

INSTALLATION OF BULK AND ZONAL WATER METERS IN THE MAQUASSI HILLS LOCAL MUNICIPALITY

TENDER DRAWINGS VOLUME 2

CONTRACT NUMBER: MHLM/WSIG/06/2023/24

AUGUST 2023

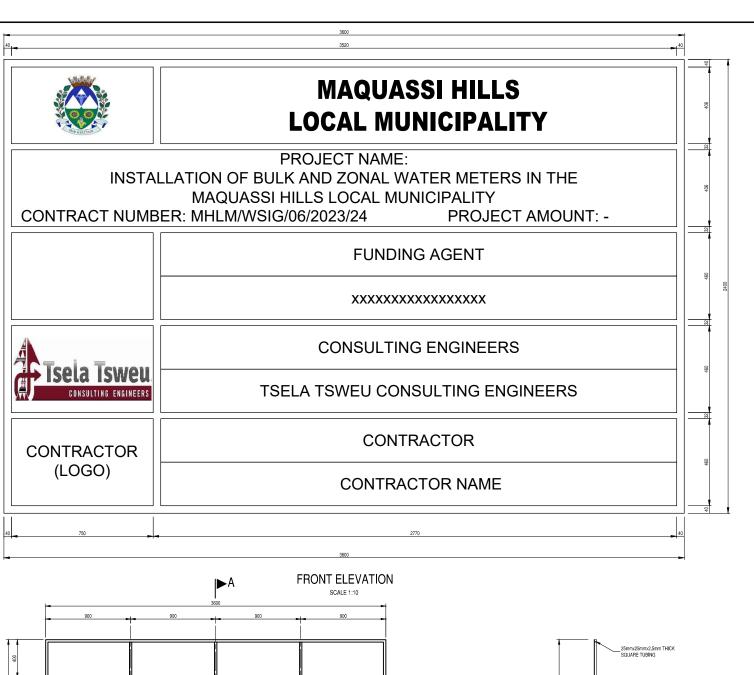


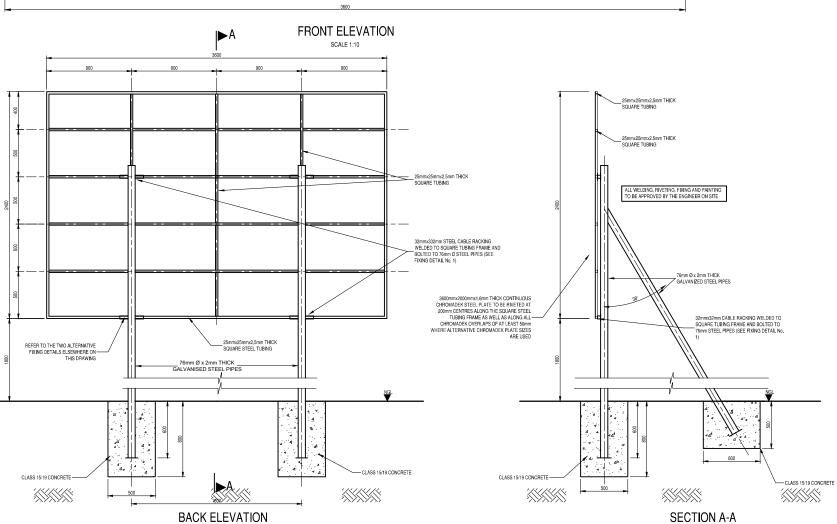
VERSION	DRAWING NUMBER	DRAWING DESCRIPTION
1.0	2023-06/G/A/001	PROJECT DRAWING INDEX
1.0	2023-06/G/D/001	PROJECT NAME BOARD
1.0	2023-06/W/A/001	TYPICAL DETAILS
1.0	2023-06/W/D/001	WATER METER INSTALLATION LAYOUT & DETAILS FOR 50ND & 80ND WATER METER INSTALLATION ON 75mmØ & 110mmØ WATER MAIN
1.0	2023-06/W/D/002	WATER METER INSTALLATION LAYOUT & DETAILS FOR 100ND & 150ND WATER METER INSTALLATION ON 160mmØ & 200mmØ WATER MAIN
1.0	2023-06/W/D/003	WATER METER INSTALLATION LAYOUT & DETAILS FOR 200ND & 250ND WATER METER INSTALLATION ON 250mmØ TO 350mmØ WATER MAIN
1.0	2023-06/W/L/001	WATER METER INSTALLATIONS LOCALITY MAP
1.0	2023-06/W/P/001	WATER METER INSTALLATIONS WOLMARANSSTAD LAYOUT
1.0	2023-06/W/P/001A	WATER METER INSTALLATIONS WOLMARANSSTAD LAYOUT ZONE 1
1.0	2023-06/W/P/001A-1	WATER METER INSTALLATIONS WOLMARANSSTAD LAYOUT ZONE 1 WATER METER POSITIONS
1.0	2023-06/W/P/001B	WATER METER INSTALLATIONS WOLMARANSSTAD LAYOUT ZONE 2 & 3
1.0	2023-06/W/P/001B-1	WATER METER INSTALLATIONS WOLMARANSSTAD LAYOUT ZONE 2 & 3 WATER METER POSITIONS
1.0	2023-06/W/P/001C	WATER METER INSTALLATIONS WOLMARANSSTAD LAYOUT ZONE 4, 5 & 6
1.0	2023-06/W/P/001C-1	WATER METER INSTALLATIONS WOLMARANSSTAD LAYOUT ZONE 4, 5 & 6 WATER METER POSITIONS
1.0	2023-06/W/P/002	WATER METER INSTALLATIONS MAKWASSIE LAYOUT
1.0	2023-06/W/P/002A	WATER METER INSTALLATIONS MAKWASSIE LAYOUT ZONE 7
1.0	2023-06/W/P/002A-1	WATER METER INSTALLATIONS MAKWASSIE LAYOUT ZONE 7 WATER METER POSITIONS
1.0	2023-06/W/P/002B	WATER METER INSTALLATIONS MAKWASSIE LAYOUT ZONE 8, 9 & 10
1.0	2023-06/W/P/002B-1	WATER METER INSTALLATIONS MAKWASSIE LAYOUT ZONE 8, 9 & 10 WATER METER POSITIONS
1.0	2023-06/W/P/003	WATER METER INSTALLATIONS LEEUDORINGSTAD LAYOUT
1.0	2023-06/W/P/003A	WATER METER INSTALLATIONS LEEUDORINGSTAD LAYOUT ZONE 11 & 12
1.0	2023-06/W/P/003A-1	WATER METER INSTALLATIONS LEEUDORINGSTAD LAYOUT ZONE 11 & 12 WATER METER POSITIONS
1.0	2023-06/W/P/003B	WATER METER INSTALLATIONS LEEUDORINGSTAD LAYOUT ZONE 13 & 14
1.0	2023-06/W/P/003B-1	WATER METER INSTALLATIONS LEEUDORINGSTAD LAYOUT ZONE 13 & 14 WATER METER POSITIONS
1.0	2023-06/W/P/004	WATER METER INSTALLATIONS WITPOORT LAYOUT
1.0	2023-06/W/P/004A	WATER METER INSTALLATIONS WITPOORT LAYOUT ZONE 15, 16 & 17
1.0	2023-06/W/P/004A-1	WATER METER INSTALLATIONS WITPOORT LAYOUT ZONE 15, 16 WATER METER POSITIONS

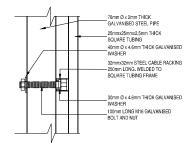
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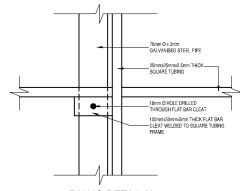
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FIXING DETAIL No. 1



FIXING DETAIL No. 2 ALTERNATIVE FIXING DETAILS

REVISIONS				
No.	DATE	BY	DESCRIPTION	

NOTES

- LETTERS TO BE CAPITALISED.

