, controls and associated parts fixed to top of lintel on wall face				
224	Blind to window 2950mm wide x 1360mm high	No	3		
225	Blind to window 2946mm wide x 900mm high	No	8		
	SUNDRIES				
226	300mm window stay (brass)	No	7		
227	Ditto but window latch (Brass)	No	14		
228	Union - 87001SS:SC door stop, floor mounted door stop	No	21		
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Item No			Quantity	Rate	Amount R
	BILL NO 14				
	METALWORK				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	ALUMINIUM DOORS				
	The following natural anodized aluminium extrusion by specialist aluminium door units as per the Architects diagrams, details and specifications bound into the back of these bills of quantities. Prices for all units measured herein to include all glass, ironmongery, assembly, fixing and sealing				
229	Natural anodised Aluminium door size 1625 x 2125mm high overall in two equal leaves, comprising of aluminium frame system to manufacturers specification with 2 x panel size composed of 6,38mm H.P.R laminated glazing size approximately 585 x 950mm and 2 x panel size composed of 6,38mm safety laminated glazing with translucent vinyl interlayer size approximately 585 x 845mm complete 100mm aluminium kick rail in natural anodised finish (Refer to Architects drawing no. MDA/290-E, Type D01)	No	2		
	Sundries				
230	300 x 300mm aluminium louvres fixed to both sides of door with self taping screws	No	6		
	STEEL WINDOWS, DOORS, ETC				
	Carried to Abstract			R	

	Factory manufactured steel frame window with factory primer and lugs for building				
231	Window type W01 size 600 x 600mm high	No	5		
232	Window type W02 size 1150 x 600mm high consisting of 2 x glazed outward opening panels size 600 x 600mm, the outward opening panels including 2 x brass latches as per manufacturers instruction	No	4		
233	Window type W03 size 535 x 655mm high consisting of 1 x outward opening panel, the outward opening panels including 2 x brass latches as per manufacturers instruction	No	7		
234	Window type W04 size 1020 x 1275mm high consisting of 2 x inward opening panels size, the inward opening panels including 2 x brass latches as per manufacturers instruction	No	3		
235	Window type W05 size 500 x 1275mm high consisting of 1 x fixed glazed panel,the inward opening panels including 2 x brass latches as per manufacturers instruction	No	4		
236	Window type W06 size 1500 x 1275mm high consisting of 2 x glazed inward opening panels and 1 x fixed panel the inward opening panels including 2 x brass latches as per manufacturers instruction	No	9		
237	Window type W07 size 1700 x 1275mm high consisting of 2 x glazed inward opening panels and 1 x fixed panel the inward opening panels including 2 x brass latches as per manufacturers instruction	No	3		
238	Window type W08 size 1020 x 1275mm high consisting of 2 x inward opening panels size, the inward opening panels including 2 x brass latches as per manufacturers instruction	No	1		
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239	Window type W09 size 1475 x 1190mm high consisting of two equal size panels, 1 x glazed fixed panel and 1 x sliding panel as per manufacturers instruction	No	1		
240	Window type W10 size 1200 x 2125mm high, consisting of 1 glazed fixed panel size 1100 x 850mm and 1 x void size 1100 x 250mm as per manufacturers instruction	No	1		
	The following natural anodized aluminium extrusion by specialist aluminium window units as per the Architects diagrams, details and specifications bound into the back of these bills of quantities. Prices for all units measured herein to include all glass, ironmongery, assembly, fixing and sealing and attached rubberised buffers at rebate				
241	Screen size 935 x 2125mm high consisting of 2 x glazed panel size 835 x 1565mm Frosted with 6.38mm HPR Laminated safety glass, 2 x no. 935 x 460mm voids as per MDA "A"- 04/04/2019	No	2		
	PRESSED STEEL DOOR FRAMES				
	1,8mm Rebated frames suitable for brick walls				
242	Frame for door size approximately 813 x 2032mm high	No	57		
243	Frame for door size approximately 1460 x 2032mm high	No	1		
244	Frame for door size approximately 1455 x 2032mm high	No	1		
	STEEL HANDRAILS, BALUSTRADES, ETC				
	The following in hot dip galvanised balustrades				
245	50mm Diameter. x 3mm Thick rounds hollow section in handrail welded to 50mm diameter. tube (Posts elsewhere measured)	m	10		
246	Extra over handrail for forming 90 degree angle	No	19		
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247	Extra over handrail for forming 45 degree angle intersection	No	9		
248	50mm Diameter. x 3mm Thick round section tube post 2000mm high with 200 x 200x 3mm thick plate welded to bottom of post,plate four times holed for 10mm diameter bolt for fixing to top of ramp or landing (bolts elsewhere measured)	No	15		
	Bolts, etc				
	Descriptions of bolts shall be deemed to include nuts and washers.Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.				
	Metalwork described as "holed for bolt(s)" shall be deemed to exclude the bolts unless otherwise described.				
249	10mm Diameter x 125mm long Rawl bolt	No	60		
	ROLLER SHUTTER DOORS				
	Fire Rated (SABS 1253) chain operated heavy duty metal slatted roller shutter composed of 76mm interlocking slats with slide bolts fitted to padlock				
250	1 200 mm x 1 200mm high heavy duty roller shutter steel roll-up door, manually operated, including centre lift lock and rubber weather strips, handles, roll guides, hinges, fixing bolts, tracks etc, fixed to brickwork or concrete with a minimum of 100mm side room and 500mm headroom MDA/RSD01	No	4		
251	1 500 mm x 1 200mm high heavy duty roller shutter steel roll-up door, manually operated, including centre lift lock and rubber weather strips, handles, roll guides, hinges, fixing bolts, tracks etc, fixed to brickwork or concrete with a minimum of 100mm side room and 500mm headroom MDA/RSD02	No	1		
	SECURITY GATES				
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	The following in hot dip galvanised security gates strictly as per the Architects drawings attached to these bills of quantities				
252	Security gate (GO1) size 900 x 2125mm high overall composed of 30 x 30 x 3mm mild steel hollow framework with 70 x 30mm horizontal cross members and 12 x 12mm solid bar vertical members spaced at 100mm centres,70 x 30 x 3mm latch mechanism housing with and including 3 x mild steel hinges both sides as per the Architects drawing No. MDA 290/E with and including · 1 Galvanized mild steel heavy duty sliding bolt for padlock bolt · 1 Galvanized mild steel heavy duty drop bolt · 3 Galvanized mild steel heavy duty hinges as supplied by gate manufacturer · Padlock by Client	No	10		
253	Entrance gate (GO2) size 1 460 x 2 125mm high overall composed of 50 x 50 x 3mm mild steel hollow framework with 70 x 30mm horizontal cross members and 12 x 12mm solid bar vertical members spaced at 100mm centres, 70 x 30 x 3mm latch mechanism housing with and including 3 x mild steel hinges both sides as per the Architects drawing No. MDA 290/E with and including: · 1 Galvanized mild steel heavy duty sliding bolt for padlock bolt · 1 Galvanized mild steel heavy duty drop bolt · 3 Galvanized mild steel heavy duty hinges as supplied by gate manufacturer · Padlock by Client	No	2		
254	Security gate (GO3) size 1190 x 2125mm high overall composed of 30 x 30 x 3mm mild steel hollow framework with 70 x 30mm horizontal cross members and 12 x 12mm solid bar vertical members spaced at 100mm centres,70 x 30 x 3mm latch mechanism housing with and including 3 x mild steel hinges both sides as per the Architects drawing No. MDA 290/E· with and including 1 Galvanized mild steel heavy duty sliding bolt for padlock bolt · 1 Galvanized mild steel heavy duty drop bolt · 3 Galvanized mild steel heavy duty hinges as supplied by gate manufacturer · Padlock by Client	No	1		
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255	Security gate (SC01) size 1190 x 2125mm high overall composed of 30 x 30 x 3mm mild steel hollow framework with 70 x 30mm horizontal cross members and 12 x 12mm solid bar vertical members spaced at 100mm centres,70 x 30 x 3mm latch mechanism housing with and including 3 x mild steel hinges both sides as per the Architects drawing No. MDA 290/E with and including 1 Galvanized mild steel heavy duty sliding bolt for padlock bolt · 1 Galvanized mild steel heavy duty drop bolt · 3 Galvanized mild steel heavy duty hinges as supplied by gate manufacturer · Padlock by Client	No	1		
	SECURITY SCREENS				
	The following in hot dip galvanised curved window security screens with tangential angle approximately 45 degrees composed of 20mm diameter galvanised horizontal solid rods with 50mm steel knobs shaped decorative end caps both sides, welded to 10mm diameter solid square sections,spaced at 100mm centres as per Architects drawings				
256	Galvanised mesh screens over window type W01 size 600 x 600mm high composed of 50 x 50 x 2.5mm galvanised angle frame and galvanised mesh panel with and including 4 x no. 50 x 50mm Galv. m.s. angle flat bar fixed and welded to frame for wall fixing complete with bolts etc	No	5		
257	Galvanised mesh screens over window type W02 size 1150 x 600mm high composed of 50 x 50 x 2.5mm galvanised angle frame and galvanised mesh panel with and including 4 x no. 50 x 50mm Galv. m.s. angle flat bar fixed and welded to frame for wall fixing complete with bolts etc	No	4		
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258	Galvanised mesh screens over window type W03 size 535 x 655mm high composed of 50 x 50 x 2.5mm galvanised angle frame and galvanised mesh panel with and including 4 x no. 50 x 50mm Galv. m.s. angle flat bar fixed and welded to frame for wall fixing complete with bolts etc	No	7		
259	Galvanised mesh screens over window type W04 size 1020 x 1275mm high composed of 50 x 50 x 2.5mm galvanised angle frame and galvanised mesh panel with and including 4 x no. 50 x 50mm Galv. m.s. angle flat bar fixed and welded to frame for wall fixing complete with bolts etc	No	3		
260	Galvanised mesh screens over window type W05 size 500 x 1275mm high composed of 50 x 50 x 2.5mm galvanised angle frame and galvanised mesh panel with and including 4 x no. 50 x 50mm Galv. m.s. angle flat bar fixed and welded to frame for wall fixing complete with bolts etc	No	4		
261	Galvanised mesh screens over window type W06 size 1500 x 1275mm high composed of 50 x 50 x 2.5mm galvanised angle frame and galvanised mesh panel with and including 4 x no. 50 x 50mm Galv. m.s. angle flat bar fixed and welded to frame for wall fixing complete with bolts etc	No	9		
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262	Galvanised mesh screens over window type W07 size 1700 x 1275 mm high composed of 50 x 50 x 2.5mm galvanised angle frame and galvanised mesh panel with and including 4 x no. 50 x 50mm Galv. m.s. angle flat bar fixed and welded to frame for wall fixing complete with bolts etc	No	3		
263	Galvanised mesh screens over window type W08 size 1020 x 1275mm high composed of 50 x 50 x 2.5mm galvanised angle frame and galvanised mesh panel with and including 4 x no. 50 x 50mm Galv. m.s. angle flat bar fixed and welded to frame for wall fixing complete with bolts etc	No	1		
264	Galvanised mesh screens over window type W09 size 1475 x 1190mm high composed of 50 x 50 x 2.5mm galvanised angle frame and galvanised mesh panel with and including 4 x no. 50 x 50mm Galv. m.s. angle flat bar fixed and welded to frame for wall fixing complete with bolts etc	No	1		
265	Galvanised mesh screens over window type W10 size 1200 x 2125mm high composed of 50 x 50 x 2.5mm galvanised angle frame and galvanised mesh panel with and including 4 x no. 50 x 50mm Galv. m.s. angle flat bar fixed and welded to frame for wall fixing complete with bolts etc	No	1		
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	BILL NO 16				
	GLAZING				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev Oct. 1993) as well as to the "Model Preambles for Trades" (1998) and Supplemetary preambles below.				
	GLAZING				
	6.38mm Normal strength clear laminated safety glass				
266	6.38mm H.P.R clear Panes exceeding 0,1 square metres and not exceeding 0,5 square metres	m²	43		
267	6.38mm H.P.R clear Panes exceeding 0,5 square metres and not exceeding 2.0 square metres	m²	62		
268	6.38mm laminated safety glass exceeding 0,5m2 and not exceeding 2m2, with translucent vinyl interlayer colour to be confirmed with the Principal Agent	m²	37		
	PUTTY TO GLAZED ALUMINIUM WINDOWS				
	30mm thick type II putty on				
269	Steel windows	m	71		
	MIRRORS				
270	6mm Float glass silver backed mirror size 400 x 600mm with bevelled and polished edges fixed with double sided tape and chromium plated mirror screws and cork washers	No	4		
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BILL NO 15

PLUMBING AND DRAINAGE(PROVISIONAL)

PREAMBLES

For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles

SUPPLEMENTARY PREAMBLES

"Polycop" polypropylene pipes

Polypropylene pipes 54mm diameter and under shall be seamless copper coloured class 16 pipes jointed with "Fast-fuse" heat welded thermoplastic or brass compression fittings as designed for use with copper pipes as stated.

Pipes shall be firmly fixed to walls, etc. with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions.

All pipe diameters are nominal external.

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"Polylink" polypropylene pipes

Polypropylene pipes 63mm diameter and over shall be class 12 pipes jointed with cast iron "Supraclamp" running joints.

Fusion welded bends, once or twice mitred as necessary, and tees shall be factory manufactured.

Fusion welded bends and tees shall include jointing to pipes with PVC rubber ring double Z joint couplers.

Branch tees shall include flanged and bolted joints to "Polycop" branch pipes in addition and for brass compression male iron to copper straight couplers.

Reducers shall include jointing to pipes with PVC rubber ring double Z joint couplers and reducers shall be of sufficient overall length to accommodate same.

All pipes shall be jointed and fixed strictly in accordance with the manufacturer's instructions.

All pipe diameters are nominal external.

Concrete pipes

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

uPVC pipes and fittings

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

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

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uPVC pressure pipes and fittings

Pipes for water supply shall be of the class stated.

Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings.

Pipes of 50mm diameter and greater shall have sockets and spigots with push in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push in type joints.

Copper pipes

Pipes shall be hard drawn and half hard pipes of the class stated. Class O (thin walled hard drawn) pipes shall not be bent. Class 1 thin walled half hard), class 2 (half hard) and Class 3 (heavy walled half hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be "Cobra Watertech" type. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or in ground.

Fixing of pipes

Unless specifically otherwise stated, descriptions of pipes shall be deemed to include fixing to walls, etc., casting in, building in or suspending not exceeding 1m below suspension level.

Lead pipes and traps

All soldered joints shall be wiped and brass unions shall be used for jointing lead to steel.

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Reducing fittings

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

Wire gratings

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

Exposed concrete surfaces

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

Excavations

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

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

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Laying, backfilling, bedding, etc. of pipes

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

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

SABS 1200 L	:	Medium pressure pipelines
LD	:	Sewers
LE	:	Stormwater drainage

Pipe trenches etc. shall be backfilled in accordance with clauses 3, 5.5, 5.6, 5. and 7 of SABS 1200 DB : Earthworks (Pipe trenches). Pipes shallvbe bedded in accordance with clause 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SABS 1200 LG : Bedding (Pipes). Unless otherwise described bedding of rigid pipes shall be class B bedding.

Flush pans

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

Stainless steel basins, sinks, wash troughs, urinals, etc.

Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable.

Waste unions

Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings.

Steel sectional water tanks

Tanks shall comply with SABS CKS 114

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	"Densyl" petrolatum anti corrosion tape as manufactured by Denso SA (Pty) Ltd				
	Prices for wrapping of pipes shall include for all work as described to couplings in the length.				
	User note: Dependent on soil or environmental conditions laps may require to be increased to a maximum of 55% (which results in a double layer)				
	RAINWATER GOODS, ETC				
	0.8mm rectangular pre-coated aluminium seamless gutter with 10 year guarantee with architect approved coloured finish including colour-coded rivet-fixed internal and external mitres and end caps internally sealed using silicone sealant, hung by screw fixed internal aluminium hangers at 600mm				
271	Purpose made 300mm x 175mm precoated seamless eaves gutter and fixing to falls on and including aluminium alloy gutter brackets bolted to fascia at not exceeding 1,5m centres.	m	364		
272	Extra for stopped end	No	17		
273	Extra for outlet with nozzel for 140mm x 140mm rainwater pipe with leafguard including additional gutter bracket	No	16		
274	Extra for eaves offset 400mm projection including additional downpipe clip	No	16		
275	150 x 150mm Rainwater downpipe and fixing to walls with pre-painted downpipe cleats using nail-in anchor fixings and fixed to gutter outlets with domestic snap seals, including all necessary bends, elbows, etc including securing to structural steel columns (columns elsewere measured)	m	130		
	WATER SUPPLY				
	Copper Pipes				
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	Class 0				
276	35mm Pipe and fixing to walls, floors, in roofs, soffit of concrete slab, in chases (including chases), in concrete, etc.	m	75		
	Class 2				
277	15mm Pipe and fixing to walls, floors, in roofs, soffit of concrete slab, in chases (including chases), in concrete, etc.	m	50		
278	22mm Pipe and fixing to walls, floors, in roofs, soffit of concrete slab, in chases (including chases), in concrete, etc.	m	63		
279	32mm Pipe and fixing to walls, floors, in roofs, soffit of concrete slab, in chases (including chases), in concrete, etc.	m	10		
	Extra over class 0 copper for Copcal Capillary type fittings with soldered joints				
280	35mm Elbow.	No	2		
281	35 x 28 x 15mm Reducing tee.	No	1		
	Extra over class 2 copper pipes for brass compression fittings				
282	15mm Fittings	No	25		
283	22mm Fittings	No	25		
284	32 x 32 x 15mm Reducing tee for 15mm branch pipe	No	1		
285	Cut into existing 28mm copper rising main and fit 28 x 28 x 15mm reducing tee for 15mm copper branch pipe	No	1		
	SANITARY PLUMBING				
	PVC pipes				
286	50mm Pipe and fixing to walls, floors, in roofs, soffit of concrete slab, in chases (including chases), in concrete, etc.	m	35		
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287	110mm Pipe and fixing to walls, floors, in roofs, soffit of concrete slab, in chases (including chases), in concrete, etc.	m	65		
	PVC, waste or vent piping				
288	50 mm Pipe.	m	15		
	Extra over 40 mm PVC pipe for:				
289	40 mm Bend.	No	10		
	Extra over 50 mm PVC pipe for:				
290	50 mm Bend.	No	10		
	Extra over 110 mm PVC pipe for:				
291	110 mm I.E. Bend.	No	1		
	Traps, gratings, etc.				
292	Cut into existing 110mm PVC stack and fit 110mm double reducing junction	No	10		
293	Chrome plated bottle trap with and including 32mm basin waste unslotted, 62mm flange and 80mm tail piece	No	11		
	SANITARY FITTINGS				
294	Franke or other equally approved 545 x 450 x 220.5 Rondo VM wall mounted basin (product code: 362964) basin fixed to wall using 4x8mm anchor bolts	No	1		
295	Vaal Sanitaryware vitreous China “Hibiscus Elite Vandal Proof” close coupled suite (product Code: 772404) complete with front push button, lid fitments and low level flush pipe	No	13		
296	Cobra Welcome Medium round wall hung basin. 430mm long X 390mm wide, no tap hole required (product code: 709100WH	No	19		
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297	Vaal Sanitaryware vitreous China Lavatera Wall Hung Bowl back inlet urinal (product code: 705427) supplied complete with all fittings, concealed back inlet flush valve cobra FJ8. 102 complete with flush pipes and fittings Product code 7054Z2	No	7		
298	Franke 300mm undermount vanity basin manufactured from 305 grade stainless steel with and including black rubber waste to be fitted to basin unit	No	1		
	Stainless steel sinks, wash troughs, etc.				
	NOTE: All products are to be manufactured from 1,2 mm thick Grade 304 Stainless Steel unless otherwise stated.				
299	Stainless steel drinking fountain approximately 311 x 489 x 1500mm high complete with bubbler and goose-neck taps including a 2 stage in-line filtration system consisting of sediment and carbon filtration, fixed to the wall next to an electrical point and connected to the external drainage.	No	1		
300	1160 x 460mm inset sink, mounted to joinery as detailed elsewhere	No	3		
301	Solid wood particle moisture proof white lacquered toilet seat	No	6		
302	Stainless steel slop hopper unit 965 x 550 mm manufactured from grade 304 (18/10) stainless steel 1,2 mm thick with a 100 mm high integral splash back to the rear and both sides, with an integral flushing rim in the cone and a 110 mm waste outlet for pan connector, the inlet fitted with a 38 x 250 mm long vertical flush pipe for a standard flush valve. Unit fitted with a hinged bucket grid manufactured from 10 mm diameter grade 304 (18/10) stainless steel round bar. Unit complete with two 40 x 40 mm square stainless steel wall mounting gallows brackets. Unit fixed to the wall.	No	1		
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303	Franke Nouveau NVN621 1160 x 460mm inset sink, mounted to joinery as detailed elsewhere (product code: 811024)	No	4		
304	§Franke grade 304 stainless steel grade 1,2mm NCH Slop Hopper 540x540 integral with 100mm high splash back § Product Code: 2630035-004 § Cobra FM 1-000/N Flush Master Valve	No	1		
305	Franke model "S1" Catering Sink single right hand bowl manufactured from grade 304 stainless steel 1,2mm thick with a 150mm high integral splash back to the rear and 50x10mm turndown with a beaded edge on the remaining sides. Sink with pressed 500x500x230mm deep bowl with a 40mm waste outlet. The underside sprayed with vermin proof bitumastic sound deadening and supported with a 30x30x3mm framework and galvanised mild steel backing sheet. Unit fixed 900mm high from the top of the front apron to the finish floor level with anchor bolts	No	1		
	Overflow pipes, traps etc.				
	uPVC				
306	Cobra Watertech chrome platted bottle trap (product code: 340) and 32mm basin waste un slotted, 62mm flange and 80mm tail piece (product code: 308)	No	19		
307	Trap Extendible Gio 32x40mm Universal PVC White	No	3		
	ELECTRIC WATER HEATERS				
308	200 Litre Kwikot 600 Dual horizontal ceiling mounted type electric hot water copper cylinder with 22mm connections and fitted with 4 kilowatt monel metal electrical element complete with vacuum breaker, pressure reducing valve and relief valve including all joints to copper pipes and fixing in position and connect up.	No	1		
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309	0,60mm Galvanised sheet iron tray size 500 x 1000mm with riveted and soldered seams and joints, turned up all round to form kerb 75mm high with beaded edge, including outlet with nozzle for 50mm diameter overflow pipe and fix in position.	No	1		
310	Ditto size 700 x 1500mm, ditto.	No	1		
311	50mm PVC overflow and fixing to falls to roof timbers.	m	1		
312	Extra for 50mm bend	No	1		
313	38mm Sawn Pine boarding for geyser platform formed of 38 x 228mm boards butt-jointed and nailed to bearers.	m²	2		
314	38 x 114mm Sawn Pine bearers	m	3		
	TAPS, VALVES, ETC				
315	Cobra KM2-200 or other approved metering bib tap with non hold open feature and flow controller fitted to basin (Basin elsewhere measured)	No	1		
316	Cobra Watertech Medical elbow action wall type mixer with swivel outlet (product code: 500-21B/N and 500-21R/N)	No	19		
317	Cobra Watertech Metered Tap, non hold open with outlet (product code: KM2-100FS/N)	No	6		
318	Cobra Watertech ½"rough brass hose bibtap (product code: 108-15)	No	1		
319	Watertech Kitchen Classic Star wall mounded mixer with aerated swivel outlet (product code: 266/041/10)	No	1		
320	Cobra Watertech Medical Elbow action pillar tap with raised nose and blue indice (product code: 503-21B) cold water supply only	No	1		
	FIRE SERVICE				
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	Sundries				
321	"Chubb" or other approved turnable hosereel bearing SABS mark and brackets with patent swivel joints, fitted with 30m length of 19mm diameter SABS red PVC hose with gunmetal 'shut-off' control nozzle and chromium plated wheelhead valve and fix reel and nozzle bracket to plastered walls with and including 6 x 76mm expanding bolts in mortices in wall	No	2		
322	Wrot Red Meranti framed fire hose cupboard size 1250 x 300 x 1250mm high overall with bottom, ends and sloping top (set projecting 38mm along front and both ends) formed of 22mm tongued, grooved and V-jointed one side boarding; ledged,braced and battened double doors formed of 22mm V-jointed boarding with 22 x 50mm chamfered cover fillet planted on at meeting stiles, hung folding on two pairs of 150mm black japanned iron tee hinges, with a 50mm brass cupboard lock and two 75mm brass barrel bolts; in door form 100 x 100mm aperture rebated for and glazed with 3mm clear sheet glass fixed with beads; drill six 20mm diameter holes in bottom and two in ends near top of cupboard for ventilation, bottom holed to it over hydrant; cover top with 0,63mm galvanised sheet iron turned down at edges and close nailed; cupboard bolted three times on to concrete wall at the top centre and bottom of the cupboard with 16 x 140mm Dynabolt masonry anchor with nut and washer and including mortice/s in concrete	No	2		
	LAGGING				
323	Two layers of thermoflex or other approved preformed self extinguishing polyethylene tightly wrapped around 22mm pipe and couplings and tied with wire prior to building in	m	63		
324	Extra for wrapping around 22mm fittings	No	25		
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	TESTING				
325	Provide all necessary apparatus, water, etc. for and test the sanitary plumbing, water supplies, sanitary fittings and fire services to the satisfaction of the Representative/Agent and the Local Authorities, replace any defective work free of charge and leave perfect.		Item		
	BUILDERS WORK				
326	500 x 500mm 20MPa/19mm stone,Concrete encasing to soil pipes in high traffic zones	m	4		
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	BILL NO 17				
	PAINTWORK				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	PAINTWORK, ETC. ON PREVIOUSLY PAINTED WORK				
	ON PLASTER ETC.				
	Clean down to remove all loose plaster and paint,including sandblasting or wire brushing where necessary, wash with sugar soap, rinse, make good where necessary and fill cracks with Polyfilla (Brickwalls / Rhinolight for plasterboard) and sand down clean down, prepare and apply one coat Plascon Professional Gypsum Plaster Primer (PP700) on brick walls and Rhino light is used on plasterboard, stop and apply two coats Plascon Plascon TLL 100 pastel base professional hygiene low sheen acrylic PVA paint on				
327	Internal plastered walls	m²	2 719		
328	External plastered walls	m²	578		
	ON METAL				
	Carried to Abstract			R	

	Clean down steel substrate to a clean exposed state by removing all loose and friable matter,old paint, dust,oil,grease and soluble solvents with detergent solution and rinse with portable water to achieve a PH of 7,dry abrasive blast surface (sandblast) to a near "white metal" and further remove all traces of previous protective coating from Galvanised Surfaces with Galvanised Iron Cleaner, Prepare And Apply One Coat Galvanised Iron Primer, One Universal Undercoat And Two Coats coats polyurethane non drip enamel on				
329	Steel door frames	m²	30		
330	Existing steel window frames	m²	37		
	ON WOOD				
	Sand and clean down to bare surface, remove all dust, stop and apply one coat varnish diluted 20% with mineral turpentine and three coats matt varnish lightly sanded on				
331	On timber surfaces	m²	20		
	Sand and clean down to bare surface, remove all dust, stop and apply one coat varnish diluted 20% with mineral turpentine and three coats carbolineum paint on				
332	On timber surfaces	m²	63		
	PAINTWORK, ETC TO NEW WORK ON				
	ON PLASTER OR PLASTERBOARD				
	Carried to Abstract			R	

	Clean down, prepare and apply one coat Plascon Professional Gypsum Plaster Primer (PP700) on brick walls and Rhino light is used on plasterboard, stop and apply two coats Plascon Plascon TLL 100 pastel base professional hygiene low sheen acrylic PVA paint				
333	Plastered walls	m²	1 784		
	Prepare and apply one coat Plascon plaster acrylic filler coat, fill with interior Polyfilla, sand and touch up filler coat and apply one coat wood primer including to hardwood cover strips, one universal undercoat and two coats Plascon acrylic PVA (Colour: White) with approved anti-fungicide on				
334	Plastered ceilings.	m²	728		
	ON WOOD				
	Clean down to bare surface, remove all dust, stop and apply one coat wood primer, one coat universal undercoat and two coats Plascon Velvaglo Satin enamel paint on				
335	On backs of grounds, frames, linings, etc. not exceeding 300mm wide	m²	21		
336	PVA paint to dry walls	m²	54		
337	On door frames, etc.	m²	64		
338	On doors	m²	209		
	Sand and clean down to bare surface, remove all dust, stop and apply one coat varnish diluted 20% with mineral turpentine and three coats matt varnish lightly sanded on				
339	Doors	m²	6		
	METAL SURFACES WITH				
	Carried to Abstract			R	

	Clean down steel substrate to a clean exposed state by removing all loose and friable matter,old paint, dust,oil,grease and soluble solvents with detergent solution and rinse with portable water to achieve a PH of 7,dry abrasive blast surface (sandblast) to a near "white metal" and further remove all traces of previous protective coating from Galvanised Surfaces with Galvanised Iron Cleaner, Prepare And Apply One Coat Galvanised Iron Primer, One Universal Undercoat And Two Coats coats polyurethane non drip enamel Enamel On				
340	Windows	m²	46		
	Carried to Abstract			R	

RAGLAN ROAD CLINIC
Bill No. 17
PAINTWORK

RAGLAN ROAD CLINIC

Bill No. 17

PAINTWORK

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RAGLAN ROAD CLINIC
Bill No. 17
PAINTWORK

RAGLAN ROAD CLINIC

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RAGLAN ROAD CLINIC

Item No			Quantity	Rate	Amount R
	SECTION NO. 3				
	BILL NO. 1				
	STAINLESS STEEL FURNITURE				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	The following in square silver stainless steel benches suitable for public seating in external areas in all weather conditions. Each seat to carry a minimum weight per seat of 110kg				
1	Seven seater stainless steel seating size approximately 3890 x 670 x 785mm high overall suitable for all weather conditions, each seated epoxy bolted four times with stainless steel bolt to concrete floors with vinyl sheeting finish (floor and floor finish elsewhere measured)	No	3		
2	Six seater stainless steel seating size approximately 2850 x 670 x 785mm high overall suitable for all weather conditions, each seated epoxy bolted four times with stainless steel bolt to concrete floors with vinyl sheeting finish (floor and floor finish elsewhere measured)	No	4		
	Carried Forward to Summary of Section No.			R	

FITTINGS
Bill No. 1
STAINLESS STEEL SEATING

Item No			Quantity	Rate	Amount R
	BILL NO. 2				
	BUILT IN CUPBOARDS AND SHELVING ETC				
	PREAMBLES				
	For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles				
	PINNING BOARDS AND WHITE BOARDS				
3	600 x 900mm magnetic white board, with pen tray	No	16		
4	Allow for a 600 x 900mm felt pinboard, in 25mm aluminium	No	16		
5	2 500 x 900mm notice boards comprising of 9mm backing hardboard with 6mm felt infill, set into a 75mm meranti hard wood frame finished off with 2 coats clear varnish finish (to match existing notice board)	No	6		
	Sand and clean down to bare surface, remove all dust, stop and apply one coat varnish diluted 20% with mineral turpentine and three coats matt varnish lightly sanded on				
6	On frames	m	19		
	BULK FILLERS				
	Carried to Abstract			R	

	<u>The following in hammertone grey steel bulk filers</u>				
7	10 Bay heavy duty steel bulk filing cabinets including 50 shelves size overall 2130mm (H) x 1100mm(W) x 5100mm(L) with and including 800mm walk in space, with each bay x 430mm deep bolted to concrete floors with suitable anchors	No	1		
	Carried to Abstract			R	

FITTINGS
Bill No. 2
PINNING BOARDS ETC

FITTINGS

Bill No. 2

PINNING BOARDS ETC

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FITTINGS
Bill No. 2
PINNING BOARDS ETC

FITTINGS

SECTION SUMMARY - FITTINGS

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FITTINGS

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SECTION NO. 4

BILL NO. 1

EXTERNAL PLUMBING

SUPPLEMENTARY PREAMBLES

PREAMBLES

For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles

"Polycop" polypropylene pipes

Polypropylene pipes 54mm diameter and under shall be seamless copper coloured class 16 pipes jointed with "Fast-fuse" heat welded thermoplastic or brass compression fittings as designed for use with copper pipes as stated.

Pipes shall be firmly fixed to walls, etc. with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions.

All pipe diameters are nominal external.

Carried to Abstract R

"Polylink" polypropylene pipes

Polypropylene pipes 63mm diameter and over shall be class 12 pipes jointed with cast iron "Supraclamp" running joints.

Fusion welded bends, once or twice mitred as necessary, and tees shall be factory manufactured.

Fusion welded bends and tees shall include jointing to pipes with PVC rubber ring double Z joint couplers.

Branch tees shall include flanged and bolted joints to "Polycop" branch pipes in addition and for brass compression male iron to copper straight couplers.

Reducers shall include jointing to pipes with PVC rubber ring double Z joint couplers and reducers shall be of sufficient overall length to accommodate same.

All pipes shall be jointed and fixed strictly in accordance with the manufacturer's instructions.

All pipe diameters are nominal external.

Concrete pipes

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

uPVC pipes and fittings

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

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

Carried to Abstract R

uPVC pressure pipes and fittings

Pipes for water supply shall be of the class stated.

Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings.

Pipes of 50mm diameter and greater shall have sockets and spigots with push in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push in type joints.

Copper pipes

Pipes shall be hard drawn and half hard pipes of the class stated. Class O (thin walled hard drawn) pipes shall not be bent. Class 1 thin walled half hard), class 2 (half hard) and Class 3 (heavy walled half hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be "Cobra Watertech" type. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or in ground.

Fixing of pipes

Unless specifically otherwise stated, descriptions of pipes shall be deemed to include fixing to walls, etc., casting in, building in or suspending not exceeding 1m below suspension level.

Lead pipes and traps

All soldered joints shall be wiped and brass unions shall be used for jointing lead to steel.

Carried to Abstract R

EXTERNAL WORKS
Bill No. 1
EXTERNAL PLUMBING

Reducing fittings

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

Wire gratings

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

Exposed concrete surfaces

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

Excavations

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

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

Carried to Abstract R

EXTERNAL WORKS
Bill No. 1
EXTERNAL PLUMBING

Laying, backfilling, bedding, etc. of pipes

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

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

SABS 1200 L	:	Medium pressure pipelines
LD	:	Sewers
LE	:	Stormwater drainage

Pipe trenches etc. shall be backfilled in accordance with clauses 3, 5.5, 5.6, 5. and 7 of SABS 1200 DB : Earthworks (Pipe trenches). Pipes shallvbe bedded in accordance with clause 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SABS 1200 LG : Bedding (Pipes). Unless otherwise described bedding of rigid pipes shall be class B bedding.

Flush pans

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

Stainless steel basins, sinks, wash troughs, urinals, etc.

Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable.

Waste unions

Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings.

Steel sectional water tanks

Tanks shall comply with SABS CKS 114

Carried to Abstract R

EXTERNAL WORKS
Bill No. 1
EXTERNAL PLUMBING

	"Densyl" petrolatum anti corrosion tape as manufactured by Denso SA (Pty) Ltd				
	Prices for wrapping of pipes shall include for all work as described to couplings in the length.				
	User note: Dependent on soil or environmental conditions laps may require to be increased to a maximum of 55% (which results in a double layer)				
	SOIL DRAINAGE				
	Demolitions				
1	Excavate for and cut into existing 150mm drain for new 110mm PVC drain including all necessary fittings and backfill and compact with material obtained from excavations to 95% Mod AASTO density.	No	1		
2	Excavate for and leave existing 150mm drain ready to be encased in concrete (concrete encasing elsewhere measured) and backfill and compact with material obtained from excavations to 95% Mod AASTO density.	m	2		
	uPVC Class 34 drainpipes and fittings with spigot and socket joints with 0 ring seals complying with SABS791				
3	110 mm Pipe vertically in ground (no excavation)	m	65		
4	110 mm Pipe and laying in ground not exceeding 1m deep including excavating trench, granular sand bedding 150mm thick under, around and above pipe compacted in multiple layers not exceeding 150mm thick to 93% Mod AASHTO density and filling to ground level with G5 base course material complying with SABS 1200 ME compacted in multiple layers not exceeding 150mm thick to 95% modified AASHTO density	m	43		
5	110mm Pipe and excavation exceeding 1000mm and not exceeding 2000mm deep.	m	23		
	Extra over uPVC pipes for the following uPVC fittings				
6	110mm 45° Bend	No	8		
	Carried to Abstract			R	

7	110mm 90° Bend	No	3		
8	110mm Junction	No	3		
9	110mm Access junction	No	1		
	Sundries				
10	Plain concrete 15MPa/19mm stone encasement 150mm thick round existing 150mm diameter horizontal pipe including additional excavation, formwork, etc.	m	10		
11	Plain concrete 15MPa/19mm stone encasement 150mm thick round 110mm diameter horizontal pipe including additional excavation, formwork, etc.	m	3		
12	Ditto but around 110mm bend	No	4		
13	ABC cast iron 45° type cleaning eye cover and frame and fix to top of 110mm uPVC pipe	No	3		
14	110mm Gulley exceeding 750mm and not exceeding 1000mm deep complete with concrete gully top 400 x 400 x 120mm	No	1		
15	Cement concrete 15MPa/19mm stone apron size 450 x 450 x 100mm thick around cleaning eye cover and frame (elsewhere measured) and set to finish flush with paving or ground including excavation to formwork, etc.	No	6		
	Inspection chambers				
16	Inspection chamber size internally 600 x 760 x exceeding 500 not exceeding 750mm deep to invert having 150mm thick plain concrete 20MPa/19mm stone bottom projecting 150mm beyond face of external walls all around 230mm brick sides in 1:3 cement mortar rendered internally in 1:3 cement plaster steel trowelled smooth 100mm thick plain concrete 20MPa/19mm stone cover slab rebated for and fitted with and including 450 x 600mm x 72kg cast iron manhole cover and frame type 8A including fine cement concrete benching in bottom around and including vitrified clay main and branch inlet channels including excavation, backfilling, formwork, holes through sides, etc.	No	2		
	Carried to Abstract			R	

EXTERNAL WORKS
Bill No. 1
EXTERNAL PLUMBING

17	Inspection chamber size internally 1200 x 1000 x exceeding 1000 not exceeding 1500mm deep to invert having 150mm thick plain concrete 20MPa/19mm stone bottom projecting 150mm beyond face of external walls all around 230mm brick sides in 1:3 cement mortar rendered internally in 1:3 cement plaster steel trowelled smooth 100mm thick plain concrete 20MPa/19mm stone cover slab rebated for and fitted with and including 450 x 600mm x 72kg cast iron manhole cover and frame type 8A including fine cement concrete benching in bottom around and including vitrified clay main and branch inlet channels including excavation, backfilling, formwork, holes through sides, etc.	No	3		
18	Stornwater double grid inlet as per 1574-77-STW-030 Inspection chamber ditto size internally 1250 x 760 x exceeding 1000 not exceeding 1250mm deep to invert ditto.	No	1		
	SUNDRIES				
19	Extra over excavation in earth for trenches, inspection chambers, etc. for excavation in soft rock	m³	12		
20	Ditto but in hard rock	m³	4		
	SEPTIC TANK				
	Excavation in earth not exceeding 2m deep				
21	In holes : septic tanks	m³	92		
	Excavation in earth exceeding 2m and not exceeding 4m deep				
22	In holes : septic tanks	m³	3		
	Extra over bulk excavation in earth for excavation in				
23	Soft rock	m³	4		
24	Hard rock	m³	2		
	Carried to Abstract			R	

	Extra over all excavations for carting away				
25	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m³	94		
	Risk of collapse of excavations				
26	Sides of trench and hole excavations not exceeding 1,5m deep	m²	43		
	Keeping excavations free of water				
27	Keeping excavations free of water		Item		
	Earth filling obtained from the excavations				
28	In prescribed stock piles on site compacted to 95% MOD AASHTO	m³	10		
	Earth filling supplied by the contractor				
29	G7 material over site compacted to 95% MOD AASHTO	m³	6		
30	G5 material over site compacted to 98% MOD AASHTO	m³	4		
	Coarse river sand filling supplied by the contractor				
31	Under floors etc	m³	1		
	Compaction of surfaces				
32	Compaction of ground surface under floors etc by wetting and compacting with 4 passes of a 10 ton vibratory roller	m²	21		
	Prescribed density tests on filling				
33	"Modified AASHTO Density" test	No	3		
34	"Field Density" test, including "Optimum Moisture Content" (four readings per test)	No	3		
	15MPa/20mm concrete				
35	Surface blinding under footings and bases	m³	21		
	Carried to Abstract			R	

	Cement concrete (25 Mpa - 19mm stone) in				
36	Footings	m³	50		
	Cement concrete (30 Mpa - 19mm stone) in				
37	Surface beds cast in panels	m³	5		
38	Slabs	m³	3		
	Rough formwork to soffits				
39	Slabs	m²	21		
	Expansion joints with softboard between vertical concrete and brick surfaces				
40	10mm Thick Jointex expansion joint filler vertically between concrete or brick surfaces not exceeding 300 mm high.	m	6		
41	Rake out 10mm wide expansion joint for a depth of 15mm, clean, prime and seal with an approved external quality polyurethane sealing compound applied with a pressure caulking gun.	m	6		
	Reinforcement including cutting to lenghts				
42	Reinforcement in all size bars	t	1.12		
43	Reference 245 welded mesh reinforement lapped 300mm at edge of adjoining sheets and bound with annealed wire and laying in concrete surface beds (Measured nett - no allowance made for laps)	m²	21		
	Brickwork				
44	330mm Hollow wall formed of two half brick thicknesses with 110mm cavity between tied together with and including galvanised wire ties of the Butterfly or Modified PWD type in accordance with SABS 28 spaced at not more than one metre centres alternately to every third course and staggered.	m²	34		
45	Build 110mm wide cavity closed for one courses at top of wall.	m	19		
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46	1:5 Cement mortar triangular fillet 110 mm wide and one course high to bottom of cavity wall to receive stepped dampproof course including weepholes.	m	19		
	1:3 Cement mortar screed finished smooth on concrete to receive roof finishes				
47	60mm Thick average to falls and cross falls to receive waterproofing	m²	21		
	Sundries				
48	Type 2A Lockable concrete polymer concrete cover and frame	No	2		
49	Quick4 or other equally approved Infiltrator chamber systems composed of, Quick 4 high capacity chamber size approximately 0.86m x 1.35m x 041m (capacity 235litres)	No	49		
50	Quick4 or other equally approved multiport end cap size approximately 0.86m x 0.48m x 041m (capacity 235litres)	No	12		
51	Excavation not exceeding 2m deep for drain trenches	m³	41		
52	Backfilling to drain trenches compacted to 93% Mod AASHTO density	m³	9		
53	110 mm Pipe vertically in ground (no excavation)	m	25		
54	100mm Ø uPVC Class 34 inlet pipe laid in and including trenches not exceeding 1m deep	m	120		
55	110mm Ø uPVC Class 54 inlet pipe laid in and including trenches not exceeding 2m deep	m	45		
56	160mm Ø uPVC Class 34 inlet pipe laid in and including trenches not exceeding 2m deep	m	36		
	Carried to Abstract			R	

EXTERNAL WORKS
Bill No. 1
EXTERNAL PLUMBING

57	19mm stone filling around infiltrator systems as per manufacturers recommendation	m^3	3 811		
58	110mm Bend	No	15		
59	Ditto but 160mm bends	No	20		
60	160 x 160 x 110mm Reducing junction	No	8		
61	160mm Junction	No	25		
62	M4 Concrete block size 390mm x 190mm x 190mm	No	256		
63	Excavate for and cut into existing 150mm drain for new 110mm PVC drain including all necessary fittings and backfill and compact with material obtained from excavations to 95% Mod AASTO density.	No	1		
64	Excavate for and leave existing 150mm drain ready to be encased in concrete (concrete encasing elsewhere measured) and backfill and compact with material obtained from excavations to 95% Mod AASTO density.	m	3		
65	ABC cast iron 45° type cleaning eye cover and frame and fix to top of 110mm uPVC pipe	No	2		
66	Approved fibre glass lamp post approximately 10m high with ND sewer vent and adaptor, with and including 110mm Ø cable entry plain ended mold as part of pole	No	1		
	Carried to Abstract			R	

EXTERNAL WORKS

Bill No. 1

EXTERNAL PLUMBING

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EXTERNAL WORKS
Bill No. 1
EXTERNAL PLUMBING

Item No		Quantity	Rate	Amount R

BILL NO 2

EXTERNAL WORKS, ETC.

PREAMBLES

For preambles the tenderer is referred to the "Model Specification of Materials and Methods to be used for Department of Roads and Public Works projects" (PW371, Rev July 2013 Part A and B) as well as to the "Model Preambles for Trades", SANS 10400 and other equally applicable state supplementary preambles

NOTE:

Prices for filling, etc., shall include for the costs of any compaction tests as required by the Representative/Agent.

Cost of tests

Descriptions of concrete items shall be deemed to include for all necessary testing of concrete components and trail mixes

The costs of making, storing and testing of concrete test cubes as required shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the principal agent. The testing shall be undertaken by an independent firm or institution nominated by the contractor to the approval of the principal agent. (Test cubes are measured separately)

NOTE: Should the strength required for the concrete in anyportion of the structure not be attained in the test cubes, orshould any concrete whatsoever be defective the portion inquestion is to be demolished and replaced at the expense ofthe Contractor.

Carried to Abstract R

EXTERNAL WORKS
Bill No. 2
EXTERNAL WORKS

	TEMPORARY HOARDING AND FENCING				
67	Hoarding 2500mm high formed of timber boarding, blockboard sheeting or similar splinter free material painted one side with two coats PVA, including poles, bearers, bracing, etc. firmly secured, with and including taping hoardings all round to form a dust proof screen, all removed upon completion of sections of work and including making good floors and walls where applicable	m	315		
68	Extra on hoarding for single builders access door 1 m wide	No	3		
	TEMPORARY ABLUTIONS				
69	Excavate in clay soil to reduce levels not exceeding 2 m deep.	m³	12		
70	Extra over excavations in earth for excavation in soft rock.	m³	1		
71	Ditto in hard rock.	m³	1		
72	Extra over all excavations for carting surplus excavated material from the site.	m³	12		
73	250 Micron polyethylene sheeting in accordance with SABS 952 Type C lapped 150 mm at joints and sealed with pressure sensitive tape and laying under concrete surface bed complete with condensation barrier	m²	24		
74	50mm Thick bed of approved sand.	m²	24		
75	Extra for floating up to non slip finish to floors including any additional cement necessary.	m²	24		
76	G5 Backfilling to trenches, holes, etc	m³	5		
77	Reference 245 welded mesh reinforcement lapped 200mm at edge of adjoining sheets and bound with annealed wire and laying in concrete surface beds / ramps (Measured nett - no allowance made for laps)	m²	24		
	Cement concrete (25 MPa - 19 mm stone) in				
78	Surface bed	m³	2		
	Carried to Abstract			R	

79	Footings	m^3	4		
	Structural CCA and Creosote treated gum poles complete				
80	110mm diameter gumpoles purlins bolted to concrete floors one end, and rafters on other	m	54		
	Bolts, Fasteners, Etc				
81	Allowance for bolts,fasteners etc	t	2.70		
	Cladding etc				
82	0.8mm mild steel corrugated sheeting in continues lengths on double sided reflective aluminium foil faced insulation barrier(reflective facing to be exposed to roof sheets) colour to match existing not exceeding 25° fixed to structural timber gumpoles (elsewhere measured) with hook bolts, including plastic washers, etc.	m^2	67		
83	75 x 50mm SAP Purlins,bolted	m	17		
84	150 x 50mm SAP rafters,bolted	m	36		
	ENTRANCE SIGNAGE				
85	Entrance sign composed of 75mm diameter galvanised mild steel pipe to create frame size 2550 x 2100mm. The frame to be fixed into concrete bases of 500 x 500 x 500mm (Foundations and bases etc elsewhere measured) with and including a new chromadek signage panel size 2420 x 1225mm fixed welded to frame. The chromodek sign to be affixed to 20 x 20 x 1mm galvanised mild steel square tube frame, which is welded into main 75mm diameter main frame.			SUM	
86	Allow for frosted vinyl lettering at the main entrance doors letter height 35mm, font type: Tahoma for the following complete: Clinic name Clinic operating hours Clinic Emergency contact number			SUM	
	Carried to Abstract			R	

EXTERNAL WORKS
Bill No. 2
EXTERNAL WORKS

	ELEVATED WATER TANK STAND				
	The following in galvanised steel elevated water tank stands at a height of approximately +/- 10m from ground level				
87	Abeco or other equally approved elevated water tank size 4 000 x 3 900 x 6 100mm overall (7000litre capacity or higher) with and including 2.5 mm thick x 610 mm wide roof sheeting, hot-dip galvanising support towers (15m high), standard accessories including but not limited to caged external access ladder, Internal access ladder, Hinged lockable manhole, float and pointer type water level indicator and screened ventilator, pressure pump and booster pump to match tank capacity complete	No	1		
88	Column legs composed of equal angle size 60 x 60 x 5 kg/m angle	t	0.60		
89	Cross bracing composed of 30 × 5 x 1.18kg/m flat bar	t	2.69		
90	Horizontal bracing comprised from 40 x 40 x 1.6kg/m equal angle	t	0.70		
91	Top platform main support beam comprised of 150 x 75 x 10 angle	t	0.70		
92	Top platform secondary support beams – 125 x 75 x 20 x3 lipped channel	t	1.00		
	Bolts etc				
93	M16 grade 4.8 bolts	No	32		
94	M12 grade 4.8 bolt	No	160		
	Foundations				
95	Excavate for holes n.e 2m deep	m³	4		
	Carried to Abstract			R	

96	Cartaway excavated material	m³	2		
97	Approved G6 material as filling compacted in 150 mm layers to 93% Mod. AASHTO density.	m³	2		
98	Concrete blinding under footings (10mpa/19mm stone)	m³	0.2		
99	Ditto but in bases (25mpa/19mm stone)	m³	2		
100	Reinforcement in all bar sizes	kg	72		
	220 x 110 x 75mm Brick paving in soldier course to match existing				
101	220mm wide clay brick paving soldier course margin to match existing, set flush with top of concrete slab and jointed in cement mortar on and including 50mm thick concrete (20Mpa - 19mm stone) mortar bed and pointing to top and edge.	m	10		
	Sundries				
102	5000 litre polythene water storage tank size 1800 diameter x 1850mm high, fitted with access lid and inlet hole, with and including flanged or screwed connections for inlet, 15mm outlet and 15mm overflow pipes, hoist and set in position on concrete plinth, approximately 1000mm high above ground level	No	1		
	STRUCTURAL STEEL				
103	Excavate in clay soil to reduce levels not exceeding 2 m deep.	m³	3		
104	Extra over excavations in earth for excavation in soft rock.	m³	0.3		
105	Ditto in hard rock.	m³	0.1		
106	Extra over all excavations for carting surplus excavated material from the site.	m³	3		
	Cement concrete (25 MPa - 19 mm stone) in				
107	Footings	m³	2		
	Carried to Abstract			R	

	Hot Dip Galvanised Steel Purlins, Girts, Bracing, Etc.				
108	100 x 50 x 20 x 3mm Thick cold-formed lipped channel purlins bolted to rafters (rafters and bolts elsewhere measured)	t	2.10		
	Bolts, Fasteners, Etc				
109	Allowance for bolts,fasteners etc	t	1.05		
	BENCHES ETC				
110	Excavate in earth to reduce levels not exceeding 2 m deep.	m³	17		
111	Extra over all excavations for carting surplus excavated material from the site.	m³	17		
112	Approved G6 material as filling compacted in 150 mm layers to 93% Mod. AASHTO density.	m³	28		
113	Scarify ground to a depth of 150 mm and re compact to 93% Mod. AASHTO density.	m²	5		
114	Approved G5 material as base course 100 mm thick compacted to 95% Mod. AASHTO density under surface bed.	m²	5		
115	Reference 245 welded mesh reinforcement lapped 200mm at edge of adjoining sheets and bound with annealed wire and laying in concrete surface beds / ramps (Measured nett - no allowance made for laps)	m²	8		
116	250 Micron polyethylene sheeting in accordance with SABS 952 Type C lapped 150 mm at joints and sealed with pressure sensitive tape and laying under concrete surface bed complete with condensation barrier	m²	8		
117	Extra for floating up to non slip finish to floors including any additional cement necessary.	m²	8		
118	10mpa concrete in blinding layer	m³	6		
119	12mm artificial grass	m²	56		
	Carried to Abstract			R	

120	Half brick walls	m²	12	
	Cement concrete (25 MPa - 19 mm stone) in			
121	Ground beams etc	m³	1	
	EXCAVATIONS			
122	Excavate in clay soil to reduce levels not exceeding 2 m deep.	m³	50	
123	Extra over excavations in earth for excavation in soft rock.	m³	4	
124	Ditto in hard rock.	m³	2	
125	Extra over all excavations for carting surplus excavated material from the site.	m³	37	
126	Scarify ground to a depth of 150 mm and re compact to 93% Mod. AASHTO density.	m²	36	
127	Approved G5 material as base course 100 mm thick compacted to 95% Mod. AASHTO density under surface bed.	m²	36	
128	Reference 245 welded mesh reinforcement lapped 200mm at edge of adjoining sheets and bound with annealed wire and laying in concrete surface beds / ramps (Measured nett - no allowance made for laps)	m²	70	
129	250 Micron polyethylene sheeting in accordance with SABS 952 Type C lapped 150 mm at joints and sealed with pressure sensitive tape and laying under concrete surface bed complete with condensation barrier	m²	70	
130	Extra for floating up to non slip finish to floors including any additional cement necessary.	m²	70	
	Cement concrete (25 MPa - 19 mm stone) in			
131	Ground beams etc	m³	11	
132	Walkways	m³	14	
	Carried to Abstract			R

	FENCING				
	NOTE				
	The price for the fencing must include allowances for Stainless Steel Grade 304 sundries such as bolts, nuts and washers				
	Large established trees on the inside of the boundary and forming an obstruction to a straight line must be left undisturbed unless otherwise specified or described in the specification				
	Builder's work in connection with ClearVu fencing				
133	Roughly clear, grade and level ground along fence line between fence poles for a width of 1m both sides including clearing of all vegetation, trees, rocks, rubble and rubbish	m²	180		
	The following in Hot Dipped Galvanized and PVC coated 100 x 55 x 2 mm profile Bekafix Super Secure Posts - with holes in side flanges for lateral fixation of the ClearVu panel with mini securifor brackets and plastic caps ,Yield strenght : min 320 N/mm2 complete with minimum zinc coating :275 g/m2 (double side determined) Colour : Anthracite RAL 7021				
134	Post size 3200mm long including 600 x 600mm reinforced concrete 20mpa footings, complete with excavations, backfilling etc	No	60		
	Carried to Abstract			R	

	''Cochrane ClearVu'' similar or equally approved ZincAlu and PVC coated security fencing, gates, etc and setting out Fence system to be maintenance free and carry a 10 year anti-corrosion guarantee. Supplier to be ISO 9001 & Green Building Council approved.				
135	Supply and erect 2.4m high " ClearVu" or other equally approved fence to boundary comprised of 3050 x 2400 mm panels made out of welded mesh, with rectangular apertures size 76.2 x 12.7mm,horizontal and vertical wire diameter size 3.00mm,weld strength: 60% of the minimum tensile strength of the wire,and tensile strength range of wire: 540-690N/m² complete made from Zincalu® super wire and PVC coated - Anthracite RAL 7021	m	120		
	Serrated Top Rail Saw Tooth				
136	3050mm x 100 mm thick top rail with serrated tooth spike 2.5mm thickhot dip galvanised and PVC coated, bolted to panel top as per manufacturer's specification - Anthracite RAL 7021	m	120		
	Underdig				
137	"''Cochrane ClearVu'' " or similar 3510 Singleskin Flat Zincalu size 3050 x 450mm high	m	120		
	Galvanised mild steel security gates				
138	Galvanised main vehicular steel gate size 6000 x 2200mm ditto(**Labour Intensive**)	No	1		
139	64mm Union 3102 or other approved brass padlock	No	1		
	Carried to Abstract			R	

EXTERNAL WORKS

Bill No. 2

EXTERNAL WORKS

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EXTERNAL WORKS
Bill No. 2
EXTERNAL WORKS

EXTERNAL WORKS

SECTION SUMMARY - EXTERNAL WORKS

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EXTERNAL WORKS

Item No		Quantity	Rate	Amount R
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	BILL NO. 1			
	SMME PACKAGES			
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The following provisional sums are for work to be executed by the Small, Medium and Micro Enterprises, which will be regarded as direct domestic sub-contractors to the contractor. The contractor must call for quotations from firms approved by the Client in accordance with the conditions of contract and in conjunction with the Management Team for consideration. Tenderers are advised that it is a condition of the tender that where SMME's cannot be found, can not proceed or fail to complete the work, the Main Contractor will complete the work at his own tendered rates as per Section 2, 3 and 4. Tenderers to take note that a portion of the building works, excluding specialist work, are to be contracted to SMME's. Provisional Sums are provided for this purpose and bids will be called for after award for these packages on a domestic sub- contractor basis. The Tenderer is to price all associated administrative, supervision, mentoring costs, profit and attendance in the relevant sections of the Preliminaries as no claims for additional costs will be entertained. The portion is made up of all building works excluding the following:

Preliminaries and General Provisional Sums
Electrical Specialist Works
Mechanical Specialist Works
Escalation and Contingencies

These are monetary provisions only and the use,value and payment thereof are subject to adjustment based on actual costs through contractually approved variation orders calculatedin terms of the prescribed contractual directives

Carried to Abstract R

SMME PACKAGES
Bill No. 1
SMME PACKAGES

SMME Domestic sub-contract packages to be implemented are below. The Bills of Quantities for the packages shall be provided to the successful bidder (Contractor) to obtain prices from SMMe sub Contractors. The Employer to approve list of subcontractors and preferred sub-contractors prior to appointment of such SMME Domestic Sub-contractors SMME CONTRACTS - DOMESTIC SUBCONTRACT PACKAGES. All envisaged costs related to SMME packages to the Contractor shall be priced under Preliminaries				
The following provisional sums cover the complete supply and installation of material and equipment by firms of SMME contractors to be direct domestic sub-contractors and are NETT, that is the sum does not include for builders discount				
The Contractor may allow under the "profit" item for any profit he considers necessary. If the Contractor allows an amount for profit, this amount will be adjusted in direct proportion to the final value of the SMME work				
Each provisional sum in this bill is followed by an item under which the Contractor may allow for attendance on the specific SMME sub-contractor				
Attendance on Domestic Sub-contractors The amounts of the items for "Attendance" are to allow for giving every facility to attending upon and making good in all trades after the SMME sub-contractors have completed their work, for providing the use of all water, electricity, storage space for materials, etc. the use of general amenities, i.e. latrines, etc., for the SMME sub-contractors and their workmen. For maintaining conduits, sleeve pipes, etc. in position during the building operations and providing the use of all ordinary scaffolding and plant. The Contractor is to leave erected scaffolding in position for the period required for work by the domestic sub-contractors under this contract				
Carried to Abstract			R	

	The following provisional sums cover the complete supply and installation of material and equipment by firms of SMME contractors to be direct domestic sub- **contractors and are NETT, that is the sum does not include for builders discount. The contractor must call for quotations from firms approved by the Employer in accordance with the conditions of contract and in conjunction with the Management Team for consideration. (at least three responsive quotations are required)** **The Contractor may allow under the "profit" item for any profit he considers necessary. If the Contractor allows an amount for profit, this amount will be adjusted in direct proportion to the final value of the SMME work Each provisional sum in this bill is followed by an item under which the Contractor may allow for attendance on the specific SMME sub-contractor. Attendance on Domestic Sub-contractors** **The amounts of the items for "Attendance" are to allow for giving every facility to attending upon and making good in all trades after the SMME sub-contractors have completed their work, for providing the use of all water, electricity, storage space for materials, etc. the use of general amenities, i.e. latrines, etc., for the SMME sub-contractors and their workmen. For maintaining conduits, sleeve pipes, etc. in position during the building operations and providing the use of all ordinary scaffolding and plant. The Contractor is to leave erected** **scaffolding in position for the period required for work by the domestic sub-contractors under this contract**				
	COMMUNITY LIAISON OFFICER				
1	Provide the sum of R 120 000 (One Hundred and Twenty Thousand Rand) nett for the employment, on a full time basis for the duration of the contract of a Community Liaison Officer, (R6,000.00 per month gross salary)	Item			120 000.00
2	Allow for Profit.	Item			
3	Allow for Attendance	Item			
	Carried to Abstract			R	

	LOCAL LABOUR INTENSIVE TRAINING				
4	Provide the sum of R375,000.00 (Three Hundred and Seventy Five Thousand Rand) nett for formal training, administration, transport and accommodation of local labourers	Item			375 000.00
5	Allow for Profit.	Item			
6	Allow for Attendance	Item			
	APT COD STUDENTS				
7	Provide the sum of R 220 000-00 (Two Hundred and Twenty Thousand Rand) for the employment and utilisation of 3 (Three) **APTCOD** tested and trained Artisans on the project	Item			220 000.00
8	Allow for Profit.	Item			
9	Allow for Attendance.	Item			
	GRADUATE				
10	Provide the sum of R 100 000-00 (One Hundred Thousand Rand) for the provision of experiential training and work opportunities for one built environment graduate (R 8 000 / Month)	Item			100 000.00
11	Allow for Profit.	Item			
12	Allow for Attendance.	Item			
	INTERNS				
13	Provide the sum of R 165 000-00 (One Hundred and Sixty Five Thousand Rand) for the provision of two interns (R 5 500 / Month x 2 Interns)	Item			165 000.00
14	Allow for Profit.	Item			
15	Allow for Attendance.	Item			
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	PROJECT STEERING COMMITEE				
16	Provide the sum of R 60 000-00 (Sixty Thousand Rand) for the provision of monthly payments to a maximum of four (4) PSC members for the duration of the contract (R500 per month per PSC member)	Item			60 000.00
17	Allow for Profit.	Item			
18	Allow for Attendance	Item			
	SMME SOCIAL FACILITATOR				
19	Provide the sum of R375,000.00 (Three Hundred and Seventy Five Thousand Rand) nett for the employment, on a full time basis for the duration of the contract, a dedicated Foreman to assist SMME sub-contractors with quality control, etc. Foreman and duration on site to be approved by Employer prior to appointment (R25,000.00 per month gross salary)	Item			375 000.00
20	Allow for Profit.	Item			
21	Allow for Attendance	Item			
	SMME SOCIAL MENTOR				
22	Provide the sum of R375,000.00 (Three Hundred and Seventy Five Thousand Rand) nett for the employment, on a full time basis for the duration of the contract, a SMME Mentor (R25,000.00 per month gross salary	Item			375 000.00
23	Allow for Profit.	Item			
24	Allow for Attendance	Item			
	TRAINING OF SMME CONTRACTORS				
25	Provide the sum of R200,000.00 (Two Hundred Thousand Rand) nett for the provision of accredited specific training to Domestic SMME Subcontractors to be used at the discretion of the Employer, or to be deducted in whole or in part if not required	Item			200 000.00
26	Allow for Profit.	Item			
27	Allow for Attendance	Item			
	Carried to Abstract			R	

	PPE FOR SMME CONTRACTORS				
28	Provide the sum of R250,000.00 (Two Hundred and Fifty Thousand Rand) nett for purchasing and providing PPE Kits for all SMME domestic subcontractor labourers' (The Main Contractor shall provide detailed lists with names including ID numbers, verified by SMME Mentor)	Item			250 000.00
29	Allow for Profit.	Item			
30	Allow for Attendance	Item			
	Carried to Abstract			R	

SMME PACKAGES

Bill No. 1

SMME PACKAGES

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SMME PACKAGES
Bill No. 1
SMME PACKAGES

	FINAL SUMMARY **Upgrading & Additions** **BID NO: SCMU3-23/24-0619-HO** **Raglan Road , N.G Dlukulu, Middle Terrace & V Shumane Clinics**	
SECTION NO.	**DESCRIPTION**	**AMOUNT**
	Preliminaries and General	
	V.G Shumane Clinic	
	Fittings	
	External Works	
	Middle Terrace Clinic	
	Fittings	
	External Works	
	N.G Dlukulu Clinic	
	Fittings	
	External Works	
	Raglan Road Clinic	
	Fittings	
	External Works	
	SMME Packages	
	SUB TOTAL	
	Electrical Installations (Carried over from Excl VAT from the Electrical Installations BoQ)	
	Mechanical Installations (Carried over Excl Vat from Mechanical Installations BoQ)	
	Health and Safety Costs (Carried over from Excl Vat from the Health and Safety BoQ)	
	SUB TOTAL	
	Allow the sum of R 800 000 (Eight Hundred Thousand) for Contingencies to be used or deducted in full at the Principal Agent's discretion.	**R 800,000.00**
	SUB TOTAL	
	Include the sum of R540 000,00 (Five hundred and forty thousand Rand) for Escalation	**R 540,000.00**
	SUB TOTAL	
	PLUS: 15% V.A.T	
	TOTAL CARRIED TO FORM OF TENDER (OFFER AND ACCEPTANCE)	

OCCUPATIONAL HEALTH & SAFETY RELATED ITEMS:Upgrading & Additions to Raglan Road, NG Dlukulu, Middle Terrace & V Shumane Clinics BID NO: SCMU3-23/24-0619-HO					
ITEM NO	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**TOTAL**
1	**Occupational Health & Safety Obligations**				
1.1	Preparation of the Contractor's site-specific Health and Safety Plan & File	Sum	1		
1.2	Allow for the necessary Workman's Compensation Fund or FEM contributions for the duration of the project with and including renewals	Sum	1		
1.3	Principal Contractor's initial obligations in respect of the Occupational Health and Safety Act and Construction Regulations and relevant & applicable Standards	Sum	1		
1.4	Principal Contractor's time related obligations in respect of the Occupational Health and Safety Act and Construction Regulations	Month	15.0		
1.4	Provision for appointment of a Registered Asbestos Contractor including AIA and relevant legal requirements.	Sum	1.0		
2	**Provision of Personal Protective Equipment (PPE)** **Note:** Tenderer to provide quantity for full component of staff for contract period				
2.1	Reflective vests with visible marking of contractor's name and proof of induction	Item	100		
2.2	Hard Hats (High Density polyethylene, & 6-point lining)	Item	100		
2.3	Safety boots/shoes (Steel-Toe)	Item	80		
2.4	Earplugs/muffs	Item	1000		
2.5	Dust Mask (at least FF2 type)	Item	1000		
2.6	Safety gloves	Item	500		
2.7	Overall/work suit	Item	160		
2.8	Personal Fall arrest and rescue equipment with and including lifelines and associated equipment	Item	10		
3	Provision of a Competent Construction Health & Safety Officer				
3.1	Provision of a Full time Construction **Health and Safety Officer (**SACPCMP Registered)	Month	15.0		
4	Cost of **medical certificates** and medical surveillance per employee **Note:** Tenderer to provide quantity for full component of staff for contract period	Item			
4.1	Initial (baseline) medical examinations	Item	80		
4.2	Periodic and exit examinations	Item	100		
4.3	Induction training inclusive of Environmental and HIV/AIDS Awareness Programmes	Sum	80		
4.4	Provision of First Aid Boxes to GSR reqirements for each site i.e 2 sites	Item	2		
4.6	Level 3 First Aider/s	Month	4.0		
4.7	OHS Awareness Signage	Sum			
4.8	Fire and emergency prevention signage,extinguishers	Sum			
5	**Adhoc: Any OHS related requirements not listed above**				
5.1	Printer, Paper and Ink, consumables	Sum	1		
5.2	Waste bins	Item			
5.3	Under cover eating area	Item	2		
5.4	Close out H& S files scanned electronically with original files to CHSA.	Sum	1		
SUBTOTAL TAKEN FORWARD TO THE PRELIMINARIES					

REFURBISHMENT OF MIDDLE TERRACE CLINIC - ELECTRICAL INSTALLATIONS

BILL NO. 1 : PRELIMINARY & GENERAL

ITEM	DESCRIPTION	UNIT	RATE			AMOUNT
			Fixed	Value Related	Time Related	
1.0	**BILL NO. 1 : PRELIMINARY & GENERAL**					
1.1	Contract Works Insurances	Sum				
1.2	Supplementary Insurance	Sum				
1.3	Public Liability Insurance	Sum				
1.4	Construction Guarantee / Security	Sum				
1.5	Establish on Site and provision of buildings and materials storage facilities including de-establishment of site, cleaning and tidying up after completion of contract	Sum				
1.6	Contract Management and supervison of the Works including Contractor's Monthly Reports and attendence of site meetings	Sum				
1.7	Liaison with Eskom and Municipality for switching off power to do remedial and new work when necessary to suit your construction plan and programme. Price to include disconnection and reconnection of cable by supply authority.	Sum				
1.8	Compliance with Construction Regulations and Health and Safety Act	Sum				
1.9	All HIV / AIDS Specification Requirements	Sum				
1.10	Tools and Equipment	Sum				
1.11	The rates for labour in Dayworks are to be applied to the hours worked and are to include for the cost of labour, overheads, profit, all levies, bonuses, leave pay, Including full supervision and the use of all tools					
1.11.1	Artisan	Hr				Rate Only
1.11.1.1	Normal Time	Hr				Rate Only
1.11.1.2	Over Time	Hr				Rate Only
1.11.2	Apprentice	Hr				Rate Only
1.11.2.1	Normal Time	Hr				Rate Only
1.4.2.2	Over Time	Hr				Rate Only
1.11.3	Semi- Skilled	Hr				Rate Only
1.11.3.1	Normal Time	Hr				Rate Only
1.11.3.2	Over Time	Hr				Rate Only
1.11.4	Labourer	Hr				Rate Only
1.11.4.1	Normal Time	Hr				Rate Only
1.11.4.2	Over Time	Hr				Rate Only
TOTAL CARRIED FORWARD TO SUMMARY PAGE						

NB ***All materials must be of South African manufacture. The Electrical Subcontractor must submit proof of unavailability where this requirement cannot be fulfilled.***

BILL NO. 2: LV DISTRIBUTION BOARDS

ITEM	DESCRIPTION	UNIT	QNTY	RATE	TENDER AMOUNT
2.0	**LV DISTRIBUTION BOARDS**				
2.1	New flush mounted Distribution Board complete for Gate House				
	Supply	No.	1		
	Install	No.	1		
2.2	Existing Distribution Boards				
	Supply and install in existing distribution boards the following switchgear and materials including labelling:				
2.2.1	:- 30 Amps 2,5kA circuit breakers	No.	3		
2.2.2	:- 20 Amps 2,5kA circuit breakers	No.	18		
2.2.3	:- 15 Amps 2,5kA circuit breakers	No.	10		
2.2.4	:- Spare way blank	No.	25		
2.2.5	:- Circuit breaker label as per Specification	No.	50		
2.2.6	:- Circuit legend card including labelling	No.	2		
2.3	Earth Leakage Unit				
2.3.1	63A, ELU single pole	No.	4		
2.4	Isolators				
2.4.1	63A,TP, 10kA	No.	2		
2.5	New surface mounted 4 pole, Automatic Change Over Switch (MCOS) near or onto existing DB including cabling/wiring				
2.5.1	- 63A				
2.5.1.1	Supply	No.	1		
2.5.1.1	Install	No.	3		
2.6	New surface mounted 2 pole,Automatic Change Over Switch (MCOS) near or onto existing DB including cabling/wiring				
2.6.1	- 63A				
2.6.1.1	Supply	No.	1		
2.6.1.1	Install	No.	3		
2.7	Allow for testing, balancing and commissioning the whole of the electrical installation as laid down in the specification and for re-testing as may be required after the making good of all defective work to the satisfaction of the Engineer. Price to include Certificate of Compliance for the refurbished DB	No.	1		
2.6,1	Earthing and bonding of the installation	No.	1		
TOTAL CARRIED FORWARD TO SUMMARY PAGE					

REFURBISHMENT OF MIDDLE TERRACE CLINIC - ELECTRICAL INSTALLATIONS

NB ***All materials must be of South African manufacture. The Electrical Subcontractor must submit proof of unavailability where this requirement cannot be fulfilled.***

BILL NO. 3: CABLING AND CABLE SLEEVES

ITEM	DESCRIPTION	UNIT	QNTY	RATE	TENDER AMOUNT
3.0	**CABLING AND CABLE SLEEVES**				
3.1	LV Cabling				
3.1.1	Multicore PVCSWAPVC cable with stranded copper conductors to SANS 1507-3 drawn into cable sleeves, installed on cable trays/ladders or laid in open trenches and ducts. All cables to be complete with ECC for earthing				
3.1.1.1	4mm² 3 Core (From DB-Clinic to DB-Gatehouse)				
	Supply	m	70		
	Install	m	70		
	Terminations	No.	4		
3.1.1.2	16mm² 4 Core Cu (DB- Clinic)				
	Supply	m	120		
	Install	m	120		
	Terminations	No.	6		
3.1.1.2	10mm² 2 Core Cu (DB- Pharmacy)				
	Supply	m	70		
	Install	m	70		
	Terminations	No.	4		
3.2	LV Trenching Excavations 600mm deep x 400mm wide including bachfilling and compaction.				
3.2.1	In Earth	m	50		
3.2.2	In concete/tar/paving including reinstatement to original finnishing	m³	10		
3.2.3	Selected fines bedding 150mm under cable and 150mm on top of cable(when required by soil conditions)	m³	4		
3.3	Cable Sleeves				
3.3.1	Supply and Install 50mm PVC sleeve	m	100		
3.4	Cable Ladders and Trays				
3.4.1	Supply and Install 150mm wide galvanised wire-mesh tray in ceiling. Price to include mounting accessories.	m	60		
TOTAL CARRIED FORWARD TO SUMMARY PAGE					

BILL NO. 4: GENERAL LIGHTING AND POWER

NOTE: ALL PRICES BELOW TO INCLUDE REMOVAL AND REPLACEMENT OF EXISTING INSTALLATION

ITEM	DESCRIPTION	UNIT	QNTY	RATE	TENDER AMOUNT
	CONDUIT All conduit and accessories to be uPVC when chased into brickwork or laid in concrete. All exposed conduits is to be plain ended galvanised conduit. Galvanized / PVC conduit including all accessories such as bends elbows and saddles. Making good of chasing will be by others.				
4.1	20mm dia PVC				
	Supply	m	863		
	Install	m	863		
4.2	25mm dia PVC				
	Supply	m	400		
	Install	m	400		
4.3	20mm dia Gal				
	Supply	m	50		
	Install	m	50		
	CONDUIT ACCESSORIES The supply and installation of drawboxes including locknuts, bushes, coverplates, fixing materials when required				
4.4	Lightweight round, deep back or side entry for 20mm dia conduit cast in concrete or roof space, average for 1,2,3 and 4 ways complete with suitable lid				
	Supply	No.	70		
	Install	No.	70		
4.5	Lightweight round shallow back or side entry type for 20mm dia conduit on surface in open roof space and built into wall averaged for 1,2,3 and 4 ways complete with suitable lid				
	Supply	No.	30		
	Install	No.	30		
4.6	Galvanised 100 x 50 x 50 switch boxes for 20mm dia conduit built into brickwork or cast into concrete (coverplates measured elsewhere)				
	Supply	No.	20		
	Install	No.	20		
4.7	Galvanised 100 x 100 x 50 boxes for 20mm dia conduit built into brickwork or cast into concrete (coverplates measured elsewhere)				
	Supply	No.	25		
	Install	No.	25		
TOTAL CARRIED FORWARD NEXT PAGE					

BILL NO. 4: GENERAL LIGHTING AND POWER

NOTE: ALL PRICES BELOW TO INCLUDE REMOVAL AND REPLACEMENT OF EXISTING INSTALLATION

ITEM	DESCRIPTION	UNIT	QNTY	RATE	TENDER AMOUNT
TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE					
	Equipment and Control Gear				
	Supply, deliver, accept and store the following switches, complete with 100mmx50mmx50mm galvanized box where required, PVC covers and screws and LABELING as specified				
	Fix, connect and commission the following Switches complete with PVC or metal covers and metal screws.				
4.8	16 amp single lever, one way flush mounted rocker rocker type switch with coverplates.				
	Supply	No.	27		
	Install	No.	27		
4.9	16 amp two lever, one way flush mounted rocker rocker type switch with coverplates.				
	Supply	No.	4		
	Install	No.	4		
4.10	16 amp double pole surface mounted isolator				
	Supply	No.	5		
	Install	No.	5		
4.11	10 amp photo electric cell surface mounted in an empty luminaire				
	Supply	No.	2		
	Install	No.	2		
4.12	One lever, one way (water tight switch)				
	Supply	No.	3		
	Install	No.	3		
	POWER SKIRTING				
4.12	Galvanised power skirting with two full size compartments. The top compartment to be used for power cabling.	m	20		
	Power Skirting Switchgear and Accessories				
4.13	Supply and Install 3-pin socket outlet module	No.	8		
4.14	Supply and Install Single Dedicated socket outlet	No.	4		
4.15	Supply and Install Telephone outlet	No.	4		
4.16	Supply and Install Data outlet	No.	4		
4.17	Supply and Install End caps	No.	8		
	CONDUCTORS				
	The supply and installation of PVC insulated copper conductors drawn into wireways including lugs and fixing [clips in the case of surfix]				
4.18	1,5mm² PVC black & red				
	Supply	m	1500		
	Install	m	1500		
4.19	2,5mm² PVC black & red				
	Supply	m	1200		
	Install	m	1200		
4.20	2,5mm² PVC green/yellow earth wire				
	Supply	m	1350		
	Install	m	1350		
4.21	4mm² PVC black & red				
	Supply	m	80		
	Install	m	80		
4.22	4mm² PVC green/yellow earth wire				
	Supply	m	40		
	Install	m	40		
TOTAL CARRIED FORWARD NEXT PAGE					

BILL NO. 4: GENERAL LIGHTING AND POWER

NOTE: ALL PRICES BELOW TO INCLUDE REMOVAL AND REPLACEMENT OF EXISTING INSTALLATION

ITEM	DESCRIPTION	UNIT	QNTY	RATE	TENDER AMOUNT
TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE					
	LUMINAIRES				
	Supply, deliver, accept and store the following luminaries, complete with lamps and mounting brackets if required. All luminaires are to be as per the detailed specification (or approved equal).				
4.23	**Type L** - 15W LED Bulkhead luminaire with IP rating of 65. The bulkhead shall be round shaped. See lighting schedule in detailed specification for information				
	Supply	No.	56		
	Install	No.	56		
4.24	**Type B** - (44W LED Surface mounted linear, 1450mm). See lighting schedule in detailed specification for information.				
	Supply	No.	54		
	Install	No.	54		
4.26	**Type EL** - Examination Light(Ceiling mounted)See lighting schedule in detailed specification for information				
	Supply	No.	3		
	Install	No.	3		
	SOCKET OUTLETS				
	Supply, deliver, accept and store the following socket outlets, complete with 100mmx100mmx50mm OR 100mmx50mmx50mmgalvanized box where required, PVC covers screws and LABELING as specified including covers and surrounds, mounted to outlet boxes, power skirting, flushed floor ducting and / or ducting				
4.27	16 Amp flush mounted single switched socket outlet				
	Supply	No.	37		
	Install	No.	37		
4.28	16 Amp flush mounted Duo switched socket outlet				
	Supply	No.	37		
	Install	No.	37		
4.29	Surface mounted weather proof 20A switched double pole isolator				
	Supply	No.	5		
	Install	No.	5		
TOTAL CARRIED FORWARD SUMMARY					

REFURBISHMENT OF MIDDLE TERRACE CLINIC - ELECTRICAL INSTALLATIONS

NB ***All materials must be of South African manufacture. The Electrical Subcontractor must submit proof of unavailability where this requirement cannot be fulfilled.***

BILL NO. 5: SUNDRY ITEMS

ITEM	DESCRIPTION	UNIT	QNTY	RATE	TENDER AMOUNT
5.0	**SUNDRY ITEMS**				
5.1	**Earthing**				
5.1.1	Earthing and bonding of all installations (new and existing) to SABS 0142	No.	1		
5.2	**TESTING**				
5.2.1	Testing of the complete electrical installation in terms of SABS 0142 and provision of Certificates of Compliance	No.	1		
5.3	**AS INSTALLED DRAWINGS** Allow for the marking up of prints for the production of "as installed" records by the Engineer.	No.	1		
5.4	General Repairs and Renovations to existing electrical installations including cleaning and making good inside and outside	No.	1		
5.5	Removal of light existing light fittings	No.	30		
5.6	Removal of light existing switched socket outlets	No.	10		
5.6	Removal of light existing switched lightswitches	No.	20		
5.7	Lightning Protection				
5.7.1	Lightning specialist contractor to check existing installation, repair and provide certificates	Prov Sum	1		
5.6.2	Mark-up for item 5.6.1 above	%	15%		
TOTAL CARRIED FORWARD TO SUMMARY PAGE					

REFURBISHMENT OF MIDDLE TERRACE CLINIC - ELECTRICAL INSTALLATIONS

PRICE SUMMARY PAGE

BILL NO.	DESCRIPTION	AMOUNT
1	PRELIMINARY & GENERAL	
2	LV DISTRIBUTION BOARDS	
3	CABLING AND CABLE SLEEVES	
4	POWER AND LIGHTING	
5	SUNDRY ITEMS	
	SUBTOTAL	
	10% Contingency	
	Total Excluding VAT	
	15% VAT	
TOTAL PRICE CARRIED FORWARD TO BUILDERS WORK SUMMARY		

REFURBISHMENT OF NG DLUKULU CLINIC - ELECTRICAL INSTALLATIONS

BILL NO. 1 : PRELIMINARY & GENERAL

ITEM	DESCRIPTION	UNIT	RATE			AMOUNT
			Fixed	Value Related	Time Related	
1.0	**BILL NO. 1 : PRELIMINARY & GENERAL**					
1.1	Contract Works Insurances	Sum				
1.2	Supplementary Insurance	Sum				
1.3	Public Liability Insurance	Sum				
1.4	Construction Guarantee / Security	Sum				
1.5	Establish on Site and provision of buildings and materials storage facilities including de-establishment of site, cleaning and tidying up after completion of contract	Sum				
1.6	Contract Management and supervison of the Works including Contractor's Monthly Reports and attendence of site meetings	Sum				
1.7	Liaison with Eskom and Municipality for switching off power to do remedial and new work when necessary to suit your construction plan and programme. Price to include disconnection and reconnection of cable by supply authority.	Sum				
1.8	Compliance with Construction Regulations and Health and Safety Act	Sum				
1.9	All HIV / AIDS Specification Requirements	Sum				
1.10	Tools and Equipment	Sum				
1.11	The rates for labour in Dayworks are to be applied to the hours worked and are to include for the cost of labour, overheads, profit, all levies, bonuses, leave pay, Including full supervision and the use of all tools					
1.11.1	Artisan	Hr				Rate Only
1.11.1.1	Normal Time	Hr				Rate Only
1.11.1.2	Over Time	Hr				Rate Only
1.11.2	Apprentice	Hr				Rate Only
1.11.2.1	Normal Time	Hr				Rate Only
1.4.2.2	Over Time	Hr				Rate Only
1.11.3	Semi- Skilled	Hr				Rate Only
1.11.3.1	Normal Time	Hr				Rate Only
1.11.3.2	Over Time	Hr				Rate Only
1.11.4	Labourer	Hr				Rate Only
1.11.4.1	Normal Time	Hr				Rate Only
1.11.4.2	Over Time	Hr				Rate Only
TOTAL CARRIED FORWARD TO SUMMARY PAGE						

REFURBISHMENT OF NG DLUKULU CLINIC - ELECTRICAL INSTALLATIONS

NB ***All materials must be of South African manufacture. The Electrical Subcontractor must submit proof of unavailability where this requirement cannot be fulfilled.***

BILL NO. 2: LV DISTRIBUTION BOARDS

ITEM	DESCRIPTION	UNIT	QNTY	RATE	TENDER AMOUNT
2.0	**LV DISTRIBUTION BOARDS**				
2.1	New flush mounted Distribution Board complete for Gate House				
	Supply	No.	1		
	Install	No.	1		
2.2	New flush mounted Distribution Board complete for Clinic				
	Supply	No.	1		
	Install	No.	1		
2.5	New surface mounted 4 pole, Automatic Change Over Switch (MCOS) near or onto existing DB including cabling/wiring				
2.5.1	- 80A				
2.5.1.1	Supply	No.	1		
2.5.1.1	Install	No.	3		
2.6	New surface mounted 2 pole,Automatic Change Over Switch (MCOS) near or onto existing DB including cabling/wiring				
2.6.1	- 80A				
2.6.1.1	Supply	No.	1		
2.6.1.1	Install	No.	3		
2.7	Allow for testing, balancing and commissioning the whole of the electrical installation as laid down in the specification and for re-testing as may be required after the making good of all defective work to the satisfaction of the Engineer. Price to include Certificate of Compliance for the refurbished DB	No.	1		
2.6,1	Earthing and bonding of the installation	No.	1		
TOTAL CARRIED FORWARD TO SUMMARY PAGE					

REFURBISHMENT OF NG DLUKULU CLINIC - ELECTRICAL INSTALLATIONS

NB ***All materials must be of South African manufacture. The Electrical Subcontractor must submit proof of unavailability where this requirement cannot be fulfilled.***

BILL NO. 3: CABLING AND CABLE SLEEVES

ITEM	DESCRIPTION	UNIT	QNTY	RATE	TENDER AMOUNT
3.0	**CABLING AND CABLE SLEEVES**				
3.1	LV Cabling				
3.1.1	Multicore PVCSWAPVC cable with stranded copper conductors to SANS 1507-3 drawn into cable sleeves, installed on cable trays/ladders or laid in open trenches and ducts. All cables to be complete with ECC for earthing				
3.1.1.1	4mm² 3 Core (From DB-Clinic to DB-Gatehouse)				
	Supply	m	70		
	Install	m	70		
	Terminations	No.	4		
3.1.1.2	16mm² 4 Core Cu (DB- Clinic)				
	Supply	m	120		
	Install	m	120		
	Terminations	No.	6		
3.2	LV Trenching Excavations 600mm deep x 400mm wide including bachfilling and compaction.				
3.2.1	In Earth	m	50		
3.2.2	In concete/tar/paving including reinstatement to original finnishing	m³	10		
3.2.3	Selected fines bedding 150mm under cable and 150mm on top of cable(when required by soil conditions)	m³	4		
3.3	Cable Sleeves				
3.3.1	Supply and Install 50mm PVC sleeve	m	100		
3.4	Cable Ladders and Trays				
3.4.1	Supply and Install 150mm wide galvanised wire-mesh tray in ceiling. Price to include mounting accessories.	m	60		
TOTAL CARRIED FORWARD TO SUMMARY PAGE					

BILL NO. 4: GENERAL LIGHTING AND POWER

NOTE: ALL PRICES BELOW TO INCLUDE REMOVAL AND REPLACEMENT OF EXISTING INSTALLATION

ITEM	DESCRIPTION	UNIT	QNTY	RATE	TENDER AMOUNT
	CONDUIT All conduit and accessories to be uPVC when chased into brickwork or laid in concrete. All exposed conduits is to be plain ended galvanised conduit. Galvanized / PVC conduit including all accessories such as bends elbows and saddles. Making good of chasing will be by others.				
4.1	20mm dia PVC				
	Supply	m	863		
	Install	m	863		
4.2	25mm dia PVC				
	Supply	m	400		
	Install	m	400		
4.3	20mm dia Gal				
	Supply	m	50		
	Install	m	50		
	CONDUIT ACCESSORIES The supply and installation of drawboxes including locknuts, bushes, coverplates, fixing materials when required				
4.4	Lightweight round, deep back or side entry for 20mm dia conduit cast in concrete or roof space, average for 1,2,3 and 4 ways complete with suitable lid				
	Supply	No.	70		
	Install	No.	70		
4.5	Lightweight round shallow back or side entry type for 20mm dia conduit on surface in open roof space and built into wall averaged for 1,2,3 and 4 ways complete with suitable lid				
	Supply	No.	30		
	Install	No.	30		
4.6	Galvanised 100 x 50 x 50 switch boxes for 20mm dia conduit built into brickwork or cast into concrete (coverplates measured elsewhere)				
	Supply	No.	20		
	Install	No.	20		
4.7	Galvanised 100 x 100 x 50 boxes for 20mm dia conduit built into brickwork or cast into concrete (coverplates measured elsewhere)				
	Supply	No.	25		
	Install	No.	25		
TOTAL CARRIED FORWARD NEXT PAGE					

BILL NO. 4: GENERAL LIGHTING AND POWER

NOTE: ALL PRICES BELOW TO INCLUDE REMOVAL AND REPLACEMENT OF EXISTING INSTALLATION

ITEM	DESCRIPTION	UNIT	QNTY	RATE	TENDER AMOUNT
TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE					
	Equipment and Control Gear				
	Supply, deliver, accept and store the following switches, complete with 100mmx50mmx50mm galvanized box where required, PVC covers and screws and LABELING as specified				
	Fix, connect and commission the following Switches complete with PVC or metal covers and metal screws.				
4.8	16 amp single lever, one way flush mounted rocker rocker type switch with coverplates.				
	Supply	No.	20		
	Install	No.	20		
4.9	16 amp two lever, one way flush mounted rocker rocker type switch with coverplates.				
	Supply	No.	5		
	Install	No.	5		
4.11	10 amp photo electric cell surface mounted in an empty luminaire				
	Supply	No.	2		
	Install	No.	2		
4.12	One lever, one way (water tight switch)				
	Supply	No.	3		
	Install	No.	3		
	POWER SKIRTING				
4.12	Galvanised power skirting with two full size compartments. The top compartment to be used for power cabling.	m	20		
	Power Skirting Switchgear and Accessories				
4.13	Supply and Install 3-pin socket outlet module	No.	8		
4.14	Supply and Install Single Dedicated socket outlet	No.	4		
4.15	Supply and Install Telephone outlet	No.	4		
4.16	Supply and Install Data outlet	No.	4		
4.17	Supply and Install End caps	No.	8		
	CONDUCTORS				
	The supply and installation of PVC insulated copper conductors drawn into wireways including lugs and fixing [clips in the case of surfix]				
4.18	1,5mm² PVC black & red				
	Supply	m	2240		
	Install	m	2240		
4.19	2,5mm² PVC black & red				
	Supply	m	1500		
	Install	m	1500		
4.20	2,5mm² PVC green/yellow earth wire				
	Supply	m	1870		
	Install	m	1870		
4.21	4mm² PVC black & red				
	Supply	m	100		
	Install	m	100		
4.22	4mm² PVC green/yellow earth wire				
	Supply	m	50		
	Install	m	50		
TOTAL CARRIED FORWARD NEXT PAGE					

BILL NO. 4: GENERAL LIGHTING AND POWER

NOTE: ALL PRICES BELOW TO INCLUDE REMOVAL AND REPLACEMENT OF EXISTING INSTALLATION

ITEM	DESCRIPTION	UNIT	QNTY	RATE	TENDER AMOUNT
TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE					
	LUMINAIRES				
	Supply, deliver, accept and store the following luminaries, complete with lamps and mounting brackets if required. All luminaires are to be as per the detailed specification (or approved equal).				
4.23	**Type L** - 15W LED Bulkhead luminaire with IP rating of 65. The bulkhead shall be round shaped. See lighting schedule in detailed specification for information				
	Supply	No.	36		
	Install	No.	36		
4.24	**Type B** - (44W LED Surface mounted linear, 1450mm). See lighting schedule in detailed specification for information.				
	Supply	No.	53		
	Install	No.	53		
4.25	**Type EL** - Examination Light(Ceiling mounted)See lighting schedule in detailed specification for information				
	Supply	No.	6		
	Install	No.	6		
	SOCKET OUTLETS				
	Supply, deliver, accept and store the following socket outlets, complete with 100mmx100mmx50mm OR 100mmx50mmx50mmgalvanized box where required, PVC covers screws and LABELING as specified including covers and surrounds, mounted to outlet boxes, power skirting, flushed floor ducting and / or ducting				
4.27	16 Amp flush mounted single switched socket outlet				
	Supply	No.	12		
	Install	No.	12		
4.28	16 Amp flush mounted Duo switched socket outlet				
	Supply	No.	22		
	Install	No.	22		
4.29	Surface mounted weather proof 20A switched double pole isolator				
	Supply	No.	5		
	Install	No.	5		
TOTAL CARRIED FORWARD SUMMARY					

REFURBISHMENT OF NG DLUKULU CLINIC - ELECTRICAL INSTALLATIONS

NB ***All materials must be of South African manufacture. The Electrical Subcontractor must submit proof of unavailability where this requirement cannot be fulfilled.***

BILL NO. 5: SUNDRY ITEMS

ITEM	DESCRIPTION	UNIT	QNTY	RATE	TENDER AMOUNT
5.0	**SUNDRY ITEMS**				
5.1	**Earthing**				
5.1.1	Earthing and bonding of all installations (new and existing) to SABS 0142	No.	1		
5.2	**TESTING**				
5.2.1	Testing of the complete electrical installation in terms of SABS 0142 and provision of Certificates of Compliance	No.	1		
5.3	**AS INSTALLED DRAWINGS** Allow for the marking up of prints for the production of "as installed" records by the Engineer.	No.	1		
5.4	General Repairs and Renovations to existing electrical installations including cleaning and making good inside and outside	No.	1		
5.5	Removal of light existing light fittings	No.	30		
5.6	Removal of light existing switched socket outlets	No.	10		
5.6	Removal of light existing switched lightswitches	No.	20		
5.7	Lightning Protection				
5.7.1	Lightning specialist contractor to check existing installation, repair and provide certificates	Prov Sum	1		
5.6.2	Mark-up for item 5.6.1 above	%	15%		
TOTAL CARRIED FORWARD TO SUMMARY PAGE					

REFURBISHMENT OF NG DLUKULU CLINIC - ELECTRICAL INSTALLATIONS

PRICE SUMMARY PAGE

BILL NO.	DESCRIPTION	AMOUNT
1	PRELIMINARY & GENERAL	
2	LV DISTRIBUTION BOARDS	
3	CABLING AND CABLE SLEEVES	
4	POWER AND LIGHTING	
5	SUNDRY ITEMS	
	SUBTOTAL	
	10% Contingency	
	Total Excluding VAT	
	15% VAT	
TOTAL PRICE CARRIED FORWARD TO BUILDERS WORK SUMMARY		

REFURBISHMENT OF RAGLAN ROAD CLINIC - ELECTRICAL INSTALLATIONS

BILL NO. 1 : PRELIMINARY & GENERAL

ITEM	DESCRIPTION	UNIT	RATE			AMOUNT
			Fixed	Value Related	Time Related	
1.0	**BILL NO. 1 : PRELIMINARY & GENERAL**					
1.1	Contract Works Insurances	Sum				
1.2	Supplementary Insurance	Sum				
1.3	Public Liability Insurance	Sum				
1.4	Construction Guarantee / Security	Sum				
1.5	Establish on Site and provision of buildings and materials storage facilities including de-establishment of site, cleaning and tidying up after completion of contract	Sum				
1.6	Contract Management and supervison of the Works including Contractor's Monthly Reports and attendence of site meetings	Sum				
1.7	Liaison with Eskom and Municipality for switching off power to do remedial and new work when necessary to suit your construction plan and programme. Price to include disconnection and reconnection of cable by supply Authority.	Sum				
1.8	Compliance with Construction Regulations and Health and Safety Act	Sum				
1.9	All HIV / AIDS Specification Requirements	Sum				
1.10	Tools and Equipment	Sum				
1.11	The rates for labour in Dayworks are to be applied to the hours worked and are to include for the cost of labour, overheads, profit, all levies, bonuses, leave pay, Including full supervision and the use of all tools					
1.11.1	Artisan	Hr				Rate Only
1.11.1.1	Normal Time	Hr				Rate Only
1.11.1.2	Over Time	Hr				Rate Only
1.11.2	Apprentice	Hr				Rate Only
1.11.2.1	Normal Time	Hr				Rate Only
1.4.2.2	Over Time	Hr				Rate Only
1.11.3	Semi- Skilled	Hr				Rate Only
1.11.3.1	Normal Time	Hr				Rate Only
1.11.3.2	Over Time	Hr				Rate Only
1.11.4	Labourer	Hr				Rate Only
1.11.4.1	Normal Time	Hr				Rate Only
1.11.4.2	Over Time	Hr				Rate Only
TOTAL CARRIED FORWARD TO SUMMARY PAGE						

NB ***All materials must be of South African manufacture. The Electrical Subcontractor must submit proof of unavailability where this requirement cannot be fulfilled.***

BILL NO. 2: LV DISTRIBUTION BOARDS

ITEM	DESCRIPTION	UNIT	QNTY	RATE	TENDER AMOUNT
2.0	**LV DISTRIBUTION BOARDS**				
2.1	New flush mounted Distribution Board for Reception				
	Supply	No.	1		
	Install	No.	1		
2.2	New flush mounted Distribution Board for Refuse Room				
	Supply	No.	1		
	Install	No.	1		
2.3	Replace existing surface mounted Main Distribution Board				
	Supply	No.	1		
	Install	No.	1		
2.4	Replace existing surface mounted Distribution Board for Pharmacy				
	Supply	No.	1		
	Install	No.	1		
2.5	New surface mounted 4 pole, Automatic Change Over Switch (MCOS) near or onto existing DB including cabling/wiring				
2.5.1	- 60A				
2.5.1.1	Supply	No.	2		
2.5.1.1	Install	No.	2		
2.6	Allow for testing, balancing and commissioning the whole of the electrical installation as laid down in the specification and for re-testing as may be required after the making good of all defective work to the satisfaction of the Engineer. Price to include Certificate of Compliance for the refurbished DB	No.	1		
2.6,1	Earthing and bonding of the installation	No.	1		
TOTAL CARRIED FORWARD TO SUMMARY PAGE					

REFURBISHMENT OF RAGLAN ROAD CLINIC - ELECTRICAL INSTALLATIONS

NB ***All materials must be of South African manufacture. The Electrical Subcontractor must submit proof of unavailability where this requirement cannot be fulfilled.***

BILL NO. 3: CABLING AND CABLE SLEEVES

ITEM	DESCRIPTION	UNIT	QNTY	RATE	TENDER AMOUNT
3.0	**CABLING AND CABLE SLEEVES**				
3.1	LV Cabling				
3.1.1	Multicore PVCSWAPVC cable with stranded copper conductors to SANS 1507-3 drawn into cable sleeves, installed on cable trays/ladders or laid in open trenches and ducts. All cables to be complete with ECC for earthing				
3.1.1.1	4mm² 3 Core (Refuse Room)				
	Supply	m	80		
	Install	m	80		
	Terminations	No.	2		
3.2	LV Trenching Excavation 600mm deep x 400mm wide including backfilling and compaction.				
3.2.1	In Earth	m	25		
3.2.2	In concrete/tar/paving including reinstatement to original finnishing	m³	10		
3.2.3	Selected fines bedding 150mm under cable and 150mm on top of cable(when required by soil conditions)	m³	5		
3.3	Cable Sleeves				
3.3.1	Supply and install 50mm PVC sleeve	m	20		
TOTAL CARRIED FORWARD TO SUMMARY PAGE					

BILL NO. 4: GENERAL LIGHTING AND POWER

NOTE: ALL PRICES BELOW TO INCLUDE REMOVAL AND REPLACEMENT OF EXISTING INSTALLATION

ITEM	DESCRIPTION	UNIT	QNTY	RATE	TENDER AMOUNT
4.0	**CONDUIT** All conduit and accessories to be uPVC when chased into brickwork or laid in concrete. All exposed conduits is to be plain ended galvanised conduit. Galvanized / PVC conduit including all accessories such as bends elbows and saddles. Making good of chasing will be by others.				
4.1	20mm dia PVC				
	Supply	m	1000	R 5.83	R 5,830.00
	Install	m	1000	R 19.80	R 19,800.00
4.2	25mm dia PVC				
	Supply	m	300	R 8.86	R 2,658.00
	Install	m	300	R 24.20	R 7,260.00
4.3	20mm dia Gal				
	Supply	m	30	R 34.28	R 1,028.40
	Install	m	30	R 22.00	R 660.00
	CONDUIT ACCESSORIES The supply and installation of drawboxes including locknuts, bushes, coverplates, fixing materials when required				
4.4	Lightweight round, deep back or side entry for 20mm dia conduit cast in concrete or roof space, average for 1,2,3 and 4 ways complete with suitable lid				
	Supply	No.	100	R 66.33	R 6,633.00
	Install	No.	100	R 22.11	R 2,211.00
4.5	Lightweight round shallow back or side entry type for 25mm dia conduit on surface in open roof space and built into wall averaged for 1,2,3 and 4 ways complete with suitable lid				
	Supply	No.	10	R 86.78	R 867.80
	Install	No.	10	R 22.11	R 221.10
4.6	Galvanised 100 x 50 x 50 switch boxes for 20mm dia conduit built into brickwork or cast into concrete (coverplates measured elsewhere)				
	Supply	No.	35	R 5.53	R 193.55
	Install	No.	35	R 22.11	R 773.85
4.7	Galvanised 100 x 100 x 50 boxes for 20mm dia conduit built into brickwork or cast into concrete (coverplates measured elsewhere)				
	Supply	No.	33	R 7.74	R 255.42
	Install	No.	33	R 22.11	R 729.63
TOTAL CARRIED FORWARD NEXT PAGE					R 49,121.75

BILL NO. 4: GENERAL LIGHTING AND POWER

NOTE: ALL PRICES BELOW TO INCLUDE REMOVAL AND REPLACEMENT OF EXISTING INSTALLATION

ITEM	DESCRIPTION	UNIT	QNTY	RATE	TENDER AMOUNT
TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE					R 49,121.75
	Equipment and Control Gear				
	Supply, deliver, accept and store the following switches, complete with 100mmx50mmx50mm galvanized box where required, PVC covers and screws and LABELING as specified				
	Fix, connect and commission the following Switches complete with PVC or metal covers and metal screws.				
4.8	16 amp single lever, one way flush mounted rocker				
	rocker type switch with coverplates.				
	Supply	No.	20	R 69.35	R 1,387.00
	Install	No.	20	R 40.00	R 800.00
4.9	16 amp two lever, one way flush mounted rocker				
	rocker type switch with coverplates.				
	Supply	No.	2	R 115.58	R 231.16
	Install	No.	2	R 40.00	R 80.00
4.10	10 amp photo electric cell surface mounted in an empty luminaire				
	Supply	No.	5	R 225.35	R 1,126.75
	Install	No.	5	R 120.00	R 600.00
4.11	One lever, one way (water tight switch)				
	Supply	No.	4	R 186.93	R 747.72
	Install	No.	4	R 60.30	R 241.20
	POWER SKIRTING				
4.12	Galvanised power skirting with two full size compartments. The top compartment to be used for power cabling.	m	15	R 432.63	R 6,489.45
	Power Skirting Switchgear and Accessories				
4.13	Supply and Install 3-pin socket outlet module	No.	4	R 201.31	R 805.24
4.14	Supply and Install Single Dedicated socket outlet	No.	4	R 201.31	R 805.24
4.15	Supply and Install Telephone outlet	No.	6	R 650.00	R 3,900.00
4.16	Supply and Install Data outlet	No.	6	R 650.00	R 3,900.00
4.17	Supply and Install End caps	No.	4	R 96.80	R 387.20
	CONDUCTORS				
	The supply and installation of PVC insulated copper conductors drawn into wireways including lugs and fixing [clips in the case of surfix]				
4.18	1,5mm² PVC black & red				
	Supply	m	3500	R 4.47	R 15,645.00
	Install	m	3500	R 2.42	R 8,470.00
4.19	2,5mm² PVC black & red				
	Supply	m	1200	R 7.74	R 9,288.00
	Install	m	1200	R 3.50	R 4,200.00
4.20	2,5mm² PVC green/yellow earth wire				
	Supply	m	2375	R 7.74	R 18,382.50
	Install	m	2375	R 3.50	R 8,312.50
4.21	4mm² PVC black & red				
	Supply	m	50	R 35.38	R 1,769.00
	Install	m	50	R 6.63	R 331.50
4.22	4mm² PVC green/yellow earth wire				
	Supply	m	25	R 35.38	R 884.50
	Install	m	25	R 6.63	R 165.75
TOTAL CARRIED FORWARD NEXT PAGE					R 138,071.46

BILL NO. 4: GENERAL LIGHTING AND POWER

NOTE: ALL PRICES BELOW TO INCLUDE REMOVAL AND REPLACEMENT OF EXISTING INSTALLATION

ITEM	DESCRIPTION	UNIT	QNTY	RATE	TENDER AMOUNT
TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE					R 138,071.46
	LUMINAIRES				
	Supply, deliver, accept and store the following luminaries, complete with lamps and mounting brackets if required. All luminaires are to be as per the detailed specification (or approved equal).				
4.23	**Type L** - 15W LED Bulkhead luminaire with IP rating of 65. The bulkhead shall be round shaped. See lighting schedule in detailed specification for information				
	Supply	No.	61		
	Install	No.	61		
4.24	**Type B** - (44W LED Surface mounted linear, 1450mm). See lighting schedule in detailed specification for information.				
	Supply	No.	50		
	Install	No.	50		
4.24	**Type EL** - (Wall Mounted LED Sexamination Light). See lighting schedule in detailed specification for information.				
	Supply	No.	3		
	Install	No.	3		
	SOCKET OUTLETS				
	Supply, deliver, accept and store the following socket outlets, complete with 100mmx100mmx50mm OR 100mmx50mmx50mmgalvanized box where required, PVC covers screws and LABELING as specified including covers and surrounds, mounted to outlet boxes, power skirting, flushed floor ducting and / or ducting				
4.27	16 Amp flush mounted single switched socket outlet				
	Supply	No.	1		
	Install	No.	1		
4.28	16 Amp flush mounted Duo switched socket outlet				
	Supply	No.	19		
	Install	No.	19		
4.29	Surface mounted weather proof 20A switched double pole isolator				
	Supply	No.	2		
	Install	No.	2		
TOTAL CARRIED FORWARD SUMMARY					

REFURBISHMENT OF RAGLAN ROAD CLINIC - ELECTRICAL INSTALLATIONS

NB ***All materials must be of South African manufacture. The Electrical Subcontractor must submit proof of unavailability where this requirement cannot be fulfilled.***

BILL NO. 5: SUNDRY ITEMS

ITEM	DESCRIPTION	UNIT	QNTY	RATE	TENDER AMOUNT
5.0	**SUNDRY ITEMS**				
5.1	**Earthing**				
5.1.1	Earthing and bonding of all installations (new and existing) to SABS 0142	No.	1		
5.2	**TESTING**				
5.2.1	Testing of the complete electrical installation in terms of SABS 0142 and provision of Certificates of Compliance	No.	1		
5.3	**AS INSTALLED DRAWINGS**				
	Allow for the marking up of prints for the production of "as installed" records by the Engineer.	No.	1		
5.4	General Repairs and Renovations to existing electrical installations including cleaning and making good inside and outside	No.	1		
5.5	Removal of existing light fittings	No.	30		
5.6	Removal of existing switched socket outlets	No.	10		
5.6	Removal of existing switched lightswitches	No.	20		
5.7	Lightning Protection				
5.7.1	Lightning specialist contractor to check existing installation, repair and provide certificates	Prov Sum	1		
5.6.2	Mark-up for item 5.6.1 above	%	15%		
TOTAL CARRIED FORWARD TO SUMMARY PAGE					

REFURBISHMENT OF RAGLAN ROAD CLINIC - ELECTRICAL INSTALLATIONS

PRICE SUMMARY PAGE

BILL NO.	DESCRIPTION	AMOUNT
1	PRELIMINARY & GENERAL	
2	LV DISTRIBUTION BOARDS	
3	CABLING AND CABLE SLEEVES	
4	POWER AND LIGHTING	
5	SUNDRY ITEMS	
	SUBTOTAL	
	10% Contingency	
	Total Excluding VAT	
	15% VAT	
TOTAL PRICE CARRIED FORWARD TO BUILDERS WORK SUMMARY		

REFURBISHMENT OF VIGINIA SHUMANE CLINIC - ELECTRICAL INSTALLATIONS

BILL NO. 1 : PRELIMINARY & GENERAL

ITEM	DESCRIPTION	UNIT	RATE			AMOUNT
			Fixed	Value Related	Time Related	
1.0	**BILL NO. 1 : PRELIMINARY & GENERAL**					
1.1	Contract Works Insurances	Sum				
1.2	Supplementary Insurance	Sum				
1.3	Public Liability Insurance	Sum				
1.4	Construction Guarantee / Security	Sum				
1.5	Establish on Site and provision of buildings and materials storage facilities including de-establishment of site, cleaning and tidying up after completion of contract	Sum				
1.6	Contract Management and supervison of the Works including Contractor's Monthly Reports and attendence of site meetings	Sum				
1.7	Liaison with Eskom and Municipality for switching off power to do remedial and new work when necessary to suit your construction plan and programme. Price to include disconnection and reconnection of cable by supply Authority.	Sum				
1.8	Compliance with Construction Regulations and Health and Safety Act	Sum				
1.9	All HIV / AIDS Specification Requirements	Sum				
1.10	Tools and Equipment	Sum				
1.11	The rates for labour in Dayworks are to be applied to the hours worked and are to include for the cost of labour, overheads, profit, all levies, bonuses, leave pay, Including full supervision and the use of all tools					
1.11.1	Artisan	Hr				Rate Only
1.11.1.1	Normal Time	Hr				Rate Only
1.11.1.2	Over Time	Hr				Rate Only
1.11.2	Apprentice	Hr				Rate Only
1.11.2.1	Normal Time	Hr				Rate Only
1.4.2.2	Over Time	Hr				Rate Only
1.11.3	Semi- Skilled	Hr				Rate Only
1.11.3.1	Normal Time	Hr				Rate Only
1.11.3.2	Over Time	Hr				Rate Only
1.11.4	Labourer	Hr				Rate Only
1.11.4.1	Normal Time	Hr				Rate Only
1.11.4.2	Over Time	Hr				Rate Only
TOTAL CARRIED FORWARD TO SUMMARY PAGE						

NB ***All materials must be of South African manufacture. The Electrical Subcontractor must submit proof of unavailability where this requirement cannot be fulfilled.***

BILL NO. 2: LV DISTRIBUTION BOARDS

ITEM	DESCRIPTION	UNIT	QNTY	RATE	TENDER AMOUNT
2.0	**LV DISTRIBUTION BOARDS**				
2.1	New flush mounted Distribution Board for New Gate House				
	Supply	No.	1		
	Install	No.	1		
2.2	Existing Distribution Boards				
	Supply and install in an existing distribution boards the following switchgear and materials including labelling:				
2.2.1	:- 30 Amps 2,5kA circuit breakers	No.	2		
2.2.2	:- 20 Amps 2,5kA circuit breakers	No.	15		
2.2.3	:- 15 Amps 2,5kA circuit breakers	No.	10		
2.2.4	:- Spare way blank	No.	10		
2.2.5	:- Circuit breaker label as per Specification	No.	50		
2.2.6	:- Circuit legend card including labelling	No.	2		
2.3	Earth Leakage Unit				
2.3.1	63A, ELU single pole	No.	3		
2.4	Isolators				
2.4.1	80A,2P, 6kA	No.	1		
2.5	New surface mounted 4 pole, Automatic Change Over Switch (MCOS) near or onto existing DB including cabling/wiring				
2.5.1	- 80A				
2.5.1.1	Supply	No.	2		
2.5.1.1	Install	No.	2		
2.7	Allow for testing, balancing and commissioning the whole of the electrical installation as laid down in the specification and for re-testing as may be required after the making good of all defective work to the satisfaction of the Engineer. Price to include Certificate of Compliance for the refurbished DB	No.	1		
2.6,1	Earthing and bonding of the installation	No.	1		
TOTAL CARRIED FORWARD TO SUMMARY PAGE					

NB ***All materials must be of South African manufacture. The Electrical Subcontractor must submit proof of unavailability where this requirement cannot be fulfilled.***

BILL NO. 3: CABLING AND CABLE SLEEVES

ITEM	DESCRIPTION	UNIT	QNTY	RATE	TENDER AMOUNT
3.0	**CABLING AND CABLE SLEEVES**				
3.1	LV Cabling				
3.1.1	Multicore PVCSWAPVC cable with stranded copper conductors to SANS 1507-3 drawn into cable sleeves, installed on cable trays/ladders or laid in open trenches and ducts. All cables to be complete with ECC for earthing				
3.1.1.1	4mm² 3 Core (for Gatehouse)				
	Supply	m	80		
	Install	m	80		
	Terminations	No.	2		
3.1.1.2	25mm² 2 Core Cu (DB- Clinic)				
	Supply	m	120		
	Install	m	120		
	Terminations	No.	6		
3.2	LV Trenching Excavation 600mm deep x 400mm wide including backfilling and compaction.				
3.2.1	In Earth	m	25		
3.2.2	In concrete/tar/paving including reinstatement to original finnishing	m³	10		
3.2.3	Selected fines bedding 150mm under cable and 150mm on top of cable(when required by soil conditions)	m³	5		
3.3	Cable Sleeves				
3.3.1	Supply and install 50mm PVC sleeve	m	20		
3.4	Cable Ladders and Trays				
3.4.1	Supply and Install 150mm wide galvanised wire-mesh tray in ceiling. Price to include mounting accessories.	m	80		
TOTAL CARRIED FORWARD TO SUMMARY PAGE					

BILL NO. 4: GENERAL LIGHTING AND POWER

NOTE: ALL PRICES BELOW TO INCLUDE REMOVAL AND REPLACEMENT OF EXISTING INSTALLATION

ITEM	DESCRIPTION	UNIT	QNTY	RATE	TENDER AMOUNT
4.0	**CONDUIT** All conduit and accessories to be uPVC when chased into brickwork or laid in concrete. All exposed conduits is to be plain ended galvanised conduit. Galvanized / PVC conduit including all accessories such as bends elbows and saddles. Making good of chasing will be by others.				
4.1	20mm dia PVC				
	Supply	m	568	R 5.83	R 3,311.44
	Install	m	568	R 19.80	R 11,246.40
4.2	25mm dia PVC				
	Supply	m	250	R 8.86	R 2,215.00
	Install	m	250	R 24.20	R 6,050.00
4.3	20mm dia Gal				
	Supply	m	30	R 34.28	R 1,028.40
	Install	m	30	R 22.00	R 660.00
	CONDUIT ACCESSORIES The supply and installation of drawboxes including locknuts, bushes, coverplates, fixing materials when required				
4.4	Lightweight round, deep back or side entry for 20mm dia conduit cast in concrete or roof space, average for 1,2,3 and 4 ways complete with suitable lid				
	Supply	No.	60	R 66.33	R 3,979.80
	Install	No.	60	R 22.11	R 1,326.60
4.5	Lightweight round shallow back or side entry type for 25mm dia conduit on surface in open roof space and built into wall averaged for 1,2,3 and 4 ways complete with suitable lid				
	Supply	No.	10	R 86.78	R 867.80
	Install	No.	10	R 22.11	R 221.10
4.6	Galvanised 100 x 50 x 50 switch boxes for 20mm dia conduit built into brickwork or cast into concrete (coverplates measured elsewhere)				
	Supply	No.	20	R 5.53	R 110.60
	Install	No.	20	R 22.11	R 442.20
4.7	Galvanised 100 x 100 x 50 boxes for 20mm dia conduit built into brickwork or cast into concrete (coverplates measured elsewhere)				
	Supply	No.	20	R 7.74	R 154.80
	Install	No.	20	R 22.11	R 442.20
TOTAL CARRIED FORWARD NEXT PAGE					R 32,056.34

BILL NO. 4: GENERAL LIGHTING AND POWER

NOTE: ALL PRICES BELOW TO INCLUDE REMOVAL AND REPLACEMENT OF EXISTING INSTALLATION

ITEM	DESCRIPTION	UNIT	QNTY	RATE	TENDER AMOUNT
TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE					R 32,056.34
	Equipment and Control Gear				
	Supply, deliver, accept and store the following switches, complete with 100mmx50mmx50mm galvanized box where required, PVC covers and screws and LABELING as specified				
	Fix, connect and commission the following Switches complete with PVC or metal covers and metal screws.				
4.8	16 amp single lever, one way flush mounted rocker				
	rocker type switch with coverplates.				
	Supply	No.	17	R 69.35	R 1,178.95
	Install	No.	17	R 40.00	R 680.00
4.9	16 amp two lever, one way flush mounted rocker				
	rocker type switch with coverplates.				
	Supply	No.	5	R 115.58	R 577.90
	Install	No.	5	R 40.00	R 200.00
4.10	10 amp photo electric cell surface mounted in an empty luminaire				
	Supply	No.	1	R 225.35	R 225.35
	Install	No.	1	R 120.00	R 120.00
4.11	One lever, one way (water tight switch)				
	Supply	No.	3	R 186.93	R 560.79
	Install	No.	3	R 60.30	R 180.90
	POWER SKIRTING				
4.12	Galvanised power skirting with two full size compartments. The top compartment to be used for power cabling.	m	25	R 432.63	R 10,815.75
	Power Skirting Switchgear and Accessories				
4.13	Supply and Install 3-pin socket outlet module	No.	10	R 201.31	R 2,013.10
4.14	Supply and Install Single Dedicated socket outlet	No.	4	R 201.31	R 805.24
4.15	Supply and Install Telephone outlet	No.	5	R 650.00	R 3,250.00
4.16	Supply and Install Data outlet	No.	5	R 650.00	R 3,250.00
4.17	Supply and Install End caps	No.	8	R 96.80	R 774.40
	CONDUCTORS				
	The supply and installation of PVC insulated copper conductors drawn into wireways including lugs and fixing [clips in the case of surfix]				
4.18	1,5mm² PVC black & red				
	Supply	m	800	R 4.47	R 3,576.00
	Install	m	800	R 2.42	R 1,936.00
4.19	2,5mm² PVC black & red				
	Supply	m	1500	R 7.74	R 11,610.00
	Install	m	1500	R 3.50	R 5,250.00
4.20	2,5mm² PVC green/yellow earth wire				
	Supply	m	1200	R 7.74	R 9,288.00
	Install	m	1200	R 3.50	R 4,200.00
4.21	4mm² PVC black & red				
	Supply	m	80	R 35.38	R 2,830.40
	Install	m	80	R 6.63	R 530.40
4.22	4mm² PVC green/yellow earth wire				
	Supply	m	40	R 35.38	R 1,415.20
	Install	m	40	R 6.63	R 265.20
TOTAL CARRIED FORWARD NEXT PAGE					R 97,589.92

BILL NO. 4: GENERAL LIGHTING AND POWER

NOTE: ALL PRICES BELOW TO INCLUDE REMOVAL AND REPLACEMENT OF EXISTING INSTALLATION

ITEM	DESCRIPTION	UNIT	QNTY	RATE	TENDER AMOUNT
TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE					R 97,589.92
	LUMINAIRES				
	Supply, deliver, accept and store the following luminaries, complete with lamps and mounting brackets if required. All luminaires are to be as per the detailed specification (or approved equal).				
4.23	**Type L** - 15W LED Bulkhead luminaire with IP rating of 65. The bulkhead shall be round shaped. See lighting schedule in detailed specification for information				
	Supply	No.	25		
	Install	No.	25		
4.24	**Type B** - (44W LED Surface mounted linear, 1450mm). See lighting schedule in detailed specification for information.				
	Supply	No.	45		
	Install	No.	45		
	SOCKET OUTLETS				
	Supply, deliver, accept and store the following socket outlets, complete with 100mmx100mmx50mm OR 100mmx50mmx50mmgalvanized box where required, PVC covers screws and LABELING as specified including covers and surrounds, mounted to outlet boxes, power skirting, flushed floor ducting and / or ducting				
4.27	16 Amp flush mounted single switched socket outlet				
	Supply	No.	8		
	Install	No.	8		
4.28	16 Amp flush mounted Duo switched socket outlet				
	Supply	No.	20		
	Install	No.	20		
4.29	Surface mounted weather proof 20A switched double pole isolator				
	Supply	No.	5		
	Install	No.	5		
TOTAL CARRIED FORWARD SUMMARY					

REFURBISHMENT OF VIGINIA SHUMANE CLINIC - ELECTRICAL INSTALLATIONS

NB ***All materials must be of South African manufacture. The Electrical Subcontractor must submit proof of unavailability where this requirement cannot be fulfilled.***

BILL NO. 5: SUNDRY ITEMS

ITEM	DESCRIPTION	UNIT	QNTY	RATE	TENDER AMOUNT
5.0	**SUNDRY ITEMS**				
5.1	**Earthing**				
5.1.1	Earthing and bonding of all installations (new and existing) to SABS 0142	No.	1		
5.2	**TESTING**				
5.2.1	Testing of the complete electrical installation in terms of SABS 0142 and provision of Certificates of Compliance	No.	1		
5.3	**AS INSTALLED DRAWINGS**				
	Allow for the marking up of prints for the production of "as installed" records by the Engineer.	No.	1		
5.4	General Repairs and Renovations to existing electrical installations including cleaning and making good inside and outside	No.	1		
5.5	Removal of light existing light fittings	No.	30		
5.6	Removal of light existing switched socket outlets	No.	10		
5.6	Removal of light existing switched lightswitches	No.	20		
5.7	Lightning Protection				
5.7.1	Lightning specialist contractor to check existing installation, repair and provide certificates	Prov Sum	1		
5.6.2	Mark-up for item 5.6.1 above	%	15%		
TOTAL CARRIED FORWARD TO SUMMARY PAGE					

REFURBISHMENT OF VIGINIA SHUMANE CLINIC - ELECTRICAL INSTALLATIONS

PRICE SUMMARY PAGE

BILL NO.	DESCRIPTION	AMOUNT
1	PRELIMINARY & GENERAL	
2	LV DISTRIBUTION BOARDS	
3	CABLING AND CABLE SLEEVES	
4	POWER AND LIGHTING	
5	SUNDRY ITEMS	
	SUBTOTAL	
	10% Contingency	
	Total Excluding VAT	
	15% VAT	
TOTAL PRICE CARRIED FORWARD TO BUILDERS WORK SUMMARY		

DLUKULU CLINIC

MECHANICAL BOQ

AIR CONDITIONING & VENTILATION INSTALLATION

BILL No.1: **DLUKULU CLINIC - AIRCONDITIONING & VENTILATION INSTALLATION**

ITEM NO	Spec. Ref	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	TOTAL AMOUNT
1		**AIR CONDITIONING UNITS**					
1.1		Supply, install, test and commission midwall type air conditioning unit inclusive of outdoor unit, wired remote, piping and fittings. AC2 2.6kW or 9000 Btu/hr heat pump for the new pharmacy bulk store	Unit	1			
1.2		supply, install, test and commission midwall type air conditioning unit inclusive of outdoor unit, wired remote, piping and fittings. 3,5kW or 12000 Btu/hr for the medical waste room					
2		**VENTILATION FANS**					
		Supply, install, test and commission the following ventilations fans:					
2.1		SYSTEM F1					
2.1.1		Fan 1: In-line box supply air box fan complete with downstream and upstream sound attenuators.250 diameter, 300l/s at 150Pa	Item	1			
2.1.2		350x350 hinged weather louvre complete with filter media	no.	1			
2.1.3		DUCTING					
		200X250 90-degree bend	no.	1			
		250 diameter to 200x250 transition piece	no.	1			
		200x250 straight duct	m	8			
		250x250 straight duct	m	4			
		200 diameter round duct	m	2			
		150 diameter round duct	m	2.5			
		200 diameter flexible	m	1.5			
		150 diameter flexible	m	1.5			
2.1.4		GRILLES AND VALVES					
		200 diameter drop in ceiling constant flow diffuser	no.	3			
		125 diameter supply plastic valves	no.	2			
		150x150 supply air grille	no.	1			
2.2		SYSTEM F2					
2.2.1		300 diameter wall mounted fan complete with weather louvre	no.	1			
2.3		SYSTEM F3					
2.3.1		300 diameter wall mounted fan complete with weather louvre	no.	1			
2.3.2		200x200 door grille	no.	1			
2.4		SYSTEM F4					
2.4.1		300 diameter wall mounted fan complete with weather louvre	no.	1			
2.5		SYSTEM F5					
2.5.1		300 diameter wall mounted fan complete with weather louvre	no.	1			
2.6		SYSTEM F6					
2.6.1		300 diameter wall mounted fan complete with weather louvre	no.	1			
2.7		SYSTEM F7					
2.7.1		350x350 hinged weather louvre complete with filter media	no.	1			
2.7.2		In-line duct supply air fan complete with downstream and upstream sound attenuators. 250 diameter, 286l/s at 150Pa		1			
2.7.3		DUCTING					
		250 diameter to 250x250 duct transition piece	no.	1			
		250x250 straight duct	m	4			
		250x250 90-degree bend	no.	1			
2.7.4		GRILLES AND VALVES					
		400x150 extract grille	no.	2			
2.8		SYSTEM F8					
2.8.1		500x500 hinged weather louvre complete with filter media	no.	1			
2.8.2		In-line duct supply air fan complete with downstream and upstream sound attenuators. 450 diameter, 670l/s at 200Pa		1			
2.8.3		DUCTING					
		450 diameter to 400x300 transition piece	m	1			
		400x300 straight duct	m	11			
		400x300 to 200x250 transition piece	no.	1			
		200x250 straight duct	m	19			
		250 diameter round duct	m	4			
		250 diameter flexible	m	3			
		200x200 straight duct	m	8			
		125 diameter straight duct	m	5			
		125 diameter flexible ducting	m	5			
2.8.4		GRILLES AND VALVES					
		250 diameter constant flow diffusers	no.	5			
2.9		SYSTEM F9					
2.9.1		400x400 hinged weather louvre complete with filter media	no.	1			
2.9.2		In-line duct supply air fan complete with downstream and upstream sound attenuators. 400 diameter, 436l/s at 200Pa		1			
2.9.3		DUCTING					
		400 diameter to 300x300 transition piece	m	1			
		300x300 straight duct	m	13			
		300x300 to 250x250 transition piece	no.	1			
		250x250 straight duct	m	6			
		250x250 to 100x200 transition piece	no.	1			
		100x200 straight duct	m	3			
		250 diameter round duct	m	1			
		250 diameter flexible	m	1.5			
		200 diameter round duct	m	3			
		200 diameter flexible	m	1.5			
		150 diameter round duct	m	3			
		150 diameter flexible duct	m	1.5			
2.10		GRILLES AND VALVES					
		250 diameter constant flow drop in ceiling diffuser	no.	2			
		200 diameter constant flow drop in ceiling diffuser	no.	1			
		150 diameter exhust valves	no.	2			
		125 diameter flexible ducting	m	5			
2.8.4		GRILLES AND VALVES					
		250 diameter constant flow diffusers	no.	5			

BILL No. 2: **DLUKULU CLINIC - AIRCONDITIONING & VENTILATION INSTALLATION**

AC gas piping and fittings

ITEM NO	Spec. Ref	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	TOTAL AMOUNT
3.1		For purposes of measuring extra over to piping and fittings measured under the system Bills. Supply and install air conditioning gas piping and fittings for R410A system					
3.1.1	6.1	Grade xxx copper piping Ø6.35mm	m	1			
3.1.2	6.1	Grade xxx copper piping Ø9.52mm	m	1			
3.1.3	6.1	Grade xxx copper piping Ø12.7mm	m	1			
3.1.4	6.1	Grade xxx copper piping Ø15.88mm	m	1			
3.1.5	6.1	Grade xxx copper piping Ø19.05mm	m	1			
3.1.6	6.1	Grade xxx copper piping Ø22.2mm	m	1			
3.1.7	6.1	Grade xxx copper piping Ø28.58mm	m	1			
3.1.8	6.1	Grade xxx copper piping Ø34.93mm	m	1			
3.1.9	6.1	Grade xxx copper piping Ø41.28mm	m	1			
3.2.1	6.1	ø6.35mm	m	1			
3.2.2	6.1	ø9.52mm	m	1			
3.2.3	6.1	ø12.7mm	m	1			
3.2.4	6.1	ø15.88mm	m	1			
3.2.5	6.1	ø19.05mm	m	1			
3.2.6	6.1	ø22.2mm	m	1			
3.2.7	6.1	ø28.58mm	m	1			
3.2.8	6.1	ø34.93mm	m	1			
3.2.9	6.1	ø41.28mm	m	1			
3.3		Supply and install air conditioning gas piping and fittings - elbows					
3.3.1	6.1	ø6.35mm ID	Unit	1			
3.3.2	6.1	ø9.52mm ID	Unit	1			
3.3.3	6.1	ø12.7mm ID	Unit	1			
3.3.4	6.1	ø15.88mm ID	Unit	1			
3.3.5	6.1	ø19.5mm ID	Unit	1			
3.3.6	6.1	ø22.2mm ID	Unit	1			
3.3.7	6.1	ø28.58mm ID	Unit	1			
3.3.8	6.1	ø34.93mm ID	Unit	1			
3.3.9	6.1	ø41.28mm ID	Unit	1			
4.4		Supply and install R410A refrigerant gas	kg	1			
4.5		Supply and install joint kits	Unit	1			
		CARRY FORWARD TO SUMMARY PAGE					

SUMMARY DLUKULU CLINIC - AIRCONDITIONING & VENTILATION INSTALLATION

Item No.	Description			TOTAL
1	Total Bill No.1			
2	Total Bill No. 2 -AC Gas Pipes & Fittings	RATE ONLY		
	SUB-TOTAL			
	SUB-TOTAL			
	VAT 15%			
	CARRIED FORWARD TO BUILDERS WORK SUMMARY			

I, ……..……, on behalf of the Tenderer ……..……..……..……..…….... advise that I have read and priced the installation in accordance with the specifications, drawings and schedules of quantities and that I have satisfied myself that no discrepancies exist between the various

TENDERER'S NAME/STAMP

SIGNATURE

DATE

RAGLAN ROAD CLINIC FIRE DETECTION
SCHEDULE 1 : PRELIMINARY AND GENERAL

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1	**Contractual Items**				
1.1	Provision of Sureties	Sum	1		
1.2	Insurances	Sum	1		
1.3	Third Party Insurance	Sum	1		
1.4	Guarantee of the Works	Sum	1		
1.5	Provide test results	Sum	1		
1.6	Provision of Record Drawings	Sum	1		
1.7	Other (Specify)……	Sum	1		
2	**Fixed Cost Items**				
2.1	Site Establishment/Removal	Sum	1		
2.2	Other (Specify)……				
	(i)…….	Sum			
	(ii)……	Sum			
	(iii)…….	Sum			
	(iv)…….	Sum			
	(v)……..	Sum			
3	**Time Related Items**				
3.1	Supervision	Sum	1		
3.2	Project Administration	Sum	1		
3.3	Other Overheads (Specify)				
	(i)…….	Sum	1		
	(ii)……	Sum	1		
	(iii)…….	Sum	1		
	(iv)…….	Sum	1		
	(v)……..	Sum	1		
4	**Commissioning**				
4.1	Testing and Commissioning	Sum	1		
4.2	O&M Manual	Sum	3		
5	**Training**				
5.1	Training of staff on the operation and daily maintenance of the installed equipment under this contract	Sum	1		
	NOTE P&G costs for time related items shall be based on the Contract period specified in the Form of Tender				
			TOTAL CARRIED FORWARD TO SUMMARY		

RAGLAN ROAD CLINIC
SCHEDULE 2 : FIRE DETECTION

ITEM	SPEC REF	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	TOTAL AMOUNT
2		**Supply, install, commission of analogue addressable fire detection system incl all cabling, devices and connections as listed**					
2.1		Four loop Control Panel (Surface mounted)	No.	1			
2.2		Battery back up systems	No.	1			
2.3		Optical/Smoke detectors	No.	15			
2.4		Heat Detectors	No.	1			
2.5		Detector bases	No.	16			
2.6		Sounder beacons	No.	1			
2.7		Relay - interface	No.	1			
2.8		Telediler system linked to the Fire dept. or police station	Sum	1			
2.9		Red strobe lights	No.	1			
2.10		Break glass Units	No.	5			
2.11		PH30 2 core 1mm Fire cable	m	60			
2.12		25mm galvanised Sprague	m	45			
2.13		Line isolator and base	No.	1			

RAGLAN ROAD CLINIC FIRE DETECTION
SCHEDULE 4 :TEST DAYWORKS

ITEM NO	Spec. Ref	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	TOTAL AMOUNT
4.1		Dayworks for unforeseen items to be approved by the Engineer prior to implementation					
4.1.1	n/a	Qualified Artisan	Hrs	40			
4.1.2	n/a	Semi-skilled labourer	Hrs	80			
4.1.3	n/a	Labourer	Hrs	160			
4.2		Snag, test, Balance, commissioning of the following:					
4.2.1		Fire Dection System	sum	1			
TOTAL CARRIED FORWARD TO SUMMARY							**RATES ONLY**

RAGLAN ROAD CLINIC FIRE DETECTION
SCHEDULE 5 :Cabling

ITEM NO	Spec. Ref	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	TOTAL AMOUNT
5.1		For purposes of measuring extra over to piping and fittings measured under the system Bills.					
5.1.1		25mm galvanised Sprague	m	1			
5.1.2		PH30 2 core 1mm Fire cable	m	1			
		CARRY FORWARD TO SUMMARY PAGE					**RATES ONLY**

RAGLAN ROAD CLINIC FIRE DETECTION
FINAL SUMMARY

ITEM No.	DESCRIPTION		TOTAL
1	PRELIMINARIES AND GENERAL		
2	FIRE DETECTION		
2	TEST DAYWORKS		RATES ONLY
2	FITTINGS		RATES ONLY
	SUBTOTAL		
5	ADD 2.5% CONTIGENCY		
	SUBTOTAL		
6	ADD 15% VAT		
TOTAL FOR THE COMPLETE FIRE DETECTION INSTALLATION TO BE CARRIED FORWARD TO TENDER SUM COMPILATION			

MIDDLE TERRACE CLINIC

MECHANICAL BOQ

AIR CONDITIONING & VENTILATION INSTALLATION

BILL No.1: **MIDDLE TERRACE CLINIC - AIRCONDITIONING & VENTILATION INSTALLATION**

ITEM NO	Spec. Ref	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	TOTAL AMOUNT
1		**AIR CONDITIONING UNITS**					
1.1		Servicing of existing air conditioning unit in the new pharmacy store as per specifications	sum	1			
1.2		Servicing of existing air conditioning unit in the New pharmacy as per specifications	sum	1			
1.3		Servicing of existing air conditioning unit in thedispensary as per specifications	sum	1			
1.4		supply, install, test and commission midwall type air conditioning unit inclusive of outdoor unit, wired remote, piping and fittings. 3,5kW or 12000 Btu/hr for the medical waste room					
2		**VENTILATION FANS**					
		Supply, install, test and commission the following ventilations fans:					
2.1		SYSTEM F1					
2.1.1		Fan 1: In-line box supply air box fan complete with downstream and upstream sound attenuators.200 diameter, 202l/s at 150Pa	Item	1			
2.1.2		300x300 hinged weather louvre complete with filter media	no.	1			
2.1.3		DUCTING					
		200 diameter to 200x200 transition piece	no.	1			
		200x200 straight duct	m	9			
		150 round diameter	m	5			
		150 diameter flexible duct	m	3			
2.1.4		GRILLES AND VALVES					
		150 exhaust air valves	no.	5			
2.2		SYSTEM F2					
2.2.1		150 diameter wall mounted fan complete with weather louvre	no.	1			
2.3		SYSTEM F3					
2.3.1		150 diameter wall mounted fan complete with weather louvre	no.	1			
2.4		SYSTEM F4					
2.4.1		150 diameter wall mounted fan complete with weather louvre	no.	1			
2.5		SYSTEM F5					
2.5.1		150 diameter wall mounted fan complete with weather louvre	no.	1			
2.6		SYSTEM F6					
2.6.1		300x300 hinged weather louvre complete with filter media	no.	1			
2.6.2		In-line duct supply air fan complete with downstream and upstream sound attenuators.250 diameter, 250l/s at 120Pa					
2.6.3		DUCTING					
		250diameter to 200x250 duct	no.	1			
		200x250 straight duct	m	9			
2.6.4		GRILLES AND VALVES					
		400x150 extract grille`	no.	3			
2.7		SYSTEM F1					
2.7.1		In-line box supply air box fan complete with downstream and upstream sound attenuators.450 diameter, 605l/s at 150Pa	Item	1			
2.1.2		500x500 hinged weather louvre complete with filter media	no.	1			
2.1.3		DUCTING					
		450 diameter to 350x300 transition piece	no.	1			
		350x300 straight duct	m	3			
		350x300 to 150x250 transition piece	no.	1			
		150x250 straight duct	m	1			
2.1.4		GRILLES AND VALVES					
		400x200 extract grille	no.	3			

BILL No. 2: **MIDDLE TERRACE CLINIC - AIRCONDITIONING & VENTILATION INSTALLATION**

AC gas piping and fittings

ITEM NO	Spec. Ref	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	TOTAL AMOUNT
3.1		For purposes of measuring extra over to piping and fittings measured under the system Bills. Supply and install air conditioning gas piping and fittings for R410A system					
3.1.1	6.1	Grade xxx copper piping Ø6.35mm	m	1			
3.1.2	6.1	Grade xxx copper piping Ø9.52mm	m	1			
3.1.3	6.1	Grade xxx copper piping Ø12.7mm	m	1			
3.1.4	6.1	Grade xxx copper piping Ø15.88mm	m	1			
3.1.5	6.1	Grade xxx copper piping Ø19.05mm	m	1			
3.1.6	6.1	Grade xxx copper piping Ø22.2mm	m	1			
3.1.7	6.1	Grade xxx copper piping Ø28.58mm	m	1			
3.1.8	6.1	Grade xxx copper piping Ø34.93mm	m	1			
3.1.9	6.1	Grade xxx copper piping Ø41.28mm	m	1			
3.2.1	6.1	ø6.35mm	m	1			
3.2.2	6.1	ø9.52mm	m	1			
3.2.3	6.1	ø12.7mm	m	1			
3.2.4	6.1	ø15.88mm	m	1			
3.2.5	6.1	ø19.05mm	m	1			
3.2.6	6.1	ø22.2mm	m	1			
3.2.7	6.1	ø28.58mm	m	1			
3.2.8	6.1	ø34.93mm	m	1			
3.2.9	6.1	ø41.28mm	m	1			
3.3		Supply and install air conditioning gas piping and fittings - elbows					
3.3.1	6.1	ø6.35mm ID	Unit	1			
3.3.2	6.1	ø9.52mm ID	Unit	1			
3.3.3	6.1	ø12.7mm ID	Unit	1			
3.3.4	6.1	ø15.88mm ID	Unit	1			
3.3.5	6.1	ø19.5mm ID	Unit	1			
3.3.6	6.1	ø22.2mm ID	Unit	1			
3.3.7	6.1	ø28.58mm ID	Unit	1			
3.3.8	6.1	ø34.93mm ID	Unit	1			
3.3.9	6.1	ø41.28mm ID	Unit	1			
4.4		Supply and install R410A refrigerant gas	kg	1			
4.5		Supply and install joint kits	Unit	1			
		CARRY FORWARD TO SUMMARY PAGE					

SUMMARY MIDDLE TERRACE CLINIC - AIRCONDITIONING & VENTILATION INSTALLATION

Item No.	Description			TOTAL
1	Total Bill No.1			
2	Total Bill No. 2 -AC Gas Pipes & Fittings	RATE ONLY		
	SUB-TOTAL			
	SUB-TOTAL			
	VAT 15%			
	CARRIED FORWARD TO BUILDERS WORK SUMMARY			

I, ……..……, on behalf of the Tenderer ……..……..……..……..……..…….... advise that I have read and priced the installation in accordance with the specifications, drawings and schedules of quantities and that I have satisfied myself that no discrepancies exist between the various

TENDERER'S NAME/STAMP

SIGNATURE

DATE

VIRGINIA SISHUMANE CLINIC

MECHANICAL BOQ

AIR CONDITIONING & VENTILATION INSTALLATION

BILL No.1: **VIRGINIA SISHUMANE CLINIC - AIRCONDITIONING & VENTILATION INSTALLATION**

ITEM NO	Spec. Ref	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	TOTAL AMOUNT
1		**AIR CONDITIONING UNITS**					
1.1		Servicing of existing air conditioning unit in the staff room as per specifications	sum	1			
1.2		Servicing of existing air conditioning unit in the New pharmacy as per specifications	sum	1			
1.3		Servicing of existing air conditioning unit in the pharmacy store room as per specifications	sum	1			
1.4		supply, install, test and commission midwall type air conditioning unit inclusive of outdoor unit, wired remote, piping and fittings. 3,5kW or 12000 Btu/hr for the medical waste room	no.	1			
2		**VENTILATION FANS**					
		Supply, install, test and commission the following ventilations fans:					
2.1		SYSTEM F1					
2.1.1		Fan 1: In-line box supply air box fan complete with downstream and upstream sound attenuators.355 diameter, 684l/s at 150Pa	Item	1			
2.1.2		500x500 hinged weather louvre complete with filter media	no.	1			
2.1.3		DUCTING					
		355 diameter to 400x300 transition piece	no.	1			
		400x300 straight duct	m	4			
		400x300 to 100x200 transition piece	no.	1			
		100x200 straight duct	m	7			
2.1.4		GRILLES AND VALVES					
		300x150 extract air grille	no.	4			
2.2		SYSTEM F2					
2.2.1		150 diameter wall mounted fan complete with weather louvre	no.	1			
2.3		SYSTEM F3					
2.3.1		150 diameter wall mounted fan complete with weather louvre	no.	1			
2.4		SYSTEM F4					
2.4.1		150 diameter wall mounted fan complete with weather louvre	no.	1			
2.5		SYSTEM F5					
2.5.1		150 diameter wall mounted fan complete with weather louvre	no.	1			
2.6		SYSTEM F6					
2.6.1		150 diameter wall mounted fan complete with weather louvre	no.	1			
2.7		SYSTEM F7					
2.7.1		150 diameter wall mounted fan complete with weather louvre	no.	1			
2.8		SYSTEM F8					
2.8.1		150 diameter wall mounted fan complete with weather louvre	no.	1			
2.7		SYSTEM F9					
2.7.1		500x500 hinged weather louvre complete with filter media	no.	1			
2.7.2		In-line duct supply air fan complete with downstream and upstream sound attenuators. 400 diameter, 719l/s at 150Pa		1			
2.7.3		DUCTING					
		400 diameter to 400x350 duct	no.	1			
		400x350 straight duct	m	27			
		100x200 straight duct	m	10			
		100x200 90-degree bend	no.	1			
		250 round duct	m	8			
		150 round duct	m	3			
		250 diameter flexible	m	3			
		150 diameter flexible	m	3			
2.7.4		GRILLES AND VALVES					
		250 diameter constant flow diffusers	no.	4			
		150 diameter exhaust valve	no.	5			
2.9.8		250x250 to 100x200 transition piece	no.	1			
2.9.9		100x200 straight duct	m	3			
2.9.10		250 diameter round duct	m	1			
2.9.11		250 diameter flexible	m	1.5			
2.9.12		200 diameter round duct	m	3			
2.9.13		200 diameter flexible	m	1.5			
2.9.14		150 diameter round duct	m	3			
2.9.15		150 diameter flexible duct	m	1.5			
2.10		GRILLES AND VALVES					
2.10.1		250 diameter constant flow drop in ceiling diffuser	no.	2			
2.10.2		200 diameter constant flow drop in ceiling diffuser	no.	1			
2.10.3		150 diameter exhust valves	no.	2			
		125 diameter flexible ducting	m	5			

BILL No. 2: **VIRGINIA SHUMANE CLINIC - AIRCONDITIONING & VENTILATION INSTALLATION**

AC gas piping and fittings

ITEM NO	Spec. Ref	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	TOTAL AMOUNT
3.1		For purposes of measuring extra over to piping and fittings measured under the system Bills. Supply and install air conditioning gas piping and fittings for R410A system					
3.1.1	6.1	Grade xxx copper piping Ø6.35mm	m	1			
3.1.2	6.1	Grade xxx copper piping Ø9.52mm	m	1			
3.1.3	6.1	Grade xxx copper piping Ø12.7mm	m	1			
3.1.4	6.1	Grade xxx copper piping Ø15.88mm	m	1			
3.1.5	6.1	Grade xxx copper piping Ø19.05mm	m	1			
3.1.6	6.1	Grade xxx copper piping Ø22.2mm	m	1			
3.1.7	6.1	Grade xxx copper piping Ø28.58mm	m	1			
3.1.8	6.1	Grade xxx copper piping Ø34.93mm	m	1			
3.1.9	6.1	Grade xxx copper piping Ø41.28mm	m	1			
3.2.1	6.1	ø6.35mm	m	1			
3.2.2	6.1	ø9.52mm	m	1			
3.2.3	6.1	ø12.7mm	m	1			
3.2.4	6.1	ø15.88mm	m	1			
3.2.5	6.1	ø19.05mm	m	1			
3.2.6	6.1	ø22.2mm	m	1			
3.2.7	6.1	ø28.58mm	m	1			
3.2.8	6.1	ø34.93mm	m	1			
3.2.9	6.1	ø41.28mm	m	1			
3.3		Supply and install air conditioning gas piping and fittings - elbows					
3.3.1	6.1	ø6.35mm ID	Unit	1			
3.3.2	6.1	ø9.52mm ID	Unit	1			
3.3.3	6.1	ø12.7mm ID	Unit	1			
3.3.4	6.1	ø15.88mm ID	Unit	1			
3.3.5	6.1	ø19.5mm ID	Unit	1			
3.3.6	6.1	ø22.2mm ID	Unit	1			
3.3.7	6.1	ø28.58mm ID	Unit	1			
3.3.8	6.1	ø34.93mm ID	Unit	1			
3.3.9	6.1	ø41.28mm ID	Unit	1			
4.4		Supply and install R410A refrigerant gas	kg	1			
4.5		Supply and install joint kits	Unit	1			
		CARRY FORWARD TO SUMMARY PAGE					

SUMMARY VIRGINIA SHUMANE CLINIC - AIRCONDITIONING & VENTILATION INSTALLATION

Item No.	Description			TOTAL
1	Total Bill No.1			
2	Total Bill No. 2 -AC Gas Pipes & Fittings	RATE ONLY		
	SUB-TOTAL			
	SUB-TOTAL			
	VAT 15%			
	CARRIED FORWARD TO BUILDERS WORK SUMMARY			

I, ……..……, on behalf of the Tenderer ……..……..……..……..……..... advise that I have read and priced the installation in accordance with the specifications, drawings and schedules of quantities and that I have satisfied myself that no discrepancies exist between the various

TENDERER'S NAME/STAMP

SIGNATURE

DATE

Province of the
EASTERN CAPE
HEALTH

PART C3 - SCOPE OF WORKS

5.1 C3 SCOPE OF WORK

Bid Description:	**Upgrading & Additions to NG Dlukulu, Middle Terrace, V Shumane and Raglan Road (vacant building) Clinics**
Tender No:	**SCMU3-23/24-0619-HO**

C3.1

DESCRIPTION OF THE WORKS:

1. General:
   - The project comprises of the renovation, upgrade and expansion of 4 clinics in the Makhanda Municipal District viz Raglan Road (Vacant Building), V. Shumane, Middle Terrace and N.G. Dlukulu Clinics.
   - The work will be phased and will embrace temporary decanting and sectional completions.
   - Decanting will necessitate permanent renovation and upgrade of vacant buildings at Raglan Road Clinic. On completion of this renovation, V. Shumane Clinic will decant to this facility.
   - Details scope of work descriptions are enclosed hereafter under item 4 below.

2. Decanting and Sectional Completion:
   - Raglan Road and V. Shumane Clinics are deemed to be one (1) contractual sub section. (Sub Section no. 1)
     - The Raglan Road Clinic upgrade of the vacant buildings will form phase one (1) of the sub section.
     - Sectional completion no. one (1) will be the completion of the renovation of the vacant buildings at Raglan Road.
     - V. Shumane Clinic will decant and locate temporarily to Raglan Road on completion of the vacant building renovation at Raglan Road to allow the renovation of V. Shumane to proceed.
     - Patients and Staff from V. Shumane Clinic will decant and locate temporarily to Raglan Road Clinic.
     - There will be unhindered contractor access to V. Shumane Clinic during the construction period for renovations and upgrade this facility.
     - Sectional Completion no. two (2) will be the completion of V. Shumane Clinic upgrade and renovation.
     - V. Shumane Clinic will be recommissioned and re-opened.
     - V. Shumane Clinic staff will relocate to V. Shumane clinic and patients will be re-directed accordingly.
     - The upgraded buildings at Raglan Road will be utilised as an expanded facility for the existing Raglan Road Clinic.
   - N.G. Dlukulu Clinic is deemed to be one (1) contractual sub section (Sub Section no.2)
     - The renovation and upgrade of N.G Dlukulu Clinic will be in two (2) phases
     - Phase 1 will be the construction of the new extension.
     - Phase 2 will be the renovation and upgrade of the existing clinic.
     - The clinic will remain operational throughout the construction period.
     - Sectional completion no. one (1) will realise the completion and commissioning of the new works.
     - The clinic staff will take occupation of the new works and vacate the existing clinic.

- Sectional completion no. two (2) will realise the completion and commissioning of the renovation of the existing clinic.
- The clinic staff will be granted occupation of the clinic as a whole and patients directed accordingly.

- Middle Terrace Clinic upgrade is deemed to be one contractual sub section (sub section no. 3).
  - Staff and patients from Middle Terrace will decant to vacant facilities at Settlers CHC. No renovation or upgrade is required at Settlers CHC for this decanting.
  - Patients will be temporarily directed to Settlers CHC.
  - There will be unhindered contractor access to Middle Terrace Clinic during the construction period for renovations and upgrade.
  - Sectional completion no. three (3) will be the completion of Middle Terrace clinic which will then be recommissioned and re-opened.

3. Projected contractual time frames:
   - The contract start date will be the date of the ECDOH letter of award of the building contract.
   - The construction period will commence with the site hand over / site possession to the contractor.
   - The construction period is 16 calendar months, inclusive of the annual builders shut down.
   - Sectional practical completion dates are included under each of the phases of sub section 1, sub section 2 and sub section 3.

Sub Section one (1)		: Raglan Road Clinic and V. Shumane Clinic
Phase 1:	Raglan Road Clinic	: 7 months construction period
		: Sectional practical completion
		:Decanting V. Shumane to Raglan Road Clinic: 1 Month
Phase 2:	V. Shumane Clinic	: 7 months construction period
		: Sectional practical completion
		: Decanting Raglan Road to V. Shumane Clinic: 1 Month
Sub Section two (2)		: N.G. Dlukulu Clinic
Phase 1:	New Work	: 7 months construction period
		: Sectional practical completion
	Decanting	: 1 Month
Phase 2:	Refurbishment	: 7 months construction period
		: Sectional practical completion
	Decanting	: 1 Month
Sub Section Three (3)		: Midddle Terrace Clinic
		: Decanting to Settlers CHC: 1 month
		: 7 months construction period
		: Decanting and occupation of newly commissioned facility: 1 month
Sub Sections 1, 2 and 3		: Final completion to be 3 months (90 calendar days) after each practical completion.

- Sub Sections 1, 2 and 3 are to run concurrently.
- There will always be 3 site establishments for the duration of the contract viz:
  - Raglan Road / V. Shumane

- N. G. Dlukulu phases 1 and 2.
- Middle Terrace
- All site establishments to locate on the active sites per sub section.

- Annual Builders Shutdown is deemed to be included in the 16 months construction period.

4. Detailed Scope of Works:

4.1 Raglan Road Clinic

- **Overview**

  - The existing clinic is operational in separate structures on the same site.
  - This scope of work is limited to the refurbishment of existing vacant buildings.
  - The existing clinic will remain operational throughout the renovation process.

- Building Fabrick and Scope of Work
  - Demolish existing outbuilding toilet block.
  - Remove and replace roof coverings. All buildings
  - Repair existing roof trusses. All buildings
  - Replace existing roof trusses (refer to roof plan). Some buildings
  - Replace all rainwater goods.
  - Replace all doors and ironmongery.
  - Repair and refurbish existing windows.
  - Replace all electrical circuitry and fittings.
  - Install new windows as per architects drawing.
  - Replace existing vinyl tile floors. Making good substrate
  - Remove carpet floor finishes, substrate repair and install new vinyl floor finish.
  - Repair / reinstate skirtings.
  - Replace ceilings (± 50%) as per architects' drawings.
  - Repair plaster finishes internally and externally.
  - Build new covered walkways and external waiting areas.
  - Build new staff ablution facilities.
  - Build new public ablution facilities.
  - Build new waste management facilities.
  - Complete redecoration internally and externally.
  - Site works and drainage.

4.2 V. Shumane Clinic

- **Overview**

  - There is considerable outstanding maintenance.
  - Some construction techniques implemented in the construction of the clinic are not of the highest integrity. This has resulted in cracking in walls.
  - There is no administrative management office.
  - There is no dedicated archive / records storage is too small.
  - The existing reception is too small reinforcing the need for a separate admin office, enlarged reception and separate archive room.
  - Public waiting area is congested. Overflow onto adjacent enclosed balcony is ineffective.
  - The treatment room doubles as an administrative office and consulting room for visiting specialists. The treatment room has no stretcher access.
  - The pharmacy is too small and non-compliant. Furthermore, recent renovation attempts are incomplete.
    - The waiting area is compromised & congested.
    - There is no formal reception. This function is accommodated within the general waiting area and entrance passage.

  - The Pharmacy dispensary fronts onto the clinic entrance passage. People waiting for medication cause congestion in the waiting area and at reception.
  - Ideally the pharmacy waiting should be an independent function.
  - There is no services area at the clinic to formally accommodate the pharmacy deliveries.
  - Privacy of patients at the dispensary is compromised.
- Medical and general waste storage is non-compliant in galvanised cages externally. Medical waste is collected monthly by an external service provider. General waste is collected weekly. All waste should be secure and under cover out of the elements. Medical waste, general waste and garden waste storage facilities are inadequate
- There is no back up emergency water supply.
- There is no standby generator.
- Natural ventilation is inadequate.
- Air Conditioning is inadequate.
- There is insufficient parking.
- Stackable concrete retaining wall is poorly constructed and has failed and needs to be demolished and rebuilt.
- There is no sputum booth.
- Patient ablutions, disabled ablution and staff ablutions are in poor condition and should be refurbished completely with new sanitary fittings and new finishes.
- There is no sluice room.
- Signage is in poor condition. A consolidated signage policy is required. Additional notice boards and white boards are required.
- Security fence at perimeter of site is inadequate and is in poor condition.
- There is no guardhouse.
- Storm water management from rear of site inadequate.

- **Scope of Work**

  - An expansion in a Northerly direction to provide a new entrance will enable the following:
    - Reconfiguration of the pharmacy
    - Provision of a dedicated pharmacy waiting area
    - Privacy at pharmacy dispensary
    - Enlarged public waiting (single space)
    - Enlarged admin and archive storage
    - Provision of dedicated admin office

  - Internal reconfiguration is proposed to embrace the following:
    - Subdivide store room to create staff ablution accessible from staff room.
    - Convert existing staff ablution into a dedicated sluice room
    - Demolish shower at observation room and reconfigure the space as TB waiting room.
    - Provide new sputum booth accessed from consulting room.
    - Pharmacy and dispensary reconfiguration made possible by the provision of a new entrance.
    - Waiting area enlargement is facilitated by demolition of a wall and expansion onto the enclosed verandah. A new structural beam will be required.
    - Wasted space on the enclosed verandah is reconfigured to accommodate a new admin office and an expanded archive

  - Site works upgrade to include:
    - Additional parking. Parking to be expanded into space occupied by vegetable garden and the area to the north of the entrance.
    - Provision of a delivery bay.

- Paved pedestrian access across pavement.
- Upgraded perimeter security fencing.
- Storm water management upgraded.
- Repair and reinstatement of stackable concrete retaining wall.
- Provision of new refuse facilities:
  - Medical Waste
  - Garden Waste
  - General Waste

- Building Fabric:
  - Remove asbestos roof, fascia & rainwater goods.
  - Remove existing knock up ceilings.
  - Remove all ceiling mounted electrical reticulation and light fittings.
  - Remove all floor finishes.
  - Remove existing door frames, doors and ironmongery & install new.
  - Replace all joinery generally.
  - Install new plaster on new brick walls.
  - Reinstate / repair existing plaster as required.
  - Redecorate generally. Primer coats and finishing coats paint.
  - Install new sheet metal roof in continuous lengths on lambda board insulation in compliance with SANS 10400 XA regulations.
  - Install new suspended ceilings.
  - Install new recessed ceiling mounted light fittings.
  - Install new vinyl sheeting floor finish on new self-levelling screed.
  - Install new bump rails in public spaces.
  - Install new eaves closing.
  - Install new fascia boards & rainwater goods.

- Specialist sub-contracts will be required for the following:
  - Electrical installation including standby generator.
  - Fire detection.
  - HVAC installation.
  - I.T. reticulation.

4.3 Middle Terrace Clinic

- **Overview**

- There is considerable outstanding maintenance.
- There is no administrative office. Currently clinic administration functions are performed in the emergency treatment room and reception office causing congestion.
- Reception office is small. In addition, there is no archive & records storage. Archive / records are located in filing cabinets which are insufficient. Larch archives / records to be located adjacent to reception.
- Currently there are 4 consulting rooms. The need is for 4 consulting rooms based on the number of professional nurses at the clinic. No adjustment required.
- There is no area located for patient observation / recording of patient vitals. An area with privacy adjacent to reception / waiting area is required.
- Pharmacy waiting area is inadequate. The waiting area is shared with general patient waiting causing congestion. Ideally the Pharmacy waiting should be an independent function.
- The pharmacy is non-compliant and too small. In addition, the methodology of receiving drugs / medicines through the public waiting area is unacceptable.

- All sanitary ware is in poor condition and requires replacement & upgrading
- The access ramps for disabled people are too steel and non-compliant:
- External ramp at Middle Drift Road is approximately 1:6.
- Internal ramp is approximately 1:9.
- Site security is compromised by the low level of specification of perimeter fence and gates.
- Building security is compromised by the low level of specification of security gates at front and rear entrances.
- There is no back up emergency water supply.
- There is no stand by generator.
- Ventilation at the waiting area is inadequate.
- Medical and general waste storage is non-compliant.
    - General waste is stored in a lockable external galvanised container. This container is exposed to the elements.
    - General waste is collected weekly.
    - Medical waste is stored in a lockable external galvanised container. This container is exposed to the elements.
    - Medical waste is collected monthly by an external service provider.
    - All waste should be secure under cover away from the public.
- Building functionality is compromised by poor clinical flow. The clinic is always busy and congested which exacerbates the poor clinical flow.
- The location of the pharmacy requires consideration. The pharmacy is spatially non-compliant but the sharing of pharmacy waiting with the general waiting exacerbates the congestion problem at the clinic entrance.
- Relocating the pharmacy will offer the opportunity to redesign the pharmacy in accordance with accepted norms, improve clinical flow and help ease congestion.

