

MAFUBE LOCAL MUNICIPALITY



**PROVISION OF SANITATION AND TO STRUCTURE IN
MAMELLO EXTENSION 09 (800 HOUSEHOLDS)**

TENDER DRAWINGS

BOOK OF DRAWINGS

NOVEMBER 2025

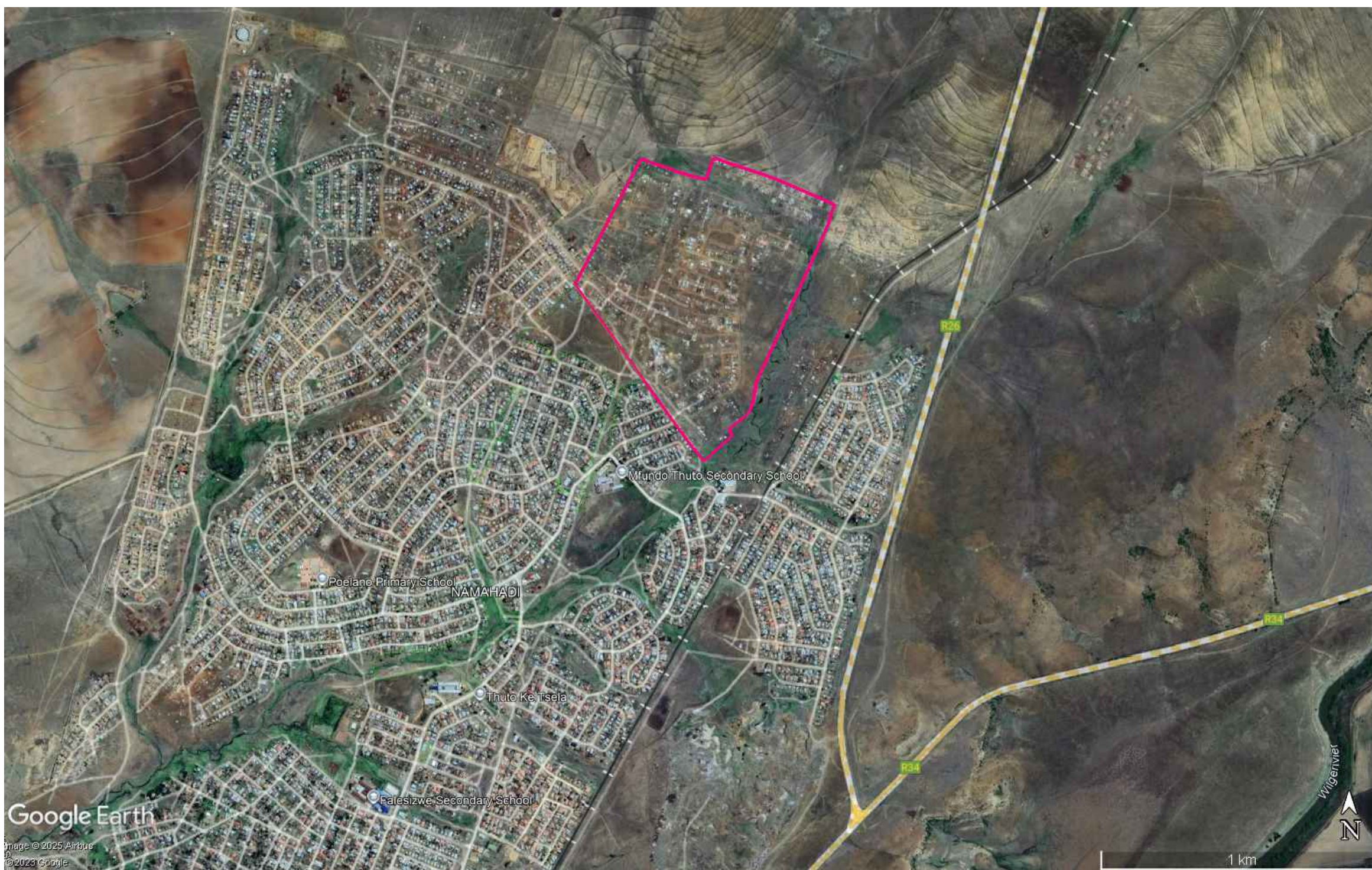


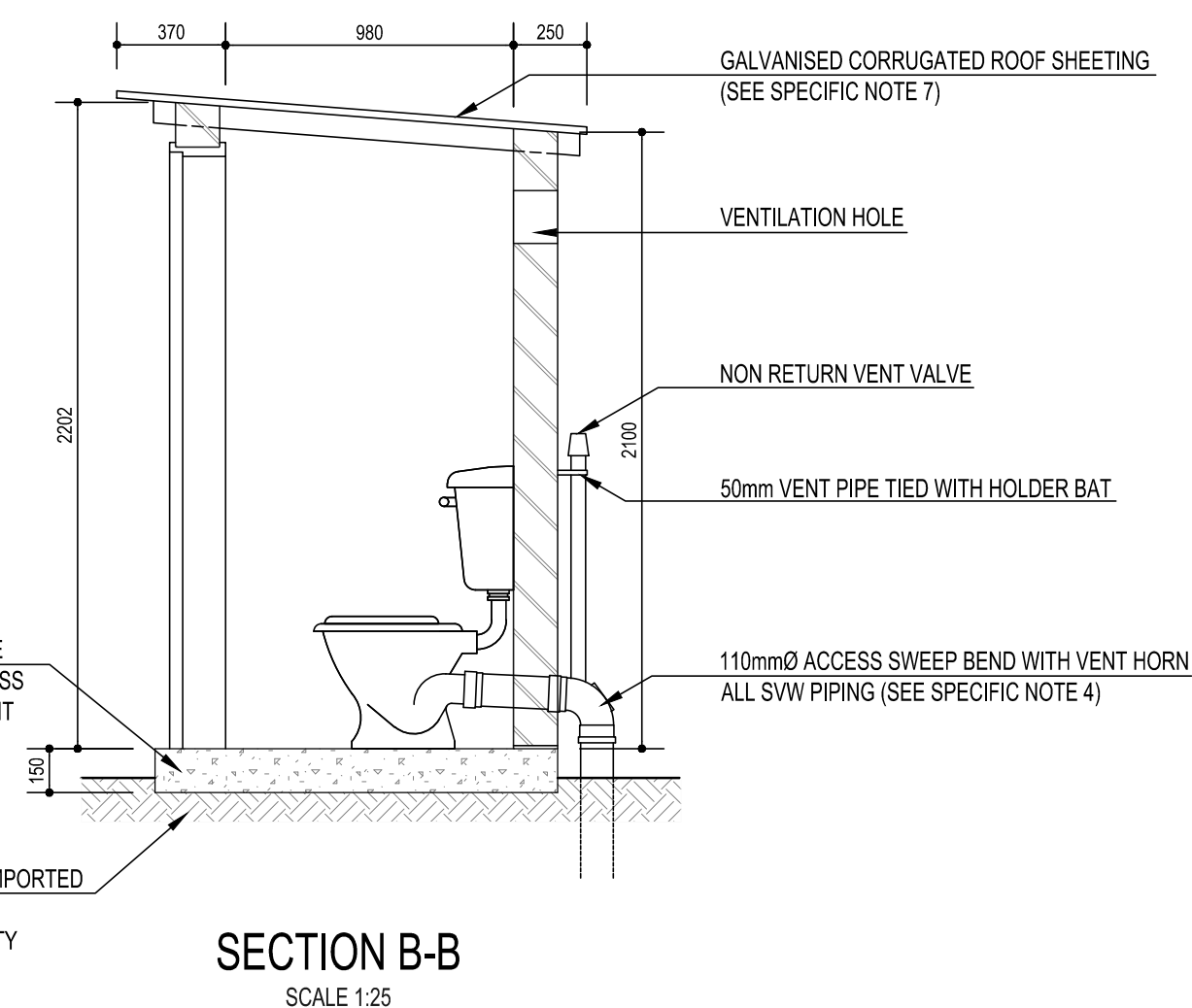