REFERENCE DRAWINGS			
PLAN Nr.	DESCRIPTION		





MAQUASSI HILLS LOCAL MUNICIPALITY

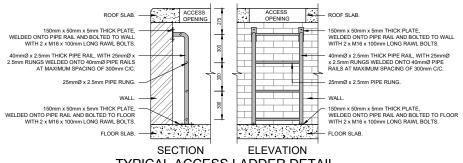
INSTALLATION OF BULK AND ZONAL WATER METERS IN THE MAQUASSI HILLS LOCAL MUNICIPALITY

PROJECT NAME BOARD

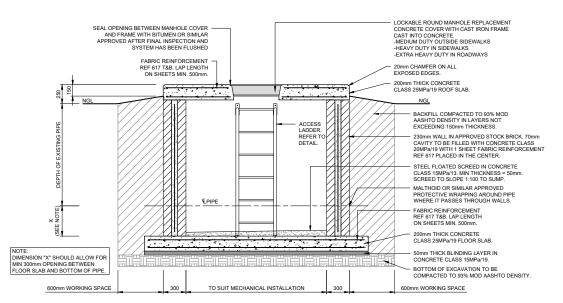
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-		J BATEMAN	AUG 2023

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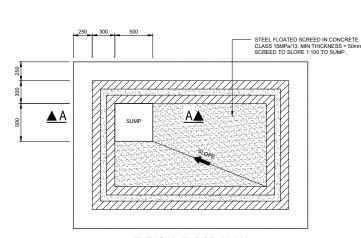
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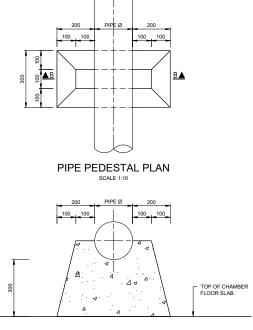
TYPICAL ACCESS LADDER DETAIL



TYPICAL SECTION



TYPICAL FLOOR PLAN



SECTION B-B PIPE PEDESTAL SCALE 1:10

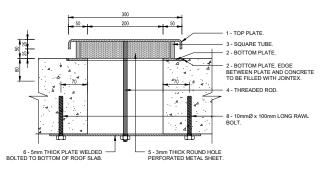
TOP UNIT COMPONENTS: 1. TOP PLATE - 300mm x 300mm x 5mm THICK WITH EDGES BENT 90° DOWNWARD FOR 25mm.

- BOTTOM PLATE 300mm x 300mm x 5mm THICK WITH 200mm x 200mm OPENING CUT OUT IN THE MIDDLE.
- SQUARE TUBING 8 x 20mm x 20mm x 3mm x 45mm LONG SQUARE TUBES PLACED 25mm FROM, ONE ON EACH CORNER AND ONE IN THE CENTER OF EACH EDGE OF TOP AND BOTTOM PLATES. WELDED ONTO TOP PLATE AND BOTTOM PLATE.
- $3 \mathrm{mm}$ THICK ROUND HOLE PERFORATED METAL SHEET, FIXED TO INSIDE OF SQUARE TUBES.

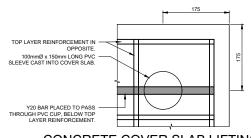
IXING BRACKET COMPONENTS:

50mm WIDE x 5 mm THICK x 400 mm LONG PLATE, BOLTED TO BOTTOM OF ROOF SLAB WITH 10mm ½ 100mm LONG RAWL BOLTS, ONE EACH SIDE. PLATE TO HAVE 12mm Ø HOLE IN THE CENTER TO ACCOMMODATE FIXING OF TOP UNIT WITH 10mm Ø THREADED ROD.

A. ALL STEELWORK TO BE HOT DIP GALVANIZED.
 B. PERFORATED PLATE TO BE ALUMINIUM.

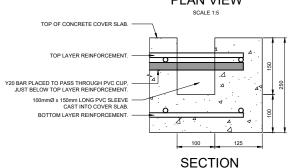


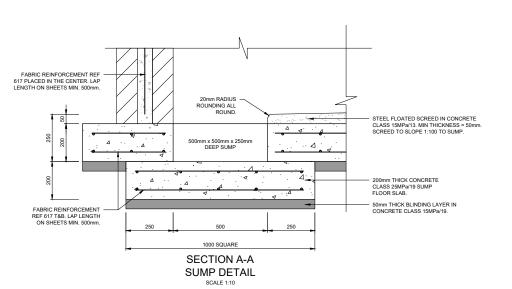
AIR BREATHER DETAIL - SECTION



CONCRETE COVER SLAB LIFTING HOOK PLAN VIEW

SCALE 1:5





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LOCAL MUNICIPALITY

INSTALLATION OF BULK AND ZONAL WATER METERS IN THE **MAQUASSI HILLS** LOCAL MUNICIPALITY

FUNDING AGENT:	
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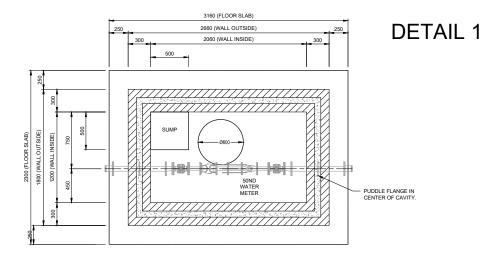
TYPICAL DETAILS

DESIGN	DATE	DRAWN	DATE
	AUG 2023	÷	AUG 2023
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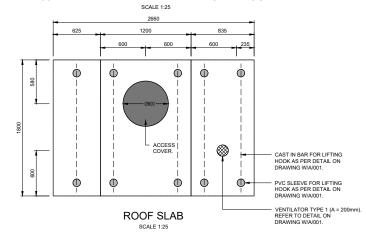
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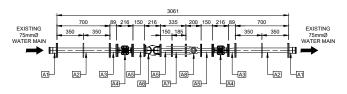
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2023-06/W/A/001



50ND WATER METER INSTALLATION LAYOUT

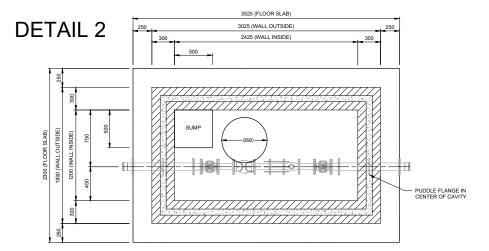




50ND WATER METER INSTALLATION PIPES & FITTINGS LAYOUT

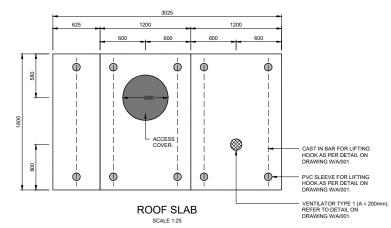
SCALE 1:25

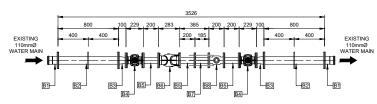
50ND BULK WATER METER INSTALLATION						
PIPE FITTING LIST						
PIPE NUMBER	DESCRIPTION	MATERIAL	QUANTITY			
A1	COUPLING TO SUIT CONNECTION ONTO EXISTING 75mm DIAMETER WATER MAIN AND 65mm DIAMETER STEEL PIPE.	STANDARD	2			
A2	65mm DIAMETER FLANGED STRAIGHT PIPE WITH PUDDLE FLANGE.	SANS 62	2			
А3	65mm - 50mm FLANGED ECCENTRIC REDUCER.	SCHDULE 40	2			
A4	50ND PN16 RESILIENT SEATED GATE VALVE TO SANS 664.	DUCTILE IRON - EPOXY PAINTED	2			
A5	50mm DIAMETER FLANGED STRAIGHT PIPE.	SANS 62	3			
A6	50ND PN16 Y-PATTERN STRAINER.	DUCTILE IRON - EPOXY PAINTED	1			
A7	50ND PN16 DISMANTLING JOINT.	STANDARD	1			
A8	50ND PN16 WATER METER.	CAST IRON - EPOXY PAINTED	1			



80ND WATER METER INSTALLATION LAYOUT

SCALE 1





80ND WATER METER INSTALLATION PIPES & FITTINGS LAYOUT

SCALE 1:25

	80ND BULK WATER METER INSTA	LLATION				
PIPE FITTING LIST						
PIPE NUMBER	DESCRIPTION	MATERIAL	QUANTITY			
B1	COUPLING TO SUIT CONNECTION ONTO EXISTING 110mm DIAMETER WATER MAIN AND 100mm DIAMETER STEEL PIPE.	STANDARD	2			
B2	100mm DIAMETER FLANGED STRAIGHT PIPE WITH PUDDLE FLANGE.	SANS 62	2			
В3	100mm - 80mm FLANGED ECCENTRIC REDUCER.	SCHDULE 40	2			
B4	80ND PN16 RESILIENT SEATED GATE VALVE TO SANS 664.	DUCTILE IRON - EPOXY PAINTED	2			
В7	80mm DIAMETER FLANGED STRAIGHT PIPE.	SANS 62	3			
В6	80ND PN16 Y-PATTERN STRAINER.	DUCTILE IRON - EPOXY PAINTED	1			
В7	80ND PN16 DISMANTLING JOINT.	STANDARD	1			
B8	80ND PN16 WATER METER.	CAST IRON - EPOXY PAINTED	1			

NOTE: 1. FOR TYPICAL DETAILS REFER TO DRAWING 2023-06/W/A/001.