- **Scope of work:**
- New facilities to be built:
    - New gatehouse and access ramps that are compliant.
    - New off-street parking.
    - New public ablutions.
    - New sputum booth.
    - New refuse facilities:
        - Garden refuse.
        - General refuse.
        - Medical waste.
    - Construction of new sluice room.
    - Construction of a new store.
    - Construction of new connecting ramp between upper and lower wings with non-slip floor finish, bump rail & hand rail.
    - New windows as required.
    - New bulk water storage system.
- Internal reconfiguration is proposed to embrace the following:
    - Demolition of partitions and construction of new internal partition walls at reception / admin office to create an enlarged reception, admin office and new archive.
    - Internal reconfiguration of partition walls to create new mother & child consulting room & waiting area.
    - Installation of 1 ½ leaf stretcher door at repositioned treatment room adjacent to entrance foyer.
    - Demolition of existing ablutions.
    - Creation of new chronic waiting area in the zone where ablutions are demolished.
    - Reconfiguration of passage / ramp walls at pharmacy bulk store, counselling room and dispensary.
    - Demolition of lower entrance & conversion to new cleaner's store.

- New brick partition wall to facilitate positioning of staff room adjacent to ablutions.
- Installation of new fire escape adjacent to staff room.

- Site works upgrade to include:
- Provision of a paved delivery bay & road access.
- Paved pedestrian access across pavement and at pedestrian walkway on site.
- Upgraded perimeter security fencing.
- Storm water management upgraded generally.
- Provision of new refuse facilities:
    - Medical Waste
    - Garden Waste
    - General Waste

- Building Fabric:
  - Remove asbestos roof, fascia & rainwater goods.
  - Remove existing knock up ceilings.
  - Remove all ceiling mounted electrical reticulation and light fittings.
  - Remove all floor finishes.
  - Remove existing door frames, doors and ironmongery & install new.
  - Replace all joinery generally.
  - Install new plaster on new brick walls.
  - Reinstate / repair existing plaster as required.
  - Redecorate generally. Primer coats and finishing coats paint.
  - Install new sheet metal roof in continuous lengths on lambda board insulation in compliance with SANS 10400 XA regulations.
  - Install new suspended ceilings.
  - Install new recessed ceiling mounted light fittings.
  - Install new vinyl sheeting floor finish on new self-levelling screed.
  - Install new bump rails in public spaces.
  - Install new eaves closing.
  - Install new fascia boards & rainwater goods.
  - Install new windows as required.

Specialist sub-contracts will be required for the following:

- Electrical installation including standby generator.
- Fire detection.
- HVAC installation.
- I.T. reticulation.

4.4 N.G. Dlukulu Clinic:

- **Overview**

- There is considerable outstanding maintenance.
- There is no administrative management office.
- There is no dedicated archive / records storage. The archive should be immediately adjacent to reception.
- The existing reception is very small reinforcing the need for a separate admin office and separate archive room.
- There is no consulting too for visiting specialist Doctor, Dentist, Psychologist, Physiotherapist and Dietician who visit and consult on a weekly or bi-weekly basis.
- There is no balustrade at the entrance ramp and no steps nor balustrade at the entrance portico. Access ramp is non-compliant (too steep).

- The treatment room acts as aN administrative office, consulting room for visiting specialists and as a treatment room. The treatment room is poorly located and has no stretcher access.
- There is no area for patient observation and measuring / recording of patient vitals.
- The pharmacy is too small and non-compliant:
  - The waiting area is compromised and congested.
  - There is no formal reception. This function is accommodated within the waiting area causing congestion.
  - The Pharmacy dispensary is adjacent to the reception desk. People waiting for medication cause congestion in the waiting area and at reception.
  - The pharmacy waiting area should be an independent function.
  - There is no services area at the clinic to formally accommodate the pharmacy deliveries.
- Public waiting area is congested.
- Medical and general waste storage is non-compliant in galvanised cages externally. Medical waste is collected monthly by an external service provider. General waste is collected weekly. All waste should be secure and under cover out of the elements.
- Medical waste, general waste and garden waste storage facilities are inadequate and non-compliant.
- There is no backup emergency water supply.
- There is no standby generator.
- Natural ventilation is inadequate.
- Air-conditioning is inadequate.
- External site works are informal and under structured. Pedestrian pathways and access roads become mud baths and are impassable in the wet and are dusty in dry weather.
- The staff room is big enough but poorly located between consulting rooms. Joinery in staff rooms is in poor condition. Staff ablution is detached from the staff room.
- There is no disabled ablution.
- There is no sputum booth.
- There is no counselling room.
- Patient ablutions and staff ablutions are in poor condition and should be replaced completely.
- There is no sluice room.
- Signage is in poor condition. A consolidated signage policy is required. Additional notice boards and white boards are required.
- Security fence at perimeter of site is inadequate and is in poor condition.

- **Scope of Work:**

PHASE I:

Phase I will include the construction of all new facilities as follows:

- New pharmacy, dispensary & pharmacy waiting.
- New chronic consulting room & waiting area.
- New public ablutions including facilities for disabled people.
- New external veranda (extension of existing).
- New entrance lobby & circulation space.
- New stand-alone refuse facility for medical waste, garden refuse & general waste,
- New acute consulting room & waiting area.
- New mother & child consulting room & waiting area.
- New sputum booth.
- New gate house.
- Site works will include new storm-water management & discharge, connection to municipal sewer, water supply & storage upgrade, new paving & kerbing at access roads, parking pedestrian walkways and new perimeter fencing.

PHASE II:

Phase II will include the internal reconfiguration of the existing building and will embrace the following:

- Demolish an internal dividing wall to create a new emergency treatment room wit new stretcher door.

- Existing staff room to be subdivided to create new admin office and new archive.
- Demolish existing ablutions and gable wall to create new mother & child waiting area with access to external play area.
- Demolish existing ablutions to create new patient observation and vitals area.
- Existing treatment room to be converted to a staff room with dedicated ablution.
- Demolish dry wall store to enlarge public waiting area.
- Install new internal brickwork partitions to create a new consulting room for specialist doctors.
- Install new internal brickwork partitions to create a new store room.
- Create new sluice room in reconfigured space.
- Removal of existing asbestos roof and replacement with new sheet metal roofing and insulation layer in accordance with SANS XA requirements.
- Replacement of fascia's & rainwater goods.
- Install new bump rails.
- Replace all joinery.
- Reinstate plaster where required.
- Redecorate generally.
- Removal & replacement of internal finishes inclusive of vinyl floor coverings and knock-up ceilings.
- Replacement of mild steel windows with powder coat aluminium windows.
- General replacement of internal doors & ironmongery.
- Install new signage.

Specialist sub-contracts will be required for the following:

- Electrical installation including standby generator.
- Fire detection.
- HVAC installation.
- I.T. reticulation.

5. SMME Sub Contract Requirement:

Tenderers to take note that 30% of the value of the building works, exclusive of specialist works, are to be contracted to SMME sub-contractors. Provisional sums are provided for this purpose and tenders will be called for after the award for these SMME packages on a selected sub-contractor basis.

Tenderers are to price all associated administrative, supervisory, mentoring cost, profit and attendance in the relevant sections of the preliminaries as no claims for additional costs will be entertained.

The 30% is made up of all building works excluding the following:

- Provisional sums
- Contingencies

These are monetary provisions only and the use, value and payment thereof are subject to adjustment based on actual costs through contractually approved variation orders calculated in terms of the prescribed contractual derivatives.

The SMME sub contract packages involve the following works:

- New works:
  Gate House comprising of concrete strip footings, brickwork superstructure, steel sheeted roof and associated plumbing works.
  Refuse room comprising of concrete strip footings, brickwork superstructure, steel sheeted roof and associated plumbing works.

- Alterations:
  Removal of existing works (doors, roof sheeting, timber roof members, ceilings, floor sheeting or tiles, sanitaryware)
  New floor screeds, plastering and associated remedial works, painting, sanitary fittings and associated plumbing works.
- Ceilings:
  Ceilings to be attached to timber roof structure and comprise of gypsum ceiling boards secured to 38x50mm SAP brandering at maximum 400mm centres, at joints and walls. Ceilings are inclusive of cover strips and skimmed finish with Rhinolite skimming plaster.
- Tiling:
  Wall tiling comprising of 600x600x10mm thick porcelain tiles fixed to plaster with approved adhesive, 3mm continuous jointing in both directions complete with dove grey or white grout.
  Floor tiling comprising of 600x600x10mm thick full body porcelain tiles fixed to screed layer (elsewhere) with approved adhesive, 3mm continuous jointing and / or movement joints in both directions complete with dove grey grout
- Paint work:
  General painting to new and existing walls. Surfaces to be correctly prepared and repaired according to architects or engineers specification inclusive of cleaning down. Blistered or peeling paint shall be completely removed, surfaces rubbed down to a smooth tolerance, cracks opened and filled with suitable filler and finished smooth.
- Internal Fencing:
  PVC coated high security fencing inclusive of all Grade 304 stainless steel bolts, nuts and washers. Fixators to be Grade 304 stainless steel and PVC coated. Fence system to be maintenance free and shall carry a minimum 10 year insurance underwritten anticorrosion guarantee for material and workmanship issued for original panels, posts and fixtures.

6. Civil Scope of Works:

Notwithstanding the inferred Civil and Structural scope above, a summary of the required civil and structural scope for each clinic is as follows:

6.1 Raglan Road Clinic

Civil:

- Partial demolition of existing to make way for new civil infrastructure.
- New sewer reticulation system to tie into existing.
- New concrete block paving with related layer works.
- New stormwater management system to tie into existing.
- Repositioning, relocating and reinstating existing infrastructure such as gates and signage.

Structural:

- New strip foundations to extensions and enclosures within existing clinic, out-buildings and new pad foundations to overhead canopies.
- New steel posts with purpose made brackets on brick columns for overhead canopy and on strip foundations for sputum booth.
- Demolition and reinstatement of surface bed with adequate joints in areas as indicated by architect and where demolished to make way for new foundations.
- Remove and replace all roof coverings

- Repair identified existing roof trusses and replace some of the roof trusses completely.

6.2 V. Shumane Clinic

Civil:

- New sewer reticulation system to tie into existing.
- New concrete block paved parking area with related layer works.
- New stormwater management system to tie into existing.
- Repositioning, relocating and reinstating existing infrastructure such as gates and signage.
- Reconstruction and restacking (where practicable) of existing concrete block retaining wall to match existing.
- Partial demolition of existing to make way for new civil infrastructure.
- Follow up with wayleave applications to municipality and other stakeholders if required.
- Provision of a new 9480 litre elevated water tank.

Structural:

- New strip foundations to extensions and enclosures within existing clinic, out-buildings and new pad foundations to overhead canopies.
- New steel posts with purpose made brackets on brick columns for overhead canopy and on strip foundations for sputum booth.
- Demolition and reinstatement of surface bed with adequate joints in areas as indicated by architect and where demolished to make way for new foundations.

6.3 Middle Terrace Clinic

Civil:

- New sewer reticulation system to tie into existing and the abandoning of some existing.
- New concrete edge beam and interlocking concrete block paved parking area with related layerworks.
- New pedestrian ramps to tie into existing.
- New stormwater management system to tie into existing.
- New surface bed ramps and landings with adequate joints adjacent to new brick retaining walls.
- Repositioning, relocating and reinstating existing infrastructure such as gates and signage.
- Demolition of existing to make way for new civil infrastructure.
- Follow up with wayleave applications to municipality and other stakeholders if required.
- Provision of a new 13 008 litre elevated water tank.

Structural:

- New strip foundations to extensions and enclosures within existing clinic and out-buildings.
- New steel posts with purpose made brackets on strip foundations for sputum booth.
- Demolition and reinstatement of surface bed with adequate joints in areas as indicated by architect and where demolished to make way for new foundations.

6.4 N.G Dlukulu Clinic

Civil:

- New sewer reticulation system to tie into existing.
- Abandoned Septic tank to be filled as per engineers' specification.
- New concrete block paved parking area with related layer works.
- New pedestrian ramps to tie into existing.
- New stormwater management system to tie into existing.
- New surface bed ramps and landings with adequate joints adjacent to new brick retaining walls.
- Repositioning, relocating and reinstating existing infrastructure such as gates, fences, rainwater tanks, storage cages, tool sheds and signage.
- Demolition of existing to make way for new civil infrastructure.
- Follow up with wayleave applications to municipality and other stakeholders if required.
- Provision of a new 11 904 litre elevated water tank.

Structural:

- New strip foundations to extensions and enclosures within existing clinic and out-buildings.
- New steel posts with purpose made brackets on brick columns for overhead canopy and on strip foundations for sputum booth.
- Demolition and reinstatement of surface bed with adequate joints in areas as indicated by architect and where demolished to make way for new foundations.

7. SPECIALIST SERVICES

7.1 Electrical Sub Contract

7.1.1 Raglan Road Clinic electrical scope of works:

- Electrical
  - Installation of new LED luminaries to new extensions and existing building
  - Installation of new flush wall mounted light switches
  - Installation bulkhead fittings or lamps
  - Installation of new examination lights
  - Installation of new switched socket outlets
  - Installation of power skirting with socket, Telephone and Data outlets
  - Installation of Isolators for Air Conditioners and Fans
  - Replacement of faulty circuit breakers (if any)
  - Conduit and wiring
  - Repairs to Lightning Protection System if required
  - Earthing and bonding
  - Issuing of test records and Certificate of Compliance
  - Installation of standby generator
  - Installation of new Distribution Board
  - Upgrade of existing Distribution Board
  - IT wiring to new data points from existing data switches

7.1.2 Middle Terrace Clinic electrical scope of works:

- Electrical

  - Installation of new LED luminaries to new extensions and existing building
  - Installation of new flush wall mounted light switches to new extensions and existing building
  - Installation bulkhead fittings
  - Installation of new switched socket outlets
  - Installation of power skirting with socket, Telephone and Data outlets
  - Installation of Isolators for Air Conditioners, Fans and water tank pump
  - Replacement of faulty circuit breakers (if any)
  - Conduit and wiring
  - Repairs to Lightning Protection System if required
  - Earthing and bonding
  - Issuing of test records and Certificate of Compliance
  - Installation of standby generator
  - Repositioning and upgrade of existing Distribution Board
  - Installation of new Distribution Board
  - IT wiring to new data points from existing data switches

7.1.3 V Shumane Clinic electrical scope of works:

- Electrical

  - Installation of new LED luminaries to new extensions and existing building
  - Installation of new flush wall mounted light switches to new extensions and existing building
  - Installation bulkhead fittings
  - Installation of new switched socket outlets
  - Installation of power skirting with socket, Telephone and Data outlets
  - Installation of Isolators for Air Conditioners, Fans and water tank pump
  - Replacement of faulty circuit breakers (if any)
  - Conduit and wiring
  - Repairs to Lightning Protection System if required
  - Earthing and bonding
  - Issuing of test records and Certificate of Compliance
  - Installation of standby generator
  - Installation of new Distribution Board
  - Upgrade of existing Distribution Board
  - IT wiring to new data points from existing data switches

7.1.4 N.G. Dlukulu Clinic electrical scope of works:

- Electrical

  - Installation of new LED luminaries to new extensions and existing building
  - Installation of new flush wall mounted light switches to new extensions and existing building
  - Installation bulkhead fittings
  - Installation of new switched socket outlets
  - Installation of power skirting with socket, Telephone and Data outlets
  - Installation of Isolators for Air Conditioners, Fans and water tank pump
  - Replacement of faulty circuit breakers (if any)
  - Conduit and wiring
  - Repairs to Lightning Protection System if required
  - Earthing and bonding
  - Issuing of test records and Certificate of Compliance
  - Installation of standby generator
  - Installation of new Distribution Boards
  - Upgrade of existing Distribution Board
  - IT wiring to new data points from existing data switches

7.2 Mechanical Sub Contract

7.2.1 Raglan Road Clinic

- Fire protection that comprises evacuation signage, hose reels and dry chemical powder fire extinguishers.
- Mechanical ventilation that comprises of extraction in the ablutions, stores,waiting area, sluice
- Mechanical ventilation that comprises of fresh air in pharmacy, new dispensary and phamarcy store, staff room and waiting area
- Air conditioning units to the pharmacy, new dispensary, and new pharmacy
- Fire Detection installation for early evacuation and protection of property.

7.2.2 V Shumane Clinic

- Fire protection that comprises evacuation signage, hose reels and dry chemical powder fire extinguishers.
- Mechanical ventilation that comprises of extraction in the ablutions, stores,waiting area, sluice
- Mechanical ventilation that comprises of fresh air in pharmacy, new dispensary and phamarcy store, staff room and waiting area
- Air conditioning units to the pharmacy, new dispensary, and new pharmacy
- Fire Detection installation for early evacuation and protection of property.

7.2.3 Middle Terrace Clinic

- Fire protection that comprises evacuation signage, hosereels and dry chemical powder fire extinguishers.
- Mechanical ventilation that comprises of extraction in the ablutions, stores, waiting areas, new sluice
- Mechanical ventilation that comprises of fresh air in new pharmacy store, pharmacy and new dispensary
- Air conditioning units to the new pharmacy store, pharmacy, and new dispensary
- Fire Detection installation for early evacuation and protection of property.

7.2.4 N.G Dlukulu Clinic:

- Fire protection that comprises evacuation signage, hosereels and dry chemical powder fire extinguishers.
- Mechanical ventilation that comprises of extraction in the ablutions, waiting and sub waiting areas, sluice
- Mechanical ventilation that comprises of fresh air in waiting areas and sub waiting areas, pharmacy waiting, new staff kitchen, pharmacy bulk store, pharmacy dispensary
- Air conditioning units to the pharmacy, new dispensary, and new pharmacy
- Fire Detection installation for early evacuation and protection of property.

8 Occupational Health and Safety

The occupational Health & Safety Act, 85 of 1993 with all its Regulations with specific emphasis and reference to Construction Regulations, Asbestos Abatement Regulations and relevant Standards must be fully complied with. Failure to comply will lead penalties and/or breach of contract. The following are the key health and safety elements that should be taken into consideration on this contract.

8.1 Raglan Road Clinic

- Asbestos Cement Roof Sheeting;
- Asbestos Cement Soffits;

- Asbestos Cement Ceiling Panels;
- Asbestos Fascia Boards;
- Contractor to strictly adhere to the separation of the site from the existing functional clinic as directed by the client and as per the attached relevant hoarding drawing;
- Clear hoarding between the construction area and the operational clinic to be erected prior to commencement of any construction activities;
- Approved Health & Safety Measures to be strictly adhered to when connecting the new sewer lines into the existing live lines.

8.2 V. Shumane Clinic

- Asbestos Roof Sheeting;
- Entire site access to be controlled by the appointed contractor;
- Approved Health & Safety Measures to be strictly adhered to when connecting new sewer lines into the existing live lines.

8.3 Middle Terrace Clinic

- Asbestos Cement Roof Sheeting;
- Asbestos Cement Gutters;
- Asbestos Down Pipes;
- Asbestos Cement Plumbing Pipes; only Asbestos Registered contractor may remove these pipes.
- Entire site access to be controlled by the appointed contractor;
- Approved Health & Safety Measures to be strictly adhered to when connecting the new sewer lines into the existing live lines.

8.4 N.G.Dlukulu Clinic

- Asbestos Cement Roof Sheeting;
- Asbestos Cement Soffits;
- Asbestos Cement Ceiling Panels;
- Asbestos Fascia Boards;
- Contractor to strictly adhere to the phasing plan as directed by the client and as per the attached relevant phasing drawing;
- Clear hoarding between the construction area and the operational clinic to be erected prior to commencement of any construction activities;
- Approved Health & Safety Measures to be strictly adhered to when connecting the new sewer lines into the existing live lines.

C3.2 RESTRICTIONS AND CONSTRAINTS

- The completion of the project is urgent and work shall be executed during normal working hours i.e. 6h30 till 16h00 daily including weekends. Work required to be executed outside of these hours must be arranged with the Facilities Manager and Clinic Manager, in advance.
- Noise must be kept to a minimum and within acceptable levels at all times.
- All shut-offs and tie/cut-ins to existing services must be arranged in advance with the Facilities Manager and a methodology with appropriate mitigation of risks must be prepared by the contractor and submitted to the relevant Professional discipline in advance, for approval.
- Dust emanating from the work site must be controlled at all times.

C3.3 OPERATIONAL PROTOCOLS

- Security is a priority, and the site shall be kept safe at all times.
- The approved Health and Safety plan shall be adhered to at all times
- All staff members of the contractor shall wear PPE at all times
- All staff members of the contractor shall be specifically identifiable at all times and to this end shall wear a predetermined coloured overall to be able to enter and work on the site.
- Regular meetings, the frequency of which is to be determined, shall be held with the management of the clinic to always ensure a cohesive spirit of co-operation
- The successful contractor must take into account that other contractors may be busy with construction in close proximity to the works and allowance must be made in the contractor's submission to accommodate these parties.

C3.4 ACCESS AND SITE ESTABLISHMENT

- Prospective bidders are to fully familiarize themselves with the sites and access to the sites and restricted area for site establishment ***NB There shall be two site establishments between the various clinics for the duration of the project***. Allowance for temporary construction access etc. shall be deemed to be included in contractor's price/bid. Prospective bidders are to familiarize themselves with the site as no additional costs shall be entertained.
- No Contractor's representatives or workers are allowed to sleep at establishment area or with in clinic complex.
- The Contractors are required to price for establishment, de-establishment and re-instatement in the Preliminaries section of the Bills of Quantities.

C3.5 ACCEPTANCE OF TENDERS

- The Employer is not bound to accept the lowest, or any tender, or any portion of any tender

C3.6 MINIMUM WAGE

- The Contractor shall adhere to "The national minimum wage determined by the Minister in accordance with the National Minimum Wage Act (NMWA)", and yearly pronounced increases for duration of contract.

C3.7 TEMPORARY WORKS

- All temporary work to comply with the Construction Health and safety Act (Act 85 of 1993) and its regulations.

C3.8 DESIGN DETAIL

- Refer to consultants detail design drawings.

C3.9 DESIGN BRIEF

N/A

Province of the EASTERN CAPE HEALTH

LIST OF DRAWINGS FOR WHICH REFERENCES ARE MADE IN THE BILLS OF QUANTITIES

Contract drawings – Architectural	Number	Revision	Date
Middle Terrace Clinic: Site Plan	MDA290C-200	0	09-11-2023
Floor Plan	MDA290C-201	0	
Sections (x2)	MDA290C-202 & 203	0	
Elevations (x2)	MDA290C-204 & 205	0	
Window Schedules	MDA290C	0	
Door Schedules	MDA290C	0	
Gate Schedules	MDA29C	0	
Virginia Shumane Clinic: Site Plan	MDA290E-200	0	09-11-2023
Floor Plan	MDA290E-201	0	
Sections	MDA290E-202	1	
Elevations	MDA290E-203	1	
Refuse Yard	MDA290E-204	1	
Window Schedules	MDA290E	0	
Door Schedules	MDA290E	0	
Gate Schedules	MDA290E	0	
NG Dlukulu Clinic: Site Plan	MDA290D-200	0	09-11-2023
Floor Plan	MDA290D-201	0	
Sections	MDA290D-202	0	
Elevations	MDA290D-203	0	
Guard House & Refuse Yard	MDA290D-204	0	
Window Schedules	MDA290D	0	
Door Schedules	MDA290D	0	
Gate Schedules	MDA290D	0	
Raglan Road Clinic: Site Plan	MDA290H-200	0	15-01-2024
Ablution block	MDA290H-201	0	
Building A – Working Drawing	MDA290H-202	0	
Building B – Floor Plan	MDA290H-203	0	
Building B – Sections & Elev.	MDA290H-204	0	
Building C – Working Drawing	MDA290H-205	0	
Refuse Yard & Temp. Abl. – Working Drawing	MDA290H-206	0	
Window Schedules	MDA290H	0	
Door Schedules	MDA290H	0	
Gate Schedules	MDA290H	0	

Contract drawings – Electrical	Number	Revision	Date
NG Dlukula Clinic – Lighting Layout	1710PE-T-E-101	00	05/11/2023

NG Dlukula Clinic – Power Layout	1710PE-T-E-102	00	05/11/2023
Virginia Shumane Clinic - Lighting and Power Layout	1710PE-T-E-101	00	05/11/2023
Middle Terrace Clinic – Lighting Layout	1710PE-T-E-101	00	05/11/2023
Middle Terrace Clinic – Power Layout	1710PE-T-E-102	00	05/11/2023
Raglan Road Clinic – Lighting Layout	1710PE-T-E-101	00	12/12/2023
Raglan Road Clinic – Power Layout	1710PE-T-E-102	00	12/12/2023

Contract drawings – Mechanical	Number	Revision	Date
NG Dlukulu Clinic	1574-76-FD-01	P0	Ground Floor - Fire Detection Layout
	1574-76-FP-01	P0	Ground Floor - Fire Protection Layout
	1574-76-FP-02	P0	Ground Floor - Fire Plan Layout
	1574-76-V-001	P0	Ground Floor - Ventilation Layout
V Shumane Clinic	1574-77-FD-01	P0	Ground Floor - Fire Detection Layout
	1574-77-FP-01	P0	Ground Floor - Fire Protection Layout
	1574-77-FP-02	P0	Ground Floor - Fire Plan Layout
	1574-77-V-01	P0	Ground Floor - Ventilation Layout
Middle Terrace Clinic	1574-79-FD-01	P0	Ground Floor - Fire Detection Layout
	1574-79-FP-01	P0	Ground Floor - Fire Protection Layout
	1574-79-V-01	P0	Ground Floor - Ventilation Layout

Contract drawings – Middle Terrace Clinic	Number	Revision	Date
General Layout Plan	1574-79-GEN-001	P0	Sep 2023
Engineering Survey Layout Plan	1574-79-GEN-002	P0	Sep 2023

Civils Demolition Layout Plan	1574-79-GEN-003	P0	Sep 2023
Proposed Parking Area and General Civil Works Layout Plan	1574-79-RDS-010	P0	Sep 2023
Proposed Parking Area Sections and Setting Out Information	1574-79-RDS-011	P0	Sep 2023
Typical Parking Area Details	1574-79-RDS-012	P0	Sep 2023
Proposed Sewer Layout Plan	1574-79-SEW-020	P0	Sep 2023
Proposed Sewer Longitudinal Sections and Setting Out Information	1574-79-SEW-021	P0	Sep 2023
Typical Sewer Details	1574-79-SEW-022	P0	Sep 2023
Foundation Layout	1574-79-S-001	0	Feb 2019
Typical Details	1574-79-S-002	0	Feb 2019

Contract drawings – NG Dlukulu Clinic	Number	Revision	Date
General Layout Plan	1574-76-GEN-001	P1	Sep 2023
General Layout Plan	1574-76-GEN-001	P2	Sep 2023
Engineering Survey Layout Plan	1574-76-GEN-002	P0	Sep 2023
Civils Demolition Layout Plan	1574-76-GEN-003	P0	Sep 2023
Parking Layout Plan	1574-76-RDS-010	P1	Sep 2023
Parking Layout Plan	1574-76-RDS-010	P2	Sep 2023
Parking Area Cross-Sections & Setting Out Information	1574-76-RDS-011	P1	Sep 2023
Typical Parking Lot Details	1574-76-RDS-012	P0	Sep 2023
Sewer Layout Plan	1574-76-SEW-020	P0	Sep 2023
Sewer Layout Plan	1574-76-SEW-020	P1	Sep 2023
Sewer Longitudinal Sections	1574-76-SEW-021	P1	Sep 2023
Sewer Longitudinal Sections	1574-76-SEW-021	P2	Sep 2023

Sewer Longitudinal Sections	1574-76-SEW-022	P0	Sep 2023
Typical Sewer Details	1574-76-SEW-023	P0	Sep 2023
Foundation Layout	1574-76-S-001	0	Feb 2019
Typical Details	1574-76-S-002	0	Feb 2019

Contract drawings – V Shumane Clinic	Number	Revision	Date
General Layout Plan	1574-77-GEN-001	0	Sep 2023
Engineering Survey Layout Plan	1574-77-GEN-002	0	Sep 2023
Civils Demolition Layout Plan	1574-77-GEN-003	0	Sep 2023
Proposed Parking Area Layout Plan	1574-77-RDS-010	0	Sep 2023
Parking Area Sections and Setting Out Information	1574-77-RDS-011	0	Sep 2023
Typical Parking Area Details	1574-77-RDS-012	0	Sep 2023
Proposed Sewer Layout Plan and Setting Out Information	1574-77-SEW-020	0	Sep 2023
Typical Sewer Details	1574-77-SEW-021	0	Sep 2023
Proposed Stormwater Layout Plan	1574-77-STW-030	0	Sep 2023
Proposed Stormwater Sections, Details and Setting Out Information	1574-77-STW-031	0	Sep 2023
Foundation Layout	1574-77-S-001	0	Feb 2019
Typical Details	1574-77-S-002	0	Feb 2019

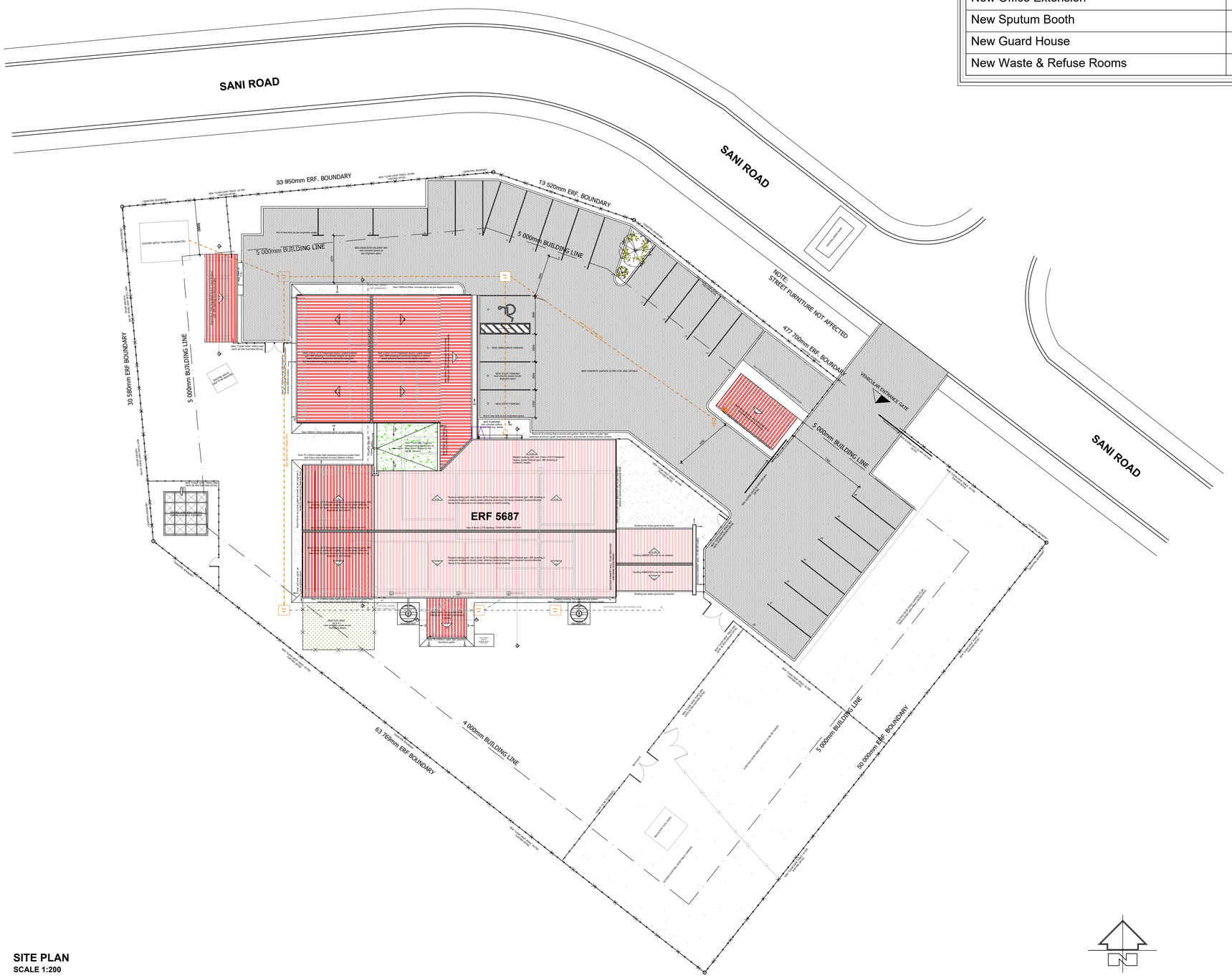
Contract drawings – V Shumane Clinic	Number	Revision	Date
Description	**Drawing No.**	**Revision**	**Issue**
General Layout Plan	1574-XX-GEN-001	T0	Jan 2024
Demolition Layout Plan	1574-XX-GEN-002	T0	Jan 2024
Proposed Layout Plan	1574-XX-GEN-003	T0	Jan 2024
Typical Parking Detail	1574-XX-RDS-010	T0	Jan 2024
Typical Sewer Detail	1574-XX-SEW-010	T0	Jan 2024

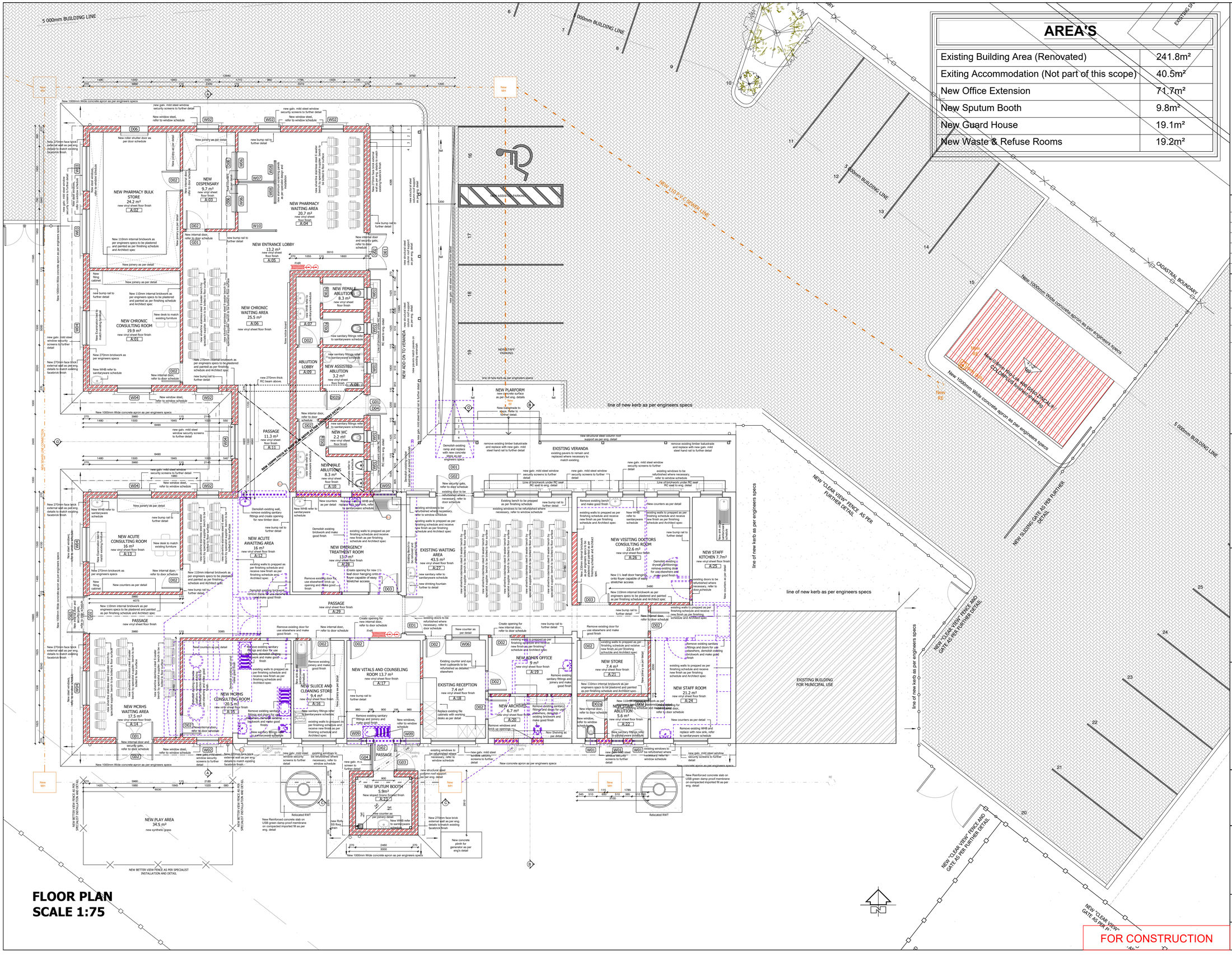
Province of the
EASTERN CAPE
HEALTH

C3.10 DRAWINGS

AREA'S

Existing Building Area (Renovated)	241.8m²
Exiting Accommodation (Not part of this scope)	40.5m²
New Office Extension	71.7m²
New Sputum Booth	9.8m²
New Guard House	19.1m²
New Waste & Refuse Rooms	19.2m²


SANI ROAD
SANI ROAD
SANI ROAD
33 950mm ERF. BOUNDARY
13 520mm ERF. BOUNDARY
477 700mm ERF. BOUNDARY
30 580mm ERF BOUNDARY
63 769mm ERF BOUNDARY
50 930mm ERF. BOUNDARY
5 000mm BUILDING LINE
5 000mm BUILDING LINE
5 000mm BUILDING LINE
5 000mm BUILDING LINE
4 000mm BUILDING LINE
5 080mm BUILDING LINE
ERF 5687
NOTE:
STREET FURNITURE NOT AFFECTED
VEHICULAR ENTRANCE GATE
EXISTING SEPTIC TANK TO BE INSPECTED
NEW CONCRETE SURFACE SLOPE 1:50 CIVIL DETAIL
NEW 1500Lt/day BIOLOGICAL WASTE WATER TREATMENT PLANT



FLOOR PLAN
SCALE 1:75

AREA'S

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Exiting Accommodation (Not part of this scope)	40.5m²
New Office Extension	71.7m²
New Sputum Booth	9.8m²
New Guard House	19.1m²
New Waste & Refuse Rooms	19.2m²

GENERAL NOTES:

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Sewer connections to comply with municipal regulations by a Land Surveyor

No	AMENDMENTS	DATE
01	Concrete roof to Ablution facilities, parking layout and building line.	OCT 2023
0	ISSUED FOR CONSTRUCTION	FEB 2019

SURVEYED	NA	
DRAWN	IOI	FEB 2019
DESIGNED	DBA	FEB 2019
CHECKED	DBA	FEB 2019
APPROVED	PR REGISTRATION NO. 3128	

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PROJECT TITLE

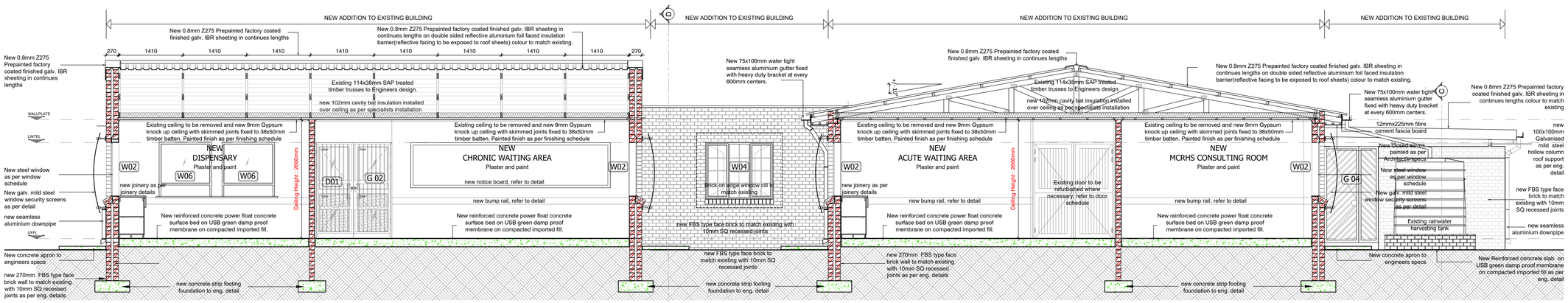
ERF 5687
NG DLUKULU CLINIC
(GRAHAMSTOWN)

DRAWING TITLE

FLOOR PLAN

SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 02	A1
DRAWING No.		REVISION
MDA290D-201		0

FOR CONSTRUCTION



SECTION A-A
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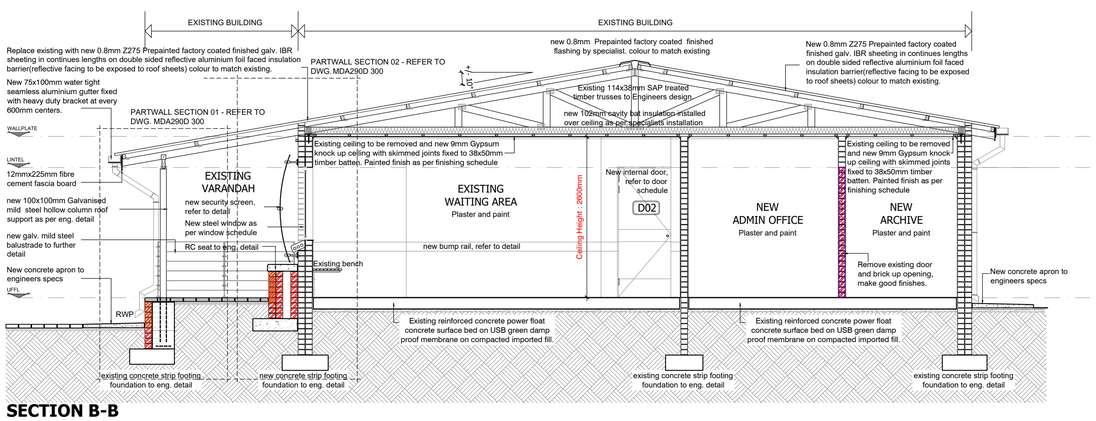

SECTION B-B
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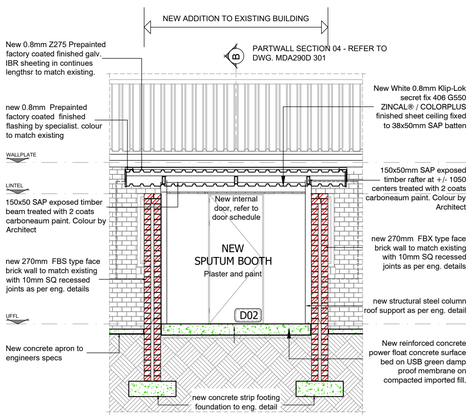

SECTION C-C
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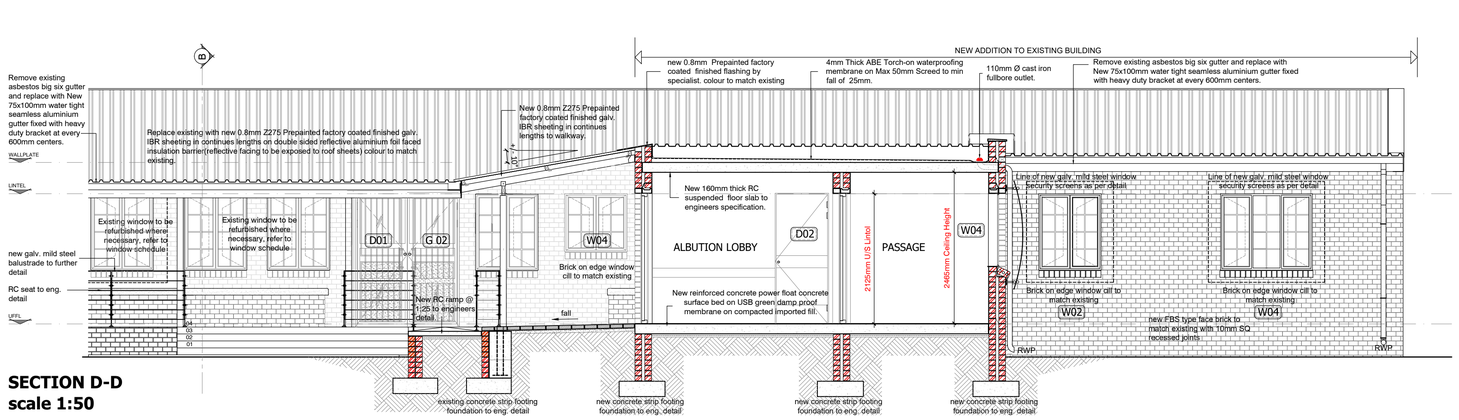

SECTION D-D
scale 1:50

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Sewer connections to comply with municipal regulations by a Land Surveyor

No	AMENDMENTS	DATE

SURVEYED	NA	
DRAWN	IOI	JUNE 2018
DESIGNED	DBA	JUNE 2018
CHECKED	DBA	JUNE 2018
APPROVED		

ARCHITECT

Y:\opperation tools\PE Title Blocks\MDA PE.jpg

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18 Park Lane, Central, Port Elizabeth
Duncan Angus
SACAP REGISTRATION NO.
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CLIENT

SAKHIWO HEALTH SOLUTIONS

On behalf of Eastern Cape Department of Health

Appointed agent:
Duncan Angus

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PROJECT TITLE

NG DLUKULU CLINIC (GRAHAMSTOWN)

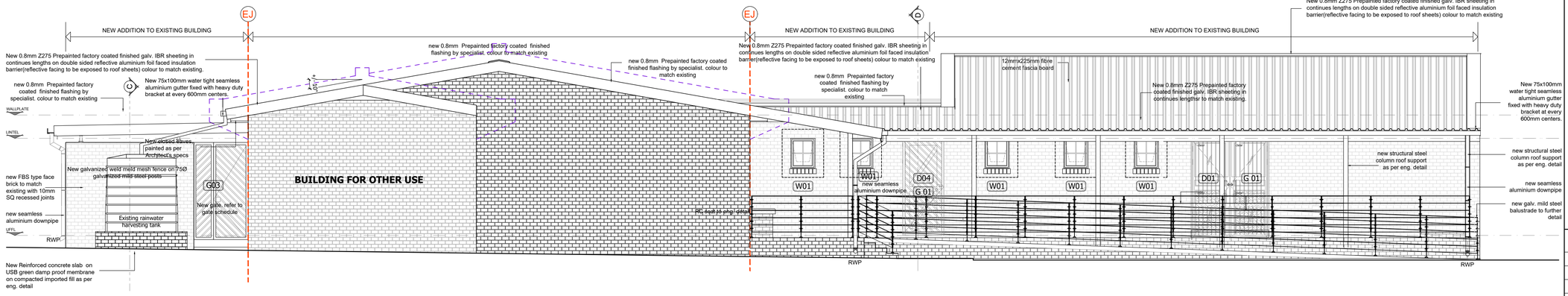
DRAWING TITLE

SECTIONS

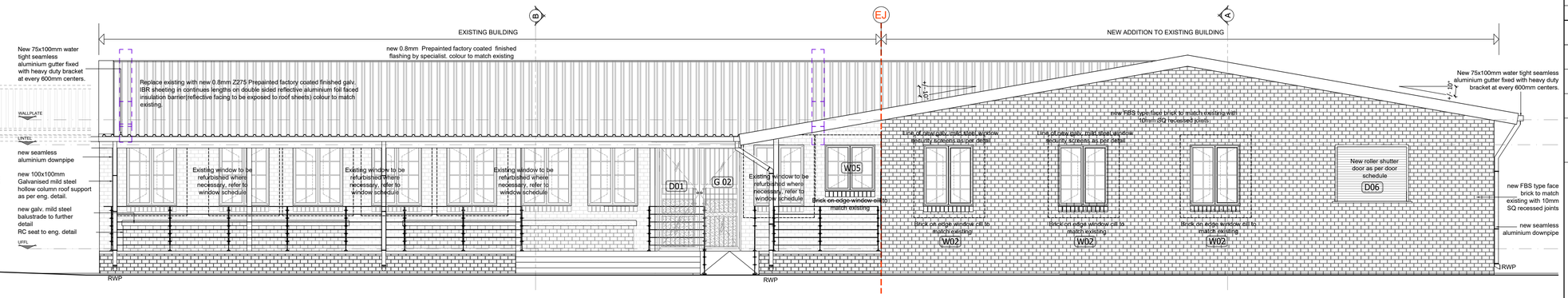
SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 3 OF 4 SHEETS	A1

DRAWING No.	REVISION
MDA290D-202	0

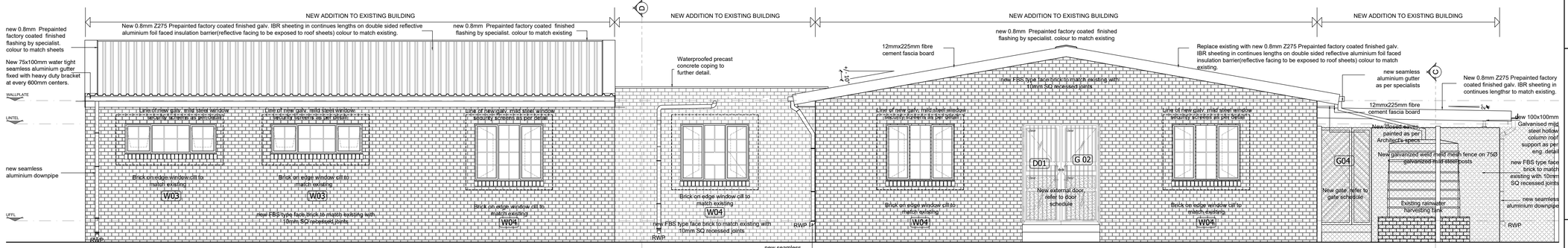
FOR INFORMATION



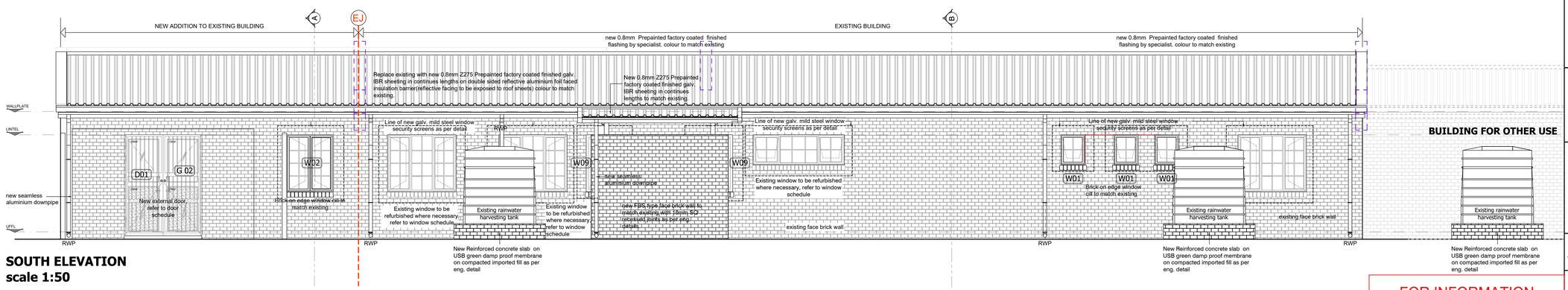
EAST ELEVATION
scale 1:50



NORTH ELEVATION
scale 1:50



WEST ELEVATION
scale 1:50



SOUTH ELEVATION
scale 1:50

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No	AMENDMENTS	DATE

SURVEYED	NA	
DRAWN	IOI	JUNE 2018
DESIGNED	DBA	JUNE 2018
CHECKED	DBA	JUNE 2018
APPROVED		

ARCHITECT

Y:\opperation tools\PE Title Blocks\MDA PE.jpg

MDA Architects cc
Company registration:
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SACAP REGISTRATION NO.
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On behalf of Eastern Cape Department of Health

Appointed agent:
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PROJECT TITLE

NG DLUKULU CLINIC (GRAHAMSTOWN)

DRAWING TITLE

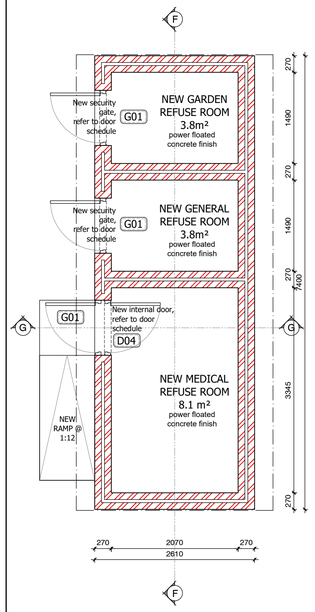
ELEVATIONS

SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 4 OF 4 SHEETS	A1

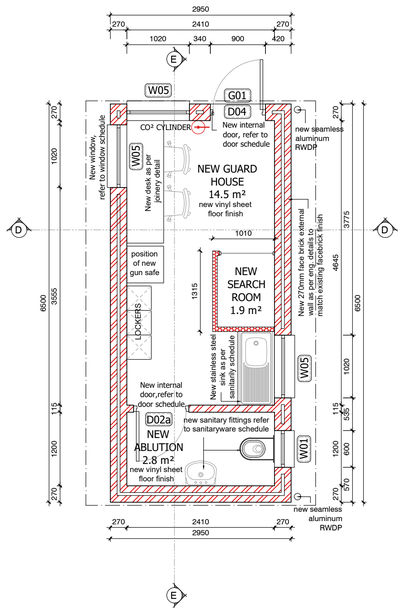
DRAWING No. MDA290D-203

REVISION 0

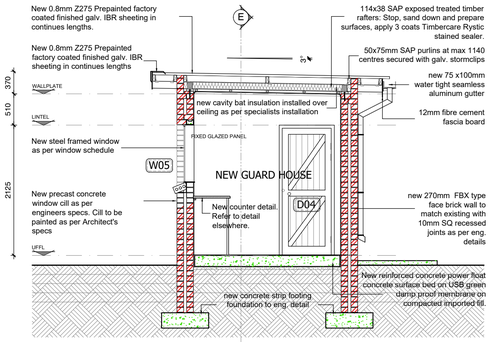
FOR INFORMATION



FLOOR PLAN _ REFUSE YARD
scale 1:50



FLOOR PLAN _ GUARD HOUSE
scale 1:50



SECTION D-D _ GUARD HOUSE
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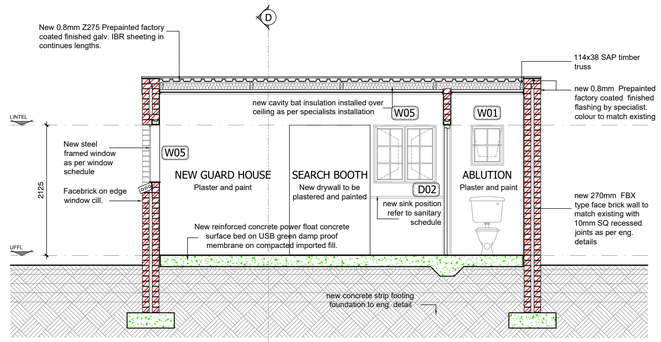

SECTION E-E _ GUARD HOUSE
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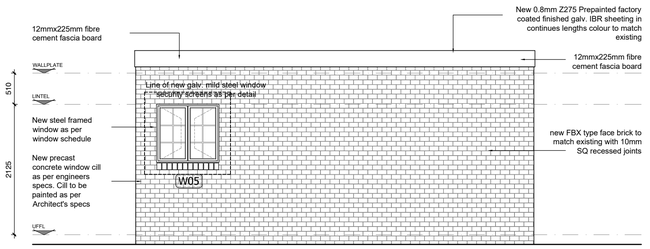
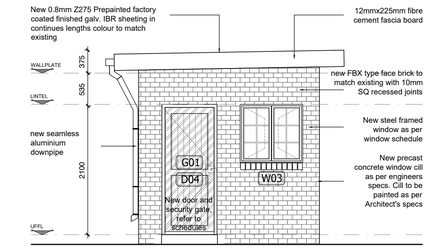


NORTH WEST ELEVATION - GUARD HOUSE
scale 1:75



NORTH EAST ELEVATION - GUARD HOUSE
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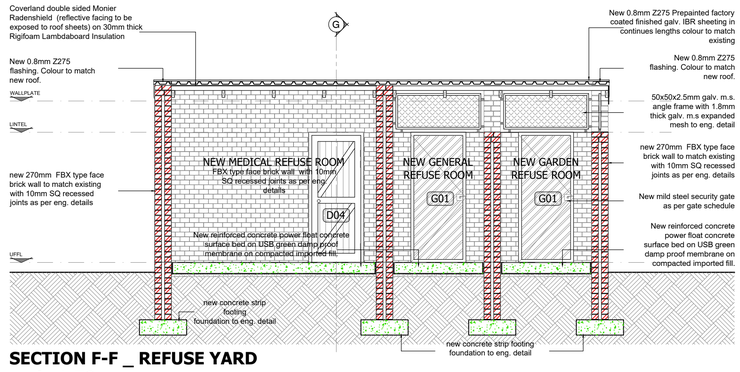

SECTION F-F _ REFUSE YARD
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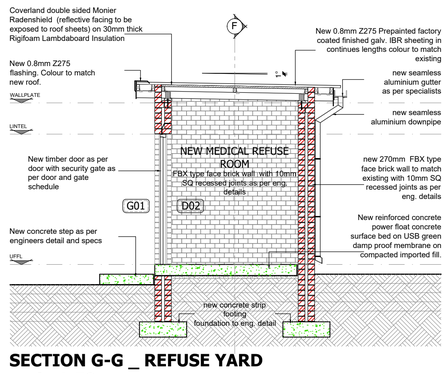

SECTION G-G _ REFUSE YARD
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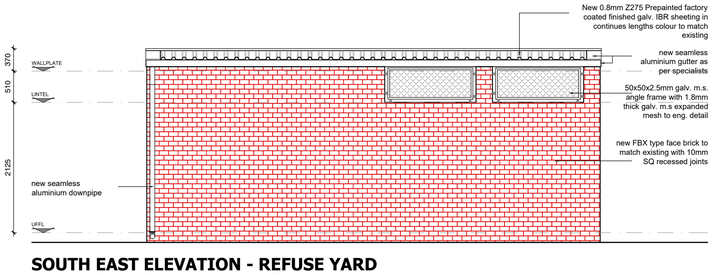
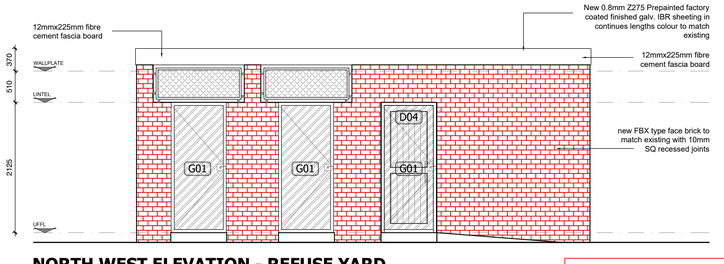


SOUTH EAST ELEVATION - REFUSE YARD
scale 1:75



NORTH WEST ELEVATION - REFUSE YARD
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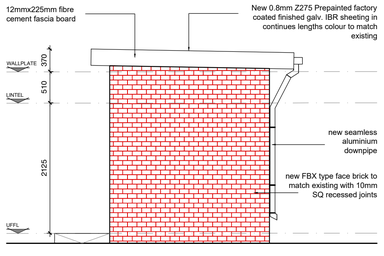

NORTH WEST ELEVATION - REFUSE YARD
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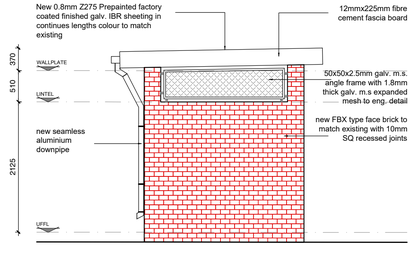

NORTH EAST ELEVATION - REFUSE YARD
scale 1:75

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No	AMENDMENTS	DATE

SURVEYED	NA	
DRAWN	IOI	JUNE 2018
DESIGNED	DBA	JUNE 2018
CHECKED	DBA	JUNE 2018
APPROVED		

ARCHITECT

Y:\opperation tools\PE Title Blocks\MDA PE.jpg

MDA Architects cc
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SACAP REGISTRATION NO.
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CLIENT

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On behalf of Eastern Cape Department of Health

Appointed agent:
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PROVINCE OF THE EASTERN CAPE
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PROJECT TITLE

NG DLUKULU CLINIC (GRAHAMSTOWN)

DRAWING TITLE

Guard House and Refuse Yard

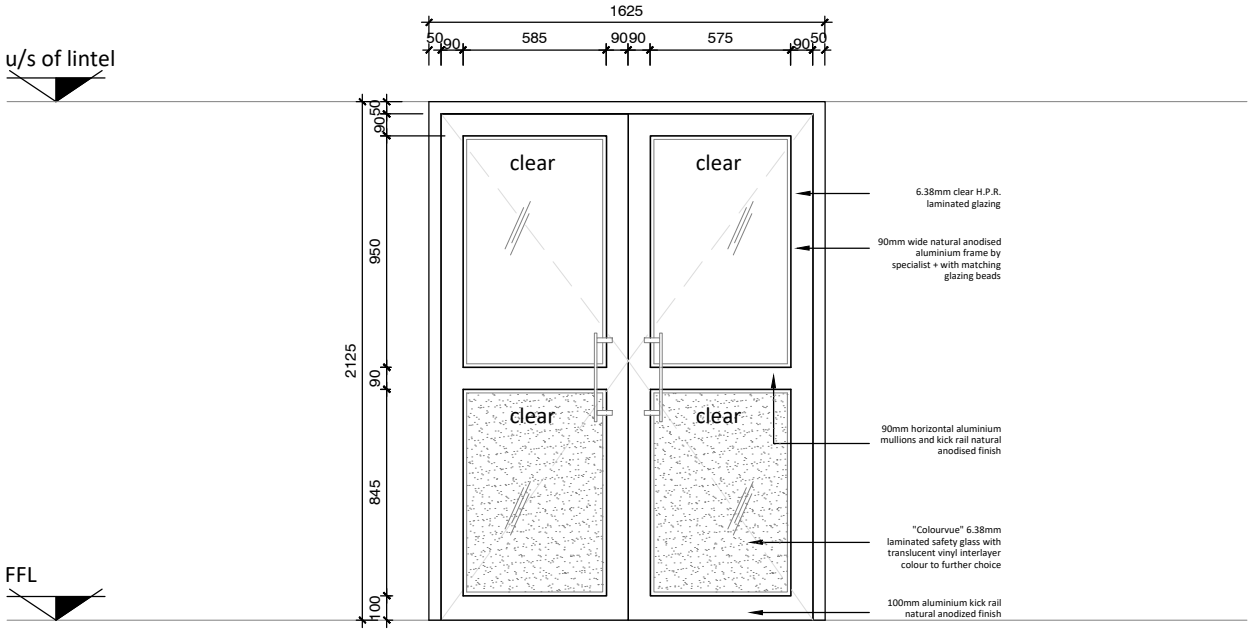
SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET OF 4 SHEETS	A1

DRAWING No. MDA290D-204

REVISION 0

FOR INFORMATION

MDA ARCHITECTS	NG DLUKULU CLINIC	D01



TYPICAL ELEVATION

QUANTITY	04	LOCATION	Entrance Door

DOOR FRAME:

- Natural Anodized aluminium extrusion with rebated lip by specialist: min 90mm wide extrusion.
- Attached rubberized buffers at rebate
- Draft excluded

DOOR:

- Natural Anodized aluminium extrusion by specialist.
- Tensioned 10mm treated securing rod in top and bottom style over full width of each door leaf
- 3 x aluminium butt hinges with nylon bushes

GENERAL:

- IRONMONGERY: Refer to Door Schedule Index - SET S03
  (As supplied by specialist)

GLAZING:

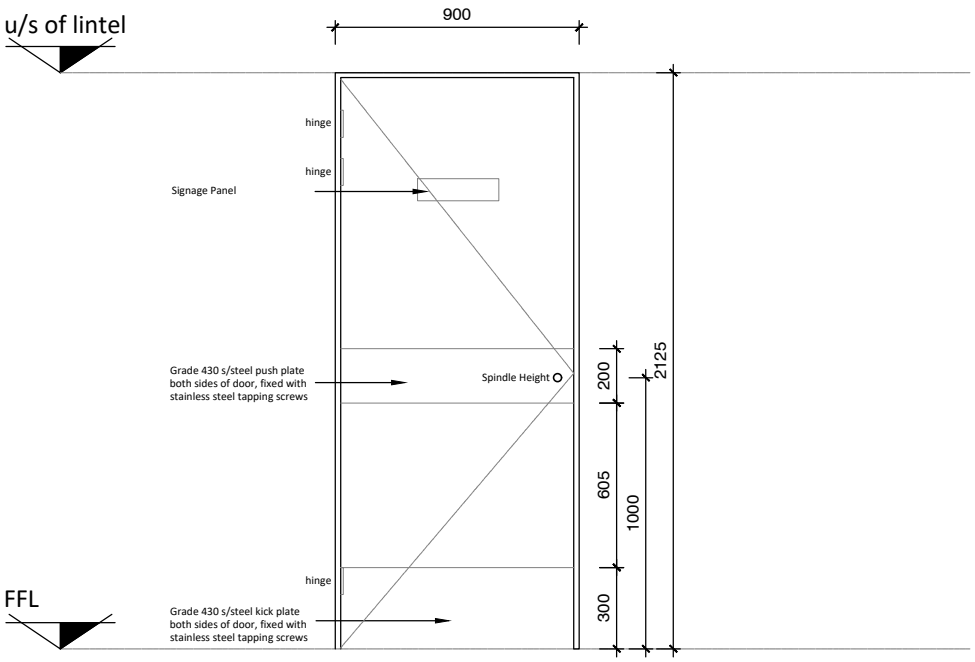
- 6.38mm HPR Laminated safety glass
- "Colourvue" 6mm laminated safty glass with translucent vinyl interlayer colour to further choice

MDA ARCHITECTS	Drawing Number:	Revision:
DOOR SCHEDULE	MDA 290 D	

MDA ARCHITECTS

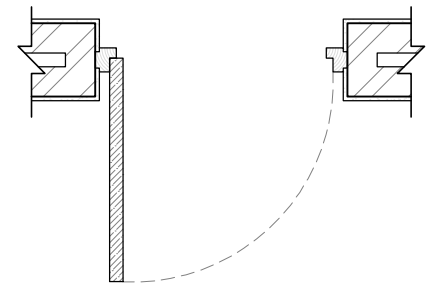
NG DLUKULU CLINIC

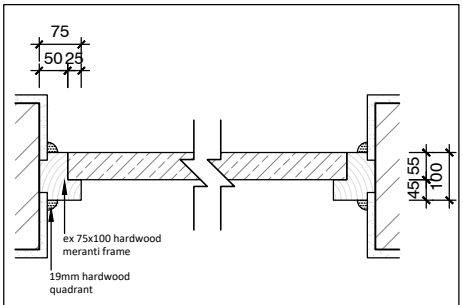
D02



TYPICAL ELEVATION

TYPICAL PLAN VIEV





TYPICAL SECTIONAL VIEW

QUANTITY	17	LOCATION	New Internal Doors

DOOR FRAME:

- Ex 75x100 meranti hardwood frame with galv lugs at every 5th brick course for building into either 270 or 230 plastered brick walls.
- No 3 PVC buffers to closing
- Built into plastered brick walls or Built into composite wall system.
- Wood primer universal undercoat and 2 of polyurethane enamel paint

DOOR:

- 44mm thick semi-solid core flush doors with 10mm hardwood edges faced with tempered smooth faced hardboard for painting.
- 300mm stainless steel protective kick plates and 200mm push plates on both sides of door fixed with 20mm counter sunk s.s screws at max 200mm.
- Door to receive; -1x Wood primer
  -1x Universal undercoat
  -2x Coats of polyurethane enamel paint

GENERAL:

- IRONMONGERY: Refer to Door Schedule Index - SET S01-1
  (As supplied by specialist)

GLAZING:

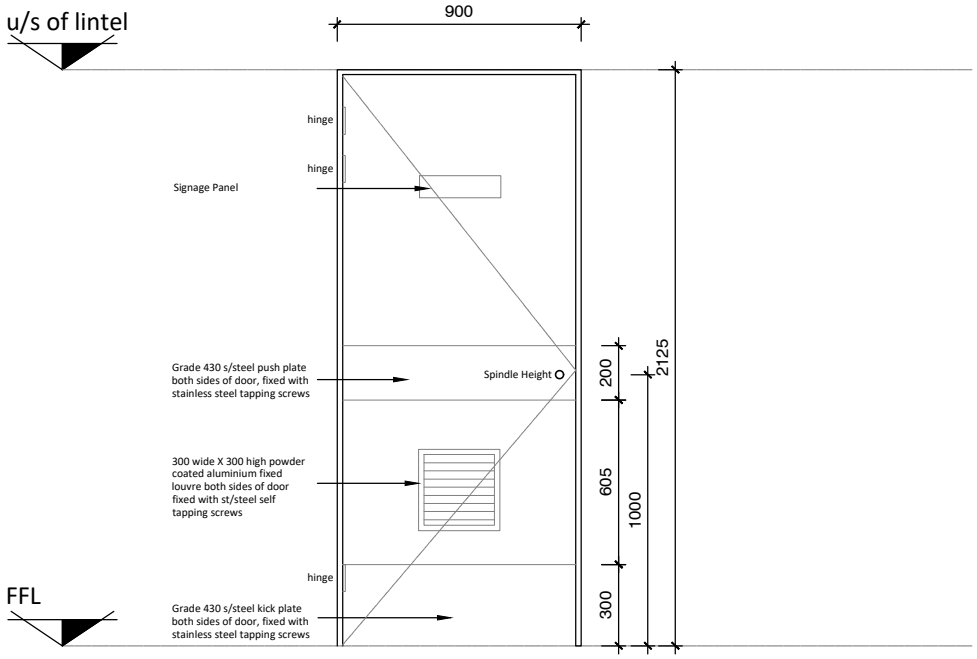
- Not Aplicable

MDA ARCHITECTS	Drawing Number:	Revision:
DOOR SCHEDULE	MDA 290 D	

MDA ARCHITECTS

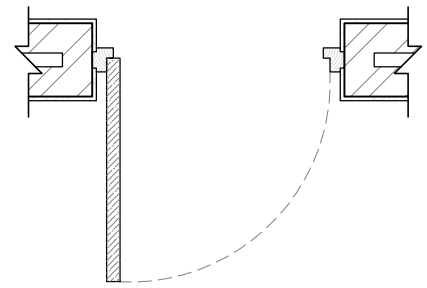
NG DLUKULU CLINIC

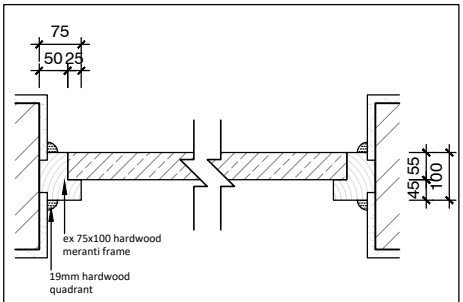
D02a



TYPICAL ELEVATION

TYPICAL PLAN VIEV





TYPICAL SECTIONAL VIEW

QUANTITY	05	LOCATION	New Ablution Doors

DOOR FRAME:

- Ex 75x100 meranti hardwood frame with galv lugs at every 5th brick course for building into either 270 or 230 plastered brick walls.
- No 3 PVC buffers to closing
- Built into plastered brick walls or Built into composite wall system.
- Wood primer universal undercoat and 2 of polyurethane enamel paint

DOOR:

- 44mm thick semi-solid core flush doors with 10mm hardwood edges faced with tempered smooth faced hardboard for painting.
- 300mm stainless steel protective kick plates and push plates on both sides of door fixed with 20mm counter sunk s.s screws at max 200mm.
- Door to receive; -1x Wood primer
  -1x Universal undercoat
  -2x Coats of polyurethane enamel paint
- 300x300mm powder coated aluminium fixed louvre both sides of the door fixed with stainless steel self tapping screws

GENERAL:

- IRONMONGERY: Refer to Door Schedule Index - SET S04-1
  (As supplied by specialist)

GLAZING:

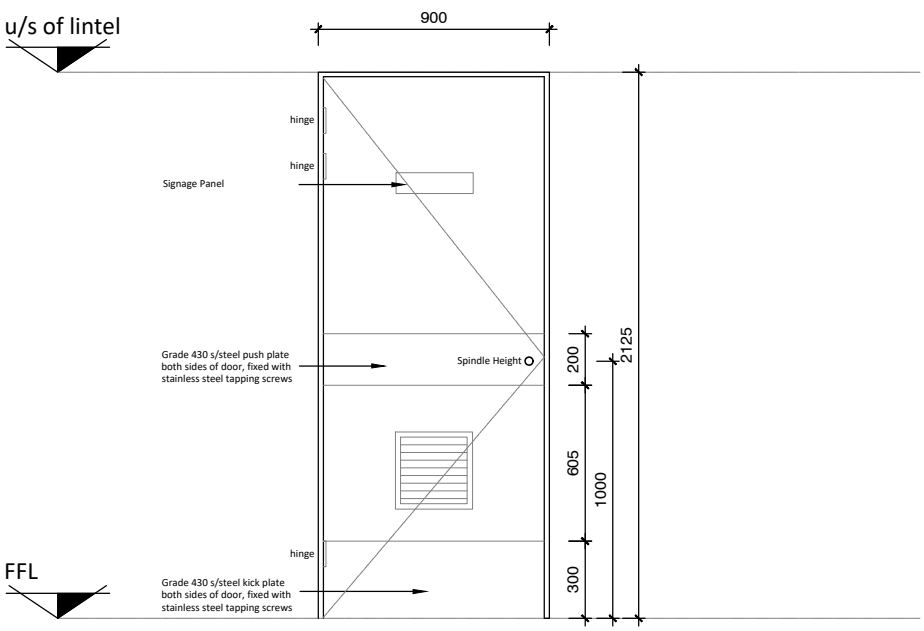
- Not Aplicable

MDA ARCHITECTS	Drawing Number:	Revision:
DOOR SCHEDULE	MDA 290 D	

MDA ARCHITECTS

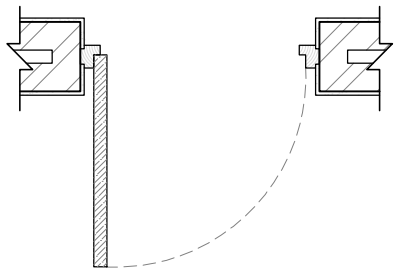
NG DLUKULU CLINIC

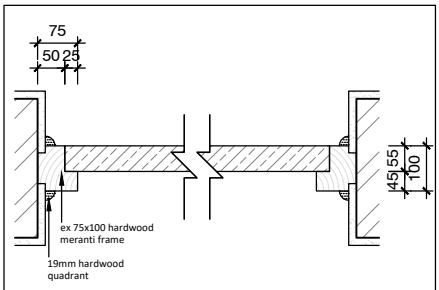
D02b



TYPICAL ELEVATION

TYPICAL PLAN VIEV





TYPICAL SECTIONAL VIEW

QUANTITY	01	LOCATION	New Disabled Ablution Door

DOOR FRAME:

- Ex 75x100 meranti hardwood frame with galv lugs at every 5th brick course for building into either 270 or 230 plastered brick walls.
- No 3 PVC buffers to closing
- Built into plastered brick walls or Built into composite wall system.
- Wood primer universal undercoat and 2 of polyurethane enamel paint

DOOR:

- 44mm thick semi-solid core flush doors with 10mm hardwood edges faced with tempered smooth faced hardboard for painting.
- 300mm stainless steel protective kick plates and 200mm push plates on both sides of door fixed with 20mm counter sunk s.s screws at max 200mm.
- Door to receive; -1x Wood primer
  -1x Universal undercoat
  -2x Coats of polyurethane enamel paint
- 300x300mm powder coated aluminium fixed louvre both sides of the door fixed with stainless steel self tapping screws

GENERAL:

- IRONMONGERY: Refer to Door Schedule Index - SET S04-2
  (As supplied by specialist)

GLAZING:

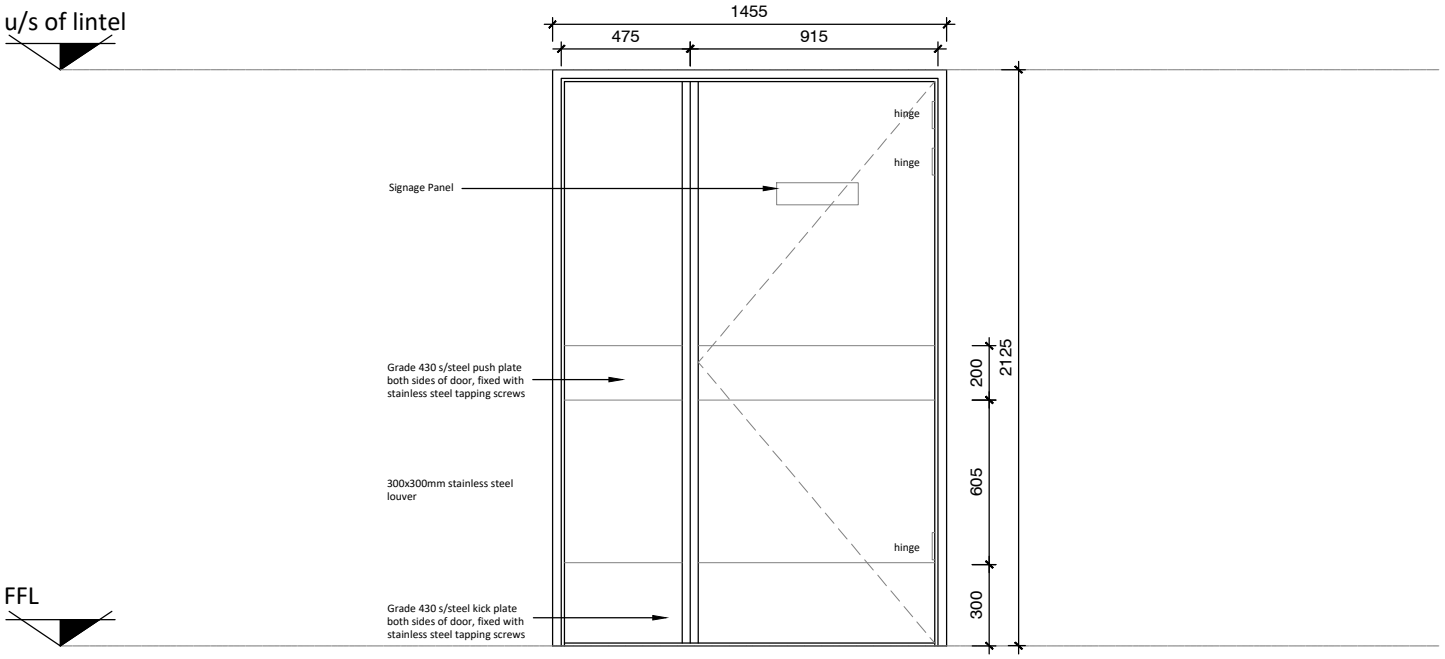
- Not Aplicable

MDA ARCHITECTS	Drawing Number:	Revision:
DOOR SCHEDULE	MDA 290 D	

MDA ARCHITECTS

NG DLUKULU CLINIC

D03



TYPICAL ELEVATION

QUANTITY	02	LOCATION	New Treatment Room Door

DOOR FRAME:

- Ex 75x100 meranti hardwood frame with galv lugs at every 5th brick course for building into either 270 or 230 plastered brick walls.
- No 3 PVC buffers to closing
- Built into plastered brick walls or Built into composite wall system.
- Wood primer universal undercoat and 2 of polyurethane enamel paint

DOOR:

- 44mm thick semi-solid core flush doors with 10mm hardwood edges faced with tempered smooth faced hardboard for painting.
- 300mm stainless steel protective kick plates and 200mm push plates on both sides of door fixed with 20mm counter sunk s.s screws at max 200mm.
- Door to receive; -1x Wood primer
  -1x Universal undercoat
  -2x Coats of polyurethane enamel paint

GENERAL:

- IRONMONGERY: Refer to Door Schedule Index - SET S02
  (As supplied by specialist)

GLAZING:

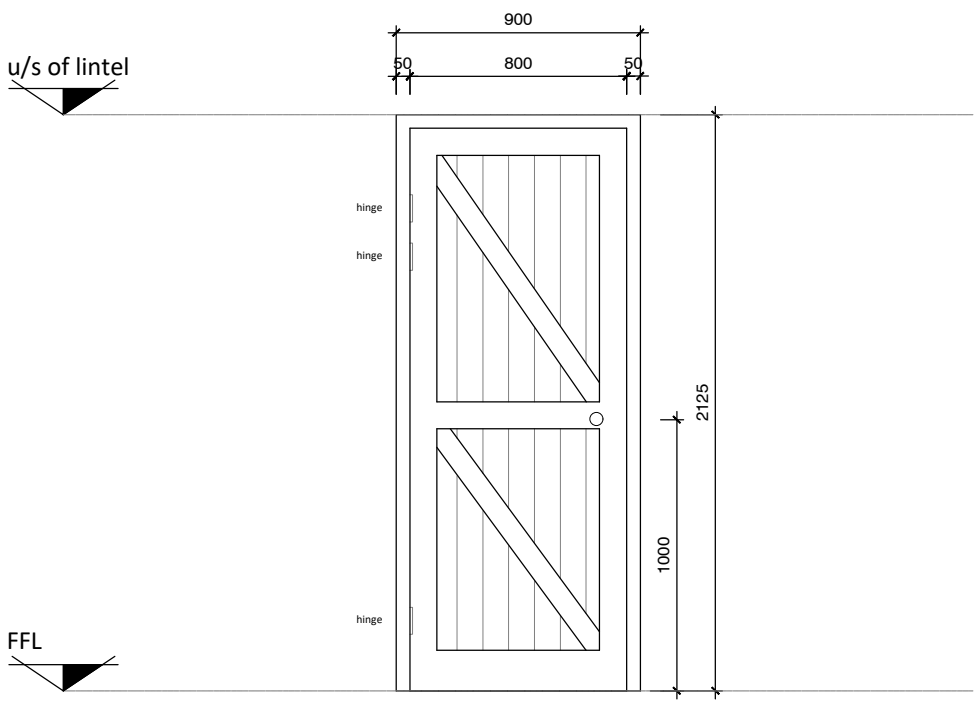
- Not Aplicable

MDA ARCHITECTS	Drawing Number:	Revision:
DOOR SCHEDULE	MDA 290 D	

MDA ARCHITECTS

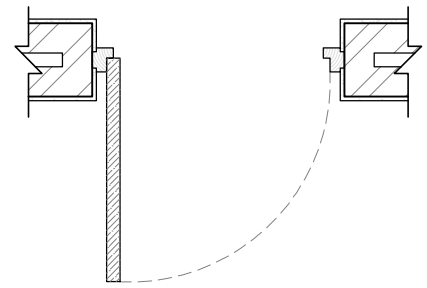
NG DLUKULU CLINIC

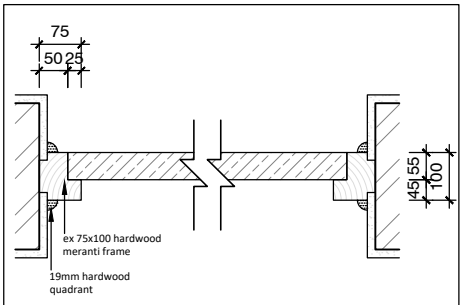
D04



TYPICAL ELEVATION

TYPICAL PLAN VIEV





TYPICAL SECTIONAL VIEW

QUANTITY	03	LOCATION	New External Doors

DOOR FRAME:

- 16mm hardwood quadrant trim both sides of door frame
- 75 x 100mm par meranti hardwood frame with galv lugs at every 5th brick course for building into either 230 or 110 plastered and paint brick walls
- 100x10mm dia mild steel dowels to door frame styles
- Frame to be sanded smooth and receive 2 finishing coats woodoc 50 marine clear exterior sealer.

DOOR:

- 900mm Solid core FLB external door
- 108x44mm top rail and styles
- 220x44mm lock rail and bottom rail
- 22mm v-joint meranti T&C boarding
- Door to be sanded smooth 2 finishing coats woodoc 50 marine clear exterior sealer.

GENERAL:

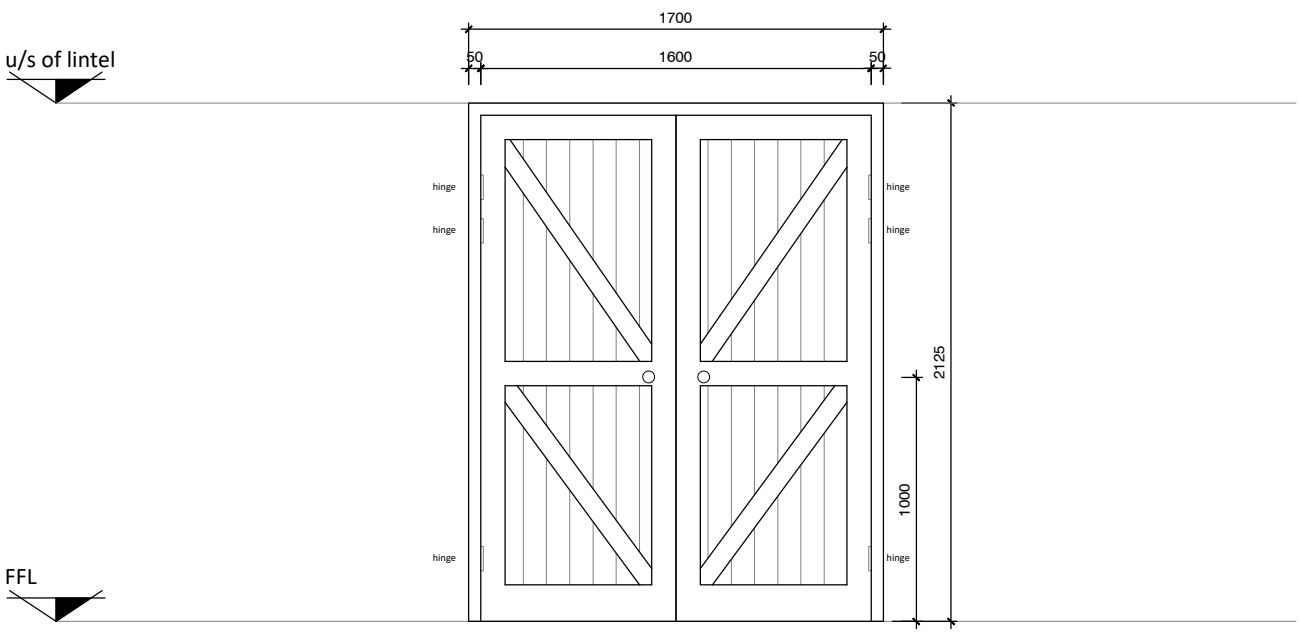
- IRONMONGERY: Refer to Door Schedule Index - SET S01-1
  (As supplied by specialist)

GLAZING:

- Not Aplicable

MDA ARCHITECTS	Drawing Number:	Revision:
DOOR SCHEDULE	MDA 290 D	

MDA ARCHITECTS	NG DLUKULU CLINIC	D05



TYPICAL ELEVATION

QUANTITY	01	LOCATION	New Fire Escape Door

DOOR FRAME:

- 16mm hardwood quadrant trim both sides of door frame
- 75 x 100mm par meranti hardwood frame with galv lugs at every 5th brick course for building into either 230 or 110 plastered and paint brick walls
- 100x10mm dia mild steel dowels to door frame styles
- Frame to be sanded smooth and receive 2 finishing coats woodoc 50 marine clear exterior sealer.

DOOR:

- 1700 x 900mm Solid core FLB external door
- 108x44mm top rail and styles
- 220x44mm lock rail and bottom rail
- 22mm v-joint meranti T&C boarding
- Door to be sanded smooth 2 finishing coats woodoc 50 marine clear exterior sealer.

GENERAL:

- IRONMONGERY: Refer to Door Schedule Index - SET S02
  (As supplied by specialist)

GLAZING:

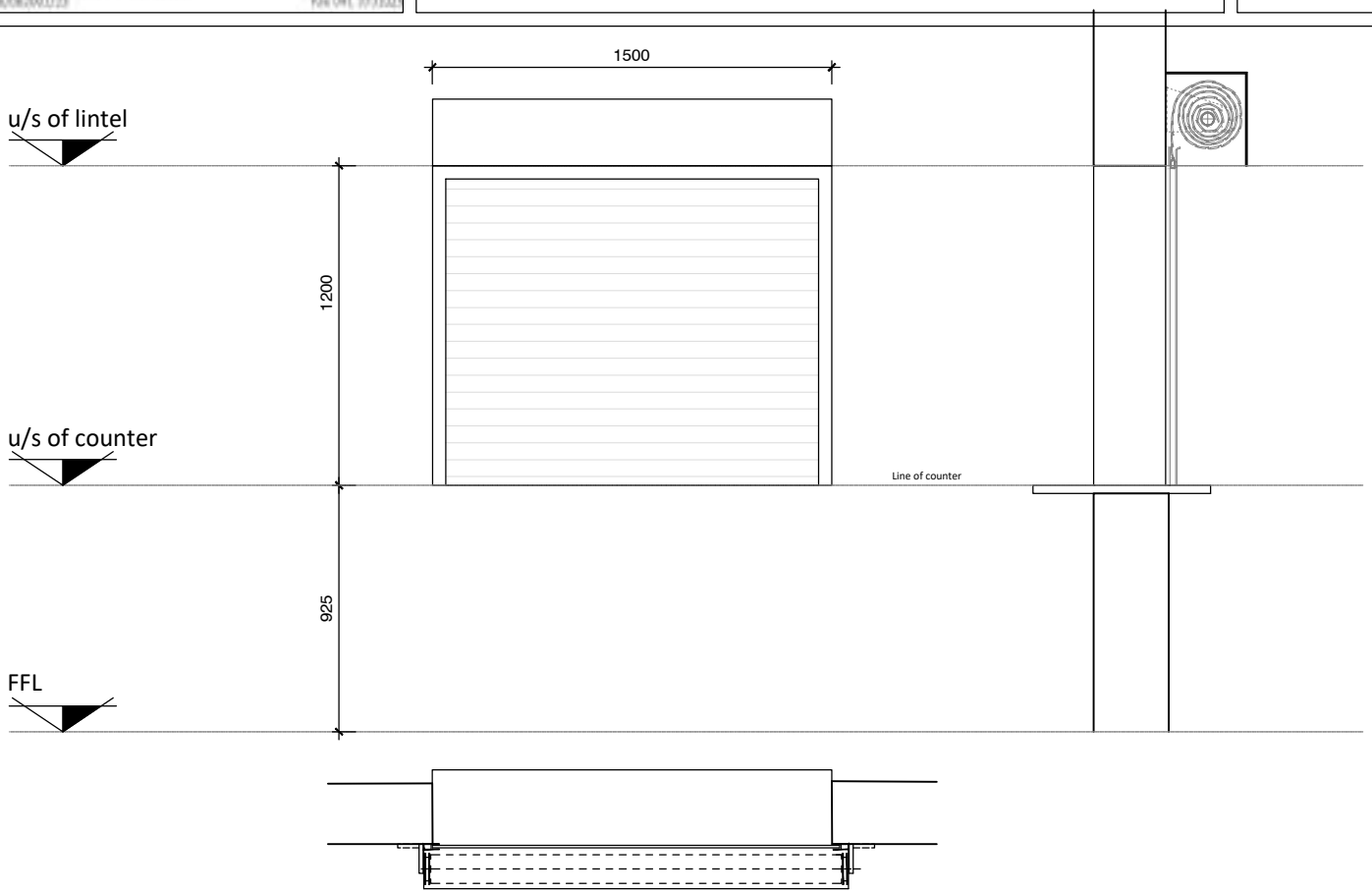
- Not Aplicable

MDA ARCHITECTS	Drawing Number:	Revision:
DOOR SCHEDULE	MDA 290 D	

MDA ARCHITECTS

NG DLUKULU CLINIC

D06



TYPICAL ELEVATION

QUANTITY	03	LOCATION	New Pharmacy Store

FRAME:
- Galv. housing and side rails bolted to brickwork

FRAME FINISH:
- To manufacturers specifications

DOOR TYPE:
- Fire Rated (SABS 1253) chain operated galv. heavy duty metal slatted roller shutter, to suit opening 1500mm wide x 1200mm high.

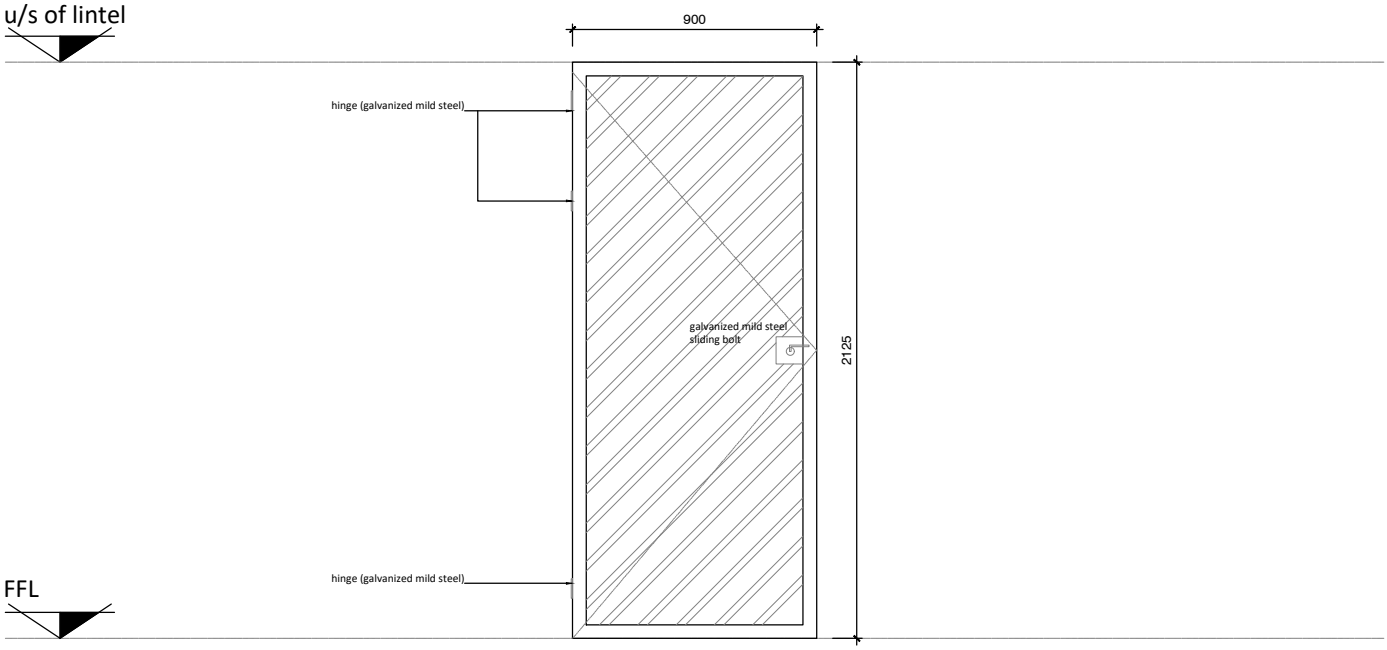
DOOR FINISH:
- Powder coated as per manufacturers specifications

GENERAL:
- Slide bolts, fitted for padlock
- Locking slide bolts supplied by door manufacturer
- Pad lock supplied by client
- All door handing's and quantities to be verified on site

GLAZING:
- Not Applicable

MDA ARCHITECTS	Drawing Number:	Revision:
DOOR SCHEDULE	MDA 290 D	

MDA ARCHITECTS	NG DLUKULU CLINIC	G01



TYPICAL ELEVATION

QUANTITY	06	LOCATION	Dispensary, Ablutions,Guard House and Refuse Room

GATE FRAME:
- 30X30X3mm Galvanized mild steel rectangular hollow section welded to form frame
- 25mm x 25mm Galvanized mild steel square section, place diagonally in main frame placed at 100mm centers.

GATE TYPE:
- Purpose made galvanized mild steel square hollow section security gate

GATE FINISH:
- 1 coat Zinc Chromate Primer
- 2 coats gloss enamel

FRAME FINISH:
- Degrease, 1 coat Zinc Chromate Primer
- 2 coats gloss enamel

GENERAL:
- IRONMONGERY: Refer to Door Schedule Index - SET S5
  (As supplied by specialist)

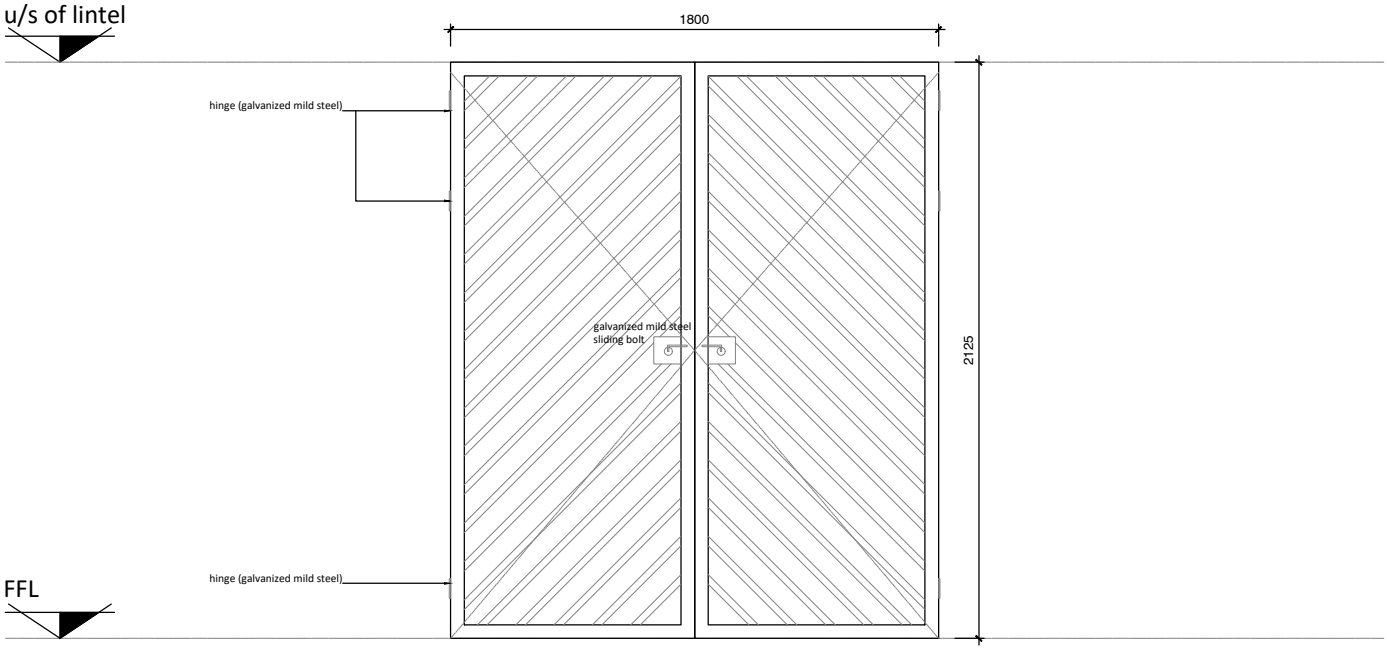
GLAZING:
- Not Applicable

MDA ARCHITECTS	Drawing Number:	Revision:
GATE SCHEDULE	MDA 290 D	

MDA ARCHITECTS

NG DLUKULU CLINIC

G02



TYPICAL ELEVATION

QUANTITY	04	LOCATION	Entrance Door Security Gate

GATE FRAME:

- 30X30X3mm Galvanized mild steel rectangular hollow section welded to form frame
- 25mm x 25mm Galvanized mild steel square section, place diagonally in main frame placed at 100mm centers.

GATE TYPE:

- Purpose made galvanized mild steel square hollow section security gate

GATE FINISH:

- 1 coat Zinc Chromate Primer
- 2 coats gloss enamel

FRAME FINISH:

- Degrease, 1 coat Zinc Chromate Primer
- 2 coats gloss enamel

GENERAL:

- IRONMONGERY: Refer to Door Schedule Index - SET S5
  (As supplied by specialist)

GLAZING:

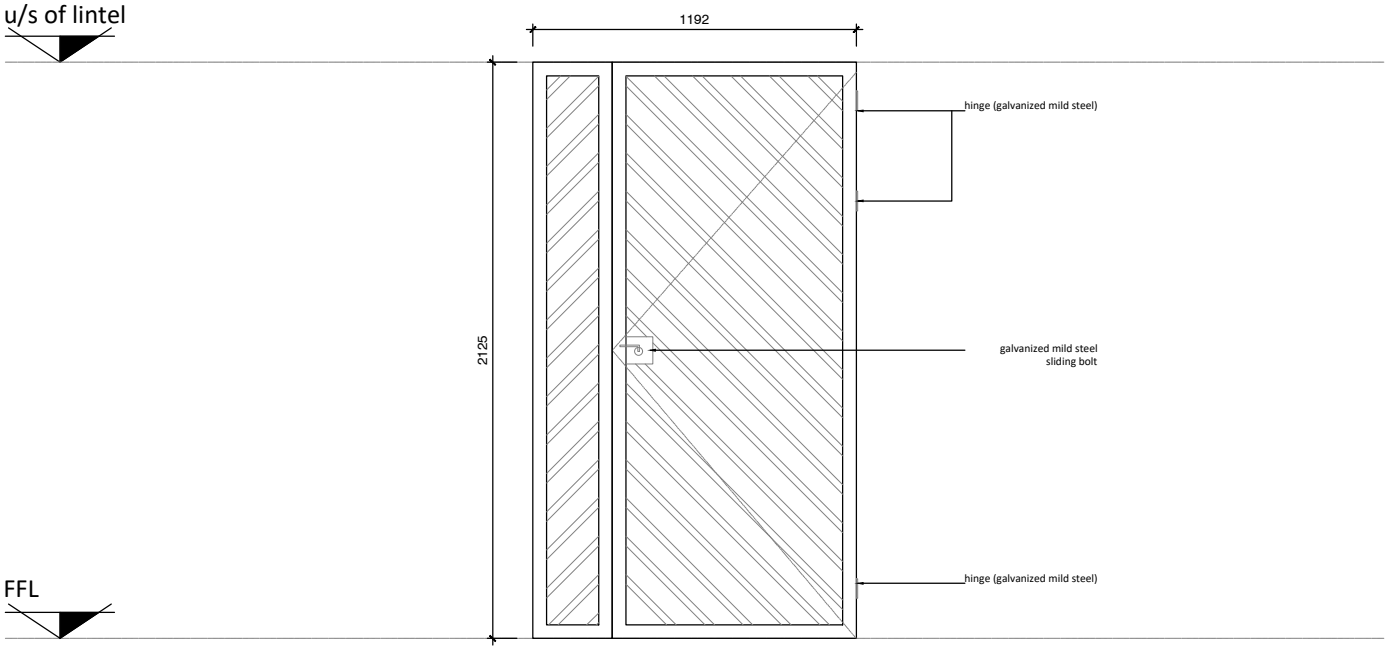
- Not Applicable

MDA ARCHITECTS	Drawing Number:	Revision:
GATE SCHEDULE	MDA 290 D	

MDA ARCHITECTS

NG DLUKULU CLINIC

G03



TYPICAL ELEVATION

QUANTITY	01	LOCATION	New Sputum Booth

GATE FRAME:

- 30X30X3mm Galvanized mild steel rectangular hollow section welded to form frame
- 25mm x 25mm Galvanized mild steel square section, place diagonally in main frame placed at 100mm centers.

GATE TYPE:

- Purpose made galvanized mild steel square hollow section security gate

GATE FINISH:

- 1 coat Zinc Chromate Primer
- 2 coats gloss enamel

FRAME FINISH:

- Degrease, 1 coat Zinc Chromate Primer
- 2 coats gloss enamel

GENERAL:

- IRONMONGERY: Refer to Door Schedule Index - SET S5
  (As supplied by specialist)

GLAZING:

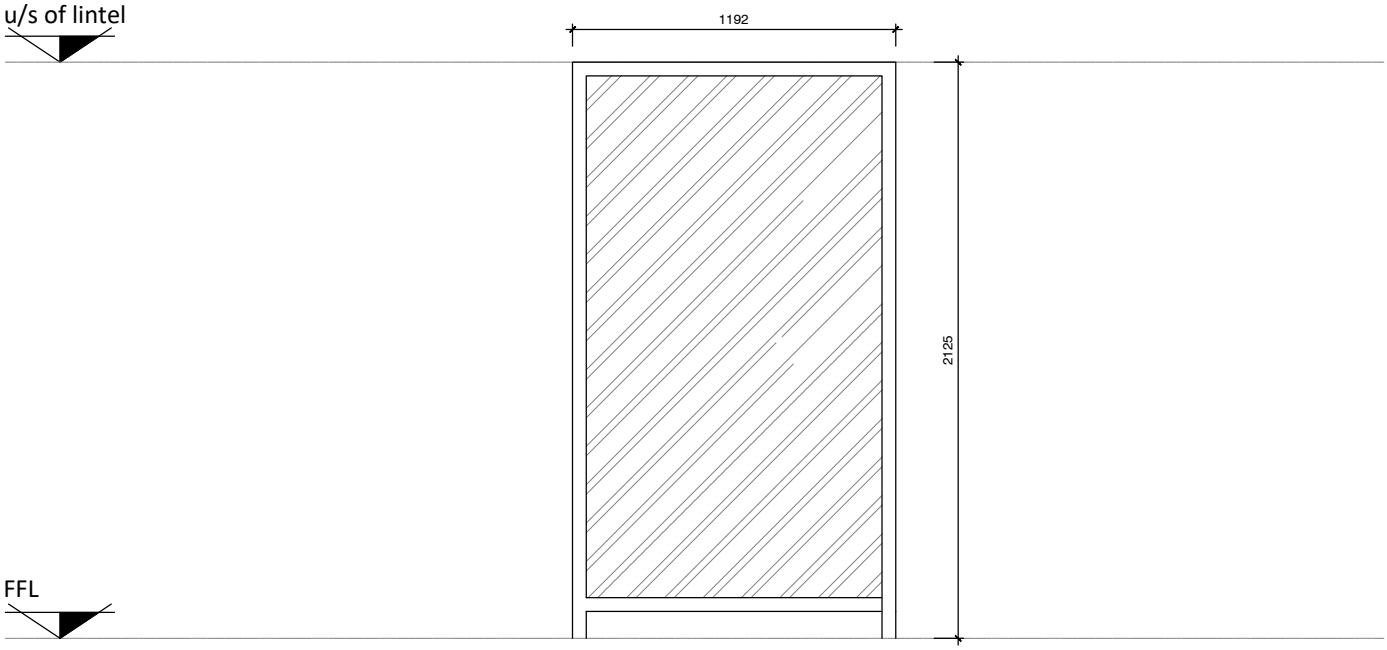
- Not Applicable

MDA ARCHITECTS	Drawing Number:	Revision:
GATE SCHEDULE	MDA 290 D	

MDA ARCHITECTS

NG DLUKULU CLINIC

G04



TYPICAL ELEVATION

QUANTITY	01	LOCATION	General Security Gate + Guard House

GATE FRAME:

- 30X30X3mm Galvanized mild steel rectangular hollow section welded to form frame
- 25mm x 25mm Galvanized mild steel square section, place diagonally in main frame placed at 100mm centers.

GATE TYPE:

- Purpose made galvanized mild steel square hollow section security gate

GATE FINISH:

- Galv. mild steel

FRAME FINISH:

- Galv. mild steel

IRONMONGERY:

- N/A

GLAZING:

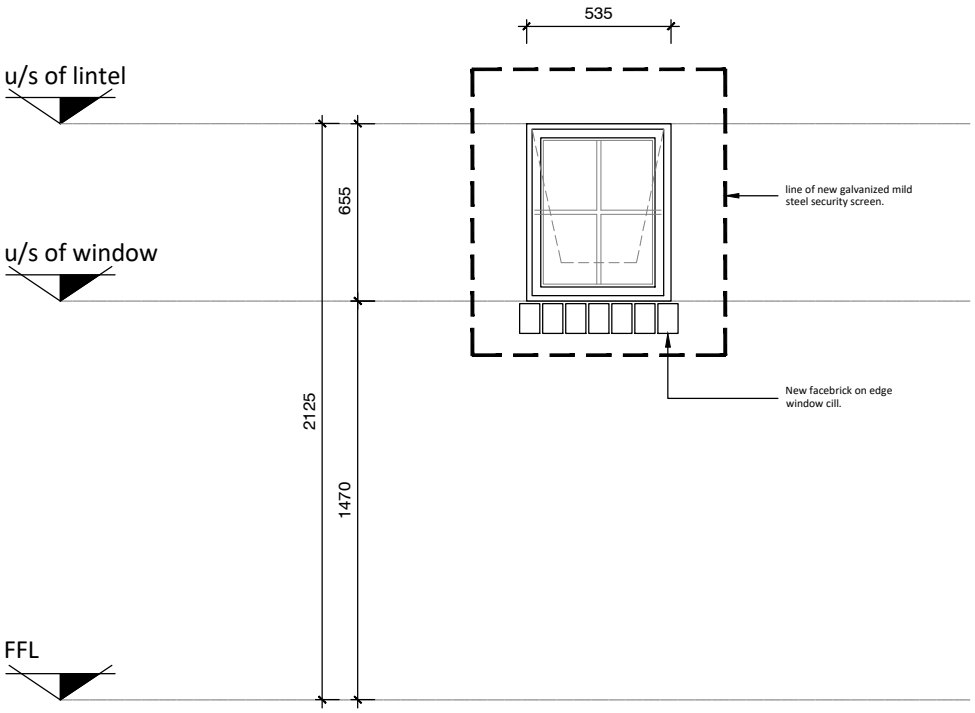
- Not Applicable

MDA ARCHITECTS	Drawing Number:	Revision:
SCREEN SCHEDULE	MDA 290 D	

MDA ARCHITECTS

NG DLUKULU CLINIC

W01



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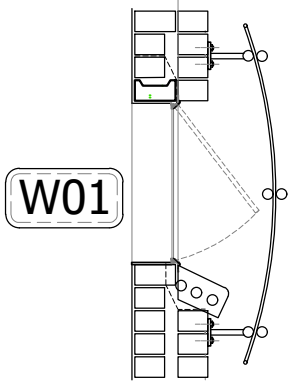

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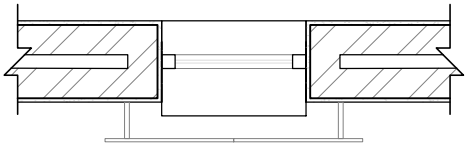


TYPICAL PLAN VIEW

QUANTITY	09	LOCATION	New Ablutions, New Guard House, New Vitals Room

FRAME FINISH:

- 1 coat primer
- 1 coat approved enamel paint

WINDOW TYPE: NE1

- Standard Steel E Type Residential open out windows to SANS

IRONMONGERY:

- Factory fitted burglar bars.
- Standard brass fittings.

GLAZING:

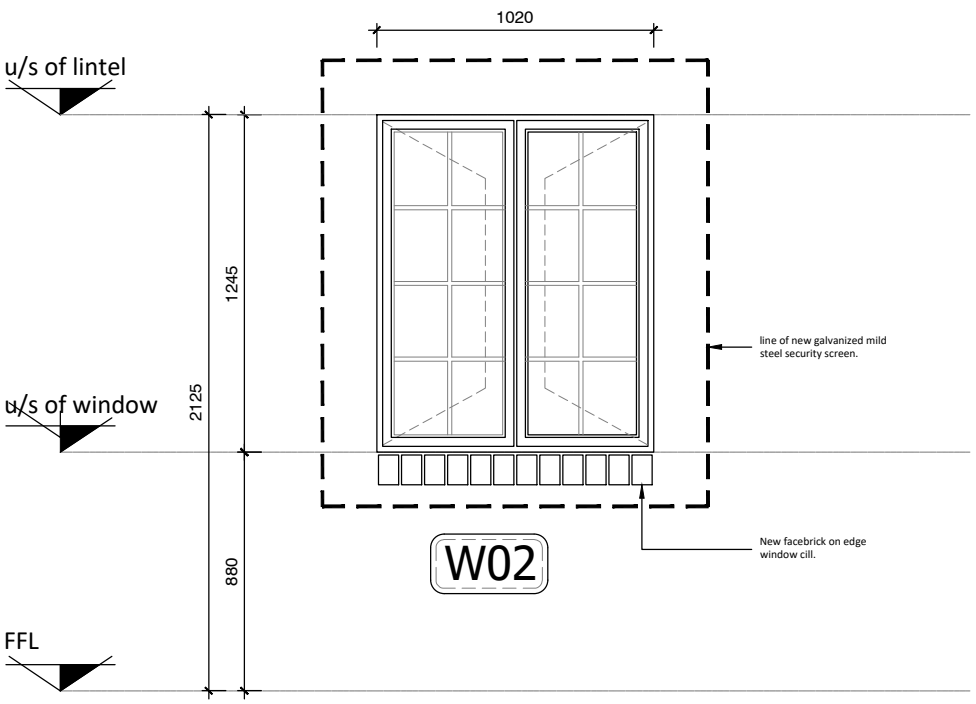
- 6.38mm HPR Laminated opaque glass with steel window putty.

MDA ARCHITECTS	Drawing Number:	Revision:
WINDOW SCHEDULE	MDA 290 D	20/05/2019

MDA ARCHITECTS

NG DLUKULU CLINIC

W02



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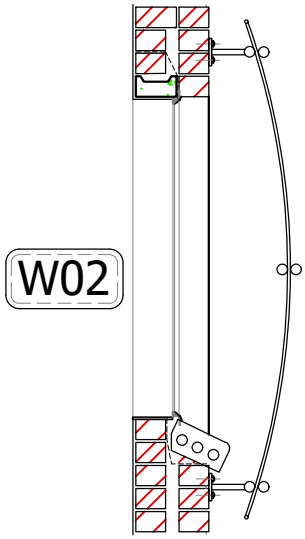

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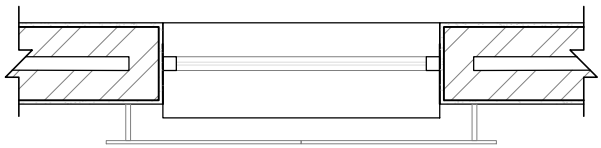


TYPICAL PLAN VIEW

QUANTITY	06	LOCATION	Existing Waiting Area, New Dispensary

FRAME FINISH:

- 1 coat primer
- 1 coat approved enamel paint

WINDOW TYPE: D7

- Standard Steel D Type Residential open out windows to SANS

IRONMONGERY:

- Factory fitted burglar bars.
- Standard brass fittings.

GLAZING:

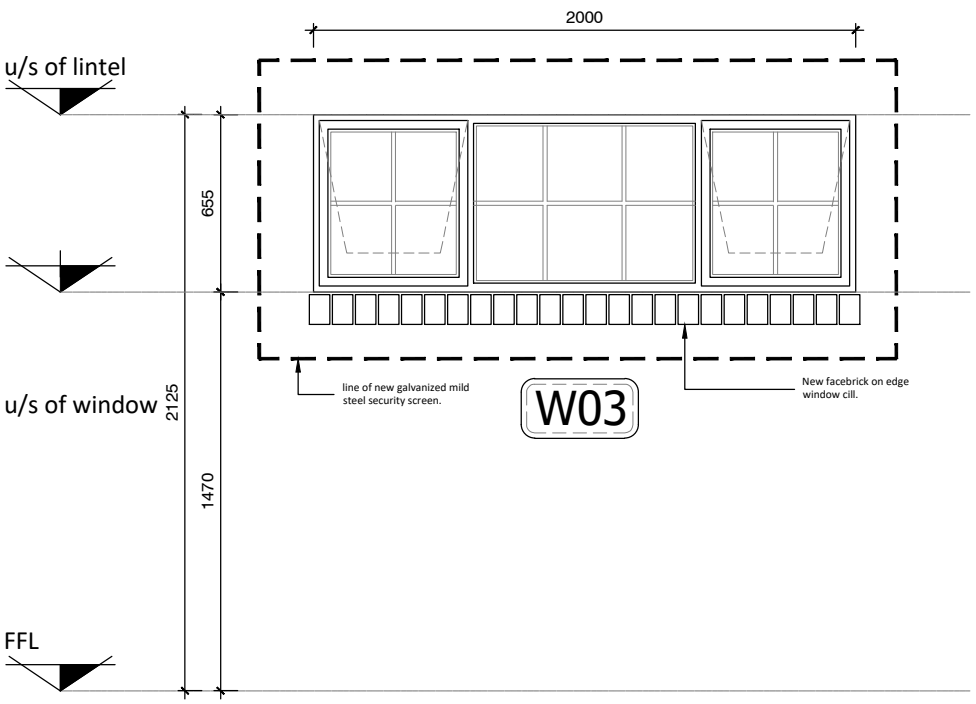
- 6.38mm HPR Laminated safety glass

MDA ARCHITECTS	Drawing Number:	Revision:
WINDOW SCHEDULE	MDA 290 D	

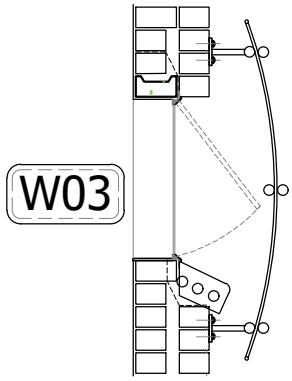
MDA ARCHITECTS

NG DLUKULU CLINIC

W03



TYPICAL ELEVATION



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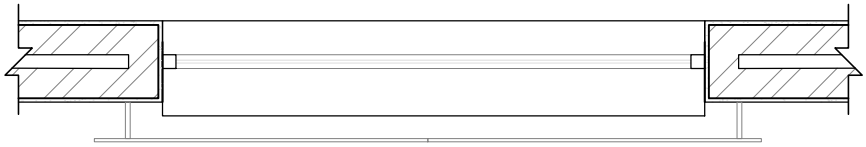


TYPICAL PLAN VIEW

QUANTITY	02	LOCATION	New Pharmacy Bulk

FRAME FINISH:

- 1 coat primer
- 1 coat approved enamel paint

WINDOW TYPE: E22

- Standard Steel E Type Residential open out windows to SANS

IRONMONGERY:

- Factory fitted burglar bars.
- Standard brass fittings.

GLAZING:

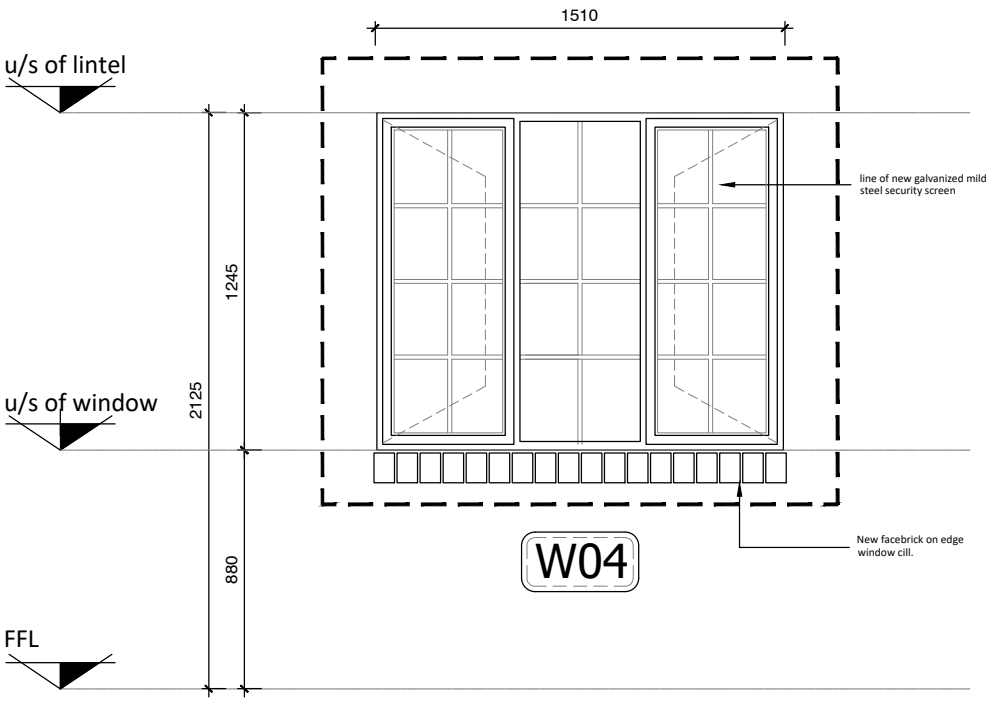
- 6.38mm HPR Laminated safety glass

MDA ARCHITECTS	Drawing Number:	Revision:
WINDOW SCHEDULE	MDA 290 D	

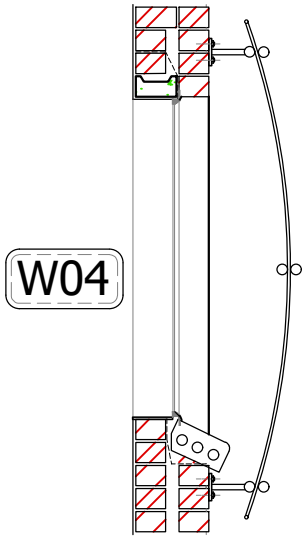
MDA ARCHITECTS

NG DLUKULU CLINIC

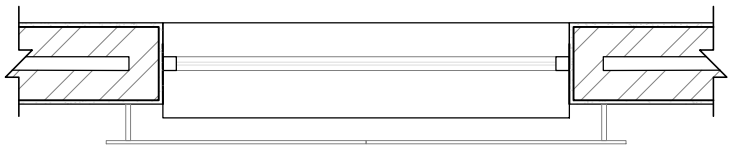
W04



TYPICAL ELEVATION



TYPICAL SECTION



TYPICAL PLAN VIEW

QUANTITY	06	LOCATION	Chronic and Acute consulting room, New MCRHS with passage

FRAME FINISH:

- 1 coat primer
- 1 coat approved enamel paint

WINDOW TYPE: D4

- Standard Steel D Type Residential open out windows to SANS

IRONMONGERY:

- Factory fitted burglar bars.
- Standard brass fittings.

GLAZING:

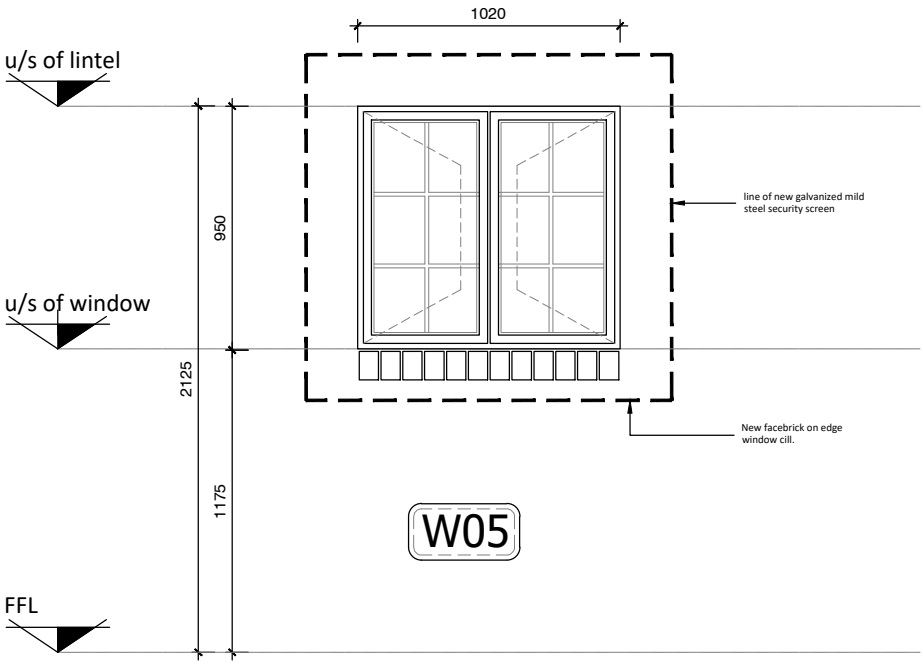
- 6.38mm HPR Laminated safety glass

MDA ARCHITECTS	Drawing Number:	Revision:
WINDOW SCHEDULE	MDA 290 D	

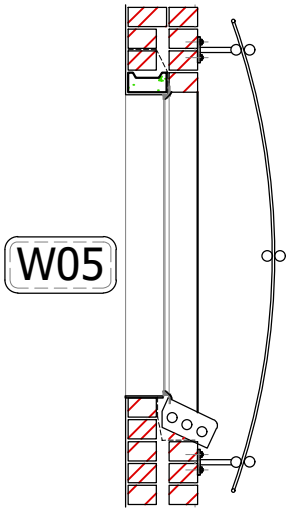
MDA ARCHITECTS

NG DLUKULU CLINIC

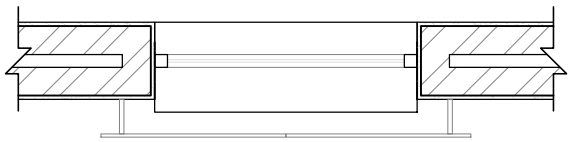
W05



TYPICAL ELEVATION



TYPICAL SECTION



TYPICAL PLAN VIEW

QUANTITY	04	LOCATION	Guard house and new Emergency treatment room

FRAME FINISH:

- 1 coat primer
- 1 coat approved enamel paint

WINDOW TYPE: C7

- Standard Steel C Type Residential open out windows to SANS

IRONMONGERY:

- Factory fitted burglar bars.
- Standard brass fittings.

GLAZING:

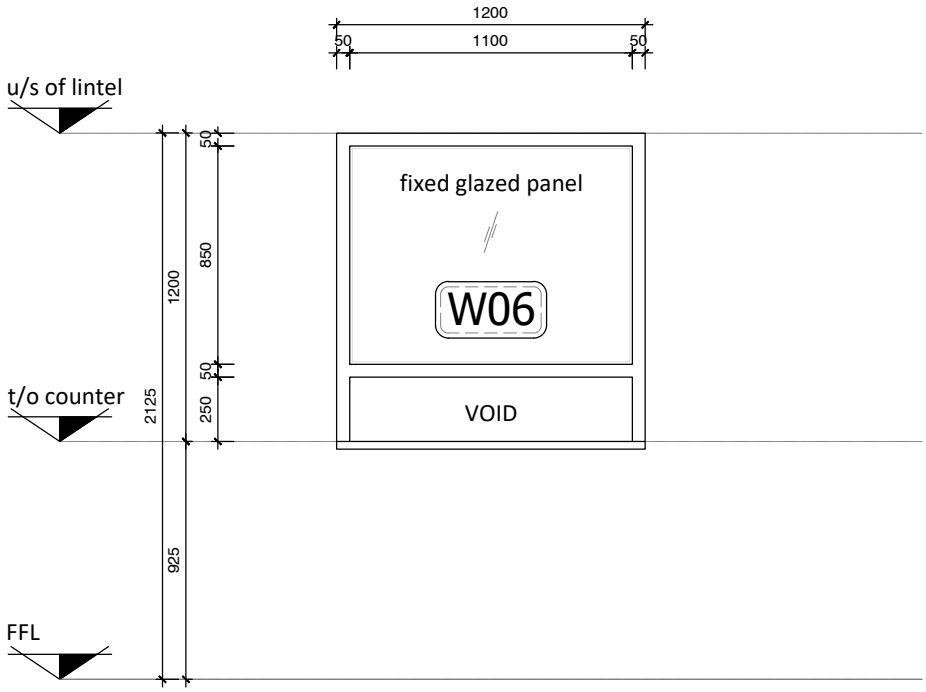
- 6.38mm HPR Laminated safety glass

MDA ARCHITECTS	Drawing Number:	Revision:
WINDOW SCHEDULE	MDA 290 D	

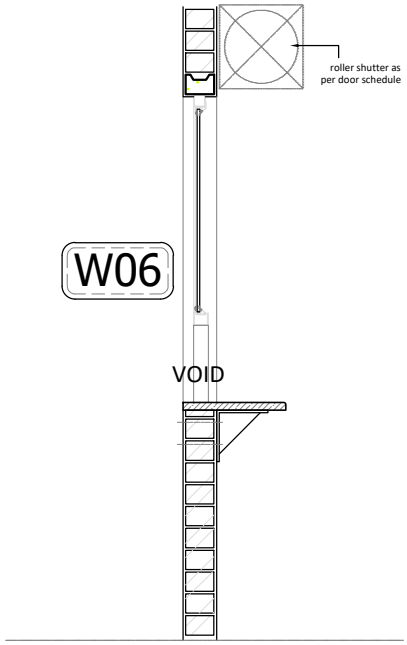
MDA ARCHITECTS

NG DLUKULU CLINIC

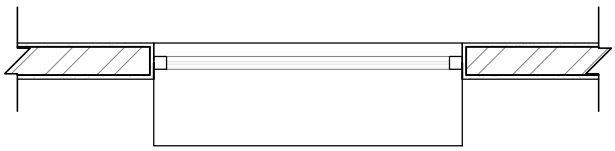
W06



TYPICAL ELEVATION



TYPICAL SECTION



TYPICAL PLAN VIEW

QUANTITY	02	LOCATION	New Reception and New Dispensary

FRAME FINISH:

- Natural Anodized aluminum extrusions by specialist with powder coated finish

WINDOW TYPE:

- Natural Anodized aluminum extrusions by specialist with powder coated finish
- Aluminium window: x1 fixed glassed panel
  x1void below

IRONMONGERY:

- Not Applicable

GLAZING:

- 6.38mm HPR Laminated safety glass

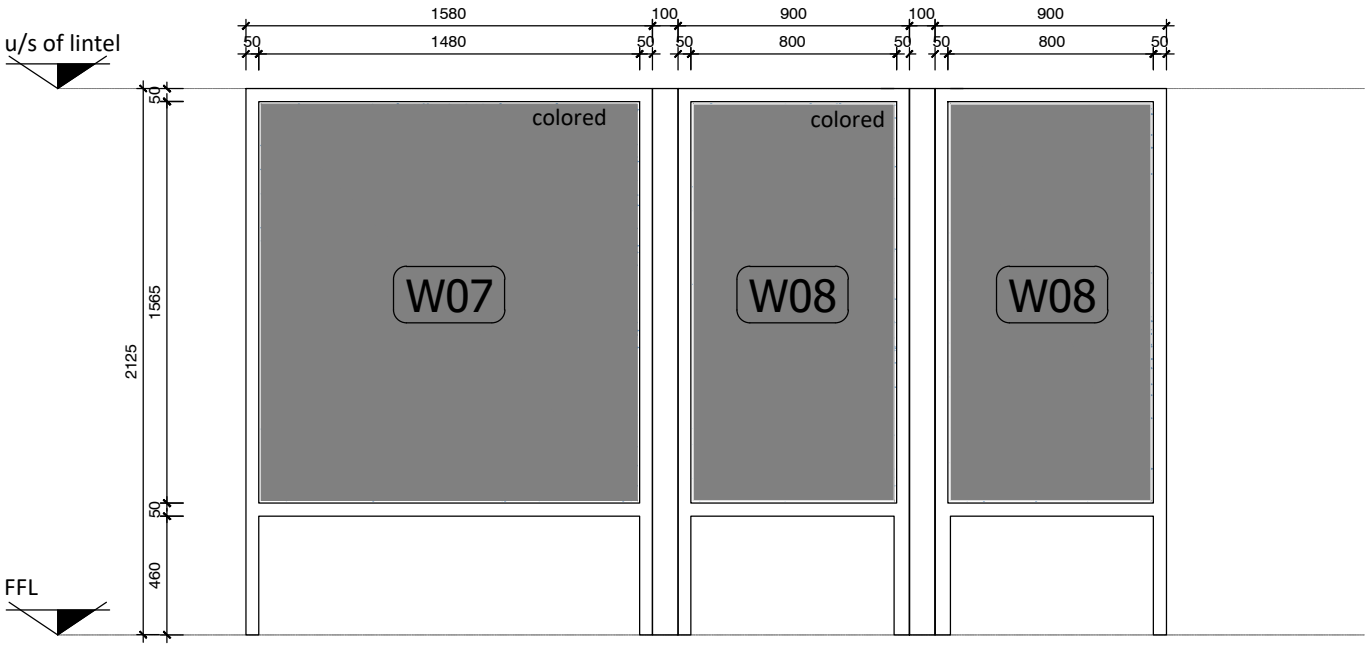
NOTE:

Glazing specialist to take on site measurements prior to manufacture. No scaling to be done from schedule drawings.

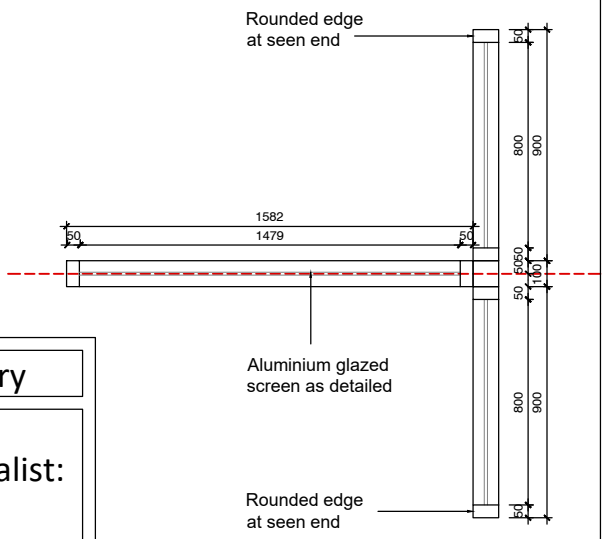
MDA ARCHITECTS	Drawing Number:	Revision:
WINDOW SCHEDULE	MDA 290 A	

NG DLUKULU CLINIC

W07 & W08



TYPICAL ELEVATION



TYPICAL PLAN

QUANTITY	01	LOCATION	New Dispensary

FRAME FINISH:

- Powder coat white extrusions with rebate by specialist: min 50mm wide
- Attached rubberized buffers at rebate

WINDOW TYPE:

- Aluminium window: x2 fixed glassed panel
  x2void below

IRONMONGERY:

- Not Applicable

GLAZING:

- Frosted 6.38mm HPR Laminated safety glass

NOTE:

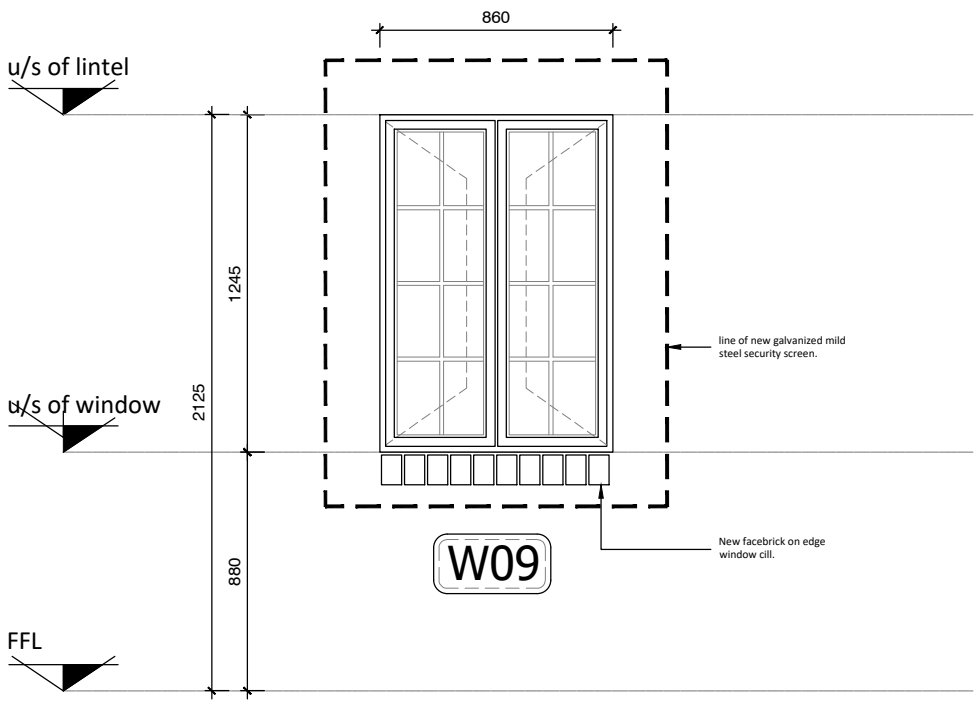
Glazing specialist to take on site measurements prior to manufacture. No scaling to be done from schedule drawings.

MDA ARCHITECTS	Drawing Number:	Revision:
WINDOW SCHEDULE	MDA 290 D	

MDA ARCHITECTS

NG DLUKULU CLINIC

W09



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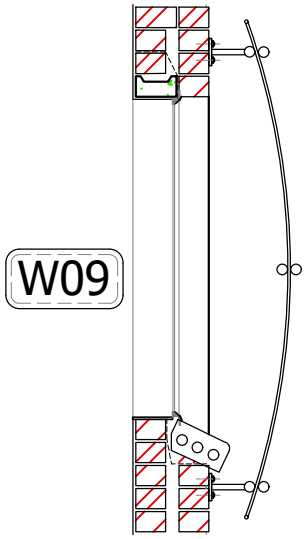
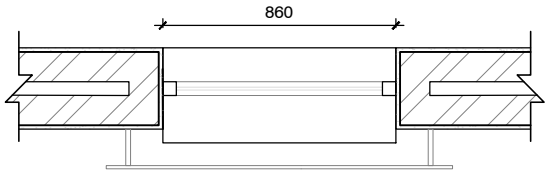


TYPICAL SECTION



TYPICAL PLAN VIEW

QUANTITY	02	LOCATION	New vitals and Counseling room

FRAME FINISH:

- 1 coat primer
- 1 coat approved enamel paint

WINDOW TYPE: D7

- Standard Steel D Type Residential open out windows to SANS

IRONMONGERY:

- Factory fitted burglar bars.
- Standard brass fittings.

GLAZING:

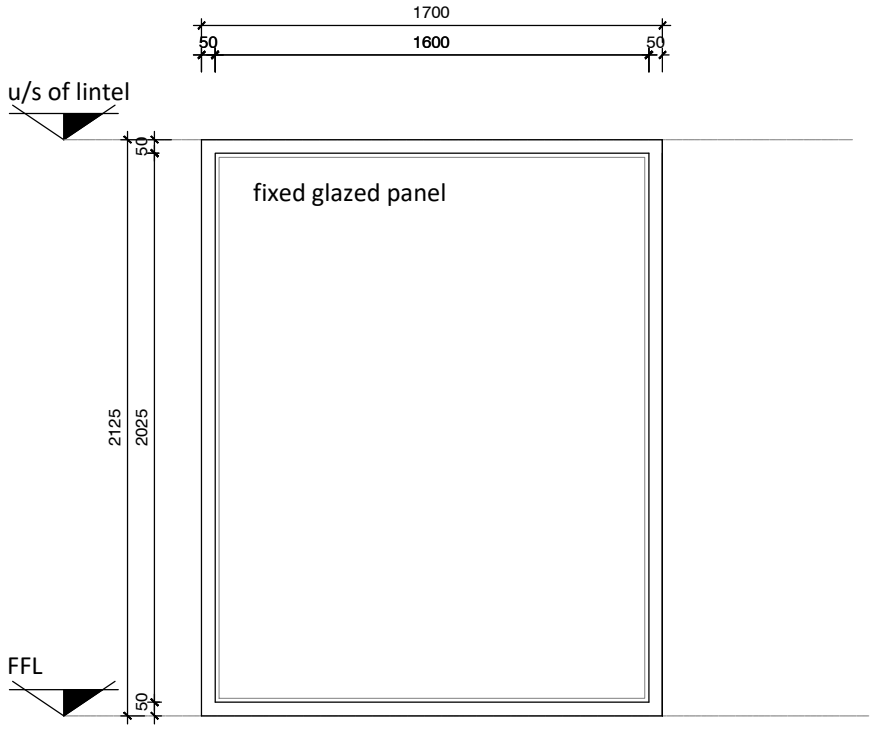
- 6.38mm HPR Laminated safety glass

MDA ARCHITECTS	Drawing Number:	Revision:
WINDOW SCHEDULE	MDA 290 D	

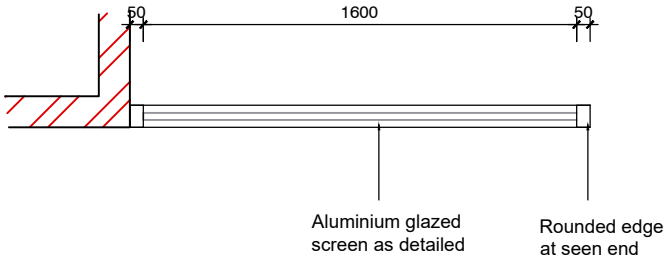
MDA ARCHITECTS

NG DLUKULU CLINIC

W10



TYPICAL ELEVATION



TYPICAL PLAN

QUANTITY	01	LOCATION	New Dispensary

FRAME FINISH:

- Powder coat white extrusions with rebate by specialist: min 50mm wide
- Attached rubberized buffers at rebate

WINDOW TYPE:

- Aluminium window: x1 fixed glassed panel

IRONMONGERY:

- Not Applicable

GLAZING:

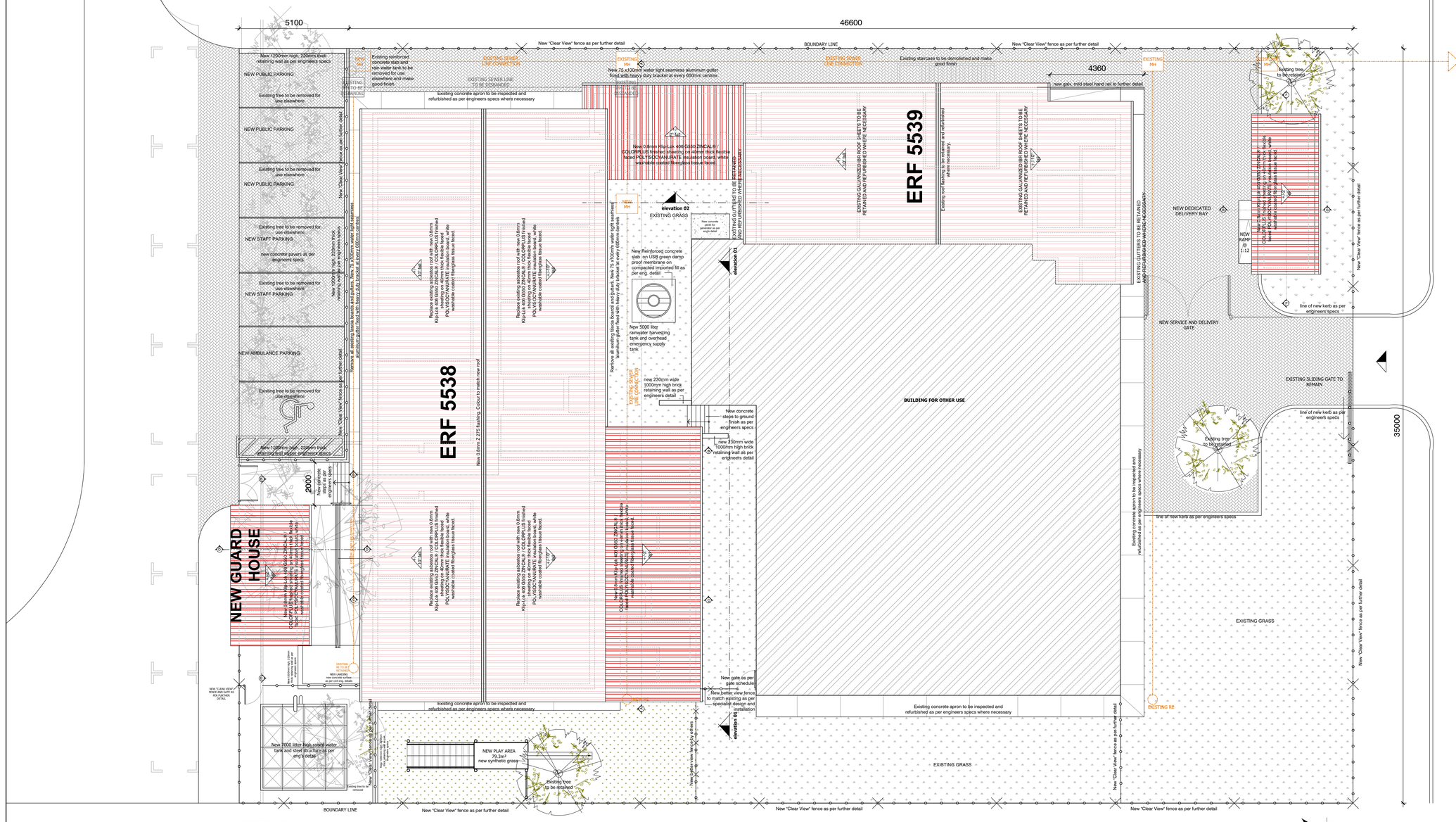
- Frosted 6.38mm HPR Laminated safety glass

NOTE:

Glazing specialist to take on site measurements prior to manufacture. No scaling to be done from schedule drawings.

