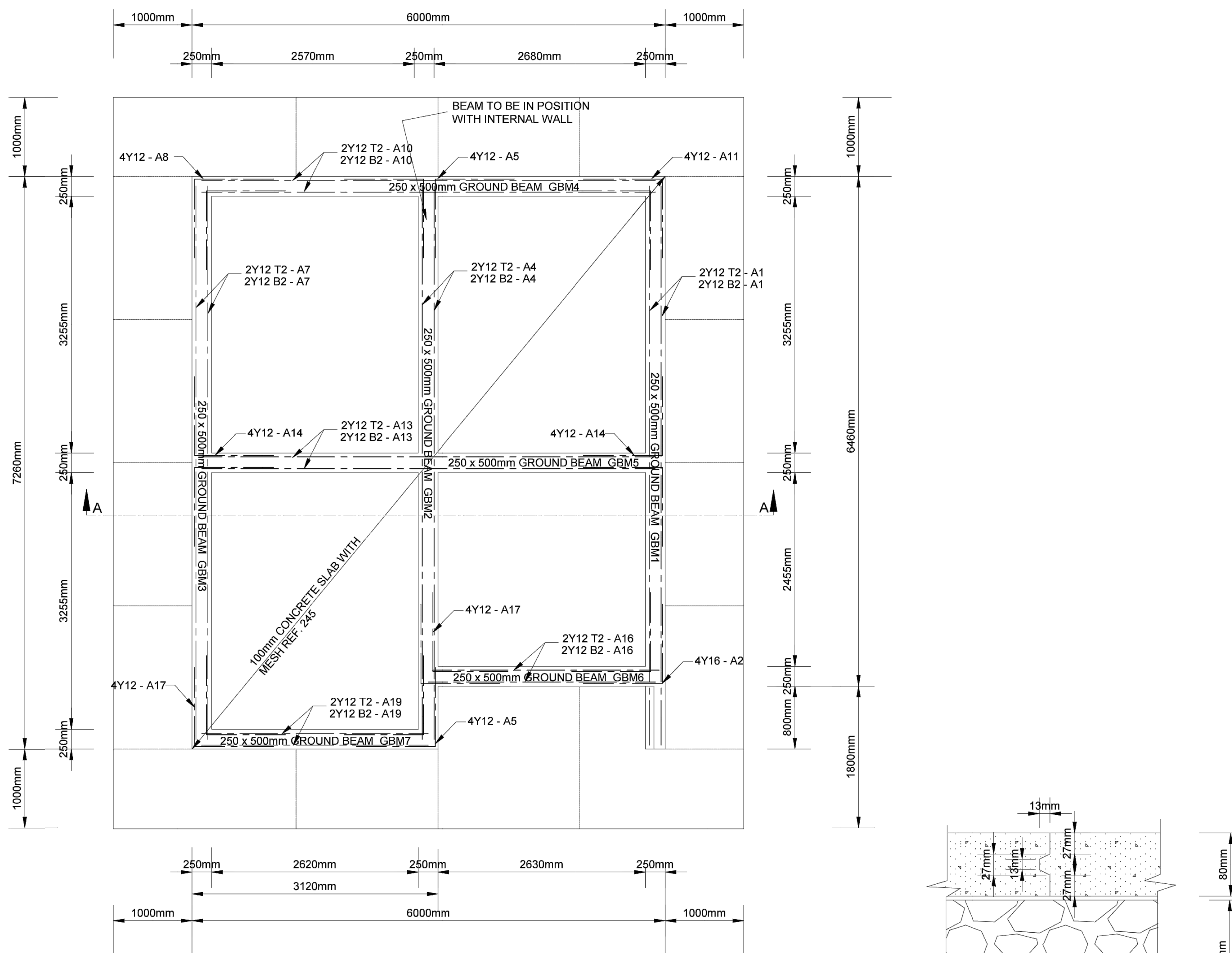
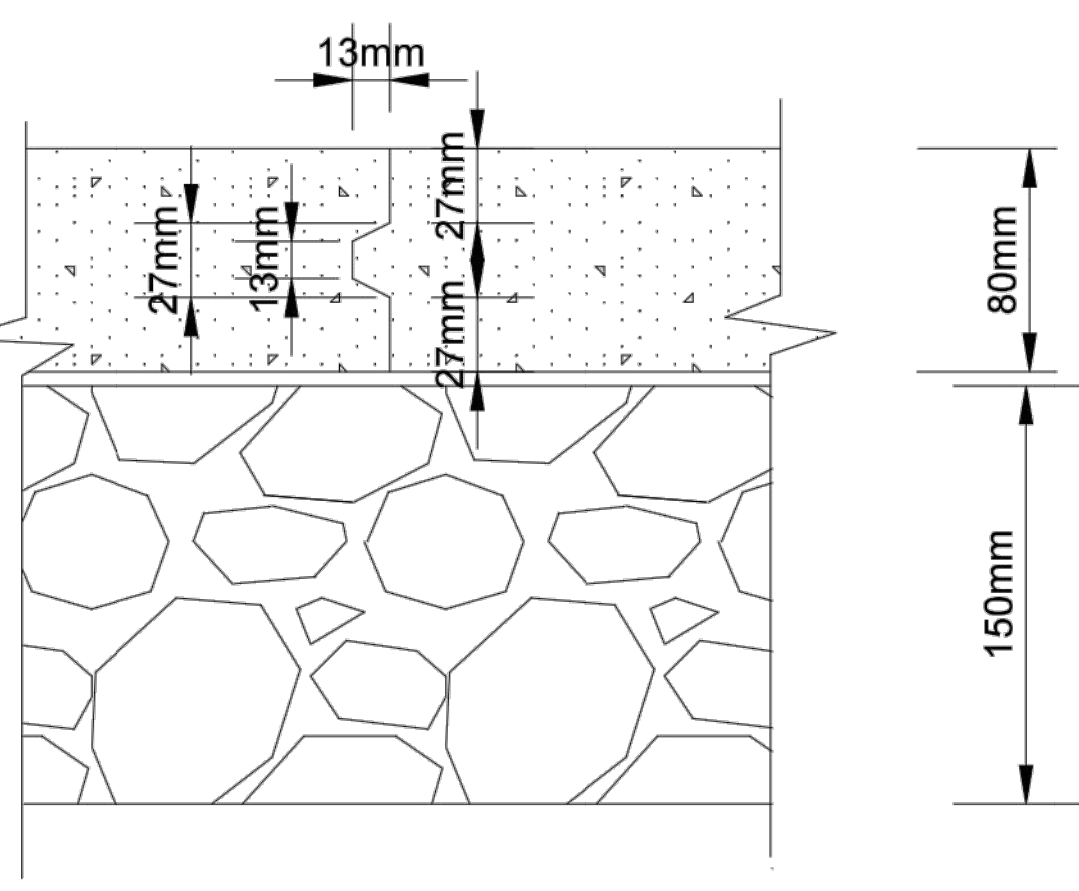