REVISIONS

No. DATE BY DESCRIPTION

MECHANICAL NOTES:

- ALL FLANGES TO BE DRILLED SABS 1123-1977 (1600/3)
- ALL VALVES, STRAINERS AND WATER METERS TO BE APPROVED BY ENGINEER IN WRITING.
- THE LENGTH OF PIPES AND FITTINGS ARE APPROXIMATE
 ONLY ACTUAL LENGTH TO BE DETERMINED BY CONTRACTO
 ONLY AFTER APPROVAL OF VALVES BY ENGINEER.
- NO ALLOWANCE HAS BEEN MADE IN PIPE AND FITTING DIMENSIONS FOR PACKINGS, GASKETS AND GAPS BETWEEN PIPEWORK - PROVISION FOR THESE TO BE MADE BY SUPPLIE
- FLANGE HOLES TO BE DRILLED TO ALLOW EXACT ALIGNMEN HORIZONTALLY AND VERTICALLY, AS DETAILED ON THE DRAWINGS, OF ALL PIPEWORK AND EQUIPMENT.
- i. ALL WELDING TO BE FULL STRENGTH, FULL PENETRATION.
- 7. ALL PIPES, ELBOWS, TEE PIECES AND REDUCERS TO BE
- ALL PIPEWORK PASSING THROUGH BRICKWORK TO BE
 MALTHOID WRAPPED (4 LAYERS MIN.) AND SEALED AROUND
 PIPE WITH POLYSULPHIDE SEALANT ON BOTH FACES OF
 BRICKWORK
- ALL BOLTS, NUTS AND GASKETS NECESSARY FOR THE PROPEI INSTALLATION OF THE EQUIPMENT, TO BE SUPPLIED AS PART OF THE MECHANICAL EQUIPMENT.
- A PEDESTAL IN CONCRETE CLASS 25MPa/19 TO BE CAST EITHER SIDE OF THE WATER. REFER TO PEDESTAL DETAIL ON DRAWING W/A/001.

REFERENCE DRAWINGS
PLAN Nr.

APPROVED:	
ENGINEER:	DATE:
APPROVED:	

PRINT ISSUED



Mobile: + 27 (0)83 265 1524 329 Stateway Chambers, Stateway, Welkom, PO Box 2600.Welkom, 9460. South Africa



MAQUASSI HILLS
LOCAL MUNICIPALITY

PROJ

INSTALLATION OF
BULK AND ZONAL WATER METERS
IN THE
MAQUASSI HILLS
LOCAL MUNICIPALITY

FUNDING AGENT:
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DRAWING TITL

WATER METER INSTALLATION LAYOUT & DETAILS FOR 50ND & 80ND WATER METER INSTALLATION ON 75mmØ & 110mmØ WATER MAIN

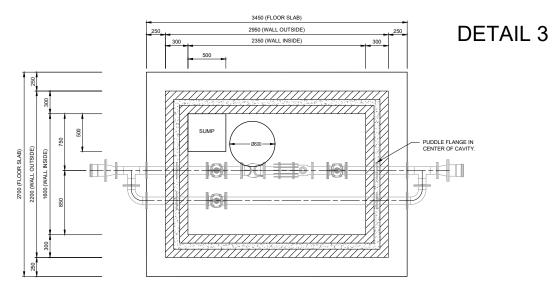
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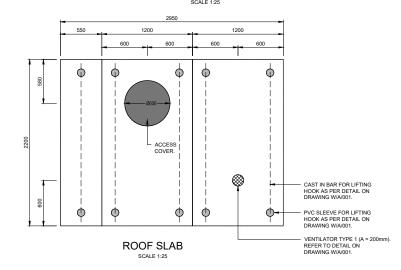
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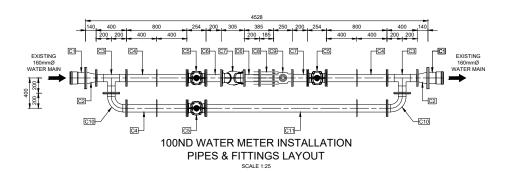
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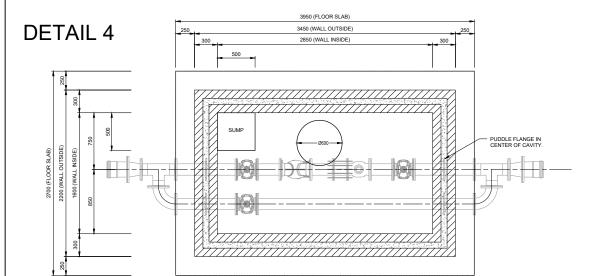


100ND WATER METER INSTALLATION LAYOUT





	100ND BULK WATER METER INSTA	ALLATION	
	PIPE FITTING LIST		
PIPE NUMBER	DESCRIPTION	MATERIAL	QUANTITY
C1	COUPLING TO SUIT CONNECTION ONTO EXISTING 160mm DIAMETER WATER MAIN AND 150mm DIAMETER STEEL PIPE.	STANDARD	2
C2	150mm - 100mm FLANGED ECCENTRIC REDUCER.	SCHDULE 40	2
СЗ	100mm DIAMETER TEE PIECE.	SCHDULE 40	2
C4	100mm DIAMETER FLANGED STRAIGHT PIPE WITH PUDDLE FLANGE.	SANS 62	3
C5	100ND PN16 RESILIENT SEATED GATE VALVE TO SANS 664.	DUCTILE IRON - EPOXY PAINTED	3
C6	100mm DIAMETER FLANGED STRAIGHT PIPE.	SANS 62	3
C7	100ND PN16 Y-PATTERN STRAINER.	DUCTILE IRON - EPOXY PAINTED	1
C8	100ND PN16 DISMANTLING JOINT.	STANDARD	1
C9	100ND PN16 WATER METER.	CAST IRON - EPOXY PAINTED	1
C10	100mm DIAMETER FLANGED 90 DEGREE ELBOW.	SCHDULE 40	2
C11	100mm DIAMETER FLANGED STRAIGHT PIPE WITH PUDDLE FLANGE.	SANS 62	1



150ND WATER METER INSTALLATION LAYOUT SCALE 125

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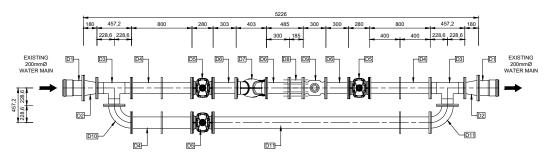
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150ND WATER METER INSTALLATION PIPES & FITTINGS LAYOUT

SCALE 1:25

	150ND BULK WATER METER INSTA	ALLATION	
	PIPE FITTING LIST		
PIPE NUMBER	DESCRIPTION	MATERIAL	QUANTITY
D1	COUPLING TO SUIT CONNECTION ONTO EXISTING 200mm DIAMETER WATER MAIN AND 200mm DIAMETER STEEL PIPE.	STANDARD	2
D2	200mm - 150mm FLANGED ECCENTRIC REDUCER.	SANS 719	2
D3	150mm DIAMETER TEE PIECE.	SCHDULE 40	2
D4	150mm DIAMETER FLANGED STRAIGHT PIPE WITH PUDDLE FLANGE.	SANS 62	3
D5	150ND PN16 RESILIENT SEATED GATE VALVE TO SANS 664.	DUCTILE IRON - EPOXY PAINTED	3
D6	150mm DIAMETER FLANGED STRAIGHT PIPE.	SANS 62	3
D7	150ND PN16 Y-PATTERN STRAINER.	DUCTILE IRON - EPOXY PAINTED	1
D8	150ND PN16 DISMANTLING JOINT.	STANDARD	1
D 9	150ND PN16 WATER METER.	CAST IRON - EPOXY PAINTED	1
D10	150mm DIAMETER FLANGED 90 DEGREE ELBOW.	SCHDULE 40	2
D11	150mm DIAMETER FLANGED STRAIGHT PIPE WITH PUDDLE FLANGE.	SANS 62	1

NOTE:
1. FOR TYPICAL DETAILS REFER TO DRAWING 2023-06/W/A/001.

REVISIONS

No. DATE BY DESCRIPTION

MECHANICAL NOTES:

- ALL FLANGES TO BE DRILLED SABS 1123-1977 (1600/3)
- ALL VALVES, STRAINERS AND WATER METERS TO BE APPROVED BY ENGINEER IN WRITING.
- THE LENGTH OF PIPES AND FITTINGS ARE APPROXIMATE
 ONLY ACTUAL LENGTH TO BE DETERMINED BY CONTRACTO
 ONLY AFTER APPROVAL OF VALVES BY ENGINEER.
- NO ALLOWANCE HAS BEEN MADE IN PIPE AND FITTING DIMENSIONS FOR PACKINGS, GASKETS AND GAPS BETWEEN PIPEWORK - PROVISION FOR THESE TO BE MADE BY SUPPLIE
- FLANGE HOLES TO BE DRILLED TO ALLOW EXACT ALIGNMENT HORIZONTALLY AND VERTICALLY, AS DETAILED ON THE DRAWINGS, OF ALL PIPEWORK AND EQUIPMENT.
- 8. ALL WELDING TO BE FULL STRENGTH, FULL PENETRATION.
- ALL PIPES, ELBOWS, TEE PIECES AND REDUCERS TO BE HOT-DIPPED GALVANISED.
- ALL PIPEWORK PASSING THROUGH BRICKWORK TO BE MALTHOID WRAPPED (4 LAYERS MIN.) AND SEALED AROUND PIPE WITH POLYSULPHIDE SEALANT ON BOTH FACES OF BRICKWORK.
- ALL BOLTS, NUTS AND GASKETS NECESSARY FOR THE PROPEI INSTALLATION OF THE EQUIPMENT, TO BE SUPPLIED AS PART OF THE MECHANICAL EQUIPMENT.
- A PEDESTAL IN CONCRETE CLASS 25MPa/19 TO BE CAST EITHER SIDE OF THE WATER. REFER TO PEDESTAL DETAIL ON DRAWING WIA/001.

