

THE GOVERNMENT OF ZIMBABWE



BILLS OF QUANTITIES

PROPOSED STAFF ACCOMMODATION

AT FORBES BOARDER POST

IN

MUTARE

FOR

ZIMBABWE REVENUE AUTHORITY

ARCHITECTS, ENGINEERS AND QUANTITY SURVEYORS

MINISTRY OF LOCAL GOVERNMENT AND PUBLIC WORKS

P BAG 7755

CAUSEWAY

HARARE

MARCH 2022

CONTENTS

<u>Section</u>	<u>Trade</u>	<u>Page</u>
	Notices to Bidders	ii
1	Preliminaries and Generals	1
2	Staff Accommodation	20
3	Boundary Wall	56
4	Civil Works at Stand 7430	67
5	Civil Works at Stand 7353	75
6	Electrical Works	
7	Main Summary	

NOTICES TO BIDDERS

GENERALLY

These Bills of Quantities are to be read in conjunction with, and all workmanship and materials, unless otherwise describes, shall comply with the Ministry of Local Government and Public Works' "General Specification" revised in January 1978.

It is hereby made condition that the Contractor's submission of a tender based on these Bills of Quantities shall be accepted as proof that he is in possession of the above mentioned General Specification at the time of tendering and his tendered price was based on the requirements of such General Specification.

The Contractor is required to check the number of pages of all the documents, and all references thereto in Summary and the collections. Should any pages be missing or duplicated, or the figures or typing be indistinct, or the descriptions be ambiguous, he is to apply at once to the Ministry of Local Government and Public Works and have the same rectified.

Any errors or claims arising through the Contractor's failing to comply with the above will not be admitted after submission of his tender.

These Bills of Quantities are to be priced by the contractor and returned, fully priced in ink, only when his Tender is being considered for acceptance, and when called for by the Ministry of Local Government and Public Works.

SYSTEM OF MEASUREMENT

The method of measurement of these Bills of Quantities (Section 1, 2 & 3 only) is in accordance with the general principles laid down in the System of Measurement of Building Work in Zimbabwe, third edition, dated 1st May 1985, as issued by the Zimbabwe Institute of Quantity Surveyors and Construction Industry Federation of Zimbabwe. This system may be modified in certain respects as described in these

Bills of Quantities and it is to be understood that the system of measurement adopted in these Bills of Quantities is the only system which will be recognised in connection with this Contract.

TRADE NAMES, ETC.

Where names, manufacturer's catalogue or reference numbers, etc., are used in these Bills of Quantities, the items referred thereto shall be of equal quality, specification and mass in all respects to those specified and approved for any substitution shall be obtained in writing from the Ministry of Local Government and Public Works before submission of tenders, otherwise the specified materials, fittings, etc. will be assumed to have been allowed for in the tender.

DRAWINGS

The following drawings have been used in the preparation of these Bills of Quantities, and may be seen at offices of Ministry of Local Government and Public Works.

Architectural drawings

DRAWING TITTLE	PAPER SIZE	DRAWING No

SECTION 1 - PRELIMINARIES AND GENERALS

BILL NO. 1

PRELIMINARIES

NOTES TO TENDERERS

- A The following Preliminaries shall apply to all tenders whether based on Bills of Quantities or on a Specification, issued by the Ministry of Local Government and Public Works.

- B In the case of a tender based on Bills of Quantities the Tenderer should allow for all costs incurred in complying with these Preliminaries in the money column of this Bill and carry the total (if any) to the appropriate Summary in the Main Bills of Quantities, or as otherwise instructed in the Tender Documents.

- C In the case of a Tender based on a Specification, the Tenderer should include for all costs and expenses in complying with these Preliminaries in his lump sum Tender figure for the work.

- D In the case of a Contract based on a Specification those Preliminaries which refer to "Bills of Quantities", shall apply only where such term is synonymous with the term "Specification".

- E The Specification or Bills of Quantities are to be read in conjunction with, and all workmanship and material, unless otherwise described, shall comply with the current edition of the Ministry of Local Government and Public Works "General Specification of Materials and Workmanship" and with any amendments thereto. It is hereby made a condition that the submission of a tender based on Bills of Quantities or a Specification issued by the Ministry of Local Government and Public Works shall be accepted as proof that the Tenderer was in possession of a copy of this "General Specification" and amendments thereto at the time of tendering and that his tender price was based upon the requirements of such "General Specification" and amendments thereto.

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A No representation, explanation or statement which in any way alters the tender or contract documents, made prior to the acceptance of a tender or during the progress of the contract shall bind the Secretary for Local Government and Public Works unless such explanation, statement or alteration be made and confirmed under the signature of the Secretary for Local Government and Public Works.

B Should there be any doubt or obscurity as to the meaning of any particulars in the Specification, Bills of Quantities or Tender Documents, the Tenderer must obtain an explanation as to the true intent and meaning in writing from the Secretary for Local Government and Public Works before submitting his tender. No claim for extras arising from any doubt or obscurity will be admitted after the delivery of his tender.

C The Tenderer is required to check the number of pages in the Specification (and in the case of Bills of Quantities all pages and references thereto in the "Collections" and Summary), and should any pages or references thereto be missing or duplicated or the figures or typing be indistinct, he is to apply at once to the Secretary for Local Government and Public Works and have the same rectified. Any errors arising through the Tenderer failing to do this will not be admitted after the submission of his tender.

D The Contractor shall, when requested by the Secretary for Local Government and Public Works, deposit his Bills of Quantities fully priced out in ink with the Secretary for Local Government and Public Works, and on the basis of this Bill of Quantities all extras and omissions will be valued. The Secretary for Local Government and Public Works shall be at liberty to call for such adjustments of individual rates and rectify discrepancies as he considers necessary provided that the Tendered Amount is not altered.

CONDITIONS OF CONTRACT

E The Tenderer is referred to the "Conditions of Contract" and if he considers any of the clauses (or any amplification thereof given below) in such Conditions involves expense not included elsewhere, he should include for same.

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- A Should the Tenderer not be in possession of the Ministry of Local Government and Public Works Standard Conditions of Contract, two copies will be issued to him on application being made.

- B A Tenderer's failure to obtain a copy of the Conditions of Contract will not absolve him from complying with such Conditions.

- C Clause No. 1: Scope of Contract.

- D Clause No. 2: Drawings, Specifications and Bills of Quantities, etc.

- E Clause No. 3: Local and Other Authorities' Notices and Fees.

- F Clause No. 4: Setting Out of Works.

- G Clause No.5: Materials and Workmanship to Conform to Description.

- H Clause No. 6: Foreman.

- J Clause No. 7: Access for Architect to Works.

- K Clause No. 8: Clerk of Works.

- L Clause No. 9: Ascertainment of Prices for Variations.

- M Clause No. 10: Bills of Quantities.

Should the Contractor not affix any figures in the money column against any particular items, he shall write hyphens thus:- - against such items.

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All measurements, sizes and quantities throughout the Bills of Quantities are taken nett and should be held to mean the finished measurement and sizes, unless otherwise stated. The Quantities represent the actual nett quantities left in the building. The Contractor must allow in his prices for all cutting and waste, etc.

The Bills of Quantities are not to be used for the ordering of materials except at the Contractor's own risk. They have been prepared in order to enable the Contractor to furnish an estimate for the work and to provide unit rates for adjustment of variations.

No alterations, erasures or additions are to be made by the Tenderer in the text of the Bills of Quantities, and should any such alterations or additions be made the same will not be recognised and the text of the Bills of Quantities will be adhered to.

To assist the Tenderer in casting the various trades in these Bills of Quantities, sufficient space has been left at the end of each trade to enable him to cast each page separately, and carry the same to a column on the page in question under the heading of "Collection".

A Clause No. 11: Unfixed Materials when taken into account to be Property of the Government.

B Clause No. 12: Defects After Completion.

C Clause No. 13: Assignment or Sub-letting.

D Clause No. 14: Injury to Persons or Property.

(a) Injury to Persons: The Contractor is to allow for all costs and charges in taking out an Insurance Policy covering THIRD PARTY RISKS, in the joint names of the Government and the Contractor.

(b) Workmen's Compensation.

(c) Injury to Property.

(d) Damage resulting from riot or civil commotion.

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A Clause No. 15: Insurance. The Contractor is to allow for all costs and charges in insuring the building against fire, for the full amount of the Contract plus 12½% to cover professional fees, from the commencement of work until the building is handed over. The policy is to be deposited with the Secretary for Local Government and Public Works and payments to the Contractor may be withheld until this Clause has been complied with.

B Clause No. 16: Occupation.

C Clause No. 17: Date of Possession and Completion.

D Clause No. 18: Damages for Non-completion.

E Clause No. 19: Delay and Extension of Time.

F Clause No. 20: Determination by Government.

G Clause No. 21: Determination by Contractor.

H Clauses No. 22 and 23: Nominated Sub-contractors and Suppliers.

Where the Government becomes the nominated sub-contractor or the nominated supplier no cash discount will be allowed.

When during the course of the contract the Government omits Provisional Sums included in the Bills of Quantities, Specification or Tender Documents for nominated sub-contractors or nominated suppliers and negotiates a separate contract for such work to be paid direct by the Government, the main Contractor shall allow such facilities and he shall be entitled to payment of profit and attendance at the rates included by him in the Bills of Quantities against the respective items, adjusted pro rata on the amount paid direct by the Government, but shall not be entitled to claim cash discount or compensation for loss thereof.

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In the event of Provisional Sums for nominated sub-contractors' or suppliers' work being omitted in whole or in part, and such work not being otherwise carried out during the period of this contract all cash discount, profit and attendance shall be similarly omitted in whole, or in part pro rata.

A Clause No. 24: Artists, Tradesmen and Works Outside the Contract.

The Government reserves the right at all times during the progress of the contract to let separate contracts for Specialists' work, or any other similar work not included in the Bills of Quantities, Specification or Tender Documents, and the main Contractor must grant access, and all facilities to such artists, tradesmen and others so engaged by the Government and such persons shall not be regarded as sub-contractors under this contract and no builders' discount or profit in respect thereof shall be payable to the Main Contractor, but in the event of attendance and making good being required payment will be made on a fair valuation of the services performed.

To assist the Contractor in arranging any attendance required, the Government may, when there is prior knowledge of specialist work, state in the Specification or Bills of Quantities the approximate value of such intended or existing separate contracts, but the inclusion of this information is for the Contractor's guidance only and shall not be deemed to be an amount included in the value of the Contract.

B Clause No. 25: Certificates and Payment

The Contractor when requiring a progress payment, shall furnish the Secretary for Local Government and Public Works with an approximate statement of the work executed, detailed and priced under trades and based on his original tender.

In all cases where the Contractor requires payment for unfixed materials on the site, the application for a progress payment must be accompanied by a complete list of all such materials, signed by the Contractor and countersigned by the Clerk of Works. All such material shall become the property of the Government and shall not be taken away (except for use in the building) without the written permission of the Secretary for Local Government and Public Works.

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Not more than 80% of the value of any materials on site will be included in progress payments and such payments will only be made for materials which are properly protected from weather and theft, and which have not, in the opinion of the Quantity Surveyor, been brought prematurely upon the site.

All monies due to the nominated sub-contractors or suppliers and which are included in the contractor's certificate shall be paid to the sub-contractors or suppliers by the Contractor within 21 days after the date of the certificate in which the sum due is included. in the event of such payment not being made within the above stipulated time, the Contractor shall lose all right to claim any cash discount on the monies involved and the Secretary for Local Government and Public Works reserves the right to deduct ALL sums of maney that are due to the said sub-contractors or suppliers from the Contractor's next certificate and pay them direct to the sub-contractors or suppliers.

It is a condition of this contract that the Government shall not be bound to pay (except under an Order of the Court) any monies due or to become due hereunder to any persons save the Contractor who shall not have the right to assign his rights to payment to any third party without first obtaining the written consent of the Government to such assignment.

A Clause No. 26: Wages

B Clause No. 27: Non-Payment of Certificates

Notwithstanding the provisions of Clause 25 of the "Conditions of Contract", the Government reserves the right to withhold retention money beyond the retention period until the Contractor has submitted to the Secretary for Local Government and Public Works all receipts in respect of monies due to nominated sub-contractors and nominated suppliers which have been included in payments made to the Contractor, and in the event of the Contractor failing to produce within 14 days of being asked in writing, conclusive evidence that such amounts have been fully paid, the Government shall have the right to make final payment direct to such sub-contractors or suppliers and to deduct the value thereof from the retention money, or other monies due under the Contract.

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A Clause No.28: Surety Bond
The Contractor is to allow for all costs and charges in taking out the surety bond.

B Clause No. 29: Corrupt Gifts and Payments of Commission.

C Clause No. 30: Photographs.

D Clause No. 31: Articles of Value or Antiquity.

E Clause No. 32: Patent Rights and Royalties.

F Clause No. 33: Arbitration.

PRELIMINARIES AND GENERAL

The tenderer is referred to section B, Preliminaries and General, Pages B.1 to B.9 of the General Specification and if he considers that any of the clauses or any amplification thereof given below involves expense not elsewhere included, he should include for same hereunder.

Clause B.1 Public Liability.

G 1.1 Noise control.

H 1.2 Nuisance.
The Contractor shall make adequate provision by spraying, erecting screens or other suitable methods, against nuisance or damage by dust to all works under this Contract, to persons or property in the vicinity, and he will be held solely responsible for any complaints, damage or claims in this connection.

J 1.3 Adjoining owners.
The Contractor shall not in the execution of the Works enter upon or otherwise make use of any lands adjoining the site of the Works as demarcated on the site plan, without the consent in writing of the Secretary for Local Government and Public Works or without the consent of the owners of such adjoining lands, having been previously obtained, but shall (except with such consent) confine his operations within the site of the Works. No trespassing beyond the limits as

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above described will be allowed.

- A 1.4 Adjoining property.
- B 1.5 Police regulations.
- C 1.6 Statutory obligations.
- D 1.7 Notices, fees and charges.

Clause B.2 Prevention of Damage or Loss

- E 2.1 Locate existing services.
- F 2.2 Protect existing services.
- G 2.3 Damage to services.
- H 2.4 Fire precautions.
- J 2.5 Damage to roads.
- K 2.6 Repairs to roads.
- L 2.7 Clear roads
Nothing shall be done by the Contractor or anyone employed by him that shall in anyway interfere with the free use by the public of any of the roads, gravel drives, paths, etc., within or approaching the site.
- M 2.8 Protect trees and shrubs.
- N 2.9 Replace trees and shrubs.
- O 2.10 Existing features.
Make good or reinstate at the Contractor's expense all damage which may occur to gates, fences, buildings or other Government property existing upon the site.
- P 2.11 Existing damage.

Clause B.3 Management/administration Procedures

- Q 3.1 Programme.
- R 3.2 Submit.
- S 3.3 Submission

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A	3.4	Receipt.	
B	3.5	Monitoring. The Contractor shall provide on site a carbon copy record book which shall provide one original and two copies in which shall be recorded all site visits and daily record of work done.	
C	3.6	Safety, health and welfare.	
D	3.7	Use of site.	
E	3.8	Site meetings.	
F	3.9	Minutes.	
G	3.10	Measurements.	
H	3.11	Labour return.	
J	3.12	Daywork vouchers.	
K	3.13	Order materials.	
		<u>Clause B.4 Resources/Temporary Works and Services</u>	
L	4.1	Locations.	
M	4.2	Temporary works.	
N	4.3	Roads.	
O	4.4	Buildings.	
P	4.5	SO's site office.	
Q	4.6	Storage for cement and lime.	
R	4.7	Sanitary accommodation for supervisory staff.	
S	4.8	Sanitary accommodation for artisan staff.	
T	4.9	Hoardings, gantries and scaffolding.	
U	4.10	Name boards.	
V	4.11	Telephones.	
W	4.12	Water. Allow for providing all water for the Works and for	
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sub-contractors, pay all fees and charges legally demandable and provide all necessary piping, taps and other fittings, storage tanks, etc.

If this Contract embodies work at a Government building or institution where water is already laid on, the Contractor may by agreeing in writing with the Secretary for Local Government and Public Works, use the water from this supply. (Any connection to or extensions of the existing supply pipes must be provided at the Contractor's expense.)

If permission be thus obtained and the Contractor uses the water from this source, he shall pay the Government (by deduction from the amount due under the contract) a sum equal to one quarter percent ($\frac{1}{4}\%$) of the final completed cost of the work executed under this contract as disclosed in the final statement, and shall allow in his price for water such amount as he considers necessary to cover this cost.

The use of water from a Government supply is granted subject to the condition that the water used by the Contractor shall be for building purposes only and should the Government be satisfied that the Contractor is unduly wasting water and/or using water for any subsidiary purpose such as providing for living accommodation of his workmen on the site, the Government reserves the right to deduct from monies due under the contract their assessment of all such additional water used.

- A 4.13 Lighting and power.
It is entirely the Contractor's responsibility to ascertain before tendering the availability of electricity and all costs and charges thereof, and no claim arising out of this clause will be considered after the submission of a tender.
- B 4.14 Plant.
- C 4.15 Sole use of plant.
- D 4.16 Removal of plant.
- E 4.17 Plant to comply.
- F 4.18 Protective clothing.

Clause B.5 Nominated Firms/Public Bodies

- G 5.1 Prime cost or provisional sums.
Where Provisional and Prime Cost Sums are included
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for works to be performed, or materials supplied by nominated sub-contractors or suppliers, the Secretary for Local Government and Public Works will invite tenders (or may request the Contractor to obtain not less than three tenders) and direct the Contractor to accept a tender from a sub-contractor who will then become a nominated sub-contractor or supplier in terms of the Conditions of Contract: Clauses 22 and 23". The main Contractor will be entirely responsible for the proper and timely execution of the sub-contract and no contract will exist between the will nominated sub-contractor or supplier and the Government, and it is the responsibility of the main Contractor to ensure that the sub-contractor indemnifies the Contractor against the same obligations in respect of the sub-contract, as those for which the Contractor is liable in respect of the main contract.

The Contractor shall not order any materials for which Provisional or Prime Cost Sums are included without first receiving instructions in writing from the Secretary for Local Government and Public Works so to do.

The Contractor will be required to produce all receipted invoices, if demanded by the secretary for Local Government and Public Works for the adjustment of accounts.

If items are reserved for work of a nature usually carried out by the Contractor in the course of his business, the Government may give the Contractor an opportunity of tendering for the same without prejudice to the Government's right to reject the lowest or any tender.

- A 5.2 Sub-contractors.
The names of all sub-contractors (other than nominated) whom the Contractor proposes to employ shall be submitted to the Secretary for Local Government and Public Works for approval before the signing of the Contract. Such approval shall not be unreasonably withheld.
- B 5.3 General Attendance.
Wherever the words "allow for attendance" occur, it shall be deemed to cover all the Contractor's costs involved in the following:-
(a) For giving the sub-contractor every facility to enable him to execute his work in a workmanlike manner and in proper order and sequence.

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- (b) For allowing the sub-contractor free use of all scaffolding and plant as may be reasonably required by him, and for erecting, shifting and removing as necessary such scaffolding and plant free of charge to the sub-contractor.
- (c) For providing water or electricity required by the sub-contractor.
- (d) For receiving, unloading, checking, and removing to store all the sub-contractor's materials, articles and fittings on arrival at the site, and where necessary for providing proper storage accommodation for the prevention of pilferage, damage, etc., returning all empties and packing of same carriage paid, and for hoisting or lowering materials, articles, or fittings to the requisite levels and positions in the the building.
- (e) For agreeing with the sub-contractor proper and accurate working dimensions and other particulars and for obtaining from the sub-contractor full data and particulars as to the sub-contractor's requirements, with particular regard to chases, recesses, mortices, notchings, holes, perforations, etc., and for obtaining full information from the sub-contractor to enable the Contractor to make proper arrangements and provisions during the general execution of the work for the receipt of the sub-contractor's work. The cost of any alterations consequent upon the non fulfilment of the foregoing stipulations will be at the Contractor's sole expense.
- (f) For all items, conditions or requirements with regard to the sub-contractor's work mentioned or described in the general Conditions of Contract, Specification and Preliminaries not specifically stated in the foregoing.

A 5.4 Supervision.

B 5.5 Programme.

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Clause B.6 Quality/Testing/Approvals.

- A 6.1 Commodities.
- B 6.2 Manufacturer's Recommendations.
- C 6.3 Standards.
- D 6.4 Single Sources.
- E 6.5 Samples of commodities.
- F 6.6 Samples of work.

Clause B.7 Accuracy/Setting Out.

- G 7.1 Set out the works.
- H 7.2 Profiles.
- J 7.3 Permanency.
- K 7.4 Instruments.
- L 7.5 Check all dimensions.
- M 7.6 Dimensions.

Clause B.8 Protection.

- N 8.1 Safeguard the site.
Provide all necessary barriers, hoardings, footways, etc., and provide all necessary watching and lighting as required for the protection of the Works and materials and plant on the site, and for the protection of the public. The Contractor will be held responsible for all injury or accident that may happen through failure to provide adequate protection and lighting.
- O 8.2 Inclement weather.
- P 8.3 Stormwater and surface water.
The Contractor must satisfy himself as to the quantities of subsoil and surface water to be dealt with and is to keep the building foundations and work generally clear of surface, subsoil and stormwater by baling, pumping or otherwise. Provide for dealing with springs, underground streams, etc., which may be opened up and provide all necessary pipes and machinery sufficient for the above purposes, and an ample supply

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of power, and apply the same as necessary to enable all operations to be promptly and efficiently performed, including night and day attendance and work as necessary.

- A 8.4 Overloading.
- B 8.5 Cleanliness.
- C 8.6 Damage by sunlight.
- D 8.7 Datum.

Clause B.9 Prefabricated Elements.

- E 9.1 Delivery.
- F 9.2 Check fixings.
- G 9.3 Authorise erection.
- H 9.4 Notice.

Clause B.10 Work at Completion.

- J 10.1 Clean the works.
- K 10.2 Cleaning.
- L 10.3 Remove.
- M 10.4 Painted surfaces.
- N 10.5 Moving parts.
- O 10.6 Security at completion.
- P 10.7 Making good defects.
- Q 10.8 Maintenance instructions.

Clause B.11 Miscellaneous.

- R 11.1 Photographs.
- S 11.2 Articles of value or antiquity.

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VISIT SITE

The Contractor must visit the site of the Works before submitting his tender and carefully examine the conditions that exist, and he is to satisfy himself as to the nature of the materials to be excavated as well as all natural conditions, water and light services, transport facilities, etc. No allowance will be made in the event of conditions being different from what he expected.

B

FLUCTUATIONS IN COSTS

1) Where applying to nominated sub-contractors or suppliers

Where the following provisions for fluctuations in wages, cost of living allowances or prices of materials are applicable to a nominated sub-contractor or nominated supplier, the additional payments to them are to be regarded as a reimbursement of expense only, upon which the contractor shall not be entitled to claim any additional pro rata profit in terms of Clause 25 (e) of the conditions of contract.

2) Fluctuations in wages and cost of living allowances

The Contractor is to pay not less than the recognised Standard Rate of wages and Allowances to all employees.

If at any time between the date of delivery of the Contractor's tender and the date for the completion of the Works any statutory fluctuation (i.e. any specific increase or decrease stipulated by the Government Gazette) takes place in the Standard Rate of Wages, Cost of Living Allowances, or other statutory compulsory contribution in respect of the men employed on the Works covered by this Contract, whether on the site or in the workshops or yards of the Contractor or sub-contractors (but not in respect of merchants or suppliers), the Contractor is to submit WEEKLY to the Secretary for Local Government and Public Works receipted time sheets, together with a weekly return of the number of hours worked, signed by the Foreman and countersigned by the Clerk of Works, and the contract price shall be adjusted in accordance with the statutory fluctuation. Variations, if any, made under this clause shall be a nett increase or increase or decrease, and no allowance will be made for any profit whatsoever. No claims will be admitted in respect of labour employed after the expiration of the contract completion date or any amendments thereto under Clause 19 of the Conditions of contract.

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3) Fluctuations in prices of materials

Should any statutory fluctuation (i.e. any specified increase or decrease in control prices of materials stipulated by notices published in the Government Gazette) take place after the date of delivery of the Contractor's tender, the Contractor is to submit invoices for such materials certified by the Clerk of Works and the contract price shall be adjusted in accordance with the statutory fluctuation. Such variations, if any, made under this clause shall be a net increase or decrease, and no allowance will be made for any profit whatsoever.

The term "statutory fluctuation" is accepted to cover variation in custom duty or other Government tax, duty or surcharge only when detailed in the relevant Act of Parliament or statutory notices as payable direct on specified building materials and items incorporated in a building structure but will not be accepted to cover any indirect variation of costs or overheads, etc., of the Contractor, sub-contractors, merchants or suppliers, arising from fluctuations in such items as railage, shipping rates, insurance, postage, dock dues, clearance charges, transport, power and fuel costs, etc., whether arising directly or indirectly from Government action.

No claims will be admitted under this Clause for statutory fluctuations coming into effect after the expiration of the contract completion date or any amendments - thereto under Clause 19 of the Conditions of Contract.

If the Contractor wishes to be protected against fluctuations in cost of any basic materials he is to attach to the Form of Tender a list of such materials and prices in respect of which he wishes to be protected. Such prices to be those upon which he bases his tender.

In support of these prices, the Contractor is to furnish with his tender bona fide current merchants quotations (for quantities as required for the job).

The prices actually paid must be substantiated by receipted invoices, and all adjustment will be net with no allowance for profit, provided that if the variations are positive then the Contractor may add not more than 5% to the net amount.

At completion of the works the Contractor will be required to substantiate the quantities used and the prices actually paid for all items listed in order that Government may benefit for any decrease in price that may have occurred.

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Orders for materials as listed shall have been placed within a reasonable time after the date of acceptance of the tender, otherwise no adjustment will be made. Such time to be mutually agreed when the tender is provisionally accepted.

All delivery notes for materials as listed must be certified by the Clerk of Works as having been delivered to the site, and shall be submitted to the Secretary for Local Government and Public Works failing which no adjustment will be made.

Where no materials have been listed the tender shall be treated as a firm tender.

Dumping duties are not acceptable as fluctuations, and it is a condition of the tender that any dumping duty levied at an time on items and goods incorporated in this contract shall be payable by the successful tenderer, and not recoverable from the government.

A AGREED WORKING HOURS

No work of any kind or description shall be done outside the agreed working hours of the building industry except such as shall be unavoidable or absolutely necessary for the saving of life or property, or the safety and protection of the works. Should the Contractor desire to execute any work outside the agreed working hours of the building industry, he shall first obtain the permission of the Secretary for Local Government and Public Works and any work executed outside such hours without the written permission having been first obtained will not be paid for, or if the Secretary for Local Government and Public Works desires the same taken out or pulled down and removed.

B DISMISSAL OF INCOMPETENT WORKMEN

The Contractor shall on the request of the Secretary for Local Government and Public Works immediately dismiss from the works any persons employed thereon who may, in the opinion of the Secretary for Local Government and Public Works be incompetent or misconduct himself, or is likely to cause or who has caused strikes, disturbances or delays, and such persons shall not again be employed on the works without permission from the Secretary for Local Government and Public Works.

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COLLECTION

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BILL NO. 1: PRELIMINARIES
CARRIED TO SUMMARY PAGE OF MAIN BILL

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.....
SIGNATURE OF CONTRACTOR

.....
DATE

SECTION 2 - STAFF COTTAGES

BILL NO.2

FOUNDATIONS (PROVISIONAL)

(For Preambles see General Specification)

Note: Foundations have been measured to top of surface bed.

SITE CLEARANCE

A	Clear site of all rubbish, bushes, shrubs, undergrowth, hedges, small trees, stumps, roots,	m ²	284
B	Cut down and remove tree exceeding 500 and not exceeding 1000 mm girth measured 1000 mm above ground level including grubbing up roots and filling in holes.	no.	4
C	Ditto tree exceeding 1000 mm and not exceeding 2000 mm ditto.	no.	4

EXCAVATION

Pumping and bailing

D	Allow for the keeping excavations free of storm, surface and mud by pumping and bailing.	item	1
E	Excavate over site to remove vegetable soil average 150 mm deep and deposit on site not exceeding 100 metres.	m ²	179
F	Disposal of topsoil	m ³	27

Carried to collection

	<u>Excavate in pickable earth for</u>			
A	Reduced levels not exceeding 2 metres deep.	m ³	27	
B	Surface trenches not exceeding 2 metres deep.	m ³	81	
C	Allow for searching and excavation all ants' nests below ground level, treating with "Shelldrite Ant Poison "fill in and well ram selected excavated material and consolidate.	m ³	4	
D	Extra over excavation in pickable material for excavation in hard pickable material.	m ³	17	
E	Ditto excavation in rock.	m ³	11	
	<u>Planking and strutting</u>			
F	Allow for maintaining and supporting sides of all excavations and making good all slips.	m ²	278	
	<u>Disposal</u>			
G	Redig from spoil heap, return, fill and well compact selected excavated material around foundations to 95% L.C.E. density.	m ³		
H	Redig from spoil heap and cart off site.	m ³	27	
	Carried to collection			

	<u>Formation</u>			
A	Scarify ground to a depth of 150 mm and compact to 95% L.C.E. density.	m ²	179	
B	Selected and approved clean, hard, non-expansive granular filling supplied and brought onto site by the contractor well watered and mechanically compacted under ground slabs in layers of 150 mm thick to 90% HCE density	m ³	54	
	<u>SUNDRIES</u>			
C	250 Micron black polythene sheeting well lapped at joints including all cutting and waste (measured nett) laid over filling to receive concrete.	m ²	179	
	<u>TERMITES</u>			
D	Termite treatment as described to top of filling and foundation walls with "Shelldrite Ant Poison" by a specialist company and provide a written 10 year guarantee.	m ²	179	
	<u>PLAIN CONCRETE</u>			
	<u>Concrete (Grade 25MPa) in</u>			
E	Footings.	m ³	22	
F	Ground floor slabs.	m ³	16	
	<u>Sundries</u>			
G	Strike off and cure top of concrete.	m ²	179	
	Carried to collection			

	<u>Welded fabric reinforcement of approved manufacture including all cutting, tying, placing in position with necessary temporary supports and minimum 300 mm laps both ways (measured nett)</u>			
A	Ref. S193 (mass of 1.93 kg/square metre) in top reinforcement to slab.	m ²	154	
	<u>BRICKWORK</u>			
	<u>Brickwork in approved common bricks in cement mortar as described</u>			
B	Half brick wall.	m ²	28	
C	One brick wall.	m ²	125	
	<u>Reinforcement</u>			
	<u>Brickforce lapped at joints and junctions and building in as the work proceeds (measured nett)</u>			
D	Ref. C1 in half brick walls.	m	111	
E	Ref. C2 in one brick walls.	m	493	
	Carried to collection			

COLLECTION

PAGE

20

21

22

23

BILL NO.2: FOUNDATIONS (PROVISIONAL)
CARRIED TO SUMMARY

BILL NO.3

CONCRETE, FORMWORK AND REINFORCEMENT

(For Preambles see General Specification)

STRUCTURAL CONCRETE

Vibrated reinforced concrete Grade 25 Mpa in

A	Beams	m ³	2
	<u>Formwork Class A as described to</u>		
B	Soffit of beams, lintels.	m ²	10
C	Sides of beams, lintels.	m ²	16

REINFORCEMENT

Steel bar reinforcement

D	High yield deformed steel reinforcement bars all sizes.	kg	280
---	---	----	-----

Sundries

E	Strike off and cure top of concrete.	m ²	10
---	--------------------------------------	----------------	----

Carried to collection

<u>PRECAST CONCRETE</u>			
<u>Lintels</u>			
A	115 x 170 x 1360mm long	no	4
B	230 x 170 x 1480mm long	no	8
<u>Dripstones</u>			
C	Rainwater dripstone 450 mm wide and 650 mm thick and 800 mm long with segmental channel formed in top and place in position.	no.	16
<u>Precast concrete apron</u>			
D	900 x 900mm Precast concrete pavers	m ²	95
<u>Precast concrete Coping</u>			
E	Precast concrete coping as per Architects's design and Engineer's specification on top of parapet walls.	m	56
<u>TESTING</u>			
F	Allow for carrying out slump tests when directed as described.	item	1
Carried to collection			

COLLECTION

PAGE

25

26

BILL NO.3: CONCRETE, FORMWORK AND
REINFORCEMENT CARRIED TO SUMMARY

BILL NO.4

BRICKWORK

(For Preambles see General Specification)

SAMPLES

A	Allow for providing samples of all bricks as	item	1
---	--	------	---

BRICKWORK

Brickwork in approved common bricks in cement mortar as described

B	Half brick wall.	m ²	67
---	------------------	----------------	----

C	Half brick in beam filling.	m ²	7
---	-----------------------------	----------------	---

D	One brick wall.	m ²	298
---	-----------------	----------------	-----

SUNDRIES

E	Bed wall plate in cement mortar.	m	39
---	----------------------------------	---	----

F	1,25 mm Galvanised hoop iron tie 25 mm wide and 1000 mm long one end built into brickwork or cast into concrete and other end wrapped around and spiked to wall plate and foot of truss.	no.	51
---	--	-----	----

G	230 x 150 mm Terra Cotta louvred and gauze backed external air brick and building into brick wall.	no.	32
---	--	-----	----

H	230 x 150 mm cast plaster internal air brick and building into opening in plastered wall.	no.	32
---	---	-----	----

WINDOW CILLS

I	Brick on edge cills with dpc under (elsewhere measured). All mortar joints and holes exposed at side ends of cill to be plugged with crushed brick and cement mixture to match colour of cill bricks.	m	12
---	---	---	----

Carried to collection

<u>DAMP PROOF COURSE</u>			
<u>One layer of three ply bituminous felt sheeting as damp proof course as described, well lapped at joints and junctions (measured nett)</u>			
A	On half brick walls.	m ²	3
B	On one brick walls.	m ²	26
C	Under cills.	m ²	2
D	Under precast concrete copings.	m ²	13
<u>REINFORCEMENT</u>			
<u>Brickforce lapped at joints and junctions and in as the work proceeds (measured nett)</u>			
E	Ref. C1 in half brick walls.	m	197
F	Ref. C2 in one brick walls.	m	877
<u>BUILDING IN</u>			
G	Set up in position, cross brace and build in steel door frame not exceeding 5 square metres.	no.	8
<u>Leave or form opening through one brick wall including temporary centering to flat soffits of brickwork complete with all strutting, shoring not exceeding 5 metres high, bolting, wedging easing, striking and removing</u>			
H	Opening for Purpose made aluminium doors exceeding 5 square metres in area	no.	4
I	Opening for Purpose made aluminium windows not exceeding 5 square metres in area	no.	12
Carried to collection			

COLLECTION

PAGE

28

29

BILL NO.4: BRICKWORK
CARRIED TO SUMMARY

BILL NO.5

ROOF COVERINGS

(For Preambles see General Specification)

"Harvey" concrete roof tiles in approved colour laid on sawn softwood battens to be fixed in strict accordance with the Manufacturers printed instructions including all square cutting (measured nett) to be fixed by an approved firm of specialits.

A	Interlocking concrete tiles laid on softwood battens (elsewhere measured).	m ²	251
B	Half round ridge or hip tile with and including three ply bituminous felt soaker bedded and pointed in cement mortar.	m	20

BILL NO.5: ROOF COVERINGS
CARRIED TO SUMMARY

BILL NO.6

CARPENTRY

(For Preambles see General Specification)

PREFABRICATED ROOF TRUSSES

The trusses are to be "Gangnail" Hydronail or other equal and approved prefabricated timber trusses with all members in the same plane and jointed together with steel plate nails. All timbers are to be SW.