MDA ARCHITECTS	Drawing Number:	Revision:
WINDOW SCHEDULE	MDA 290 D	

AREA'S	
Existing Building Area (Renovated)	410.6m²
New Ablution and Sputum Booth Area	55.6m²
New Office Extension	16.7m²
New Guard House	19.1m²
New Waste & Refuse Rooms	19.3m²



SITE PLAN

SCALE 1:100

GENERAL NOTES:

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No setting out is to commence before the positions of the boundary pegs have been verified

Sewer connections to comply with municipal regulations by a Land Surveyor

No	AMENDMENTS	DATE
0	ISSUED FOR TENDER	Oct 2023

SURVEYED	NA	
DRAWN	IOI	FEB 2019
DESIGNED	DBA	FEB 2019
CHECKED	DBA	FEB 2019
APPROVED	PR REGISTRATION NO. 3128	

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PROJECT TITLE

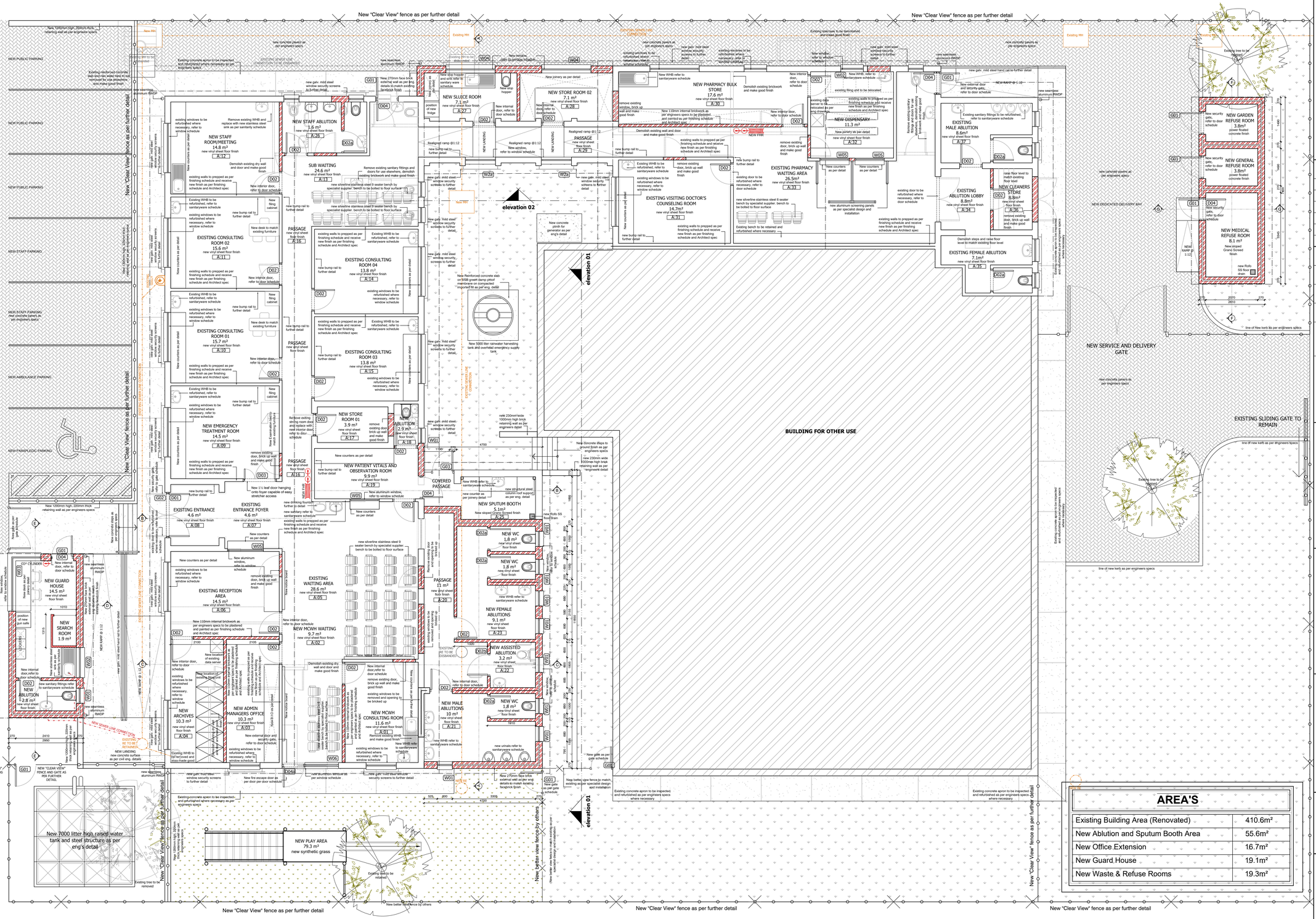
ERF 5538 & 5539
MIDDLE TERRACE CLINIC
(GRAHAMSTOWN)

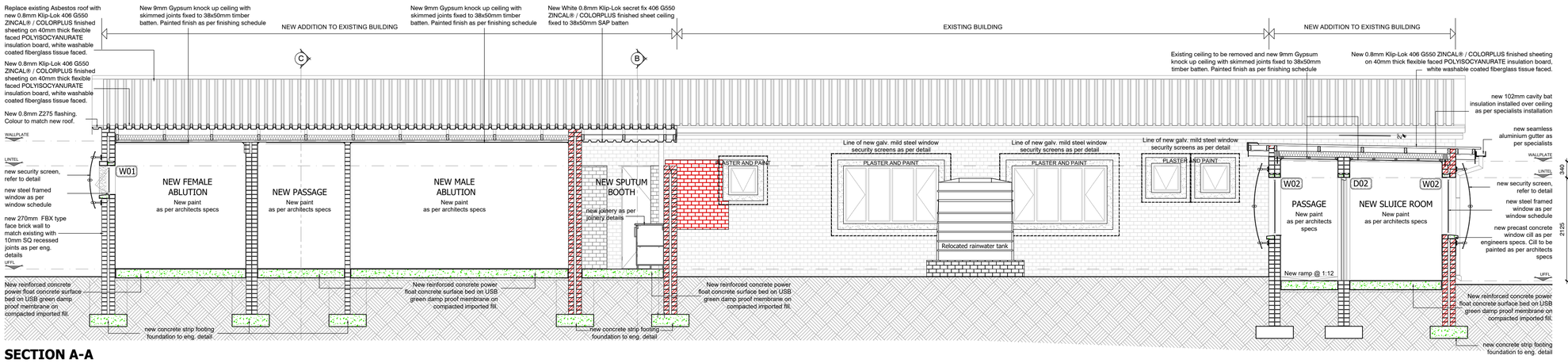
DRAWING TITLE

SITE PLAN

SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 01	A1
DRAWING No.		REVISION
MDA290C-200		0

FOR INFORMATION


New "Clear View" fence as per further detail
New "Clear View" fence as per further detail
New "Clear View" fence as per further detail
New "Clear View" fence as per further detail
New "Clear View" fence as per further detail
New "Clear View" fence as per further detail
NEW PUBLIC PARKING
NEW STAFF PARKING
NEW AMBULANCE PARKING
NEW PARAPLEGIC PARKING
NEW SERVICE AND DELIVERY GATE
EXISTING SLIDING GATE TO REMAIN
BUILDING FOR OTHER USE
NEW SLUICE ROOM
A-27
NEW STAFF ABLUTION
1.6 m²
A-26
NEW STAFF ROOM/MEETING
14.8 m²
A-12
NEW STORE ROOM 02
7.1 m²
A-28
NEW PHARMACY BULK STORE
17.6 m²
A-30
NEW DISPENSARY
11.3 m²
A-32
EXISTING MALE ABLUTION
8.6m²
A-37
EXISTING PHARMACY WAITING AREA
26.5m²
A-33
EXISTING VISITING DOCTOR'S COUNSELING ROOM
14.7m²
A-31
EXISTING ABLUTION LOBBY
8.8m²
A-34
NEW CLEANERS STORE
8.8m²
A-36
EXISTING FEMALE ABLUTION
7.1m²
A-35
PASSAGE
A-29
SUB WAITING
24.6 m²
A-13
EXISTING CONSULTING ROOM 02
15.6 m²
A-11
EXISTING CONSULTING ROOM 04
13.8 m²
A-14
EXISTING CONSULTING ROOM 01
15.7 m²
A-10
EXISTING CONSULTING ROOM 03
13.8 m²
A-15
NEW EMERGENCY TREATMENT ROOM
14.5 m²
A-09
NEW STORE ROOM 01
3.9 m²
A-17
NEW ABLUTION
2.9 m²
A-18
NEW PATIENT VITALS AND OBSERVATION ROOM
9.9 m²
A-19
COVERED PASSAGE
A-20
NEW SPUTUM BOOTH
5.1m²
A-25
EXISTING ENTRANCE
4.6 m²
A-08
EXISTING ENTRANCE FOYER
4.6 m²
A-07
EXISTING RECEPTION AREA
14.5 m²
A-06
NEW GUARD HOUSE
14.5 m²
NEW SEARCH ROOM
1.9 m²
NEW ABLUTION
2.8 m²
NEW ARCHIVES
10.3 m²
A-04
NEW ADMIN MANAGERS OFFICE
10.3 m²
A-03
EXISTING WAITING AREA
28.6 m²
A-05
NEW MCWH WAITING
9.7 m²
A-02
NEW MCWH CONSULTING ROOM
11.6 m²
A-01
NEW MALE ABLUTIONS
10 m²
A-21
NEW FEMALE ABLUTIONS
9.1 m²
A-23
NEW ASSISTED ABLUTION
3.2 m²
A-22
NEW WC 1.6 m²
NEW WC 1.8 m²
NEW WC 1.8 m²
NEW WC 1.8 m²
NEW GARDEN REFUSE ROOM
3.8m²
NEW GENERAL REFUSE ROOM
3.8m²
NEW MEDICAL REFUSE ROOM
8.1 m²
NEW PLAY AREA
79.3 m²
new synthetic grass
New 7000 litter high raised water tank and steel structure as per eng's detail
New 5000 liter rainwater harvesting tank and overhead emergency supply tank
elevation 01
elevation 02
NEW CRICKET/SOCCER/RUGBY/KERV BAY
NEW "CLEAR VIEW" FENCE AND GATE AS PER FURTHER DETAIL
EXISTING SEWER LINE CONNECTION
NEW SEWER LINE CONNECTION
EXISTING SEWER LINE TO BE DIVERTED
Existing MH
New MH
Existing tree to be removed
Existing tree to be retained
line of new kerb as per engineers specs
Existing concrete apron to be inspected and refurbished as per engineers specs where necessary
New concrete plinth for generator as per eng's detail
New concrete apron as per engineers specs
New Reinforced concrete slab on 50MI green damp proof membrane on compacted imported fill as per eng. detail
New 270mm face brick external wall as per eng details to match existing facebrick finish
New 230mm wide 1000mm high brick retaining wall as per engineers detail
New Concrete steps to ground finish as per engineers specs
New Concrete steps to ground finish as per engineers specs
New 1200mm high, 200mm thick retaining wall as per engineers specs
New 1000mm high, 200mm thick retaining wall as per engineers specs
New 1½ leaf door hanging onto foyer capable of easy stretcher access
New 110mm internal brickwork as per engineers specs to be plastered and painted as per finishing schedule and Architect spec
New 230mm wide 1000mm high brick retaining wall as per engineers detail
New 270mm face brick external wall as per engineers details to match existing facebrick finish
New better view fence by others
New better view fence by others
New gate as per gate schedule
New gate as per gate schedule
New concrete apron to be inspected and refurbished as per engineers specs where necessary
New concrete apron to be inspected and refurbished as per engineers specs where necessary
New concrete apron to be inspected and refurbished as per engineers specs where necessary
New concrete pavers as per engineers specs
New concrete pavers as per engineers specs
New concrete pavers as per engineers specs



SECTION A-A
scale 1:50

SECTION B-B
scale 1:50

SECTION C-C
scale 1:50

GENERAL NOTES:

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Sewer connections to comply with municipal regulations by a Land Surveyor

No	AMENDMENTS	DATE
0	ISSUED FOR TENDER	OCT 2023

SURVEYED	NA	
DRAWN	IOI	FEB 2019
DESIGNED	DBA	FEB 2019
CHECKED	DBA	FEB 2019
APPROVED	PR REGISTRATION NO. 3128	

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www.echealth.gov.za

PROJECT TITLE

ERF 5538 & 5539
MIDDLE TERRACE CLINIC
(GRAHAMSTOWN)

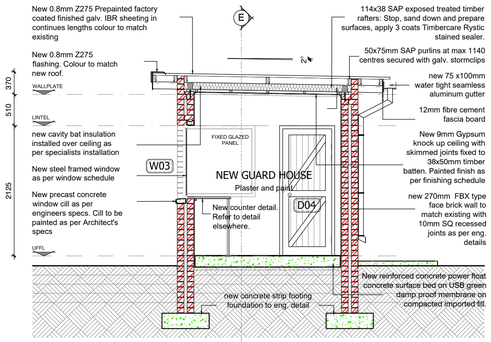
DRAWING TITLE

SECTIONS

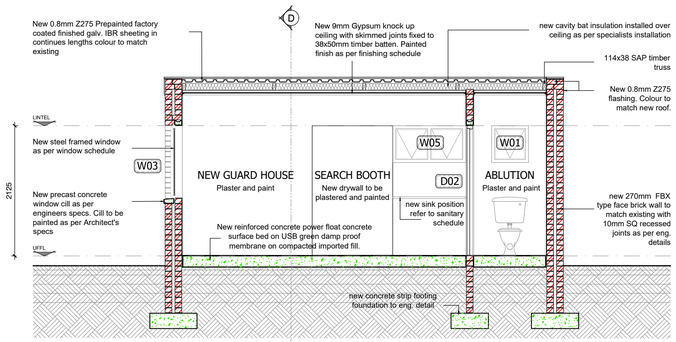
SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 03	A1

DRAWING No.	REVISION
MDA290C-202	0

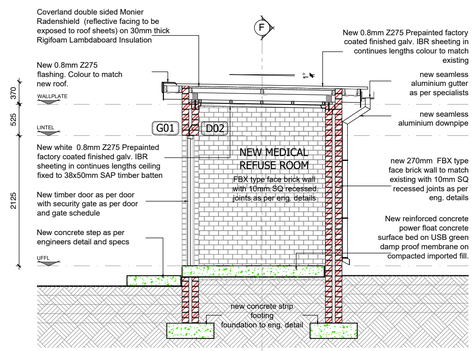
FOR INFORMATION



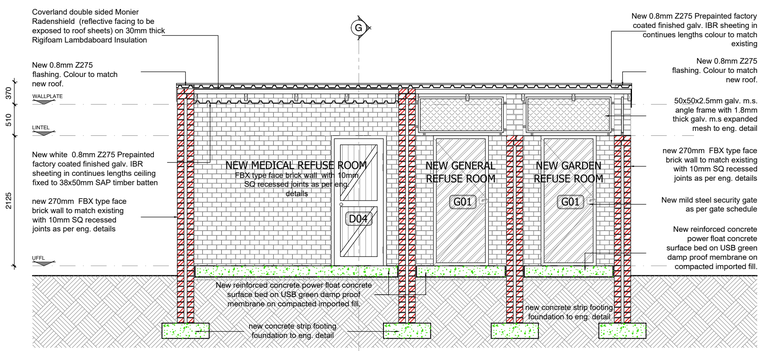
SECTION D-D _ GUARD HOUSE
scale 1:50



SECTION E-E _ GUARD HOUSE
scale 1:50



SECTION G-G _ REFUSE YARD
scale 1:50



SECTION F-F _ REFUSE YARD
scale 1:50

GENERAL NOTES:

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No	AMENDMENTS	DATE
0	ISSUED FOR TENDER	OCT 2023

SURVEYED	NA	
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PROJECT TITLE

ERF 5538 & 5539
MIDDLE TERRACE CLINIC
(GRAHAMSTOWN)

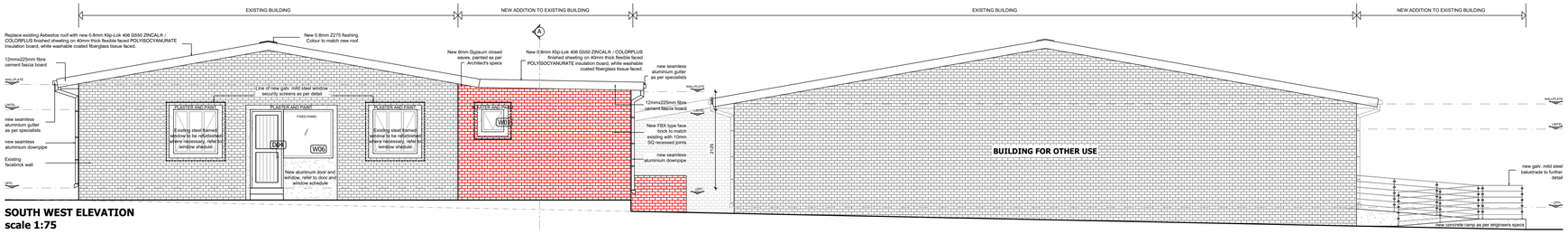
DRAWING TITLE

SECTIONS

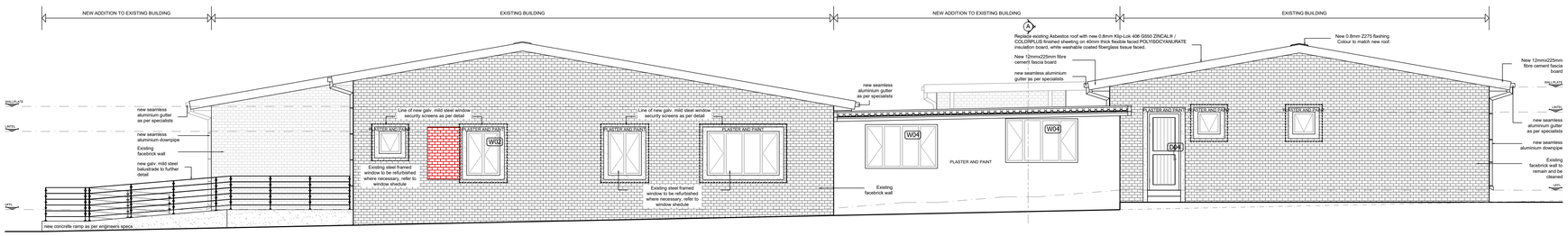
SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 04	A1

DRAWING No.	REVISION
MDA290C-203	0

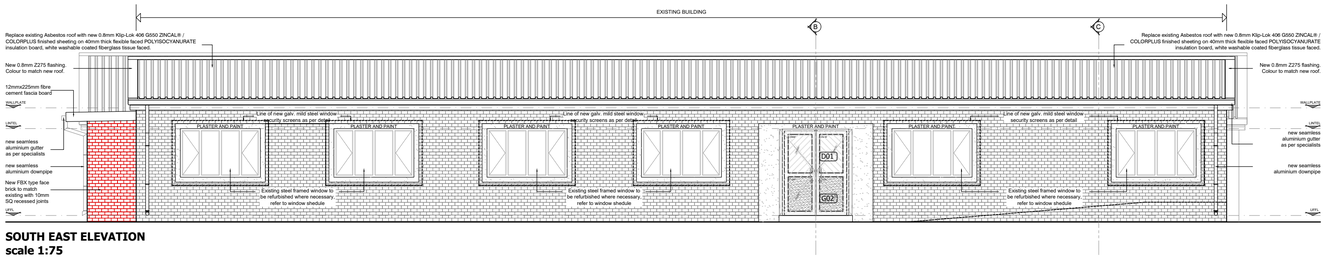
FOR INFORMATION



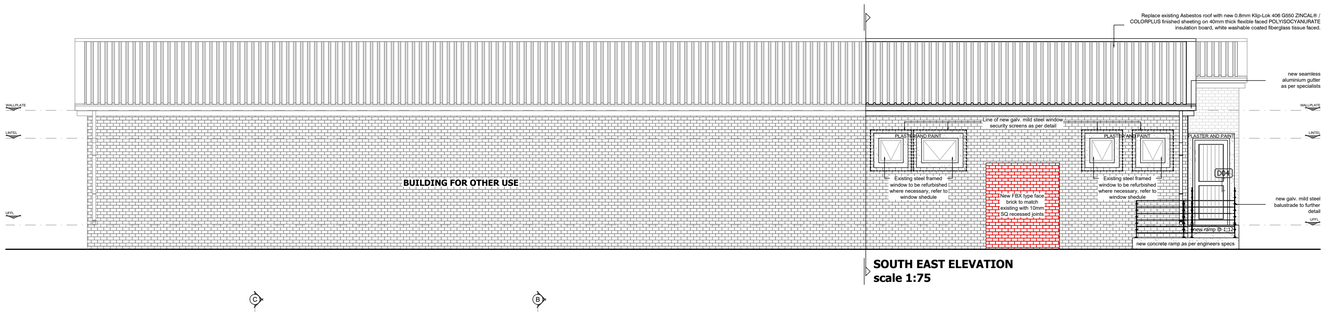
SOUTH WEST ELEVATION
scale 1:75



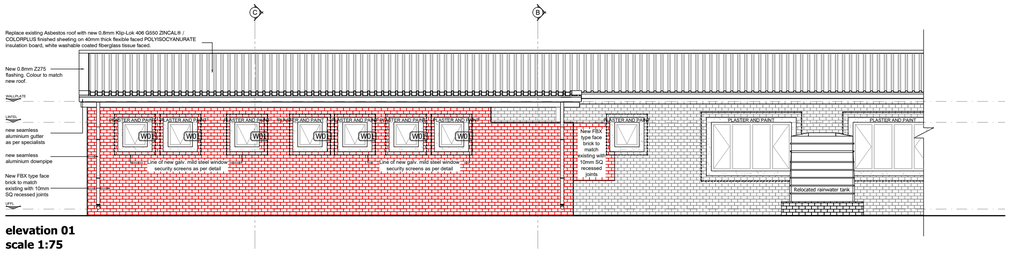
NORTH EAST ELEVATION
scale 1:75



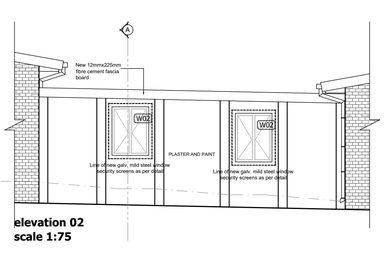
SOUTH EAST ELEVATION
scale 1:75



SOUTH EAST ELEVATION
scale 1:75



elevation 01
scale 1:75



elevation 02
scale 1:75

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Sewer connections to comply with municipal regulations by a Land Surveyor

No	AMENDMENTS	DATE
0	ISSUED FOR TENDER	OCT 2023

SURVEYED	NA	
DRAWN	IOI	FEB 2019
DESIGNED	DBA	FEB 2019
CHECKED	DBA	FEB 2019
APPROVED	PR REGISTRATION NO. 3128	

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SAKHIWO MAINTAINANCE CONSORTIUM

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Independence Avenue Dukumbana Building
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SOUTH AFRICA
Private Bag X0038, BHISHO, 5605
Tel: +27 (0)40 608 1114
www.echealth.gov.za

PROJECT TITLE

ERF 5538 & 5539
MIDDLE TERRACE CLINIC
(GRAHAMSTOWN)

DRAWING TITLE

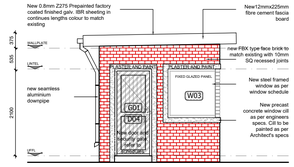
ELEVATIONS

SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 05	A1

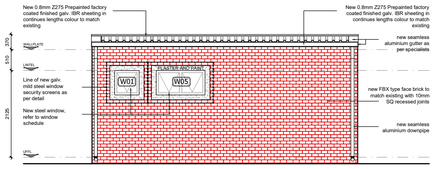
DRAWING No.	REVISION
MDA290C-204	0

FOR INFORMATION

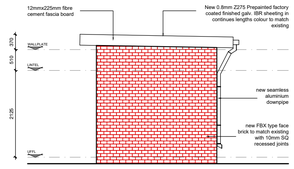
NORTH WEST ELEVATION - GUARD HOUSE
scale 1:75



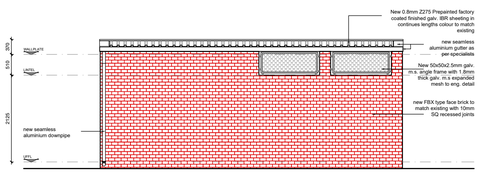
NORTH EAST ELEVATION - GUARD HOUSE
scale 1:75



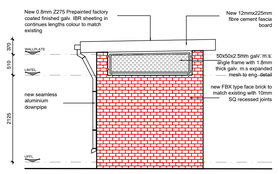
SOUTH EAST ELEVATION - GUARD HOUSE
scale 1:75



SOUTH WEST ELEVATION - GUARD HOUSE
scale 1:75

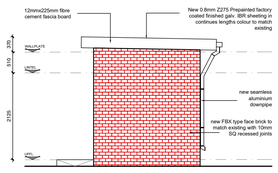


SOUTH EAST ELEVATION - REFUSE YARD
scale 1:75



NORTH EAST ELEVATION - REFUSE YARD
scale 1:75

NORTH WEST ELEVATION - REFUSE YARD
scale 1:75



NORTH WEST ELEVATION - REFUSE YARD
scale 1:75

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ERF 5538 & 5539
MIDDLE TERRACE CLINIC
(GRAHAMSTOWN)

DRAWING TITLE

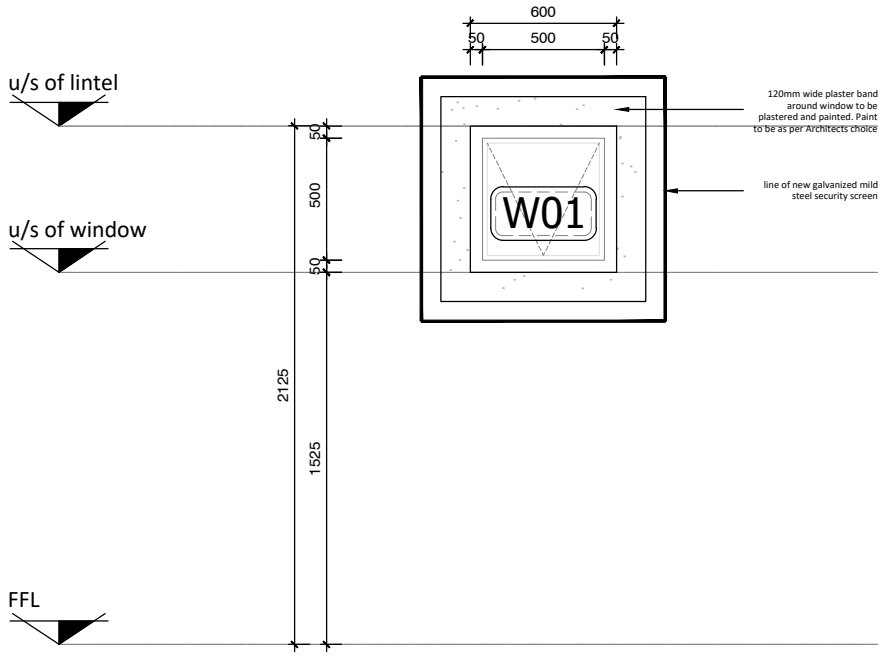
ELEVATIONS

SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 06	A1

DRAWING No.	REVISION
MDA290C-205	0

FOR INFORMATION

MIDDLE TERRACE CLINIC | W01



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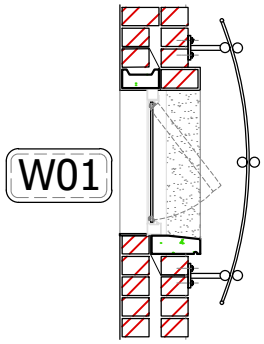
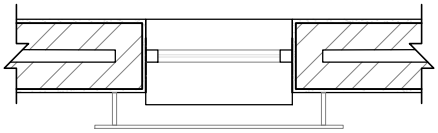


TYPICAL SECTION



TYPICAL PLAN VIEW

QUANTITY	10	LOCATION	New Ablutions, New Guard House, New Vitals Room

FRAME FINISH:
- Painted finish as per Architects

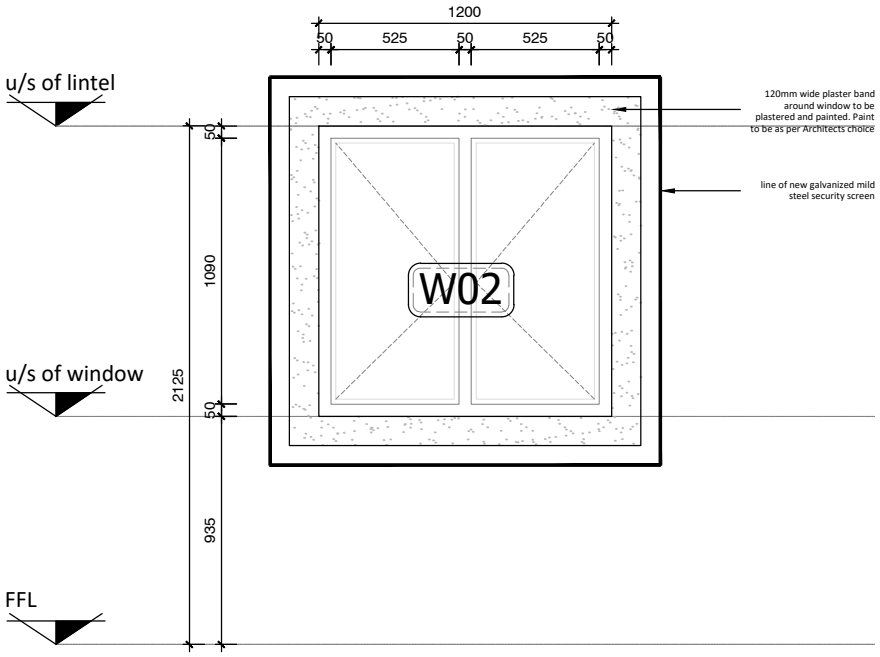
WINDOW TYPE:
- Factory manufactured steel frame window with factory primer and lugs for building

IRONMONGERY:
- Brass Latch

GLAZING:
- 6.38mm HPR Laminated safety glass

MDA ARCHITECTS	Drawing Number:	Revision:
WINDOW SCHEDULE	MDA 290 C	

MIDDLE TERRACE CLINIC | W02



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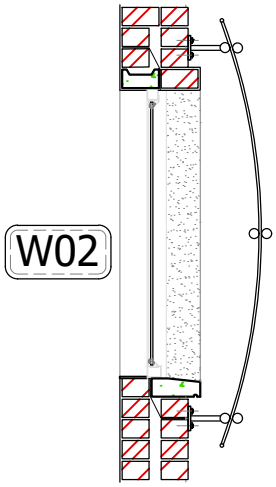

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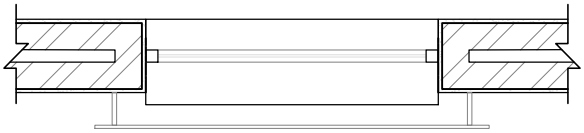


TYPICAL PLAN VIEW

QUANTITY	02	LOCATION	Guard house, Existing Waiting Area, New Dispensary

FRAME FINISH:
- Painted finish as per Architects

WINDOW TYPE:
- Factory manufactured steel frame window with factory primer and lugs for building

IRONMONGERY:
- Brass Latch

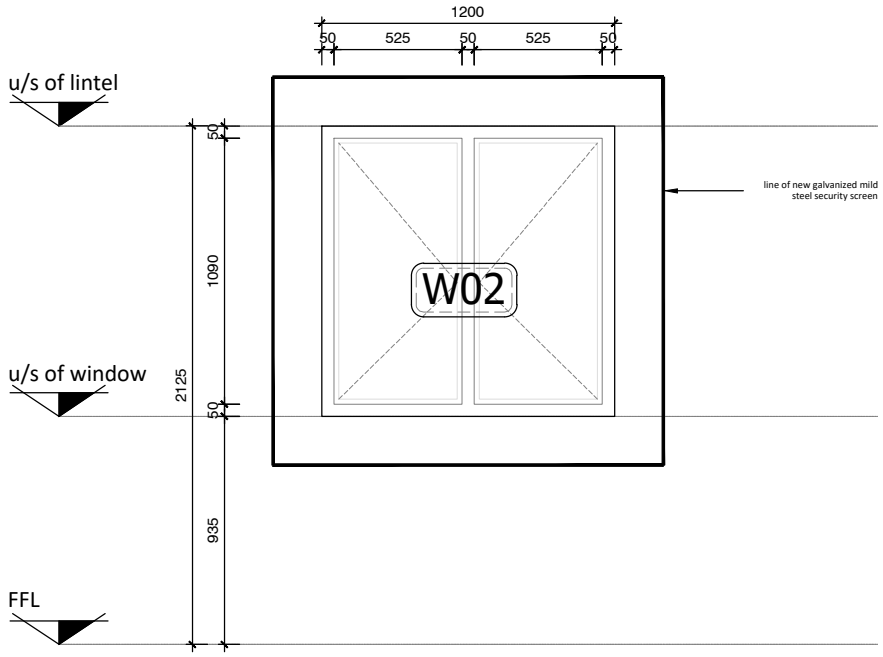
GLAZING:
- 6.38mm HPR Laminated safety glass

MDA ARCHITECTS	Drawing Number:	Revision:
WINDOW SCHEDULE	MDA 290 C	

MDA ARCHITECTS

MIDDLE TERRACE CLINIC

W02a



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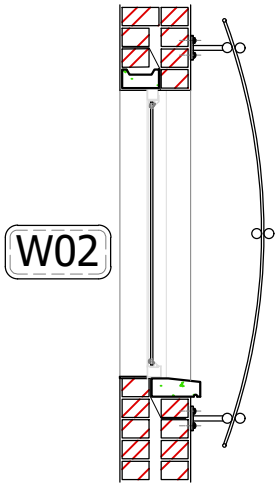

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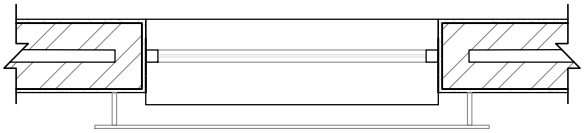


TYPICAL PLAN VIEW

QUANTITY	02	LOCATION	New Reception Hatch

FRAME FINISH:
- Painted finish as per Architects

WINDOW TYPE:
- Factory manufactured steel frame window with factory primer and lugs for building

IRONMONGERY:
- Brass Latch

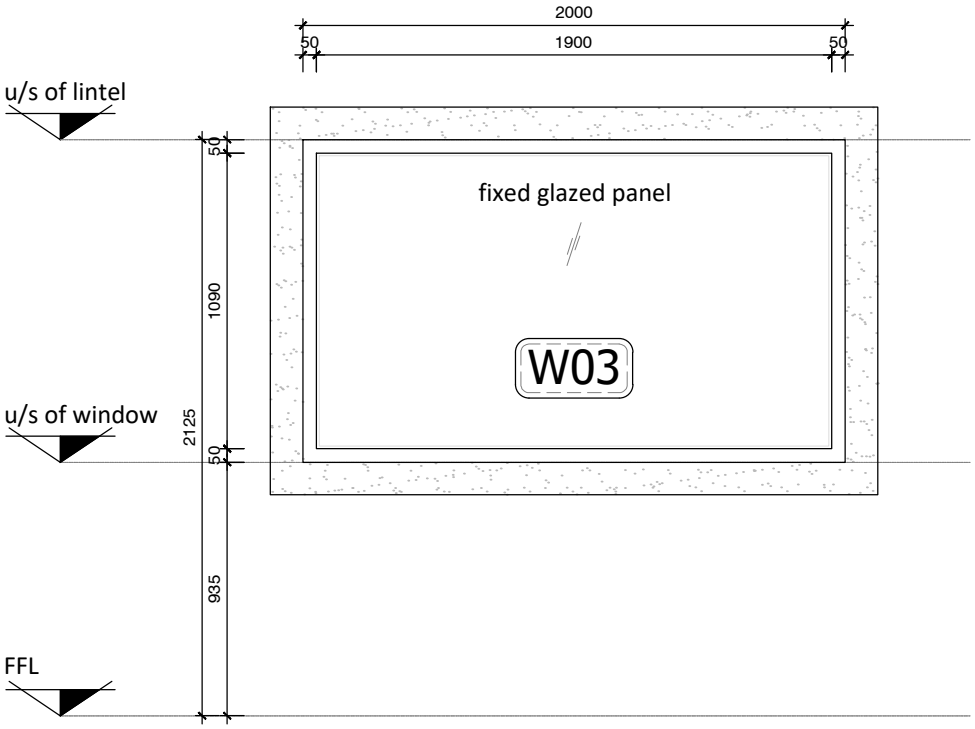
GLAZING:
- 6.38mm HPR Laminated safety glass

MDA ARCHITECTS	Drawing Number:	Revision:
WINDOW SCHEDULE	MDA 290 C	

MDA ARCHITECTS

MIDDLE TERRACE CLINIC

W03



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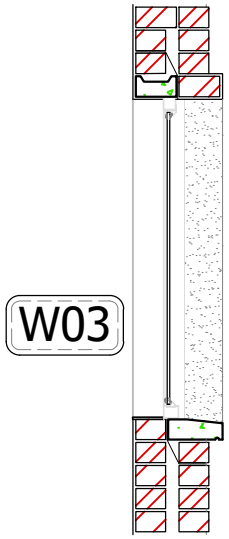

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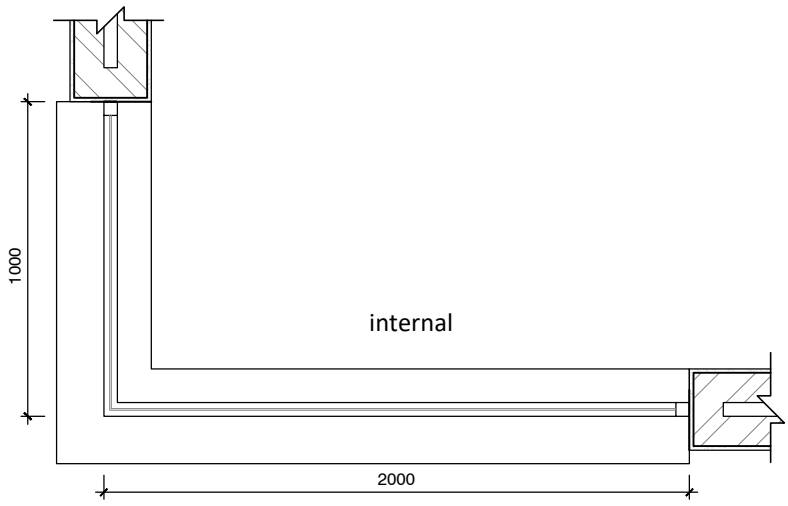


TYPICAL PLAN VIEW

QUANTITY	01	LOCATION	New Guard House

FRAME FINISH:
- Painted finish as per Architects

WINDOW TYPE:
- Natural Anodized aluminum extrusions by specialist

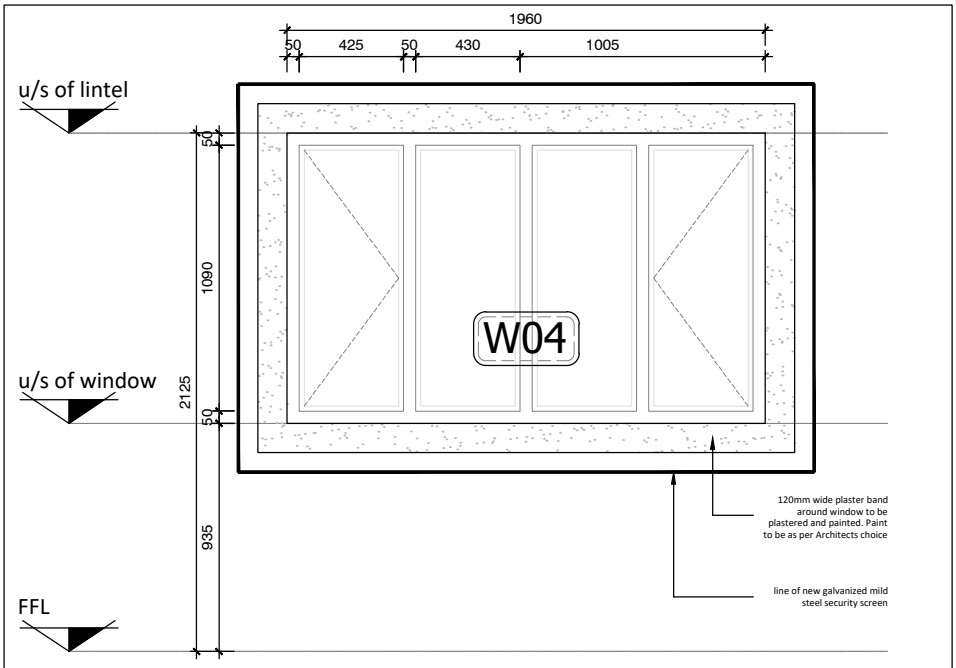
IRONMONGERY:
- Not Applicable

GLAZING:
- 6.38mm HPR Laminated safety glass

MDA ARCHITECTS	Drawing Number:	Revision:
WINDOW SCHEDULE	MDA 290 C	

MIDDLE TERRACE CLINIC

W04



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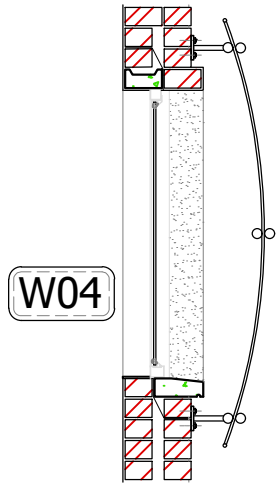
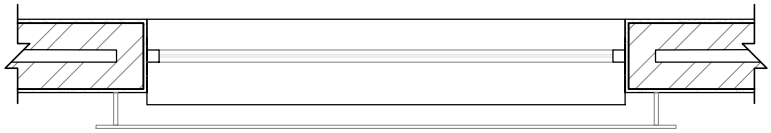


TYPICAL SECTION



TYPICAL PLAN VIEW

QUANTITY	02	LOCATION	New Sluice Room, New Store

FRAME FINISH:

- Painted finish as per Architects

WINDOW TYPE:

- Factory manufactured steel frame window with factory primer and lugs for building

IRONMONGERY:

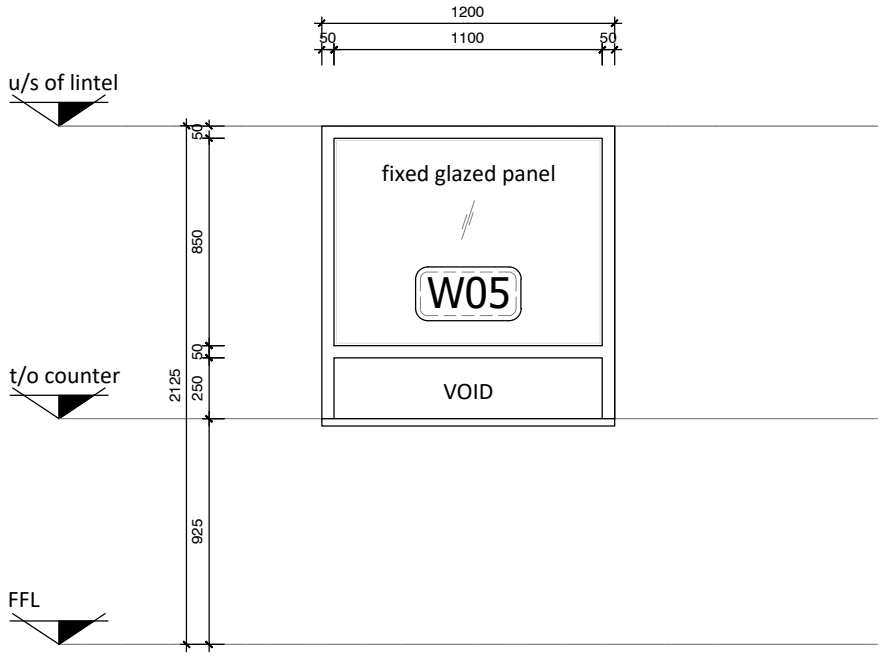
- Brass Latch

GLAZING:

- 6.38mm HPR Laminated safety glass

MDA ARCHITECTS	Drawing Number:	Revision:
WINDOW SCHEDULE	MDA 290 C	

MIDDLE TERRACE CLINIC | W05



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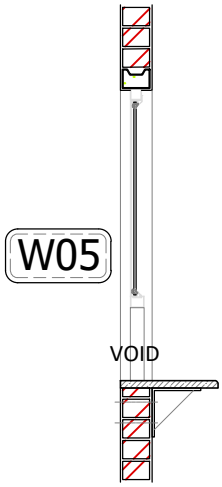

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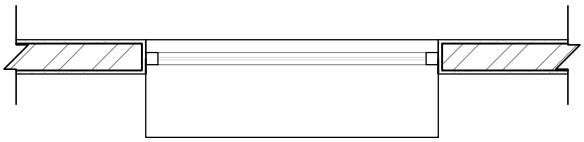


TYPICAL PLAN VIEW

QUANTITY	04	LOCATION	Reception, Patient Vitals Room, New Dispensary

FRAME FINISH:
- Painted finish as per Architects

WINDOW TYPE:
- Natural Anodized aluminum extrusions by specialist
- x1 fixed section and x1 void below

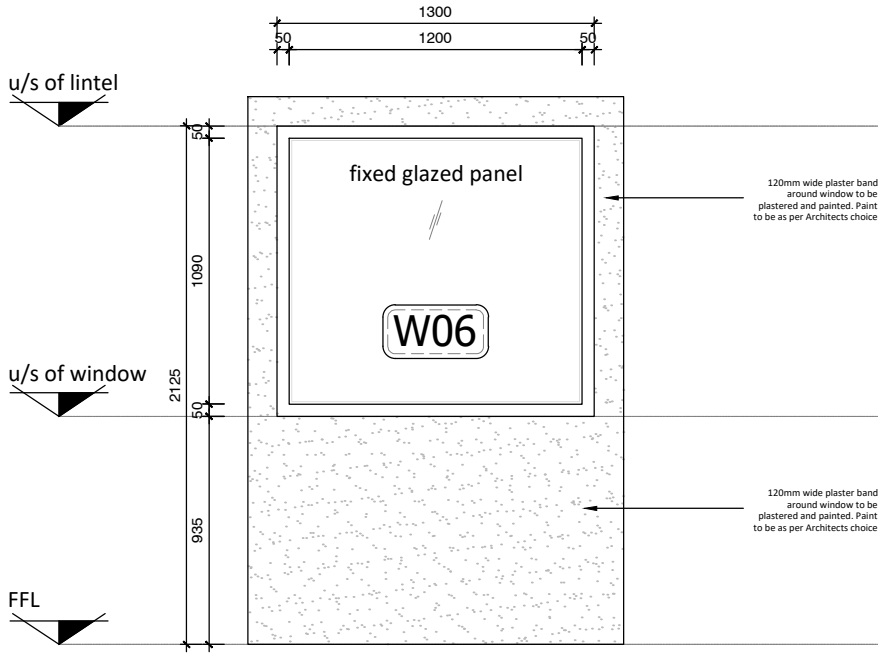
IRONMONGERY:
- Not Applicable

GLAZING:
- 6.38mm HPR Laminated safety glass

MDA ARCHITECTS	Drawing Number:	Revision:
WINDOW SCHEDULE	MDA 290 C	

MIDDLE TERRACE CLINIC

W06



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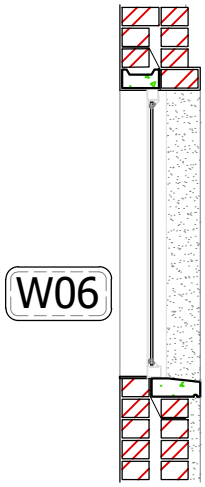

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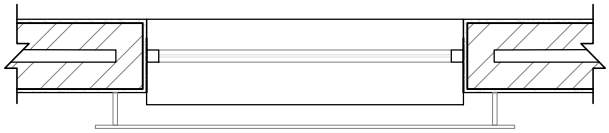


TYPICAL PLAN VIEW

QUANTITY	01	LOCATION	New MCWH Waiting area

FRAME FINISH:
- Painted finish as per Architects

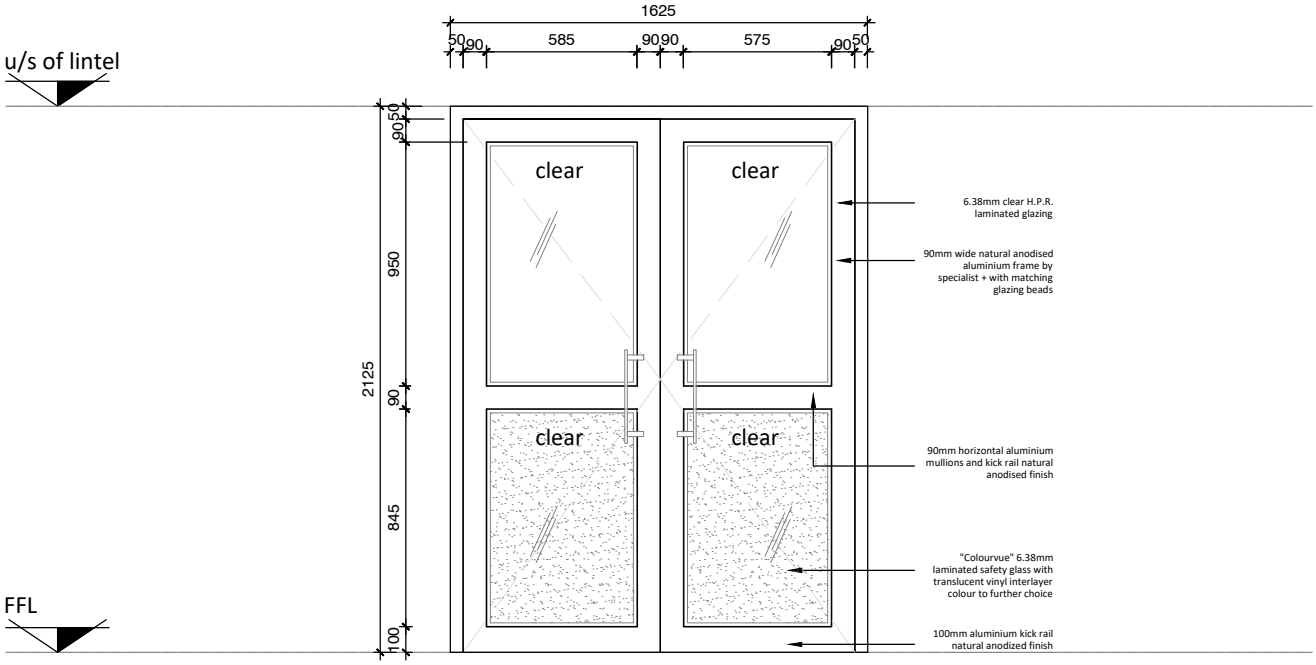
WINDOW TYPE:
- Natural Anodized aluminum extrusions by specialist

IRONMONGERY:
- Not Applicable

GLAZING:
- 6.38mm HPR Laminated safety glass

MDA ARCHITECTS	Drawing Number:	Revision:
WINDOW SCHEDULE	MDA 290 C	

MDA ARCHITECTS	MIDDLE TERRACE CLINIC	D01



TYPICAL ELEVATION

QUANTITY	01	LOCATION	Main Entrance Door

DOOR FRAME:
- Natural Anodized aluminium extrusion with rebated lip by specialist: min 90mm wide extrusion.
- Attached rubberized buffers at rebate
- Draft excluded

DOOR:
- Natural Anodized aluminium extrusion by specialist.
- Tensioned 10mm treated securing rod in top and bottom style over full width of each door leaf
- 3 x aluminium butt hinges with nylon bushes

GENERAL:
- IRONMONGERY: Refer to Ironmongery Schedule - SET 3

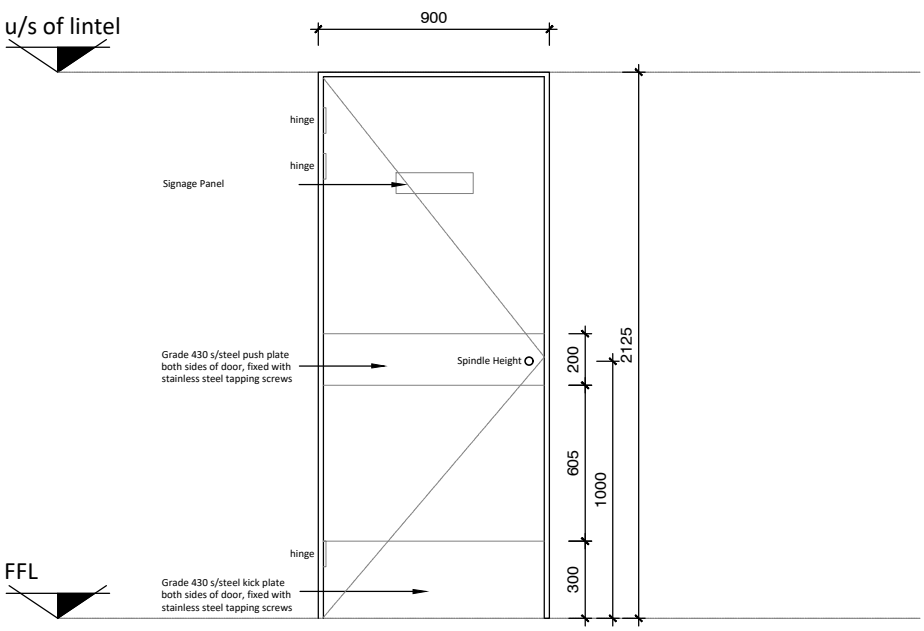
GLAZING:
- 6.38mm HPR Laminated safety glass
- "Colourvue" 6mm laminated safty glass with translucent vinyl interlayer colour to further choice

MDA ARCHITECTS	Drawing Number:	Revision:
DOOR SCHEDULE	MDA 290 C	

MDA ARCHITECTS

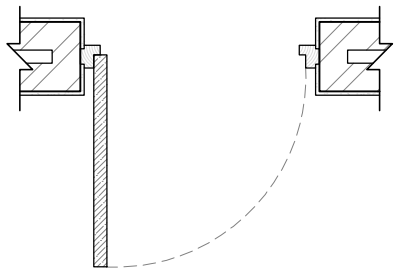
MIDDLE TERRACE CLINIC

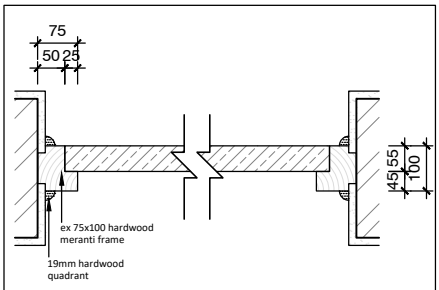
D02



TYPICAL ELEVATION

TYPICAL PLAN VIEV





TYPICAL SECTIONAL VIEW

QUANTITY	23	LOCATION	New Internal Doors

DOOR FRAME:

- pressed metal galv. mild steel frame 1.8mm thick for building in to 110mm or 230mm brick wall with plastered finish.
- Built into plastered brick walls
- painted finish as per Architects

DOOR:

- 44mm thick semi-solid core flush doors with 10mm hardwood edges faced with tempered smooth faced hardboard for painting.
- 300mm stainless steel protective kick plates and push plates on both sides of door fixed with 20mm counter sunk s.s screws at max 200mm.
- painted finish as per Architect spec

GENERAL:

- IRONMONGERY: Refer to Ironmongery Schedule - SET 1

GLAZING:

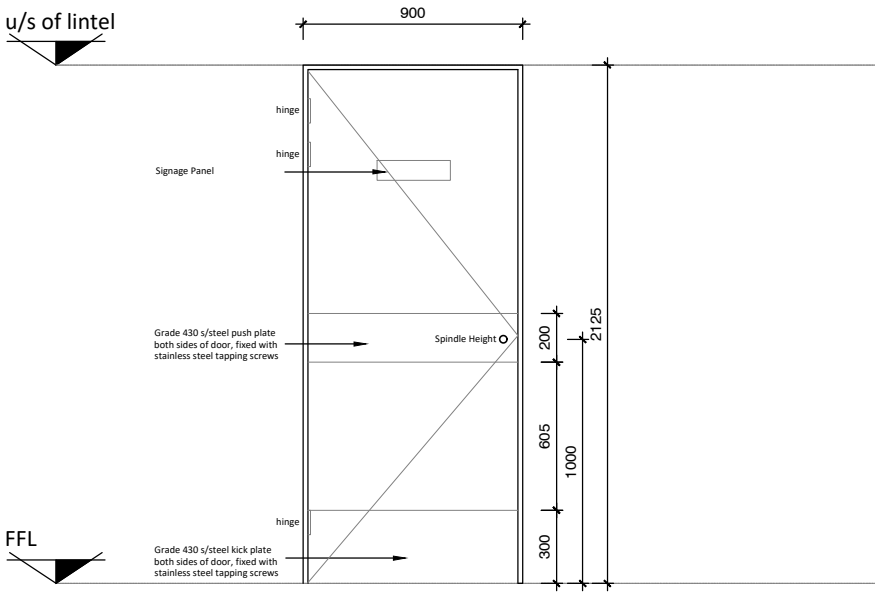
- Not Aplicable

MDA ARCHITECTS	Drawing Number:	Revision:
DOOR SCHEDULE	MDA 290 C	

MDA ARCHITECTS

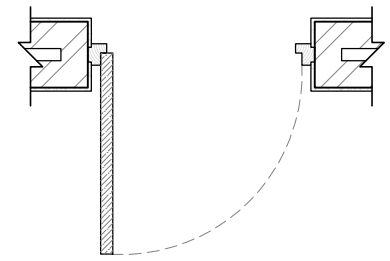
MIDDLE TERRACE CLINIC

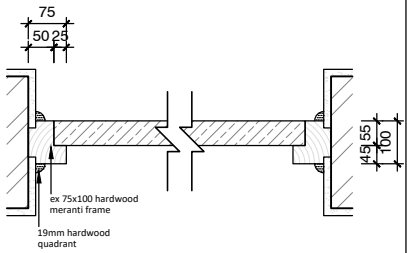
D02a



TYPICAL ELEVATION

TYPICAL PLAN VIEV





TYPICAL SECTIONAL VIEW

QUANTITY	06	LOCATION	New Ablution Doors

DOOR FRAME:

- pressed metal galv. mild steel frame 1.8mm thick for building in to 110mm or 230mm brick wall with plastered finish.
- Built into plastered brick walls
- painted finish as per Architects

DOOR:

- 44mm thick semi-solid core flush doors with 10mm hardwood edges faced with tempered smooth faced hardboard for painting.
- 300mm stainless steel protective kick plates and push plates on both sides of door fixed with 20mm counter sunk s.s screws at max 200mm.
- painted finish as per Architect spec

GENERAL:

- IRONMONGERY: Refer to Ironmongery Schedule - SET 4

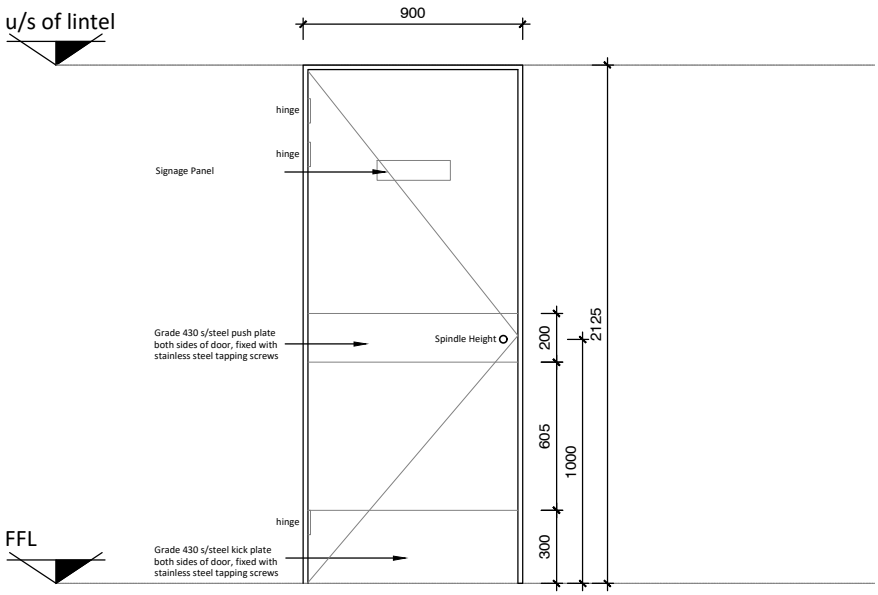
GLAZING:

- Not Aplicable

MDA ARCHITECTS	Drawing Number:	Revision:
DOOR SCHEDULE	MDA 290 C	

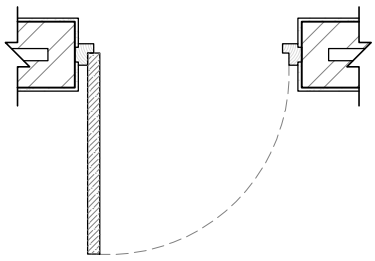
MIDDLE TERRACE CLINIC

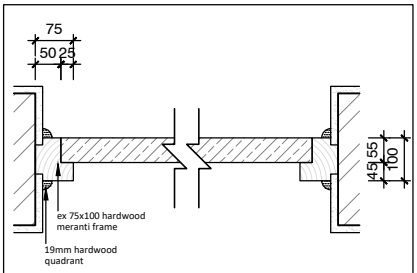
D02b



TYPICAL ELEVATION

TYPICAL PLAN VIEV





TYPICAL SECTIONAL VIEW

QUANTITY	01	LOCATION	New Disabled Ablution Door

DOOR FRAME:

- pressed metal galv. mild steel frame 1.8mm thick for building in to 110mm or 230mm brick wall with plastered finish.
- Built into plastered brick walls
- painted finish as per Architects

DOOR:

- 44mm thick semi-solid core flush doors with 10mm hardwood edges faced with tempered smooth faced hardboard for painting.
- 300mm stainless steel protective kick plates and push plates on both sides of door fixed with 20mm counter sunk s.s screws at max 200mm.
- painted finish as per Architect spec

GENERAL:

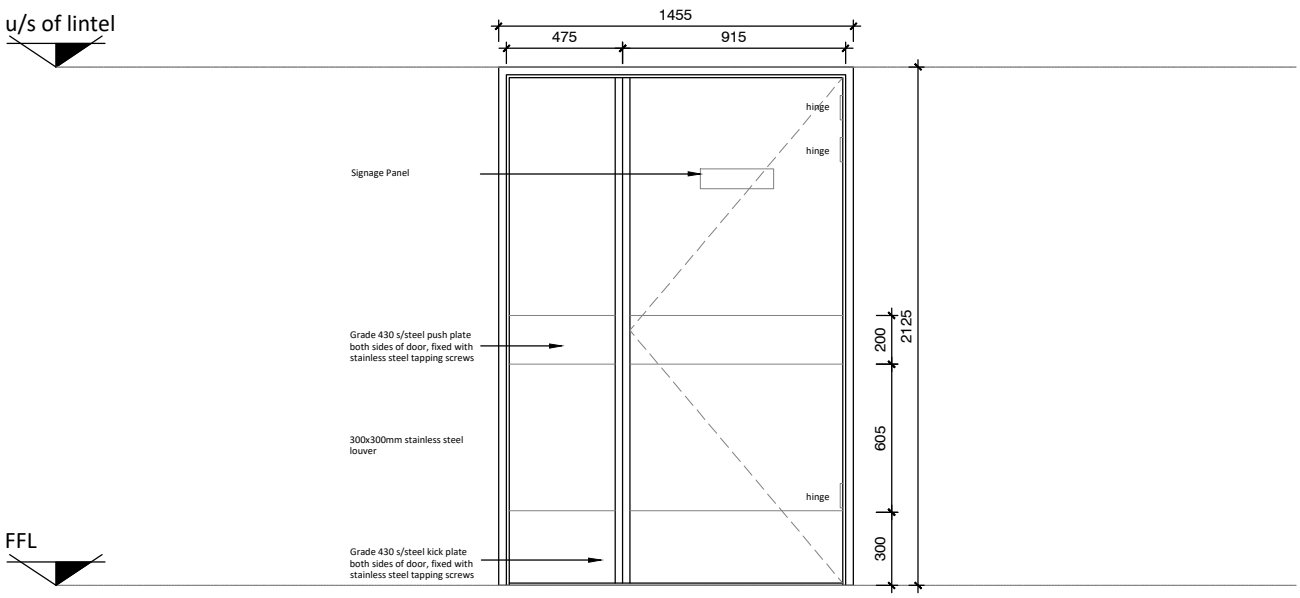
- IRONMONGERY: Refer to Ironmongery Schedule - SET 5

GLAZING:

- Not Aplicable

MDA ARCHITECTS	Drawing Number:	Revision:
DOOR SCHEDULE	MDA 290 C	

MDA ARCHITECTS	MIDDLE TERRACE CLINIC	D03



TYPICAL ELEVATION

QUANTITY	01	LOCATION	New Treatment Room Door

DOOR FRAME:

- pressed metal galv. mild steel frame 1.8mm thick for building in to 110mm or 230mm brick wall with plastered finish.
- Built into plastered brick walls
- painted finish as per Architects

DOOR:

- 900x2032mm Solid Doors (Pty) Ltd or equal approved wide horizontal grooved Solid core interior door (Product code: 12E0180), faced with 10mm tempered veneer faced hardboard placed horizontally for painting
- Surface prepared to receive 2 finishing coats Woodoc10 clear velvet indoor sealer. Surface to a smooth tolerance between coats
- 300mm stainless steel protective kick plates and push plates on both sides of door fixed with 20mm counter sunk s.s screws at max 200mm.

GENERAL:

- IRONMONGERY: Refer to Ironmongery Schedule - SET 2

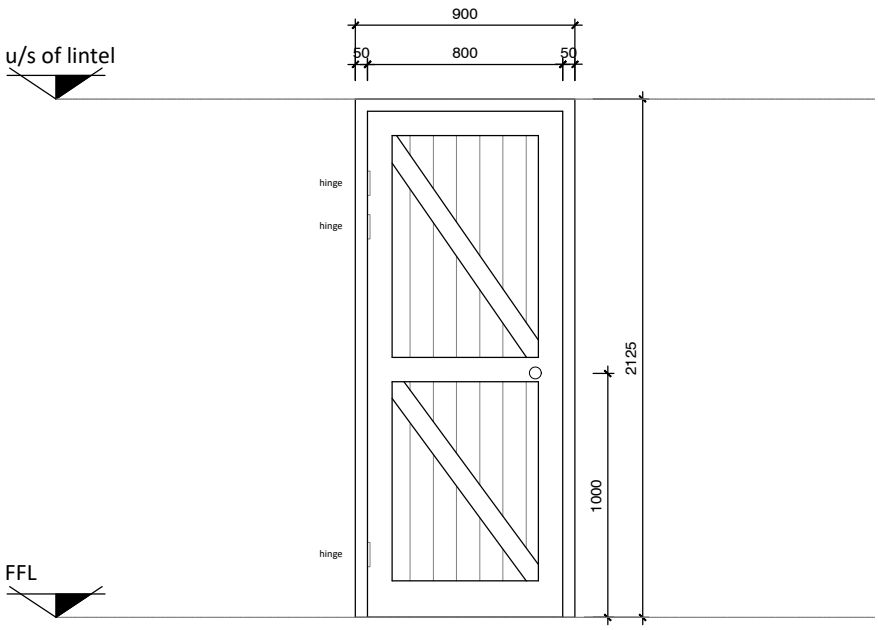
GLAZING:

- Not Aplicable

MDA ARCHITECTS	Drawing Number:	Revision:
DOOR SCHEDULE	MDA 290 C	

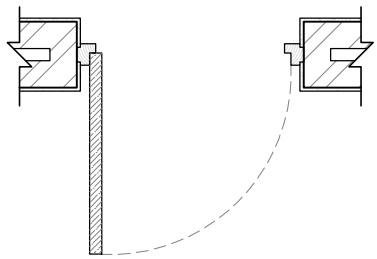
MIDDLE TERRACE CLINIC

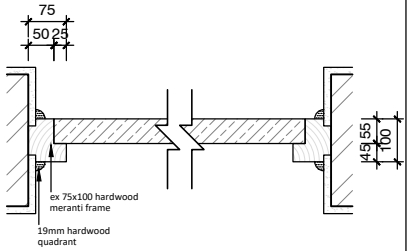
D04



TYPICAL ELEVATION

TYPICAL PLAN VIEV





TYPICAL SECTIONAL VIEW

QUANTITY	05	LOCATION	New External Doors

DOOR FRAME:

- pressed metal galv. mild steel frame 1.8mm thick for building in to 110mm or 230mm brick wall with plastered finish.
- Built into plastered brick walls
- painted finish as per Architects

DOOR:

- 44mm thick FLB doors. Door to receive painted finish, as per finishing schedule

GENERAL:

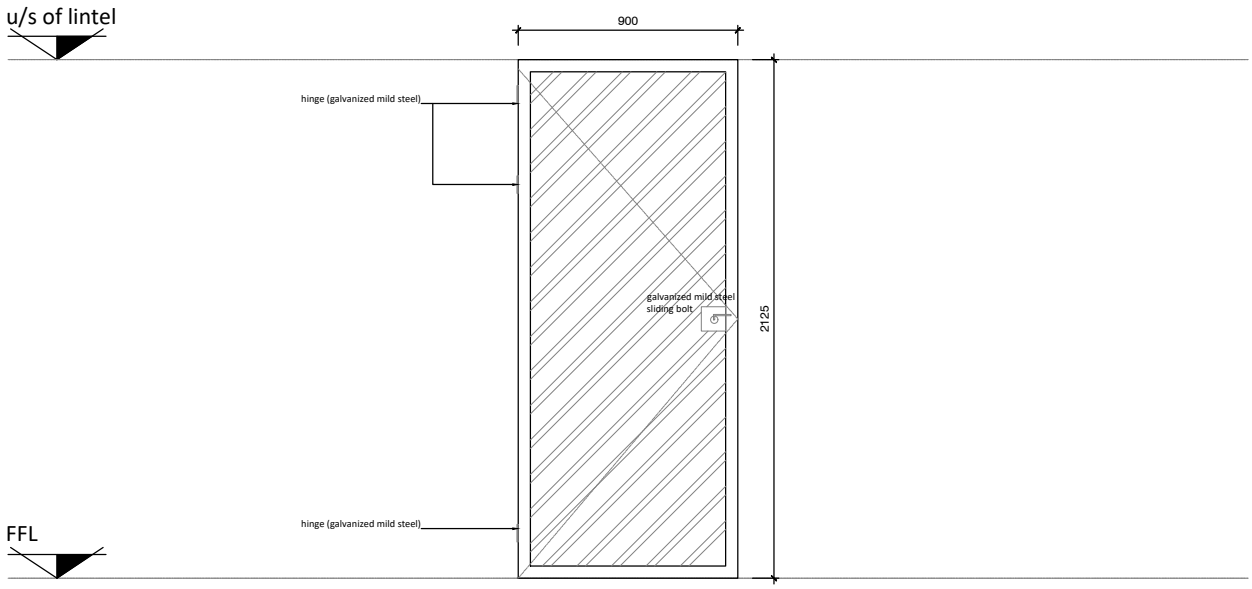
- IRONMONGERY: Refer to Ironmongery Schedule - SET 1

GLAZING:

- Not Aplicable

MDA ARCHITECTS	Drawing Number:	Revision:
DOOR SCHEDULE	MDA 290 C	

MDA ARCHITECTS	MIDDLE TERRACE CLINIC	G01



TYPICAL ELEVATION

QUANTITY	09	LOCATION	General Security Gate

GATE FRAME:
- 30X30X3mm Galvanized mild steel rectangular hollow section welded to form frame
- 25mm x 25mm Galvanized mild steel square section, place diagonally in main frame placed at 100mm centers.

GATE TYPE:
- Purpose made galvanized mild steel square hollow section security gate

GATE FINISH:
- 1 coat Zinc Chromate Primer
- 2 coats gloss enamel

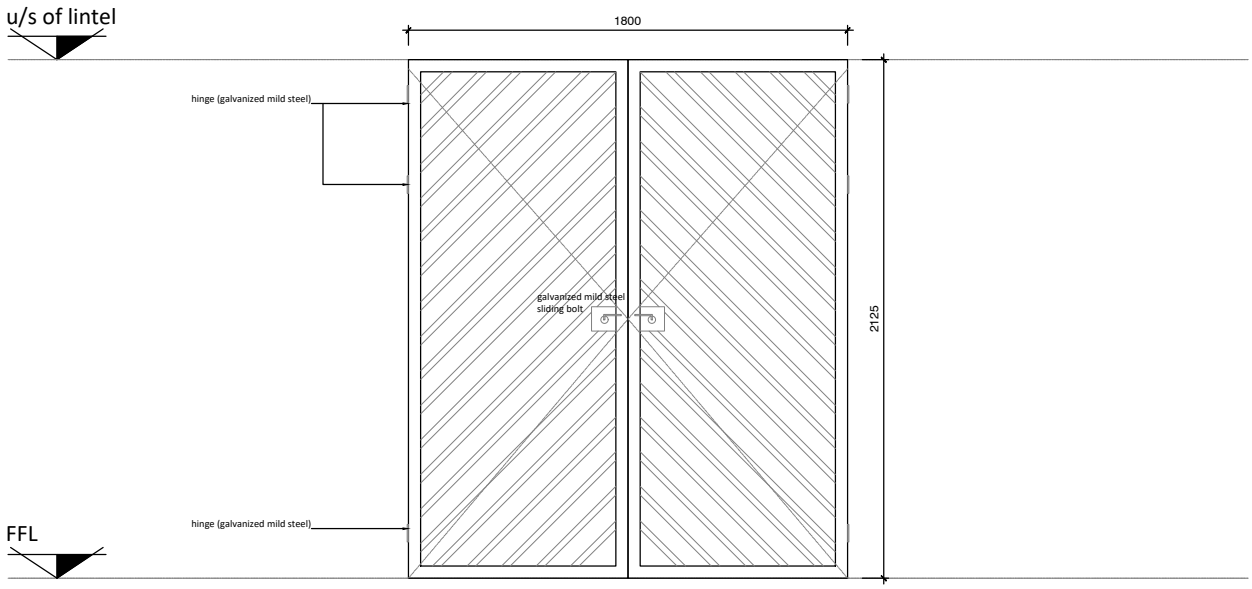
FRAME FINISH:
- Degrease, 1 coat Zinc Chromate Primer
- 2 coats gloss enamel

IRONMONGERY:
- 1 Galvanized mild steel heavy duty sliding bolt for padlock bolt
- 1 Galvanized mild steel heavy duty drop bolt
- 3 Galvanized mild steel heavy duty hinges as supplied by gate manufacturer
- Padlock by Client

GLAZING:
- Not Applicable

MDA ARCHITECTS	Drawing Number:	Revision:
GATE SCHEDULE	MDA 290 C	

MDA ARCHITECTS	MIDDLE TERRACE CLINIC	G02



TYPICAL ELEVATION

QUANTITY	01	LOCATION	Entrance Door Security Gate

GATE FRAME:
- 30X30X3mm Galvanized mild steel rectangular hollow section welded to form frame
- 25mm x 25mm Galvanized mild steel square section, place diagonally in main frame placed at 100mm centers.

GATE TYPE:
- Purpose made galvanized mild steel square hollow section security gate

GATE FINISH:
- 1 coat Zinc Chromate Primer
- 2 coats gloss enamel

FRAME FINISH:
- Degrease, 1 coat Zinc Chromate Primer
- 2 coats gloss enamel

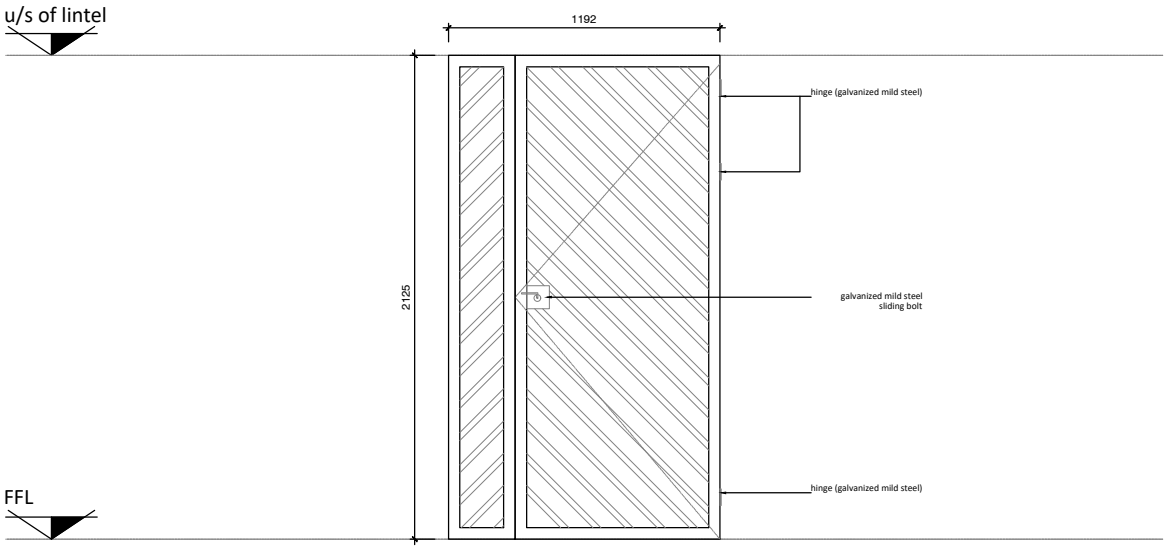
IRONMONGERY:
- 1 Galvanized mild steel heavy duty sliding bolt for padlock bolt
- 1 Galvanized mild steel heavy duty drop bolt
- 3 Galvanized mild steel heavy duty hinges as supplied by gate manufacturer
- Padlock by Client

GLAZING:
- Not Applicable

MDA ARCHITECTS	Drawing Number:	Revision:
GATE SCHEDULE	MDA 290 C	

MDA ARCHITECTS

MIDDLE TERRACE CLINIC | G03



TYPICAL ELEVATION

QUANTITY	02	LOCATION	New Sputum Booth + New Ablutions

GATE FRAME:
- 30X30X3mm Galvanized mild steel rectangular hollow section welded to form frame
- 25mm x 25mm Galvanized mild steel square section, place diagonally in main frame placed at 100mm centers.

GATE TYPE:
- Purpose made galvanized mild steel square hollow section security gate

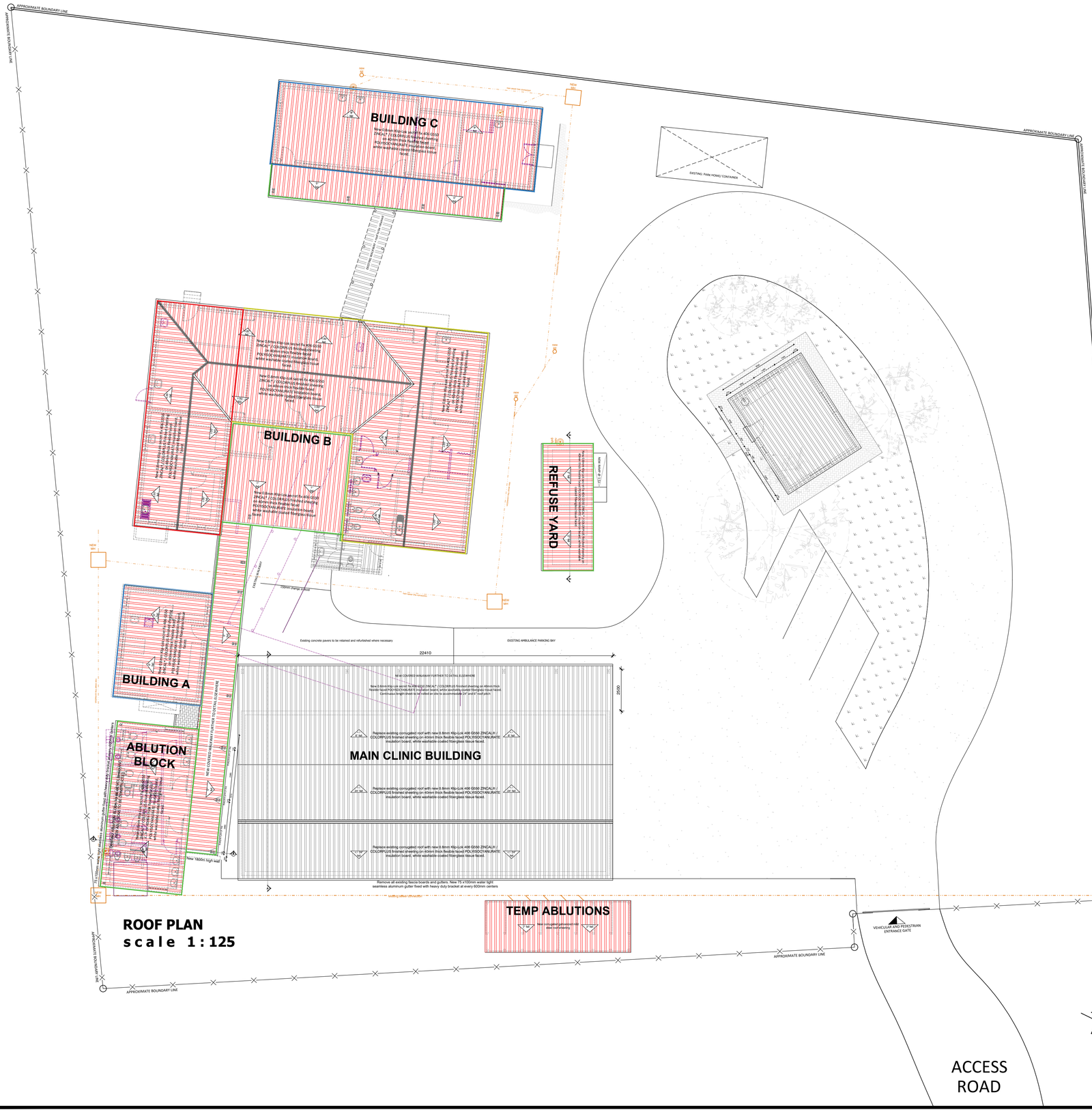
GATE FINISH:
- 1 coat Zinc Chromate Primer
- 2 coats gloss enamel

FRAME FINISH:
- Degrease, 1 coat Zinc Chromate Primer
- 2 coats gloss enamel

IRONMONGERY:
- 1 Galvanized mild steel heavy duty sliding bolt for padlock bolt
- 1 Galvanized mild steel heavy duty drop bolt
- 3 Galvanized mild steel heavy duty hinges as supplied by gate manufacturer
- Padlock by Client

GLAZING:
- Not Applicable

MDA ARCHITECTS	Drawing Number:	Revision:
GATE SCHEDULE	MDA 290 C	



ROOF PLAN
scale 1:125

- Remove existing roof cladding.
- Make good existing timber roof structure + purlins.
- Install new 0.8mm klip-Lok secret fix 406 G550 ZINCAL / COLOUR PLUS finished sheeting on 40mm thick flexible faced POLYISOCYANURATE insulation board, white washable coated fibre glass tissue faced
- Remove front + side gables to suite installation of fibre cement fascias + 0.8mm gauge sheet metal flashings (side + apex)

- Remove existing roof cladding
- Make good existing timber roof structure + purlins
- Install new 0.8mm klip-Lok secret fix 406 G550 ZINCAL / COLOUR PLUS finished sheeting on 40mm thick flexible faced POLYISOCYANURATE insulation board

- Remove existing roof covering , gutters etc + timber sub-structure
- Install new timber prefabricated rafters by specialist
- Install new 0.8mm klip-Lok secret fix 406 G550 ZINCAL / COLOUR PLUS finished sheeting on 40mm thick flexible faced POLYISOCYANURATE insulation board

- New building
- New timber roof structure by specialist
- New 0.8mm klip-Lok secret fix 406 G550 ZINCAL / COLOUR PLUS finished sheeting on 40mm thick flexible faced POLYISOCYANURATE insulation board

- GUTTERS: Remove all existing gutters + fascias
- Install new fibre cement fascias
- Install new extruded aluminium gutters in continuous lengths
- Install new 40 x 75 aluminium rail water down pipes.

General Notes:

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- Sewer connection to comply with municipal regulations
- The Architects reserve the copyright on this drawing.

Municipal Information:

Architects Information:
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Designers Signature

Clients Information:
Province of the EASTERN CAPE HEALTH

Drawing Revisions:

Revision	Date	Drawn By	Description

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Project Title
Raglan Road Clinic - Grahamstown
Working Drawings

Drawing Name
Site Plan

Issue Date:	15-01-2024
Technician:	G.D
Checked By:	D.B.A
Drawing Scale:	As Shown

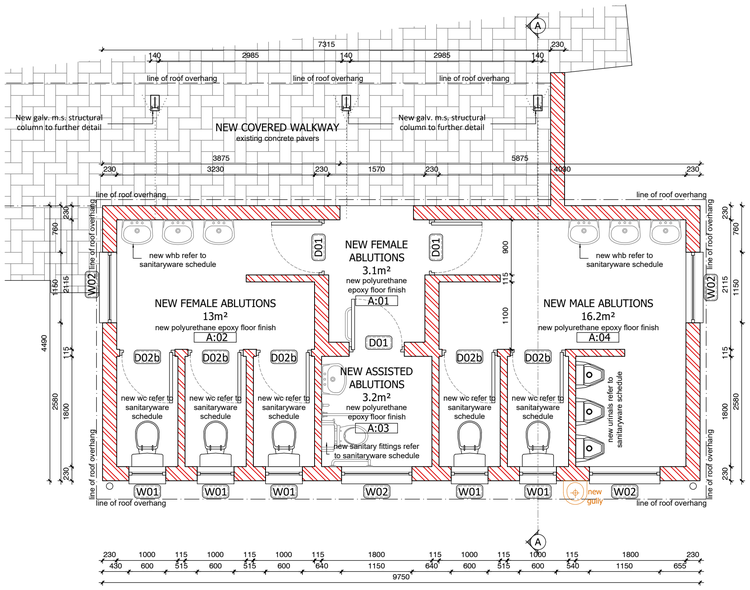
Drawing Number: MDA 290H-200

Drawing Status: SK: Sketch Plan; T: Tender; WD: Working Drawing; RD: Record Drawing

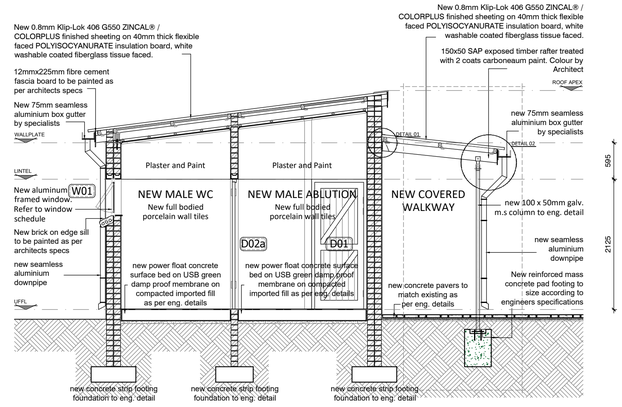
Page Size: A1

Revision

ISSUED FOR: INFORMATION



FLOOR PLAN-
scale 1:50



SECTION A-A
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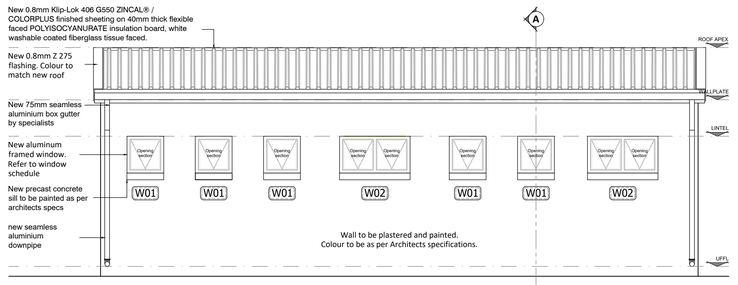
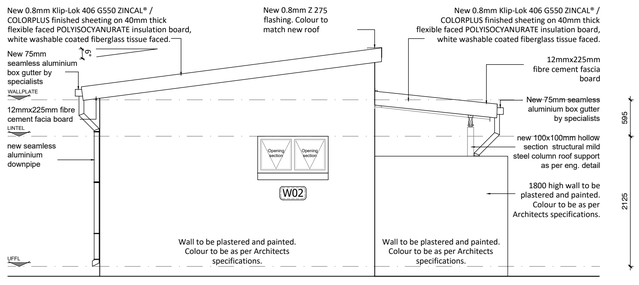
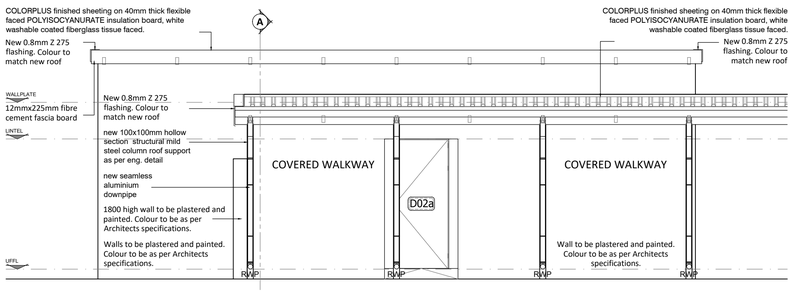


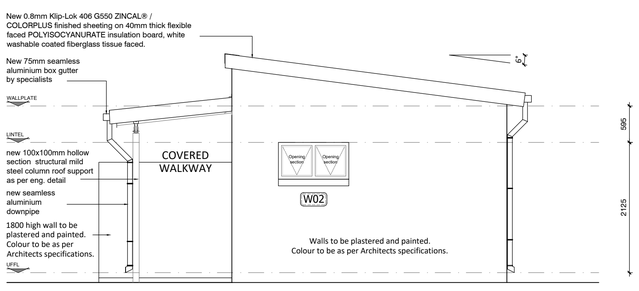
SOUTH WEST ELEVATION
scale 1:50



SOUTH EAST ELEVATION
scale 1:50



NORTH EAST ELEVATION
scale 1:50



NORTH EAST ELEVATION
scale 1:50

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Municipal Information:

Architects Information:

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Designers Signature

Clients Information:

Province of the EASTERN CAPE HEALTH

Drawing Revisions:

Revision	Date	Drawn By	Description

MDA ARCHITECTS
10 Park Lane Central Port Elizabeth 6001
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Project Title
Raglan Road Clinic - Grahamstown
Working Drawings

Drawing Name
ABLUTION BLOCK
Floor Plan, Sections and Elevation

Issue Date:	15-01-2024
Technician:	G.D
Checked By:	D.B.A
Drawing Scale:	As Shown

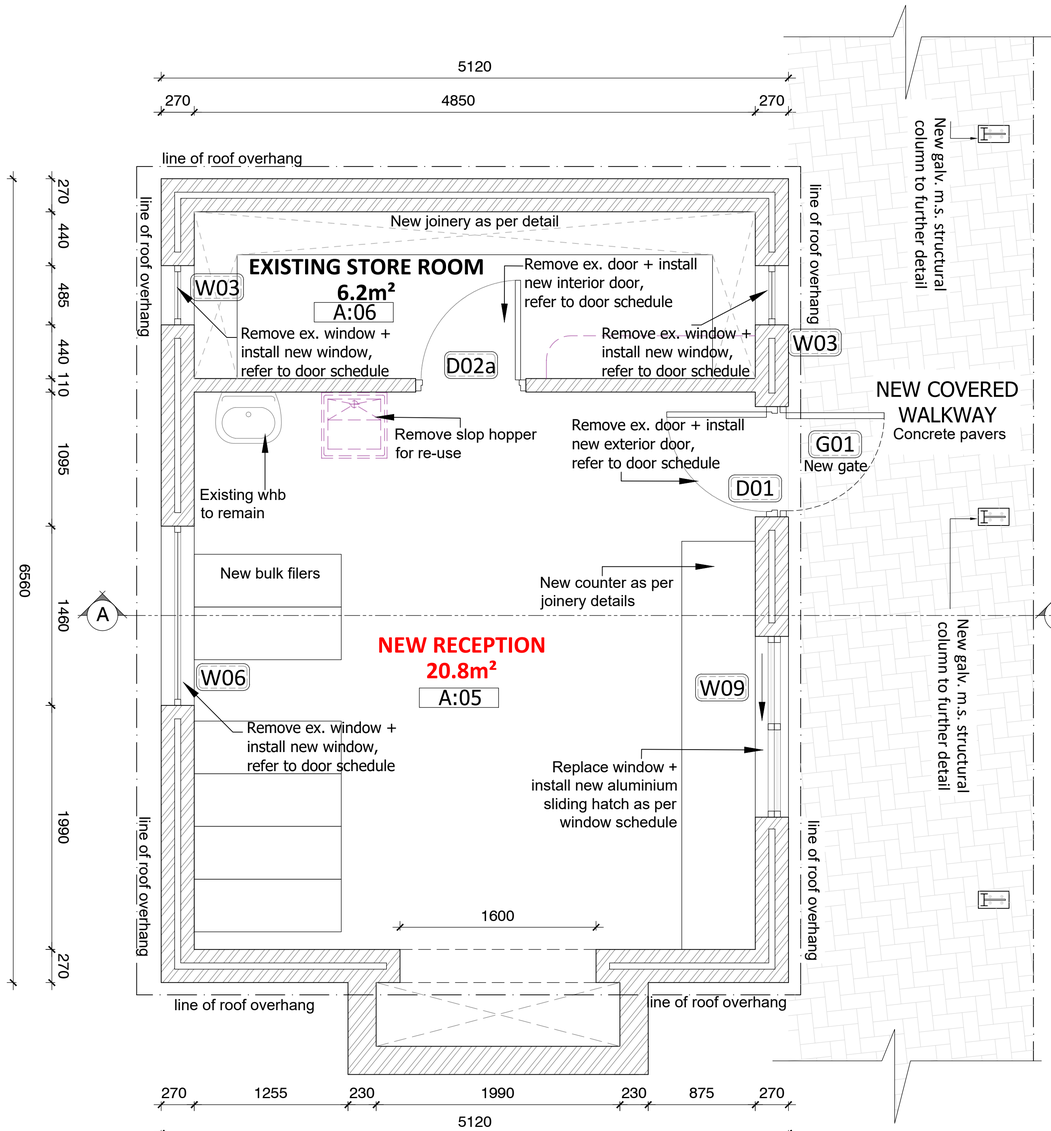
Drawing Number: MDA 290H-201

Drawing Status: SK: Sketch Plan; T: Tender; WD: Working Drawing; RD: Record Drawing

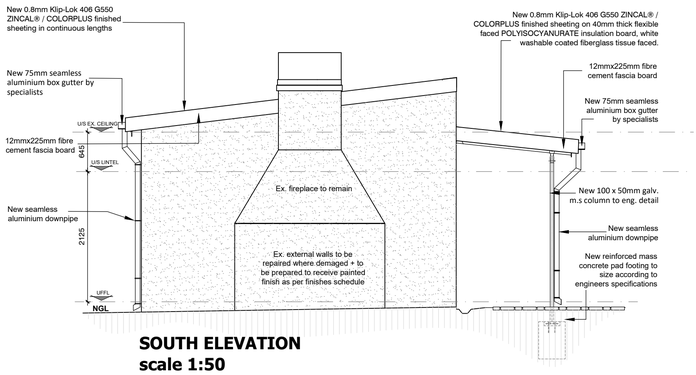
Page Size: A1

Revision

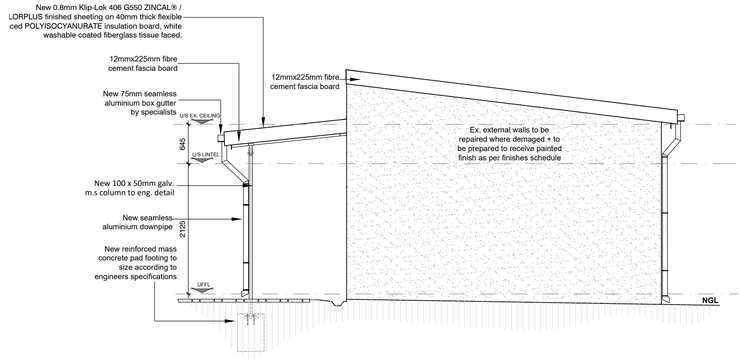
ISSUED FOR: INFORMATION



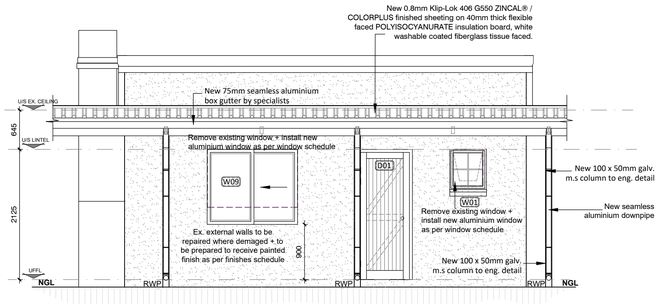
FLOOR PLAN-
scale 1:25



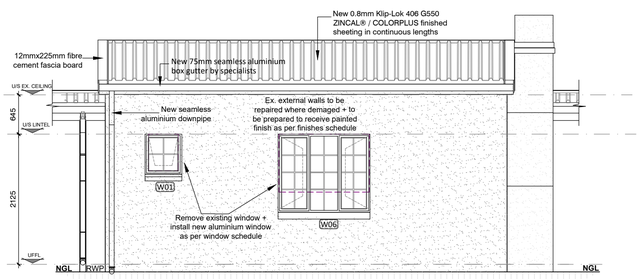
SOUTH ELEVATION
scale 1:50



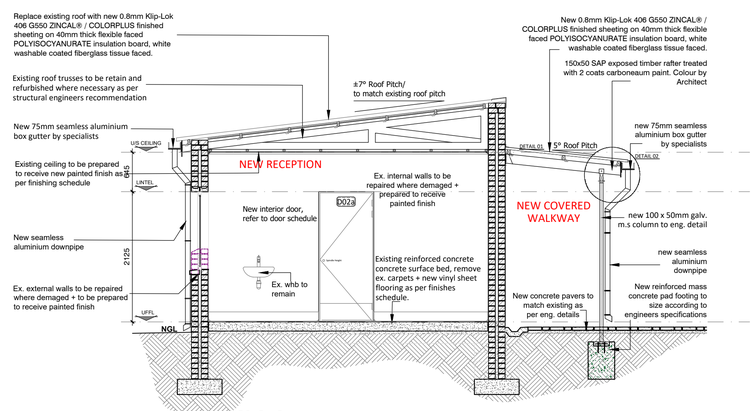
NORTH ELEVATION
scale 1:50



EAST ELEVATION
scale 1:50



WEST ELEVATION
scale 1:50



SECTION A-A
scale 1:50

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Municipal Information:

Architects Information:

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Designers Signature

Clients Information:

Province of the EASTERN CAPE HEALTH

Drawing Revisions:

Revision	Date	Drawn By	Description

MDA ARCHITECTS
19 Park Lane Central Port Elizabeth 6001
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Reg: 2006/042301/23
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Project Title
Raglan Road Clinic - Grahamstown
Working Drawings

Drawing Name
BUILDING A
Floor Plan, Sections and Elevation

Issue Date:	15-01-2024
Technician:	G.D
Checked By:	D.B.A
Drawing Scale:	As Shown

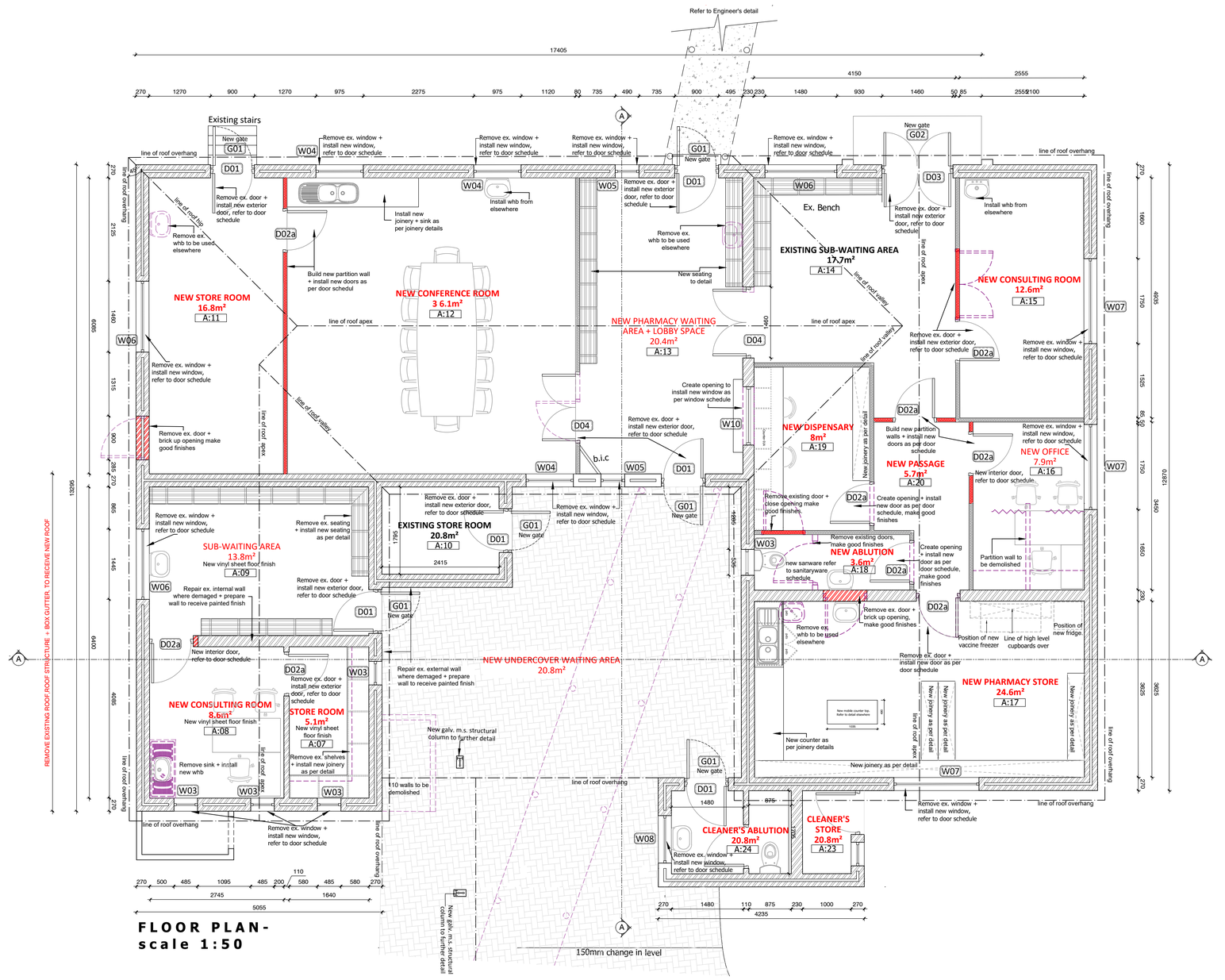
Drawing Number: MDA 290H-202

Drawing Status: SK: Sketch Plan; T: Tender; WD: Working Drawing; RD: Record Drawing

Page Size: A1

Revision

ISSUED FOR: INFORMATION



General Notes:

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cell : 041 373 0228

.....
Designers Signature

Clients Information:

Province of the EASTERN CAPE HEALTH

Drawing Revisions:

Revision	Date	Drawn By	Description

MDA ARCHITECTS
10 Park Lane Central Port Elizabeth 6001
PO Box 8213 Walmer Port Elizabeth 6065
Reg: 2006/062001/23
admin@mdaarchitects.co.za
Tel: 041 373 0228
Fax: 041 373 1948

Project Title
Raglan Road Clinic - Grahamstown
Working Drawings

Drawing Name
BUILDING B
Floor Plan

Issue Date:	15-01-2024
Technician:	G.D
Checked By:	D.B.A
Drawing Scale:	As Shown

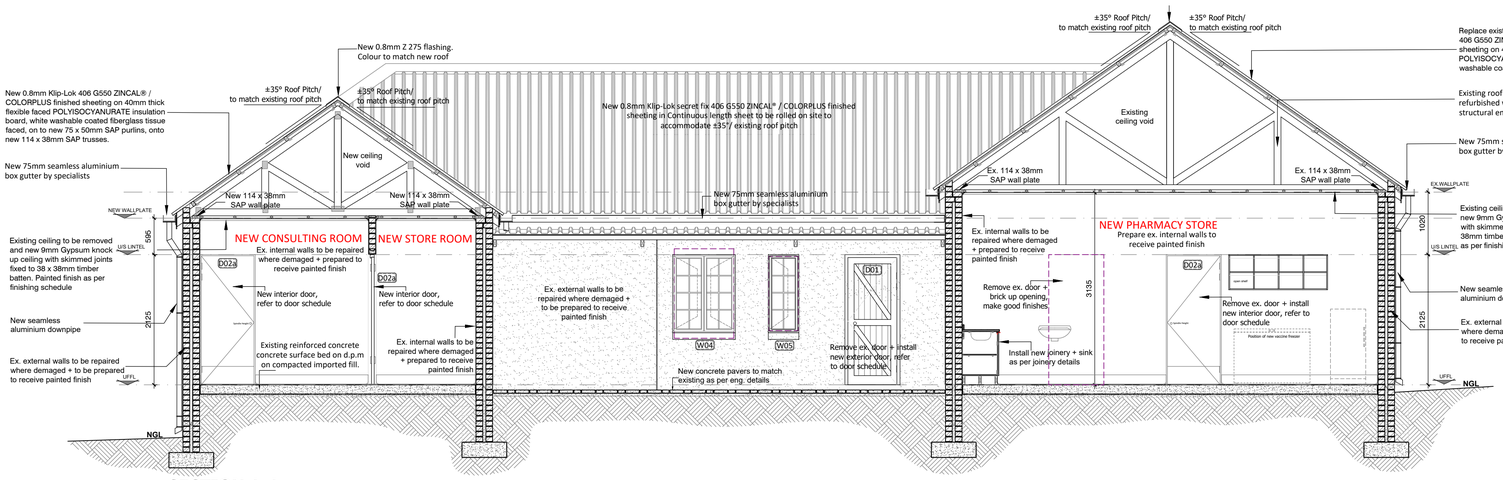
Drawing Number: MDA 290H-203

Drawing Status: SK: Sketch Plan; T: Tender; WD: Working Drawing; RD: Record Drawing

Page Size: A1

Revision

ISSUED FOR: INFORMATION



SECTION A-A
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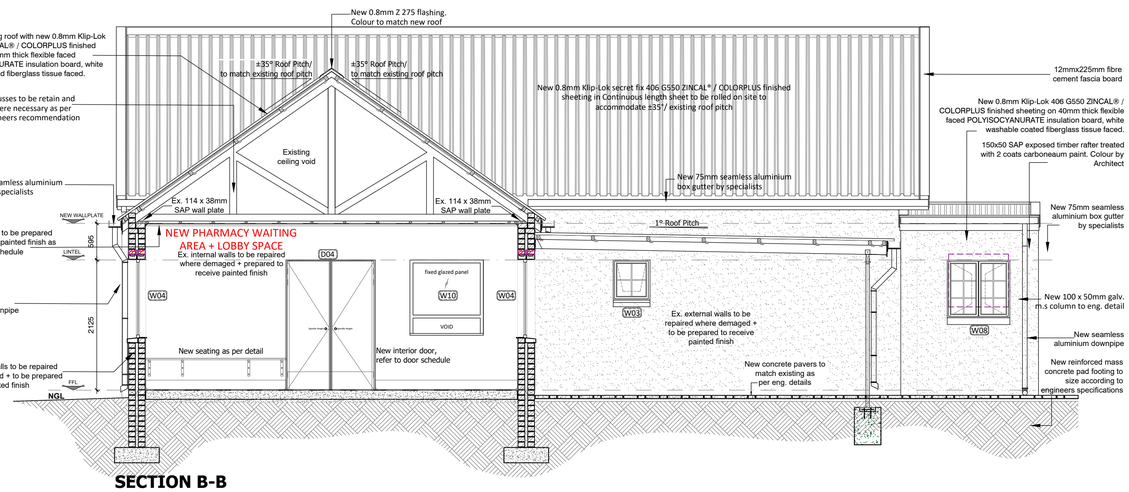

SECTION B-B
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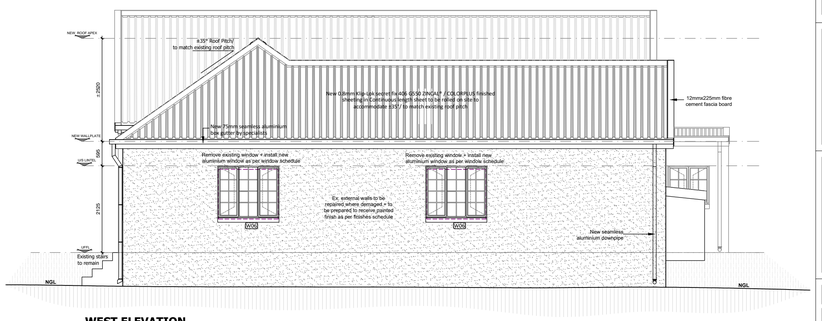
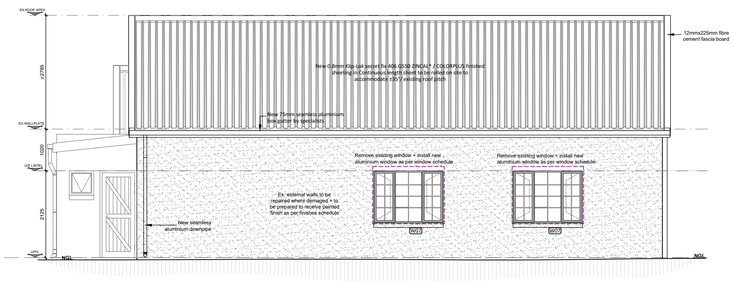


WEST ELEVATION
scale 1:75



EAST ELEVATION
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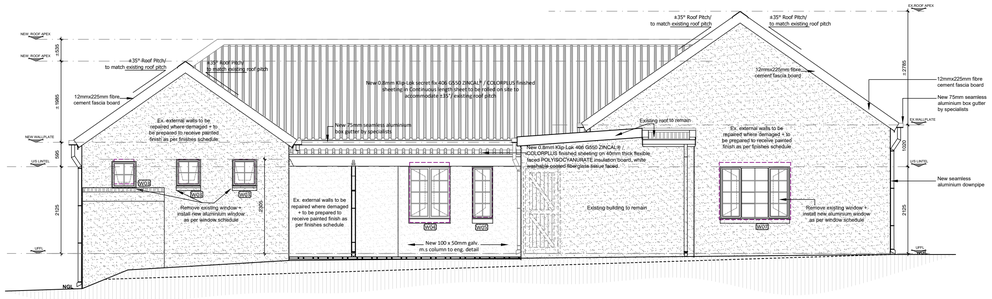
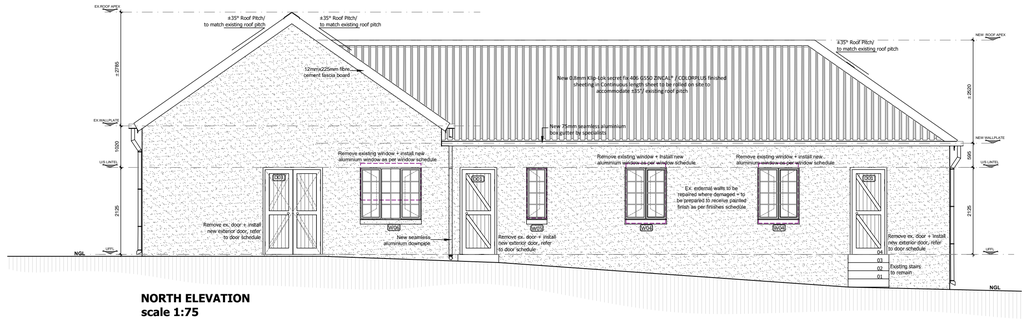


SOUTH ELEVATION
scale 1:75



NORTH ELEVATION
scale 1:75

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- The Architects reserve the copyright on this drawing.

Municipal Information:

Architects Information:

Member of the South African Architectural Profession
SACAP Reg. 3128
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duncan@mdaarchitects.co.SC za
cell : 041 373 0228

.....
Designers Signature

Clients Information:

Province of the EASTERN CAPE HEALTH

Drawing Revisions:

Revision	Date	Drawn By	Description

MDA ARCHITECTS
10 Park Lane Central Port Elizabeth 6001
PO Box 5213 Walmer Port Elizabeth 6065
Reg. 2006/063651/23
admin@mdaarchitects.co.za
Tel: 041 373 0128
Fax: 041 373 1049

Project Title
Raglan Road Clinic - Grahamstown
Working Drawings

Drawing Name
BUILDING B
Sections and Elevation

Issue Date:	15-01-2024
Technician:	G.D
Checked By:	D.B.A
Drawing Scale:	As Shown

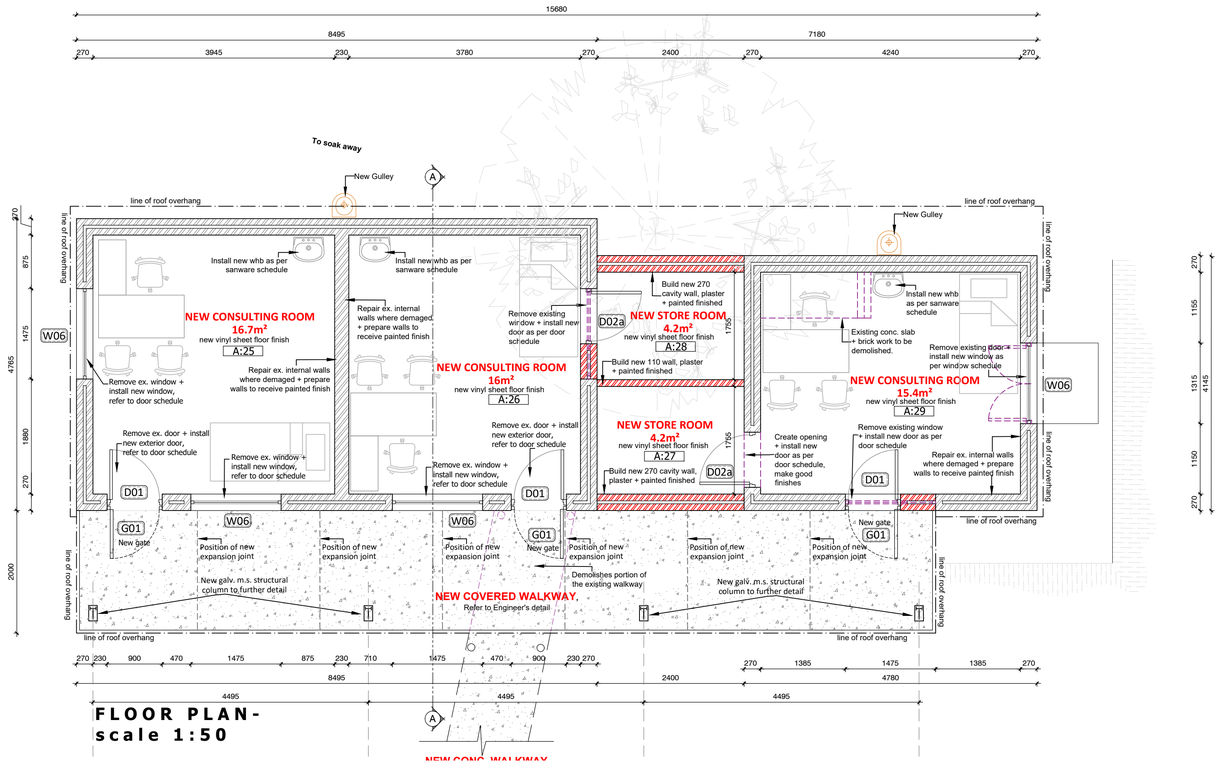
Drawing Number: MDA 290H-204

Drawing Status: SK Sketch Plan; T Tender; WD Working Drawing; PD Record Drawing

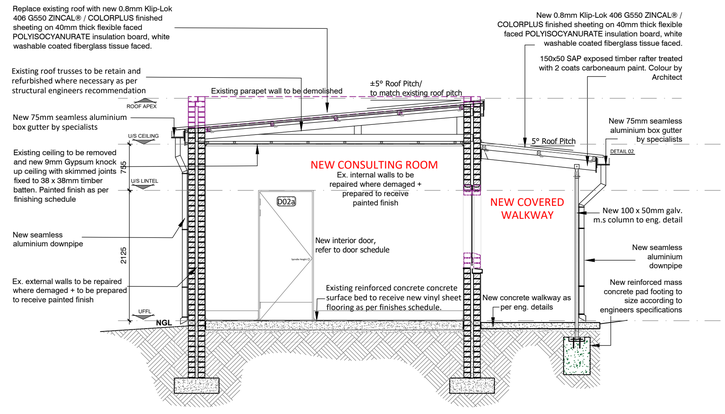
Page Size: A1

Revision

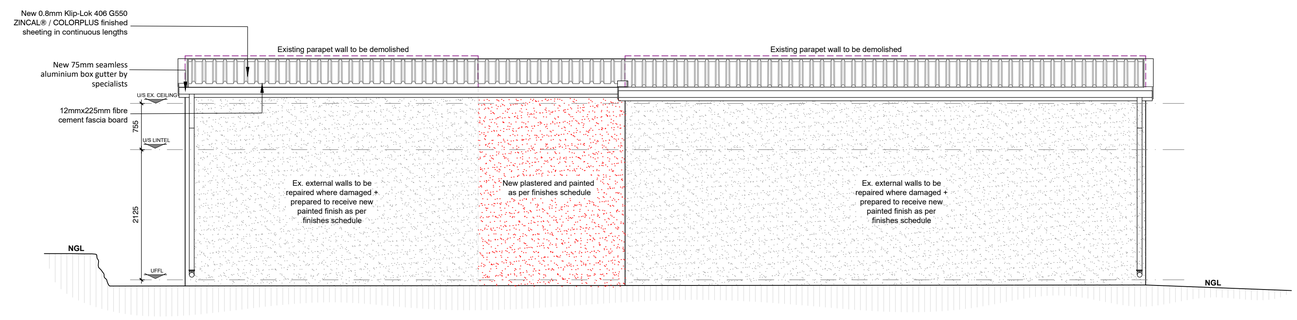
ISSUED FOR: INFORMATION



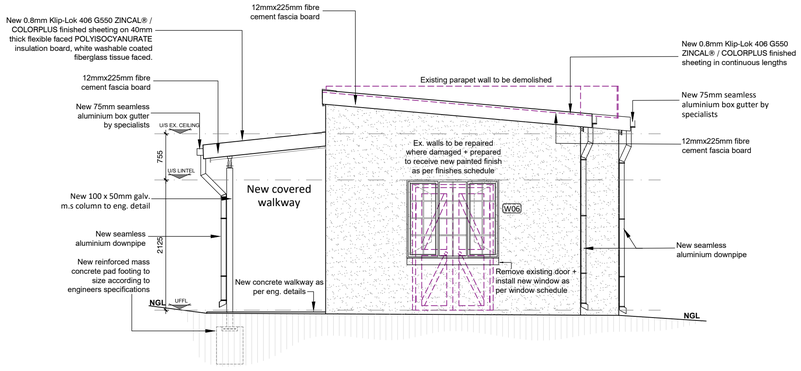
FLOOR PLAN-
scale 1:50



SECTION A-A



NORHT ELEVATION
scale 1:50



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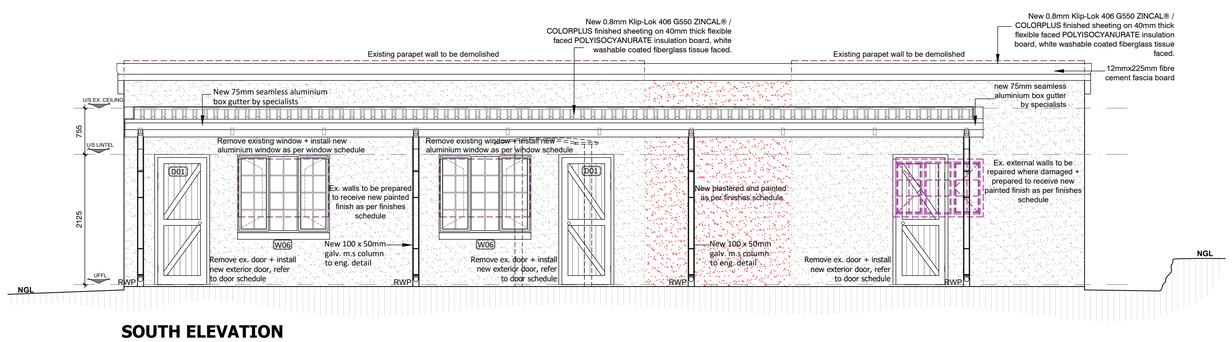
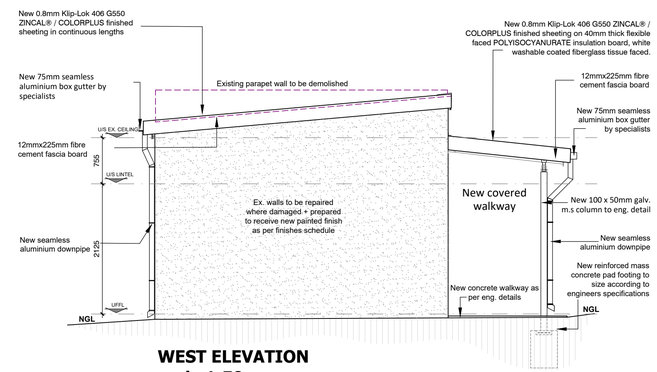
scale 1:50



SOUTH ELEVATION
scale 1:50



WEST ELEVATION
scale 1:50

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duncan@mdaarchitects.co.SC za
cell : 041 373 0228

.....
Designers Signature

Clients Information:

Province of the EASTERN CAPE HEALTH

Drawing Revisions:

Revision	Date	Drawn By	Description

MDA ARCHITECTS
10 Park Lane Central Port Elizabeth 6001
PO Box 6213 Walmer Port Elizabeth 6065
Reg: 2006/063651/23
admin@mdaarchitects.co.za
Tel: 041 373 0228
Fax: 041 373 1049

Project Title
Raglan Road Clinic - Grahamstown
Working Drawings

Drawing Name
BUILDING C
Floor Plan, Sections and Elevation

Issue Date:	15-01-2024
Technician:	G.D
Checked By:	D.B.A
Drawing Scale:	As Shown

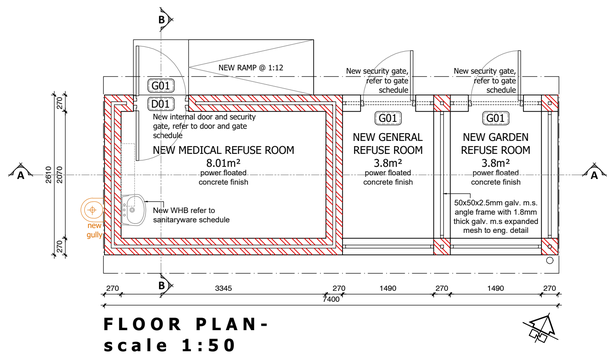
Drawing Number: MDA 290H-205

Drawing Status: SK: Sketch Plan; T: Tender; WD: Working Drawing; RD: Record Drawing

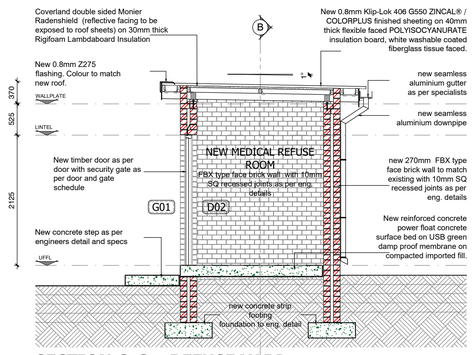
Page Size: A1

Revision

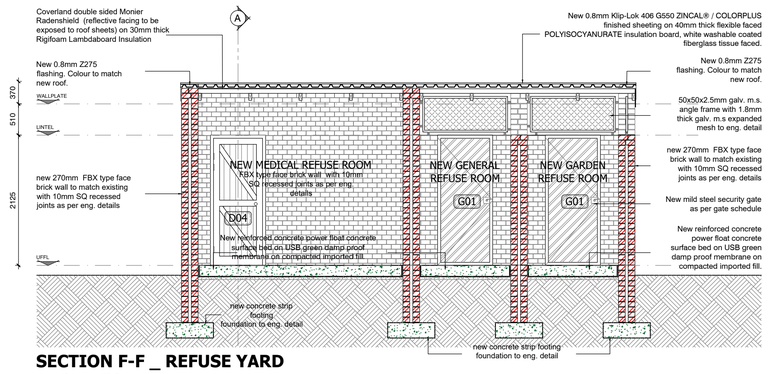
ISSUED FOR: INFORMATION



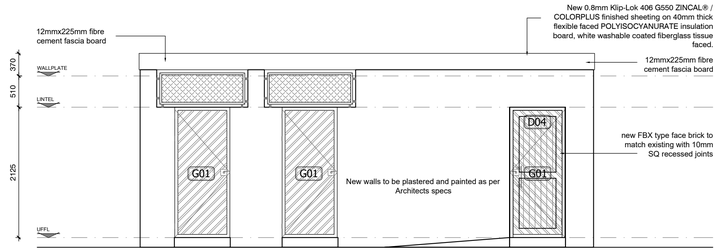
FLOOR PLAN-
scale 1:50



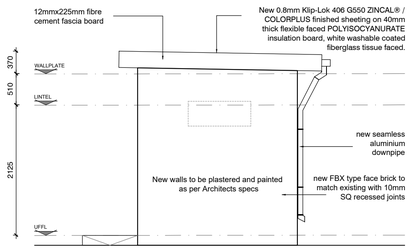
SECTION G-G _ REFUSE YARD
scale 1:50



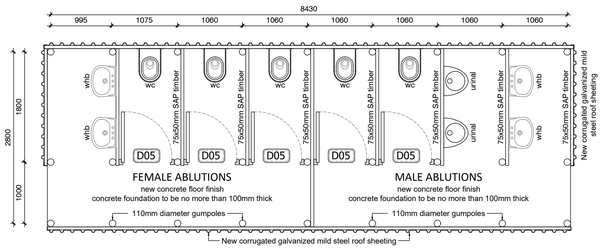
SECTION F-F _ REFUSE YARD
scale 1:50



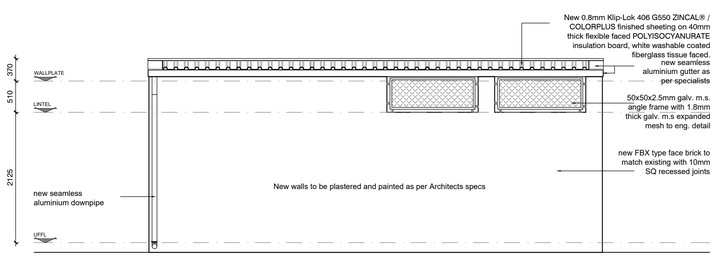
NORTH WEST ELEVATION - REFUSE YARD
scale 1:75



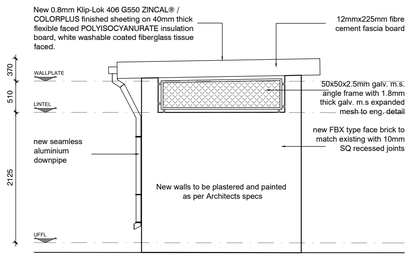
NORTH WEST ELEVATION - REFUSE YARD
scale 1:75



FLOOR PLAN-TEMP ABLUTION
scale 1:50



SOUTH EAST ELEVATION - REFUSE YARD
scale 1:75



NORTH EAST ELEVATION - REFUSE YARD
scale 1:75

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cell : 041 373 0228

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Designers Signature

Clients Information:

Province of the EASTERN CAPE HEALTH

Drawing Revisions:

Revision	Date	Drawn By	Description

MDA ARCHITECTS
10 Park Lane Central Port Elizabeth 6001
PO Box 5213 Walmer Port Elizabeth 6065
Reg: 2006/028301/23
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Tel: 041 373 0228
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Project Title
Raglan Road Clinic - Grahamstown
Working Drawings

Drawing Name
REFUSE YARD & TEMP. ABLUTIONS
Floor Plan, Sections and Elevation

Issue Date:	15-01-2024
Technician:	G.D
Checked By:	D.B.A
Drawing Scale:	As Shown

Drawing Number: MDA 290H-206

Drawing Status: SK: Sketch Plan; T: Tender; WD: Working Drawing; SD: Council Drawing

Page Size: A1

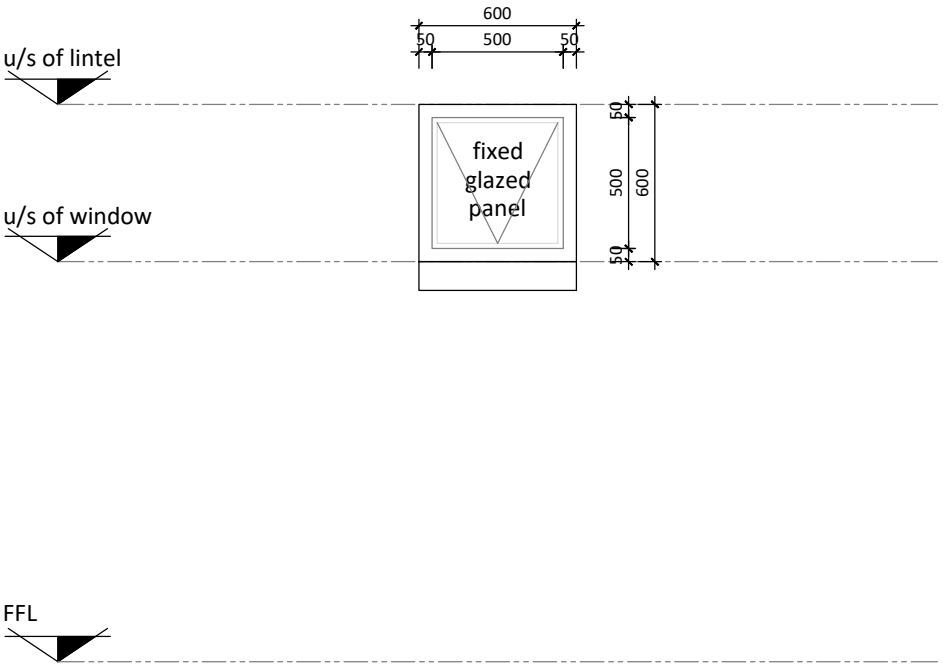
Revision

ISSUED FOR: INFORMATION

MDA ARCHITECTS

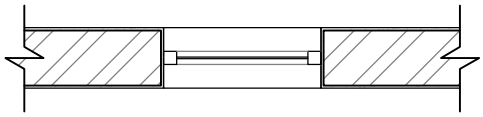
RAGLAN ROAD CLINIC

W01



TYPICAL ELEVATION

TYPICAL SECTION



TYPICAL PLAN VIEW

QUANTITY	05	LOCATION	New Ablutions

FRAME FINISH:

- Powder coat white

WINDOW TYPE:

- Powder coat aluminium extrusions, by specialist

IRONMONGARY:

- Friction stays on opening leaf
- Nylon pivot locking mechanism on opening leaf as per manufacturer
- Square bar burglar proofing to further detail

GLAZING:

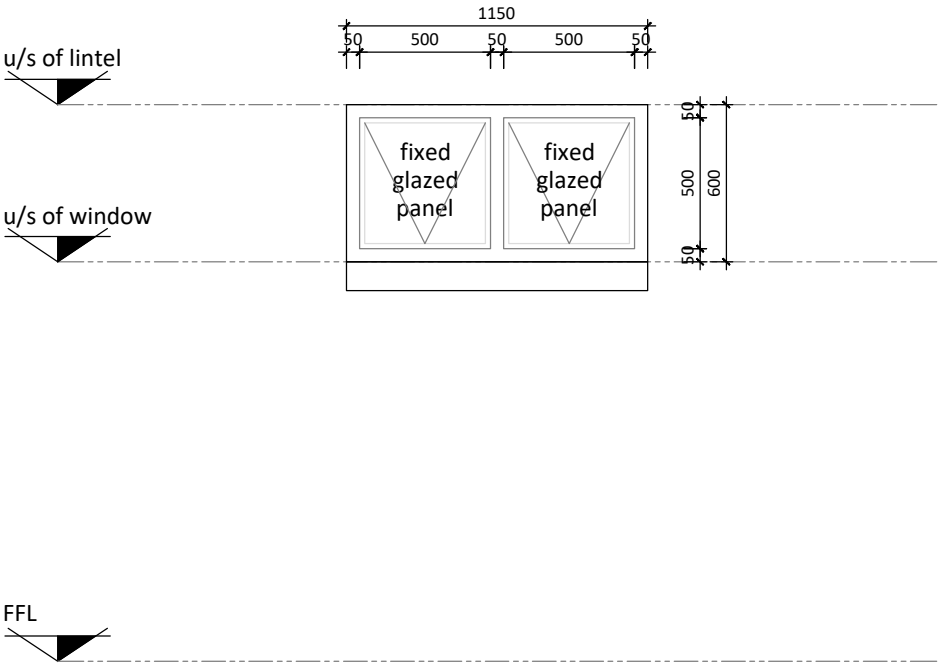
- 6.38mm HPR Laminated safety glass

MDA ARCHITECTS	Drawing Number:	Revision:
WINDOW SCHEDULE	MDA 290 H	

MDA ARCHITECTS

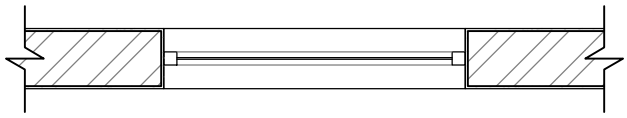
RAGLAN ROAD CLINIC

W02



TYPICAL ELEVATION

TYPICAL SECTION



TYPICAL PLAN VIEW

QUANTITY	04	LOCATION	New Ablutions

FRAME FINISH:

- Powder coat white

WINDOW TYPE:

- Powder coat aluminium extrusions, by specialist

IRONMONGARY:

- Friction stays on opening leaf
- Nylon pivot locking mechanism on opening leaf as per manufacturer
- Square bar burglar proofing to further detail

GLAZING:

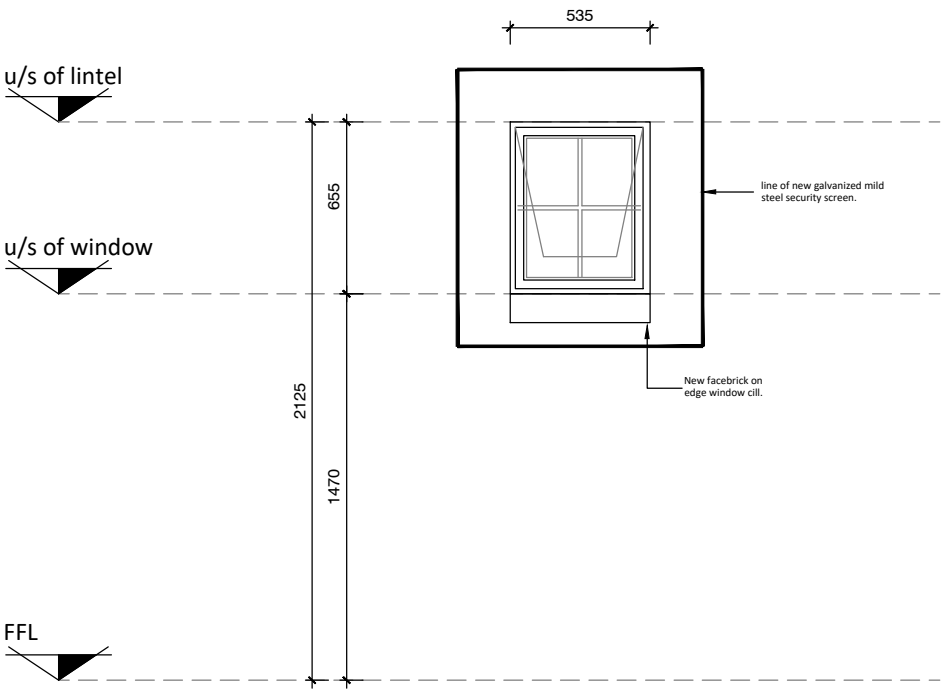
- 6.38mm HPR Laminated safety glass

MDA ARCHITECTS	Drawing Number:	Revision:
WINDOW SCHEDULE	MDA 290 H	

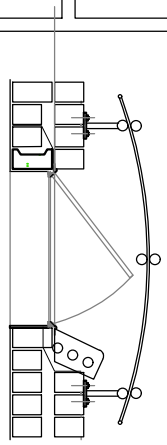
MDA ARCHITECTS

RAGLAN ROAD CLINIC

W03



TYPICAL ELEVATION



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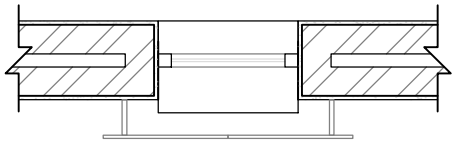


TYPICAL PLAN VIEW

QUANTITY	07	LOCATION	Store room at reception, Store + consult room at building B

FRAME FINISH:

- 1 coat primer
- 1 coat approved enamel paint

WINDOW TYPE: NE1

- Standard Steel E Type Residential open out windows to SANS

IRONMONGERY:

- Factory fitted burglar bars.
- Standard brass fittings.

GLAZING:

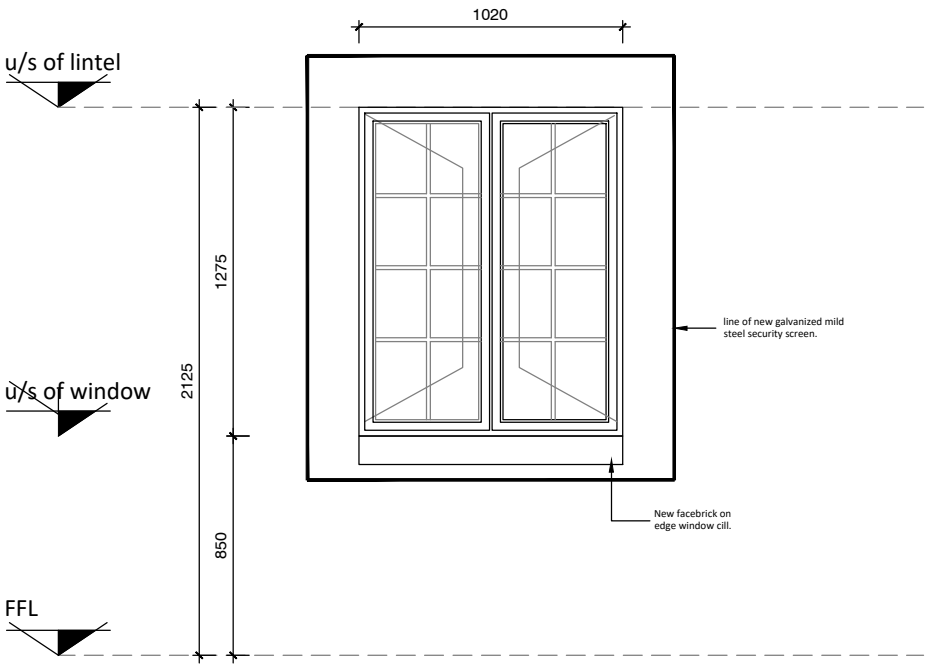
- 6.38mm HPR Laminated opaque glass with steel window putty.

MDA ARCHITECTS	Drawing Number:	Revision:
WINDOW SCHEDULE	MDA 290 H	20/05/2019

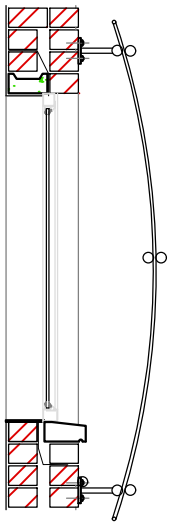
MDA ARCHITECTS

RAGLAN ROAD CLINIC

W04



TYPICAL ELEVATION



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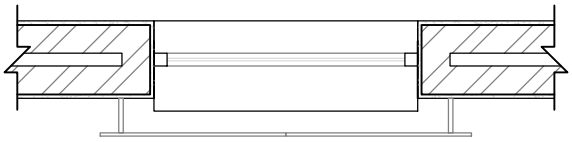


TYPICAL PLAN VIEW

QUANTITY	03	LOCATION	Building B: New Bulk store, new pharmacy store + new dispensary

FRAME FINISH:

- 1 coat primer
- 1 coat approved enamel paint

WINDOW TYPE: D7

- Standard Steel D Type Residential open out windows to SANS

IRONMONGERY:

- Factory fitted burglar bars.
- Standard brass fittings.

GLAZING:

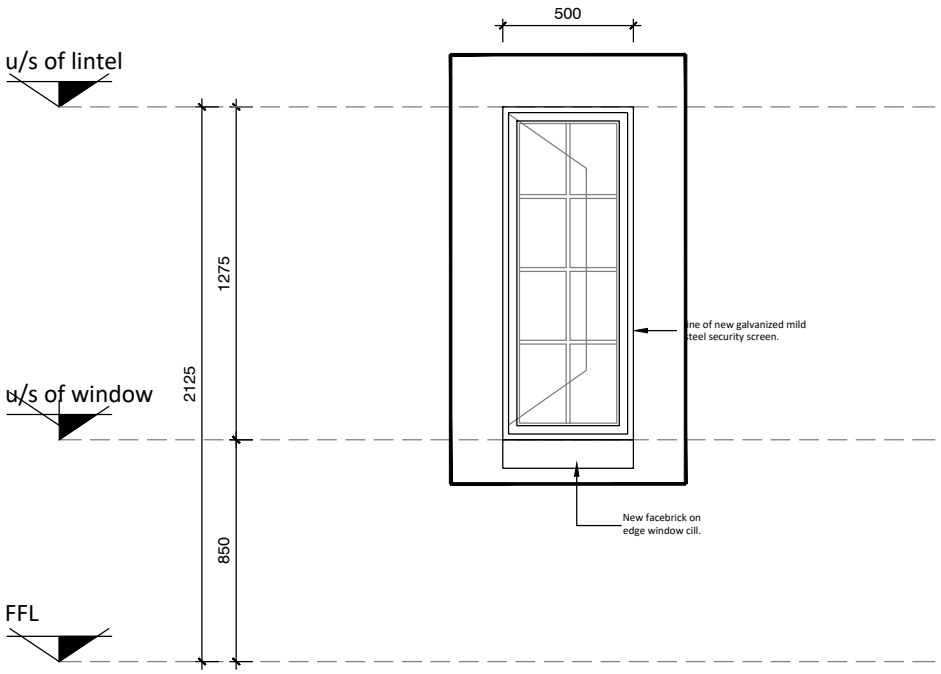
- 6.38mm HPR Laminated safety glass

MDA ARCHITECTS	Drawing Number:	Revision:
WINDOW SCHEDULE	MDA 290 H	

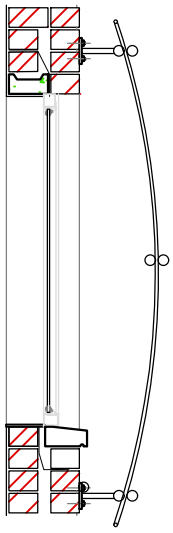
MDA ARCHITECTS

RAGLAN ROAD CLINIC

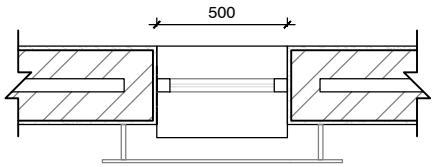
W05



TYPICAL ELEVATION



TYPICAL SECTION



TYPICAL PLAN VIEW

QUANTITY	02	LOCATION	New pharmacy waiting + lobby

FRAME FINISH:

- 1 coat primer
- 1 coat approved enamel paint

WINDOW TYPE: D7

- Standard Steel D Type Residential open out windows to SANS

IRONMONGERY:

- Factory fitted burglar bars.
- Standard brass fittings.

GLAZING:

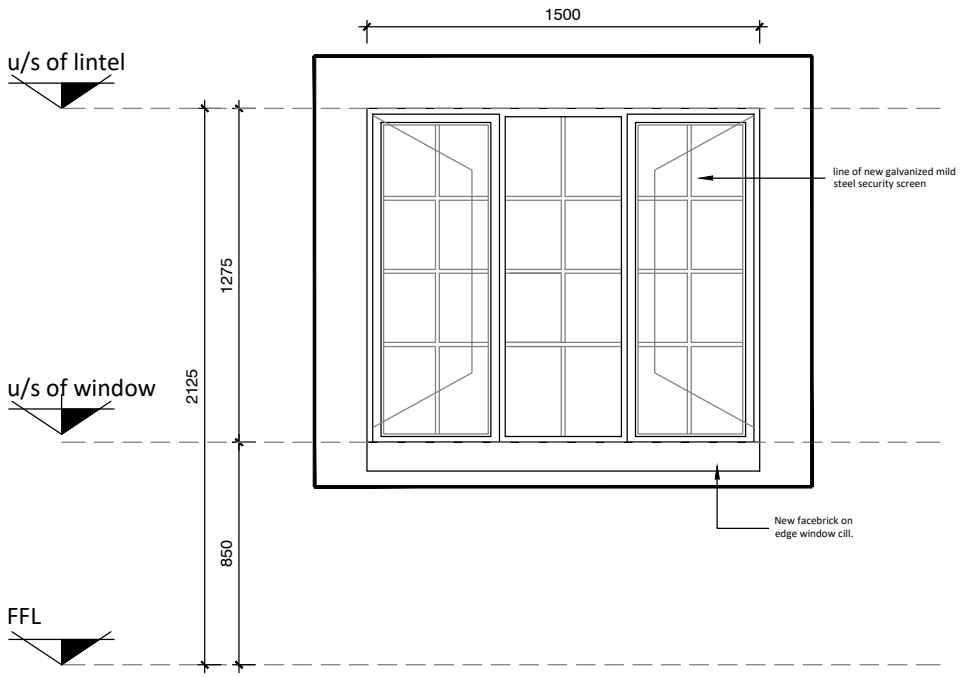
- 6.38mm HPR Laminated safety glass

MDA ARCHITECTS	Drawing Number:	Revision:
WINDOW SCHEDULE	MDA 290 H	

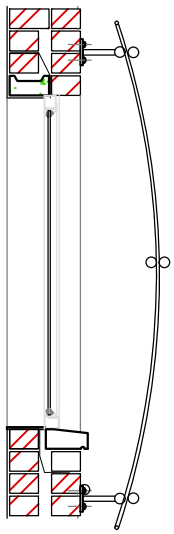
MDA ARCHITECTS

RAGLAN ROAD CLINIC

W06



TYPICAL ELEVATION



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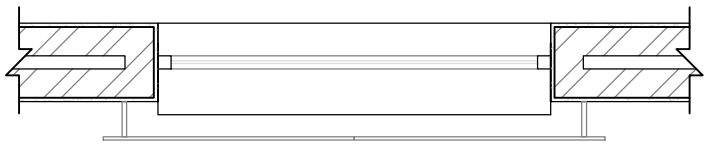


TYPICAL PLAN VIEW

QUANTITY	07	LOCATION	Chronic and Acute consulting room, New MCRHS with passage

FRAME FINISH:

- 1 coat primer
- 1 coat approved enamel paint

WINDOW TYPE: D4

- Standard Steel D Type Residential open out windows to SANS

IRONMONGERY:

- Factory fitted burglar bars.
- Standard brass fittings.

GLAZING:

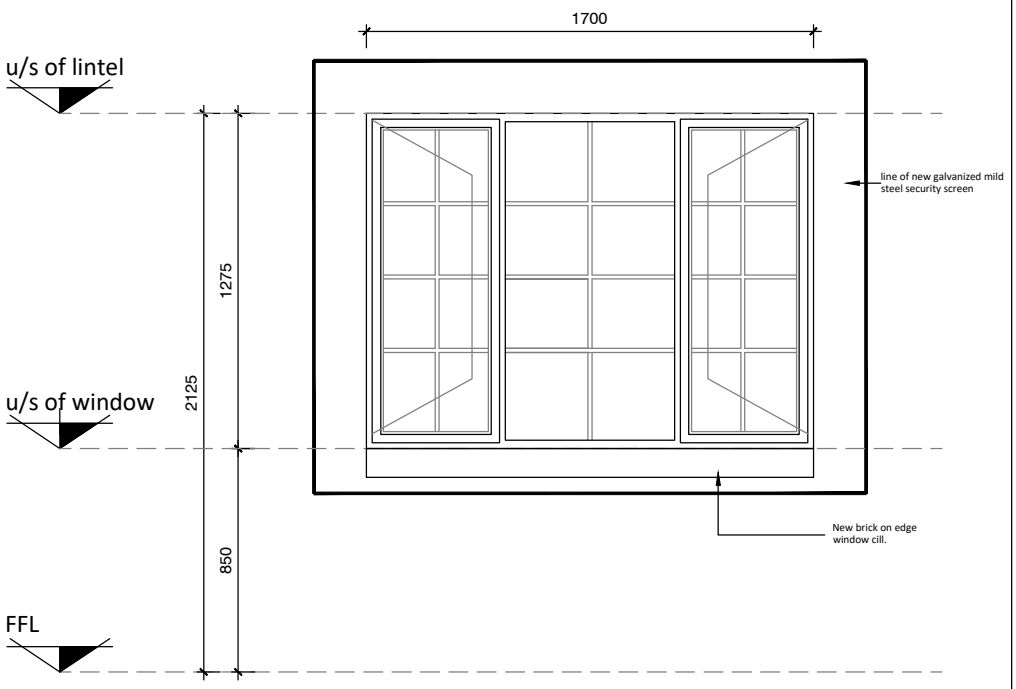
- 6.38mm HPR Laminated safety glass

MDA ARCHITECTS	Drawing Number:	Revision:
WINDOW SCHEDULE	MDA 290 H	

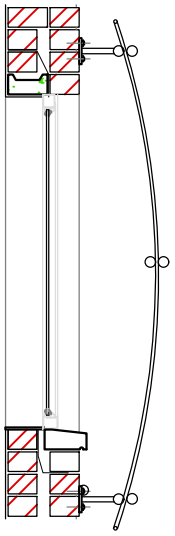
MDA ARCHITECTS

RAGLAN ROAD CLINIC

W07



TYPICAL ELEVATION



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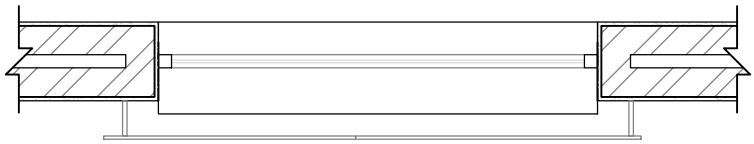


TYPICAL PLAN VIEW

QUANTITY	03	LOCATION	Building B: new consult room , new office + new staff room

FRAME FINISH:

- 1 coat primer
- 1 coat approved enamel paint

WINDOW TYPE: D4

- Standard Steel D Type Residential open out windows to SANS

IRONMONGERY:

- Factory fitted burglar bars.
- Standard brass fittings.

GLAZING:

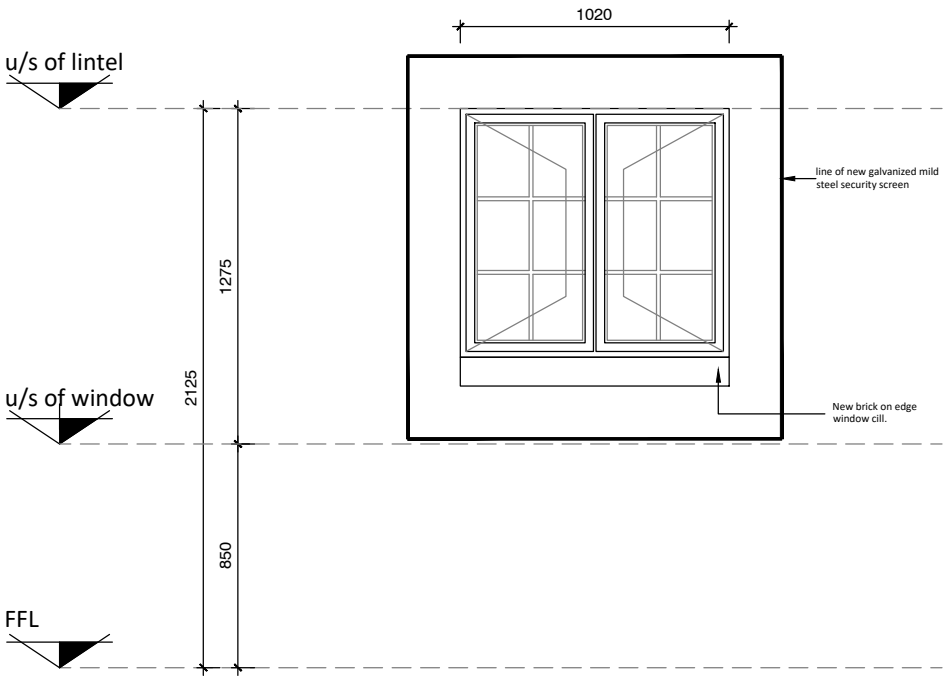
- 6.38mm HPR Laminated safety glass

MDA ARCHITECTS	Drawing Number:	Revision:
WINDOW SCHEDULE	MDA 290H	

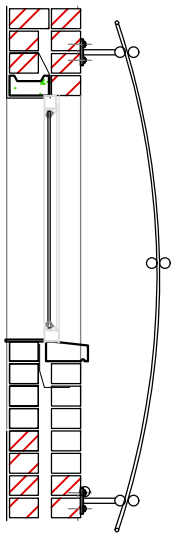
MDA ARCHITECTS

RAGLAN ROAD CLINIC

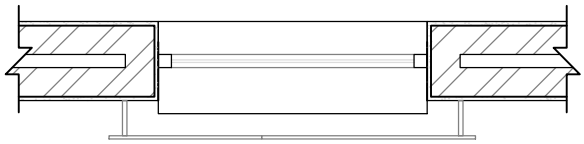
W08



TYPICAL ELEVATION



TYPICAL SECTION



TYPICAL PLAN VIEW

QUANTITY	01	LOCATION	Cleaner's ablution

FRAME FINISH:

- 1 coat primer
- 1 coat approved enamel paint

WINDOW TYPE: D4

- Standard Steel D Type Residential open out windows to SANS

IRONMONGERY:

- Factory fitted burglar bars.
- Standard brass fittings.

GLAZING:

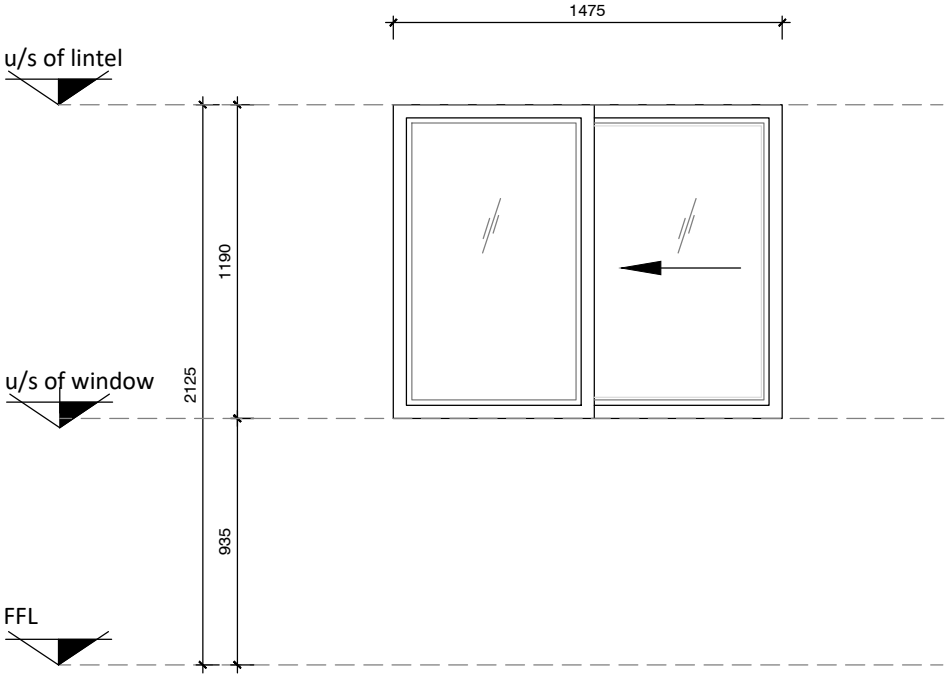
- 6.38mm HPR Laminated safety glass

MDA ARCHITECTS	Drawing Number:	Revision:
WINDOW SCHEDULE	MDA 290 H	

MDA ARCHITECTS

RAGLAN ROAD CLINIC

W09



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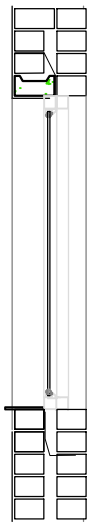
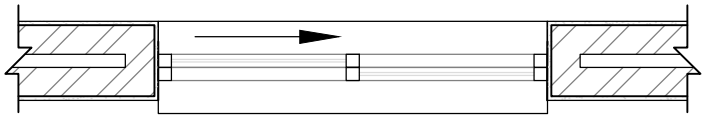


TYPICAL SECTION



TYPICAL PLAN VIEW

QUANTITY	01	LOCATION	Reception

FRAME FINISH:

- 1 coat primer
- 1 coat approved enamel paint

WINDOW TYPE: D4

- Standard Steel D Type Residential open out windows to SANS

IRONMONGERY:

- Factory fitted burglar bars.
- Standard brass fittings.

GLAZING:

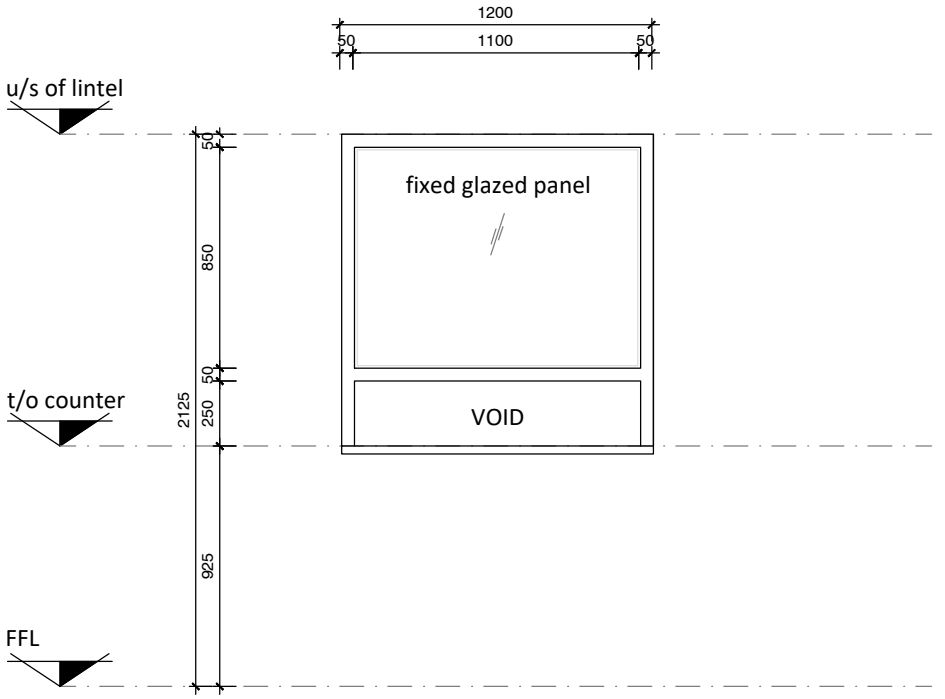
- 6.38mm HPR Laminated safety glass

MDA ARCHITECTS	Drawing Number:	Revision:
WINDOW SCHEDULE	MDA 290 H	

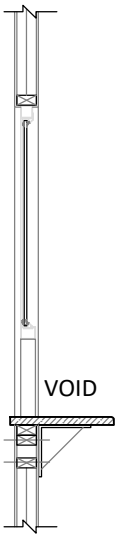
MDA ARCHITECTS

RAGLAN ROAD CLINIC

W10



TYPICAL ELEVATION



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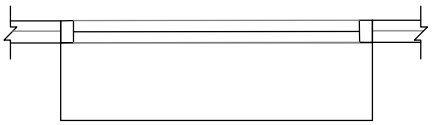


TYPICAL PLAN VIEW

QUANTITY	01	LOCATION	New Dispensary

FRAME FINISH:

- Painted finish as per Architects

WINDOW TYPE:

- Natural Anodized aluminum extrusions by specialist
- x1 fixed section and x1 void below

IRONMONGERY:

- Not Applicable

GLAZING:

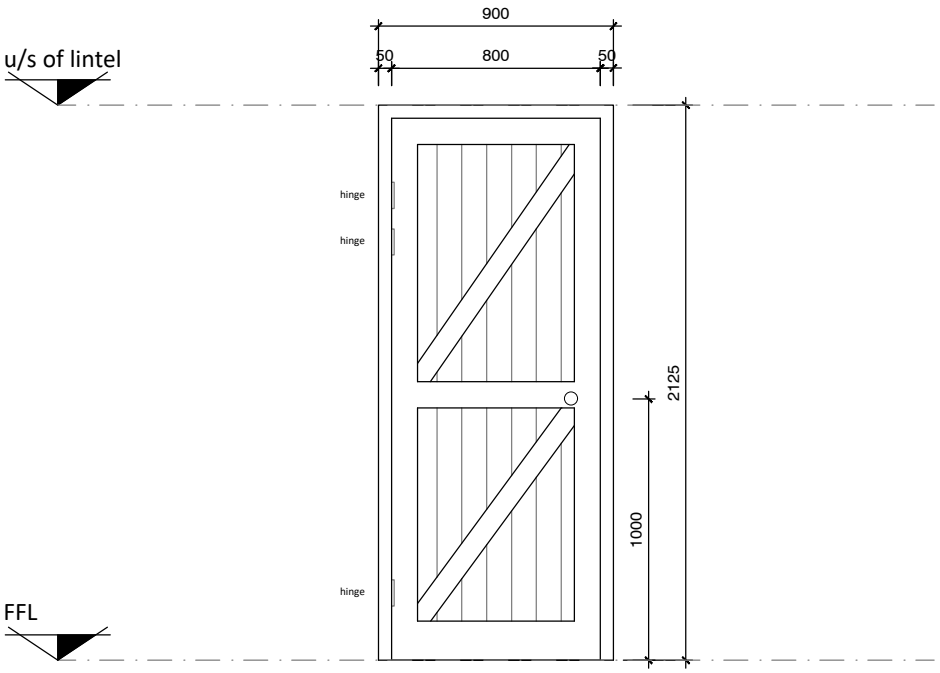
- 6.38mm HPR Laminated safety glass

MDA ARCHITECTS	Drawing Number:	Revision:
WINDOW SCHEDULE	MDA 290 H	

MDA ARCHITECTS

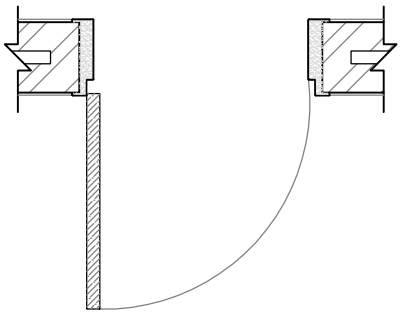
RAGLAN ROAD CLINIC

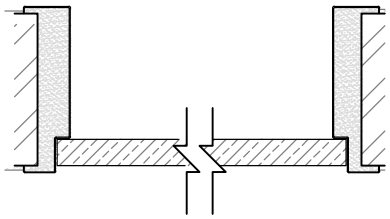
D01



TYPICAL ELEVATION

TYPICAL PLAN VIEV





TYPICAL SECTIONAL VIEW

QUANTITY	14	LOCATION	External Doors

DOOR FRAME:

- pressed metal galv. mild steel frame 1.8mm thick for building in to 110mm or 230mm brick wall with plastered finish.
- Built into plastered brick walls
- painted finish as per Architects

DOOR:

- 44mm thick FLB doors. Door to receive painted finish, as per finishing schedule

GENERAL:

- IRONMONGERY: Refer to Ironmongery Schedule - SET 1
  - SET 3 (FOR DISABLE ABLUTION)

GLAZING:

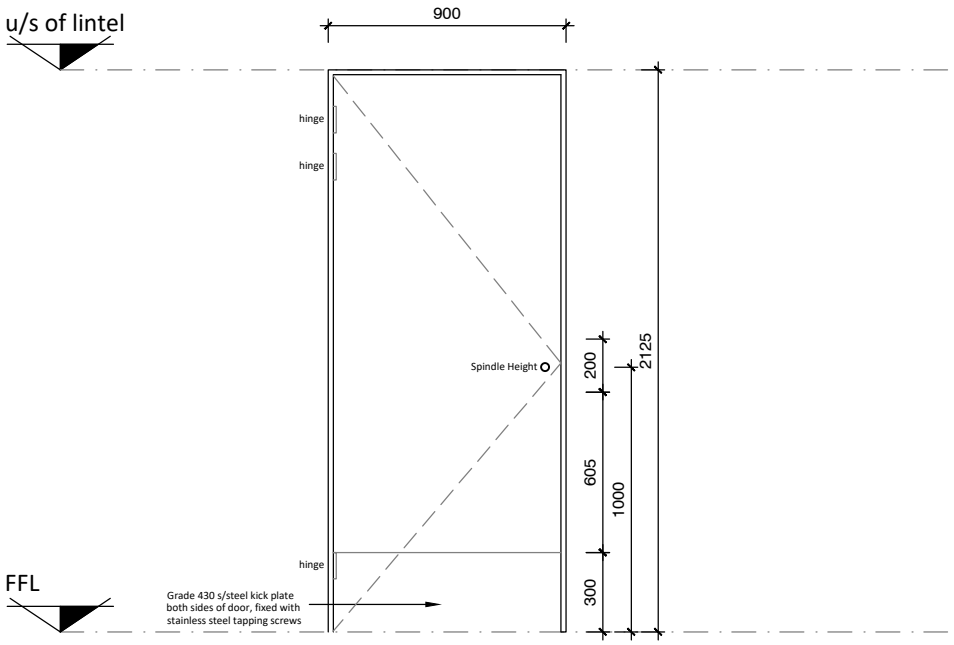
- Not Aplicable

MDA ARCHITECTS	Drawing Number:	Revision:
DOOR SCHEDULE	MDA 290 H	

MDA ARCHITECTS

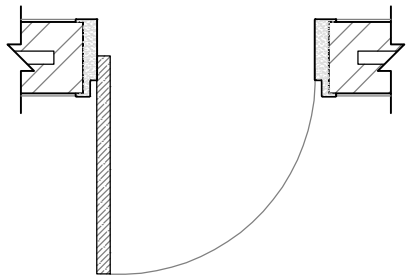
RAGLAN ROAD CLINIC

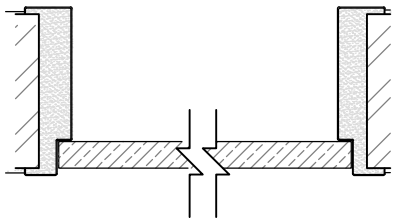
D02a



TYPICAL ELEVATION

TYPICAL PLAN VIEV





TYPICAL SECTIONAL VIEW

QUANTITY	17	LOCATION	New Internal Doors

DOOR FRAME:

- pressed metal galv. mild steel frame 1.8mm thick for building in to 110mm or 230mm brick wall with plastered finish.
- Built into plastered brick walls
- painted finish as per Architects

DOOR:

- 44mm thick semi-solid core flush doors with 10mm hardwood edges faced with tempered smooth faced hardboard for painting.
- 300mm stainless steel protective kick plates and push plates on both sides of door fixed with 20mm counter sunk s.s screws at max 200mm.
- painted finish as per Architect spec

GENERAL:

- IRONMONGERY: Refer to Ironmongery Schedule - SET 1

GLAZING:

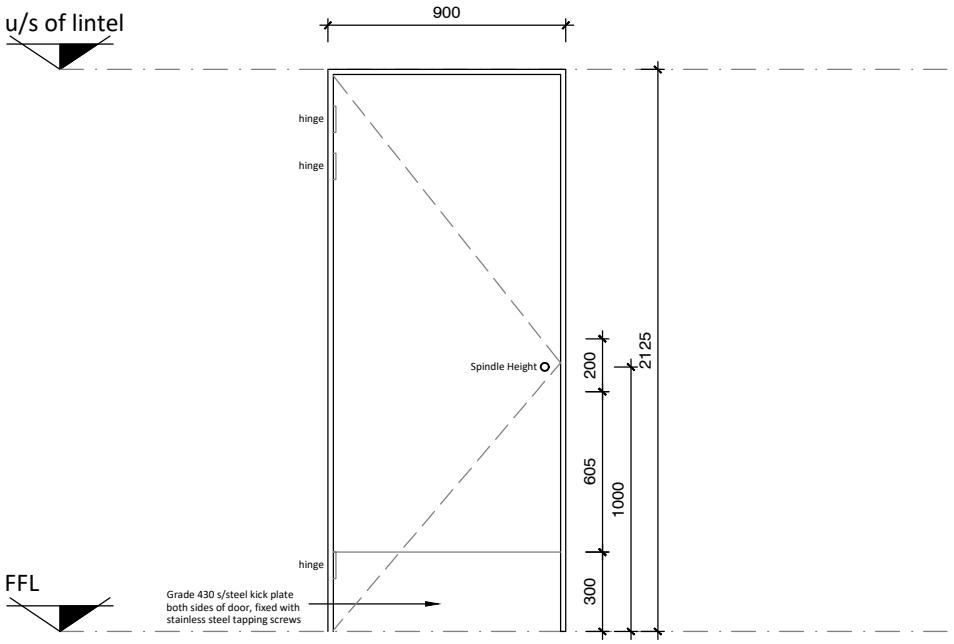
- Not Aplicable

MDA ARCHITECTS	Drawing Number:	Revision:
DOOR SCHEDULE	MDA 290 H	

MDA ARCHITECTS

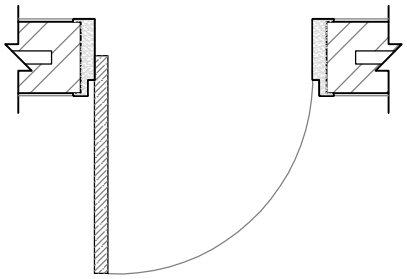
RAGLAN ROAD CLINIC

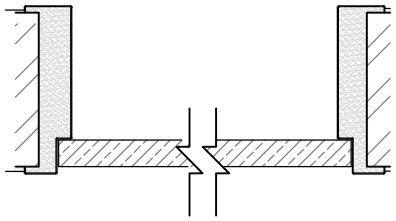
D02b



TYPICAL ELEVATION

TYPICAL PLAN VIEV





TYPICAL SECTIONAL VIEW

QUANTITY	05	LOCATION	New Ablution Doors

DOOR FRAME:

- pressed metal galv. mild steel frame 1.8mm thick for building in to 110mm or 230mm brick wall with plastered finish.
- Built into plastered brick walls
- painted finish as per Architects

DOOR:

- 44mm thick semi-solid core flush doors with 10mm hardwood edges faced with tempered smooth faced hardboard for painting.
- 300mm stainless steel protective kick plates and push plates on both sides of door fixed with 20mm counter sunk s.s screws at max 200mm.
- painted finish as per Architect spec

GENERAL:

- IRONMONGERY: Refer to Ironmongery Schedule - SET 2

GLAZING:

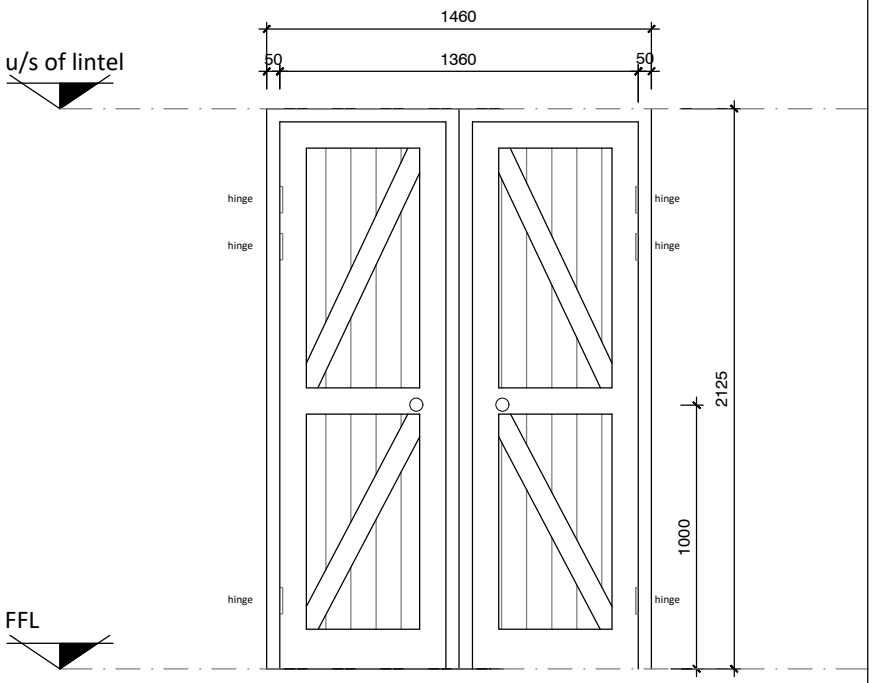
- Not Aplicable

MDA ARCHITECTS	Drawing Number:	Revision:
DOOR SCHEDULE	MDA 290 H	

MDA ARCHITECTS

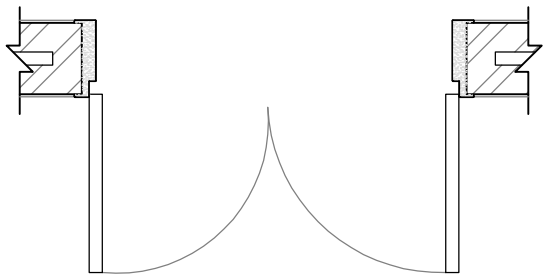
RAGLAN ROAD CLINIC

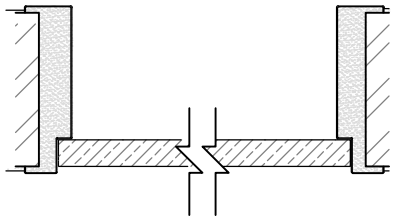
D03



TYPICAL ELEVATION

TYPICAL PLAN VIEV





TYPICAL SECTIONAL VIEW

QUANTITY	01	LOCATION	External Doors

DOOR FRAME:

- pressed metal galv. mild steel frame 1.8mm thick for building in to 110mm or 230mm brick wall with plastered finish.
- Built into plastered brick walls
- painted finish as per Architects

DOOR:

- 44mm thick FLB doors. Door to receive painted finish, as per finishing schedule

GENERAL:

- IRONMONGERY: Refer to Ironmongery Schedule - SET 4

GLAZING:

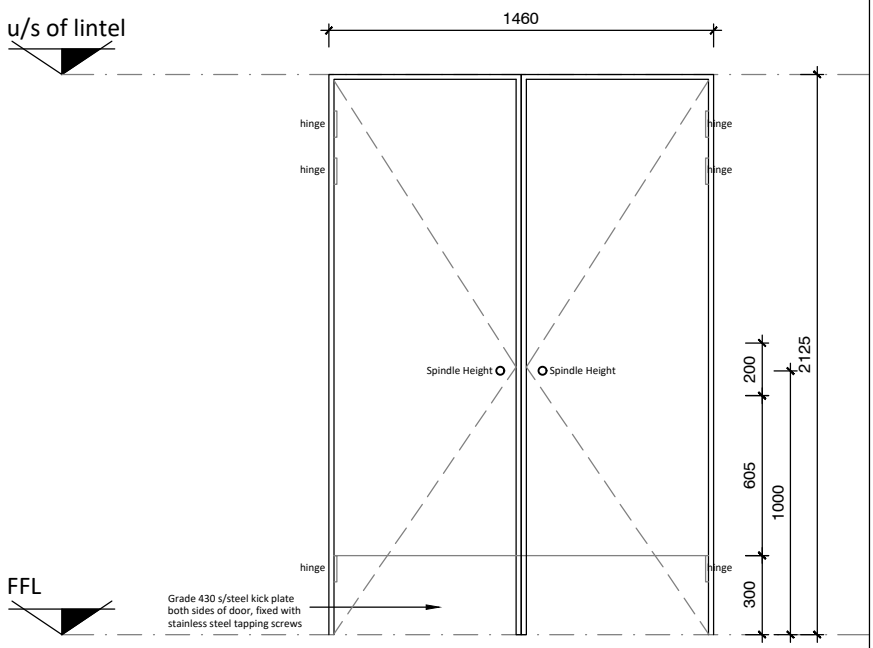
- Not Aplicable

MDA ARCHITECTS	Drawing Number:	Revision:
DOOR SCHEDULE	MDA 290 H	

MDA ARCHITECTS

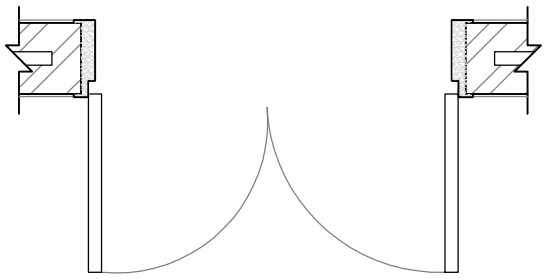
RAGLAN ROAD CLINIC

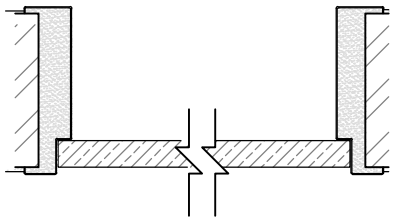
D04



TYPICAL ELEVATION

TYPICAL PLAN VIEV





TYPICAL SECTIONAL VIEW

QUANTITY	02	LOCATION	New Internal Doors

DOOR FRAME:

- pressed metal galv. mild steel frame 1.8mm thick for building in to 110mm or 230mm brick wall with plastered finish.
- Built into plastered brick walls
- painted finish as per Architects

DOOR:

- 44mm thick semi-solid core flush doors with 10mm hardwood edges faced with tempered smooth faced hardboard for painting.
- 300mm stainless steel protective kick plates and push plates on both sides of door fixed with 20mm counter sunk s.s screws at max 200mm.
- painted finish as per Architect spec

GENERAL:

- IRONMONGERY: Refer to Ironmongery Schedule - SET 4

GLAZING:

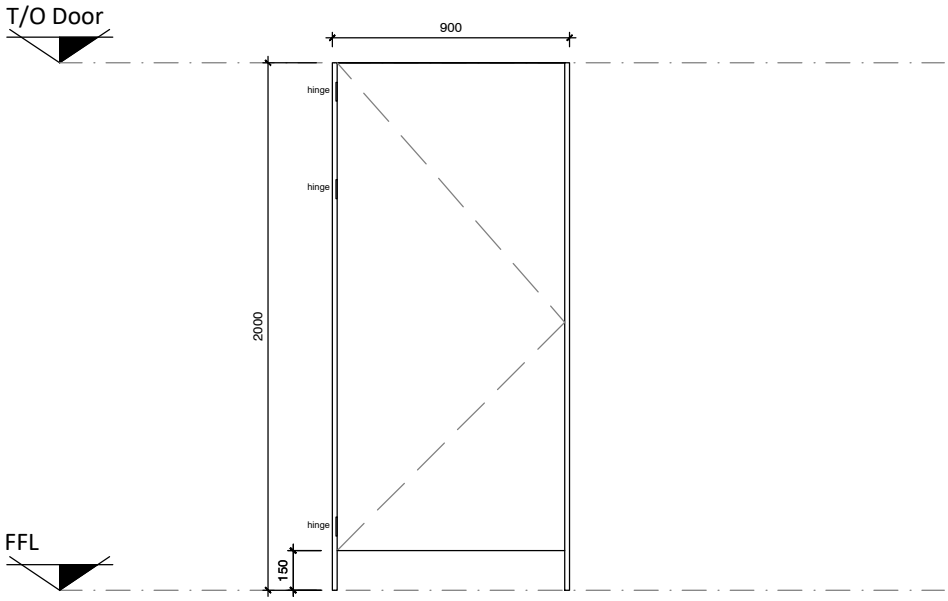
- Not Aplicable

MDA ARCHITECTS	Drawing Number:	Revision:
DOOR SCHEDULE	MDA 290 H	

MDA ARCHITECTS

RAGLAN ROAD CLINIC

D05



TYPICAL ELEVATION

QUANTITY	05	LOCATION	Temp. Ablutions

DOOR FRAME:

- Solid flush panel door with hardboard both side and 2 concealed edges
- Wood primer, undercoat and 2 finishing coats eggshell enamel

DOOR:

- Solid flush panel door with hardboard both side and 2 concealed edges
- Wood primer, undercoat and 2 finishing coats eggshell enamel

IRONMONGERY:

- 3 102 x 76mm heavy duty high performance ball bearing butt hinge
- 1 Stainless Steel Bathroom W/C Indicator Bolt
- 2 x 1.6mm 430 grade S.S plate drilled and CSK for screw fixing

GLAZING:

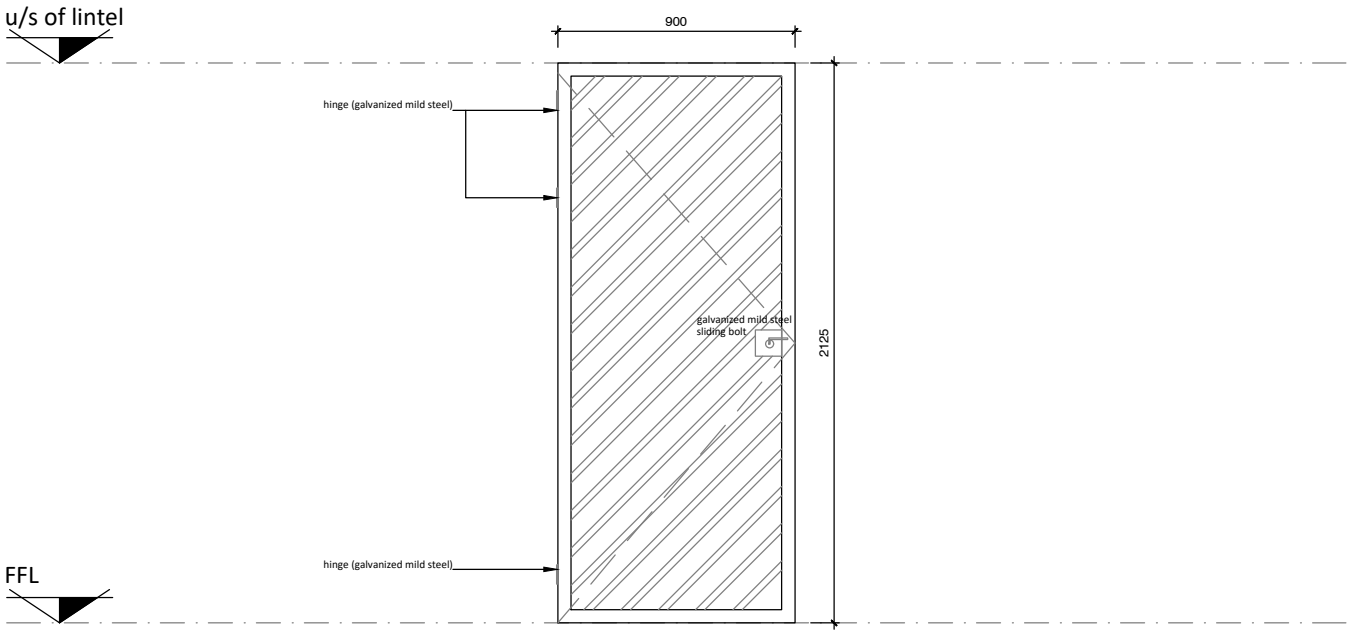
- Not Aplicable

MDA ARCHITECTS	Drawing Number:	Revision:
DOOR SCHEDULE	MDA 290 H	

MDA ARCHITECTS

RAGLAN ROAD CLINIC

G01



TYPICAL ELEVATION

QUANTITY	10	LOCATION	General Security Gate

GATE FRAME:

- 30X30X3mm Galvanized mild steel rectangular hollow section welded to form frame
- 25mm x 25mm Galvanized mild steel square section, place diagonally in main frame placed at 100mm centers.