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Mobile: + 27 (0)83 265 1524 329 Stateway Chambers, Stateway, Welkom, PO Box 2600.Welkom, 9460. South Africa



MAQUASSI HILLS LOCAL MUNICIPALITY

PROJ

INSTALLATION OF BULK AND ZONAL WATER METERS IN THE MAQUASSI HILLS LOCAL MUNICIPALITY

FUNDING AGENT:
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DRAWING TITL

WATER METER INSTALLATION LAYOUT & DETAILS FOR 100ND & 150ND WATER METER INSTALLATION ON 160mmØ & 200mmØ WATER MAIN

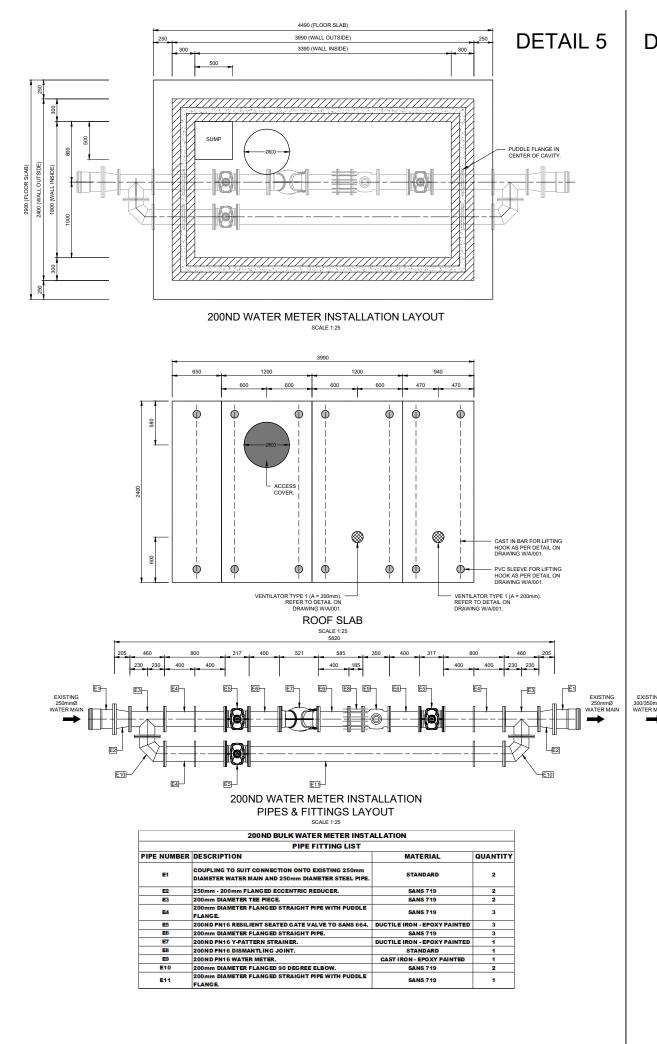
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•	•	J BATEMAN	AUG 2023

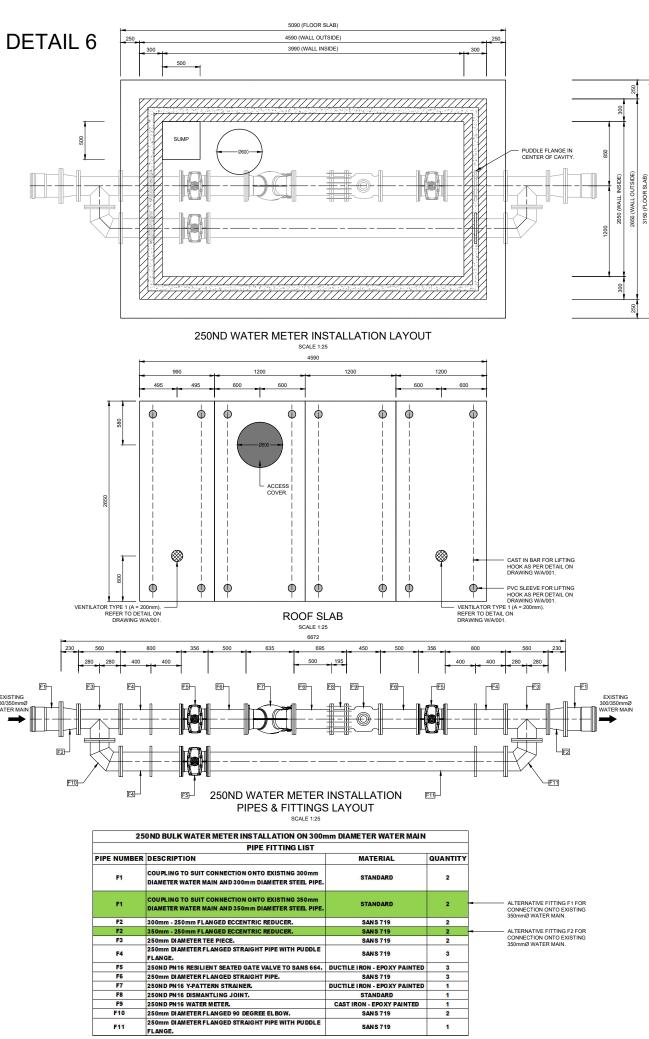
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DRAWING No.

2023-06/W/D/002

REVISION No.





NOTE:
1. FOR TYPICAL DETAILS REFER TO DRAWING 2023-06/W/A/001.

REVISIONS

No. DATE BY DESCRIPTION

MECHANICAL NOTES:

- ALL FLANGES TO BE DRILLED SABS 1123-1977 (1600/3)
- ALL VALVES, STRAINERS AND WATER METERS TO BE APPROVED BY ENGINEER IN WRITING.
- THE LENGTH OF PIPES AND FITTINGS ARE APPROXIMATE ONLY ACTUAL LENGTH TO BE DETERMINED BY CONTRACTO ONLY AFTER APPROVAL OF VALVES BY ENGINEER.
- NO ALLOWANCE HAS BEEN MADE IN PIPE AND FITTING DIMENSIONS FOR PACKINGS, GASKETS AND GAPS BETWEEN PIPEWORK - PROVISION FOR THESE TO BE MADE BY SUPPLIER
- PIEWORK PROVISION FOR THESE TO BE MADE BY SUPPLIER

 FLANGE HOLES TO BE DRILLED TO ALLOW EXACT ALIGNMENT
- HORIZONTALLY AND VERTICALLY, AS DETAILED ON THE DRAWINGS, OF ALL PIPEWORK AND EQUIPMENT.

 ALL WELDING TO BE FULL STRENGTH, FULL PENETRATION
- ALL PIPES, ELBOWS, TEE PIECES AND REDUCERS TO BE
- ALL PIPEWORK PASSING THROUGH BRICKWORK TO BE MALTHOID WRAPPED (4 LAYERS MIN.) AND SEALED AROUND PIPE WITH POLYSULPHIDE SEALANT ON BOTH FACES OF
- ALL BOLTS, NUTS AND GASKETS NECESSARY FOR THE PROPEI INSTALLATION OF THE EQUIPMENT, TO BE SUPPLIED AS PART OF THE MECHANICAL EQUIPMENT.
- A PEDESTAL IN CONCRETE CLASS 25MPa/19 TO BE CAST EITHER SIDE OF THE WATER. REFER TO PEDESTAL DETAIL OF DRAWING W/A/001.

REFERENCE DRAWINGS

APPROVED:
ENGINEER: DATE:
APPROVED:



Mobile: + 27 (0)83 265 1524 329 Stateway Chambers, Stateway, Welkom PO Roy 2600 Welkom, 9460 South Africa