The roof is to be created in accordance with the drawings.

Prices are to include for all necessary trusses and bracing, and for hoisting and fixing in position.

The roof is designed to carry concrete roofing tiles and, plasterboard ceilings with trusses spaced at approximately 750 mm centres and the contractor will be required to produce all design calculations for checking, notwithstanding which, he will be held responsible for the sufficiency of the design.

A	Trusses, necessary hips, jack rafters, bracing, purlins etc fixed complete as per drawings	item	1
---	--	------	---

Sawn softwood

B	38 x 114 mm wall plate.	m	39
---	-------------------------	---	----

EAVES AND VERGES

C	225 x 12 mm cement fibre fascia board	m	40
---	---------------------------------------	---	----

**BILL NO.6: CARPENTRY
CARRIED TO SUMMARY**

BILL NO.7

JOINERY AND IRONMONGERY

(For Preambles see General Specification)

CEILINGS

A	6 mm plasterboard ceiling boarding (plaster finish elsewhere measured) and fixing to and including 50 x 25 mm sawn softwood bandering at 400mm centres one way next wall and at end joints, skew nailed in opposite directions to roof timbers (elsewhere measured) including covering all joints with and including 75 mm wide strip of scrim planted on including all square cutting and waste	m ²	154
B	Extra over for forming trap door with 750 x 750mm clear opening comprising 20mm blockboard door size 775 x775mm hardwood lapped all round fitted loose with 38 x 38mm planted on (provisional) softwood rebated frame all round and 20 x 25mm cover beads.	no	4

Cornices

C	75mm Rhino coved cornice including mitres, etc.	m	183
---	---	---	-----

DOORS

Semi-solid core internal quality flush doors with venner suitable for painting both sides.

D	44 mm Door. Size 813 x 2030 mm.	no.	4
---	---------------------------------	-----	---

Solid core external quality fire rated flush doors with veneer suitable for painting both sides

E	44 mm Door. Size 813 x 2030 mm.	no.	4
---	---------------------------------	-----	---

Carried to collection

IRONMONGERY

A	Union No. CZ682 - 24 - 95CH two lever mortice lockset.	no.	4
B	Union No. CZ682 - 24 - 77CH three lever mortice lockset.	no.	4

BUILT IN CUPBOARDS (PROVISIONAL)

C	Provide a sum for the supply, delivery and installation of kitchen cupboards, polished granite vanity worktops executed complete as per Architect's drawings and specifications.	item	1
D	Provide a sum for the supply, delivery and installation of bedroom built-in cupboards executed complete as per Architect's drawings and	item	1

Carried to collection

COLLECTION

PAGE

33

34

BILL NO.7: JOINERY AND IRONMONGERY
CARRIED TO SUMMARY

BILL NO.8

METALWORK

(For Preambles see General Specification)

STANDARD DOOR FRAMES

Standard full profile pressed steel door frames with chromium plated striking plates where appropriate (building in elsewhere measured)

To suit half brick wall (P.B.S.) for

A 44 mm Door size 813 x 2030 mm. no. 4

To suit one brick wall (P.B.S.) for

B 44mm Door size 832 x 2030 mm. no. 4

PURPOSE MADE ALUMINIUM WINDOWS, DOORS AND FRAMES AS DESCRIBED (BUILDING IN ELSEWHERE MEASURED) INCLUDING 4mm EXTERNAL GLAZING WITH U-VALUE OF 5.73 AND SHGc OF 0.6.

The whole to be executed by an approved firm of specialists. (Refer to the Window and Door Schedule for type in parenthesis)

C Window type AC2F size 1020 x 950 mm high with and including 4mm obscure glass. no. 4

D Window type AC2F size 1020 x 950 mm high with and including 4mm clear glass. no. 4

E Window type AAW2 size 900 x 1800 mm high with and including 4mm clear glass. no. 4

F Sliding door size 2510 x 2180 mm high with and including 8mm clear laminated glass. no. 1

BILL NO.8: METALWORK CARRIED TO SUMMARY

BILL NO.9

PLASTERING AND WALL LININGS

(For Preambles see General Specification)

EXTERNALLY

One coat cement plaster (1:4) as described including all labours with a fine woodfloat finish on

A	Walls.	m ²	298
B	Ditto in narrow widths.	m ²	1

INTERNALLY

One coat cement/sand plaster (1:4) and set in rhinaset plaster with woodfloat finish on to the following surfaces

C	Walls.	m ²	306
D	Ditto in narrow widths.	m ²	2

Two coats "Rhinobond" plaster and one skimming coat of "Rhinaset" plaster applied with an approved flicking machine to give a tyrolean finish to an even thickness to the Architect approval on plasterboard

E	Ceilings	m ²	154
---	----------	----------------	-----

Carried to collection

A	Extra for 50 mm wide steel trowelled margin to edge of ceiling	m	183	
	<u>WALL TILING</u>			
	<u>6 x 600 x 300 mm "Porcelain" or other equal approved glazed wall tiles with continuous horizontal and vertical joints fixed with and including approved adhesive on and including cement sand screed (1:4) and point in coloured cement, on completion cleandown to approval, on:</u>			
B	Walls.	m ²	174	
C	Walls, reveals, etc in narrow widths.	m ²	1	
	<u>Sundries</u>			
D	150 x 150 mm recessed type toilet roll holder with spring loaded removable wood spindle and building into plastered brickwork.	no.	4	
E	"Varese" chrome plated shower soap dish.	no.	4	
F	"Varese" chrome plated double towel rail.	no.	4	
G	"Roma" chrome plated tumbler holder.	no.	4	
	Carried to collection			

COLLECTION

PAGE

37

38

BILL NO.9: PLASTERING AND WALL LININGS
CARRIED TO SUMMARY

BILL NO.10

PAVINGS, FLOOR COVERINGS, PLASTIC LININGS, ETC

(For Preambles see General Specification)

SCREEDS

Cement and sand screed (1:4) finished to a true and even surface

A	40 mm thick screed to receive ceramic tiles.	m ²	24
B	40 mm thick screed to receive non-slip porcelain tiles.	m ²	130

CERAMIC FLOOR TILES

300 x 300mm Ceramic tiles with non-slip surface, as in "Samca Tiles" or similar approved, colour from manufacturer's standard colour range, on adhesive to manufacturer's recommendation and 3mm wide grout joints.

C	Tiles laid on floors.	m ²	24
---	-----------------------	----------------	----

PORCELAIN FLOOR TILES

800 x 800mm "Porcelain" or equal approved non-slip ceramic tiles bedded and tight jointed in and including cement mortar and flush pointed in coloured cement and finished with two coats of wax polish.

D	To floors on screed (elsewhere measured).	m ²	130
E	75mm High skirting coved at junction with floor and fair edge and arris next to wall finish.	m	58

Carried to collection

Sundries

A 3 x 40mm Aluminium division strip set in position between different floor finishes.

m

24

Carried to collection

COLLECTION

PAGE

40

41

BILL NO.10: PAVINGS, FLOOR COVERINGS,
PLASTIC LININGS, ETC CARRIED TO

BILL NO.11

PLUMBING (PROVISIONAL)

(For Preambles see General Specification)

FLASHINGS

0.6 mm Galvanised sheet iron as described in:

A	Flashings and fixing to walls.	m ²	67
---	--------------------------------	----------------	----

RAINWATER DISPOSAL

PVC as described in

A	100 mm Diametre semi-circle section eaves gutter on brackets as described to fascia boards.	m	39
---	---	---	----

B	100 mm Dia stop ends.	no.	8
---	-----------------------	-----	---

C	Extra for angle.	no.	8
---	------------------	-----	---

D	Ditto outlet with nozzle for and joint to 100 mm Dia rainwater down pipe.	no.	8
---	---	-----	---

E	100 mm Diameter rainwater pipe fixed 38 mm clear of wall with holderbats.	m	24
---	---	---	----

F	Extra for shoe.	no.	8
---	-----------------	-----	---

G	Ditto eaves offset.	no.	8
---	---------------------	-----	---

SANITARY FITTINGS

H	510 x 405 mm white glazed vitreous china wash hand basin with concealed brackets, complete with integral overflow, chromium plated outlet, plug and chain, pair of 15 mm chromium plated colour coded pillar taps, bolt to brackets to wall and connect up.	no.	4
---	---	-----	---

Carried to collection

A	Approved low level W.C. Suite comprising white glazed vitreous china pan with "P" trap, plastic double flap seat , 9 litre cistern and white plastic flush pipe, bolt to cistern to wall, fix pan to concrete floor and connect up.	no.	4	
B	Citi Metal Series single bowl overlay stainless steel sink unit, size 750 x 535mm, complete with integral overflow, chromium plated waste outlet, plug, chain and backnut, with turndown at edge; tap set in position and including fixing one pair of Citi metal 25 x 25 mm galvanised mild steel gallows, square fixing (code SGB)	no.	4	
C	980 x 920 x 1800mm high Shower set comprising aluminium framing, 8mm obscure toughened glass panels (one fixed and two sliding), fitted with top and bottom roller bearings, shower tray, waste outlet, 15 mm chromium colour coded undertile diverter, bridging piece, 900 mm copper riser with chromium plated arm and approved chromium plated rose including chasing into wall and joint one valve to copper pipes.	no.	4	
<u>Geysers</u>				
D	100 Litre solar geyser roof mounted with electric backup water heater, set up in position and connect up.	no.	4	
<u>SANITARY PLUMBING</u>				
<u>"Promat" or equal rigid P.V.C. waste piping with solvent cement and joints and fitting as described</u>				
E	110 mm diameter pipe laid in ground including excavating in trench not exceeding 2 metres deep and fill in and ram and cart off site surplus material.	m	6	
F	50 mm diameter pipe laid under floors	m	10	
G	50 mm diameter pipe fixed to walls.	m	12	
Carried to collection				

<u>Extra on P.V.C. piping for</u>				
A	50 mm bend.	no.	12	
B	50 mm bend with inspection eye.	no.	12	
C	110 mm bend.	no.	4	
D	110 mm bend with inspection eye.	no.	3	
E	110mm Inspection junction.	no.	4	
F	110mm Reducing junction.	no.	4	
G	110 mm Straight pan connector and joint to W.C. pan.	no.	4	
H	110 mm P.V.C. vent cowl and fixing to top of 110 mm diameter pipe.	no.	4	
I	Assembled gulley trap with 110 mm diameter outlet connected to drain and gulley head with universal back inlet and removable grate.	no.	4	
J	Joint small pipe to gulley.	no.	4	
K	Ditto large pipe to gulley.	no.	4	
<u>Traps</u>				
L	32 - 40 mm diameter "Flexitrap" or equal "P" trap and joint to fitting and P.V.C. pipe.	no.	12	
Carried to collection				

HOT AND COLD WATER RETICULATION

Copper tubing as described

A	15 mm diameter pipe fixed to walls.	m	6
B	15 mm ditto to walls in and including chase.	m	30
C	20 mm diameter pipe fixed to walls.	m	6
D	20 x 15 mm reducer.	no.	4
E	15 mm elbow.	no.	12
F	20 mm elbow.	no.	4
G	20 x 15 x 20 mm tee.	no.	4
H	20 mm socket union.	no.	4
I	15 mm diameter bent connector	no.	12
J	15 mm swivel elbow.	no.	4
K	15 mm socket union.	no.	4

Carried to collection

<u>Brasswork</u>			
A	15 mm diameter brass high pressure screw down stop cock and joints to copper pipe.	no.	12
B	25 mm diameter brass or equal high pressure undertile stopcock, and joint to copper pipe.	no.	4
<u>PVC pipes as described</u>			
C	22 mm diameter pipe fixed to walls.	m	6
D	22 mm ditto to walls in and including chase.	m	6
E	22 mm diameter pipe underground.	m	12
F	22 x 20 mm reducer.	no.	1
G	22 mm elbow.	no.	1
H	22 mm socket union.	no.	1
Carried to collection			

BUILDER'S WORK IN CONNECTION WITH
PLUMBING (PROVISIONAL)

A Chase brickwork for small pipe and flush up in
cement mortar (1:3). m 30

Hole for small pipe including making good through

B Half brick wall. no. 1

C One brick wall. no. 4

Hole for large pipe including making good through

D One brick wall. no. 4

TESTING

E Allow for the testing of all the Plumber's work to the
satisfaction of the Engineers and for the retesting
after making good defects. item 1

Carried to collection

COLLECTION

PAGE

43

44

45

46

47

48

BILL NO.11: PLUMBING (PROVISIONAL)
CARRIED TO SUMMARY

BILL NO.12

GLAZING

(For Preambles see General Specification)

Mirrors

A 6 mm clear float quality glass silvered and sealed mirror with bevelled edges sprayed on back with clear lacquer before fixing four times drilled for and plugged and screwed to plastered walls with and including chromium plated capped mirror screws and rubber washers, size 600 x 600 mm. no.

4

BILL NO.12: GLAZING
CARRIED TO SUMMARY

BILL NO.13

PAINTING

(For Preambles see General Specification)

ON PLASTER, ETC

Prepare and apply three coats external quality
P.V.A. emulsion paint externally on

A Fine woodfloat plastered walls. m² 298

B Fine woodfloat plastered walls in narrow widths m² 1

Prepare and apply three coats internal quality
P.V.A. emulsion paint internally on

C Steel trowelled plastered walls. m² 306

D Ditto in narrow widths. m² 2

Prepare and apply three coats internal quality
ceiling white PVA paint internally on

E Ceilings m² 179

Carried to collection

<u>ON METAL</u>				
<u>Clean down, touch up priming coat and apply one undercoat and two finishing coats high gloss enamel paint on</u>				
A	Pressed door frames.	m ²	15	
<u>ON WOOD, ETC</u>				
C	Carbolineum saturate sawn softwood wall plate before fixing.	m ²	12	
<u>Clean down, prime, stop and apply one undercoat and two finishing coats high gloss enamel pain on</u>				
D	General surfaces of doors.	m ²	31	
<u>LEAVE CLEAN</u>				
E	Allow for touching up all work throughout, clean off all paint, oil, cement or other stains or marks, floors, ceilings, glass, etc. and leave all surfaces in full and proper working order.	item		
Carried to collection				

COLLECTION

PAGE

51

52

BILL NO.13: PAINTING
CARRIED TO SUMMARY

BILL NO.14

SPECIALIST SERVICES

(For Preambles see General Specification)

PROVISIONAL SUMS

A	Provide a sum for the supply and delivery of iPhone 13 Pro Max, 128 GB storage, 6 GB ram, 12 months warranty. iPhone procured from an Apple authorised reseller.	no	6	15,000.00
B	Provide the sum of USD 7,000.00 (Seven thousand dollars) for Materials and Compaction Density Testing.	sum	1	7,000.00

PRICE COST SUMS

A	Air conditioning	sum	1	7,200.00
B	Add profit	%		
C	Add attendance	%		
D	Fire fighting equipment	sum	1	900.00
E	Add profit	%		
F	Add attendance	%		

**BILL NO.14: SPECIALIST SERVICES
CARRIED TO SUMMARY**

SUMMARY

<u>Bill No.</u>	<u>Trade</u>	<u>PAGE</u>
2	FOUNDATIONS (PROVISIONAL)	24
3	CONCRETE, FORMWORK AND REINFORCEMENT	26
4	BRICKWORK	30
5	ROOF COVERINGS	31
6	CARPENTRY	32
7	JOINERY AND IRONMONGERY	35
8	METALWORK	36
9	PLASTERING AND WALL LININGS	39
10	PAVINGS, FLOOR COVERINGS, PLASTIC LININGS, ETC	42
11	PLUMBING (PROVISIONAL)	49
12	GLAZING	50
13	PAINTING	53
14	SPECIALIST SERVICES	54

CARRIED TO MAIN SUMMARY

**SECTION 3 - BOUNDARY WALL
(PROVISIONAL)**

BILL NO.2

FOUNDATIONS (PROVISIONAL)

(For Preambles see General Specification)

Note: Foundations have been measured to top of surface bed.

SITE CLEARANCE

A	Cut down and remove tree exceeding 500 and not exceeding 1000 mm girth measured 1000 mm above ground level including grubbing up roots and filling in holes.	no	R/O
---	--	----	-----

EXCAVATION

Pumping and bailing

B	Allow for the keeping excavations free of storm, surface and mud by pumping and bailing.	item	1
---	--	------	---

C	Excavate over site to remove vegetable soil average 150 mm deep and deposit on site not exceeding 100 metres.	m ²	354
---	---	----------------	-----

D	Disposal of topsoil	m ³	53
---	---------------------	----------------	----

Excavate in pickable earth for

E	Surface trenches not exceeding 2 metres deep.	m ³	166
---	---	----------------	-----

F	Extra over excavation in pickable material for excavation in hard pickable material.	m ³	25
---	--	----------------	----

G	Ditto excavation in rock.	m ³	17
---	---------------------------	----------------	----

Planking and strutting

H	Allow for maintaining and supporting sides of all excavations and making good all slips.	m ²	588
---	--	----------------	-----

Carried to collection

BRICKWORK

Brickwork in approved common bricks in cement mortar as described

A One brick wall. m² 264

B One brick x one brick attached pier. m³ 14

Reinforcement

Brickforce lapped at joints and junctions and building in as the work proceeds (measured nett)

C Ref. C2 in one brick walls. m 1040

Sundries

D 20 mm "Kaylite" or other equal and approved joint filler between brick faces in narrow widths not exceeding 300mm wide m² 29

Carried to collection

COLLECTION

PAGE

56

57

58

BILL NO.2: FOUNDATIONS (PROVISIONAL)
CARRIED TO SUMMARY

BILL NO.3

CONCRETE, FORMWORK AND REINFORCEMENT

(For Preambles see General Specification)

PRECAST CONCRETE

Precast concrete Coping

A	Precast concrete coping as per Architects's design and Engineer's specification on top of	m	386
---	---	---	-----

BILL NO.3: CONCRETE, FORMWORK AND REINFORCEMENT CARRIED TO SUMMARY

BILL NO. 4

BRICKWORK

(For Preambles see General Specification)

BRICKWORK

Brickwork in approved common bricks or similar approved in cement mortar as described

A	One brick wall.	m ²	695
B	One brick x one brick attached pier.	m ³	35

DAMP PROOF COURSE

One layer of three ply bituminous felt sheeting as damp proof course as described, well lapped at joints and junctions (measured nett)

C	On one brick walls.	m ²	89
D	Under precast concrete copings.	m ²	89

REINFORCEMENT

Brickforce lapped at joints and junctions and bedding in as the work proceeds (measured nett)

E	Ref. C2 in one brick walls.	m	2043
---	-----------------------------	---	------

Expansion Joint

F	20mm Kaylite or equal approved joint filler between brickwork in narrow widths.	m ²	75
---	---	----------------	----

Sundries

G	Providing weep holes in brick masonry with 100mm dia PVC pipe, extending through the full width of structure with a slope (as per Eng. instruction).	item	1
---	--	------	---

BILL NO.4: BRICKWORK
CARRIED TO SUMMARY

BILL NO.5

METALWORK

(For Preambles see General Specification)

STEEL GATES (PROVISIONAL)

A Supply and fix steel clad electric powered sliding gate, painted both sides with corrosive resistant paint, wheels, electric motor, locking devices, accessories etc executed complete size 3000 x 2340mm high.

no

2

BILL NO.5: METALWORK
CARRIED TO SUMMARY

BILL NO.6

PLASTERING AND WALL LININGS

(For Preambles see General Specification)

EXTERNALLY

One coat cement plaster (1:4) as described
including all labours with a fine woodfloat finish on

A	Walls.	m ²	1390
B	Ditto in narrow widths.	m ²	75

**BILL NO.6: PLASTERING AND WALL LININGS
CARRIED TO SUMMARY**

BILL NO.7

PAINTING

(For Preambles see General Specification)

ON PLASTER, ETC

Prepare and apply three coats external quality
P.V.A. emulsion paint externally on

A	Fine woodfloat plastered walls.	m ²	1390
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B	Fine woodfloat plastered walls in narrow widths ditto.	m ²	75
---	--	----------------	----

LEAVE CLEAN

C	Allow for touching up all work throughout, clean off all paint, oil, cement or other stains or marks, floors, ceilings, glass, etc. and leave all surfaces in full and proper working order.	item	1
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BILL NO.7: PAINTING
CARRIED TO SUMMARY

BILL NO.8

SPECIALIST SERVICES

(For Preambles see General Specification)

PROVISIONAL SUMS

A Provide a sum of US\$8,000.00 for electrical installations and fittings, etc.

sum

1

10,000.00

**BILL NO.8: SPECIALIST SERVICES
CARRIED TO SUMMARY**

<u>BILL</u>			
<u>No.</u>	<u>TRADE</u>		<u>PAGE</u>
2	FOUNDATIONS (PROVISIONAL)		59
3	CONCRETE, FORMWORK AND REINFORCEMENT		60
4	BRICKWORK		61
5	METALWORK		62
6	PLASTERING AND WALL LININGS		63
7	PAINTING		64
8	SPECIALIST SERVICES		65
TOTAL CARRIED TO MAIN SUMMARY			

**SECTION 4 - CIVIL WORKS AT
STAND 7430**

ITEM No	DESCRIPTION	UNIT	QNTY	RATE	AMOUNT
	<u>BILL NO.2</u>				
B1	ROADS AND STORMWATER				
	Subgrade				
B1.1	Clearing within designated area including removal from site of all rubbish and trees up to 1m girth	m ²	870		
B1.2	Remove trees and stumps of girth more than 1m, including stacking and grubbling roots.	No	3		
B1.3	Remove topsoil to a depth of 150mm from the designated area ,spread to waste within 0.5km free haul within 0.5km free haul.	m ³	130.50		
B1.4	Excavate/cut in all unsuitable material below formation level,dump to waste within 0.5km free haul.Maximum depth to be 150mm	m ³	130.50		
B1.5	Excavate for removal of anthills and backfilling.	m ³	15		
B1.6	Allow for poisoning of anthills using an approved antkiller at the specialist's specified rate	Sum	1		
B1.7	Extra over items B1.4 and B1.5 for i) intermediate excavation ii) rock excavation	m ³ m ³	15 1		
B1.8	Take suitable material from cut,dump and spread in layers not exceeding 200mm loose thickness and compact as specified for fills to 93% Mod AASHTO.Borrow from cut sections on site to fill in approved SG5 or better material.	m ³			
B1.9	Allow for sourcing, hauling, dumping, spreading,watering and compacting SG5 or better material from the most convenient and economical municipal borrow pits in fill areas to 93% Mod AASHTO(only when cut material is insufficient to cover fill areas.)	m ³	15		
B1.10	Scarify/rip, water, mix, trim and compact upper 150mm of road formation to form subgrade for roadbed and car parks to not less than 93%Mod.AASHTO	m ³	130.50		
B1.11	Allow for rock blasting and carting away to within 0.5km from site	m ³	15		
Total carried forward					

ITEM No	DESCRIPTION	UNIT	QNTY	RATE	AMOUNT
	Total brought forward				
	Pavement There will be no pavement material obtainable on site. The contractor is to source all imported material from commercial or own sources to the best price advantage. Allow for sourcing and base 1, 2 and 3 gravel material from nearest municipal gravel borrow pits and dump along road formation or carpark, volume measured as compacted.				
B2.1	Gravel Base (150mm) material, class 3.0 including spreading, watering, mixing and compacting in 150mm layers to 98% mod AASHTO	m ³	130.50		
B2.2	Gravel Base 2(150mm) material, class 3.0 including spreading, watering, mixing and compacting in 150mm layers to 96% mod AASHTO	m ³	130.50		
B2.3	Gravel Base 1(150mm thick), class 3.3 from commercial source, including spreading, watering, mixing and compacting to 98% mod AASHTO	m ³	130.50		
	B3 G-Block Surfacing				
B3.1	Supply, spread and compact 50mm Quarry Dust	m ³	44		
B3.2	Supply and lay 80mm heavy duty interlocking pavers	m ²	43500		
B3.3	Sand cover as may be ordered by the Engineer	m ³	10		
	B4 Culverts(Pipes)				
B4.1	Excavation for pipe culverts	m ³	3		
B4.2	Extra over item B4.1, Supply and install Class S standard reinforced stormwater pipes with interlockin Ogee joints for underground drainage pipes and culverts. i. 450mm diameter ii. 600mm diameter	no no	4		
B4.3	Concrete to haunches, surrounds and foundation for brick headwalls i. Grade 10 to haunches ii. Grade 20 to surrounds and foundations.	m ³ m ³	0.3 2		
B4.4	Supply and construct 230mm brick head walls	m ²	5		
B4.5	Stone pitching to the end of the pipe	m ²	8		
	B5 Traffic Signs				
B5.1	"Stop Signs"	No	1		
	Total carried forward				

ITEM No	DESCRIPTION	UNIT	QNTY	RATE	AMOUNT
	Total brought forward				\$ -
B6	Carriageway markings				
B6.1	Carriageway markings as directed onsite:				
	i.Markings in reflective white paint	m ²	5		
	ii.Shoulder markings in reflective yellow paint	m ²	10		
B7	Kerbing				
B7.1	Supply and lay where shown on the drawing or as directed kerbing including excavation and concrete bedding,jointing, haunching ,backfilling behind kerb and painting in alternative black and white PVA,two coats.				
	i.Municipal kerbing	m	410		
	ii.Rollover kerbing	m	15		
Total carried to summary					\$ -

ITEM No	DESCRIPTION	UNIT	QNTY	RATE	AMOUNT
C	BILL NO.3 WATER RETICULATION				
C1.0	Site Clearance				
C1.1	Clear vegetation and trees of girth up to 1m(width of line maximum 2m)	m ²	98		
C2.0	Excavation				
C2.1	Excavation in all materials for trenches backfill and compact depth between 0.5m-1.5m for pipes i)32mm PVC class 12 pipes	m ³	10		
C2.2	Extra-over all excavations For i)Hard material excavations ii)Hard rock excavations	m ³ m ³	2 2		
C3.0	Pipe Bedding				
C3.1	Supply and place bedding material as directed by Engineer and measured compacted for i)Selected granular/sand material ii) Selected backfill material(non-expansive) obtained from within the site iii) Selected backfill material imported from borrow pits elsewhere	m ³ m ³ m ³ /km	2 2		
C3.2	Allow for alternative concrete bedding under roadways and shallow areas, i) Grade 10 concrete ii) Grade 15 concrete	m ³ m ³			
C3.3	Allow for carting away and disposing of unsuitable or surplus material from trench	m ³ /km	4		
C3.4	Allow for pumping of trenches to remove excess water in excavations	sum	1		
C4.0	Pipe Laying				
C4.1	Supply,handle, and lay Pvc pipes complete with fluid-tite joints: i.32mm PVC class 12 pipes	m	98		
C5.0	Fittings Supply,lay,bed and joint,including cut pipes to length where required,test and include for CISC joints Supply and fix the following fittings:				
C5.1	Gate valves clockwise closing 32mm PVC class 12 pipes	No			
Total carried forward					

ITEM No	DESCRIPTION	UNIT	QNTY	RATE	AMOUNT
	Total brought forward				
C5.2	Supply and install underground Fire Hydrants as detailed including GMS pipework and Hydrant valve i.32mm diameter	No	1		
C5.3	PVC Bends 32*90 degree bends	No	1		
C5.4	PVC tees 32mm*32mm equal tees.	No			
C5.5	End Caps 32mm dia	No	1		
C5.6	Supply and fix precast chambers as detailed for the following fittings with C.I covers i.Gate valves ii.Fire hydrant	No No	1		
C5.7	Supply and fix marker posts for the following fittings as detailed. i.Gate valves ii.Fire hydrant	No No	1		
C5.8	Allow a provisional sum for any other fittings not specified above	SUM	1		
C5.9	Allow for connections to internal reticulation,complete as detailed excluding saddles. 32mm single stand connection	No			
C6.0	Ancillaries				
C6.1	Anchor/Thrust blocks and pedestals including formwork where required: Grade 20 concrete	m ³	0.5		
C7.0	Pressure testing of water mains				
C7.1	Allow for all costs for pressure testing as specified or directed by the Engineer Engineer.	SUM	1		
C8.0	Disinfect pipelines				
C8.1	Allow for all cost of flushing and sterilizing of pipelines as specified or directed by the Engineer.	SUM	1		
C8.2	Allow for connection into existing pipelines including all municipal charges and connection fees	SUM	1		
Total carried to summary					

ITEM No	DESCRIPTION	UNIT	QNTY	RATE	AMOUNT
D	BILL NO.4 SEWER RETICULATION				
D1.0	Site Clearance				
D1.1	Clear vegetation and trees of girth up to 0.5m(width of to 0.5m (width of line maximum 1.5m)	m ²	28		
D1.2	Extra over item D1.1 for trees with girth over 0.5m	no			
D2.0	Excavation				
D2.1	Excavate in all materials for trenches backfill and compact for depth up to 2m	m ³	23		
D2.2	Extra over all excavations for:				
	i.Hard material excavation	m ³	5		
	ii.Hard rock excavation	m ³	5		
D3.0	Pipe bedding				
D3.1	Allow for supplying and placing bedding material for all sewer pipes measured compacted.				
	i)Selected granular/sand material	m ³	3		
	ii) Selected backfill material available on site.	m ³	4		
	iii)Selected backfill material imported from borrow pits elsewhere	m ³			
D3.2	Concrete bedding or concrete surround including formwork and compacting for shallow pipework under roads.				
	i) Grade 10 concrete sorround	m ³			
	ii) Grade 15 concrete sorround	m ³			
D3.3	Allow for carting away excess and unsuitable material from trenches	m ³ /km	7		
D4.0	Pipework				
	Supply, lay, bed, joint and test sewer pipes:Bed Class to be determined by Engineer on site				
D4.1	PVC sewer pipes				
	i) 110mm diam.	m	56		
D5.0	Construction of Manholes				
D5.1	Allow for supplying and pouring G20 concrete for manhole slabs including for making good benching and channels with smooth finish.	m ³	0.6		
D5.2	Supply and fix 900*300mm precast manhole rings and ensure water tight joints for manholes exceeding 1.5m deep.	no	9		
D5.3	Supply and fix stepping irons for deep manholes.(each stepping iron)	no	9		
Total carried forward					

ITEM No	DESCRIPTION	UNIT	QNTY	RATE	AMOUNT
	Total brought forward				
D5.4	Supply and install precast concrete manholes slabs complete with cover and frames(915mm dia) for				
	i) Heavy duty manhole covers	no	3		
	ii) Ordinary manhole covers	no			
D6.0	Sundries				
D6.1	Test Manholes for water tightness	No	3		
D6.2	Break into and connect into existing sewer line including flexible joints and make good all benching at the connection point.	SUM	1		
D6.3	Allow for pumping of trenches to remove excess water	SUM	1		
Total carried to summary					

ITEM No	DESCRIPTION	UNIT	QNTY	RATE	AMOUNT
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COST ESTIMATES FOR CIVIL WORKS

SECTION	DESCRIPTION				AMOUNT
BILL A	PRELIMINARY & GENERAL				
BILL B	ROADS AND STORMWATER				
BILL C	WATER RETICULATION				
BILL D	SEWER RETICULATION				
	TOTAL CARRIED TO MAIN SUMMARY				

**SECTION 5 - CIVIL WORKS AT
STAND 7353**

ITEM No	DESCRIPTION	UNIT	QNTY	RATE	AMOUNT
	<u>BILL NO.2</u>				
B1	ROADS AND STORMWATER				
	Subgrade				
B1.1	Clearing within designated area including removal from site of all rubbish and trees up to 1m girth	m ²	1100		
B1.2	Remove trees and stumps of girth more than 1m, including stacking and grubbling roots.	No	5		
B1.3	Remove topsoil to a depth of 150mm from the designated area ,spread to waste within 0.5km free haul within 0.5km free haul.	m ³	165		
B1.4	Excavate/cut in all unsuitable material below formation level,dump to waste within 0.5km free haul.Maximum depth to be 150mm	m ³	165		
B1.5	Excavate for removal of anthills and backfilling.	m ³	15		
B1.6	Allow for poisoning of anthills using an approved antkiller at the specialist's specified rate	Sum	1		
B1.7	Extra over items B1.4 and B1.5 for i) intermediate excavation ii) rock excavation	m ³ m ³	10 10		
B1.8	Take suitable material from cut,dump and spread in layers not exceeding 200mm loose thickness and compact as specified for fills to 93% Mod AASHTO.Borrow from cut sections on site to fill in approved SG5 or better material.	m ³			
B1.9	Allow for sourcing, hauling, dumping, spreading,watering and compacting SG5 or better material from the most convenient and economical municipal borrow pits in fill areas to 93% Mod AASHTO(only when cut material is insufficient to cover fill areas.)	m ³	30		
B1.10	Scarify/rip, water, mix, trim and compact upper 150mm of road formation to form subgrade for roadbed and car parks to not less than 93%Mod.AASHTO	m ³	165		
B1.11	Allow for rock blasting and carting away to within 0.5km from site	m ³	15		
Total carried forward					

ITEM No	DESCRIPTION	UNIT	QNTY	RATE	AMOUNT
	Total brought forward				
	Pavement There will be no pavement material obtainable on site.The contractor is to source all imported material from commercial or own sources to the best price advantage.Allow for sourcing and base 1,2 and 3 gravel material from nearest municipal gravel borrow pits and dump along road formation or carpark, volume measured as compacted.				
B2.1	Gravel Base (150mm) material, class 3.0 including spreading, watering,mixing and compacting in 150mm layers to 98% mod AASHTO	m ³	165		
B2.2	Gravel Base 2(150mm) material, class 3.0 including spreading, watering,mixing and compacting in 150mm layers to 96% mod AASHTO	m ³	165		
B2.3	Gravel Base 1(150mm thick),class 3.3 from commercial source,including spreading,watering,mixing and compacting to 98% mod AASHTO	m ³	165		
	B3 G-Block Surfacing				
B3.1	Supply,spread and compact 50mm Quarry Dust	m ³	55		
B3.2	Supply and lay 80mm heavy duty interlocking pavers	m ²	57000		
B3.3	Sand cover as may be ordered by the Engineer	m ³	10		
	B4 Culverts(Pipes)				
B4.1	Excavation for pipe culverts	m ³	3		
B4.2	Extra over item B4.1, Supply and install Class S standard reinforced stormwater pipes with interlockin Ogee joints for underground drainage pipes and culverts. i.450mm diameter ii.600mm diameter	no no	4		
B4.3	Concrete to haunches, surrounds and foundation for brick headwalls i.Grade 10 to haunches ii.Grade 20 to surrounds and foundations.	m ³ m ³	0.3 2		
B4.4	Supply and construct 230mm brick head walls	m ²	5		
B4.5	Stone pitching to the end of the pipe	m ²	8		
	B5 Traffic Signs				
B5.1	"Stop Signs"	No	1		
	Total carried forward				

ITEM No	DESCRIPTION	UNIT	QNTY	RATE	AMOUNT
	Total brought forward				
B6	Carriageway markings				
B6.1	Carriageway markings as directed onsite:				
	i.Markings in reflective white paint	m ²	5		
	ii.Shoulder markings in reflective yellow paint	m ²	10		
B7	Kerbing				
B7.1	Supply and lay where shown on the drawing or as directed kerbing including excavation and concrete bedding, jointing, haunching ,backfilling behind kerb and painting in alternative black and white PVA,two coats.				
	i.Municipal kerbing	m	15		
	ii.Rollover kerbing	m	260		
Total carried to summary					