GATE TYPE:

- Purpose made galvanized mild steel square hollow section security gate

GATE FINISH:

- 1 coat Zinc Chromate Primer
- 2 coats gloss enamel

FRAME FINISH:

- Degrease, 1 coat Zinc Chromate Primer
- 2 coats gloss enamel

IRONMONGERY:

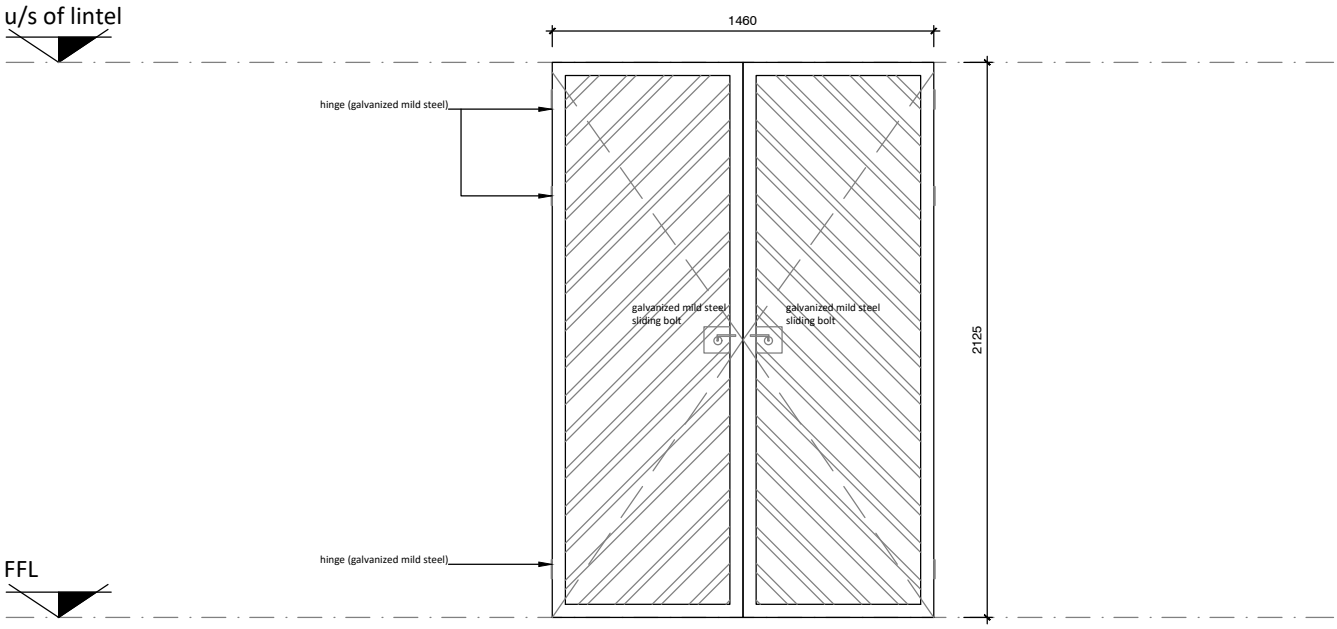
- 1 Galvanized mild steel heavy duty sliding bolt for padlock bolt
- 1 Galvanized mild steel heavy duty drop bolt
- 3 Galvanized mild steel heavy duty hinges as supplied by gate manufacturer
- Padlock by Client

GLAZING:

- Not Applicable

MDA ARCHITECTS	Drawing Number:	Revision:
GATE SCHEDULE	MDA 290 H	

MDA ARCHITECTS	RAGLAN ROAD CLINIC	G02



TYPICAL ELEVATION

QUANTITY	01	LOCATION	General Security Gate

GATE FRAME:
- 30X30X3mm Galvanized mild steel rectangular hollow section welded to form frame
- 25mm x 25mm Galvanized mild steel square section, place diagonally in main frame placed at 100mm centers.

GATE TYPE:
- Purpose made galvanized mild steel square hollow section security gate

GATE FINISH:
- 1 coat Zinc Chromate Primer
- 2 coats gloss enamel

FRAME FINISH:
- Degrease, 1 coat Zinc Chromate Primer
- 2 coats gloss enamel

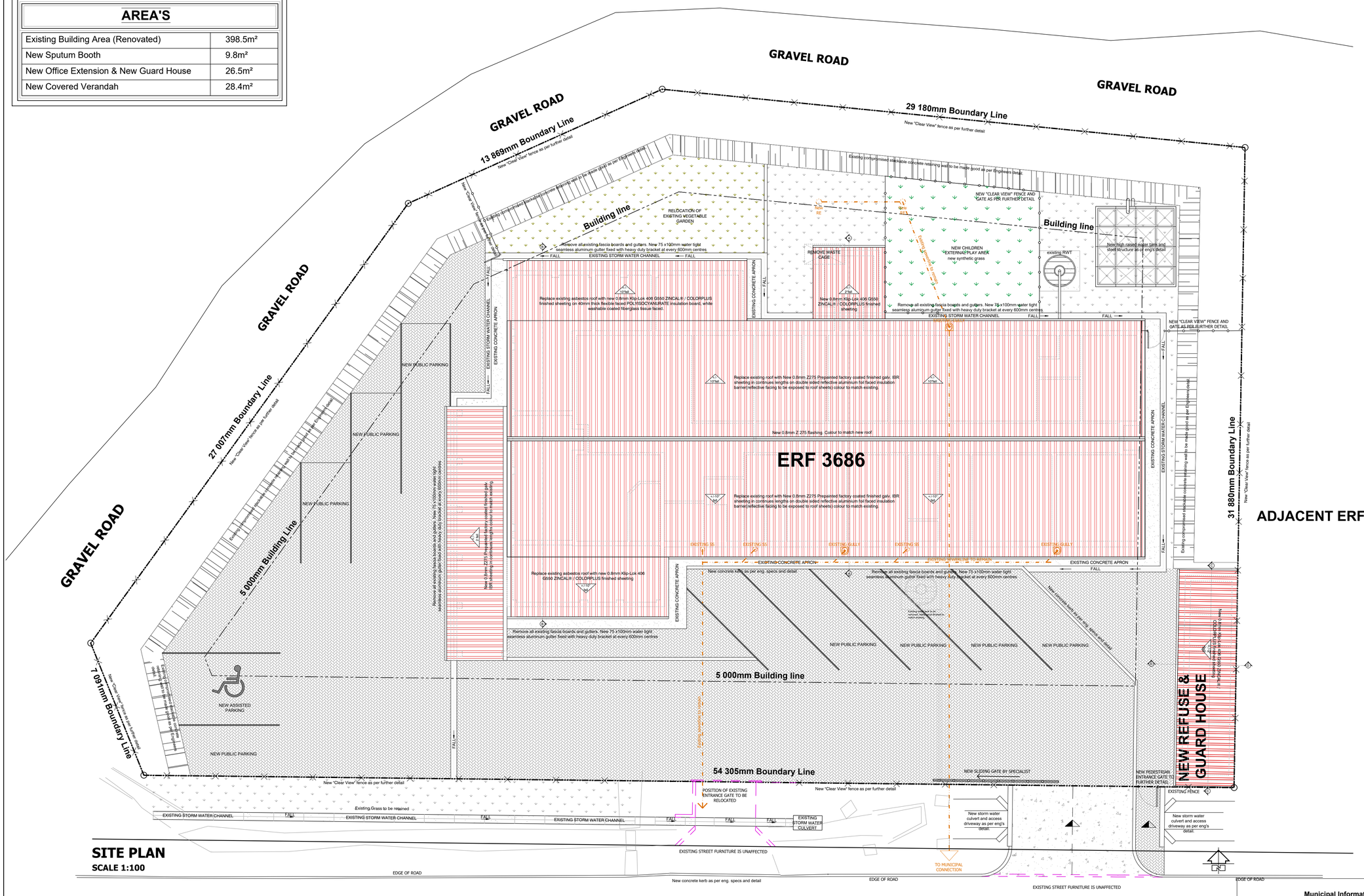
IRONMONGERY:
- 1 Galvanized mild steel heavy duty sliding bolt for padlock bolt
- 1 Galvanized mild steel heavy duty drop bolt
- 3 Galvanized mild steel heavy duty hinges as supplied by gate manufacturer
- Padlock by Client

GLAZING:
- Not Applicable

MDA ARCHITECTS	Drawing Number:	Revision:
GATE SCHEDULE	MDA 290 H	

AREA'S

Existing Building Area (Renovated)	398.5m²
New Sputum Booth	9.8m²
New Office Extension & New Guard House	26.5m²
New Covered Verandah	28.4m²



SITE PLAN
SCALE 1:100

Municipal Information

Erf No.	3686
Zoning	Institutional
Area of Erf	1.6 Hectares (1622.6m²)
Existing Coverage	443.5m² = 27.3%
New Building Coverage	41.8² = 2.5%
Total Coverage	443.5m² + 41.8m² = 485.3m² = 29.8%
Existing Area:	Existing clinic building = 443.5m²
New Area:	New covered walkway + new sputum booth +new refuse area = 41.8m²
No. of parking provided at clinic:	12

CONSTRUCTION

GENERAL NOTES:

All dimensions and levels are to be checked on site by the Contractor and discrepancies must be reported to the Architect before any work commences.

This drawing is to be read in conjunction with all the other drawings including those of the Consultants and/or Bill of Quantities and or specification issued for.

Scaled dimensions are not to be used for construction. Should there be any discrepancies or lack of dimensions, the Architects are to be contacted for clarification.

Only drawings numbered 200 and upwards and showing latest revisions are to be used for construction. All previously issued drawings are to be destroyed.

The Architect reserve the copyright on this drawing.

This drawing is only to be used for the project and site for which it was prepared.

No setting out is to commence before the positions of the boundary pegs have been verified

Sewer connections to comply with municipal regulations by a Land Surveyor

No	AMENDMENTS	DATE
0	ISSUED FOR TENDER	OCT 2023

SURVEYED	NA	
DRAWN	IOI	FEB 2019
DESIGNED	DBA	FEB 2019
CHECKED	DBA	FEB 2019
APPROVED	PR REGISTRATION NO. 3128	

ARCHITECT

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SACAP REGISTRATION NO.
3128

CLIENT

SAKHIWO HEALTH SOLUTIONS

SAKHIWO MAINTAINANCE CONSORTIUM

PROVINCE OF THE EASTERN CAPE DEPARTMENT OF HEALTH

Independence Avenue Dukumbana Building
BHISHO, 5605
SOUTH AFRICA
Private Bag X0038, BHISHO, 5605
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www.echealth.gov.za

PROJECT TITLE

ERF 3686
VIRGINIA SHUMANE CLINIC
(GRAHAMSTOWN)

DRAWING TITLE

SITE PLAN

SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 01	A1

DRAWING No.	REVISION
MDA290E-200	0

GENERAL NOTES:

All dimensions and levels are to be checked on site by the Contractor and discrepancies must be reported to the Architect before any work commences.

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Sewer connections to comply with municipal regulations by a Land Surveyor

No	AMENDMENTS	DATE
0	ISSUED FOR TENDER	OCT 2023

SURVEYED	NA	
DRAWN	IOI	FEB 2019
DESIGNED	DBA	FEB 2019
CHECKED	DBA	FEB 2019
APPROVED	PR REGISTRATION NO. 3128	

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SACAP REGISTRATION NO.
3128

CLIENT

SAKHIWO HEALTH SOLUTIONS

SAKHIWO MAINTAINANCE CONSORTIUM

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DEPARTMENT OF HEALTH

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SOUTH AFRICA
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Tel: +27 (0)40 608 1114
www.echealth.gov.za

PROJECT TITLE

ERF 3686
VIRGINIA SHUMANE CLINIC
(GRAHAMSTOWN)

DRAWING TITLE

FLOOR PLAN

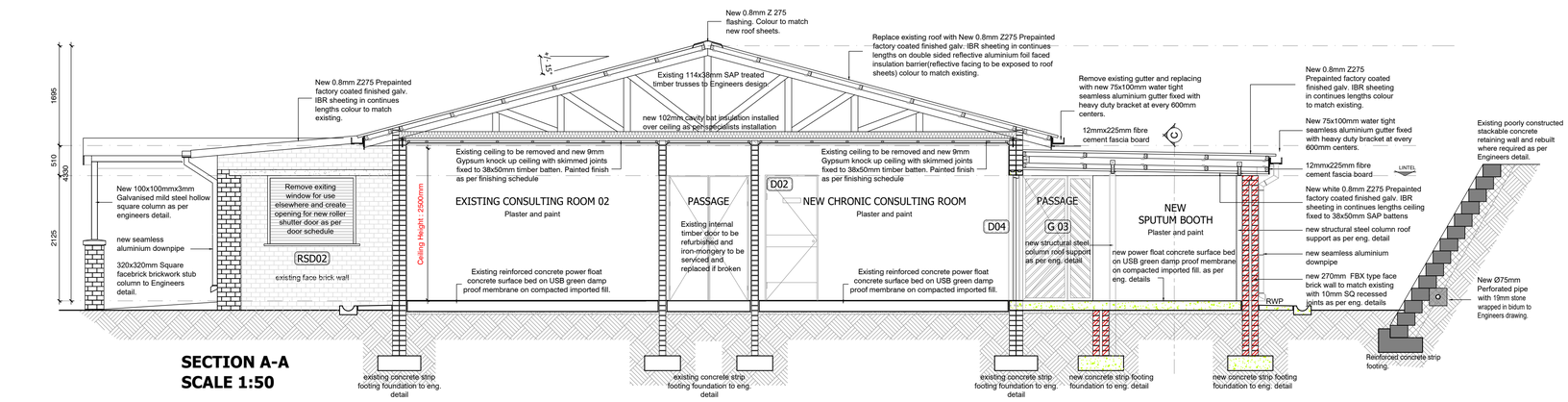
SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 02	A1
DRAWING No.		REVISION
MDA290E-202		0

CONSTRUCTION

AREA'S

Existing Building Area (Renovated)	398.5m²
New Sputum Booth	9.8m²
New Office Extension & New Guard House	26.5m²
New Covered Verandah	28.4m²

FLOOR PLAN
SCALE 1:75



SECTION A-A
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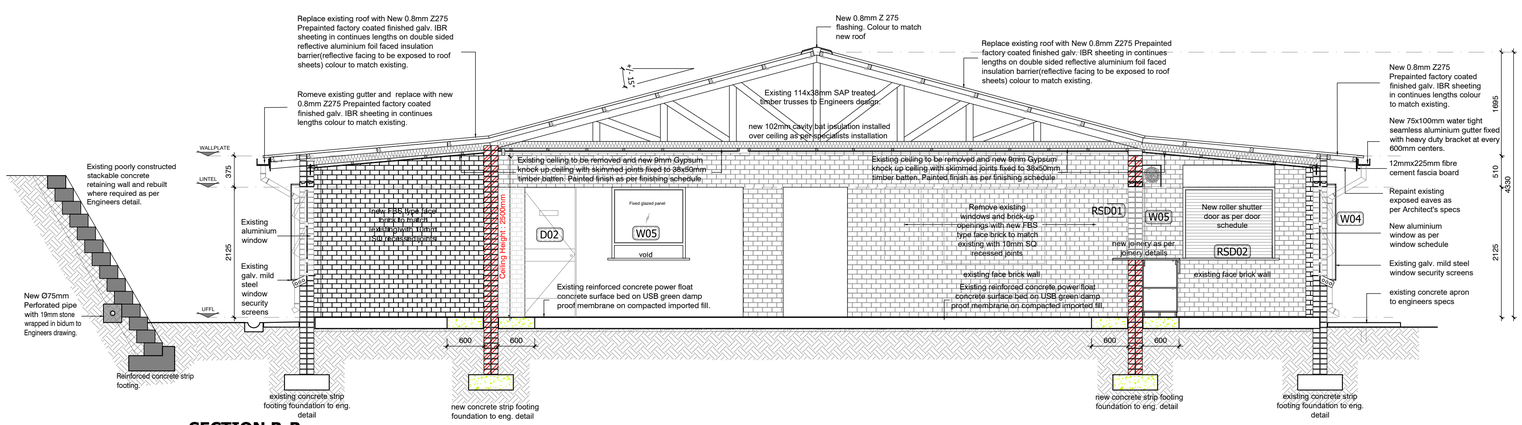

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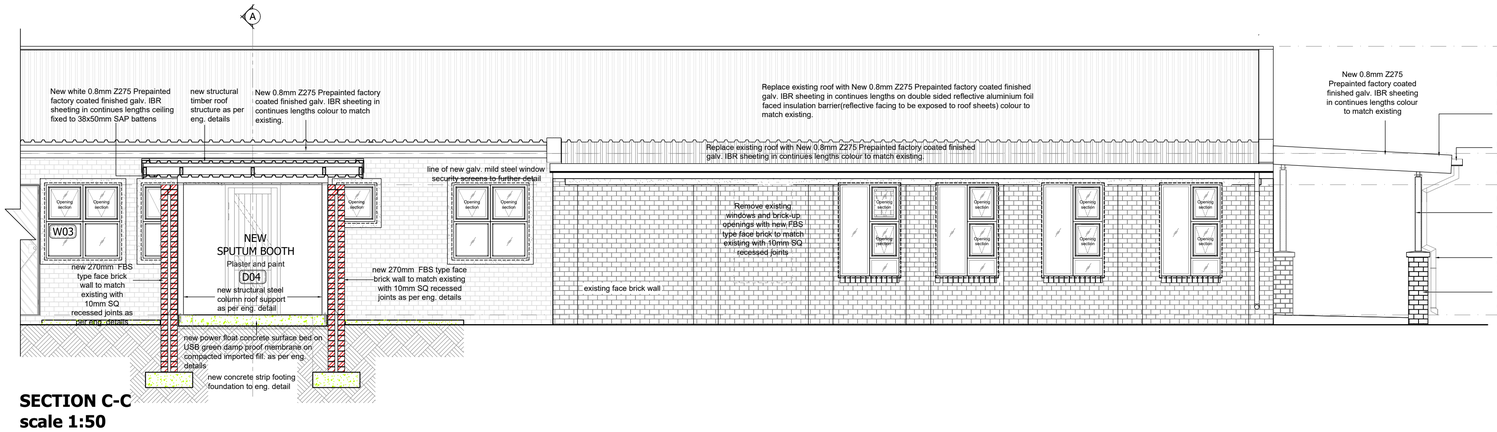

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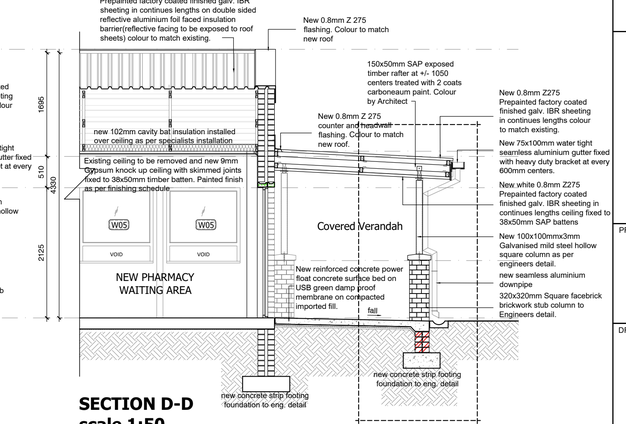

SECTION D-D
scale 1:50

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Sewer connections to comply with municipal regulations by a Land Surveyor

No	AMENDMENTS	DATE
0	ISSUED FOR TENDER	SEP 2023

SURVEYED	NA	
DRAWN	IOI	FEB 2019
DESIGNED	DBA	FEB 2019
CHECKED	DBA	FEB 2019
APPROVED	PR REGISTRATION NO. 3128	

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DEPARTMENT OF HEALTH

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www.echealth.gov.za

PROJECT TITLE

ERF 3686
VIRGINIA SHUMANE CLINIC
(GRAHAMSTOWN)

DRAWING TITLE

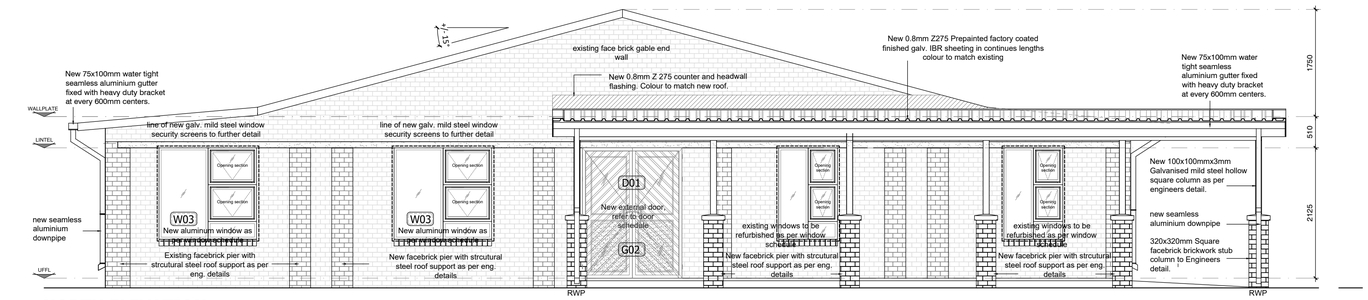
SECTIONS

SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 03	A1

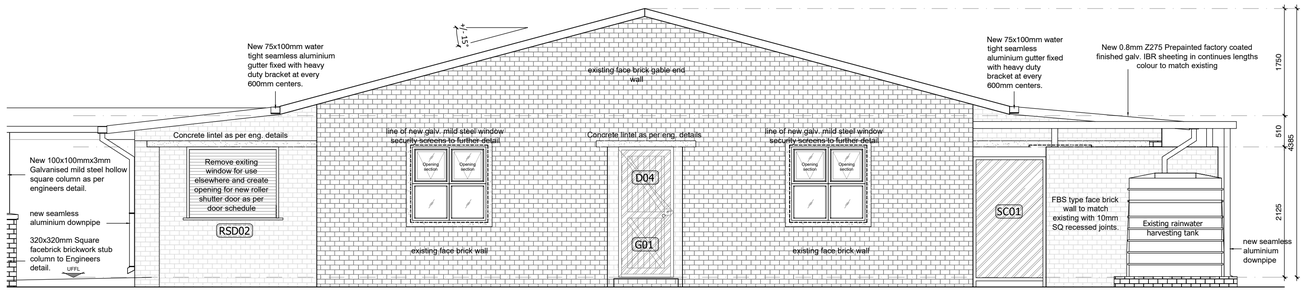
DRAWING No. MDA290E-202

REVISION 01

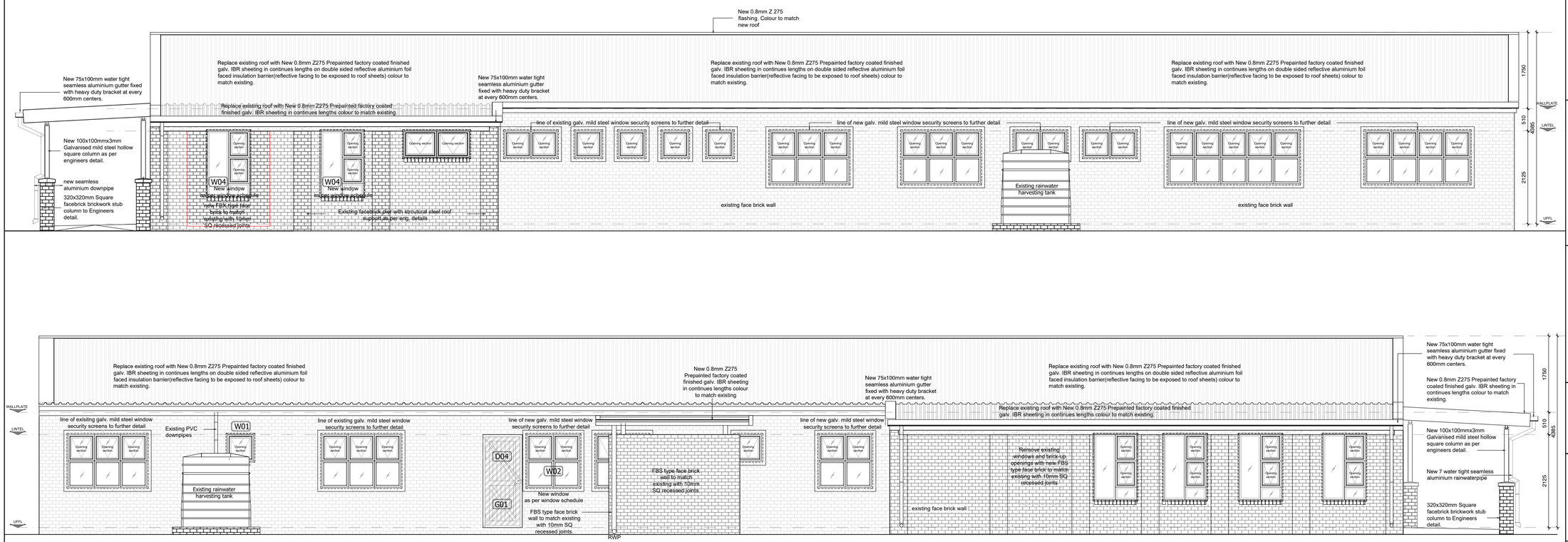
CONSTRUCTION



NORTH ELEVATION
SCALE 1:50



SOUTH ELEVATION
SCALE 1:50



EAST ELEVATION
SCALE 1:50

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0	ISSUED FOR TENDER	SEP 2023

SURVEYED	NA	
DRAWN	IOI	FEB 2019
DESIGNED	DBA	FEB 2019
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APPROVED	PR REGISTRATION NO. 3128	

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PROJECT TITLE

ERF 3686
VIRGINIA SHUMANE CLINIC
(GRAHAMSTOWN)

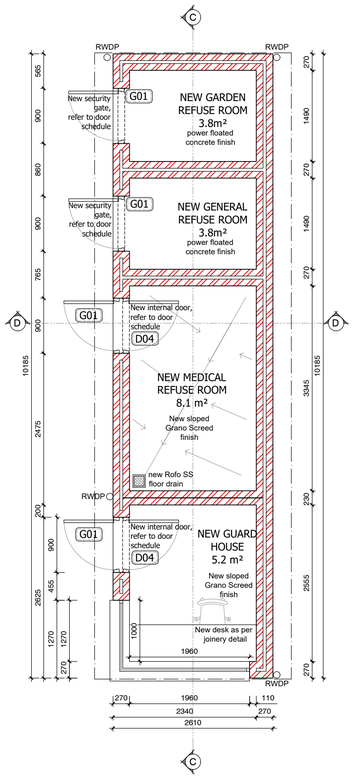
DRAWING TITLE

ELEVATIONS

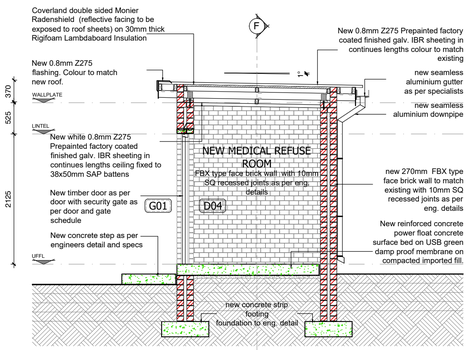
SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 04	A1

DRAWING No.	REVISION
MDA290E-203	01

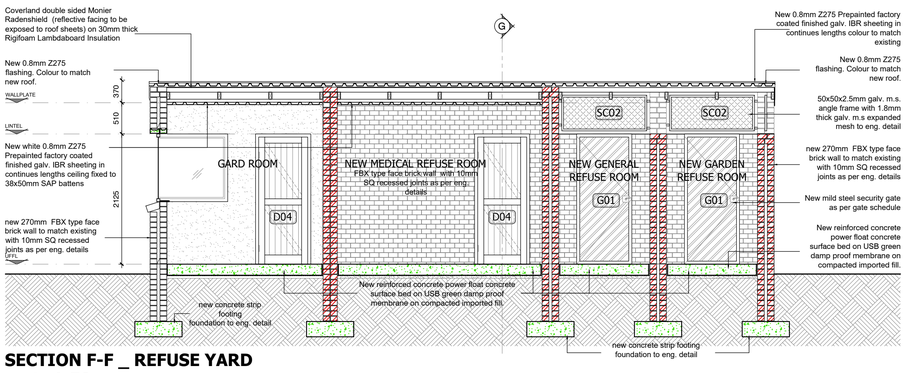
CONSTRUCTION



FLOOR PLAN _ REFUSE YARD
scale 1:50



SECTION E-E _ REFUSE YARD
scale 1:50



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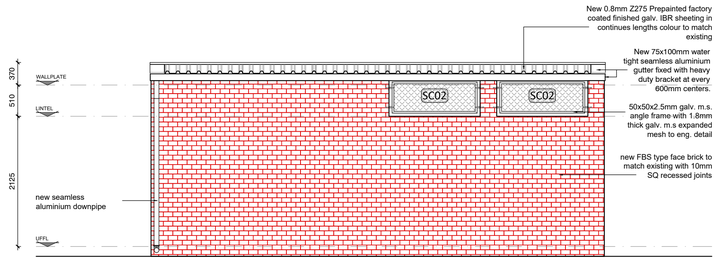
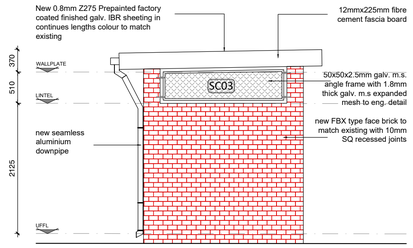
scale 1:50

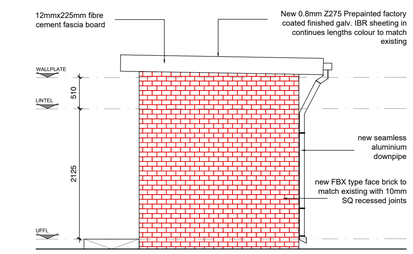


EAST ELEVATION - REFUSE YARD
scale 1:75



SOUTH ELEVATION - REFUSE YARD
scale 1:75

WEST ELEVATION - REFUSE YARD
scale 1:75



NORTH ELEVATION - REFUSE YARD
scale 1:75

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No	AMENDMENTS	DATE
0	ISSUED FOR TENDER	SEP 2023

SURVEYED	NA	
DRAWN	IOI	FEB 2019
DESIGNED	DBA	FEB 2019
CHECKED	DBA	FEB 2019
APPROVED	PR REGISTRATION NO. 3128	

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PROJECT TITLE

ERF 3686
VIRGINIA SHUMANE CLINIC
(GRAHAMSTOWN)

DRAWING TITLE

REFUSE YARD

SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 05	A1

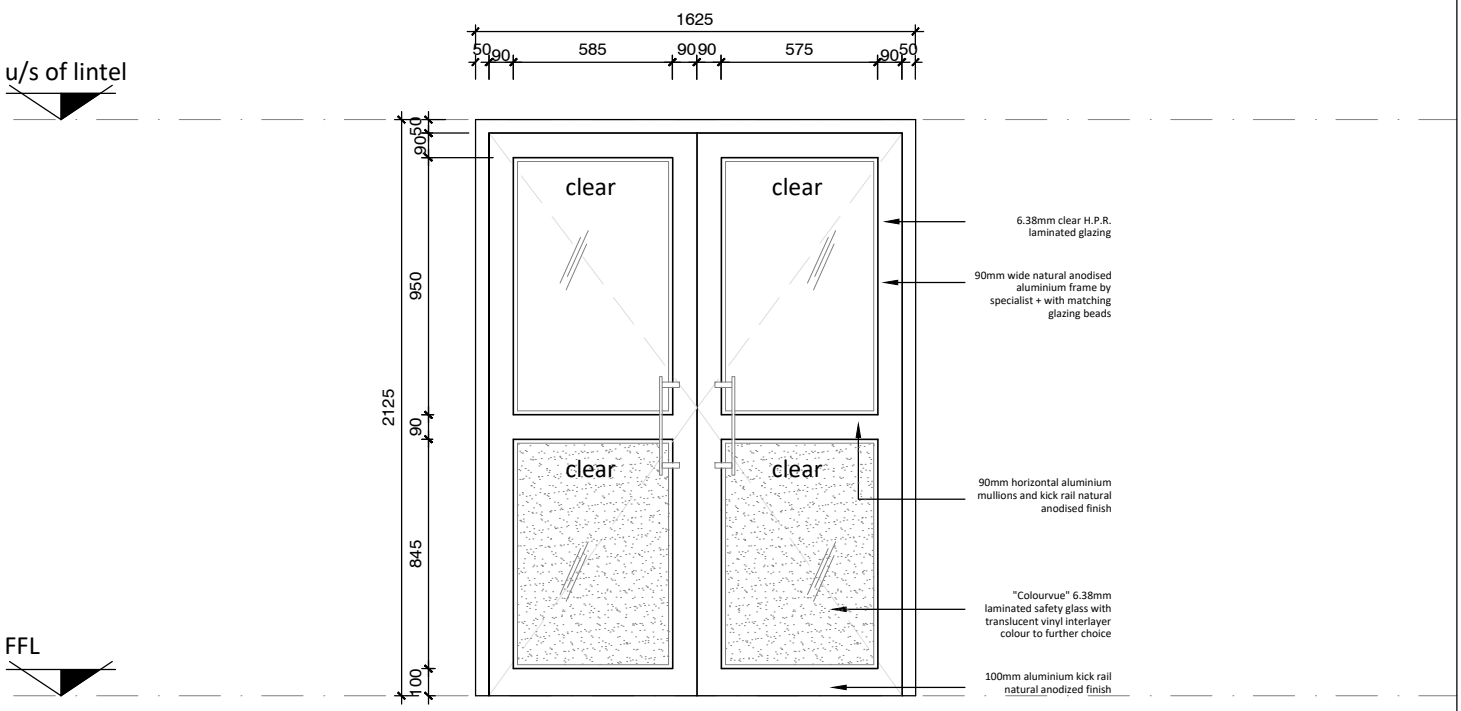
DRAWING No.	REVISION
MDA290E-204	01

CONSTRCTION

MDA ARCHITECTS

V - SHUMANE CLINIC

D01



TYPICAL ELEVATION

QUANTITY	02	LOCATION	Entrance Door

DOOR FRAME:

- Natural Anodized aluminium extrusion with rebated lip by specialist: min 90mm wide extrusion.
- Attached rubberized buffers at rebate
- Draft excluded

DOOR:

- Natural Anodized aluminium extrusion by specialist.
- Tensioned 10mm treated securing rod in top and bottom style over full width of each door leaf
- 3 x aluminium butt hinges with nylon bushes

GENERAL:

- IRONMONGERY: Refer to Ironmongery Schedule -

GLAZING:

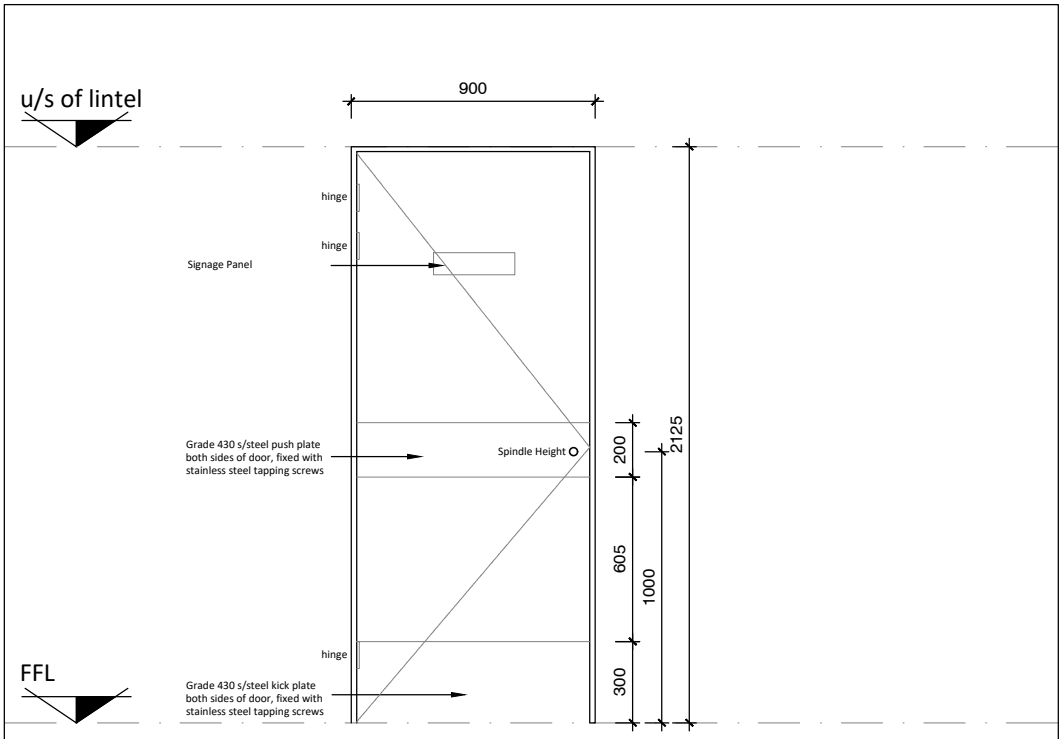
- 6.38mm HPR Laminated safety glass
- "Colourvue" 6mm laminated safty glass with translucent vinyl interlayer colour to further choice

MDA ARCHITECTS	Drawing Number:	Revision:
DOOR SCHEDULE	MDA 290 E	

MDA ARCHITECTS

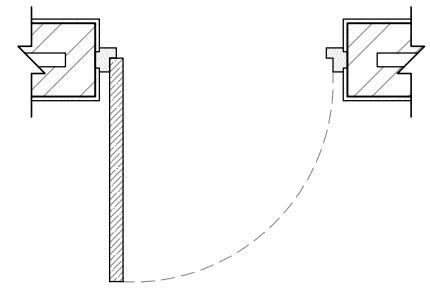
V - SHUMANE CLINIC

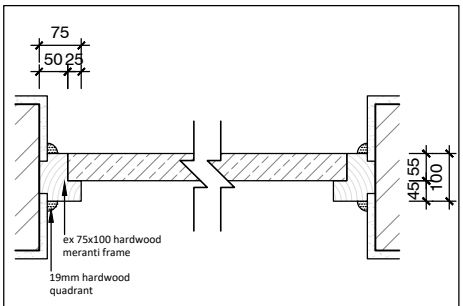
D02



TYPICAL ELEVATION

TYPICAL PLAN VIEV





TYPICAL SECTIONAL VIEW

QUANTITY	22	LOCATION	New Internal Doors

DOOR FRAME:

- Ex 75x100 meranti hardwood frame with galv lugs at every 5th brick course for building into either 270 or 230 plastered brick walls.
- No 3 PVC buffers to closing
- Built into plastered brick walls or Built into composite wall system.
- Wood primer universal undercoat and 2 of polyurethane enamel paint

DOOR:

- 44mm thick semi-solid core flush doors with 10mm hardwood edges faced with tempered smooth faced hardboard for painting.
- 300mm stainless steel protective kick plates and 200mm push plates on both sides of door fixed with 20mm counter sunk s.s screws at max 200mm.
- Door to receive; -1x Wood primer
  -1x Universal undercoat
  -2x Coats of polyurethane enamel paint

GENERAL:

- IRONMONGERY: Refer to Ironmongery Schedule -

GLAZING:

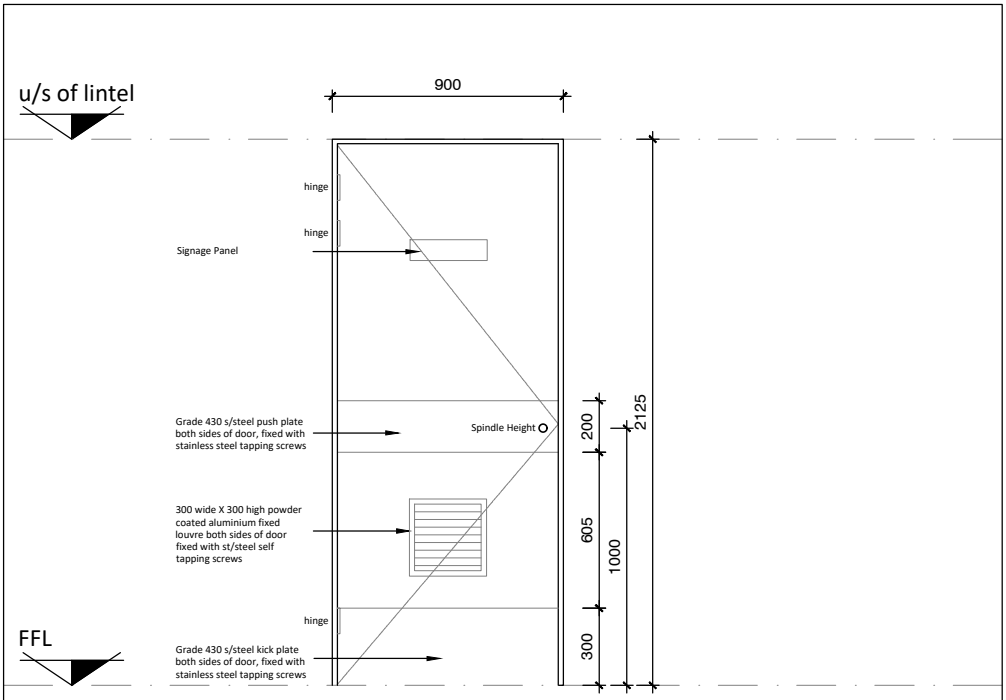
- Not Aplicable

MDA ARCHITECTS	Drawing Number:	Revision:
DOOR SCHEDULE	MDA 290 E	

MDA ARCHITECTS

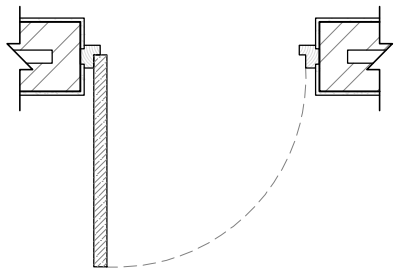
V - SHUMANE CLINIC

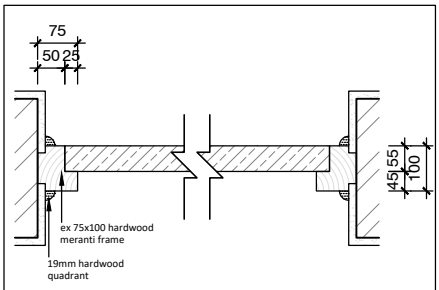
D02a



TYPICAL ELEVATION

TYPICAL PLAN VIEV





TYPICAL SECTIONAL VIEW

QUANTITY	05	LOCATION	New Staff Ablution Doors

DOOR FRAME:

- Ex 75x100 meranti hardwood frame with galv lugs at every 5th brick course for building into either 270 or 230 plastered brick walls.
- No 3 PVC buffers to closing
- Built into plastered brick walls or Built into composite wall system.
- Wood primer universal undercoat and 2 of polyurethane enamel paint

DOOR:

- 44mm thick semi-solid core flush doors with 10mm hardwood edges faced with tempered smooth faced hardboard for painting.
- 300mm stainless steel protective kick plates and push plates on both sides of door fixed with 20mm counter sunk s.s screws at max 200mm.
- Door to receive; -1x Wood primer
  -1x Universal undercoat
  -2x Coats of polyurethane enamel paint
- 300x300mm powder coated aluminium fixed louvre both sides of the door fixed with stainless steel self tapping screws

GENERAL:

- IRONMONGERY: Refer to Ironmongery Schedule -

GLAZING:

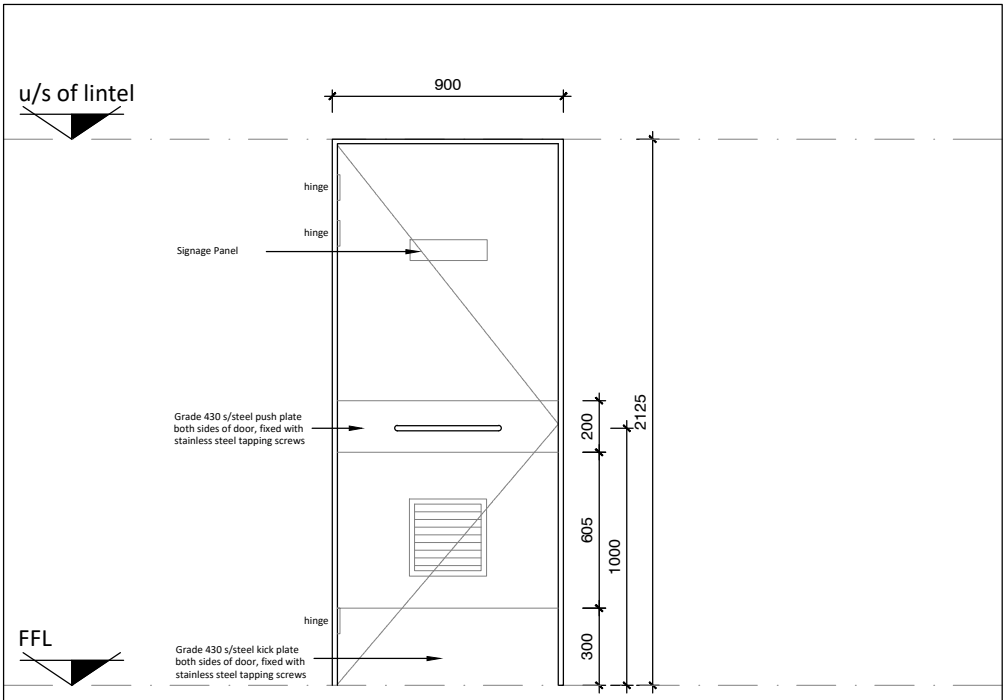
- Not Aplicable

MDA ARCHITECTS	Drawing Number:	Revision:
DOOR SCHEDULE	MDA 290 E	

MDA ARCHITECTS

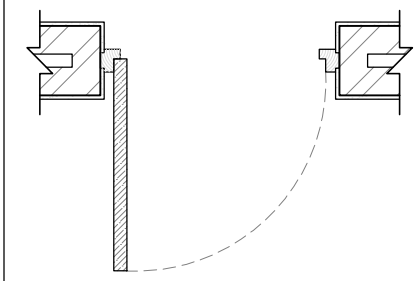
V - SHUMANE CLINIC

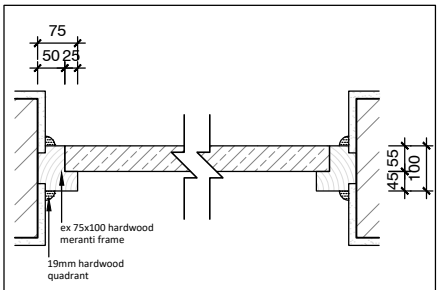
D02b



TYPICAL ELEVATION

TYPICAL PLAN VIEV





TYPICAL SECTIONAL VIEW

QUANTITY	01	LOCATION	New Disabled Ablution Door

DOOR FRAME:

- Ex 75x100 meranti hardwood frame with galv lugs at every 5th brick course for building into either 270 or 230 plastered brick walls.
- No 3 PVC buffers to closing
- Built into plastered brick walls or Built into composite wall system.
- Wood primer universal undercoat and 2 of polyurethane enamel paint

DOOR:

- 44mm thick semi-solid core flush doors with 10mm hardwood edges faced with tempered smooth faced hardboard for painting.
- 300mm stainless steel protective kick plates and 200mm push plates on both sides of door fixed with 20mm counter sunk s.s screws at max 200mm.
- Door to receive; -1x Wood primer
  -1x Universal undercoat
  -2x Coats of polyurethane enamel paint
- 300x300mm powder coated aluminium fixed louvre both sides of the door fixed with stainless steel self tapping screws

GENERAL:

- IRONMONGERY: Refer to Ironmongery Schedule -

GLAZING:

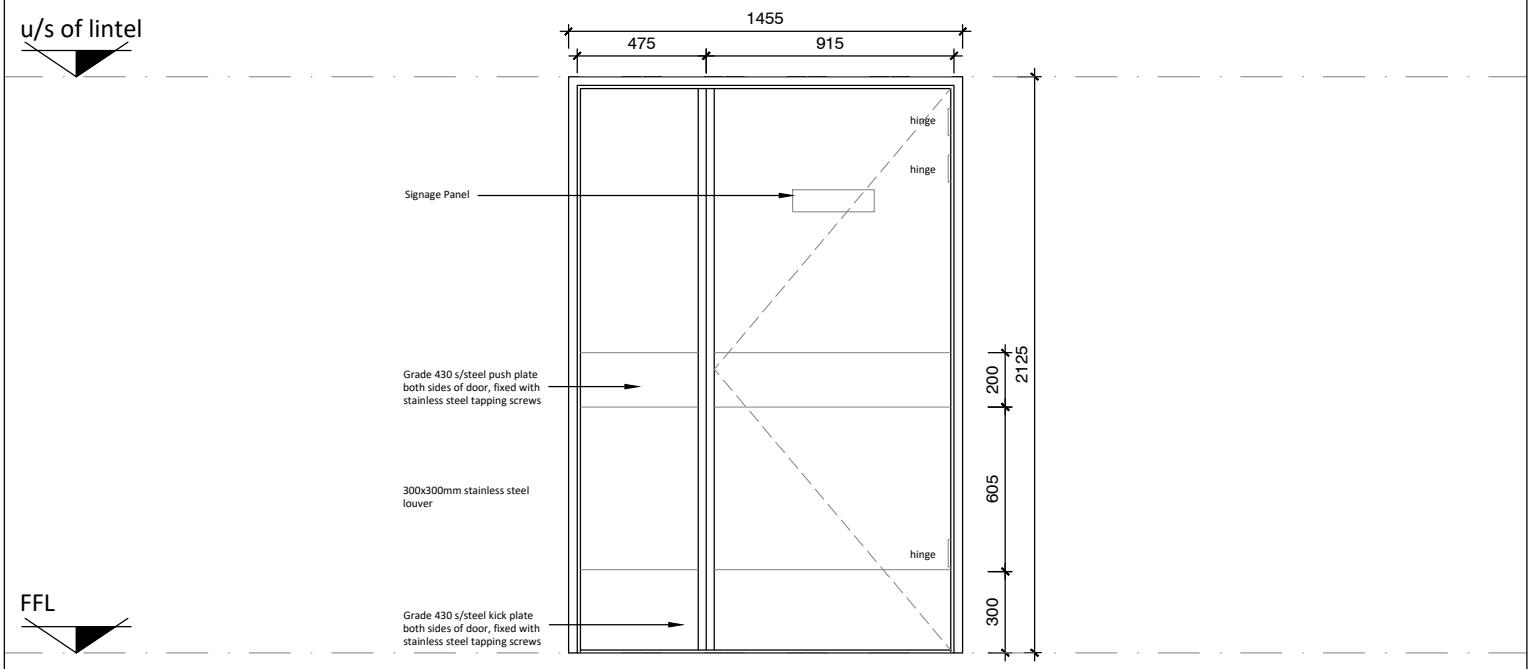
- Not Aplicable

MDA ARCHITECTS	Drawing Number:	Revision:
DOOR SCHEDULE	MDA 290 E	

MDA ARCHITECTS

V - SHUMANE CLINIC

D03



TYPICAL ELEVATION

QUANTITY	01	LOCATION	Existing Treatment Room Door

DOOR FRAME:

- Ex 75x100 meranti hardwood frame with galv lugs at every 5th brick course for building into either 270 or 230 plastered brick walls.
- No 3 PVC buffers to closing
- Built into plastered brick walls or Built into composite wall system.
- Wood primer universal undercoat and 2 of polyurethane enamel paint

DOOR:

- 44mm thick semi-solid core flush doors with 10mm hardwood edges faced with tempered smooth faced hardboard for painting.
- 300mm stainless steel protective kick plates and 200mm push plates on both sides of door fixed with 20mm counter sunk s.s screws at max 200mm.
- Door to receive; -1x Wood primer
  -1x Universal undercoat
  -2x Coats of polyurethane enamel paint

GENERAL:

- IRONMONGERY: Refer to Ironmongery Schedule -

GLAZING:

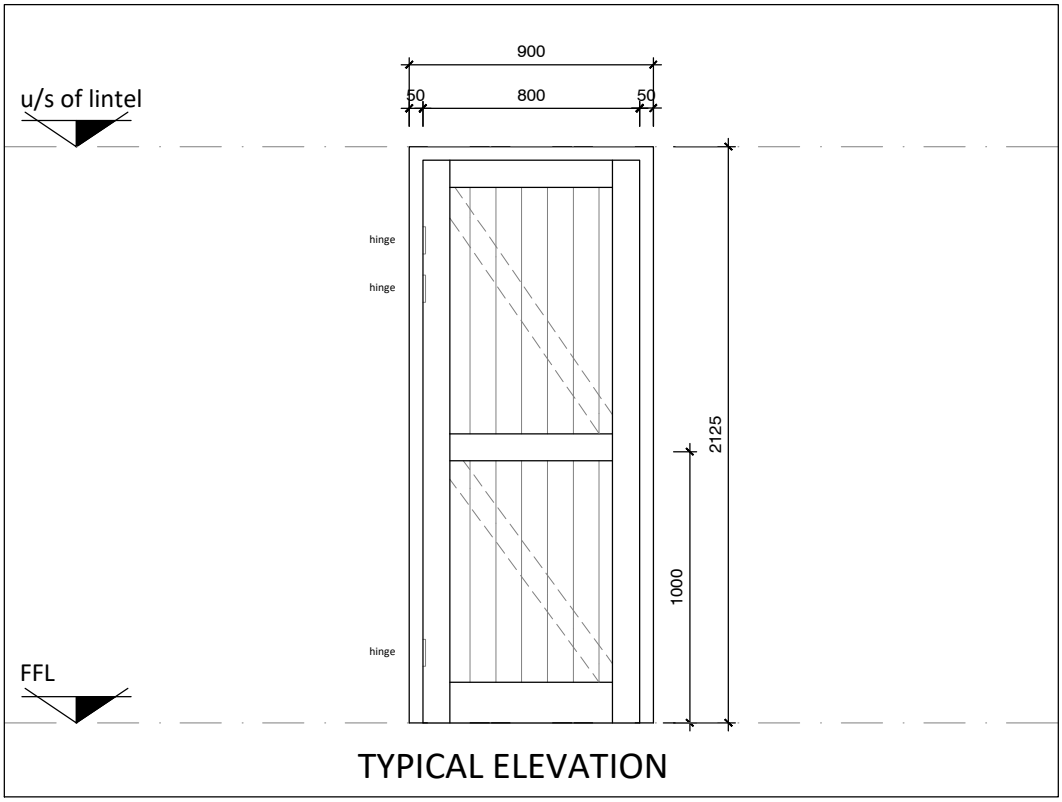
- Not Aplicable

MDA ARCHITECTS	Drawing Number:	Revision:
DOOR SCHEDULE	MDA 290 E	

MDA ARCHITECTS

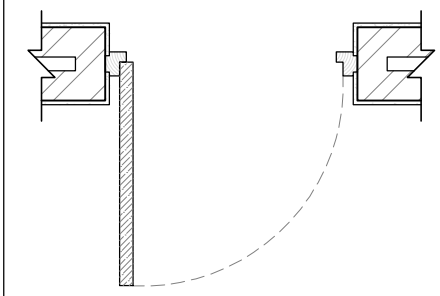
V - SHUMANE CLINIC

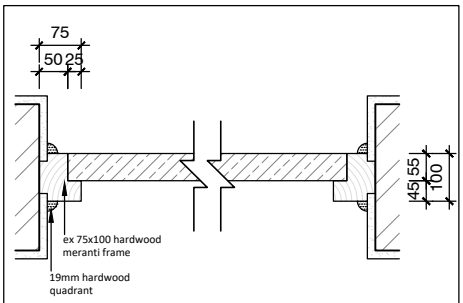
D04



TYPICAL ELEVATION

TYPICAL PLAN VIEV





TYPICAL SECTIONAL VIEW

QUANTITY	03	LOCATION	New External Doors and New Sputum Booth

DOOR FRAME:

- 16mm hardwood quadrant trim both sides of door frame
- 75 x 100mm par meranti hardwood frame with galv lugs at every
- 5th brick course for building into either 230 or 110 plastered and paint brick walls
- 100x10mm dia mild steel dowels to door frame styles
- Frame to be sanded smooth and receive 2 finishing coats woodoc 50 marine clear exterior sealer.

DOOR:

- 900mm Solid core FLB external door
- 108x44mm top rail and styles
- 220x44mm lock rail and bottom rail
- 22mm v-joint meranti T&C boarding
- Door to be sanded smooth 2 finishing coats woodoc 50 marine clear exterior sealer.

GENERAL:

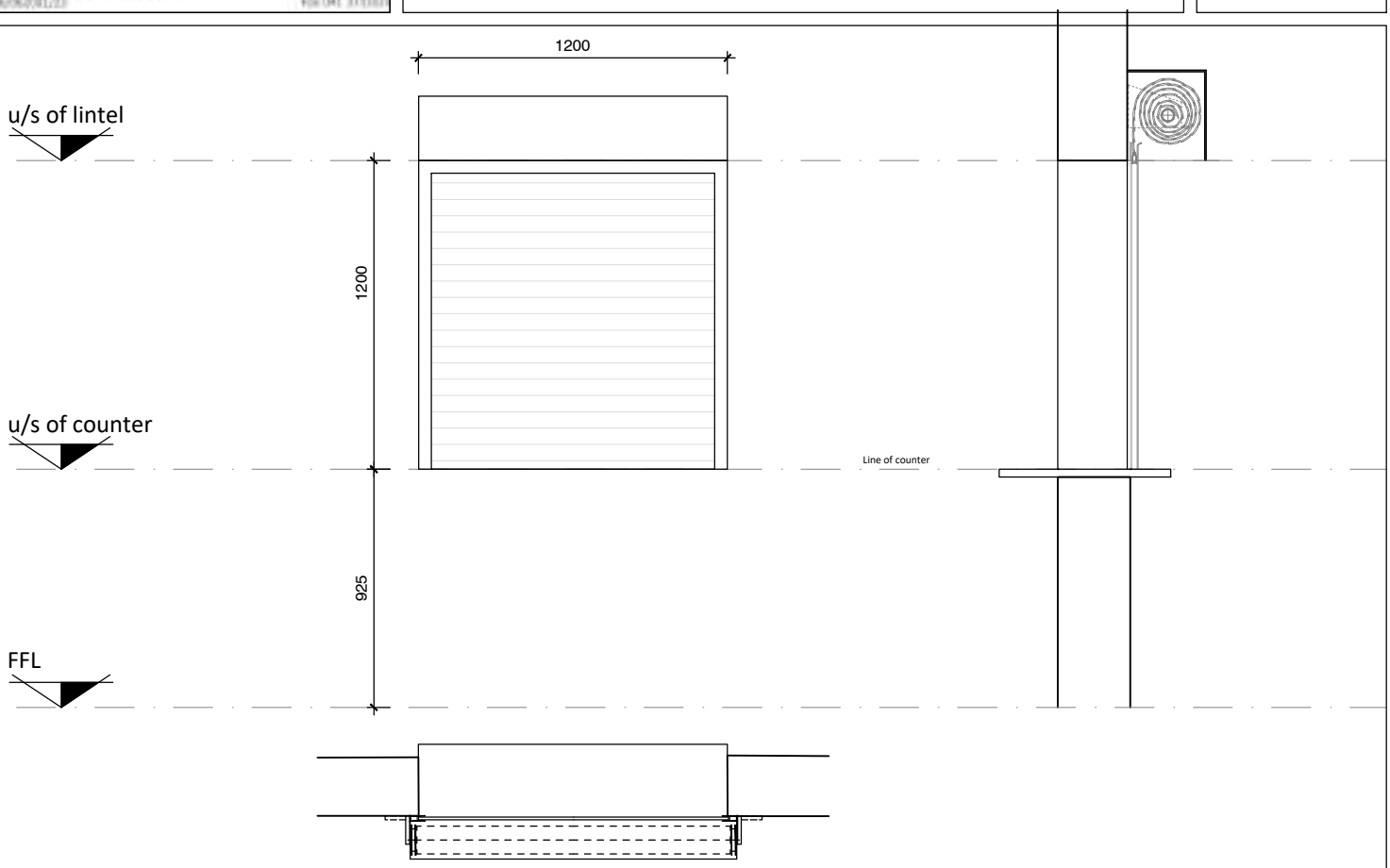
- IRONMONGERY: Refer to Ironmongery Schedule -

GLAZING:

- Not Aplicable

MDA ARCHITECTS	Drawing Number:	Revision:
DOOR SCHEDULE	MDA 290 E	

MDA ARCHITECTS	NG DLUKULU CLINIC	RSD01



TYPICAL ELEVATION

QUANTITY	04	LOCATION	New Dispensary and Existing Reception

FRAME:
- Galv. housing and side rails bolted to brickwork

FRAME FINISH:
- To manufacturers specifications

DOOR TYPE:
- Fire Rated (SABS 1253) chain operated galv. heavy duty metal slatted roller shutter, to suit opening 1200mm wide x 1200mm high.

DOOR FINISH:
- Powder coated as per manufacturers specifications

GENERAL:
- Slide bolts, fitted for padlock
- Locking slide bolts supplied by door manufacturer
- Pad lock supplied by client
- All door handing's and quantities to be verified on site

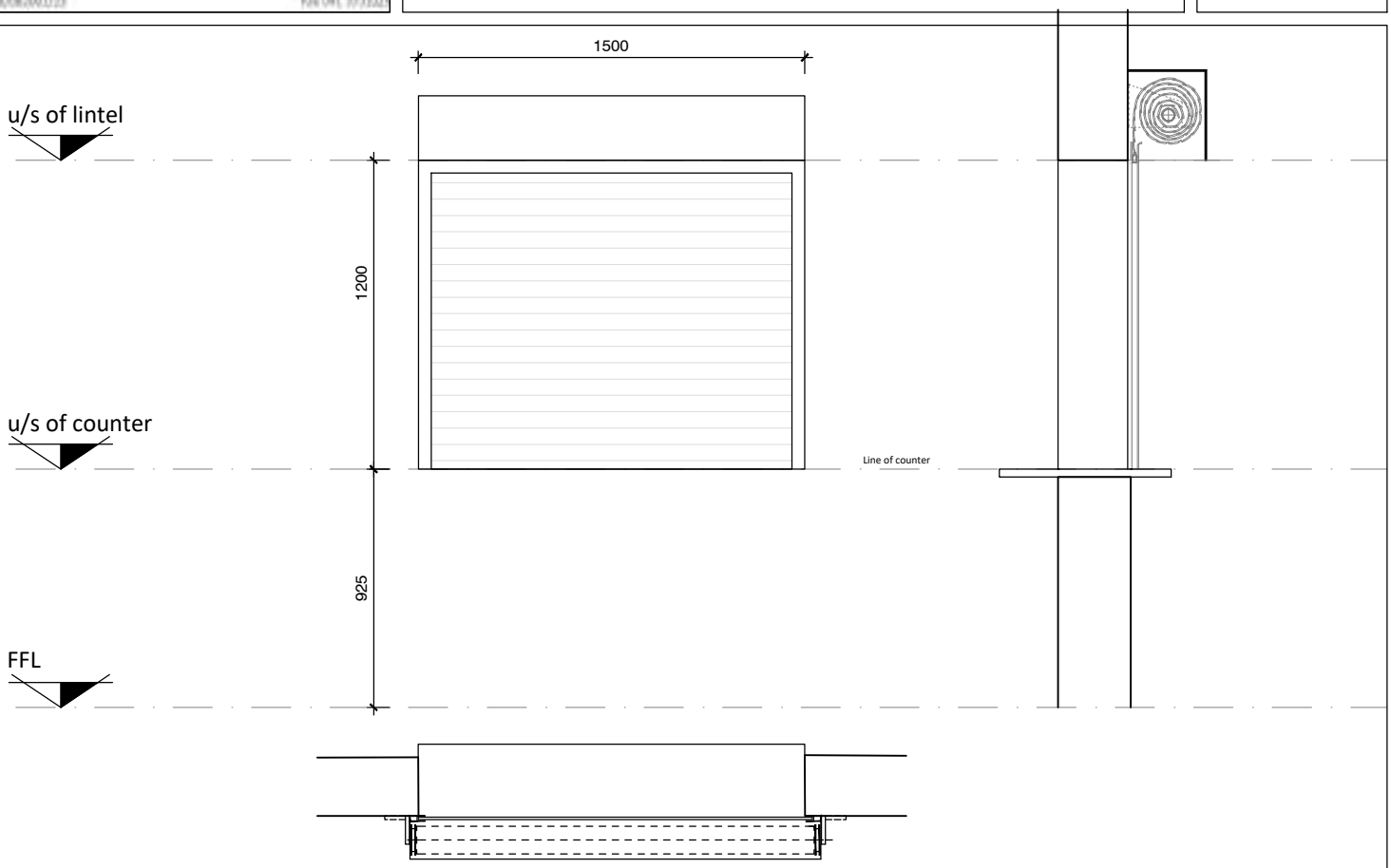
GLAZING:
- Not Applicable

MDA ARCHITECTS	Drawing Number:	Revision:
DOOR SCHEDULE	MDA 290 E	

MDA ARCHITECTS

NG DLUKULU CLINIC

RSD02



TYPICAL ELEVATION

QUANTITY	01	LOCATION	New Pharmacy Store

FRAME:
- Galv. housing and side rails bolted to brickwork

FRAME FINISH:
- To manufacturers specifications

DOOR TYPE:
- Fire Rated (SABS 1253) chain operated galv. heavy duty metal slatted roller shutter, to suit opening 1500mm wide x 1200mm high.

DOOR FINISH:
- Powder coated as per manufacturers specifications

GENERAL:
- Slide bolts, fitted for padlock
- Locking slide bolts supplied by door manufacturer
- Pad lock supplied by client
- All door handing's and quantities to be verified on site

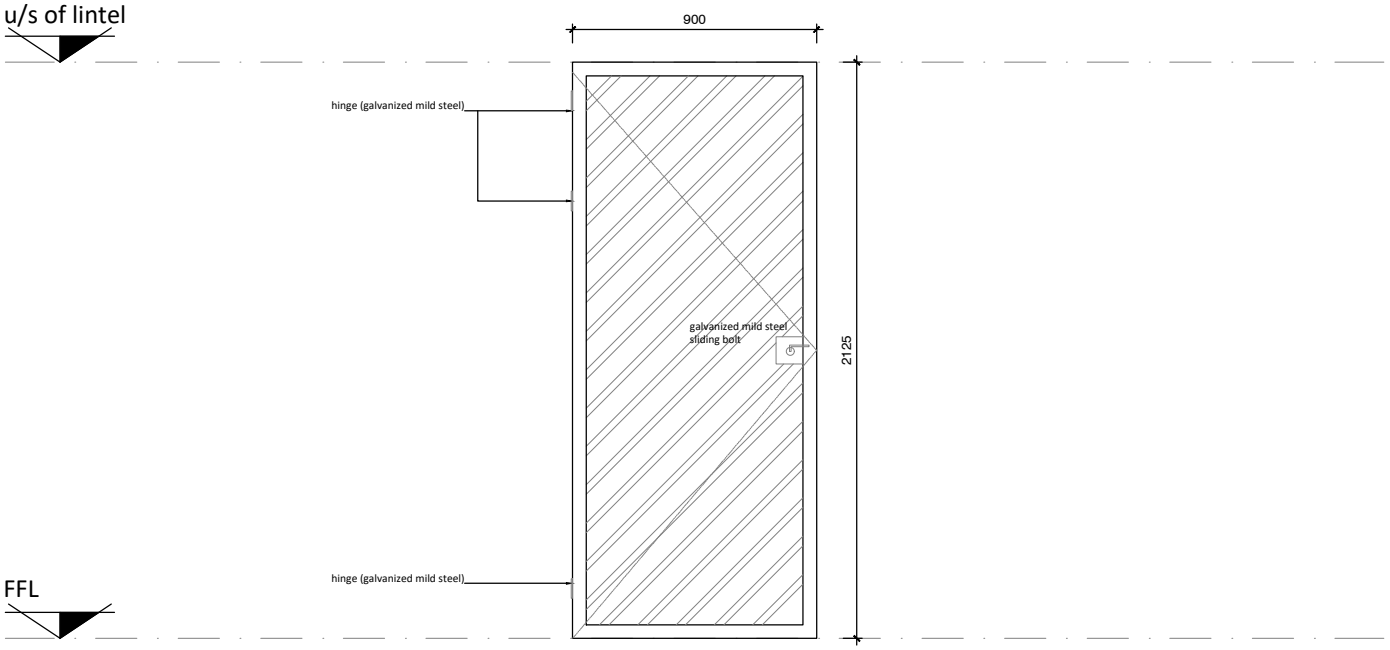
GLAZING:
- Not Applicable

MDA ARCHITECTS	Drawing Number:	Revision:
DOOR SCHEDULE	MDA 290 E	

MDA ARCHITECTS

V - SHUMANE CLINIC

G01



TYPICAL ELEVATION

QUANTITY	04	LOCATION	External doors and Refuse Room

GATE FRAME:

- 30X30X3mm Galvanized mild steel rectangular hollow section welded to form frame
- 25mm x 25mm Galvanized mild steel square section, place diagonally in main frame placed at 100mm centers.

GATE TYPE:

- Purpose made galvanized mild steel square hollow section security gate

GATE FINISH:

- 1 coat Zinc Chromate Primer
- 2 coats gloss enamel

FRAME FINISH:

- Degrease, 1 coat Zinc Chromate Primer
- 2 coats gloss enamel

IRONMONGERY:

- 1 Galvanized mild steel heavy duty sliding bolt for padlock bolt
- 1 Galvanized mild steel heavy duty drop bolt
- 3 Galvanized mild steel heavy duty hinges as supplied by gate manufacturer
- Padlock by Client

GLAZING:

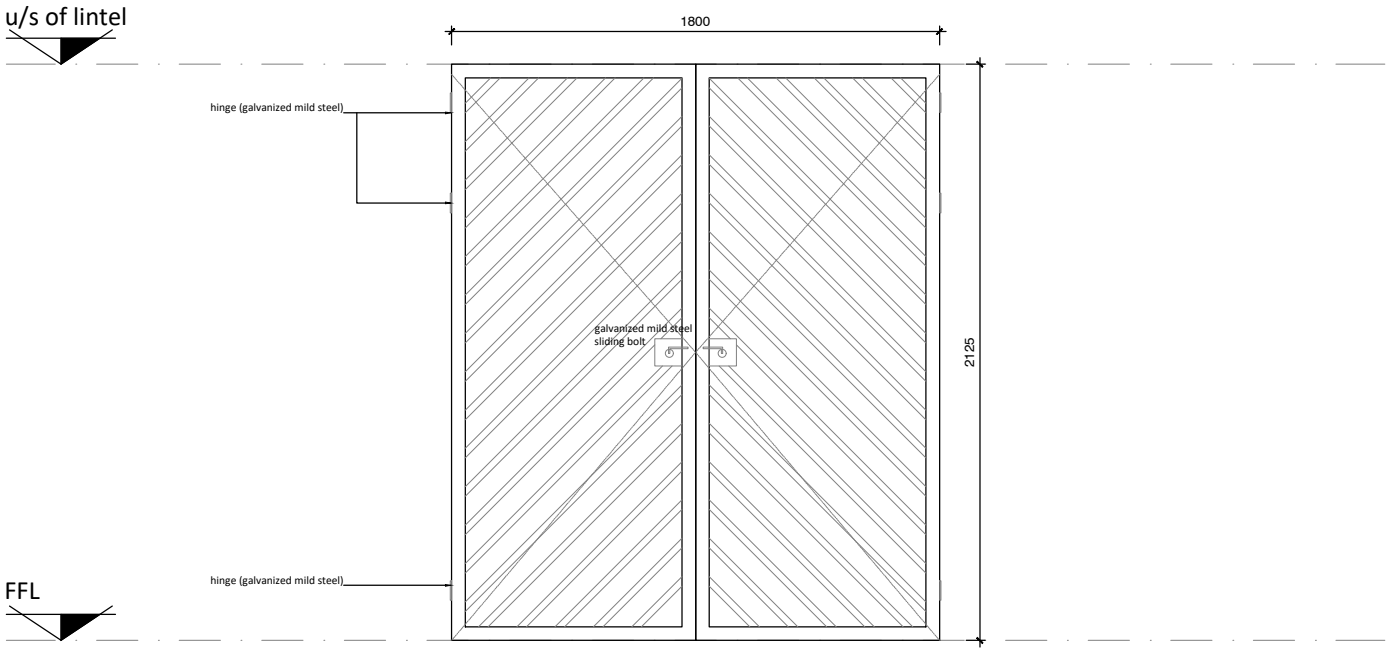
- Not Applicable

MDA ARCHITECTS	Drawing Number:	Revision:
GATE SCHEDULE	MDA 290 E	

MDA ARCHITECTS

V - SHUMANE CLINIC

G02



TYPICAL ELEVATION

QUANTITY	01	LOCATION	Entrance Door Security Gate

GATE FRAME:

- 30X30X3mm Galvanized mild steel rectangular hollow section welded to form frame
- 25mm x 25mm Galvanized mild steel square section, place diagonally in main frame placed at 100mm centers.

GATE TYPE:

- Purpose made galvanized mild steel square hollow section security gate

GATE FINISH:

- 1 coat Zinc Chromate Primer
- 2 coats gloss enamel

FRAME FINISH:

- Degrease, 1 coat Zinc Chromate Primer
- 2 coats gloss enamel

IRONMONGERY:

- 1 Galvanized mild steel heavy duty sliding bolt for padlock bolt
- 1 Galvanized mild steel heavy duty drop bolt
- 3 Galvanized mild steel heavy duty hinges as supplied by gate manufacturer
- Padlock by Client

GLAZING:

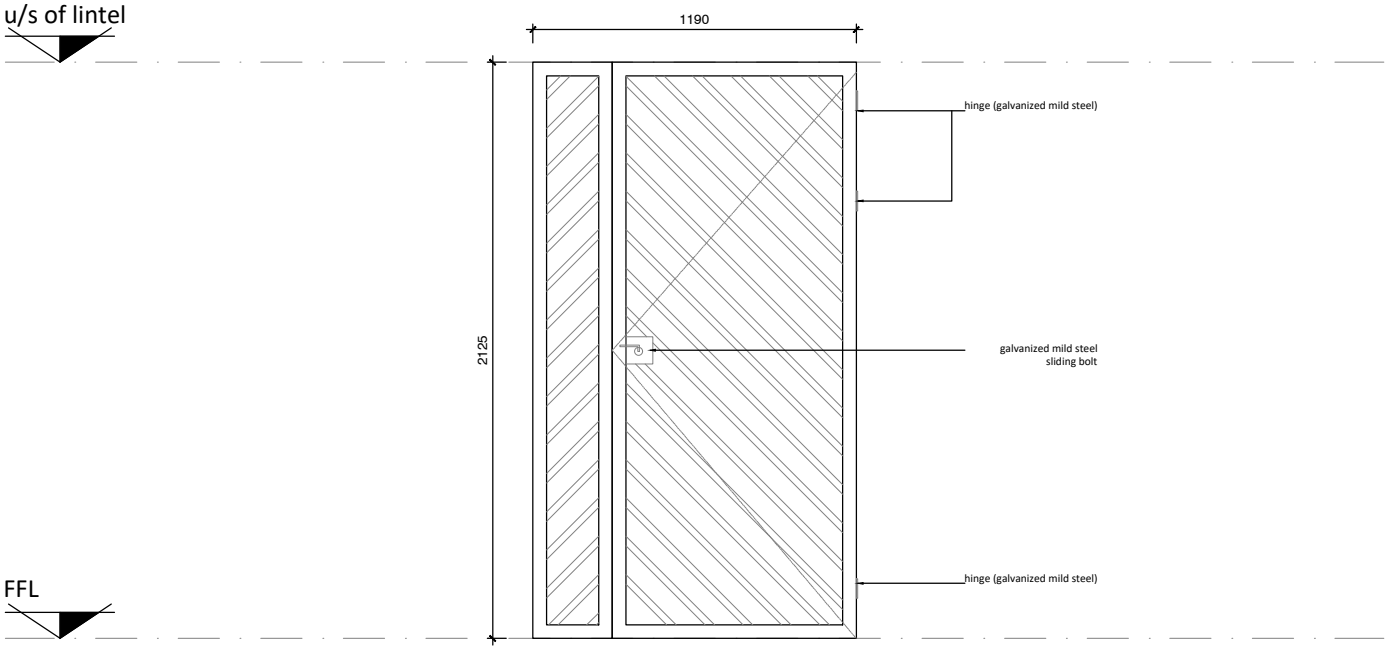
- Not Applicable

MDA ARCHITECTS	Drawing Number:	Revision:
GATE SCHEDULE	MDA 290 E	

MDA ARCHITECTS

V - SHUMANE CLINIC

G03



TYPICAL ELEVATION

QUANTITY	01	LOCATION	New Sputum Booth

GATE FRAME:

- 30X30X3mm Galvanized mild steel rectangular hollow section welded to form frame
- 25mm x 25mm Galvanized mild steel square section, place diagonally in main frame placed at 100mm centers.

GATE TYPE:

- Purpose made galvanized mild steel square hollow section security gate

GATE FINISH:

- 1 coat Zinc Chromate Primer
- 2 coats gloss enamel

FRAME FINISH:

- Degrease, 1 coat Zinc Chromate Primer
- 2 coats gloss enamel

IRONMONGERY:

- 1 Galvanized mild steel heavy duty sliding bolt for padlock bolt
- 1 Galvanized mild steel heavy duty drop bolt
- 3 Galvanized mild steel heavy duty hinges as supplied by gate manufacturer
- Padlock by Client

GLAZING:

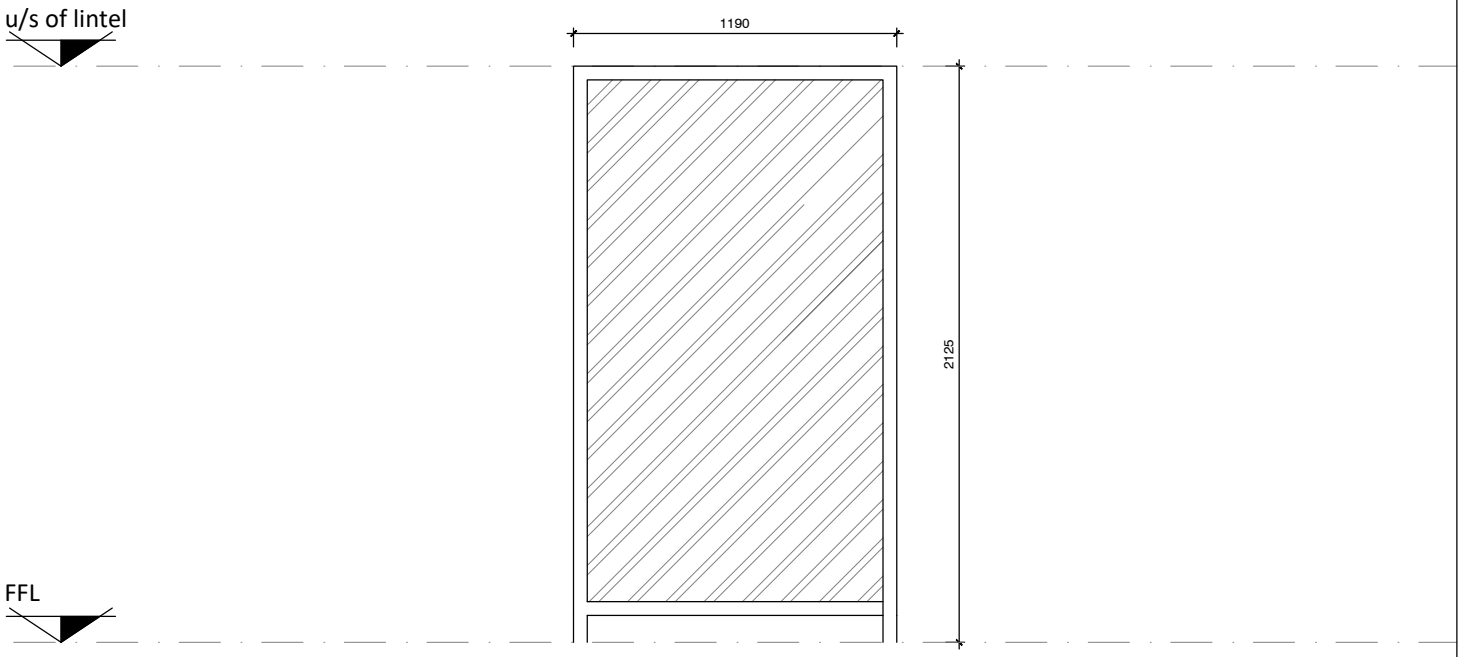
- Not Applicable

MDA ARCHITECTS	Drawing Number:	Revision:
GATE SCHEDULE	MDA 290 E	

MDA ARCHITECTS

V - SHUMANE CLINIC

SC01



TYPICAL ELEVATION

QUANTITY	01	LOCATION	New Sputum Booth

SCREEN FRAME:

- 30X30X3mm Galvanized mild steel rectangular hollow section welded to form frame
- 25mm x 25mm Galvanized mild steel square section, place diagonally in main frame placed at 100mm centers.

SCREEN TYPE:

- Purpose made galvanized mild steel square hollow section security gate

SCREEN FINISH:

- Galv. mild steel

FRAME FINISH:

- Galv. mild steel

IRONMONGERY:

- N/A

GLAZING:

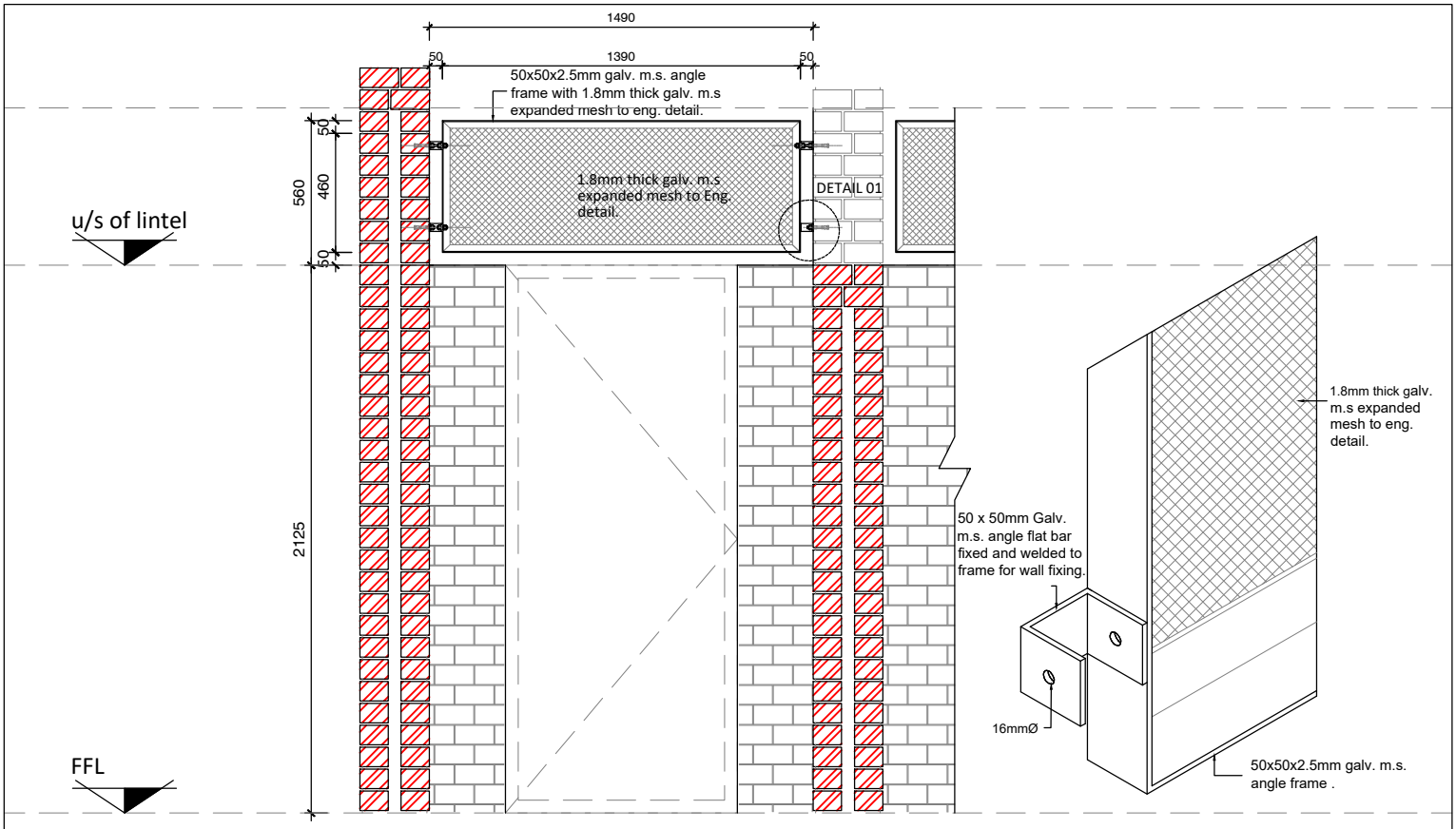
- Not Applicable

MDA ARCHITECTS	Drawing Number:	Revision:
SCREEN SCHEDULE	MDA 290 E	

MDA ARCHITECTS

V - SHUMANE CLINIC

SC02



TYPICAL ELEVATION

DETAIL 01: ISO-METRIC

QUANTITY	04	LOCATION	New Refuse Room

SCREEN FRAME:

- 50x50x2.5mm galv. mild steel angle frame.
- 1.8mm thick galv. m.s expanded mesh to Eng. detail.

SCREEN TYPE:

- 1.8mm thick galv. m.s expanded mesh to Eng. detail.

SCREEN FINISH:

- Galv. m.s expanded mesh.

FRAME FINISH:

- Galv. mild steel

IRONMONGERY:

- N/A

GLAZING:

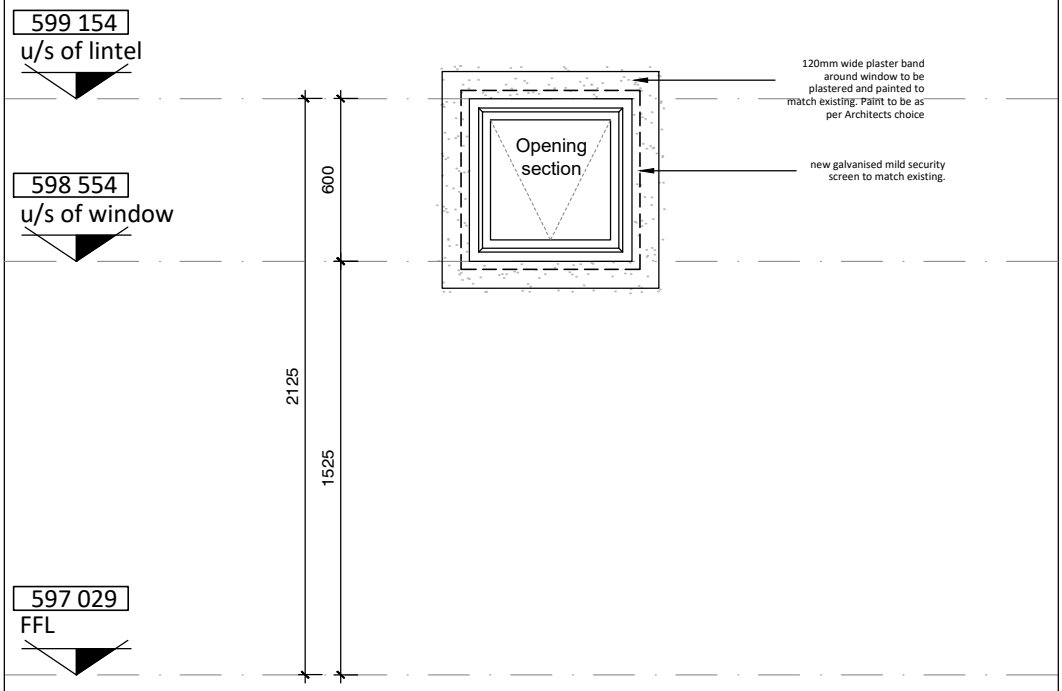
- Not Applicable

MDA ARCHITECTS SCREEN SCHEDULE	Drawing Number: MDA 290 E	Revision:

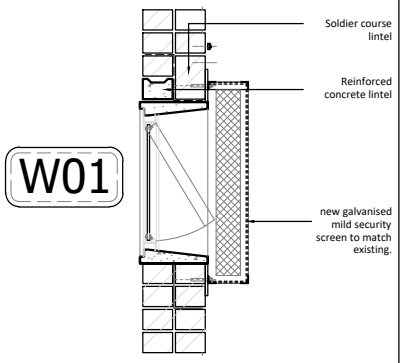
MDA ARCHITECTS

V - SHUMANE CLINIC

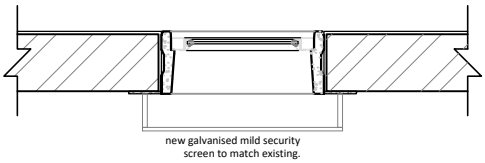
W01



TYPICAL ELEVATION



TYPICAL SECTION



TYPICAL PLAN VIEW

QUANTITY	01	LOCATION	New StaFF Ablution

FRAME FINISH:

- Off shutter concrete winblocks
- Painted with 1x coat of plaster primer and 2x Micatex

WINDOW TYPE:

- Natural Anodized aluminum extrusions by specialist
- x1 fixed section and x1 void below

IRONMONGERY:

- Brass Latch as per specialist

GLAZING:

- 6.38mm HPR Laminated safety glass

NOTE:

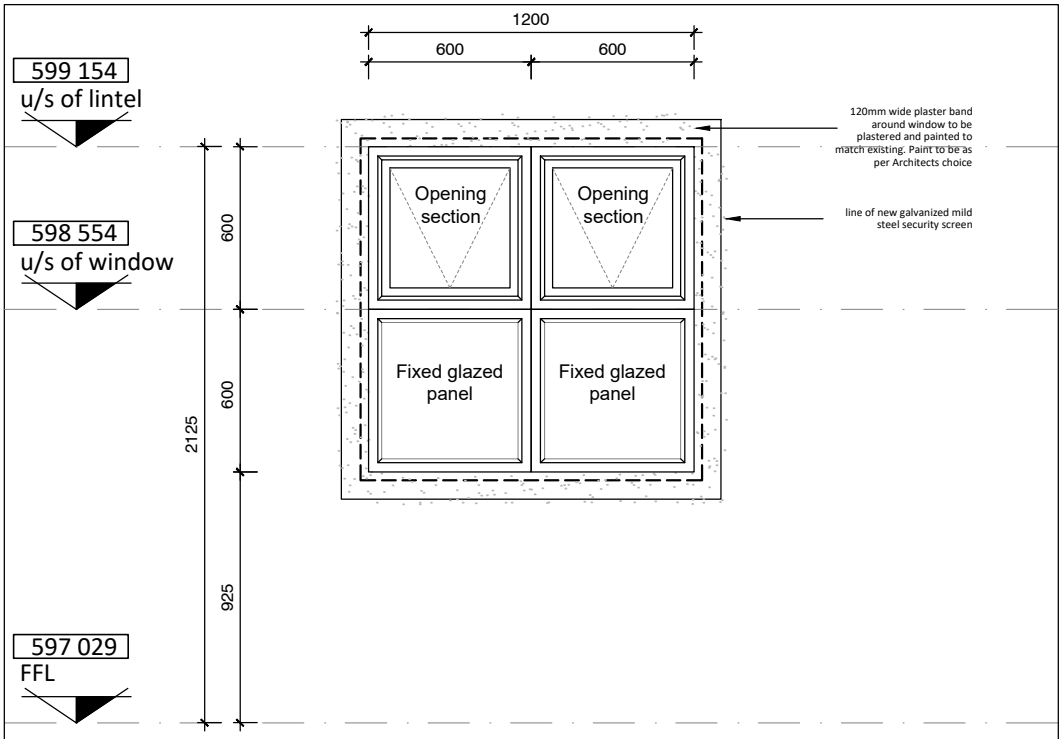
Glazing specialist to take on site measurements prior to manufacture. No scaling to be done from schedule drawings.

MDA ARCHITECTS	Drawing Number:	Revision:
WINDOW SCHEDULE	MDA 290 E	"A"- 04/04/2019

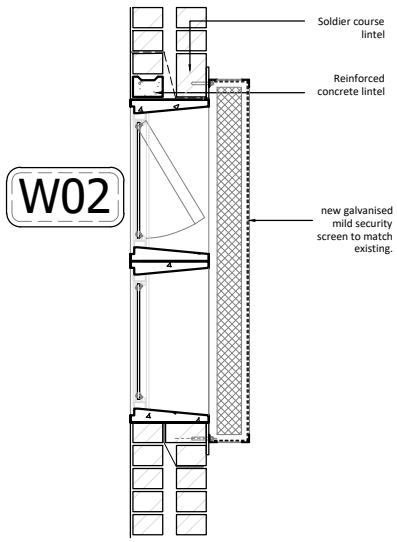
MDA ARCHITECTS

V - SHUMANE CLINIC

W02



TYPICAL ELEVATION



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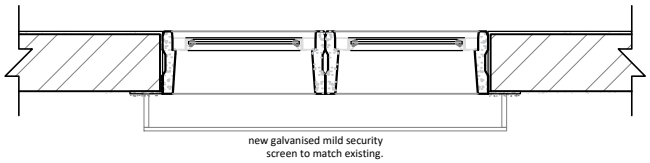


TYPICAL PLAN VIEW

QUANTITY	01	LOCATION	New Mother and Child Waiting

FRAME FINISH:

- Off shutter concrete winblocks
- Painted with 1x coat of plaster primer and 2x Micatex

WINDOW TYPE:

- Natural Anodized aluminum extrusions by specialist
- x1 fixed section and x1 void below

IRONMONGERY:

- Brass Latch as per specialist

GLAZING:

- 6.38mm HPR Laminated safety glass

NOTE:

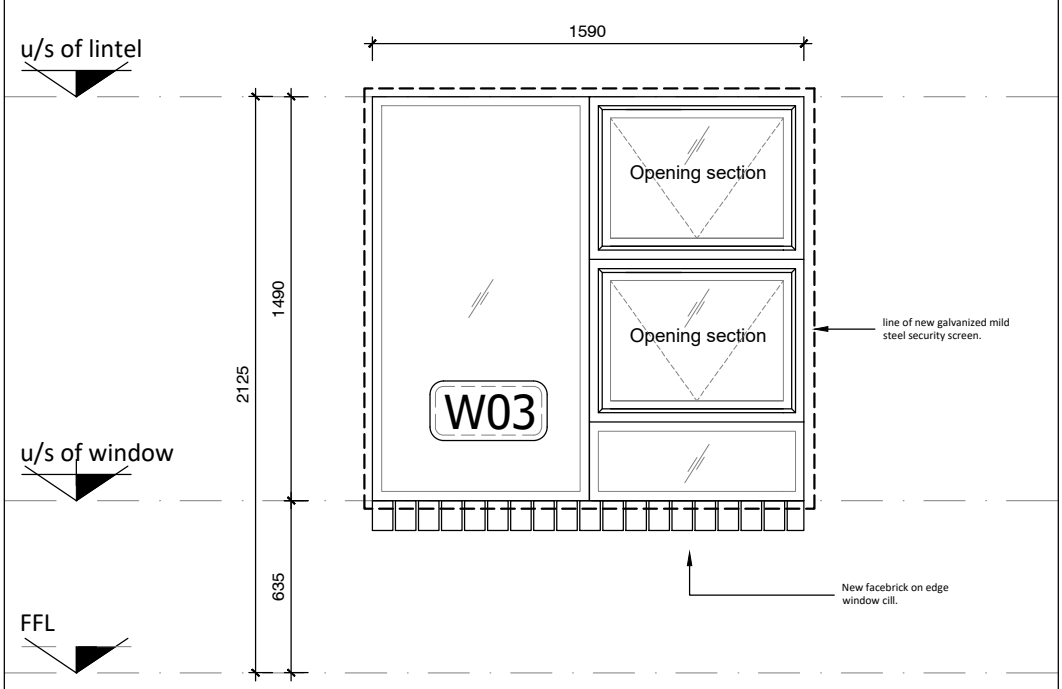
Glazing specialist to take on site measurements prior to manufacture. No scaling to be done from schedule drawings.

MDA ARCHITECTS	Drawing Number:	Revision:
WINDOW SCHEDULE	MDA 290 E	"A"- 04/04/2019

MDA ARCHITECTS

V - SHUMANE CLINIC

W03



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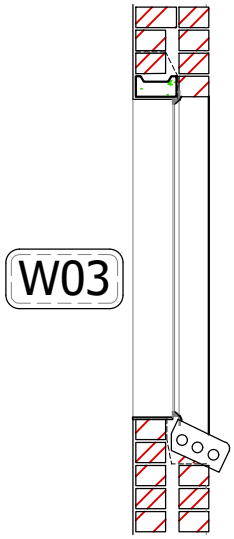

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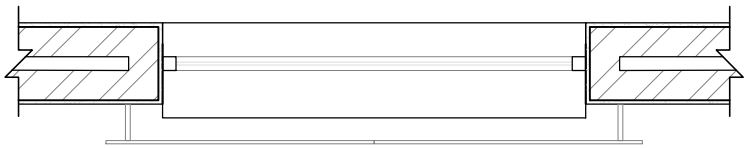


TYPICAL PLAN VIEW

QUANTITY	02	LOCATION	New Waiting Area

FRAME FINISH:

- 1 coat primer
- 1 coat approved enamel paint

WINDOW TYPE: D7

- Standard Steel D Type Residential open out windows to SANS

IRONMONGERY:

- Factory fitted burglar bars.
- Standard brass fittings.

GLAZING:

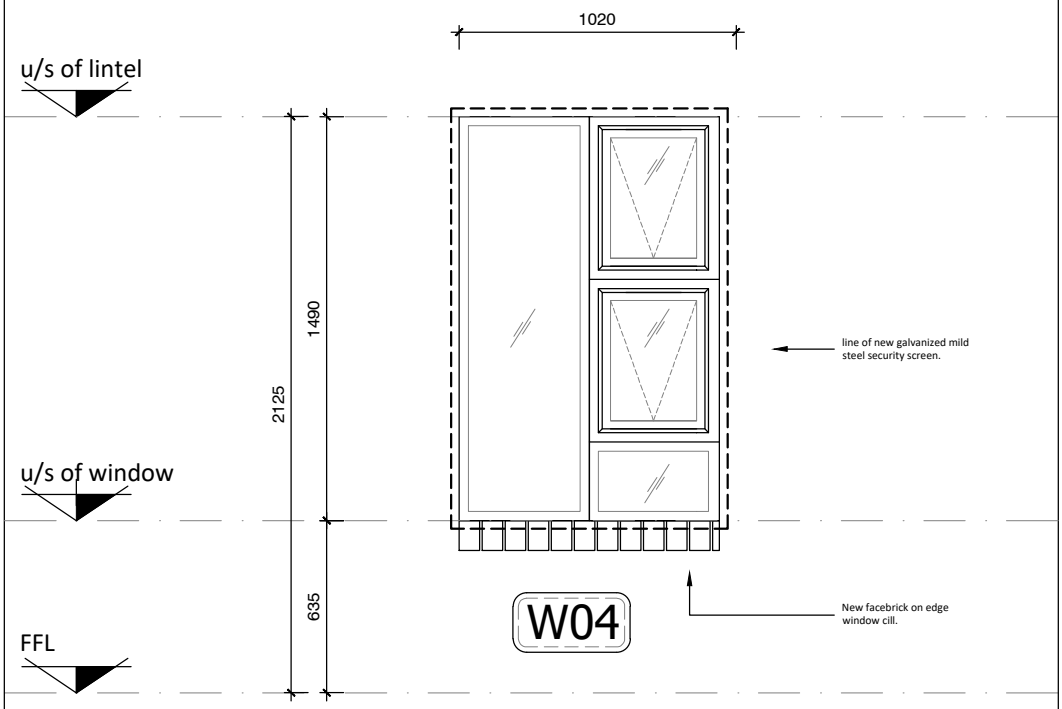
- 6.38mm HPR Laminated safety glass

MDA ARCHITECTS	Drawing Number:	Revision:
WINDOW SCHEDULE	MDA 290 D	20/05/2019

MDA ARCHITECTS

V - SHUMANE CLINIC

W04



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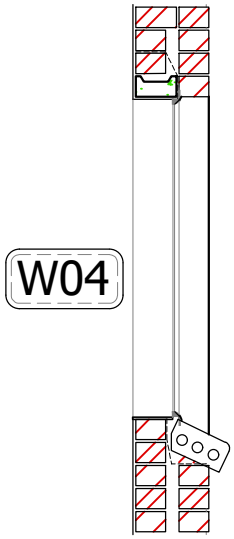

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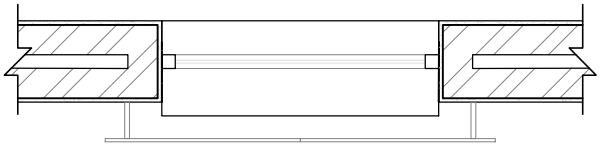


TYmPICAL PLAN VIEW

QUANTITY	02	LOCATION	Existing Waiting Area, New Dispensary

FRAME FINISH:

- 1 coat primer
- 1 coat approved enamel paint

WINDOW TYPE: D7

- Standard Steel D Type Residential open out windows to SANS

IRONMONGERY:

- Factory fitted burglar bars.
- Standard brass fittings.

GLAZING:

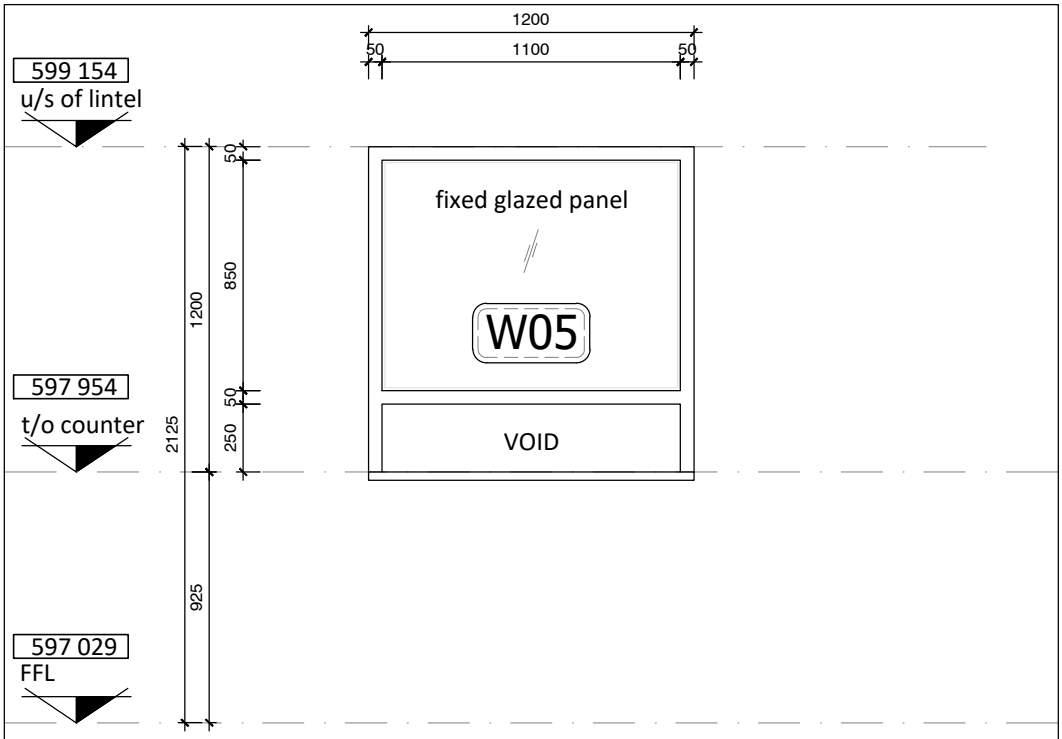
- 6.38mm HPR Laminated safety glass

MDA ARCHITECTS	Drawing Number:	Revision:
WINDOW SCHEDULE	MDA 290 D	20/05/2019

MDA ARCHITECTS

V - SHUMANE CLINIC

W05



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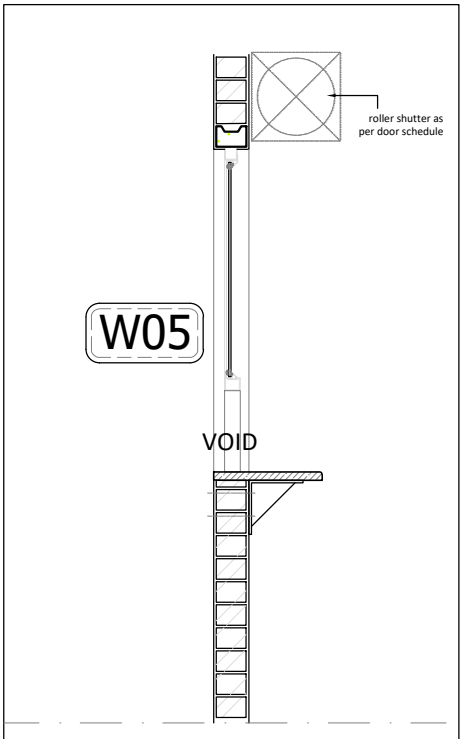

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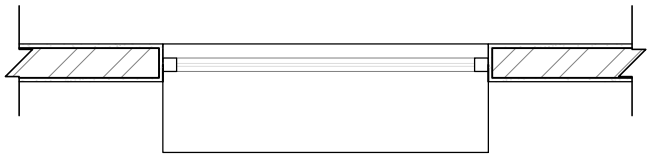


TYPICAL PLAN VIEW

QUANTITY	04	LOCATION	New Reception and New Dispensary

FRAME FINISH:

- Natural Anodized aluminum extrusions by specialist with powder coated finish

WINDOW TYPE:

- Natural Anodized aluminum extrusions by specialist with powder coated finish
- Aluminium window: x1 fixed glassed panel
  x1void below

IRONMONGERY:

- Not Applicable

GLAZING:

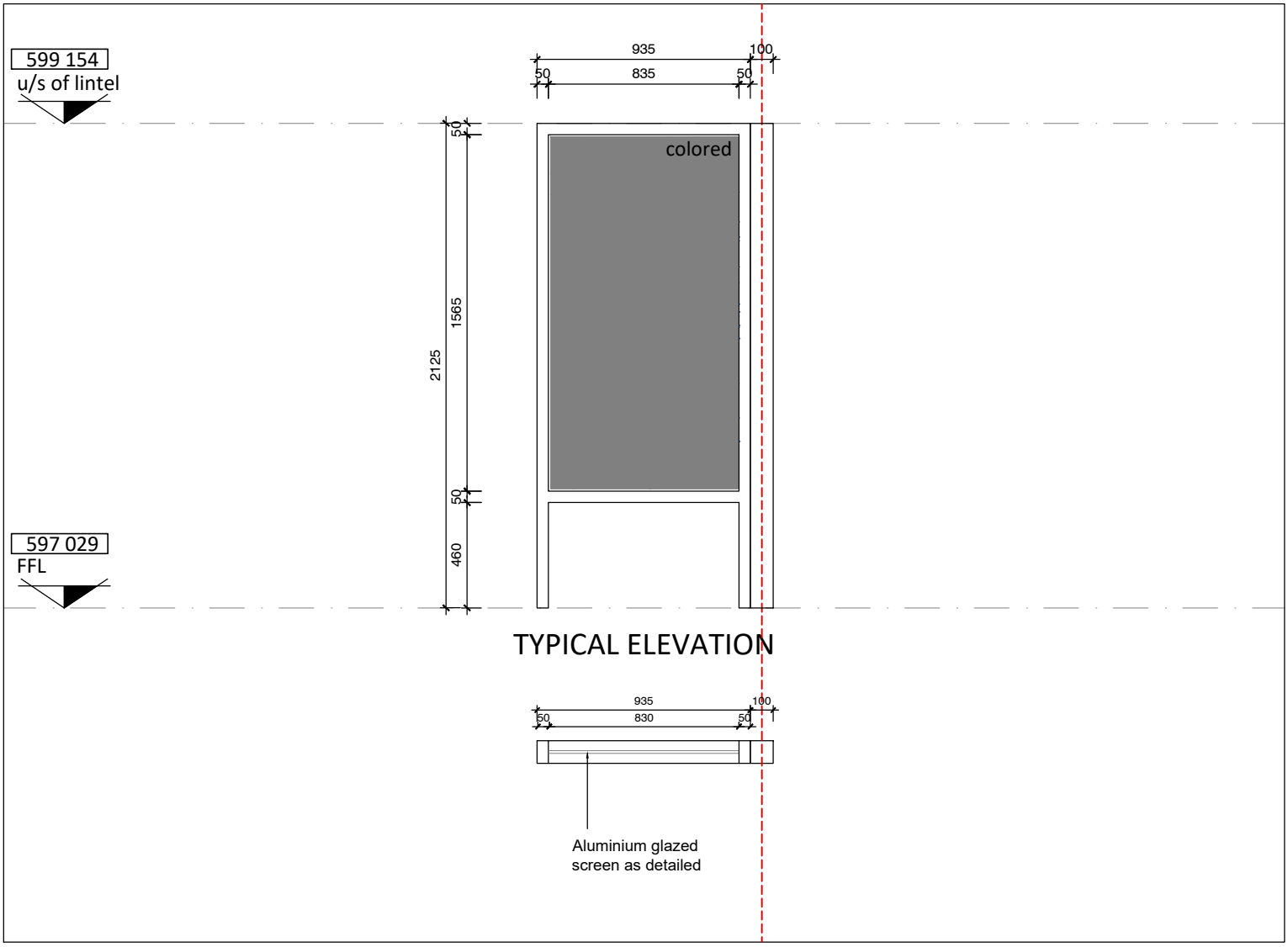
- 6.38mm HPR Laminated safety glass

NOTE:

Glazing specialist to take on site measurements prior to manufacture. No scaling to be done from schedule drawings.

MDA ARCHITECTS	Drawing Number:	Revision:
WINDOW SCHEDULE	MDA 290 E	"A"- 04/04/2019

V - SHUMANE CLINIC



TYPICAL ELEVATION

QUANTITY	01	LOCATION	New Dispensary

FRAME FINISH:
- Powder coat white extrusions with rebate by specialist: min 50mm wide
- Attached rubberized buffers at rebate

WINDOW TYPE:
- Aluminium window: x2 fixed glassed panel
  x2void below

IRONMONGERY:
- Not Applicable

GLAZING:
- Frosted 6.38mm HPR Laminated safety glass

NOTE:
Glazing specialist to take on site measurements prior to manufacture. No scaling to be done from schedule drawings.

MDA ARCHITECTS	Drawing Number:	Revision:
WINDOW SCHEDULE	MDA 290 A	"A"- 04/04/2019

FLOOR PLAN _ REFUSE YARD
scale 1:50

FLOOR PLAN _ GUARD HOUSE
scale 1:50

GENERAL NOTES:

1. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DETAILED SPECIFICATIONS.
2. DO NOT SCALE LENGTHS OF SLEEVE, CABLES ETC FROM DRAWINGS .
3. A COMPLETE SET OF DRAWINGS MUST BE AVAILABLE ON SITE AT ALL TIMES.
4. FOR WIRING CONDUCTOR SIZES, REFER TO DB SCHEMATIC DIAGRAMS.
5. CONDUITS TO BE INSTALLED IN STRAIGHT PARALLEL LINES IN CEILING VOIDS AND SADDLED AT EVERY TRUSS.
6. SEE DETAILED SPECIFICATION FOR MOUNTING HEIGHTS OF SWITCHES, SWITCH SOCKET OUTLETS, ETC.
7. NON-CORRODING DRAW WIRE / STRING TO BE INSTALLED IN ALL SPARE SLEEVES, TELEPHONE AND DATA CABLE CONDUITS AND SLEEVES.
8. DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY THEY BECOME EVIDENT.
9. ALLOW 4 X 20mmØ & 4 x 25mmØ SPARE CONDUITS FROM EACH DB TO CEILING VOIDS. (FLUSH MOUNTED DB's)
10. IF NOT MEASURED IN THE BILL OF QUANTITIES, TELEPHONE AND DATA SOCKETS SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
11. TELEPHONE AND DATA CONDUITS TO BE 25 Ø mm UNLESS INDICATED DIFFERENTLY ON DRAWINGS.
12. IF NOT INDICATED ON DRAWINGS, IN RADIO ROOMS, KITCHENS AND WORK AREA, POWER SKIRTING OR WIRING CHANNELS TO BE ABOVE WORK TOP OR 1200mm A.F.F.L.
13. CIRCUITING:
    - AC = AIR CONDITIONING
    - D = DEDICATED SSO
    - L = LIGHTING CIRCUIT
    - P = STANDARD SSO
    - XL = LIGHTING CIRCUIT ON STANDBY POWER
    - XP = STANDARD SSO ON STANDBY POWER
14. DB DUCTS TO HAVE RISING CABLE TRAYS AS FOLLOWS:
    - 1x300mm WIDE FOR TELEPHONE, DATA AND FIRE DETECTION CABLES.
    - 1x200mm WIDE FOR POWER CABLES (MINIMUM).
15. ALL SSO AND LIGHT SWITCHES TO BE LABELLED WITH CIRCUIT NUMBERS.
16. AC ISOLATORS TO BE INSTALLED ON THE RHS OF THE AC POSITIONS.

REVISIONS

REV	DATE	INIT.	DESCRIPTION
00	19/09/23	B.G	ISSUED FOR TENDER.

CLIENT

PROVINCE OF THE EASTERN CAPE DEPARTMENT OF HEALTH

Independence Avenue Dukumbana Building
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Tel: +27 (0)40 608 1114
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PROJECT

DLUKULU CLINIC

TITLE

POWER LAYOUT

ARCHITECTS

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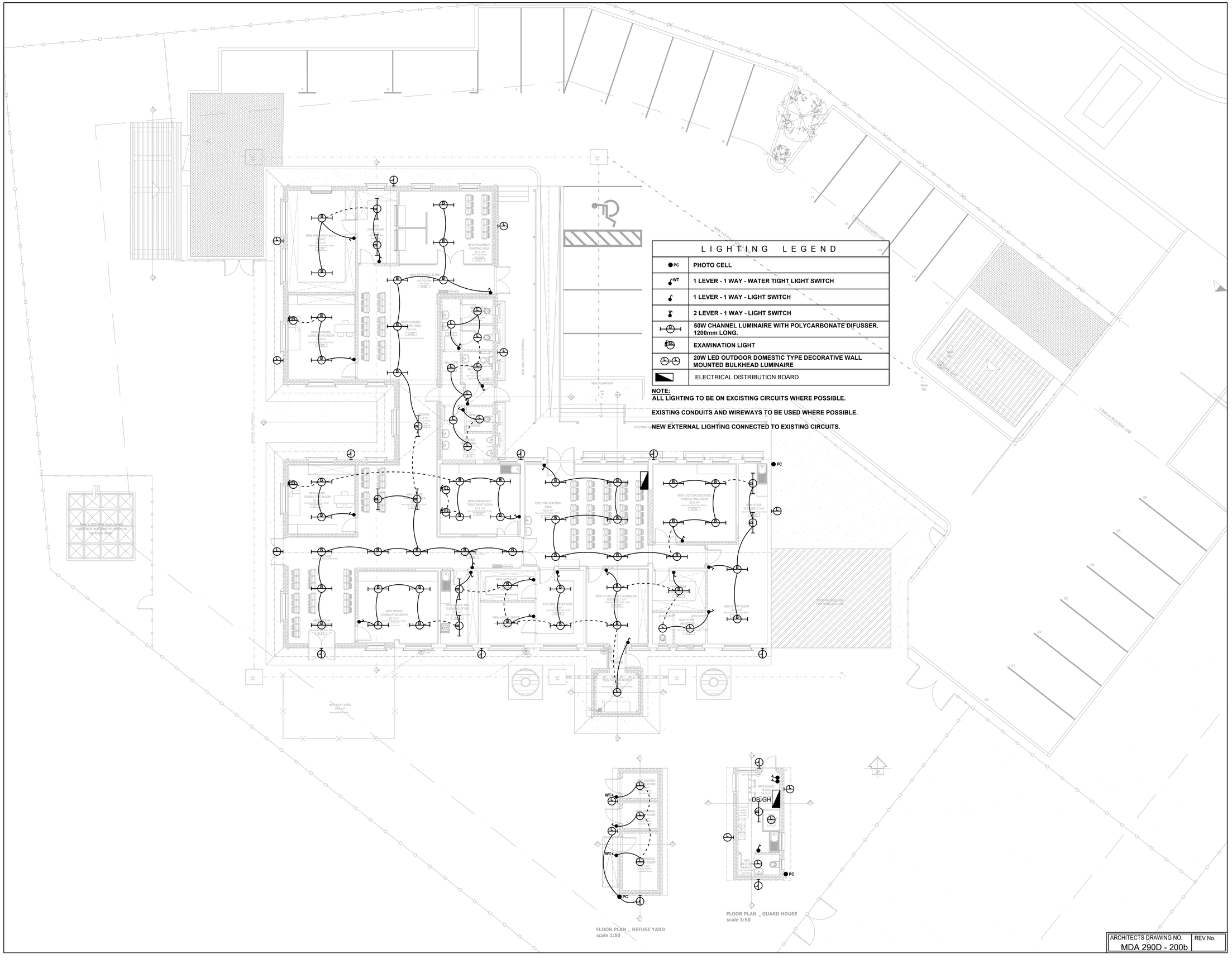
CESA
Consulting Engineers South Africa

DESIGN	TENDER	CONSTRUCTION
	✓	

DESIGNED BY: B. GEELBOOI
SCALE: 1 :100
DRAWN: B. GEELBOOI
DATE: 19/09/2023
PRINT DATE: 05/11/2023
CHECKED BY: E. CEBA
REGISTRATION No. 201930053
SIGNED.

ARCHITECTS DRAWING NO. MDA 290D - 200b
REV No.
DRAWING NO. 1710PE-T-E-102
REV No. 00



LIGHTING LEGEND	
PC	PHOTO CELL
WT	1 LEVER - 1 WAY - WATER TIGHT LIGHT SWITCH
	1 LEVER - 1 WAY - LIGHT SWITCH
	2 LEVER - 1 WAY - LIGHT SWITCH
	50W CHANNEL LUMINAIRE WITH POLYCARBONATE DIFUSSER. 1200mm LONG.
EL	EXAMINATION LIGHT
	20W LED OUTDOOR DOMESTIC TYPE DECORATIVE WALL MOUNTED BULKHEAD LUMINAIRE
	ELECTRICAL DISTRIBUTION BOARD

NOTE:
ALL LIGHTING TO BE ON EXCISTING CIRCUITS WHERE POSSIBLE.

EXISTING CONDUITS AND WIREWAYS TO BE USED WHERE POSSIBLE.

NEW EXTERNAL LIGHTING CONNECTED TO EXISTING CIRCUITS.

FLOOR PLAN _ REFUSE YARD
scale 1:50

FLOOR PLAN _ GUARD HOUSE
scale 1:50

GENERAL NOTES:

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10. IF NOT MEASURED IN THE BILL OF QUANTITIES, TELEPHONE AND DATA SOCKETS SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
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    - D = DEDICATED SSO
    - L = LIGHTING CIRCUIT
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REVISIONS

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CLIENT

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PROJECT

DLUKULU CLINIC

TITLE

LIGHTING LAYOUT

ARCHITECTS

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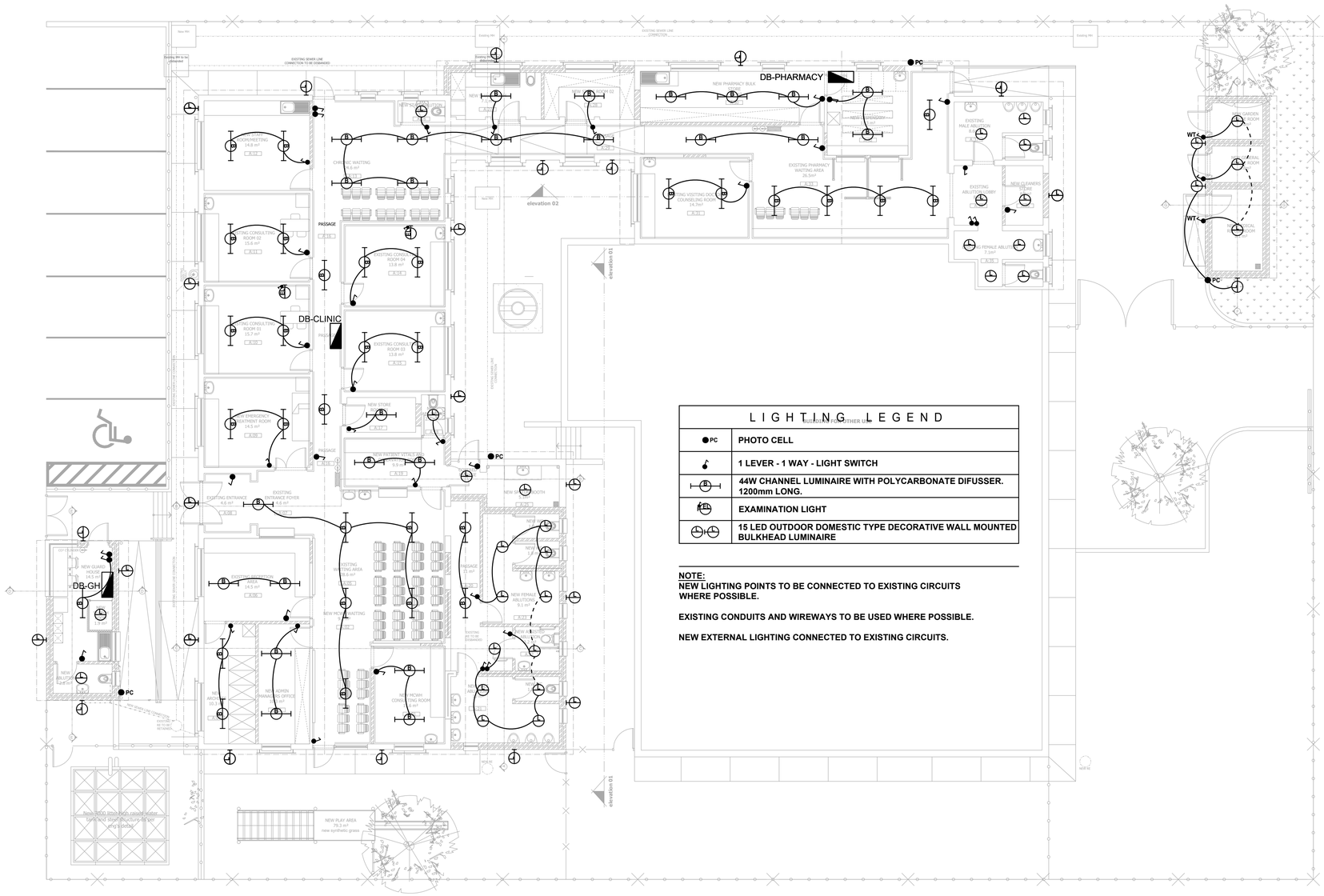
CESA
Consulting Engineers South Africa

DESIGN	TENDER	CONSTRUCTION
	✓	

DESIGNED BY: B. GEELBOOI
SCALE: 1 :100
DRAWN: B. GEELBOOI
DATE: 19/09/2023
PRINT DATE: 05/11/2023
CHECKED BY: E. CEBA
REGISTRATION No. 201930053
SIGNED.

ARCHITECTS DRAWING NO.: MDA 290D - 200b
REV No.:
DRAWING NO.: 1710PE-T-E-101
REV No.: 00



LIGHTING LEGEND	
PC	PHOTO CELL
	1 LEVER - 1 WAY - LIGHT SWITCH
B	44W CHANNEL LUMINAIRE WITH POLYCARBONATE DIFUSSER. 1200mm LONG.
EL	EXAMINATION LIGHT
	15 LED OUTDOOR DOMESTIC TYPE DECORATIVE WALL MOUNTED BULKHEAD LUMINAIRE

NOTE:
NEW LIGHTING POINTS TO BE CONNECTED TO EXISTING CIRCUITS WHERE POSSIBLE.

EXISTING CONDUITS AND WIREWAYS TO BE USED WHERE POSSIBLE.

NEW EXTERNAL LIGHTING CONNECTED TO EXISTING CIRCUITS.

GENERAL NOTES:

1. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DETAILED SPECIFICATIONS.
2. DO NOT SCALE LENGTHS OF SLEEVE, CABLES ETC FROM DRAWINGS .
3. A COMPLETE SET OF DRAWINGS MUST BE AVAILABLE ON SITE AT ALL TIMES.
4. FOR WIRING CONDUCTOR SIZES, REFER TO DB SCHEMATIC DIAGRAMS.
5. CONDUITS TO BE INSTALLED IN STRAIGHT PARALLEL LINES IN CEILING VOIDS AND SADDLED AT EVERY TRUSS.
6. SEE DETAILED SPECIFICATION FOR MOUNTING HEIGHTS OF SWITCHES, SWITCH SOCKET OUTLETS, ETC.
7. NON-CORRODING DRAW WIRE / STRING TO BE INSTALLED IN ALL SPARE SLEEVES, TELEPHONE AND DATA CABLE CONDUITS AND SLEEVES.
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12. IF NOT INDICATED ON DRAWINGS, IN RADIO ROOMS, KITCHENS AND WORK AREA, POWER SKIRTING OR WIRING CHANNELS TO BE ABOVE WORK TOP OR 1200mm A.F.F.L.
13. CIRCUITING:
    - AC = AIR CONDITIONING
    - D = DEDICATED SSO
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    - P = STANDARD SSO
    - XL = LIGHTING CIRCUIT ON STANDBY POWER
    - XP = STANDARD SSO ON STANDBY POWER
14. DB DUCTS TO HAVE RISING CABLE TRAYS AS FOLLOWS:
    - 1x300mm WIDE FOR TELEPHONE, DATA AND FIRE DETECTION CABLES.
    - 1x200mm WIDE FOR POWER CABLES (MINIMUM).
15. ALL SSO AND LIGHT SWITCHES TO BE LABELLED WITH CIRCUIT NUMBERS.
16. AC ISOLATORS TO BE INSTALLED ON THE RHS OF THE AC POSITIONS.

REVISIONS

REV	DATE	INIT.	DESCRIPTION
00	19/09/23	B.G	ISSUED FOR TENDER.

CLIENT

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PROJECT

MIDDLE TERRACE CLINIC

TITLE

LIGHTING LAYOUT

ARCHITECTS

MDA ARCHITECTS
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DESIGN	TENDER	CONSTRUCTION
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DRAWN: B. GEELBOOI	DATE: 19/09/2023	PRINT DATE: 05/11/2023
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REGISTRATION No.: 201930053		
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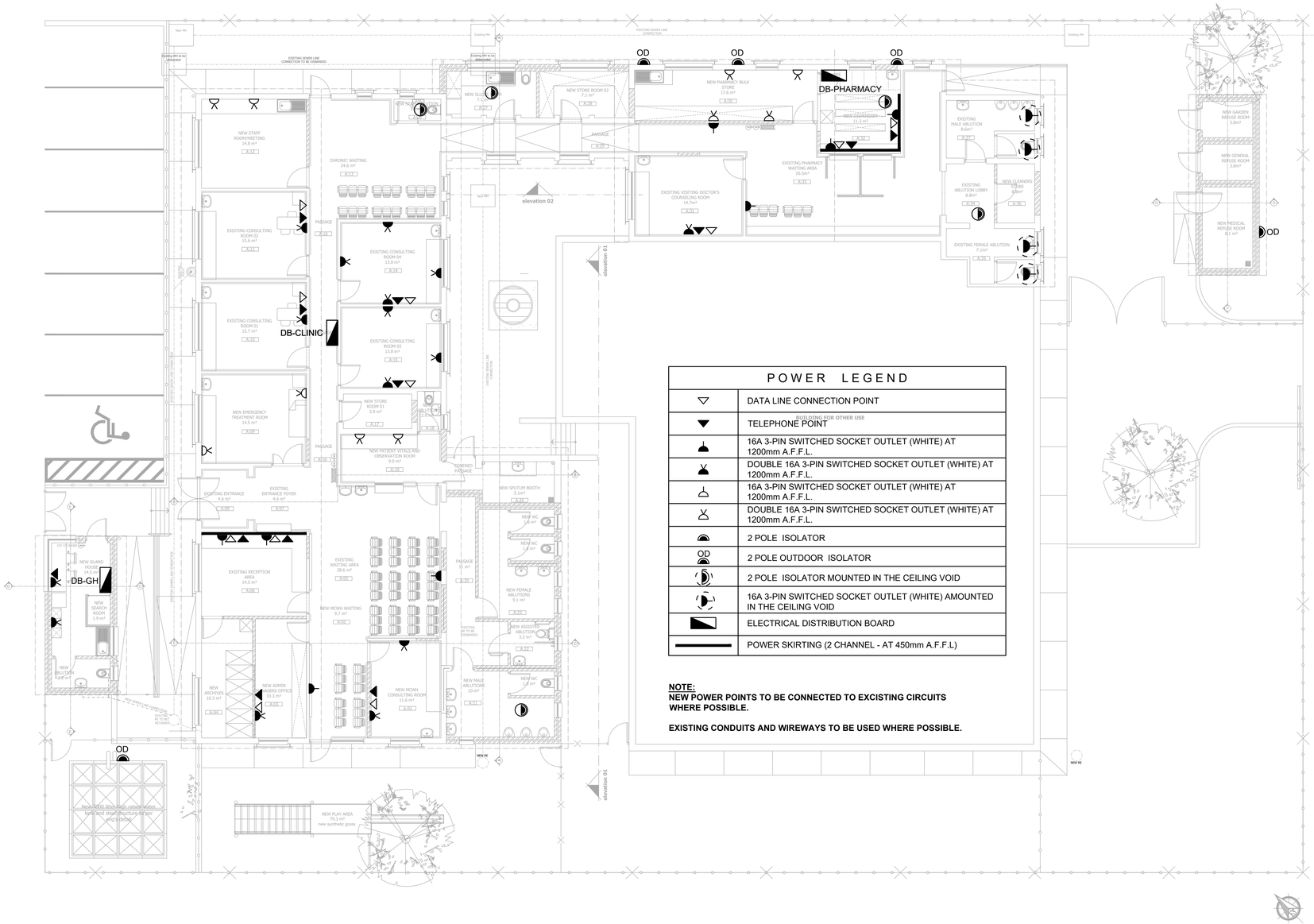
ARCHITECTS DRAWING NO.	REV No.
MDA 290D - 200b	

DRAWING NO.	REV No.
1710PE-T-E-101	00



POWER LEGEND

▽	DATA LINE CONNECTION POINT
▼	TELEPHONE POINT
	16A 3-PIN SWITCHED SOCKET OUTLET (WHITE) AT 1200mm A.F.F.L.
	DOUBLE 16A 3-PIN SWITCHED SOCKET OUTLET (WHITE) AT 1200mm A.F.F.L.
	16A 3-PIN SWITCHED SOCKET OUTLET (WHITE) AT 1200mm A.F.F.L.
	DOUBLE 16A 3-PIN SWITCHED SOCKET OUTLET (WHITE) AT 1200mm A.F.F.L.
	2 POLE ISOLATOR
OD	2 POLE OUTDOOR ISOLATOR
	2 POLE ISOLATOR MOUNTED IN THE CEILING VOID
	16A 3-PIN SWITCHED SOCKET OUTLET (WHITE) AMOUNTED IN THE CEILING VOID
	ELECTRICAL DISTRIBUTION BOARD
	POWER SKIRTING (2 CHANNEL - AT 450mm A.F.F.L)

NOTE:
NEW POWER POINTS TO BE CONNECTED TO EXCISTING CIRCUITS WHERE POSSIBLE.

EXISTING CONDUITS AND WIREWAYS TO BE USED WHERE POSSIBLE.

GENERAL NOTES:

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REVISIONS

REV	DATE	INIT.	DESCRIPTION
00	19/09/23	B.G	ISSUED FOR TENDER.

CLIENT

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PROJECT

MIDDLE TERRACE CLINIC

TITLE

POWER LAYOUT

ARCHITECTS

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CESA
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DESIGN	TENDER	CONSTRUCTION
	✓	

DESIGNED BY: B. GEELBOOI		SCALE 1 :100
DRAWN B. GEELBOOI	DATE 19/09/2023	PRINT DATE 05/11/2023
CHECKED BY: E. CEBA		
REGISTRATION No. 201930053		
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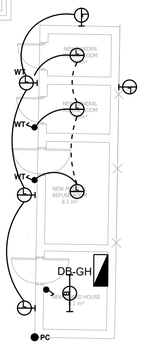
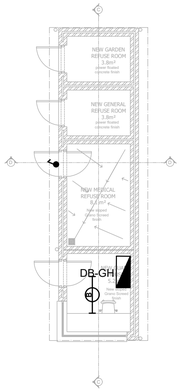
ARCHITECTS DRAWING NO.	REV No.
MDA 290D - 200b	

DRAWING NO.	REV No.
1710PE-T-E-102	00





FLOOR PLAN _ REFUSE YARD
scale 1:50

L I G H T I N G L E G E N D	
PC	PHOTO CELL
	1 LEVER - 1 WAY - LIGHT SWITCH
WT	1 LEVER - 1 WAY - WATER TIGHT LIGHT SWITCH
	2 LEVER - 1 WAY - LIGHT SWITCH
2	1 LEVER - 2 WAY - LIGHT SWITCH
	44W CHANNEL LUMINAIRE WITH POLYCARBONATE DIFUSSER. 1200mm LONG.
	20W LED OUTDOOR DOMESTIC TYPE DECORATIVE WALL MOUNTED BULKHEAD LUMINAIRE

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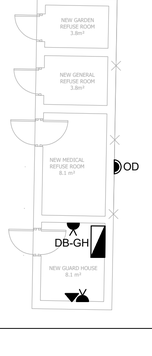

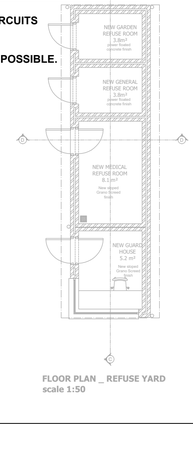

FLOOR PLAN _ REFUSE YARD
scale 1:50

P O W E R L E G E N D	
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▼	TELEPHONE POINT
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REV	DATE	INIT.	DESCRIPTION
00	19/09/23	B.G	ISSUED FOR TENDER.

CLIENT

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Independence Avenue Dukumbana Building
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SOUTH AFRICA
Private Bag X0038, BHISHO, 5605
Tel: +27 (0)40 608 1114
www.echealth.gov.za

PROJECT

V-SHUMANE CLINIC

TITLE

LIGHTING & POWER LAYOUT

ARCHITECTS

MDA ARCHITECTS
18 Park Lane Central Port Elizabeth 6001
PO Box 6213 Walmer Port Elizabeth 6065
Reg: 2006/062001/23
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DESIGN	TENDER	CONSTRUCTION
	✓	

DESIGNED BY: B. GEELBOOI
SCALE: 1 :100
DRAWN: B. GEELBOOI
DATE: 19/09/2023
PRINT DATE: 05/11/2023
CHECKED BY: E. CEBA
REGISTRATION No. 201930053
SIGNED.