MAQUASSI HILLS
LOCAL MUNICIPALITY

PROJEC

INSTALLATION OF BULK AND ZONAL WATER METERS IN THE MAQUASSI HILLS LOCAL MUNICIPALITY

ı	FUNDING AGENT:
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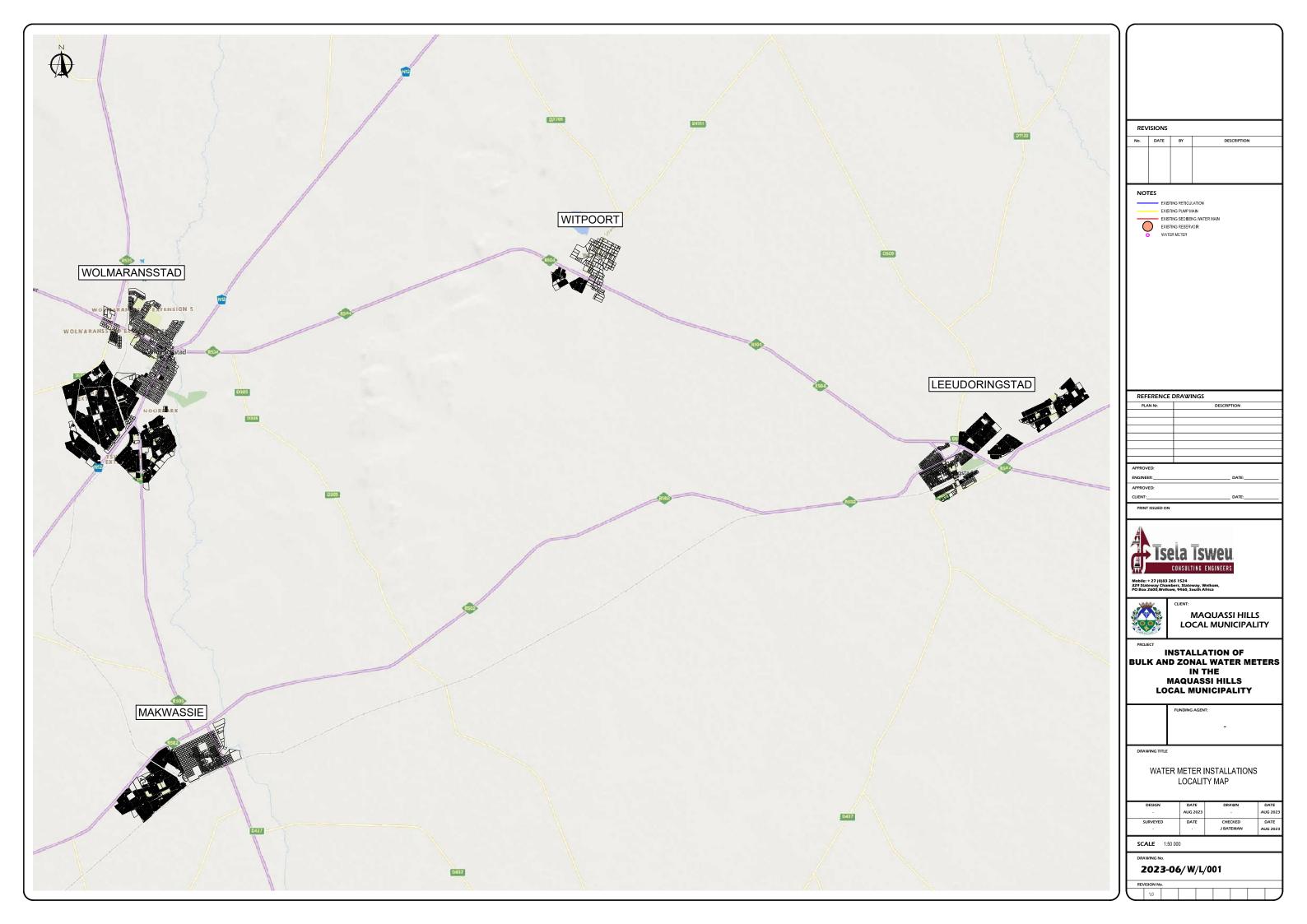
WATER METER INSTALLATION LAYOUT & DETAILS FOR 200ND & 250ND WATER METER INSTALLATION ON 250mmØ TO 350mmØ WATER MAIN

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	J BATEMAN	AUG 2023	ı
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INSTALLATION OF
BULK AND ZONAL WATER METERS
IN THE
MAQUASSI HILLS
LOCAL MUNICIPALITY

FUNDING AGENT:		
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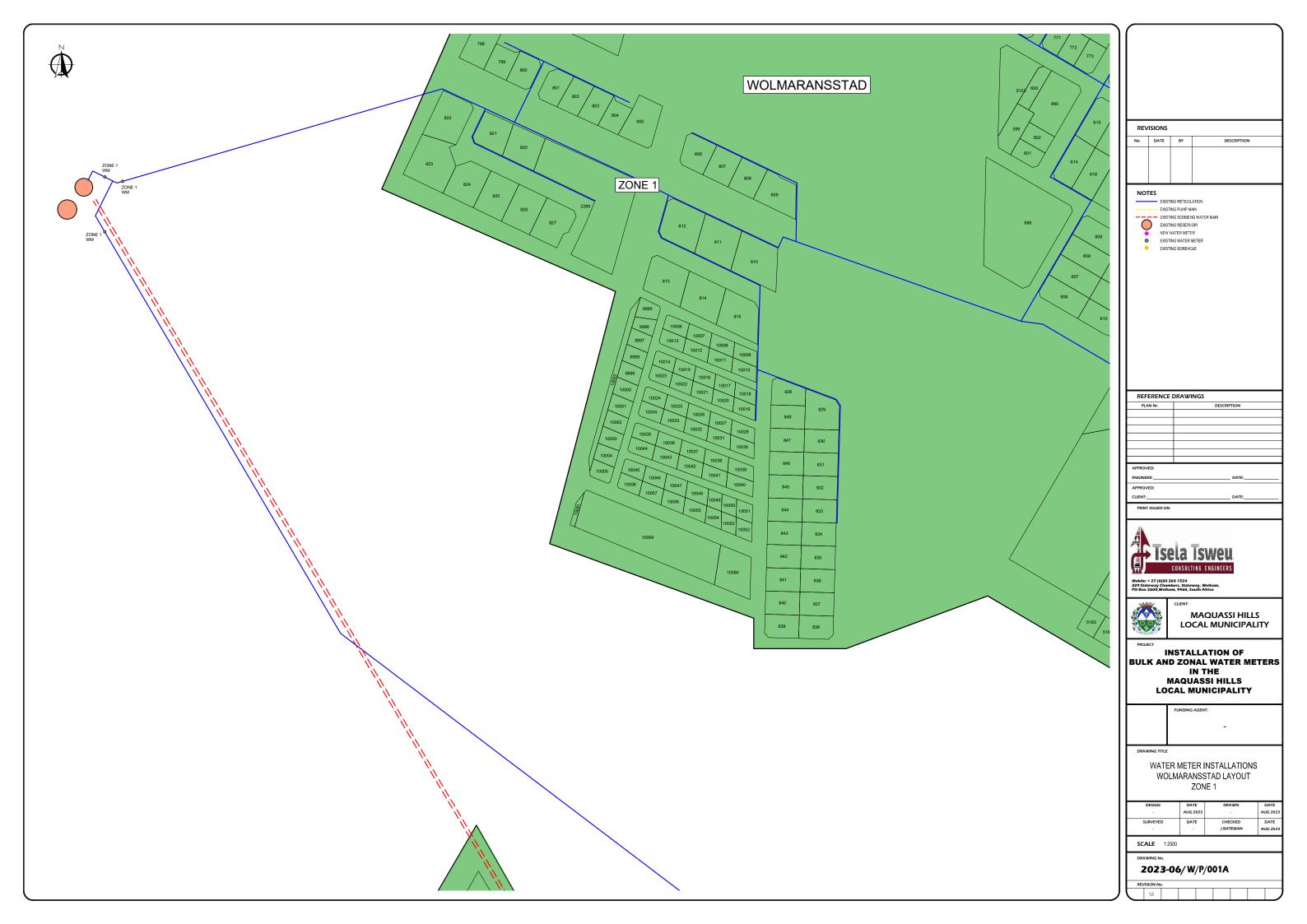
WATER METER INSTALLATIONS WOLMARANSSTAD LAYOUT