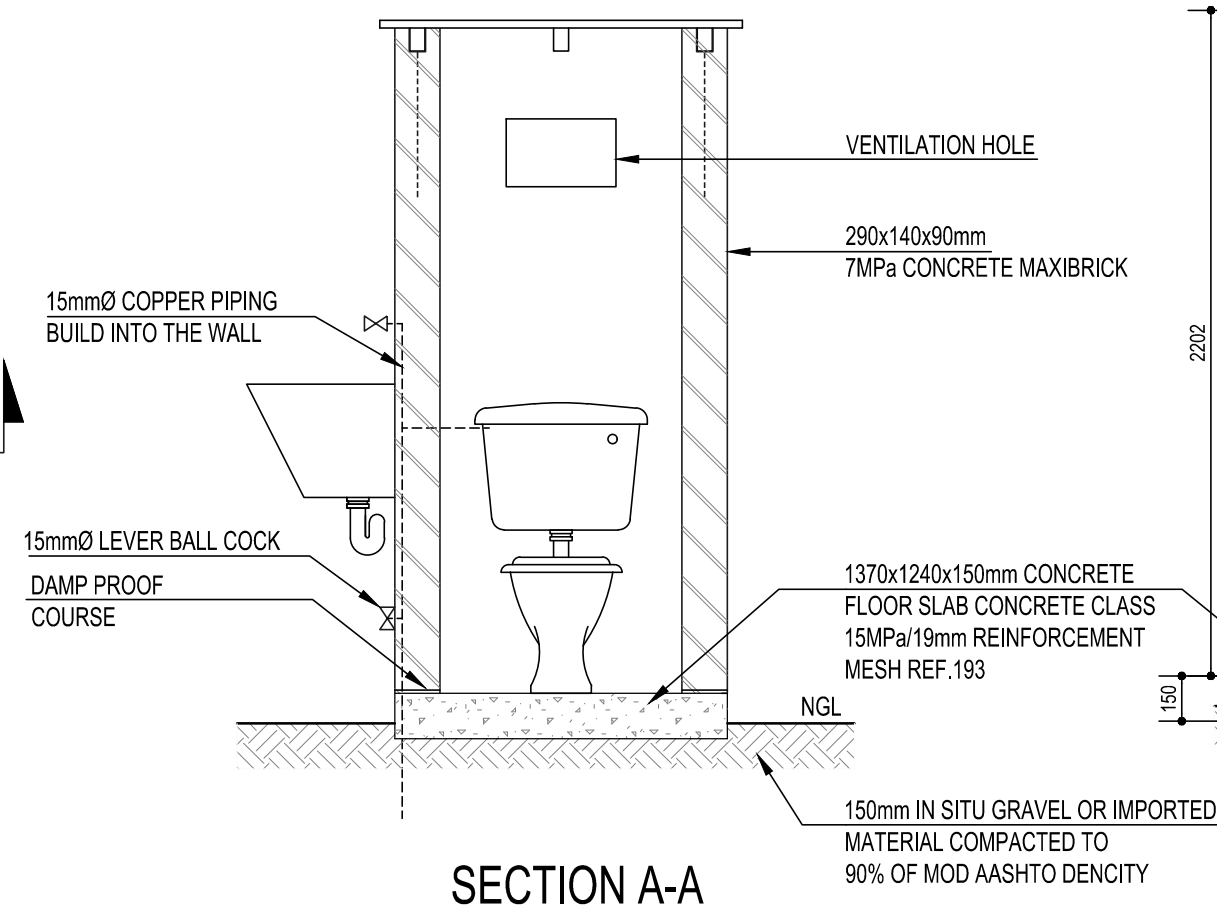
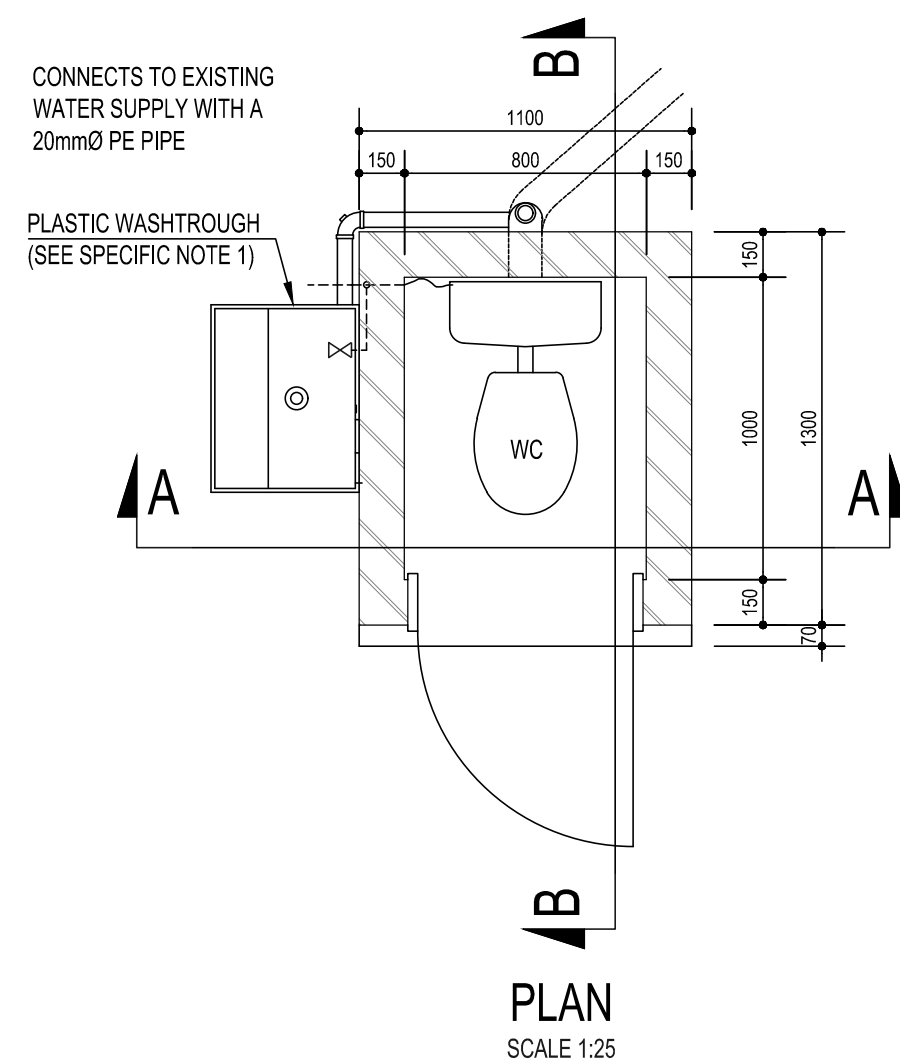
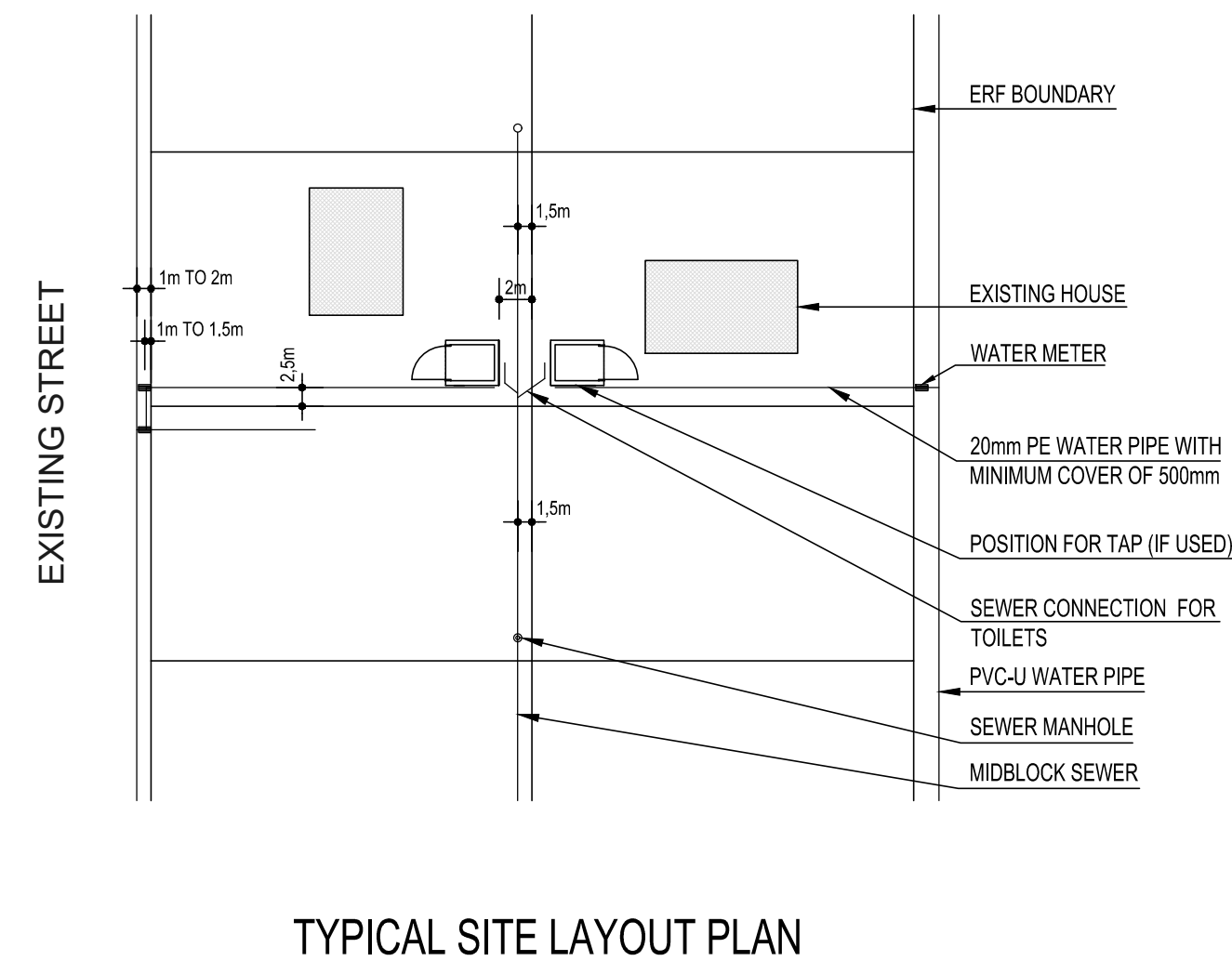
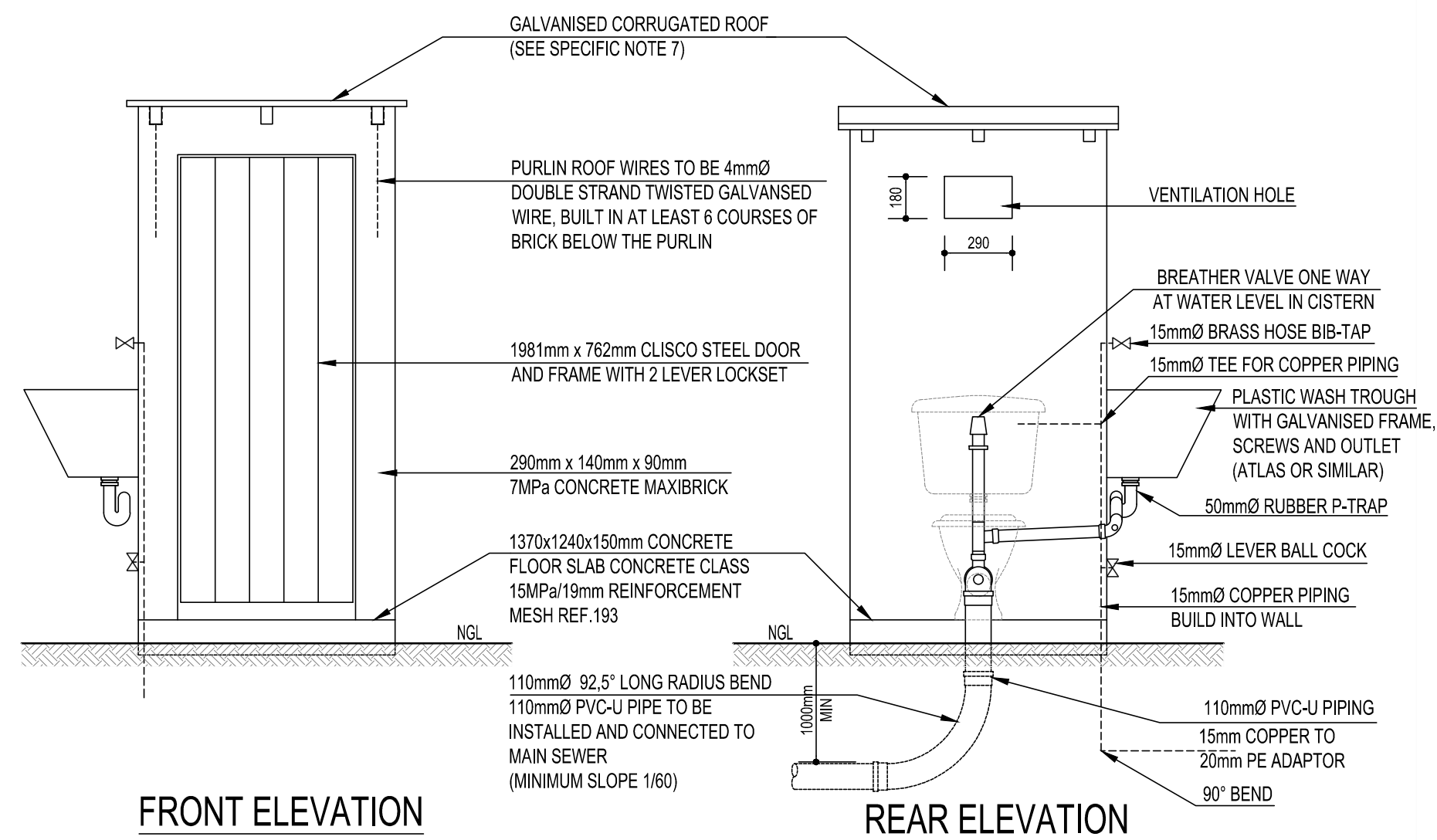
CLIENT
MAFUBE LOCAL MUNICIPALITY
64 J.J Hadebe Street
P.O Box 2
FRANKFORT
9830