ITEM No	DESCRIPTION	UNIT	QNTY	RATE	AMOUNT
C	BILL NO.3 WATER RETICULATION				
C1.0	Site Clearance				
C1.1	Clear vegetation and trees of girth up to 1m(width of line maximum 2m)	m ²	196		
C2.0	Excavation				
C2.1	Excavation in all materials for trenches backfill and compact depth between 0.5m-1.5m for pipes i)32mm PVC class 12 pipes	m ³	20		
C2.2	Extra-over all excavations For				
	i)Hard material excavations	m ³	10		
	ii)Hard rock excavations	m ³	10		
C3.0	Pipe Bedding				
C3.1	Supply and place bedding material as directed by Engineer and measured compacted for				
	i)Selected granular/sand material	m ³	5		
	ii) Selected backfill material(non-expansive) obtained from within the site	m ³	5		
	iii) Selected backfill material imported from borrow pits elsewhere	m ³ /km			
C3.2	Allow for alternative concrete bedding under roadways and shallow areas,				
	i) Grade 10 concrete	m ³			
	ii) Grade 15 concrete	m ³			
C3.3	Allow for carting away and disposing of unsuitable or surplus material from trench	m ³ /km	10		
C3.4	Allow for pumping of trenches to remove excess water in excavations	sum	1		
C4.0	Pipe Laying				
C4.1	Supply,handle, and lay Pvc pipes complete with fluid-tite joints: i.32mm PVC class 12 pipes	m	98		
C5.0	Fittings				
	Supply,lay,bed and joint,including cut pipes to length where required,test and include for CISC joints Supply and fix the following fittings:				
C5.1	Gate valves clockwise closing 32mm PVC class 12 pipes	No			
Total carried forward					

ITEM No	DESCRIPTION	UNIT	QNTY	RATE	AMOUNT
	Total brought forward				
C5.2	Supply and install underground Fire Hydrants as detailed including GMS pipework and Hydrant valve i.32mm diameter	No	1		
C5.3	PVC Bends 32*90 degree bends	No	1		
C5.4	PVC tees 32mm*32mm equal tees.	No			
C5.5	End Caps 32mm dia	No	1		
C5.6	Supply and fix precast chambers as detailed for the following fittings with C.I covers i.Gate valves ii.Fire Hydrant	No No	1		
C5.7	Supply and fix marker posts for the following fittings as detailed. i.Gate valves ii.Fire Hydrant	No No	1		
C5.8	Allow a provisional sum for any other fittings not specified above	SUM	1		
C5.9	Allow for connections to internal reticulation,complete as detailed excluding saddles. 32mm single stand connection	No			
C6.0	Ancillaries				
C6.1	Anchor/Thrust blocks and pedestals including formwork where required: Grade 20 concrete	m ³	0.5		
C7.0	Pressure testing of water mains				
C7.1	Allow for all costs for pressure testing as specified or directed by the Engineer Engineer.	SUM	1		
C8.0	Disinfect pipelines				
C8.1	Allow for all cost of flushing and sterilizing of pipelines as specified or directed by the Engineer.	SUM	1		
C8.2	Allow for connection into existing pipelines including all municipal charges and connection fees	SUM	1		
Total carried to summary					

ITEM No	DESCRIPTION	UNIT	QNTY	RATE	AMOUNT
D	BILL NO.4 SEWERAGE RETICULATION				
D1.0	Site Clearance				
D1.1	Clear vegetation and trees of girth up to 0.5m(width of to 0.5m (width of line maximum 1.5m)	m ²	162		
D1.2	Extra over item D1.1 for trees with girth over 0.5m	no			
D2.0	Excavation				
D2.1	Excavate in all materials for trenches backfill and compact for depth up to 2m	m ³	54		
D2.2	Extra over all excavations for:				
	i.Hard material excavation	m ³	5		
	ii.Hard rock excavation	m ³	5		
D3.0	Pipe bedding				
D3.1	Allow for supplying and placing bedding material for all sewer pipes measured compacted.				
	i)Selected granular/sand material	m ³	5		
	ii) Selected backfill material available on site.	m ³	8		
	iii)Selected backfill material imported from borrow pits elsewhere	m ³			
D3.2	Concrete bedding or concrete surround including formwork and compacting for shallow pipework under roads.				
	i) Grade 10 concrete sorround	m ³			
	ii) Grade 15 concrete sorround	m ³			
D3.3	Allow for carting away excess and unsuitable material from trenches	m ³ /km	13		
D4.0	Pipework				
	Supply, lay, bed, joint and test sewer pipes:Bed Class to be determined by Engineer on site				
D4.1	PVC sewer pipes				
	i) 110mm diam.	m	108		
D5.0	Construction of Manholes				
D5.1	Allow for supplying and pouring G20 concrete for manhole slabs including for making good benching and channels with smooth finish.	m ³	1.5		
D5.2	Supply and fix 900*300mm precast manhole rings and ensure water tight joints for manholes exceeding 1.5m deep.	no	24		
D5.3	Supply and fix stepping irons for deep manholes.(each stepping iron)	no	24		
Total carried forward					

ITEM No	DESCRIPTION	UNIT	QNTY	RATE	AMOUNT
	Total brought forward				
D5.4	Supply and install precast concrete manholes slabs complete with cover and frames(915mm dia) for				
	i) Heavy duty manhole covers	no	6		
	ii) Ordinary manhole covers	no			
D6.0	Sundries				
D6.1	Test Manholes for water tightness	No	6		
D6.2	Break into and connect into existing sewer line including flexible joints and make good all benching at the connection point.	SUM	1		
D6.3	Allow for pumping of trenches to remove excess water	SUM	1		
Total carried to summary					

ITEM No	DESCRIPTION	UNIT	QNTY	RATE	AMOUNT
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COST ESTIMATES FOR CIVIL WORKS

SECTION	DESCRIPTION				AMOUNT
BILL A	PRELIMINARY & GENERAL				
BILL B	ROADS AND STORMWATER				
BILL C	WATER RETICULATION				
BILL D	SEWER RETICULATION				
	TOTAL CARRIED TO MAIN SUMMARY				

SECTION 6 - ELECTRICAL WORKS

MINISTRY OF LOCAL GOVERNMENT & PUBLIC WORKS



DEPARTMENT OF ENGINEERING SERVICES

ELECTRICAL BILLS OF QUANTITIES

FOR

PROPOSED ZIMRA FORBES BORDER POST STAFF ACCOMODATON

MUTARE

IN

ZIMBABWE

09 MARCH 2022

Item	Description	Unit	Qty [A]	Unit Price US\$	Rate/Installed [B] US\$	Total Installed Price [B x A] US\$
1.1.1	3 Phase Weatherproof Lockable Distribution Feeder Pillar c/w main switch, trunking, switch gear and pre-paid metering accessories [See Dwg. No 192512/E/02]	Nos	1			
1.1.2	Flush Mounted Lockable Sub Distribution Board [DB] wired c/w switch gear [See Dwg. No 192512/E/02]	Nos	4			
1.1.3	45A 6' x 6' MK or similar approved type Cooker Control Unit c/w flush mounting metal box and accessories	Nos	4			
1.1.4	35sqmm 4C PVC SWAPVC CAFCA or similar approved type cable [Provisional Length]	m	50			
1.1.5	16sqmm 3C PVC SWAPVC CAFCA or similar approved type cable	m	80			
1.1.6	No. 3 Cable gland and shroud	Nos	8			
1.1.7	No. 5 Cable gland and shroud	Nos	6			
1.1.8	6sqmm CAFCA or similar approved type s/c cable red	100m roll	0.3			
1.1.9	6sqmm CAFCA or similar approved type s/c cable black	100m roll	0.3			
1.1.10	2.5sqmm CAFCA or similar approved type s/c cable red	100m roll	8			
1.1.11	2.5sqmm CAFCA or similar approved type s/c cable black	100m roll	8			
1.1.12	1.5sqmm CAFCA or similar approved type s/c cable red	100m roll	7			

Item	Description	Unit	Qty [A]	Unit Price US\$	Rate/Installed [B] US\$	Total Installed Price [B x A] US\$
1.1.13	1.5sqmm CAFCA or similar approved type s/c cable black	100m roll	5			
1.1.14	2.5sqmm CAFCA or similar approved type SBCC	m	600			
1.1.15	6sqmm CAFCA or similar approved type SBCC	m	30			
1.1.16	25sqmm CAFCA or similar approved type SBCC [Provisional Length]	m	50			
1.1.17	1.4m earth rod c/w clamp	Nos	1			
1.1.18	10A 3' x 3' MK or similar approved type shaver socket outlet	Nos	4			
1.1.19	10A 3' x 3' MK or similar approved type extract fan isolator	Nos	4			
1.1.20	20A 3' x 3' MK or similar approved type air- conditioning isolator	Nos	4			
1.1.21	13A 6' x 3' MK or similar approved type double switched socket outlet	Nos	30			
1.1.22	15A 3' x 3' MK or similar approved type single switched socket outlet	Nos	4			
1.1.23	5A 3' x 3' MK or similar approved type one gang one-way switch	Nos	16			
1.1.24	5A 3' x 3' MK or similar approved type two gang one-way switch	Nos	12			
1.1.25	20mm PROPLASTICS or similar approved type pvc conduit	4m length	50			
1.1.26	32mm CLASS E PROPLASTICS or similar approved type PVC duct	6m length	2			

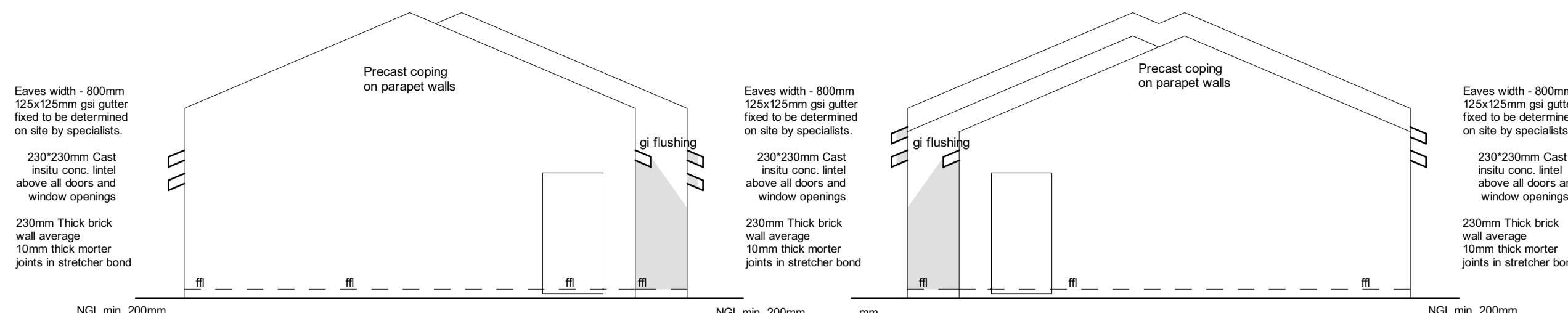
Item	Description	Unit	Qty [A]	Unit Price US\$	Rate/Installed [B] US\$	Total Installed Price [B x A] US\$
1.1.27	75mm CLASS E PROPLASTICS or similar approved type PVC duct	6m length	10			
1.1.28	75mm CLASS E PROPLASTICS or similar approved type PVC 90 degree bend	Nos	4			
1.1.29	20mm PROPLASTICS or similar approved type PVC nipples	Nos	100			
1.1.30	20mm PROPLASTICS or similar approved type PVC couplings	Nos	200			
1.1.31	3' x 3' PROPLASTICS or similar approved type PVC boxes	Nos	50			
1.1.32	6' x 3' boxes	Nos	30			
1.1.33	PROPLASTICS or similar approved type PVC round boxes	Nos	100			
1.1.34	PROPLASTICS or similar approved type PVC extension round boxes	Nos	50			
1.1.35	20mm BE saddles	Nos	100			
1.1.36	4.0 x 35mm wood screws	Box	3			
1.1.37	500ml solvent cement	500mls bottle	3			
1.1.38	20mm Sprague tube	m	16			
1.1.39	20mm Sprague tube connectors	Nos	8			
1.1.40	20mm dome cover	Nos	4			
1.1.41	S6 fisher plugs	Box	2			
1.1.42	Insulation tape	Rolls	3			
1.1.43	Perforated copper bonding strip	M	25			
1.1.44	15x20mm Veranda Bolts and Nuts	Nos	50			

Item	Description	Unit	Qty [A]	Unit Price US\$	Rate/Installed [B] US\$	Total Installed Price [B x A] US\$
1.1.45	Cable Warning tape [Provisional length]	m	150			
1.1.46	Cable Warning tile	Nos	4			
1.1.47	Type 1 - 1 x 15W Ceiling Mounted Round Bulkhead Light Fitting c/w 15W Led Bulb	Nos	12			
1.1.48	Type 2 - 1 x 11W Weatherproof Ceiling Mounted Round Bulkhead Light Fitting c/w 11W Led Bulb	Nos	4			
1.1.49	Type 3 - 1 x 15W Wall Mounted Round Bulkhead Light Fitting c/w 15W Led Bulb	Nos	4			
1.1.50	Type 4 - 1 x 11 Wall Mounted Round Bulkhead Light Fitting c/w 11W Led Bulb	Nos	4			
1.1.51	Any other accessories required to complete the installation [Itemise]	Lot	1			
	SUBTOTAL					
	ADD PROVISION FOR ZESA CONNECTON					500.00
	LIASON WITH ZESA FOR POWERT CONNECTION					
	TOTAL COST OF ELECTRICAL WORKS					

SECTION 7 - MAIN SUMMARY

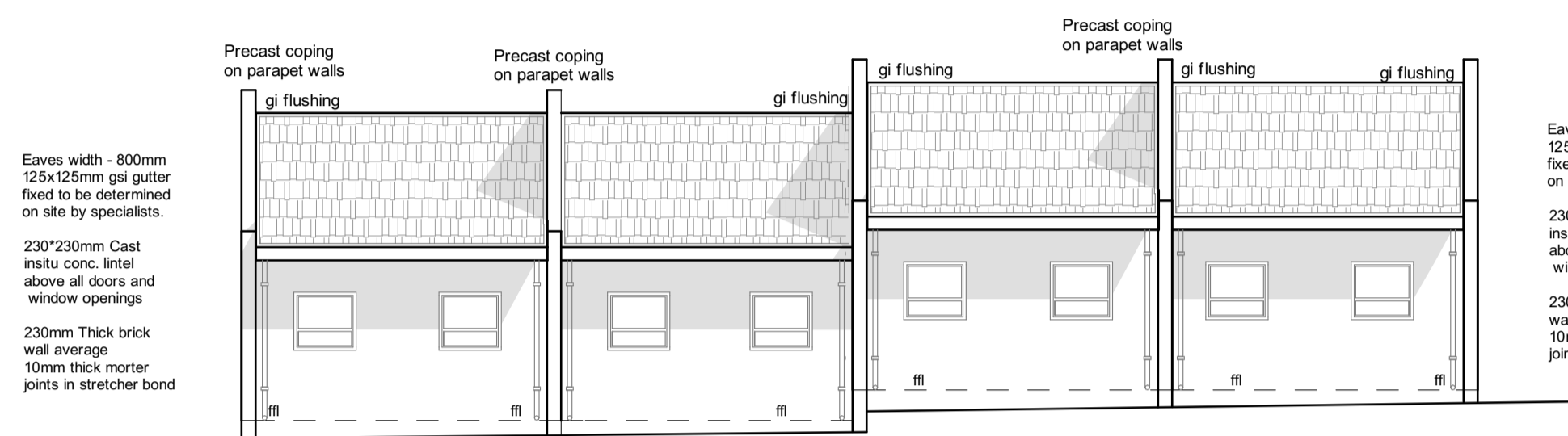
<u>SECTION</u>	<u>MAIN SUMMARY</u>	<u>PAGE</u>	<u>QTY</u>	<u>AMOUNT</u>
1	PRELIMINARIES AND GENERALS	19	1	
2	STAFF COTTAGES	54	4	
3	BOUNDARY WALL (PROVISIONAL)	66	1	
4	CIVIL WORKS AT STAND 7430	74	1	
5	CIVIL WORKS AT STAND 7353	82	1	
6	ELECTRICAL WORKS	-	1	
	SUB-TOTAL A			
	Add 10% CONTIGENCY			
	SUB-TOTAL B			
	Add 14.5% VAT			
 Signature of Contractor Date		
	TOTAL CARRIED TO FORM OF TENDER			