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ē		J BATEMAN	AUG 2023

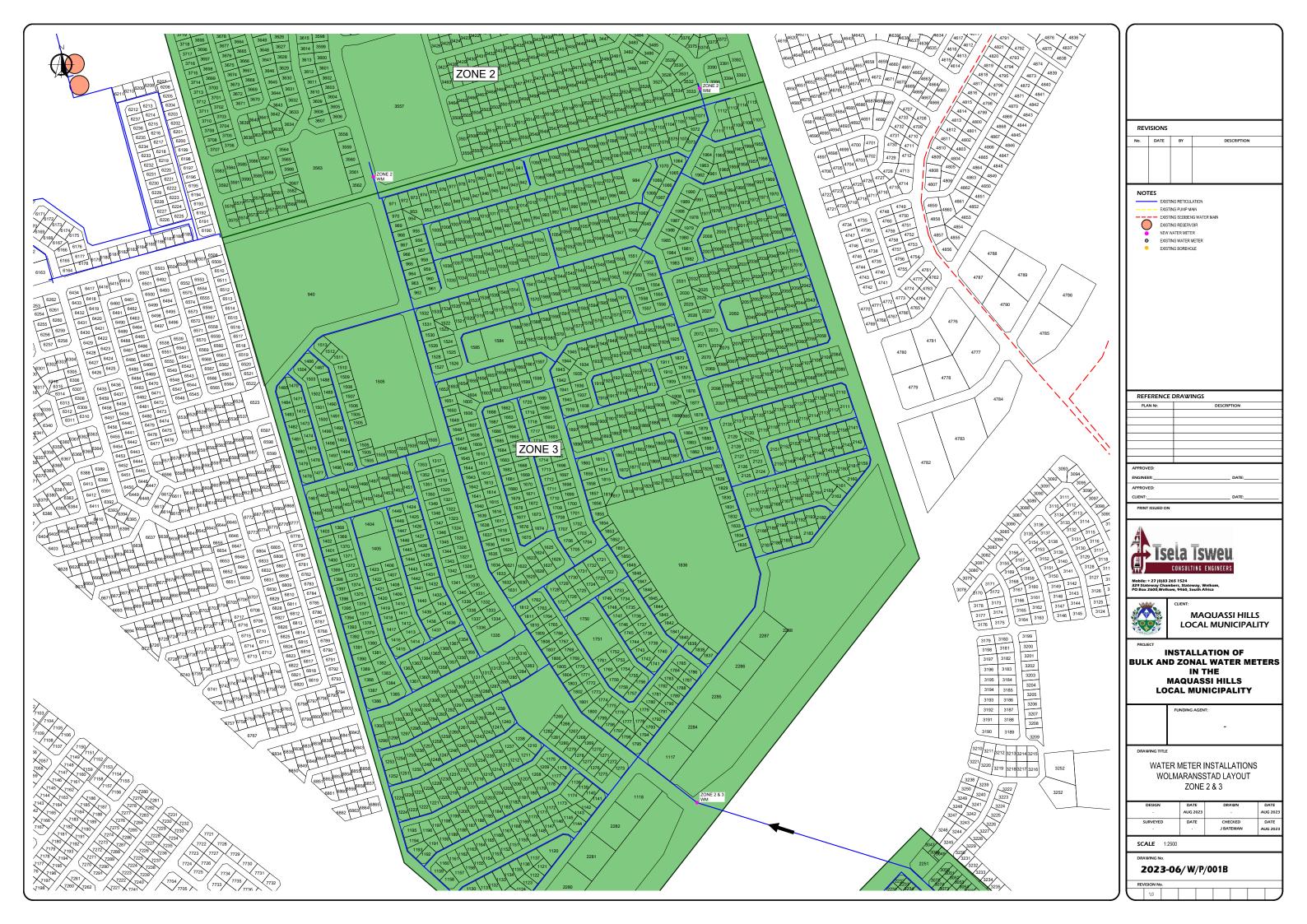
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2023-06/W/P/001













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INSTALLATION OF
BULK AND ZONAL WATER METERS
IN THE
MAQUASSI HILLS
LOCAL MUNICIPALITY

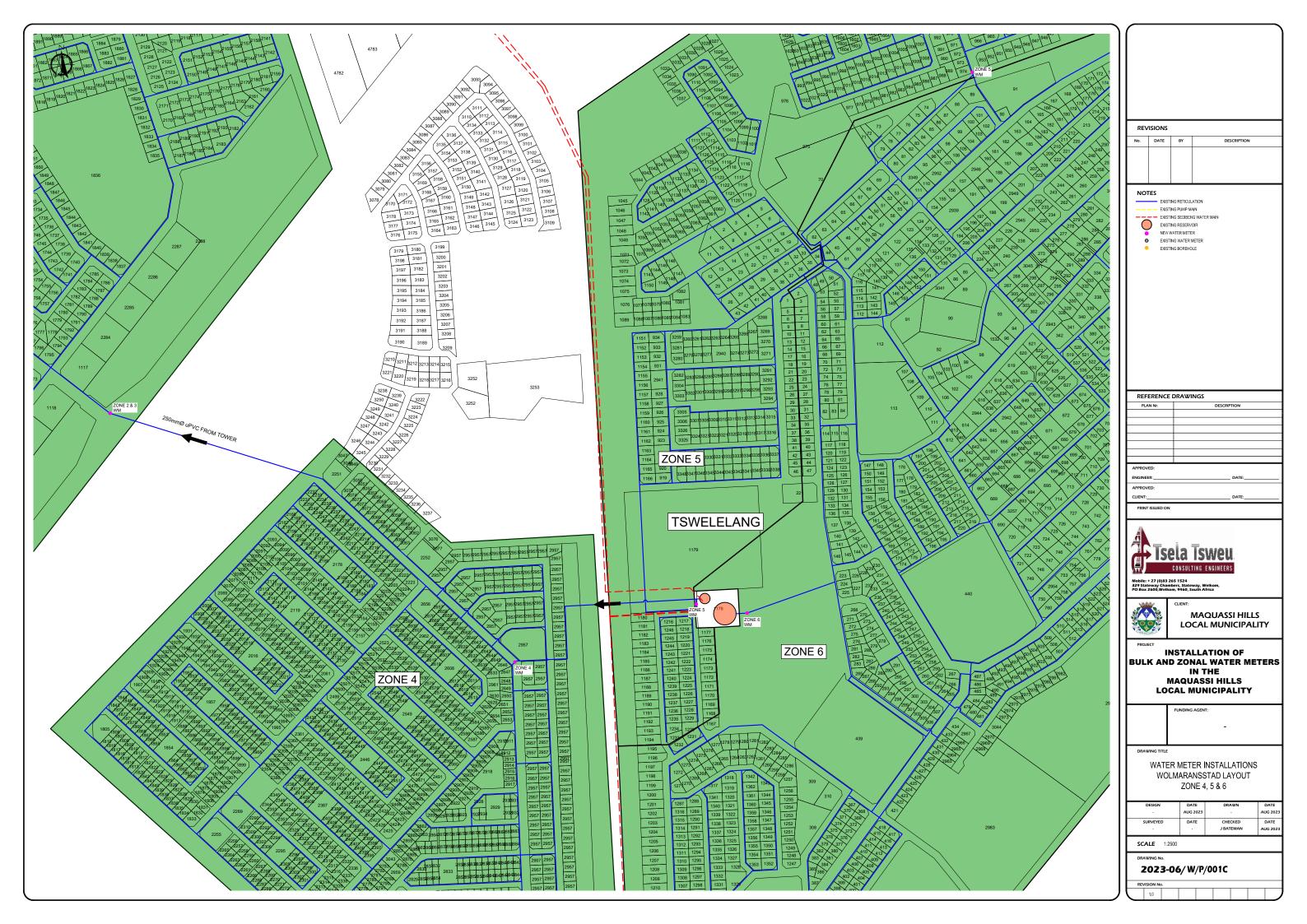
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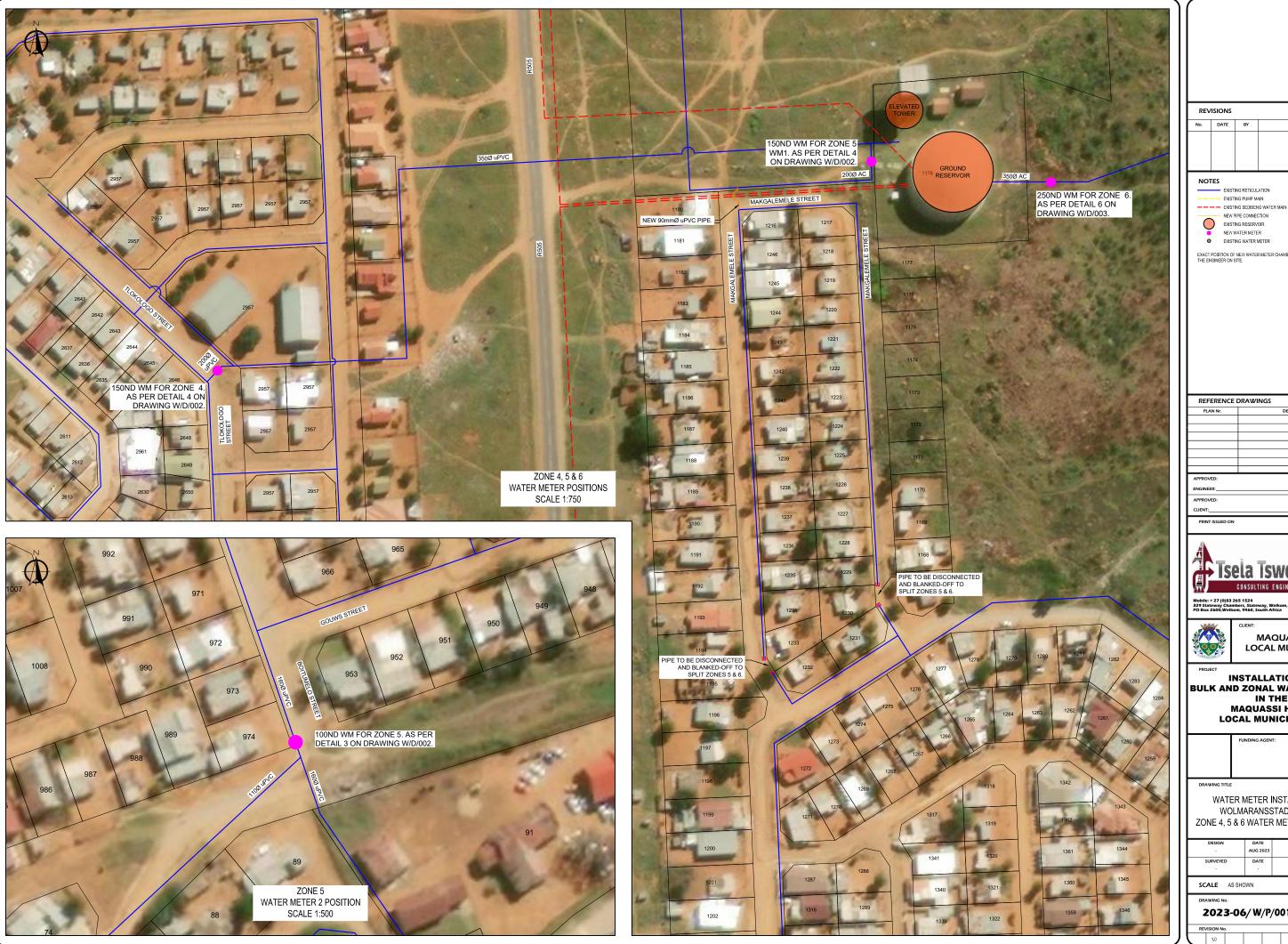
WATER METER INSTALLATIONS WOLMARANSSTAD LAYOUT ZONE 2 & 3 WATER METER POSITIONS