SECTION A - A
SCALE 1:20



RC FOUNDATION LAYOUT
SCALE 1:50



TYPICAL CONSTRUCTION JOINT DETAIL FOR APRONS
SCALE 1:5

ITEM	No. OFF	BAR MK	TYPE DIA.	No. PER ITEM	TOTAL No.	LENGTH	SH. CODE	BENDING DIMENSIONS TO SABS 82						
								A	B	C	D	E OR F		
GBM 1	1	A1	Y12	4	4	7000	20	7000						
		A2	Y12	4	4	2000	37	1000	1000					
		A3	R8	24	24	1250	60	400	130					
GBM 2	1	A4	Y12	4	4	7000	20	7000						
		A5	Y12	8	8	2000	37	1000	1000					
		A6	R8	24	24	1250	60	400	130					
GBM 3	1	A7	Y12	4	4	7000	20	7000						
		A8	Y12	4	4	2000	37	1000	1000					
		A9	R8	24	24	1250	60	400	130					
GBM 4	1	A10	Y12	4	4	5750	20	5750						
		A11	Y12	4	4	2000	37	1000	1000					
		A12	R8	20	20	1250	60	400	130					
GBM 5	1	A13	Y12	4	4	5750	20	5750						
		A14	Y12	8	8	2000	37	1000	1000					
		A15	R8	20	20	1250	60	400	130					
GBM 6	1	A16	Y12	4	4	2870	20	2870						
		A17	Y12	8	8	2000	37	1000	1000					
		A18	R8	10	10	1250	60	400	130					
GBM 7	1	A19	Y12	4	4	2870	20	2870						
		A21	R8	10	10	1250	60	400	130					

REINFORCEMENT WEIGHT (kg)	R	Y	TOT				
				8	10	12	16
66			66				
225			225				
291			291				

MESH REF. 245 (m2)
MINIMUM 400mm OVERLAP
45m2

GENERAL BUILDING SPECIFICATION
 THIS SPECIFICATION IS FOR EXPANSIVE SOIL (SITE CLASS "D-C", NHRBC MANUAL Part 1, Section 2 Table 1) AND SLOPING GROUND SUCH THAT THE HEIGHT OF THE RETAINED BY FOUNDATION WALLS DOES NOT EXCEED 1000mm (NHRBC MANUAL Part 2, Section 3, Table B) FOR EXPANSIVE, COMPRESSIBLE & POTENTIALLY COLLAPSIBLE, COMPRESSIBLE AND VARIABLE SOIL TYPES (SITE CLASS "H-C", "C-C" & "S-C" AND "P", NHRBC MANUAL Part 1, Section 2, Table 1). THE COMPLETE STRUCTURE IS TO BE DESIGNED, INSPECTED AND APPROVED BY A REGISTERED PROFESSIONAL STRUCTURAL ENGINEER.