CONSULTANT:

MFS Mosebo Projects (Pty) Ltd
90 Pony Street
Tygervalley Office Park
Pretoria
0081





NOTES:

GENERAL

1. ALL MATERIAL AND WORKMANSHIP MUST COMPLY WITH THE REQUIREMENTS OF THE LATEST RELEVANT SANS REQUIREMENTS.
2. ALL DIMENSIONS ARE IN MILLIMETERS. (UNLESS OTHERWISE SPECIFIED).
3. DO NOT SCALE FROM THIS DRAWINGS.
4. ALL DIMENSIONS MUST BE CHECKED AND APPROVED ON SITE.

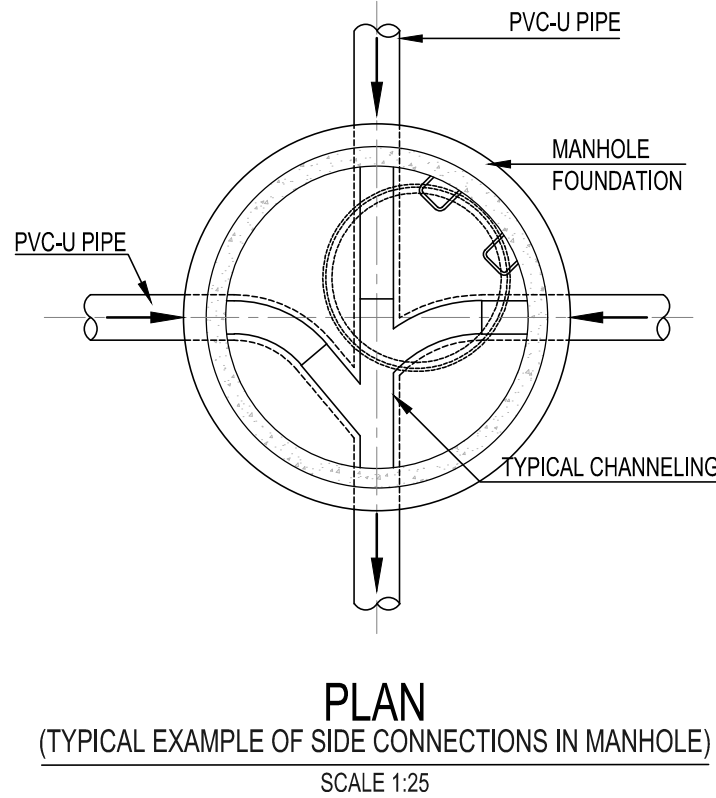
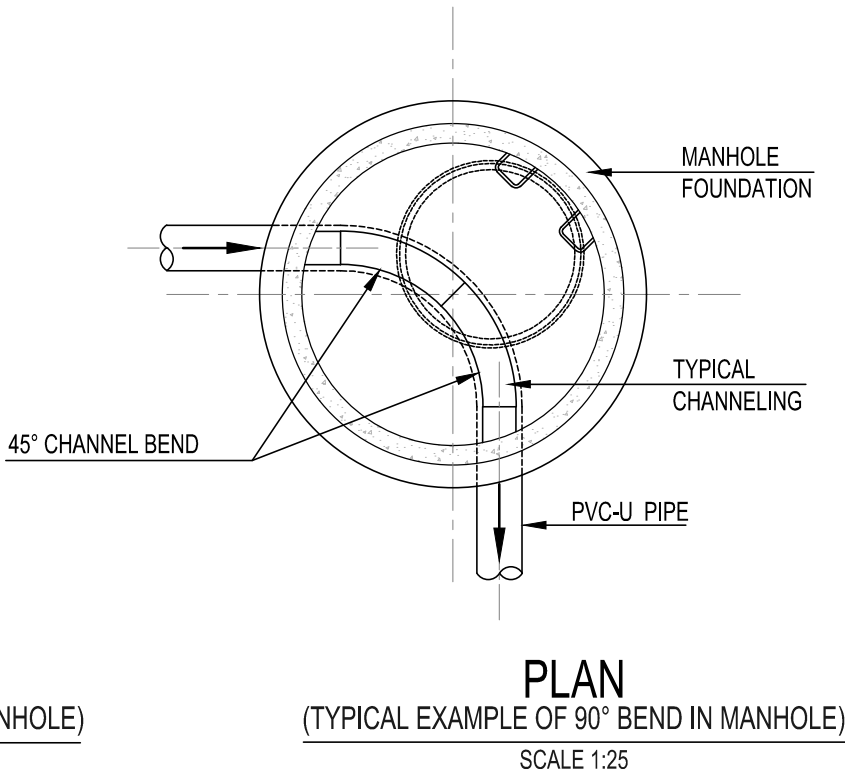
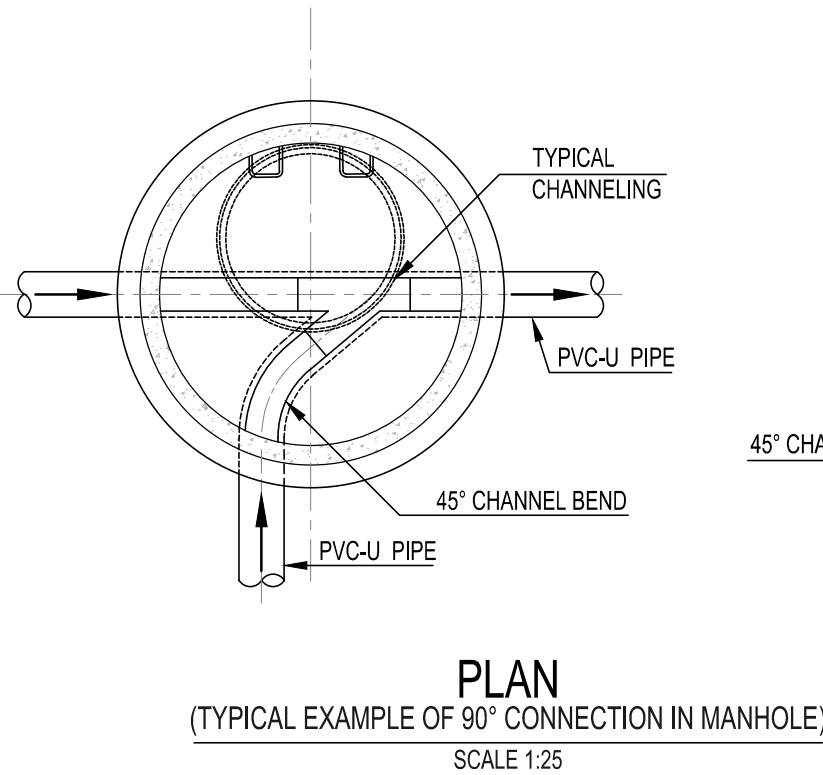
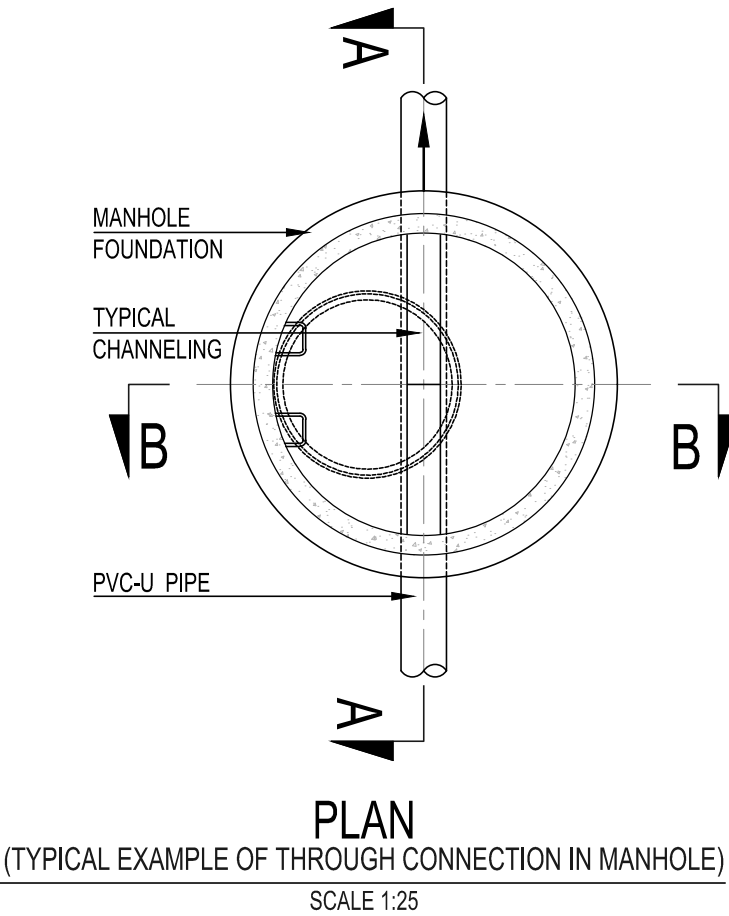
SPECIFIC NOTES

1. FIXING BOLTS FOR WASHTROUGH SHOULD NOT BE MORE THAN 30mm FROM CORNER OF METAL FRAME.
2. THE 50mm HOLDERBAT SHOULD NOT BE MORE THAN 50mm BELOW THE VENT VALE.
3. FIT THE WASTE WATER PIPE FROM THE WASHTROUGH TO THE SOIL PIPE. A 50x50mm PVC-U 95° JUNCTION SHOULD BE USED. CARE SHOULD BE TAKEN NOT TO INSTALL THE JUNCTION UPSIDE DOWN.
4. THE 110mmØ PIPE FROM THE TOILET PAN TO THE 110mmØ VENTHORN BEND AND THE VERTICAL 110mmØ PIPE DOWN TO THE ¼ BEND BELOW GROUND SHOULD BE OF 110mmØ SOIL VENT WASTE (SVW) PIPE. "THE WHITE PIPE".
5. DAMP COURSE TO BE PLACED AT THE BOTTOM OF THE WALL.
6. BRICKFORCE SHOULD BE PLACED BETWEEN THE BOTTOM THREE LAYERS AND REPEATED IN EVERY FOURTH LAYER ABOVE.
7. 0.5mm FULL HARD GALVANISED STEEL ROOF SHEETING ON 76x50mm SA PINE GRADE 6 PURLINS ON EDGE ANCHORED 6 BRICK COURSES DEEP INTO MASONRY WORK AT ALL FOUR CORNERS WITH 2 STRANDS OF 4mmØ GALVANISED STEEL WIRE OR GALVANISED LOOP IRON ACCORDING TO NBR SPECIFICATIONS. EXPOSED ENDS SHOULD BE TREATED WITH CREOSOTE.
8. TAP STAND PIPE SHOULD BE 600mm ABOVE GROUND.
9. THE FLUSHING LEVER OF THE CISTERN SHOULD BE ON THE SAME SIDE AS THE WATER INLET TO THE CISTERN.