Annexure 2

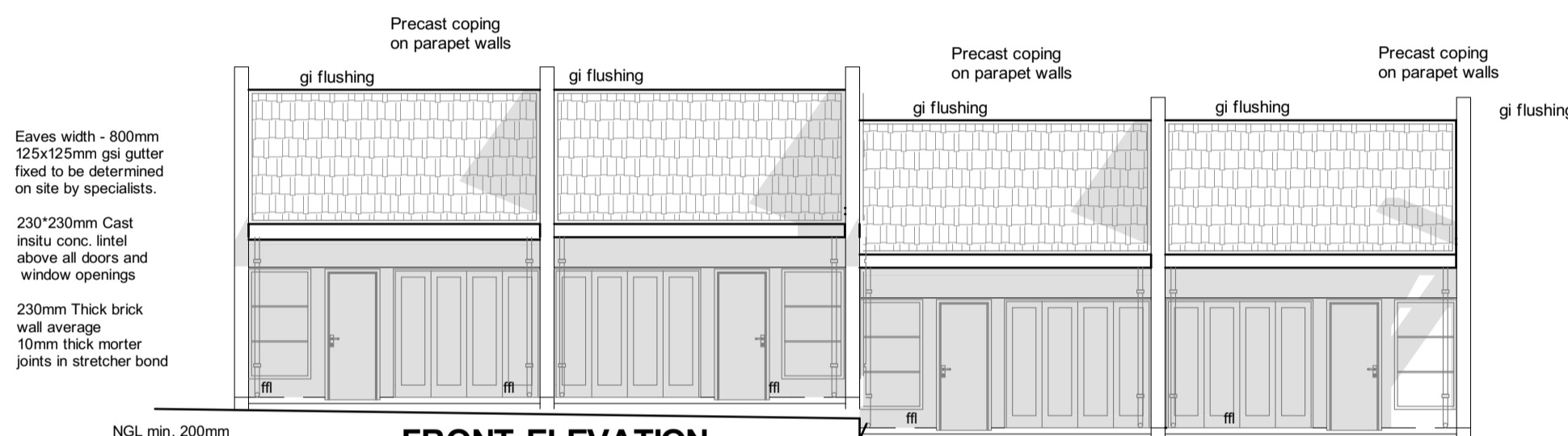


SIDE 2 ELEVATION
SCALE: 1: 100

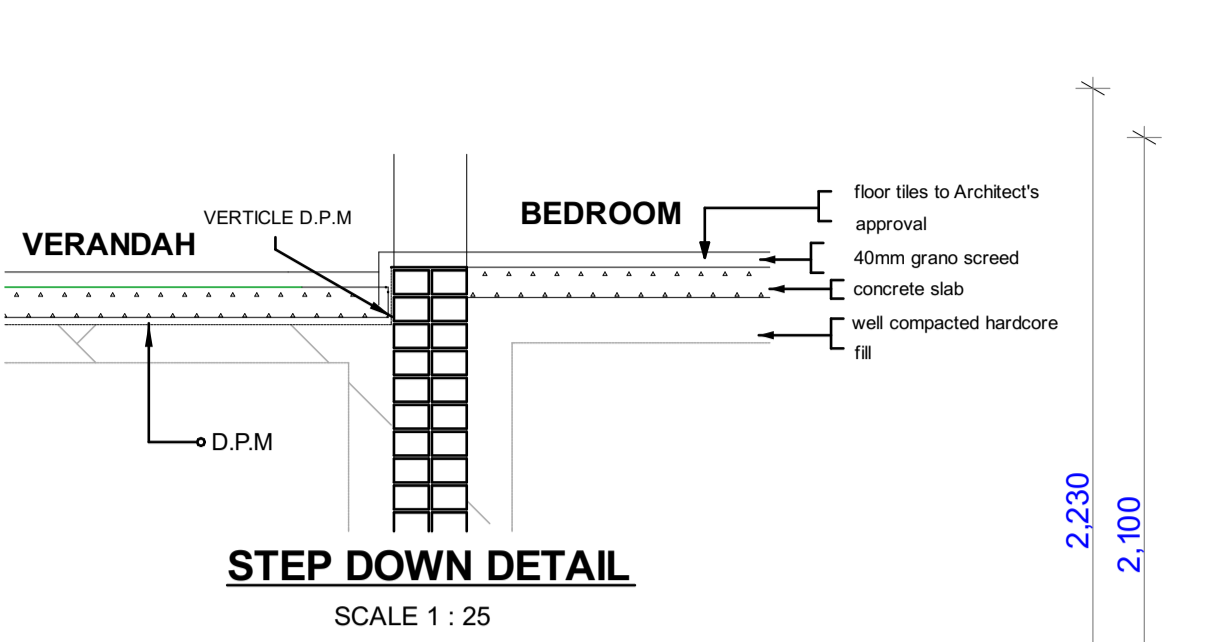
SIDE 2 ELEVATION
SCALE: 1: 100



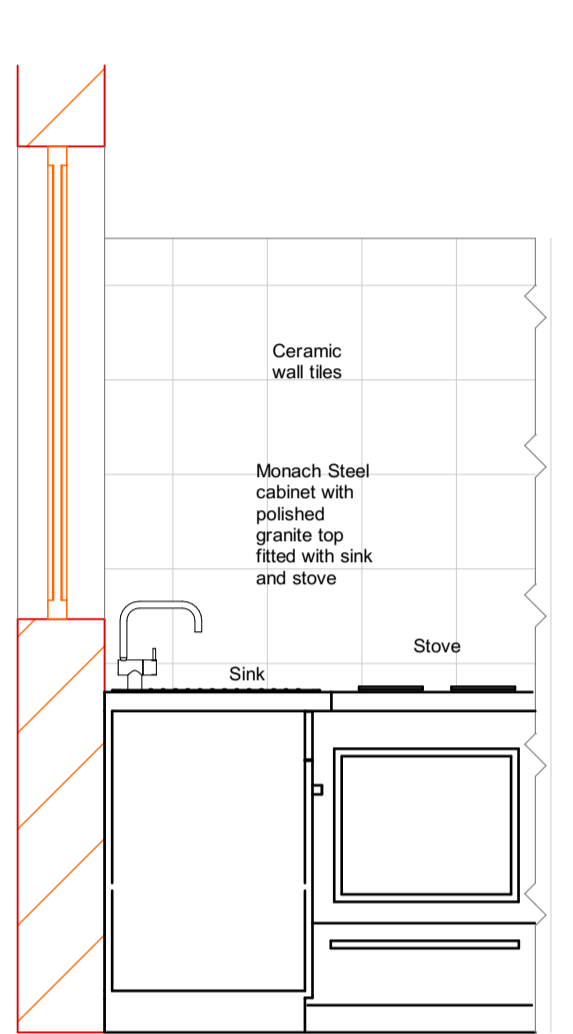
BACK ELEVATION
SCALE: 1: 100



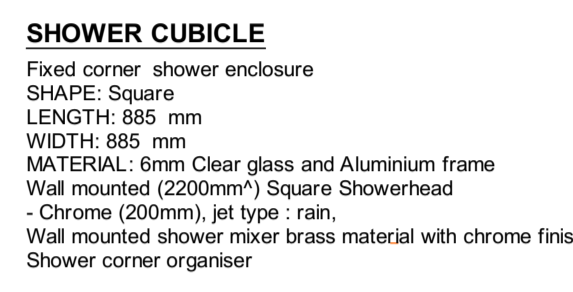
FRONT ELEVATION
SCALE: 1: 100



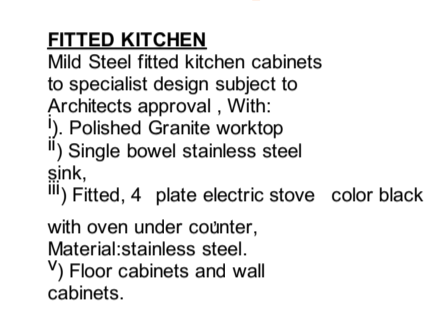
STEP DOWN DETAIL
SCALE 1 : 25



KITCHENNETTE DETAIL 2



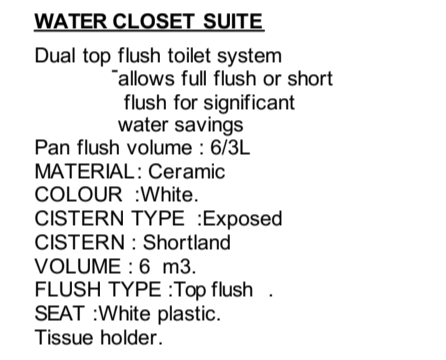
SHOWER CUBICLE



FITTED KITCHEN



WASH HAND BASIN



WATER CLOSET SUITE

TILE

FLOOR

SHOWER CUBICLE

WASH HAND BASIN

WATER CLOSET SUITE

WATER CLOSET SUITE

WATER CLOSET SUITE

WATER CLOSET SUITE

WATER CLOSET SUITE

WATER CLOSET SUITE

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WATER CLOSET SUITE

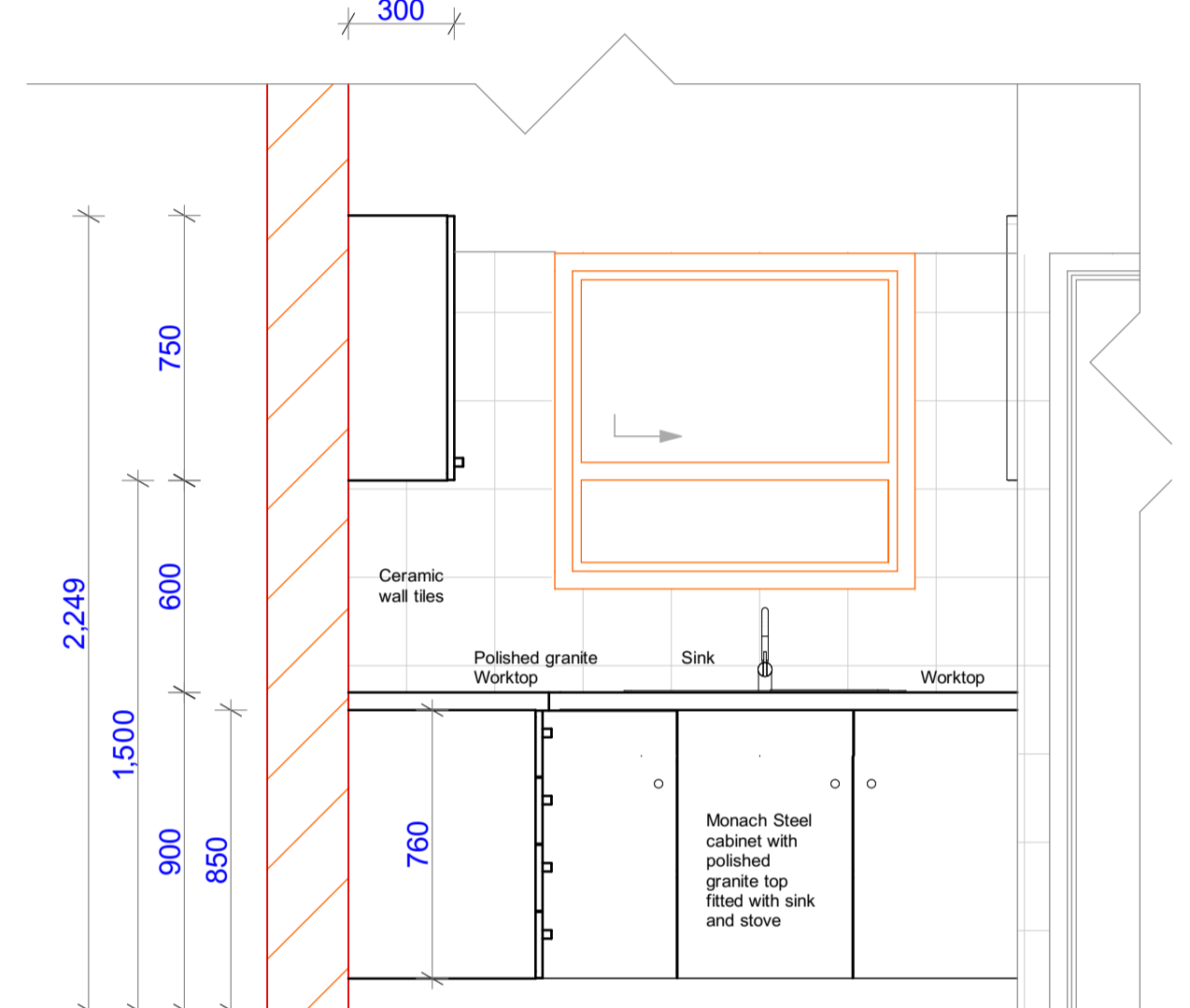
WATER CLOSET SUITE

WATER CLOSET SUITE

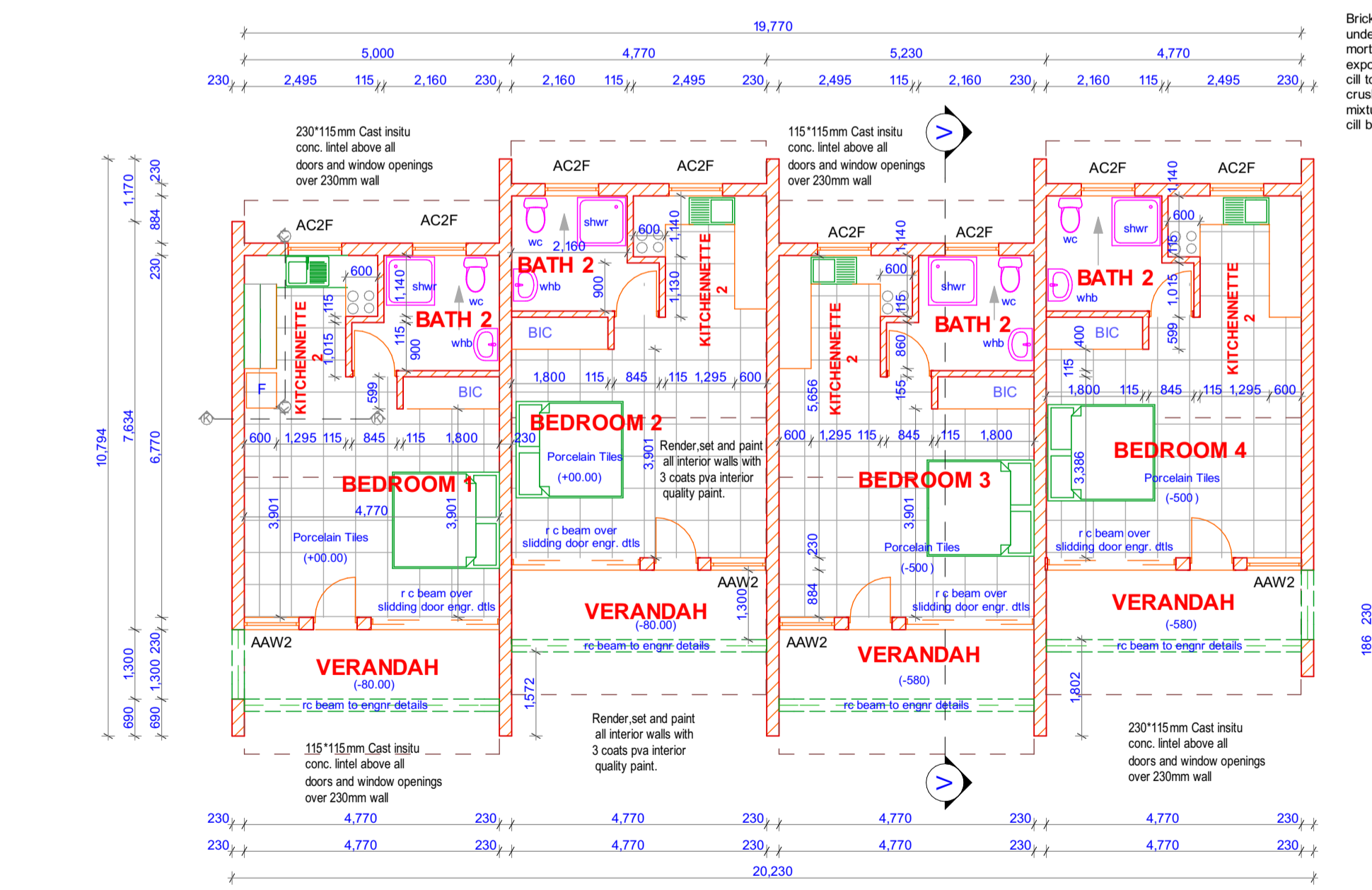
WATER CLOSET SUITE

WATER CLOSET SUITE

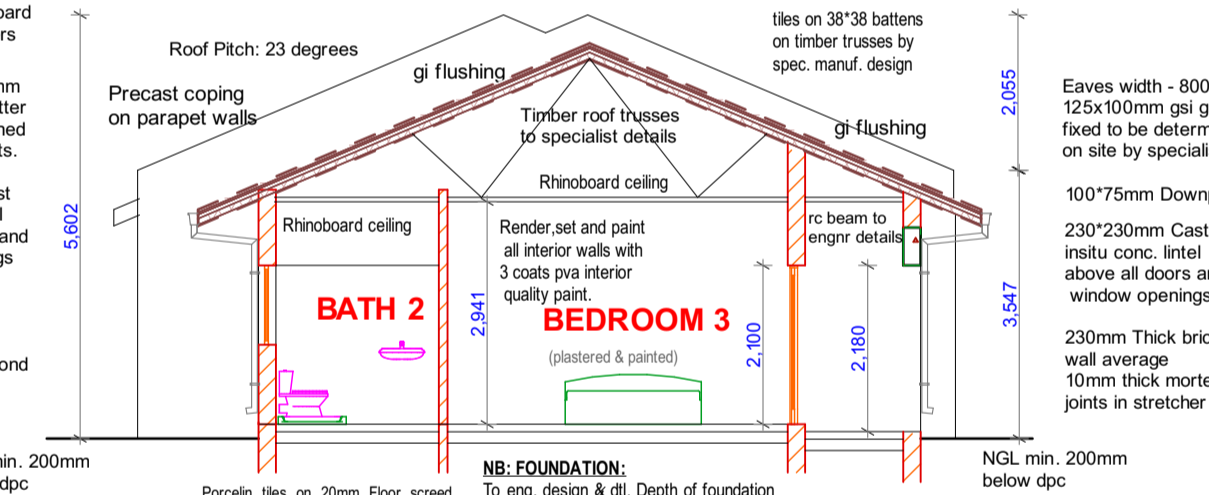
KITCHENNETTE DETAIL 3



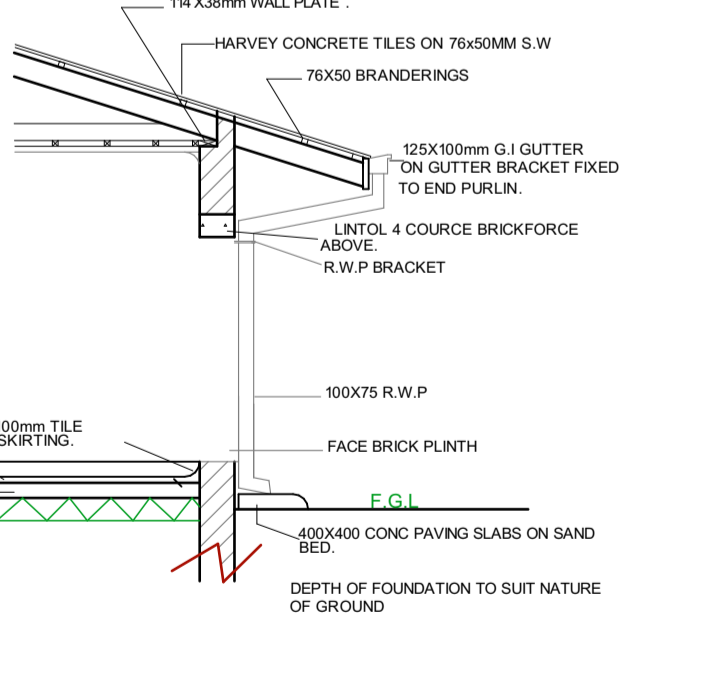
KITCHENNETTE DETAIL 1



FLOOR PLAN
SCALE: 1: 100

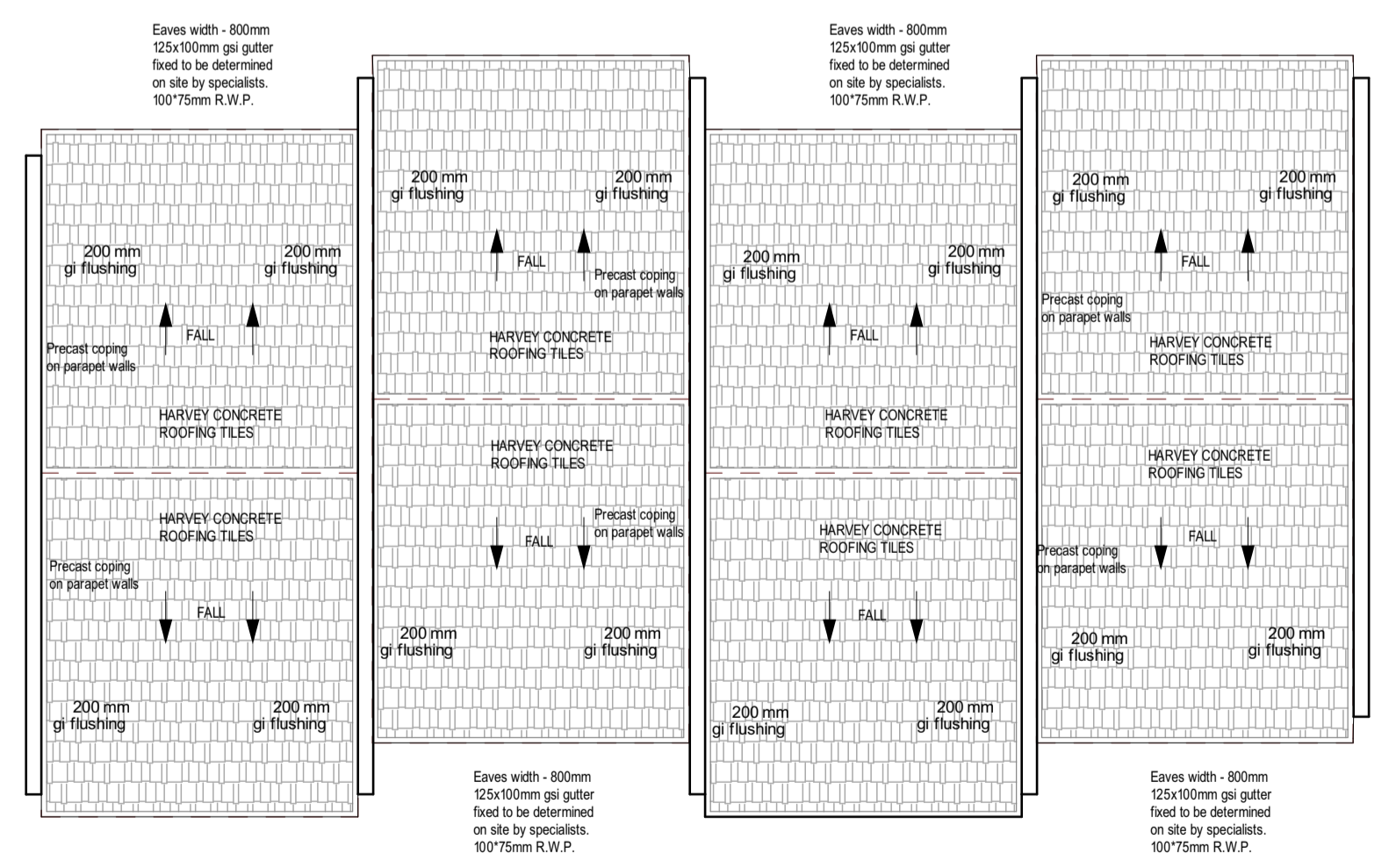


SECTION: V-V
SCALE: 1: 100



FOUNDATION ROOF DETAILS
scale 1:50

WINDOW SCHEDULE	
W x H Size	900x1,800
Quantity	4
2D Symbol	[Symbol]
3D Front View	[Symbol]
Full Element ID	AAW2 AC2F
Details	1
	Architectural aluminium window frame 4mm external glazing with U-value of 5.73 and SHGC of 0.6
	Architectural aluminium window frame 4mm external glazing with U-value of 5.73 and SHGC of 0.6



ROOF PLAN
SCALE: 1: 100

PLUMBING NOTES
-REFER TO CIVIL AND MECHANICAL ENGINEER'S DRAWINGS.

GENERAL NOTES
-a.b. denotes air bricks in walls
-brick force to all wall at every four courses.
-smooth cement plaster all walls internally
-render cement float all walls externally unless stated.

All given dimensions are in millimetres.
RC BEAMS OVER TO STRUCTURAL ENGINEER DETAILS AND SPECIFICATIONS

FOUNDATION NOTES
-Depth of conc. footing to be determined on site.
-690*230mm conc. footing for all external walling to eng. specs
-500*200mm conc. footing for all internal walling to eng. spec

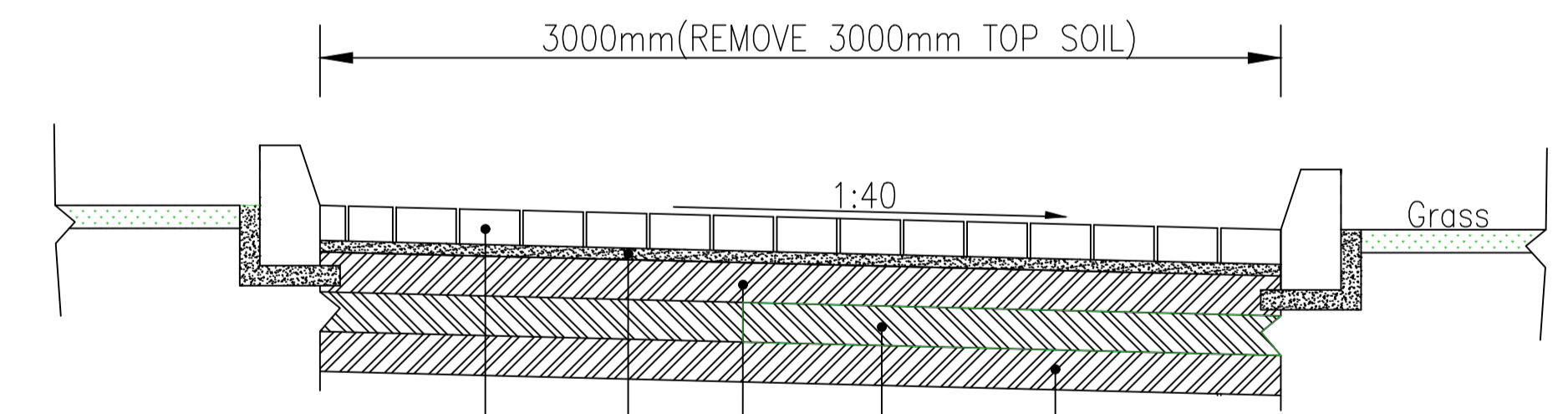
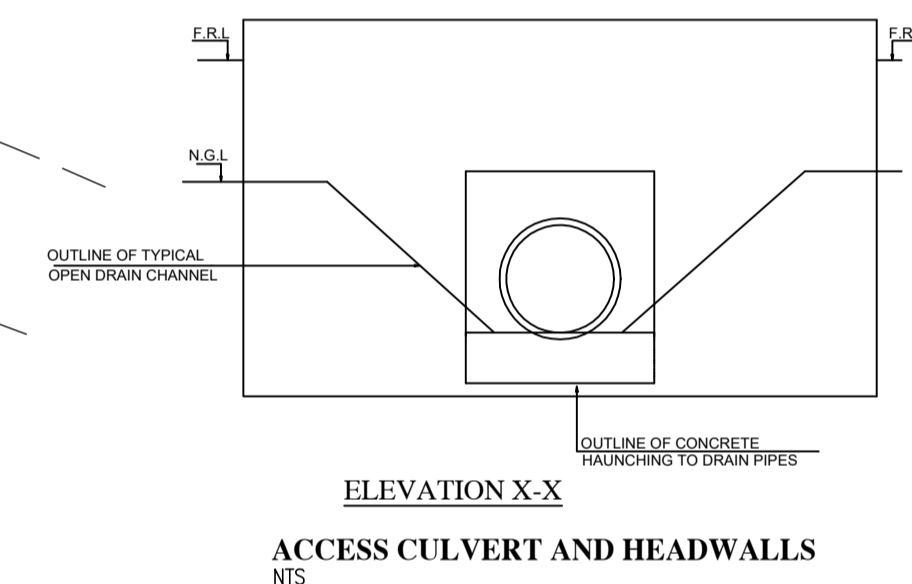
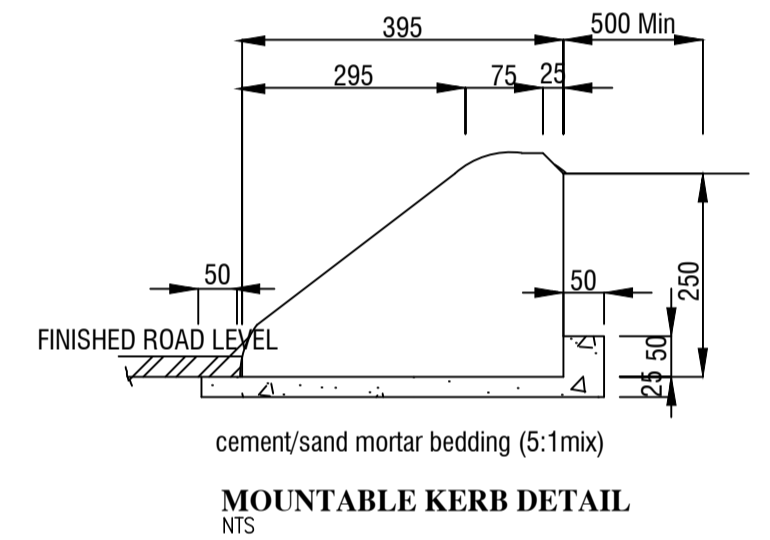
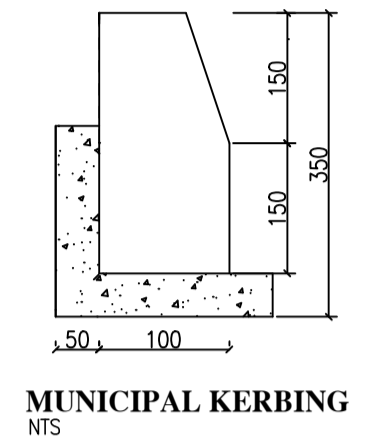
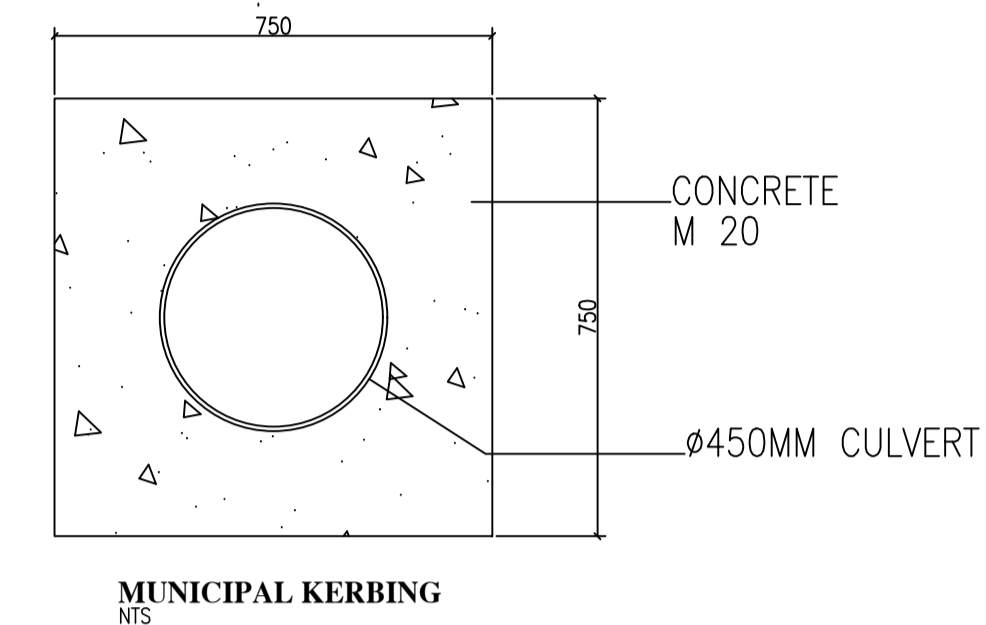
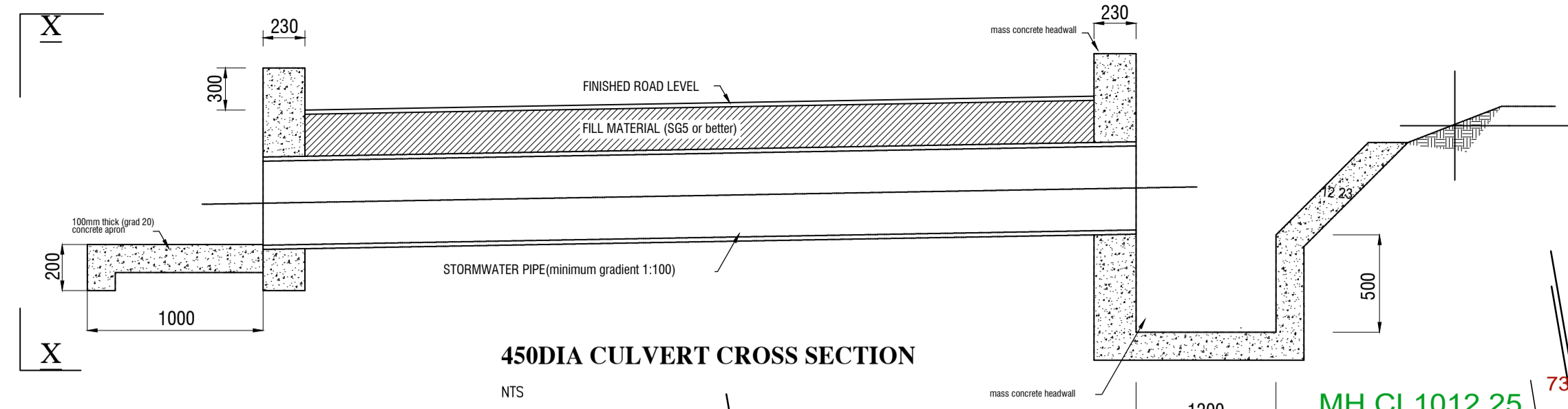
ROOF NOTES
-Roof pitch : 23°
-Rhinoard ceiling on 400mm c/c 38*38mm r.s.b.
-Roof timber trusses to eng./ specialist manufacturer design and specification
-114 *38mm wall plate p.a.r.

EAVES AND FASCIABOARD
Eaves width - 800mm
holder bats at centres to be determined on site by specialists.
900mm wide precast concrete paving all round.

EXTERNAL CILLS
Brick on edge cills with dpc under to all windows.
All mortar joints and holes exposed at side ends of cill to be plugged with crushed brick and cement mixture to match colour of cill bricks.

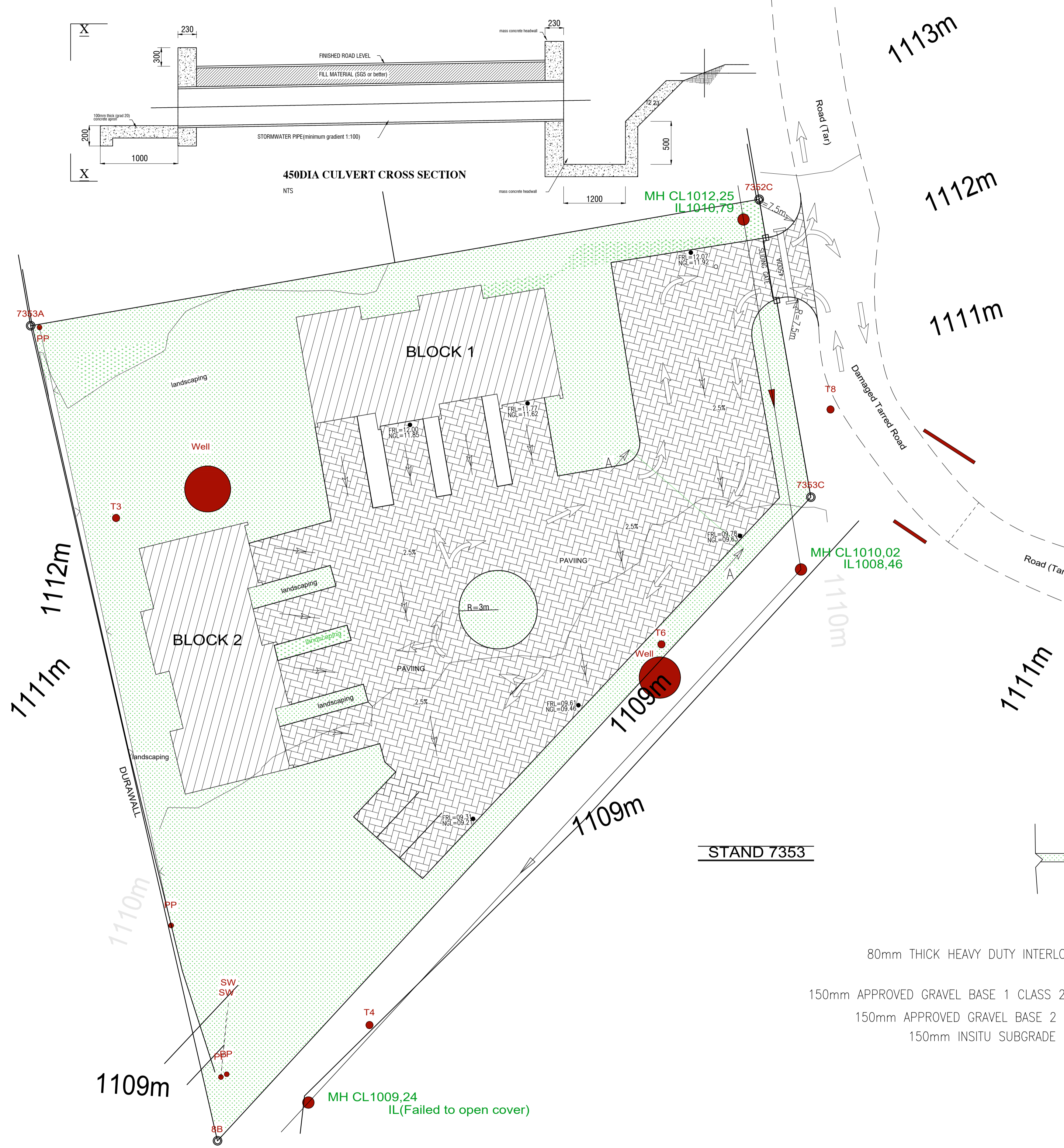
DRIPSTONE
All rainwater downpipes to discharge onto 450x650mm precast conc. and to be laid on 75mm well compacted sandbed to structural engineer's approval.

Notes	AMENDMENT		<p>MINISTRY OF LOCAL GOVERNMENT AND PUBLIC WORKS P.O. BOX CY441, CAUSEWAY ZIMBABWE</p>	Branch Head : G. GWENHURE	Director Arch : ARCH. P.S. MUKURA	Ministry : MINISTRY OF FINANCE	Centre : MUTARE
	Ltr	date		Init	Designed : M. DUBE	Scale : As Shown	Title : ZIMRA STAFF COTTAGES
				Drawn : M. DUBE	Date : DECEMBER 2021	Description : FORBES BORDER POST STAFF ACCOMMODATION	
				Checked : L.T MUGORE	File Ref	Details : 7353 B1 : FLOOR PLAN, ELEVATIONS, SECTION AND DETAILS	
				Telephone 790137 / 704079		Stock Drwg No	G.P. No
							Project No 192593/A/04



80mm THICK HEAVY DUTY INTERLOCKING PAVERS ON
 50mm QUARRY DUST
 150mm APPROVED GRAVEL BASE 1 CLASS 2.6 COMPACTED TO 98% H.C.E
 150mm APPROVED GRAVEL BASE 2 CLASS 3.6 COMPACTED TO 96% H.C.E
 150mm INSITU SUBGRADE MATERIAL SCARIFIED & COMPACTED TO 93% H.C.E

SECTION A-A



STAND 7353

NOTES:	AMENDMENT	Description:

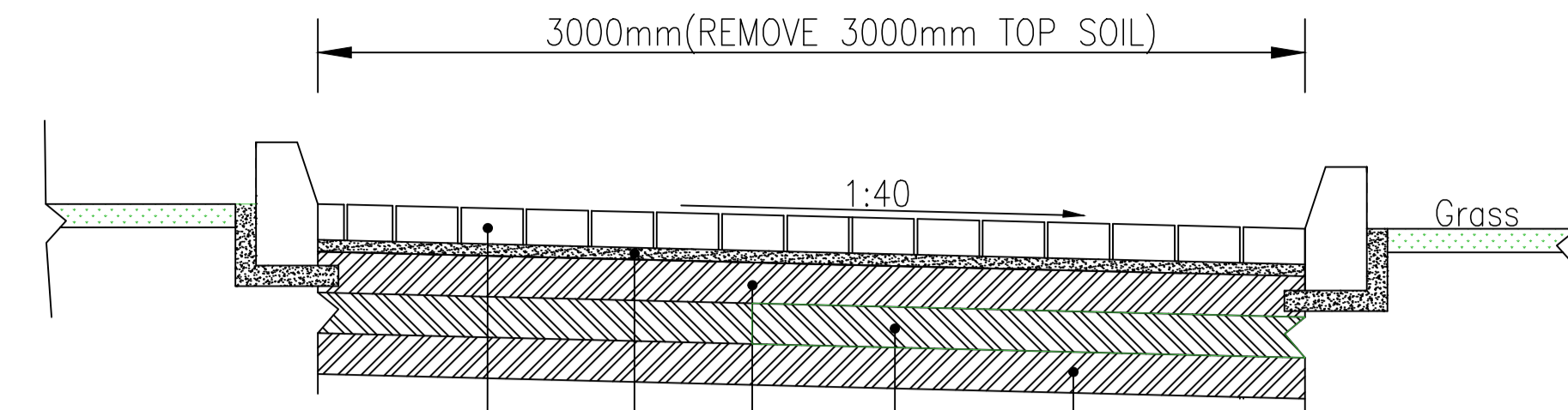
Ministry of Local Government,
 Public Works and National Housing
 P.O. Box CY7755, Causeway
 Zimbabwe

Arch Eng	A.S	Director Eng	H.Hungwe	Ministry	MINISTRY OF FINANCE	Centre	MUTARE
Designed	L.M	Branch Head	E.N	Title	FORBES BORBER POST STAFF COTTAGES		
Drawn	L.M	Scale	1:180	Description	ROAD AND STORMWATER LAYOUT FOR STAND 7353		
Checked	E.M	Date	July 2021				
				G.P. No			
				Proj			

Telephone 04 700811

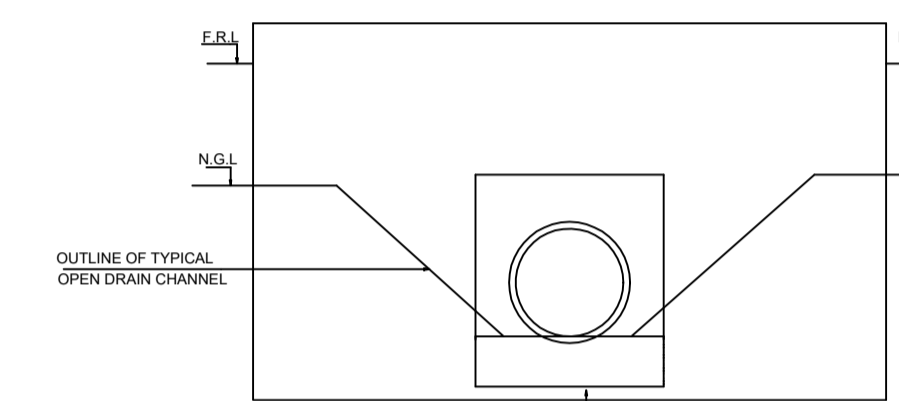


STAND 7431

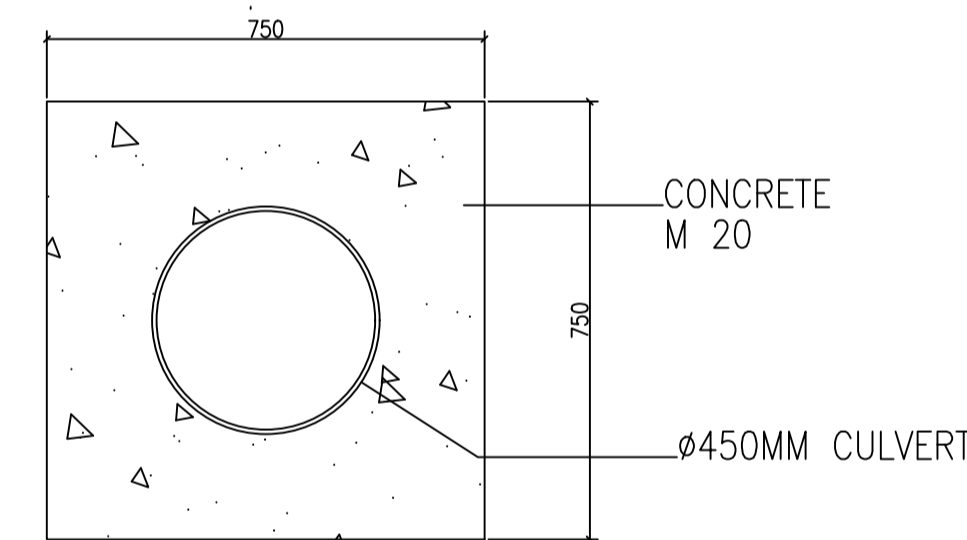


80mm THICK HEAVY DUTY INTERLOCKING PAVERS ON
50mm QUARRY DUST
150mm APPROVED GRAVEL BASE 1 CLASS 2.6 COMPACTED TO 98% H.C.E
150mm APPROVED GRAVEL BASE 2 CLASS 3.6 COMPACTED TO 96% H.C.E
150mm INSITU SUBGRADE MATERIAL SCARIFIED & COMPACTED TO 93% H.C.E

SECTION A-A



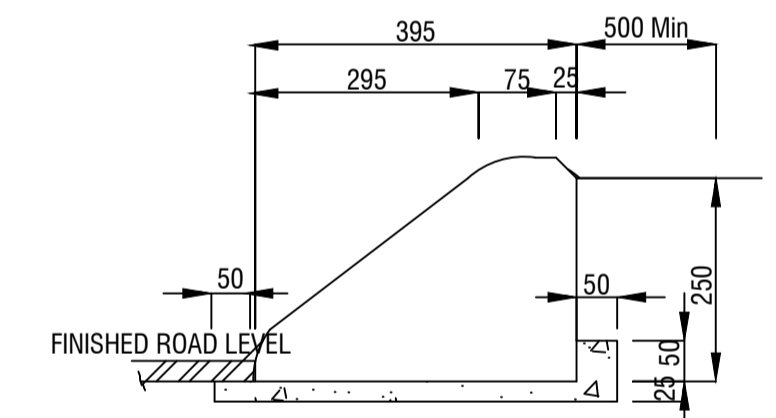
ELEVATION X-X
ACCESS CULVERT AND HEADWALLS
NTS



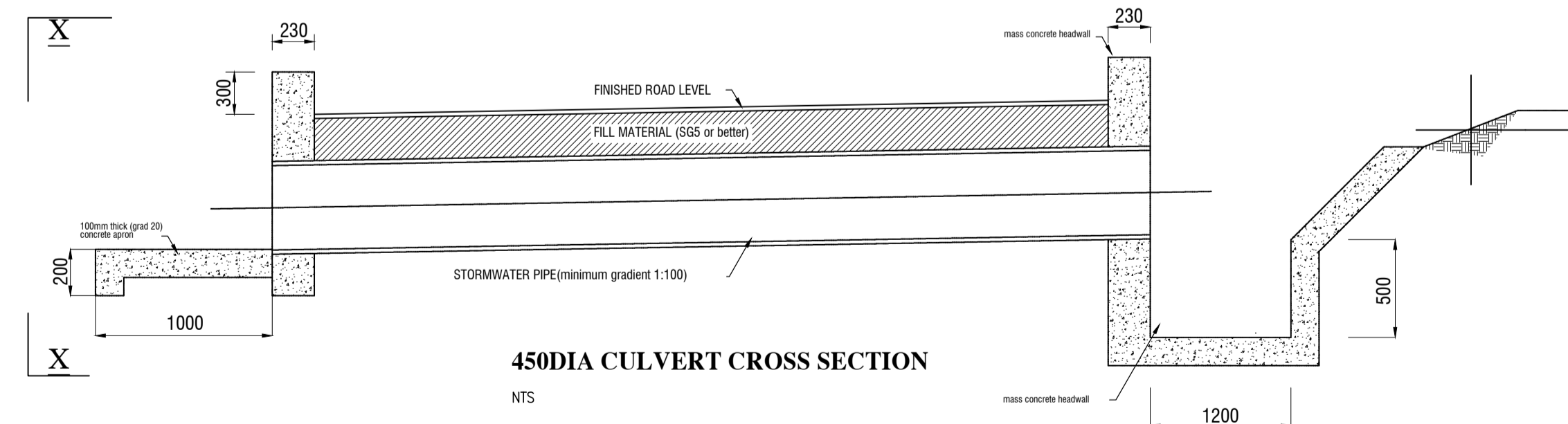
MUNICIPAL KERBING
NTS



MUNICIPAL KERBING
NTS



MOUNTABLE KERB DETAIL
NTS



450DIA CULVERT CROSS SECTION
NTS

NOTES:	AMENDMENT	Description:



Ministry of Local Government,
Public Works and National Housing
P.O. Box CY7755, Causeway
Zimbabwe

Arch Eng A.S	Director Eng H.Hungwe	Ministry MINISTRY OF FINANCE	Centre MUTARE
Designed L.M	Branch Head E.N	Title FORBES BORBER POST STAFF COTTAGES	
Drawn L.M	Scale 1:180	Description ROAD AND STORMWATER LAYOUT FOR STAND 7430	
Checked E.M	Date July 2021	G.P. No	Proj
Telephone 04 700811			



NOTES:
Sewer reticulation invert levels and slopes for block B to be determined on site.

AMENDMENT	Description



Ministry of Local Government,
Public Works and National Housing
P.O. Box CY7755, Causeway
Zimbabwe

Arch Eng	V.D	Director Eng	H.Hungwe
Designed	L.M	Branch Head	E.N
Drawn	L.M	Scale	1:190
Checked	E.M	Date	Mar 2022

Ministry	MINISTRY OF FINANCE	Centre	MUTARE
Title	FORBES BORBER POST STAFF COTTAGES		
Description	SEWER RETICULATION LAYOUT FOR STAND 7353		

Telephone 04 700811

G.P. No

Proj



NOTES:
Sewer reticulation invert levels and slopes for block B to be determined on site.