GENERAL:
 All materials and workmanship to comply with NHRBC - Home Building Manual, SANS 10400 and OHS Norms and standards.

SETTING OUT:
 The longer axis of the house should be oriented to run as near east/west as possible to assist with thermal efficiency.

SITE PREPARATION:
 An area extending 1.5m beyond the perimeter of the house is to be cleared of all refuse and vegetation. The site shall be sloped so that no water pond with 1.5m of the house, and the ground immediately around the hot tub shall be sloped to fall at least 100mm over 1.5m from the perimeter of the unit. Topsoil containing grass and vegetation roots shall be removed from the area where the floor slab and apron will fit.

FOUNDATIONS:
 As per Engineers Design.

WALLS:
 External walls of 300 x 150 x 140mm. Internal walls and beam filling of 300 x 150 x 140mm concrete blocks (SA BS 1215) laid with 10mm thick horizontal and vertical mortar joints. c/s 2 mortar (1 cement sand mix). External 100mm walls to be reinforced with galvanized mesh to the course above floor level and every 2nd course thereafter. Allow window end door openings, brick for in every brick course up to wall plate level. 275 mason bricks. 100mm girth course (SABS 82) to be built into internal and external walls. Floor level with minimum 150mm overlap. Intersecting external and internal walls to be laid together with 700mm c/c. 200mm galvanized hoop iron strips with 50mm bands at both ends, but into the intersecting walls at 400mm vertical centres (2 block courses). Block cores at hoop iron strips to be filled solid with mortar or 100MPa fill concrete. Walls finished both internally and externally with 15mm thick smooth plaster. External walls to be painted with 1 coat of approved exterior primer undercoat and 2 coats super acrylic paint (SABS 1586 Grade 2). Internal walls with manufacturer's finish. Internal walls to bathroom and kitchen to be painted with 1 coat primer and 2 coats white acrylic enamel paint. All other internal walls to be painted with 1 coat primer and 2 coats white acrylic enamel. Beams to be plastered flush with external face of wall. 100 x 100mm vermin proof galvanized steel mesh to be laid into the external face of each gate wall in position over of truss members.

LIMITS:
 All limits to be placed on concrete (SABS 1504) built in with a minimum bearing length of 150mm each side of door opening. No limit need be over window opening, and extent 1:1 - of frames. Limit 1:1 the rest and over internal door frame 1:1 only. All limits to be bedded in mortar as for wall blocks.

WINDOW & DOOR FRAMES:
 All window and external door frames to be Betatec polyurethane frames. Logs have to be built into walls with ends turned down into block cores, affected blocks are to be fixed with mortar or 100MPa concrete. Windows to be Betatec Aluminium to fit into the polyurethane window frame. To be manufactured to manufacturer's specifications. Glass to be 4mm smooth annealed clear glass. Internal door frames to be 100mm pressed metal to receive 813mm x 2032mm doors.

DOORS:
 External doors to be 813 x 2032mm solid meranti with frameless, hinges, cross-brace and pull-and doors with SABS 3 lever locks. External doors to be sanded down all round and finished with a 50:50 mixture of pure linseed oil and mineral turpentine and finished with two generous coats of a clear finished polyurethane varnish. Internal doors to be 813 x 2032mm hollow core Masonite clad with SABS 2 lever locks.

ROOF:
 Double Roman roofline and V-ridge line (SABS 842). Bottom 2 rows of tiles are to be nailed/bedded to resist wind uplift with 2.8mm gauge aluminium alloy serrated clout nails of the correct length to suit the profile or approved replacement.

"Stimulphor" Tiles to be fixed in accordance with 38 x 38mm softwood battens and 38 x 50mm ribbing battens at max. 200mm centres. 0.2mm thick cold-chamber membrane with min. 150mm overlap on precast concrete roof trusses as per engineer's specifications. Trusses fixed on 38 x 50mm wall plates designed, manufactured and erected in accordance with SABS 603. TIC membrane to be provided by contractor for design & construction of complete roof structure. Trusses of max. 750mm c/c laid down to side with down galvanizing 200mm into walls. Roofboards to be lapped around reinforcement, taken up within the hollow core of the block and wrapped tightly around truss and wire ends nailed down. Trusses treated with 38 x 14mm continuous bracing members nailed to underside of truss at approx. 45 degrees, so that it does not interfere with the truss webs, with 3 no. x 75mm nails per connectors.