ARCHITECTS DRAWING NO. MDA 290E - 201s
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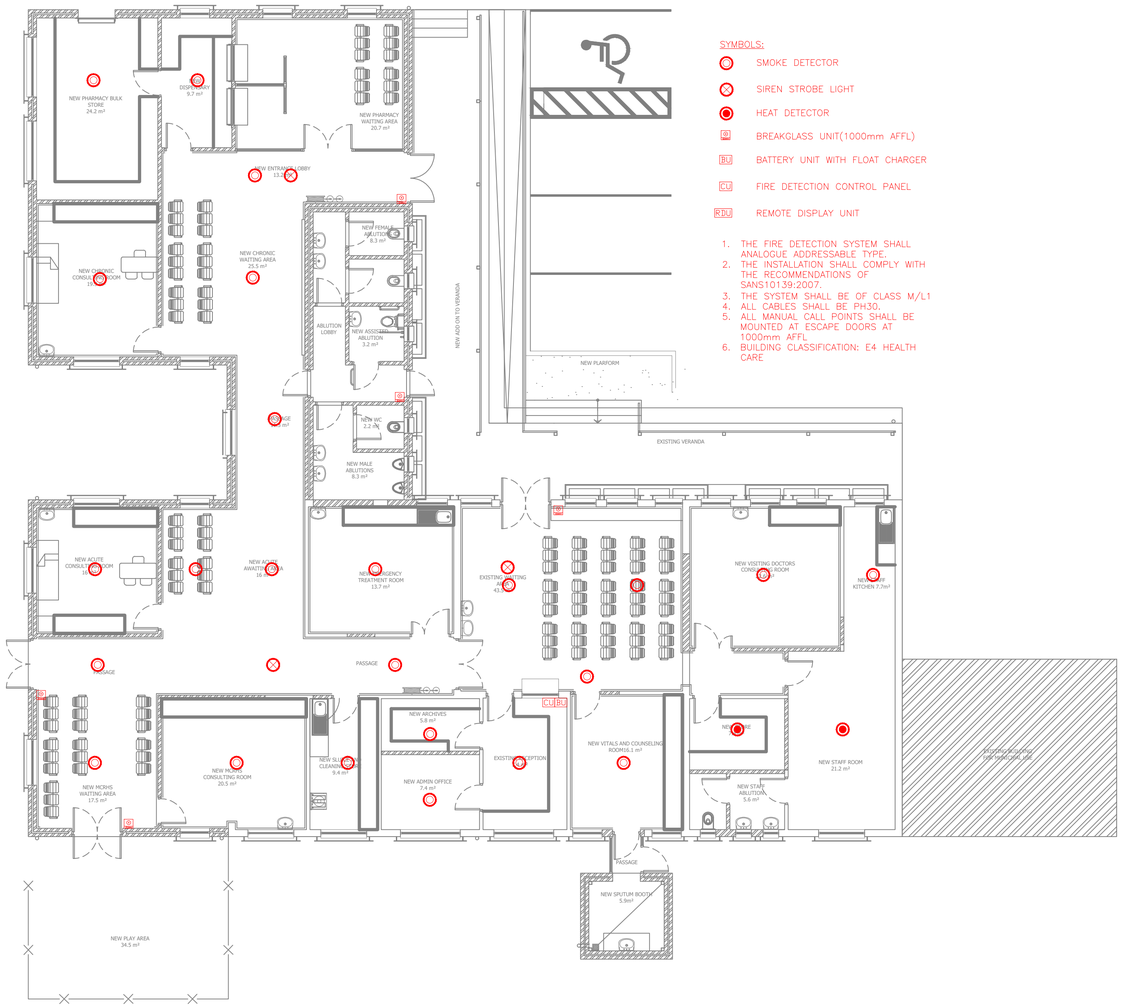

SYMBOLS:

- SMOKE DETECTOR
- SIREN STROBE LIGHT
- HEAT DETECTOR
- BG — BREAKGLASS UNIT(1000mm AFFL)
- BU — BATTERY UNIT WITH FLOAT CHARGER
- CU — FIRE DETECTION CONTROL PANEL
- RDU — REMOTE DISPLAY UNIT

1. THE FIRE DETECTION SYSTEM SHALL ANALOGUE ADDRESSABLE TYPE.
2. THE INSTALLATION SHALL COMPLY WITH THE RECOMMENDATIONS OF SANS10139:2007.
3. THE SYSTEM SHALL BE OF CLASS M/L1
4. ALL CABLES SHALL BE PH30.
5. ALL MANUAL CALL POINTS SHALL BE MOUNTED AT ESCAPE DOORS AT 1000mm AFFL.
6. BUILDING CLASSIFICATION: E4 HEALTH CARE

FOR INFORMATION

No	AMENDMENTS	DATE

SURVEYED		
DRAWN	MB.MALITI	03-11-2023
DESIGNED	MB.MALITI	03-11-2023
CHECKED	J. DUVENHAGE	03-11-2023
APPROVED	PR REGISTRATION NO.200970291	DATE

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LUKHOZI

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SAKHIWO MAINTAINANCE CONSORTIUM

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PROJECT TITLE

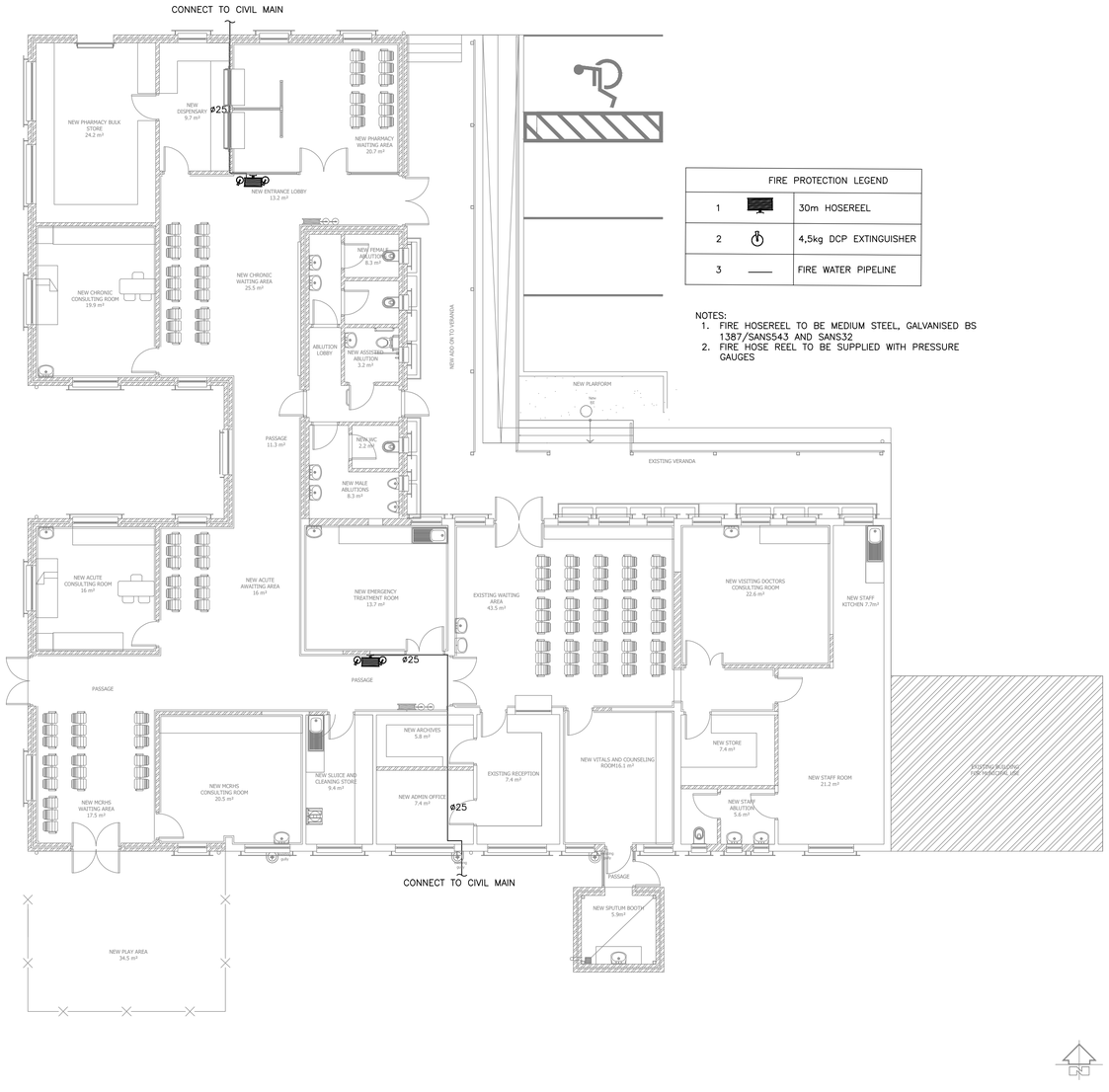
SARAH BAARTMAN DISTRICT
NG DLUKULU CLINIC

DRAWING TITLE

GROUND FLOOR
FIRE DETECTION
LAYOUT

SCALE	SHEET SET	SHEET SIZE
1 : 50	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-76-FD-01	P0



FIRE PROTECTION LEGEND		
1		30m HOSEREEL
2		4,5kg DCP EXTINGUISHER
3	——	FIRE WATER PIPELINE

NOTES:
1. FIRE HOSEREEL TO BE MEDIUM STEEL, GALVANISED BS 1387/SANS543 AND SANS32
2. FIRE HOSE REEL TO BE SUPPLIED WITH PRESSURE GAUGES

NOTES:
1. SABS APPROVED 4,5kg DRY POWDER FIRE EXTINGUISHER
2. SABS APPROVED 30m FIRE HOSE REEL WITH WATER SUPPLY
3. REFERENCE TO MDA 290D-200b OF ARCHITECTURAL DRAWINGS

No	AMENDMENTS	DATE
1	ISSUED FOR CONSTRUCTION	OCT-2023
0	ISSUED FOR CONSTRUCTION	FEB-2019

DRAWN	N.MJOLI	JAN-2018
DESIGNED	N.MJOLI	JAN-2018
CHECKED	MB.MALITI	JAN-2018
APPROVED	PR REGISTRATION NO.200970291	DATE

LUKHOZI

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FAX: (043)7211330

E-MAIL: el@lukhozi.co.za

PRINCIPAL AGENT

C:\Users\LUKHOZI\OneDrive\Desktop\Sakhiwo Health Solutions\L\17. Logos\Sakhiwo Health Solutions.JPG

CLIENT

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DEPARTMENT OF HEALTH

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PROJECT TITLE

NG DLUKULU CLINIC

DRAWING TITLE

GROUND FLOOR - FIRE PROTECTION LAYOUT

SCALE	SHEET SET	SHEET SIZE
1:100	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-76-FP-01	1

FOR CONSTRUCTION

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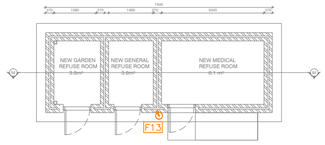

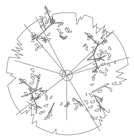

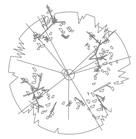

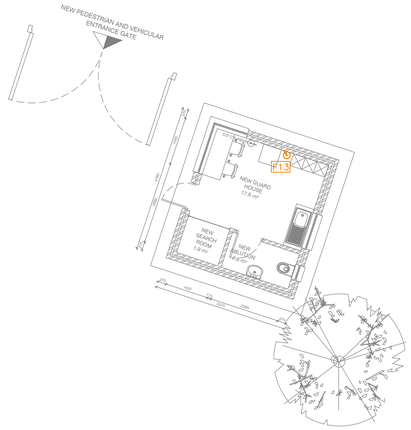

GENERAL NOTES

4.5kg CO2 FIRE EXTINGUISHER

HOSEREEL

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO.MDA 290D-201

No	AMENDMENTS	DATE
0	ISSUED FOR CONSTRUCTION	FEB 2019

DRAWN	MB. MALITI	17-07-2017
DESIGNED	MB. MALITI	17-07-2017
CHECKED	C. ALBRECHT	17-07-2017
APPROVED	PR REGISTRATION NO. 200970291	DATE

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PROJECT TITLE

SARAH BAARTMAN DISTRICT : NG DLUKULU CLINIC

DRAWING TITLE

GROUND FLOOR LAYOUT FIRE PLAN

SCALE	SHEET SET	SHEET SIZE
1 : 50	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-76-FP-02	0

FOR CONSTRUCTION

P:\PE\1574_76_SB\07 - NG Dlukulu Clinic\PE Data\04 Design\12 Mechanical\20231013\1574-76-FP-002 Rev1.dwg

FOR CONSTRUCTION

No	AMENDMENTS	DATE
1	ISSUED FOR CONSTRUCTION	NOV 2023
0	ISSUED FOR CONSTRUCTION	FEB 2019

SURVEYED		
DRAWN	N.MJOLI	JAN 2018
DESIGNED	N.MJOLI	JAN 2018
CHECKED	MB.MALITI	JAN 2018
APPROVED	PR REGISTRATION NO.200970291	DATE

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PROJECT TITLE

NG DLUKULU CLINIC

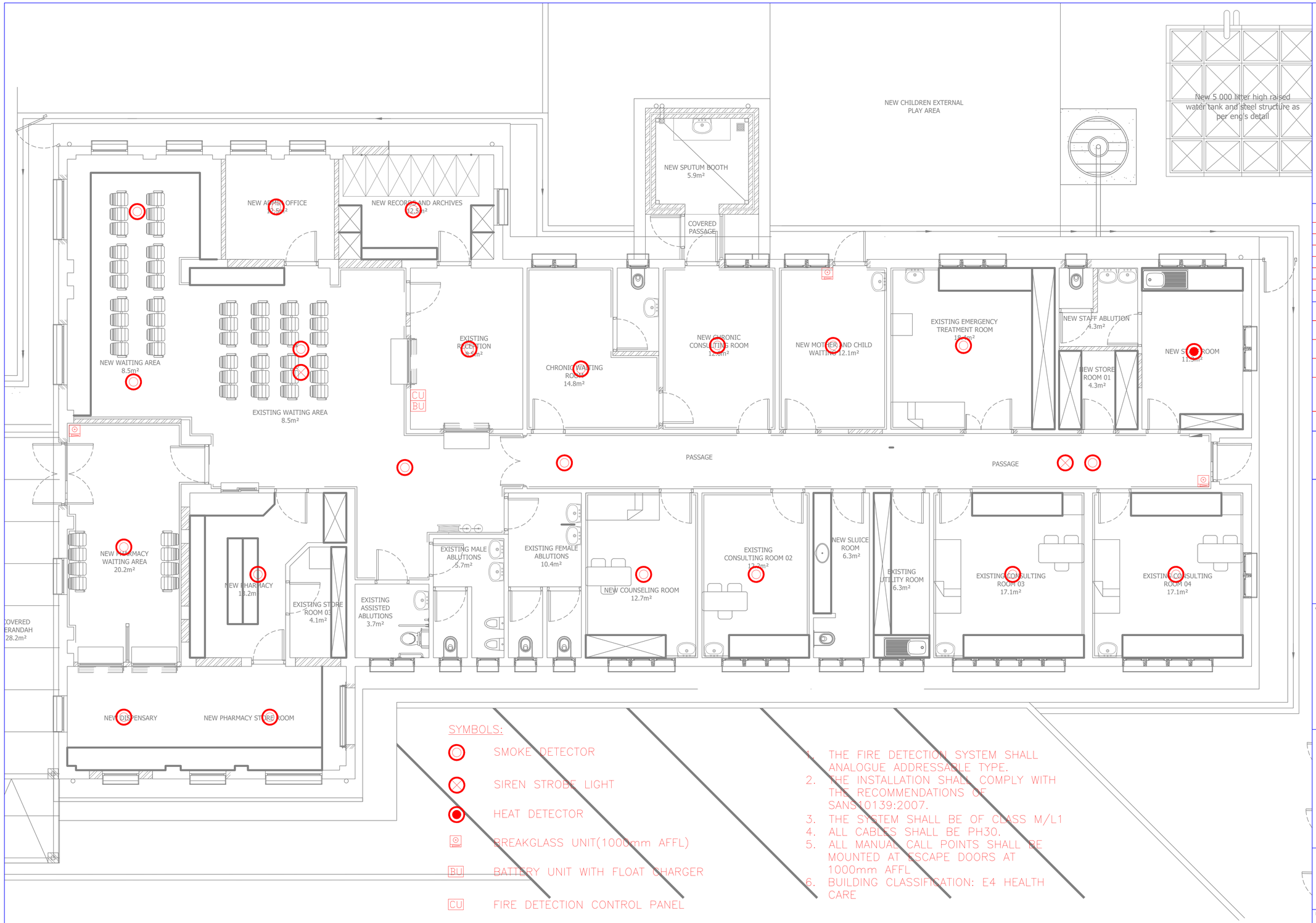
DRAWING TITLE

GROUND FLOOR VENTILATION LAYOUT

SCALE	SHEET SET	SHEET SIZE
1 : 100	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-76-V-001	1

P:\PE\1574_76_SB007 - NG Dlukulu Clinic\PE Data\04 Design\12 Mechanical\2023\10\31\1574-76-V-001 Rev1.dwg



SYMBOLS:

- SMOKE DETECTOR
- SIREN STROBE LIGHT
- HEAT DETECTOR
- BREAKGLASS UNIT(1000mm AFFL)
- BU — BATTERY UNIT WITH FLOAT CHARGER
- CU — FIRE DETECTION CONTROL PANEL
- RDU — REMOTE DISPLAY UNIT

1. THE FIRE DETECTION SYSTEM SHALL ANALOGUE ADDRESSABLE TYPE.
2. THE INSTALLATION SHALL COMPLY WITH THE RECOMMENDATIONS OF SANS10139:2007.
3. THE SYSTEM SHALL BE OF CLASS M/L1
4. ALL CABLES SHALL BE PH30.
5. ALL MANUAL CALL POINTS SHALL BE MOUNTED AT ESCAPE DOORS AT 1000mm AFFL
6. BUILDING CLASSIFICATION: E4 HEALTH CARE

FOR INFORMATION

No	AMENDMENTS	DATE

SURVEYED		
DRAWN	MB MALITI	03 NOV 2023
DESIGNED	MB MALITI	03 NOV 2023
CHECKED	J. DUVENHAGE	03 NOV 2023
APPROVED	PR REGISTRATION NO.200970291	DATE

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PROJECT TITLE

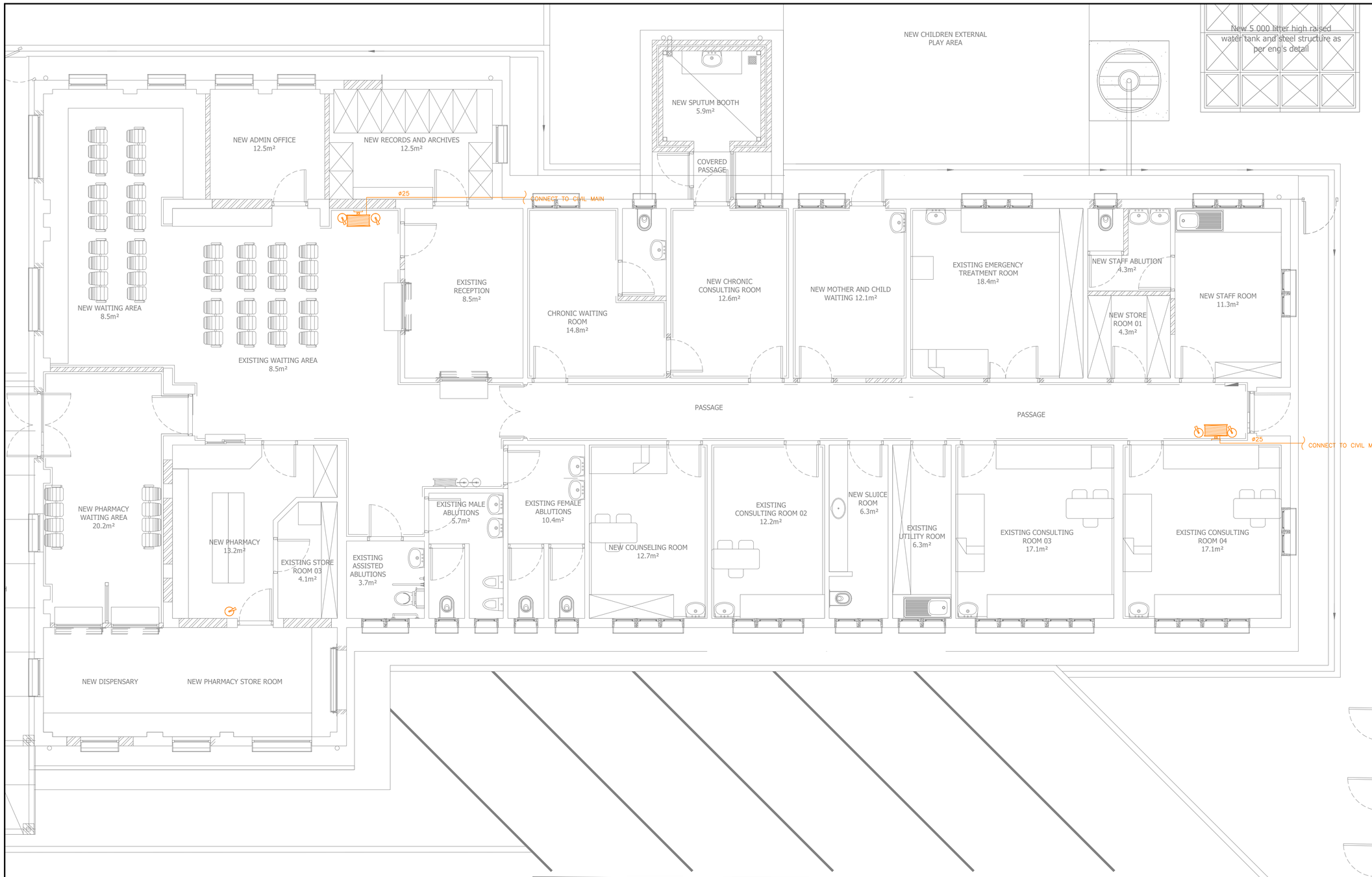
VIRGINIA SHUMANE CLINIC

DRAWING TITLE

GROUND FLOOR FIRE DETECTION LAYOUT

SCALE	SHEET SET	SHEET SIZE
1 : 50	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-77-FD-01	P1



FIRE PROTECTION LEGEND		
1		30m HOSEREEL
2		4,5kg DCP EXTINGUISHER
3		FIRE WATER PIPELINE

NOTES:
1. FIRE HOSEREEL TO BE MEDIUM STEEL, GALVANISED BS 1387/SANS543 AND SANS32
2. FIRE HOSE REEL TO BE SUPPLIED WITH PRESSURE GAUGES

NOTES:
1. SABS APPROVED 4,5kg DRY POWDER FIRE EXTINGUISHER
2. SABS APPROVED 30m FIRE HOSE REEL WITH WATER SUPPLY
3. REFERENCE TO MDA 290E-201 WD OF ARCHITECTURAL DRAWINGS

No	AMENDMENTS	DATE

SURVEYED		
DRAWN	A.MONELO	FEB 2018
DESIGNED	A.MONELO	FEB 2018
CHECKED	MB.MALITI	FEB 2018
APPROVED	PR REGISTRATION NO.200970291	DATE

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PROJECT TITLE

VIRGINIA SHUMANE CLINIC

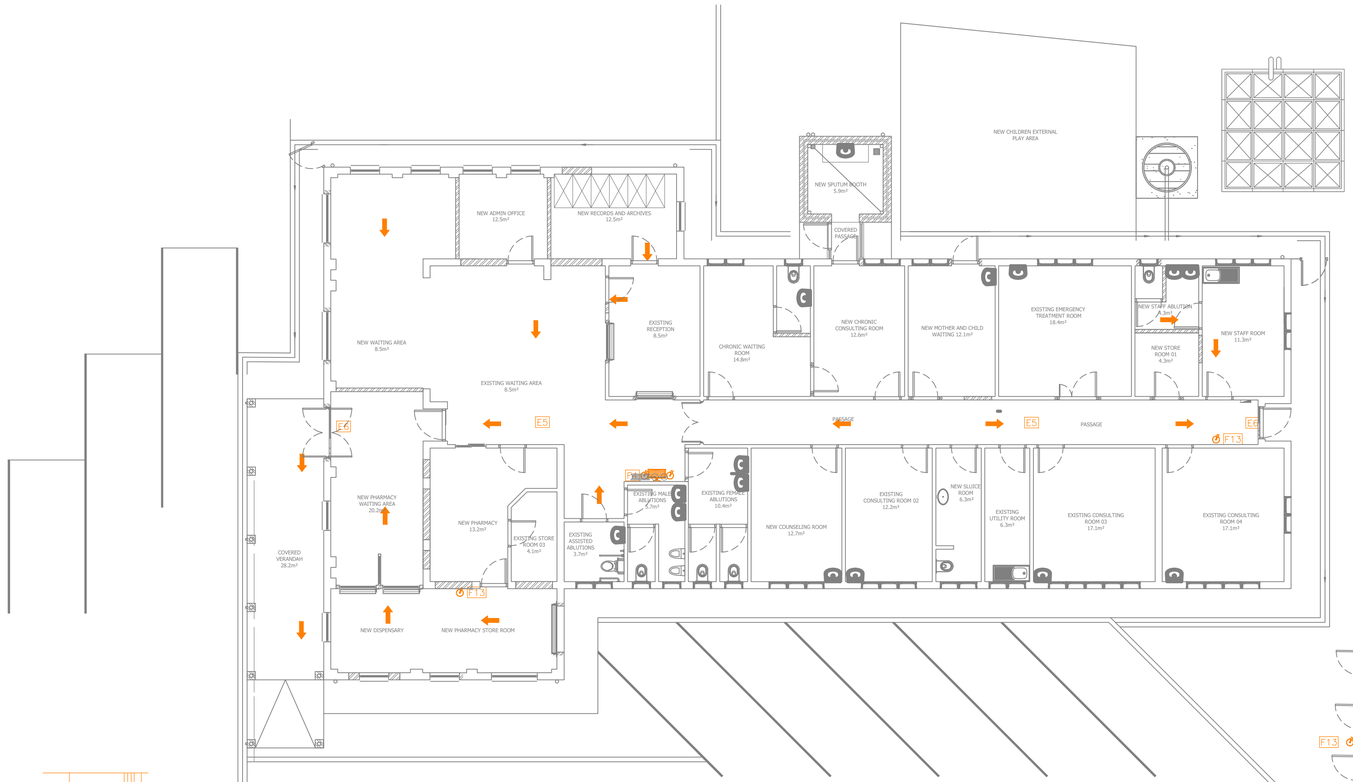
DRAWING TITLE

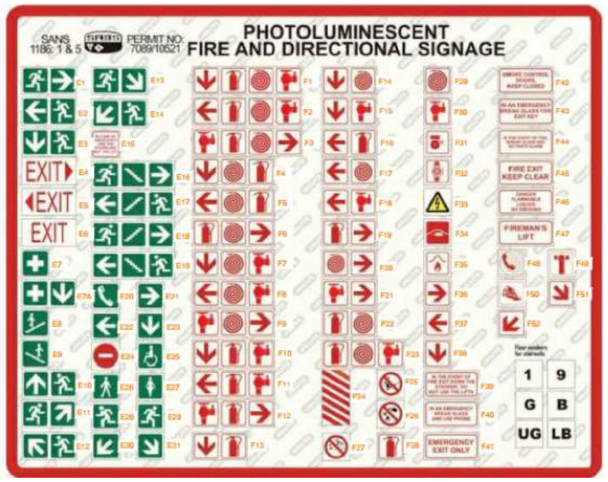
GROUND FLOOR FIRE PROTECTION LAYOUT

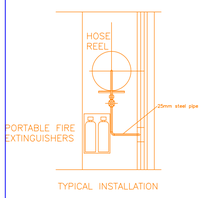
SCALE	SHEET SET	SHEET SIZE
1 : 50	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-77-FP-01	P1

FOR INFORMATION







TYPICAL INSTALLATION

FIRE PROTECTION SIGNAGE

- EVACUATION DIRECTIONAL ARROW
- FIRE HOSEREEL AS PER DETAIL
- 4,5kg DCP FIRE EXTINGUISHER

1. FIRE HOSE REEL INSTALLATION TO COMPLY WITH SANS 543 AND SHALL BE COMPLETE WITH 30m LONG LIGHT RUBBER TUBE.
2. FIRE PROTECTION INSTALLATION TO COMPLY WITH SANS 10400 PART T & PART W.
3. FIRE EXTINGUISHER SHALL COMPLY WITH SANS 1910, SANS 1475–1 & SANS & SANS 10105–1.
4. ALL FIRE FIGHTING EQUIPMENT TO BE FITTED WITH SERVICE LABEL.
5. ALL ESCAPE DOORS SHALL BE CLASS A.
6. ALL FIRE SIGNS TO BE PHOTOLUMINESCENT AND SHALL COMPLY WITH SANS 1186–1, SANS 1186–3, SANS 1186–5, SANS 1464–22 AND SANS 10114–2. APPROVED.

FIRE PROTECTION INSTALLATION NOTES:

1. GENERAL

BUILDING AREAS: CONSULTING ROOMS, WAITING AREAS, ABLUTIONS AND PHARMACY STORE.
AREA: 681 m²
OCCUPANCY: E4 – HEALTH CARE

POPULATION: 120 PEOPLE

2. TENANCY–SEPARATING ELEMENTS

SEPARATING ELEMENTS BETWEEN TENANCIES SHALL HAVE A FIRE RESISTANCE OF NOT LESS THAN 60min.

3. AUTOMATIC SPRINKLERS

THERE IS NO REQUIREMENT FOR SPRINKLERS IN TERMS OF T4.36

4. PORTABLE FIRE EXTINGUISHERS

PORTABLE FIRE EXTINGUISHERS SHALL BE INSTALLED IN COMPLIANCE WITH TABLE 11 OF T4.37

5. SMOKE CONTROL

THERE IS NO AREA THAT EXCEEDS 500m² OF FLOOR AREA. THEREFORE NO PROVISION FOR SMOKE CONTROL.

FIRE PROTECTION INSTALLATION NOTES:

6. FIRE DETECTION

THE BUILDING SHALL BE EQUIPPED WITH A FIRE DETECTION SYSTEM AND AN EMERGENCY EVACUATION COMMUNICATION SYSTEMS COMPLYING WITH SABS0139. refer to Electrical Services

7. HOSE REEL

HOSE REELS SHALL BE PROVIDED AT A RATE OF ONE PER 250m². All hose reels have a 30m hose that is position to protect area within 30m distance.

8. FIRE HYDRANTS

THE TOTAL BUILDING FLOOR AREA IS LESS THAN 1000m². THERE IS NO NEED FOR FIRE HYDRANT FOR THE DEDICATED AREA.

9. TRAVEL DISTANCE

FURTHEST TRAVEL DISTANCE IS FROM NEW PHARMACY STORE TO THE EMERGENCY EXIT BY THE DISPENSARY IS 20m AND DOES NOT EXCEED THE PRESCRIBED 45m.

GENERAL NOTES

4.5kg CO2 FIRE EXTINGUISHER

HOSEREEL

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO.MDA 290E-201WD

No	AMENDMENTS	DATE
1	ISSUED FOR CONSTRUCTION	NOV 2023
0	ISSUED FOR CONSTRUCTION	FEB 2019

DRAWN	MB. MALITI	17-07-2017
DESIGNED	MB. MALITI	17-07-2017
CHECKED	C. ALBRECHT	17-07-2017
APPROVED	PR REGISTRATION NO.200970291	DATE

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PROJECT TITLE

SARAH BAARTMAN DISTRICT : VIRGINIA SHUMANE CLINIC

DRAWING TITLE

GROUND FLOOR LAYOUT
FIRE PLAN

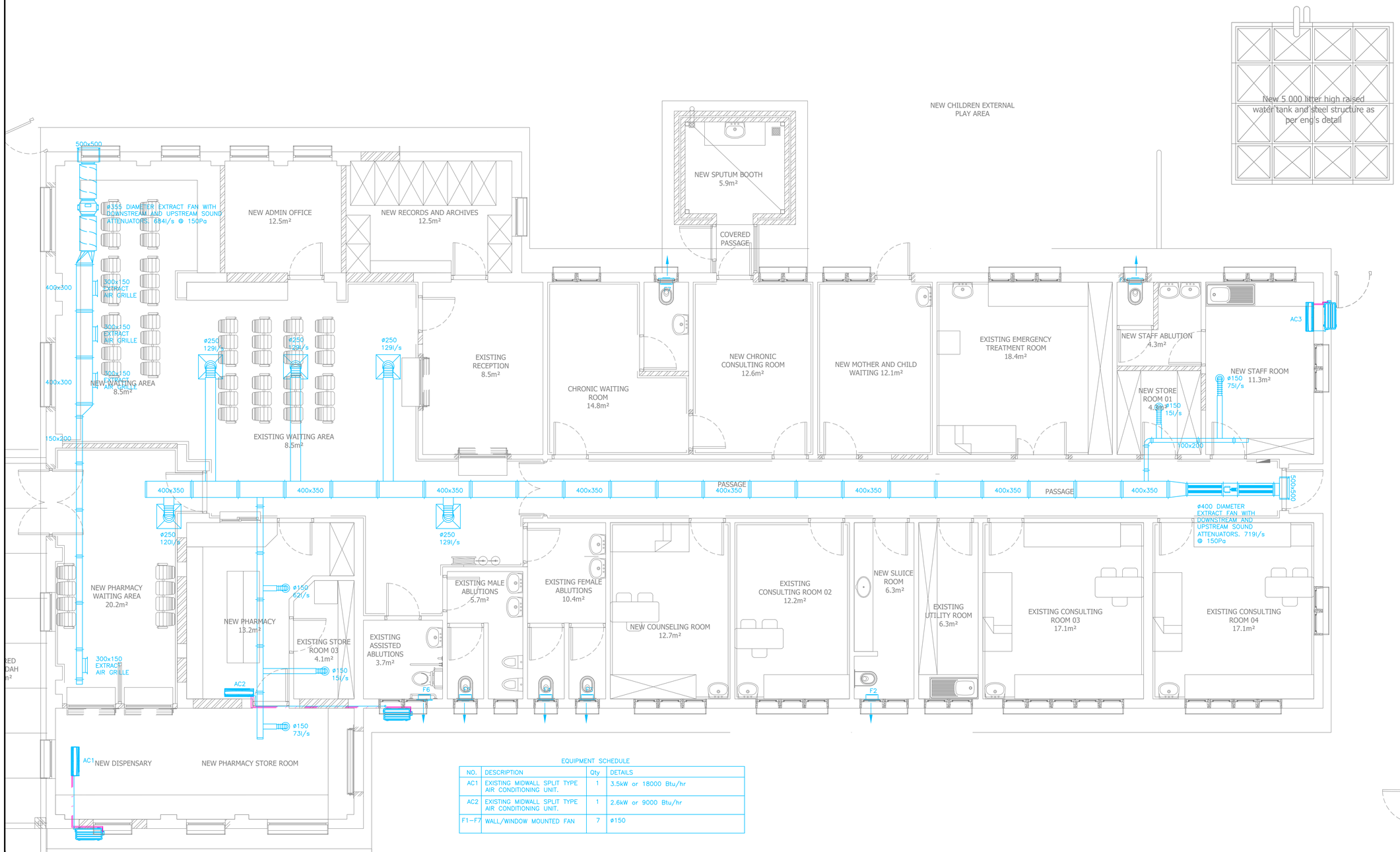
SCALE	SHEET SET	SHEET SIZE
1 : 50	SHEET 1 OF 1 SHEETS	A1

FOR CONSTRUCTION

DRAWING No. 1574-77-FP-02

REVISION 0

P:\PE\1574_77_SB008 - Virginia Shumane Clinic\PE Data\04 Design\12 Mechanical\20231016\1574-77-FP-02 Rev1.dwg



EQUIPMENT SCHEDULE

NO.	DESCRIPTION	Qty	DETAILS
AC1	EXISTING MIDWALL SPLIT TYPE AIR CONDITIONING UNIT.	1	3.5kW or 18000 Btu/hr
AC2	EXISTING MIDWALL SPLIT TYPE AIR CONDITIONING UNIT.	1	2.6kW or 9000 Btu/hr
F1–F7	WALL/WINDOW MOUNTED FAN	7	ø150

FOR CONSTRUCTION

No	AMENDMENTS	DATE
1	ISSUED FOR CONSTRUCTION	OCT 2023
0	ISSUED FOR CONSTRUCTION	FEB 2019

SURVEYED		
DRAWN	S.MONELO	FEB 2018
DESIGNED	S.MONELO	FEB 2018
CHECKED	MB.MALITI	FEB 2018
APPROVED	PR REGISTRATION NO.	DATE

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PROJECT TITLE

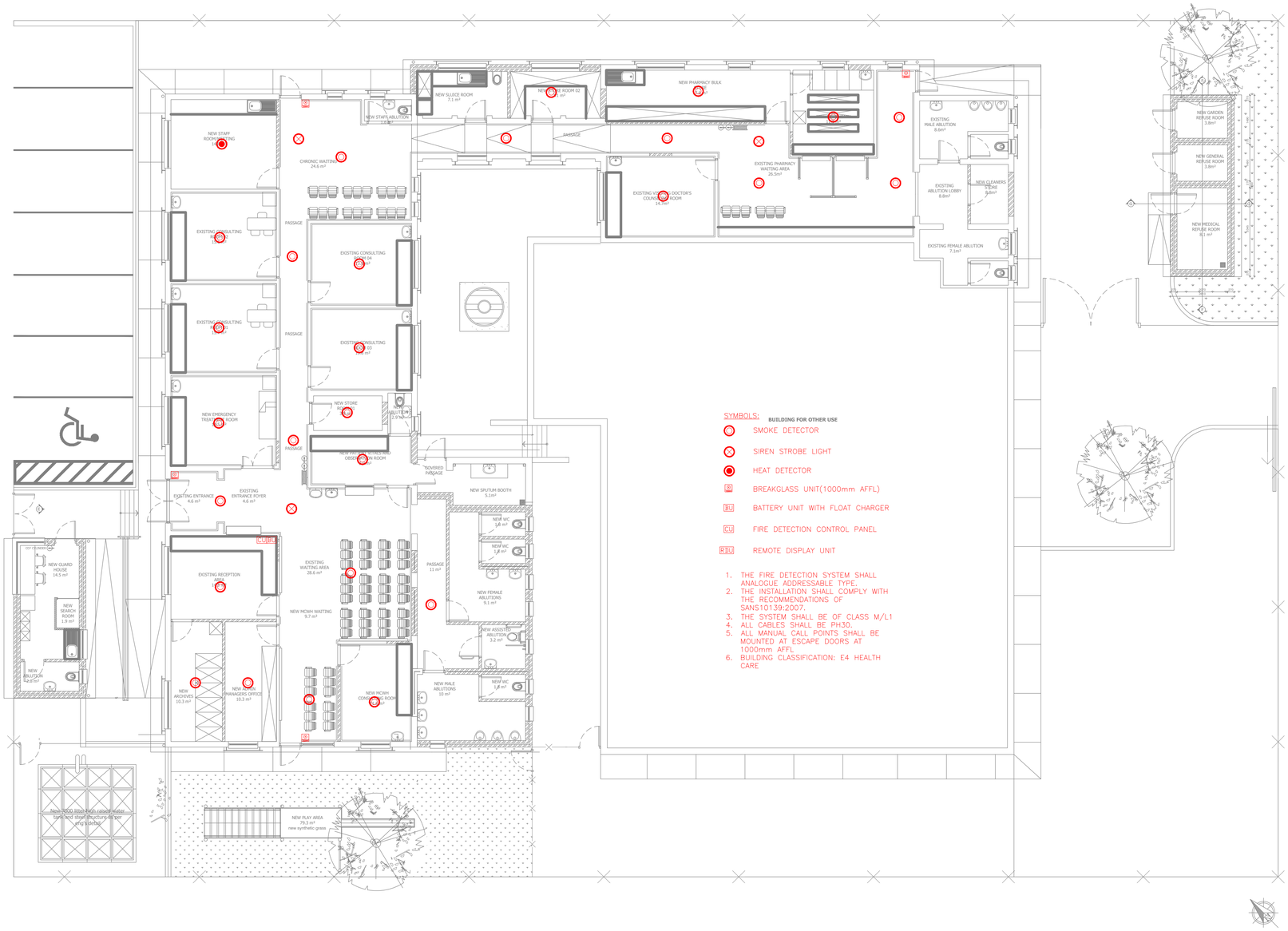
VIRGINIA SHUMANE CLINIC

DRAWING TITLE

GROUND FLOOR VENTILATION LAYOUT

SCALE	SHEET SET	SHEET SIZE
1 : 50	SHEET 1 OF 1 SHEETS	A1
DRAWING No.		REVISION
1574-77-V-01		1

P:\PE\1574_77_SB008 - Virginia Shumane Clinic\PE Data\04 Design\12 Mechanical\20231016\1574-77-V-01 Rev1.dwg



No	AMENDMENTS	DATE
P1	UPDATED TO THE LATEST ARCHITECTURAL	16/10/2023
0	ISSUED FOR CONSTRUCTION	22/02/2019

SURVEYED		
DRAWN	S.MONELO	JAN 2018
DESIGNED	S.MONELO	JAN 2018
CHECKED	MB.MALITI	JAN 2018
APPROVED	PR REGISTRATION NO.200970291	DATE

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PROJECT TITLE

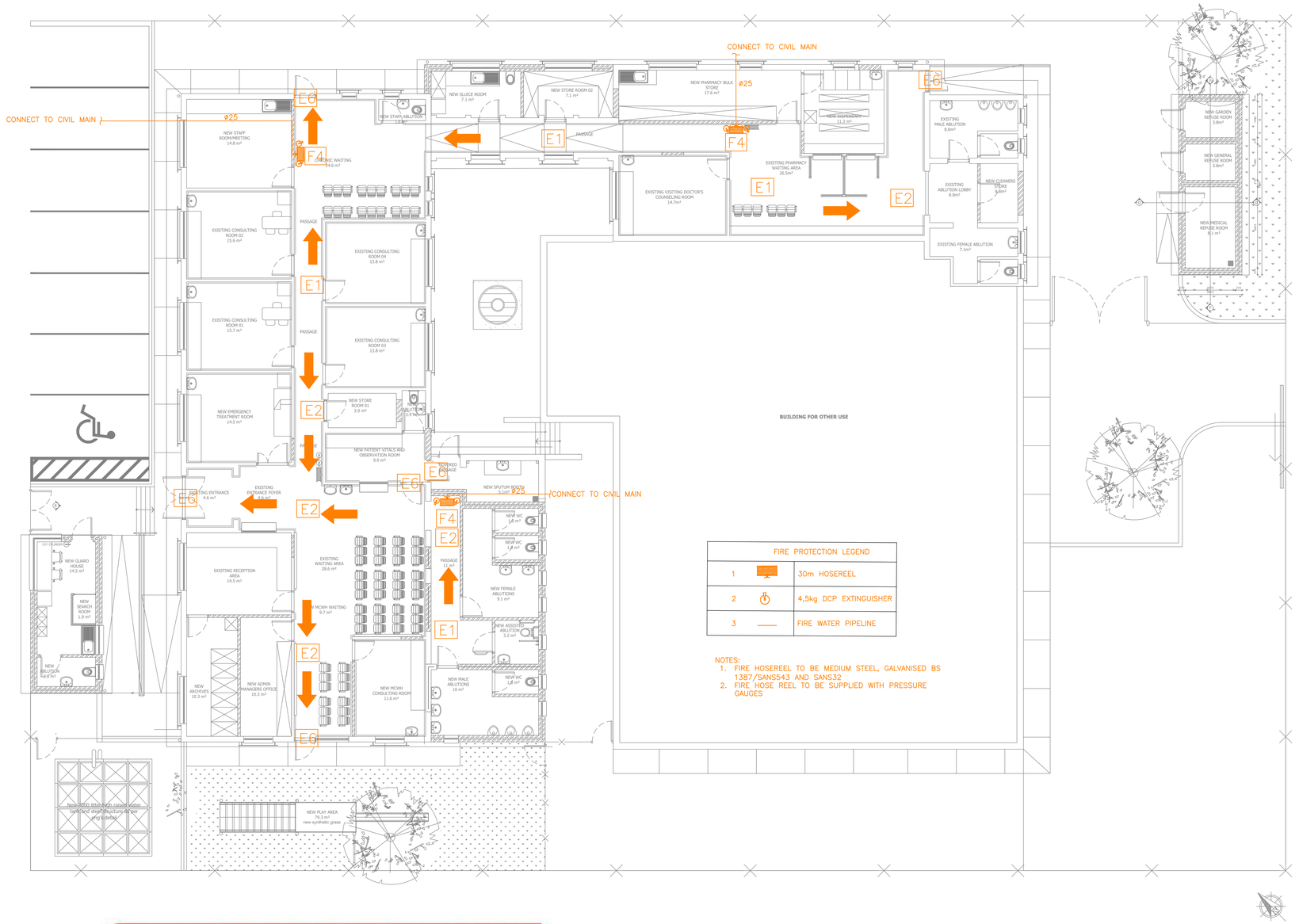
MIDDLE TERRACE CLINIC

DRAWING TITLE

GROUND FLOOR FIRE PROTECTION LAYOUT

SCALE	SHEET SET	SHEET SIZE
1 : 100	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-79-FP-01	P1



FIRE PROTECTION LEGEND		
1		30m HOSEREEL
2		4,5kg DCP EXTINGUISHER
3	——	FIRE WATER PIPELINE

NOTES:
1. FIRE HOSEREEL TO BE MEDIUM STEEL, GALVANISED BS 1387/SANS543 AND SANS32
2. FIRE HOSE REEL TO BE SUPPLIED WITH PRESSURE GAUGES

NOTES:
1. SABS APPROVED 4,5kg DRY POWDER FIRE EXTINGUISHER
2. SABS APPROVED 30m FIRE HOSE REEL WITH WATER SUPPLY
3. REFERENCE TO MDA 290C 100b OF ARCHITECTURAL DRAWINGS

No	AMENDMENTS	DATE
P1	UPDATED TO THE LATEST ARCHITECTURAL	16/10/2023
0	ISSUED FOR CONSTRUCTION	22/02/2019

SURVEYED		
DRAWN	S.MONELO	JAN 2018
DESIGNED	S.MONELO	JAN 2018
CHECKED	MB.MALITI	JAN 2018
APPROVED	PR REGISTRATION NO.200970291	DATE

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PROJECT TITLE

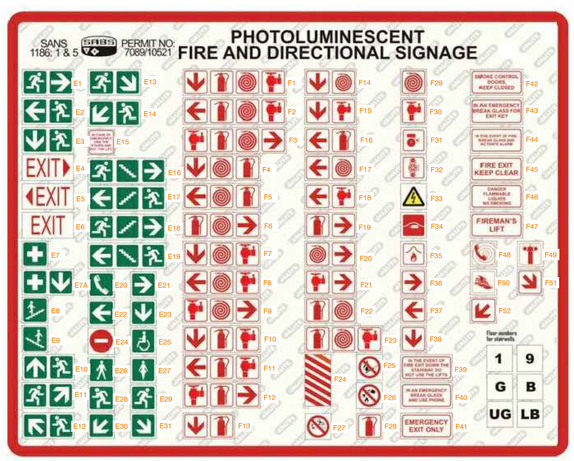
MIDDLE TERRACE CLINIC

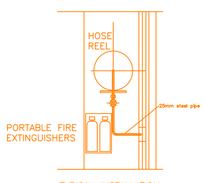
DRAWING TITLE

GROUND FLOOR FIRE PROTECTION LAYOUT

SCALE	SHEET SET	SHEET SIZE
1 : 100	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-79-FP-01	P1





FIRE PROTECTION SIGNAGE

- EVACUATION DIRECTIONAL ARROW
- FIRE HOSEREEL AS PER DETAIL
- 4,5kg DCP FIRE EXTINGUISHER

1. FIRE HOSE REEL INSTALLATION TO COMPLY WITH SANS 543 AND SHALL BE COMPLETE WITH 30m LONG LIGHT RUBBER TUBE.
2. FIRE PROTECTION INSTALLATION TO COMPLY WITH SANS 10400 PART T & PART W.
3. FIRE EXTINGUISHER SHALL COMPLY WITH SANS 1910, SANS 1475–1 & SANS & SANS 10105–1.
4. ALL FIRE FIGHTING EQUIPMENT TO BE FITTED WITH SERVICE LABEL.
5. ALL ESCAPE DOORS SHALL BE CLASS A.
6. ALL FIRE SIGNS TO BE PHOTOLUMINESCENT AND SHALL COMPLY WITH SANS 1186–1, SANS 1186–3, SANS 1186–5, SANS 1464–22 AND SANS 10114–2. APPROVED.

FIRE PROTECTION INSTALLATION NOTES:

1. GENERAL

BUILDING AREAS: CONSULTING ROOMS, WAITING AREAS, ABLUTIONS AND PHARMACY STORE.
AREA: 681 m²
OCCUPANCY: E4 – HEALTH CARE

POPULATION: 120 PEOPLE

2. TENANCY–SEPARATING ELEMENTS

SEPARATING ELEMENTS BETWEEN TENANCIES SHALL HAVE A FIRE RESISTANCE OF NOT LESS THAN 60min.

3. AUTOMATIC SPRINKLERS

THERE IS NO REQUIREMENT FOR SPRINKLERS IN TERMS OF T4.36

4. PORTABLE FIRE EXTINGUISHERS

PORTABLE FIRE EXTINGUISHERS SHALL BE INSTALLED IN COMPLIANCE WITH TABLE 11 OF T4.37

5. SMOKE CONTROL

THERE IS NO AREA THAT EXCEEDS 500m² OF FLOOR AREA. THEREFORE NO PROVISION FOR SMOKE CONTROL.

FIRE PROTECTION INSTALLATION NOTES:

6. FIRE DETECTION

THE BUILDING SHALL BE EQUIPPED WITH A FIRE DETECTION SYSTEM AND AN EMERGENCY EVACUATION COMMUNICATION SYSTEMS COMPLYING WITH SABS0139. refer to Electrical Services

7. HOSE REEL

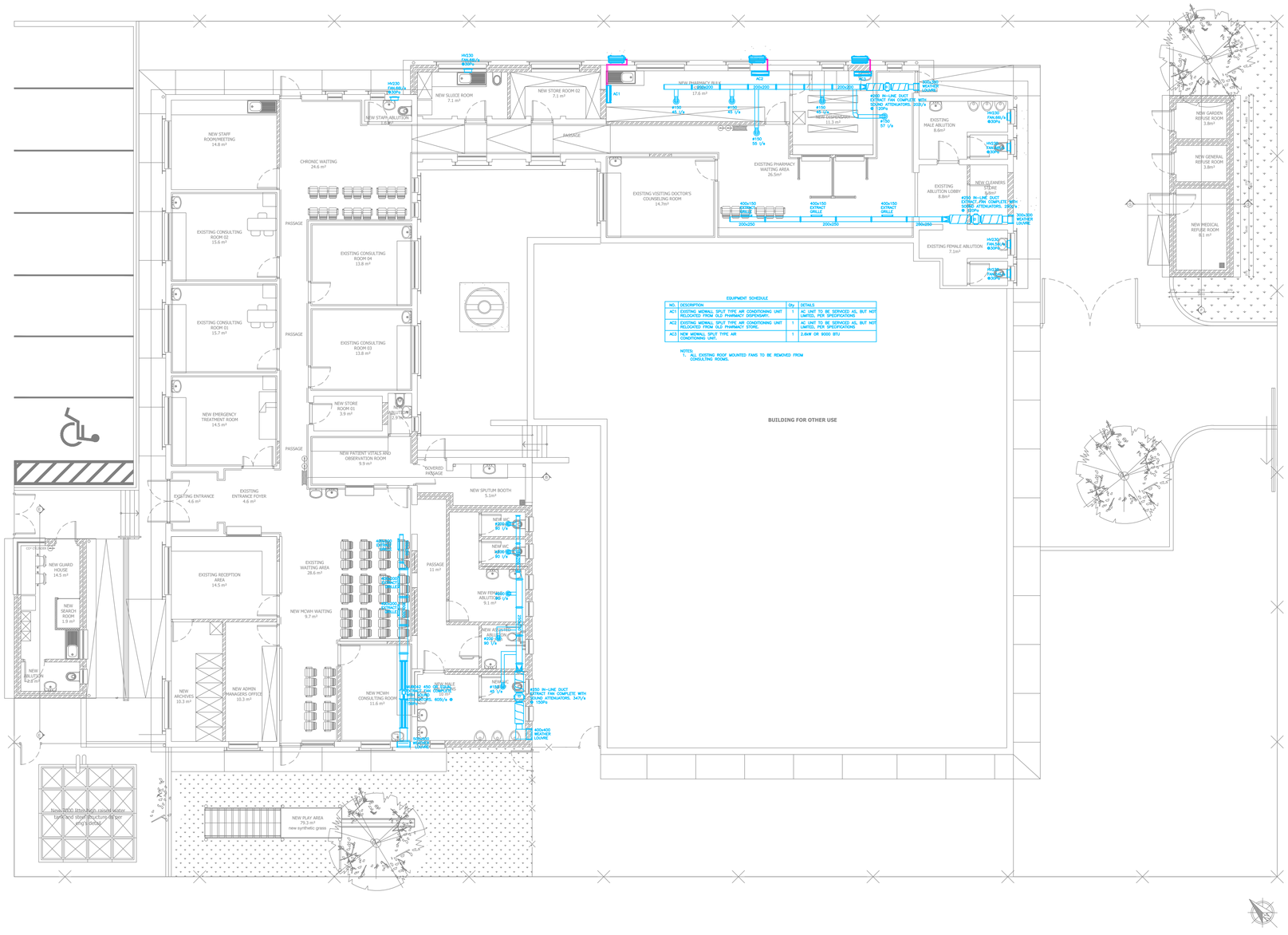
HOSE REELS SHALL BE PROVIDED AT A RATE OF ONE PER 250m². All hose reels have a 30m hose that is position to protect area within 30m distance.

8. FIRE HYDRANTS

THE TOTAL BUILDING FLOOR AREA IS LESS THAN 1000m². THERE IS NO NEED FOR FIRE HYDRANT FOR THE DEDICATED AREA.

9. TRAVEL DISTANCE

FURTHEST TRAVEL DISTANCE IS FROM NEW PHARMACY STORE TO THE EMERGENCY EXIT BY THE DISPENSARY IS 20m AND DOES NOT EXCEED THE PRESCRIBED 45m.



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DRAWN	MB.MALITI	JAN 2018
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PROJECT TITLE

MIDDLE TERRACE CLINIC

DRAWING TITLE

GROUND FLOOR MECHANICAL VENTILATION LAYOUT

SCALE	SHEET SET	SHEET SIZE
1 : 100	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-79-V-01	1

P:\PE\1574_79_SB606 - Middle Terrace Clinic\PE Data\04 Design\12 Mechanical\1574-79-V-01 Rev 01dwg.dwg

Clinics

SB006: Middle Terrace Clinic

SB007: NG Dlukulu Clinic

SB008: Virginia Shumane Clinic

Civil and Structural Engineering Specifications

Revision 1

November 2023

Prepared for

Sakhiwo FM Consortium (Pty) Ltd

Prepared by

Lukhozi Consulting Engineers

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1 : WORKS SPECIFICATION

1.1 GENERAL

This specification covers the civil and structural engineering scope for the construction of a cluster of 3 (three) Clinics for Sakhiwo FM Consortium (Pty) Ltd. The 3 (three) clinics are as follow:

a) SB006 : Middle Terrace Clinic (Grahamstown)
b) SB007 : NG Dlukulu Clinic (Grahamstown)
c) SB008 : Virginia Shumane Clinic (Grahamstown)

Notwithstanding the inferred Civil and Structural scope, a summary of the required civil and structural scope for each clinic is as follows:

SB006 : Middle Terrace Clinic

Civil:

- New sewer reticulation system to tie into existing and the abandoning of some existing.
- New concrete edge beam and interlocking concrete block paved parking area with related layerworks.
- New pedestrian ramps to tie into existing.
- New stormwater management system to tie into existing.
- New surface bed ramps and landings with adequate joints adjacent to new brick retaining walls.
- Repositioning, relocating and reinstating existing infrastructure such as gates and signage.
- Demolition of existing to make way for new civil infrastructure.
- Follow up with wayleave applications to municipality and other stakeholders if required.
- Provision of a new 13 008 litre elevated water tank.

Structural:

- New strip foundations to extensions and enclosures within existing clinic and out-buildings.
- New steel posts with purpose made brackets on strip foundations for sputum booth.
- Demolition and reinstatement of surface bed with adequate joints in areas as indicated by architect and where demolished to make way for new foundations.

SB007 : NG Dlukulu Clinic

Civil:

- New sewer reticulation system to tie into existing.
- Abandoned Septic tank to be filled as per engineers' specification.
- New concrete block paved parking area with related layer works.
- New pedestrian ramps to tie into existing.
- New stormwater management system to tie into existing.
- New surface bed ramps and landings with adequate joints adjacent to new brick retaining walls.
- Repositioning, relocating and reinstating existing infrastructure such as gates, fences, rainwater tanks, storage cages, tool sheds and signage.
- Demolition of existing to make way for new civil infrastructure.
- Follow up with wayleave applications to municipality and other stakeholders if required.
- Provision of a new 11 904 litre elevated water tank.

Structural:

- New strip foundations to extensions and enclosures within existing clinic and out-buildings.
- New steel posts with purpose made brackets on brick columns for overhead canopy and on strip foundations for sputum booth.
- Demolition and reinstatement of surface bed with adequate joints in areas as indicated by architect and where demolished to make way for new foundations.

SB008 : Virginia Shumane Clinic

Civil:

- New sewer reticulation system to tie into existing.
- New concrete block paved parking area with related layer works.
- New stormwater management system to tie into existing.
- Repositioning, relocating and reinstating existing infrastructure such as gates and signage.
- Reconstruction and restacking (where practicable) of existing concrete block retaining wall to match existing.
- Partial demolition of existing to make way for new civil infrastructure.
- Follow up with wayleave applications to municipality and other stakeholders if required.
- Provision of a new 9480 litre elevated water tank.

Structural:

- New strip foundations to extensions and enclosures within existing clinic, out-buildings and new pad foundations to overhead canopies.
- New steel posts with purpose made brackets on brick columns for overhead canopy and on strip foundations for sputum booth.
- Demolition and reinstatement of surface bed with adequate joints in areas as indicated by architect and where demolished to make way for new foundations.

1.2 APPLICABLE SANS STANDARDS

The SABS 1200 Standardised Specifications for Civil Engineering Construction read in conjunction with the SABS 0120 Code of Practise for use with standardised specifications for Civil Engineering Construction and Contract Documents apply.

1.3 APPLICABLE NATIONAL AND INTERNATIONAL STANDARDS

The following Standardised Specifications for Civil Engineering Construction, as amended in the Scope of Work, form part of the Contract Documents:

SABS 1200 A	: 1986 :	General
SABS 1200 C	: 1980 (as amended 1982) :	Site Clearance
SABS 1200 D	: 1988 (as amended 1990) :	Earthworks
SABS 1200 DB	: 1989 :	Earthworks (Pipe Trenches)
SABS 1200 DM	: 1981 :	Earthworks (Roads; Subgrade)
SABS 1200 G	: 1982 :	Concrete (Structural)
SABS 1200 H	: 1990 :	Structural Steelwork
SANS 2001-CS1	: 2005 :	Structural Steelwork (Construction works)
SABS 1200 LB	: 1983 :	Bedding (Pipes)
SABS 1200 LC	: 1981 :	Cable Ducts
SABS 1200 LD	: 1982 :	Sewers
SABS 1200 M	: 1996 :	Roads (General)
SABS 1200 ME	: 1981 :	Subbase
SABS 1200 MJ	: 1984 :	Segmented Paving
SABS 1200 MK	: 1983 :	Kerbing and Channelling
SABS 1200 MM	: 1984 :	Ancillary Roadworks

The term “project specifications” appearing in any of the SABS 1200 Standardised Specifications shall be replaced with the term “Scope of Work”.

The variations and additions of the Standardised Specifications are provided in Section 2.

Clause 8 Measurement and Payment of the listed specifications are to be omitted and replaced by the Quantity Surveyor’s payment clauses.

2 : ENGINEERING

2.1 DESIGN SERVICES AND ACTIVITY MATRIX

Works designed by, per design stage (Elevated Storage Tanks):

Concept, feasibility and overall process	*Employer*
Basic engineering and detail layout to bid stage	*Engineer*
Final design of the civil infrastructure and structural foundations	*Engineer*
Elevated Storage Tank, Stand and Pipework	*Contractor*
Temporary works of Contractor	*Contractor*
Preparation of as-built drawings	*Contractor*

2.2 DRAWINGS

The relevant tender drawings are attached in order to give an overview of the project.

Additional construction drawings will be issued to the Contractor by the Engineer/Employer on the commencement date and from time to time as required.

Only figured dimensions shall be used and drawings shall not be scaled unless so instructed by the Engineer.

The drawings listed below are attached in order to give an overview of the project.

Any information in the possession of the Contractor that the Engineer requires in order to complete his as-built drawings shall be supplied to the Engineer before a Certificate of Completion will be issued.

2.3 DESIGN BRIEF

The design brief for the envisaged elevated water tanks are as follows:

The Contractor will be responsible for the procurement of an elevated water tank and stand by a specialist sub-contractor. The scope of works will include the design, supply, delivery. erection and installation of a water tank and a hot dipped galvanized tank stand that meets the following requirements:

1. The storage capacity and size of the tanks are to be:

Clinic	Recommended Capacity	Tank Size	Capacity (litres)
VG Shumane	9 480	3.66 x 1.22 x 2.44	10 895
Middle Terrace	13 008	4.88 x 1.22 x 2.44	14 527
Dlukulu Clinics	11 904	4.88 x 1.22 x 2.44	14 527

2. Height to the underside of the tank above ground level shall be at least 8m high.
3. All fittings fasteners, holding down bolts, materials, labour and plant associated with the supply, fabrication, delivery and installation of the elevated storage tank.
4. Steel pipework to suit.
5. Air vent on roof with venting air capacity of 50.0l/s and intake air capacity of 30.0l/s, with minimum diameter of 50mm (rainwater/insect/vermin/bird proofed)
6. A suitably sized hot dipped galvanized structural steel support structure at least 8m high on reinforced concrete foundations as per the Engineers drawings. The Contractor is to provide the necessary loading, drawings and HD Bolt Layout from the tank supplier so that the Engineer can finalise the base design.
7. Hinged, sealed, lockable access cover
8. External cat ladder with safety cage to level of 1.0m above roof of tank, and handrail around tank.

The tank and all its ancillary components shall comply with SANS 10252-1:2012 with specific reference to 5.4.6.2 “Tanks of capacity exceeding 2kL” and SANS 10162 Parts 1 and 2 of 2005 “The structural use of steel” for the design of the structural steel tank stand.

All structural steel work specifications for the structural steel tank stand shall be supplied by the specialist sub-contractor in accordance with SABS 1200: H Structural Steelwork or SANS 2001: CS1 Structural steelwork.

The wind loading design shall take into account the location of the tank.

The Contractor shall seal all pipes and openings below the top water level. The structure shall then be filled to the top water level with clean water and shall be allowed to remain filled for a period of at least one day. Any loss of water which may occur during this saturation period shall be made up by filling the structure to top water level again. At the beginning of the test, the water level shall be recorded by the Engineer and the structure shall be left undisturbed for a period of not less than three days. The structure shall be considered watertight if the drop in level does not exceed 5mm in three days and if there is no visible leakage.
The Works will not be certified complete until the structure has been proved by testing to be watertight to the satisfaction of the Engineer.

3 : VARIATIONS & ADDITIONS TO STANDARDISED SPECIFICATIONS

The following variations and additions to the SABS1200 Standardised Specifications for Civil Engineering Construction apply to this Contract. The prefix “PS” denotes a reference to the Standardised specification. The letters and clause number following the prefix denote a reference to the specific clause in the specific Standardised specification.

An asterisk(*) placed next to the PS clause heading denotes the inclusion of an additional clause that does not appear in the Standardised specification.

The term “project specification” used in the Standardised Specification shall mean “Scope of Works”.

****

PSA GENERAL (SABS 1200 A)

PSA 2 INTERPRETATIONS

PSA 2.3 Definitions and abbreviations

"SABS'" shall mean "SANS", except for references to the official SABS mark.

PSA 3 MATERIALS

PSA 3.1 Quality

Where applicable, materials shall bear an official standardization mark. Where it is specified that a material shall comply with the requirements of an SABS specification, the material shall bear the official SABS mark, unless the Contractor can prove that such material is not available with the mark.

PSA 5 CONSTRUCTION

PSA 5.1 Survey

PSA 5.1.1 Setting out of the Works

In addition to the requirements of Clause 5.1.1, the Contractor shall check the positions and levels of all setting out pegs and bench marks before commencing any construction, and advise the Civil Engineer of any discrepancies.

PSA 5.9 Drawings *

Construction drawings and additional detailed information will be made available to the Contractor as and when required by him. Tender drawings shall not be used for construction.

PSA 7 TESTING

PSA 7.2 Approved laboratories

In addition to the approved laboratories stated in Clause 7.2, a testing laboratory certified by the South African National Accreditation Systems (SANAS) in respect of the nature and type of testing to be undertaken for the purposes of the Contract, will also be regarded as an approved laboratory.

****

PSC SITE CLEARANCE (SABS 1200 C)

PSC 3 MATERIALS

PSC 3.1 Disposal of material

The contractor shall make his own arrangements for the disposal off site of all material obtained from clearing and grubbing operations, including the trunks of large trees.

PSC 5 CONSTRUCTION

PSC 5.1 Areas to be cleared and grubbed

The Contractor shall ensure that the areas cleared and grubbed are kept to the minimum area necessary for the execution of the Works.

The Contractor shall clear and grub the area required for the Works, areas on which material will be stockpiled for later use and areas where material is to be dumped and spread, unless instructed otherwise by the Civil Engineer.

PSC 5.2 Cutting of trees

The Contractor shall not remove trees with a trunk girth of more than 0.3m without the written permission of the Civil Engineer.

PSC 5.6 Conservation of topsoil

Topsoil shall be removed from the cleared areas up to a depth of 150 mm (if available) and stockpiled on approved sites for later reuse. Until required for spreading, the stockpiles of topsoil material shall be stabilized by watering or other approved means.

****

PSD EARTHWORKS (SABS 1200 D)

PSD 3 MATERIALS

PSD 3.1 Classification for excavation purposes

PSD 3.1.1 Method of classifying

Replace the third sentence of Clause 3.1.1 with

”The classification will be based on the Civil Engineer or his Representative’s inspection of the material to be excavated and on the criteria given in PSD3.1.2”.

PSD 3.1 Classification for Excavation Purposes

Delete SABS 1200:D Clause 3.1 and replace with the following:

PSD 3.1.1 Method of Classifying

The Contractor may use any method he chooses to excavate any class of material but his chosen method of excavation shall not determine the classification of the excavation. The Engineer or his Representative will decide on the classification of materials. In the first instance classification will be based on inspection of the material to be excavated and on the criteria given in PSD 3.1.2(a) and (b).

PSD 3.1.2 Classes of Excavation

Notwithstanding Clause 3.1.2, soft excavation shall include the excavation in all material other than hard rock, and no extra-over payment will be made for intermediate or boulder excavation.

All materials encountered in any excavation for any purpose including restricted excavation will be classified as follows:

(a) Hard rock excavation

Hard rock excavation shall be excavation in material (including undecomposed boulders exceeding 0.17 cubic metres in individual volume) that cannot be efficiently removed without blasting, wedging and splitting, or hydraulic hammers.

This classification includes materials such as:

- solid unfractured rock occurring in bulk
- solid ledges thicker than 200mm
- igneous rock intrusions
- cemented sedimentary rocks.

(b) Soft Excavation

Soft excavation shall be material not falling into the category of hard rock excavation.

PSD3.3.1 Selective excavation

The Contractor will not be required to deal selectively with the excavated material, but shall rather use excavation methods that will result in the material from cuts being mixed as much as possible, so that the embankments are constructed using material from all classes of excavation mixed together.

Excavated material shall be moved directly to fill and temporary stockpiling shall not take place without the prior approval of the Engineer. Should the Engineer authorise material to be placed in temporary stockpiles, the operation shall be measured per cubic metre, and payment shall be Extra Over to the normal cut to fill or cut to spoil operations as applicable. The rate tendered shall include for all necessary costs brought about by the double handling of the material.

PSD 5 CONSTRUCTION

PSD5.1.2 Existing services

The contractor will be issued with drawings showing the positions of all existing services on or adjacent to the site.

PSD5.1.2.4 Negligence

Where the contractor damages any existing service, including roads, kerbs, sidewalks, pipelines, manholes, chambers, streetlights or electrical kiosks, he shall not be penalised, but will be responsible for the cost of all necessary repairs and reinstatement.

PSD 5.2 Methods and procedures

PSD 5.2.1.2 Conservation of topsoil

The contractor shall be required to strip topsoil to a depth of 150 mm off the entire area of all cuts and fills prior to commencement of the earthwork operations. The topsoil may initially be placed in a windrow adjacent to the site from where it will either be moved to a stockpile for later use by the building contractor, or disposed of off site, as directed by the Engineer.

When moved to stockpile, the topsoil shall not be stockpiled to a height exceeding 2,0 m, and care shall be exercised to prevent the compaction of topsoil in any way, especially by vehicles or plant travelling over the stockpile.

PSD 5.2.2.3 Disposal

All surplus material from the excavations or other construction activities shall be carted to spoil. The Contractor shall be responsible for locating suitable spoil sites. All costs associated with the carting and spoiling of material shall be included in the tendered rates and no additional payment will be made for this work.

PSD5.2.3 Placing and Compaction

The contents of clauses 5.2.4.2 (a) to (f) of SABS 1200 DM shall apply to the placing and compaction of fill material, with the following amendments :

(a) <u>General :</u>

Following the stripping of topsoil, and prior to the construction of any fills, the in-situ material beneath the fill area shall be prepared by ripping to a depth of 300 mm, addition of water to achieve the optimum moisture content, and re-compaction to 93% of Modified AASHTO maximum density.

Treatment of in-situ material shall be measured by the cubic metre, based on the agreed area to be treated and the net depth of 300mm. The tendered rate shall cover the cost of the entire operation including the provision of all plant and equipment and the necessary water to achieve the specified moisture content.

PSD5.2.4 Finishing

The contents of clauses 5.2.4.3 (a) to (d) of SABS 1200 DM shall apply to the finishing of cuts, fills and selected layer, with the additional requirement that the Contractor shall provide the Engineer with a set of levels taken at the perimeter of the terraces and on a grid of 10 m x 10 m on the platforms. The Engineer may take additional levels to verify the above. Only once all the levels are within the specified tolerances and all the compaction tests have passed will the Works be taken over and the Completion Certificate be issued.

PSD5.2.4.2 Topsoil

Topsoil shall be placed to a thickness of 100 mm on platforms and to a thickness of 75 mm on the faces of cut and fill embankments.

PSD5.2.5.1 Freehaul

Notwithstanding the contents of clause 5.2.5.1, all haul of material, whether within the limits of the site, from commercial sources, or disposed of at spoil sites, shall be considered as freehaul.

PSD5.2.5.2 Overhaul

The cost of the movement and haulage of all materials shall be included in the rates for the respective items, and no payment will be made for overhaul.

PSD 6 Tolerances

Notwithstanding the requirements of any other standardised specification, the earthwork operations shall be carried out in accordance with Degree of Accuracy I.

PSD 7.2 Taking and Testing of Samples

The frequency of all testing for both the earthworks and selected layers shall comply with the requirements of clause 7.2 of SABS 1200 DM.

PSD 8.3.4 Importing of materials

The Contractor shall be required to locate a suitable source for any imported materials.

****

PSDB EARTHWORKS (PIPE TRENCHES) (SABS 1200 DB)

PSDB 3 MATERIALS

PSDB 3.1 Classes of excavation

Delete the contents of Clause 3.1 and replace with the following:

"The classification shall be as described in PSD 3.1".

PSDB 3.5 Backfill material

Delete the contents of Clause 3.5(b) and replace with the following:

"Materials used in the reinstatement of trenches beneath or within a new roadway, up to underside of the road layers, shall be 37,5mm base course quality material conforming to SABS 1200 MF compacted in 150mm layers to 98% Mod. AASHTO density."

PSDB 3.7 Selection

Notwithstanding Clause 3.7, the Contractor is required to use selective methods of excavating. The Contractor shall selectively remove and keep separate topsoil, unsuitable material, and material suitable for reuse as backfill, selected fill, selected granular material or for other use as ordered by the Engineer.

PSDB 5 CONSTRUCTION

PSDB 5.2 Minimum base widths

The minimum base width for flexible pipes shall be as follows:

External diameter of pipe barrel (mm)		Minimum base width (mm)
Over	Up to and including	
-	50	400
50	100	600
100	300	800

Otherwise the provisions of clause 5.2 shall apply.

PSDB 5.4 Excavation

Add:

"The excavation of trenches across a concurrently constructed parking lot shall commence after the subgrade layer has been accepted. The pipe/duct shall be laid and the trench backfilled to the acceptable requirements, including density testing before the construction of the next layer may commence".

PSDB 5.5 Trench bottom

Should the Engineer consider the trench bottom to be unstable, he may instruct the Contractor to replace unsuitable material with a 19 mm single-sized crushed stone layer in order to provide a stable platform for the placing of the pipe bedding. The stone layer shall be 150mm thick over the full width of the trench, and shall be wrapped in a geotextile blanket with 150mm overlap at the joint.

PSDB 5.6 Backfilling

PSDB 5.6.3 Disposal of Soft Excavation Material

Delete the contents of Clause 5.6.3. and replace with the following:

"Excess material arising from the excavations will be disposed of off site unless instructed otherwise by the Engineer. The rate for spoiling of excess material shall include for the loading and carting of material, and the off-loading at the tip site.

Where topsoil is encountered this shall be set aside on site and re-used later."

PSDB 5.7 Compaction

PSDB 5.7.2 Areas subject to traffic loads

All trenches will be considered to be subject to traffic loads and the backfill material and compaction in these trenches shall comply with the requirements of PSDB3.5 and 5.7.2.

PSDB 7 TESTING

PSDB 7.1 Density testing

In addition to clause 7.1 the Contractor shall also carry out density tests to determine the compaction of the trench bottom. The Contractor will be required to carry out as many density tests that are necessary to achieve the required material control, with a minimum testing frequency of:

- Every 50m on the bedding
- Every 50m on the backfill

Notwithstanding Clause 7.1, the Contractor will be responsible for the cost of all testing.

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PSDM EARTHWORKS (ROADS, SUBGRADE) (SABS 1200 DM)

PSDM 1 SCOPE

The construction of road verges, including where such construction extends beyond the road reserve, shall be carried out under this specification.

PSDM 2 INTERPRETATIONS

PSDM 2.1 Supporting specifications

Delete from Clause 2.1(c) "or SABS 1200 DA, as applicable" and throughout the specification delete all reference to SABS 1200 DA.

PSDM 3 MATERIALS

PSDM 3.1 Classification for excavating purposes

Replace Clause 3.1 with:

“All cut to fill, cut to spoil, borrow to fill, and excavations for drains will be classified according to PSD3.1”.

PSDM3.2.3 Selected Layer

Notwithstanding the requirements of clause 3.2.3, the material used in the upper selected layer shall have a minimum grading modulus of 0,75.

PSDM 5 CONSTRUCTION

PSDM 5.2 Methods and procedures

PSDM 5.2.4 Fill

PSDM 5.2.4.2 Placing and compaction

Material used for filling behind kerbs above subgrade level shall be of selected subgrade quality. This material shall be compacted to at least 90% of mod. AASHTO max. density (100% in the case of sand). The Contractor may however, at his own additional expense, construct all or portion of this fill using subbase material rather than selected subgrade material.

PSDM5.2.5 Selected layer

a) Upper selected layer

All areas as designated on the drawings, or ordered by the Engineer, shall be provided with an upper selected layer compacted to 93 % of modified AASHTO maximum density, with a minimum thickness after compaction of 150 mm.

PSDM 5.2.9 Trimming and grading of verges*

During the initial earthworks the verge width shall be cut or filled to approximately the final level and shall be kept trimmed and tidy during construction of the works. After completion of the hardstand layers, including the surfacing, and after construction of the necessary kerbs, including the satisfactory backfilling behind the kerb, the verge shall be trimmed off to the lines and levels shown on the drawings or as specified, before the electrical Contractor requires access for the installation of electrical cables and infrastructure. Final finishing and reinstatement of the verges shall be carried out after the electrical Contractor has completed the electrical reticulation.

The verge material shall consist of that material which would normally occur at that position or depth when in cut and shall not be contaminated by foreign materials such as bricks, basecourse material, horticulturally inferior materials from trench excavations, etc. Verges in fill conditions are to consist of the material as specified for the fills and similarly not be contaminated with foreign materials.

Over those sections of verge where grass is to be planted or where the Engineer deems it necessary to spread topsoil, he may instruct the Contractor at the stage of the major earthworks operation to work to levels altered from those shown on the drawings.

Topsoil may be provided from stockpiles on site in which case the Contractor shall load, transport and spread as ordered by the Landscape Architect. In the case of topsoil provided and imported by the Contractor the quality of the topsoil shall be approved of by the Landscape Architect beforehand.

The Contractor shall be responsible for taking the necessary precautions and measures to control the dust nuisance which may arise due to his operations on the verge, whether from the natural ground surface or topsoil layer, until the verge is accepted by the Engineer.

PSDM 5.2.10 Dimension, level and process control *

The Contractor shall submit to the Engineer records of dimension and level control and/or process control prior to requesting the Engineer to carry out any routine tests and/or inspections.

A sample form can be obtained from the Engineer.

PSDM 5.2.11 Requesting of tests *

Tests and Inspections of the works will only be carried out by the Engineer once the appropriate test/inspection request forms have been fully completed.

Test/inspection request forms can be obtained from the Engineer.

PSDM 7 TESTING

PSDM 7.3.2 Routine inspection testing

Notwithstanding Clause 7.3.2 and Table 2, no single test result which is below the specified density will be accepted.

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PSG CONCRETE (STRUCTURAL) (SABS 1200 G)

PSG 1 SCOPE

This specification applies to the concrete hardstand. The Engineer's specification for concrete shall apply to concrete in all associated structures.

PSG 2 Interpretations

PSG 2.3 Definitions

Under (a) add:

"Constructional joint: a joint required on account of constraints or convenience in the method of construction and that is not a movement, contraction or expansion joint."

PSG 2.4.1 Exposure condition

Concrete shall be as specified for "severe" exposure condition.

PSG 2.4.2 Strength concrete

Grade 20MPa/19mm means strength concrete grade 20MPa with 19 mm stone.

PSG 2.4.3 Joints

Notwithstanding Clause 2.4.3, "designated joints" will only be joints that are shown on the drawings. Any other joints that are required by the Contractor as a result of his construction constraints or for any other reason, whether approved by the Engineer or not, will not be considered to be designated joints as defined in Clause 2.4.3, i.e. they will be considered to be "non-designated" joints.

PSG 3 Materials

PSG 3.2 Cement

All cement used in the works shall be Portland cement CEM I of strength class 42,5 complying with SABS ENV 197-1.

Where "blast furnace slag concrete" is specified on the drawings, or scheduled, blast furnace slag shall be a constituent of the concrete as specified in PSG 3.9.

PSG 3.2.2 Storage

Cement and slagment shall be used in the order in which it is received.

Unless approved by the Engineer, cement and slagment kept in storage for longer than 8 weeks shall not be used in the Works.

Any cement that contains lumps that cannot easily be crumbled to powder between the fingers, may not be used.

PSG 3.3 Water

Only potable quality water from an approved source may be used for mixing concrete. Water from a river or stream may however be used for curing.

PSG 3.4 Aggregates

The nominal stone size specified in the concrete grade (e.g. 30 MPa/40 mm) shall mean stone conforming to the grading specified in SABS 1083 for the nearest equivalent size, i.e. 40 mm means stone that complies with SABS 1083 for 37, 5 mm size.

PSG 3.4.2 Use of plums

The use of plums will not be permitted in concrete.

PSG 3.4.4 Fine aggregate *

The fineness modulus of the sand delivered to the mixer shall lie between 1,7 and 2,8 and the standard deviation of fineness modulus of samples of sand that is delivered to the mixer during one shift shall be not more than 0,10.

PSG 3.5.1 Admixtures

The use of admixtures will be subject to the approval of the Engineer. The information listed in Clause 3.5.1 shall be provided.

PSG 3.5.2 Air-entraining agents

The use of air-entraining agents will not be permitted.

PSG 3.9 Cementitious material for blast furnace slag concrete *

The cementitious material for blast furnace slag concrete shall consist of not less than 50% by mass of portland cement complying with SABS 471 and not more than 50% by mass of milled granulated blast furnace slag. The ratio of blast furnace slag to cement may be varied by the Engineer before or during the Contract.

Blast furnace slag shall be milled, granulated blast-furnace slag processed from an approved source and shall be of a consistent quality. It shall be ground to a minimum fineness of 3 500 Blaine (square centimetres per gram). The percentage by mass retained on an 88 micrometre screen shall not exceed 10%.

The blast furnace slag and the ordinary portland cement shall be added separately at the mixer where they shall be intimately mixed.

PSG 4 Plant

PSG 4.4 Mixing plant and vibrators

Stand-by mixers and vibrators of adequate capacity and with an independent power unit shall be maintained on site for immediate use in the event of breakdown of the regular mixers or vibrators or failure of the power supply.

PSG 4.5.4 Formwork: chamfers and fillets *

All exposed external angles in concrete work shall have 20 mm x 20 mm chamfers unless otherwise specified or ordered, but the top edge of a slab that is to receive an applied finish shall not be chamfered.

PSG 5 Construction

PSG 5.1 Reinforcement

PSG 5.1.2 Fixing

Fixing of reinforcing bars by welding will not be permitted without the prior approval of the Engineer. Where welding is approved the methods used shall be subject to the Engineer's approval. Where called for, samples of the typical reinforcement to be welded will be sent to a laboratory, designated by the Engineer, for testing purposes. Under these circumstances the welding of the samples shall be carried out on the site by the welder to be subsequently employed on the job, and carried out under the conditions which will prevail during the actual site welding. Where welding is permitted by the Engineer, it shall be carried out in strict accordance with the relevant SABS Codes of Practice.

PSG 5.1.3 Cover

In Clause 5.1.3(a) amend the words "bar or stirrup" to read: "bar, secondary reinforcement, tie, stirrup, tying-wire knots or wire ends".

Add to Clause 5.1.3: "Tying wire may not encroach on the specified minimum cover by more than a single strand thickness."

PSG 5.1.3.1 Spacers *

Spacers shall be purpose made precast mortar blocks.

The mortar blocks shall be properly shaped so as not to slip out of position and shall be made of the same mix as the mortar of the concrete in which they are to be placed. The mortar shall be well compacted by approved means into the moulds to result in blocks with a density of at least 2 300 kg/m3 and which are free from honeycombing. The mortar blocks shall be cured in water for at least 7 days. Blocks which have not been manufactured and cured strictly in accordance with these requirements or which are in any other way considered unsatisfactory by the Engineer, will be rejected and shall be removed from the Site.

PSG 5.2 Formwork

PSG 5.2.1 Classification of finishes

Formwork for formed concrete surfaces against which backfill will be placed shall be rough. Formwork for all other formed surfaces shall be smooth, except where otherwise specified.

PSG 5.2.5.2 Removal of formwork for blast furnace slag concrete

The requirements specified in Clause 5.2.5.2 for the removal of formwork in the case of portland blast furnace cement shall apply for blast furnace slag concrete.

PSG 5.5 Concrete

PSG 5.5.1.1 General

The concrete mix design for strength concrete must be prepared in an approved laboratory and the results of actual test mixes must be submitted for approval together with 7-day and 28-day strength test results. Special attention is drawn to the fact that the concrete mix must provide a very dense and impervious concrete.

No concrete shall be cast until the mix designs have been approved by the Engineer. The Engineer may call for revised mix designs at any stage during the Contract.

PSG 5.5.1.4 Chloride content

The maximum chloride content (as Cl^-, % (*m/m*)) in the concrete shall not exceed 0.20%.

PSG 5.5.1.5 Durability

All concrete in the works shall be considered to be subject to severe exposure conditions. The water : cement ratio shall not exceed 0.45.

PSG 5.5.1.7 Strength concrete

With the exception of mixes weaker than 15 MPa, all concrete for the Works shall be considered to be strength concrete in terms of Clause 5.5.1.7.

Strength concrete shall be Grade 30 MPa/19 mm. The minimum binder content shall be 340 kg/m^3, of which 50% by mass shall be CEM1 Portland cement and 50% shall be blast furnace slag.

PSG 5.5.2 Batching

Batching of strength concrete shall be by mass.

PSG 5.5.3.2 Ready-mixed concrete

Concrete from a central concrete production facility other than on the construction site will be permitted and, apart from test results in terms of 7.3.1, 7.3.2 and/or 7.3.3, test results obtained by such a production facility as part of its quality control system will be accepted for evaluation in terms of Clause 7.3.4, provided they are stored and cured on site.

PSG 5.5.5.10 Prevention and repair of plastic shrinkage cracks *

The Contractor shall take whatever measures are necessary to prevent plastic shrinkage cracking in the concrete. Particularly on dry windy days or hot sunny days the Contractor shall make provision for fine spraying of the concrete surface with water within one hour of casting or covering of the concrete with black plastic sheeting. It may be necessary to change the aggregates or the concrete mix proportions. In order to combat shrinkage cracking it may also be necessary to change the time at which, or the manner in which, power floating is carried out.

If plastic shrinkage cracking occurs, the cracks shall be closed up by revibrating the concrete with a poker vibrator, within about three hours of casting. Once the cracks have been closed, the concrete shall be kept thoroughly wet, or covered with plastic sheeting for at least a further three hours.

PSG 5.5.7 Construction joints

Unless construction joints between designated joints shown on the drawings are authorized by the Engineer in writing, concrete shall be cast continuously between the designated joints shown on the drawings.

PSG 5.5.7.4 Formed joints *

Formed joints will be considered to be designated joints as defined in Clause 2.4.3.

Each joint shall be formed as shown on the drawings, complete with shear key rebates, waffle formwork, V-feature, waterstops, "Flexcell" or similar joint filler, dowel bars and their PVC tubes, etc. as indicated.

PSG 5.5.8 Curing and protection

PSG 5.5.8.1 Horizontal surfaces *

Horizontal and near horizontal surfaces shall be shall be wet cured for a minimum of seven days from date of casting, and treated in accordance with Clause 5.5.8.

Other surfaces of the concrete shall be treated with a curing compound complying with PSG 5.5.8.3.

PSG 5.5.8.2 Formed surfaces *

In order to improve the effectiveness of the curing treatment, the specified minimum time for the removal of the formwork shall be four days.

PSG 5.5.8.3 Curing compound *

The use of membrane curing compounds will be allowed on vertical faces or steeply inclined faces (i.e. steeper than 45^{O} to the horizontal) of cast in situ members of the structures subject to the Contractor producing sufficient, satisfactory cube crushing strength test results where the crushing strength of cubes which have been cured with the proposed curing membrane and left exposed to the elements are compared with those of an equal number of water cured cubes. The crushing strength of cubes cured with the proposed membrane shall be at least 85% of the crushing strength of the water cured cubes.

Before any membrane curing compound is used, each batch shall be tested on a trial surface to ensure that it forms a satisfactory membrane, and any compound which is unsatisfactory in the opinion of the Engineer, shall be rejected. Curing membranes will be disallowed if permanent discolouration of the concrete takes place. Surfaces where curing membranes are used shall be treated in such a manner that the final concrete texture and colour blends in with the rest of the concrete work. Furthermore, the Engineer shall, at his discretion, require the Contractor immediately to adopt an effective alternative means of curing any area of the structure to which a membrane has been applied which, in the opinion of the Engineer, is unsatisfactory. The curing compound used shall be to the approval of the Engineer. Wax based curing compounds will not be permitted.

The curing compound shall be applied immediately as formwork is progressively stripped or, in the case of unformed surfaces, when the concrete has taken its initial set. It shall preferably be applied by spraying and the rate of application shall be strictly in accordance with the manufacturer's recommendations. A method of monitoring the area to which curing compound has been applied and the application rate shall be as approved by the Engineer and rigidly applied by the Contractor.

Surfaces of joint rebates, where elastomeric sealant is to be applied, shall be protected from contamination by curing compound by the use of masking tape.

PSG 5.5.9.2 Hot weather conditions

No placing of concrete shall take place if the ambient temperature exceeds $32^{O}C$, or is likely to rise to above $32^{O}C$ during the casting period or within eight hours after casting is completed.

PSG 5.5.10 Concrete surfaces

PSG 5.5.10.4 Screeded finish *

After placing and compacting, the concrete on a top (unformed) surface shall be struck off with a template to the designated grades and tamped with a tamping board to compact the surface thoroughly and to bring mortar to the surface, leaving the surface slightly ridged but generally at the required elevation. No mortar shall be added, and noticeable surface irregularities caused by the displacement of coarse aggregate shall be made good by re-screeding after the interfering aggregate has been removed or tamped.

PSG 5.5.10.5 Wood-floated finish *

Where wood-floating is ordered or scheduled, the surface shall first be given a finish as specified in PSG 5.5.10.4 Clause 5.5.10.1 and, after the concrete has hardened sufficiently, it shall be wood-floated, either by hand or machine, only sufficiently to produce a uniform surface free from screeding marks.

PSG 5.5.10.6 Steel-floated finish *

Where steel-floating is specified or scheduled, the surface shall be treated as specified in PSG 5.5.10.4 except that, when the moisture film has disappeared and the concrete has hardened sufficiently to prevent laitance from being worked to the surface, the screeded surface shall be steel-trowelled under firm pressure to produce a dense, smooth, uniform surface free from trowel marks.

PSG 5.5.14 Defects

All defects shall be repaired as soon as possible after the formwork has been removed and the Engineer has inspected the concrete. A statement of the method to be used for each repair shall be submitted to the Engineer for his approval before any work is carried out. The Engineer may prohibit the further placing of concrete in the particular area concerned until he is satisfied that the repair has been satisfactorily executed.

PSG 6 Tolerances

PSG 6.2 Permissible deviations

Degree of Accuracy II shall apply except that abrupt changes in a continuous surface shall not be more than 3 mm.

PSG 7 Testing

PSG 7.1.2 Frequency of sampling

One sample shall consist of three concrete test cubes.

For each sample taken the position in the structure shall be recorded where the batch represented by that sample is placed.

Sampling of concrete of a particular grade shall be as specified in Clause 7.1.2.

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PSH STRUCTURAL STEELWORK (SABS 1200 H)

PSH 3 Materials

PSH 3.1 Grade of Steel (Subclause 3.1)

Unless otherwise stated, the grade of steel for all members shall be Grade S355JR and shall comply with the requirements of SABS 1431.

PSH 3.3 Single length members

The Contractor shall use only single length structural members. Only in exceptional cases will making up of member lengths by welding short lengths together be permitted and then only in accordance with details as approved by the Engineer. In cases where the required member length is longer than available stock lengths, details of joints shall be as supplied, or approved, by the Engineer.

PSH 5 Construction

PSH 5.1 Drawings and shop details

PSH 5.1.1 Verification of dimensions

The Contractor shall be solely responsible for the final verification of all steelwork dimensions before manufacturing any steelwork components.

PSH 5.1.2 Shop details (Subclause 5.1.2)

The Contractor shall be responsible for the preparation, in accordance with SABS 0162:1993, of shop drawings and/or details. The Engineer will require five working days for the approval of shop drawings/details submitted by the Contractor.

PSH 5.2 Fabrication

PSH 5.2.1 Holes for fasteners (Subclause 5.2.4)

Holes for fasteners shall be drilled. Punching of holes will only be permitted with the approval of the Engineer.

PSH 5.2.2 Welders (Subclause 5.3.4)

All welding shall be done by, or under the direct supervision of coded welders.

PSH 5.3 Erection (Subclause 5.5.1)

PSH 5.3.1 Procedure

The Contractor shall submit a method statement for the Engineer's approval before erection of any structural steelwork commences. The method statement shall clearly indicate the use of temporary bracing to suit the erection sequence.

PSH 5.4 Grouting of supports

PSH 5.4.1 Holding down bolts and grouting of supports

The Contractor shall supply detailed layouts of holding down (HD) bolts, as well as a suitable steel template of each type of HD bolt layout which can be used by the building contractor to accurately position the bolts. Grouting will be carried out by the building contractor.

The HD bolts and templates shall be provided to the building contractor within two weeks after the Contract has been awarded to the Contractor.

PSH 7 Testing

PSH 7.1 Test certificates

Test certificates pertaining to steel used for the various members shall be supplied by the Contractor to the Engineer when called for.

PSH 8 Measurement and payment

PSH 8.1 Templates for HD bolts

The cost of providing the steel templates specified in PSH5-4.1 shall be allowed for in the rates for HD bolts and no separate payment will be made for templates.

PSHA STRUCTURAL STEELWORK (SUNDRY ITEMS) (SABS 1200 HA)

PSHA 3 Materials

PSHA 3.1 Structural steel

Structural steelwork shall be Grade 300WA.

PSHA 3.4 Stainless steel*

All stainless steel items shall be Grade 316 material.

PSHA 5 Construction

PSHA 5.2.6 Handrails

The handrails shall be manufactured by an approved manufacturer specializing in such work and shall be of galvanized steel tubing of nominal thickness 2,6 mm and of normal outside diameter at least 34 mm.

Stanchions shall be manufactured preformed in one piece and shall be at least 42 mm nominal outside diameter. The bases of the stanchions shall be preformed to suit the situation in which they are to be installed, and the stanchions and spheres shall be preformed to suit right angled or other angled intersections as shown on the drawings.

Stanchions shall be spaced at intervals not exceeding 2,0 m. All joints shall be welded after the erection of handrails.

PSHA 5.2.11 Corrosion protection *

The open grid flooring panels, ladders and screens shall be galvanized in accordance with the requirements of Subclause 5.9 of SABS 1200 HC.

PSHA 5.2.10 Protective treatment

All mild steel items not suited for hot-dip galvanizing shall receive the following treatment, unless otherwise scheduled, at the shop of an approved painting subcontractor.

All internal and external surfaces shall be blast cleaned to Swedish Standard SIS 05/59/00 Sa 2 1/2 with an anchor profile between 45 and 75 micrometres. The surface shall be moisture-free of soluble salts and airborne contaminants, and shall be painted with a twin pack polyamide cured high build epoxy coating to a minimum dry film thickness of 300 micrometres. The first coat of paint shall be applied within 2 hours of blast cleaning. The time period between subsequent coats shall be in accordance with the paint manufacturer's requirements.

PSHA 5.2.11 Type M protection *

Steelwork shall be cleaned to Sa 2½ finish and, within four hours of final cleaning, be primed with alkyd resin-based primer and finished with two coats of gloss alkyd resin-based enamel paint. Primed steelwork shall be kept covered and protected until erected in its permanent position.

PSHA 5.3.7 Repairs to paint

Where site cutting and/or welding is required, the area for a distance of 50 mm on either side of the weld or cut shall be cleaned of all coatings, the cutting and/or welding carried out, the weld deslagged, all flux and weld spatter removed, the steelwork ground down to at least Sa 21/2 and painted as specified herein. On arrival on site, and both before and after erection, all items of steelwork shall be

examined for damage to the paintwork, and damaged areas degreased, derusted and repaired. The damaged area shall be ground down to at least Sa 2½.

The surrounding paintwork which is still intact shall be feathered for a distance of 20 mm beyond the damaged area. The whole shall then be repainted as specified herein. Under no circumstances will the use of wire brushes be permitted for the removal of rust or other contaminants.

PSHA 5.4 Penstocks *

Channel mounted penstocks as scheduled are required in the various bifurcation structures. The penstocks shall be manufactured from stainless steel Grade 316 to the details shown on the relevant drawings. The penstocks shall have rectangular frames suitable for casting into concrete channel walls and shall be operated by means of a clockwise-closing handwheel with a rising spindle. The penstocks shall be able to withstand an off-seating head of 2,0 m of water.

PSHA 5.5 Grids *

Grids to the syphon inlets shall be manufactured in accordance with the details shown on the relevant drawings.

PSHA 8 Measurement and payment

PSHA 8.3.6 Corrosion protection

Notwithstanding the requirements of Subclause 8.3.6, corrosion protection (painting and galvanizing) will not be measured separately, the prices tendered for the steel items being held to include for the cost of corrosion protection as specified.

PSHA 8.3.7 Penstocks *

Penstocks will be measured by number. The rate shall cover the cost of supply, delivery, corrosion protection, grouting in of anchor bolts and complete installation of penstocks with frames.

PSHA 8.3.8 Grids *

Grids will be measured by number. The rate shall cover the cost of supply, delivery, corrosion protection, grouting in of anchor bolts and complete installation of grids.

PSHA 8.3.9 Hand stops *

Hand stops will be measured by number. The tendered rate shall cover the cost of supply, delivery, corrosion protection and complete installation of gates and frames.

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PSLB BEDDING (PIPES) (SABS 1200 LB)

PSLB 3 MATERIALS

PSLB 3.1 Selected granular material

Replace Clause 3.1 with the following:

"Selected granular material shall be a granular, free-draining, non-cohesive material with a grading analysis that shows 100% passing a 9.5 mm sieve and less than 5% passing a 0.425mm sieve. The Compactability Factor shall not exceed 0.4."

PSLB 3.2 Selected fill material

Where rock or expansive clay is encountered in the trench bottom, the material in the selected fill blanket shall be selected granular material.

PSLB 3.4 Selection

Notwithstanding any references to the contrary in Clause 3.4, the Contractor is required to use selective methods of excavating. The Contractor shall selectively remove and keep separate topsoil, unsuitable material, and material suitable for reuse as backfill, selected fill, selected granular material or for other use as ordered by the Engineer.

PSLB 5 CONSTRUCTION

PSLB 5.2 Placing and compacting of rigid pipes

PSLB 5.2.1 Class A Bedding

Add the following:

"or a period of 5 days has elapsed after the placing of the concrete in that section, whichever occurs first"

PSLB 5.2.2 Class B and Class C bedding

Concrete stormwater pipes shall be bedded as specified for rigid pipes with Class C bedding unless otherwise shown on the drawings or ordered by the Engineer.

PSLB 5.2.2 Class B Bedding

1. The dimension "x" for all rigid and flexible pipes (except for HDPE connections) as referred to in drawing LB-1 and LB-2 shall be 150mm.

PSLB 5.3 Placing and compacting of flexible pipes

All PVC-U pipes, sewers and erf connections shall be classified as flexible pipes.

PSLB 7 TESTING

PSLB 7.1 Density testing

Density tests shall be as per PSDB7.1.

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PSLC CABLE DUCTS (SABS 1200 LC)

PSLC 2 INTERPRETATIONS

PSLC 2.4 Abbreviations

Replace the term “GPO” with “Telkom”.

PSLC 3 MATERIALS

PSLC 3.1 Ducts

Notwithstanding this clause, the following pipes shall be used for cable ducts:

Electricity ducts shall be PVC-U class 51 sewer pipes which shall comply with the relevant requirements of SABS 791, complete with end caps and draw wires.

Irrigation ducts shall be an approved smooth bore, black, HDPe cable conduit, complete with push fit couplings, rubber sealing rings, end caps and draw wires.

Data and communication ducts shall be smooth bore, green, approved HDPe cable conduit, complete with push fit couplings, rubber sealing rings, end caps and draw wires.

PSLC 3.2 Bedding

Bedding shall comply with PSLB 3.1.

PSLC 3.3 Backfill

Material used for backfill of trenches under carriageways shall be subbase quality material that complies with Clause 3.2.1 of SABS 1200 ME.

PSLC 5 CONSTRUCTION

PSLC 5.1 Excavation of trenches

The classification of excavation shall be as specified in PSD 3.1.

PSLC 5.1.1 Trench widths and depths

Ducts shall be installed at the positions shown on the drawings, according to Drawing LC-1 of SABS 1200LC, unless shown otherwise on the drawings, or as ordered by the Engineer. Ducts shall be installed across carriageways at right angles to the centreline of the road. All ducts across carriage-ways shall have a minimum cover of 1.0m between the finished road surface and the crown of the duct. Ducts shall extend beyond the back of the kerb, walkway or edge of road, as applicable, by a minimum of 1.0m.

Where ducts are installed in areas other than road carriageways, the minimum cover shall be as stated in Clause 5.1.1.2.

In the case of electricity ducts for high tension electricity cables, the base width of the trench shall be the diameter of the duct with 150mm side allowance, subject to a minimum base width of 500mm. Where two or more ducts are laid in the same trench the minimum base width shall be the sum of the diameters plus 150mm side allowance and a minimum spacing of 100mm between ducts.

PSLC 5.3 Duct laying

PSLC 5.3.3 Draw wire

The Contractor shall install 3mm nominal diameter draw wires in all ducts.

PSLC 5.3.4 Draw pits

The connection of the cable duct to the draw pit shall be properly sealed to prevent the ingress of water or sand into the draw pit.

PSLC 5.3.5 Sealing of ducts *

The ends of ducts shall be sealed to prevent the ingress of sand, dirt and water during construction, and on completion of the duct. This shall be carried out by placing end caps onto the open ends of the pipe.

The ends of electricity ducts shall be sealed with approved end caps.

PSLC 5.6 Laying of cables with other services

Where communication ducts are laid alongside water pipelines, a minimum clearance of 500mm between the pipe/duct shall be maintained.

Where communication ducts and low voltage electricity cables are to be laid alongside each other in the same trench, a minimum clearance of 300mm shall be maintained between the ducts.

PSLC 5.7 Crossings of communication and electricity ducts

Notwithstanding Clause 5.7, the distance between communication and electricity ducts/cables shall be the maximum possible, but not less than 300mm in all directions. Where this cannot be achieved, then 50mm thick, Grade 20MPa/13mm concrete slabs shall be inserted between the ducts.

PSLC 5.10 Position to be marked

Marking of ducts is required on both sides of the carriageway.

The position, type and number of all ducts shall be marked by imprinting a letter “E”, “W”, “T”, “C” for electricity, water, Telkom and communication services respectively, into the wet concrete of extruded or insitu kerbs and channels, directly above the end of each duct or group of ducts. The imprint shall be 5mm deep and 100mm high. After the letters have been printed, the number of ducts laid shall be painted next to the symbol. The symbol and number shall be painted with an approved red paint. The letter and number shall be painted with an approved red paint.

Where there is no kerb or channel, or where precast kerbs are used, the duct shall be marked with a Grade 20MPa/19mm concrete marker 150mm x 150mm x 300mm long with the appropriate letter imprinted on the square face. The marker shall be placed hard up against the edge of the road surface, level with the verge.

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PSLD SEWERS (SABS 1200 LD)

PSLD 3 MATERIALS

PSLD 3.1 Pipes, fittings and joints

Sewers shall be constructed with uPVC class 34 (heavy duty – minimum hoop stiffness 300kPa) pipes and fittings. Sewer erf connections shall be constructed with 110mm diameter uPVC class 51 (normal duty – minimum hoop stiffness 100kPa) pipes and fittings. uPVC pipes and fittings shall comply with the relevant requirements of SABS 791. Structured wall uPVC pipes will not be acceptable.

PSLD 3.1.3 AC pipes - Now FC

Triplex joints shall be used at the joints

AC pipes shall be bitumen dipped internally and externally. Where AC pipes are cast into or in contact with cast insitu concrete, the bitumen shall be removed beforehand.

PSLD 3.5 Manholes, chambers, etc.

PSLD 3.5.1 Bricks

Bricks used in sewerage infrastructure shall be burnt clay engineering bricks, with a compressive strength of 28 MPa minimum, that comply with the requirements of SABS 227.

PSLD 3.5.2 Precast concrete sections

Joints between concrete chamber sections shall be sealed according to the drawings.

PSLD 3.5.3 Prefabricated AC manholes

Prefabricated AC manholes are not permitted.

PSLD 3.5.4 Concrete

Dolomitic aggregate shall be used in the manufacture of the precast concrete chamber sections, leveling rings and roof slabs, and for all cast insitu concrete, mortar, benching and plaster used in manholes.

PSLD 3.5.7 Step irons

Step irons are not required in manholes.

PSLD 3.5.8 Manhole covers and frames

Approved precast concrete heavy duty roof slabs shall be used in all areas subject to traffic loads, i.e. in the road carriageways, verges and service lanes. Approved precast concrete medium duty roof slabs shall be used in all other areas.

Medium duty cast iron Type 4 manhole covers and frames, which comply with the requirements of SABS 558, shall be used in all areas not subject to traffic loads.

Heavy duty cast iron Type 2A manhole covers and frames, which comply with the requirements of SABS 558, shall be used in all carriageways.

PSLD 3.6 Marker posts

Erf connection markers shall be 40mm diameter HDPe class 10 pipes, which protrude 300mm above finished ground level, with a 200mm wide strip at the top of the marker painted yellow.

PSLD 5 CONSTRUCTION

PSLD 5.6 Manholes, inspection chambers, etc

Manholes shall be 1000mm nominal diameter precast concrete sections and shall be installed according to the manufacturer's specifications. The flexible connections to the manholes shall be as shown on the drawings.

A sample manhole shall be completed at the start of construction. Once the sample manhole has been approved by the Engineer, it will be used as a standard for all other manholes.

Manholes shall not be backfilled without the written approval of the Engineer.

PSLD 5.6.1 General

Replace the word "brick" in Clauses (a) and (b) with "cast insitu concrete."

PSLD 5.6.2.3 Benching

The concrete render to be applied on top of the benching shall be mixed in the proportions of 1 part cement, 2 parts sand and 3 parts 7mm concrete stone, by mass. The sand proportion may be varied between 1.5 and 2.5 to obtain ideal workability.

PSLD 5.6.7 Finished cover levels *

Unless otherwise ordered or dimensioned explicitly on the working drawings, the level of the top surface of the cover shall be:

- flush with the final surface of a carriageway, footway or any paved areas
- 50 mm above the surface of a grassed or gravelled verge, or service lane
- 250 mm above the finished ground level for manholes situated at the midblock of private or municipal property.
- 500 mm above ground level in undeveloped open space.

PSLD 5.6.5 Precast concrete manholes

Precast concrete sections shall be placed such that there is no misalignment of the shaft and such that the shaft is truly vertical. The first section shall be bedded firmly in the base while the concrete is wet. The first precast section shall not rest on the crown or collar of a sewer. The precast concrete section shall be cut to suit the sewer with an angle grinder, and under no circumstances shall holes by knocked out by hammer.

Joints between precast concrete sections shall be sealed with a bitumastic sealant. The sealant shall be placed on the top of the section before placing the next section above it. The external surface of the joint shall be thoroughly cleaned and a double layer of self adhesive polyethylene tape shall be wrapped around the joint.

PSLD 5.6.8 Manhole repair *

The Contractor may attempt to rectify infiltration visible in the manhole channels, pipe ends or benching by applying proprietary waterproofing products approved by the Engineer, on the external surfaces of the manhole only. Should such attempt prove to be unsuccessful in the opinion of the Engineer, the Contractor shall demolish the base and rebuild the manhole.

PSLD 5.6.9 Cast in-situ concrete manholes*

Refer to Municipal Standard Detail Drawings for details.

20 MPa strength concrete shall be used. Aggregate size may be 19 mm or 13 mm to suite Contractor. Dolomitic aggregates are not required.

When the concrete is mixed on site, an approved rotary mixer, suitable in size for a batch containing cement in increments of one sack of 50 kg, shall be used. The Contractor's method of batching of the ingredients shall be to the approval of the Engineer's Representative. Samples of the materials to be used shall be submitted for approval. The proportions of cement, coarse and fine aggregate and water necessary to produce the 20 MPa concrete shall be determined and submitted to the Engineer's Representative together with the results of compressive strength tests, before the Contractor will be allowed to use site mixed concrete in the construction of manholes.

The Contractor shall bear the costs of determining the proportions of the mix and making and testing cubes for this purpose. If the Contractor submits reliable test records of concrete made from the same materials and mix proportions which he proposes to use, then the Engineer may waive all or part of the strength tests required above to verify that the concrete mix design which the Contractor proposes to use is satisfactory.

The Contractor shall carry out his own testing during the construction of the Works to ensure that the concrete being used complies with the Specification. The Engineer's Representative shall carry out such test check testing as he requires and the Contractor shall render any assistance necessary in taking of samples and the carrying out of tests.

All concrete being placed shall be vibrated by means of approved vibrators. Curing shall be by means of the application of a natural resin based liquid curing compound complying with ASTM C309 74. When the surface to be cured is to receive further concrete it shall be cured with water only, by sprinkling, spraying or ponding such as to maintain it in a continuously wet condition.

If the concrete is found to be cracked, honeycombed, soft or defective in any way, or if cube test strength results do not comply with the requirements, then the concrete shall be rejected. Rectification shall be by removal of the defective portion and replacement with sound concrete.

If the manhole is constructed in more than one lift the construction joint formed shall in addition to being prepared as specified in sub clause 5.4.5.4 of SABS 1200 GA, be reinforced with 8 No 12 mm diam. x 300 mm long mild steel dowel bars, cast in to a depth of 150 mm, placed centrally in the joint face and equally spaced about the circumference.

PSLD 5.6.9 Rectification of Infiltration of Water*

Any infiltration visible in the manhole channels, pipe ends or benching shall be rectified by demolishing the base and rebuilding. Rectification of infiltration through the walls and/or joints may be attempted only by externally applied measures, failing which the manhole shall be demolished and rebuilt.

PSLD 5.9 Connecting sewers

PSLD 5.9.1 Location and Details

Delete the words "Drawing LD 7 or Drawing LD 8" as applicable and replace by :

"The relevant Municipal Standard Detail Drawings."

PSLD 5.9.2 Marker posts

Before backfilling the erf connection, and while the end of the erf connection is still exposed, the marker post shall be installed immediately in front of the end cap. The post shall extend from the crown of the erf connection at the end cap, vertically above its centreline to a point 300mm above finished ground level, or as otherwise specified by the Engineer.

PSLD 5.9.3 Recording location

Replace item (c) with “the X, Y coordinates of the marker to an accuracy of 2m”

The data recorded in accordance with Clause 5.9.3 shall be submitted to the Engineer in electronic format.

PSLD 5.9.4 Connection to existing sewer/manhole *

The Contractor shall determine the exact position and existing invert level at the proposed connection point before excavating pipe trenches upstream of the connection point. Any discrepancy between the position and level on site and the design data shall be brought to the attention of the Engineer immediately.

The Contractor shall under no circumstances connect the new reticulation into an existing sewer or manhole without the prior written instruction of the Engineer. This instruction will only be given after acceptance, by the Engineer, of the sewers and manholes of the new reticulation upstream of the connection point.

After receiving the Engineer's approval of the proposed operation the Contractor shall interrupt or divert the sewage flow, expose the existing sewer, cut into the pipe, remove the debris, connect the new pipe into the old and make good, and backfill.

PSLD 5.9.5 Erf connections *

Erf connections shall be constructed according to the type and details shown on the drawings. Erf connections shall be situated 1.3m alongside the erf boundary as indicated on the drawings. The ends of the erf connections shall extend 1,0m into the erf, and shall be sealed with end caps and marked according to PSLD 5.9.2.

Where erf connections are built into manholes, the benching and channels shall be constructed in accordance with the drawings.

PSLD 6 TOLERANCES

PSLD 6.2 Overall centre-line control and manhole location

Delete in second line " ± 300" and replace by "±100". Manhole positions, as shown on the drawings, are critical. Any required deviation by the Contractor, in excess of the tolerance, must be authorized by the Engineer.

PSLD 6.3 Manhole invert levels

Replace "± 50mm" in the second line with "±25mm".

PSLD 6.6 As-Built information*

The Contractor shall submit "As-Built" levels, distances between manholes and the grades of pipelines to the Engineer on successful completion of the testing.

PSLD 7 TESTING

PSLD 7.1 General

Delete wording of Clause (c) and replace by: "A torch and mirror test shall be carried out on all pipe lengths, in both directions”.

PSLD 7.2 TESTS AND ACCEPTANCE/REJECTION CRITERIA

PSLD 7.2.6 Watertightness of manholes

The Engineer may request a watertightness test of any manhole. The watertightness test shall be conducted as follows:

The pipe ends shall be sealed with temporary end caps.

Infiltration : The excavation surrounding the manhole shall be flooded to approximately the top of wall level and this depth of water shall be maintained for at least 48 hours. The manhole will have satisfied the test requirements provided there is no sign of infiltration of water into the manhole.

Exfiltration : The manhole shall be filled with water to the top of wall level and this depth maintained for at least 24 hours. Water shall be added to maintain this level. At the end of the subsequent 24 hour period the drop in water level shall be measured. The manhole will have satisfied the test requirement provided the drop is less than 75mm per metre in depth of the manhole measured from channel invert to the original height of the water. A shorter testing time may be allowed at the discretion of the Engineer, subject to a minimum of 3 hours, in which case a 'drop in level' pro rata to the time tested shall be used.

PSLD 7.2.7 Torch and mirror test *

For the pipeline to be acceptable the visibility of the plug/reflector shall be at least 50% of its area.

PSLD 7.2.8 CCTV Inspection *

The Contractor shall perform closed circuit television inspection (CCTV) as a post-construction method to determine if the pipeline has been installed as required, all joints have been properly joined *welded and the beads properly removed*, and to inspect the lateral erf connections to the main sewer. The CCTV system shall have a tractor mounted rotating lens camera with articulating head, capable of pan and rotate. The system shall be capable of recording onto DVD and shall be equipped with an inclinometer. Each joint and erf connection shall be scanned 360 degrees. The camera shall be operative in 100% humidity conditions. Lighting for the camera shall minimize reflective glare. Lighting and camera quality shall be suitable to provide a clear, in focus picture of the entire periphery of the pipe for all conditions encountered during the work. Focal distance shall be adjustable through a range from 75mm to infinity. The remote reading distance counter shall be accurate to one percent (1%) over the length of the particular section being inspected. The camera, television monitor and other components of the color video system shall be capable of producing a minimum of 500 line resolution. All such inspections shall be performed by personnel trained to locate and identify breaks, obstacles and lateral erf connections by closed circuit color television.

Documentation consisting of a color video DVD, a written report detailing the condition of the mainline and joints, and a colour thematic map indicating the location of the main sewer and the lateral erf connections shall be submitted to the Engineer for approval prior to final payment

The newly installed pipe shall be visibly free of defects, which may affect the integrity or strength of the pipe. If in the opinion of the Engineer such defects exist, the pipe shall be repaired or replaced at the Contractor's expense. Any section of the pipe with a gash, blister, abrasion, nick, scar, or other deleterious fault greater in depth than ten percent (10%) of the wall thickness shall not be used and shall be removed from the site.

Post construction DVDs, reports and thematic maps shall be submitted to the Engineer for review prior to final payment. Should any portion of the inspection DVDs be of inadequate quality or coverage, as determined by the Engineer, the Contractor shall re-inspect the unacceptable portion at no additional expense to the Employer. All original DVDs shall remain the property of the Employer.

PSLD 7.2.9 Acceptance criteria *

The acceptance of the pipe length or manhole will depend upon whether it satisfies the criteria set out in SABS 1200 LD clauses 6 and 7 and the PS clauses above.

Only tests carried out on the pipelines after completion of the backfilling to ground level (excluding surface restoration) and completion of the construction of manholes to roof height, including benching, will be considered for acceptance purposes.

PSLD 8 MEASUREMENT AND PAYMENT

PSLD 8.2.1 Supply, lay, joint, bed and test pipeline

Up to a maximum of 75% of the measured lengths of pipes will be certified for payment until such lengths have successfully passed the field test.

In addition to Clause 8.2.1, the rate for supply, lay, bed and testing of pipelines shall include all test methods specified in PSLD 7.

PSLD 8.2.3 Manholes, inspection chambers

In addition to the requirements of Clauses 8.2.3, 8.2.4 and 8.2.5, the rate for manholes shall include the cost of supplying and installing the manhole complete, the supply, laying and jointing of channels as for a through manhole, the supply and installation of manhole roof slabs and medium duty precast concrete manhole covers and frames.

For the purpose of measurement and payment, the depth of a manhole, inspection chamber, etc, is defined as the depth from the cover level to the invert level of the manhole, inspection chamber, etc.

Extra-over items for heavy duty roof slabs and covers and frames have been scheduled.

PSLD 8.2.6 Erf connections

Notwithstanding the requirements of Clause 8.2.6, excavation in hard rock will be measured separately in accordance with the requirements of Clause 8.3.2(b) of SABS 1200 DB.

In addition to Clause 8.2.6, the rates for the various types of erf connections shall also cover the cost of supply and installation of the bends, end cap and erf connection marker, recording locations, laying the connection pipeline to 1.0m within the erf, and testing.

An extra-over item has been scheduled for sewer erf connections where the length of the erf connection measured from the centerline of the main sewer to a point 1.0m into the erf, exceeds the standard 2.3m by 700mm. The unit of measurement is the linear metre. The extra-over rate shall cover the cost of additional excavation in soft materials, backfilling, bedding, disposal of surplus material, and the supply and laying of additional erf connection pipeline.

PSLD 8.2.11 Connection to existing sewer

Connections that involve cutting and building into existing manholes will be measured by number.

Construction of new manholes on existing pipes will be measured by number extra-over the rate paid for the construction of manholes.

Connections that merely entail connecting up to existing pipe ends will be measured by number.

The rates shall cover the cost of location, excavation, exposure and surveying of the positions and levels of the connecting points, cutting into and the making good of the existing works, removal and disposal of debris, the cutting, fitting and building in of the new pipes, the additional cost of building the new manhole on the existing sewer, as applicable, and any other costs of completing the connection as specified in PSLD 5.9.4, including dealing with the sewage flow.

PSLD 8.2.13 Watertightness of manholes *

Watertightness tests of manholes will be measured by number, per type (infiltration or exfiltration). Payment will be made only for successful testing. The cost of retesting failed tests will be to the Contractors account.

PSLD 8.2.14 Terminal manholes *

An extra-over item has been scheduled for the construction of terminal manholes.

The tendered rate shall cover the additional benching, corrosion protection measures, and all other additional labour, plant and materials necessary to complete the terminal manhole to the details shown on the drawings.

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PSM ROADS (GENERAL) (SABS 1200 M)

PSM 5 CONSTRUCTION

PSM 5.1 Pavement design *

The design of the road layerworks is indicated on the drawings.

PSM 5.2 Joints *

At the joint between the existing road and the roads constructed under this Contract, the surfacing of the existing road shall be neatly cut on a straight line and the construction layers of the existing road shall be neatly trimmed back with a 100mm step (measured horizontally) between each layer, to a depth matching the construction depth of the new road.

The alignment of kerbs etc., at junctions shall be adjusted and agreed on site to form acceptable transition curves at the junction points.

PSM 6 TOLERANCES

PSM.6.4 Level control *

The Contractor shall submit at the time of requesting acceptance of a road layer, a record of the surface levels of that section, taken at given points to coincide with the level pegs.

PSM 7 TESTING

PSM 7.1 General

The random sampling method of TMH 5, for the spotting of positions, for field density testing will not necessarily be applied by the Engineer.

Density testing shall be carried out where, in the opinion of the Engineer, the density of the compacted layer is in question. The Contractor shall present the full width of the layer for acceptance. Only in exceptional cases will partial widths of a layer be accepted for testing.

PSM 7.2 Process control

Process control carried out by the Contractor shall be executed by an independent, SANAS accredited laboratory approved by the Engineer.

PSM 7.3 Routine inspections and tests

Notwithstanding the requirements for minimum densities for single tests, as set out in the relevant standardized specification, no lot for which any single test result is below the specified density will be deemed to comply with the requirements for density.

All requests for acceptance of a layer shall be submitted to the Engineer in writing, specifying the exact location of the section and type of layer, accompanied by the level control information under PSM 6.4. On receipt of all these details the Engineer will arrange for the necessary inspections and tests to satisfy himself that the layer complies with the specification.

The Contractor shall backfill the test holes left in the layer with a similar material to that of the layer tested and compact the material to a similar density. Concrete shall not be used.

The Contractor shall not proceed with the placing of material for the next layer until he has received the written approval of the tested layer and section, from the Engineer.

PSM 7.4 Compaction control

Add the following to the end of clause 7.4 :

“except that where a nucleonic device is used, it shall have been satisfactorily calibrated against the sand replacement method for each type of material on which it is used. The Contractor shall also provide a copy of the calibration certificate of the nucleonic device with each report.”

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PSME SUBBASE (SABS 1200 ME)

PSME 3 MATERIALS

PSME 3.2 Physical properties

PSME 3.2.1 Subbase material

With reference to Clause d(ii) and d(iii), the Regional Factor for this area is 0.75.

PSME 3.2.2 Gravel shoulder and wearing course material

In Clause 3.2.2(b) delete the words "used in gravel shoulders".

PSME 5 CONSTRUCTION

PSME 5.4 Placing and compaction

PSME 5.4.1 Placing

The subbase layer shall be 100mm thick unless shown otherwise on the drawings.

PSME 7 TESTING

PSME 7.2 Process control and routine inspection and testing

PSME 7.2.2 Routine inspection and testing

Notwithstanding Clause 7.2.2 and Table 3, no single test result which I below the specified density will be accepted.

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PSMJ SEGMENTED PAVING (SABS 1200 MJ)

PSMJ 3 MATERIALS

PSMJ 3.1 Units

PSMJ 3.1.2 Class, strength and type

The concrete block paving units (CBP)shall be 60 mm thick Class 25, Type S-A (fully interlocking) with chamfers, with natural grey colour, for road and parking surfaces.

PSMJ 3.3 Sand for bedding and jointing

Samples of the proposed bedding sand and jointing sand shall be submitted to the Engineer for approval, complete with grading analysis and road indicator tests.

No paving or trial sections shall commence until the proposed bedding sand and filling sand have been approved by the Engineer in writing. Failure to meet this requirement will result in the rejection of any paving.

PSMJ 4 PLANT

PSMJ 4.2 ROLLER

Heavy duty steel rollers may not be used.

PSMJ 5 CONSTRUCTION

PSMJ 5.1 Preparation

PSMJ 5.1.1 New work

PSMJ 5.1.1.1 General

Add the following to the end of the first sentence: " …of this specification, to Degree of Accuracy I."

PSMJ 5.1.1.2 Depressions

Shallow depressions in the subbase shall be scabbled to ensure a minimum 50mm thickness of filling.

PSMJ 5.4 Laying of units

CBP units shall be laid in a herringbone pattern. The principle lines of the pattern shall be straight, and parallel to the main kerbs on straight tangents. Patterns on horizontal curves shall follow the line of one tangent through the curve, with a cut joint at the start of the other tangent.

Under no circumstances may the joint width between two units be less than 2mm.

Joints shall not be filled with jointing sand until the initial vibration of the units has been completed and the levels checked.

PSMJ 5.5 Filling gaps in unit pattern

Delete the contents of this clause and replace with the following:

"Gaps shall not be filled with concrete. The use of cut CBP units less than 25% of the full unit size is not permitted. CBP units alongside an edge restraint may be re-aligned (re-orientated) along the edge restraint to eliminate the need to cut CBP units longitudinally and to avoid small and slender units. The gap between the units and the edge restraints shall be 2-6mm.

CBP units shall be cut. No chopping or breaking of units will be permitted."

PSMJ 5.6.2 Paving subject to wheel loads exceeding 30kN

The paving is likely to be subjected regularly to wheel loads exceeding 30kN, therefore this Clause shall apply.

PSMJ 5.7 Joint filling

Both the jointing sand and the CBP units shall be dry when jointing sand is spread. Jointing sand shall not be washed into the joints.

Where ordered by the Engineer, jointing sand shall be stabilised with cement. Stabilised jointing sand shall be mixed at a ratio of one part cement to ten parts sand by mass (1:10), which shall be thoroughly mixed dry, brushed dry into the joints, vibrated, then lightly sprayed with water to activate the cement.

PSMJ 5.8 Re-filling of joints *

Two months after the opening of the paving area to traffic, the joints shall be re-filled with jointing sand in accordance with Clause 5.7 and PSMJ 5.7, to replace lost sand.

PSMJ 6 TOLERANCES

PSMJ 6.2 Permissible deviations

Category I degree of accuracy shall apply, except for:

b) 2) Smoothness of top of subbase layer measured on a 3m straight line in any direction) where the tolerance shall be ±4mm.

b) 3) Thickness of 20 mm compacted sand bedding layer, where the tolerance shall be ±5mm.

c) 2) (i) Vertical deviation from 3m straight line at kerbs, channels, gullies, manholes and other edge restraints) where the tolerance shall be +5,-0.

PSMJ 7 TESTING

PSMJ 7.2 Trial section

The trial section shall be prepared in a location identified by the Engineer.

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PSMK KERBING AND CHANNELLING (SABS 1200 MK)

PSMK 3 MATERIALS

PSMK 3.2.1 General

"Refer to the Construction Detail Drawings for kerb and channel details."

PSMK 3.8 Curing compound

In addition to Clause 3.8, the curing compound shall be the resin based white pigmented type.

PSMK 3.9 Bedding material

The bedding material for precast kerbs and channels shall be as detailed on the drawings.

PSMK 5 CONSTRUCTION

PSMK 5.1 Excavation and bedding

Delete the first paragraph viz. "Trenches for ..... grade."

PSMK 5.2 Precast concrete kerbing and channelling

Notwithstanding Clause 5.2, the minimum thickness of bedding material is 50mm.

PSMK 5.2.1 Precast concrete kerbing and cast-in-situ concrete channeling *

After the precast kerbs have been laid the formwork for the channeling shall be set up. Expansion joints shall be provided at approximately 8m intervals, i.e. opposite the joint between the kerbs. The principles of Clause 5.4 shall apply to the construction of cast-in-situ channeling.

PSMK 5.8.3 Subbase preparation

Notwithstanding Clause 5.8.3, the width of the subbase shall extend 150mm beyond the back face of the kerb.

PSMK 5.11 Transition sections and inlet and outlet structures

The Contractor shall construct transition kerbs to the details shown on the drawings.

PSMK 5.13 Junction with existing kerb and channel

The Engineer will indicate the length of existing kerb and channel to be removed in each case. The exposed road layer surface shall be made good before proceeding with the preparation for the new kerb.

PSMK 6 TOLERANCES

PSMK 6.1 Concrete kerbing and channeling

Replace the allowance of "0, - 10" in Clause (b)(1) with "0, -5" and add to the item "provided the layer thicknesses are not prejudiced."

PSMK 7 TESTING

PSMK 7.2 Cast insitu and extruded kerbing and channeling

PSMK 7.2.2.2 Alternative tests

Notwithstanding Clause 7.2.2.2, the average crushing strength shall be 20 MPa.

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PSMM ANCILLARY ROADWORKS (SABS 1200 MM)

PSMM 3 MATERIALS

PSMM 3.1 Guardrails, posts, and reflector plates

PSMM 3.1.1 Guardrails

The material used for guard rails shall be galvanised mild steel.

PSMM 3.1.2 Posts and spacer blocks

PSMM 3.1.2.1 Timber

Timber posts shall be manufactured from SA Pine or gum poles.

PSMM 3.1.2.2 Steel

Steel posts for guard rails shall be manufactured as shown on the drawings, or instructed by the Engineer.

PSMM 3.2 Road signs

PSMM 3.2.1 General

If required, give full details of the provision that is to be made in supports to ensure safe breakaways in emergencies.

PSMM 3.2.2 Structural steel

All structural steel, including steel tubes shall be hot dipped galvanized.

PSMM 3.2.12 Street Name Boards *

Street name boards shall be as specified on the Municipal Standard Detail Drawings PSMM 53.

PSMM 3.3 Road-marking materials

PSMM 3.3.3 Road studs

Road studs shall be the reflecting type, and shall match the colour of the road marking on which they are installed for the relevant direction of travel, except that where they are installed on white barrier (no-overtaking)lines, they shall be red.

PSMM 5 CONSTRUCTION

PSMM 5.1 Guardrails

PSMM 5.1.2 Painting of guardrails

PSMM 5.1.2.1 Guardrail elements

Guardrails shall not be painted.

(Alt)
Guardrails shall be painted and finished with black enamel and reflectorized yellow paint on the road side as shown on the drawings, and with white paint on the back.

PSMM 5.1.2.2 Timber elements

Timber posts and spacer blocks shall be painted as set out below:

Surface preparation : All dirt, peeling or cracking paint, and other foreign matter shall be removed by wire brushing, scraping, approved wax-free flushable paint remover, or other approved means. All checks, shakes, knot-holes and knot cavities shall be puttied up flush and, when relevant, the surface allowed to dry before painting is started. The moisture content of the timber shall be not more than 200 g/kg at the time of applying the first coat.

Primer — One coat of wood primer shall be applied.

Finishing — Two coats of high gloss enamel black colour (or of the colour ordered) shall be applied.

PSMM 5.2 Road signs

PSMM 5.2.1 Manufacture of supports and backing plates and boards

PSMM 5.2.1.2 Backing plates and boards

Backing plates and boards for road sign faces shall be manufactured from aluminium plate, aluminium extrusion, or a composite of these.

PSMM 5.2.1.6 Galvanizing

All structural steel, including steel tubes shall be hot dipped galvanized. Galvanized items shall not be painted.

PSMM 5.2.2 Painting

PSMM 5.2.2.4 (d)(2) Finishing coat

The colour of the finishing coat shall be one of, or a combination of the colours specified in clause 3.2.8.2.

PSMM 5.2.2.5 c) Painting of signs

PSMM 5.2.2.6 Painting of concrete

The finishing coats shall consist of an approved textured plastics film, applied by means of a sponge roller or in the manner recommended by the manufacturer and approved by the Engineer.

PSMM 5.3.6 Road Studs

Add:

Holes for the shank of the road studs shall be drilled; hammering with a moil point to create the hole will not be accepted. The Contractor shall provide the Civil Engineer with a method statement detailing how the holes will be drilled and road studs fastened and may only proceed once the Civil Engineer has approved the method statement.

PSMM 5.5 Street Name Boards *

Poles shall be erected at the positions shown on the drawings and name blades attached as ordered. The correct spelling of the names of the streets, etc. to appear on the blades will be supplied in writing by the Engineer.

PSMM 8 MEASUREMENT AND PAYMENT

PSMM 8.3.2 Provision and application of retro-reflective material

Details of the retro-reflective background, symbols, characters and legend are scheduled on the drawings.

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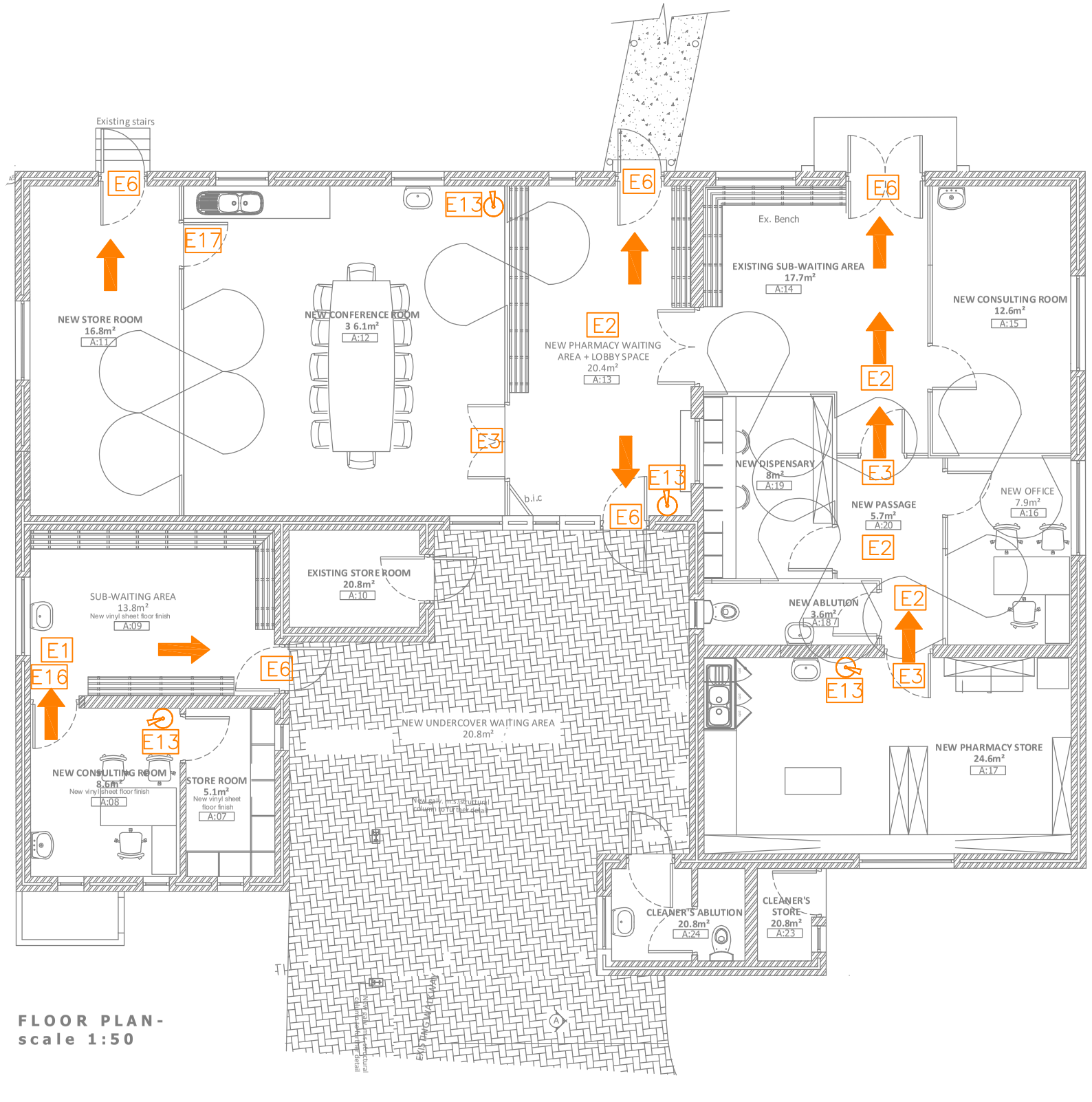
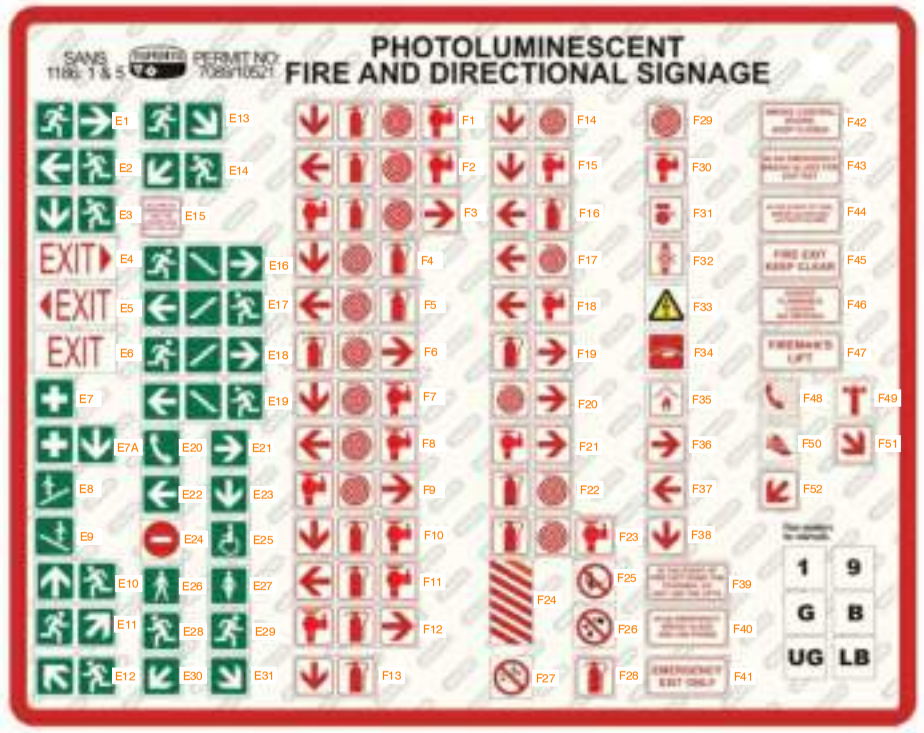


FLOOR PLAN-
scale 1:50



FIRE PROTECTION SIGNAGE

- EVACUATION DIRECTIONAL ARROW
- FIRE HOSEREEL AS PER DETAIL
- 4,5kg DCP FIRE EXTINGUISHER

1. FIRE HOSE REEL INSTALLATION TO COMPLY WITH SANS 543 AND SHALL BE COMPLETE WITH 30m LONG LIGHT RUBBER TUBE.
2. FIRE PROTECTION INSTALLATION TO COMPLY WITH SANS 10400 PART T & PART W.
3. FIRE EXTINGUISHER SHALL COMPLY WITH SANS 1910, SANS 1475–1 & SANS & SANS 10105–1.
4. ALL FIRE FIGHTING EQUIPMENT TO BE FITTED WITH SERVICE LABEL.
5. ALL ESCAPE DOORS SHALL BE CLASS A.
6. ALL FIRE SIGNS TO BE PHOTOLUMINISCENT AND SHALL COMPLY WITH SANS 1186–1, SANS 1186–3, SANS 1186–5, SANS 1464–22 AND SANS 10114–2. APPROVED.

FIRE PROTECTION INSTALLATION NOTES:

1. GENERAL

BUILDING AREAS: Consulting Rooms, Pharmacy, Ablutions, Office and Store Rooms.
AREA: 192 m²
OCCUPANCY: E4 – HEALTH CARE

POPULATION: 60 PEOPLE

2. TENANCY–SEPARATING ELEMENTS

SEPARATING ELEMENTS BETWEEN TENANCIES SHALL HAVE A FIRE RESISTANCE OF NOT LESS THAN 60min.

3. AUTOMATIC SPRINKLERS

THERE IS NO REQUIREMENT FOR SPRINKLERS IN TERMS OF T4.36

4. PORTABLE FIRE EXTINGUISHERS

PORTABLE FIRE EXTINGUISHERS SHALL BE INSTALLED IN COMPLIANCE WITH TABLE 11 OF T4.37

5. SMOKE CONTROL

THERE IS NO AREA THAT EXCEEDS 500sqm OF FLOOR AREA, THEREFORE NO PROVISION FOR SMOKE CONTROL.

FIRE PROTECTION INSTALLATION NOTES:

6. FIRE DETECTION

THE BUILDING SHALL BE EQUIPPED WITH A FIRE DETECTION SYSTEM AND AN EMERGENCY EVACUATION COMMUNICATION SYSTEMS COMPLYING WITH SABS0139. refer to Electrical Services

7. HOSE REEL

NO HOSE REELS SHALL BE PROVIDED SINCE THE TOTAL AREA OF THIS BUILDING IS LESS THAN 250m².

8. FIRE HYDRANTS

THE TOTAL BUILDING FLOOR AREA IS LESS THAN 1000m². THERE IS NO NEED FOR FIRE HYDRANT FOR THIS BLOCK.

9. TRAVEL DISTANCE

FURTHEST TRAVEL DISTANCE IS FROM NEW PHARMACY STORE TO EXIT NEXT TO EXISTING SUB–WAITING IS 12m AND DOES NOT EXCEED THE PRESCRIBED 45m.

FOR TENDER

No	AMENDMENTS	DATE
0	ISSUED FOR TENDER	JAN 2024

SURVEYED		
DRAWN	A. MTAMBEKI	JAN 2024
DESIGNED	A. MTAMBEKI	JAN 2024
CHECKED	MB.MALITI	JAN 2024
APPROVED	PR REGISTRATION NO.	DATE

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www.echealth.gov.za

PROJECT TITLE

RAGLAN CLINIC

DRAWING TITLE

GROUND FLOOR
FIRE PROTECTION
LAYOUT

SCALE	SHEET SET	SHEET SIZE
1 : 50	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-76-RG-FP-01	1

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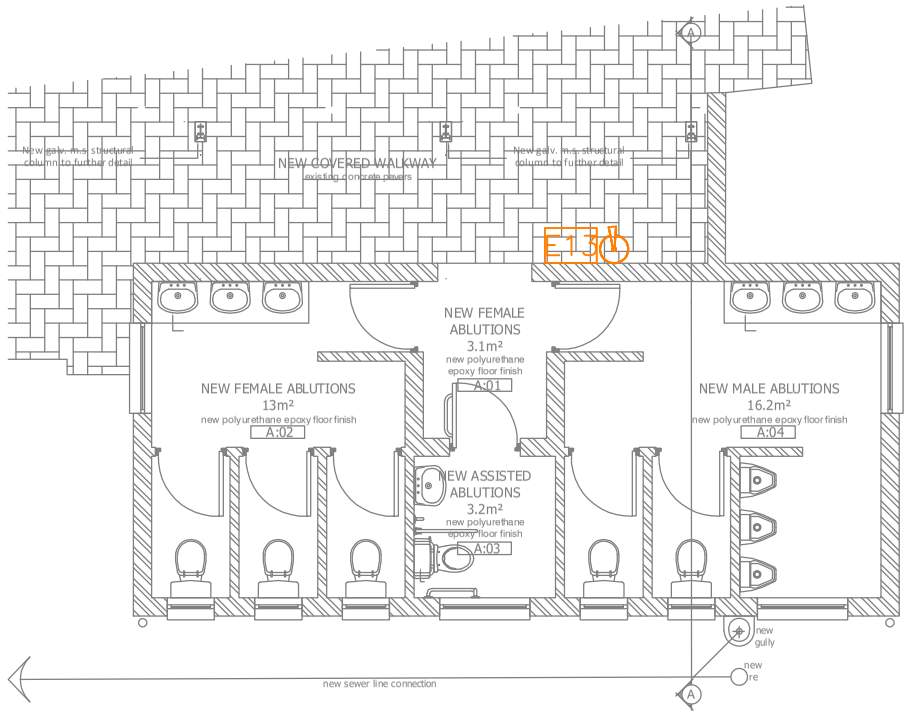
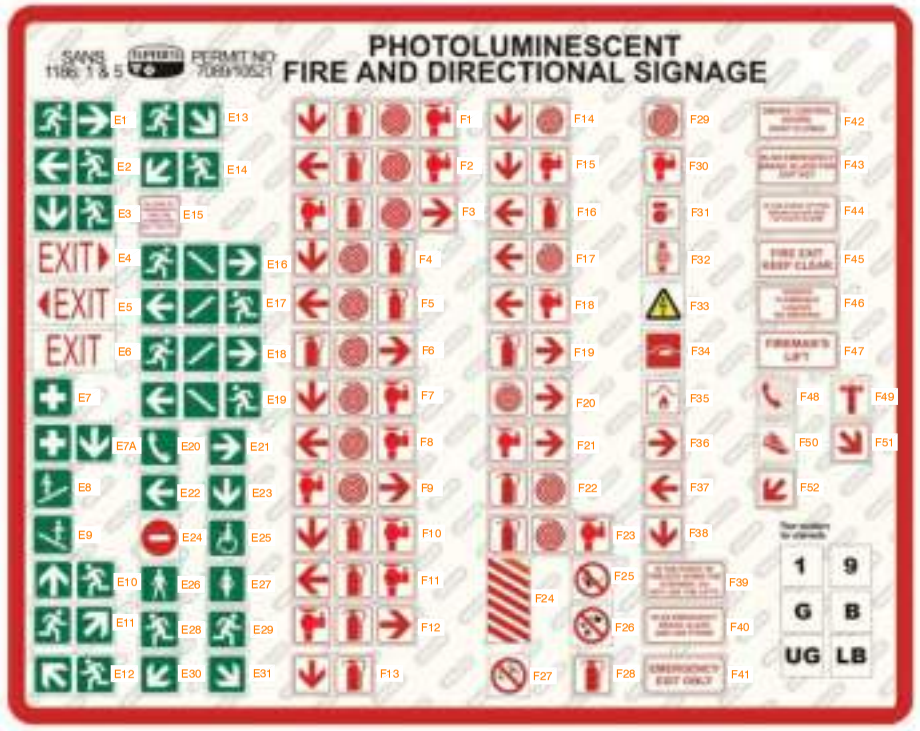


FLOOR PLAN-
scale 1:50



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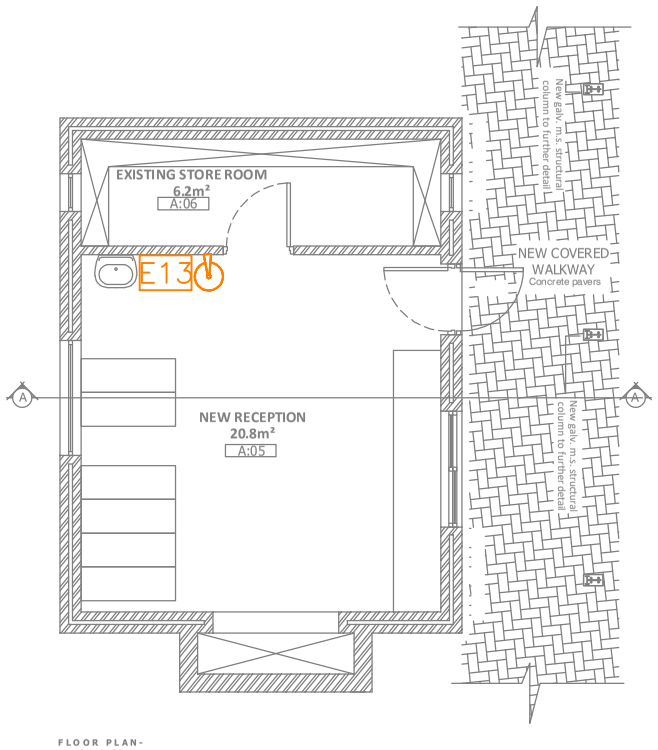
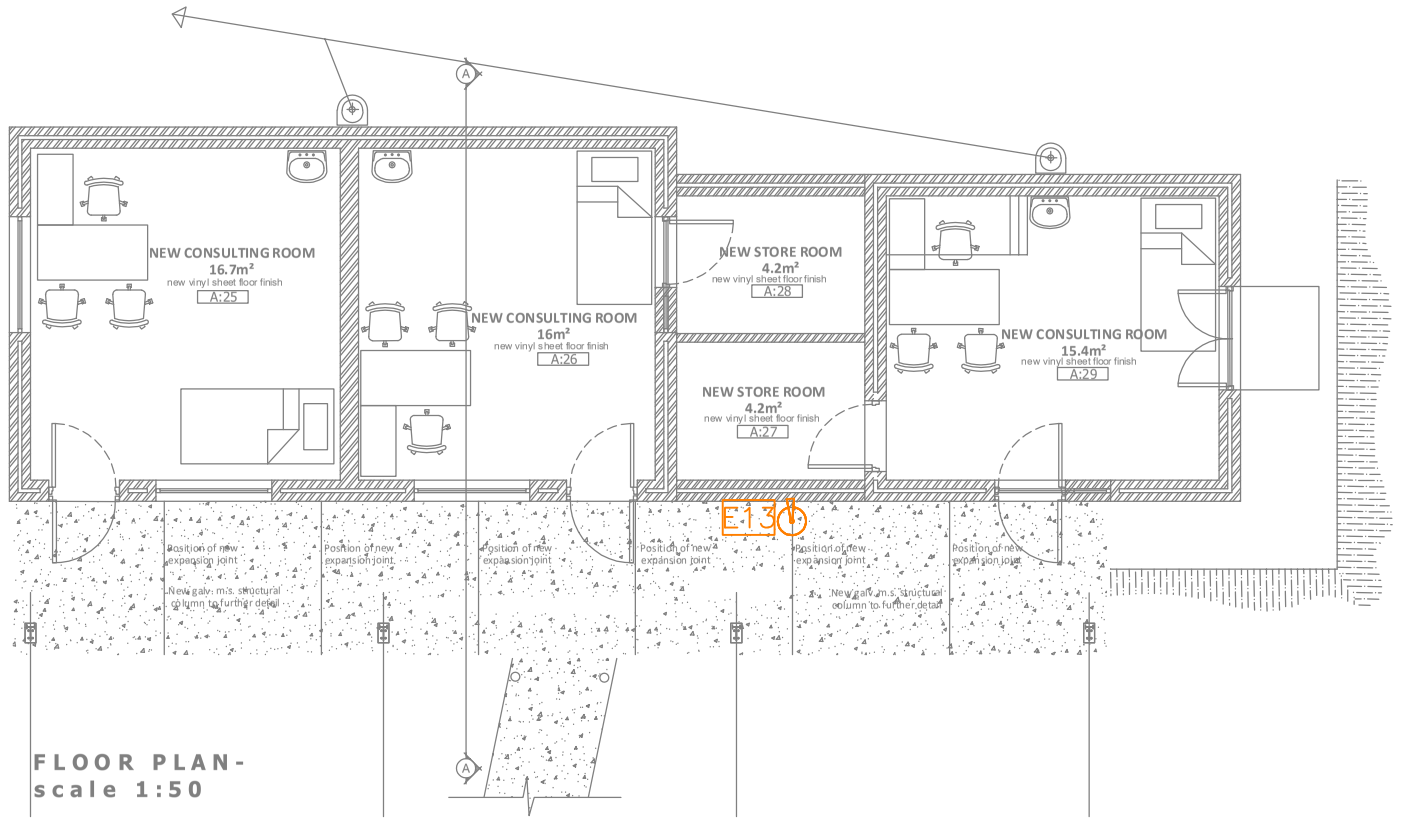


FLOOR PLAN-
scale 1:25



FLOOR PLAN-
scale 1:50

No	AMENDMENTS	DATE
0	ISSUED FOR TENDER	JAN 2024

SURVEYED		
DRAWN	A. MTAMBEKI	JAN 2024
DESIGNED	A. MTAMBEKI	JAN 2024
CHECKED	MB.MALITI	JAN 2024
APPROVED	PR REGISTRATION NO.	DATE

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www.echealth.gov.za

PROJECT TITLE

RAGLAN CLINIC

DRAWING TITLE

GROUND FLOOR
FIRE PROTECTION
LAYOUT

SCALE	SHEET SET	SHEET SIZE
1 : 50	SHEET 1 OF 1 SHEETS	A1

DRAWING No. 1574-76-RG-FP-02

REVISION 1

FOR TENDER

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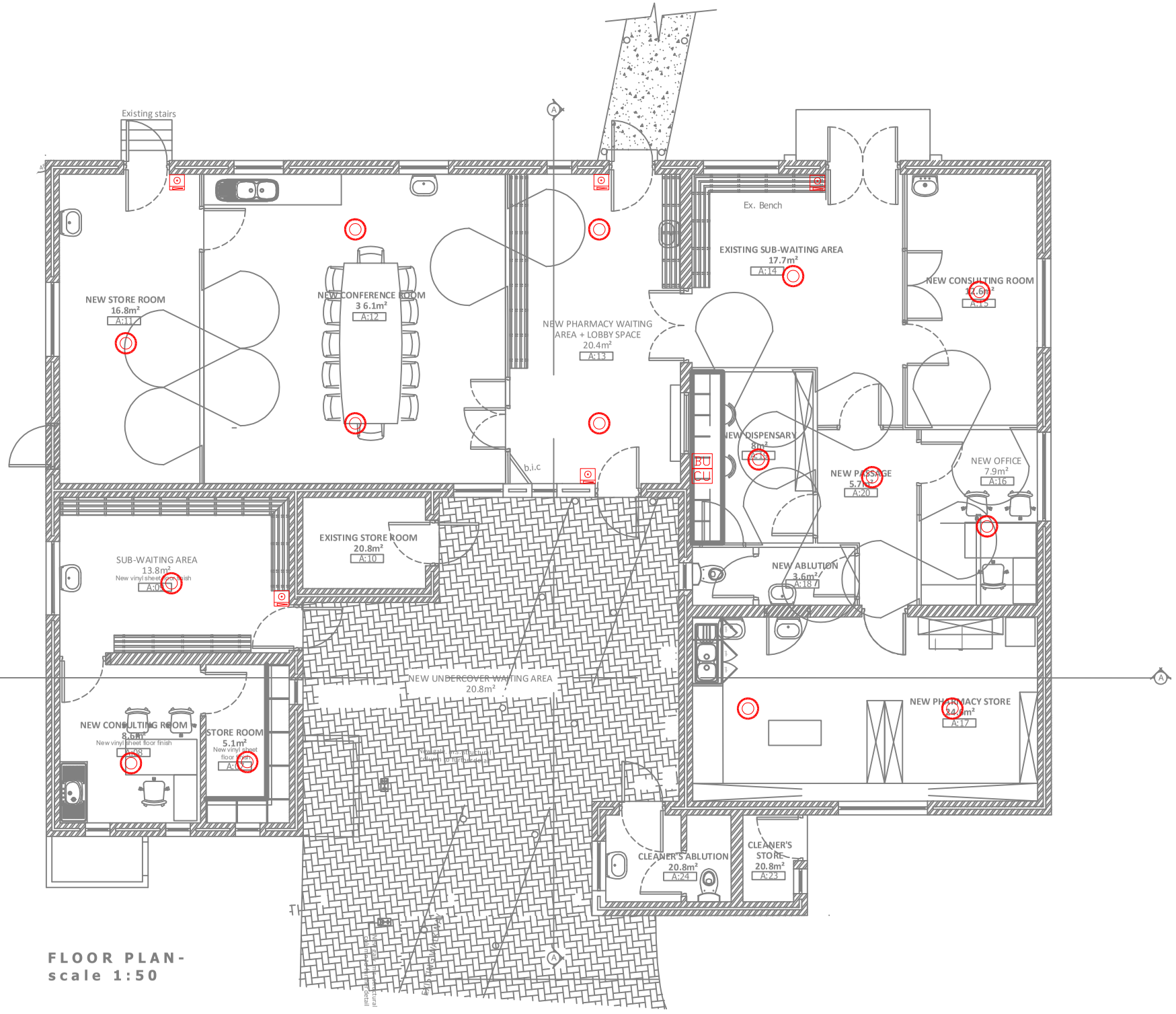

FLOOR PLAN-
scale 1:50

SYMBOLS:

- SMOKE DETECTOR
- SIREN STROBE LIGHT
- HEAT DETECTOR
- BREAKGLASS UNIT(1000mm AFFL)
- BU — BATTERY UNIT WITH FLOAT CHARGER
- CU — FIRE DETECTION CONTROL PANEL
- REMOTE DISPLAY UNIT

1. THE FIRE DETECTION SYSTEM SHALL ANALOGUE ADDRESSABLE TYPE.
2. THE INSTALLATION SHALL COMPLY WITH THE RECOMMENDATIONS OF SANS10139:2007.
3. THE SYSTEM SHALL BE OF CLASS M/L1
4. ALL CABLES SHALL BE PH30.
5. ALL MANUAL CALL POINTS SHALL BE MOUNTED AT ESCAPE DOORS AT 1000mm AFFL
6. BUILDING CLASSIFICATION: E4 HEALTH CARE

FOR TENDER

No	AMENDMENTS	DATE
1	ISSUED FOR CONSTRUCTION	OCT 2023
0	ISSUED FOR CONSTRUCTION	FEB 2019

SURVEYED		
DRAWN	S.MONELO	FEB 2018
DESIGNED	S.MONELO	FEB 2018
CHECKED	MB.MALITI	FEB 2018
APPROVED	PR REGISTRATION NO.	DATE

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PROJECT TITLE

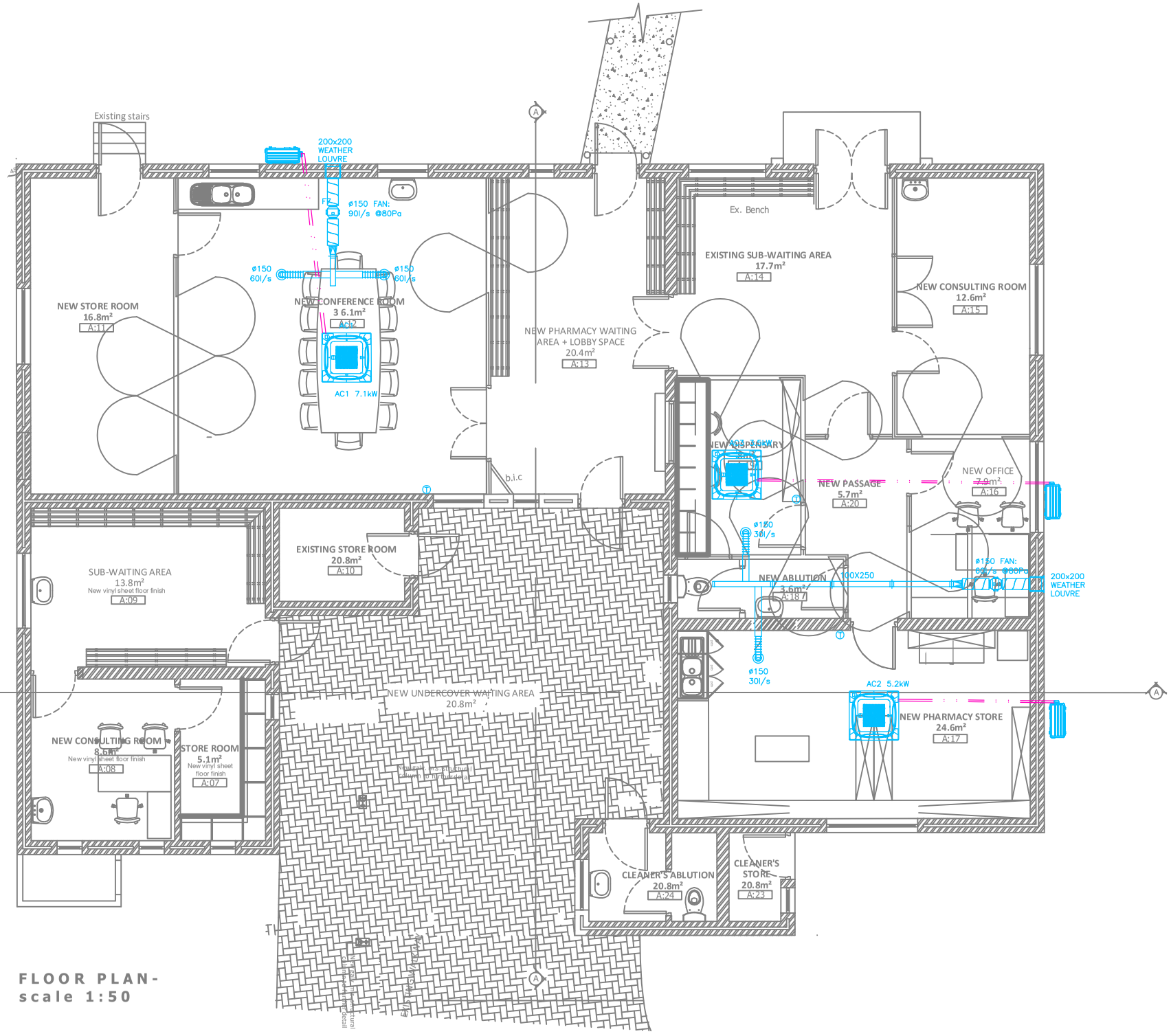
RAGLAN CLINIC

DRAWING TITLE

GROUND FLOOR FIRE DETECTION LAYOUT

SCALE	SHEET SET	SHEET SIZE
1 : 50	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-76-RG-FD-01	1



FLOOR PLAN-
scale 1:50

FOR TENDER

No	AMENDMENTS	DATE
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SURVEYED		
DRAWN	MB.MALITI	JAN 2024
DESIGNED	MB.MALITI	JAN 2024
CHECKED	MB.MALITI	JAN 2024
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PROJECT TITLE

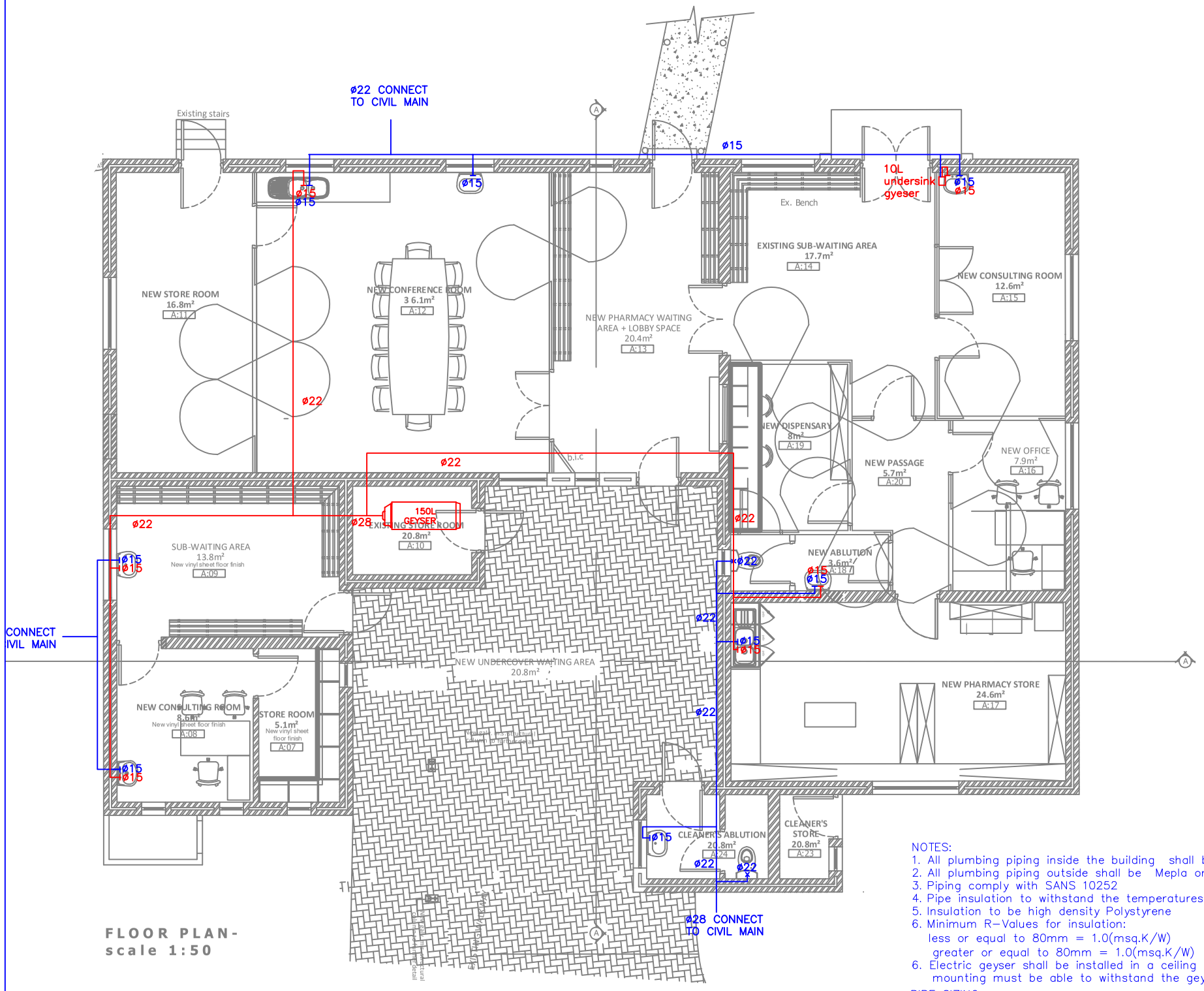
RAGLAN CLINIC

DRAWING TITLE

GROUND FLOOR HVAC LAYOUT

SCALE	SHEET SET	SHEET SIZE
1 : 50	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-76-RG-HVAC-01	0



FLOOR PLAN-
scale 1:50

NOTES:
1. All plumbing piping inside the building shall be Mepla or equal approved.
2. All plumbing piping outside shall be Mepla or equal approved.
3. Piping comply with SANS 10252
4. Pipe insulation to withstand the temperatures within the piping.
5. Insulation to be high density Polystyrene
6. Minimum R–Values for insulation:
   less or equal to 80mm = 1.0(msq.K/W)
   greater or equal to 80mm = 1.0(msq.K/W)
6. Electric geyser shall be installed in a ceiling void space. Support and mounting must be able to withstand the geyser and the full copacity.

PIPE SIZING

The minimum size of piping to be used is to be in accordance with the table below:
– ø15mm – 1 take off
– ø22mm – 4 take offs
– ø28mm – 8 take offs
– ø35mm – 24 take offs
– ø42mm – 49 take offs
– ø54mm – 99 take offs
– ø67mm – 200 take offs
* Basins, urinals and similar are regarded as 1 draw off.
*WC,Showers,Zinks and similar are regarded as 2 draw offs

No	AMENDMENTS	DATE
0	ISSUED FOR TENDER	

SURVEYED		
DRAWN	MB.MALITI	JAN 2024
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PROJECT TITLE

RAGLAN CLINIC

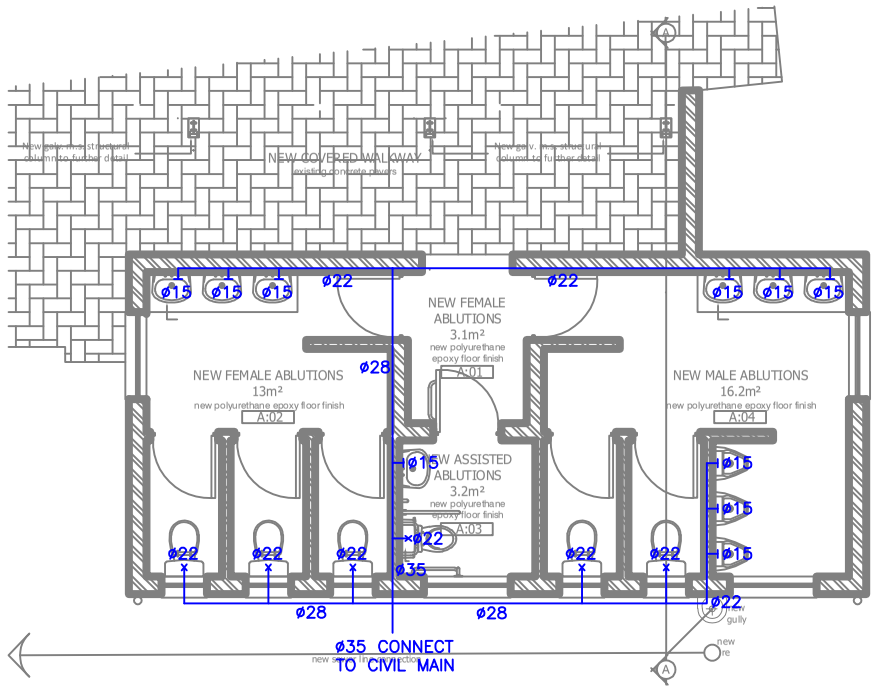
DRAWING TITLE

GROUND FLOOR
WATER SUPPLY LAYOUT

SCALE	SHEET SET	SHEET SIZE
1 : 50	SHEET 1 OF 1 SHEETS	A1

FOR TENDER

DRAWING No.	REVISION
1574-76-RG-W-01	0



FLOOR PLAN-
scale 1:50

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5. Insulation to be high density Polystyrene
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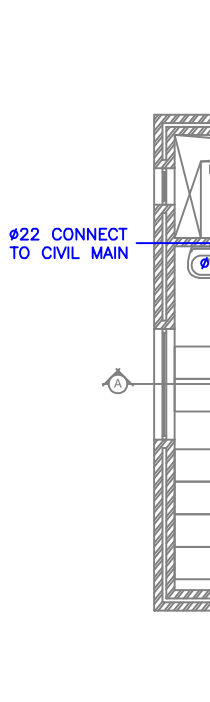
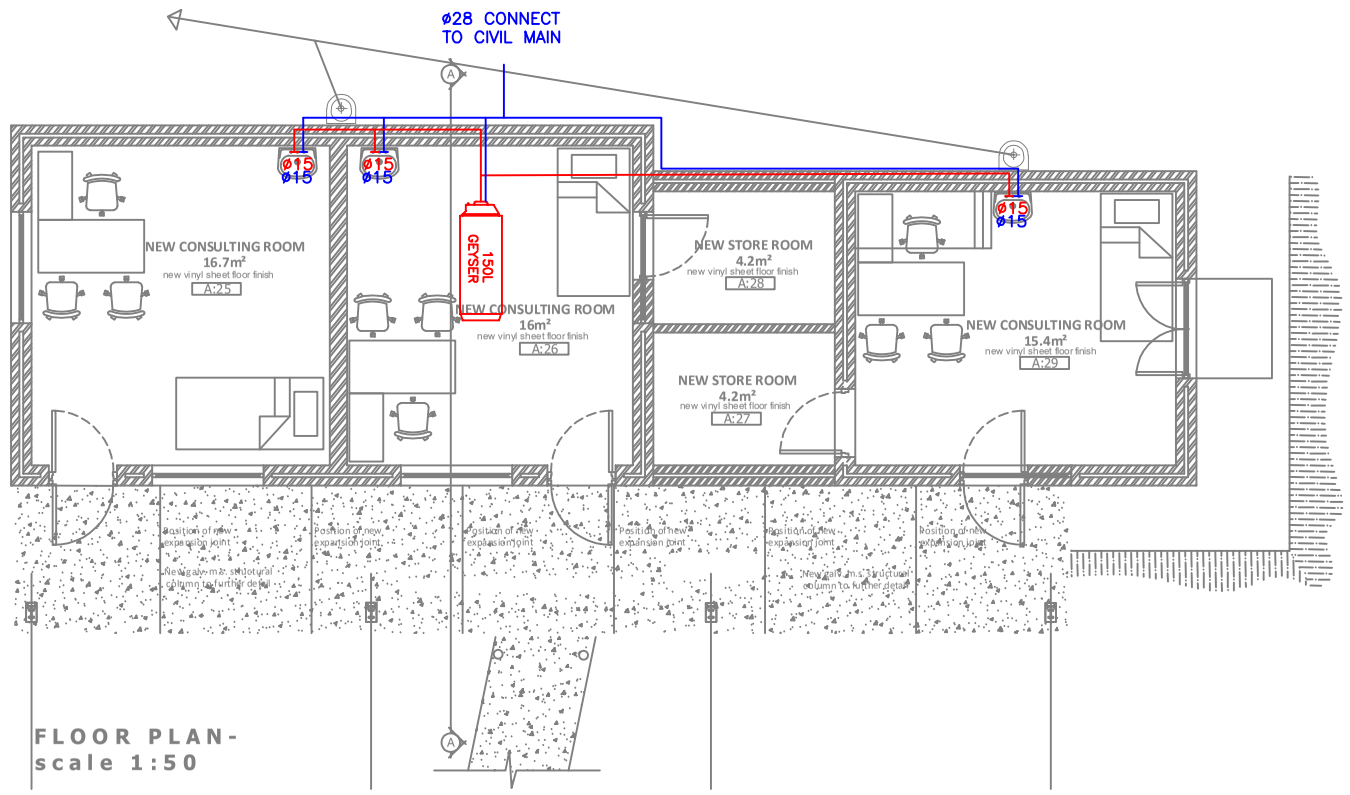


FLOOR PLAN-
scale 1:25



FLOOR PLAN-
scale 1:50

FOR TENDER

No	AMENDMENTS	DATE
0	ISSUED FOR TENDER	JAN 2024

SURVEYED		
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GROUND FLOOR
WATER SUPPLY LAYOUT

SCALE	SHEET SET	SHEET SIZE
1 : 50	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-76-RG-W-02	0

RAGLAN ROAD CLINIC

FIRE DETECTION INSTALLATION

JANUARY 2024

PREPARED BY:

LUKHOZI CONSULTING ENGINEERS (PTY) LTD
KWA-LUKHOZI
QUARTZITE DRIVE
THE QUARRY
SELBORNE
EAST LONDON, 5241

TEL : 043-7211321
FAX:043-7211330

E-MAIL: el@lukhozi.co.za

NAME OF CONTRACTOR:

.....