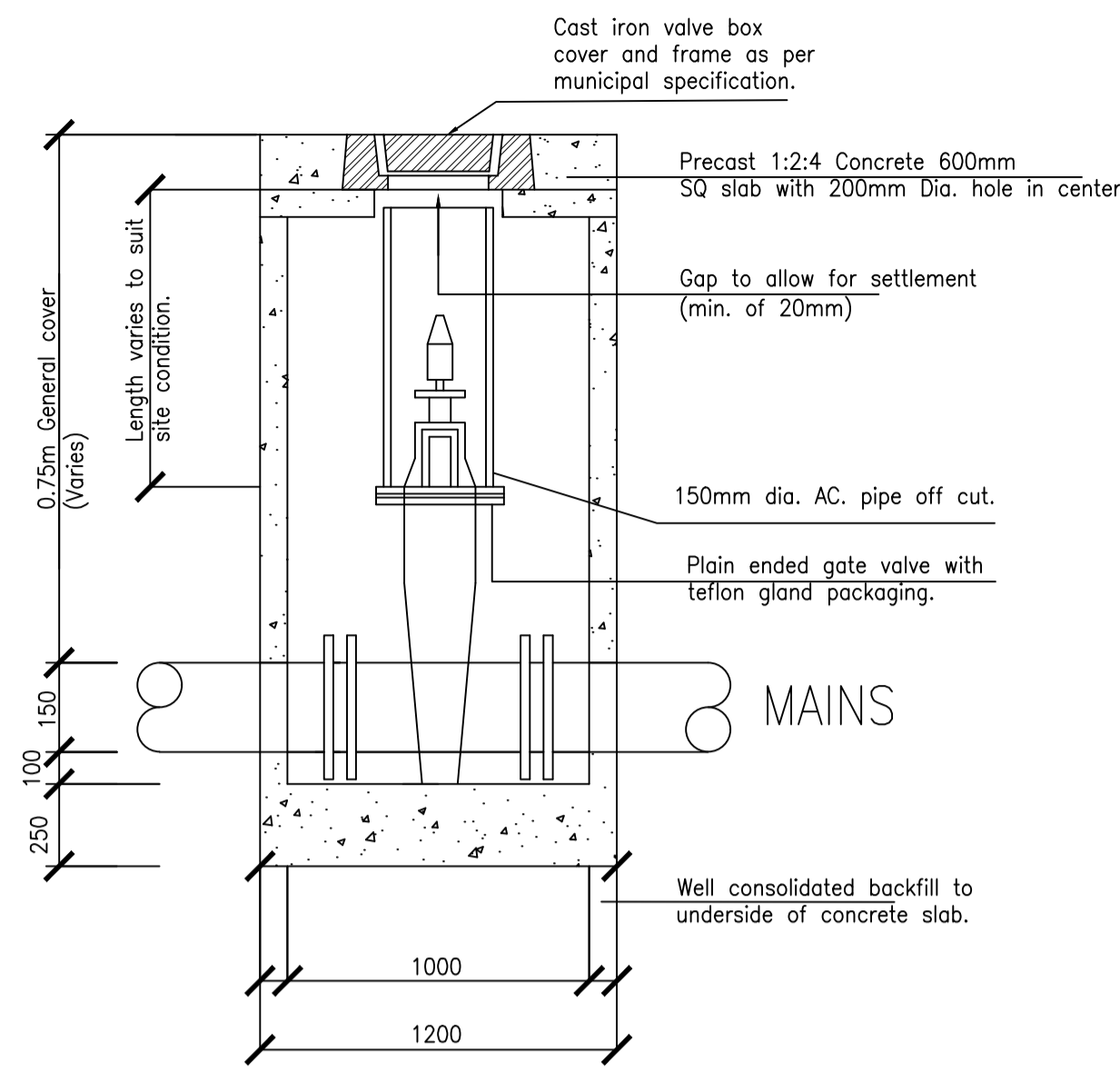
AMENDMENT	Description



Ministry of Local Government,
Public Works and National Housing
P.O. Box CY7755, Causeway
Zimbabwe

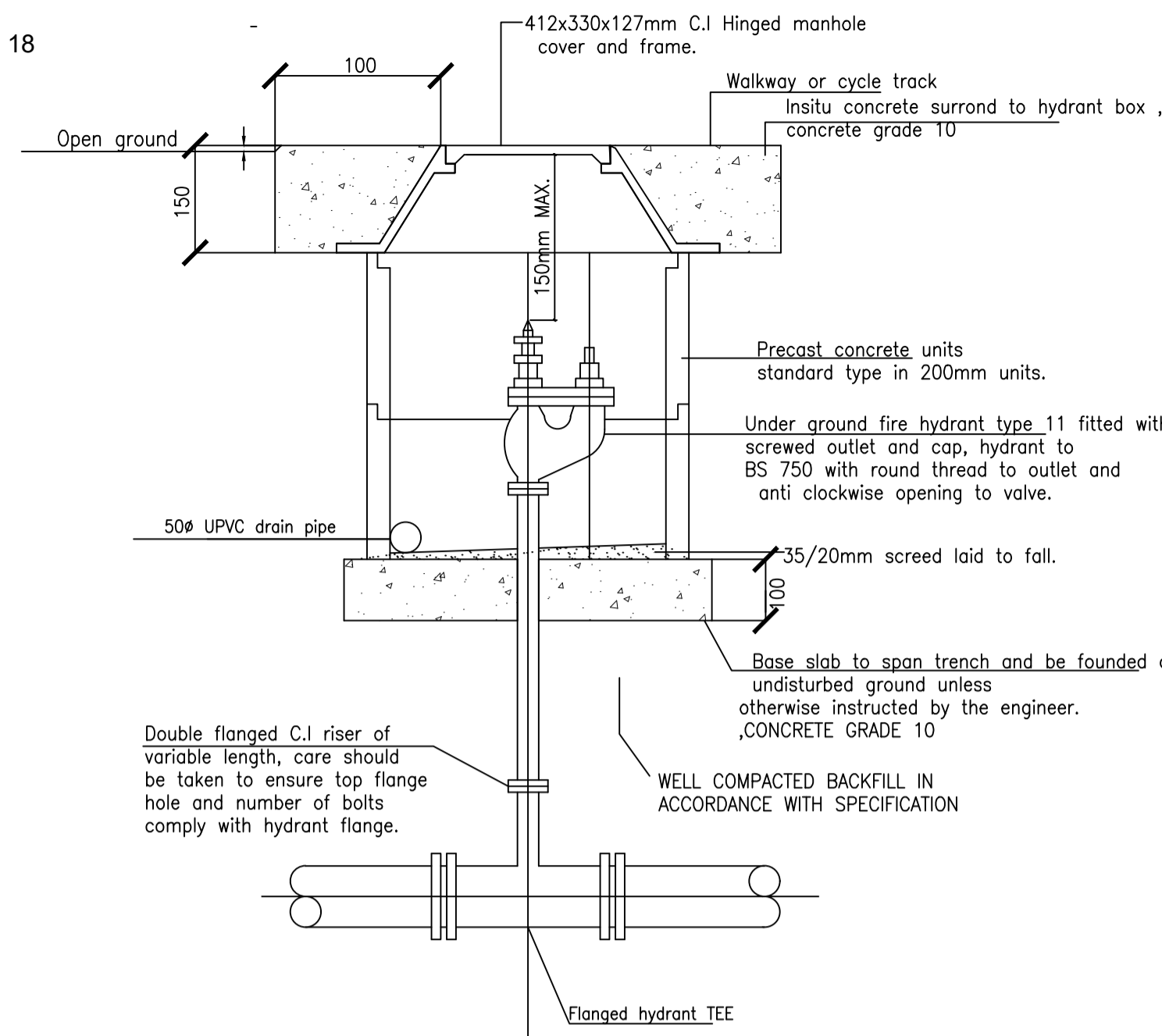
Arch Eng	V.D	Director Eng	H.Hungwe
Designed	L.M	Branch Head	E.N
Drawn	L.M	Scale	1:190
Checked	E.M	Date	Mar 2022
Telephone 04 700811			

Ministry	MINISTRY OF FINANCE	Centre	MUTARE
Title	FORBES BORBER POST STAFF COTTAGES		
Description	WATER RETICULATION LAYOUT FOR STAND 7353		
G.P. No		Proj	

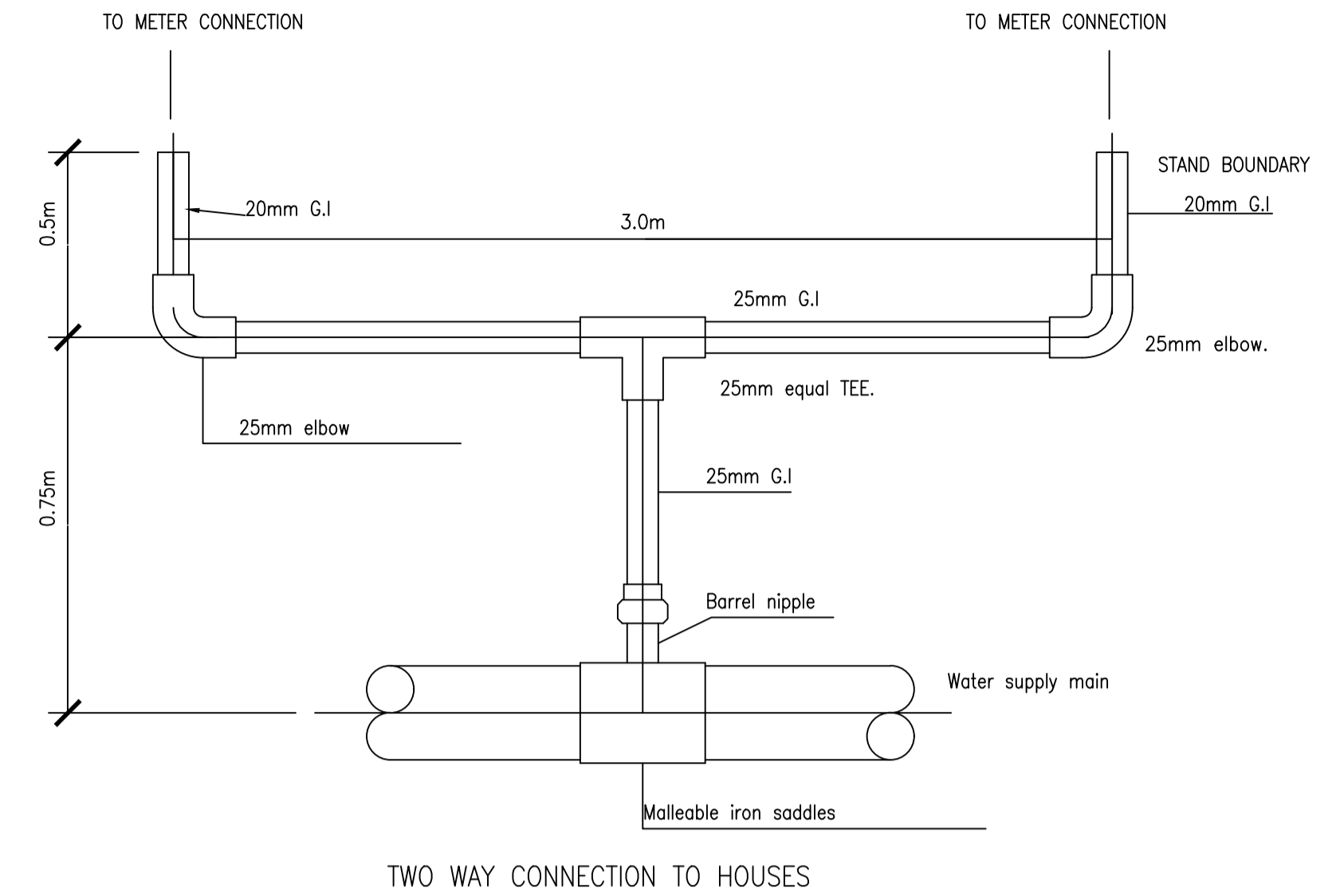


GATE VALVE INSTALLATION AND BOX
(MAINS up to 300mm)

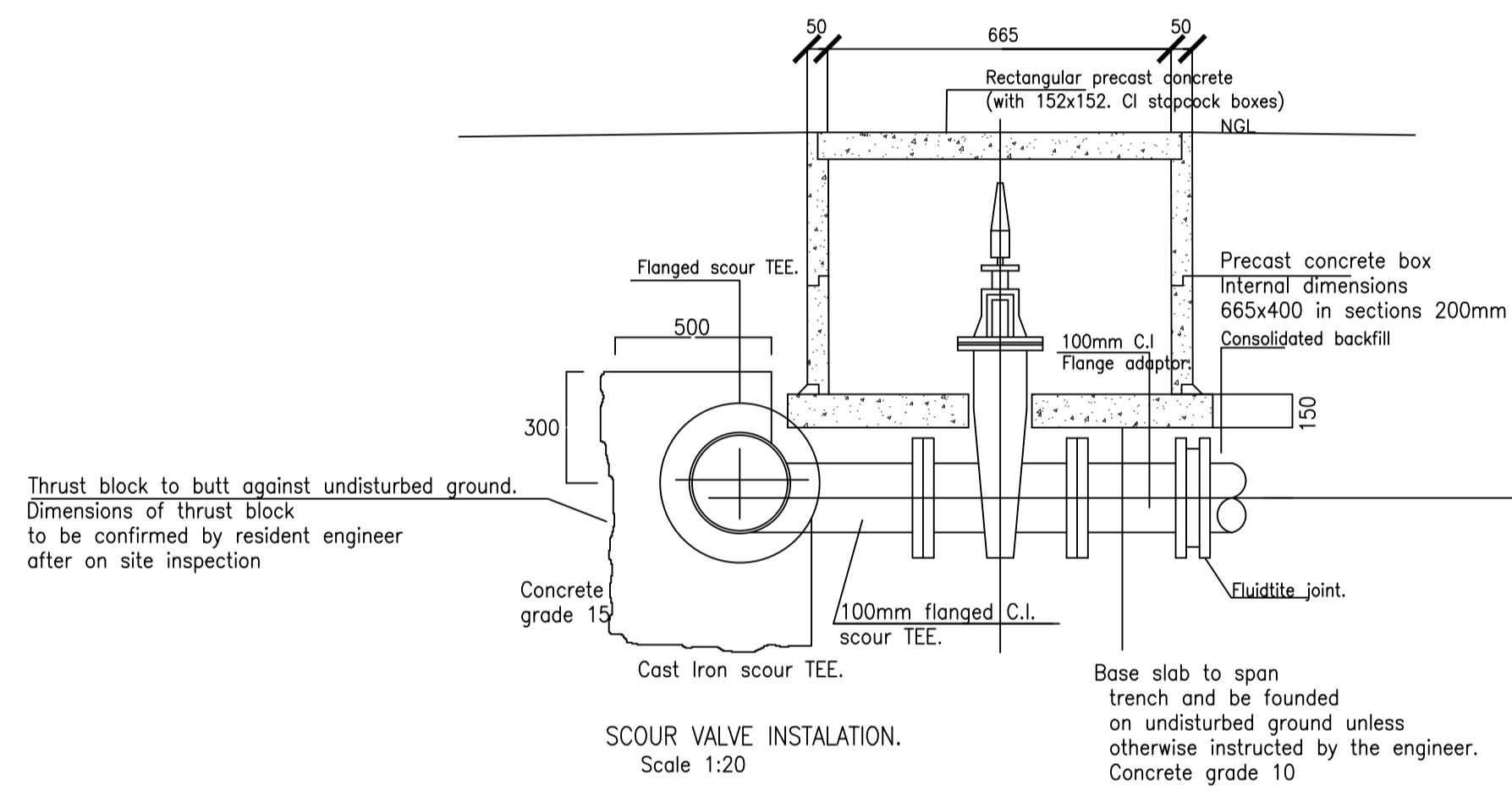
Annexure 18



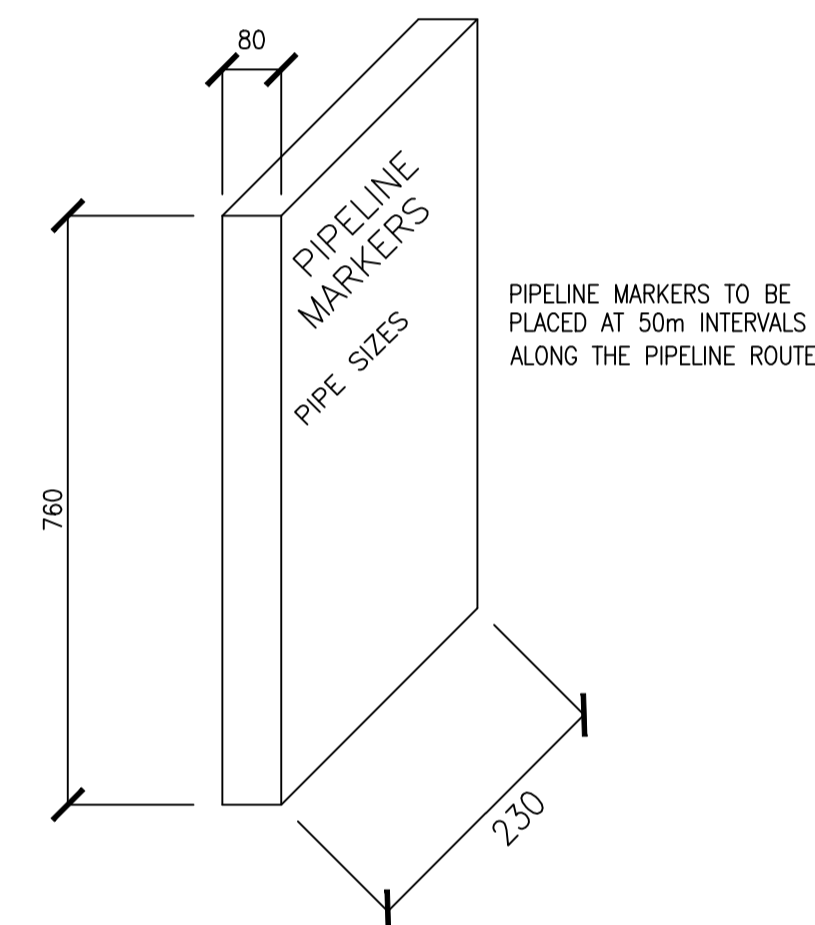
FIRE HYDRANT AND BOX DETAILS



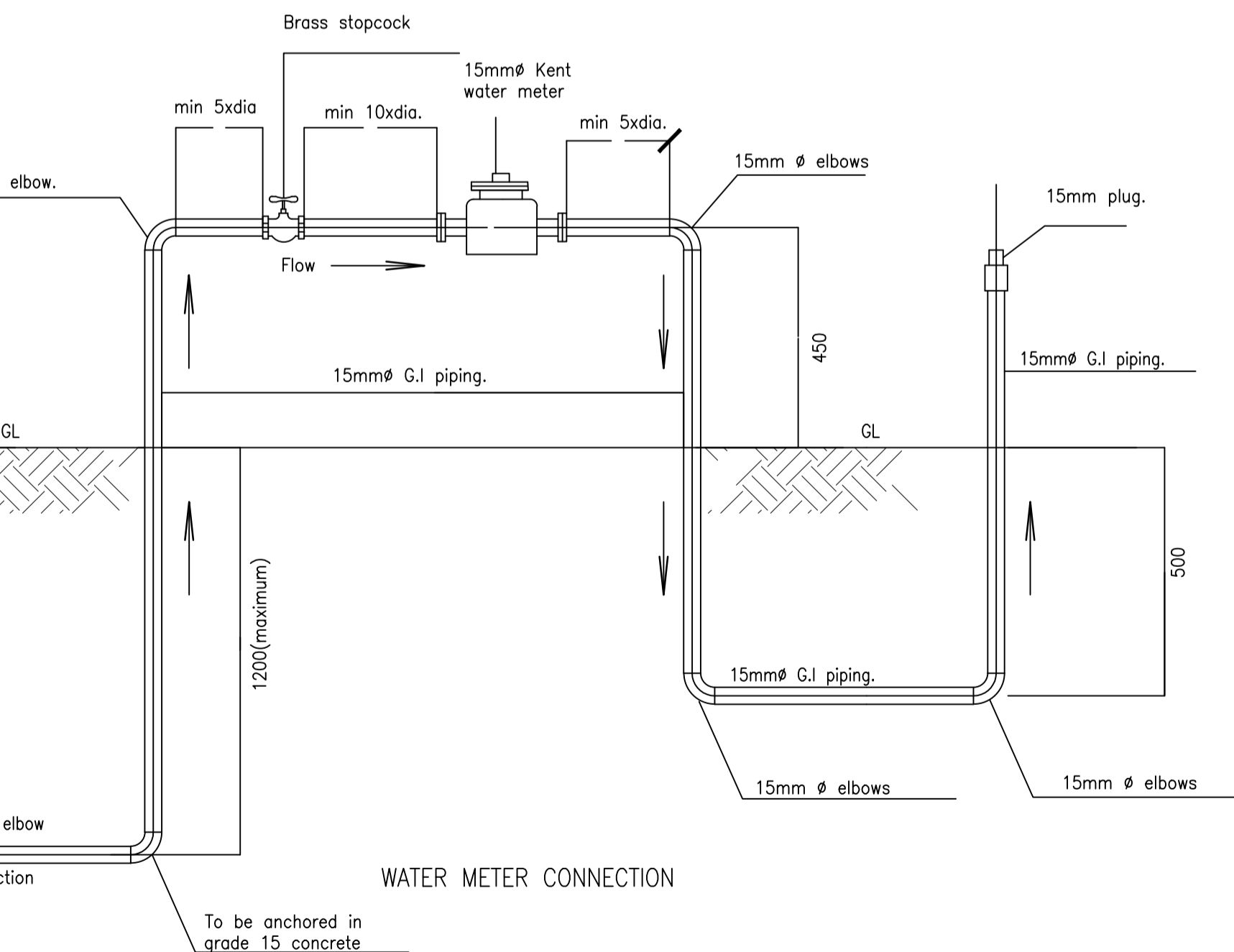
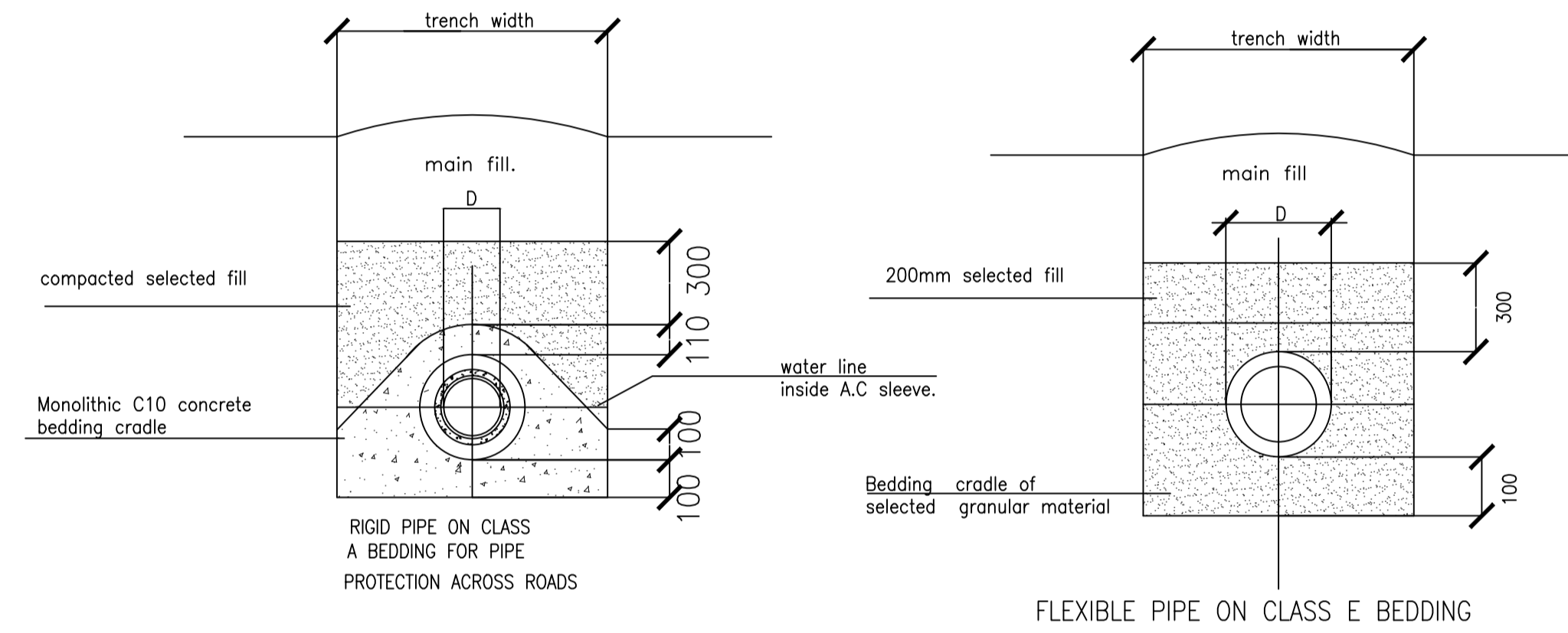
TWO WAY CONNECTION TO HOUSES



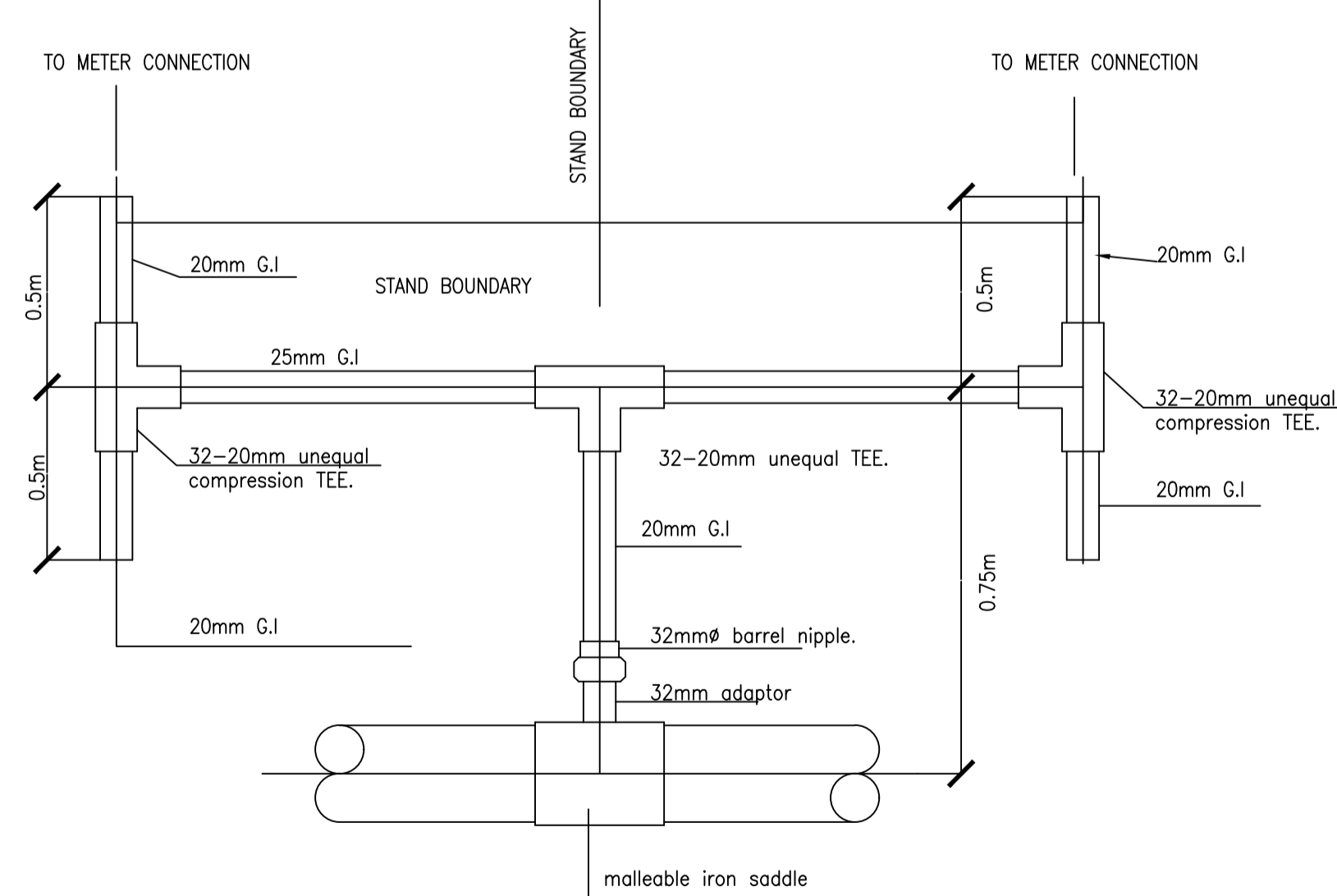
SCOUR VALVE INSTALLATION.
Scale 1:20



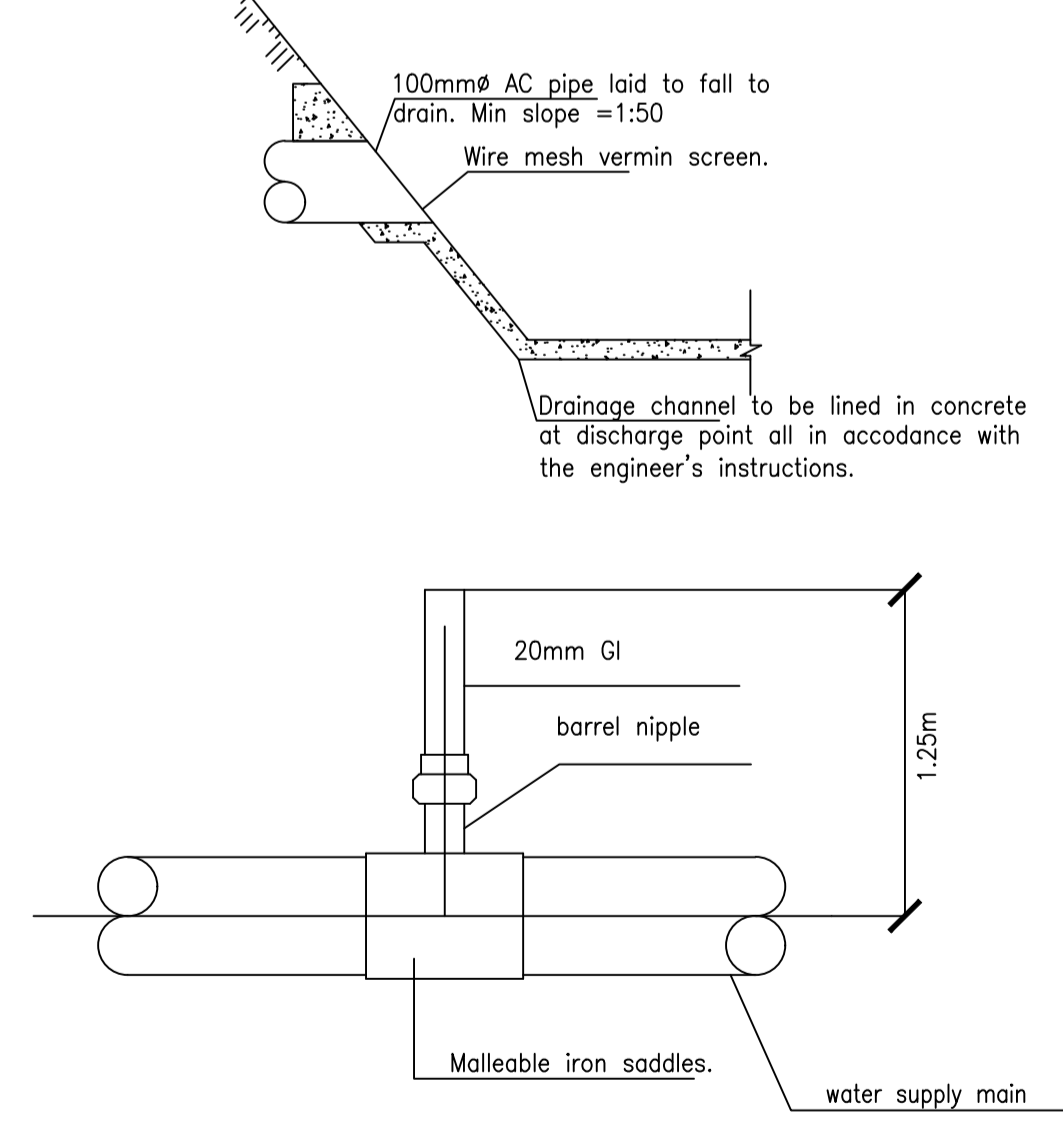
PRECAST CONCRETE PIPELINE
MAKER DETAILS



WATER METER CONNECTION



FOUR WAY CONNECTION TO HOUSES



ONE WAY STAND CONNECTION

NOTES:

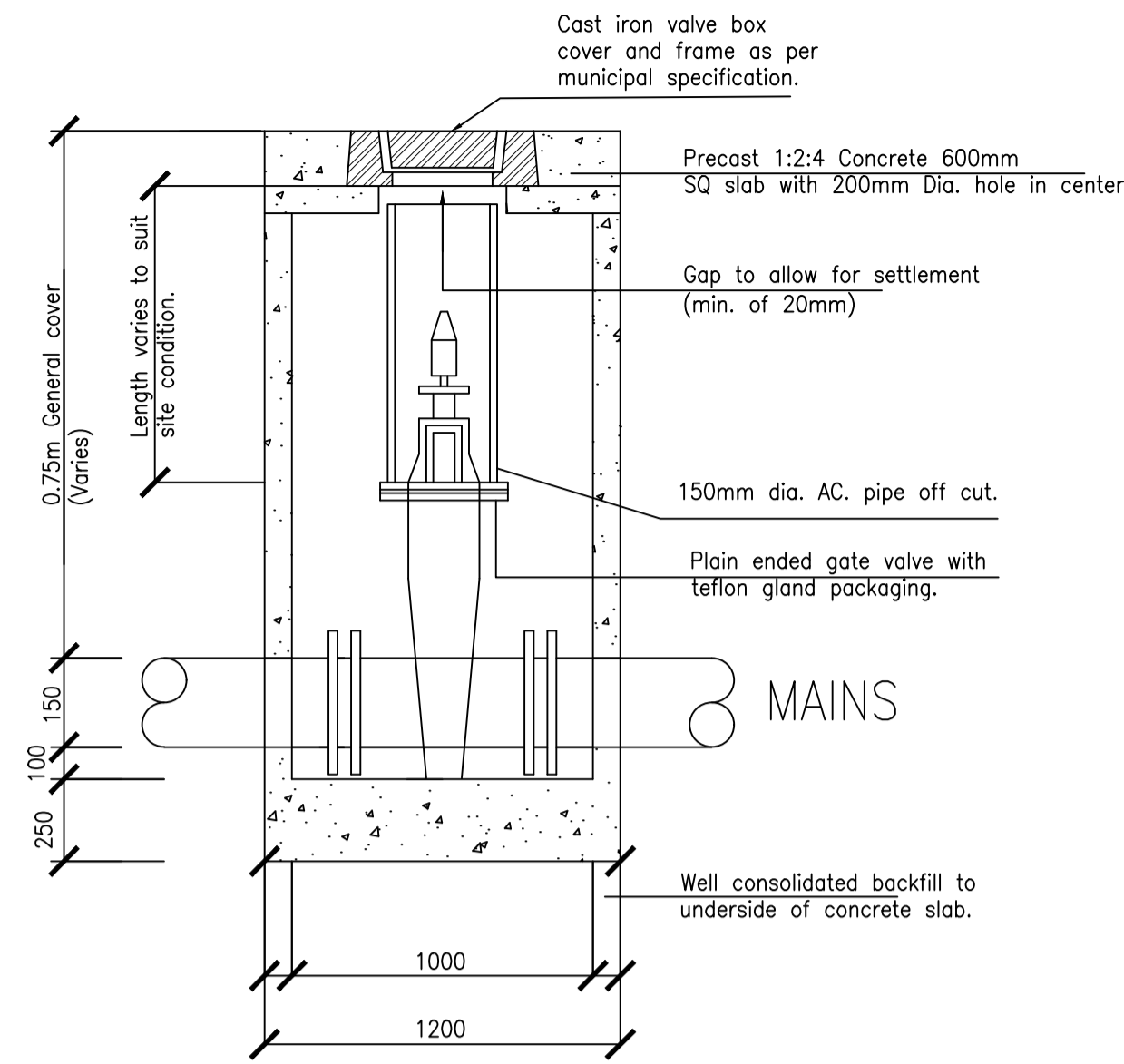
AMENDMENT	Description



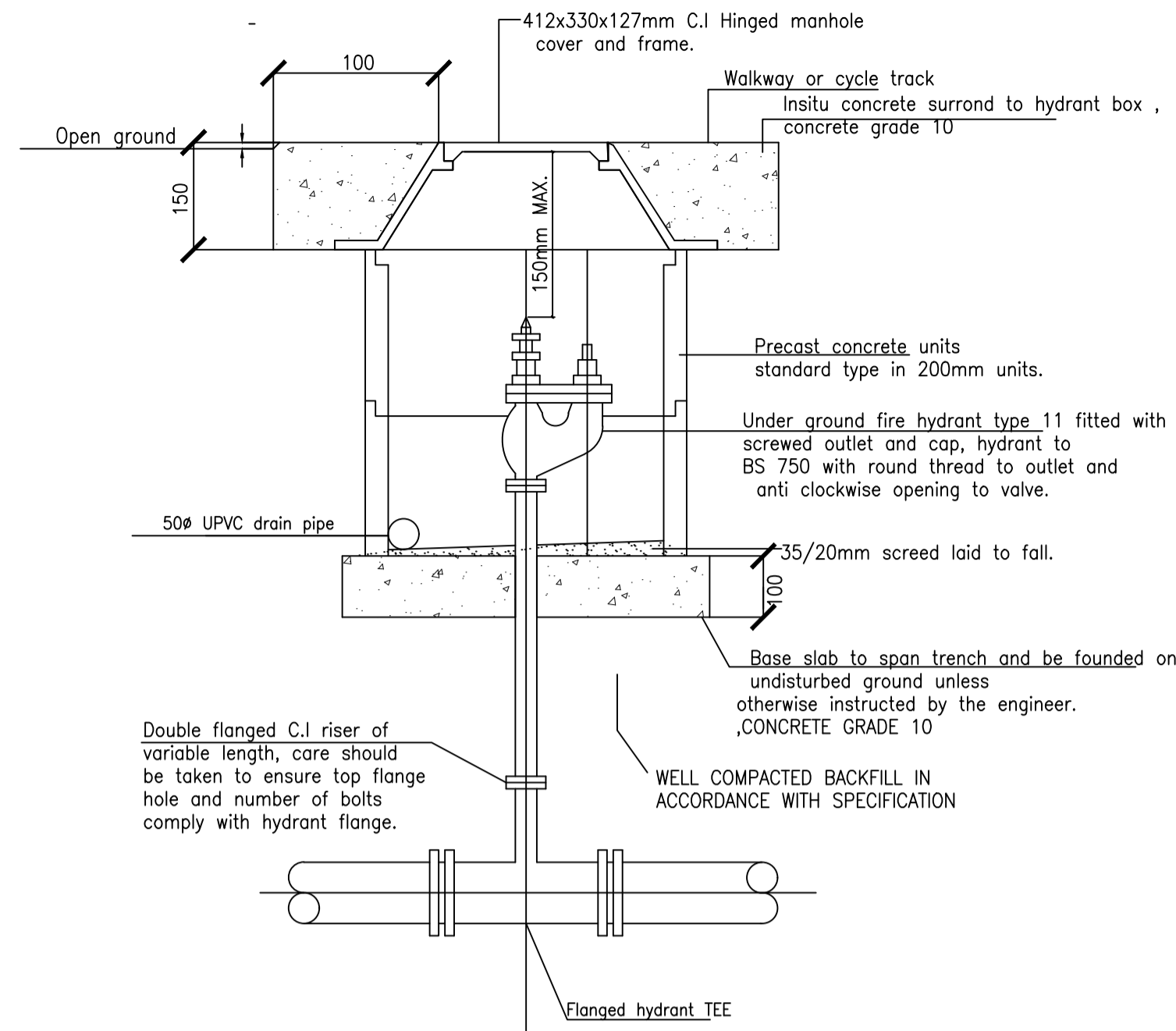
Ministry of Local Government,
Public Works and National Housing
P.O. Box CY7755, Causeway
Zimbabwe