ROOF:
BASE BOARDS:
 80 x 200mm F.C. barge boards, screwed etc to ends of 44 x 70mm rail and profiled 38 x 38mm, bracing at 600mm centres with 19mm brass screws with washers. Use PVC glue and No. 685-2314 grille joints throughout.

FASCIA BOARDS:
 225 x 15mm (WHITE) resin Fascia boards, medium density, including priming strip for butt-jointing, fixed to truss ends with 19mm brass screws with washers.

GUTTERS & D PIPES:
 VYNADEEP gutters with stops (DE50) both sides and outlet (DE50) as indicated. Gutter fixed with fascia brackets (DE50) 100mm apart with a minimum fall of 1:60. 80mm VYNADEEP downpipes including all brackets as required fixed to walls with pipe clips (DC30). Gutter & downpipe installation as per VYNADEEP specifications.

CEILING:
 Main risk free gypsum ceiling boards galvanized cold nailed at 150mm c/c to 38 x 38mm softwood bracing (SABS 65) fixed to underside of subbeams at maximum 400mm c/c in one direction only. Fix 44 x 13mm softwood cover strips over all sheet joints. Fix 38 x 38mm softwood batten around ceiling edges for 75mm gypsum covered cornice all round, galvanized cold nailed at 300mm c/c. Prime nail heads with galvanized iron primer and paint ceiling with 2 coats matt acrylic white SABS 1586 Grade 2. Provide a 600 x 600mm door or 32 x 44mm rough softwood rebated framing with one 38 x 38mm softwood batten covered with ceiling board and fitted flush in opening.

CEILING INSULATION:
 75mm thick x 75mm wide lightweight compressible mineral wool insulation (SABS 1381-1) laid on top of the ceiling between trusses.

APRONS & STEPS:
 100mm wide x 60mm thick 20MPa concrete apron with a 1 in 50 fall away from the house. Apron to be cast in panels of maximum length of 1.5m, on selected filling material, well compacted to required levels. For sloping apron - cast minimum 20MPa concrete steps 1.0m wide with maximum 270mm board width and maximum 200mm riser height. Brush the surface after concrete has finished sufficient to leave a coarse non-slip surface.

ELECTRICAL:
 Electrical cables to be re-located in PVC electrical conduit within the roof trusses and returned down in the blockwork cavities at all J-joints, light switches and wall fix. COC required for ERM unit contain listed Size (Electric Drawing 000-001-01).

NOTE:
 All alternative material / building system or deviation from the above specification is to be shown on plans and submitted for approval by the chief building inspector prior to commencement of construction.

REV No.	DATE	DESCRIPTION
A	11-01-2024	ISSUED FOR INFORMATION

SIZE ON ORIGINAL DRAWING 100 mm



INSTITUTION
HOUSING DEVELOPMENT AGENCY

STAND REF/PILOT DESCRIPTION
 SERVICE
CONSTRUCTION OF ENGOBO 1854

CONTRACT	BUILDING OCCUPANCY CLASSIFICATION	PROJECT STAGE
A3		5

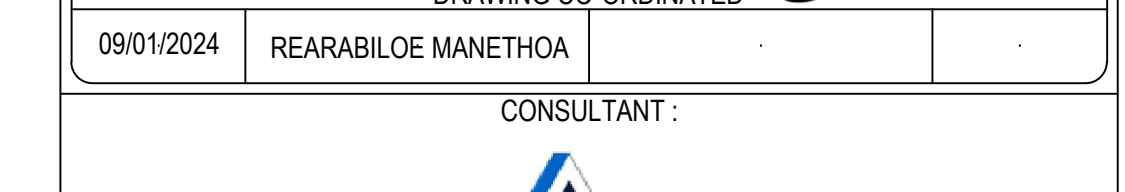
DISCIPLINE
STRUCTURAL DESIGNS

WORK DESCRIPTION - SUB DIVISION
HOUSE PLAN LAYOUT

DRAWING DESCRIPTION
RAFT FOUNDATION DETAILS

FILE No.	DESIGN	SCALE	DATE	NAME	SIGNATURE	PR NUMBER	ITEM No.
	LIZWELETHU KHUMALO	1:100	11/01/2024	JABU MAHLANGU	[Signature]	20180159	
	REARABLOE MANETHOA		09/01/2024	REARABLOE MANETHOA	[Signature]		

RESPONSIBLE PROFESSIONAL
 CONSULTANT



Waterford Court Block D20, 234 Glover Ave, Die Hoewes 0157

CADD	AUTO CAD	P03-2302-E1854-02-REV A	FILE
SYSTEM	SIZE	DRAWING NUMBER	REV
A1			A

SITE CLASS:	H
CONSTRUCTION TYPE:	STIFFENED RAFT
CATEGORY OF EXPECTED DAMAGE:	
COMPETENT PERSON:	
REGISTRATION NUMBER:	
SIGNATURE:	