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÷	AUG 2023	·	AUG 2023
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ē	•	J BATEMAN	AUG 2023

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2023-06/W/P/001B-1





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EXACT POSITION OF NEW WATER METER CHAMBERS TO BE DETERMINED BY THE ENGINEER ON SITE.

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MAQUASSI HILLS LOCAL MUNICIPALITY

INSTALLATION OF BULK AND ZONAL WATER METERS MAQUASSI HILLS LOCAL MUNICIPALITY

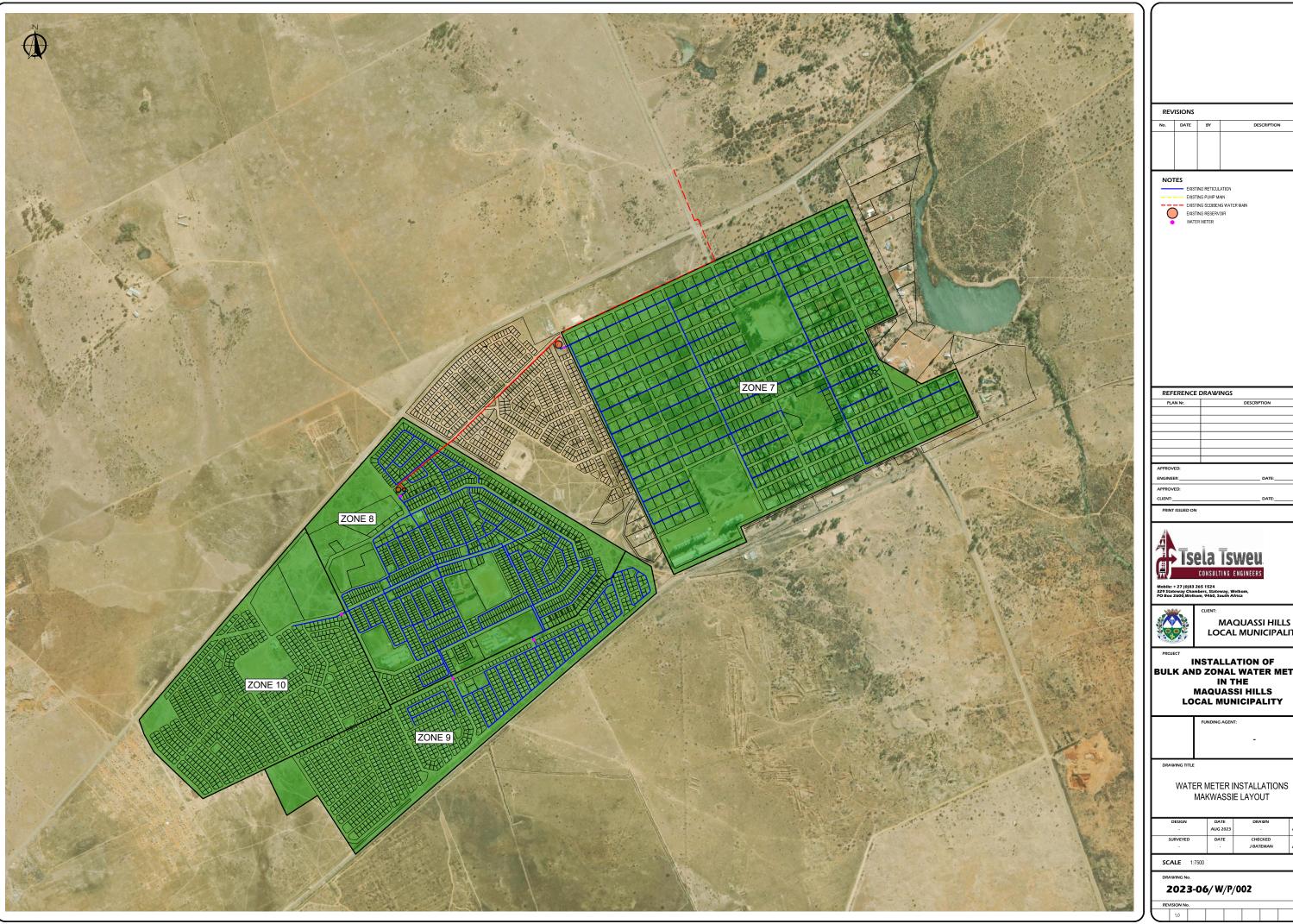
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WATER METER INSTALLATIONS WOLMARANSSTAD LAYOUT ZONE 4, 5 & 6 WATER METER POSITIONS

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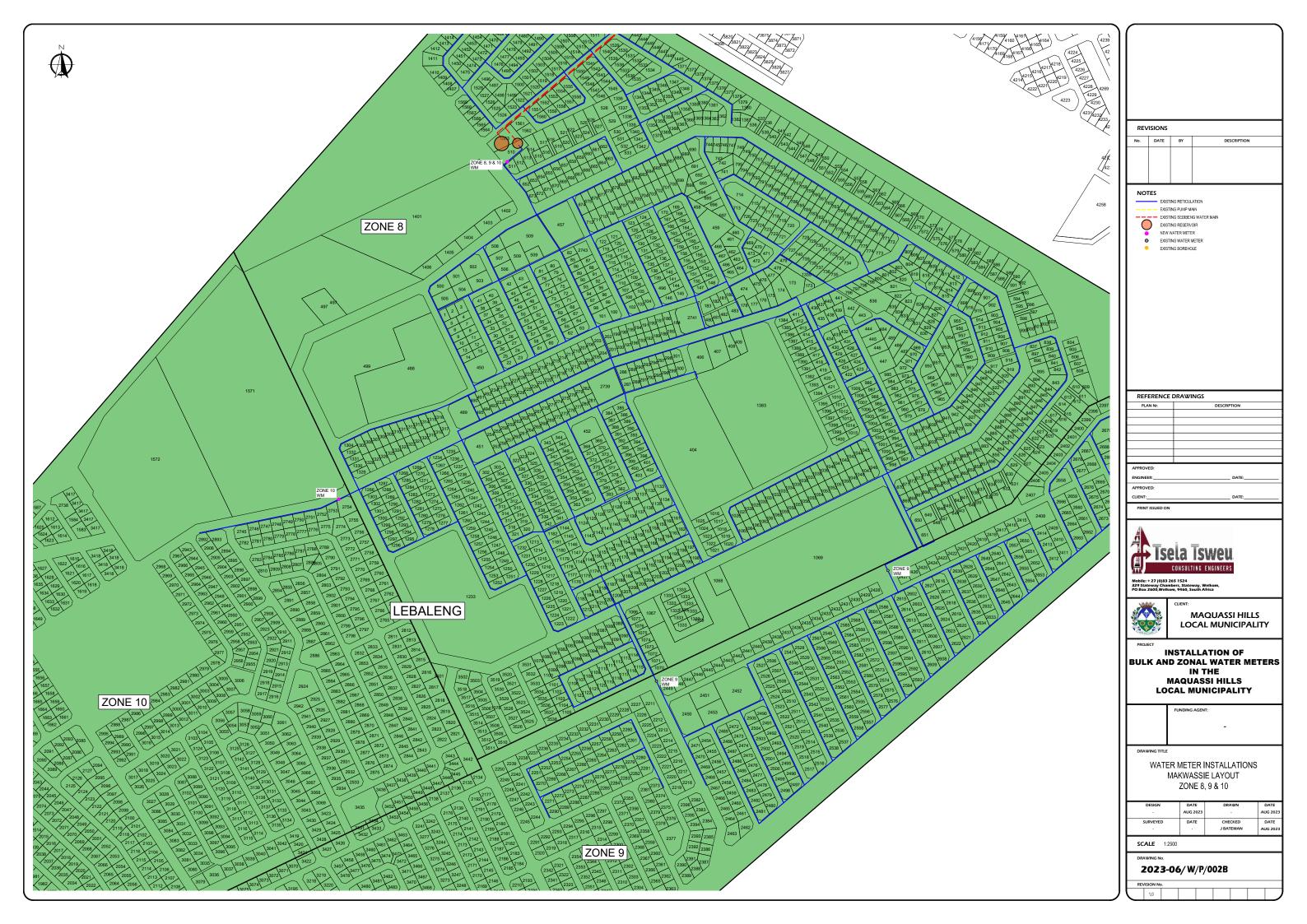
INSTALLATION OF
BULK AND ZONAL WATER METERS
IN THE
MAQUASSI HILLS
LOCAL MUNICIPALITY