Arch Eng A.S	Director Eng H.Hungwe	Ministry MINISTRY OF FINANCE	Centre MUTARE
Designed L.M	Branch Head E.N	Title FORBES BORBER POST STAFF COTTAGES	
Drawn L.M	Scale N.T.S	Description WATER STANDARD DETAILS	
Checked E.M	Date March 2022	G.P.No	Proj
Telephone 04 700811			

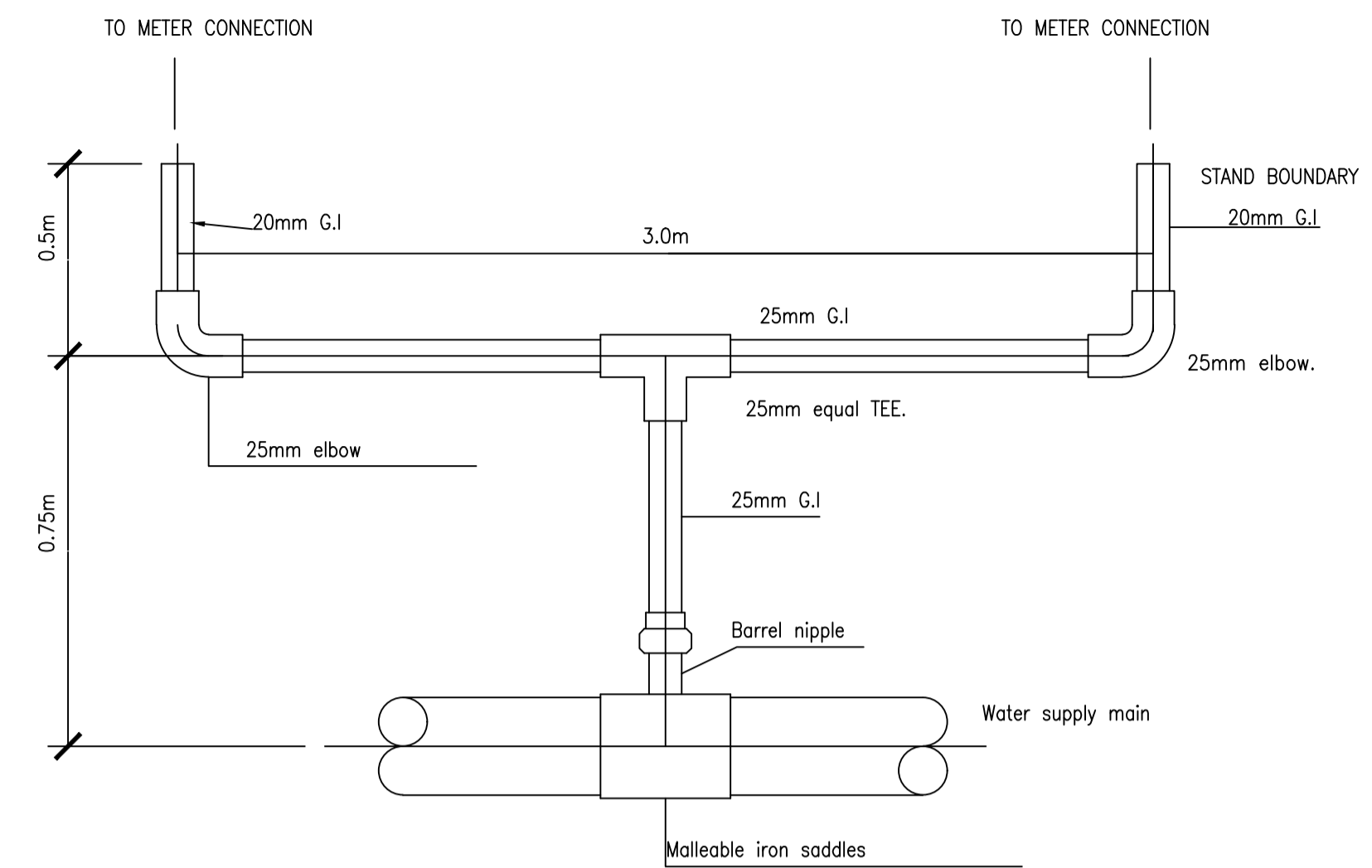
Annexure 19



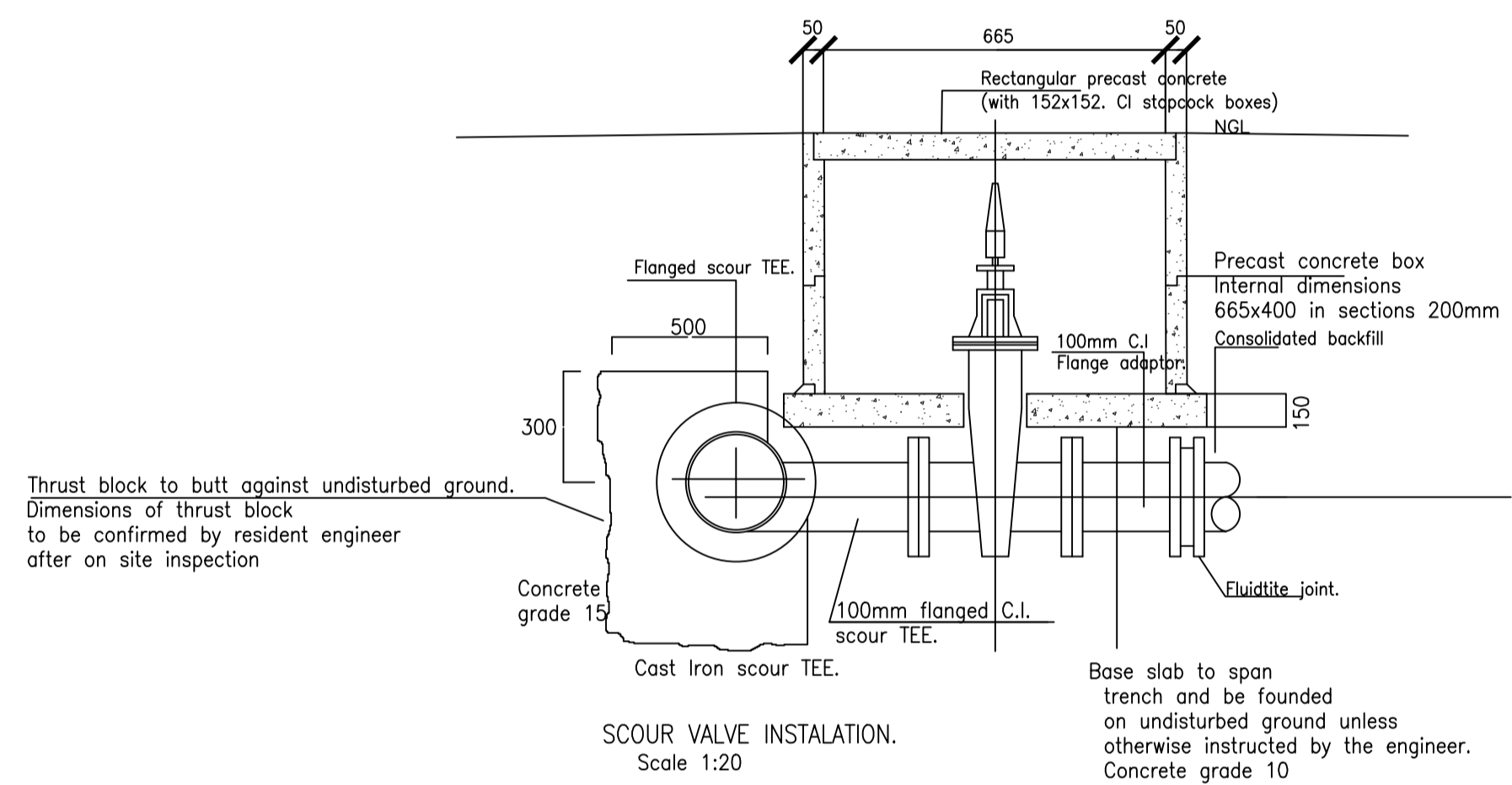
GATE VALVE INSTALLATION AND BOX
(MAINS up to 300mm)



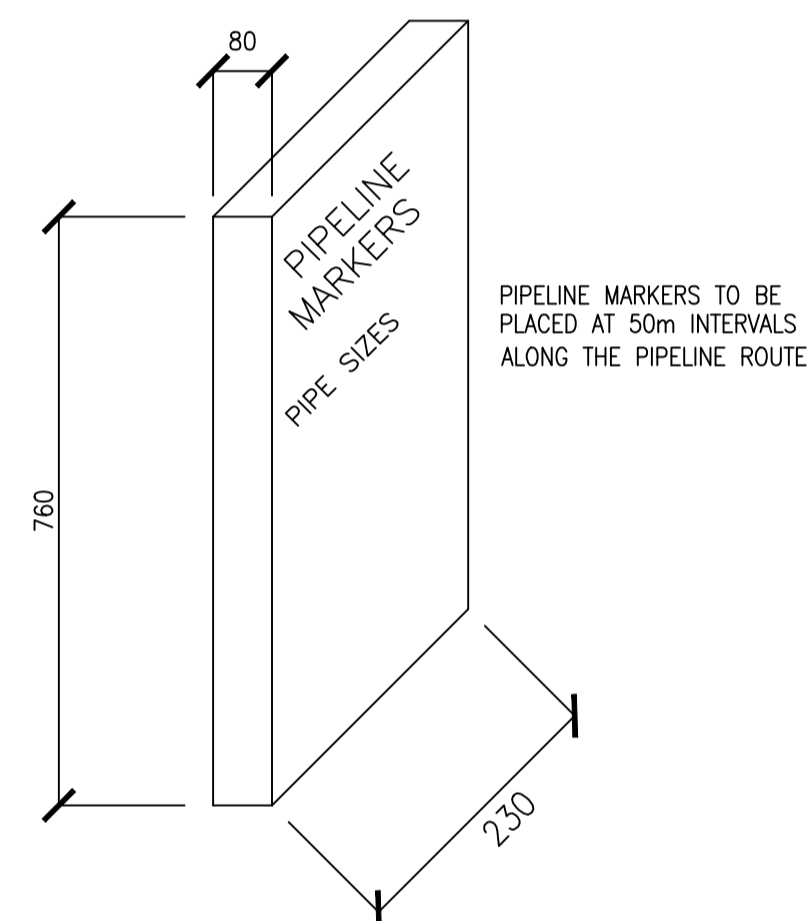
FIRE HYDRANT AND BOX DETAILS



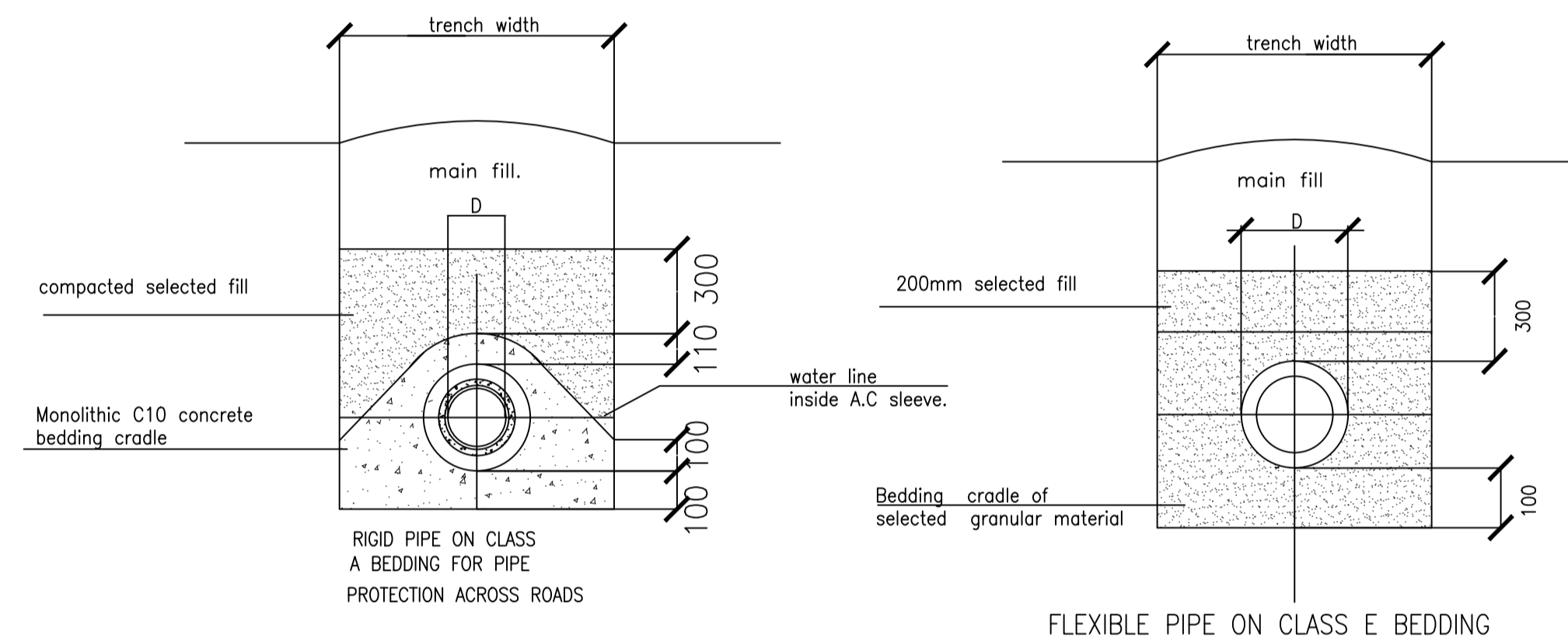
TWO WAY CONNECTION TO HOUSES



SCOUR VALVE INSTALLATION.
Scale 1:20

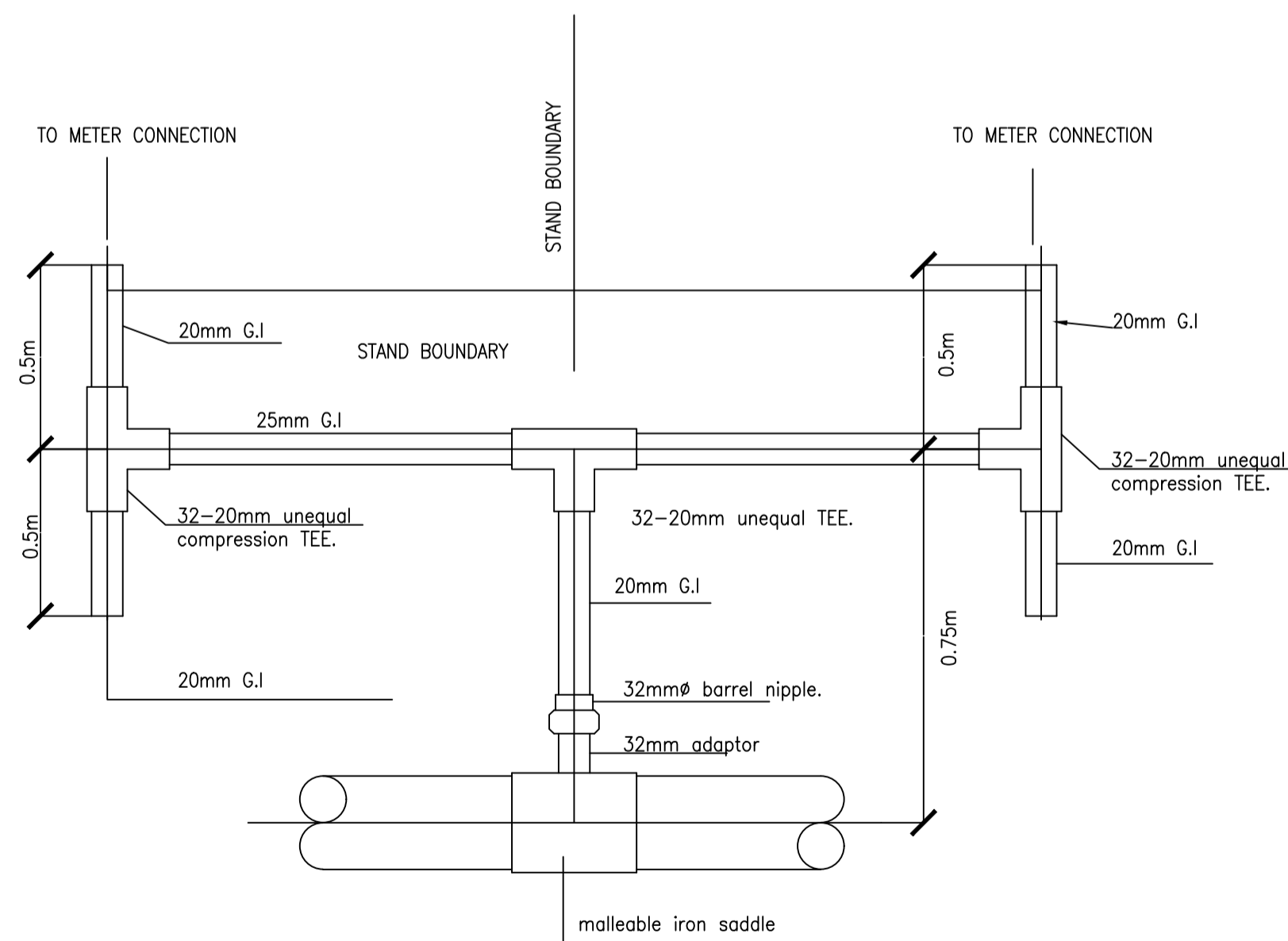


PRECAST CONCRETE PIPELINE
MAKER DETAILS

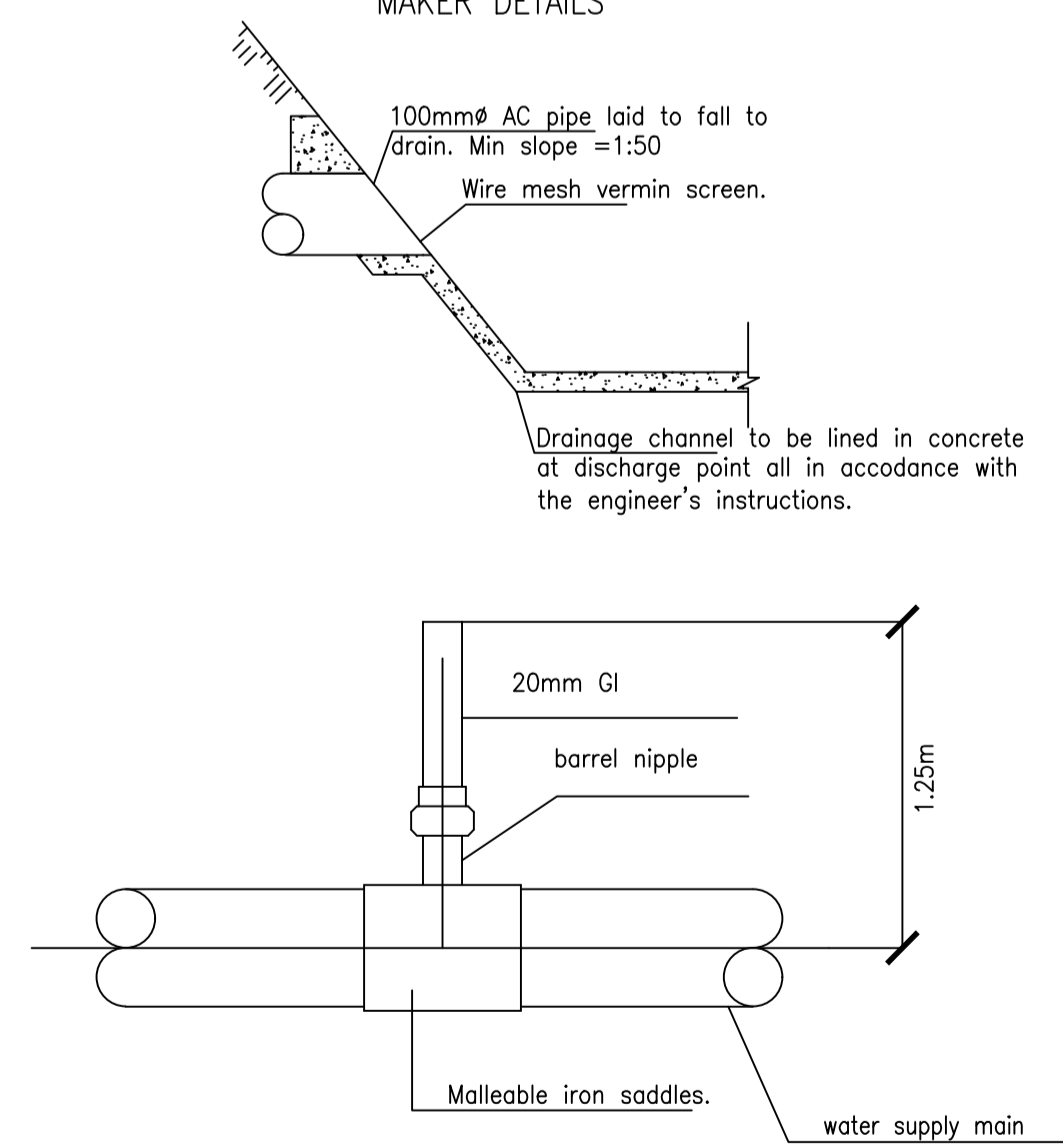


RIGID PIPE ON CLASS
A BEDDING FOR PIPE
PROTECTION ACROSS ROADS

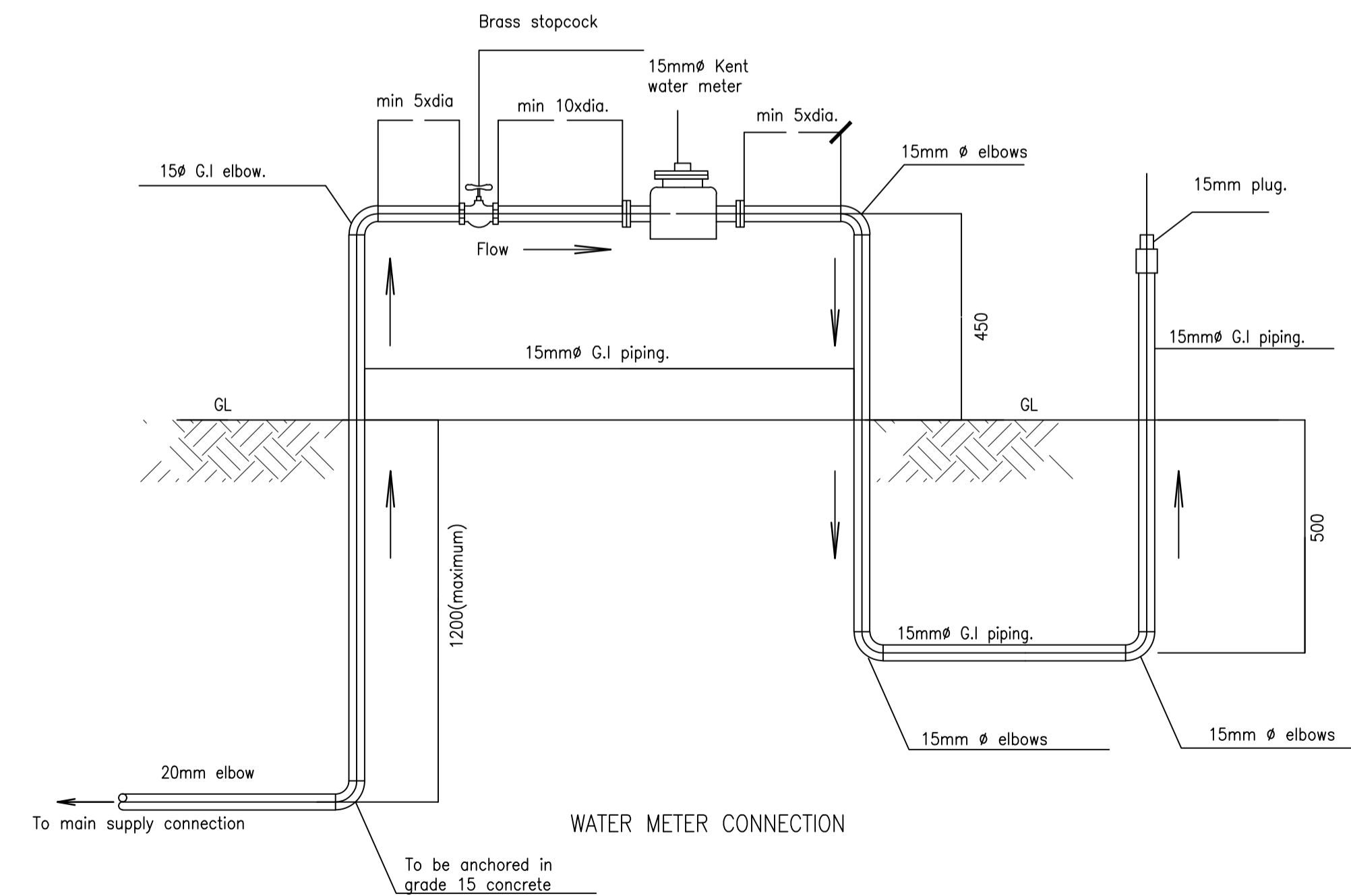
FLEXIBLE PIPE ON CLASS E
BEDDING



FOUR WAY CONNECTION TO HOUSES



ONE WAY STAND CONNECTION



WATER METER CONNECTION

NOTES:

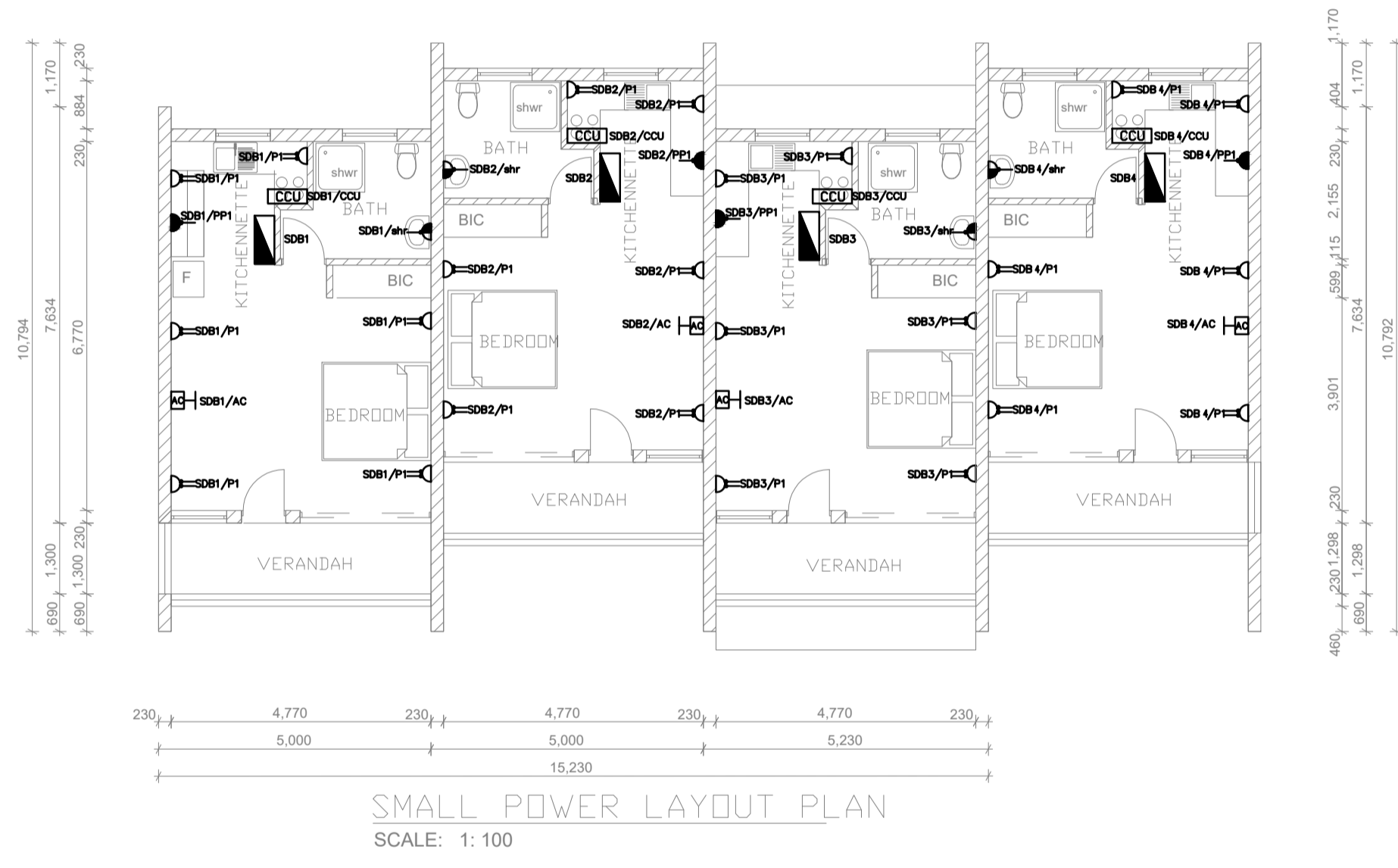
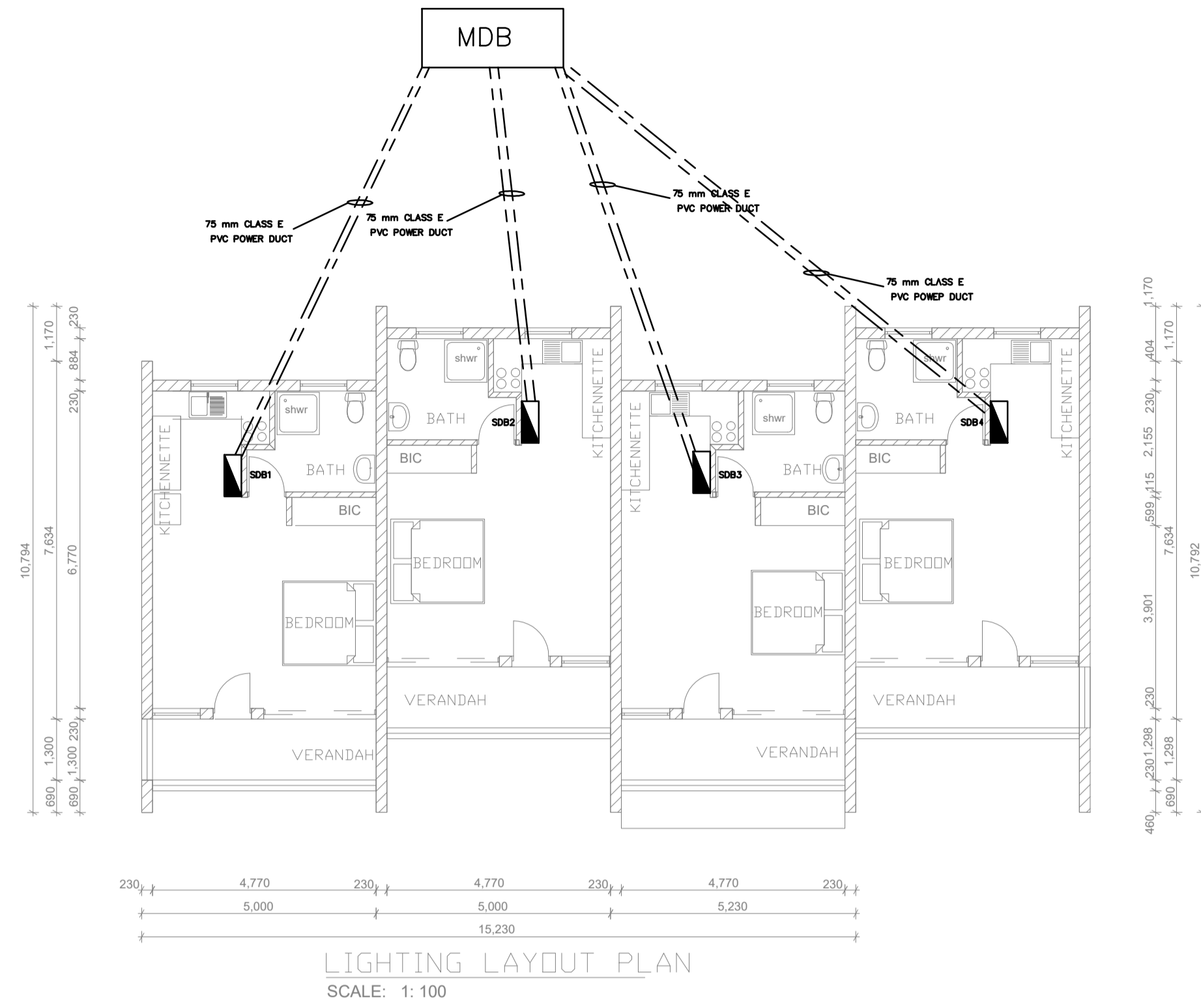
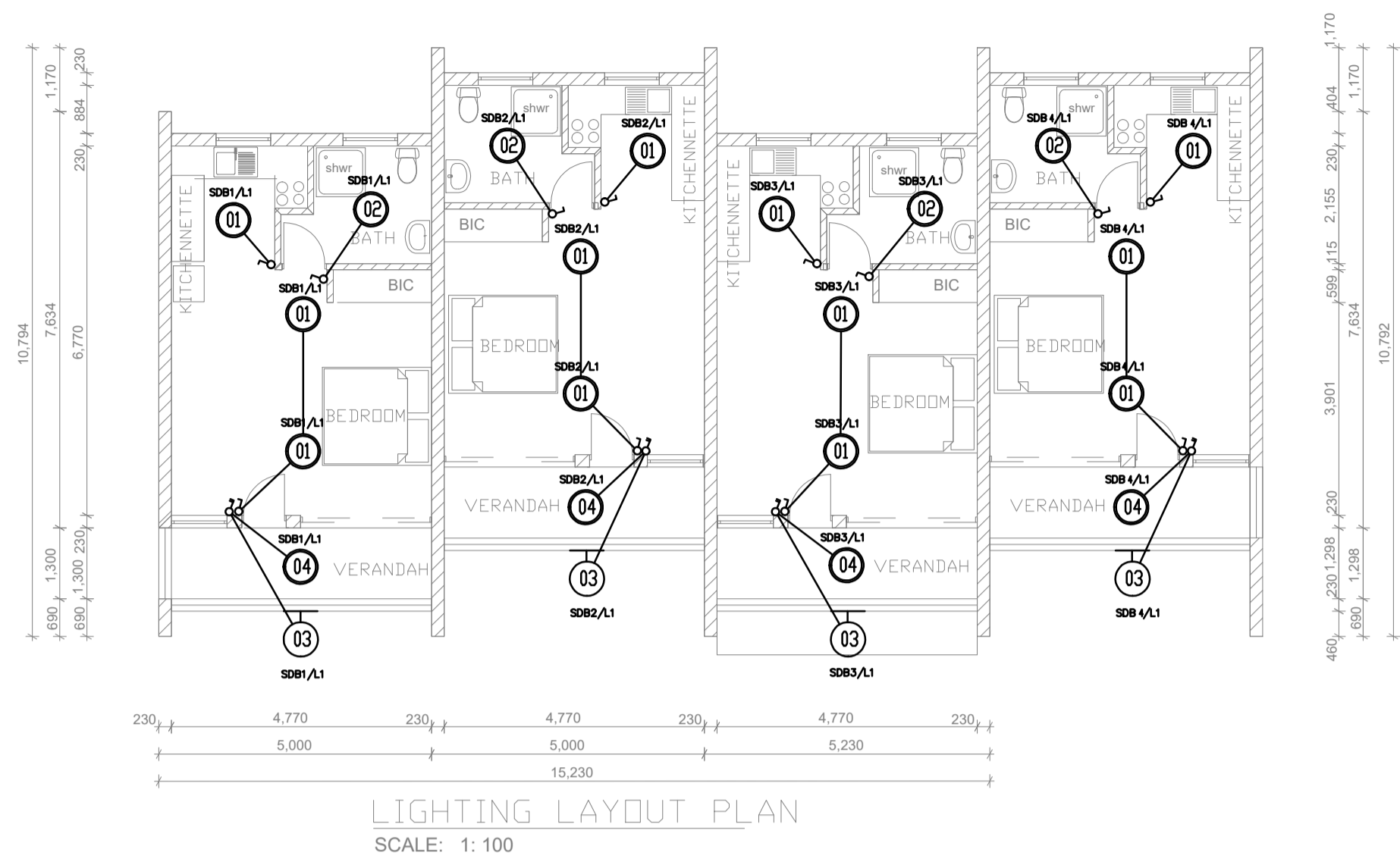
AMENDMENT	Description :