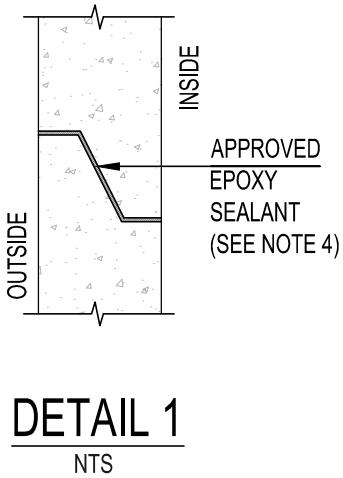
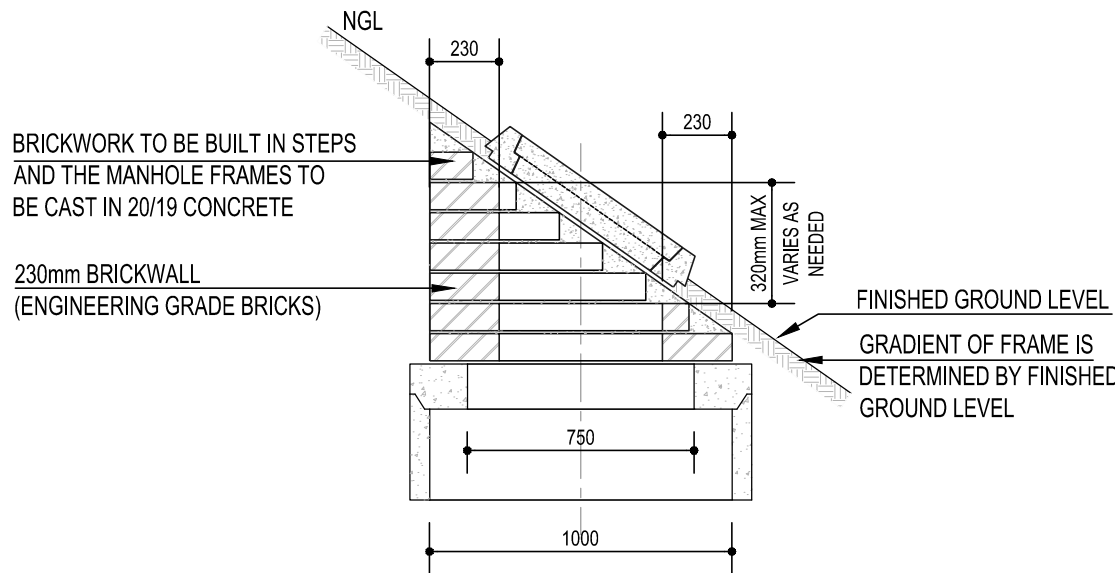
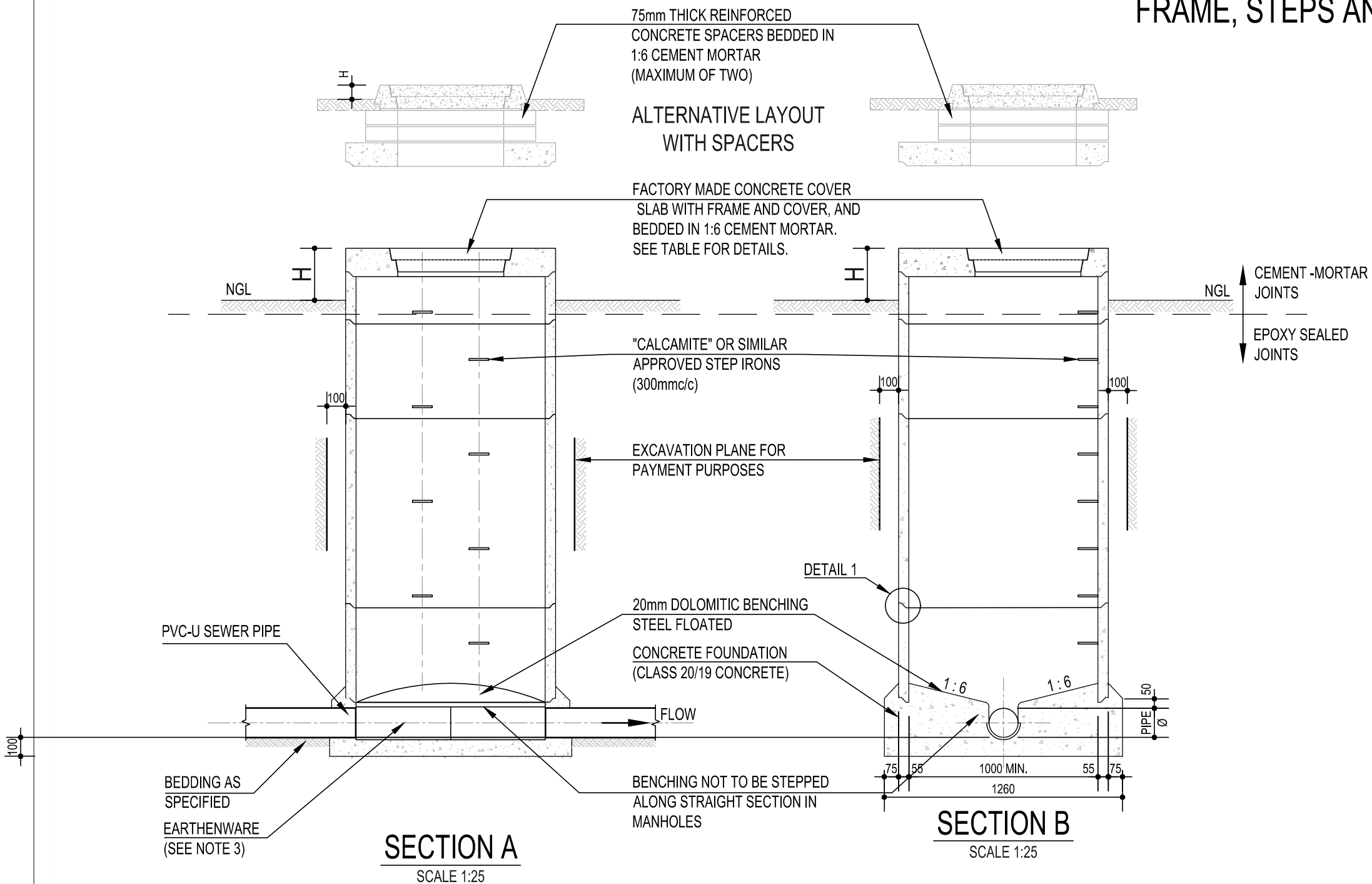
			FOR INTERNAL USE:		 mosebo Engineers Project Managers Technical Advisors	 MAFUBE LOCAL MUNICIPALITY	PROVISION OF SANITATION AND TO STRUCTURE IN MAMELLO EXTENSION 09 (800 HOUSEHOLDS)	DRAWING DESCRIPTION TOILET STRUCTURE	APPROVED BY		SCALE BAR		SHEET OF SHEETS	
			Designed By:	L.M					 SCALE 1:1000		01 OF 01			
B	31/10/2025	TENDER DRAWINGS	Checked By:	D.U										
A	24/10/2025	DETAILED DESIGN DRAWINGS	Authorised By:	M.M										
0	03/02/2025	PRELIMINARY DESIGN DRAWINGS	Drawn By:	L.M										
No	DATE	AMENDMENTS	Approved by G.T Jokonya Pr.TechEng (2023301498) 						for HEAD OF DEPARTMENT	DATE	DRAWING SCALE : AS SHOWN	DRAWING NUMBER : MSB/MAF / 102		

NOTES:

- 1) CONCRETE FOR MANHOLES MUST BE OF DOLOMITIC ORIGIN.
- 2) TYPICAL VALUES FOR H.
H = 50 - 75mm WITHIN ERVEN AND ROAD RESERVES
= 250mm LOW COST HOUSING DEVELOPMENTS AND UNDEFINED ROADWAYS.
= 500mm OPEN VELD OR ROAD RESERVES WHERE POSITION OF MANHOLES CAN BE CONCEALED BY LONG GRASS OR OTHER GROWTH.
- 3) CHANNELING :
NOMINAL DIAMETERS.
 $\varnothing \leq 300\text{mm}$ CLAY OR DOLOMITIC CONCRETE OR NUTEC CEMENT.
 $\varnothing > 300\text{mm}$ INSITU CAST DOLOMITIC CONCRETE
- 4) CONCRETE MANHOLE SECTIONS MUST BE FIXED WITH AN EPOXY SEALER SUCH AS EPIDERMIX 344 OR PRO-STRUCT 687 OR SIMILAR APPROVED.
- 5) FACTORY MADE MANHOLE SECTIONS MUST BE IN ACCORDANCE WITH SANS 1294.
- 6) MANHOLE FRAMES MAY ONLY BE BUILT IN ON SLOPED FINISHED SIDEWALKS ON A WRITTEN INSTRUCTION BY THE ENGINEER.
- 7) OVER EXCAVATION MAY ONLY BE FILLED AFTER APPROVAL BY THE ENGINEER WITH GRADE 20/19 CONCRETE OR SUITABLE MATERIAL AS DIRECTED BY THE ENGINEER.
- 8) NO PART OF THE MANHOLE MAY BE FINISHED OFF WITH CEMENT-WASH OR MORTAR.