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

PART 1 – PROJECT SPECIFICATION

CONTENTS

ITEM	DESCRIPTION
1	Standard Conditions In Respect of the Supply, Delivery and Installation of Mechanical Equipment and Materials - PW 379
2	Section 1: General Project Specifications
3	Section 2: Detailed Technical Specification
4	Section 3: Schedule of Equipment

PART 1 PROJECT SPECIFICATIONS

STANDARD CONDITIONS IN RESPECT OF THE SUPPLY, DELIVERY AND INSTALLATION OF MECHANICAL EQUIPMENT AND MATERIALS - PW 379

PW 379 is available on the Department of Public Works website. Tenderers are to familiarise themselves with the contents of the document to ensure they are compliant and price their tender document correctly.

1 TESTS AND PRACTICAL COMPLETION

1.1 Tests

After completion of the Works and before Practical Completion is taken, a full test will be carried out on the installation for a period of sufficient duration to determine the satisfactory work thereof. During this period the whole of the Works will be inspected and the Contractor shall make good to the satisfaction of the Representative / Agent or Main Contractor, any deficiencies that may arise.

The Contractor shall provide all instruments and equipment required for the testing as well as any water and power required for the commissioning and testing of installations at completion.

The Contractor shall include in his price for all labour, equipment, specialist commissioners

1.2 Final Completion

As prescribed in the JBCC Conditions of Contract for nominated/selected subcontracts shall be twelve months.

2 CONTRACTOR'S LIABILITY IN RESPECT OF DEFECTS

2.1 Latent Defects Liability Period

As prescribed in Clause 27 of the JBCC Conditions of Contract for Nominated/Selected subcontracts

2.2 Maintenance of installations

With effect from the date of the Practical Completion Certificate the Contractor shall at his own expense undertake the regular servicing of the installation during the period stipulated and shall make all adjustments necessary for the correct operation thereof.

If during the said period the installation is not in working order for any reason for which the Contractor can be held responsible, or if the installation develops defects, he shall immediately upon being notified thereof take steps to remedy the defects or faults or to make any necessary adjustments.

Should such stoppages however be so frequent as to become troublesome, or should the installation otherwise prove unsatisfactory during the said period the Contractor shall, if called upon by the Representative / Agent or the Director-General, at his own expense replace the whole installation or such parts thereof as the Representative / Agent or the Director-General may deem necessary with apparatus specified by the Representative / Agent or the Director-General.

3 COMPLIANCE WITH REGULATIONS

The installation shall be erected and tested in accordance with the following Acts and Regulations:

i) The latest issue of SANS 10142: "Code of Practice for the Wiring of Premises",
ii) The Occupational Health and Safety Act, 1993 (Act 85 of 1993) as amended,
iii) The Local Government Ordinance 1939 (Ordinance 17 of 1939) as amended and the municipal by-laws and any special requirements of the local supply authority,
iv) The Fire Brigade Services Act 1993 Act 99 of 1987 as amended,
v) The National Building Regulations and Building Standards Act 1977 (Act 103 of 1977) as amended,
vi) The Post Office Act 1958 (Act 44 of 1958) as amended,
vii) The Electricity Act 1984 (Act 41 of 1984) as amended and
viii) The Regulations of the local Gas Board where applicable

4 MAINTENANCE OF INSTALLATIONS

With effect from the date of the Practical Completion the Contractor shall at his own expense undertake the regular servicing of the installation during the maintenance period and shall make all adjustments necessary for the correct operation thereof.

The maintenance period shall be twelve (12) months from the date of the Practical Completion Certificate.

If during the said period the installation is not in working order for any reason for which the Contractor is responsible, or if the installations develop defects, he shall immediately upon being notified thereof take steps to remedy the defects and make any necessary adjustments.

Should such stoppages however be so frequent as to become troublesome, or should the installations otherwise prove unsatisfactory during the said period the Contractor shall, if called upon by the Representative / Agent or the Director-General, at his own expense replace the whole of the installations or such parts thereof as the Representative/Agent or the Director-General may deem necessary with apparatus specified by the Representative / Agent or the Director-General.

SECTION 1: GENERAL PROJECT SPECIFICATIONS

CONTENTS

CLAUSE	DESCRIPTION	PAGE
1	Scope of Work	1.1
2	Inspection of Site	1.1
3	Compliance with Regulations, Standards and Codes	1.1
4	Supervision	1.1
5	Programme	1.1
6	Samples and Alternatives	1.2
7	Definitions	1.2
8.	Conflict between Specifications and Drawings	1.2
9	Drawings	1.2
10	Measurement	1.3
11	Moving of Equipment	1.3
12	Miscellaneous	1.3
13	Operating Instructions, Maintenance Manuals and Record Drawings	1.3
14	Installation Drawings	1.4
15	Testing and Commissioning	1.4
16	Compulsory Forms and Certificates	1.4
17	Variation Orders	1.4
18	Payment Certificates	1.5

SPECIFICIATION FOR THE FIRE DETECTION INSTALLATION AT RAGLAN ROAD CLINIC
SECTION 1: GENERAL PROJECT SPECIFICATION

1 SCOPE OF WORK

The work covered by this Contract comprises the supply and complete Installation, including a twelve (12) months defects liability period as further detailed in the Detailed Specification below at Raglan Road Clinic. The services shall be fire detection of the whole Clinic block.

2 INSPECTIONS OF SITE

The Tenderers are advised to thoroughly acquaint themselves with the nature and extent of work to be done and to make allowance for items obviously intended and necessary for the proper completion of the Works, although not specified. Claims due to lack of knowledge will not be entertained.

3 COMPLIANCE WITH REGULATIONS, STANDARDS AND CODES

The Contractor shall arrange for the necessary inspection and testing after completion of the Works. All notices fees, including inspection and re-inspection are the responsibility of the Contractor and all relevant costs shall be borne by him.

Any items not specified, but reasonably assumed to be necessary, for the completion of the Works to recognised standards of workmanship and practice, shall be deemed to be included in the Contract.

The workmanship throughout the Works shall be to the satisfaction of the Employer and relevant codes of practice. Any materials or workmanship considered to be faulty or incorrectly or inadequately erected or repaired shall be substituted, altered or rectified to the satisfaction of the Employer without additional costs to the Employer.

The Contractor shall adhere to all the relevant regulations, standards and codes specified in this Tender Document.

4 SUPERVISION

The work shall at all times, for the duration of the contract, be carried out under the supervision of a competent representative of the Contractor, who should also be an Accredited Person registered as an Installation Technician in terms of the Occupational Health and Safety Act No. 85 of 1993, as amended.

The representative of the Contractor shall be able and authorised to receive and carry out instructions on behalf of the Sub-contractor.

5 PROGRAMME

The Contractor shall submit a programme for the Works within 14 days of receipt of the Letter of Acceptance of Tender and / or Letter of Commencement of Works and / or on receipt of an order as a nominated sub-contractor. The programme shall be co-ordinated and agreed by the Main Contractor prior to submitting it to the Engineer for approval.

The cost of overtime, additional labour and plant necessary for the completion of the Works in accordance with the Principal Contractor's programme shall be included in the Contractor's Tender Price for the Works.

6 SAMPLES AND ALTERNATIVES

The preferred manufacturer / makers of equipment and / or material are either as described in the Project Specification, the Standard Technical Specifications or as listed in the Schedule of Quantities.

The Employer reserves the right to specify the equipment and / or materials utilised in the Works. No alternatives to equipment and / or materials are to be used unless written approval is obtained from the Employer, or his Representative.

7 DEFINITIONS

Supply	To purchase, procure and deliver complete with all related specified accessories
Erect	To place or mount and fix in position
Install	To erect, connect up and commission, complete with related accessories
Indicated shown, Noted	As indicated or shown on drawings
Approved, Alternative	Approved in writing by the Engineer.
Similar, Equal	Equal or better in efficiency of performance and compatibility

8 CONFLICT BETWEEN SPECIFICATIONS AND DRAWINGS

Should there be conflict between the Project Specifications, Standard Technical Specifications, Schedule of Quantities and Drawings, the sections shall be considered in the following order of priority:

a) Project Specifications
b) Drawings
c) Standard Technical Specifications

Should the Contractor note an inconsistency between the Project Specifications, Standard Technical Specifications, and Drawings, he shall notify the Engineer immediately and obtain clarification or instructions prior to ordering or installing equipment.

9 DRAWINGS

Design (Tender Document) drawings are issued with this Tender Document, as per the Drawing Schedule. These are for information purposes and are to be read in conjunction with the Schedules of Quantities that form the basis of the Tender. Any obvious discrepancies found are to be brought to the attention of the Engineer prior to the submission of the tender.

The Contractor shall read the drawings in conjunction with the Architects and other Engineers drawings in order to ensure the correct positioning of outlets, plant and equipment.

10 MEASUREMENT

At no time is the Contractor to scale drawings or to make any assumptions regarding measurements / dimensions. If in doubt, the Contractor is to obtain clarification from the Engineer.

11 MOVING OF EQUIPMENT

11.1 The Contractor shall investigate each space through which equipment must be moved. Where necessary, equipment shall be transported in sections of size suitable for moving through spaces available.

12 MISCELLANEOUS

12.1 Labels

Labels shall be installed as required in terms of the relevant codes of practice and as further specified in this Tender Document.

All labels shall be in English with capital letters, in black and on a white background, and a minimum of 4 mm in height. All labels shall be of ivorine or plastic construction and riveted / screwed in place.

12.2 Danger Notices / Signage

The Contractor shall supply and install all danger, sub-station and safety notices and signs in terms of the relevant regulations.

All safety signage installed shall be in accordance with SANS 1186.

13 OPERATING INSTRUCTIONS, MAINTENANCE MANUALS AND RECORD DRAWINGS

The Contractor shall supply, after approval by the Engineer, three (3) bound sets of operating instructions, maintenance manuals and AS BUILT drawings for the complete Fire Detection Installation, including the portions thereof completed by Specialist Contractors.

The provision of operation instructions, maintenance manuals and record drawings shall be inclusive of the demonstration of the specific portion of the Mechanical Engineering Services Installation by the Contractor and / or Specialist Sub-contractor and training of the Employer’s representatives and staff members.

The Contract will not be accepted as complete until these have been supplied and approved by the Engineer.

14 INSTALLATION DRAWINGS

Drawings shall be submitted in triplicate as soon as possible after the signing of the Sub-contract, but in ample time to allow the Engineers to examine and approve before equipment manufacture is started, or material delivered to site.

Should the Engineers require that any drawing be amended, the Contractor shall make the necessary alterations and re-submit the drawing within two weeks.

The Contractor shall provide the Principal Contractor and the Consulting Mechanical Engineers with complete layout, installation and shop drawings, together with any necessary descriptions and specifications. Sufficient details shall be given to permit a full appraisal of all parts of the installation and their relation to the building structure.

Drawings shall give full details of all foundations, ducts, chases, pits and openings and shall set out all lines and levels for the work.

Delays caused by the submission of drawings or by an error, omission or inadequacy in these drawings, shall not be considered a reason for an extension of the Sub-contract time.

15 TESTING AND COMMISSIONING

The Contractor shall carry out all tests required in terms of the relevant Acts, SANS Codes of Practice and Local Authority requirements. The Contractor shall provide all the equipment and apparatus required for the purpose of carrying out all necessary tests.

If any part of the Works fails the test, the Contractor shall be responsible for rectifying, at his own cost, the defective Works and the re-testing thereof to ensure compliance. If in consequence, the Engineers are obliged to attend the further acceptance tests the additional costs incurred by the Engineers shall be payable by the Contractor.

The Works shall be deemed to be practically complete only when the Engineer has approved all tests and inspections, and a Completion Advice Notice or other relevant completion notice is issued.

16 COMPULSORY FORMS AND CERTIFICATES

The Contractor shall submit the necessary commencement, compliance and completion forms for the installation as required in terms of the Occupational Health and Safety Act No. 85 of 1993, as amended, the relevant SANS Specifications and the requirements of the relevant Supply Authorities.

17 VARIATION ORDERS

Variations orders shall be ordered and processed in one of the following ways:

a) Issue of a revised drawing.
b) By Architect’s Instruction.

The Contractor shall ensure that the above procedures have been followed prior to carrying out any work. Failure to comply may invalidate any claim for work done.

Unless otherwise agreed with the Engineer, all claims for variation orders shall be approved prior to proceeding with the relevant Works. The Contractor shall submit variation order claims to the Engineer for approval with the preceding monthly payment claim.

However, the Contractor shall only include the value of approved variation orders in any payment claim or invoice, once approved in writing by the Engineer. Variation order claims, which have not been approved, but are included in the monthly payment claim, will be deducted from the payment claim in question.

18 PAYMENT CERTIFICATES

The Fire Detection Contractor shall be entitled to submit monthly payment claims to the Principal Contractor.

The Fire Detection Contractor shall submit the monthly payment claim to the Consulting Mechanical Engineer for approval and recommendation, prior to the submission to the Principal Contractor.

The payment claim shall be set out in accordance with the Price Schedule.

SECTION 2: DETAILED TECHNICAL SPECIFICATION FOR FIRE DETECTION

CONTENTS

CLAUSE	DESCRIPTION	PAGE
1	Scope of Work	2.1
2	Standards and Regulations	2.1
3	Drawings	2.1
4	Work to be carried out by others	2.1
5	Site Conditions and Design Criteria	2.2
6	Inspection Site	2.2
7	Description of Equipment	2.2
8	Commissioning & Testing	2.7
9	Maintenance	2.7
10	Guarantee	2.7
11	Operating and Maintenance Manuals	2.8
12	Training	2.8

1 SCOPE OF WORK

The Contract, as detailed in these specification documents and the accompanying drawings, comprises of the manufacture, supply, delivery, erection, testing, commissioning, setting into operation, quarterly maintenance and guarantee for a period of twelve months of the complete fire detection & alarm evacuation installation. The work comprises the installation of an early warning fire detection and alarm system at Raglan Road Clinic.

2 STANDARDS AND REGULATIONS

a) The work shall be in full conformity with:

- SANS 50054 Part 1 to 5, Part 7, Part 11 as applicable
- SANS 10139 – Edition 3.01-2007
- BS 5839-1:2002. MOD
- NFPA Codes of Practice
- SANS 10142-1:2012
- NOSA General Safety Standards
- Occupational Health & Safety Act 85 of 1993
- Local Authority and Fire Department
- SANS 10400 – 2014: The application of the National building regulations
- SANS 10142-1&2: Code of Practice for the Wiring of Premises
- Construction Regulations and Health and Safety Requirements
- Local Fire Regulations
- Local Municipal by-laws and regulations
- The Electricity Act 1996

b) All other applicable standards and codes of practice and local regulations having jurisdiction.

3 DRAWINGS

3.1 Tender Drawings

The drawings accompanying this Specification as numbered in the drawing schedule, above shall be deemed to indicate the general layout and requirements only and are not for Construction Drawings.

3.2 Architectural and Structural Drawings

The Contractor shall ensure that he is in possession of all information required for the installation of the Works and shall, if necessary, obtain copies of all relevant Drawings from the Architect and Structural Engineer.

4 WORK TO BE CARRIED OUT BY OTHERS

The following work is excluded from this Contract and will be carried out by others.

- All builders' work including the forming of holes in walls and making good thereafter.
- The cutting of holes in suspended ceilings and ceiling tiles for the fixing of detector heads, siren and other devices.
- The provision of all wireways and conduits (with draw wires), drawboxes, draw trays, sleeves, trunking etc., where cast into concrete or chased in

brickwork or surface fixed, as specifically indicated on the drawings. (Excludes surface flexible conduit)
- The provision of a separately protected 15 amp single-phase essential power supply adjacent to the Fire Panel.

Final connections between draw boxes and equipment, using Galvanised Metal Sprague shall form part of the Fire Detection Contract.

5 SITE CONDITIONS AND DESIGN CRITERIA

Location

RAGLAN ROAD CLINIC – GRAHAMSTOWN, SOUTH AFRICA

6 INSPECTION OF SITE

No formal site inspection meeting will be held.
The prospective Tenderers are advised to thoroughly acquaint themselves with the nature and extend of work to be done and make allowance for items obviously intended and necessary for the proper completion of the Works, although not specified. Claims due to lack of knowledge will not be entertained.

7 DESCRIPTION OF FIRE DETECTION EQUIPMENT

7.1 Fire Control Panel

The Fire Control Panels shall be fully addressable and each shop to have its own control panel as shown on drawings.

The panel shall include the following:

- Annunciators
- Power Supply Modules
- Automatic Fault Monitoring Modules
- Module including all necessary relays for switching functions
- Main and Standby Tone Generation Modules

The panel shall be of modular construction using solid state components to operate the system. Alarm initiating circuits shall meet the approved requirements for limited energy application and function for the required period of time. The equipment shall function satisfactorily at the normal mains voltage ±10% and within the following parameters:

- With the batteries disconnected.
- With the batteries connected as for normal use.
- With the batteries connected in the discharged condition.

A fully discharged cell is defined in terms of final voltage. For the purpose of this specification a battery is considered fully discharged when it is unable to maintain output in excess of the final voltage, measured at one minute intervals, whilst it is subjected to the maximum design load of the system.

The panel shall contain all necessary equipment including internal trouble signals with silencing switches.

Trouble silencing switches shall be furnished each with its associated pilot lamp so that faults on the alarm initiating circuits and the alarm signal circuits can initiate trouble signals and be silenced independently of each other.

Alternatively this can be done electronically using one common silence switch. However, using either method, the silencing of one signal shall not prevent further signals from sounding the trouble alarm.

Any relays used for critical alarm functions shall have the necessary respective coils electrically supervised and shall alarm in the event of an open circuit.

GPRS and/or landline facility to link the system to the local fire station OR teledial system.

7.2 Annunciator

Annunciator modules shall indicate fire and fault conditions. The fire indication shall be red and the fault indication amber. Initiating devices shall be individually identified on the Annunciator Panel.

Clearly identified zone indicators shall be provided for fire and fault conditions. It shall be necessary to restore the alarm-initiating device to normal and manually reset the annunciator indication lights. The Control Panel test switch shall test all circuit components necessary to sound an alarm as well as all the alarm lamps. Provision shall be made for more than one test switch where it is not practical to use one test switch. All field wires connected to alarm initiating devices necessary to actuate an annunciator shall be electrically supervised, and a single short circuit, open or ground fault shall not cause illumination of any fire alarm indicator. The removal of any detector shall cause the relevant zone fault to alarm.

The type of zone indicator used for the fire alarm system, and the specified critical alarms shall be one of the following:

- Two lamps connected in parallel associated with each indicator and arranged so that the failure either of the lamps is apparent during the course of a routine test.
- Two light emitting diodes (LED's) connected in parallel with each indicator and arranged so that failure of either of the lights is apparent during the course of a routine test. Proprietary LED holder complete with lenses shall be used and the direct soldering of wires to LED connection leads shall not be permitted.
- One lamp associated with each indicator and the circuit arranged so as to give an audible fault warning immediately on the failure of any lamp at any time.

For all other auxiliary alarm indicators it shall only be necessary to have one lamp or one light emitting diode.

7.3 Fault Warning

An immediate fault warning or trouble signal shall be given by:

- An audible warning from a sounder situated within the indicating equipment.
- A visible indication on the indicating equipment.

A fault warning shall be given in the event of any of the following occurring:

- Failure or disconnection of the normal power supply.
- Failure or disconnection of the standby power supply.
- Failure or disconnection of the battery charging equipment.
- Failure or disconnection of the leads to the alarm sounders (fault warning facility per zone).
- Failure of any fuse or protective device.
- Isolation of any of the fire signal circuits.

The control panel shall be fitted with Modbus RTU interface using RS485 or Modbus TCP to enable communication with the Building Management system.

7.4 Interfacing

The Central Control Unit shall interface with the following peripheral device/systems at the positions indicated on the drawings.

- Access Control System
- Air Conditioning Installation
- Lift Installation
- Access Control Installation – release doors in event of fire

7.5 Remote Signal

Facilities shall be provided at each Control Panel, for signaling all fire and fault alarm indication to a remote station via volt free contacts. Remote signal boxes shall be installed in the guard house. They shall comprise a green and red light for each zone a sounder and a mute button. The green light shall depict zone circuit healthy, red light zone circuit fault. Space for three (3) additional zones shall be allowed for on the remote panels.

7.6 Branch Circuits

Outputs to any ancillary services powered from the control equipment power supply shall be fused or similarly protected to ensure the safety of the control equipment. In addition, isolation switches shall be provided for maintenance and testing of the following:

- Each fire service signal facility.
- Each remote signal facility.

The operation of any of the isolation switches shall initiate the fault warning as described in Clause 2.7.

7.7 Battery and Charger (24V DC)

The normal (main) supply shall be 230/240V AC and a standby supply of 24V DC shall take over immediately upon a failure of the main supply. The changeover shall be automatic and must not interrupt the operation of the fire alarm system.

The standby batteries shall be heavy duty sealed lead acid with the required amount of cells necessary for the system voltage. They shall have sufficient capacity to supply the largest load placed on them under normal, fire and fault conditions. The batteries shall be rated for a period of 24 hours normal load and 30 minutes fault alarm load for the complete Detection Evacuation System.

Battery charging equipment shall incorporate automatic control features with the output designed to charge and maintain the cells within the limits specified by the battery manufacturer. The charger shall be capable of recharging the batteries fully within 12 hours. Under normal charging service, the charger shall charge the batteries at a high rate and automatically switch to a low charge rate when the batteries are fully charged.

The charger shall contain a voltmeter, an ammeter and an indicating lamp shall illuminate to indicate the 230/240V AC power source. The battery charger shall be current limited to prevent damage in the event of a short circuit in the battery leads or a reversal of polarity.

Fault warnings shall be provided as detailed in Clause 3.7.3.

The battery shall be housed in a suitable robust ventilated cabinet.

7.8 Detectors

An indication light on each detector shall indicate when smoke or combustion gas is detected. Extended lights shall be installed where detectors are located above ceilings, or where they are concealed in any way. All detector shall be protect against vandalism, every detector/strobe light shall be fitted with anti-vandalism metal cages.

Infra-red detectors shall not respond to constant infra-red radiation or short flickering phenomenon.

Heat sensitive detectors shall incorporate a rate of rise feature as well as a fixed temperature alarm.

All the above mentioned detectors shall utilize a common standard base mounting to ensure uniformity and flexibility with the installation.

A Beam detector shall include but not be limited to the following:

- have integral transmitter and receiver
- automatic alignment onto a reflective prism
- automatic contamination compensation
- programmable sensitivity and fire threshold
- minimum range of 20m

7.9 Sirens

The siren lines shall be electronically supervised for short and open circuits.

7.10 Strobe Alarm Lights

Strobe alarm light lines shall be electronically supervised for short and open circuits.

Strobe alarm lights shall be type Zenon Beacon (or similar approved), with red lens suitable for 24V electrical supply and have a flashing energy of 0.5 joule.

7.11 Relays

All necessary relays shall be provided for operating air conditioning/ventilation plants, operating alarms and indicating on panels as specified.

The relays shall each be provided with a minimum of one normally open and one normally closed contact rated at 5 amps.

The relays shall be mounted in a separate compartment in the control unit and wired to terminals and wiring from the outgoing terminals of the Control Unit to the terminals of the appropriate air conditioning switchboard shall be executed by the Fire Services Sub-Contractor.

7.12 Terminals

Terminals shall be provided for each input and output and shall be suitable for DIN rail mounting and each terminal shall be provided with proprietary identification markers. Where a terminal has insufficient capacity for the number of connections, proprietary insulated insertion bridges shall be used. Allowance shall be made for 10% spare capacity with minimum of 10 terminals.

7.13 Electronic Door Holders

Electronic Door Holders shall be suitable for operation with 24V DC power supply.

The unit shall be manufactured by either FULLEON as distributed by ARITECH models FE 333 and FE 550 for wall or floor mounting respectively, or alternatively BRITON as distributed by Ingersoll Rand, Models 533/SE or 534.

Units shall be suitable for surface fixing with rear (concealed) cable entry.

The units shall have sufficient holding force for the application intended. Units shall be fail safe and complete with reverse polarity protection.

7.14 Break glass Units

Flush mounted break glass manual alarm units shall be provided where indicated on the drawings. The unit shall be of the normally open type with contacts rated at 5 amperes. The glass front shall only require firm thumb pressure or moderate impact to break it and shall have a transparent plastic film adhered to the glass to prevent injury from glass fragments. A test probe shall be provided with each unit to enable the unit to be tested on site. The front of the unit shall be clearly marked "FIRE/BRAND".

Flush mounted units shall be installed in 75 mm x 75 mm galvanised back boxes as supplied by Le Grand or Crabtree.

7.15 Labels

Engraving, silk-screening or etching on indication lights or adjacent to the lights must be clear and easy to understand. Approval of the method used must be

obtained from the Engineer before manufacture commences.

7.16 Electrical Wiring

All electrical wiring shall be carried out in accordance with local regulations in fire resistant cables rated at PH60 minutes encased in conduit and trunking to the satisfaction of the Engineers. The cross section of conductor to be minimum 1.5mm^2.

7.17 Conduit

All conduit and trunking shall be supplied and installed by others, with the exception of those items specifically noted in clause 4.4.

8 COMMISSIONING AND TESTING

The installation shall be commissioned and tested to the satisfaction of the Engineer with the following minimum requirements:

- Each and every trigger device shall be tested.
- The supervision of each applicable circuit shall be tested.
- All the functions of the control unit shall be tested
- All time delays shall be checked for accuracy and that the timers will complete their cycles even though wiring between them and their detector circuits are interrupted.
- The power supply, battery and automatic changeover shall be tested.
- All audible and visual alarm shall be tested.
- All air conditioning plant signals shall be tested in the presence of the respective sub-contractor's representative.

9 MAINTENANCE

The Contractor shall include in his tender price for the maintenance of the complete installation for a period of ONE YEAR after first delivery of the entire plant has been taken by the Secretary for Works or his representative.

The Contractor shall visit the installation at regular intervals on an acceptable and agreed day and perform full maintenance on the basis of a proper preventive maintenance programme approved by the Engineer.

The Contractor shall report to an official on arriving and again at leaving the premises on the occasion of each visit. Such person, who has been nominated by the engineer, shall sign a Service report giving details of any defects made good, temperature readings taken, etc. A copy of such Service Report is to be submitted to the Engineer liasing with the Consultant Engineer in all cases.

A major service shall be executed by the Contractor in the twelfth month of the contract maintenance period.

10 GUARANTEE

The Contractor shall guarantee the materials, apparatus and workmanship delivered by him for a period to twelve months. The guarantee must be valid for a period starting on the date when the Contract is accepted by the Secretary for Works or his representative as completed and in working condition. The complete installation must be guaranteed against defects as a result of patent and latent defects of the apparatus as well as against faulty materials and workmanship. Fair wear and tear is excluded from the guarantee. The guarantee must provide for all parts, spares and appurtenances, which become defective during the guarantee period, to be replaced free of charge to the Administration or to the Engineer. All costs of labour, out of town allowances, materials and transportation required to replace such part of a defective installation shall be borne by the contractor and shall be included in his guarantee. The Contractor shall cede to the Administration the remainder of any equipment guarantee which he has received from his suppliers and which may extend beyond the period of twelve months mentioned herein.

13 OPERATING AND MAINTENANCE MANUALS.

The Contractor shall furnish to the Engineer three bound copies of Operating and Maintenance Instructions prior to the final acceptance of the installation

These manuals shall include the following:

- Index
- Description of the System.
- Operation of the System.
- Plant and Equipment – including Model Numbers and Suppliers.
- Test Report.
- Maintenance Instructions.
- Spare Parts List.
- Descriptive Literature.
- Record Drawings (both HARD COPY and ELECTRONIC FORMAT - drawing AutoCAD)
- Service Records

14 TRAINING

The Contractor shall provide substantive training to selected staff in the correct operation and operator maintenance procedures of each item of equipment supplied by himself and requiring such training.

He shall issue a "Certificate of Training" to each staff member for each item of equipment on which the staff member has been trained. These certificates of training are to be signed by the Contractor, the staff member concerned. Copies of these certificates shall be submitted to the Engineer for inclusion in the Practical Completion \ First Delivery Certificates

SECTION 3: SCHEDULE OF EQUIPMENT

CONTENTS **PAGE NUMBER**

1	Detectors	3.1
2	Battery Unit	3.1
3	Break glass Units	3.1
4	Audible Alarm Sirens	3.2
5	Control Units	3.2
6	Annunciator Panel	3.2
7	Fire Alarm Repeater Panel	3.3
8	Extended Light	3.3
9	Solenoid Operated Door Release Mechanism	3.3
10	Line Isolator	3.3

SCHEDULE OF MATERIALS OFFERED

Tenderers shall complete the following schedule of materials and equipment offered and undertake that the actual materials and equipment installed shall be in accordance with this schedule. Enter N/A if not applicable for that particular item / installation.

Bidders are to take note that if the material offered is not to specification, this may lead to the Bidder being disqualified.

3 DETECTORS

1 IONISATION CHAMBER DETECTORS:

Make .....

Model No. .....

Country of Origin .....

No of heads included in Bid .....

2 BATTERY UNIT

Make of Batteries .....

Country of origin .....

Size .....

Capacity .....

Type .....

Make of Battery Charger .....

Country of origin .....

Size .....

Capacity .....

3 BREAK GLASS UNITS

Make .....

Model No. .....

Country of origin .....

No of units included in Bid .....

4 AUDIBLE ALARM SIRENS

Make .....

Model No. .....

Country of origin .....

No of units included in Bid .....

5 CONTROL UNITS

Make .....

Country of origin .....

Size .....

Material .....

Finish .....

Type of relays .....

Type of lights .....

Type of housing .....

6 ANNUNCIATOR PANEL

Make .....

Country of origin .....

Size .....

Material .....

Finish .....

Type of relays .....

Type of lights .....

Type of housing .....

7 FIRE ALARM REPEATER PANEL

Make .....

Country of origin .....

Size .....

Material .....

Finish .....

8 EXTENDED LIGHT

Make .....

Country of origin .....

9 SOLENOID OPERATED DOOR RELEASE MECHANISM

Make .....

Country of origin .....

10 LINE ISOLATOR

Make .....

Model .....

Country of origin .....

DATE : ....SIGNATURE OF TENDERER

REGISTRATION DETAILS OF FIRE DETECTION INSTALLATION

PROJECT NAME:_____

I/We certify that (name of Company) ……..

is registered under : SAQCC Fire with registration number …….

: FDIA with registration number …….……

DATE : ……..

COMPANY STAMP:

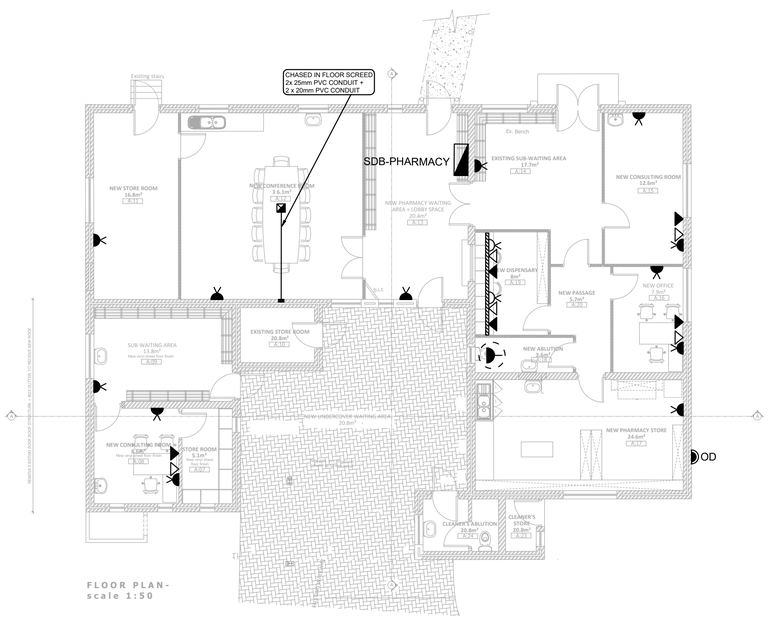
SIGNATURE OF TENDERER DATE

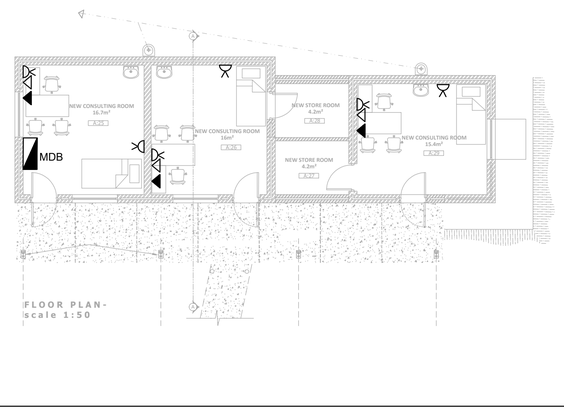
POWER LEGEND

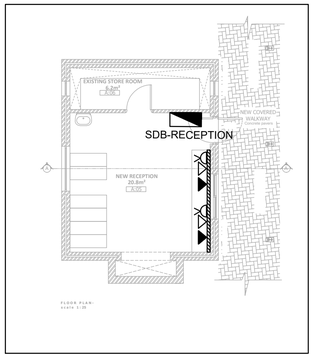
▽	DATA LINE CONNECTION POINT
▼	TELEPHONE POINT
	16A 3-PIN SWITCHED SOCKET OUTLET (WHITE) AT 1200mm A.F.F.L.
	DOUBLE 16A 3-PIN SWITCHED SOCKET OUTLET (WHITE) AT 1200mm A.F.F.L.
	16A 3-PIN SWITCHED SOCKET OUTLET (WHITE) AT 1200mm A.F.F.L.
	DOUBLE 16A 3-PIN SWITCHED SOCKET OUTLET (WHITE) AT 1200mm A.F.F.L.
	2 POLE ISOLATOR
OD	2 POLE OUTDOOR ISOLATOR
	2 POLE ISOLATOR MOUNTED IN THE CEILING VOID
	16A 3-PIN SWITCHED SOCKET OUTLET (WHITE) AMOUNTED IN THE CEILING VOID
	ELECTRICAL DISTRIBUTION BOARD
	POWER SKIRTING (2 CHANNEL)

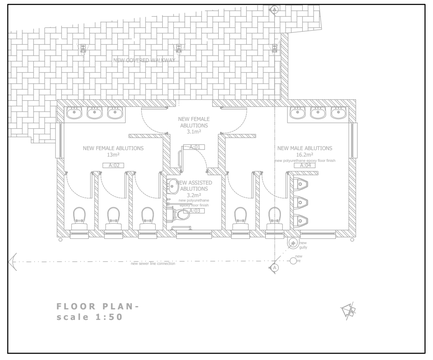
NOTE:
NEW POWER POINTS TO BE CONNECTED TO EXCISTING CIRCUITS WHERE POSSIBLE.

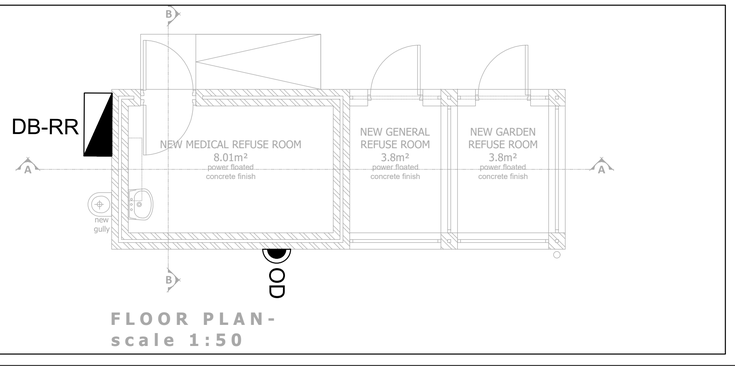
EXISTING CONDUITS AND WIREWAYS TO BE USED WHERE POSSIBLE.

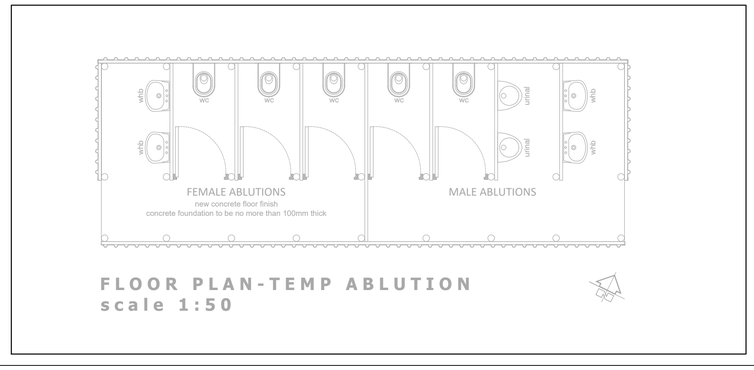












GENERAL NOTES:

1. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DETAILED SPECIFICATIONS.
2. DO NOT SCALE LENGTHS OF SLEEVE, CABLES ETC FROM DRAWINGS .
3. A COMPLETE SET OF DRAWINGS MUST BE AVAILABLE ON SITE AT ALL TIMES.
4. FOR WIRING CONDUCTOR SIZES, REFER TO DB SCHEMATIC DIAGRAMS.
5. CONDUITS TO BE INSTALLED IN STRAIGHT PARALLEL LINES IN CEILING VOIDS AND SADDLED AT EVERY TRUSS.
6. SEE DETAILED SPECIFICATION FOR MOUNTING HEIGHTS OF SWITCHES, SWITCH SOCKET OUTLETS, ETC.
7. NON-CORRODING DRAW WIRE / STRING TO BE INSTALLED IN ALL SPARE SLEEVES, TELEPHONE AND DATA CABLE CONDUITS AND SLEEVES.
8. DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY THEY BECOME EVIDENT.
9. ALLOW 4 X 20mmØ & 4 x 25mmØ SPARE CONDUITS FROM EACH DB TO CEILING VOIDS. (FLUSH MOUNTED DB's)
10. IF NOT MEASURED IN THE BILL OF QUANTITIES, TELEPHONE AND DATA SOCKETS SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
11. TELEPHONE AND DATA CONDUITS TO BE 25 Ø mm UNLESS INDICATED DIFFERENTLY ON DRAWINGS.
12. IF NOT INDICATED ON DRAWINGS, IN RADIO ROOMS, KITCHENS AND WORK AREA, POWER SKIRTING OR WIRING CHANNELS TO BE ABOVE WORK TOP OR 1200mm A.F.F.L.
13. CIRCUITING:
    - AC = AIR CONDITIONING
    - D = DEDICATED SSO
    - L = LIGHTING CIRCUIT
    - P = STANDARD SSO
    - XL = LIGHTING CIRCUIT ON STANDBY POWER
    - XP = STANDARD SSO ON STANDBY POWER
14. DB DUCTS TO HAVE RISING CABLE TRAYS AS FOLLOWS:
    - 1x300mm WIDE FOR TELEPHONE, DATA AND FIRE DETECTION CABLES.
    - 1x200mm WIDE FOR POWER CABLES (MINIMUM).
15. ALL SSO AND LIGHT SWITCHES TO BE LABELLED WITH CIRCUIT NUMBERS.
16. AC ISOLATORS TO BE INSTALLED ON THE RHS OF THE AC POSITIONS.

REVISIONS

REV	DATE	INIT.	DESCRIPTION
00	19/09/23	B.G	ISSUED FOR TENDER.

CLIENT

PROJECT

RAGLAN ROAD CLINIC

TITLE

PHARMACY, REFUSE ROOM, NEW RECEPTION AND ABLUTIONS - POWER LAYOUT

ARCHITECTS

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CESA
Consulting Engineers South Africa

DESIGN	TENDER	CONSTRUCTION
	✓	

DESIGNED BY: B. GEELBOOI

SCALE: 1 :100

DRAWN: B. GEELBOOI

DATE: 14/12/2023

PRINT DATE: 14/01/2024

CHECKED BY: E. CEBA

REGISTRATION No. 201930053

SIGNED.

ARCHITECTS DRAWING NO.

REV No.

DRAWING NO. 1710PE-T-E-102

REV No. 00

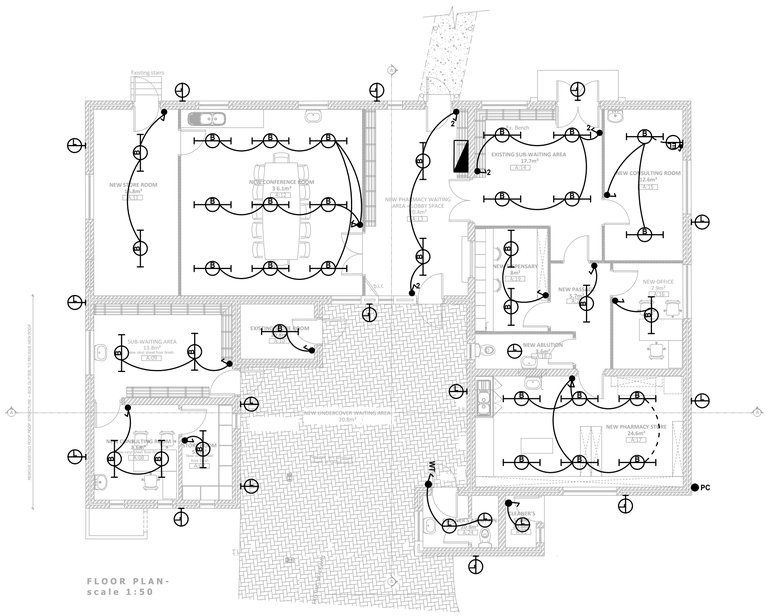
LIGHTING LEGEND

PC	PHOTO CELL
	1 LEVER - 1 WAY - LIGHT SWITCH
WT	1 LEVER - 1 WAY - WATER TIGHT LIGHT SWITCH
	2 LEVER - 1 WAY - LIGHT SWITCH
x2	1 LEVER - 2 WAY - LIGHT SWITCH
B	44W CHANNEL LUMINAIRE WITH POLYCARBONATE DIFUSSER. 1200mm LONG.
L	20W LED OUTDOOR DOMESTIC TYPE DECORATIVE WALL MOUNTED BULKHEAD LUMINAIRE

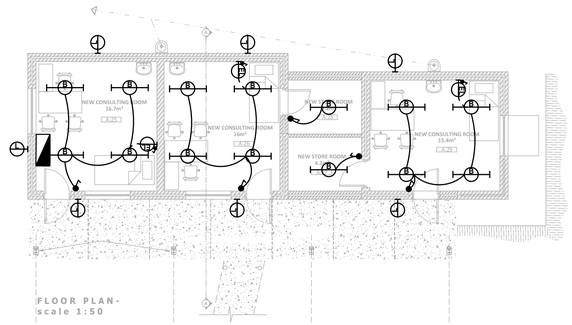
NOTE:
NEW LIGHTING POINTS TO BE CONNECTED TO EXCISTING CIRCUITS WHERE POSSIBLE.

EXISTING CONDUITS AND WIREWAYS TO BE USED WHERE POSSIBLE.

NEW EXTERNAL LIGHTING CONNECTED TO EXISTING CIRCUITS.



FLOOR PLAN-
scale 1:50



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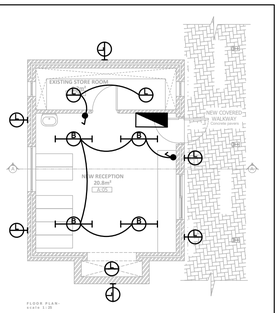

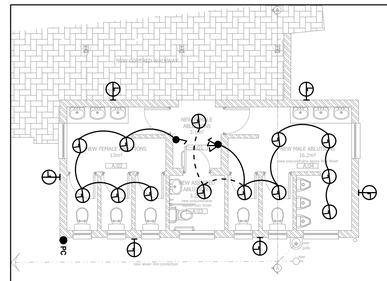

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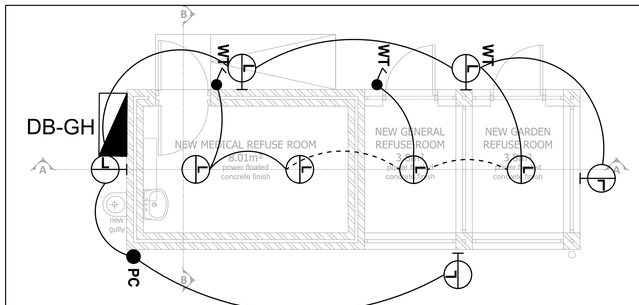

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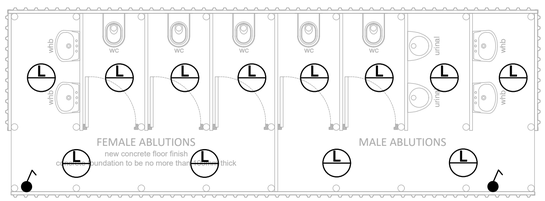
scale 1:50



FLOOR PLAN-TEMP ABLUTION
scale 1:50

GENERAL NOTES:

1. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE DETAILED SPECIFICATIONS.
2. DO NOT SCALE LENGTHS OF SLEEVE, CABLES ETC FROM DRAWINGS .
3. A COMPLETE SET OF DRAWINGS MUST BE AVAILABLE ON SITE AT ALL TIMES.
4. FOR WIRING CONDUCTOR SIZES, REFER TO DB SCHEMATIC DIAGRAMS.
5. CONDUITS TO BE INSTALLED IN STRAIGHT PARALLEL LINES IN CEILING VOIDS AND SADDLED AT EVERY TRUSS.
6. SEE DETAILED SPECIFICATION FOR MOUNTING HEIGHTS OF SWITCHES, SWITCH SOCKET OUTLETS, ETC.
7. NON-CORRODING DRAW WIRE / STRING TO BE INSTALLED IN ALL SPARE SLEEVES, TELEPHONE AND DATA CABLE CONDUITS AND SLEEVES.
8. DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY THEY BECOME EVIDENT.
9. ALLOW 4 X 20mmØ & 4 x 25mmØ SPARE CONDUITS FROM EACH DB TO CEILING VOIDS. (FLUSH MOUNTED DB's)
10. IF NOT MEASURED IN THE BILL OF QUANTITIES, TELEPHONE AND DATA SOCKETS SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
11. TELEPHONE AND DATA CONDUITS TO BE 25 Ø mm UNLESS INDICATED DIFFERENTLY ON DRAWINGS.
12. IF NOT INDICATED ON DRAWINGS, IN RADIO ROOMS, KITCHENS AND WORK AREA, POWER SKIRTING OR WIRING CHANNELS TO BE ABOVE WORK TOP OR 1200mm A.F.F.L.
13. CIRCUITING:
    - AC = AIR CONDITIONING
    - D = DEDICATED SSO
    - L = LIGHTING CIRCUIT
    - P = STANDARD SSO
    - XL = LIGHTING CIRCUIT ON STANDBY POWER
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REVISIONS

REV	DATE	INIT.	DESCRIPTION
00	19/09/23	B.G	ISSUED FOR TENDER.

CLIENT

PROJECT

RAGLAN ROAD CLINIC

TITLE

PHARMACY, REFUSE ROOM, NEW RECEPTION AND ABLUTIONS - LIGHTING LAYOUT

ARCHITECTS

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CESA
Consulting Engineers South Africa

DESIGN	TENDER	CONSTRUCTION
	✓	

DESIGNED BY: B. GEELBOOI

SCALE: 1 :100

DRAWN: B. GEELBOOI

DATE: 14/12/2023

PRINT DATE: 14/01/2024

CHECKED BY: E. CEBA

REGISTRATION No. 201930053

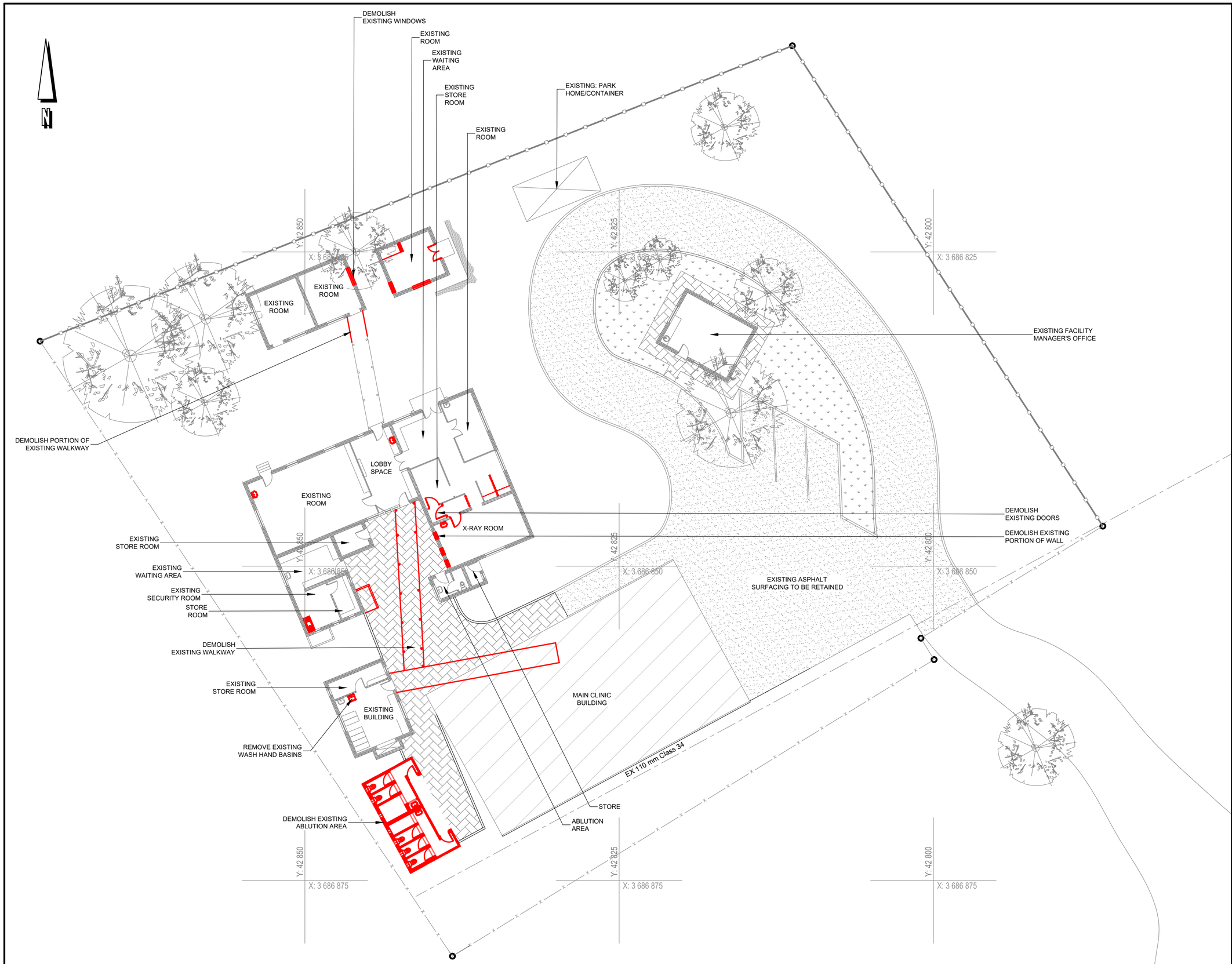
SIGNED.

ARCHITECTS DRAWING NO.

REV No.

DRAWING NO. 1710PE-T-E-101

REV No. 00



GENERAL NOTES

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO.MDA _

No	APPROVED	AMENDMENTS	DATE
T0	CB	ISSUED FOR TENDER	2024/01/15

SURVEYED	N/A	N/A
DRAWN	A. NOKWE	JAN 2024
DESIGNED	C. BEZUIDENHOUT / A. NOKWE	JAN 2024
CHECKED	C. BEZUIDENHOUT	JAN 2024
APPROVED	PR REGISTRATION NO. DATE:---	

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PROJECT TITLE

RAGLAN ROAD CLINIC (GRAHAMSTOWN)

DRAWING TITLE

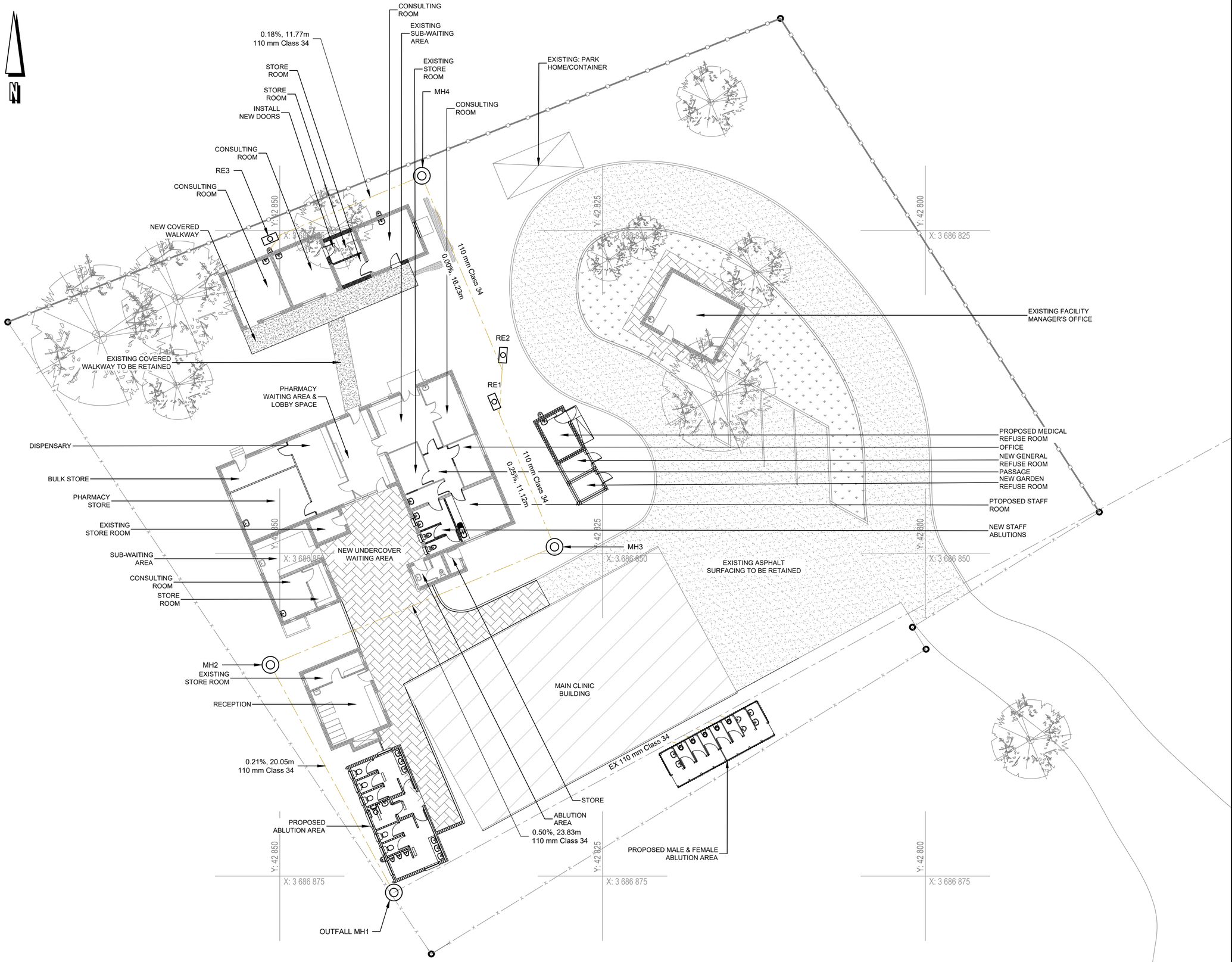
DEMOLITION LAYOUT PLAN

SCALE	SHEET SET	SHEET SIZE
1 : 200	SHEET 1 OF 1 SHEETS	A2

DRAWING No.	REVISION
1574-XX-GEN-002	T0

2024/01/15 09:55 am

P:\PE\1574_76_SB007 - NG Dlukulu Clinic\Raglan Temp\04 Design & Drawings\08 General\1574-XX-GEN-RAGLAN ROAD CLINIC DESIGN-P0.dwg



GENERAL NOTES

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO.MDA _

No	APPROVED	AMENDMENTS	DATE
T0	CB	ISSUED FOR TENDER	2024/01/15

SURVEYED	N/A	N/A
DRAWN	A. NOKWE	JAN 2024
DESIGNED	C. BEZUIDENHOUT / A. NOKWE	JAN 2024
CHECKED	C. BEZUIDENHOUT	JAN 2024
APPROVED	PR REGISTRATION NO. DATE:---	

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LUKHOZI

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PROJECT TITLE

RAGLAN ROAD CLINIC (GRAHAMSTOWN)

DRAWING TITLE

PROPOSED LAYOUT PLAN

SCALE	SHEET SET	SHEET SIZE
1 : 200	SHEET 1 OF 1 SHEETS	A2

DRAWING No.	REVISION
1574-XX-GEN-003	T0

2024/01/15 09:55 am

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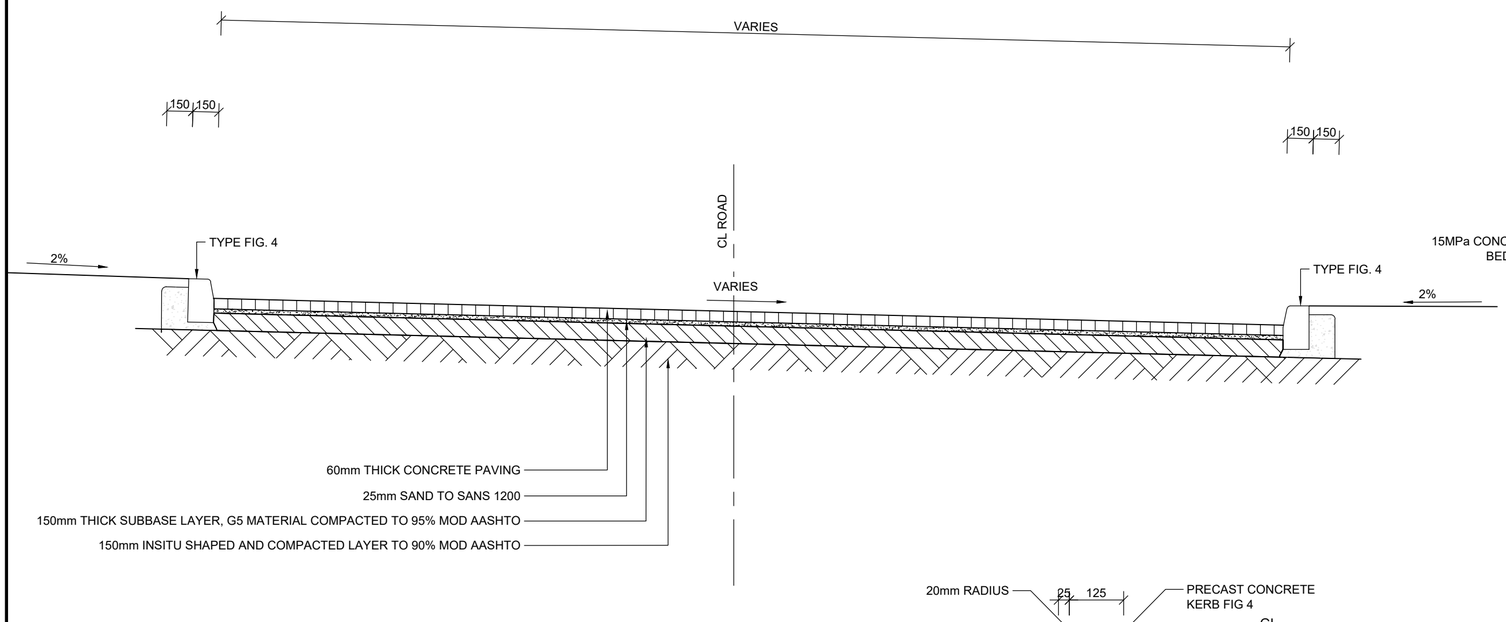
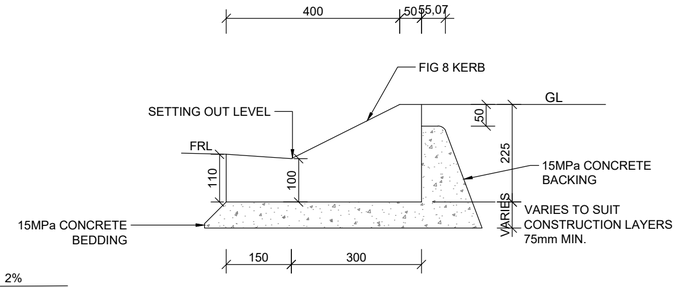


PARKING AREA
TYPICAL LAYERWORKS DETAIL

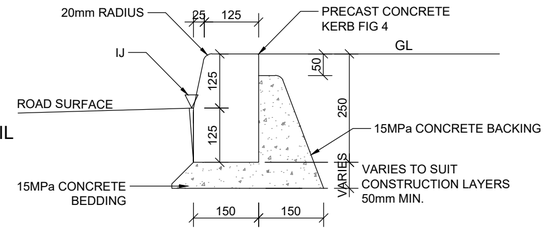
SCALE 1:25

NOTE:
1. ALL UNITS TO BE LAID WITH 15 MPa CONCRETE BEDDING/BACKING OR SHOWN OTHERWISE ON WELL COMPACTED SUBGRADE/SUBBASE.
2. NO OUTFALL CHANNELS PERMITTED.
3. ALL RADII<20m SHOULD BE BUILT WITH 300mm LONG ELEMENTS.



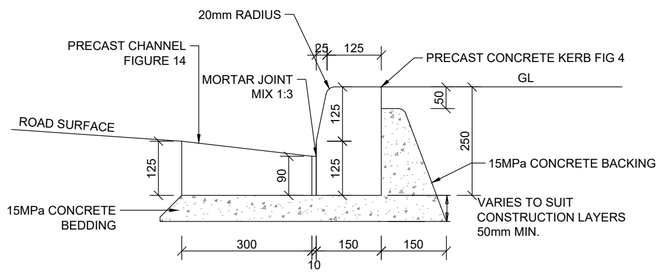
PRECAST ROLLOVER KERB (FIG 8)
WITH CHANNEL (LOW SIDE OF ROAD)

SCALE 1:10



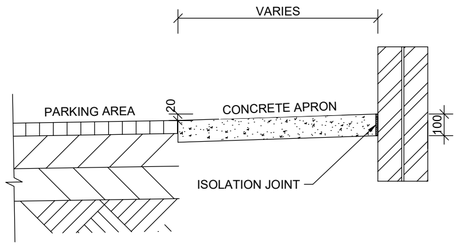
BARRIER KERB

SCALE 1:10



BARRIER KERB AND CHANNEL

SCALE 1:10



APRON SLAB DETAIL

SCALE 1:20

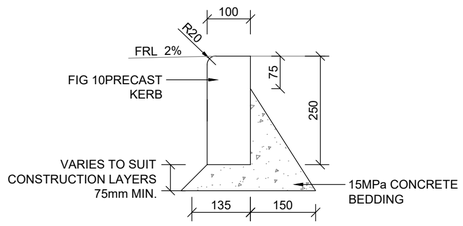
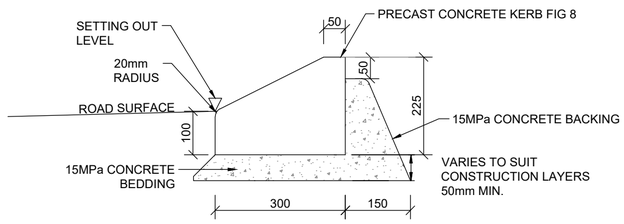


FIGURE 10 EDGING

SCALE 1:10



PRECAST ROLLOVER KERB (FIG.8)
(HIGH SIDE OF THE ROAD)

SCALE 1:10

GENERAL NOTES

No	APPROVED	AMENDMENTS	DATE
T0	CB	ISSUED FOR TENDER	2024/01/15

SURVEYED	N/A	N/A
DRAWN	A. NOKWE	JAN 2024
DESIGNED	C. BEZUIDENHOUT/A. NOKWE	JAN 2024
CHECKED	C. BEZUIDENHOUT	JAN 2024
APPROVED	PR REGISTRATION NO. DATE:---	

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CLIENT

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PROJECT TITLE

RAGLAN ROAD CLINIC (GRAHAMSTOWN)

DRAWING TITLE

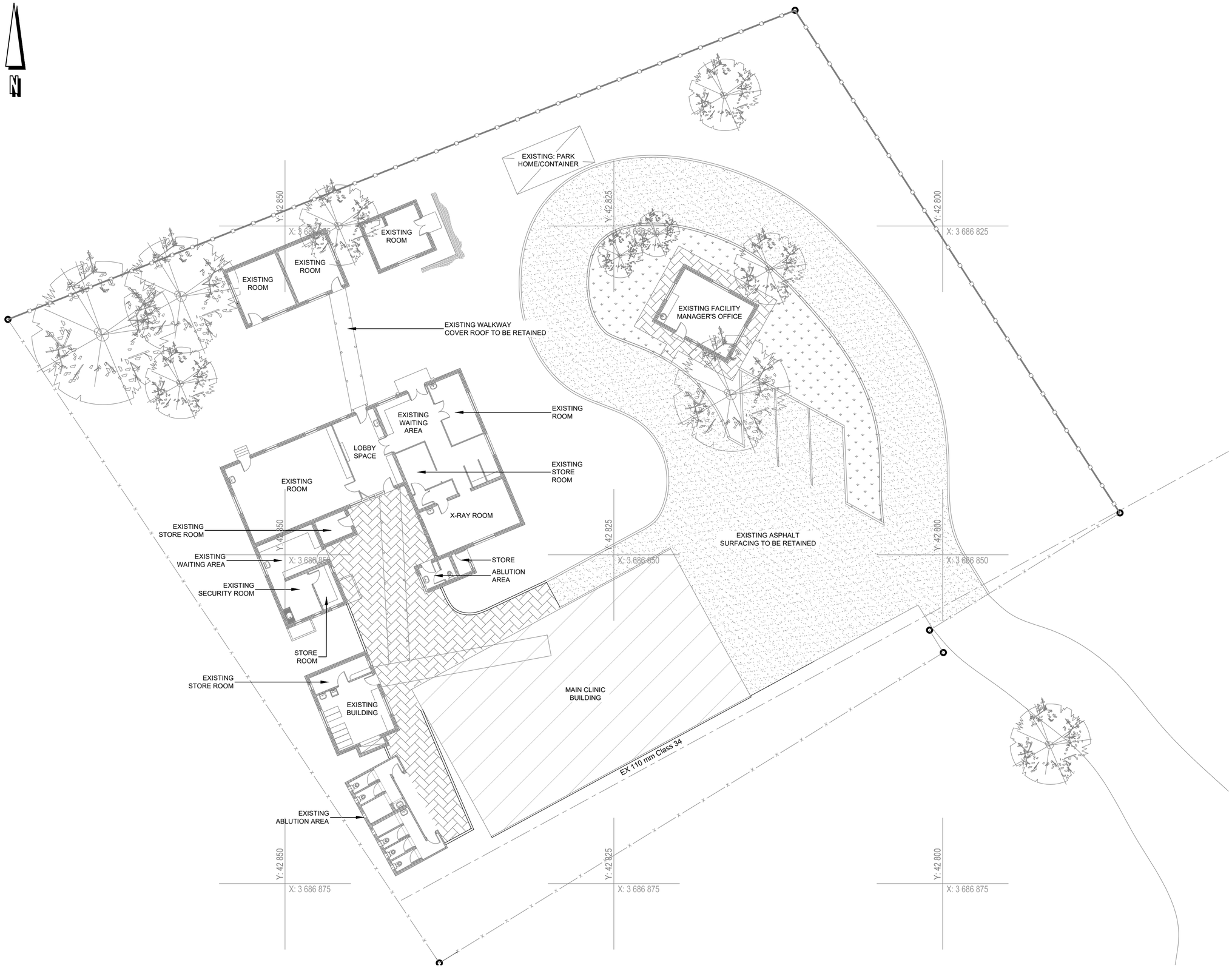
TYPICAL PARKING LOT DETAILS

SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 1 OF 1 SHEETS	A2

DRAWING No.	REVISION
1574-XX-RDS-010	T0

2024/01/15 09:52 am

P:\PE\1574_76_SB007 - NG Dlukulu Clinic\Raglan Temp\04 Design & Drawings\03 Road\ROAD DETAILS.dwg



GENERAL NOTES

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No	APPROVED	AMENDMENTS	DATE
T0	CB	ISSUED FOR TENDER	2024/01/15

SURVEYED	N/A	N/A
DRAWN	A. NOKWE	JAN 2024
DESIGNED	C. BEZUIDENHOUT / A. NOKWE	JAN 2024
CHECKED	C. BEZUIDENHOUT	JAN 2024
APPROVED	PR REGISTRATION NO.	DATE:---

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PROJECT TITLE

RAGLAN ROAD CLINIC (GRAHAMSTOWN)

DRAWING TITLE

EXISTING LAYOUT PLAN

SCALE	SHEET SET	SHEET SIZE
1 : 200	SHEET 1 OF 1 SHEETS	A2

DRAWING No.	REVISION
1574-XX-GEN-001	T0

2024/01/15 09:56 am

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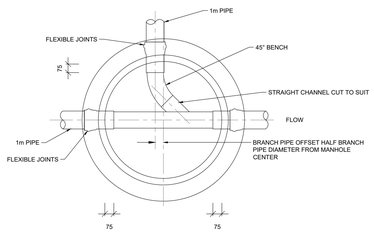
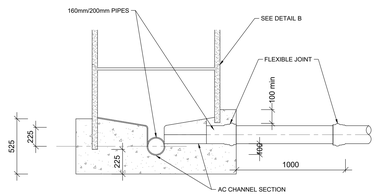
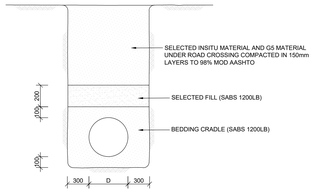


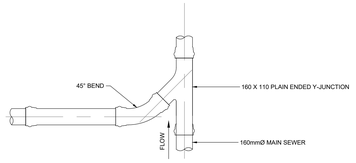
PLAN OF 90 BRANCH MANHOLE
SCALE 1:20



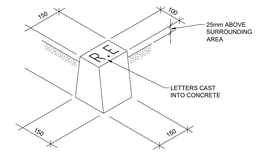
MAIN & BRANCH PIPES EQUAL SIZES
SCALE 1:20



FLEXIBLE PIPES
SCALE 1:20

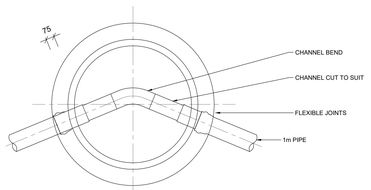


PLAN OF CONNECTION
SCALE 1:20

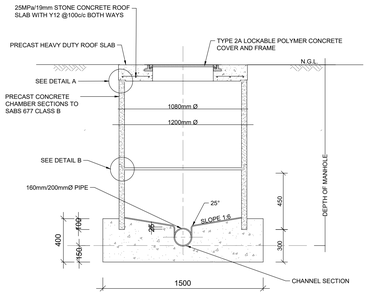


ALL RODDING EYES IN UNPAVED AREAS TO BE MARKED BY CONCRETE MARKER BLOCK OR AS SPECIFIED.

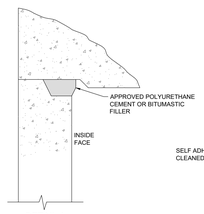
DETAIL OF RODDING EYE MARKER
SCALE 1:20



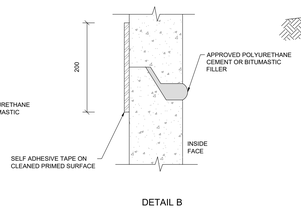
PLAN OF MANHOLE AT BENDS
SCALE 1:20



TYPICAL SECTION THROUGH MANHOLE
SCALE 1:20

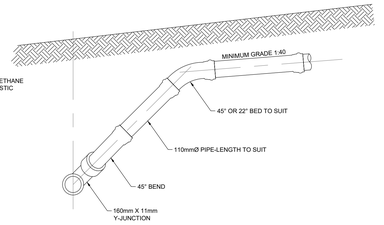


DETAIL A



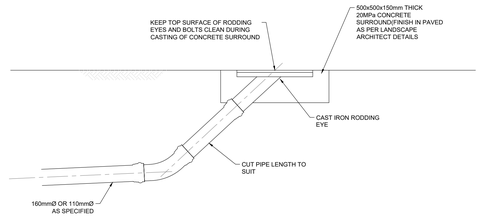
DETAIL B

DETAILS 'A' & 'B' INTERLOCKING JOINTS
SCALE 1:20

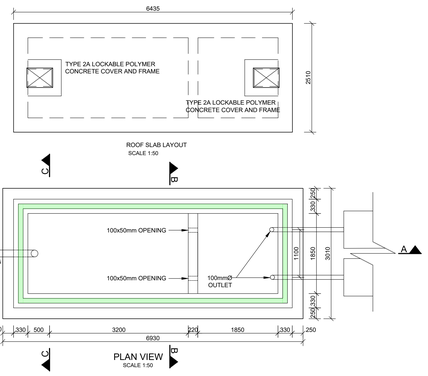


TOILET CONNECTION END VIEW
SCALE 1:20

LEVEL OF RODDING EYE
= 25mm ABOVE SURROUNDING SURFACE IN OPEN AREAS. =
SAME LEVEL AS SURROUNDING SURFACE IN
SURFACED/PAVED AREAS/ PUBLIC AREAS.

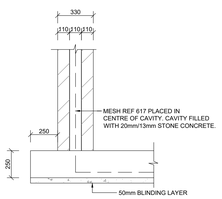


DETAIL OF RODDING EYE
SCALE 1:20



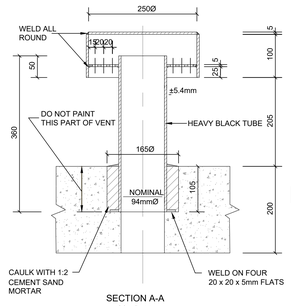
ROOF SLAB LAYOUT
SCALE 1:50

PLAN VIEW
SCALE 1:50



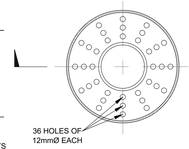
WALL DETAIL
SCALE 1:20

SECTION C-C
SEPTIC TANK VENT DETAIL
SCALE 1:50



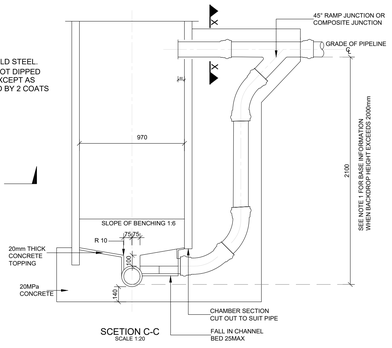
SECTION A-A
SCALE 1 : 5

AIR VENT NOTES:
1. AIR VENT TO BE MANUFACTURED FROM MILD STEEL.
2. AFTER FABRICATION, AIR VENT MUST BE HOT DIPPED GALVANIZED AND PAINTED EXTERNALLY (EXCEPT AS SHOWN) WITH AN ETCH. PRIMER FOLLOWED BY 2 COATS OF EPOXY TAR PAINT.

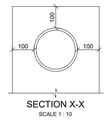


SECTIONAL PLAN
SCALE 1 : 5

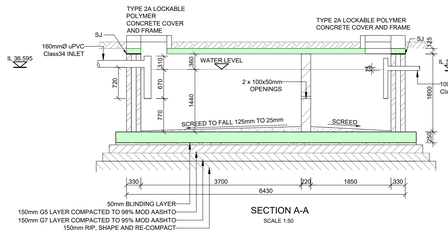
TYPICAL AIR VENT DETIAL



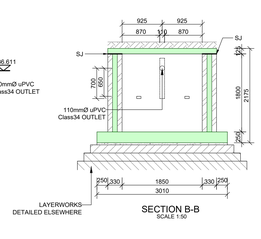
SECTION C-C
SCALE 1:20



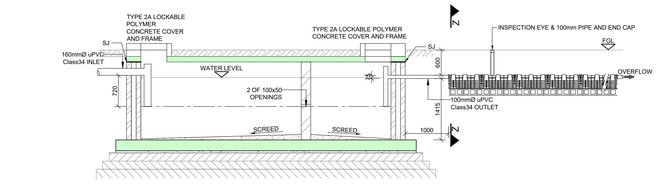
SECTION X-X
SCALE 1 : 10



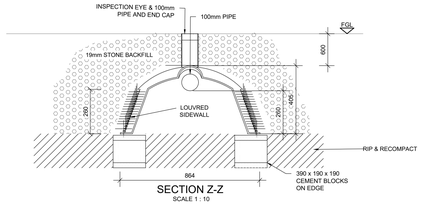
SECTION A-A
SCALE 1:50



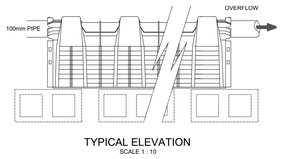
SECTION B-B
SCALE 1:50



SEPTIC TANK LONGITUDINAL SECTION
SCALE 1:50

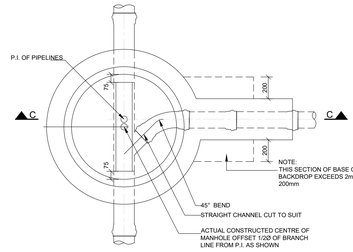


SECTION Z-Z
SCALE 1 : 10



TYPICAL ELEVATION
SCALE 1 : 10

INFILTRATOR DETAILS



BACKDROP MANHOLE PLAN
SCALE 1:20

GENERAL NOTES

1. ALL CONSTRUCTION WORK TO BE IN ACCORDANCE WITH THE RELEVANT SANS 1200 SPECIFICATIONS FOR CIVIL ENGINEERING CONSTRUCTION AS AMENDED BY THE SCOPE OF WORKS.
2. ALL SEWER CONNECTIONS TO BE Ø110mm uPVC CLASS 34.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL LEVELS AND DIMENSIONS ON SITE PRIOR TO COMMENCING WITH ANY EXCAVATIONS.
4. THE EXACT POSITIONS AND LEVELS OF ALL EXISTING SERVICES TO BE DETERMINED BY HAND EXCAVATION OR APPROVED LOCATION DEVICE BEFORE COMMENCING WITH CONSTRUCTION.
5. THE ENGINEER IS TO BE CALLED TO INSPECT ALL TRENCHES PRIOR TO ANY BACKFILL.
6. ALL MATERIAL TESTS FOR ALL CONSTRUCTION WORKS TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
7. ANY DISCREPANCIES TO BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY.
8. REFER TO DRAWING NO. 1677-GEN-002, ENGINEERING SURVEY LAYOUT PLAN FOR BENCHMARK POSITIONS AND COORDINATES.

No	APPROVED	AMENDMENTS	DATE
T0	CB	ISSUED FOR TENDER	2024/01/15

SURVEYED	N/A	N/A
DRAWN	A. NOKWE	JAN 2024
DESIGNED	C. BEZUIDENHOUT / A. NOKWE	JAN 2024
CHECKED	C. BEZUIDENHOUT	JAN 2024
APPROVED	PR REGISTRATION NO.	DATE:---

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CLIENT

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SAKHIWO MAINTAINANCE CONSORTIUM

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www.echealth.gov.za

PROJECT TITLE

RAGLAN ROAD CLINIC (GRAHAMSTOWN)

DRAWING TITLE

TYPICAL SEWER DETAILS

SCALE	SHEET SET	SHEET SIZE:
AS SHOWN	SHEET 1 OF 1 SHEETS	A0
DRAWING No.		REVISION
1574-SEW-010		T0

2024/01/15 09:53 am

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CLUSTER 4
VIRGINIA SHUMANE CLINIC PHASE 1
RENOVATIONS AND EXTENSIONS

ELECTRICAL INSTALLATION

PART C3.1: Standard Quality Specifications

C3.1: STANDARD TECHNICAL SPECIFICATION – Electrical Installation

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STANDARD TECHNICAL SPECIFICATION – Electrical Installation

1. General

The below standard technical specifications are in no way comprehensive but relies on the expertise of the contractor as well as all knowledge obtainable the relevant specifications regarding the building and electrical industry. Should the contractor require a more detailed specification this may be requested from the engineer and will be forwarded in an electronic format.

2. Tests

After completion of the works and before practical completion is granted, a full test will be carried out on the installation for a period of sufficient duration to determine the satisfactory working thereof. During this period the installations will be inspected and the Electrical Sub-contractor shall make good, to the satisfaction of the Representative / Agent, any defects which may arise.

The Electrical Sub-contractor shall provide all instruments and equipment required for testing and any water, power and fuel required for the commissioning and testing of the installations at completion.

3. Maintenance of Installations

With effect from the date of the Practical Completion Certificate, the Electrical Sub-contractor shall undertake the regular servicing of the installation during the three months maintenance (defects liability) period and shall make all adjustments necessary for the correct operation thereof.

If, during the three month maintenance (defects liability) period, the installation is not in working order for any reason for which the Electrical Sub-contractor is responsible, or if the installation develops defects, he shall immediately upon being notified thereof take steps to remedy the defects and make any necessary adjustments.

Should such stoppages however be so frequent as to become troublesome, or should the installations otherwise prove unsatisfactory during the said period the Electrical Sub-contractor shall, if called upon by the Representative / Agent at his own expense replace the whole of the installations or such parts thereof as the Representative / Agent may deem necessary with apparatus specified by the Representative / Agent.

4. Regulations

The installation shall be erected and tested in accordance with the following Acts and regulations :

(a) SANS 10142 : 2008 : “The Wiring of Premises : Part 1 : Low-voltage Installations”,

(b) the Occupational Health and Safety Act, 1993 (Act 85 of 1993),

(c) the Local Government Act 1998 (Act 10 of 1998 (Gauteng), municipal by-laws and any special requirements of the local supply authority,

(d) the Fire Brigade Services Act 2000 (Act 14 of 2000),

(e) the National Building Regulations and Building Standards Act 1996 (Act 29 of 1996),

(f) the Post Office Act 1998 (Act 124 of 1998),

(g) the Electricity Act 1996 (Act 88 of 1996),

(h) the Regulations of the local Gas Board where applicable,

(i) the National Water Act 1998 (Act no. 36 of 1998),

(j) the Water Services Act 1997 (Act 108 of 1997),

(k) the General Authorizations (Water Act),

(l) the Environmental Conservation Act 1998 (Act no. 73 of 1989),

(m) the National Environmental Management Act 1998 (Act no. 107 of 1998) and

(n) the Relevant SANS publications (such as for example SANS 252 parts 1 and 2, SANS 0400, etc).

5. Notices and Fees

The Electrical Sub-contractor shall give all notices required by and pay all necessary fees, including any inspection fees, which may be due to the respective Local Supply Authorities.

6. Schedule of Fittings

In all instances where schedules of light, socket outlet and power points are attached to or included on the drawings, these schedules are to be regarded as forming part of the Document.

7. Quality of Materials

Only materials of first class quality shall be used and all materials shall be subject to the approval of the Electrical Engineer. Schedule of information for various materials to be used on this Contract are attached to and form part of this Document.

Wherever applicable the material is to comply with the relevant South African Bureau of Standards, or to British Standard Documents, where no SANS Documents exist.

Materials wherever possible, must be of South African manufacture.

8. Conduit and Accessories

The type of conduit and accessories required for the service shall be PVC except in areas where galvanised conduit are specified, as specified in Clause 15 of Part C3.2 of this Document.

Unless other methods of installation are specified for certain circuits, the installation shall be in conduit throughout. No open wiring in roof spaces or elsewhere will be permitted.

The conduit and conduit accessories shall comply fully with the applicable SANS Documents as set out below and the conduit shall bear the mark of approval of the South African Bureau of Standards.

(a) Plain-end metallic conduit and accessories: SANS 1065, Parts 1 and 2

All conduit fittings, except couplings, shall be of the inspection type. Where cast metal conduit accessories are used, these shall be of malleable iron. Zinc base fittings will not be allowed.

Bushes used for metallic conduit shall be brass and shall be provided in addition to locknuts at all points where the conduit terminates at switchboards, switch-boxes, draw-boxes, etc.

Draw-boxes are to be provided in accordance with the relevant regulations and wherever necessary to facilitate easy wiring.

For light and socket outlet circuits, the conduit used shall have an external diameter of 20 mm. In all other instances the sizes of conduit shall be in accordance with the “SANS 10142 : 2008 : The Wiring of Premises : Part 1 : Low-voltage Installations” for the specified number and size of conductors, unless otherwise indicated on the drawings.

Only one manufactured type of conduit and conduit accessories will be permitted throughout the installation.

Running joints in screwed conduit are to be avoided as far as possible and all conduit systems shall be set or bent to the required angles. The use of normal bends must be kept to a minimum with exception of larger diameter conduits where the use of such bends is essential.

All metallic conduits shall be manufactured of mild steel with a minimum thickness of 1,2 mm.

Under no circumstances will conduit having a wall thickness of less than 1,6 mm be allowed in screeding laid on top of concrete slabs.

Bending and setting of conduit must be done with special bending apparatus manufactured for the purpose and which are obtainable from the manufacturers of the conduit systems.

Damaged conduit resulting from the use of incorrect bending apparatus or methods applied must on indication by the Electrical Engineer, completely removed and rectified and any wiring already drawn into such damaged conduits must be completely renewed at the Electrical Sub-contractor's expense.

Conduit and conduit accessories used for flameproof or explosion proof installations and for the suspension of luminaires as well as all load bearing conduit shall in all instances be of the metallic screwed type. All conduit and accessories used in areas within 50 km of the coast shall be galvanised to SANS 763.

Tenderers must ensure that general approval of the proposed conduit system to be used is obtained from the local electricity supply authority prior to the submission of their tender. Under no circumstances will consideration be given by the Electrical Engineer to any claim submitted by the Electrical Sub-contractor, which may result from a lack of knowledge in regard to the supply authority's requirements.

9. Conduit in Roof Spaces

Conduit in roof spaces shall be installed parallel or at right angles to the roof members and shall be secured at intervals not exceeding 1.5 m by means of saddles screwed to the roof timbers. Nails or "crampets" will not be allowed.

Where non-metallic conduit has been specified for a particular service, the conduit shall be supported and fixed with saddles with a maximum spacing of 450 mm. The Electrical Sub-contractor shall supply and install all additional supporting timbers in the roof space as required.

Under flat roofs, in false ceilings or where there is less than 0.9 m of clearance, or should the ceilings be insulated with glass wool or other insulating material, the conduit shall be installed in such a manner as to allow for all wiring to be executed from below the ceilings.

Conduit runs from distribution boards shall, where possible terminate in fabricated sheet steel draw-boxes installed directly above or in close proximity to the boards.

10. Surface Mounted Conduit

Wherever possible, the conduit installation is to be concealed in the building work; however, where unavoidable or otherwise specified under Clause 15 of Part C3.2 of the Document, conduit installed on the surface must be plumbed or levelled and only straight lengths shall be used.

The use of inspection bends is to be avoided and instead the conduit shall be set uniformly and inspection coupling used where necessary.

No threads will be permitted to show when the conduit installation is complete, except where running couplings have been employed.

Running couplings are only to be used where unavoidable, and shall be fitted with sliced couplings as a lock nut.

Conduit is to be run on approved spaced saddles rigidly secured to the walls.

Alternatively, fittings, tees, boxes, couplings etc., are to be cut into the surface to allow the conduit to fit

flush against the surface. Conduit is to be bedded into any wall irregularities to avoid gaps between the surface and the conduit.

Crossing of conduits is to be avoided; however, should it be necessary purpose-made metal boxes are to be provided at the junction. The finish of the boxes and positioning shall be in keeping with the general layout.

Where several conduits are installed side by side, they shall be evenly spaced and grouped under one purpose-made saddle.

Distribution boards, draw-boxes, industrial switches and socket outlets etc., shall be neatly recessed into the surface to avoid double sets.

In situations where there are no ceilings the conduits are to be run along the wall plates and the beams.

Painting of surface conduit shall match the colour of the adjacent wall finishes.

Only approved plugging materials such as aluminium inserts, fibre plugs, plastic plugs, etc., and round-head screws shall be used for fixing saddles, switches, socket outlets, etc., to walls, wood plugs and the plugging in joints in brick walls are not acceptable.

11. Conduit in Concrete Slabs

In order not to delay building operations the Electrical Sub-contractor must ensure that all conduits and other electrical equipment, which are to be cast in the concrete columns and slabs, are installed in good time.

The Electrical Sub-contractor shall have a representative in attendance at all times when the casting of concrete takes place.

Draw-boxes, expansion joint boxes and round conduit boxes are to be provided where necessary. Sharp bends of any nature will not be allowed in concrete slabs.

Draw and / or inspection boxes shall be grouped under one common cover plate and must preferable are installed in passages or male toilets.

All boxes, etc., are to be securely fixed to the shuttering to prevent displacement when concrete is cast. The conduit shall be supported and secured at regular intervals and installed as close as possible to the neutral axis of concrete slabs and/or beams.

Before any concrete slabs are cast, all conduit droppers to switchboards shall be neatly spaced and rigidly fixed.

12. Flexible Connections for connecting up of Stoves, Machines, Etc.

Flexible tubing connections shall be of galvanised steel construction, and in damp situations of the plastic sheathed galvanised steel type. Other types may only be used subject to the prior approval of the Electrical Engineer's site electrical representative.

Connectors for coupling onto the flexible tubing shall be of the gland or screw-in types, manufactured of either brass or cadmium or zinc plated mild steel, and the connectors after having been fixed onto the tubing, shall be durable and mechanically sound.

Aluminium and zinc alloy connectors will not be acceptable.

13. Wiring

Except where otherwise specified in Clause 16 of Part C3.2 of this Document, wiring shall be carried out in conduit throughout. Only one circuit per conduit will be permitted.

No wiring shall be drawn into conduit until the conduit installation has been completed and all conduit ends provided with bushes.

All conduits are to be clear of moisture and debris before wiring is commenced.

Unless otherwise specified in Clause 16 of Part C3.2 of this Document or indicated on the service drawings, the wiring of the installation shall be carried out in accordance with the "SANS 10142 : 2008 : The Wiring of Premises : Part 1 : Low-voltage Installations".

Further to the requirements concerning the installation of earth conductors to certain light points as set out in the "SANS 10142 : 2008 : The Wiring of Premises : Part 1 : Low-voltage Installations", it is a specific requirement of this document that where plain-end metallic conduit or non-metallic conduit has been used, earth conductors

must be provided and drawn into the conduit with the main conductors to all points, including all luminaires and switches throughout the installation.

Wiring for lighting circuits is to be carried out with 2.5 mm² conductors and a 2.5 mm² earth conductor. For socket outlet circuits the wiring shall comprise 4 mm² conductors and a 2.5 mm² earth conductor.

In certain instances, as will be directed in Clause 16 of Part C3.2 of this Document, or the attached drawings, the sizes of the aforementioned conductors may be increased for specified circuits.

Sizes of conductors to be drawn into conduit in all other instances, such as feeders to distribution boards, power points etc., shall be as specified elsewhere in this Document or indicated on the drawings.

Sizes of conductors not specified must be determined in accordance with the "SANS 10142: 2008 : The Wiring of Premises : Part 1 : Low-voltage Installations".

The loop-in system shall be followed throughout, and no joints of any description will be permitted.

The wiring shall be done in PVC insulated 600 / 1000 V grade cable to SANS 150.

Where cable ends connect onto switches, luminaires etc., the end strands must be neatly and tightly twisted together and firmly secured. Cutting away of wire strands of any cable will not be allowed.

14. Switches and Socket Outlets

All switches and switch-socket outlet combination units shall conform to the Detailed Specifications in this document.

No socket outlets, other than 16 A 3 pin, are to be used, unless other special purpose types are distinctly specified or shown on the drawings.

All light switches shall be installed at 1.4m above finished floor level and all socket outlets as directed in the Schedule of Fittings which forms part of this Document or alternatively the height of socket outlets may be indicated on the drawings.

15. Switchgear

Switchgear, which includes circuit breakers, iron-clad switches, interlocked switch-socket outlet units, contactors, time switches, etc., shall be equal and similar in quality to such brands as may be specified.

16. Electrical Distribution Boards

All boards shall be in accordance with the types as specified, be constructed according to the detail or

type drawings and must be approved by the Electrical Engineer before installation.

In all instances where provision is to be made on boards for the supply authority's main switch and / or metering equipment the Electrical Sub-contractor must ensure that all requirements of the authorities concerned in this respect are met.

Any construction or standard type board proposed as an alternative to that specified must have the prior approval of the Electrical Engineer.

All busbars, wiring, terminals, etc., are to be adequately insulated and all wiring is to enter the switchgear from the back of the board. The switchgear shall be mounted within the boards to give a flush front panel.

Cable boxes and other ancillary equipment must be provided where required.

Clearly engraved labels are to be mounted on or below every switch. The working of the labels in English is to be according to the layout drawings or as directed by the Electrical Engineer's representative and must be confirmed on site.

Electrical distribution boards are to be installed with the top of the board 2.0 m above the finished floor level.

17. Workmanship and Staff

Except in the case of electrical installations supplied by a single-phase electricity supply at the point of supply, an accredited person shall exercise general control over all electrical installation work being carried out.

The workmanship shall be of the highest grade and to the satisfaction of the Electrical Engineer**.**

All inferior work shall, on indication by the Electrical Engineer, immediately be removed and rectified by and at the expense of the Electrical Sub-contractor.

18. Certificate of Compliance

On completion of the service, a certificate of compliance must be issued to the Electrical Engineer's Representative in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993).

19. Earthing of Installation

Main earthing

The type of main earthing must be as required by the supply authority, and in any event as directed by the Electrical Engineer, who may require additional earthing to meet test standards.

Where required an earth mat shall be provided, the minimum size, unless otherwise specified, being 1.0m x 1.0m and consisting of 4 mm diameter hard-drawn bare copper wires at 250 mm centres, brazed at all intersections.

Alternatively or additionally earth rods or trench earths may be required as specified or directed by the Electrical Engineer's authorised representative.

Installations shall be effectively earthed in accordance with the "SANS 10142: 2008 : The Wiring of Premises : Part 1 : Low-voltage Installations" and to the requirements of the supply authority. All earth conductors shall be stranded copper with or without green PVC installation.

Connection from the main earth bar on the main board must be made to the cold water main, the

incoming service earth conductor, if any and the earth mat or other local electrode by means of 12 mm x 1.60 mm solid copper strapping or 16 mm² stranded (not solid) bare copper wire or such conductor as the Electrical Engineer may direct.

Main earth copper strapping where installed below 3 m from ground level, must be run in 20 mm diameter conduit securely fixed to the walls.

All other hot and cold water pipes shall be connected with 12 mm x 0.8 mm perforated for solid copper strapping (not conductors) to the nearest switchboard. The strapping shall be fixed to the pipework with brass nuts and bolts and against walls with brass screws at 150 mm centres.

In all cases where metal water pipes, down pipes, flues, etc., are positioned within 1.6m of switchboards an earth connection consisting of copper strapping shall be installed between the pipework and the board.

In vertical building ducts accommodating both metal water pipes and electrical cables, all the pipes shall be earthed at each distribution board.

Roofs, gutters and down pipes

Where service connections consist of overhead conductors, all metal parts of roofs, gutters and down pipes shall be earthed. One bare 10 mm² copper conductor shall be installed over the full length of the ceiling void, fixed to the top purlin and connected to the main earth conductor and each switchboard.

The roof and gutters shall be connected at 15m intervals to this conductor by means of 12 mm x 0.8 mm copper strapping (not conductors) and galvanised bolts and nuts.

Self-tapping screws are not acceptable. Where service connections consist of underground supplies, the above requirements are not applicable.

Sub-distribution boards

A separate earth connection shall be supplied between the earth busbar in each Sub-electrical Distribution Board and the earth busbar in the Main Electrical Distribution Board.

These connections shall consist of bare or insulated stranded copper conductors installed along the same routes as the supply cables or in the same conduit as the supply conductors.

Alternatively, armoured cables with earth continuity conductors included in the armouring may be utilised where specified or approved.

Sub-circuits

The earth conductors of all sub-circuits shall be connected to the earth busbar in the supply board in accordance with SANS 0142.

Ring Mains

Common earth conductors may be used where various circuits are installed in the same wire way in accordance with SANS 0142.

In such instances the sizes of earth conductors shall be equivalent to that of the largest current carrying conductor installed in the wire way, alternatively the size of the conductor shall be as directed by the Electrical Engineer.

Earth conductors for individual circuits branching from the ring main shall be connected to the common earth conductor with T-ferrules or soldered.

The common earth shall not be broken.

Non-metallic Conduit

Standard copper earth conductors shall be installed in the conduits and fixed securely to all metal appliances and equipment, including metal switch boxes, socket-outlet boxes, draw-boxes, switchboards, luminaires, etc. The securing of earth conductors by means of self-threading screws will not be permitted.

Flexible Conduit

An earth conductor shall be installed in all non-metal flexible conduits. This earth conductor shall not be installed externally to the flexible conduit but within the conduit with the other conductors.

The earth conductor shall be connected to the earth terminals at both ends of the circuit.

Connection

Under no circumstances shall any connection points, bolts, screws, etc., used for earthing be utilised for any other purpose. It will be the responsibility of the Electrical Sub-contractor to supply and fit earth terminals or clamps on equipment and materials that must be earthed where these are not provided.

Unless earth conductors are connected to proper terminals, the end shall be tinned and lugged.

20. Mounting and Positioning of Luminaires

The Electrical Sub-contractor is to note that in the case of board and acoustic tile ceilings, i.e. as opposed to concrete slabs. Close co-operation with the Principal Contractor is necessary to ensure that as far as possible the luminaires are symmetrically positioned with regard to the ceiling pattern.

The layout of the luminaires as indicated on the drawings must be adhered to as far as possible and must be confirmed with the Electrical Engineer.

Fluorescent luminaires installed against concrete ceilings shall be screwed to the outlet boxes and in addition 2 x 6 mm expansion or other approved type fixing bolts are to be provided. The bolts are to be ¾ of the length of the luminaires apart.

Fluorescent luminaires to be mounted on board ceilings shall be secured by means of two 40 mm x No. 10 round head screws and washers. The luminaires shall also be bonded to the circuit conduit by means of locknuts and brass bushes. The fixing screws are to be placed ¾ of the length of the fitting apart.

Earth conductors must be drawn in with the circuit wiring and connected to the earthing terminal of all fluorescent luminaires as well as other luminaires exposed to the weather in accordance with the “SANS 10142 : 2008 : The Wiring of Premises : Part 1 : Low-voltage Installations”.

Incandescent luminaires are to be screwed directly to outlet boxes in concrete slabs. Against board ceilings the luminaires shall be secured to the brandering or joists by means of two 40 mm x No. 8 round head screws.

CLUSTER 4
VIRGINIA SHUMANE CLINIC
RENOVATIONS AND EXTENSIONS

ELECTRICAL INSTALLATION

PART C3.2: DETAILED INSTALLATIONS

CONTENTS

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CLUSTER 4
VIRGINIA SHUMANE CLINIC
RENOVATIONS AND EXTENSIONS
ELECTRICAL INSTALLATION

PART C3.2: DETAILED INSTALLATIONS

1 Cable Sleeve Pipes

Where cables cross under roadways, other services and where cables enter buildings, the cables shall be installed in high-density polyethylene pipes.

The ends of all ducts shall be sealed with a non-hardening watertight compound after the installation of cables.

All ducts intended for future use shall likewise be sealed.

2 Notices

The Electrical Sub-contractor shall issue all notices and make the necessary arrangements with Supply Authorities. Transport Services, Provincial or National Road Authorities and other authorities as may be required with respect to the installation.

3 Electrical Equipment

All equipment and fittings supplied must be in accordance with the specifications and regulations, suitable for the relevant supply voltage and frequency and must be approved by the Electrical Engineer.

4 Drawings

The drawings generally show the scope and extent of the proposed work and shall not be held as showing every minute detail of the work to be executed.

The position of power points, switches and light points that may be influenced by built-in furniture must be established on site, prior to these items being built in.

5 Balancing of Load

The Electrical Sub-contractor is required to balance the load as equally as possible over the multiphase supply.

6 Service Conditions

All plant shall be designed for the climatic conditions appertaining to the service.

7 Switches and Socket Outlets

The installation of switches and socket outlets must conform to Clause 14 of Part C3.1 of this Document.

8 Light Fittings and Lamps

The installation and mounting of luminaires must conform to Clause 20 of Part C3.1 of this Document.

All fittings to be supplied by the Electrical Sub-contractor shall have the approval of the Consulting Electrical Engineer.

LED luminaires shall bear the approved mark of the SANS, and shall have the British light centre length.

The light fittings must be of the type specified in Schedule 17.2: Schedule of Luminaires, of Part C3.2 of this Document.

9 Earthing and Bonding

The Electrical Sub-contractor will be responsible for all earthing and bonding of the building and installation.

The earthing and bonding is to be carried out strictly as described in Clause 19 of Part C3.1 of this Document and to the satisfaction of the Consulting Electrical Engineer.

10 Maintenance of Electrical Supply

All interruptions of the electrical supply that may be necessary for the execution of the Work will be subject to prior arrangement between the Electrical Sub-contractor, the Client and the Consulting Electrical Engineer.

11 Scope of Works (Principal Contract)

- Renovations and Extensions to be carried out to the following facility:
    - Virginia Shumane Clinic

12 Scope of Works (Electrical Sub-contract)

The Electrical scope of works to include the following sections;

- Installation of new LED luminaries to new extensions and existing building
- Installation of new flush wall mounted light switches to new extensions and existing building
- Installation bulkhead fittings
- Installation of new switched socket outlets
- Installation of power skirting with socket, Telephone and Data outlets
- Installation of Isolators for Air Conditioners, Fans and water tank pump
- Replacement of faulty circuit breakers (if any)

- Conduit and wiring
- Repairs to Lightning Protection System if required
- Earthing and bonding
- Issuing of test records and Certificate of Compliance
- Installation of standby generator
- Installation of new Distribution Board
- Upgrade of existing Distribution Board
- IT wiring to new data points from existing data switches

All the rates provided in the Schedule of Quantities must include builders profit and attendance.

12.1 Existing Services

There are no drawings showing existing services or installations sub-contractor to work carefully and avoid damages to existing installations.

12.2 Builder's and Related Works

The Electrical Sub-contractor shall be responsible for the necessary liaison with the Principal Contractor and for the co-ordination and timing of the related builder's Works detailed below.

12.2.1 Builder's Works

Where applicable, the Electrical Sub-contractor shall be responsible for the flush mounting of all wall boxes required for the electrical equipment and fittings.

Where applicable, and within reason, the making good of the finished surfaces will be undertaken by the Principal Contractor.

The Electrical Sub-contractor shall be responsible for the liaison with the Principal Contractor and for co-ordination of the relevant Works.

13 Electrical Distribution Boards

13.1 General

The following shall be applicable to the electrical distribution boards, namely:

All distribution boards (DBs) will be supplied, wired and complete with all equipment of quantities, types, sizes and ratings as specified on the distribution board schematics.

Manufacturing, circuiting and labelling of DBs shall be in compliance with the latest SANS 10142-1.

The Electrical sub-contractor shall ensure on site and on the drawings, before commencing with any work that sufficient space and access is available to install the DB's as specified. No additional claims for failure to check these details and rectify any default will be entertained.

Before handing over, the boards shall be thoroughly cleaned inside and outside. Finished surfaces shall be made good where necessary with identical paint to the original finish.

Sleeve pipes as indicated on the drawings shall be provided and built into the wall for incoming and outgoing cables.

14 Record Drawings

A complete set of floor plans, in hard copy format, will be issued to the appointed Electrical Sub-contractor, for preparation of Record Drawings.

The appointed Electrical Sub-contractor shall prepare Record Drawings of the complete electrical engineering services installation and return same to Consulting Electrical Engineers.

15 Conduit and Conduit Accessories

Conduit and conduit accessories shall be PVC except in areas where galvanized conduits are specified.

Wherever possible, and unless otherwise stated, the new services shall be chased, or cast into, the concrete slabs and walls.

Should flush mounting not be practical (or possible), the Electrical Sub-contractor shall obtain prior approval from the Consulting Electrical Engineers, for the installation of surface mounted conduit and / or accessories. If approved, surface mounted conduits shall be installed using spacer brackets. Conduit accessories shall be mounted on similar brackets, ensuring an aesthetic installation.

16 Conductors

All low voltage single core conductors shall be of the PVC insulated type with stranded copper conductors, rated at 600 V general service duty and manufactured to SANS 1507 - 1990.
The colour coding for the PVC insulation shall be red, white and blue for phases, black for neutral and green and or yellow for earth.

No openly installed (i.e. surface mounted) "Surfix" or twin and earth will be permitted unless otherwise authorized by the Consulting Engineers prior to installation.

17 Lighting Installation

17.1 General

Light outlet points shall be installed generally in positions as indicated. They shall be as symmetrical as possible within the area in which they are fitted.

Cognisance must be taken of the finishes and structural components to avoid clashes of services.

Ceiling mounted LED fittings shall be secured to the concrete ceiling by means of expansion bolts, or “Hilti” fixings, and to the ceiling boards by means of PVC “Butterfly” expansion nuts.

The Electrical Sub-contractor is to include in the Tender Price the provision of fixing additional brandering where needed.

Light switches are existing, subcontractor is responsible to rewire them for the new lights and replace switches in bad condition with new.

All lamp types shall be guaranteed for the full duration of the guarantee period.

17.2 Schedule of Luminaires

All luminaires shall comply fully with the Documents detailed herein.

The Electrical Sub-contractor is to make allowance for the provision of sample luminaires for approval by the Consulting Electrical Engineering, prior to the placement of orders.

The Electrical Sub-contractor is to ensure that sufficient time is allowed for the approval process.
In addition to the clauses in Part C3.1 of this Document, the luminaires shall comply with the following:

TYPE	DESCRIPTION
Type B	44W LED surface mounted linear luminaire with: • Body – Seamless Aluminum extruded frame • Diffuser – Polycarbonate • Dimensions –1500mm Long
Type L	15W LED bulkhead luminaire. Suitable for outdoor and indoor use. • Body – Seamless Aluminum extruded frame • IP66 Diffuser – Polycarbonate

18 Trenching and Excavations

18.1 Trenching

Unless detailed otherwise on the drawings LV cables the depth shall be 650mm below final ground level. Where the required depth cannot be met, the Engineer may approve one of the following:

- cement slabs over the cables or
- cable Sleeve pipe encased in 300 mm^2 concrete

The width of trenches shall be 450mm but where two cables are laid in the same trench the width shall be 570mm and cables shall be spaced 150mm apart.

18.2 Bedding of Cables

Normal bedding requirements for both LV cables shall be 150mm sand under and 150mm sand over.

The final decision as to whether bedding may be omitted or not, shall rest with the Engineer.

18.3 Backfilling

- All loose stones or any other material likely to cause damage to cables shall be removed from trenches, before backfilling commences.
- Backfilling shall not commence without prior inspection, measurement and approval of the Engineer.
- Backfilling of trenches in road reserves shall be in layers not exceeding 300mm and the use of a suitable compacting machine is essential in order to achieve an approximate 9,8% Mod. AASHO density.

18.4 Random Check of Excavations

The Engineer reserves the right to request random check holes to check cable depth, bedding, material classification, danger tape, etc.

19 ICT, HVAC, Ventilation, Hot water and Fire Protection

The Electrical Contractor will be responsible for the installation for wireways only. This will include all distribution boards, outlet boxes with cover plates and draw wires, all as indicated on the layout drawings.

The equipment, cabling and wiring for these systems will be done by others.

CLUSTER 4
VIRGINIA SHUMANE CLINIC PHASE 1
RENOVATIONS AND EXTENSIONS

ELECTRICAL INSTALLATION

PART C3.3: SCHEDULE OF INFORMATION

CLUSTER 4
VIRGINIA SHUMANE CLINIC
RENOVATIONS AND EXTENSIONS

ELECTRICAL INSTALLATION

PART C3.3: SCHEDULE OF INFORMATION

ITEM	DESCRIPTION
1.	REGISTRATION AS ELECTRICAL CONTRACTOR
2.	DETAILS OF INSTALLATION ELECTRICIAN
3.	SCHEDULE OF MATERIALS OFFERED

1. REGISTRATION AS ELECTRICAL CONTRACTOR

The Tenderer must be registered as an Electrical Contractor with the Electrical Contracting Board of South Africa and must also be registered with the Workmen's Compensation Commissioner and the Unemployment Insurance Commissioner to qualify for this tender.

Tenderers must complete the following questionnaire and submit it with this tender.

a) Has the company been registered with the Electrical Contracting Board of South Africa YES/NO

Registration No : .....

Date of issue : .....

NB: Proof of current registration to be submitted with the tender. Should your tender be successful you will be expected to submit the original document for perusal by the Engineer.

b) Has the company been registered with the Labour Department?

i) The Workmen's Compensation Commissioner YES/NO

Registration No : .....

Date of issue : .....

ii) The Unemployment Insurance Commissioner YES/NO

Registration No : .....

Date of issue : .....

I/We certify that the above information is correct

Signature : .....

Name of Signatory : .....

Name of Firm Represented : .....

Address : .....

.....

Date : .....

2. DETAILS OF INSTALLATION ELECTRICIAN

I/We certify that .....……..…….....…….....…….....

3. **SCHEDULE OF MATERIALS OFFERED**

The Tenderer must complete the following schedules and submit them with the priced Bill of Quantities.

The schedules will be scrutinised by the Engineer and should any material offered not comply with the requirements contained in the specification, the Contractor will be required to supply material in accordance with the contract at no additional cost.

NB : **Only one manufacturer's name to be inserted for each item.**

ITEM	MATERIAL	MAKE OR TRADE NAME	CONFORMITY TO SANS ?
1	Circuit breakers	TO BE SIMILAR TO EXISTING	
2	Light Switches		
2.1	16A flush Light Switches		
3	Conduits		
4	20mm PVC		
5	25mm PVC		
6	Luminaires		
6.1	Type L		
6.2	Type B		

NOTE : The Contractor is to note that under no circumstances may materials be installed other than that offered in the above material schedule, which has been approved and accepted by the Engineer. Should the Contractors wish to supply materials other than that originally offered, prior written approval must be obtained from the Engineer, before any orders are placed.

Signature : ...……..……..……

Name of Signatory : ….....…..……..……..……..…..

Name of Firm Represented : .....…….……..……..…….

Address : ……...…….....……..…

……..…….

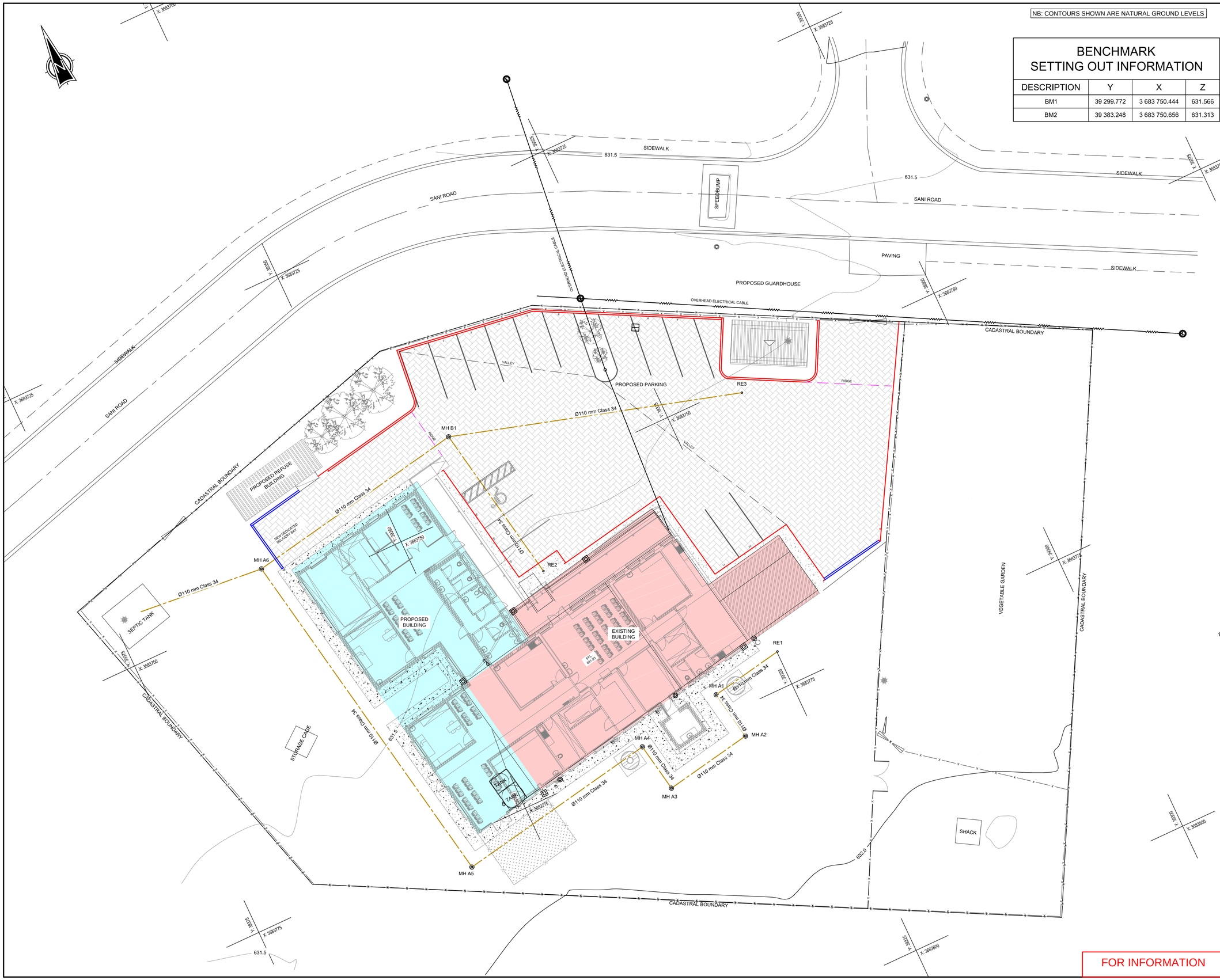
……..…….

Date : ……

NB: CONTOURS SHOWN ARE NATURAL GROUND LEVELS

BENCHMARK SETTING OUT INFORMATION

DESCRIPTION	Y	X	Z
BM1	39 299.772	3 683 750.444	631.566
BM2	39 383.248	3 683 750.656	631.313



LEGEND

PROPOSED FEATURES:

FENCING
BARRIER KERB (BK)
SUNKEN KERB (SK)

EXISTING FEATURES:

RODDING EYE
FENCE
OVERHEAD ELECTRICITY CABLES
ELECTRICITY POLE
GULLEY
BENCHMARK

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO.MDA 290D-200 / 201

No	AMENDMENTS	DATE
P1	RE-ISSUE OF DRAWING	SEP 2023
P1	REVISED PARKING LOT AREA	OCT 2018
P0	ISSUED FOR INFORMATION	SEP 2018

SURVEYED	SURPLAN	MAY 2018
DRAWN	A.NTLAMA	SEP 2018
DESIGNED	A.NTLAMA	SEP 2018
CHECKED	J.JORDAAN	SEP 2018
APPROVED	PR REGISTRATION NO. 201370318	DATE

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www.echealth.gov.za

PROJECT TITLE

NG DLUKULU CLINIC (GRAHAMSTOWN)

DRAWING TITLE

GENERAL LAYOUT PLAN

SCALE	SHEET SET	SHEET SIZE
1 : 150	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-76-GEN-001	P1

FOR INFORMATION

P:\1574 Eastern Cape Facility Management\1574-76 SB007 NG Dlukulu Clinic\04 Design\08 General\1574-76-GEN-001_recover.dwg

NB: CONTOURS SHOWN ARE NATURAL GROUND LEVELS

BENCHMARK SETTING OUT INFORMATION

DESCRIPTION	Y	X	Z
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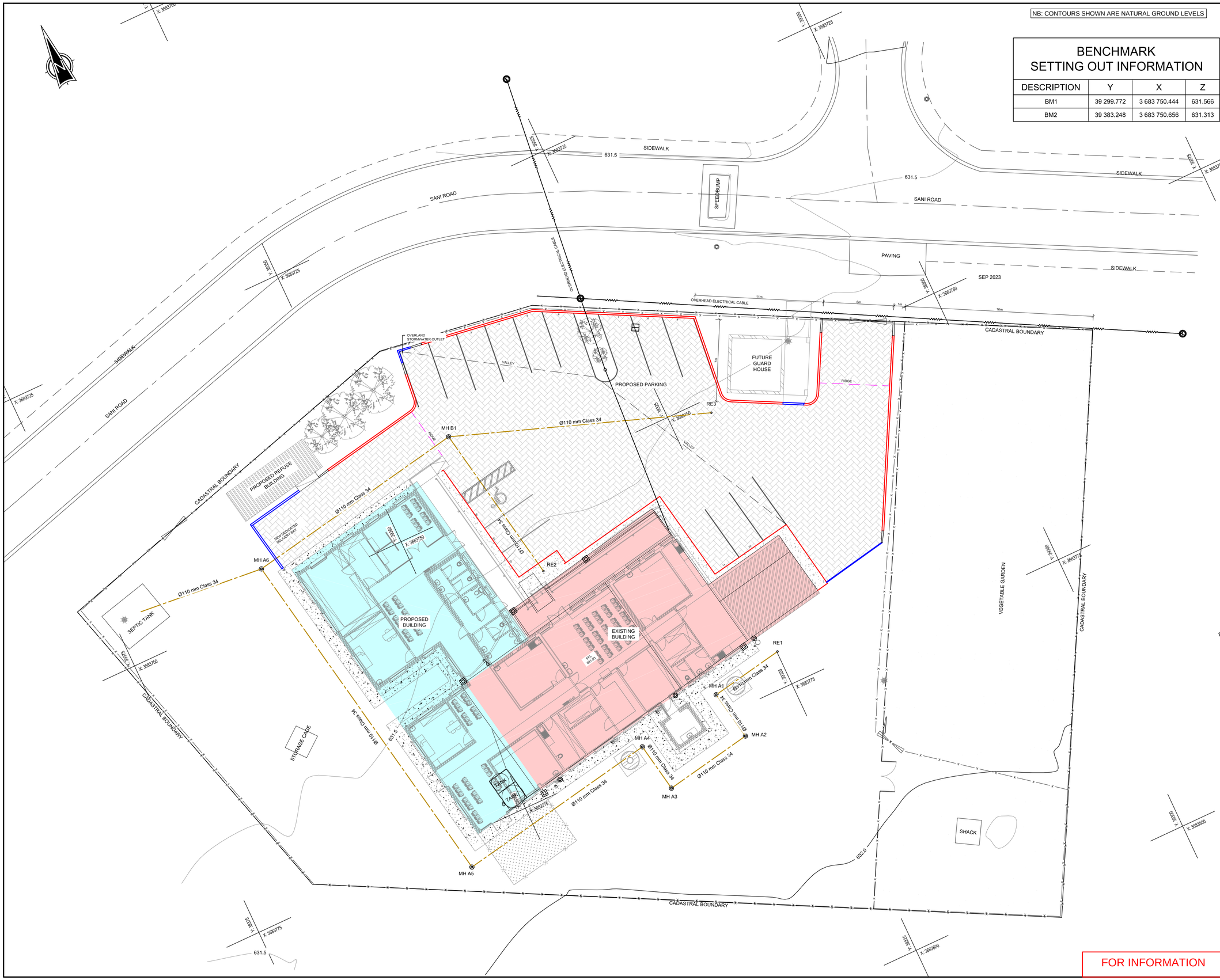
BM2	39 383.248	3 683 750.656	631.313



FOR INFORMATION

LEGEND

PROPOSED FEATURES:

- FENCING
- BARRIER KERB (BK)
- SUNKEN KERB (SK)
- TRANSITION KERB (TK)
- SEWER PIPELINE
- SEWER MANHOLE
- RODDING EYE

EXISTING FEATURES:

- RODDING EYE
- FENCE
- OVERHEAD ELECTRICITY CABLES
- ELECTRICITY POLE
- GULLEY
- BENCHMARK

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO.MDA 290D-200 / 201

No	AMENDMENTS	DATE
P2	RE-ISSUE OF DRAWING	SEP 2023
P2	REVISED PARKING LOT AREA	MAR 2019
P1	REVISED PARKING LOT AREA	OCT 2018
P0	ISSUED FOR INFORMATION	SEP 2018

SURVEYED	SURPLAN	MAY 2018
DRAWN	A.NTLAMA	SEP 2018
DESIGNED	A.NTLAMA	SEP 2018
CHECKED	J.JORDAAN	MAR 2019
APPROVED	PR REGISTRATION NO. 201370318 DATE	

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PROJECT TITLE

NG DLUKULU CLINIC (GRAHAMSTOWN)

DRAWING TITLE

GENERAL LAYOUT PLAN

SCALE	SHEET SET	SHEET SIZE
1 : 150	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-76-GEN-001	P2

P:\1574 Eastern Cape Facility Management\1574-76 SB007 NG Dlukulu Clinic\04 Design\08 General\1574-76-GEN-001 Rev1.dwg

SURVEY CONTROL
SYSTEM WGS84/LO27

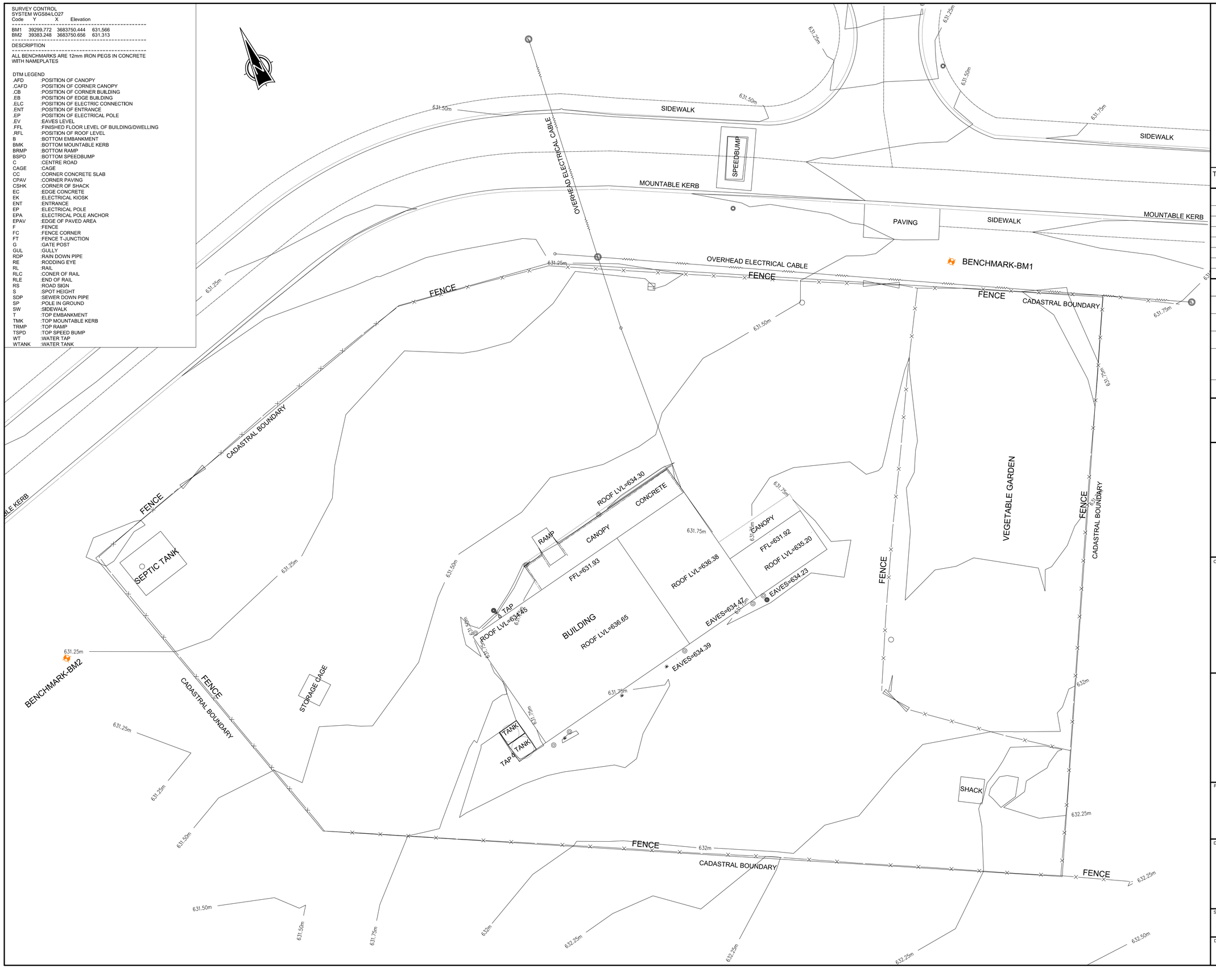
Code	Y	X	Elevation
BM1	39299.772	3683750.444	631.566
BM2	39383.248	3683750.656	631.313

DESCRIPTION

ALL BENCHMARKS ARE 12mm IRON PEGS IN CONCRETE WITH NAMEPLATES

DTM LEGEND

.AFD	:POSITION OF CANOPY
.CAFD	:POSITION OF CORNER CANOPY
.CB	:POSITION OF CORNER BUILDING
.EB	:POSITION OF EDGE BUILDING
.ELC	:POSITION OF ELECTRIC CONNECTION
.ENT	:POSITION OF ENTRANCE
.EP	:POSITION OF ELECTRICAL POLE
.EV	:EAVES LEVEL
.FFL	:FINISHED FLOOR LEVEL OF BUILDING/DWELLING
.RFL	:POSITION OF ROOF LEVEL
B	:BOTTOM EMBANKMENT
BMK	:BOTTOM MOUNTABLE KERB
BRMP	:BOTTOM RAMP
BSPD	:BOTTOM SPEEDBUMP
C	:CENTRE ROAD
CAGE	:CAGE
CC	:CORNER CONCRETE SLAB
CPAV	:CORNER PAVING
CSHK	:CORNER OF SHACK
EC	:EDGE CONCRETE
EK	:ELECTRICAL KIOSK
ENT	:ENTRANCE
EP	:ELECTRICAL POLE
EPA	:ELECTRICAL POLE ANCHOR
EPAV	:EDGE OF PAVED AREA
F	:FENCE
FC	:FENCE CORNER
FT	:FENCE T-JUNCTION
G	:GATE POST
GUL	:GULLY
RDP	:RAIN DOWN PIPE
RE	:RODDING EYE
RL	:RAIL
RLC	:CONER OF RAIL
RLE	:END OF RAIL
RS	:ROAD SIGN
S	:SPOT HEIGHT
SDP	:SEWER DOWN PIPE
SP	:POLE IN GROUND
SW	:SIDEWALK
T	:TOP EMBANKMENT
TMK	:TOP MOUNTABLE KERB
TRMP	:TOP RAMP
TSPD	:TOP SPEED BUMP
WT	:WATER TAP
WTANK	:WATER TANK



THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO.MDA 290D-200/201

No	AMENDMENTS	DATE
P0	RE-ISSUE OF DRAWING	SEP 2023
P0	ISSUED FOR INFORMATION	AUG 2018

SURVEYED	SURPLAN	AUG 2018
DRAWN	A.NTLAMA	AUG 2018
DESIGNED	A.NTLAMA	AUG 2018
CHECKED	J.JORDAAN	AUG 2018
APPROVED	PR REGISTRATION NO.	DATE

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PROJECT TITLE

NG DLUKULU CLINIC (GRAHAMSTOWN)

DRAWING TITLE

ENGINEERING SURVEY LAYOUT PLAN

SCALE	SHEET SET	SHEET SIZE
1 : 150	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-76-GEN-002	P0

P:\1574 Eastern Cape Facility Management\1574-76 SIB007 NG Dlukulu Clinic\04 Design\08 General\1574-76-GEN-002_003 EXISTING SURVEY.dwg

SURVEY CONTROL
SYSTEM WGS84/LO27

Code	Y	X	Elevation
BM1	39299.772	3683750.444	631.566
BM2	39383.248	3683750.656	631.313

DESCRIPTION

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.FFL	:FINISHED FLOOR LEVEL OF BUILDING/DWELLING
.RFL	:POSITION OF ROOF LEVEL
B	:BOTTOM EMBANKMENT
BMK	:BOTTOM MOUNTABLE KERB
BRMP	:BOTTOM RAMP
BSPD	:BOTTOM SPEEDBUMP
C	:CENTRE ROAD
CAGE	:CAGE
CC	:CORNER CONCRETE SLAB
CPAV	:CORNER PAVING
CSHK	:CORNER OF SHACK
EC	:EDGE CONCRETE
EK	:ELECTRICAL KIOSK
ENT	:ENTRANCE
EP	:ELECTRICAL POLE
EPA	:ELECTRICAL POLE ANCHOR
EPAV	:EDGE OF PAVED AREA
F	:FENCE
FC	:FENCE CORNER
FT	:FENCE T-JUNCTION
G	:GATE POST
GUL	:GULLY
RDP	:RAIN DOWN PIPE
RE	:RODDING EYE
RL	:RAIL
RLC	:CONER OF RAIL
RLE	:END OF RAIL
RS	:ROAD SIGN
S	:SPOT HEIGHT
SDP	:SEWER DOWN PIPE
SP	:POLE IN GROUND
SW	:SIDEWALK
T	:TOP EMBANKMENT
TMK	:TOP MOUNTABLE KERB
TRMP	:TOP RAMP
TSPD	:TOP SPEED BUMP
WT	:WATER TAP
WTANK	:WATER TANK

SIDEWALK
631.50m
631.25m
631.75m
631m
SPEEDBUMP
MOUNTABLE KERB
PAVING
OVERHEAD ELECTRICAL CABLE
FENCE
CADASTRAL BOUNDARY
BENCHMARK-BM1
BENCHMARK-BM2
GATE TO BE REMOVED
NEW GATE BY OTHERS
RAMP TO BE DEMOLISHED
AND REPLACED WITH STAIRS
RAMP
CONCRETE
CANOPY
ROOF LVL=634.30
FFL=631.93
ROOF LVL=636.38
FFL=631.92
ROOF LVL=635.20
EAVES=634.23
EAVES=634.47
EAVES=634.39
BUILDING
ROOF LVL=636.65
ROOF LVL=634.65
TAP
SEPTIC TANK
TO BE REMOVED
STORAGE CAGE
TANK
TANK TO BE RELOCATED
VEGETABLE GARDEN
FENCE & GATE TO
BE RELOCATED
SHACK TO BE REMOVED
SHACK
632m
632.25m

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO. 1574-GEN-001

No	AMENDMENTS	DATE
P0	RE-ISSUE OF DRAWING	SEP 2023
P0	ISSUED FOR INFORMATION	AUG 2018

SURVEYED	SURPLAN	AUG 2018
DRAWN	A.NTLAMA	AUG 2018
DESIGNED	A.NTLAMA	AUG 2018
CHECKED	J.JORDAAN	AUG 2018
APPROVED	PR REGISTRATION NO.	DATE

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www.echealth.gov.za

PROJECT TITLE

NG DLUKULU CLINIC (GRAHAMSTOWN)

DRAWING TITLE

CIVILS DEMOLITION LAYOUT PLAN

SCALE	SHEET SET	SHEET SIZE
1 : 150	SHEET 1 OF 1 SHEETS	A1

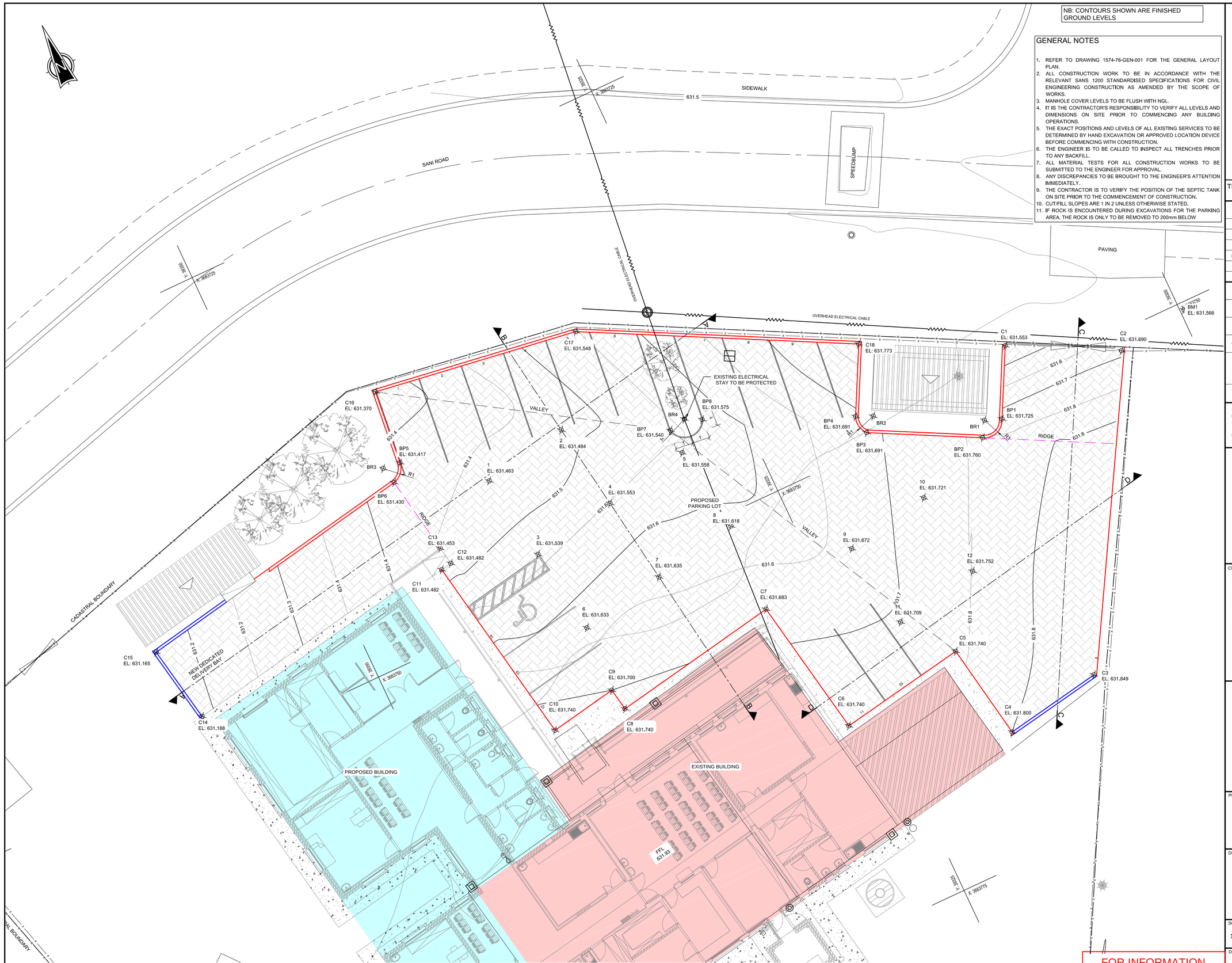
DRAWING No.	REVISION
1574-76-GEN-003	P0

P:\1574 Eastern Cape Facility Management\1574-76 SB007 NG Dlukulu Clinic\04 Design\08 General\1574-76-GEN-002_003 EXISTING SURVEY.dwg

NB: CONTOURS SHOWN ARE FINISHED GROUND LEVELS

GENERAL NOTES

1. REFER TO DRAWING 1574-76-GEN-001 FOR THE GENERAL LAYOUT PLAN.
2. ALL CONSTRUCTION WORK TO BE IN ACCORDANCE WITH THE RELEVANT SANS 1200 STANDARDISED SPECIFICATIONS FOR CIVIL ENGINEERING CONSTRUCTION AS AMENDED BY THE SCOPE OF WORKS.
3. MANHOLE COVER LEVELS TO BE FLUSH WITH NGL.
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL LEVELS AND DIMENSIONS ON SITE PRIOR TO COMMENCING ANY BUILDING OPERATIONS.
5. THE EXACT POSITIONS AND LEVELS OF ALL EXISTING SERVICES TO BE DETERMINED BY HAND EXCAVATION OR APPROVED LOCATION DEVICE BEFORE COMMENCING WITH CONSTRUCTION.
6. THE ENGINEER IS TO BE CALLED TO INSPECT ALL TRENCHES PRIOR TO ANY BACKFILL.
7. ALL MATERIAL TESTS FOR ALL CONSTRUCTION WORKS TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
8. ANY DISCREPANCIES TO BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY.
9. THE CONTRACTOR IS TO VERIFY THE POSITION OF THE SEPTIC TANK ON SITE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
10. CUT/FILL SLOPES ARE 1 IN 2 UNLESS OTHERWISE STATED.
11. IF ROCK IS ENCOUNTERED DURING EXCAVATIONS FOR THE PARKING AREA, THE ROCK IS ONLY TO BE REMOVED TO 200mm BELOW



LEGEND

PROPOSED FEATURES:

- FENCING
- BARRIER KERB (BK)
- SUNKEN KERB (SK)

EXISTING FEATURES:

- RODDING EYE
- FENCE
- OVERHEAD ELECTRICITY CABLES
- ELECTRICITY POLE
- GULLEY
- BENCHMARK

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO.MDA 290D-200 / 201

No	AMENDMENTS	DATE
P1	RE-ISSUE OF DRAWING	SEP 2023
P1	REVISED PARKING LOT	OCT 2018
P0	ISSUED FOR INFORMATION	JUNE 2018

SURVEYED	SURPLAN	MAY 2018
DRAWN	A.NTLAMA	AUG 2018
DESIGNED	A.NTLAMA	AUG 2018
CHECKED	J.JORDAAN	AUG 2018
APPROVED	PR REGISTRATION NO.201370318	DATE

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PROJECT TITLE

NG DLUKULU CLINIC (GRAHAMSTOWN)

DRAWING TITLE

PARKING LAYOUT PLAN

SCALE	SHEET SET	SHEET SIZE
1 : 100	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-76-RDS-010	P1

FOR INFORMATION

P:\1574 Eastern Cape Facility Management\1574-76 SB007 NG Dlukulu Clinic\04 Design\08 General\1574-76-GEN-001_recover.dwg

NB: CONTOURS SHOWN ARE FINISHED GROUND LEVELS

GENERAL NOTES

1. REFER TO DRAWING 1574-76-GEN-001 FOR THE GENERAL LAYOUT PLAN.
2. ALL CONSTRUCTION WORK TO BE IN ACCORDANCE WITH THE RELEVANT SANS 1200 STANDARDISED SPECIFICATIONS FOR CIVIL ENGINEERING CONSTRUCTION AS AMENDED BY THE SCOPE OF WORKS.
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LEGEND

PROPOSED FEATURES:

- FENCING
- BARRIER KERB (BK)
- SUNKEN KERB (SK)
- TRANSITION KERB (TK)

EXISTING FEATURES:

- RODDING EYE
- FENCE
- OVERHEAD ELECTRICITY CABLES
- ELECTRICITY POLE
- GULLEY
- BENCHMARK

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO.MDA 290D-200 / 201

No	AMENDMENTS	DATE
P2	RE-ISSUE OF DRAWING	SEP 2023
P2	REVISED PARKING LOT	MAR 2019
P1	REVISED PARKING LOT	OCT 2018
P0	ISSUED FOR INFORMATION	JUNE 2018

SURVEYED	SURPLAN	MAY 2018
DRAWN	A.NTLAMA	AUG 2018
DESIGNED	A.NTLAMA	AUG 2018
CHECKED	J.JORDAAN	MAR 2019
APPROVED	PR REGISTRATION NO.201370318 DATE	

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www.echealth.gov.za

PROJECT TITLE

NG DLUKULU CLINIC (GRAHAMSTOWN)

DRAWING TITLE

PARKING LAYOUT PLAN

SCALE	SHEET SET	SHEET SIZE
1 : 100	SHEET 1 OF 1 SHEETS	A1

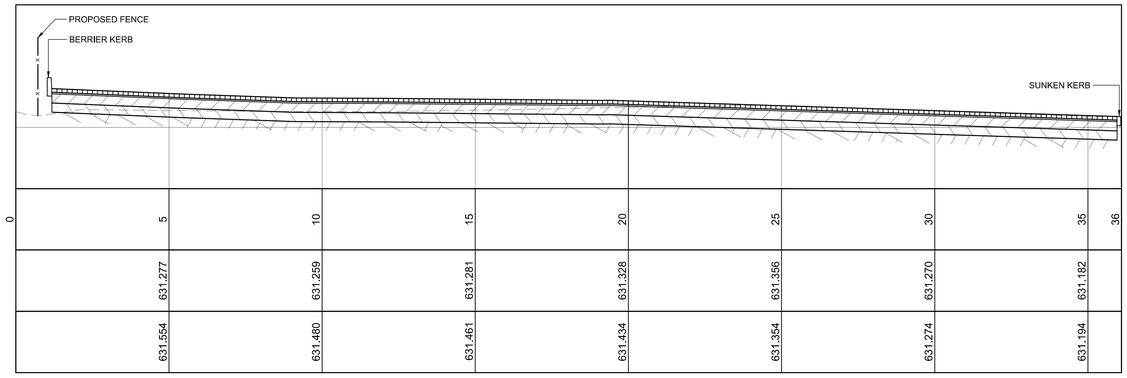
DRAWING No.	REVISION
1574-76-RDS-010	P2

FOR INFORMATION

P:\1574 Eastern Cape Facility Management\1574-76 SB007 NG Dlukulu Clinic\04 Design\08 General\1574-76-GEN-001 Rev1.dwg

NGL
FGL

SCALES:
Horizontal 1:100
Vertical 1:50
DATUM 630.000m MSL



DISTANCE (m)	0	5	10	15	20	25	30	35	36
GROUND LEVELS ON CL		631.277	631.259	631.281	631.328	631.356	631.270	631.182	
FINISHED GROUND LEVELS ON CL		631.554	631.480	631.461	631.434	631.354	631.274	631.194	

SECTION A-A
FROM 0.000 TO 36.098

BELLMOUTH SETTING OUT INFORMATION

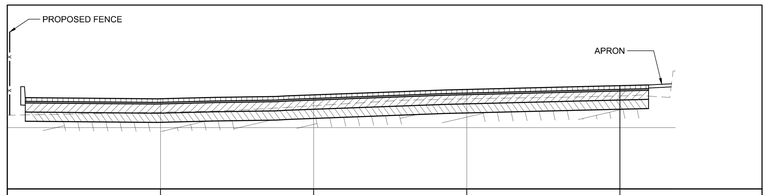
POINT	Y	X	Z
BP1	39311.747	3683751.681	631.725
BP2	39313.186	3683752.191	631.760
BP3	39319.032	3683749.140	631.691
BP4	39319.217	3683748.045	631.691
BP5	39343.750	3683739.495	631.417
BP6	39344.532	3683740.378	631.430
BP7	39329.066	3683744.312	631.540
BP8	39327.179	3683744.526	631.575

BELLMOUTH SETTING OUT RADII

POINT	Y	X
BR1	39312.682	3683751.327
BR2	39318.302	3683748.453
BR3	39344.757	3683739.391
BR4	39328.083	3683744.073

NGL
FGL

SCALES:
Horizontal 1:100
Vertical 1:50
DATUM 630.000m MSL



DISTANCE (m)	0	5	10	15	20	25
GROUND LEVELS ON CL		631.253	631.358	631.470	631.519	
FINISHED GROUND LEVELS ON CL		631.473	631.535	631.624	631.685	

SECTION B-B
FROM 0.000 TO 24.636

PARKING LOT SETTING OUT INFORMATION

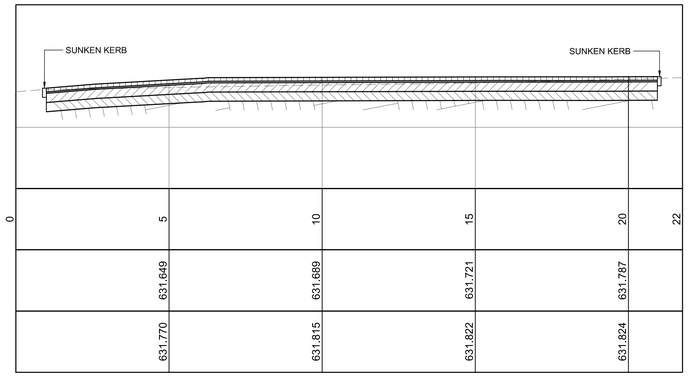
DESCRIPTION	Y	X	Z
1	39 339.602	3 683 742.572	631.463
2	39 334.679	3 683 741.685	631.484
3	39 338.850	3 683 747.517	631.539
4	39 333.928	3 683 746.630	631.553
5	39 329.005	3 683 745.744	631.558
6	39 338.099	3 683 752.462	631.633
7	39 333.176	3 683 751.575	631.635
8	39 328.253	3 683 750.689	631.618
9	39 322.579	3 683 754.747	631.672
10	39 317.656	3 683 753.861	631.721
11	39 321.827	3 683 759.692	631.709
12	39 316.904	3 683 758.806	631.752
C1	39 309.825	3 683 747.993	631.553
C2	39 303.963	3 683 751.047	631.690
C3	39 313.150	3 683 767.039	631.849
C4	39 318.731	3 683 768.016	631.800
C5	39 319.694	3 683 762.514	631.740
C6	39 326.977	3 683 763.784	631.740
C7	39 328.441	3 683 755.803	631.683
C8	39 338.082	3 683 757.539	631.740

PARKING LOT SETTING OUT INFORMATION

DESCRIPTION	Y	X	Z
C9	39 338.310	3 683 756.270	631.700
C10	39 342.192	3 683 756.969	631.740
C11	39 344.168	3 683 745.996	631.482
C12	39 343.550	3 683 745.884	631.482
C13	39 343.735	3 683 744.856	631.453
C14	39 360.008	3 683 747.787	631.188
C15	39 360.825	3 683 743.393	631.165
C16	39 343.315	3 683 735.270	631.370
C17	39 331.571	3 683 736.973	631.548
C18	39 317.319	3 683 744.399	631.773

NGL
FGL

SCALES:
Horizontal 1:100
Vertical 1:50
DATUM 630.000m MSL

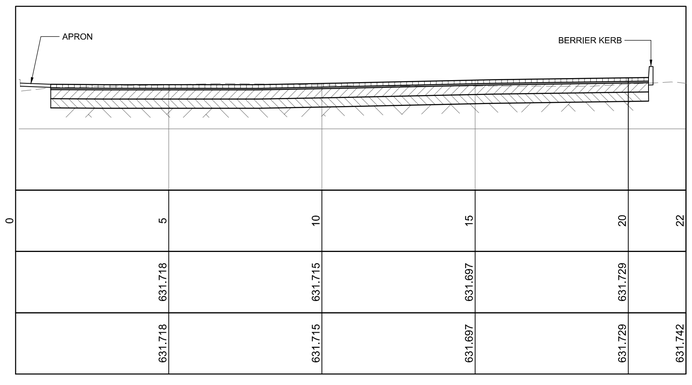


DISTANCE (m)	0	5	10	15	20	22
GROUND LEVELS ON CL		631.649	631.689	631.721	631.787	
FINISHED GROUND LEVELS ON CL		631.770	631.815	631.822	631.824	

SECTION C-C
FROM 0.000 TO 21.766

NGL
FGL

SCALES:
Horizontal 1:100
Vertical 1:50
DATUM 630.000m MSL



DISTANCE (m)	0	5	10	15	20	22
GROUND LEVELS ON CL		631.718	631.715	631.697	631.729	
FINISHED GROUND LEVELS ON CL		631.718	631.715	631.697	631.729	631.742

SECTION D-D
FROM 0.000 TO 21.882

FOR INFORMATION

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO.MDA 290D-200 / 201

No	AMENDMENTS	DATE
P1	RE-ISSUE OF DRAWING	SEP 2023
P1	REVISED ROAD LEVELS	OCT 2018
P0	ISSUED FOR INFORMATION	SEP 2018

SURVEYED	SURPLAN	MAY 2018
DRAWN	A.NTLAMA	SEP 2018
DESIGNED	A.NTLAMA	SEP 2018
CHECKED	J.HAYSOM	SEP 2018
APPROVED	PR REGISTRATION NO. 201370318 DATE	

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PROJECT TITLE

NG DLUKULU CLINIC (GRAHAMSTOWN)

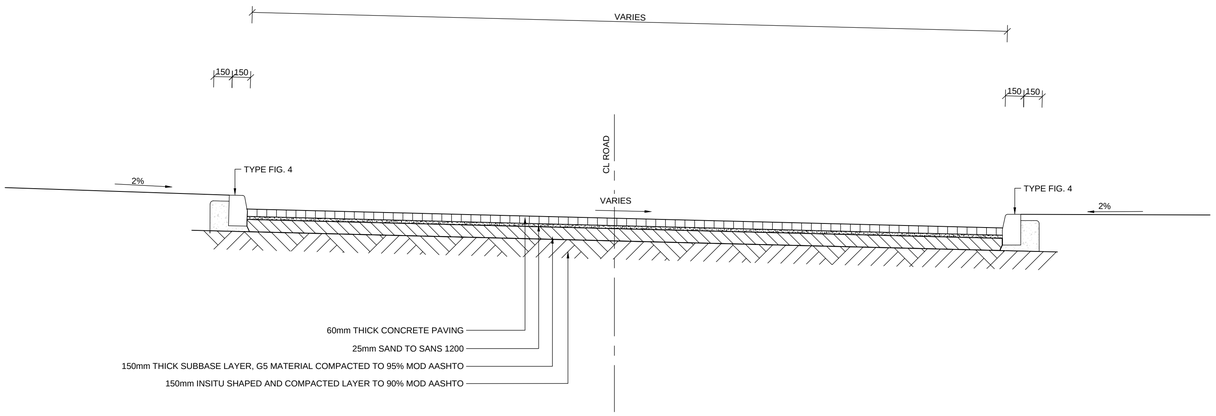
DRAWING TITLE

PARKING AREA CROSS- SECTIONS & SETTING OUT INFORMATION

SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-76-RDS-011	P1

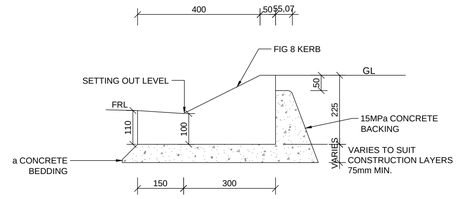
P:\1574 Eastern Cape Facility Management\1574-76 SB007 NG Dlukulu Clinic\04 Design\08 General\1574-76-GEN-001_recover.dwg



PARKING AREA
TYPICAL LAYERWORKS DETAIL

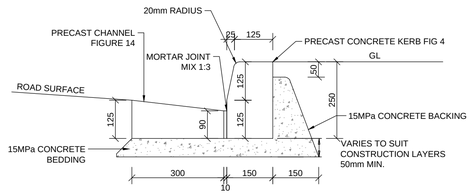
SCALE 1:25

NOTE:
1. ALL UNITS TO BE LAID WITH 15 MPa CONCRETE BEDDING/BACKING OR SHOWN OTHERWISE ON WELL COMPACTED SUBGRADE/SUBBASE.
2. NO OUTFALL CHANNELS PERMITTED.
3. ALL RADII<20m SHOULD BE BUILT WITH 300mm LONG ELEMENTS.