Ministry of Local Government,
Public Works and National Housing
P.O. Box CY7755 , Causeway
Zimbabwe

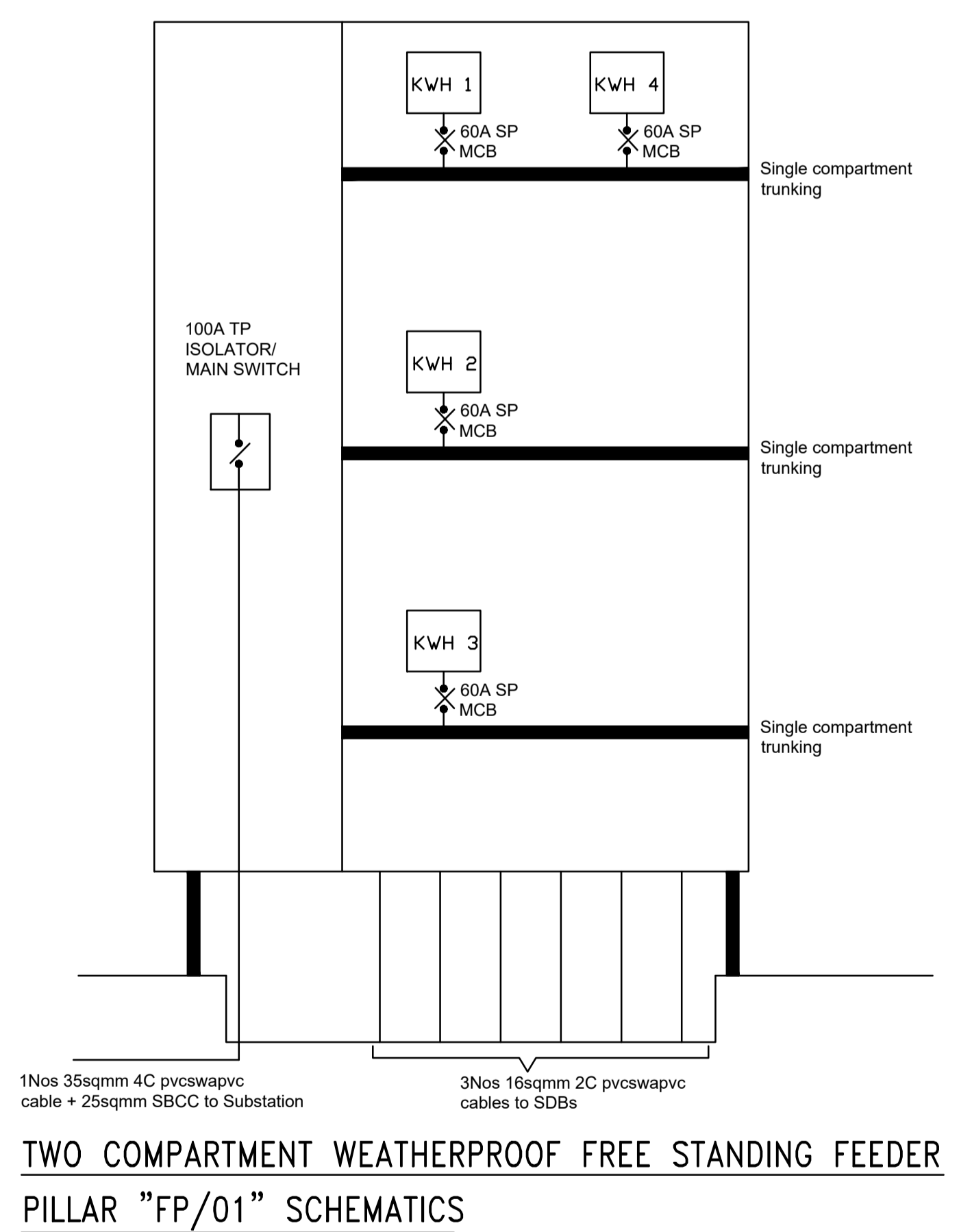
Arch Eng	A.S	Director Eng	H.Hungwe
Designed	L.M	Branch Head	E.N
Drawn	L.M	Scale	N.T.S
Checked	E.M	Date	March 2022
Telephone 04 700811			

Ministry	MINISTRY OF FINANCE	Centre	MUTARE
Title	FORBES BORBER POST STAFF COTTAGES		
Description	WATER STANDARD DETAILS		
G.P. No		Proj	



DISTRIBUTION BOARD SDBs SCHEMATICS

Reference	0	1	2	3	4	5	6	7	SPARE
SUPPLY	MDB	ckt L1	ckt Shaver	ckt Extract Fan	ckt P1	ckt PP1	ckt Aircon	ckt CCU	SPARE
CABLE SIZE	2C 16sqmm PVCSWA cable + 10sqmm SBCC	2 x 1.5 sq mm conductor + 1.5 sq mm Earth Wire		4 x 2.5 sq mm conductor + 2.5 sq mm Earth Wire		2 x 2.5 sq mm conductor + 2.5 sq mm Earth Wire		2 x 4.0 sq mm conductor + 4.0 sq mm Earth Wire	
LOAD (kW)	R 12.700 Y B	0.700	0.100	0.100	2.800	1.000	2.000	6.000	
	RYB	12.700							



FEEDER PILLAR SCHEMATICS

FEEDER PILLAR FP/01

DB NAME:	FP/01	LOCATION:	OUTSIDE			
ISOLATOR:	100A TP	RATING KA:	6KA			
		NO OF WAYS:	6 x 1 PHASE			
FEEDER CABLE SIZE:	35mm ² 4C PVCSWA + 25mm ² BARE EARTH					
WAY	DESCRIPTION	CIRCUIT ID	WATTS	BREAKER	CABLE SIZE	REMARKS
R	Apartment 1	SDB01	12700	60A SP	16mm ² E	PVCSWA
Y	Apartment 2	SDB02	12700	60A SP	16mm ² E	PVCSWA
B	Apartment 3	SDB03	12700	60A SP	16mm ² E	PVCSWA
R	Apartment 4	SDB04	12700	60A SP	16mm ² E	PVCSWA
Y	Spare					
B	Spare					

GENERAL NOTES:

- ALL DIMENSIONS AND LEVELS TO BE VERIFIED ON SITE PRIOR TO COMMENCING SETTING OUT, PRODUCTION OF WORKSHOP DRAWINGS OR CONSTRUCTION.
- DISCREPANCIES, ERRORS, OMISSIONS TO BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY AFTER BEING EVIDENT.
- SHOP DRAWINGS TO BE SUBMITTED FOR APPROVAL PRIOR MANUFACTURE.

NOTES: ELECTRICAL SERVICES

- LUMIANCE LIGHTING WORLD CATALOGUE 2016 used to specify light fittings.
- Installation to comply with Government of Zimbabwe Standard Electrical Specification (latest edition), SAZ & CAS wiring regulations.
- Each light switch shall be provided with a separate conduit drop and the electrical Subcontractor shall pay attention to columns and other structural elements.
- Circuitry on lighting and power drawings shall take precedence over figures shown on distribution board schedules.
- Unless indicated otherwise, all distribution boards shall be equipped with 5KA minimum breaking capacity MCBs.
- All electrical services drawings shall be read in conjunction with all other services drawings.
- All contactor boards and double pole switches shall be installed by the electrical Subcontractor adjacent to the respective equipment. The electrical Subcontractor shall ascertain the exact locations from the main Contractor.
- All incoming water and gas services shall each be separately bonded at the point of entry via 16 sqmm BCEW in conduit and connected to the earth bar in the associated distribution board. The electrical Subcontractor shall ascertain the exact locations from the main Contractor.
- From the telephone distribution board, the electrical Subcontractor shall link each telephone outlet via a separate 25mm dia conduit.
- From the telephone distribution board, the electrical Subcontractor shall link each television outlet via a separate 25mm dia conduit.
- The electrical Subcontractor shall link each television outlet via a separate 25mm dia conduit.
- All cable trenches shall be 1000mm deep x 500mm wide. Cables shall be laid on a 75mm sand riddled earth carpet covered by a 75mm sand blanket. 225mm x 150mm cable warning tiles to BS 2484 or equivalent to be installed along cable route. The earth shall be reinstated in 100mm layers, hand ramming the first 2 layers.
- A 150mm wide micron rot resistant polythene cable warning tape shall be installed at 500mm below ground level above cables. Separate warning tapes shall be provided for each trench.
- All sub/main cables and street lighting cables shall be installed in soft ground at a depth of 1000mm. Where these cables enter buildings, cross roads or paved areas, they shall be installed in PVC sleeves.
- All trenching shall be done by the electrical Subcontractor. The afore-said carries the responsibility of providing PVC sleeves including the necessary draw wires.
- Circuitry on lighting and power drawings shall take precedence over figures shown on distribution board schedules.
- All distribution board spare ways shall be blanked off but labelled to indicate the respective ratings.
- All 13A switched socket outlets to be wired in ring circuits. All 13A socket outlets to be mounted 300mm from finished floor level except in kitchen where they shall be mounted 1500mm A.F.F.L. In special cases, e.g. TV points, mounting heights to be agreed on with the electrical Engineer on site.
- Unless indicated otherwise, all distribution boards shall be equipped with 5KA minimum breaking capacity MCBs.
- All electrical services drawings shall be read in conjunction with all other services drawings.

LEGEND

- Single Phase Distribution Board [See schematic]
- 10A 1 gang 1 way switch (Type MK or equivalent)
- 10A 2 gang 1 way switch (Type MK or equivalent)
- 10A 1 gang 2 way switch (Type MK or equivalent)
- 1 x 11W Ceiling Mounted Round Decorative Bulkhead Light Fitting complete with 11W LED Bulb.
- 1 x 11W Weatherproof Ceiling Mounted Round Decorative Bulkhead Light Fitting complete with 11W LED Bulb.
- 1 x 15W Wall Mounted Decorative Bulkhead Light Fitting complete with 15W LED Bulb.
- 1 x 11W Wall Mounted Decorative Bulkhead Light Fitting complete with 11W LED Bulb.
- 15A MK or similar approved round pin single switched socket outlet
- 13A MK or similar approved double switched socket outlet
- 5A MK or similar approved shaver outlet
- 20A Aircon Isolator
- 6 x 6 MK or similar approved Cooker Control Unit

CIRCUIT ABBREVIATIONS

- DBX / P2
- Circuit Number
Circuit Board
- MDB : Main distribution board
DB : Single Phase Distribution Board
DBX / L1 : Light Circuit Number 1 in DBX
DBX / P1 : 13A Power Circuit Number 1 in DBX
DBX / PP1 : 15A Power Circuit Number 1 in DBX
DBX / CCU : Cooker unit circuit in DBX

Notes

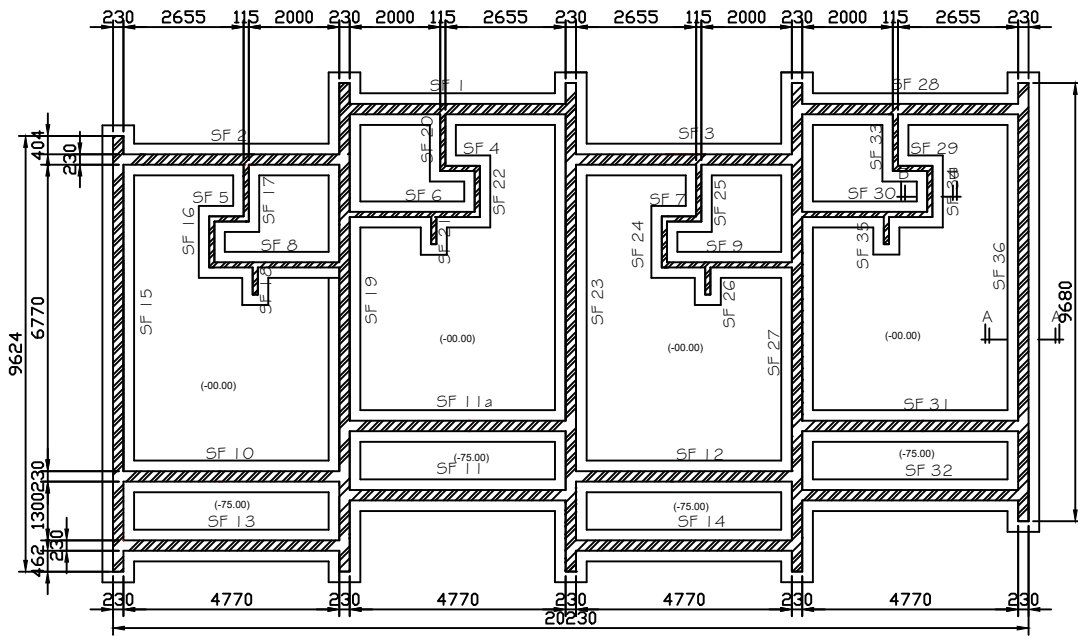
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Lr		

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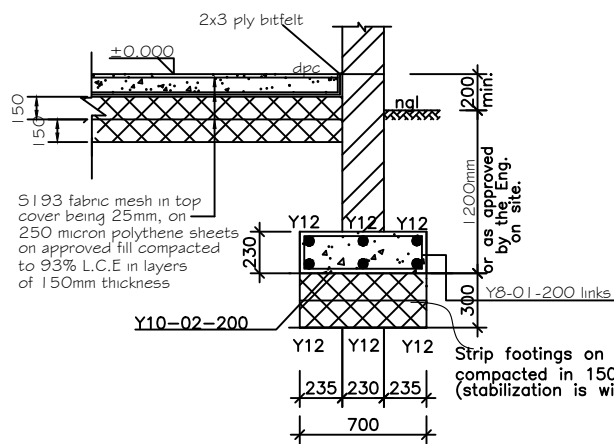
MINISTRY OF LOCAL GOVERNMENT
AND NATIONAL HOUSING
P.O BOX CY 441, CAUSEWAY
ZIMBABWE

Branch Head:	S.M Singo	Director Eng:	E. Njoma	Ministry:	MINISTRY OF FINANCE	Centre:	MUTARE
Designed:	B. Manduna	Scale:	As Shown	Title:	FORBES BORDER POST STAFF ACCOMODATON		
Drawn:	B. Manduna	Date:	MARCH 2022	Description:	SMALL POWER, LIGHTING LAYOUT AND DB SCHEMATICS		
Checked:	M. Sifeku	File Ref:					
Telephone:	790137/ 704079						

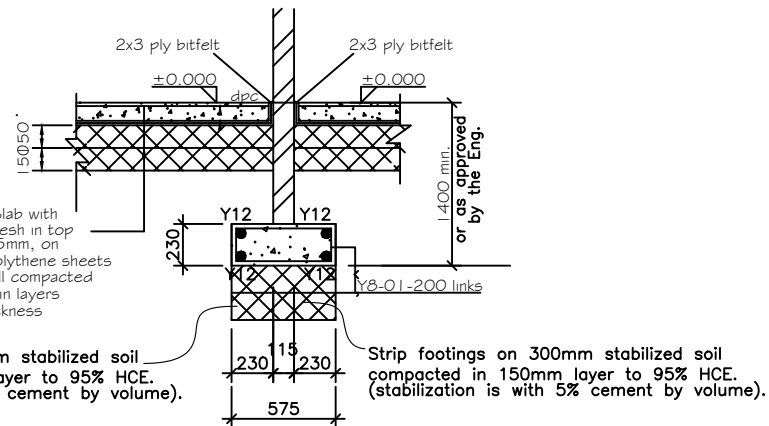
Stock Drwg No		GP. No		Proj No	192593/E/01
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FOUNDATION AND GROUND FLOOR SLAB LAYOUT
SCALE 1:100



SECTION A-A
SCALE 1:25



SECTION B-B
SCALE 1:25

MEMBER & NO.	BAR MARK	TYPE & SIZE	No. OF MBRS	No. IN EACH	TOTAL No.	LENGTH (mm)	SHAPE
SF 1: (700X230) SF2,3,10,11,11a, 12,13,14,28,31, &32 12Nos	01	Y8	12	25	300	1550	190 Links 800
	02	Y12	12	6	72	4775	STR
SF 4: (575X230) SF5,7,29 SIMILAR 4Nos	01a	Y8	4	3	12	1375	190 Links 475
	03	Y12	4	4	16	500	STR
SF 8: (575X230) SF6,9,30 SIMILAR 4Nos	01a	Y8	4	15	45	1375	190 Links 475
	04	Y12	4	4	12	2775	STR
SF 15: (700X230) SF19,23,27,36 6Nos	01	Y8	6	49	294	1550	190 Links 800
	05	Y12	6	6	36	9625	STR
SF 16: (575X230) SF22,24 SIMILAR 3Nos	01	Y8	3	7	21	1375	190 Links 575
	06	Y12	3	4	12	900	STR
SF 17: (575X230) SF20,25,33SIMILAR 4Nos	01	Y8	4	7	28	1550	190 Links 800
	07	Y12	4	4	16	1150	STR
SF 18: (575X230) SF21,26,35SIMILAR 4Nos	01	Y8	4	4	16	1375	190 Links 575
	08	Y12	4	2	8	600	STR

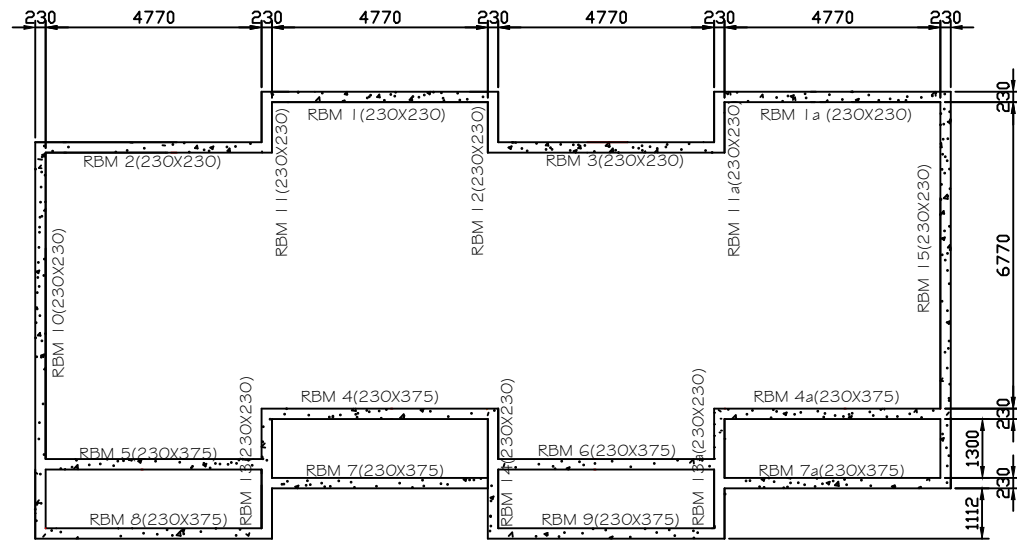
- Notes**
1. Read this drawing in conjunction with other architectural and engineering drawings.
 2. Do not scale from this drawing, use the written or calculated dimensions.
 3. Concrete grade to be 25MPa.
 4. Cover to reinforcement: Ground slab - 25mm to mesh
 5. Use precast r.c. lintels for all inside openings.
 6. Foundation depth to be minimum 1400mm from natural ground level, actual to be determined by the Engineer on site.
 7. All excavations and reinforcement to be inspected and approved by the Engineer on site.
 8. Provide backfill after every third course from foundation to ground floor. Elsewhere provide after every fourth course.

AMENDMENT		Description :
Ltr	date	

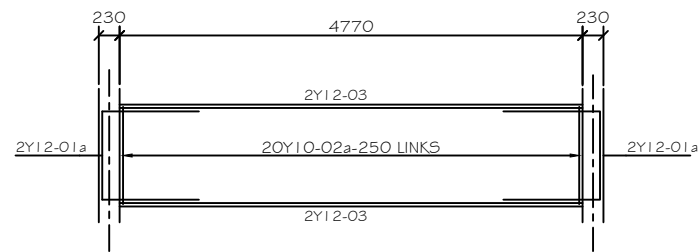
Ministry of Local Gvt, Public Works
and National Housing
P.O.Box 7706 , Causeway
Zimbabwe

ENGINEER L. CHIKWENHERE	Branch Head T.N. TSAHA	Ministry FINANCE	Centre MUTARE
Designed L. CHIKWENHERE	Scale AS SHOWN	Title ZIMRA STAFF ACCOMMODATION	
Drawn L. CHIKWENHERE	Date MARCH 2022	Description FOUNDATION AND GROUND FLOOR SLAB LAYOUT, FOUNDATION R.C DETAILS, BENDING SCHEDULE AND SECTIONS	
Checked C. KANYASA	File Ref	GP No	Project No /S/02
TELEPHONE 728201-9			

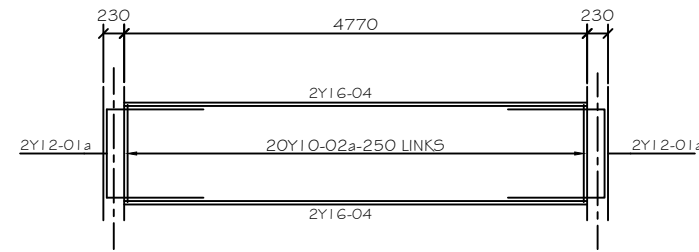
Annexure 24



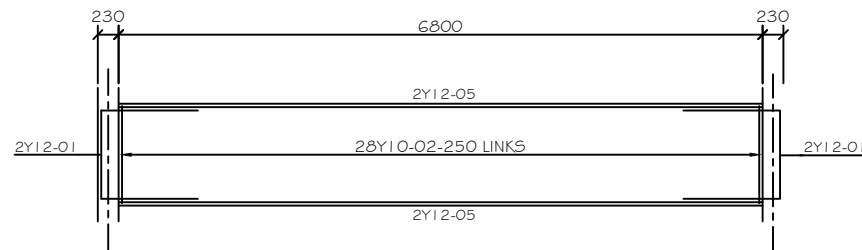
RING BEAM LAYOUT
SCALE 1:100



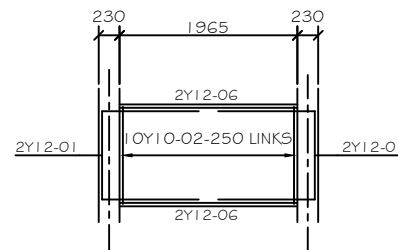
RBM 1 230x375 4Nos.
RBM 2#3, 1a SIMILAR



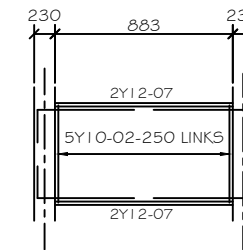
RBM 4 230x375 8Nos.
RBM 5,6,7,8#9, 4a, #7a SIMILAR



RBM 10 230x230 2No.
RBM 15 SIMILAR



RBM 11 230x230 3No.
RBM 12, 11a SIMILAR



RBM 13 230x230 3No.
RBM 14, #13a SIMILAR

BENDING SCHEDULE 1							
MEMBER & NO.	BAR MARK	TYPE & SIZE	No. OF MBRS	No. IN EACH	TOTAL No.	LENGTH (mm)	SHAPE
RBM 1: (230x230) RBM 1a,2&3 SIM 4No.	01a	Y12	4	4	16	1825	
	02a	Y10	4	20	80	825	
	03	Y12	4	4	16	4775	STR
RBM 4: (230x375) RBM 4a,5,6,7,8,7a &9 SIMILAR 8No.	01a	Y12	8	4	32	1500	
	02a	Y10	8	20	160	1200	
	04	Y12	8	4	32	4775	STR
RBM 10: (230x230) THUS RBM15 SIM 2No.	01	Y12	2	4	8	1375	
	02	Y10	2	34	68	825	
	05	Y12	2	4	8	8300	STR
RBM 11: (230x230) RBM 11a,&13, SIM 3No.	01	Y12	3	4	12	1375	
	02	Y10	3	10	30	825	
	06	Y12	3	4	12	2150	STR
RBM 13: (230x230) RBM 14&13a SIM 3No.	02	Y10	3	5	15	825	
	07	Y12	3	4	12	1050	

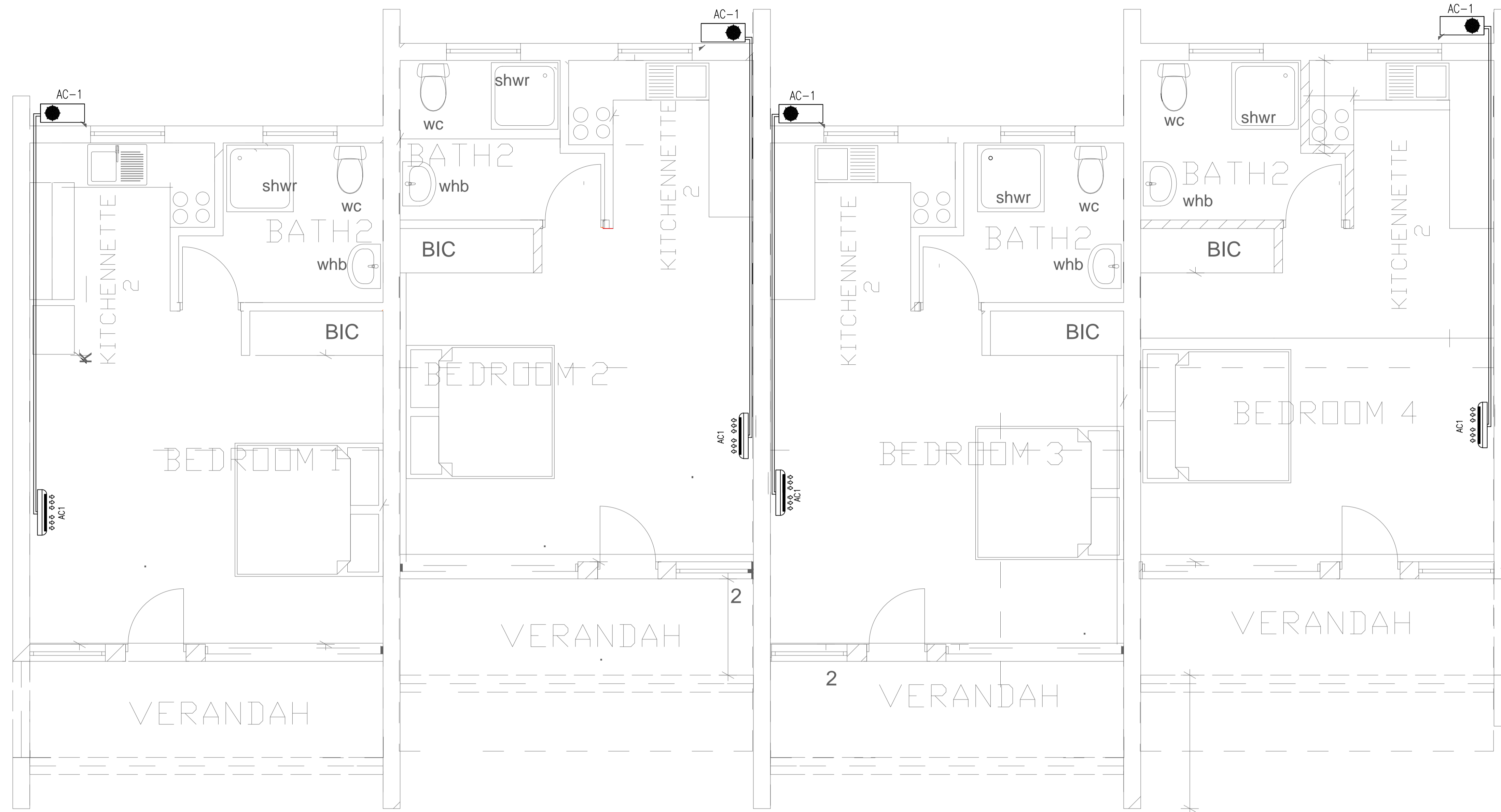
Notes

1. Read this drawing in conjunction with other architectural and engineering drawings.
2. Do not scale from this drawing, use the written or calculated dimensions.
3. Concrete grade to be 25MPa.
4. Cover to reinforcement: Ground slab - 25mm to mesh
5. Use precast r.c. lintels for all inside openings.
6. Foundation depth to be minimum 1400mm from natural ground level, actual to be determined by the Engineer on site.
7. All excavations and reinforcement to be inspected and approved by the Engineer on site.
8. Provide backforce after every third course from foundation to ground floor. Elsewhere provide after every fourth course.

AMENDMENT		Description :
Ltr.	date	

Ministry of Local Gvt, Public Works
and National Housing
P.O.Box 7706 , Causeway
Zimbabwe

ENGINEER L. CHIKWENHERE	Branch Head T.N. TSAHA	Ministry FINANCE	Centre MUTARE
Designed L. CHIKWENHERE	Scale AS SHOWN	Title ZIMRA STAFF ACCOMMODATION	
Drawn L. CHIKWENHERE	Date MARCH 2022	Description RING BEAM LAYOUT AND RING BEAMS	
Checked C. KANYASA	File Ref	G.P No	Project No /S/03
TELEPHONE 728201-9			

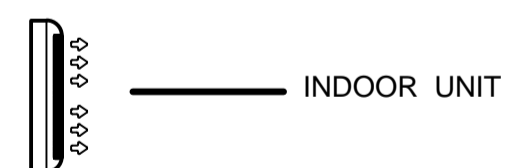


EQUIPMENT SCHEDULE

AIR CONDITIONING UNITS

ITEM No.	DESCRIPTION	Total Cool. btu/hr	Total Heat. btu/hr	Power supply V, #Hz power input W	Operating Current A	Noise Level dBA ±3	Refrigerant	Quantity
AC1	SPLIT WALL MOUNTED	24 000	24 000	220-240, Ø1, 50 2200W	13A	45	R-410A	4x4

LEGEND



AIRCONDITIONING NOTES

- 1 - ALL UNITS TO BE MOUNTED ON WALLS INDICATED.
- 2 - THE SPECIALIST AIR-CONDITIONING SUPPLIER & INSTALLER SHALL BE RESPONSIBLE FOR THE PROVISION OF THE ASSOCIATED CABLING FROM THE AIR-CONDITIONING CONTROL BOARD ON EACH INDIVIDUAL UNIT AND FROM THE POWER ISOLATOR TO THE AIR-CONDITIONING CONTROL BOARD.
- 3 - ALL UNITS TO HAVE INDIVIDUAL START CONTROLS
- 4 - ALL DIMENSIONS TO BE VERIFIED ON SITES PRIOR TO COMMENCING SETTING OUT WORKSHOP DRAWINGS OR CONSTRUCTION.
- 5 - WORKSHOP DRAWINGS TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO ANY MANUFACTURING
- 6 - ANY DISCREPANCIES, ERRORS OR OMISSIONS TO BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY AFTER BEING NOTICED.
- 7 - ALL UNITS TO BE MOUNTED AT LEAST 300mm BELOW THE CEILING.