TYPICAL MANHOLE LAYOUTS SHOWING POSITIONS OF MANHOLE FRAME, STEPS AND CHANNELING



MANHOLE COVERS AND FRAMES (SANS 558)	
POSITION OF MANHOLE	TYPE OF COVER
CARRIAGE WAY	TYPE 2A CAST IRON FRAME AND COVER
STREET RESERVE	TYPE 4 CAST IRON OR CONCRETE FRAME AND CONCRETE COVER
ERVEN	TYPE 4 CAST IRON OR CONCRETE FRAME AND CONCRETE COVER
GENERAL	ONLY TYPE 2A MANHOLE COVERS MAY BE USED FOR SEWERS 300mmØ AND GREATER
NOTE : CI COVERS ARE USED ONLY WITH WRITTEN INSTRUCTION FROM THE ENGINEER.	

			FOR INTERNAL USE:	
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			Checked By:	D.U.
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No	DATE	AMENDMENTS		

MFS MOSEBO PROJECTS (PTY) LTD
90 PONY STREET
TYGERVALLEY OFFICE PARK
PRETORIA
0081

mosebo
Engineers | Project Managers | Technical Advisors



MAFUBE LOCAL MUNICIPALITY

PROVISION OF SANITATION AND TO STRUCTURE IN
MAMELLO EXTENSION 09 (800 HOUSEHOLDS)

DRAWING DESCRIPTION

MANHOLE DETAILS FOR
SEWERS
UP TO 300mm NOMINAL
DIAMETER

APPROVED BY

for HEAD OF DEPARTMENT DATE

SCALE BAR

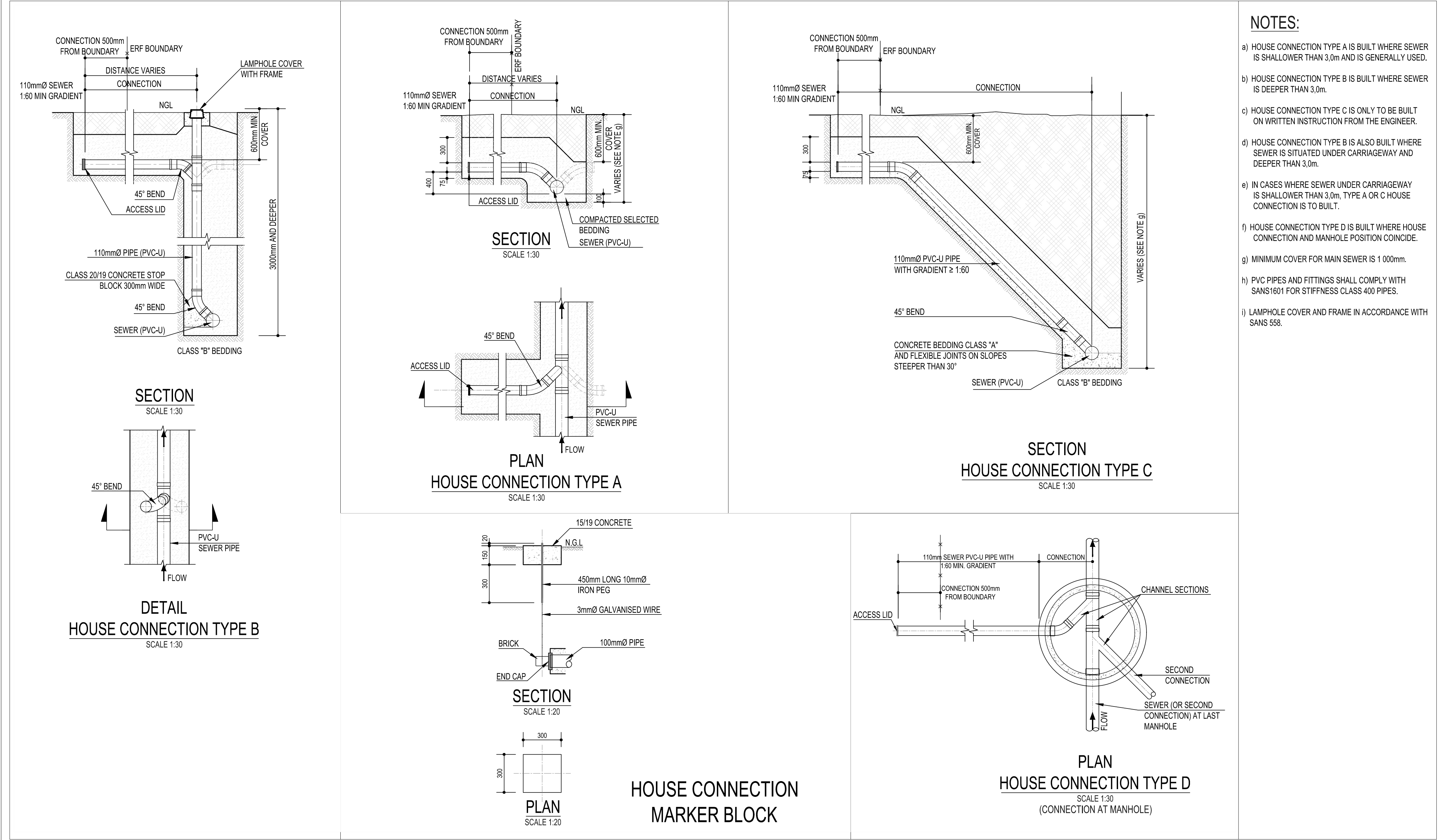
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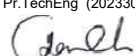
SHEET OF SHEETS

01 OF 01

DRAWING NUMBER : MSB/MAF / 103



- NOTES:**
- a) HOUSE CONNECTION TYPE A IS BUILT WHERE SEWER IS SHALLOWER THAN 3,0m AND IS GENERALLY USED.
 - b) HOUSE CONNECTION TYPE B IS BUILT WHERE SEWER IS DEEPER THAN 3,0m.
 - c) HOUSE CONNECTION TYPE C IS ONLY TO BE BUILT ON WRITTEN INSTRUCTION FROM THE ENGINEER.
 - d) HOUSE CONNECTION TYPE B IS ALSO BUILT WHERE SEWER IS SITUATED UNDER CARRIAGEWAY AND DEEPER THAN 3,0m.
 - e) IN CASES WHERE SEWER UNDER CARRIAGEWAY IS SHALLOWER THAN 3,0m, TYPE A OR C HOUSE CONNECTION IS TO BE BUILT.
 - f) HOUSE CONNECTION TYPE D IS BUILT WHERE HOUSE CONNECTION AND MANHOLE POSITION COINCIDE.
 - g) MINIMUM COVER FOR MAIN SEWER IS 1 000mm.
 - h) PVC PIPES AND FITTINGS SHALL COMPLY WITH SANS1601 FOR STIFFNESS CLASS 400 PIPES.
 - i) LAMPHOLE COVER AND FRAME IN ACCORDANCE WITH SANS 558.

			FOR INTERNAL USE:		 MFS MOSEBO PROJECTS (PTY) LTD 90 PONY STREET TYGERVALLEY OFFICE PARK PRETORIA 0081 	MAFUBE LOCAL MUNICIPALITY	DRAWING DESCRIPTION	APPROVED BY	SCALE BAR		SHEET OF SHEETS	
B	31/10/2025	TENDER DRAWINGS	Designed By:	L.M					01 OF 01			
A	24/10/2025	DETAILED DESIGN DRAWINGS	Checked By:	D.U								
			Authorised By:	M.M								
0	03/02/2025	PRELIMINARY DESIGN DRAWINGS	Drawn By:	L.M								
No	DATE	AMENDMENTS	Approved by G.T. Jokonya Pr. TechEng (2023301498) 						DRAWING SCALE : AS SHOWN		DRAWING NUMBER : MSB/MAF / 104	
			 Engineers Project Managers Technical Advisors									



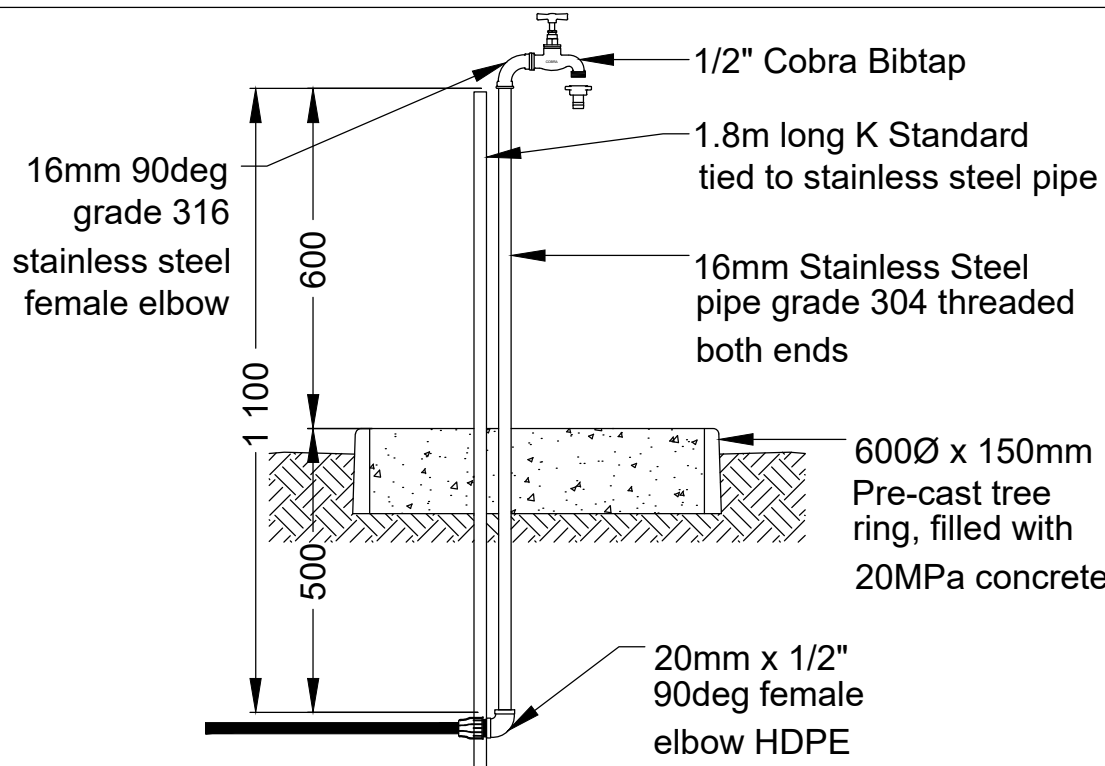
Water Hydrants					
ID	Y-Coord	X-Coord	NGL	Offset NGL	Diameter
1	47435.377	301526.325	1583.476	0.000	80 mm
3	47577.844	301487.873	1583.209	0.000	80 mm
4	47135.032	301487.344	1582.528	0.000	80 mm
6	47731.464	301457.544	1579.390	0.000	80 mm
7	47837.176	3014836.666	1584.134	0.000	80 mm
8	47384.537	301481.006	0.000	0.000	80 mm