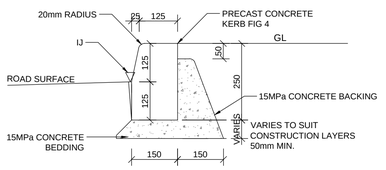
PRECAST ROLLOVER KERB (FIG 8)
WITH CHANNEL (LOW SIDE OF ROAD)

SCALE 1:10



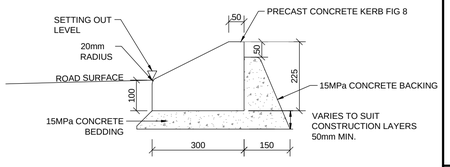
BARRIER KERB AND CHANNEL

SCALE 1:10



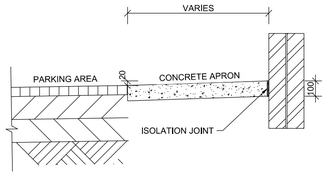
BARRIER KERB

SCALE 1:10



PRECAST ROLLOVER KERB (FIG.8)
(HIGH SIDE OF THE ROAD)

SCALE 1:10



APRON SLAB DETAIL

SCALE 1:20

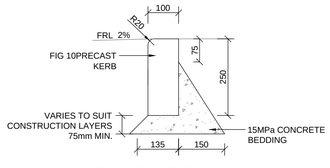


FIGURE 10 EDGING

SCALE 1:10

FOR CONSTRUCTION

No	AMENDMENTS	DATE
P0	RE-ISSUE OF DRAWING	SEP 2023
P0	ISSUED FOR INFORMATION	OCT 2018

SURVEYED	NA	
DRAWN	C.PILLAY	JULY 2018
DESIGNED	C.PILLAY	JULY 2018
CHECKED	J.JORDAAN	JUNE 2018
APPROVED	PR REGISTRATION NO.	DATE

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SOUTH AFRICA
Private Bag X0038, BHISHO, 5605
Tel: +27 (0)40 608 1114
www.echealth.gov.za

PROJECT TITLE

NG DLUKULU CLINIC (GRAHAMSTOWN)

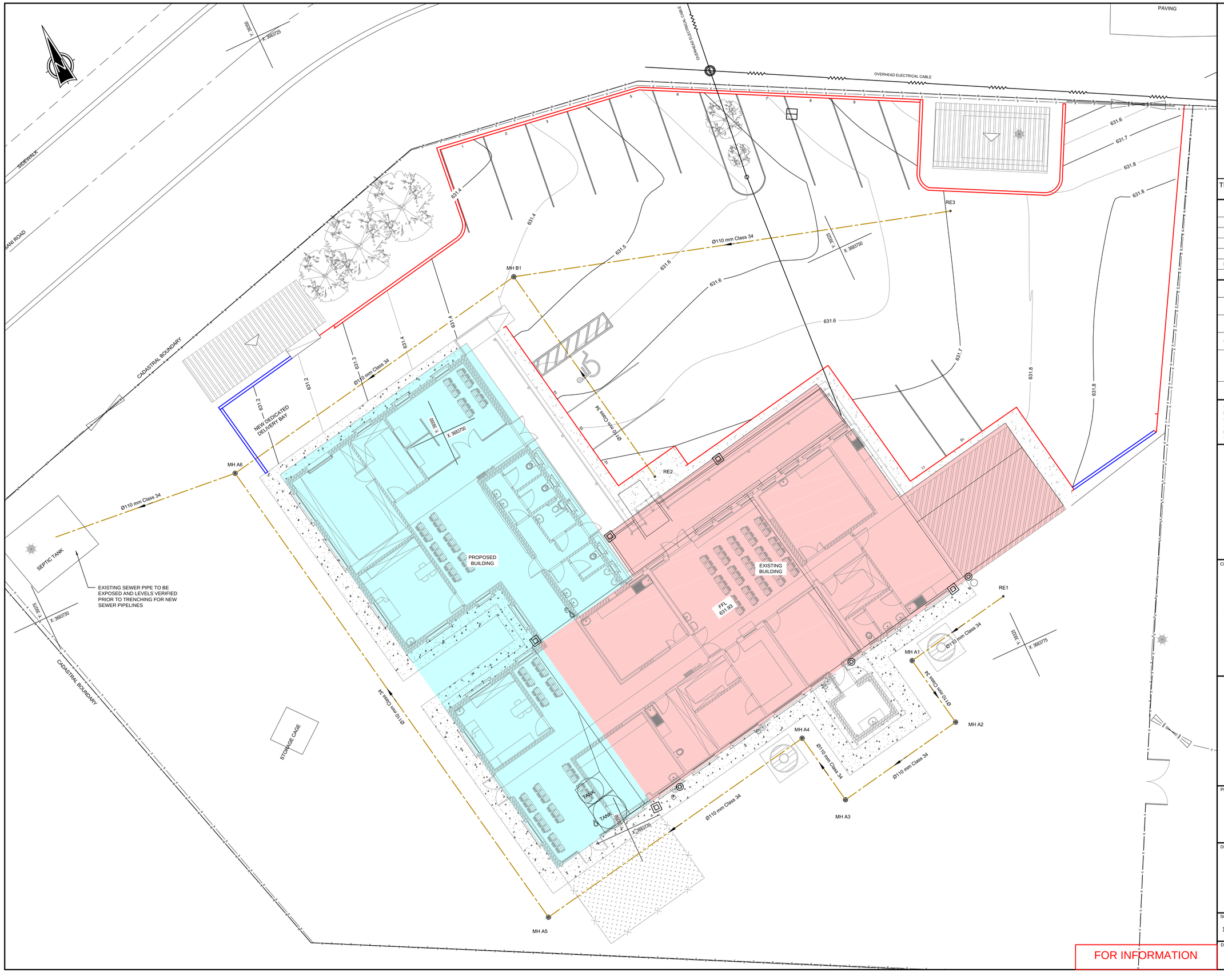
DRAWING TITLE

TYPICAL PARKING LOT DETAILS

SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-76-RDS-012	P0

P:\1574 Eastern Cape Facility Management\1574-76 SB007 NG Dlukulu Clinic\04 Design\03 Road\ROAD DETAILS.dwg



LEGEND

PROPOSED FEATURES:

- FENCING
- BARRIER KERB (BK)
- SUNKEN KERB (SK)

EXISTING FEATURES:

- RODDING EYE
- FENCE
- OVERHEAD ELECTRICITY CABLES
- ELECTRICITY POLE
- GULLEY
- BENCHMARK

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO.MDA 290D-200 / 201

No	AMENDMENTS	DATE
P0	RE-ISSUE OF DRAWING	SEP 2023
P0	ISSUED FOR INFORMATION	JUNE 2018

SURVEYED	SURPLAN	MAY 2018
DRAWN	A.NTLAMA	SEP 2018
DESIGNED	A.NTLAMA	SEP 2018
CHECKED	J.HAYSOM	SEP 2018
APPROVED	PR REGISTRATION NO. 201370318	DATE

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PROJECT TITLE

NG DLUKULU CLINIC (GRAHAMSTOWN)

DRAWING TITLE

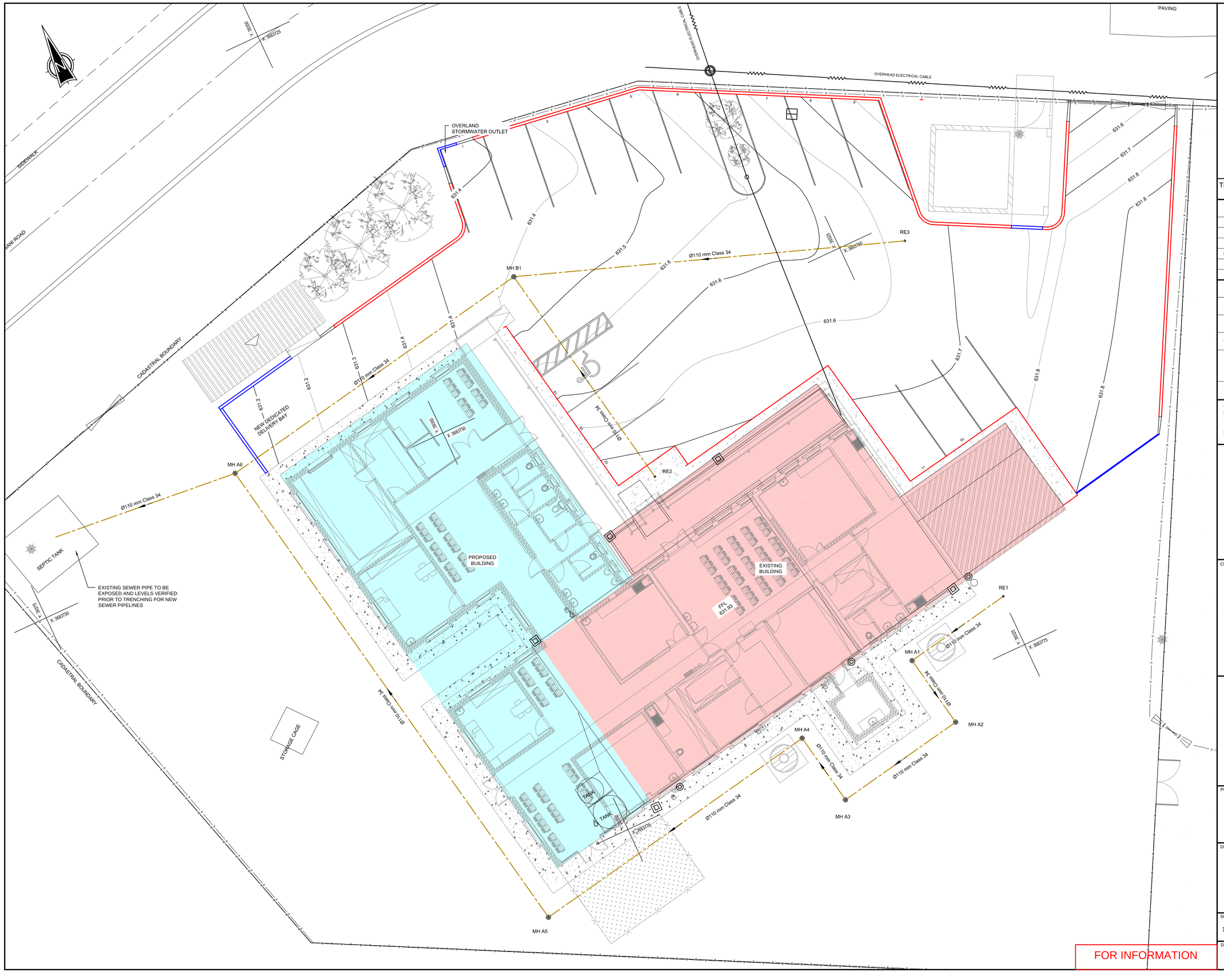
SEWER LAYOUT PLAN

SCALE	SHEET SET	SHEET SIZE
1 : 100	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-76-SEW-020	P0

FOR INFORMATION

P:\1574 Eastern Cape Facility Management\1574-76 SB007 NG Dlukulu Clinic\04 Design\08 General\1574-76-GEN-001_recover.dwg



LEGEND

PROPOSED FEATURES:

- FENCING
- BARRIER KERB (BK)
- SUNKEN KERB (SK)
- TRANSITION KERB (TK)
- SEWER PIPELINE
- SEWER MANHOLE
- RODDING EYE

EXISTING FEATURES:

- RODDING EYE
- FENCE
- OVERHEAD ELECTRICITY CABLES
- ELECTRICITY POLE
- GULLEY
- BENCHMARK

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO.MDA 290D-200 / 201

No	AMENDMENTS	DATE
P1	RE-ISSUE OF DRAWING	SEP 2023
P1	REVISED POSITION OF RE3	MAR 2019
P0	ISSUED FOR INFORMATION	JUNE 2018

SURVEYED	SURPLAN	MAY 2018
DRAWN	A.NTLAMA	SEP 2018
DESIGNED	A.NTLAMA	SEP 2018
CHECKED	J.HAYSOM	MAR 2019
APPROVED	PR REGISTRATION NO. 201370318	DATE

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PROJECT TITLE

NG DLUKULU CLINIC (GRAHAMSTOWN)

DRAWING TITLE

SEWER LAYOUT PLAN

SCALE	SHEET SET	SHEET SIZE
1 : 100	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-76-SEW-020	P1

FOR INFORMATION

P:\1574 Eastern Cape Facility Management\1574-76 SB007 NG Dlukulu Clinic\04 Design\08 General\1574-76-GEN-001 Rev1.dwg

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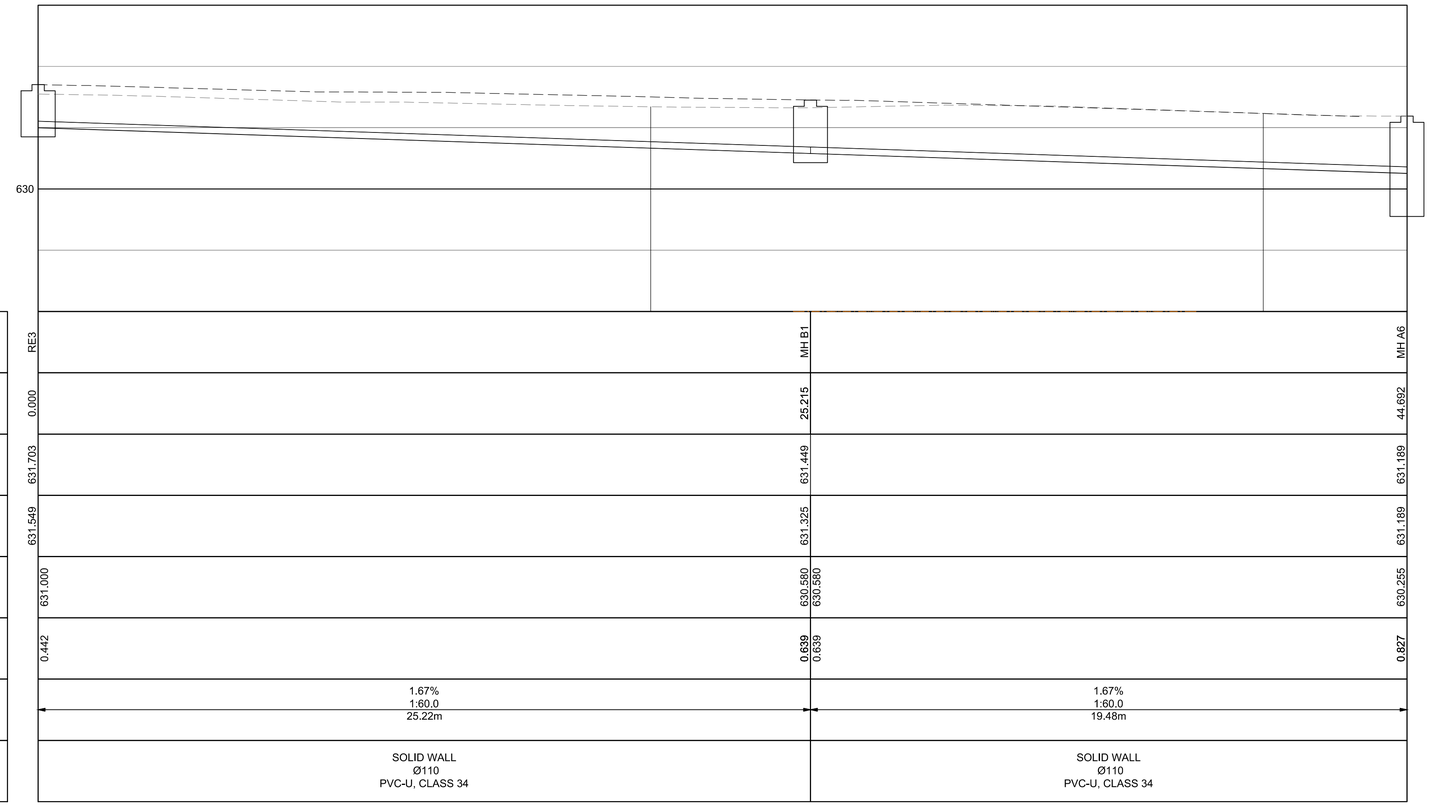
FGL

SCALES:
Horizontal 1:100
Vertical 1:50
DATUM 628.000



LONGSECTION RE3 TO MH A6

NGL
FGL

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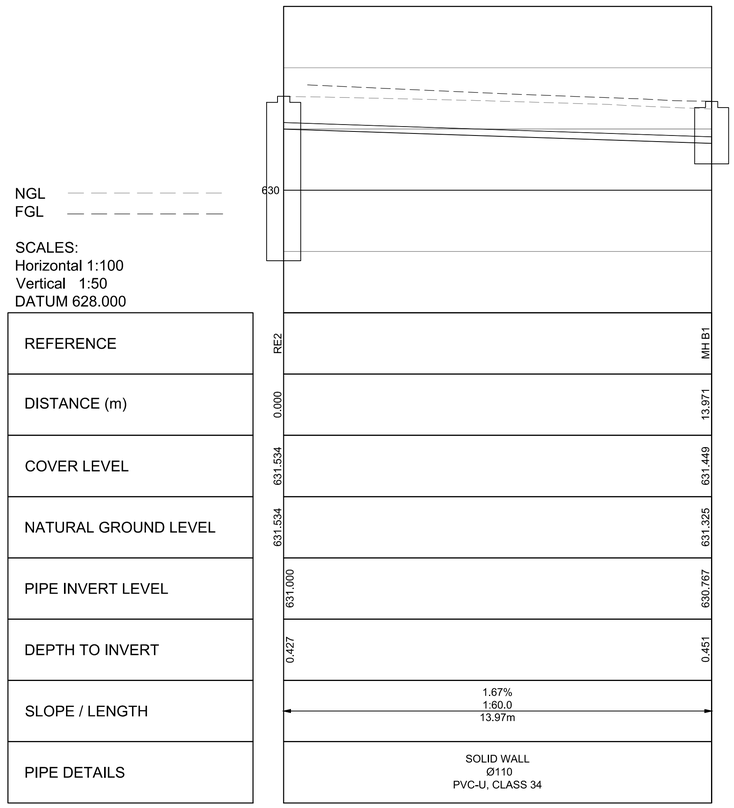
Horizontal 1:100
Vertical 1:50
DATUM 628.000



LONGSECTION RE2 TO MH B1

FOR INFORMATION

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO.MDA 290D-200 / 201

No	AMENDMENTS	DATE
P1	RE-ISSUE OF DRAWING	SEP 2023
P1	REVISED COVER LEVELS	OCT 2018
P0	ISSUED FOR INFORMATION	JUNE 2018

SURVEYED	SURPLAN	MAY 2018
DRAWN	A.NTLAMA	SEP 2018
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APPROVED	PR REGISTRATION NO. 201370318	DATE

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PROJECT TITLE

NG DLUKULU CLINIC (GRAHAMSTOWN)

DRAWING TITLE

SEWER LONGITUDINAL SECTIONS

SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-76-SEW-021	P1

P:\1574 Eastern Cape Facility Management\1574-76 SB007 NG Dlukulu Clinic\04 Design\08 General\1574-76-GEN-001_recover.dwg

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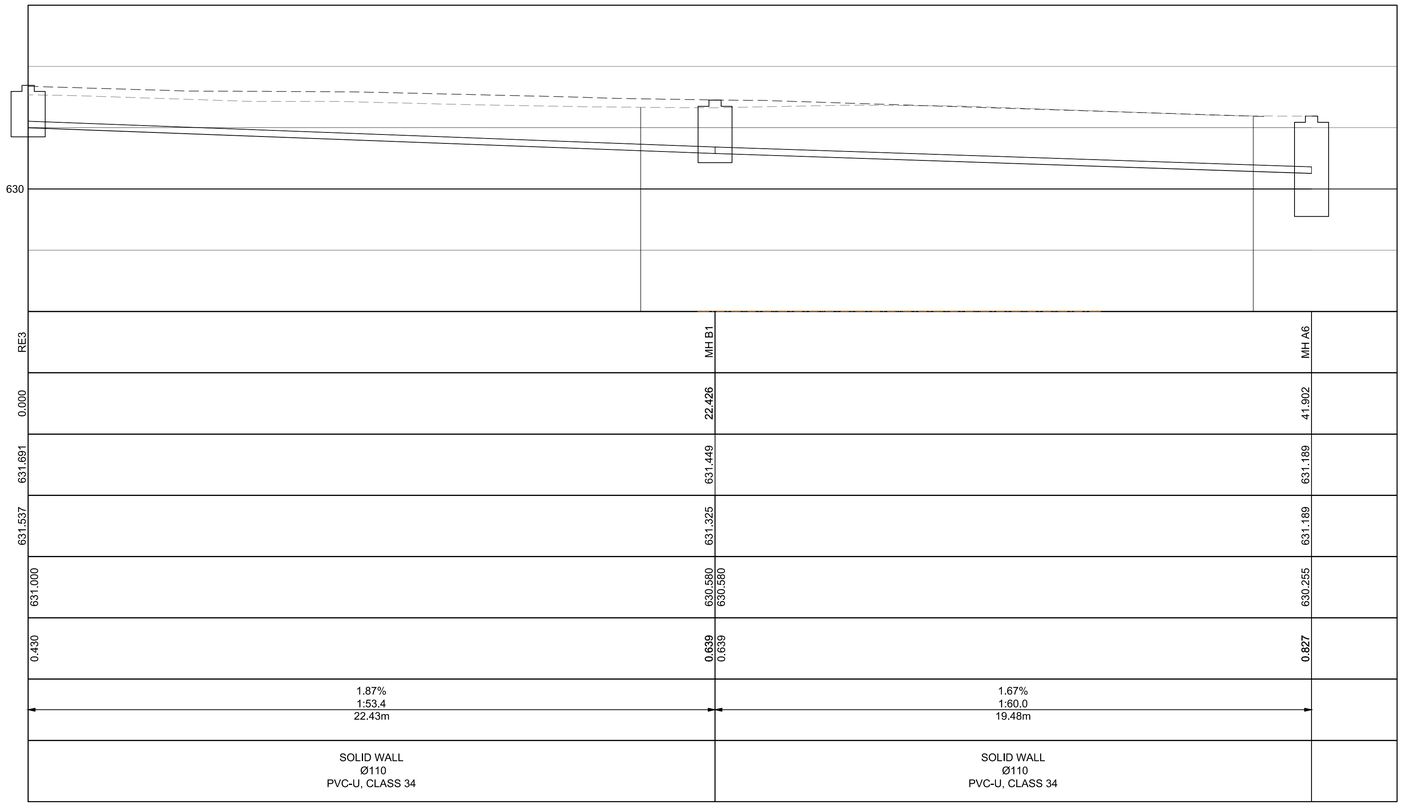
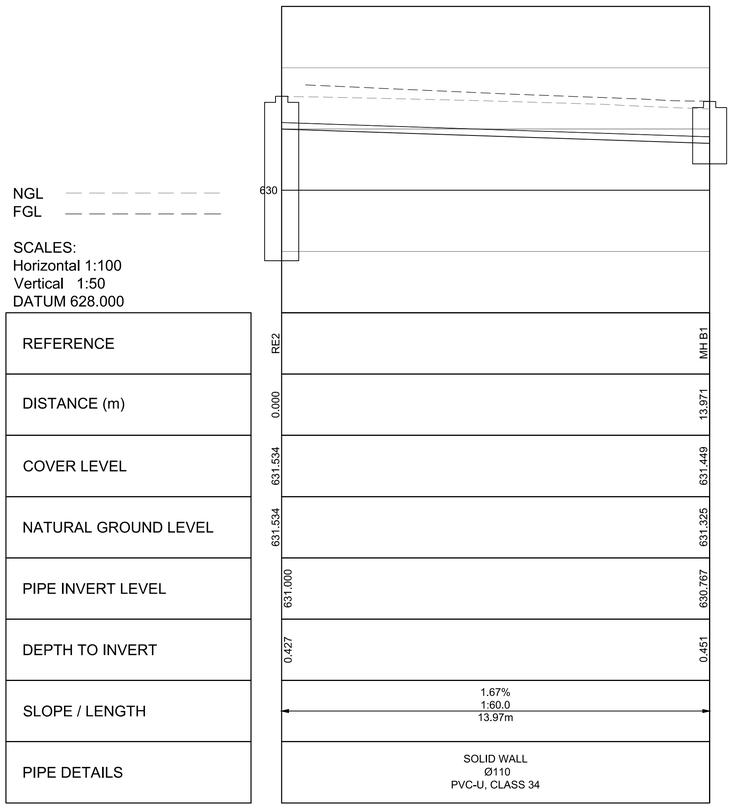
SCALES:
Horizontal 1:100
Vertical 1:50
DATUM 628.000



LONGSECTION RE3 TO MH A6

NGL
FGL

SCALES:
Horizontal 1:100
Vertical 1:50
DATUM 628.000



LONGSECTION RE2 TO MH B1

FOR INFORMATION

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO.MDA 290D-200 / 201

No	AMENDMENTS	DATE
P1	RE-ISSUE OF DRAWING	SEP 2023
P1	REVISED POSITION OF RE3	MAR 2019
P1	REVISED COVER LEVELS	OCT 2018
P0	ISSUED FOR INFORMATION	JUNE 2018

SURVEYED	SURPLAN	MAY 2018
DRAWN	A.NTLAMA	SEP 2018
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APPROVED	PR REGISTRATION NO. 201370318	DATE

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PROJECT TITLE

NG DLUKULU CLINIC (GRAHAMSTOWN)

DRAWING TITLE

SEWER LONGITUDINAL SECTIONS

SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-76-SEW-021	P2

P:\1574 Eastern Cape Facility Management\1574-76 SB007 NG Dlukulu Clinic\04 Design\08 General\1574-76-GEN-001 Rev1.dwg

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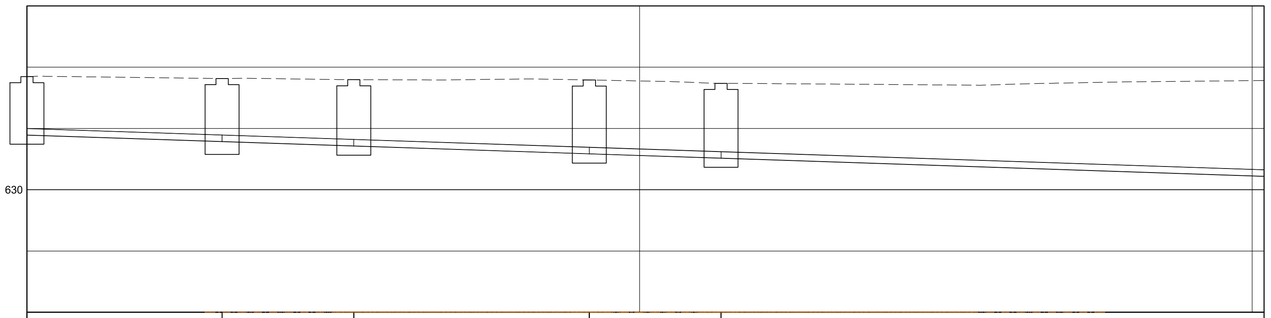
SCALES:
Horizontal 1:100
Vertical 1:50

DATUM 628.000

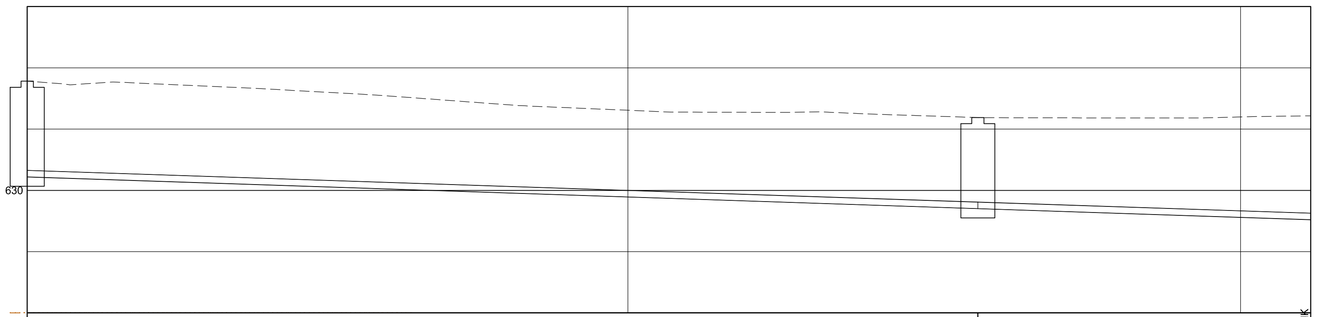


REFERENCE	RE1	MH A1	MH A2	MH A3	MH A4	
DISTANCE (m)	0.000	6.373	10.671	18.361	22.659	40.389
NATURAL GROUND LEVEL	631.846	631.815	631.797	631.792	631.737	
PIPE INVERT LEVEL	630.894	630.788 630.788	630.716 630.716	630.588 630.588	630.516 630.516	630.221
DEPTH TO INVERT	0.952	1.027 1.027	1.081 1.081	1.204 1.204	1.221 1.221	1.562
SLOPE / LENGTH		1.67% 1:60.0 6.37m	1.67% 1:60.0 4.30m	1.67% 1:60.0 7.69m	1.67% 1:60.0 4.30m	1.67% 1:60.0 17.73m

LONGSECTION RE1 TO EX.SEPTIC TANK
FROM 0.000 TO 40.389

NGL
FGL
SCALES:
Horizontal 1:100
Vertical 1:50

DATUM 628.000



REFERENCE	MH A5	MH A6	SEPTIC TANK	
DISTANCE (m)	40.389	71.424	82.291	
NATURAL GROUND LEVEL	631.782	631.189	631.216	
PIPE INVERT LEVEL	630.221	629.703 629.703	629.522	
DEPTH TO INVERT	1.562	1.485 1.485	1.694	
SLOPE / LENGTH	1.67% 1:60.0 31.03m		1.67% 1:60.0 10.87m	

LONGSECTION RE1 TO EX.SEPTIC TANK
FROM 40.389 TO 82.291

FOR INFORMATION

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO.MDA 290D-200 / 201

No	AMENDMENTS	DATE
P0	RE-ISSUE OF DRAWING	SEP 2023
P0	ISSUED FOR INFORMATION	SEP 2018

SURVEYED	SURPLAN	MAY 2018
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APPROVED	PR REGISTRATION NO. 201370318 DATE	

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PROJECT TITLE

NG DLUKULU CLINIC (GRAHAMSTOWN)

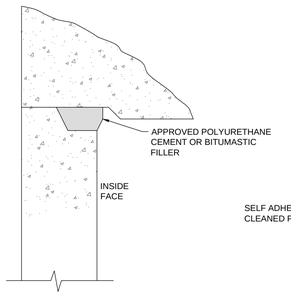
DRAWING TITLE

SEWER LONGITUDINAL SECTIONS

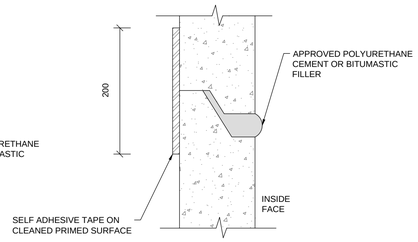
SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-76-SEW-022	P0

P:\1574 Eastern Cape Facility Management\1574-76 SB007 NG Dlukulu Clinic\04 Design\08 General\1574-76-GEN-001_recover.dwg



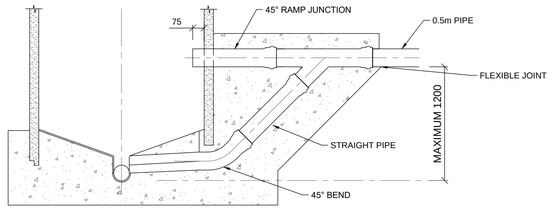
DETAIL A



DETAIL B

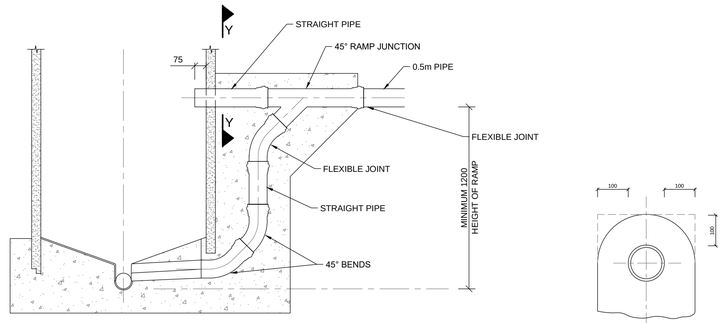
DETAILS 'A' & 'B' INTERLOCKING JOINTS

SCALE 1:20



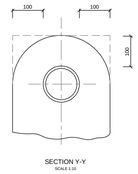
DETAIL OF RAMP MANHOLE

SCALE 1:20



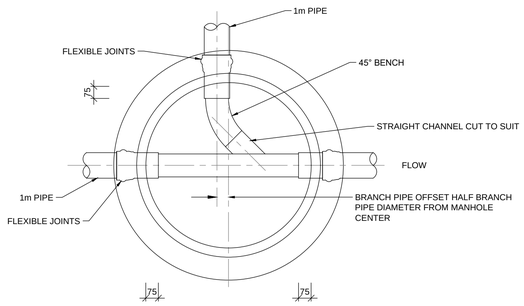
DETAIL OF BACKDROP MANHOLE

SCALE 1:20



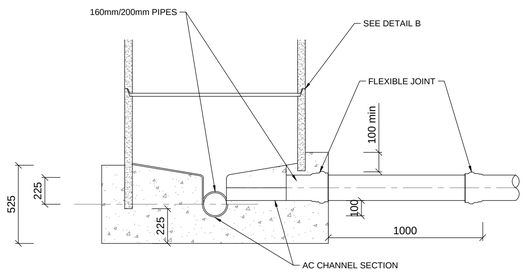
SECTION Y-Y

SCALE 1:10



PLAN OF 90° BRANCH MANHOLES

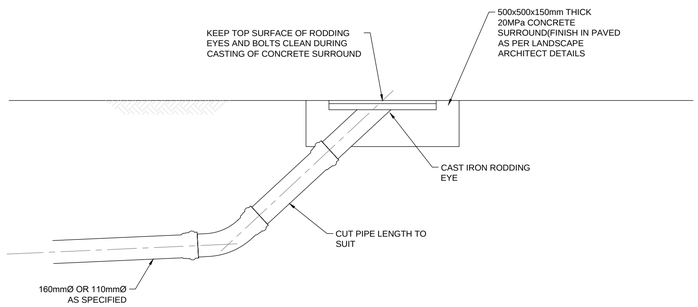
SCALE 1:20



MAIN & BRANCH PIPES EQUAL SIZES

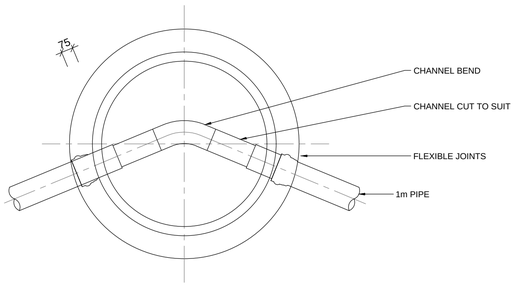
SCALE 1:20

LEVEL OF RODDING EYE
= 25mm ABOVE SURROUNDING SURFACE IN OPEN AREAS. =
SAME LEVEL AS SURROUNDING SURFACE IN
SURFACED/PAVED AREAS/ PUBLIC AREAS.



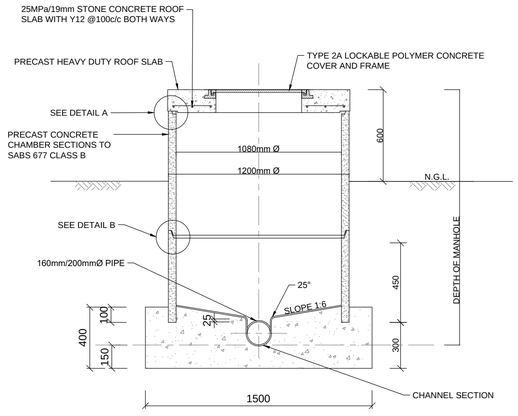
DETAIL OF RODDING EYE

SCALE 1:20



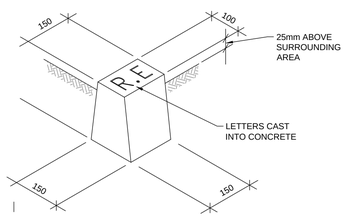
PLAN OF MANHOLE AT BENDS

SCALE 1:20



TYPICAL SECTION THROUGH MANHOLE

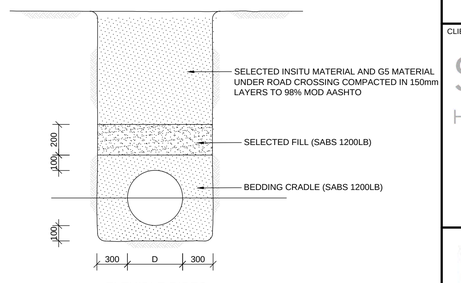
SCALE 1:20



ALL RODDING EYES IN UNPAVED AREAS TO
BE MARKED BY CONCRETE MARKER BLOCK
OR AS SPECIFIED.

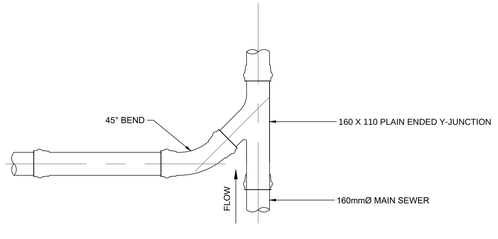
DETAIL OF RODDING EYE MARKER

SCALE 1:20



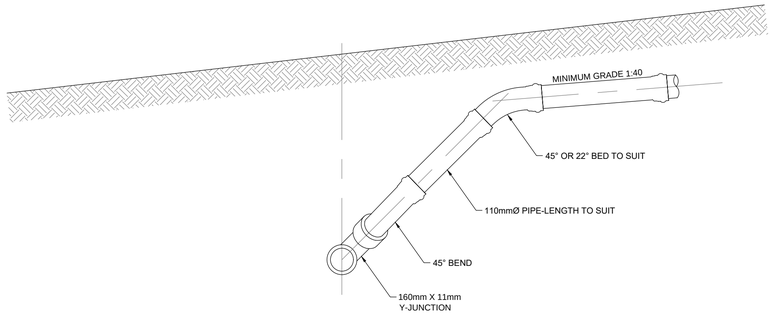
FLEXIBLE PIPES

SCALE 1:20



PLAN OF CONNECTION

SCALE 1:20



TOILET CONNECTION END VIEW

SCALE 1:20

FOR CONSTRUCTION

No	AMENDMENTS	DATE
P0	RE-ISSUE OF DRAWING	SEP 2023
P0	ISSUED FOR INFORMATION	OCT 2018

SURVEYED	NA	
DRAWN	C.PILLAY	AUG 2018
DESIGNED	C.PILLAY	AUG 2018
CHECKED	J.HAYSOM	AUG 2018
APPROVED	PR REGISTRATION NO. 201370318 DATE	

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PROJECT TITLE

NG DLUKULU CLINIC (GRAHAMSTOWN)

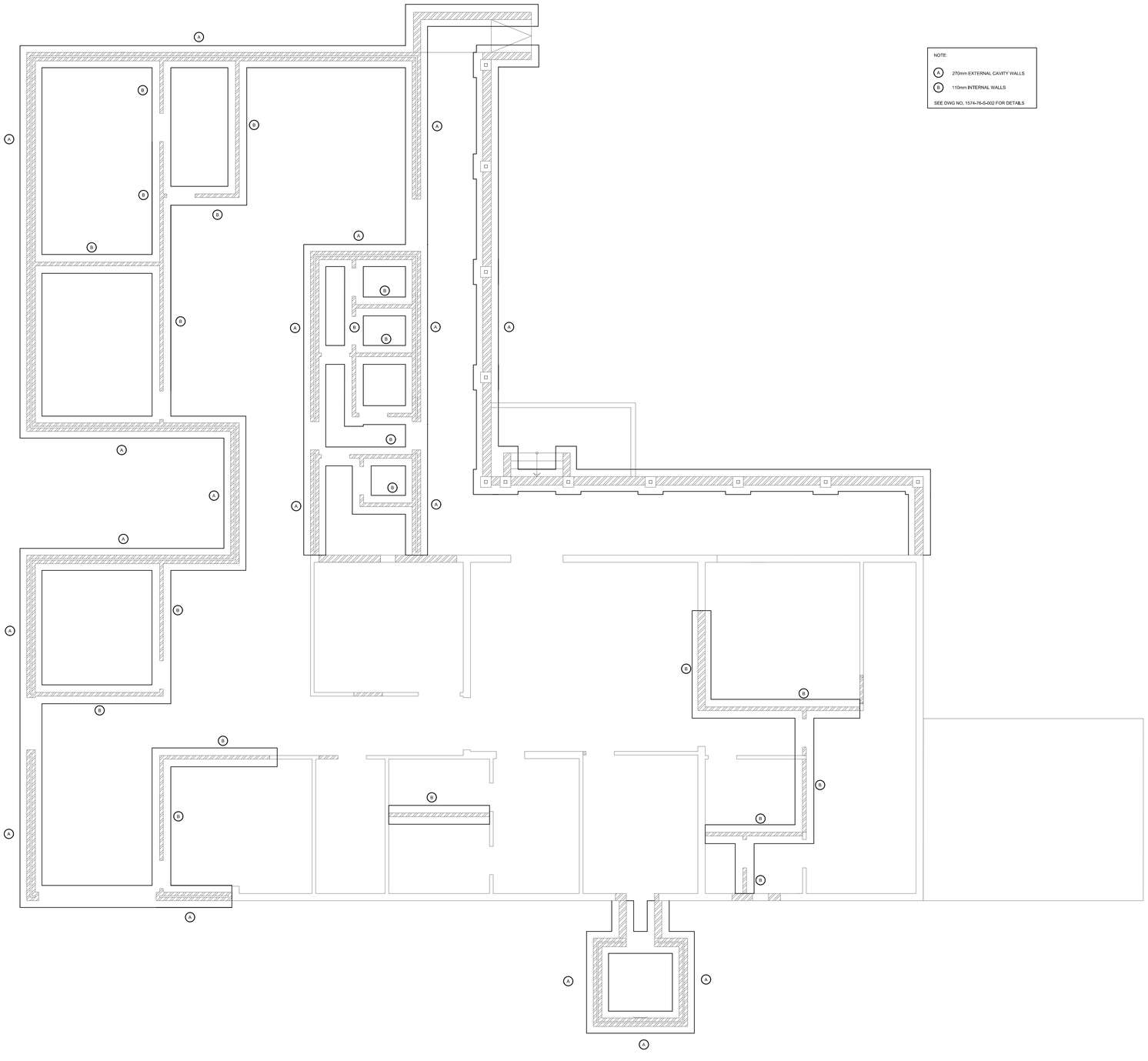
DRAWING TITLE

TYPICAL SEWER DETAILS

SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-76-SEW-023	P0

P:\1574 Eastern Cape Facility Management\1574-76 SB007 NG Dlukulu Clinic\04 Design\05 Sewer\TYPICAL SEWER DETAILS.dwg



FOUNDATION LAYOUT
SCALE 1:75

GENERAL NOTES : CONCRETE

CONCRETE STRENGTH

(A) FOUNDATIONS.....	20 Mpa cube strength at 28 days
(B) BEAMS AND SLABS.....	25 Mpa cube strength at 28 days
(C) SURFACE BEDS.....	25 Mpa cube strength at 28 days

CONCRETE COVER TO REINFORCING

(A) SLAB.....	25 mm
(B) BEAMS.....	30 mm
(C) BASES.....	50 mm

NOTE:

1. BEAM DEPTH INCLUDES SLAB THICKNESS
2. CONTRACTOR IS TO MAINTAIN STEEL IN CORRECT POSITION AFTER PLACING AND DURING CONCRETING
3. STONE, SAND AND CEMENT TO BE TO THE SATISFACTION OF THE CONSULTING ENGINEER.
4. NO CONCRETE TO BE POURED UNTIL THE STEEL HAS BEEN INSPECTED BY THE CONSULTING ENGINEER.
5. ANY BREAKS IN THE CONCRETE ARE TO BE MADE IN ACCORDANCE WITH THE ENGINEERS INSTRUCTIONS.
6. NO STRUCTURAL ALTERATIONS TO BE MADE WITHOUT THE APPROVAL OF THE CONSULTING ENGINEER.
7. THE STRUCTURE HAS BEEN DESIGNED FOR THE FOLLOWING CONDITIONS:
   (A) SAFE GROUND PRESSURE..... 150 kN/sq m
   (B) LIVE LOAD ON SLAB..... 1.5 kN/sq m
8. ALL DRAWINGS TO BE READ IN CONJUNCTION WITH THE ARCHITECTURAL AND THE CIVIL ENGINEERING DRAWINGS.
9. ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE WORK IS PUT IN HAND. ANY DISCREPANCY MUST IMMEDIATELY BE REPORTED TO THE ENGINEER.
10. THIS DRAWING IS NOT TO BE SCALED.

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO. MDA 290D

No	AMENDMENTS	DATE
0	ISSUED FOR CONSTRUCTION	07/02/2019

SURVEYED	-	-
DRAWN	D SHARP	03/08/2018
DESIGNED	D VILJOEN	04/10/2017
CHECKED	D VILJOEN	04/10/2017
APPROVED	PR REGISTRATION NO.	DATE

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PROJECT TITLE

SB007 NG DLUKULU CLINIC

DRAWING TITLE

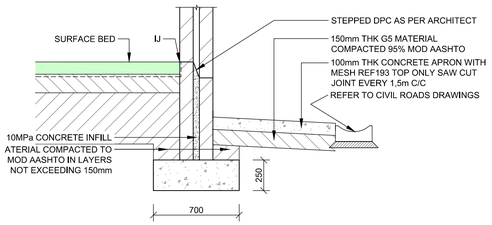
FOUNDATION LAYOUT

SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-76-S-001	0

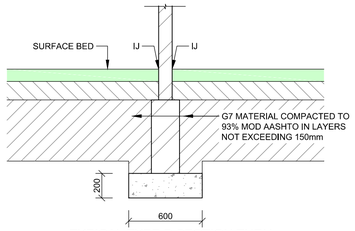
P:\1574 Eastern Cape Facility Management\1574-76 SB007 NG Dlukulu Clinic\04 Design\07 Structures\1574-76-S-001 FOUNDATION LAYOUT.dwg

NOTE:
1. ALL FOUNDATIONS TO BE AT LEAST 0.6m BELOW NGL. FOUNDATION EXCAVATIONS TO BE INSPECTED BY ENGINEER PRIOR CASTING.
2. CONTRACTOR TO ENSURE EVEN BACKFILLING FROM TOP OF FOUNDATION LEVEL.



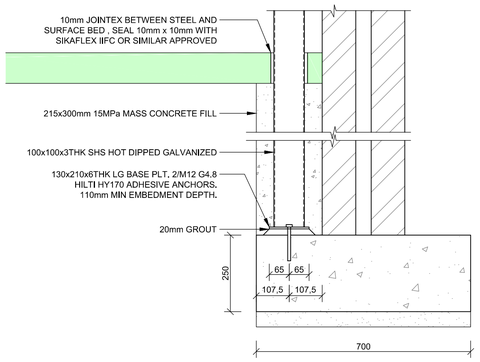
TYPICAL TYPE A SECTION THRU
270mm EXTERNAL WALL

SCALE 1:25



TYPICAL TYPE B SECTION THRU
110mm INTERNAL WALL

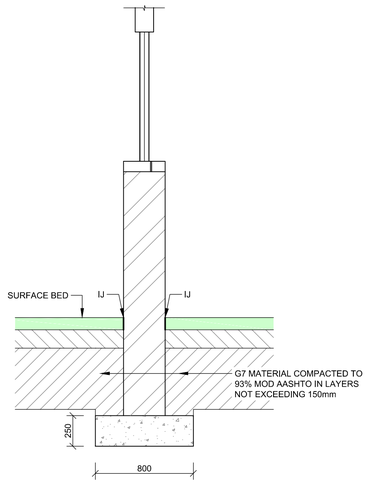
SCALE 1:25



TYPICAL SECTION
(SPUTUM BOOTH ONLY)

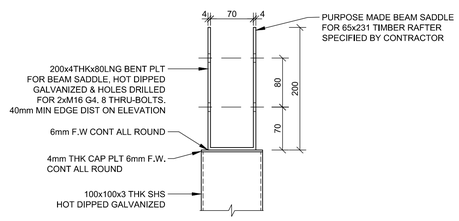
SCALE 1:10

STEEL NOTES:
1. ALL STEEL TO BE GRADE S355JR.
2. ALL CONNECTIONS TO BE TO THE FULL TENSILE STRENGTH OF THE MEMBERS.
3. ALL SPLICES AND CONNECTIONS ARE SUBJECT TO THE APPROVAL OF THE ENGINEER.
4. SHOP DRAWINGS ARE TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL AT LEAST TWO WEEKS PRIOR TO COMMENCEMENT OF MANUFACTURE.
5. ALL SURFACES TO BE PAINTED MUST BE FREE OF MILL SCALE, CORROSION, GREASE, DUST, ETC.
6. ALL STRUCTURAL STEELWORK TO BE HOT DIPPED GALVANIZED.
7. ALL DIMENSIONS ON THIS DRAWING SHOULD BE CHECKED BY THE CONTRACTOR PRIOR TO MANUFACTURE.
8. FIGURED DIMENSIONS ONLY TO BE USED, DRAWING IS NOT TO BE SCALED.
9. DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY THEY BECOME EVIDENT.
10. THIS DRAWING IS TO BE READ IN CONJUCTION WITH THE ENGINEER'S CONCRETE DRAWINGS AS WELL AS THE ARCHITECT'S DRAWINGS.
11. ALL BOLTS ARE M16 GRADE 4.6 UNLESS STATED OTHERWISE.
12. ALL WELDS ARE 6MM FILLET WELDS.



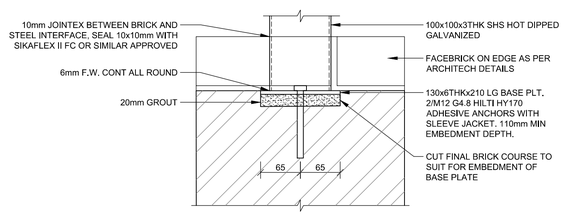
TYPICAL PAD FOOTING SECTION

SCALE 1:25



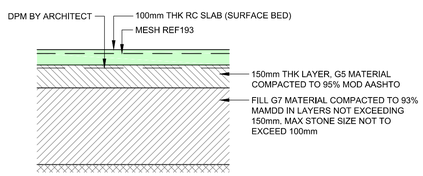
TYPICAL SECTION THRU BEAM SADDLE

SCALE 1:5



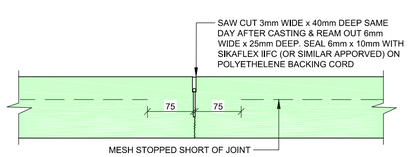
TYPICAL SECTION

SCALE 1:5



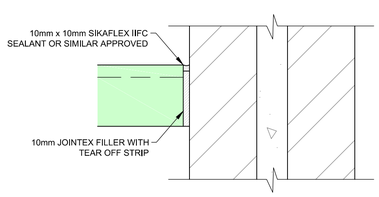
TYPICAL SURFACE BED LAYER WORKS

SCALE 1:20



TYPICAL SAW CUT CONTRACTION JOINT (SJ)

SCALE 1:5



TYPICAL ISOLATION JOINT (IJ)

SCALE 1:5

GENERAL NOTES : CONCRETE

CONCRETE STRENGTH

(A) FOUNDATIONS.....	20 Mpa cube strength at 28 days
(B) BEAMS AND SLABS.....	25 Mpa cube strength at 28 days
(C) SURFACE BEDS.....	25 Mpa cube strength at 28 days
(D) BLINDING LAYER.....	15 Mpa cube strength at 28 days

CONCRETE COVER TO REINFORCING

(A) SLAB.....	25 mm
(B) BEAMS.....	30 mm
(C) BASES.....	50 mm

NOTE:
1. BEAM DEPTH INCLUDES SLAB THICKNESS
2. CONTRACTOR IS TO MAINTAIN STEEL IN CORRECT POSITION AFTER PLACING AND DURING CONCRETING
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10. THIS DRAWING IS NOT TO BE SCALED.

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO. MDA290B-201

No	AMENDMENTS	DATE
0	FOR CONSTRUCTION	07/02/2019

SURVEYED	SURPLAN	08/05/2018
DRAWN	D SHARP	17/06/2018
DESIGNED	D VILJOEN	04/10/2017
CHECKED	L COETZER	02/10/2018
APPROVED	PR REGISTRATION NO. 201570266	DATE 12/10/2018

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www.echealth.gov.za

PROJECT TITLE

NG DLUKULU CLINIC (GRAHAMSTOWN)

DRAWING TITLE

TYPICAL DETAILS

SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-76-S-002	0

P:\1574 Eastern Cape Facility Management\1574-76 SB007 NG Dlukulu Clinic\04 Design\07 Structures\1574-76-S-002 TYPICAL DETAILS.dwg

LEGEND
PROPOSED FEATURES:

- SEWER PIPE
- STORMWATER PIPE
- STORMWATER GRID INLET
- SEWER RODDING EYE
- BARRIER KERB
- BARRIER KERB AND CHANNEL
- SUNKEN KERB
- PARKING AREA
- 300mm WIDE PRECAST CONCRETE U-DRAIN

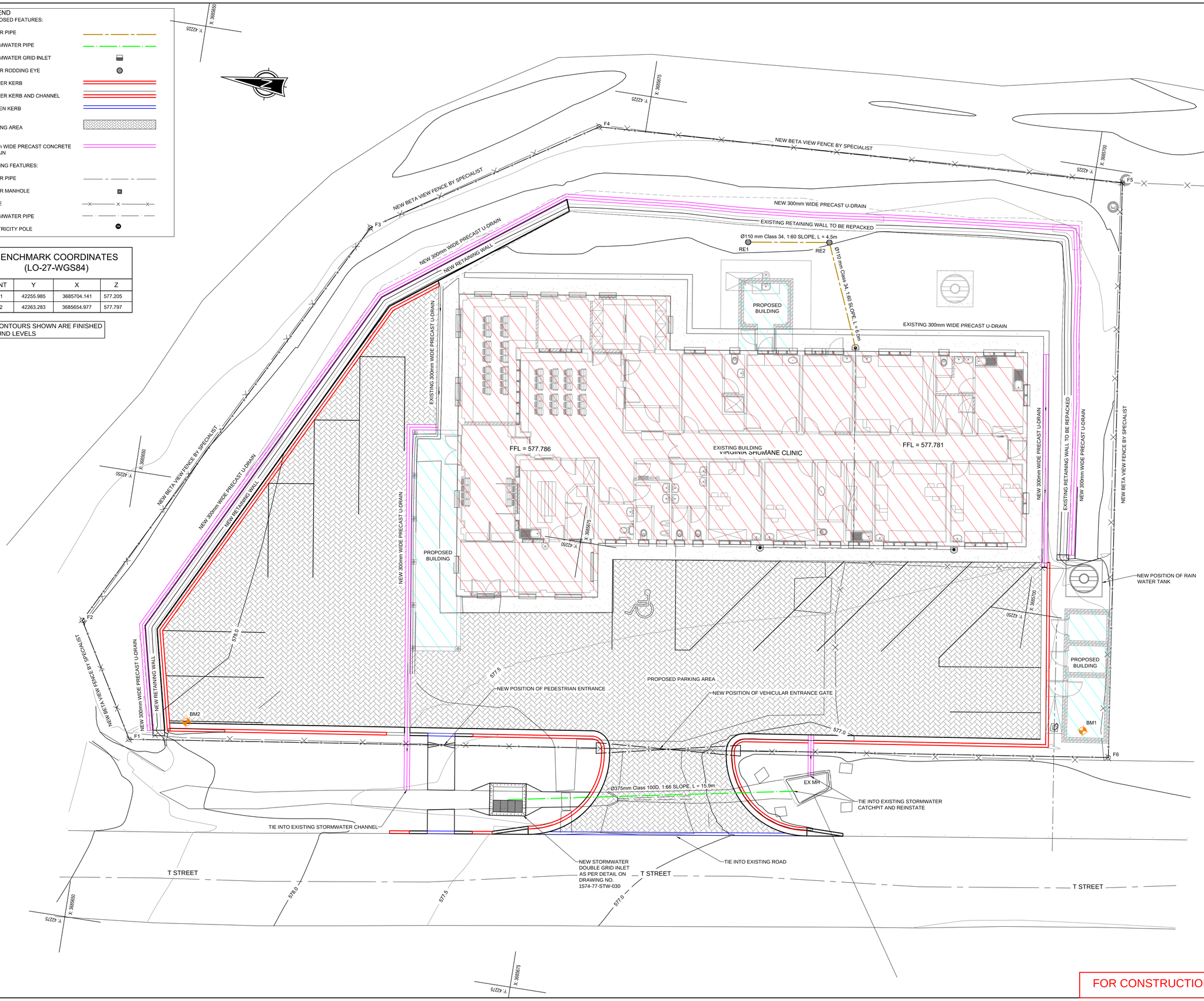
EXISTING FEATURES:

- SEWER PIPE
- SEWER MANHOLE
- FENCE
- STORMWATER PIPE
- ELECTRICITY POLE

BENCHMARK COORDINATES (LO-27-WGS84)

POINT	Y	X	Z
BM1	42255.985	3685704.141	577.205
BM2	42263.283	3685654.977	577.797

NB: CONTOURS SHOWN ARE FINISHED GROUND LEVELS



THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO.MDA 290 E - 200 WD

No	AMENDMENTS	DATE
0	RE-ISSUE OF DRAWING	SEP 2023
0	ISSUED FOR CONSTRUCTION	AUG 2018

SURVEYED	SURPLAN	11/05/2018
DRAWN	S.PADAYACHEY	AUG 2018
DESIGNED	S.PADAYACHEY	AUG 2018
CHECKED	J.HAYSOM	AUG 2018
APPROVED	PR REGISTRATION NO. 201370318 DATE	

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PROJECT TITLE

VIRGINIA SHUMANE CLINIC (GRAHAMSTOWN)

DRAWING TITLE

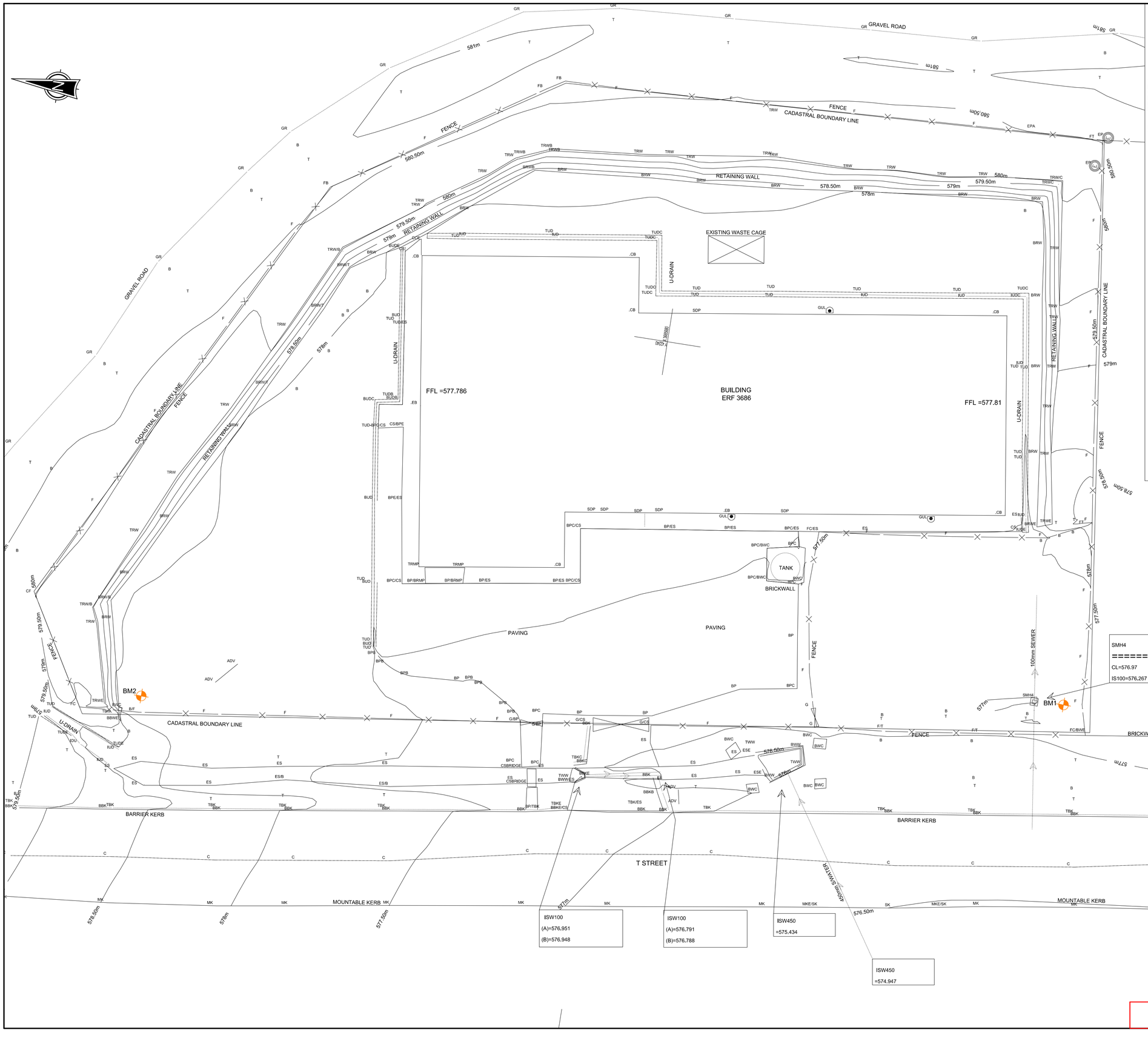
GENERAL LAYOUT PLAN

SCALE	SHEET SET	SHEET SIZE
1 : 100	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-77-GEN-001	0

FOR CONSTRUCTION

P:\1574 Eastern Cape Facility Management\1574-77 SB008 Virginia Shumane Clinic\04 Design\03 General\1574-77-GEN-001.dwg



SURVEY CONTROL
SYSTEM WGS84/LO27

Code	Y	X	Elevation
BM1	42255.985	3685704.141	577.205
BM2	42263.283	3685654.977	577.797

DESCRIPTION

BM1 AND BM2 ARE 12mm IN CONCRETE WITH NAME PLATE.

INVERT LEGEND

ISW100 : INVERT OF STORMWATER 100mm DIA PIPE
IS100 : INVERT OF SEWER 100mm DIA PIPE
ISW450 : INVERT OF STORMWATER 450mm DIA PIPE

DTM LEGEND

ADV	:ADVERTISEMENT BORD
B	:BOTTOM EMBANKMENT
BBK	:BOTTOM BARRIER KERB
BBKB	:BOTTOM BARRIER KERB BEND
BBKC	:BOTTOM BARRIER KERB CORNER
BBKE	:BOTTOM BARRIER KERB END
BBWE	:BOTTOM BRICK WALL END
BP	:BRICK PAVING
BPB	:BRICK PAVING BEND
BPC	:BRICK PAVING CORNER
BRW	:BOTTOM RETAINING WALL
BRWB	:BOTTOM RETAINING WALL BEND
BRWE	:BOTTOM RETAINING WALL END
BUD	:BOTTOM U-DRAIN
BUDB	:BOTTOM U-DRAIN BEND
BUDC	:BOTTOM U-DRAIN CORNER
BUDE	:BOTTOM U-DRAIN END
BW	:BRICK WALL
BWC	:BRICK WALL CORNER
BWW	:BOTTOM WINGWALL
C	:CENTRE LINE
CCE	:CONCRETE CORNER END
CS	:SLAB CORNER
EP	:ELECTRICAL POLE
EPA	:ELECT POLE ANCHOR
ES	:EDGE SLAB
F	:FENCE
FB	:FENCE (BEND)
FC	:FENCE CORNER
FFL	:FINISH FLOOR LEVEL
FT	:FENCE T-JUNCTION
G	:GATE
GR	:GRAVEL ROAD
GUL	:GULLY
IUD	:INVERT OF U-DRAIN
IUDC	:INVERT OF U-DRAIN CORNER
IUDE	:INVERT OF U-DRAIN END
MK	:EDGE MOUNTABLE KERB
S	:SPOT HEIGHT
SDP	:SEWER DOWN PIPE
SK	:SUNKEN KERB (ROAD LEVEL)
SMH4	:SQUARE SEWER MANHOLE COVER
T	:TOP EMBANKMENT
TANK	:TANK
TBK	:TOP BARRIER KERB
TBKB	:TOP BARRIER KERB BEND
TBKC	:TOP BARRIER KERB CORNER
TBKE	:TOP BARRIER KERB END
TBW	:TOP BRICK WALL
TBWE	:TOP BRICK WALL END
TRMP	:TOP OF RAMP
TRW	:TOP RETAINING WALL
TRWB	:TOP RETAINING WALL BEND

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO.MDA 290E - 200WD

No	AMENDMENTS	DATE
0	RE-ISSUE OF DRAWING	SEP 2023
0	ISSUED FOR CONSTRUCTION	AUG 2018

SURVEYED	SURPLAN	11/05/2018
DRAWN	S.PADAYACHEY	AUG 2018
DESIGNED	S.PADAYACHEY	AUG 2018
CHECKED	J.HAYSOM	AUG 2018
APPROVED	PR REGISTRATION NO. 201370318 DATE	

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PROJECT TITLE

VIRGINIA SHUMANE CLINIC (GRAHAMSTOWN)

DRAWING TITLE

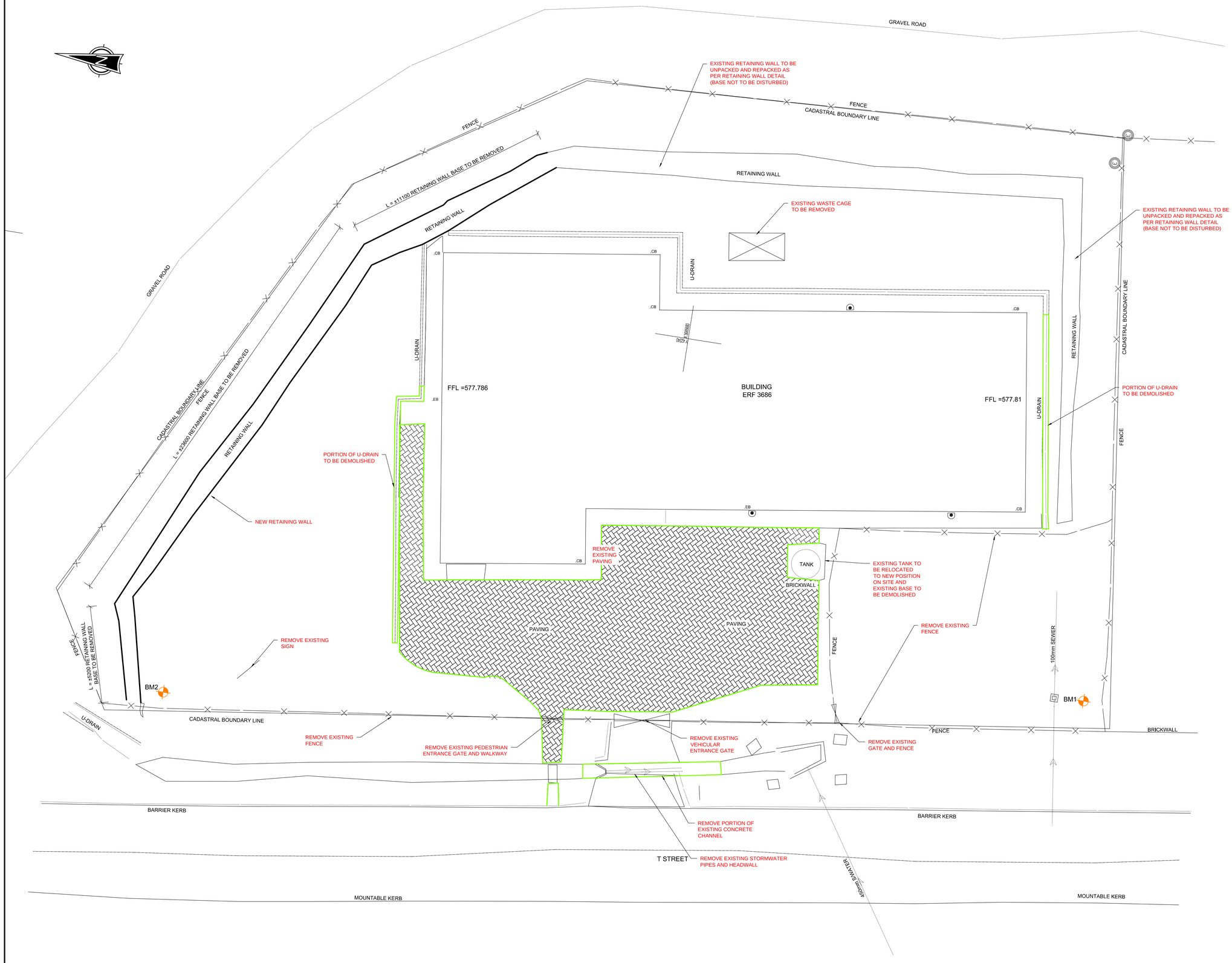
ENGINEERING SURVEY LAYOUT PLAN

SCALE	SHEET SET	SHEET SIZE
1 : 100	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-77-GEN-002	0

FOR CONSTRUCTION

P:\1574 Eastern Cape Fixility Management\1574-77-SB008 Virginia Shumane Clinic\04 Design\00 General\1574-77-GEN-002 ENGINEERING SURVEY.dwg



THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO.MDA 290E - 200WD

	AMENDMENTS	DATE
0	RE-ISSUE OF DRAWING	SEP 2023
0	ISSUED FOR CONSTRUCTION	AUG 2018

SURVEYED	SURPLAN	11/05/2018
DRAWN	S.PADAYACHEY	AUG 2018
DESIGNED	S.PADAYACHEY	AUG 2018
CHECKED	J.HAYSOM	AUG 2018
APPROVED	PR REGISTRATION NO. 201370318 DATE	

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CLIENT

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SAKHIWO MAINTAINANCE CONSORTIUM

PROVINCE OF THE EASTERN CAPE DEPARTMENT OF HEALTH

Independence Avenue Dukumbana Building
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SOUTH AFRICA
Private Bag X0038, BHISHO, 5605
Tel: +27 (0)40 608 1114
www.echealth.gov.za

PROJECT TITLE

VIRGINIA SHUMANE CLINIC (GRAHAMSTOWN)

DRAWING TITLE

CIVILS DEMOLITION LAYOUT PLAN

SCALE	SHEET SET	SHEET SIZE
1 : 100	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-77-GEN-003	0

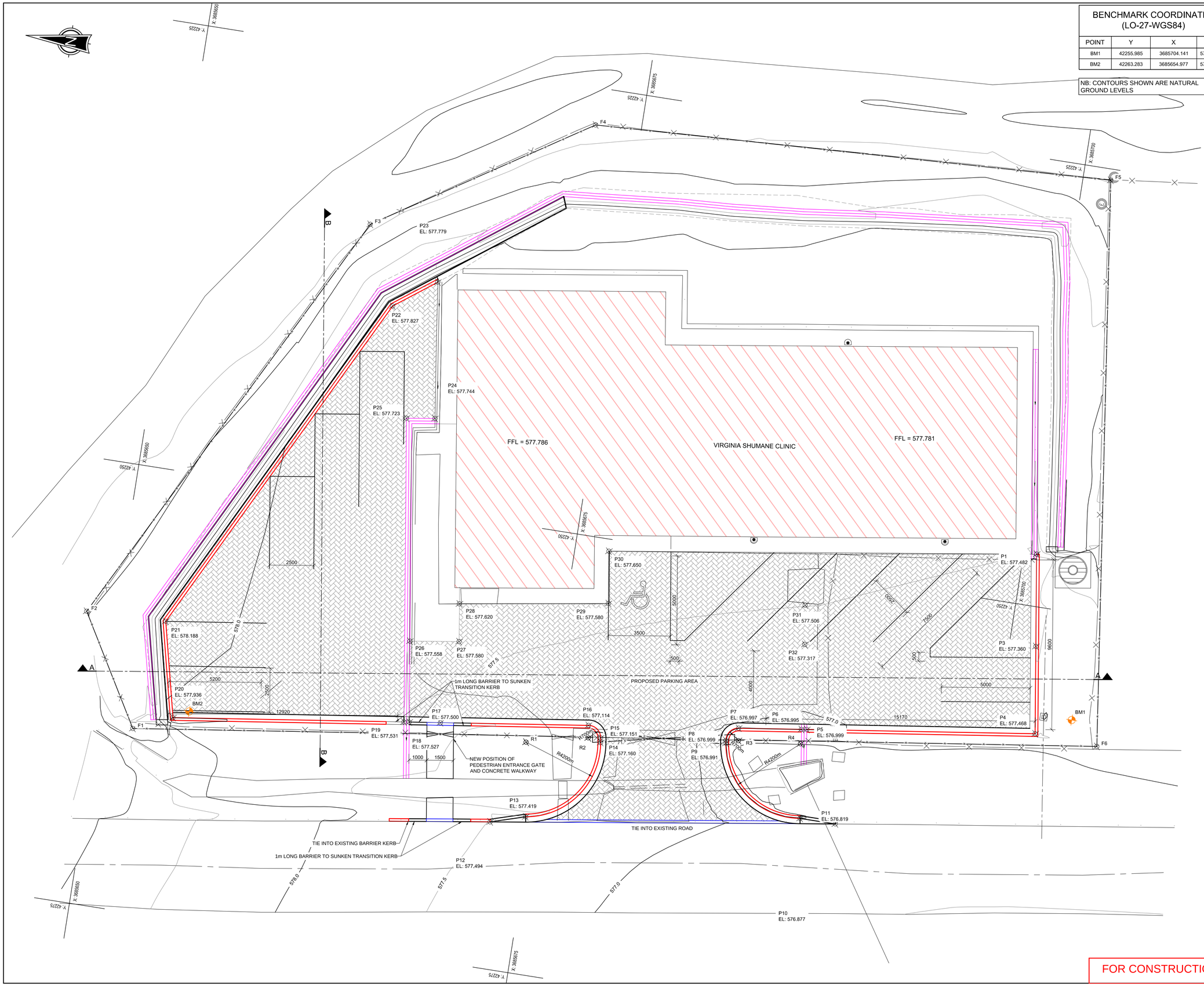
FOR CONSTRUCTION

P:\1574 Eastern Cape Facility Management\1574-77 SB008 Virginia Shumane Clinic\04 Design\08 General\1574-77-GEN-X002 ENGINEERING SURVEY.dwg

BENCHMARK COORDINATES (LO-27-WGS84)

POINT	Y	X	Z
BM1	42255.985	3685704.141	577.205
BM2	42263.283	3685654.977	577.797

NB: CONTOURS SHOWN ARE NATURAL GROUND LEVELS



LEGEND

PROPOSED FEATURES:

- BARRIER KERB
- BARRIER KERB AND CHANNEL
- SUNKEN KERB
- PARKING AREA
- 300mm WIDE PRECAST CONCRETE U-DRAIN

EXISTING FEATURES:

- FENCE
- STORMWATER PIPE
- ELECTRICITY POLE

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO.MDA 290 E_200

No	AMENDMENTS	DATE
0	RE-ISSUE OF DRAWING	SEP 2023
0	ISSUED FOR CONSTRUCTION	AUG 2018

SURVEYED	SURPLAN	11/05/2018
DRAWN	S.PADAYACHEY	AUG 2018
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APPROVED	PR REGISTRATION NO. 201370318 DATE	

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PROJECT TITLE

VIRGINIA SHUMANE CLINIC (GRAHAMSTOWN)

DRAWING TITLE

PROPOSED PARKING AREA LAYOUT PLAN

SCALE	SHEET SET	SHEET SIZE
1 : 100	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-77-RDS-010	0

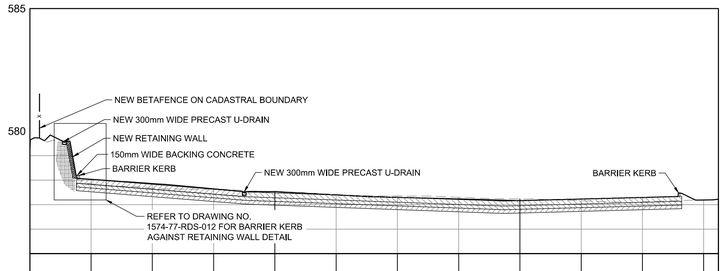
FOR CONSTRUCTION

P:\1574 Eastern Cape Facility Management\1574-77 SB008 Virginia Shumane Clinic\04 Design\03 General\1574-77-GEN-001.dwg

OGL
FGL

SCALES:
Horizontal 1:250
Vertical 1:125

DATUM 575.000m MSL



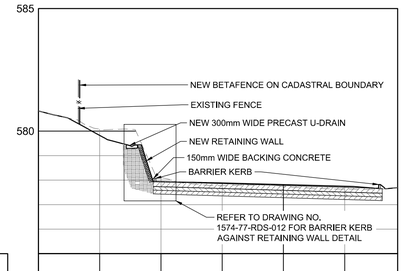
DISTANCE (m)	0	5	10	15	20	25	30	35	40	45	50	55	56
GROUND LEVEL (OGL)	579.308	578.031	577.858	577.641	577.531	577.397	577.294	577.231	577.163	577.228	577.291	577.188	577.218
FINISHED GROUND LEVEL (FGL)	579.308	578.031	577.858	577.641	577.531	577.397	577.294	577.231	577.163	577.228	577.291	577.188	577.218

PARKING AREA SECTION A-A
FROM 0.000 TO 56.199

OGL
FGL

SCALES:
Horizontal 1:250
Vertical 1:125

DATUM 575.000m MSL



DISTANCE (m)	0	5	10	15	20	25	29
GROUND LEVEL (OGL)	580.816	580.072	578.108	577.778	577.748	577.634	577.689
FINISHED GROUND LEVEL (FGL)	580.816	580.072	578.108	577.778	577.748	577.634	577.689

PARKING AREA SECTION B-B
FROM 0.000 TO 29.323

NB: ALL PARKING LOT POINTS ARE GIVEN AT FACE OF KERB

PARKING AREA SETTING OUT INFORMATION

DESCRIPTION	Y	X	Z
P1	42247,073	3685700,732	577,482
P3	42252.210	3685701.501	577.360
P4	42257,069	3685702,228	577.468
P5	42258,844	3685689,490	576,999
P6	42258,886	3685689,188	576.995
P7	42259.374	3685685.686	576.997
P8	42260.171	3685685.090	576.999
P9	42260.328	3685685.114	576.991
P10	42263,847	3685689,898	576,877
P11	42263,845	3685691,909	576,819
P12	42266.771	3685672.685	577.494
P13	42266.175	3685674.617	577.419
P14	42261,389	3685678,136	577.160
P15	42261,129	3685678,096	577,151
P16	42260.541	3685677.307	577.114
P17	42261.697	3685669.047	577.500
P18	42261,934	3685667.308	577.527
P19	42261,976	3685667.011	577,531
P20	42263.771	3685654.125	577.936
P21	42258,480	3685652.877	578.188
P22	42238.948	3685662.721	577.827
P23	42237.222	3685665.027	577.779
P24	42244,827	3685666,069	577.744
P25	42245,066	3685664.479	577.723
P26	42257.430	3685666.634	577.558
P27	42257,020	3685669,373	577.580
P28	42254,923	3685669,059	577.620
P29	42253,589	3685677,346	577.580
P30	42250.677	3685676.910	577.650
P31	42251.948	3685688.304	577.506
P32	42254,137	3685688.631	577,317

BELLMOUTH RADII SETTING OUT INFORMATION

POINT	Y	X
R1	42262.023	3685673,983
R2	42261,235	3685677,404
R3	42260,067	3685685.783
R4	42259.694	3685689.266

FENCELINE SETTING OUT INFORMATION

POINT	Y	X
F1	42 264,725	3 685 651,987
F2	42 258,615	3 685 648,387
F3	42 234,605	3 685 660,757
F4	42 227,095	3 685 672,417
F5	42 225,631	3 685 701.560
F6	42 257,232	3 685 705,774

BENCHMARK COORDINATES (LO-27-WGS84)

POINT	Y	X	Z
BM1	42255.985	3685704.141	577.205
BM2	42263.283	3685654.977	577.797

FOR CONSTRUCTION

KEY

ORIGINAL GROUND LEVEL (OGL)

FINISHED GROUND LEVEL (FGL)

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO.MDA 290 E_200

No	AMENDMENTS	DATE
0	RE-ISSUE OF DRAWING	SEP 2023
0	ISSUED FOR CONSTRUCTION	AUG 2018

SURVEYED	SURPLAN	11/05/2018
DRAWN	S.PADAYACHEY	AUG 2018
DESIGNED	S.PADAYACHEY	AUG 2018
CHECKED	J.HAYSOM	AUG 2018
APPROVED	PR REGISTRATION NO. 201370318 DATE	

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www.echealth.gov.za

PROJECT TITLE

VIRGINIA SHUMANE CLINIC (GRAHAMSTOWN)

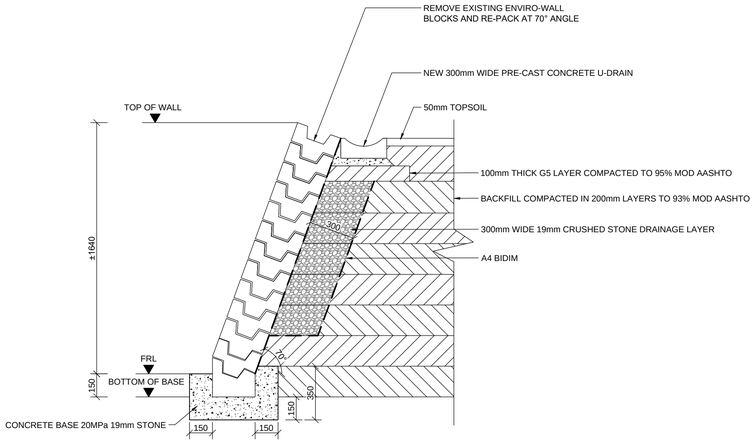
DRAWING TITLE

PARKING AREA SECTIONS AND SETTING OUT INFORMATION

SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 1 OF 1 SHEETS	A1

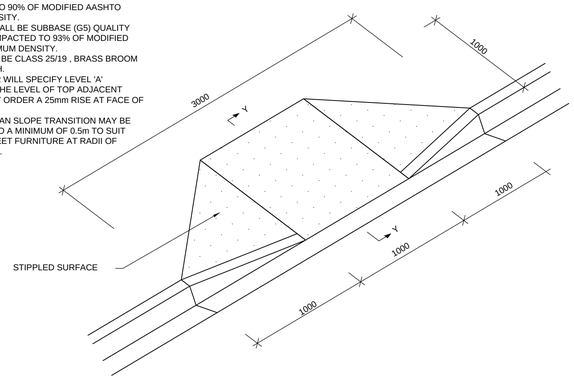
DRAWING No.	REVISION
1574-77-RDS-011	0

P:\1574 Eastern Cape Facility Management\1574-77-SB008 Virginia Shumane Clinic\04 Design\08 General\1574-77-GEN-001.dwg

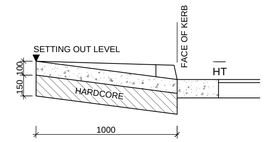


TYPICAL RETAINING WALL DETAIL
SCALE 1:20

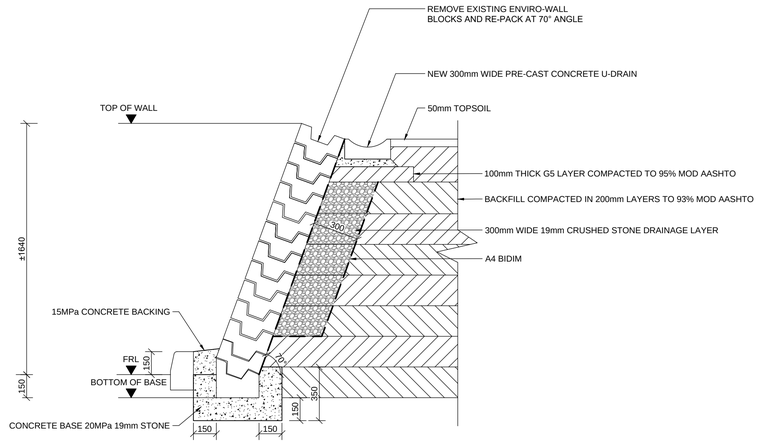
NOTES:
1. IN-SITU MATERIAL BENEATH HARDCORE TO BE COMPACTED TO 90% OF MODIFIED AASHTO MAXIMUM DENSITY.
2. HARDCORE SHALL BE SUBBASE (G5) QUALITY MATERIAL COMPACTED TO 93% OF MODIFIED AASHTO MAXIMUM DENSITY.
3. CONCRETE TO BE CLASS 25/19 , BRASS BROOM STIPPLE FINISH.
4. THE ENGINEER WILL SPECIFY LEVEL 'A' RELATIVE TO THE LEVEL OF TOP ADJACENT KERB AND MAY ORDER A 25mm RISE AT FACE OF KERB LINE.
5. THE PEDESTRIAN SLOPE TRANSITION MAY BE SHORTENED TO A MINIMUM OF 0.5m TO SUIT EXISTING STREET FURNITURE AT RADII OF INTERSECTION.



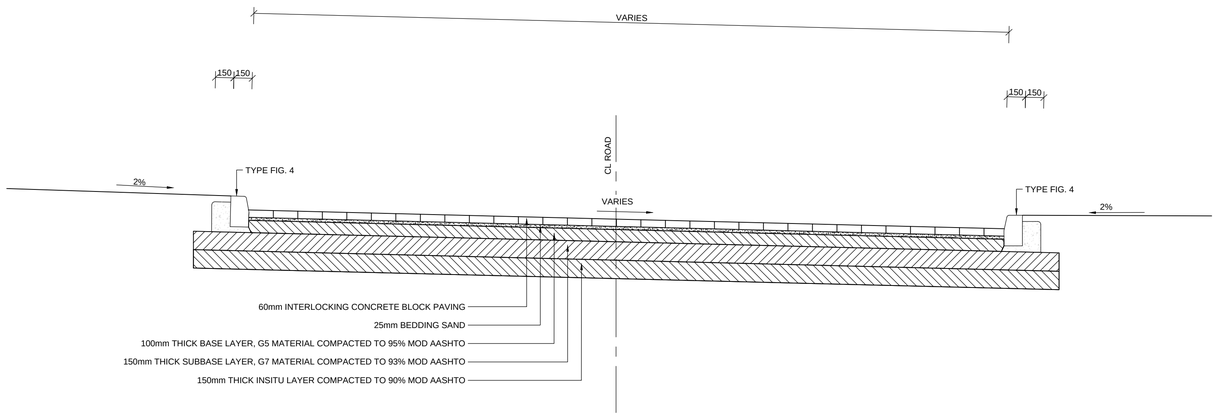
PEDESTRIAN RAMP
NTS



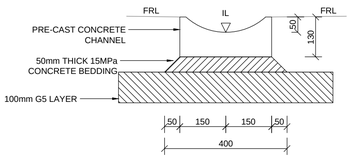
SECTION Y-Y
NTS



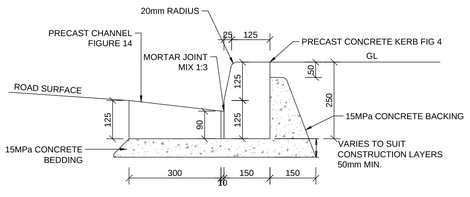
BARRIER KERB AGAINST RETAINING WALL DETAIL
SCALE 1:20



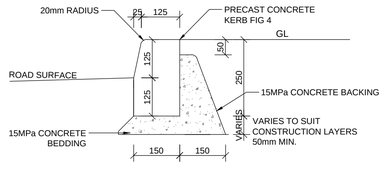
PARKING AREA
TYPICAL LAYERWORKS DETAIL
SCALE 1:25



300mm WIDE PRE-CAST CONCRETE CHANNEL
SCALE 1:10



BARRIER KERB AND CHANNEL
SCALE 1:10



BARRIER KERB
SCALE 1:10

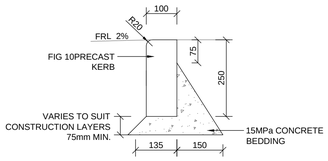


FIGURE 10 EDGING
SCALE 1:10

FOR CONSTRUCTION

No	AMENDMENTS	DATE
0	RE-ISSUE OF DRAWING	SEP 2023
0	ISSUED FOR CONSTRUCTION	AUG 2018

SURVEYED	NA	
DRAWN	C.PILLAY	AUG 2018
DESIGNED	C.PILLAY	AUG 2018
CHECKED	J.HAYSOM	AUG 2018
APPROVED	PR REGISTRATION NO. 201370318 DATE	

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PROJECT TITLE

VIRGINIA SHUMANE CLINIC (GRAHAMSTOWN)

DRAWING TITLE

TYPICAL PARKING AREA DETAILS

SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-77-RDS-012	0

P:\1574 Eastern Cape Facility Management\1574-77 SB008 Virginia Shumane Clinic\04 Design\03 Road\ROAD DETAILS.dwg

SEWER PARTICULARS (STRUCTURES)

STRUCTURE NAME	Y	X	RIM ELEVATION	SUMP ELEVATION SUMP DEPTH	INVERT ELEVATION
RE1	42 232.118	3 685 681.577	578.095	577,530 0,565	P48-INV OUT 577,530
RE2	42 231.437	3 685 686.032	578.021	577,452 0,569	P48-INV IN 577,455 P49-INV OUT 577,455

BENCHMARK COORDINATES (LO-27-WGS84)

POINT	Y	X	Z
BM1	42255.985	3685704.141	577.205
BM2	42263.283	3685654.977	577.797

NB: CONTOURS SHOWN ARE FINISHED GROUND LEVELS

LEGEND

PROPOSED FEATURES:
- SEWER PIPE
- SEWER RODDING EYE
- BARRIER KERB
- BARRIER KERB AND CHANNEL
- SUNKEN KERB
- 300mm WIDE PRECAST CONCRETE U-DRAIN

EXISTING FEATURES:
- SEWER PIPE
- SEWER MANHOLE
- FENCE
- STORMWATER PIPE
- ELECTRICITY POLE

Ø110 mm Class 34, 1:60 SLOPE, L = 4.5m
RE1
RE2
1000
1000
1000
Ø110 mm Class 34, 1:60 SLOPE, L = 6.0m
TIE INTO EXISTING SEWER GULLEY
ASSUMED POSITION OF EXISTING SEWER TO BE CONFIRMED AND INSPECTED ON SITE AND APPROVED BY THE ENGINEER PRIOR TO THE COMMENCEMENT OF CONSTRUCTION
FFL = 577.786
VIRGINIA SHUMANE CLINIC
FFL = 577.781
GRID INLET 1
BM1
BM2
578.0
577.5
577.0
T STREET
T STREET
T STREET
X: 3685650 Y: 42275
X: 3685675 Y: 42250
X: 3685700 Y: 42250
X: 3685650 Y: 42250
X: 3685675 Y: 42275

FOR CONSTRUCTION

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO.MDA 290 E - 200 WD

No	AMENDMENTS	DATE
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PROJECT TITLE

VIRGINIA SHUMANE CLINIC (GRAHAMSTOWN)

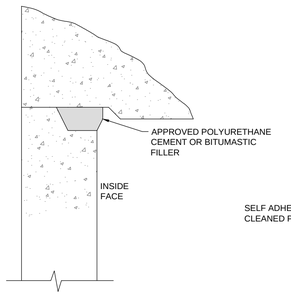
DRAWING TITLE

PROPOSED SEWER LAYOUT PLAN AND SETTING OUT INFORMATION

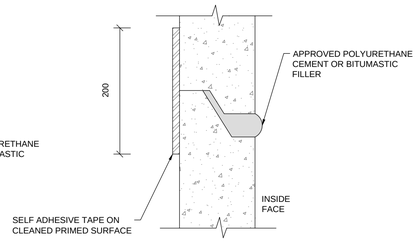
SCALE	SHEET SET	SHEET SIZE
1 : 100	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-77-SEW-020	0

P:\1574 Eastern Cape Facility Management\1574-77 SB008 Virginia Shumane Clinic\04 Design\09 General\1574-77-GEN-001.dwg



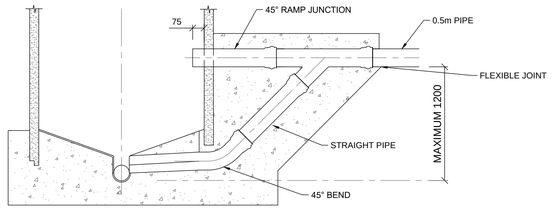
DETAIL A



DETAIL B

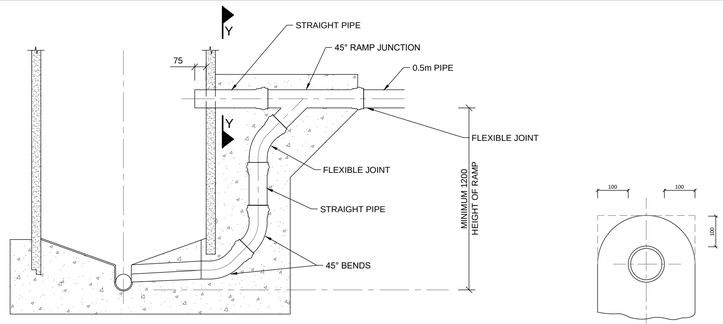
DETAILS 'A' & 'B' INTERLOCKING JOINTS

SCALE 1:20



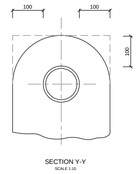
DETAIL OF RAMP MANHOLE

SCALE 1:20



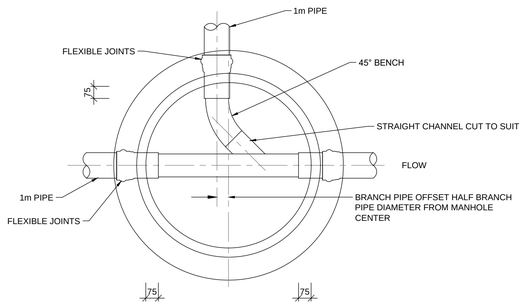
DETAIL OF BACKDROP MANHOLE

SCALE 1:20



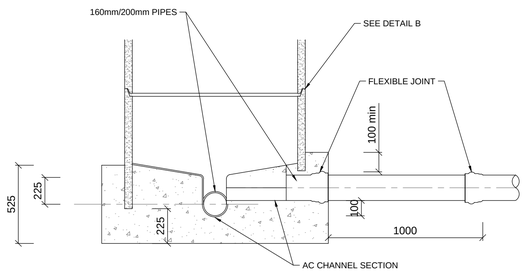
SECTION Y-Y

SCALE 1:10



PLAN OF 90° BRANCH MANHOLES

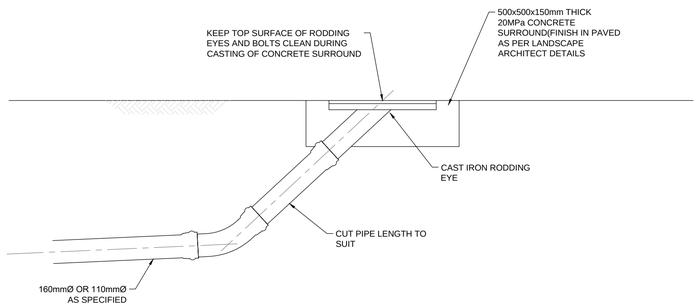
SCALE 1:20



MAIN & BRANCH PIPES EQUAL SIZES

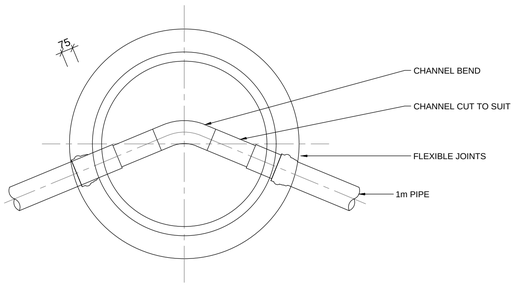
SCALE 1:20

LEVEL OF RODDING EYE
= 25mm ABOVE SURROUNDING SURFACE IN OPEN AREAS. =
SAME LEVEL AS SURROUNDING SURFACE IN
SURFACED/PAVED AREAS/ PUBLIC AREAS.



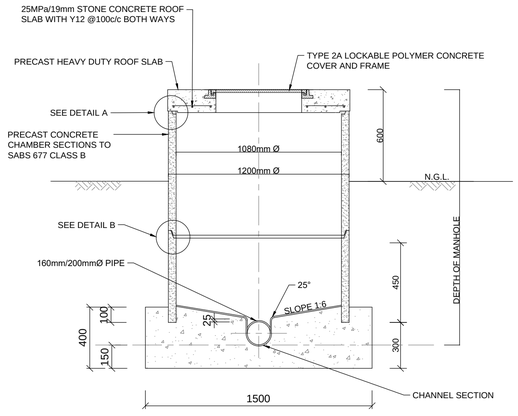
DETAIL OF RODDING EYE

SCALE 1:20



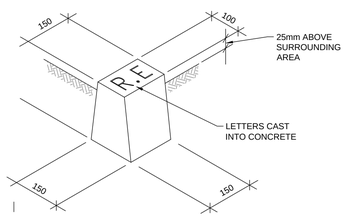
PLAN OF MANHOLE AT BENDS

SCALE 1:20



TYPICAL SECTION THROUGH MANHOLE

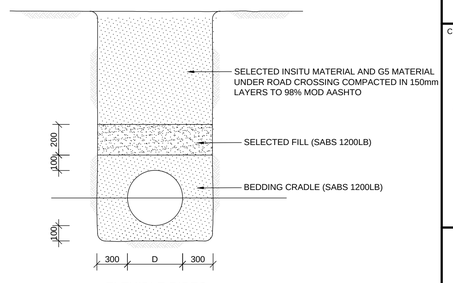
SCALE 1:20



ALL RODDING EYES IN UNPAVED AREAS TO
BE MARKED BY CONCRETE MARKER BLOCK
OR AS SPECIFIED.

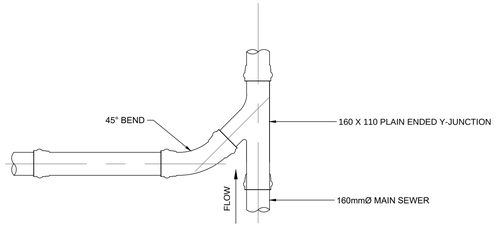
DETAIL OF RODDING EYE MARKER

SCALE 1:20



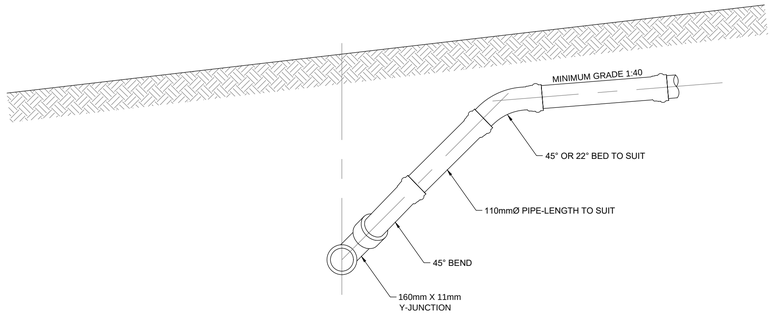
FLEXIBLE PIPES

SCALE 1:20



PLAN OF CONNECTION

SCALE 1:20



TOILET CONNECTION END VIEW

SCALE 1:20

FOR CONSTRUCTION

No	AMENDMENTS	DATE
0	RE-ISSUE OF DRAWING	SEP 2023
0	ISSUED FOR CONSTRUCTION	AUG 2018

SURVEYED	NA	
DRAWN	C.PILLAY	AUG 2018
DESIGNED	C.PILLAY	AUG 2018
CHECKED	J.HAYSOM	AUG 2018
APPROVED	PR REGISTRATION NO. 201370318 DATE	

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www.echealth.gov.za

PROJECT TITLE

VIRGINIA SHUMANE CLINIC (GRAHAMSTOWN)

DRAWING TITLE

TYPICAL SEWER DETAILS

SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-77-SEW-021	0

P:\1574 Eastern Cape Facility Management\1574-77 SB008 Virginia Shumane Clinic\04 Design\05 Sewer\TYPICAL SEWER DETAILS.dwg

BENCHMARK COORDINATES (LO-27-WGS84)

POINT	Y	X	Z
BM1	42255,985	3685704,141	577,205
BM2	42263,283	3685654,977	577,797

NB: CONTOURS SHOWN ARE FINISHED GROUND LEVELS

STORMWATER PARTICULARS (STRUCTURES)

STRUCTURE NAME	Y	X	RIM ELEVATION	SUMP ELEVATION SUMP DEPTH	INVERT ELEVATION
EX MH	42 261,805	3 685 688,841	576,318	575,511 0,807	P50-INV IN 575,511
GRID INLET 1	42 264,748	3 685 673,259	577,249	575,718 1,531	P50-INV OUT 575,750

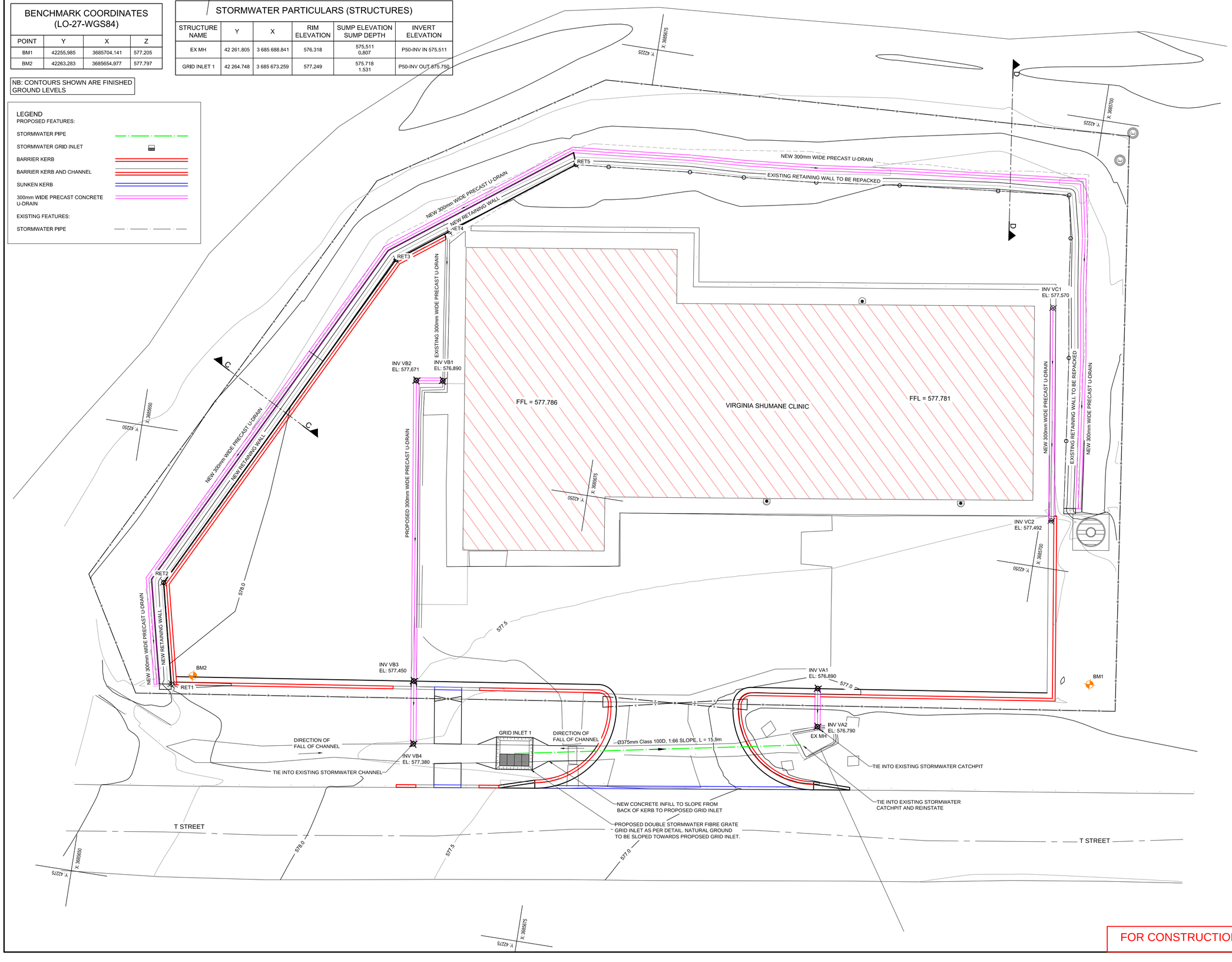
LEGEND

PROPOSED FEATURES:

- STORMWATER PIPE
- STORMWATER GRID INLET
- BARRIER KERB
- BARRIER KERB AND CHANNEL
- SUNKEN KERB
- 300mm WIDE PRECAST CONCRETE U-DRAIN

EXISTING FEATURES:

- STORMWATER PIPE



FOR CONSTRUCTION

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO.MDA 290 E - 200 WD

No	AMENDMENTS	DATE
0	RE-ISSUE OF DRAWING	SEP 2023
0	ISSUED FOR CONSTRUCTION	AUG 2018

SURVEYED	SURPLAN	11/05/2018
DRAWN	S.PADAYACHEY	AUG 2018
DESIGNED	S.PADAYACHEY	AUG 2018
CHECKED	J.HAYSOM	AUG 2018
APPROVED	PR REGISTRATION NO. 201370318 DATE	

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PROJECT TITLE

VIRGINIA SHUMANE CLINIC (GRAHAMSTOWN)

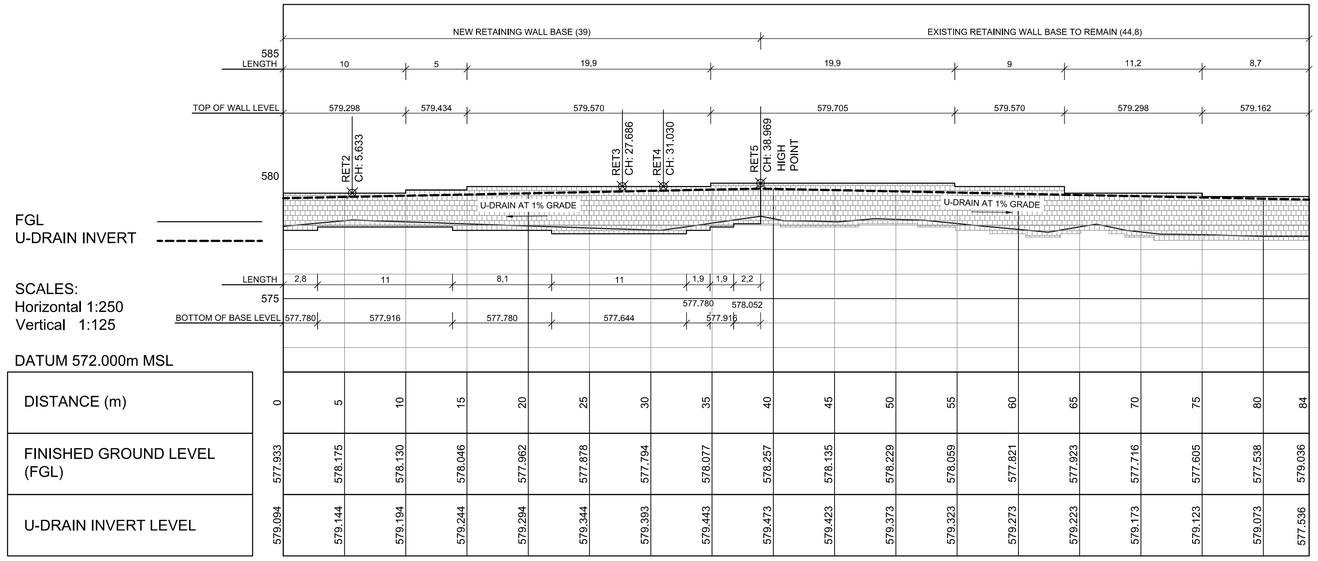
DRAWING TITLE

PROPOSED STORMWATER LAYOUT PLAN

SCALE	SHEET SET	SHEET SIZE
1:100	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-77-STW-030	0

P:\1574 Eastern Cape Facility Management\1574-77 SBD08 Virginia Shumane Clinic\04 Design\08 General\1574-77-GEN-001.dwg



RETAINING WALL SECTION
FROM 0.000 TO 83.730

U-DRAIN SETTING OUT INFORMATION

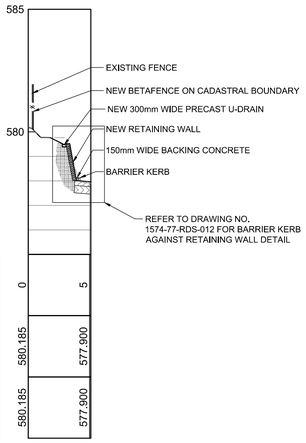
DESCRIPTION	Y	X	Z
INV VA1	42258.568	3685689.295	576.890
INV VA2	42260.655	3685689.607	576.790
INV VB1	42244,974	3685666,102	576.890
INV VB2	42245,192	3685664,650	577,671
INV VB3	42261.657	3685667.115	577.450
INV VB4	42265.098	3685667.630	577.380
INV VC1	42235.694	3685698.876	577.570
INV VC2	42247,364	3685700,623	577,492

RETAINING WALL SETTING OUT INFORMATION

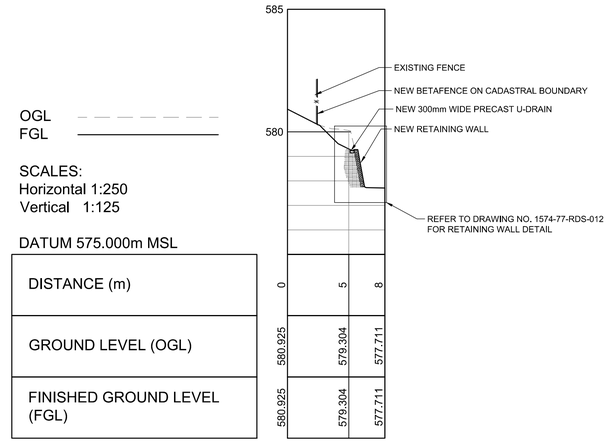
DESCRIPTION	Y	X
RET1	42263.926	3685653.854
RET2	42258.443	3685652.560
RET3	42238,750	3685662,485
RET5	42231.988	3685671.518

BENCHMARK COORDINATES (LO-27-WGS84)

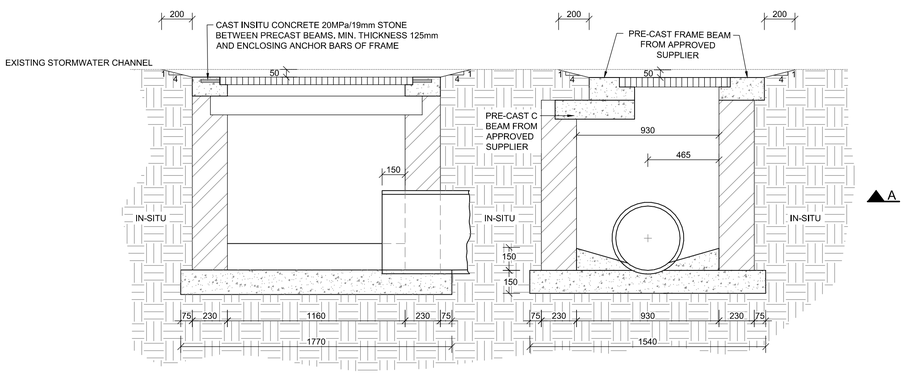
POINT	Y	X	Z
BM1	42255.985	3685704.141	577.205
BM2	42263.283	3685654.977	577.797



RETAINING WALL SECTION C-C
FROM 0.000 TO 5.113

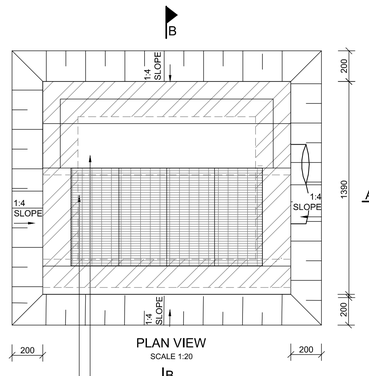


RETAINING WALL SECTION D-D
FROM 0.000 TO 7.943



SECTION A-A
SCALE 1:20

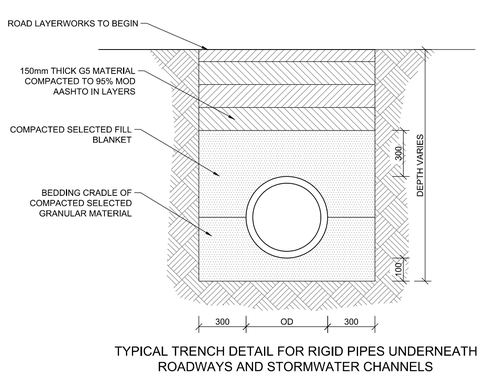
SECTION B-B
SCALE 1:20



DOUBLE STORMWATER GRID INLET DETAIL

NOTES

1. C BEAM TO BE FLUSH WITH INSIDE FACE OF FRAME BEAM AND BEARING A MINIMUM OF 90mm ON THREE WALLS.
2. PIPES MAY PROTRUDE A MAXIMUM OF 150mm INTO STRUCTURE, BUT "DEAD SPACES" TO BE BLANKED OFF.
3. BRICKS SHALL BE NFX BURNT CLAY MASONRY UNITS AND SHALL COMPLY WITH SANS 227.
4. 230mm BRICKWORK LAID IN BOND OF 2 STRETCHERS AND 1 HEADER COURSE. UNPLASTERED WITH FLUSH JOINTS BRACE STRUCTURE WHILE COMPACTING ADJACENT ROAD LAYERS.
5. FIBRE GRATE COVER TO BE TIED DOWN WITH SS 316 STAINLESS STEEL BOTTOM CLIPS AND C-TYPE CLIPS.
6. ALL PRE-CAST ITEMS TO BE FROM



TYPICAL TRENCH DETAIL FOR RIGID PIPES UNDERNEATH ROADWAYS AND STORMWATER CHANNELS
SCALE 1:20

FOR CONSTRUCTION

KEY

ORIGINAL GROUND LEVEL (OGL)

FINISHED GROUND LEVEL (FGL)

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO.MDA 290 E - 200 WD

No	AMENDMENTS	DATE
0	RE-ISSUE OF DRAWING	SEP 2023
0	ISSUED FOR CONSTRUCTION	AUG 2018

SURVEYED	SURPLAN	11/05/2018
DRAWN	S.PADAYACHEY	AUG 2018
DESIGNED	S.PADAYACHEY	AUG 2018
CHECKED	J.HAYSOM	AUG 2018
APPROVED	PR REGISTRATION NO. 201370318 DATE	

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www.echealth.gov.za

PROJECT TITLE

VIRGINIA SHUMANE CLINIC (GRAHAMSTOWN)

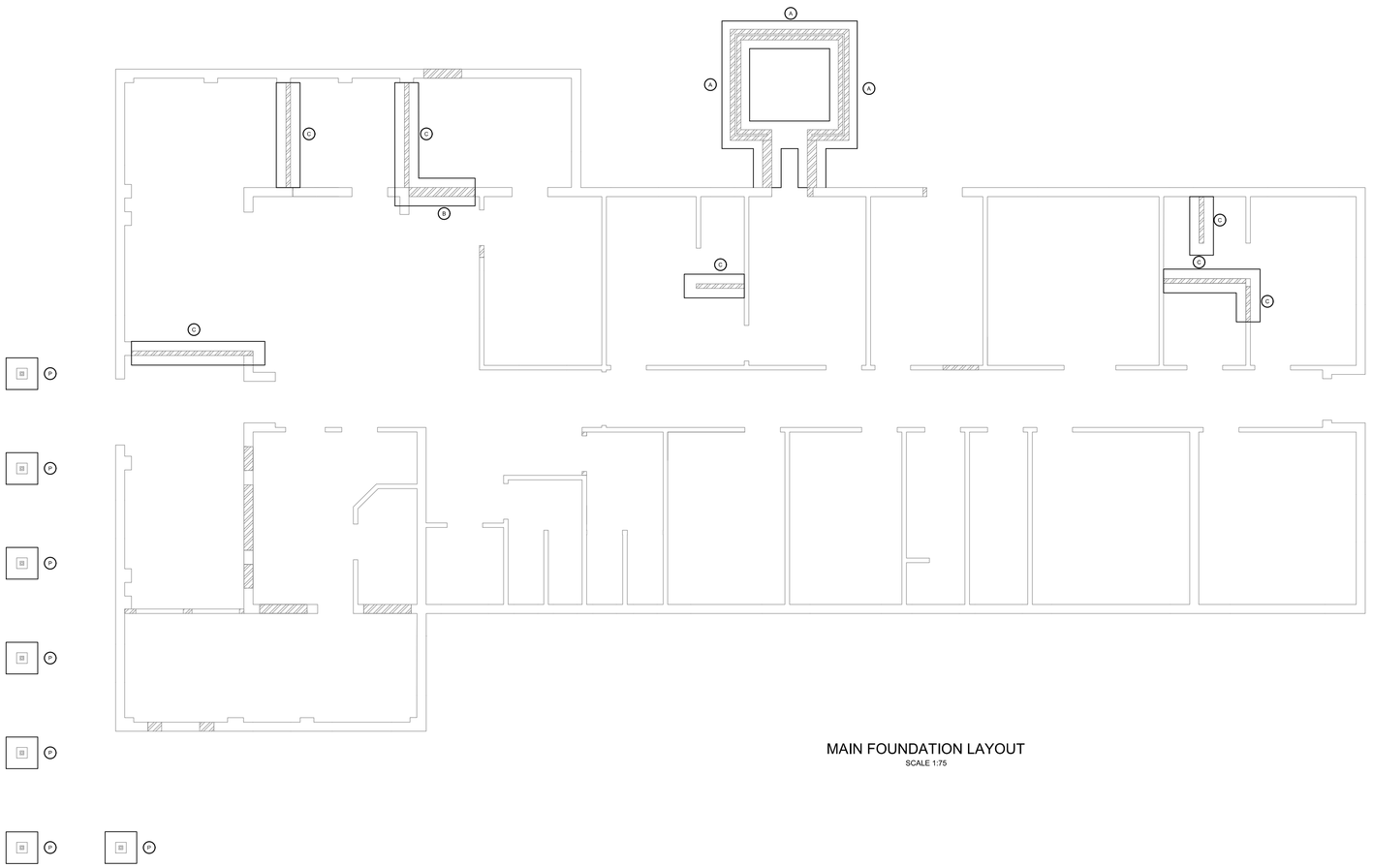
DRAWING TITLE

PROPOSED STORMWATER SECTIONS, DETAILS AND SETTING OUT INFORMATION

SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-77-STW-031	0

P:\1574 Eastern Cape Facility Management\1574-77 SB008 Virginia Shumane Clinic\04 Design\06 General\1574-77-GEN-001.dwg



MAIN FOUNDATION LAYOUT
SCALE 1:75

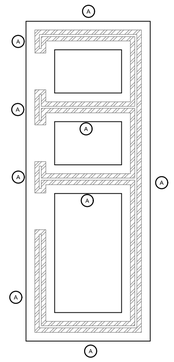
NOTE:

A 270mm EXTERNAL CAVITY WALLS

B 110mm INTERNAL WALLS

F COLUMN PAD FOOTINGS

SEE DWG NO. 1574-77-S-002 FOR DETAILS



REFUSE YARD FOUNDATION LAYOUT
SCALE 1:75

GENERAL NOTES : CONCRETE

CONCRETE STRENGTH

(A) FOUNDATIONS.....	20 Mpa cube strength at 28 days
(B) BEAMS AND SLABS.....	25 Mpa cube strength at 28 days
(C) SURFACE BEDS.....	25 Mpa cube strength at 28 days

CONCRETE COVER TO REINFORCING

(A) SLAB.....	25 mm
(B) BEAMS.....	30 mm
(C) BASES.....	50 mm

NOTE:

1. BEAM DEPTH INCLUDES SLAB THICKNESS
2. CONTRACTOR IS TO MAINTAIN STEEL IN CORRECT POSITION AFTER PLACING AND DURING CONCRETING
3. STONE, SAND AND CEMENT TO BE TO THE SATISFACTION OF THE CONSULTING ENGINEER.
4. NO CONCRETE TO BE POURED UNTIL THE STEEL HAS BEEN INSPECTED BY THE CONSULTING ENGINEER.
5. ANY BREAKS IN THE CONCRETE ARE TO BE MADE IN ACCORDANCE WITH THE ENGINEERS INSTRUCTIONS.
6. NO STRUCTURAL ALTERATIONS TO BE MADE WITHOUT THE APPROVAL OF THE CONSULTING ENGINEER.
7. THE STRUCTURE HAS BEEN DESIGNED FOR THE FOLLOWING CONDITIONS:
   (A) SAFE GROUND PRESSURE..... 150 kN/sq m
   (B) LIVE LOAD ON SLAB..... 1.5 kN/sq m
8. ALL DRAWINGS TO BE READ IN CONJUNCTION WITH THE ARCHITECTURAL AND THE CIVIL ENGINEERING DRAWINGS.
9. ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE WORK IS PUT IN HAND. ANY DISCREPANCY MUST IMMEDIATELY BE REPORTED TO THE ENGINEER.
10. THIS DRAWING IS NOT TO BE SCALED.

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO. MDA 209E

No	AMENDMENTS	DATE
0	ISSUED FOR CONSTRUCTION	07/02/2019

SURVEYED	-	-
DRAWN	D SHARP	06/08/2018
DESIGNED	D VILJOEN	04/10/2017
CHECKED	D VILJOEN	04/10/2017
APPROVED	PR REGISTRATION NO.	DATE

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PROJECT TITLE

VIRGINIA SHUMANE CLINIC (GRAHAMSTOWN)

DRAWING TITLE

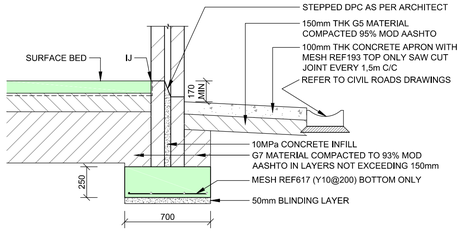
FOUNDATION LAYOUT

SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-77-S-001	0

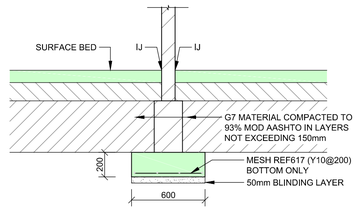
P:\1574 Eastern Cape Facility Management\1574-77 SB008 Virginia Shumane Clinic\04 Design\07 Structures\1574-77-S-001 FOUNDATION LAYOUT.dwg

NOTE:
1. ALL FOUNDATIONS TO BE AT LEAST 0.7m BELOW NGL. FOUNDATION EXCAVATIONS TO BE INSPECTED BY ENGINEER PRIOR CASTING, CARE IS TO BE TAKEN TO RETAIN THE NATURAL MOISTURE CONTENT OF THE FOUNDING MATERIAL. BOTTOM OF TRENCH TO BE COVERED WITH DPM STRAIGHT AFTER EXCAVATION UNTIL INSPECTION.
2. CONTRACTOR TO ENSURE EVEN BACKFILLING FROM TOP OF FOUNDATION LEVEL.



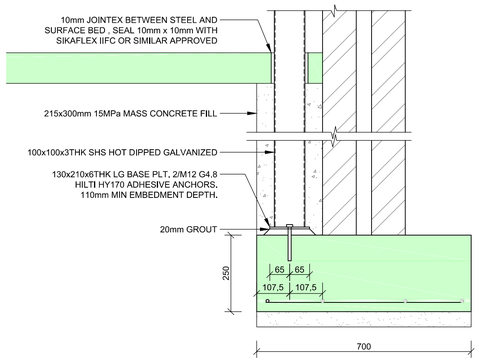
TYPICAL TYPE A SECTION THRU
270mm EXTERNAL WALL

SCALE 1:25



TYPICAL TYPE B SECTION THRU
110mm INTERNAL WALL

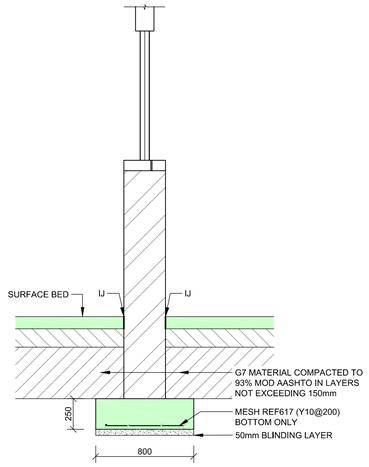
SCALE 1:25



TYPICAL SECTION
(SPUTUM BOOTH ONLY)

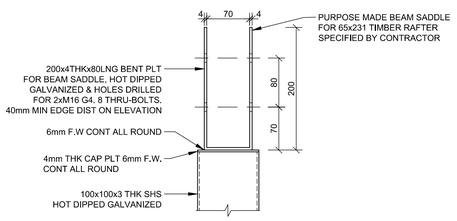
SCALE 1:10

STEEL NOTES:
1. ALL STEEL TO BE GRADE S355JR.
2. ALL CONNECTIONS TO BE TO THE FULL TENSILE STRENGTH OF THE MEMBERS.
3. ALL SPLICES AND CONNECTIONS ARE SUBJECT TO THE APPROVAL OF THE ENGINEER.
4. SHOP DRAWINGS ARE TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL AT LEAST TWO WEEKS PRIOR TO COMMENCEMENT OF MANUFACTURE.
5. ALL SURFACES TO BE PAINTED MUST BE FREE OF MILL SCALE, CORROSION, GREASE, DUST, ETC.
6. ALL STRUCTURAL STEELWORK TO BE HOT DIPPED GALVANIZED.
7. ALL DIMENSIONS ON THIS DRAWING SHOULD BE CHECKED BY THE CONTRACTOR PRIOR TO MANUFACTURE.
8. FIGURED DIMENSIONS ONLY TO BE USED, DRAWING IS NOT TO BE SCALED.
9. DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY THEY BECOME EVIDENT.
10. THIS DRAWING IS TO BE READ IN CONJUCTION WITH THE ENGINEER'S CONCRETE DRAWINGS AS WELL AS THE ARCHITECT'S DRAWINGS.
11. ALL BOLTS ARE M16 GRADE 4.6 UNLESS STATED OTHERWISE.
12. ALL WELDS ARE 6MM FILLET WELDS.



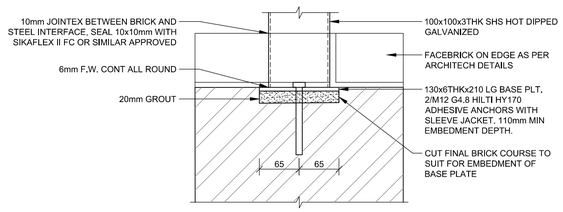
TYPICAL TYPE P
PAD FOOTING SECTION

SCALE 1:25



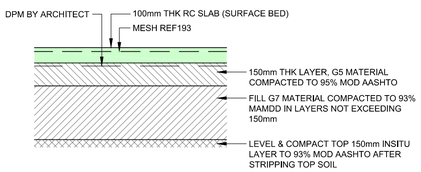
TYPICAL SECTION
BASE PLATE FOOTING

SCALE 1:5



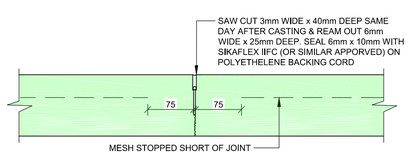
TYPICAL SECTION
BASE PLATE ON BRICK PIER

SCALE 1:5



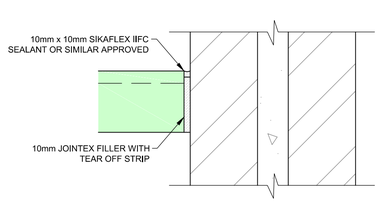
TYPICAL SURFACE BED LAYER WORKS

SCALE 1:20



TYPICAL SAW CUT CONTRACTION JOINT (SJ)

SCALE 1:5



TYPICAL ISOLATION JOINT (IJ)

SCALE 1:5

GENERAL NOTES : CONCRETE

CONCRETE STRENGTH

(A) FOUNDATIONS	20 Mpa cube strength at 28 days
(B) BEAMS AND SLABS	25 Mpa cube strength at 28 days
(C) SURFACE BEDS	25 Mpa cube strength at 28 days
(D) BLINDING LAYER	15 Mpa cube strength at 28 days

CONCRETE COVER TO REINFORCING

(A) SLAB	25 mm
(B) BEAMS	30 mm
(C) BASES	50 mm

NOTE:
1. BEAM DEPTH INCLUDES SLAB THICKNESS
2. CONTRACTOR IS TO MAINTAIN STEEL IN CORRECT POSITION AFTER PLACING AND DURING CONCRETING
3. STONE, SAND AND CEMENT TO BE TO THE SATISFACTION OF THE CONSULTING ENGINEER.
4. NO CONCRETE TO BE POURED UNTIL THE STEEL HAS BEEN INSPECTED BY THE CONSULTING ENGINEER.
5. ANY BREAKS IN THE CONCRETE ARE TO BE MADE IN ACCORDANCE WITH THE ENGINEERS INSTRUCTIONS.
6. NO STRUCTURAL ALTERATIONS TO BE MADE WITHOUT THE APPROVAL OF THE CONSULTING ENGINEER.
7. THE STRUCTURE HAS BEEN DESIGNED FOR THE FOLLOWING CONDITIONS:
   (A) SAFE GROUND PRESSURE..... 150 kN/sq m
   (B) LIVE LOAD ON SLAB..... 1.5 kN/sq m
8. ALL DRAWINGS TO BE READ IN CONJUNCTION WITH THE ARCHITECTURAL AND THE CIVIL ENGINEERING DRAWINGS.
9. ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE WORK IS PUT IN HAND. ANY DISCREPANCY MUST IMMEDIATELY BE REPORTED TO THE ENGINEER.
10. THIS DRAWING IS NOT TO BE SCALED.

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO. MDA290B-201

No	AMENDMENTS	DATE
0	FOR CONSTRUCTION	07/02/2019

SURVEYED	SURPLAN	08/05/2018
DRAWN	D SHARP	17/06/2018
DESIGNED	D VILJOEN	04/10/2017
CHECKED	L COETZER	02/10/2018
APPROVED	PR REGISTRATION NO. 201570266	DATE 12/10/2018

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PROJECT TITLE

VIRGINIA SHUMANE CLINIC (GRAHAMSTOWN)

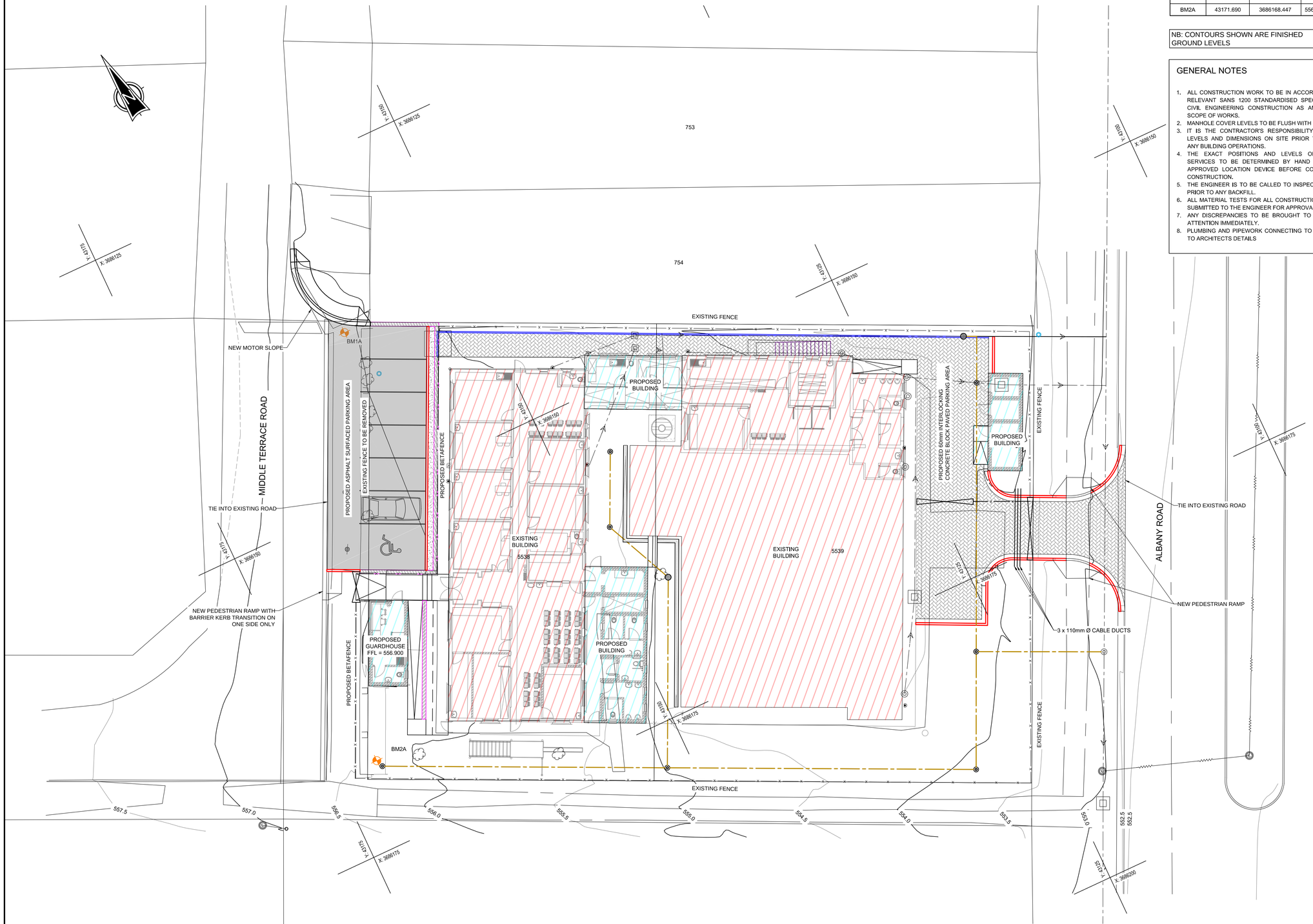
DRAWING TITLE

TYPICAL DETAILS

SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-77-S-002	0

P:\1574 Eastern Cape Facility Management\1574-77 SB008 Virginia Shumane Clinic\04 Design\07 Structures\1574-77-S-002 TYPICAL DETAILS.dwg



BENCHMARK COORDINATES (LO-27-WGS84)

POINT	Y	X	Z
BM1A	43160,180	3686137,970	557,058
BM2A	43171,690	3686168,447	556,270

NB: CONTOURS SHOWN ARE FINISHED GROUND LEVELS

GENERAL NOTES

1. ALL CONSTRUCTION WORK TO BE IN ACCORDANCE WITH THE RELEVANT SANS 1200 STANDARDISED SPECIFICATIONS FOR CIVIL ENGINEERING CONSTRUCTION AS AMENDED BY THE SCOPE OF WORKS.
2. MANHOLE COVER LEVELS TO BE FLUSH WITH NGL.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL LEVELS AND DIMENSIONS ON SITE PRIOR TO COMMENCING ANY BUILDING OPERATIONS.
4. THE EXACT POSITIONS AND LEVELS OF ALL EXISTING SERVICES TO BE DETERMINED BY HAND EXCAVATION OR APPROVED LOCATION DEVICE BEFORE COMMENCING WITH CONSTRUCTION.
5. THE ENGINEER IS TO BE CALLED TO INSPECT ALL TRENCHES PRIOR TO ANY BACKFILL.
6. ALL MATERIAL TESTS FOR ALL CONSTRUCTION WORKS TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
7. ANY DISCREPANCIES TO BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY.
8. PLUMBING AND PIPEWORK CONNECTING TO 110mm Ø SEWER TO ARCHITECTS DETAILS

LEGEND

PROPOSED FEATURES:
- SEWER PIPE
- SEWER MANHOLE
- SEWER RODDING EYE
- FENCING
- BARRIER KERB
- BARRIER KERB WITH CHANNEL
- EDGING
- RETAINING WALL

EXISTING FEATURES:
- SEWER PIPE
- SEWER MANHOLE
- PRECAST SEWER MANHOLE
- STORMWATER PIPE
- STORMWATER MANHOLE / CATCHPIT
- FENCE
- OVERHEAD ELECTRICITY CABLES
- ELECTRICITY POLE
- GULLEY
- BENCHMARK

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO.MDA 290 C_200

No	AMENDMENTS	DATE
P0	RE-ISSUE OF DRAWING	SEP 2023
P0	ISSUED FOR INFORMATION	OCT 2018

SURVEYED	SURPLAN	05/07/2018
DRAWN	S.PADAYACHEY	SEP 2018
DESIGNED	S.PADAYACHEY	SEP 2018
CHECKED	J.HAYSOM	SEP 2018
APPROVED	PR REGISTRATION NO. 201370318 DATE	

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www.echealth.gov.za

PROJECT TITLE

MIDDLE TERRACE CLINIC (GRAHAMSTOWN)

DRAWING TITLE

GENERAL LAYOUT PLAN

SCALE	SHEET SET	SHEET SIZE
1 : 150	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-79-GEN-001	P0

FOR INFORMATION

P:\1574 Eastern Cape Facility Management\1574-79 SB006 Middle Terrace Clinic\04 Design\08 General\1574-79-GEN-001 REV1.dwg

SURVEY CONTROL
SYSTEM WGS84/LO27

Code	Y	X	Elevation
BM1A	43160.180	3686137,970	557.058
BM2A	43171.690	3686168,447	556.270

DESCRIPTION

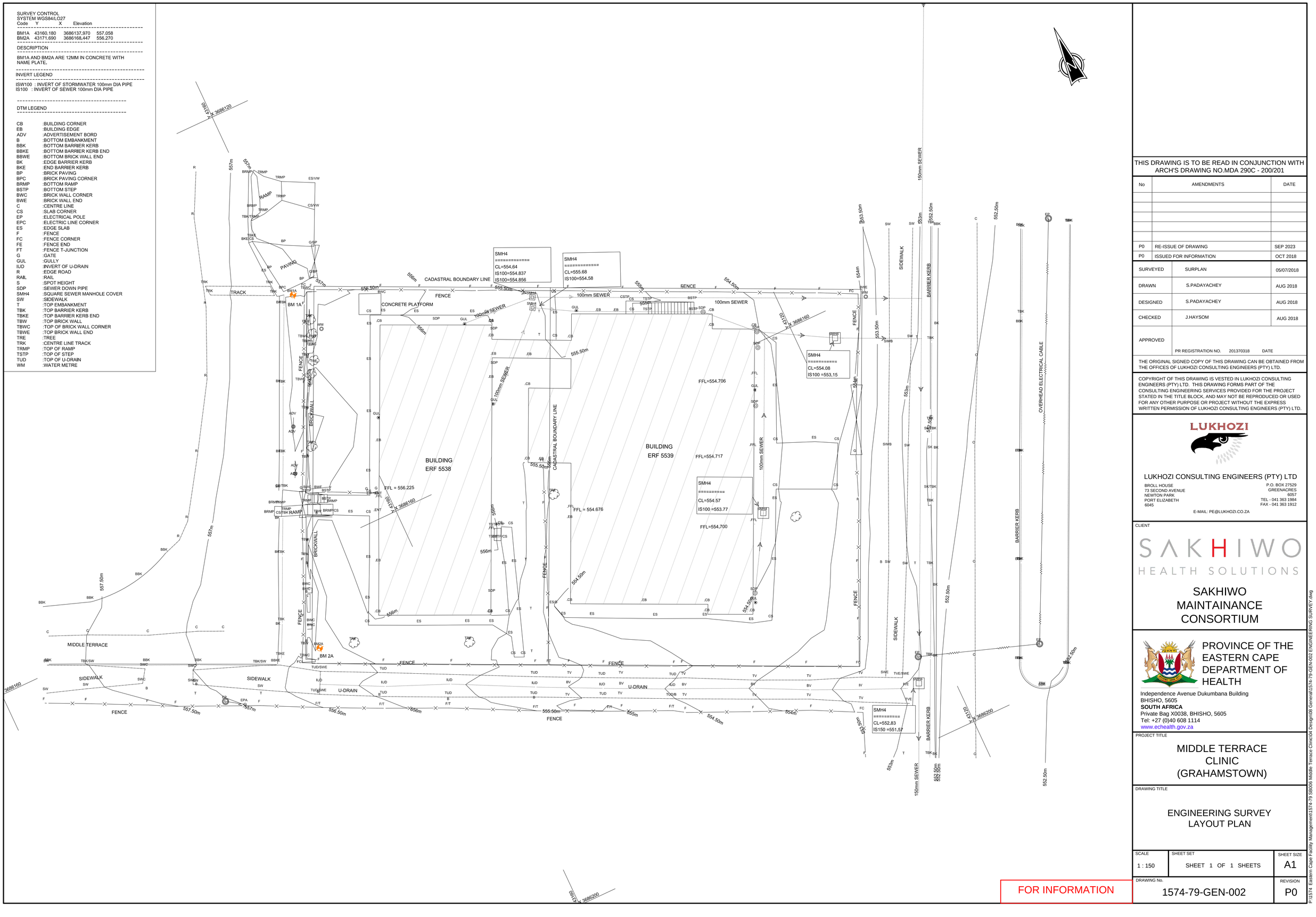
BM1A AND BM2A ARE 12MM IN CONCRETE WITH NAME PLATE.

INVERT LEGEND

ISW100 : INVERT OF STORMWATER 100mm DIA PIPE
IS100 : INVERT OF SEWER 100mm DIA PIPE

DTM LEGEND

CB	:BUILDING CORNER
EB	:BUILDING EDGE
ADV	:ADVERTISEMENT BORD
B	:BOTTOM EMBANKMENT
BBK	:BOTTOM BARRIER KERB
BBKE	:BOTTOM BARRIER KERB END
BBWE	:BOTTOM BRICK WALL END
BK	:EDGE BARRIER KERB
BKE	:END BARRIER KERB
BP	:BRICK PAVING
BPC	:BRICK PAVING CORNER
BRMP	:BOTTOM RAMP
BSTP	:BOTTOM STEP
BWC	:BRICK WALL CORNER
BWE	:BRICK WALL END
C	:CENTRE LINE
CS	:SLAB CORNER
EP	:ELECTRICAL POLE
EPC	:ELECTRIC LINE CORNER
ES	:EDGE SLAB
F	:FENCE
FC	:FENCE CORNER
FE	:FENCE END
FT	:FENCE T-JUNCTION
G	:GATE
GUL	:GULLY
IUD	:INVERT OF U-DRAIN
R	:EDGE ROAD
RAIL	:RAIL
S	:SPOT HEIGHT
SDP	:SEWER DOWN PIPE
SMH4	:SQUARE SEWER MANHOLE COVER
SW	:SIDEWALK
T	:TOP EMBANKMENT
TBK	:TOP BARRIER KERB
TBKE	:TOP BARRIER KERB END
TBW	:TOP BRICK WALL
TBWC	:TOP OF BRICK WALL CORNER
TBWE	:TOP BRICK WALL END
TRE	:TREE
TRK	:CENTRE LINE TRACK
TRMP	:TOP OF RAMP
TSTP	:TOP OF STEP
TUD	:TOP OF U-DRAIN
WM	:WATER METRE



FOR INFORMATION

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO.MDA 290C - 200/201

No	AMENDMENTS	DATE
P0	RE-ISSUE OF DRAWING	SEP 2023
P0	ISSUED FOR INFORMATION	OCT 2018

SURVEYED	SURPLAN	05/07/2018
DRAWN	S.PADAYACHEY	AUG 2018
DESIGNED	S.PADAYACHEY	AUG 2018
CHECKED	J.HAYSOM	AUG 2018
APPROVED	PR REGISTRATION NO. 201370318 DATE	

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PROJECT TITLE

MIDDLE TERRACE CLINIC (GRAHAMSTOWN)

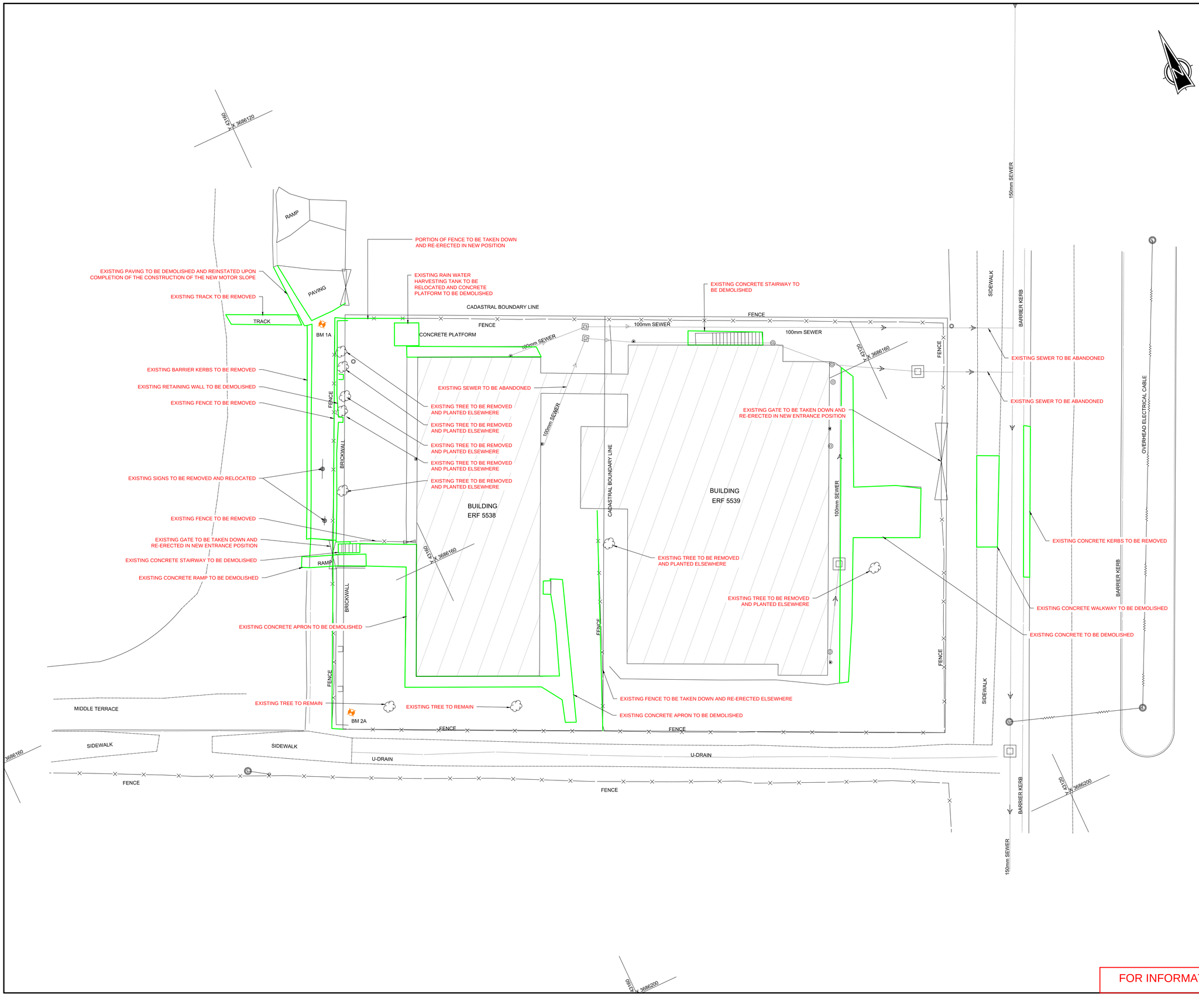
DRAWING TITLE

ENGINEERING SURVEY LAYOUT PLAN

SCALE	SHEET SET	SHEET SIZE
1 : 150	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-79-GEN-002	P0

P:\1574 Eastern Cape Facility Management\1574-79 SB006 Middle Terrace Clinic\04 Design\05 General\1574-79-GEN-002 ENGINEERING SURVEY.dwg



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No	AMENDMENTS	DATE
P0	RE-ISSUE OF DRAWING	SEP 2023
P0	ISSUED FOR INFORMATION	OCT 2018

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APPROVED	PR REGISTRATION NO. 201370318 DATE	

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PROJECT TITLE

MIDDLE TERRACE CLINIC (GRAHAMSTOWN)

DRAWING TITLE

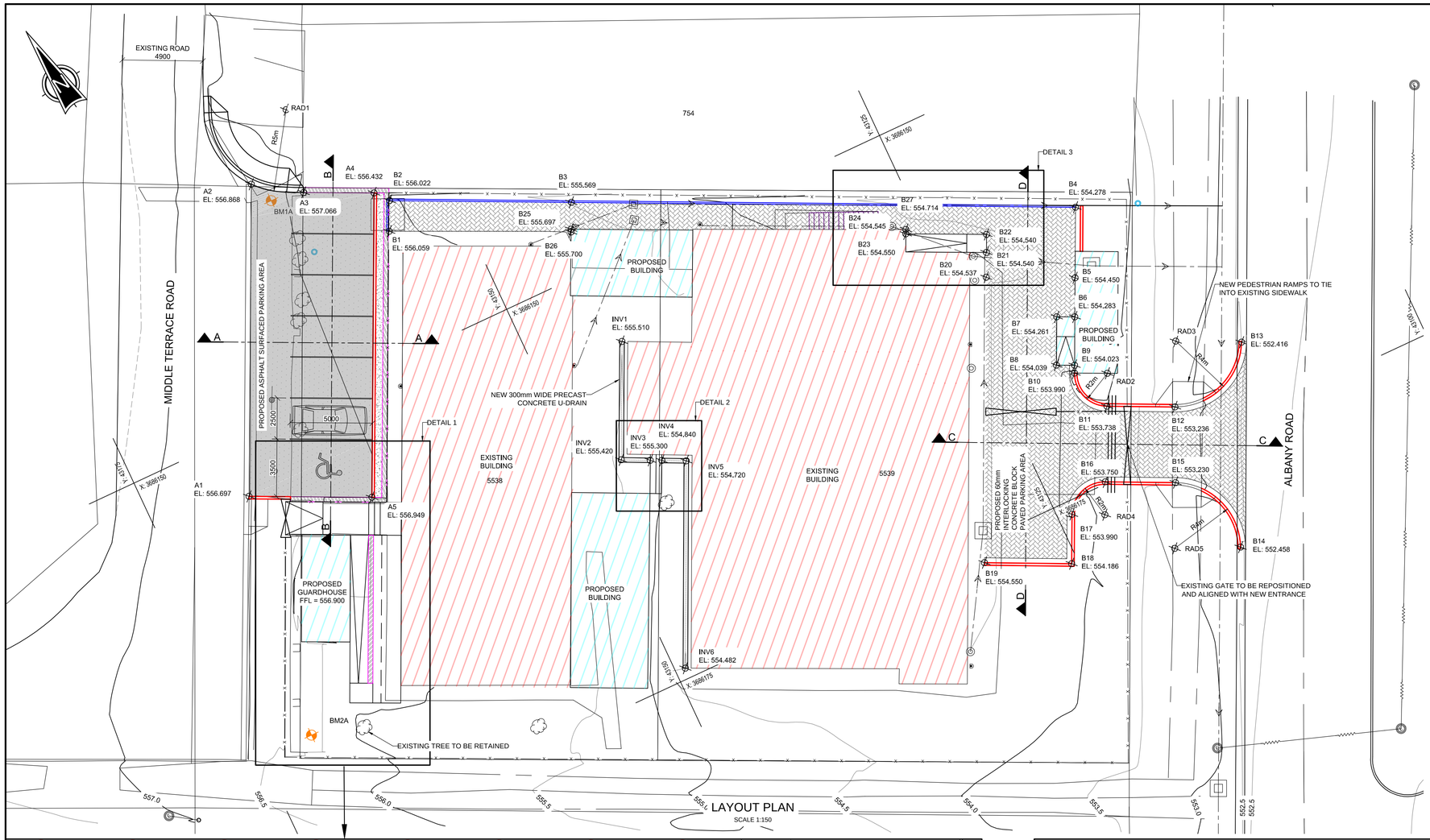
CIVILS DEMOLITION LAYOUT PLAN

SCALE	SHEET SET	SHEET SIZE
1 : 150	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-79-GEN-003	P0

FOR INFORMATION

P:\1574 Eastern Cape Facility Management\1574-79 SB000 Middle Terrace Clinic\04 Design\08 General\1574-79-GEN-002 ENGINEERING SURVEY.dwg



LAYOUT PLAN
SCALE 1:150

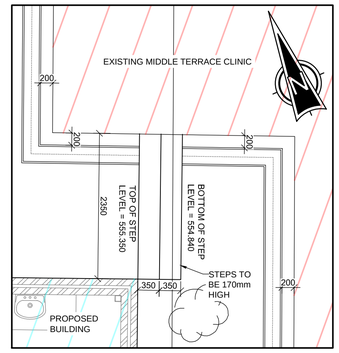
BENCHMARK COORDINATES (LO-27-WGS84)

POINT	Y	X	Z
BM1A	43160,180	3686137,970	557.058
BM2A	43171.690	3686168.447	556.270

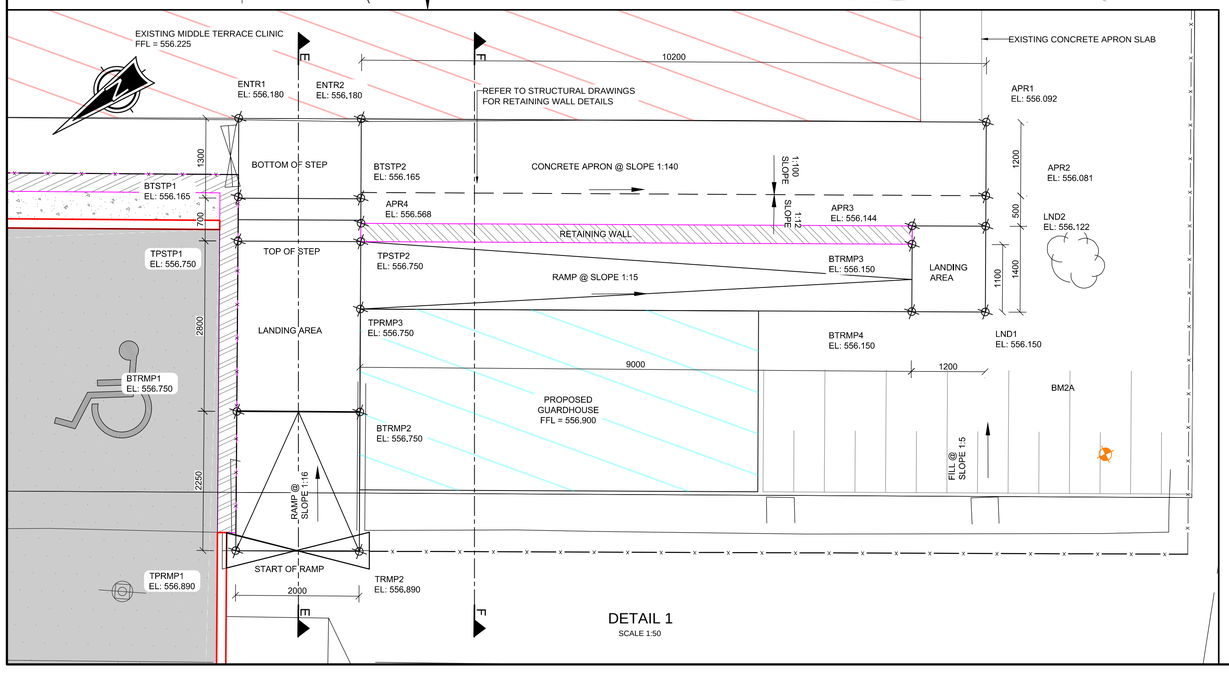
NB: CONTOURS SHOWN ARE FINISHED GROUND LEVELS

GENERAL NOTES

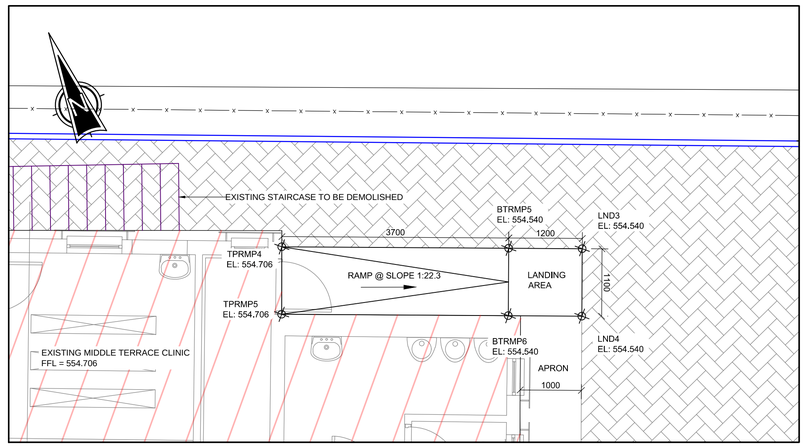
1. ALL CONSTRUCTION WORK TO BE IN ACCORDANCE WITH THE RELEVANT SANS 1200 STANDARDISED SPECIFICATIONS FOR CIVIL ENGINEERING CONSTRUCTION AS AMENDED BY THE SCOPE OF WORKS.
2. MANHOLE COVER LEVELS TO BE FLUSH WITH NGL.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL LEVELS AND DIMENSIONS ON SITE PRIOR TO COMMENCING ANY BUILDING OPERATIONS.
4. THE EXACT POSITIONS AND LEVELS OF ALL EXISTING SERVICES TO BE DETERMINED BY HAND EXCAVATION OR APPROVED LOCATION DEVICE BEFORE COMMENCING WITH CONSTRUCTION.
5. THE ENGINEER IS TO BE CALLED TO INSPECT ALL TRENCHES PRIOR TO ANY BACKFILL.
6. ALL MATERIAL TESTS FOR ALL CONSTRUCTION WORKS TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
7. ANY DISCREPANCIES TO BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY.
8. PLUMBING AND PIPEWORK CONNECTING TO 110mm Ø SEWER TO ARCHITECTS DETAILS



DETAIL 2
SCALE 1:50



DETAIL 1
SCALE 1:50



DETAIL 3
SCALE 1:50

FOR INFORMATION

LEGEND

PROPOSED FEATURES:
- FENCING
- BARRIER KERB
- BARRIER KERB WITH CHANNEL
- SUNKEN KERB
- RETAINING WALL

EXISTING FEATURES:
- SEWER PIPE
- SEWER MANHOLE
- PRECAST SEWER MANHOLE
- STORMWATER PIPE
- STORMWATER MANHOLE / CATCHPIT
- OVERHEAD ELECTRICITY CABLES
- ELECTRICITY POLE
- GULLEY
- BENCHMARK

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO.MDA 290 C_200

No	AMENDMENTS	DATE
P0	RE-ISSUE OF DRAWING	SEP 2023
P0	ISSUED FOR INFORMATION	OCT 2018

SURVEYED	SURPLAN	05/07/2018
DRAWN	S.PADAYACHEY	SEP 2018
DESIGNED	S.PADAYACHEY	SEP 2018
CHECKED	J.HAYSOM	SEP 2018
APPROVED	PR REGISTRATION NO. 201370318 DATE	

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PROJECT TITLE

MIDDLE TERRACE CLINIC (GRAHAMSTOWN)

DRAWING TITLE

PROPOSED PARKING AREA AND GENERAL CIVIL WORKS LAYOUT PLAN

SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 1 OF 1 SHEETS	A1

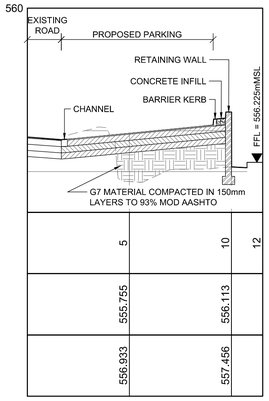
DRAWING No.	REVISION
1574-79-RDS-010	P0

P:\1574 Eastern Cape Facility Management\1574-79 SB006 Middle Terrace Clinic\04 Design\08 General\1574-79-GEN-001 REV1.dwg

OGL
FGL

SCALES:
Horizontal 1:150
Vertical 1:75

DATUM 555.000m MSL



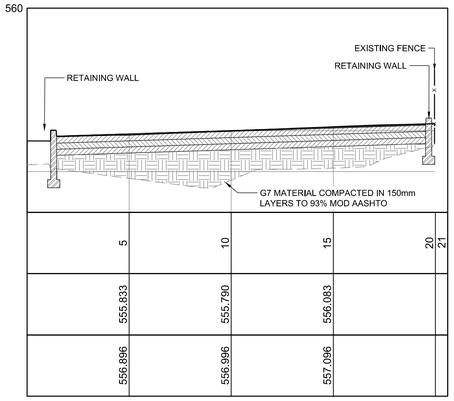
DISTANCE (m)	5	10	12
ORIGINAL GROUND LEVEL (OGL)	555.755	556.113	
FINISHED GROUND LEVEL (FGL)	556.933	557.456	

SECTION A-A
FROM 0.000 TO 11.526

OGL
FGL

SCALES:
Horizontal 1:150
Vertical 1:75

DATUM 555.000m MSL



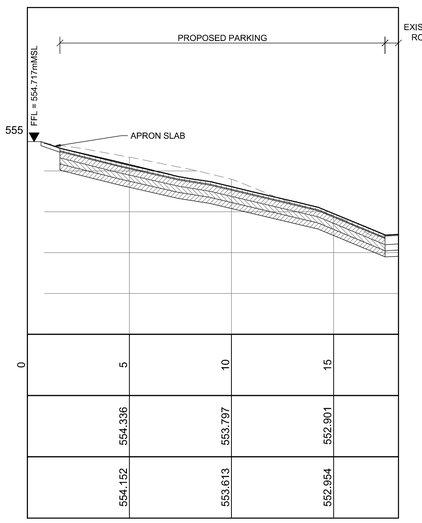
DISTANCE (m)	5	10	15	20	21
ORIGINAL GROUND LEVEL (OGL)	555.833	555.790	556.083		
FINISHED GROUND LEVEL (FGL)	556.896	556.996	557.096		

SECTION B-B
FROM 0.000 TO 20.600

OGL
FGL

SCALES:
Horizontal 1:150
Vertical 1:75

DATUM 550.000m MSL



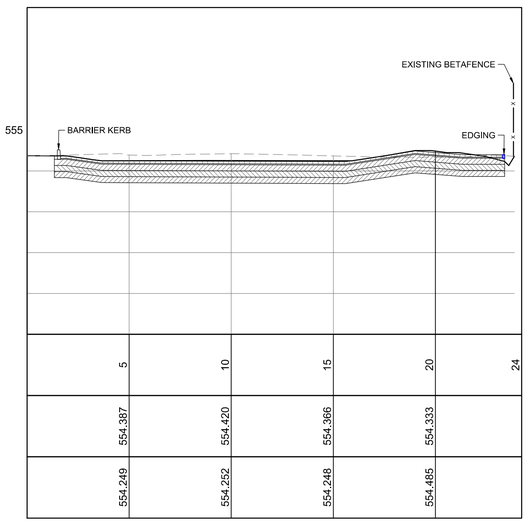
DISTANCE (m)	5	10	15
ORIGINAL GROUND LEVEL (OGL)	554.336	553.797	552.901
FINISHED GROUND LEVEL (FGL)	554.152	553.613	552.954

SECTION C-C
FROM 0.000 TO 18.173

OGL
FGL

SCALES:
Horizontal 1:150
Vertical 1:75

DATUM 550.000m MSL



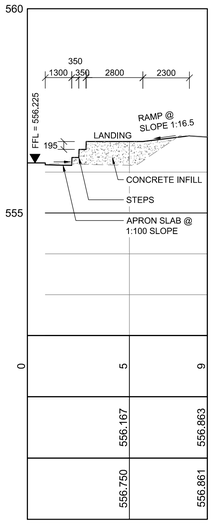
DISTANCE (m)	5	10	15	20	24
ORIGINAL GROUND LEVEL (OGL)	554.387	554.420	554.366	554.333	
FINISHED GROUND LEVEL (FGL)	554.249	554.252	554.248	554.485	

SECTION D-D
FROM 0.000 TO 24.218

OGL
FGL

SCALES:
Horizontal 1:150
Vertical 1:75

DATUM 552.000m MSL



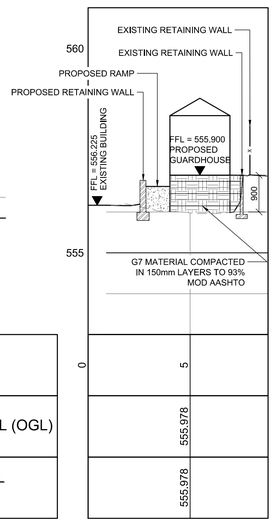
DISTANCE (m)	5	9
ORIGINAL GROUND LEVEL (OGL)	556.167	556.863
FINISHED GROUND LEVEL (FGL)	556.750	556.861

SECTION E-E
FROM 0.000 TO 8.817

OGL
FGL

SCALES:
Horizontal 1:150
Vertical 1:75

DATUM 553.000m MSL



DISTANCE (m)	5
ORIGINAL GROUND LEVEL (OGL)	555.978
FINISHED GROUND LEVEL (FGL)	555.978

SECTION F-F
FROM 0.000 TO 8.817

GENERAL NOTES

1. REFER TO DRAWING 1574-79-GEN-001 FOR THE GENERAL LAYOUT PLAN.
2. ALL CONSTRUCTION WORK TO BE IN ACCORDANCE WITH THE RELEVANT SANS 1200 STANDARDISED SPECIFICATIONS FOR CIVIL ENGINEERING CONSTRUCTION AS AMENDED BY THE SCOPE OF WORKS.
3. MANHOLE COVER LEVELS TO BE FLUSH WITH NGL.
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL LEVELS AND DIMENSIONS ON SITE PRIOR TO COMMENCING ANY BUILDING OPERATIONS.
5. THE EXACT POSITIONS AND LEVELS OF ALL EXISTING SERVICES TO BE DETERMINED BY HAND EXCAVATION OR APPROVED LOCATION DEVICE BEFORE COMMENCING WITH CONSTRUCTION.
6. THE ENGINEER IS TO BE CALLED TO INSPECT ALL TRENCHES PRIOR TO ANY BACKFILL.
7. ALL MATERIAL TESTS FOR ALL CONSTRUCTION WORKS TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
8. ANY DISCREPANCIES TO BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY.
9. THE CONTRACTOR IS TO VERIFY THE POSITION OF THE SEPTIC TANK ON SITE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
10. CUT/FILL SLOPES ARE 1 IN 2 UNLESS OTHERWISE STATED.