Notes

AMENDMENT		
Ltr	date	Init
	21/9/21	
Micro-film Drwg No		

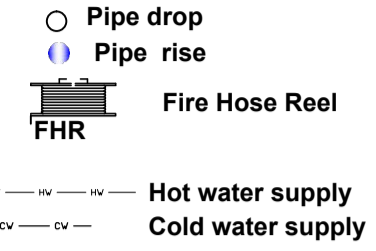
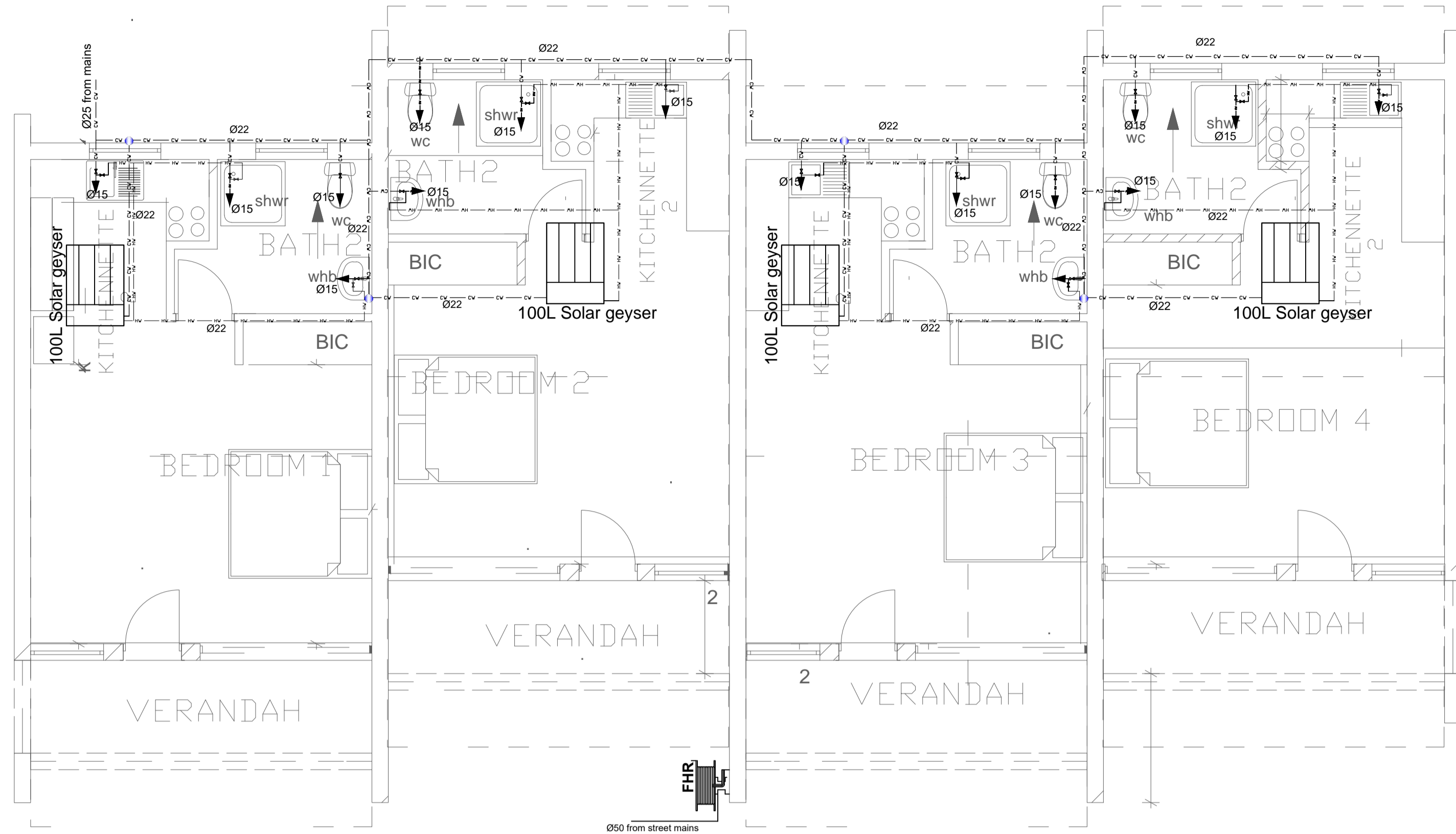
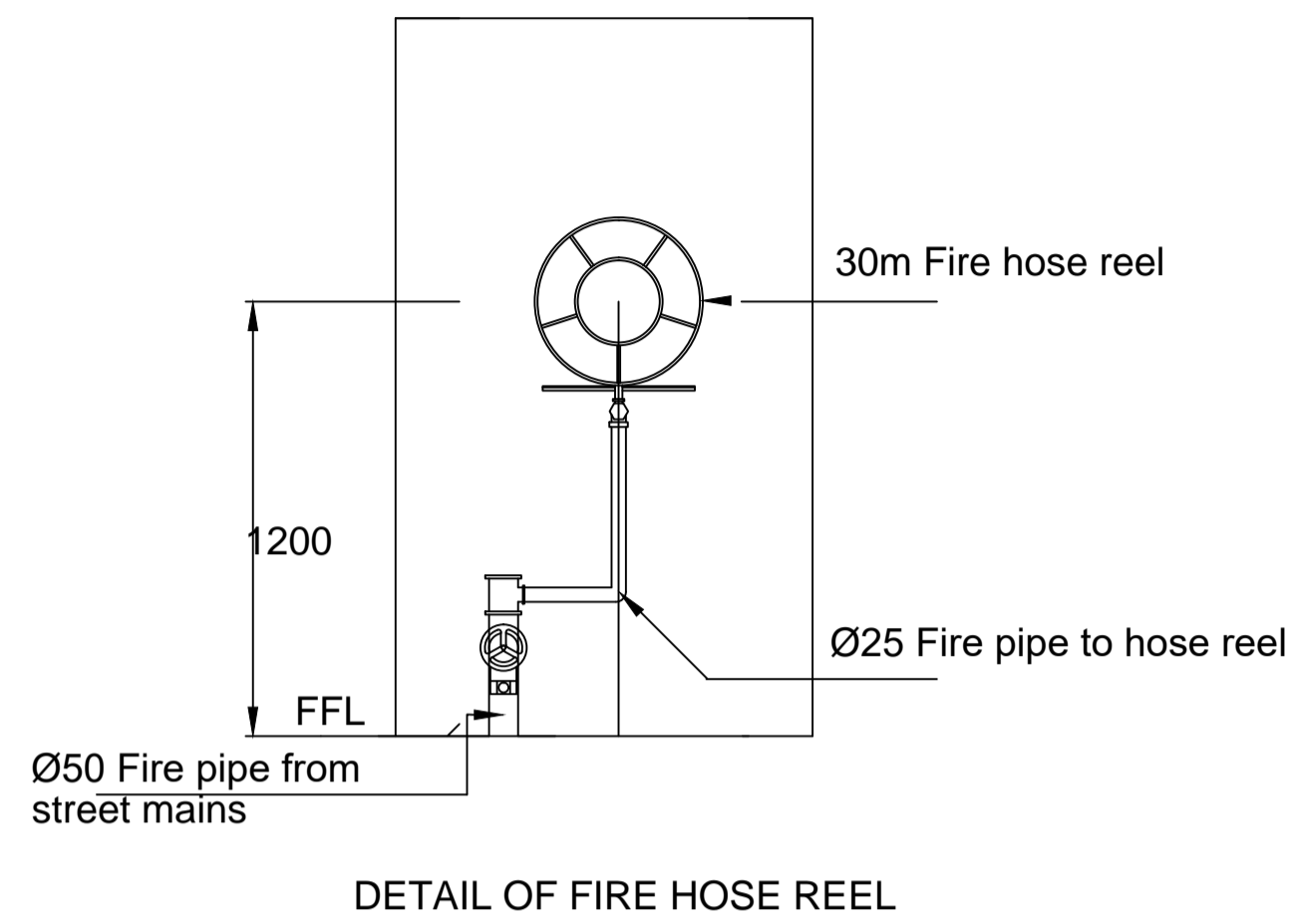
Description :
The change of the design from ceiling cassette to wall mounted split units but having same specs.



Ministry of Local Government and Public Works
P.O. Box CY441 , Causeway
Zimbabwe

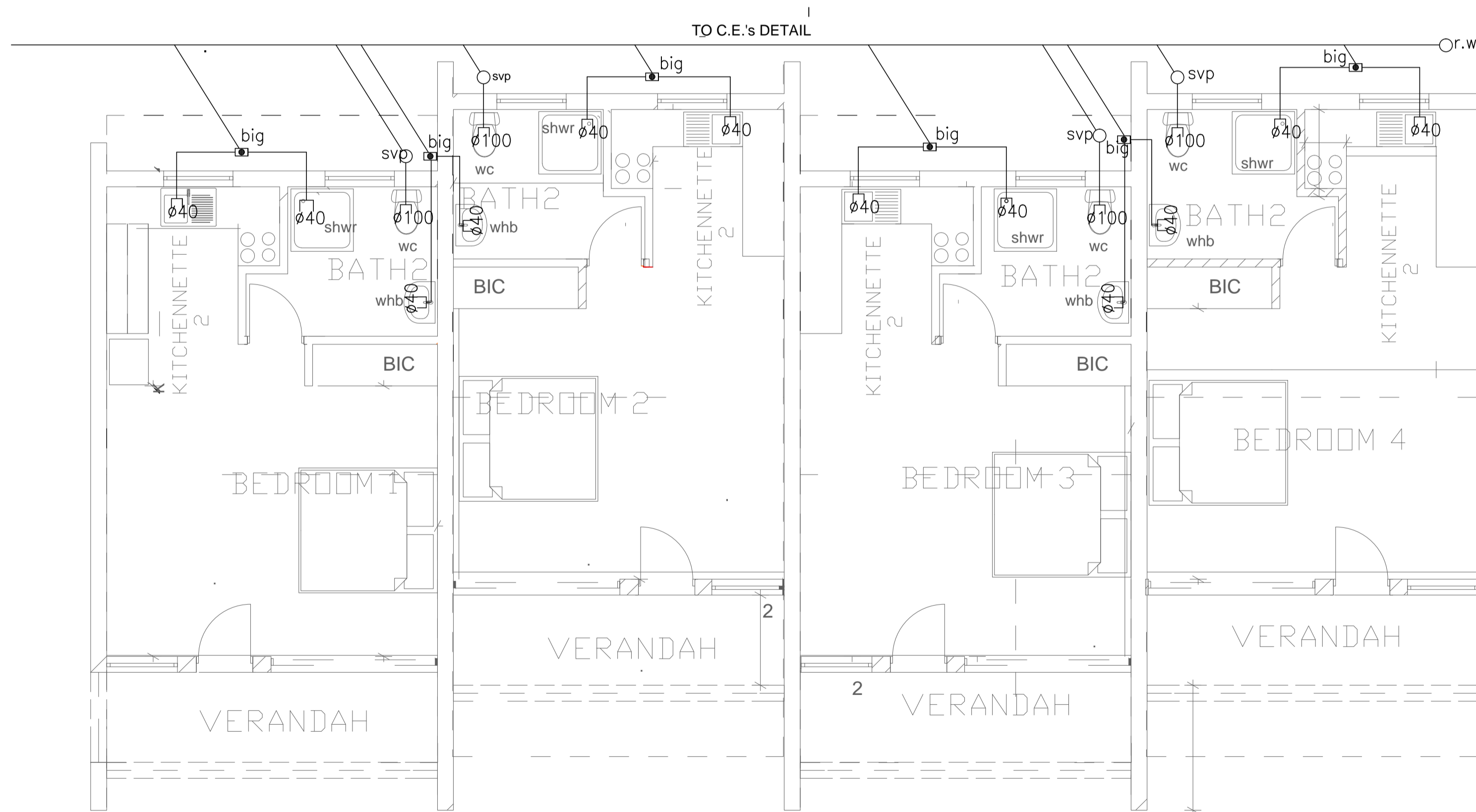
Architect	M. DUBE	Director Eng.	E. Njoma	Ministry	FINANCE	Centre	FORBES BORDER MUTARE
Designed	K.Nyemba	Branch Head	D. TAKAINDISA	Title	ZIMRA STAFF COTTAGES		
Drawn	K. Nyemba	Scale	N.T.S	Description	AIRCONDITIONING		
Checked	KWEZERA	Date	March 2022	Stock Drwg No	G.P. No	Proj No	192593/MECH/02
Telephone	728201/9, Fax 263 4 796204	File Ref					

Annexure 26



WATER NOTES

- Hot and cold water pipes shall be of copper to BS 2871 part 1 with fittings connex or similar approved compression or capillary fittings
- Valves for hot and cold water to be fullway gate valves to BS 1952-01956 or ball valves of beams or slabs.
- All pipes to be suitably supported by brackets or holderbatts fixed to walls,
- Spacing of pipe supports: 18mm or less-2m; 20mm to 28mm-2.5m; 32mm to 50mm-3m. with canvas lagging.
- Hot water pipes in ceiling space to be insulated with fibreglass and protected
- All pipes through walls beams and slabs are to be sleeved
- Sleeves shall be black steel to BS 1387 medium or PVC tube
- Space between pipe and sleeve shall be chalked with asbestos chord
- No joints to be embedded in walls except for showers.
- 25mm vent pipe from water heater to the the nearest drain



DRAINAGE NOTES

- All drain pipes shall be PVC unless otherwise specified.
- All drain pipes in slabs, through walls shall be sleeved to the approval of the supervising engineer.
- All bends and joining branch pipes shall have an inspection eye/cover.
- drain pipes shall be of PVC with the following minimum sizes:
wc - - - - - Ø100
Ur - - - - - Ø40
Whb - - - - - Ø40
- All pipes in the ground (outside building) should be laid a minimum depth of 750mm below surface.
- All wc's to have a short stub vent complete with cowl except specified.
- All junctions and radius bends to have an inspection / access cover.
- All drain pipes shall have a minimum fall of 1:60 unless otherwise specified.
- Refer to Civil Engr's drawings for continuation of pipeworks outside the buildings to the nearest sewer /drainage reticulation pipe work.
- All installations to comply with new model building by laws.
- All vent pipes to discharge to atmosphere at 300mm above roof level with galvanised or copper bird guard.

Notes

AMENDMENT

Ltr	date	Init

Description :

Micro-film
Drwg No

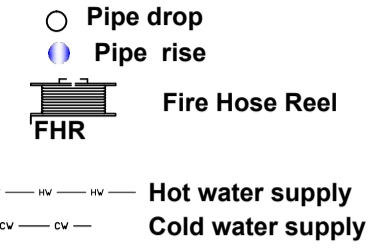
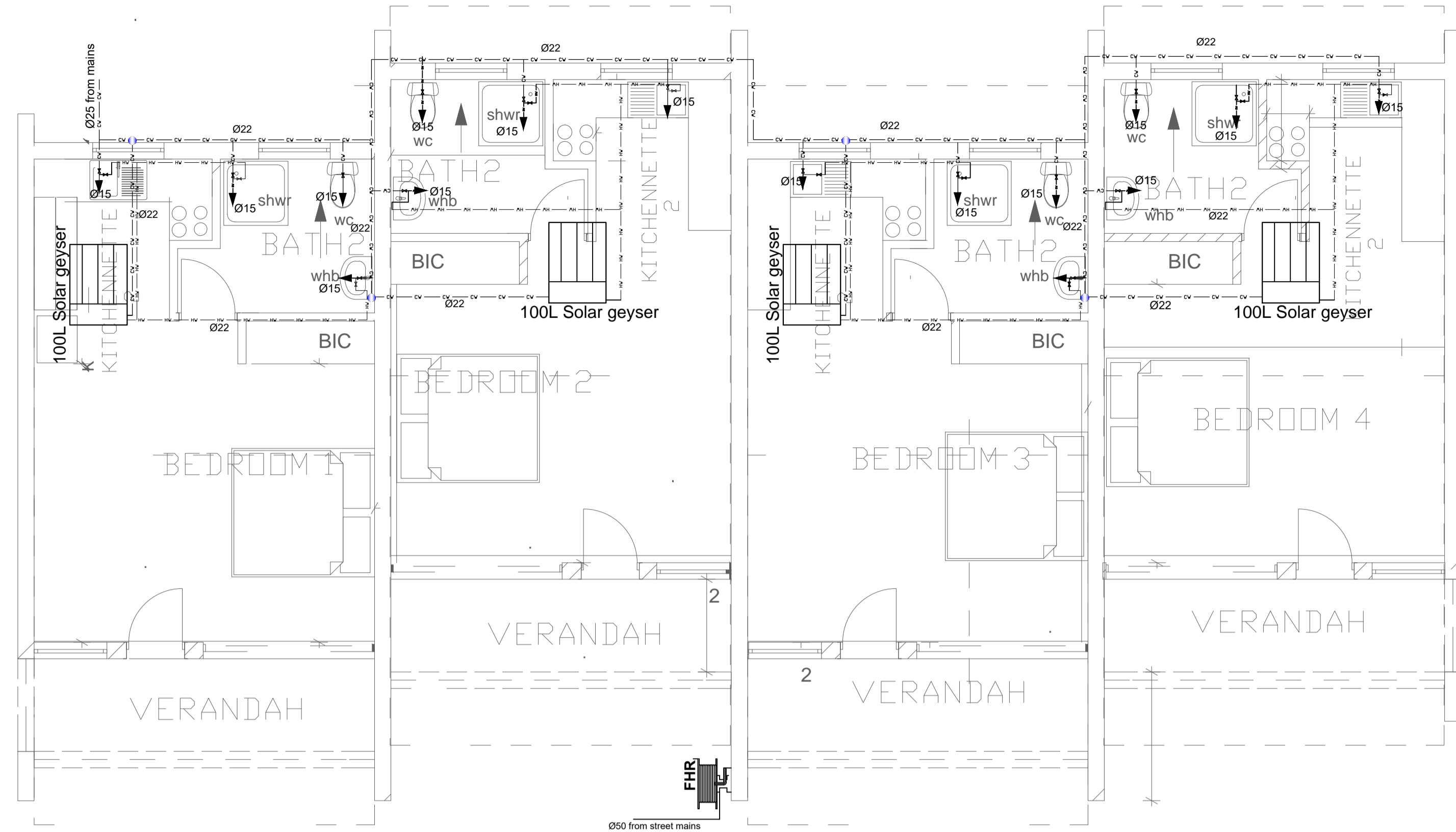
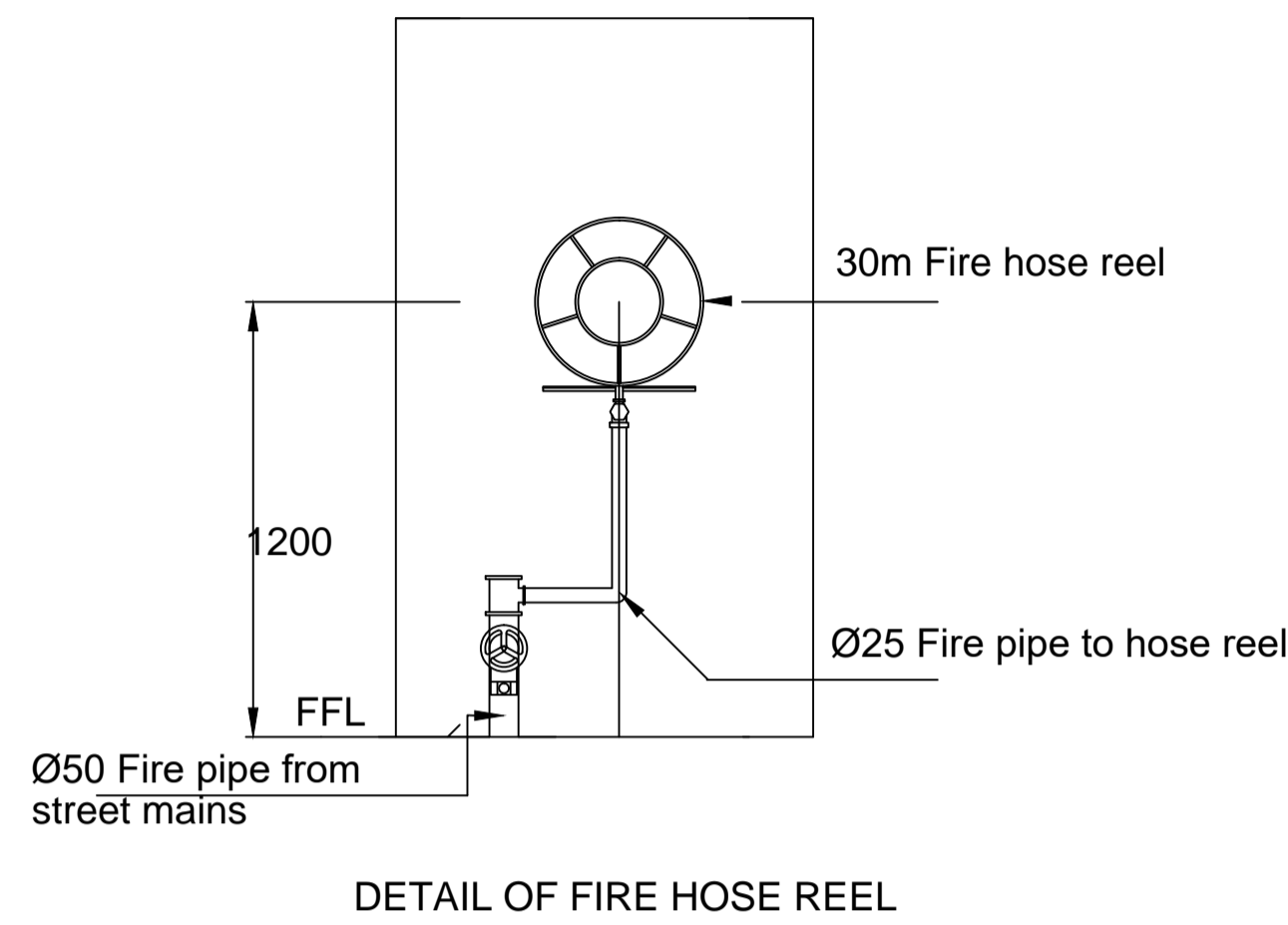


Ministry of Local Government,
and Public Works
P.O. Box CY441 , Causeway
Zimbabwe

Architect	M. Dube	Branch Head	Eng H. Hungwe
Designed	K. Nyemba	Section Head	D. Takandisa
Drawn	K. Nyemba	Scale	NTS
Checked	E. Kwezera	Date	August 2021
Telephone	728201/9, Fax 263 4 796204	File Ref	

Ministry	FINANCE	Centre	Forbes Border Post Mutare
Title	Staff Accomodation	Description	Water and Sewer Reticulation
Stock Drwg No		G.P. No	
Proj No			192593/MECH/01

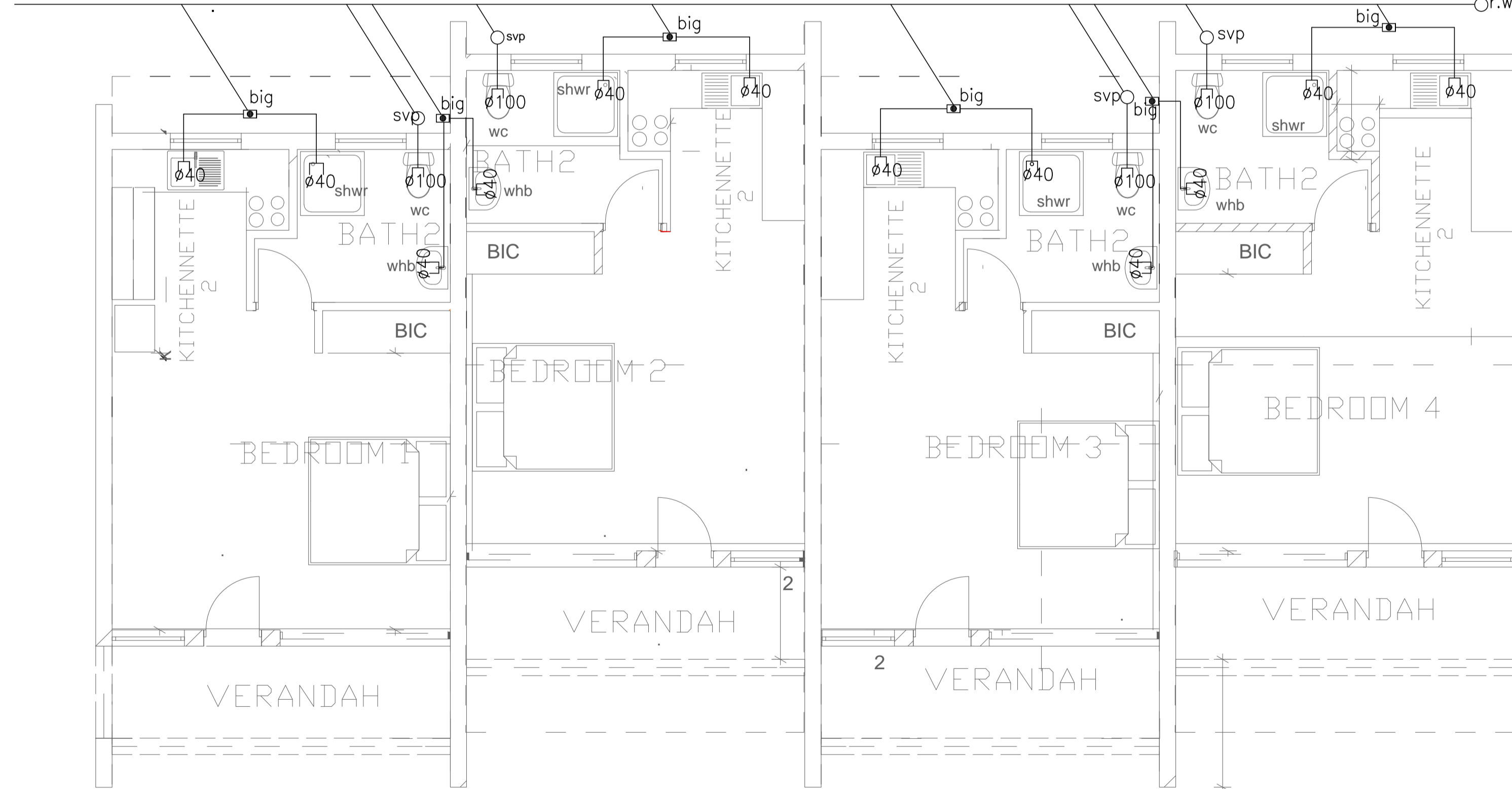
Annexure 27



WATER NOTES

- Hot and cold water pipes shall be of copper to BS 2871 part 1 with fittings connex or similar approved compression or capillary fittings
- Valves for hot and cold water to be fullway gate valves to BS 1952-01956 or ball valves of beams or slabs.
- All pipes to be suitably supported by brackets or holderbatts fixed to walls,
- Spacing of pipe supports: 18mm or less-2m; 20mm to 28mm-2.5m; 32mm to 50mm-3m. with canvas lagging.
- Hot water pipes in ceiling space to be insulated with fibreglass and protected
- All pipes through walls beams and slabs are to be sleeved
- Sleeves shall be black steel to BS 1387 medium or PVC tube
- Space between pipe and sleeve shall be chalked with asbestos chord
- No joints to be embedded in walls except for showers.
- 25mm vent pipe from water heater to the the nearest drain

TO C.E.'s DETAIL



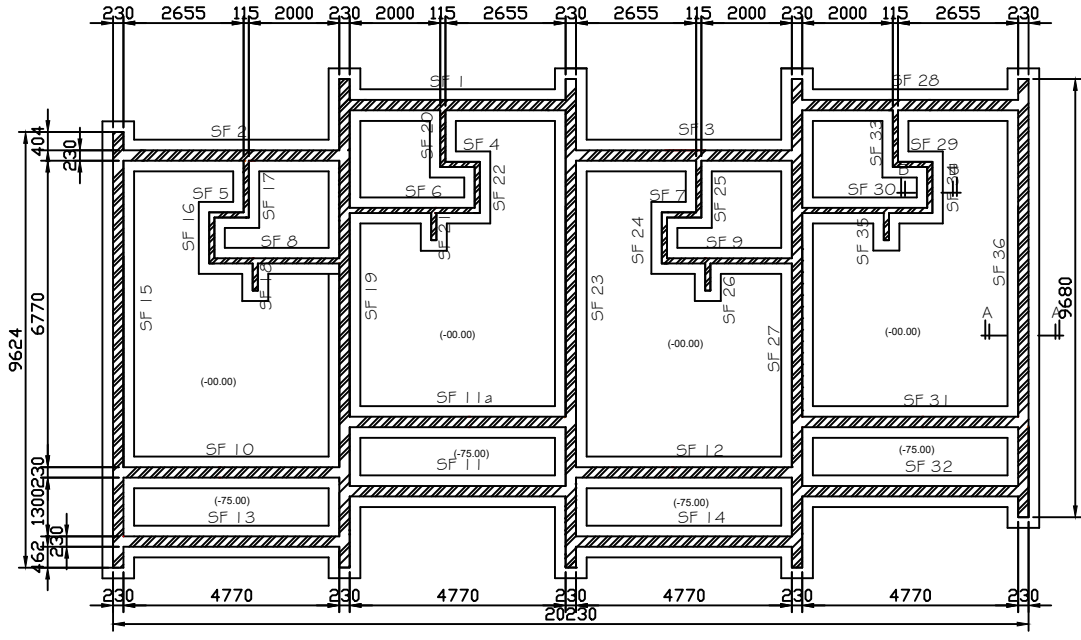
DRAINAGE NOTES

- All drain pipes shall be PVC unless otherwise specified.
- All drain pipes in slabs, through walls shall be sleeved to the approval of the supervising engineer.
- All bends and joining branch pipes shall have an inspection eye/cover.
- drain pipes shall be of PVC with the following minimum sizes:
 wc - - - - - Ø100
 Ur - - - - - Ø40
 Whb - - - - - Ø40
- All pipes in the ground (outside building) should be laid a minimum depth of 750mm below surface.
- All wc's to have a short stub vent complete with cowl except specified.
- All junctions and radius bends to have an inspection / access cover.
- All drain pipes shall have a minimum fall of 1:60 unless otherwise specified.
- Refer to Civil Engr's drawings for continuation of pipeworks outside the buildings to the nearest sewer /drainage reticulation pipe work.
- All installations to comply with new model building by laws.
- All vent pipes to discharge to atmosphere at 300mm above roof level with galvanised or copper bird guard.

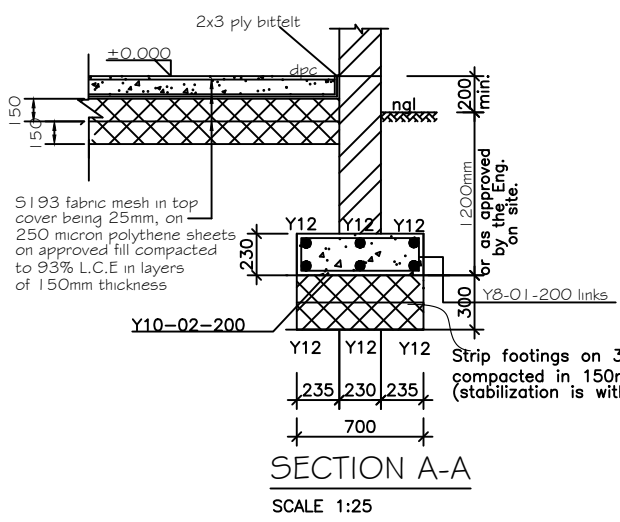
Notes	AMENDMENT		Description :	Ministry of Local Government, and Public Works P.O. Box CY441 , Causeway Zimbabwe	Architect	Branch Head	Ministry	Centre		
	Ltrr	date			Init	M. Dube	Eng H. Hungwe	FINANCE	Forbes Border Post Mutare	
						Designed	Section Head	Title		
						K. Nyemba	D. Takandisa	Staff Accomodation		
				Drawn	Scale	Description				
				K. Nyemba	NTS	Water and Sewer Reticulation				
				Checked	Date	Stock Drwg No				
				E. Kwezera	August 2021	G.P. No				
				Telephone 728201/9, Fax 263 4 796204	File Ref	Proj No				
						192593/MECH/01				

Annexure 28

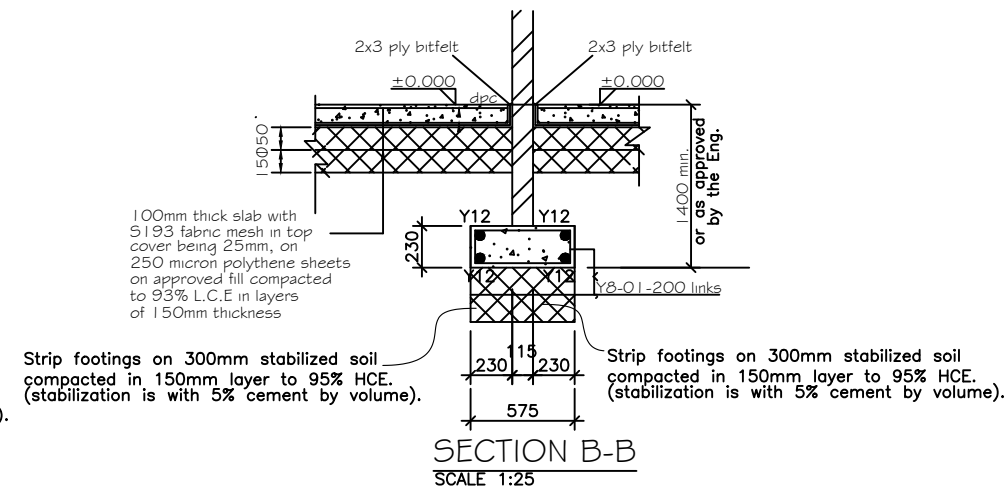
BENDING SCHEDULE 1							
MEMBER & NO.	BAR MARK	TYPE & SIZE	No. OF MBRS	No. IN EACH	TOTAL No.	LENGTH (mm)	SHAPE
SF 1: (700X230) SF2,3,10,11,11a, 12,13,14,28,31, &32 12Nos	01	Y8	12	25	300	1550	Links
	02	Y12	12	6	72	4775	STR
SF 4: (575X230) SF5,7,29 SIMILAR 4Nos	01a	Y8	4	3	12	1375	Links
	03	Y12	4	4	16	500	STR
SF 8: (575X230) SF6,9,30 SIMILAR 4Nos	01a	Y8	4	15	45	1375	Links
	04	Y12	4	4	12	2775	STR
SF 15: (700X230) SF19,23,27,36 6Nos	01	Y8	6	49	294	1550	Links
	05	Y12	6	6	36	9625	STR
SF 16: (575X230) SF22,24 SIMILAR 3Nos	01	Y8	3	7	21	1375	Links
	06	Y12	3	4	12	900	STR
SF 17: (575X230) SF20,25,33SIMILAR 4Nos	01	Y8	4	7	28	1550	Links
	07	Y12	4	4	16	1150	STR
SF 18: (575X230) SF21,26,35SIMILAR 4Nos	01	Y8	4	4	16	1375	Links
	08	Y12	4	2	8	600	STR



FOUNDATION AND GROUND FLOOR SLAB LAYOUT
SCALE 1:100



SECTION A-A
SCALE 1:25



SECTION B-B
SCALE 1:25

- Notes**
1. Read this drawing in conjunction with other architectural and engineering drawings.
 2. Do not scale from this drawing, use the written or calculated dimensions.
 3. Concrete grade to be 25MPa.
 4. Cover to reinforcement: Ground slab - 25mm to mesh
 5. Use precast r.c. lintels for all inside openings.
 6. Foundation depth to be minimum 1400mm from natural ground level, actual to be determined by the Engineer on site.
 7. All excavations and reinforcement to be inspected and approved by the Engineer on site.
 8. Provide backfill after every third course from foundation to ground floor. Elsewhere provide after every fourth course.

AMENDMENT		Description :
Ltr	date	

Ministry of Local Gvt, Public Works
and National Housing
P.O.Box 7706 , Causeway
Zimbabwe

ENGINEER L. CHIKWENHERE	Branch Head T.N. TSAHA	Ministry FINANCE	Centre MUTARE
Designed L. CHIKWENHERE	Scale AS SHOWN	Title ZIMRA STAFF ACCOMMODATION	
Drawn L. CHIKWENHERE	Date MARCH 2022	Description FOUNDATION AND GROUND FLOOR SLAB LAYOUT, FOUNDATION R.C DETAILS, BENDING SCHEDULE AND SECTIONS	
Checked C. KANYASA	File Ref	GP No	Project No /S/02
TELEPHONE 728201-9			