Water Valves					
ID	Y-Coord	X-Coord	NGL	Invert	Depth
1	47366.619	3015134.469	1583.128	1582.131	0.994
2	47370.125	3015128.230	1584.406	1583.455	0.952
3	47376.143	3015076.439	1584.606	1585.655	0.970
4	47378.521	3015010.981	1570.045	1588.155	0.860
5	47425.287	3015144.793	1586.865	1585.912	0.953
6	47488.209	3015147.515	1584.910	1587.984	0.920
7	47589.009	3015235.487	1584.907	1584.028	0.879
8	47618.700	3015100.031	1576.989	1576.034	0.955
9	47672.705	3015095.508	1581.345	1580.514	0.831
10	47629.178	3015094.968	1578.873	1577.918	0.955
11	47663.187	3015077.377	1582.866	1581.911	0.955
12	47678.452	3015079.867	1583.594	1582.639	0.955
13	47684.686	3014811.324	1585.000	1583.907	1.093
14	47689.450	3014805.543	1585.000	1584.018	0.982
15	47671.051	3014805.904	1585.000	1584.018	0.982
16	47738.353	3014824.426	1583.849	1582.326	0.924
17	47719.349	3014875.254	1581.825	1580.807	1.015
18	47723.704	3014783.888	1587.117	1586.234	0.882
19	47745.566	3014776.414	1587.830	1586.741	0.888
20	47735.132	3014727.079	1584.619	1583.644	0.975
21	47708.455	3014734.175	1584.051	1583.082	0.960
22	47822.367	3014783.515	1581.508	1580.477	1.028
23	47807.610	3014773.035	1580.538	1579.531	1.007
24	47482.154	3014783.499	1580.260	1579.220	1.040
25	47333.682	3014831.829	1589.379	1588.343	1.036
26	47343.105	3014860.184	1589.793	1588.810	0.983
27	47326.046	3014861.050	1589.016	1588.051	0.967
28	47291.481	3014861.384	1587.474	1586.519	0.955
29	47189.253	3014824.848	1582.853	1581.848	0.955
30	47124.119	3014770.237	1583.884	1584.545	-0.161
31	47145.446	3014771.081	1584.024	1584.545	-0.021
32	47338.502	3014858.080	1585.758	1583.971	0.287
33	47207.088	3014816.778	1585.000	1584.085	0.915
34	47489.448	3014886.333	1571.082	1570.127	0.955
35	47591.309	3014853.125	1574.088	1573.237	0.852
36	47677.880	3014846.973	1573.381	1572.417	0.964
37	47603.234	3014838.517	1574.536	1573.563	0.973
38	47771.410	3014804.901	1585.782	1584.816	0.966
39	47506.502	3014807.512	1581.369	1580.416	0.953
40	47723.445	3014848.406	1583.623	1582.646	0.977
41	47711.846	3014846.263	1582.952	1581.958	0.994

[illegible]

FITTINGS NOTES:

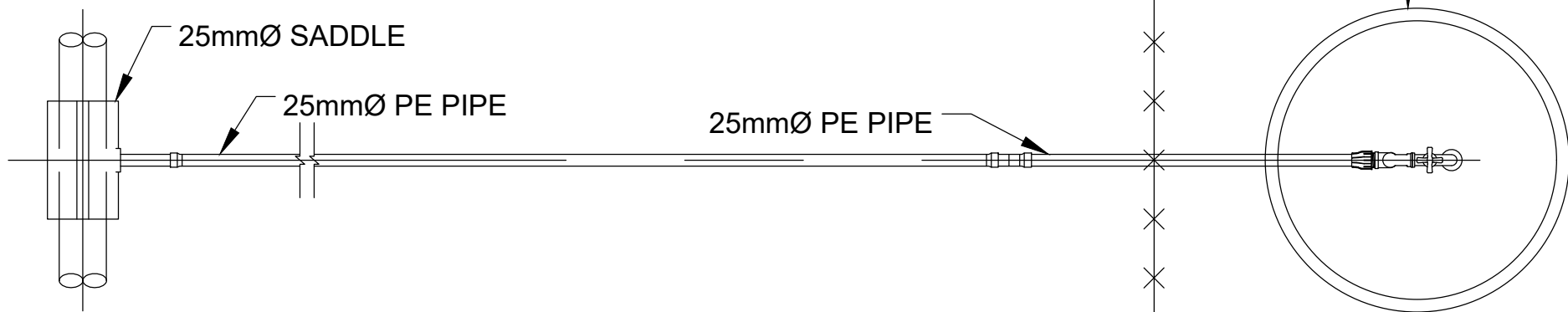
- 1) All pipes and fittings shall comply with SANS 4427 and shall be PE100 PN16 SDR11, or/and SABS approved or JASWIC accepted and listed.
- 2) 1m Cover over pipes at road crossings.
- 3) Transition of pipe depth from 1m to 0.375m to be over a length of 3m (1.5 Gradient) to preclude any kinks in pipe, if sidewalk is too narrow, appropriate bends shall be used.
- 4) Valves must be ISO or SABS approved, or JASWIC accepted and listed.
- 5) Saddles to be provided with reinforcing steel rings.
- 6) All fittings to be PLASSON or similar approved by Sembcorp.
- 7) All material and workmanship must comply with the requirements of the latest relevant SABS requirements.
- 8) All dimensions are millimetres. (unless otherwise specified).
- 9) Do not scale from these drawings.
- 10) All dimensions must be checked and approved on site.