NB: ALL POINTS ARE GIVEN TO FACE OF KERB

PARKING AREA SETTING OUT INFORMATION

DESCRIPTION	Y	X	Z
A1	43169.000	3686153.691	556.697
A2	43160.856	3686136.550	556.868
A3	43158,182	3686138,349	557,066
A4	43154.316	3686140.186	556,432
A5	43162.257	3686156,895	556.949
B1	43154.466	3686142.683	556.059
B2	43153.657	3686141.000	556.022
B3	43143.688	3686145,767	555.569
B4	43116.042	3686158,989	554,278
B5	43117.879	3686162.867	554.450
B6	43118.898	3686165.017	554.283
B7	43119,892	3686164,546	554.261
B8	43121,150	3686167,203	554,039
B9	43120.156	3686167,673	554.023
B10	43120.359	3686168.102	553.990
B11	43119.417	3686170,760	553,738
B12	43115.692	3686172,549	553.236
B13	43110.363	3686170.692	552.416
B14	43115.683	3686181.958	552.458
B15	43117.609	3686176.731	553.230
B16	43121,459	3686174,886	553,750
B17	43124,126	3686175,819	553,990
B18	43125.412	3686178.530	554,186
B19	43130,190	3686176.236	554.550
B20	43122,759	3686160,555	554,537
B21	43122,113	3686159,191	554,540
B22	43121,642	3686158,197	554,540
B23	43126.073	3686156,097	554,550
B24	43125.961	3686155.858	554,545
B25	43144.393	3686147.240	555.697
B26	43144.467	3686147,395	555,700
B27	43125.333	3686154.546	554.714

BELLMOUTH RADII SETTING OUT INFORMATION

POINT	Y	X
RAD1	43 157.021	3 686 133.340
RAD2	43 118,551	3 686 168,957
RAD3	43 113.960	3 686 168,943
RAD4	43 122.323	3 686 176.686
RAD5	43 119.340	3 686 180.337

U-DRAIN INVERT SETTING OUT INFORMATION

DESCRIPTION	Y	X	Z
INV1	43144.474	3686154.735	555.510
INV2	43147.558	3686161.238	555.420
INV3	43145.967	3686162,009	555,300
INV4	43145.337	3686162.314	554,840
INV5	43144.001	3686162.962	554.720
INV6	43149.376	3686174.362	554.482

BENCHMARK COORDINATES (LO-27-WGS84)

POINT	Y	X	Z
BM1A	43160.180	3686137.970	557.058
BM2A	43171.690	3686168.447	556,270

FOR INFORMATION

KEY

ORIGINAL GROUND LEVEL (OGL)

FINISHED GROUND LEVEL (FGL)

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO.MDA 290 C_200

No	AMENDMENTS	DATE
P0	RE-ISSUE OF DRAWING	SEP 2023
P0	ISSUED FOR INFORMATION	OCT 2018

SURVEYED	SURPLAN	05/07/2018
DRAWN	S.PADAYACHEY	SEP 2018
DESIGNED	S.PADAYACHEY	SEP 2018
CHECKED	J.HAYSOM	SEP 2018
APPROVED	PR REGISTRATION NO. 201370318 DATE	

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PROJECT TITLE

MIDDLE TERRACE CLINIC (GRAHAMSTOWN)

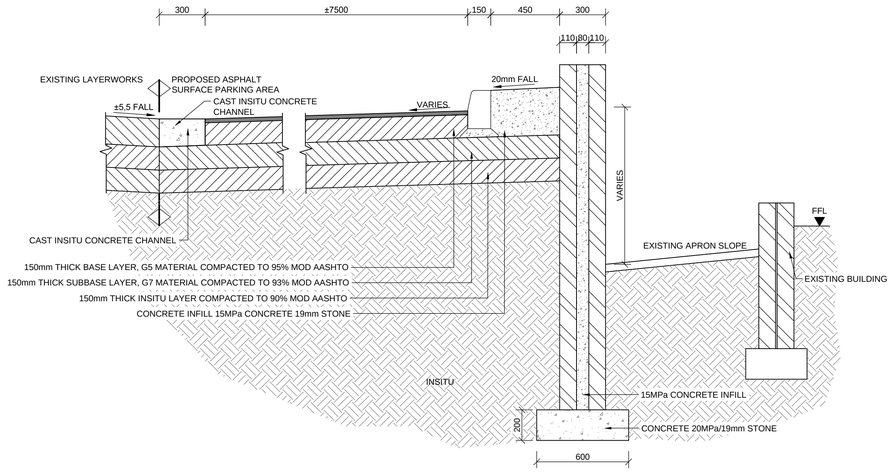
DRAWING TITLE

PROPOSED PARKING AREA SECTIONS AND SETTING OUT INFORMATION

SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 1 OF 1 SHEETS	A1

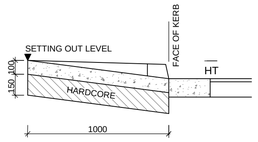
DRAWING No.	REVISION
1574-79-RDS-011	P0

P:\1574 Eastern Cape Facility Management\1574-79 SB006 Middle Terrace Clinic\04 Design\05 General\1574-79-GEN-001 REV1.dwg



RETAINING WALL (DETAIL 1)

SCALE 1:20

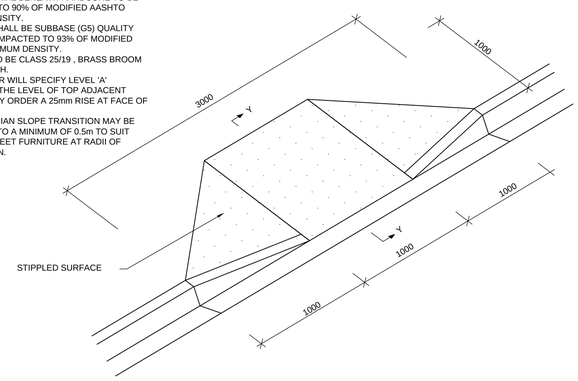


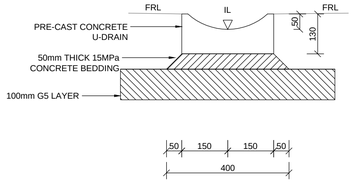
SECTION Y-Y

NTS

NOTES:

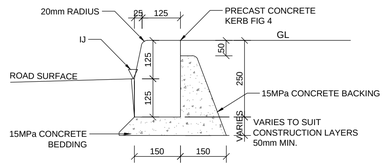
1. IN-SITU MATERIAL BENEATH HARDCORE TO BE COMPACTED TO 90% OF MODIFIED AASHTO MAXIMUM DENSITY.
2. HARDCORE SHALL BE SUBBASE (G5) QUALITY MATERIAL COMPACTED TO 93% OF MODIFIED AASHTO MAXIMUM DENSITY.
3. CONCRETE TO BE CLASS 25/19 , BRASS BROOM STIPPLE FINISH.
4. THE ENGINEER WILL SPECIFY LEVEL 'A' RELATIVE TO THE LEVEL OF TOP ADJACENT KERB AND MAY ORDER A 25mm RISE AT FACE OF KERB LINE.
5. THE PEDESTRIAN SLOPE TRANSITION MAY BE SHORTENED TO A MINIMUM OF 0.5m TO SUIT EXISTING STREET FURNITURE AT RADII OF INTERSECTION.





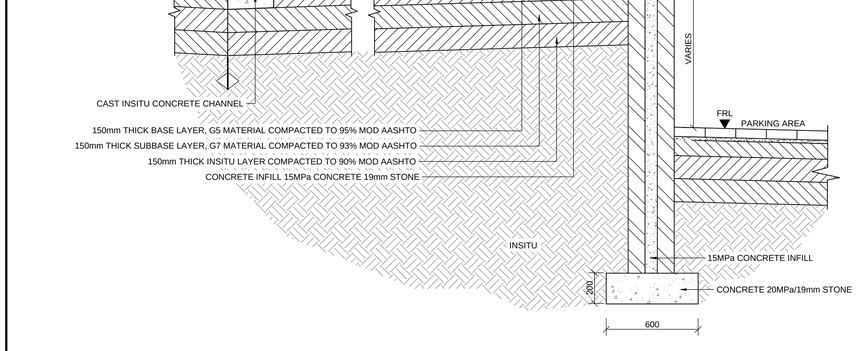
300mm WIDE PRE-CAST CONCRETE U-DRAIN

SCALE 1:10



BARRIER KERB

SCALE 1:10



RETAINING WALL (DETAIL 2)

SCALE 1:20

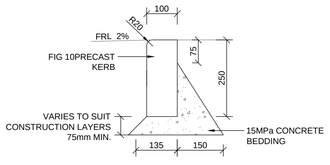
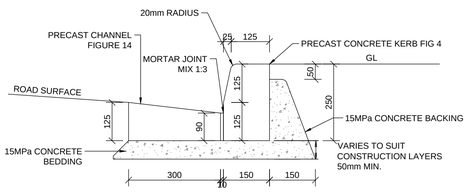


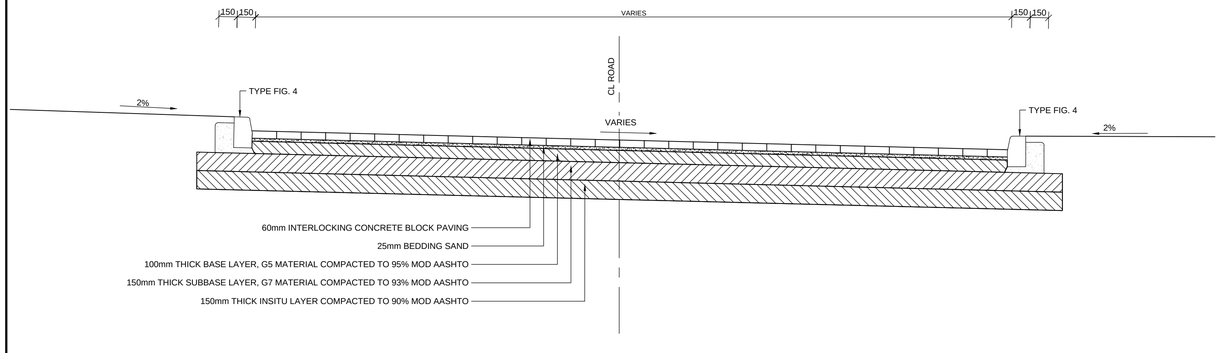
FIGURE 10 EDGING

SCALE 1:10



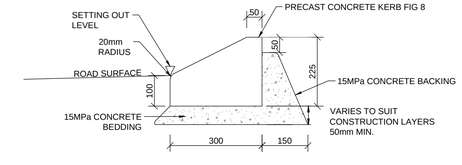
BARRIER KERB AND CHANNEL

SCALE 1:10



PARKING AREA (CONCRETE BLOCK PAVING)
TYPICAL LAYERWORKS DETAIL

SCALE 1:25



PRECAST ROLLOVER KERB (FIG.8)
(HIGH SIDE OF THE ROAD)

SCALE 1:10

FOR INFORMATION

No	AMENDMENTS	DATE
P0	RE-ISSUE OF DRAWING	SEP 2023
P0	ISSUED FOR INFORMATION	OCT 2018

SURVEYED	NA	
DRAWN	C.PILLAY	SEP 2018
DESIGNED	C.PILLAY	SEP 2018
CHECKED	J.HAYSOM	SEP 2018
APPROVED	PR REGISTRATION NO. 201370318 DATE	

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www.echealth.gov.za

PROJECT TITLE

MIDDLE TERRACE CLINIC (GRAHAMSTOWN)

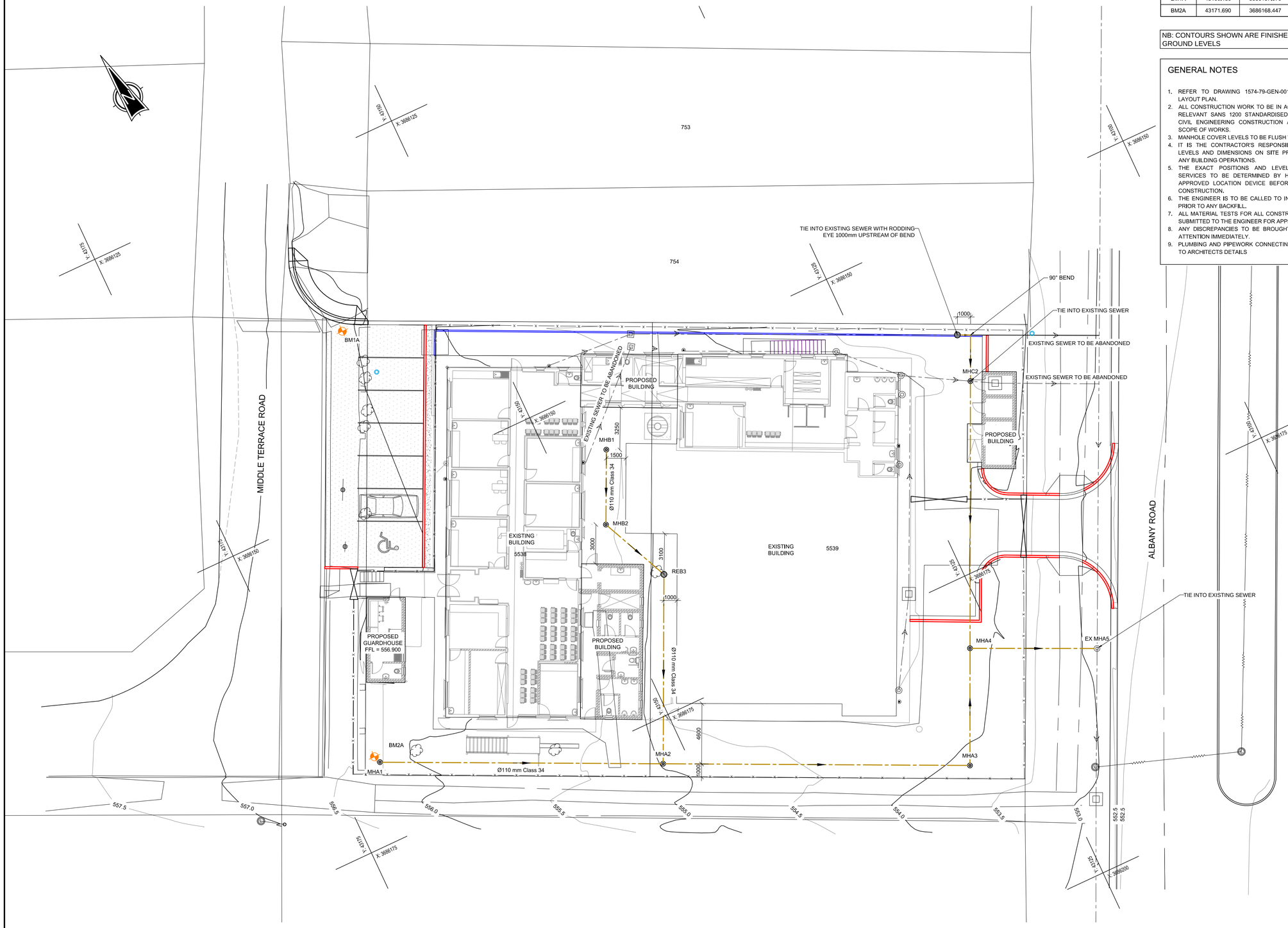
DRAWING TITLE

TYPICAL PARKING AREA DETAILS

SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-79-RDS-012	P0

P:\1574 Eastern Cape Facility Management\1574-79 SB006 Middle Terrace Clinic\04 Design\03 Road\PARKING AREA DETAILS.dwg



BENCHMARK COORDINATES (LO-27-WGS84)

POINT	Y	X	Z
BM1A	43160.180	3686137.970	557.058
BM2A	43171.690	3686168.447	556.270

NB: CONTOURS SHOWN ARE FINISHED GROUND LEVELS

GENERAL NOTES

1. REFER TO DRAWING 1574-79-GEN-001 FOR THE GENERAL LAYOUT PLAN.
2. ALL CONSTRUCTION WORK TO BE IN ACCORDANCE WITH THE RELEVANT SANS 1200 STANDARDISED SPECIFICATIONS FOR CIVIL ENGINEERING CONSTRUCTION AS AMENDED BY THE SCOPE OF WORKS.
3. MANHOLE COVER LEVELS TO BE FLUSH WITH NGL.
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL LEVELS AND DIMENSIONS ON SITE PRIOR TO COMMENCING ANY BUILDING OPERATIONS.
5. THE EXACT POSITIONS AND LEVELS OF ALL EXISTING SERVICES TO BE DETERMINED BY HAND EXCAVATION OR APPROVED LOCATION DEVICE BEFORE COMMENCING WITH CONSTRUCTION.
6. THE ENGINEER IS TO BE CALLED TO INSPECT ALL TRENCHES PRIOR TO ANY BACKFILL.
7. ALL MATERIAL TESTS FOR ALL CONSTRUCTION WORKS TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
8. ANY DISCREPANCIES TO BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY.
9. PLUMBING AND PIPEWORK CONNECTING TO 110mm Ø SEWER TO ARCHITECTS DETAILS

LEGEND

PROPOSED FEATURES:
- SEWER PIPE
- SEWER MANHOLE
- SEWER RODDING EYE
- FENCING
- GULLEY
- BARRIER KERB (BK)
- BARRIER KERB WITH CHANNEL (BKC)
- EDGING (ED)
- RETAINING WALL (RW)

EXISTING FEATURES:
- SEWER PIPE
- SEWER MANHOLE
- PRECAST SEWER MANHOLE
- FENCE
- STORMWATER PIPE
- STORMWATER MANHOLE / CATCHPIT
- OVERHEAD ELECTRICITY CABLES
- ELECTRICITY POLE
- GULLEY
- BENCHMARK

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO.MDA 290 C_200

No	AMENDMENTS	DATE
0	RE-ISSUE OF DRAWING	SEP 2023
0	ISSUED FOR CONSTRUCTION	SEP 2018

SURVEYED	SURPLAN	05/07/2018
DRAWN	S.PADAYACHEY	SEP 2018
DESIGNED	S.PADAYACHEY	SEP 2018
CHECKED	J.HAYSOM	SEP 2018
APPROVED	PR REGISTRATION NO. 201370318 DATE	

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PROJECT TITLE

MIDDLE TERRACE CLINIC (GRAHAMSTOWN)

DRAWING TITLE

PROPOSED SEWER LAYOUT PLAN

SCALE	SHEET SET	SHEET SIZE
1 : 150	SHEET 1 OF 1 SHEETS	A1

DRAWING No. 1574-79-SEW-020

REVISION 0

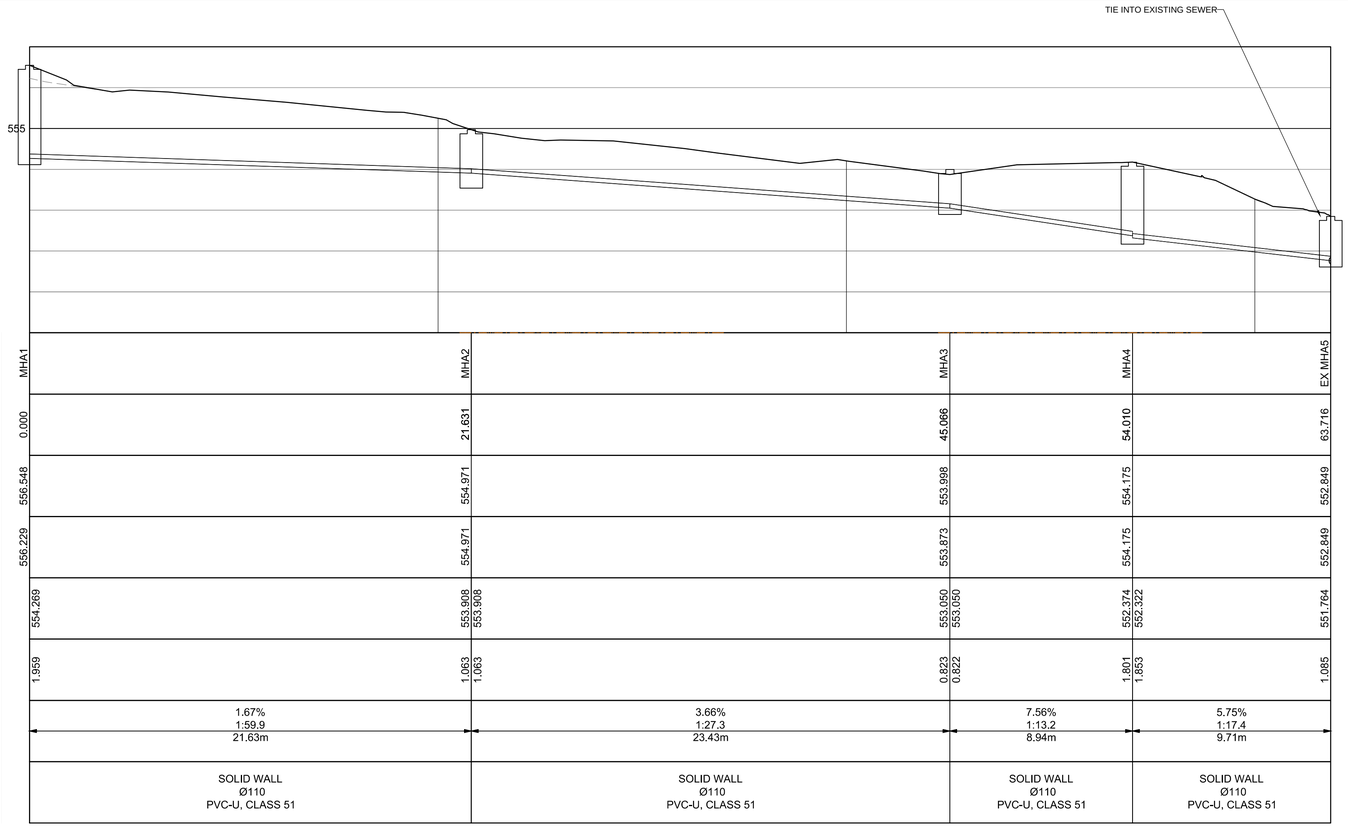
FOR CONSTRUCTION

P:\1574 Eastern Cape Facility Management\1574-79 SB006 Middle Terrace Clinic\04 Design\08 General\1574-79-GEN-001 REV1.dwg

NGL
FGL

SCALES:
Horizontal 1:150
Vertical 1:75

DATUM 550.000



REFERENCE	MHA1		MHA2		MHA3		MHA4		EX.MHA5
DISTANCE (m)	0.000		21.631		45.066		54.010		63.716
COVER LEVEL	556.548		554.971		553.998		554.175		552.849
NATURAL GROUND LEVEL	556.229		554.971		553.873		554.175		552.849
PIPE INVERT LEVEL	554.269		553.908	553.908	553.050	553.050	552.374	552.322	551.764
DEPTH TO INVERT	1.959		1.063	1.063	0.823	0.822	1.801	1.853	1.085
SLOPE / LENGTH	1.67% 1:59.9 21.63m		3.66% 1:27.3 23.43m		7.56% 1:13.2 8.94m		5.75% 1:17.4 9.71m		
PIPE DETAILS	SOLID WALL Ø110 PVC-U, CLASS 51		SOLID WALL Ø110 PVC-U, CLASS 51		SOLID WALL Ø110 PVC-U, CLASS 51		SOLID WALL Ø110 PVC-U, CLASS 51		

LONGSECTION LINE A

SEWER PARTICULARS (STRUCTURES)

STRUCTURE NAME	Y	X	COVER LEVEL (mMSL)	INVERT LEVEL (mMSL) DEPTH (m)	INVERT ELEVATION
90° BEND	43116.819	3686158.507	554.311	552.770 1.541	P54-INV IN 552.773 P46 (1) (1)-INV OUT 552.773
EX MHA5	43118.170	3686184.287	552.849	551.761 1.088	P47-INV IN 551.764
MHA1	43171.484	3686169.004	556.548	554.266 2.282	P42-INV OUT 554.269
MHA2	43151.930	3686178.254	554.971	553.690 1.281	P42-INV IN 553.908 P43-INV IN 553.693 P45-INV OUT 553.908
MHA3	43130.746	3686188.275	553.998	553.047 0.951	P45-INV IN 553.050 P46-INV OUT 553.050
MHA4	43126.961	3686180.172	554.175	552.319 1.856	P46-INV IN 552.374 P46 (1)-INV IN 552.374 P47-INV OUT 552.322
MHB1	43145.724	3686154.686	555.685	554.581 1.104	P44-INV OUT 554.584
MHB2	43148.176	3686159.857	555.587	554.255 1.332	P44-INV IN 554.258 P43 (1)-INV OUT 554.258
MHC2	43118.312	3686161.696	554.425	552.711 1.714	P46 (1) (1)-INV IN 552.714 P46 (1)-INV OUT 552.714
REB3	43145.764	3686165.177	554.734	553.931 0.803	P43 (1)-INV IN 553.934 P43-INV OUT 553.934
REC1	43117.724	3686158.082	554.450	552.849 1.601	P54-INV OUT 552.853

NGL
FGL

SCALES:
Horizontal 1:150
Vertical 1:75

DATUM 552.000

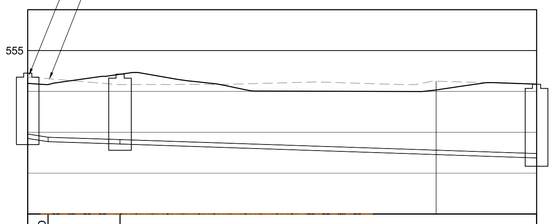
REFERENCE	MHB1		MHB2		REB3		MHA2
DISTANCE (m)	0.000		5.723		11.564		26.022
COVER LEVEL	555.685		555.587		554.734		554.971
NATURAL GROUND LEVEL	555.685		555.587		554.734		554.971
PIPE INVERT LEVEL	554.584		554.258	554.258	553.934	553.934	553.693
DEPTH TO INVERT	1.101		1.329	1.329	0.800	0.800	1.278
SLOPE / LENGTH	5.69% 1:17.6 5.72m		5.55% 1:18.0 5.84m		1.67% 1:59.9 14.46m		
PIPE DETAILS	SOLID WALL Ø110 PVC-U, CLASS 51		SOLID WALL Ø110 PVC-U, CLASS 51		SOLID WALL Ø110 PVC-U, CLASS 51		

LONGSECTION LINE B

NGL
FGL

SCALES:
Horizontal 1:150
Vertical 1:75

DATUM 551.000



REFERENCE	REC1	90° BEND	MHC2		MHA4
DISTANCE (m)	0.000	1.000	4.521		24.921
COVER LEVEL	554.450	554.311	554.425		554.175
NATURAL GROUND LEVEL	554.350	554.311	554.168		554.175
PIPE INVERT LEVEL	552.853 552.773	552.773	552.714	552.714	552.374
DEPTH TO INVERT	1.498 1.538	1.538	1.453	1.453	1.802
SLOPE / LENGTH	7.95% 1:12.6 1.00m	1.67% 1:59.9 3.52m		1.67% 1:59.9 20.40m	
PIPE DETAILS		SOLID WALL Ø110 PVC-U, CLASS 51		SOLID WALL Ø110 PVC-U, CLASS 51	

LONGSECTION LINE C

BENCHMARK COORDINATES (LO-27-WGS84)

POINT	Y	X	Z
BM1A	43160.180	3686137.970	557.058
BM2A	43171.690	3686168.447	556.270

GENERAL NOTES

1. REFER TO DRAWING 1574-79-GEN-001 FOR THE GENERAL LAYOUT PLAN.
2. ALL CONSTRUCTION WORK TO BE IN ACCORDANCE WITH THE RELEVANT SANS 1200 STANDARDISED SPECIFICATIONS FOR CIVIL ENGINEERING CONSTRUCTION AS AMENDED BY THE SCOPE OF WORKS.
3. MANHOLE COVER LEVELS TO BE FLUSH WITH NGL.
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL LEVELS AND DIMENSIONS ON SITE PRIOR TO COMMENCING ANY BUILDING OPERATIONS.
5. THE EXACT POSITIONS AND LEVELS OF ALL EXISTING SERVICES TO BE DETERMINED BY HAND EXCAVATION OR APPROVED LOCATION DEVICE BEFORE COMMENCING WITH CONSTRUCTION.
6. THE ENGINEER IS TO BE CALLED TO INSPECT ALL TRENCHES PRIOR TO ANY BACKFILL.
7. ALL MATERIAL TESTS FOR ALL CONSTRUCTION WORKS TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
8. ANY DISCREPANCIES TO BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY.
9. PLUMBING AND PIPEWORK CONNECTING TO 110mm Ø SEWER TO ARCHITECTS DETAILS

FOR INFORMATION

KEY

NATURAL GROUND LEVEL (NGL)

FINISHED GROUND LEVEL (FGL)

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO.MDA 290 C_200

No	AMENDMENTS	DATE
P0	RE-ISSUE OF DRAWING	SEP 2023
P0	ISSUED FOR INFORMATION	OCT 2018

SURVEYED	SURPLAN	05/07/2018
DRAWN	S.PADAYACHEY	SEP 2018
DESIGNED	S.PADAYACHEY	SEP 2018
CHECKED	J.HAYSOM	SEP 2018
APPROVED	PR REGISTRATION NO. 201370318 DATE	

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PROJECT TITLE

MIDDLE TERRACE CLINIC (GRAHAMSTOWN)

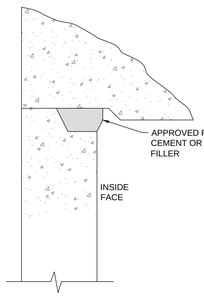
DRAWING TITLE

PROPOSED SEWER LONGITUDINAL SECTIONS AND SETTING OUT INFORMATION

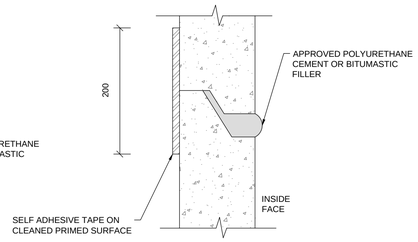
SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-79-SEW-021	P0

P:\1574 Eastern Cape Facility Management\1574-79 SB006 Middle Terrace Clinic\04 Design\08 General\1574-79-GEN-001 REV1.dwg



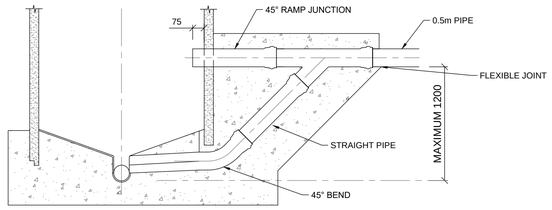
DETAIL A



DETAIL B

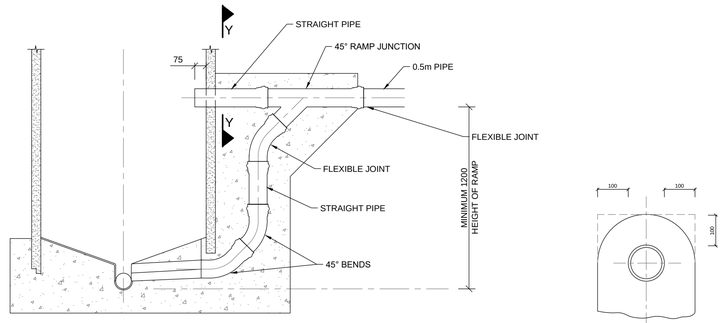
DETAILS 'A' & 'B' INTERLOCKING JOINTS

SCALE 1:20



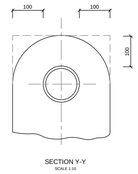
DETAIL OF RAMP MANHOLE

SCALE 1:20



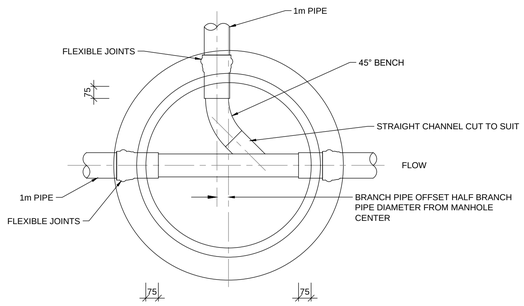
DETAIL OF BACKDROP MANHOLE

SCALE 1:20



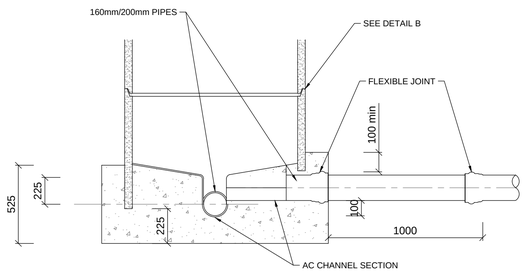
SECTION Y-Y

SCALE 1:10



PLAN OF 90° BRANCH MANHOLES

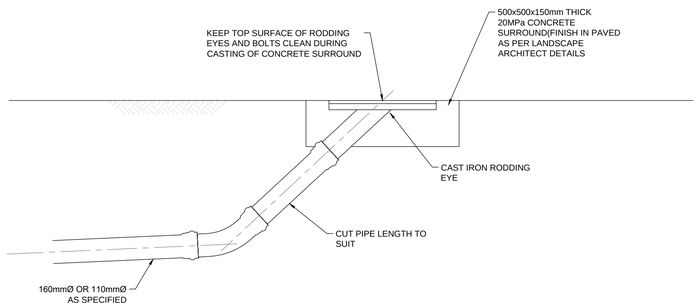
SCALE 1:20



MAIN & BRANCH PIPES EQUAL SIZES

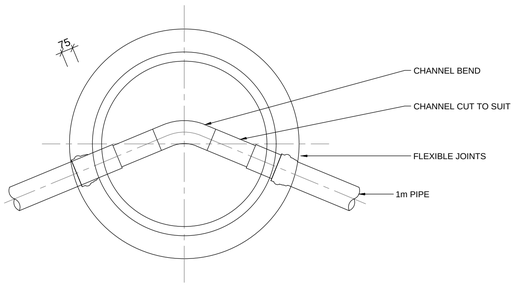
SCALE 1:20

LEVEL OF RODDING EYE
= 25mm ABOVE SURROUNDING SURFACE IN OPEN AREAS. =
SAME LEVEL AS SURROUNDING SURFACE IN
SURFACED/PAVED AREAS/ PUBLIC AREAS.



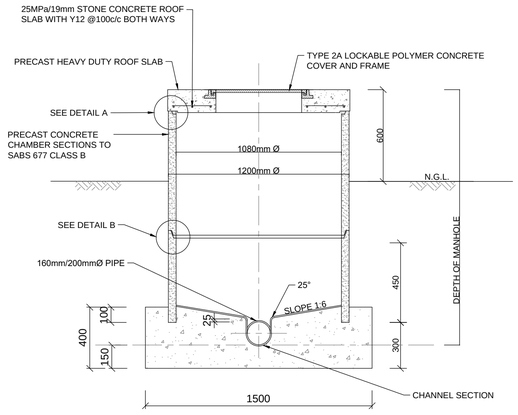
DETAIL OF RODDING EYE

SCALE 1:20



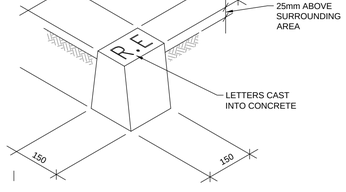
PLAN OF MANHOLE AT BENDS

SCALE 1:20



TYPICAL SECTION THROUGH MANHOLE

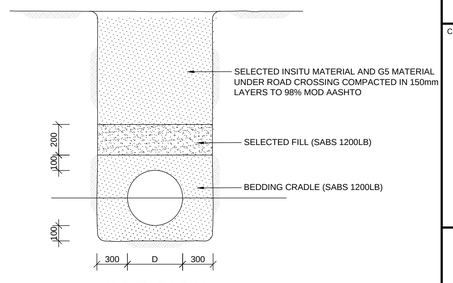
SCALE 1:20



ALL RODDING EYES IN UNPAVED AREAS TO
BE MARKED BY CONCRETE MARKER BLOCK
OR AS SPECIFIED.

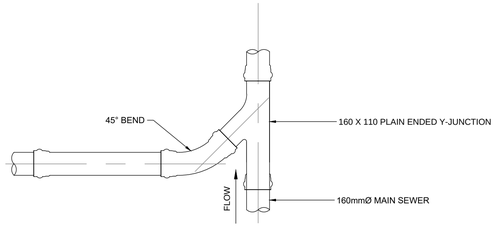
DETAIL OF RODDING EYE MARKER

SCALE 1:20



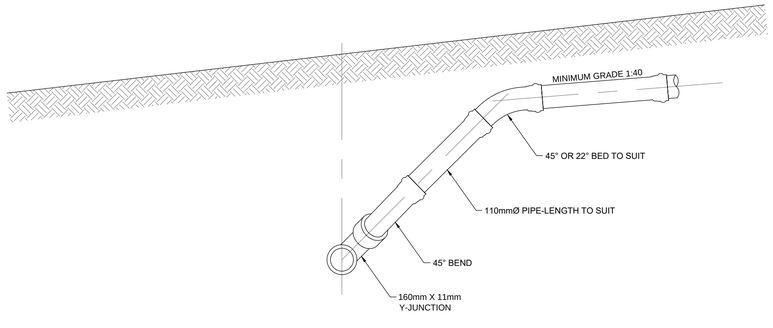
FLEXIBLE PIPES

SCALE 1:20



PLAN OF CONNECTION

SCALE 1:20



TOILET CONNECTION END VIEW

SCALE 1:20

FOR INFORMATION

No	AMENDMENTS	DATE
P0	RE-ISSUE OF DRAWING	SEP 2023
P0	ISSUED FOR INFORMATION	OCT 2018

SURVEYED	NA	
DRAWN	C.PILLAY	SEP 2018
DESIGNED	C.PILLAY	SEP 2018
CHECKED	J.HAYSOM	SEP 2018
APPROVED	PR REGISTRATION NO. 201370318 DATE	

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Tel: +27 (0)40 608 1114
www.echealth.gov.za

PROJECT TITLE

MIDDLE TERRACE CLINIC (GRAHAMSTOWN)

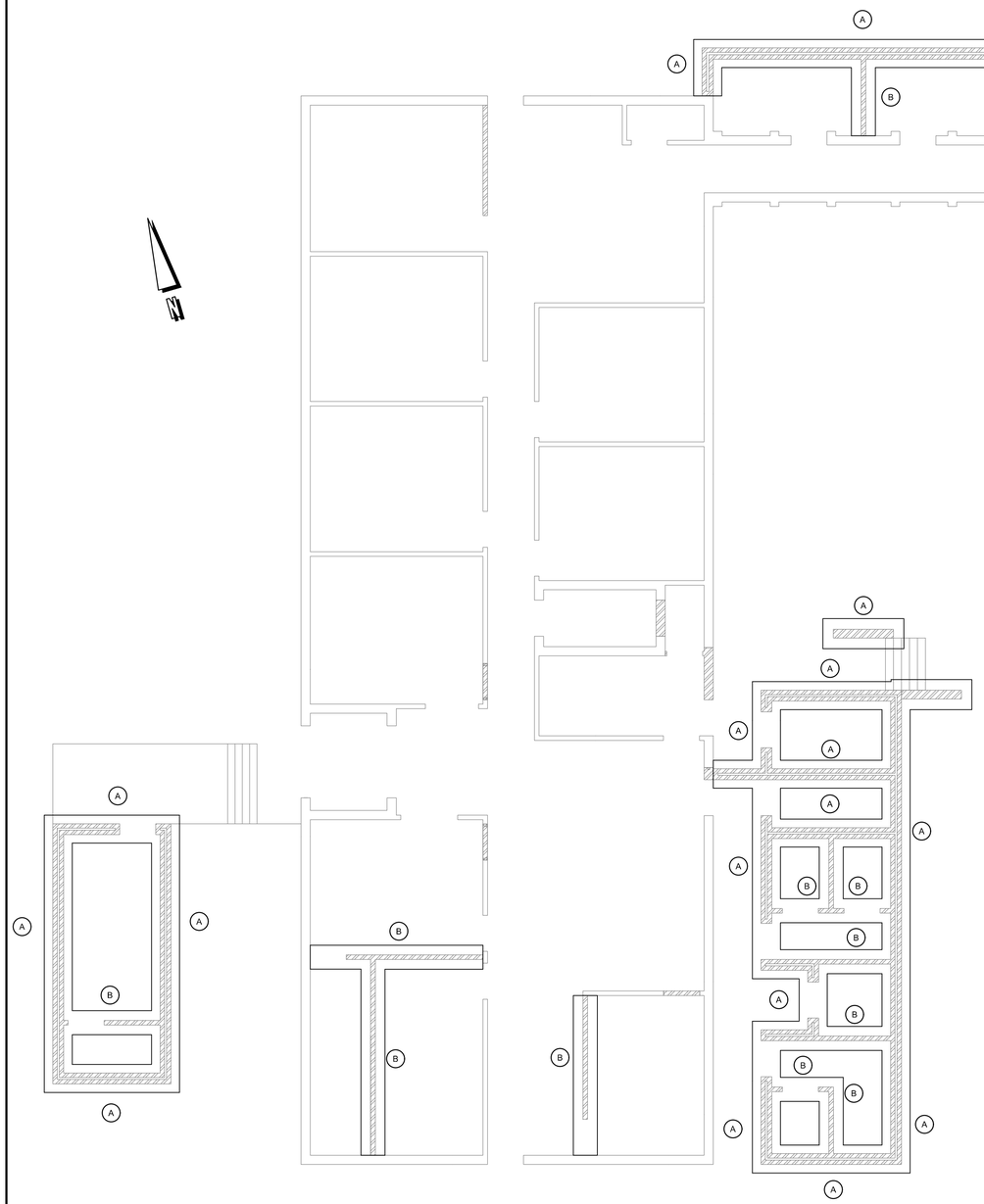
DRAWING TITLE

TYPICAL SEWER DETAILS

SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-79-SEW-022	P0

P:\1574 Eastern Cape Facility Management\1574-79 SB006 Middle Terrace Clinic\04 Design\05 Sewer\TYPICAL SEWER DETAILS.dwg



NOTE:
A 230 - 270mm EXTERNAL WALLS
B 110mm INTERNAL WALLS

SEE DWG NO. 1574-79-S-002 FOR DETAILS

FOUNDATION LAYOUT
SCALE 1:75

GENERAL NOTES : CONCRETE

CONCRETE STRENGTH
(A) FOUNDATIONS..... 20 Mpa cube strength at 28 days
(B) BEAMS AND SLABS..... 25 Mpa cube strength at 28 days
(C) SURFACE BEDS..... 25 Mpa cube strength at 28 days

CONCRETE COVER TO REINFORCING
(A) SLAB..... 25 mm
(B) BEAMS..... 30 mm
(C) BASES..... 50 mm

NOTE:
1. BEAM DEPTH INCLUDES SLAB THICKNESS
2. CONTRACTOR IS TO MAINTAIN STEEL IN CORRECT POSITION AFTER PLACING AND DURING CONCRETING.
3. STONE, SAND AND CEMENT TO BE TO THE SATISFACTION OF THE CONSULTING ENGINEER.
4. NO CONCRETE TO BE POURED UNTIL THE STEEL HAS BEEN INSPECTED BY THE CONSULTING ENGINEER.
5. ANY BREAKS IN THE CONCRETE ARE TO BE MADE IN ACCORDANCE WITH THE ENGINEERS INSTRUCTIONS.
6. NO STRUCTURAL ALTERATIONS TO BE MADE WITHOUT THE APPROVAL OF THE CONSULTING ENGINEER.
7. THE STRUCTURE HAS BEEN DESIGNED FOR THE FOLLOWING CONDITIONS:
   (A) SAFE GROUND PRESSURE..... 150 kN/sq m
   (B) LIVE LOAD ON SLAB..... 1.5 kN/sq m
8. ALL DRAWINGS TO BE READ IN CONJUNCTION WITH THE ARCHITECTURAL AND THE CIVIL ENGINEERING DRAWINGS.
9. ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE WORK IS PUT IN HAND. ANY DISCREPANCY MUST IMMEDIATELY BE REPORTED TO THE ENGINEER.
10. THIS DRAWING IS NOT TO BE SCALED.

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO. MDA 290C-201

0	ISSUED FOR CONSTRUCTION	07/02/2019

SURVEYED	-	-
DRAWN	D SHARP	19/06/2018
DESIGNED	D VILJOEN	04/10/2017
CHECKED	D VILJOEN	04/10/2017
APPROVED	PR REGISTRATION NO.	DATE

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PROJECT TITLE

MIDDLE TERRACE CLINIC (GRAHAMSTOWN)

DRAWING TITLE

FOUNDATION LAYOUT

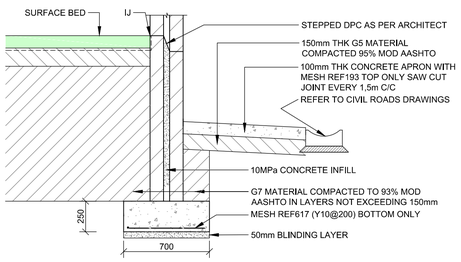
SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-79-S-001	0

P:\1574 Eastern Cape Facility Management\1574-79 SB006 Middle Terrace Clinic\04 Design\07 Structures\1574-79-S-001 Foundation Layout.dwg

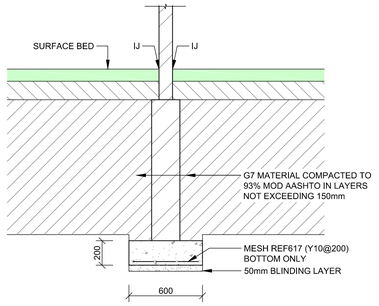
STEEL NOTES:

1. ALL STEEL TO BE GRADE S355JR.
2. ALL CONNECTIONS TO BE TO THE FULL TENSILE STRENGTH OF THE MEMBERS.
3. ALL SPLICES AND CONNECTIONS ARE SUBJECT TO THE APPROVAL OF THE ENGINEER.
4. SHOP DRAWINGS ARE TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL AT LEAST TWO WEEKS PRIOR TO COMMENCEMENT OF MANUFACTURE.
5. ALL SURFACES TO BE PAINTED MUST BE FREE OF MILL SCALE, CORROSION, GREASE, DUST, ETC.
6. ALL STRUCTURAL STEELWORK TO BE HOT DIPPED GALVANIZED,
7. ALL DIMENSIONS ON THIS DRAWING SHOULD BE CHECKED BY THE CONTRACTOR PRIOR TO MANUFACTURE,
8. FIGURED DIMENSIONS ONLY TO BE USED, DRAWING IS NOT TO BE SCALED.
9. DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY THEY BECOME EVIDENT.
10. THIS DRAWING IS TO BE READ IN CONJUCTION WITH THE ENGINEER'S CONCRETE DRAWINGS AS WELL AS THE ARCHITECT'S DRAWINGS.
11. ALL BOLTS ARE M16 GRADE 4.6 UNLESS STATED OTHERWISE.
12. ALL WELDS ARE 6MM FILLET WELDS.



TYPICAL TYPE A SECTION THRU
270mm EXTERNAL WALL

SCALE 1:25

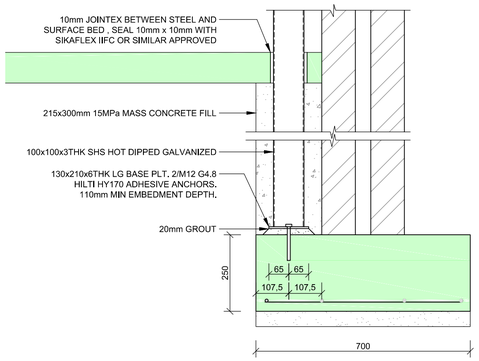


TYPICAL TYPE B SECTION THRU
110mm INTERNAL WALL

SCALE 1:25

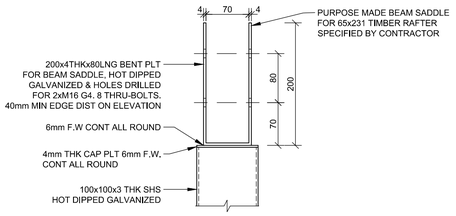
NOTE:

1. ALL FOUNDATIONS TO BE AT LEAST 0.9m BELOW NGL. FOUNDATION EXCAVATIONS TO BE INSPECTED BY ENGINEER PRIOR CASTING. CARE IS TO BE TAKEN TO RETAIN THE NATURAL MOISTURE CONTENT OF THE FOUNDING MATERIAL. BOTTOM OF TRENCH TO BE COVERED WITH DPM STRAIGHT AFTER EXCAVATION UNTIL INSPECTION.
2. CONTRACTOR TO ENSURE EVEN BACKFILLING FROM TOP OF FOUNDATION LEVEL.



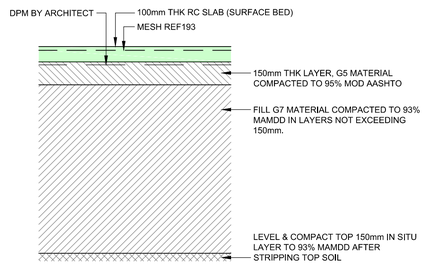
TYPICAL SECTION

SCALE 1:10



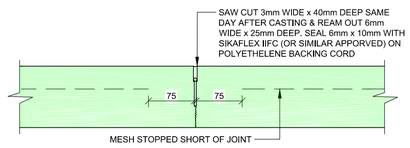
TYPICAL SECTION THRU BEAM SADDLE

SCALE 1:5



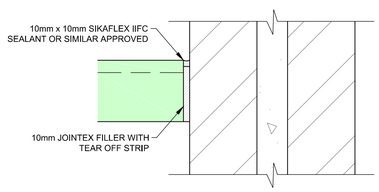
TYPICAL SURFACE BED LAYER WORKS

SCALE 1:20



TYPICAL SAW CUT CONTRACTION JOINT (SJ)

SCALE 1:5



TYPICAL ISOLATION JOINT (IJ)

SCALE 1:5

GENERAL NOTES : CONCRETE

CONCRETE STRENGTH

(A) FOUNDATIONS.....	20 Mpa cube strength at 28 days
(B) BEAMS AND SLABS.....	25 Mpa cube strength at 28 days
(C) SURFACE BEDS.....	25 Mpa cube strength at 28 days
(D) BLINDING LAYER.....	15 Mpa cube strength at 28 days

CONCRETE COVER TO REINFORCING

(A) SLAB.....	25 mm
(B) BEAMS.....	30 mm
(C) BASES.....	50 mm

NOTE:

1. BEAM DEPTH INCLUDES SLAB THICKNESS
2. CONTRACTOR IS TO MAINTAIN STEEL IN CORRECT POSITION AFTER PLACING AND DURING CONCRETING
3. STONE, SAND AND CEMENT TO BE TO THE SATISFACTION OF THE CONSULTING ENGINEER.
4. NO CONCRETE TO BE POURED UNTIL THE STEEL HAS BEEN INSPECTED BY THE CONSULTING ENGINEER.
5. ANY BREAKS IN THE CONCRETE ARE TO BE MADE IN ACCORDANCE WITH THE ENGINEERS INSTRUCTIONS.
6. NO STRUCTURAL ALTERATIONS TO BE MADE WITHOUT THE APPROVAL OF THE CONSULTING ENGINEER.
7. THE STRUCTURE HAS BEEN DESIGNED FOR THE FOLLOWING CONDITIONS:
   (A) SAFE GROUND PRESSURE..... 150 kN/sq m
   (B) LIVE LOAD ON SLAB..... 1.5 kN/sq m
8. ALL DRAWINGS TO BE READ IN CONJUNCTION WITH THE ARCHITECTURAL AND THE CIVIL ENGINEERING DRAWINGS.
9. ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE WORK IS PUT IN HAND. ANY DISCREPANCY MUST IMMEDIATELY BE REPORTED TO THE ENGINEER.
10. THIS DRAWING IS NOT TO BE SCALED.

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCH'S DRAWING NO. MDA290B-201

No	AMENDMENTS	DATE
0	FOR CONSTRUCTION	07/02/2019

SURVEYED	SURPLAN	08/05/2018
DRAWN	D SHARP	17/06/2018
DESIGNED	D VILJOEN	04/10/2017
CHECKED	L COETZER	02/10/2018
APPROVED	PR REGISTRATION NO. 201570266	DATE 12/10/2018

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PROJECT TITLE

MIDDLE TERRACE CLINIC (GRAHAMSTOWN)

DRAWING TITLE

TYPICAL DETAILS

SCALE	SHEET SET	SHEET SIZE
AS SHOWN	SHEET 1 OF 1 SHEETS	A1

DRAWING No.	REVISION
1574-79-S-002	0

P:\1574 Eastern Cape Facility Management\1574-79 SB006 Middle Terrace Clinic\04 Design\07 Structures\1574-79-S-002 Typical Details.dwg

Province of the
EASTERN CAPE
HEALTH

C3.11 OHS SPECIFICATION AND BASELINE RISK ASSESSMENT

PROJECT SPECIFIC

CONSTRUCTION HEALTH AND SAFETY

SPECIFICATION

Project title:	**RAGLAN ROAD, V. SHUMANE, MIDDLE TERRACE, AND NG DLUKULU CLINICS: RENOVATIONS**
Bid No:	**SCMU3-23/24-0434-HO**

October 2023
Version 1

V.SHUMANE, MIDDLE TERRACE, AND NG DLUKULU CLINICS AS STIPULATED IN THE TENDER DOCUMENT

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HEALTH AND SAFETY SPECIFICATION

1. INTRODUCTION AND BACKGROUND

The Construction Regulations No. 3705 of 7th February 2014 requires the Client to prepare a pre-construction Health and Safety Specification, with known and possible existing risks identified.

The Eastern Cape Department of Health (ECDoH) is tasked to provide Healthcare operational facilities across the Eastern Cape.

The ECDoH has a responsibility to limit its risk by ensuring a zero tolerance and best practice approach to Contractors and those affiliated to a construction project. Thus, a high premium is placed on the health and safety (H&S) of ECDoH stakeholders, which include its employees, professional service providers, public and its physical assets.

The responsibilities that the Department and relevant stakeholders have toward its employees are captured in, but not limited to this document. The responsibilities stem from both moral, civil and a variety of legal obligations.

The Principal Contractor is to take due cognisance of the above statement.

The ECDoH, as the Client and where there is an appointed H&S Agent on its behalf, shall provide a Project Specific Health & Safety Specification (PSHSS) for the project and provide the Principal Contractor/s making a bid or appointed to perform construction work for the project, or parts thereof such documentation.

This Health and Safety Specification complies with the Occupational Health and Safety Act No. 85 of 1993 and the Construction Regulations of February 2014.

This Health and Safety Specification is to be used as a Management tool to comply with the Occupational Health and Safety Act.

This Specification has been prepared by the Eastern Cape Department of Health.

2. KEY ROLE PLAYERS

2.1.1. Eastern Cape Department of Health (Client)

2.1.2. Principal Agent

2.1.3. Architect

2.1.4. Quantity Surveyor

2.1.5. Structural Engineer

2.1.6. Civil Engineer

2.1.7. Electrical Engineer

2.1.8. Mechanical Engineer

2.1.9. Clerk of Works

2.1.10. Health & Safety Agent

2.1.11. Contracts Manager

2.1.12. Construction Manager
2.1.13. Health & Safety Officer
2.1.14. Other

2 LIST OF ABBREVIATIONS

AAIA	Approved Asbestos Inspection Authority
AIA	Approved Inspection Authority
BoQ	Bill of Quantities
CC	Compensation Commissioner
CR	Construction Regulations
DMR	Driven Machinery Regulations
DoeL	Department of Employment and Labour
FEMA	Federated Employers Mutual Association
GAR	General Administration Regulations
GSR	General Safety Regulations
HCSR	Hazardous Chemical Substances Regulations
HIRA	Hazard Identification Risk Assessment
H&S	Health and Safety
ER	Engineer's Representative
LI	Labour Intensive
OH	Occupational Health
OHSA	Occupational Health and Safety Act No. 85 of 1993 (as amended)
OHSS	Occupational Health and Safety Specification
PSHSS	Project Specific Health and Safety Specification
PC	Principal Contractor
PPE	Personal Protective Equipment
SANS	South African National Standards (Authority)
SDS	Safety Data Sheet
SMME	Small, Micro, Medium Enterprise
SWP	Safe Work Procedure

3 DEFINITIONS

The definitions used will be those set out in the Regulation Gazette N0 3705 of 7th February 2014 with the following additions:

3.1.1 **Client:**
The Superintendent General, Eastern Cape Department of Health.

4.1.2 **Designer:**

Means a competent person appointed by the Client as Agent to design, supervise and monitor construction on their behalf.

4.1.3 **Hazard:**
Source of exposure to danger

4.1.4 **Hazard Identification and Risk Assessment (HIRA) and Risk Control:**
Means a documented plan, which identifies hazards, assesses the risks and details the control measures and safe working procedures which are to be used to mitigate and control the occurrence of hazards and risks during construction or operation phases.

4.1.5 **Health and Safety Agent:**
Means any person who acts as a representative for the Client in managing the overall health and safety work as their responsible person.

4.1.6 **Health and Safety Plan:**
Means a documented plan which answers to the Project Specific Health and Safety Specification; including all the supporting documentation that indicate how the Principal Contractor or Contractor plans to manage H&S for the duration of the Contract.

4.1.5 **Induction Training:**

Means once off introductory training on general health and safety issues given to all employees and visitors to the site before commencement of work on site.

4.1.7 **Risk:**

Means the probability or likelihood that a hazard can result in injury or damage.

4.1.8 **Regulation/s:**

Shall mean the relevant regulation/s promulgated in terms of the Occupational Health and Safety Act, No. 85 of 1993 and any other legislated Regulation with the inclusion of the Construction Regulations No. 3705 of 7th February 2014.

4.1.9 **Site:**
Means the area in the possession of the Principal Contractor for the construction of the works. Where there is no demarcated boundary it will include all adjacent areas, which are reasonably required for the activities for the Principal Contractor, and approved for such use by the Designer.

4.1.10 **The Act:**
Means, unless the context indicates otherwise, the Occupational Health and Safety Act, No. 85 of 1993 and Regulations promulgated thereunder, as amended.

5 KEY REFERENCES

5.1 Occupational Health and Safety Act No. 85 of 1993 and Regulations (as amended).

5.2 Compensation for Injury and Occupational Diseases Act No. 100 of 1993 (as Amended).

5.3 Joint Building Conditions of Contract (JBCC)

5.4 South African Roads Traffic Safety Manual (SARTSM) Chapter 2, Volume 13 of 1999.

5.5 Road Traffic Safety Act No. 93 of 1996 (as amended)

5.6 Construction Regulations No. 3705 of 7th February 2014.

5.7 Construction Specifications & Standards 6.0 for Southern Africa. Hans Wegelin 6th Edition 2010

5.8 SANS Code 10400 and others that are applicable

6 PURPOSE OF THE PROJECT SPECIFIC HEALTH AND SAFETY SPECIFICATION (PSHSS)

The PSHSS is a performance specification to ensure that the Client and any bodies that enter into formal agreements with the Client Viz. Agents, Professional Service Consultants (Engineers, Quantity Surveyors and Architects), Principal Contractors and Contractors achieve an acceptable level of OHS performance.

To assist in achieving compliances with the Occupational Health and Safety Act No. 85 of 1993 and the Construction Regulations of February 2014, to, as far as is practical, reduce or eliminate incidents or injuries.

No advice, approval of any document required by the PSHSS, such as hazard identification and risk assessments, or any other form of communication from the Client shall be construed as acceptance by the Client of any obligation that absolves the Principal Contractor from achieving the required level of performance and compliance with legal requirements.

Furthermore, there is no acceptance of liability by the Client, which may result from the Principal Contractor failing to comply with the PSHSS, i.e. the Principal Contractor remains responsible for achieving the required performance levels.

A Mandatary Agreement in terms of Section 37.2 of the OHSA will be signed between parties prior to any works commencing.

The PSHSS highlights the aspects to be implemented over and above the minimum requirements of current legislation.

Requirements may be changed should new risks or issues are identified that could not have been foreseen during the design phase of the project, or during the construction phase. Any new legislation or standards (legislated, or determined by the ECDoH) that are promulgated or accepted during the contract will automatically be applied.

Environmental management shall receive due attention as per the requirements of the Environmental Control Officer (ECO), but will be managed by the ECO directly.

The Contractor shall use this Specification as a basis for the drafting of his and any Subcontractors` Construction Health and Safety Plans.

The Specification sets out the requirements to be followed by all Contractors so that the Health and Safety of all persons who may be affected by the Construction Project will receive proper priority.

The Project Specific Risks that have been identified have been tabulated in Section 18 of this Specification.

7 IMPLEMENTATION OF THE PROJECT SPECIFIC OCCUPATIONAL HEALTH AND SAFETY SPECIFICATIONS (PSHSS)

The project specific H&S specification (PSHSS) forms an integral part of the Contract, and PCs are required to make it an integral part of their Contracts with Contractors and Suppliers.

A PSHSS will be available for each level of Contract and Contractor, and must be complied with.

This specification must be read in conjunction with the OHSA, Regulations thereto (as amended) and any other standards relating to work being done, and ensure compliance thereto.

The information relative to the scope of the project, the works etc. are detailed in the tender, are to be considered when developing the H&S plan and associated documentation:

- The summary of risks is included in Section 18 of the PSHSS;
- The OHSA S.37.2 Mandatory Agreement must be fully completed by the PC, supplied by the Client;

No work may commence without written approval of the H&S plan by the H&S Agent, or the responsible person in the ECDoH. Should there be design changes, or change in the scope of works, an amended PSHSS may be issued. Where amended PSHSSs are issued, the PC will be required to ensure a resubmission of an amended H&S plan for approval.

Further to this, the PC must ensure that similar information must be provided as it applies to the works to all their Contractors, within 5 working days following notification thereof of such design changes.

The H&S Agent will visit the project as deemed necessary by the Employer to ensure compliance and limit risk. All activities on the site and all appropriate documentation will be monitored and reported on to the Client and the Designer. Non-conformances will be issued, and penalties or work stoppage will be issued where appropriate. Communication between the H&S Agent and the PC will be through the Designer (or Client's responsible person) as determined at the commencement of the project. The Principal Contractor must forward a copy of the Health and Safety plan to all Contractors to enable them to prepare their own Health and Safety plans. Non-conformances will be issued, and penalties or work stoppage will be issued where appropriate. Communication between the H&S Agent and the PC will be through the Designer (or Client's responsible person) as determined at the commencement of the project.

8 APPLICATION

This Specification is a compliance document drawn up in terms of the Occupational Health and Safety Act No. 85 of 1993, and the Construction Regulations of February 2014, and is therefore binding on the Contractor as well as the Owner. All Contractors are to comply with the conditions of this Health and safety Specification. All Direct Contractors carrying out work on behalf of the Eastern Cape Department of Health, the Middle Terrace, V.Shumane, and NG Dlukulu Clinics are also required to comply with the conditions of this Health and Safety Specification. All staff and representatives of the Eastern Cape Department of

Health at Middle Terrace, V.Shumane, and NG Dlukulu Clinics who visit the site are required to comply with the conditions of this Health and Safety Specification. All representatives of the Implementing Agent who visit the site are required to comply with the conditions of this Health and safety Specification. All members of the Consulting Team who visit the site are required to comply with the conditions of this Health and safety Specification.

9 REQUIREMENTS AT TENDER STAGE

Adequate pricing for H&S is required, and the appropriate section in the BoQ is to be completed. Failure to do so could result in the Tender being regarded as **non-responsive.**

10 GENERAL REQUIREMENTS

Summary of Risks identified during Design:

The intention of the summary of findings from the design risk assessment is to highlight the residual risks identified during the design phase. The full design risk assessment would be required from the successful bidder as the contract includes design as well. The summary of risks in a form of Baseline Risk assessment provided is to point the contractor towards some risks he may not be aware of during tendering stage and while developing his formal risk assessments for the project. The design risks and the management thereof should be included in the Principal Contractors (PC) risk assessments. Where there are other Contractors appointed to do work, the PC is to ensure that Contractors include such information in their risk assessments. The summary is to be developed following the completion of the Design risk assessment, and to include the residual risks as they apply to the project.

10.1 Hazard Identification and Risk Assessment (HIRA)

At the Pre-Tender Site Inspection, the Principal Agent will identify any Project Specific hazards or risks that may affect the work. These hazards or risks are listed under section 18 of this Specification. Tenderers are also advised to notify the Principal Agent of any other risks or hazards that have not previously been identified. These risks are to be recorded and a recommended procedure for addressing each item agreed on and recorded. The Principal Contractor is to conduct inspections of all tools and equipment before the commencement of the works and at least once a week during the works.

The Principal Contractor shall ensure that all Contractors and workers are informed, instructed and trained by a competent person regarding any hazards, risks and related safe work procedures as part of the Induction process before any work commences and thereafter at regular intervals as the risks change and as new risks develop.

Proof of this training must be kept for inspection by the Client or Client's Representative.

The Principal Contractor shall be responsible for ensuring that all persons who could be negatively affected by the operations are informed and trained according to the hazards and risks and are conversant with the safe working procedures, control measures and other related rules (tool box talk strategy to be implemented).

The format used for the risk assessment must make provision for the following information:

- Reference Number;
- Project Name;
- Identification of task assessed;
- Date;
- Risk assessment team & designation;
- Approval of risk assessment team;
- Risk rating with matrix;
- Review date;
- Task steps;
- What can go wrong (Hazard);
- The result (Risk);
- Risk rating;
- Preventative Action (Control Measures).

The Principal Contractor is to ensure that all Middle Terrace, V.Shumane, and NG Dlukulu Clinics' Staff and Management personnel that will be affected by the works are fully informed of the risks and hazards associated with the works.

10.2 Specified Hazardous Chemical Substances

The following lists of products or substances are those which have been identified as likely to be used on the project. The list is not conclusive and other products may be considered. Where the PC is likely to supply the product as the product has not been specified, safety data sheets (SDSs) need to be considered prior to all selections.

PRODUCTS/SUBSTANCES/RISKS	POTENTIAL HEALTH OR OTHER RISKS
Concrete	• Handling of stone of various sizes for concrete mixing may occur, exposure to Silica dust is prevalent; • Overloading of wheelbarrows when transporting stone and sand must be monitored and managed.
Materials with Asbestos Cement Fibres	• Possible flying Asbestos Fibres may be present and flying while Asbestos Cement Materials(Roof Sheeting, Downpipes, Gutters, etc) are being removed and/or handled.
Cement	• Hand mixing may occur, 50kg bags are an ergonomic risk from handling. • Pumping of concrete may occur exposure to extensive vibration, extended hours of work, and potential eye, skin and respiratory irritant from dust exposure, chromates.

PRODUCTS/SUBSTANCES/RISKS	POTENTIAL HEALTH OR OTHER RISKS
Exposure to Silica dust	Caused by cutting, grinding, sanding of any concrete/granite/tiled surface/masonry and/or demolition of some existing walls.
Heavy and sharp Steel Material handling	Handling of heavy & sharp steel products may lead to multiple & muscular injuries due to improper handling and lifting operation; Improper stacking and storage of these materials could lead to unexpected collapse of materials which could lead to personal injuries and property damages.
Petrol/diesel/lubricants	Potentially a fuel bowser on site. Fire, spillage, fumes
Wood dusts	Caused by cutting, sanding, drilling wooden products treated
Oxy-acetylene Gas	Use of these gas bottles when using cutting torch and welding in confined spaces may cause lead to lack of oxygen and workers inhale gas fumes. Inhalation of these fumes in a confined space may lead to severe headaches, collapse, and/or fatality
Use of Paints/solvents/epoxy	Hazardous fumes caused by use of these products in confined spaces such as inside water tanks may lead to sever headaches, collapse, and/or fatality.
Exposure to wastewater & possible sewer during the connection onto existing services activity	Exposure and coming into contact with Hazardous Biological Agents which could lead to ill-health. Further possible inhalation of Methane Gas when working/connecting into existing manholes/ existing services.

10.3 Hazardous and potential situations

The Principal Contractor shall immediately notify other Contractors as well as the Client of any hazardous or potentially hazardous situations that may arise during performance of construction activities.

11 OCCUPATIONAL HEALTH & SAFETY MANAGEMENT

11.1 Scope

The Specification covers the requirements for eliminating and mitigating incidents and injuries during execution of works at these various sites. The scope addresses legal compliance, hazard identification, risk assessment, risk control, and promoting a Health and Safety culture on the project. The Specification also provides for the protection of those persons other than employees.

11.2 Scope of Works

11.2.1 The contract comprises Renovations and Extension works to the existing Middle Terrace, V.Shumane, and NG Dlukulu Clinics.

11.2.2 General:

- The project comprises of the renovation, upgrade and expansion of 3 clinics in the Makhanda Municipal District viz V.G. Shumane, Middle Terrace and Dlukulu Clinics.
- The work will be phased and will embrace temporary decanting and sectional completions.
- Details scope of work descriptions are enclosed hereafter under item 4 below.

11.2.3 Decanting and Sectional Completion:

- V.G. Shumane and Middle Terrace are deemed to be one (1) contractual sub section. (Sub Section no. 1)
  - The V.G. Shumane Clinic renovation and upgrade will form phase one (1) of the sub-section.
  - V.G. Shumane Clinic will be closed temporarily to accommodate the renovation and upgrade process.
  - There will be unhindered contractor access to V.G. Shumane Clinic during the construction period for renovations and upgrade.
  - Staff from V.G. Shumane will decant and locate temporarily to Middle Terrace Clinic.
  - Patients will temporarily directed to Middle Terrace.
  - Sectional Completion no. one (1) will be the completion of the V.G. Shumane Clinic.
  - V.G. Shumane Clinic will be recommissioned and re-opened and Middle Terrace Clinic Terrace will close.
  - All staff from V.G. Shumane Clinic and Middle Terrace Clinic will relocate to V.G. Shumane.
  - Patients will be temporarily directed to V.G. Shumane.
  - There will be unhindered contractor access to Middle Terrace Clinic during the construction period for renovations and upgrade.
  - Sectional Completion no. two (2) will be the completion of Middle Terrace Clinic.
  - Middle Terrace Clinic will be recommissioned and re-opened.
  - Middle Terrace staff will relocate to Middle Terrace clinic and patients will be re-directed accordingly.
- Dlukulu Clinic is deemed to be one (1) contractual sub-section (Sub Section no.2)
  - The renovation and upgrade of Dlukulu Clinic will be in two (2) phases
  - Phase 1 will be the construction of the new extension.
  - Phase 2 will be the renovation and upgrade of the existing clinic.
  - The clinic will remain operational throughout the construction period.
  - Sectional completion no. one (1) will realise the completion and commissioning of the new works.
  - The clinic staff will take occupation of the new works and vacate the existing clinic.
  - Sectional completion no. two (2) will realise the completion and commissioning of the renovation of the existing clinic.

- The clinic staff will be granted occupation of the clinic as a whole and patients directed accordingly.

- Sub section 1 (V.G. Shumane and Middle Terrace) and sub section 2 (Dlukulu) will run concurrently.

EXTENT OF THE WORKS

Raglan Road Clinic

- **Overview**

  - The existing clinic is operational in separate structures on the same site.
  - This scope of work is limited to the refurbishment of existing vacant buildings.
  - The existing clinic will remain operational throughout the renovation process.

- Building Fabrick and Scope of Work
  - Demolish existing outbuilding toilet block.
  - Remove and replace roof coverings. All buildings
  - Repair existing roof trusses. All buildings
  - Replace existing roof trusses (refer to roof plan). Some buildings
  - Replace all rainwater goods.
  - Replace all doors and ironmongery.
  - Repair and refurbish existing windows.
  - Replace all electrical circuitry and fittings.
  - Install new windows as per architects drawing.
  - Replace existing vinyl tile floors. Making good substrate
  - Remove carpet floor finishes, substrate repair and install new vinyl floor finish.
  - Repair / reinstate skirtings.
  - Replace ceilings (± 50%) as per architects' drawings.
  - Repair plaster finishes internally and externally.
  - Build new covered walkways and external waiting areas.
  - Build new staff ablution facilities.
  - Build new public ablution facilities.
  - Build new waste management facilities.
  - Complete redecoration internally and externally.
  - Site works and drainage.

V. SHUMANE

The work will include the following but not limited to:

- An expansion in a Northerly direction to provide a new entrance will enable the following:
  - Reconfiguration of the pharmacy
  - Provision of a dedicated pharmacy waiting area
  - Privacy at pharmacy dispensary
  - Enlarged public waiting (single space)
  - Enlarged admin and archive storage
  - Provision of dedicated admin office

- Internal reconfiguration is proposed to embrace the following:
  - Subdivide store room to create staff ablution accessible from staff room.
  - Convert existing staff ablution into a dedicated sluice room

- Demolish shower at observation room and reconfigure the space as TB waiting room.
- Provide new sputum booth accessed from consulting room.
- Pharmacy and dispensary reconfiguration made possible by the provision of a new entrance.
- Waiting area enlargement is facilitated by demolition of a wall and expansion onto the enclosed verandah. A new structural beam will be required.
- Wasted space on the enclosed verandah is reconfigured to accommodate a new admin office and an expanded archive

- Site works upgrade to include:
- Additional parking. Parking to be expanded into space occupied by vegetable garden and the area to the north of the entrance.
- Provision of a delivery bay.
- Paved pedestrian access across pavement.
- Upgraded perimeter security fencing.
- Storm water management upgraded.
- Repair and reinstatement of stackable concrete retaining wall.
- Provision of new refuse facilities:
  - Medical Waste
  - Garden Waste
  - General Waste

- Building Fabric:
  - Remove asbestos roof, fascia & rainwater goods.
  - Remove existing knock up ceilings.
  - Remove all ceiling mounted electrical reticulation and light fittings.
  - Remove all floor finishes.
  - Remove existing door frames, doors and ironmongery & install new.
  - Replace all joinery generally.
  - Install new plaster on new brick walls.
  - Reinstate / repair existing plaster as required.
  - Redecorate generally. Primer coats and finishing coats paint.
  - Install new sheet metal roof in continuous lengths on lambda board insulation in compliance with SANS 10400 XA regulations.
  - Install new suspended ceilings.
  - Install new recessed ceiling mounted light fittings.
  - Install new vinyl sheeting floor finish on new self-levelling screed.
  - Install new bump rails in public spaces.
  - Install new eaves closing.
  - Install new fascia boards & rainwater goods.

Specialist sub-contracts will be required for the following:

- Electrical installation including standby generator.
- Access control.
- Fire detection.
- HVAC installation.
- I.T. reticulation & security.

MIDDLE TERRACE

- **New facilities to be built:**
  - New gatehouse and access ramps that are compliant.
  - New off-street parking.
  - New public ablutions.
  - New sputum booth.
  - New refuse facilities:
    - Garden refuse.
    - General refuse.
    - Medical waste.
  - Construction of new sluice room.
  - Construction of a new store.
  - Construction of new connecting ramp between upper and lower wings with non-slip floor finish, bump rail & hand rail.
  - New windows as required.
  - New bulk water storage system.

- **Internal reconfiguration is proposed to embrace the following:**
  - Demolition of partitions and construction of new internal partition walls at reception / admin office to create an enlarged reception, admin office and new archive.
  - Internal reconfiguration of partition walls to create new mother & child consulting room & waiting area.
  - Installation of 1 ½ leaf stretcher door at repositioned treatment room adjacent to entrance foyer.
  - Demolition of existing ablutions.
  - Creation of new chronic waiting area in the zone where ablutions are demolished.
  - Reconfiguration of passage / ramp walls at pharmacy bulk store, counselling room and dispensary.
  - Demolition of lower entrance & conversion to new cleaner's store.
  - New brick partition wall to facilitate positioning of staff room adjacent to ablutions.
  - Installation of new fire escape adjacent to staff room.

- **Site works upgrade to include:**
  - Provision of a paved delivery bay & road access.
  - Paved pedestrian access across pavement and at pedestrian walkway on site.
  - Upgraded perimeter security fencing.
  - Storm water management upgraded generally.
  - Provision of new refuse facilities:
    - Medical Waste
    - Garden Waste
    - General Waste

- **Building Fabric:**
  - Remove asbestos roof, fascia & rainwater goods.
  - Remove existing knock up ceilings.
  - Remove all ceiling mounted electrical reticulation and light fittings.
  - Remove all floor finishes.
  - Remove existing door frames, doors and ironmongery & install new.
  - Replace all joinery generally.
  - Install new plaster on new brick walls.

- Reinstate / repair existing plaster as required.
- Redecorate generally. Primer coats and finishing coats paint.
- Install new sheet metal roof in continuous lengths on lambda board insulation in compliance with SANS 10400 XA regulations.
- Install new suspended ceilings.
- Install new recessed ceiling mounted light fittings.
- Install new vinyl sheeting floor finish on new self-levelling screed.
- Install new bump rails in public spaces.
- Install new eaves closing.
- Install new fascia boards & rainwater goods.
- Install new windows as required.

Specialist sub-contracts will be required for the following:

- Electrical installation including standby generator.
- Access control.
- Fire detection.
- HVAC installation.
- I.T. reticulation & security.

NG DLUKULU

PHASE I:

Phase I will include the construction of all new facilities as follows:

- New pharmacy, dispensary & pharmacy waiting.
- New chronic consulting room & waiting area.
- New public ablutions including facilities for disabled people.
- New external veranda (extension of existing).
- New entrance lobby & circulation space.
- New stand-alone refuse facility for medical waste, garden refuse & general waste,
- New acute consulting room & waiting area.
- New mother & child consulting room & waiting area.
- New sputum booth.
- New gate house.
- Site works will include new storm-water management & discharge, connection to municipal sewer, water supply & storage upgrade, new paving & kerbing at access roads, parking pedestrian walkways and new perimeter fencing.

PHASE II:

Phase II will include the internal reconfiguration of the existing building and will embrace the following:

- Demolish an internal dividing wall to create a new emergency treatment room wit new stretcher door.
- Existing staff room to be subdivided to create new admin office and new archive.
- Demolish existing ablutions and gable wall to create new mother & child waiting area with access to external play area.
- Demolish existing ablutions to create new patient observation and vitals area.
- Existing treatment room to be converted to a staff room with dedicated ablution.
- Demolish dry wall store to enlarge public waiting area.
- Install new internal brickwork partitions to create a new consulting room for specialist doctors.
- Install new internal brickwork partitions to create a new store room.
- Create new sluice room in reconfigured space.

- Removal of existing asbestos roof and replacement with new sheet metal roofing and insulation layer in accordance with SANS XA requirements.
- Replacement of fascia's & rainwater goods.
- Install new bump rails.
- Replace all joinery.
- Reinstate plaster where required.
- Redecorate generally.
- Removal & replacement of internal finishes inclusive of vinyl floor coverings and knock-up ceilings.
- Replacement of mild steel windows with powder coat aluminium windows.
- General replacement of internal doors & ironmongery.
- Install new signage.

Specialist sub-contracts will be required for the following:

- Electrical installation including standby generator.
- Access control.
- Fire detection.
- HVAC installation.
- I.T. reticulation & security.

For a more comprehensive and complete Scope of Works, please refer to the relevant Section of the Tender Document.

11.3 Structure and Organization of H&S Responsibilities

Application of Construction Work Permit

Once appointed, the Client shall prepare documentation and apply for the Construction Work Permit from the Department of Employment and Labour prior to commencement of any physical work on site. A copy of Construction Work Permit shall be kept on site at all times and permit number be displayed at the entrance of each site.

11.4 Health and Safety Plan Framework

The H&S aspects related to the project outlined in the previous sections are to be considered when drawing up the H&S Plan. The PC is required to demonstrate competence by providing an H&S system that will address the requirements of the project. The current legislative requirements, SANS codes and any other standards that may guide practice are to be fully implemented as required.

The following aspects must be addressed in the H&S Plan, as they have been identified in section 2, as playing a role in reducing the overall risk of an activity, or section of the project:

- The H&S Agent may from time to time request additions or systems as they relate to the works or legislative requirements at the time;

  The PC is to prepare a site layout drawing to indicate at least the following:

  - The positions of site offices of all Contractors, toilets, drinking water and Worker rest areas;

- Indicate the positions of emergency personnel and equipment (fire, first aiders, first aid posts);
- Protection of plant and pedestrians, indicate parking, and
- Storage areas (materials and equipment, waste etc.);
- Access and egress to site for deliveries and intended temporary traffic management;
- Emergency assembly points;
- Decanting Plan;
- Three(3) Separate Site Layout Plans must be prepared and submitted for Raglan Road, V.Shumane/Middle Terrace as well as one for N.G. Dlukulu Clinics.

Such layouts are to be updated regularly throughout the project.

11.5 Appointment of Competent Site Personnel

The CEO (OHSA S16.1) of the PC will take overall responsibility for the appointment of competent site staff for the duration of the project. Should the CEO not be personally involved in the project, the H&S responsibilities are to be delegated to the Construction Manager (OHSA 16.2). Knowledge and training in H&S is required, and certificates indicating H&S training as well as experience to be included in CVs. All other legal appointments are to be made with relevance to the type of work required and kept current with the project programme. The construction team is to ensure the appointed H&S Officer is kept up to date with all planned activities, to ensure all H&S requirements are met. All construction/technical method statements are to be generated by senior site personnel, and the appropriate risk assessments developed therefrom in conjunction with the H&S Officer.

The Occupational Health and Safety Plan shall include the following, but is not limited to the following key appointments:

11.5.1 Construction Supervision

Competent construction supervisors should be appointed to manage part or all the works and have training and/or experience around responsibility. All site supervisors must show evidence of appropriate training in H&S, and an understanding or training in areas of responsibility (i.e. risk assessments, method statements etc.). Construction manager (CR8.1) is to be full time on site, for a single site(i.e. one for Raglan Road, one for V.Shumane/Middle Terrace, and one for N.G. Dlukulu). Curriculum Vitae (CVs) are to be submitted for approval by the Client or its appointed representative.

The Construction Supervisors shall be held responsible for the safety of working teams and subordinates, housekeeping and stacking and storage of materials.

11.5.2 Construction Health and Safety Officer

The PC will employ at least one competent, full-time H&S Officer who is registered with SACPCMP as a Construction Health and Safety Officer (CHSO) for the duration of the contract. The H&S Officer's CV is to be submitted for approval by the H&S Agent or the Client.

The PC is to ensure adequate resources are provided to undertake all responsibilities (i.e. mobile phone, computer and internet access, vehicle etc.). Qualifications shall include at least Grade 12, SAQA approved training in Occupational Health and Safety, with exposure to building works that is appropriate, but at least of two year's duration given the level of project complexity preferably in an OHS capacity. The health and safety officer must provide proof of registration with the **SACPCMP**.

He should also have undergone training in the Act and Regulations. As it is envisaged that the sub-contractors will be employed, the H&S officer must have a competence to evaluate the sub- contractors Health and Safety plans and have access to reliable transport that will be available and enable him or her to visit both site during construction.

This person may not hold any other position on the site. The construction supervisor may not act as the H&S Officer. The H&S Officer/s will be held responsible for co-ordination of all H&S activities on the project. All staff members on site are to follow systems, instructions etc. given by the H&S Officer at all times. No new workers or sub- contractors may commence work without approval or following the H&S plan as submitted, and no inductions of Contractor staff until the H&S documentation is approved by the H&S Officer. The H&S Officer/s may not be removed or replaced without the approval of the H&S Agent, nor may the site be left unattended for more than 1 day without adequate, competent, and appointed Safety Officer.

A monthly report of all H&S activities and incidents is required by the end of the first week of each month, or at a date agreed to by the H&S Agent/Client and the H&S Officer. An example of the monthly report is attached as an Annexure C. The H&S Officer will be responsible for collating the H&S documentation at the close out of the project in electronic format. A list of the typical aspects that should be provided is available as Annexure B to this document. The PC is to ensure that all Contractors documentation follows the same requirements and closed out H&S documentation must be completed and be available with the close out of the main contract. Failure to do so will be considered a serious offence and penalties applied.

11.5.3 Traffic Safety

The PC is to ensure that the route for Emergency Vehicles is always accessible. The H&S Officer will be responsible for ensuring that daily traffic management is adequately managed. No worker may be transported in, or on the rear of construction vehicles (bakkies included), or with plant and materials to, on, or from site. The number of passengers in any vehicle is limited to what

is stated on the license disc. Vehicles used to transport workers to, from, or on site, shall have secure seats and be covered. No canopies may be used. Tenderers must indicate in their OHS plans what type of transport is envisaged and how this will be managed. Should there be a need for road crossings for underground services, the Principal Contractor shall prepare a Traffic Accommodation Plan for approval by the Engineer/Designer. The standards of the SARTSM Ch. 13 Vol. 2 will be used. Any changes suggested, or required are to be discussed and approved by the Engineer/Designer. Additional care must be taken where workers and public interface. Penalties will be issued for non-compliances noted.

11.6 Construction Vehicles

Vehicles shall not enter site with:

- Defective exhaust systems;
- Serious oil or fuel leaks;
- Unsafe bodywork or loads;
- Non-standard equipment fitted;
- Improperly seated passengers;
- Any obvious mechanical defects.

All earth moving equipment shall be operated in accordance with good safety practice to protect the safety of the operator and other workers or persons in the area. All earth moving equipment shall be equipped with a reverse siren and shell be inspected by the operator daily. No person shall be permitted to ride on any construction vehicle or mobile plant otherwise than in a safe place thereon provided for that purpose.

11.7 Health and Safety Representatives and H&S meetings

H&S Representatives are to be full time employees of the Contractor on the project. Each site to appoint its own H&S Representative/s. H&S Representatives representing workers and Contractors are to be appointed following the start-up of the project, irrespective of the number of workers on site. The appointed H&S Representatives will have the required competency training as a SHE rep. The H&S Representatives are to be actively involved with H&S and will assist the H&S Officer and site management in meeting legislative duties. The H&S Officer shall further ensure that H&S is discussed at all internal production or progress meetings. Issues arising from the H&S Agent audits are to be discussed, as well as all H&S related issues. Minutes are to be kept for all H&S interventions and meetings. Failure to do so will be deemed to be a moderate offence.

11.8 Appointment of Competent Contractors

The Principal Contractor is to ensure compliance with the Client's minimum standards and all legislative requirements. All competent persons shall have

the knowledge, experience, training, and qualifications specific to the work they have been appointed to supervise, control, and carry out.

The Principal Contractor is responsible to ensure that competent sub-contractors are appointed to carry out construction work. The same H&S standards required of the PC are to be applied to all sub-contractors. An index of all Contractors and Suppliers is to be on file and kept updated at all times.

Where the ECDoH appoints Direct Contractors, or uses the Maintenance staff to carry out works in the site area, the ECDoH is to ensure that the appropriate competent persons are responsible for supervising & controlling the work being undertaken. The PC is to ensure there is sufficient funding for H&S compliance by each Contractor.

The following minimum aspects are applicable to any Contractor appointed:

- ✓ The H&S Officer is to ensure a Contractor's appointment and approval of H&S documentation at least seven (7) working days prior to commencing work;
- ✓ No sub-contractor may work under the PCs Compensation registration number;
- ✓ If required, the PC may assist SMMEs with their registration with the Compensation Commissioner. However, such sub-contractors will not be able to commence work until proof of registration or Letter of Good Standing has been received;
- ✓ No work may commence without Mandatary agreements between parties in place.

The following aspects are applicable to Suppliers or short-term works (surveying, repairs, servicing, deliveries etc.). Cognisance is to be taken of the level of risk involved and the H&S Officer is to ensure the level of H&S documentation is appropriate:

- ✓ Mandatary agreements in place;
- ✓ Letter of Good Standing;
- ✓ Method statements and risk assessments

Available information relative to:

- o Load testing and registers for cranes or lifting devices;
- o Medical certificates of fitness;
- o Safety data sheets (SDSs).

Failure to provide written approval of H&S documentation will be considered a serious offense, and could result in aspects of, or all the activities being stopped, and penalties implemented.

12 GENERAL RISK MANAGEMENT

12.1 Health Risks and Medical Surveillance

The appropriate SDSs are to be obtained for all products and used to develop the H&S documentation as they relate to the works. Many of the processes may

be labour intensive and ergonomic risks are to be noted. All workers (including sub-contractors) are to be included in the medical surveillance programme.

Workers will be exposed to noise, dust, hazardous biological agents(e.g. Asbestos Fibres), and physical risks from extended periods of work of a repetitive nature, materials specified and the general nature of the works.

All workers (including those of sub- contractors) are required to be in possession of a valid medical certificate of fitness issued by an OMP (Occupational Medical Practitioner) prior to commencing work. Annual medical surveillance is required (unless identified as being required more frequently), as well as an exit medical. Arrangements for keeping medical records for the required time are to be noted. It is preferable that the PC has a medical surveillance plan. Full medical records are not to be placed in the H&S file. A procedure for managing the medical records which require safekeeping for prescribed periods are to be addressed.

Given the potential health risks the following aspects are to be included in each medical surveillance intervention:

- Full medical, surgical and occupational history;
- Full physical examination of all systems; and
- Referral if required for the management of identified health issues that may affect the worker.

Specific testing for existing conditions and limitations relative to exposure could include, but are not limited to:

- Audiometry (hearing tests);
- Lung Function Test for Asbestos Specialist Contractor; and
- Any other tests identified as relevant from chemical or specifically identified risks of exposure

Due to the nature of the work at hand and the possibility of some pipework, some workers might be exposed to Hazardous Biological Agents (HBA). All those that could potentially be working on live sewer/water pipelines should be given relevant vaccination (Hepatitis A and B etc.). Failure to do so will be considered a serious offence.

12.2 General Environmental Conditions

Compliance with the Environmental Regulations (as amended), among others is required. Environmental monitoring of ventilation, lighting and dusts may be deemed to be required by the Approved Inspection Authority used to measure the environment. Copies of the relevant reports and actions taken in respect of these are to be placed in the H&S file.

Any spillages of substances which could be toxic to persons must be dealt with adequately. The Contractor must include his spillage removal system in the OHS Plan.

12.3 Noise Risks

All plant from plant hire companies (suppliers) or that of the PC is to be compliant with the Noise Induced Hearing Loss Regulations. Plant identified that has not been tested and marked for noise emissions will result in having

to be tested at the Contractors or PCs expense. Failure to do so within a reasonable time will result in such plant being removed from site.

Audiometric testing of all workers is noted as required in the medical surveillance programme for all permanent workers prior to work commencing. Temporary labour working in identified noise areas will require testing if the noise levels are indicated on plant or through processes as greater than 85dB. Audiometry records are to be available in the H&S file. Suitable SANS approved hearing protective equipment shall be issued and worn where noise levels are identified as equal to or greater than 85 db. Failure to do so will be considered a serious offence.

12.4 Emergency Preparedness and Response Procedures

The Principal Contractor must prepare a detailed site-specific Emergency Preparedness & Response Plan for the site and submit for approval by the Client / Principal Agent prior to commencement of work on the site. It is advised that the system should be simple and easy for any worker to follow. The Plans should be separated and be site specific for both work sites i.e. Raglan Rad, V.Shumane/Middle Terrace as well as N.G. Dlukulu Clinics.

The plan may be adapted should new information or risks are identified. The procedures for dealing with the emergency evacuation of staff must be agreed upon with Middle Terrace, V.Shumane, and NG Dlukulu Clinics Management Representatives.

The procedure shall detail the response plan in relation to the works, and include at least (but are not limited to) the following key elements:

- Appointment of a competent emergency response co-ordinators and wardens; Lists of first aiders, and:
- Fire;
- Explosions;
- Public injury and motor vehicle accidents;
- Falls from heights;
- Serious injury to workers (medical or work-related); and
- Any other major risks identified during risk assessments

The emergency preparedness and response plan is to ensure the inclusion of local service providers where possible. Such arrangements should be made with these persons prior to the commencement of the project. The general principles of emergency management are to be applied as it applies to the hierarchy of control and management.

The Contractor will provide the Principal Agent with the following information regarding their response plans for dealing with emergencies:

- Contact persons;

- Details of emergency services

Action to be taken in event of an emergency:

- Fire;
- Accident;
- Damage to Raglan Road, Middle Terrace, V.Shumane, and NG Dlukulu Clinics services
- Hazardous substances.

Person to be notified in the event of an accident or emergency:

- ✓ Mrs. N Mcopele - Eastern Cape Department of Health **0833782014;**

12.5 First Aiders and First Aid Equipment

Competent, trained First Aiders are to be formally appointed for the project. At least 2 workers are to be trained to level 3 for each site. First aiders are to be available at all times and be able to cover each working team. Further first aiders from the community or SMMEs, If not already accredited, are to be sent for accredited first aid training.

Appointed Contractors are expected to ensure compliance and manage their own first aiders and equipment. Contractors are expected to ensure compliance and provide/manage their own first aiders and equipment. The number of First aiders will be determined by the complexity and exposed risks of the project, not numbers of workers. Appropriately stocked first aid kits are to be available at all times and to assure continual availability and access on site.

12.6 Fires and Emergency Management

Attention to emergency preparedness and response planning and procedures is very important. The full emergency preparedness and response plan must form part of the supporting documentation with the H&S Plan. The H&S Agents approval of all emergency preparedness and response plans and procedures is required prior to commencement on site. It is advised that the system should be simple and easy for any worker to follow. The plan may be adapted should new information or risks are identified. First aiders shall be available in each working team, and be able to work as a team when responding to any emergency on the project.

The procedure shall detail the response plan in relation to the works, and include at least (but are not limited to) the following key elements:

- ✓ Appointment of a competent emergency response co-ordinator and wardens;
- ✓ Lists of first aiders, and
- ✓ Requirement in terms of identified risks:
  - Fire;
  - Explosions;

- Falls from heights, and
- Motor vehicle accidents.

The emergency preparedness and response plan is to ensure the inclusion of local service providers where possible. Such arrangements should be made with these persons prior to the commencement of the project.

The emergency preparedness and response plan is to include the risk of fire on site and related to any specific activities where gas, welding, cutting etc. occur. Fire extinguishers will be appropriate for the risk and in sufficient numbers to deal with the type of fires that could occur. All mobile plant is to have fire extinguishers.

Hot work permits are required for any such activities. Their position is to be shown on the sketch plan of the site.

12.7 Incident Management and Compensation Claims

The PC will ensure there is a management system to investigate all incidents. All serious incidents involving any form of disabling injury or fatality are to be reported to the Designer /Client /H&S Agent immediately. This shall be confirmed in writing following the incident. Full details are to be included in each site meeting or when the Client visits site. A summary of incidents is to be included in the monthly report. Failure to comply with emergency provisions will be considered a serious offence, and the operation or project may be stopped if deemed inadequate for the work at the time of assessment or site inspection.

12.8 Personal Protective Equipment (PPE) and Clothing

The PC is to provide a procedure as an addendum to indicate how PPE is managed within the Company. The wearing of the identified SANS approved PPE at all times is non-negotiable.

The PC shall ensure that all workers (Including Contractors) are issued with and shall wear as required; the first 3 items are mandatory for all workers:

- Hard hats;
- Steel-Toe Protective footwear;
- Reflective jackets (no bibs);
- Overalls that ensure worker visibility
- Eye protection;
- Hearing protection;
- Safety Harnesses and any other required Fall Arrest Equipment when working at heights;
- Respiratory protection (minimum of FFP2),
- Disposable One Piece Overalls for Asbestos Removal Team; and
- Any other necessary PPE identified from SDSs and/or risk assessments.

Adequate quantities of PPE shall be available. This shall include necessary PPE for visitors. The procedures for managing PPE are to be in a formal procedure submitted with the H&S plan for approval. The Contractor shall carry adequate stocks of Hi-visibility Jackets and hard hats for visitors. Any person (including Client, and Professional Team) found on site without the necessary PPE will be removed from site until the PPE is supplied and worn. Failure to comply will result in penalties being applied.

12.9 Occupational Health and Safety Signage

On-site H&S signage is required. Signage shall be posted up at fixed or temporary working areas, or other potential risk areas/operations. These signs shall be in accordance with the requirements of the General Safety Regulations or SANS requirements as amended.

Signage is to be noted on the site drawings indicating where fixed/temporary signage is required. Temporary signage is to include (but not be limited to) the following:

- 'Report to site Office';
- 'Construction Work in Progress';
- 'Warning: Construction Site – Keep out' or similar;
- 'Site Office';
- 'Hard hat area' or other PPE requirements noted;
- First aid box positions (including vehicles);
- Emergency Assembly Point or Points;
- No Unauthorised Entry;
- Smoking Area; and
- Fire extinguishers.

Signs shall be posted at areas of work on site indicating that a construction site is being entered and that persons should take note of H&S requirements. The Contractor shall establish a system for controlling and recording entrance to the Site office and camp area. Failure to comply will result in penalties being applied.

12.10 Induction of Employees and Visitors, General H&S Training

A formal induction programme is to be submitted as an addendum for approval with the H&S plan. Inductions must be carried out for all workers and visitors (including Client, Professional Team, and Facility staff) to the site.

Pre-task training is required to ensure workers are familiar with the risks and H&S measures of the work or tasks to be done. Such training is to be done at least daily. Records of inductions and pre-task training are to be kept in the H&S file. Any person found on site without proof of induction will be removed from site until the proof is supplied and, and a penalty issued per non-compliance.

12.11 Public and Site Visitor Health and Safety

The Principal Contractor shall ensure that every person/visitor working on or visiting the site, as well as the work areas, shall be made aware of the dangers likely to arise from site activities, including the precautions to be taken to avoid or minimize those dangers.

The Principal Contractor shall ensure that appropriate Health and Safety notices and signs are posted where required and at relevant strategic locations.

Both the Principal Agent and the Contractor have a duty in terms of the Occupational Health and Safety Act to do all that is reasonably practical to prevent members of the public and site visitors from being affected by the work activities. Visitors to site/work areas should at all times be accompanied by a member of staff on site.

Warning notices are to be provided at the main entrance gates to the facility(Dlukulu Clinic) notifying that construction work is taking place within the perimeter of the facility. Further notices to should be place in the specific work areas inside the clinic as people are working.

Warning notices regarding the movement of workers and materials are to be posted externally between the Contractor's yard area and the service entrance.

The site/work areas must be suitably hoarded/Fenced-off at all times with a limited number of restricted and controlled access points. Adequate notices are to be displayed. Hoardings/Fencing-off are to be inspected daily and gates monitored during working hours and locked at the end of each work day.

12.12 Awareness

The Principal Contractor shall ensure that, on site, periodic toolbox talks take place at least once per week. These talks should deal with risks relevant to the construction work at hand. A record of attendance shall be kept in the Health & Safety file. All Contractors must comply with this minimum requirement. At least one of the Toolbox talks shall include an environmental related issue.

The Principal Contractor is to ensure that the relevant staff at Raglan Road Clinic, Middle Terrace, and NG Dlukulu Clinics are kept informed of any change in the situation regarding the risks and hazards relating to the construction work on the site.

13 MANAGEMENT OF PLANT AND EQUIPMENT

13.1 Construction Plant

Construction Plant" includes all types of plant including but not limited to, cranes, piling rigs, excavators, road vehicles, and all lifting equipment. The Principal Contractor shall ensure that all such plant complies with the requirements of the OHS Act 85/1993, Construction Regulations 2014, and all other relevant Regulations and Standards.

The Principal Contractor and all relevant Contractors shall inspect and keep records of inspections of the construction plant used on site. Only authorised/competent (certified) persons are to use machinery under proper supervision. Appropriate PPE and clothing must be provided and maintained in good condition at all times. Proof of medical certificate of fitness and proof of competency as required by the Construction regulations are available for inspection by the Client.

13.2 Plant & Equipment

Close control of plant and equipment is required, including that of Contractors.

Daily monitoring of all plant and equipment is required prior to commencing work.

Full lists of hired and own plant are to be available at the H&S Agent's/Client audit.

All daily inspection records are to be kept in the H&S file where plant and equipment is brought on to site. Registers are not to be more than 1 week behind.

13.3 Operators

Only competent, fit plant operators are to be used. Medical certificates of fitness are required for all operators. Operators are to be adequately trained and certified to operate mobile cranes or crane trucks. Certificates and registers are to be placed in the H&S file. Failure to do so will be considered a serious offence.

13.4 Machinery and Power Tools

Only authorized competent persons are to operate machinery and power tools.

Appropriate PPE and clothing must be provided, used and maintained. No unsafe / dangerous equipment or tools may be brought onto, or used, on the site. The Client / Principal Agent reserve the right to inspect all tools and equipment at any time and to prevent / prohibit their use, if found to be unsafe, without any penalty to the Client and without affecting the terms of the contract in any way. The Contractor may not use any machinery or power tools belonging to Middle Terrace, V.Shumane, and NG Dlukulu Clinics.

13.5 Portable Electrical Tools/Equipment and Explosive Powered Tools

The Principal Contractor shall ensure that use and storage of all explosive powered tools and portable electrical tools are in compliance with relevant legislation. The Principal Contractor shall ensure that all-electrical tools, electrical distribution boards, extension leads, and plugs are kept in safe working order.

The Principal Contractor is to ensure that extension cables and temporary power supplies do not impede access ways or escape routes.

Regular inspections and toolbox talks must be conducted to make workers aware of the dangers and control measures to be implemented e.g. personal protection equipment, guards, etc.

The Principal Contractor shall ensure the following:

- A competent person undertakes routine inspections and records are kept;
- Only authorised trained persons use the tools;
- The safe working procedures apply;
- Awareness training is carried out and compliance is enforced at all times;
- PPE and clothing are provided and maintained;
- Electrical cords must be free from any damage;
- Electrical tools & equipment may not be exposed to water;
- A register indicating the issue and return of all explosive round;
- Ensure that the cartridges and explosive tool is lock up separately;
- Signs to be posted up in the areas where explosive powered tools are being used**. (WARNING - EXPLOSIVE POWERED TOOL IN USE - KEEP CLEAR);**
- Ensure that prior arrangement is made with the Raglan Road, Middle Terrace, V.Shumane, and NG Dlukulu Clinics Maintenance Supervisor or relevant manager before any explosive powered tools are used.

13.6 Hired Plant and Machinery

The Principal Contractor shall ensure that any hired plant and machinery used on site is safe for use. The necessary requirements as stipulated by the OHS Act 85/1993 and Construction Regulations (February 2014) shall apply. The Principal Contractor shall ensure that operators hired with machinery are competent and that certificates are kept on site in the health & safety file. This includes medical certificates of fitness to operate construction vehicles and appointment of the operator. All relevant Contractors must ensure the same.

Daily inspections must be recorded by each operator. A copy of the machines service log book & planned maintenance schedule must be supplied with the machine.

Operators must be trained on the relevant risk assessments and safe working procedures.

The hired plant company must provide proof of registration with Workman's Compensation or FEM before delivery of plant to site. The Hire Company must be required to sign a 37(2) Mandatory Agreement with the hire company before commencing with work. (Applicable if an operator is supplied with the machine.

13.7 Vessels under Pressure and Gas Bottles

The Principal Contractor and all relevant Contractors shall comply with the Vessels under Pressure Regulations, including:

They must be stored in a wire mesh, faced, shaded, ventilated, approved surfaces and lockable facility with all the necessary gas, prohibition & warning signs posted and as far as possible positioned away from buildings/establishment. Storage area must be free from combustible material or any other materials.

No smoking or naked flame signs posted as well as sufficient firefighting equipment.

Cylinders must be stored in rows with aisles in between for easy removal in event of a fire and should be properly chained. Different types of gasses will be stored separately in an upright position, separately secured and the type of gas displayed identified with appropriate signage. Knocking or falling of cylinders must be prevented when moved. Before a cylinder is moved without suitable truck or trolley, the cylinder valve will be closed, and the regulator removed. Only approved cylinder crates/cradles will be used. Cylinders may not be transported with magnet cranes.

Cylinders may never be used as rollers, even if they are marked empty.

Cylinders may never be exposed to electrical circuits, e.g. welding leads. Never strike an arc on a cylinder. Cylinders must be protected from direct sunlight or areas that could cause the cylinder to overheat.

Keep cylinders away from cutting work to stop sparks or hot slag from reaching them. As with compressed air only use oxygen for the purpose for which it is approved. May not be used for pneumatic tools or inflation of tires as an explosion could occur. Oxygen cylinders must be stored at least 5m away from other flammable gas cylinders. Flashback arrestors must be fitted to the torch and the cylinder. Empty cylinders must be marked as such and removed daily to a separate approved storage area.

Cylinders may only be allowed on site in an approved trolley, properly secured and with a 1.5kg dry powder fire extinguisher within 2m of the cylinder. Flammable and oxidizing gasses may not be stored together, and greases/oils may never be allowed to come in contact with Oxygen.

Visual inspections will be done by the appointed HCS Controller to ensure that substandard vessels are not delivered and stored on site.

Pressure vessels must have a certificate of manufacture as well as a service inspection test certificate issued at intervals not exceeding 36 months.

These certificates will need to be submitted to the Safety Department on site.

13.8 Hand tools

No handmaid or damaged tools may be used on site. The Principal Contractor needs to exercise control over all contractors on site. Hand tools may only be used for its intended purpose.

A competent person must be appointed to inspect hand tools monthly. Inspections need to be recorded on a register and each tool identified with a unique number.

13.9 Inspection of equipment and tools.

The following items of equipment must be regularly inspected and maintained, and appropriate records kept:

- First Aid dressing registers
- Fire equipment
- Lifting equipment
- Lifting Gear
- Concrete Bucket
- Slings and chains used for lifting
- Portable electrical equipment
- Stacking and storage inspections
- Explosive power tools
- Hazardous Chemical Substances (HCS)

- Materials hoists (where applicable)
- Pressure Vessels
- Ladders
- Excavations
- Safety harnesses
- Scaffolds - static and mobile.
- Pneumatic tools
- Construction vehicles and mobile plant.
- Health and Safety Representatives checklists.

13.10 Ladders and ladder work

The Principal Contractor shall appoint a competent person in writing to inspect all ladders monthly and record such findings in a register. Ladders are to extend one meter above a landing and must be secured at the top and have a secure, non-slip base. All ladders that do not comply with Health and Safety standards are to be removed from the site immediately.

13.11 Cranes and lifting equipment

Should any form of lifting device or crane (fixed or mobile) be used during the project for deliveries, moving of supplies or equipment, the appropriate documentation must be made available. The Principal Contractor and all Contractors shall ensure that lifting machinery and tackle is inspected before use and thereafter in accordance with the Driven Machinery Regulations and the Construction Regulations (CR 20).

Method statements, risk assessments, safe work procedures and training are to be available prior to work commencing. A procedure for managing loads and lifting must be made available as an addendum to the H&S Plan.

There must be competent lifting machinery and tackle inspector who must inspect the equipment daily or before use, considering that all lifting machinery has a safe working load clearly indicated, are clearly marked with a unique number and safe working load.

Regular inspection and servicing is carried out as per the following timeframes:

- Lifting Machinery load test – every 12 months;
- Lifting Machinery Inspection & service – every 6 months;
- Lifting Tackle Load test – every 12 months;
- Lifting Tackle Inspections – every 3 months.

Ensure that records are kept of inspections and of service certificates. Any plant or slings used to lift plant or material requires annual load testing by an AIA, and all certificates must have the testers LMI/E number.

There is proper supervision in terms of rigging & guiding the loads that includes a trained banks man to direct lifting operations and check lifting tackle. The operators are competent as well as physically and psychologically fit to work and in possession of a medical certificate of fitness to be available on site.

13.12 Tower Cranes

Due to the scope of work at hand on this project, it is not envisaged that Tower Cranes will be required or used. Should there be a need an addendum to the Specification will be issued in order for the contractor to comply with.

13.13 Overhead Work & suspended loads

All overhead work & suspended loads must be safely executed and controlled under supervision. The area around suspended loads must be barricaded to prevent unauthorized entry of persons whom is not part of the task.

Workers may not be positioned under a suspended load at any given time.

To control overhead work the Principal contractor must ensure that Workers secure all materials & equipment to prevent articles falling from above onto workers below.

13.14 Temporary Works (Scaffolding, Support Work, Formwork)

The Principal Contractor shall ensure that the provisions of Regulation 12 of the Construction Regulations are adhered to.

These provisions must include but not be limited to the appointment of a competent supervisor; ensuring that all equipment used is examined for suitability before use; that all formwork and support work is inspected by a competent person immediately before, during and after placement of concrete or any other imposed load and thereafter, daily until the formwork and support work has been removed. Temporary works must be properly designed and signed off by a competent person prior to each pour. Signing-off will serve as confirmation that shuttering/formwork/support work has been erected as per the approved design and it is safe to be used for the intended purpose.

In these instances, a competent person is defined as a Professional Engineer or Professional Technologist (registered with ECSA) who has sufficient experience in the design of the type of temporary work in question to be able to assess the design.

The appropriate competent persons are to be appointed to manage and monitor such works to the satisfaction of the Engineer and H&S Agent.

Records and registers are to be properly completed and kept in the H&S file. If temporary works are to be erected by a Contractor, this must be notified to the Designer/H&S Agent.

Failure to do so will be considered a serious offence.

13.15 Batch Plants

Whichever form of batch plant is used, for mixing concrete, guards and protection of nip points, emergency stops etc. are to be appropriately managed by competent supervision. Edge protection, movement of plant and dust management are required, including disposal of cement bags.

The layout of the batch plant and movement of plant is to be provided on an appropriate drawing. The added requirement of Chest X rays for workers is to be added to pre-employment and possibly exit medicals, unless the workers are already on a system of medical surveillance.

14 WORKING PROCEDURES

14.1. Site Works and Excavations

A competent person is to be appointed in writing to supervise the Site Works and Excavations. A method statement on procedures relating to the diversion of existing services and the maintenance of services to the existing facilities is to be agreed between the Contractor and the Principal Agent prior to the commencement of the work where applicable. The Contractor is to ensure Risk Assessments & Safe Working procedures have been communicated to the workers before any work is commenced.

14.2. Excavations

A procedure for managing excavations is to be provided as an addendum to the H&S plan describing how excavations are to be managed.

Excavation method statements are to be approved by the Designer and associated risk assessments are required. All Excavations are to be properly barricaded and demarcated. Any excavation shall be adequately shored if people are required to work in the excavation and the depth is more than 1.5 metres or where conditions render this necessary at lesser depths unless battered/sloped at the maximum angle of repose measured relative to the horizontal plane.

Undercutting is not allowed.

Excavated material shall be placed at least 1m from the edge of an excavation.

A close watch shall be maintained at all times for signs of slipping, (e.g. cracks developing at the edges of the excavation). Any Excavations over one metre in depth are to be properly shored up in accordance with the requirements of the Civil / Structural Engineer. The requirements as per regulation 13 of the Construction Regulations must be adhered to. Designs by competent persons are required where ground conditions are deemed to require shoring. A competent person is to be appointed for managing all excavations. A permit system is to be available and used for all excavations. All equipment and ground conditions to be checked daily, and prior to work commencing.

The Contractor shall evaluate, as far as is reasonably practicable, the stability of the ground before excavation work begins.

Every contractor who performs excavation work shall –

Take suitable and sufficient steps to prevent, as far as is reasonably practicable, any person from being buried or trapped by a fall or dislodgement of material in an excavation. Not permit any person to work in an excavation which has not been adequately shored or braced: If shoring and bracing may not be necessary where The sides of the excavation are sloped to at least the maximum angle of repose measured relative to the horizontal plane; or such an excavation is in stable material: Provided that - Permission being given in writing by the appointed competent person contemplated in sub regulation (1) upon evaluation by him or her of the site conditions; and where any uncertainty pertaining to the stability of the soil still exists, the decision from a professional engineer or a professional technologist competent in excavations shall be decisive and such a decision shall be noted in writing and signed by both the competent person contemplated in sub regulation (1) and the professional engineer or technologist, as the case may be. Take steps to ensure that the shoring or bracing contemplated is designed and

constructed in such a manner rendering it strong enough to support the sides of the excavation in question.

Ensure that no load, material, plant or equipment is placed or moved near the edge of any excavation where it is likely to cause its collapse and thereby endangering the safety of, any person, unless precautions such as the provision of sufficient and suitable shoring or bracing are taken to prevent the sides from collapsing.

Ensure that where the stability of an adjoining building, structure or road is likely to be affected by the making of an excavation, the steps are taken that may be necessary to ensure the stability of such building, structure or road and the safety of persons.

Cause convenient and safe means of access to be provided to every excavation in which persons are required to work and such access shall not be further than 6m from the point where any worker within the excavation is working.

Ascertain as far as is reasonably practicable the location and nature of electricity, water, gas or other similar services which may in any way be affected by the work to be performed, and shall before the commencement of excavation work that may affect any such service, take the steps that may be necessary to render the circumstances safe for all persons involved. Cause every excavation, including all bracing and shoring, to be inspected by the competent person contemplated in the sub regulation:

- Daily, prior to each shift.
- After every blasting operation.
- After an unexpected fall of ground.
- After substantial damage to supports.
- After rain.

This is to be done in order to pronounce the safety of the excavation to ensure the safety of persons, and those results are to be recorded in a register kept on site and made available to an inspector, client, client's agent, contractor or employee upon request.

Cause every excavation which is accessible to the public or whereby the safety of persons may be endangered, to be:

- Adequately protected by a barrier or fence of at least one meter in height and as close to the excavation as is practicable;
- Provided with warning illuminates or any other clearly visible boundary indicators at night or when visibility is poor;
- Ensure that all precautionary measures as stipulated for confined spaces as determined in the General Safety Regulations promulgated by Government Notice No. R.1031 of 30 May 1986, as amended, are complied with when entering any excavation;
- Ensure that, where the excavation work involves the use of explosives, a method statement is developed in accordance with the applicable explosives legislation, by an appointed person who is competent in the use of explosives for excavation work and that the procedures therein are followed;
- Cause warning signs to be positioned next to an excavation within which persons are working or carrying out inspections or tests.

Excavations should preferably not be open beyond what can be closed daily. Where excavations need to remain open, all excavations are to be properly protected. Adequate stakes with 1m high demarcation and berms/spoil are required to be a safe distance from the edge of the angle of repose. Candy tape may not be used to demarcate excavations. Cognisance is required of the surrounding area and increased levels of protection are required as the work is within communities, health facilities. Work will be stopped, and penalties applied to any work in excavations that are not compliant.

14.3 Working at Heights

Various activities such as painting, removal of old and installation of new pitched roofs shall take place at all three facilities. Work at heights shall take place at various heights ranging from 1.5m up to 3.9m high. The following maximum heights will be worked on at the following facilities:

- Raglan Road Clinic with maximum height of 3.9m
- V. Shumane Clinic with maximum height of 3.9m(Pitched Roof);
- Middle Terrace Clinic with a maximum height of 3.9m(Pitched Roof);
- N.G. Dlukulu Clinic with a maximum height of 3.85m(Pitched Roof).

A Fall Protection and Rescue plan is to be available and supplied as an addendum to the H&S plan. The fall protection and rescue plan must be appropriate for the project and be developed by a competent Fall Protection Developer. Method statements, appropriate risk assessments, safe work procedures and training are to be available prior to work commencing.

The focus for working at height shall include fall restraint systems where possible except during assembling or dismantling top components or where it is not deemed safe. The relevant SANS codes are to be applied as they apply to the works and the project, such as:

- SANS 10085: The Design, Erection, Use and Inspection of Access Scaffolding
- SANS 10333 (parts 1-3): Personal Fall-Arrest Systems

Should part of the works be contracted out, competent Contractors are to be appointed and submit documentation according to the project requirements.

The PC is to note if such work is to be contracted to specialists in the H&S Plan.

The plan is to be developed and work managed by a competent person for the duration of the project. Such plan should include rescue operation in case of a fall.

The following aspects must be included:

- The public is to be protected at all times by way of hoarding, barricading or fencing in the case of Raglan Road, and Dlukulu Clinics;
- Notices to be posted;
- Restrictions or stoppage when weather conditions are deemed hazardous;

- Permit system for working at heights
- Prevention of falling tools or equipment
- Link to emergency preparedness and response plan regarding rescue
- All workers are to be in possession of valid certificates of fitness that extend for the duration of the works.

Note the requirements in the section relating to medical surveillance.

Registers and all relevant documentation are to be placed in the H&S file.

Work will be stopped, and penalties imposed to any work at heights that is not compliant.

14.4 Edge protection

The Principal Contractor must ensure that all edges and openings are guarded and barricaded at all times until permanent protection is erected. Special care and preventative measures must be implemented to prevent edge falls when removing Asbestos Gutters and Roof Sheeting activity.

14.5 Piling

It is not envisaged that piling will take place on these sites.

14.6 Asbestos removal/replacement of roof / sheeting

Base on the Project Scope of Works as well as Asbestos Survey Report as conducted by Asbestos Approved Inspection Authority and Specialist, it is clear that there are materials that are made of Asbestos related product. These materials were found to be the following and at the following facilities but not conclusive:

Raglan Road Clinic

- Asbestos Cement Roof Sheeting;
- Asbestos Cement Soffits

V. Shumane Clinic

- Roof Sheeting

Middle Terrace Clinic

- Asbestos Cement Roof Sheeting;
- Asbestos Cement Gutters;
- Asbestos Cement Down Pipes;
- Asbestos Cement Plumbing Pipes.

NG Dlukulu Clinic

- Asbestos Cement Roof Sheeting;
- Asbestos Cement Soffits;
- Asbestos Cement Ceiling Panels;
- Asbestos Cement Fascia Boards.

The Principal Contractor/Contractor shall comply with the Provisions of Asbestos Abatement Regulations as the works entails Removal of Asbestos Roof and related materials on the existing structures as outlined. Furthermore the removal and discarding of these materials should be conducted by Registered Asbestos Contractor as provided for in the said Regulations. The registered Asbestos Contractor shall prepare and submit to the Project Health & Safety Agent via the Principal Contractor a H&S Plan outlining how the work will be executed safely while ensuring full compliance of relevant requirements.

All asbestos related materials shall be contained and stored in a closed container/skip while on site at all times. This material shall then be transported in a safe manner that prevents flying of Asbestos Fibres and disposed of at a Registered Waste Disposal Site registered to accept this type of materials. Waste Disposal Certificates shall be obtained and be submitted to the Principal Agent and Health & Safety Agent.

14.7 Mechanical installations

All mechanical installations are to be carried out in conformity with the manufacturer's instructions. Method statements and risk analyses must be compiled for each type of installation. A competent person must be designated to supervise the work. In cases where removal of existing equipment in the existing structure, Lock-out Procedure should be prepared, submitted for approval and further be implemented at all times.

14.8 Electrical work

In addition to the requirements of the Electrical Machinery Regulations and the General Machinery Regulations any electrical distribution board used for construction work shall be fitted with suitable earth leakage protection.

Leads must be properly and firmly connected. Plugs and sockets shell be in good and safe condition.

All electrical apparatus, other than electrical hand tools, shall have a physical "lock out" system which will prevent any operation other than that authorized by a supervisor.

A "lock out" sign shall be displayed when the apparatus is not in use. Method statements and safe work procedures will be required for all work involving electrical apparatus. The electrical contractor prior to any connections to the mains shall communicate with the relevant Raglan Road, Middle Terrace, V.Shumane, and NG Dlukulu Clinics Maintenance Representative & Engineer and arrange the necessary Shutdown or Isolation (Lock-out).

14.9 Demolition Works

All Demolition Work of Walls (Internal/External) must be conducted in accordance to the requirements of Construction Regulations 2014.

15 AUDITING

Frequency of external auditing by the H&S Agent or Client will be as agreed with the Client but will at least conform to the requirements of the Construction Regulations. The site will be inspected, and the documentation audited relative to

the activities and H&S plan. The H&S Officer and the Construction Manager of the PC must accompany the Client, or the H&S Agent, on all audits and inspections. It must be noted that not all audits will be, or need be announced.

The PC will ensure that all their Contractors are audited at a frequency determined by the H&S Agent. Audit frequency may be increased if Contractors are not performing adequately. Audit results will be acted upon and non-conformances and penalties issued where deemed appropriate. The Client, or H&S Agent may act or require further outcomes if non-compliances are noted or unsafe acts are noted on site. Internal audits are to include site conditions as well as ensuring H&S files are appropriate, and compliant.

Comprehensive audit reports are to be made available, the format of the audit reports is to be acceptable by the H&S Agent. The PC will be audited using a template as supplied in the tender document. The audit template will be adjusted from time to time relative to the activities on site. A similar process is to be used by the PC when auditing their Contractors on site.

Compliance with legislative requirements and the systems provided by the PC to manage the H&S on site will be measured.

Full compliance is required. Time limits for corrective actions will be set and must be adhered to. Failure to address findings or non-conformances will be considered a serious offence.

16. OCCUPATIONAL HEALTH

16.1 Communication on Site

All H&S communication during the project between the H&S Agent and the PC will be done through the Principal Agent and be in writing, including the issue and responses to non-conformances and H&S audit results. Failure to address issues timeously will be considered a serious offence.

16.2 Care of Workers on Site (Welfare)

Adequate toilets, clean, safe drinking water and decent shelter will be provided for workers at all times. Existing Toilets especially of NG Dlukulu Clinic are not for the use of construction workers. Toilets will be within reasonable distance of workers, or placed with each working team in safe, with reasonable privacy. Hand washing facilities will be provided. Failure to ensure compliance will be considered a serious offence. High levels of humidity and temperatures during the summer months may be experienced. Workers are at greater risk of heat exhaustion where the discomfort index rises above 100.

A weather station has been allowed for to monitor temperature and humidity specifically. Should the discomfort index rise above 105, work may be partially or totally stopped. Workers must be supplied with adequate protective clothing and shelters provided as necessary. Flooding may occur during the rainy season.

High winds may be experienced and to limit dust or danger when working at heights, a wind speed is set at maximum of 40km/h which work may be stopped or the workers in an affected area moved.

The emergency preparedness and response plan is to include how these and other weather extremes identified are to be managed. The general aspects as detailed in the Environmental Regulations will be applied.

All decisions regarding work stoppage will be decided between the PC, the H&S Officer and the Engineer or Principal Agent.

Failure to manage specific conditions or address issues timeously will be considered a serious offence.

16.3 Discipline, Alcohol and Substance Abuse

All employees (management included) are to follow instructions given in the interest of H&S. Disciplinary action is to be imposed on those who do not follow such instructions or company rules or policies. No person can work or access site if under the influence of alcohol or other substances that could impact on their own or others safety.

The PC is to have a drug and alcohol policy available to manage such instances. These requirements are applicable to any employee of any organization providing services on site. Penalties may also be imposed by the Client, OHS Agent, Engineer or Principal Agent.

16.4 Rules of Conduct.

I. Workers MAY NOT partake, possess or sell drugs or alcoholic beverages on site or anywhere in the hospital precinct;

II. Any employee or visitor whose action and demeanour show symptoms of possible narcosis or drunkenness shall be removed from site;

III. Workers MAY NOT indulge in practical jokes, horseplay, fighting or gambling;

IV. Workers MAY NOT destroy or tamper with safety devices, symbolic signs or wilfully and unnecessarily discharge fire extinguishers;

V. Workers MAY NOT bring onto site or have in their possession a firearm or lethal weapon;

VI. Workers MAY NOT assault, intimidate or abuse any other person;

VII. Workers MAY NOT operate construction equipment (vehicles or plant) without the necessary training and authorisation;

VIII. Workers MAY NOT display insubordination toward any Supervisor, Foreman or Manager in respect to carrying out of properly issued instructions or orders for Health and Safety reasons;

IX. Workers MAY NOT enter any area where they have no business unless authorised to do so by the person in charge;

X. Workers MAY NOT negligently, carelessly or wilfully cause damage to property of others;

XI. Workers MAY NOT refuse to give evidence or deliberately make false statements during investigations;

XII. Workers MAY NOT work on site without appropriate induction training & proof thereof;

XIII. The Contractor MAY NOT start any task without performing a risk assessment & training of the employees who will be involved in the work;

XIV. All workers are to display their identification tags at all times;

XV. NO SMOKING will be permitted within 100 meters of the Middle Terrace, V.Shumane, and NG Dlukulu Clinics;

XVI. Workers are NOT to interfere with the duties of the Middle Terrace, V.Shumane, and NG Dlukulu Clinics they are working in;

XVII. The Principal Contractor shall keep and maintain Health and Safety records to demonstrate compliance with this Specification, with the Occupational Health and Safety Act, Construction Regulations 2014, and any other relevant Regulations or Standard;

XVIII. The Principal Contractor shall ensure that all records of incidents/accidents, emergency procedures, training, inspections, audits, etc., are kept in the Health and Safety file;

XIX. The Principal Contractor shall ensure that all Subcontractors maintain the Health and Safety file.

16.5 Compliance with the Rules of Conduct.

The Principal Contractor, Contractors and all employees under their control, including any visitor brought onto site must adhere to the rules of conduct on site, as listed in this specification.

These Rules of Conduct must also be adhered to by any of the following who visit the Site:

- ✓ Professional Team
- ✓ Middle Terrace, V.Shumane, and NG Dlukulu Clinics Management and Staff
- ✓ ECDoH Employees
- ✓ Direct Contractors
- ✓ Trade Representatives
- ✓ Any other visitors to the Site.

17 SAFETY RULES WITH RESPECT TO WORK TO HEALTHCARE FACILITIES

All persons on the premises shall obey the ECDoH & Facility's Health and Safety rules, procedures and practices. No smoking will be permitted within the buildings.

All work shall be carried out within normal working hours except certain essential works which may need to be carried out after hours or over weekends – arrangements for such work to be agreed in advance between the Contractor and Principal Agent.

All workers are to be instructed in and familiarise themselves with the existing emergency and safety procedures and to co-operate in any drills or exercises which might be held by the Middle Terrace, V.Shumane, and NG Dlukulu Clinics. Emergency / Firefighting equipment belonging to the premises is not to be interfered with. Emergency Exits and Escape Routes, including Temporary Escapes Routes are not to be obstructed.

No persons shall carry out or initiate an unsafe / unhygienic act or operation whilst on the premises. Workers are not to interfere with the duties of the Middle Terrace,

V.Shumane, and NG Dlukulu Clinics Staff. The Contractor shall maintain good housekeeping standards in the areas being worked on throughout the duration of the contract.

All waste / scrap materials are to be removed from the work areas on an on-going basis and should not be allowed to accumulate. The ECDOH and Middle Terrace, V.Shumane, and NG Dlukulu Clinics Management reserves the right to act in any way necessary to ensure the safety and / or security of any persons or equipment on its premises and will not be liable for any costs incurred or loss evoked by such actions.

The ECDOH and Middle Terrace, V.Shumane, and NG Dlukulu Clinics Officials reserves the right to search all vehicles entering, leaving or parked on the premises and to inspect any parcel, package, handbag, tog-bag or suitcase. The Middle Terrace, V.Shumane, and NG Dlukulu Clinics reserve the right to search any person entering or leaving the Middle Terrace, V.Shumane, and NG Dlukulu Clinics premises. Persons who are not willing to permit such searches may not bring any such items or vehicles onto the premises.

All workers must wear proper identification labels at all times – The Contractor will be asked to remove persons without identification from the premises. The Contractor will not be permitted to use any tools or equipment belonging to the Middle Terrace, V.Shumane, and NG Dlukulu Clinics. The Contractor is to ensure that noise is kept to a minimum so as not to unduly interfere with the functioning of the adjacent facilities.

The Contractor is to ensure that dust from the works is properly contained so as not to cause problems with the normal functioning of the adjacent facilities.

18 PROJECT SPECIFIC RISKS

- Working in the existing Raglan Road, and NG Dlukulu Clinics Yard and Building with normal health care operations throughout the contract period;
- Working with and around existing known and unknown services;
- Exposure to Excessive Dust;
- Possible exposure to Asbestos Cement Materials;
- Working on excavations;
- Working at height during brickwork, concrete works, roof work, etc.;
- Exposure to noise & vibration from construction activities;
- Working in confined spaces;
- Restricted Contractor’s yard area;
- Possible exposure to HBA and/or unknown buried Medical Waste;
- Restricted access in some facilities for construction vehicles and deliveries of materials;
- Work with Mechanical Lifting Equipment while hoisting heavy metal equipment & materials;
- Stripping and Installation of heavy Mechanical and Electrical Equipment;

- Possible community unrest or strikes.

19 PROCEDURES TO MANAGE PROJECT RISKS

- Ensuring that all workers and facility staff are properly inducted;
- Ensure that all Social Facilitation requirements are met prior and during construction;
- Ensure that communication processes are clear to all affected and relevant stakeholders;
- The provision of temporary, dust proof, hoardings to isolate the work areas;
- Provision of Industrial Extractor Fans and Dust Screens when generating dust inside the building;
- The use of closed bin trolleys/chutes for the transport of materials and rubble;
- Ensuring that the Principal Contractor has proper site management, site security and control measures in place at all times;
- Ensuring that there is ongoing liaison between the Principal Contractor and the Facility Management.

20 HEALTH AND SAFETY PLAN & FILE

The documentation submitted and approved following the awarding of the contract will be used to form the H&S file.

The H&S file is required to be prepare in a logical manner, and documentation filed within the file is to be easily accessible.

The following completed information shall be included (but not be limited to) as part of the index:

1. The Project Specific Health and Safety Specification;
2. Scope of Works;
3. The H&S Plan and the approval by Client;
4. Appointment by Client with CR5(1)(k) appointment;
5. Mandatory agreement with Client;
6. Notification of construction work/Construction Work Permit;
7. A record of all working drawings, calculations and design where applicable;
8. Detailed list of Contractors with contact details, appointments, Mandataries etc., H&S specifications issued;
9. Record of Competencies (CVs) and appointments;
10. Training Records;
11. Permits;
12. Method statements;
13. Risk assessments;
14. Safe work procedures;
15. Emergency and injury management;

16. Safety data sheets

17. Medical surveillance records;

18. Registers;

19. Records of audits, minutes etc.

20. Plant lists

21. Temporary electrical installations

22. Employee records (who is on site).

21 NON-CONFORMANCES

Should, at any time, the works, or part of the works, be stopped due to unsafe acts or non-compliance with the Clients or PCs H&S Plan; neither the PC nor any other Contractor shall have a claim for extension of time or any other compensation. In a case of repetitive non-conformance on site, penalties will be imposed against the Principal Contractor.

The following constitute examples of the types of non-conformances that will attract penalties:

Minor: Penalty: R50/count	**Medium: Penalty: R500/count and a non-conformance**	**Severe Penalty: R5000/count, a non-conformance and/or activity stoppage**
Non-use of PPE supplied	Toilets not supplied or regularly serviced; lack of drinking water	Contractors working without Health and Safety Plan approval
Non-completion of registers for plant and equipment on site	Contractors not audited	Workers transported in contravention of the OHS plan or legal requirements
Lack of H&S signage at work areas	Working without training or the appropriate, approved H&S method statements	Invalid Letters of Good Standing
Tools and equipment identified in poor condition during inspections	Legal non-conformances identified during the previous audit and not addressed within the agreed time frame	Non-compliance with traffic accommodation requirements: layout or physical conditions
	No monthly OHS report at site meeting to report on	Any serious breach of legal requirements
	No certificates of fitness for workers as required	
	Working without approved method statements	

Failure to Comply with Provisions

Failure or refusal on the part of the PC or their Contractors to take the necessary steps to ensure the safety of workers and the general public in accordance with these specifications or as required by statutory authorities or ordered by the engineer, shall be sufficient cause for the engineer to apply penalties as follows:

- A penalty as shown in the Table above shall be deducted for each occurrence of non-compliance with any of the requirements of the PSHSS.

- In addition, a time-related penalty of R500,00 per hour over and above the fixed penalty may be deducted for non-compliance to rectify any non-conformance within the allowable time after a site instruction to this effect has been given by the Designer.
- The site instruction shall state the agreed time, which shall be the time in hours for reinstatement of the defects.
- Should the Contractor fail to adhere to this instruction, the time-related penalty shall be applied from the time the instruction was given.

22 MEASUREMENT AND PAYMENT

The payment items for Occupational Health & Safety are contained in the Bill of Quantities. The same rules are applicable in respect of the pricing of these items as for every other payment item. Attention is drawn to the Pricing Instructions in this document.

22.3 Item and Unit

1. C.01 - Preparation of Contractor's Project Specific Health and Safety Plan. (Lump Sum (L.S))

22.3.1.1 The rate for this item must cover all expenses incurred in preparing the Contractor's project specific Health and Safety Plan as required by the Client's project specific Health and Safety Specification in this document

2. C.02 - Principal Contractor's initial obligations in respect of the Occupational Health and Safety Act and Construction Regulations. (Lump Sum (L.S))

22.3.2.1 The full amount will be paid in one instalment only when the Client's Agent has verified and approved the following:

22.3.2.1.1 The Principal Contractor has notified the Provincial Director of the Department of Labour in writing of the project, Annexure A to the Regulations.

22.3.2.1.2 The Principal Contractor has made the required initial Appointments of Employees and Contractors.

22.3.2.1.3 The Client has approved the Principal Contractor's project Health and Safety Plan.

22.3.2.1.4 The Principal Contractor has set up his Health and Safety File.

3. C.03 - Principal Contractor's time related obligations in respect of the Occupational Health and Safety Act and Construction Regulations. (Month (Mth))

22.3.3.1 The amount shall represent full compensation for that part of the Principal Contractor's general obligations in terms of the Occupational Health and Safety Act and Regulations which are mainly a function of time.

22.3.3.2 Payment will be made when the Client's Agent has verified the Principle Contractor's compliance as part of the audit.

22.3.3.3 This will include the updating and administration of the Health and Safety file.

4. C.04 - Provision of Personal Protective Equipment (PPE) as listed in the Bill of Quantities. (Number (No))

22.3.4.1 The rates for these items shall include for the procurement, delivery, storage, distribution and all other actions required for the supply of PPE to the employees of the Principle Contractor, full or part time, requiring them.

22.3.4.2 Subcontractors are responsible for their own costs in this regard.

22.3.4.3 Any items of PPE not included on the list will be paid for only after the Engineer has agreed to their acquisition.

22.3.4.3.1.1 Items listed will include, among others which may be noted, are: hard hats, reflective vests, reflective bibs, high visibility overalls, protective foot wear, fall arrestor harness and tethers, gloves, ear muffs, earplugs and dust masks of appropriate type.

22.3.4.3.2 Normal items such as standard overalls, waterproof clothing, gum boots and standard workshop safety equipment such as welding masks and goggles will not be paid for.

22.3.4.4 Payment will be based on the issues register for PPE as kept by the Construction Health and Safety Officer, backed up by paid invoices if requested.

5. C.05 - Provision of Full Time Construction Health and Safety Officer (Month)

22.3.5.1 The Tender sum shall include for the cost of a Construction Health and Safety Officer on a fulltime-bases.

6. C.06 - Costs of Medical Surveillance (Unit (No))

22.3.6.1 This item shall cover all costs in involved in the obtaining of baseline medical examinations of temporary labour, including operators for mobile plant as contemplated in CR 23(d) (ii); for temporary workers and workers exposed to noises at or above the limits given in the Noise-induced Hearing Loss regulations, as stipulated.

22.3.6.2 Workers in the permanent employ of the Contractor will only be paid for if their certificates require updating.

22.3.6.3 **C.06 a)** Initial (baseline) medical examinations, including audiometric and lung function testing.

22.3.6.4 **C.07 - Induction Training (Unit (No)**

22.3.6.4.1 This item shall cover all costs incurred for the health and safety inductions as set out on Regulation 7 of the Construction regulations and the proof of induction required.

22.3.6.4.2 Payment will be made on the figures contained in the induction section of the Health and Safety File.

22.3.6.5 **C.08 - Provision of First Aid Boxes. (Unit (No))**

22.3.6.5.1 The rate for this item shall cover all costs incurred in the provision and maintaining of first aid boxes as outlined in Paragraph 7 above.

22.3.6.6 **C.09) Establishment of noise levels (Unit (No))**

22.3.6.6.1 This item shall cover all costs involved in the establishment of noise zones, including any workshops, in terms of Regulation 9 of the Noise-induced Hearing Loss Regulations.

22.3.6.6.2 Where a zone has previously been established for a particular item of plant within the last two years, the test need not be

repeated but must be kept valid for the duration of the Contract.

22.3.6.7 C.10 - Submission of the Health and Safety File. (Lump Sum)

22.3.6.7.1 Expenditure under this item shall be made in accordance with the general conditions of contract.

22.3.6.7.2 This amount will be paid only once the Principal Contractor has met all his obligations in respect of the Occupational Health and Safety Act and the Construction Regulations and has submitted his Health and Safety File complete as envisaged on this specification to the Client's satisfaction.

22.3.6.7.3 This must be done prior to the issue of a Certificate of Completion.

RESPONSIBILITY	SIGNATURE	DATE
H&S AGENT SIGNATURE:		06/10/2023
CLIENT SIGNATURE:		

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ANNEXURE A
CLOSE OUT REQUIREMENTS

The H&S files for the Principal Contractors and all Contractors require closure and handover to the Client at the completion of the project. The following list is an example of what should be included, but is not exhaustive. The OHS Agent or the Client may require further information at the time of completion and the Principal Contractor is to ensure that all instructions are met. Documentation would include all records from the start of the project. Daily or monthly plant inspection records are not required unless they are related to an incident that has led to property damage, personal injury, and/or fatality. All records to be in electronic format and submitted to the OHS agent for approval in adequately formatted lists and folders. Layout should be logical and in the same order as in the site files.

Health and Safety close out file requirements include:

a) Client H&S Specification
b) Project Scope of Works
c) Principal Contractor's OHS Plan(s)
d) Organograms
e) Legal Appointments
f) List of all employees employed on a permanent or contractual basis over the duration of the contract
g) Notification to Department of Labour of commencement of work
h) Letters of Good Standing for the Project
i) Full files for all Contractors as well as their close out reports
    - List of Contractors
    - All employees employed on a permanent or contractual basis over the duration of the contract
    - Letters of Approval of Contractors
    - Mandatary Agreements
    - Letters of Good Standing
    - Appointments
    - Asbestos Waste Disposal Certificates
j) Incident Records
k) Non- Conformance records
l) Agent's Audits
m) Method Statements
n) Risk assessments
o) Safe work procedures
p) Medical surveillance certificates of fitness. Medical records are to be kept according to the OH&S Act as amended
q) All drawings for temporary structures (suspended beams/scaffolds etc.)
r) All operating manuals for any systems that require on-going maintenance
s) Copies of test results, policies and procedures for environmental monitoring (silica, noise, dusts etc.)

Defect and Liability Period

The H&S files are to be kept 'live' for the defect and liability period by the Principal Contractor, including those of their Contractors. Any work required during the defect and liability period will require an assessment of the H&S file by the OH&S Agent prior to any work commencing.
A copy of drawing records for the as-built drawings are to be placed on file by the Designers once complete.

ANNEXURE B
NON-CONFORMANCES

HEALTH AND SAFETY SITE INSPECTION NON-CONFORMANCE NO	
AGENT:	**PROJECT:**
Consultant:	**Date and time:**
Client	**Area:**
Contractor:	

ASPECTS NOTED:	COMMENTS:	COMPLETION REQUIRED BY (DATE):
	•	
	•	
	•	
	•	
	•	

PHOTOGRAPHIC EVIDENCE (if available):
OTHER:
The following penalties are to be applied:

Signature of H&S Officer/Site Agent	
Signature: of H&S Agent	

ANNEXURE C:

CONTRACTORS MONTHLY HEALTH AND SAFETY REPORT

(To be submitted by the end of the first week of each month and be available with each audit)

CONTRACT NUMBER:		PROJECT NAME:	CONTRACT DETAILS:
1	GENERAL ACTIVITIES FOR THE MONTH (detail each area of work)		
2	NUMBER OF WORKERS (permanent and local, contractors)		
3	TRAINING DONE (supplier, no of people, type)		
4	INCIDENTS / ACCIDENT (list number and details, attach reports)		
6	NON-CONFORMANCES (closed out or active)		
7	CONTRACTORS (list, approval status)		
8	AUDITS COMPLETED (internal and external)		
9	CRITICAL ISSUES		

10	**GENERAL**	

Health and Safety Officer: _____ **Signature:** _____

Date: _____

Construction Manager: _____ **Signature:** _____

Date: _____

	PROJECT	**Upgrading & Additions to NG Dlukulu, Middle Terrace & V Shumane Clinics BID NO: SCMU3-23/24-0619-HO**													
	BASELINE RISK ASSESSMENT														
	DATE **29-Sep-23**											**low**	**med**	**high**	
	SCMU3-23/24-0464-HO											**1**	**4**	**12**	
	Risk Rating multiplier: Low = 1; Medium = 2; High = 3											**2**	**6**	**18**	
												3	**8**	**27**	
Note, this HIRA is a guide only and does not cover all risks. It must be read in conjunction with the Site Specific OHS Specification in the Contract document. The Contractor must supply a full risk assessment for all activities on site					**Baseline risk**					**Residual risk**					
REF where appropriate	OPERATION	HAZARD	Design Risks identified as present	Describe the obvious control measures to be part of design	Likely consequences of an incident	Frequency of Exposure	Probability of harm	Risk rating and risk category	Extra control measures necessary to reduce risk / Redesign by Client and / or Designer	Likely consequences of an accident	Frequency of Exposure	Probability of harm	Risk rating and risk category		
	SITE ESTABLISHMENT														
	Existing Services	Electrical	Contact with electrical cable overhead-causing electrocution	erect warning signs, inform workers	2	2	3	12	Experienced supervision by site staff and Engineer . Obtain As-built Drawings of Existing power lines.	1	2	2	4		
			Contact with underground cable	erect warning signs, inform workers	3	3	3	27	Experienced supervision by site staff and Engineer . Obtain As-built Drawings of Existing underground cables. Prepare a Issue-Based RA on Locating and exposing underground electrical services.	3	2	2	12		
			Use of equipment under cable	erect warning signs, inform workers no work under cable without permission and compliance with ESKOM requirements	3	3	3	27	Experienced supervision by site staff.	3	2	2	12		
		Water & Sewer	Underground pipes	care in excavation	3	2	2	12	Experienced supervision by site staff . Obtain relevant drawings for known underground services	2	2	1	4		
		Telephone	Overhead cables	erect warning signs, inform workers	1	3	2	6	Experienced supervision by site staff and engineer . Physical Identification of Telecom lines prior to commencement of lifting activity.	1	1	1	1		

	Clear area for site container and storage	Use of substandard hand tools	May be broken or improperly used	check tools for quality regularly	2	3	3	18	Correct PPE, Trained supervision	2	3	1	6
	Clear site		ergonomic risks	Rotate work	2	3	3	18	Ensure workers fit for work. Proper supervision	2	3	1	6

		Use of substandard Mechanical plant (Excavators, TLB, etc.)	noise induced hearing loss	see above	2	2	3	12	Proper supervision, operator training, Establishment of noise zones by AIA. Correct PPE including ear defenders/plugs	2	2	1	4
			plant striking person		3	3	3	27	warning lights and reverse hooter, trained operator, trained supervision	3	2	2	12
			Plant striking object/overturning		3	3	3	27	Proper supervision, operator training, Establishment of noise zones by AIA. Correct PPE including ear defenders/plugs	3	2	2	12
Environmental and facilities Regs	Waste Management	Use of temporary toilets	Health Issues	Use of chemical Toilets, at least one per 20 workers male and female separated	2	2	3	12	No Formal dehyde in chemicals. Serviced and cleaned at least once weekly	1	2	1	2
		coming into contact with buried medical waste	personal injuries and exposure to HBA	Request possible information on any possible medical waste buried on site before.	3	2	1	6	Always be vigilant and look for possible clues of medical waste buried underground when excavating. In a case that such waste is found, stop the operation at that particular area, barricade and report it to the Client.	3	1	1	3
		Incorrect Waste disposal	Health and Environmental issues	All waste properly disposed of to certificated Waste Disposal Site	2	2	3	12	No burning of cement bags or other refuse on site. Site to be kept tidy. Removal of all waste at regular intervals. Waste Disposal Certificates to be kept on file.	3	2	1	6
	Erect Offices	Use of lifting equipment	load falling/ injury to persons	Ensure lifting gear tested and certificate supplied qualified. No work under load area	3	3	3	27	load tested lifting gear and crane. Competent operators, Warning light and reverse hooter. Medical surveillance for operator.	2	3	2	12
	Fencing	Excavation of post holes	Improper use of tools	Training of workers	2	2	2	8	Ensure workers fit for work. Proper supervision	2	2	1	4
		Erection of posts	Improper use of tools	Training of workers	2	2	2	8	Ensure workers fit for work. Proper supervision	2	2	1	4

		Wire straining/fixing	Wire breaking injury to persons	Training of workers	2	2	2	8	Ensure workers fit for work. Proper supervision	2	2	1	4
	Public access	Persons in dangerous areas	injury to persons	Separate general public from construction area	3	2	2	12	Spec to require: Access control. Induction for visitors. Security control. Safety Notices.	3	1	1	3
	Use of small electrical tools	Contact with electricity	Electric shock	Certificate of Compliance for electrical supply	3	2	2	12	Ensure all connections secure, no breaks in cable. Proper routing of cables on site	3	2	1	6
CONSTRUCTION MOBILE PLANT & EQUIPMENT													
CR 23	Use of Construction mobile plant & equipment	Struck by vehicle	Injury to persons	Vehicle fitted with acoustic warning devices, hooter and reverse warning	3	3	3	27	Competent supervision and adequate pre-task training will be required. Competent fit operators	3	2	2	12
		Vehicle overturns	Injury to persons. Damage to vehicle	proper operation of vehicle	3	3	3	27	Competent supervision and adequate pre-task training will be required. Competent fit operators	3	2	2	12
		untrained operator	Injury to persons. Damage to vehicle	Only employ competent operators	3	3	3	27	Competent supervision and adequate pre-task training will be required. Competent fit operators	3	2	2	12
		Unlicensed plant	noise induced hearing loss	Fit or repair silencer	**2**	**3**	**3**	18	Proper supervision, operator training, Establishment of noise zones by AIA. Correct PPE including ear defenders/plugs	**2**	**2**	**1**	4
N-IH l Regs	Exposure to noise	over 85 Db for long period:	Hearing Loss	Avoid prolonged exposure to noise where possible	2	3	3	18	Noise monitoring survey by AIA,then to require establishment of noise zones. Noisy activities must be programmed in such a manner that it does not cause nuisance to the daily operations of the particular Health Facility.	2	2	2	8
	Exposure to dust	If severe lack of clear vision; Breathing problems	Loss of Lung Function	Dust prevention	2	3	3	18	specification to include dust palliative requirements. Contractor to provide a Method Statement on Dust Control and fully implement all such control measures when required.	2	2	2	8

EXCAVATIONS 500cm-1,5 m														
	Excavation by machine	Use of mechanical plant	Striking person or object	Vehicle fitted with acoustic warning devices, hooter and reverse warning	2	2	3	12	warning lights and reverse hooter, trained operator, trained supervision	3	1	2	6
			Untrained operator		2	2	3	12	excavation barricaded as required. Proper supervision	3	1	2	6
			machine fall into excavation		1	2	3	6	warning lights and reverse hooter, trained operator, trained supervision. Ensure that a trained banksman is available to guide the operator.	1	1	2	2
	Excavation	By Hand/ machine	Improper use of tools	Follow safe work procedures	2	2	2	8	Adequate supervision. Operator has certificate of competence and medical. Training of workers	2	1	1	2
		Trench collapse	Persons engulfed	Refer to geotech report if available prior to excavating. Follow approved excavation method statement	2	2	2	8	Checks by competent person. Shoring if recommended. Training of workers. Adequate safety precautions I e. well placed ladders or other escape apparatus. Conduct inspections prior to work commencing.	1	2	1	2
		Fall into excavation	injury to persons	proper training,	2	2	3	12	Adequate supervision. Training of workers. Proper demarcation with physical barricading.	2	2	2	8
		Ergonomic risks	injury to persons	proper training, and supervision	2	2	2	8	Rotation of work type, rest periods as needed.	2	1	1	2

CONCRETE WORK														
	Premix	delivery by truck	person struck by truck	Banks men to be appointed	2	2	2	12	Adequate supervision	3	1	2	6
			person struck by concrete poured into shuttering	Adequate supervision	2	2	2	12	Safe work procedures to be adhered to.	3	1	2	6
CR 20	machine mixing	Batch Plant	use of wheel barrows	proper training	1	2	2	4	Adequate supervision. Well maintained equipment	2	1	2	4
			trapped by machine	Check plant for pinch points	1	2	2	4	Adequate supervision. Well maintained equipment	2	1	2	4
			use of access ramps										
	hand mixing	use of small tools	contact with cement	care in opening cement bags	1	2	2	4	Ensure workers fit for work. Proper supervision	2	1	2	4
			inhale cement dust	care in opening cement bags	1	2	2	4	Ensure workers fit for work. Proper supervision	2	1	2	4
			ergonomic risks	Rotate work	1	3	3	9	Ensure workers fit for work. Proper supervision	2	3	1	6
													0
					2	2	3	12	Safe work procedures to be followed, toolbox talks	2	3	1	6
	use of concrete vibrator	injury to persons	noise, vibration, contact with vibrating head, contact with wet concrete	Operator training	2	2	3	12	Experienced supervision by site staff . Competent Inspection. Use of proper equipment	2	2	1	4
DEMOLITION OF WALLS & BRICKWORK														
	Delivery of bricks by truck	struck by truck	Injury to persons	Vehicle fitted with acoustic warning devices, hooter and reverse warning	3	3	3	27	Experienced supervision by site staff	3	2	2	12
	Offloading of bricks	Accidental Release of brick pallets	Injury to persons and/or damage to property	Safe lifting gear to be used.	2	2	3	12	Experienced supervision by site staff . Use lifting equipment that confirms with the requirements of DMR 18. Use of lifting equipment that has the necessary certification. Only competent operators should be allowed to lift or lower loads.	1	2	1	2
	Use of support work	Collapse of support work	Injury to persons	training of workers in use of equipment	1	2	2	4	Experienced supervision by site staff . Competent Inspection. Use of proper equipment proper calculation of loads involved by competent person	1	2	1	2
	use of access scaffolding	collapse of scaffolding	minor to possible fatality	Strictly adhere to SANS10085	3	3	3	27	Competent Scaffold Erectors, and Inspector should be appointed. Proper Scaffolding equipment should be provided, inspected and certified Safe for Work. All workers working at heights should be certified fit to work at heights. Fully implement the approved Fall Protection and Rescue Plan.	3	2	2	12
	Demolition of Internal Walls	collapse of Debris onto workers and other perssons in the affected area	minor to possible fatality	Strictly adhere to Demolition Plan & Risk Assessment.	3	3	3	27	Prepare a Risk Assessment, Demolition Plan. Induct workers on RA & Demolition Plan. Ensure full implementaiton of the Plan.	3	2	2	12
	PLUMBING													

	Plumbing and connecting into existing services	Exposure to foreign and possible HBA's	Possible Methane Gas Inhalation that could lead to suffocation. Exposure to other HBA's such as Hepatitis	Ensure appointment of registered, competent contractor	3	2	2	12	Proper Issue Based Risk Assessment and Implementation of approved Method Statement. Proof of medical certification relevant to the works. Gas fumes monitoring when working with sewer lines and in confined spaces. Constant monitoring of the activity.Ensure all workers involved on this activity are vaccinated for Hepatitis	3	2	1	6
	ELECTRICAL INSTALLATION												
	Electrical Contractor	Unregistered, incompetent contractor	poor work, cost overruns, no municipal connection	Ensure appointment of registered, competent contractor	3	2	2	12	Proper procurement procedures On completion COC	3	2	1	6
TRAFFIC ACCOMMODATION													
	Accommodation of traffic	Traffic hazards	Person struck by traffic	adequate control of traffic	2	3	3	18	CHSO to act has Traffic Safety Officer. Proper signage	2	2	2	8

	HAZARDOUS CHEMICALS													
HCS Regulations	Use/supply of hazardous Chemicals	improper use/storage of hazardous Chemicals	Fire, explosion poisoning of persons	Supply appropriate materials safety data information	3	2	3	18	component person appointed to check stores. Proper storage preferably in a steel cage with concrete flooring. Provision of fire extinguishers	3	2	2	12
	Concreting Works	Cement	Used across the project for a range of tasks, 50kg bags delivered on pallets, ergonomic risk from handling, dust exposure	Avoid contact with cement. Supply SDS	3	3	2	18	Dust control, PPE(eye and respiratory) Use of distributor when stabilising road. Rotation of workers	2	3	1	6
	Formwork/Support Work	Use of shutter oil	Usually hand application prior to placing formwork in position. Volatiles present	Avoid contact with shutter oil. Supply SDS	1	1	2	2	PPE - gloves for skin protection, adequate supervision	1	1	1	1
	Operate vehicle Plant on site	Use of Petrol/diesel/lubricants	Storage tanks on site. Fire, spillage, fumes	Avoid contamination with PDL	2	2	2	8	Local supplier preferred for petrol. bund walls around diesel tanks, emergency plan, Hazardous chemical store for petrol and lubricants. Supervision	2	2	1	4
	WORKING AT HEIGHT													
CR 10	Working at Heights	Scaffold not properly erected	Scaffold collapse	calculate load capacity of scaffold. Proper design of scaffold	3	3	3	27	Specification must ensure design is done by competent person Scaffolding to comply to SAN10085	3	2	2	12
		Scaffold not properly erected	Fall from height	Fall protection Plan by registered fall planner	3	3	3	27	Experienced supervision by site staff	3	2	2	12
		Scaffold not properly erected	Falling objects	Use of toe boards, proper decking, catch nets	3	3	3	27	Experienced supervision by site staff and Engineer. Competent Inspection	3	2	2	12
	Removal of Asbestos Sheeting & related materials	Exposure to Asbestos Fibres	Coming into contact and inhaling Asbestos Fibres	Full compliance of Asbestos Regulations is compulsory.	3	3	3	27	Use of Registered Asbestos Contractors is compulsory. Use of Proper PPE and disposal thereof is critical. Close monitoring and measurement of Asbestos Fibres by AIA should be conducted as per the Regulations.	3	2	2	12
	BIOLOGICAL HAZARDS													
	Working within medical facility	Exposure to contact and airborne diseases	Contracting /becoming ill	HIRA adequately done, Fitness to Work Medicals	2	3	3	27	Screening of employees, following protocols at medical facilities, Vaccinations where required.	2	2	2	12
	Removal of Asbestos related materials	Exposure to Asbestos Fibres	Coming into contact and inhaling Asbestos Fibres	Full compliance of Asbestos Regulations is compulsory.	3	3	3	27	Use of Registered Asbestos Contractors is compulsory. Use of Proper PPE and disposal thereof is critical. Close monitoring and measurement of Asbestos Fibres by AIA should be conducted as per the Regulations.	2	2	2	12

Province of the
EASTERN CAPE
HEALTH

PART C4 SITE INFORMATION

C4.1 SITE INFORMATION

Bid Description:	**Upgrading & Additions to NG Dlukulu, Middle Terrace, V Shumane & Raglan Road Clinics**
Project Number:	**SCMU3-23/24-0619-HO**

GENERAL

Prospective bidders to familiarize themselves with the locality, access, any other "restrictions". (Refer to Scope of Works C3). Prospective bidders to familiarize themselves with the locality, access, any other matters related thereto:

Location of Each Clinic:

V Shumane Clinic:
Address: T Street, Tyanti Location, Makanda Sub District, Makanda
Access: Access to the clinic is by tar road

Middle Terrace Clinic:
Address: 46 Middle Terrace, Makanda Sub District, Makanda
Access: Access to the clinic is by tar road

NG Dlukulu Clinic:
Address: Sani Street, Makanda Sub District, Makanda
Access: Access to the clinic is by tar road

Raglan Road Clinic:
Address: Raglan Road, Makanda Sub District, Makanda
Access: Access to the clinic is by tar road