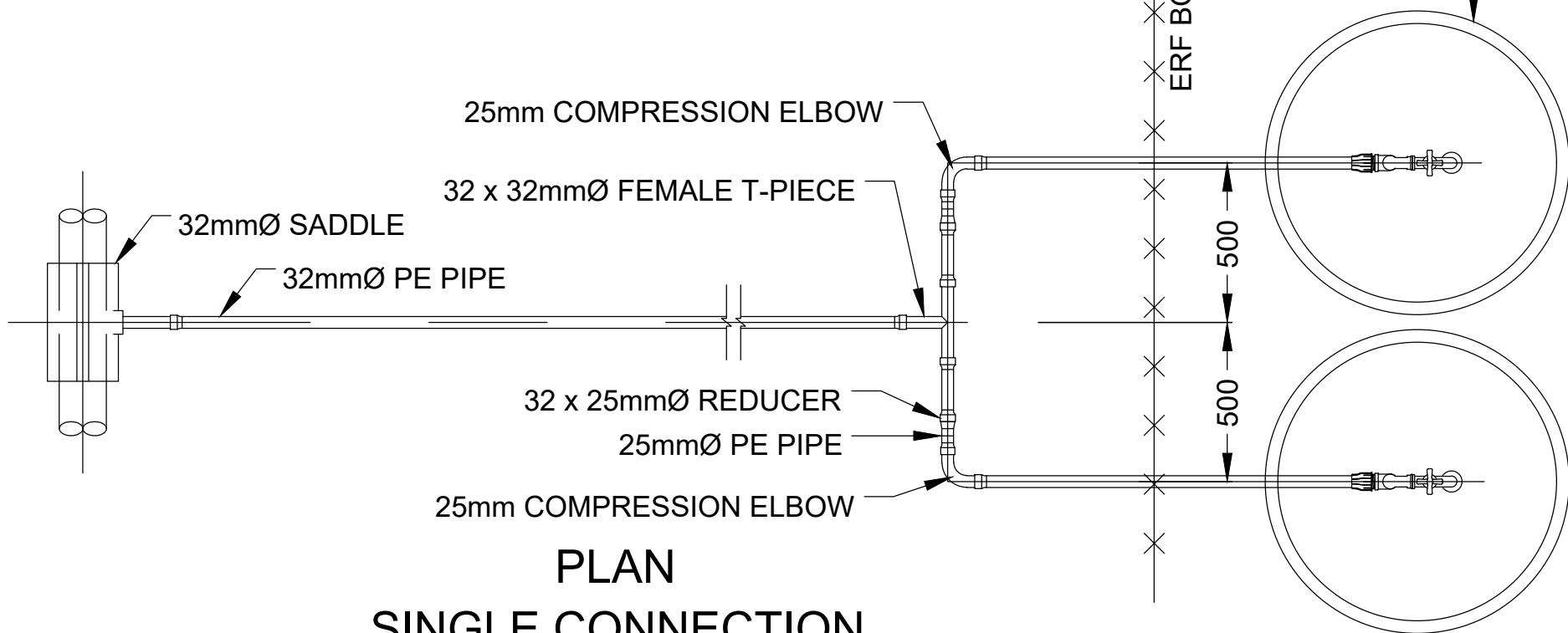
TAP CONNECTION DETAIL



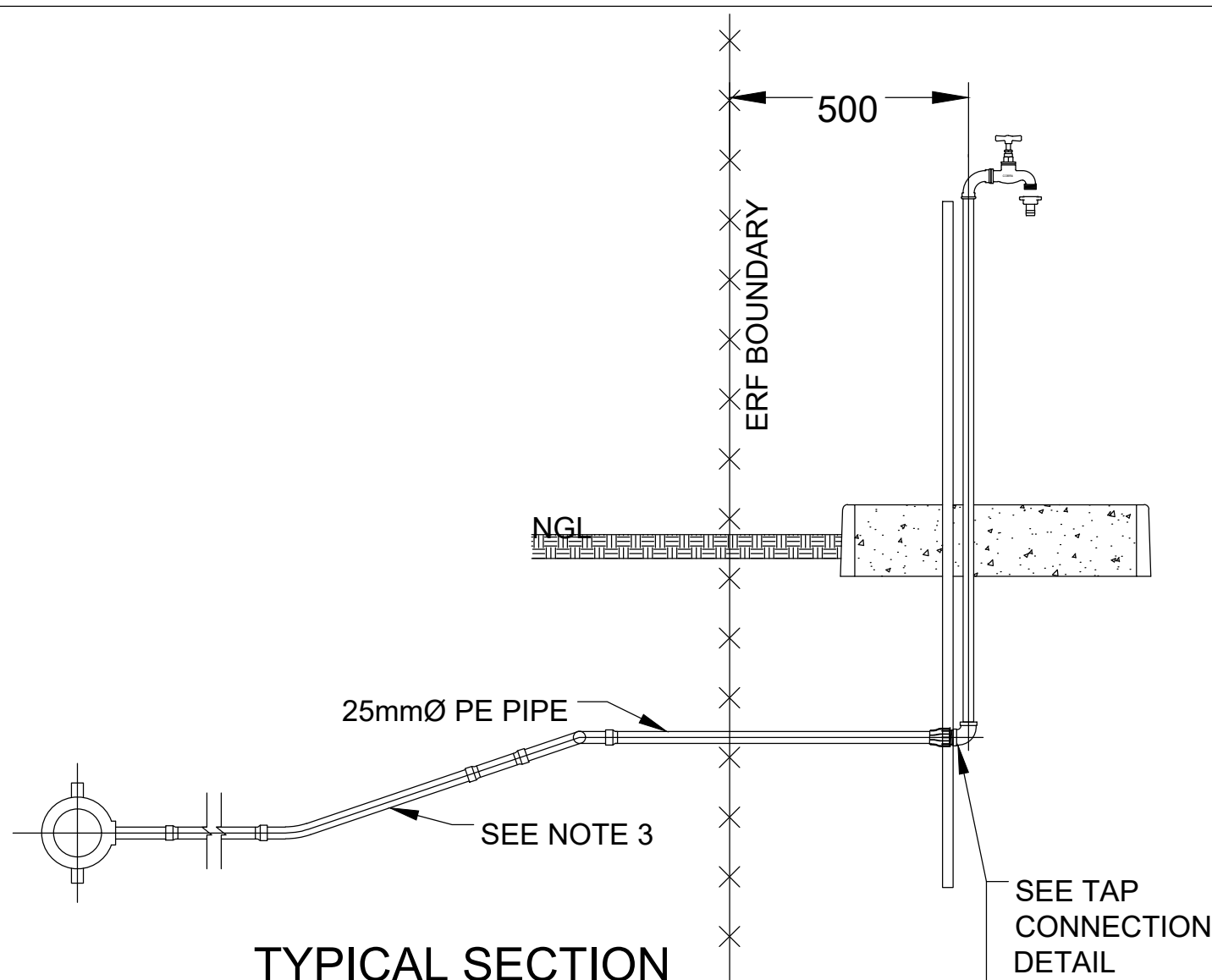
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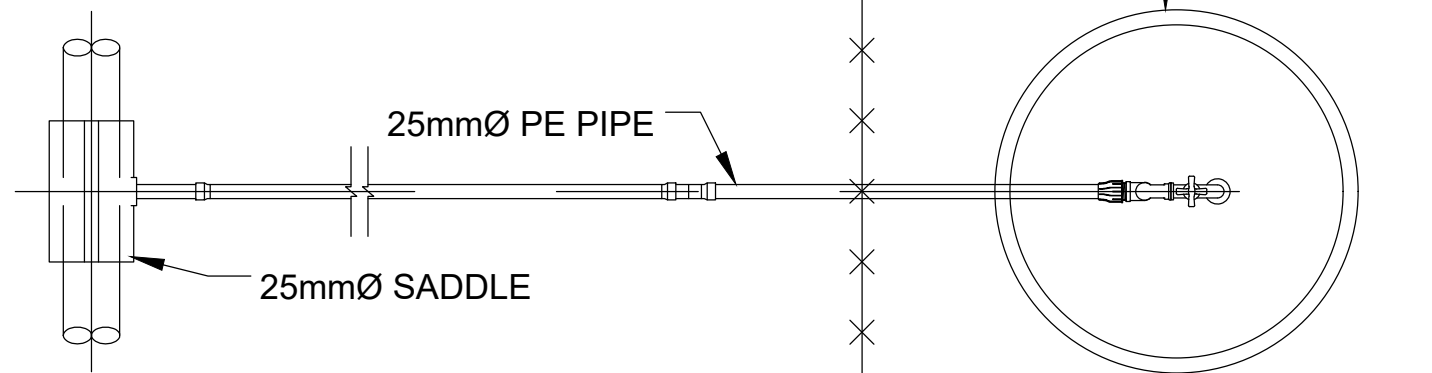
LONGEST ERF CONNECTIONS



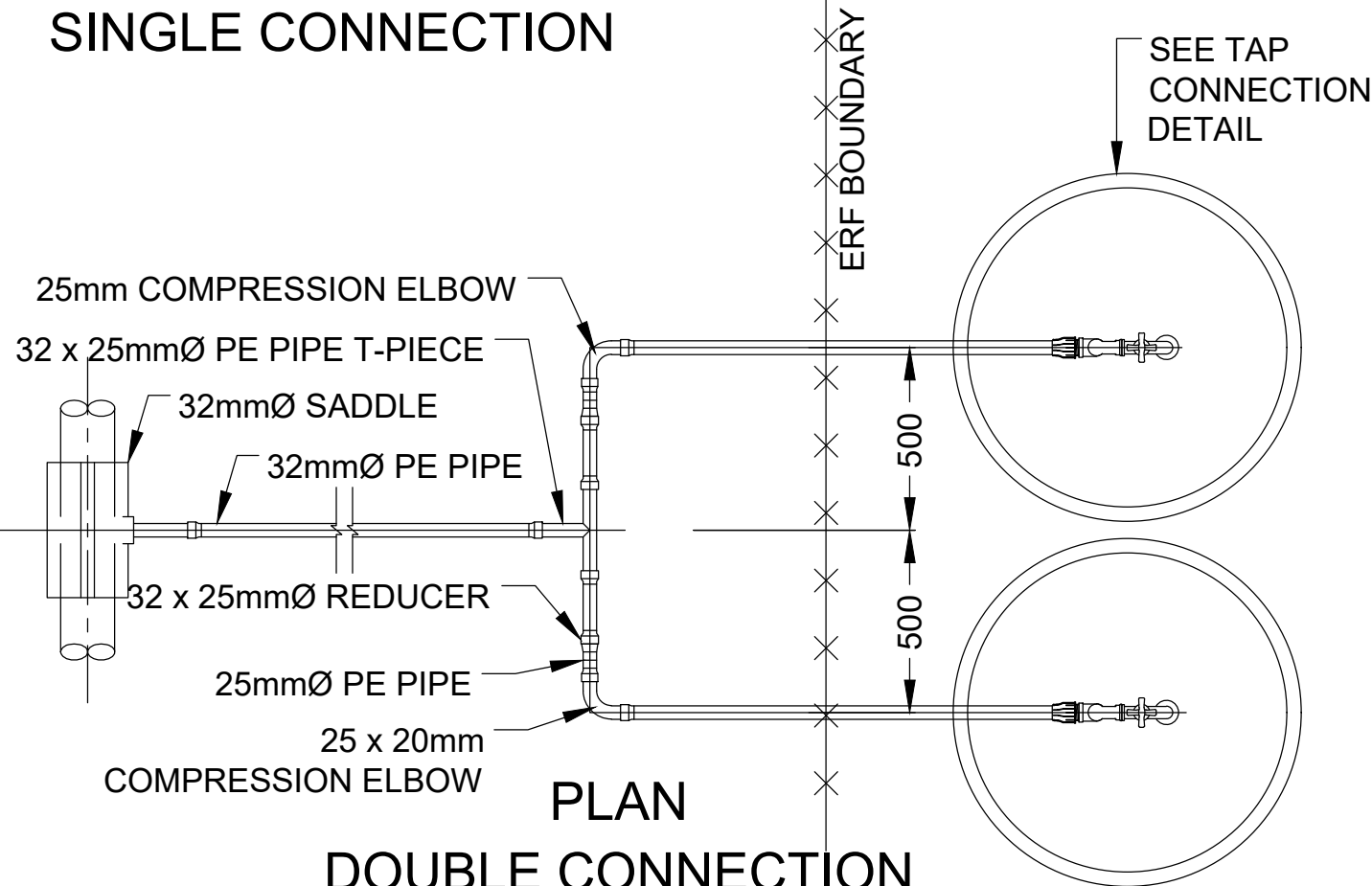
PLAN SINGLE CONNECTION



TYPICAL SECTION



PLAN SINGLE CONNECTION



PLAN DOUBLE CONNECTION

			FOR INTERNAL USE:	
			Designed By:	L.M
			Checked By:	D.U
			Authorised By:	M.M
			Drawn By:	L.M
			Approved by G T Jokonya Pr.TechEng (2023301498)	
No	DATE	AMENDMENTS		



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MAFUBE LOCAL MUNICIPALITY

PROVISION OF SANITATION AND TO STRUCTURE IN
MAMELLO EXTENSION 09 (800 HOUSEHOLDS)

DRAWING DESCRIPTION

WATER HOUSE
CONNECTION DETAILS

APPROVED BY

for HEAD OF DEPARTMENT DATE

SCALE BAR



DRAWING SCALE : N.T.S

SHEET OF SHEETS

01 OF 01

DRAWING NUMBER : MSB/MAF / 108

- 1) All pipes and fittings shall comply with SANS 4427 and shall be PE100 PN16 SDR11, or/and SABS approved or JASVIC accepted and listed.
- 2) 1m Cover over pipes at road crossings.
- 3) Transition of pipe depth from 1m to 0.375m to be over a length of 3m (1:5 Gradient) to preclude any kinks in pipe, if sidewalk is too narrow, appropriate bends shall be used.
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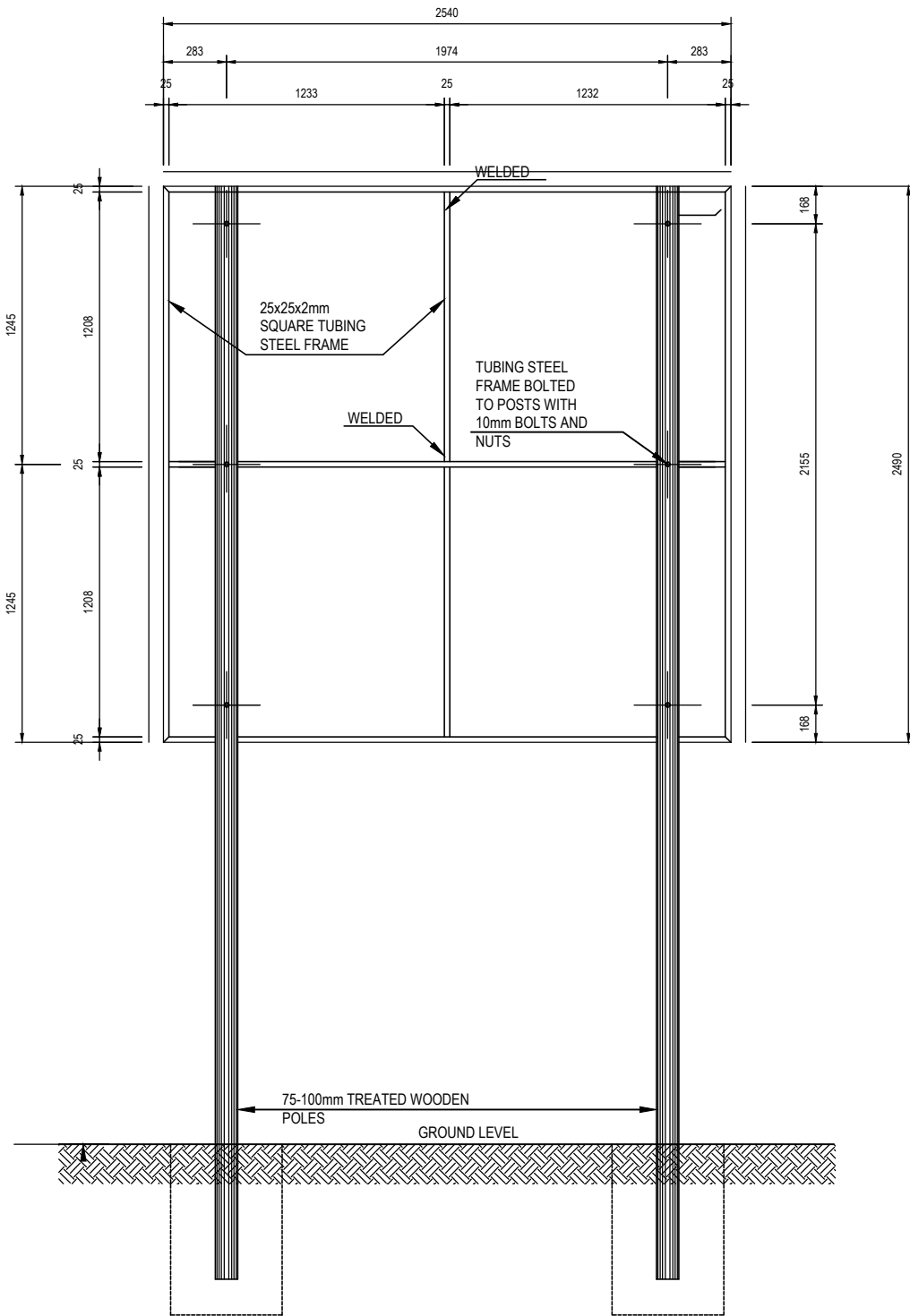


PIPE DIAMETER (mm)	160	110	75
TRENCH WIDTH (mm)	710	690	675

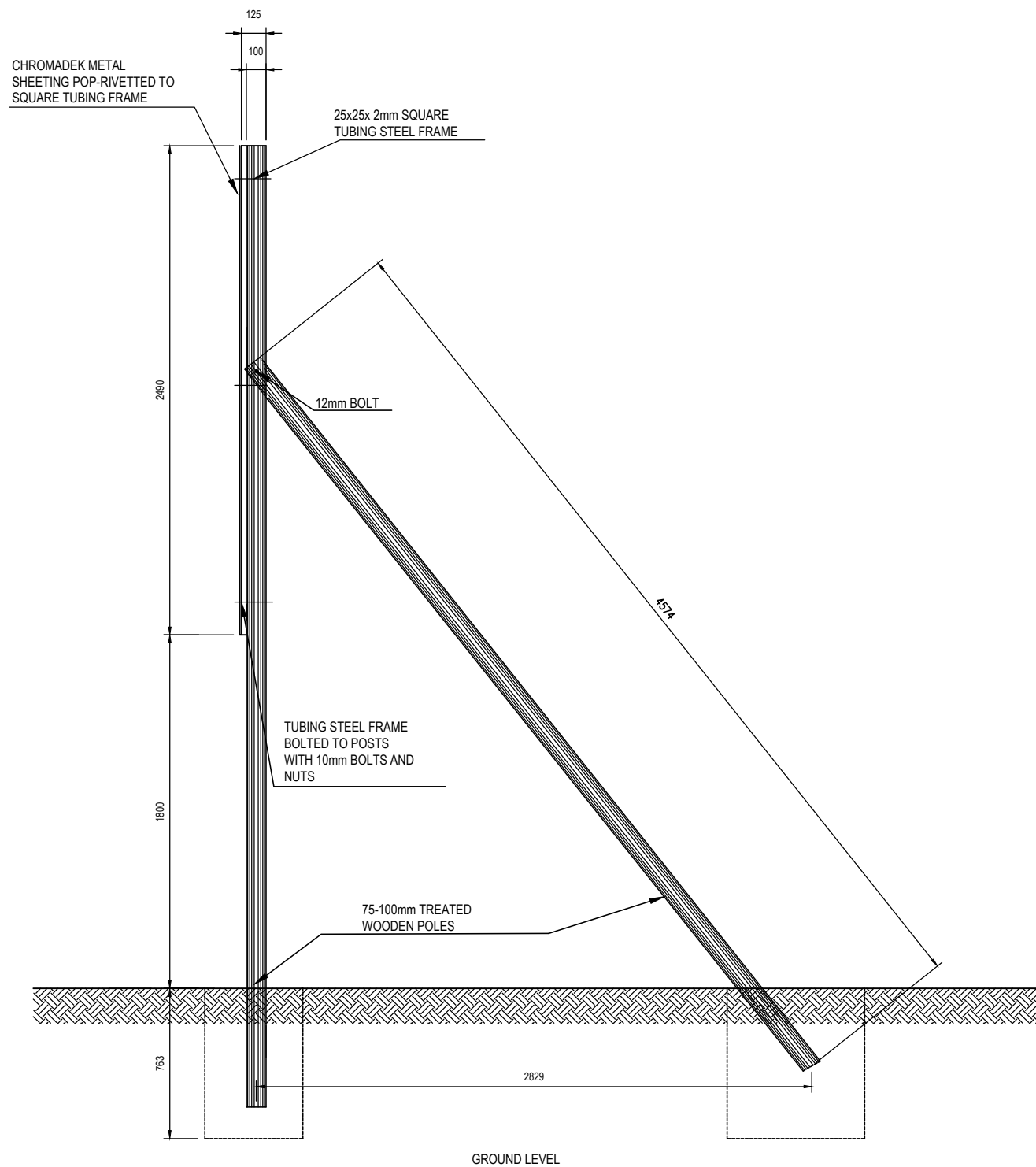
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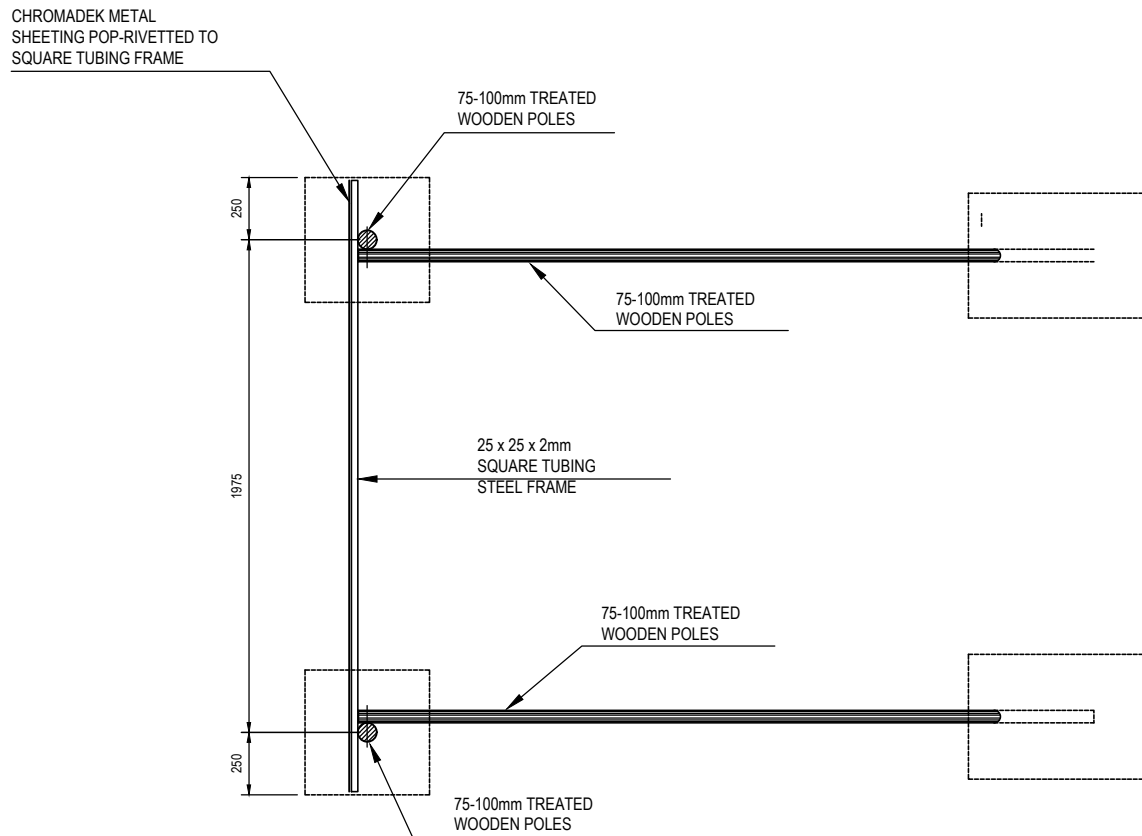
FRONT ELEVATION



BACK ELEVATION



SIDE ELEVATION



PLAN

			FOR INTERNAL USE:		 MFS MOSEBO PROJECTS (PTY) LTD 90 PONY STREET TYGERVALLEY OFFICE PARK PRETORIA 0081  mosebo Engineers Project Managers Technical Advisors	MAFUBE LOCAL MUNICIPALITY PROVISION OF SANITATION AND TO STRUCTURE IN MAMELLO EXTENSION 09 (800 HOUSEHOLDS)	DRAWING DESCRIPTION NAME BOARD SUPPORTING STRUCTURE	APPROVED BY		SCALE BAR		SHEET OF SHEETS 02 OF 02	
B	31/10/2025	TENDER DRAWINGS	Designed By:	L.M				for HEAD OF DEPARTMENT DATE		DRAWING SCALE : NOT TO SCALE		DRAWING NUMBER : MSB /MAF /112	
A	24/10/2025	DETAILED DESIGN DRAWINGS	Checked By:	D.U									
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