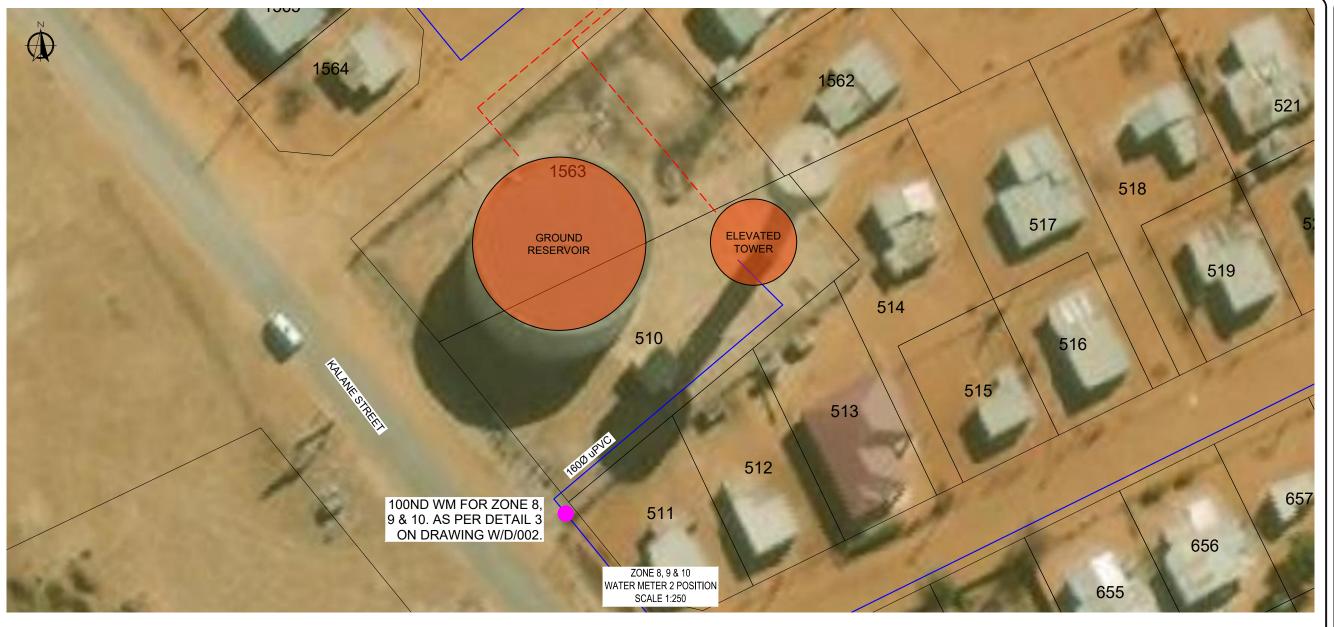
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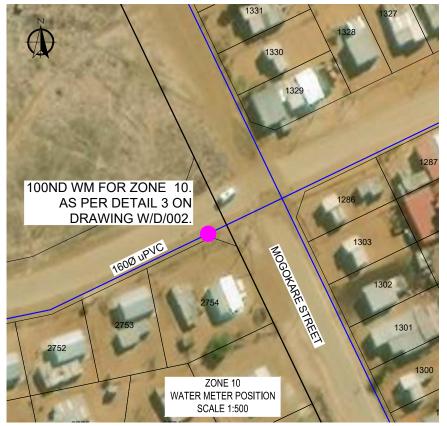




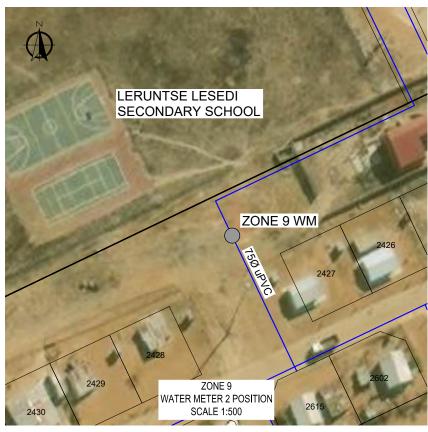
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INSTALLATION OF
BULK AND ZONAL WATER METERS
IN THE
MAQUASSI HILLS
LOCAL MUNICIPALITY

WATER METER INSTALLATIONS MAKWASSIE LAYOUT ZONE 8, 9 & 10 WATER METER POSITIONS

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MAQUASSI HILLS LOCAL MUNICIPALITY

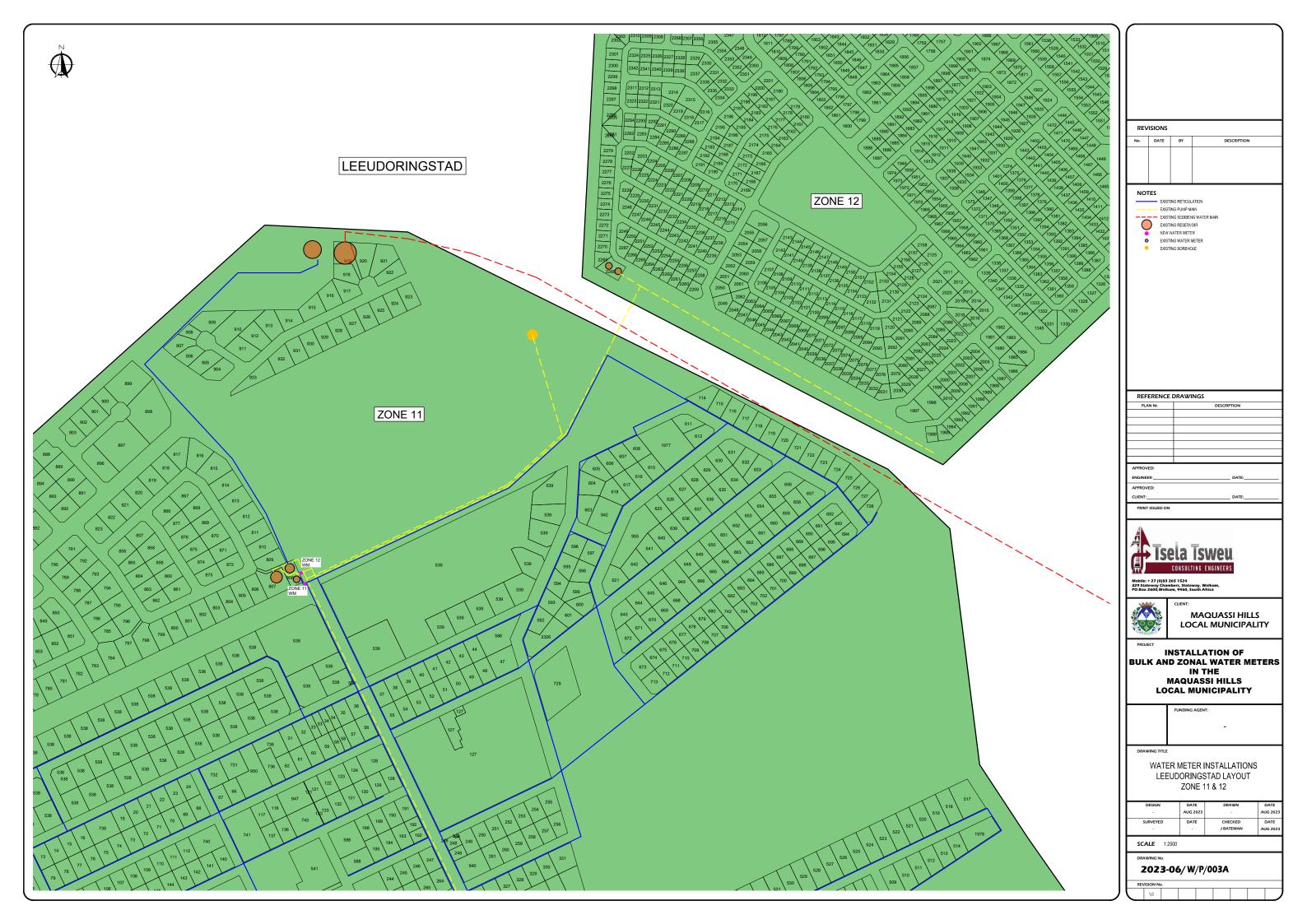
INSTALLATION OF
BULK AND ZONAL WATER METERS
IN THE
MAQUASSI HILLS
LOCAL MUNICIPALITY

WATER METER INSTALLATIONS LEEUDORINGSTAD LAYOUT

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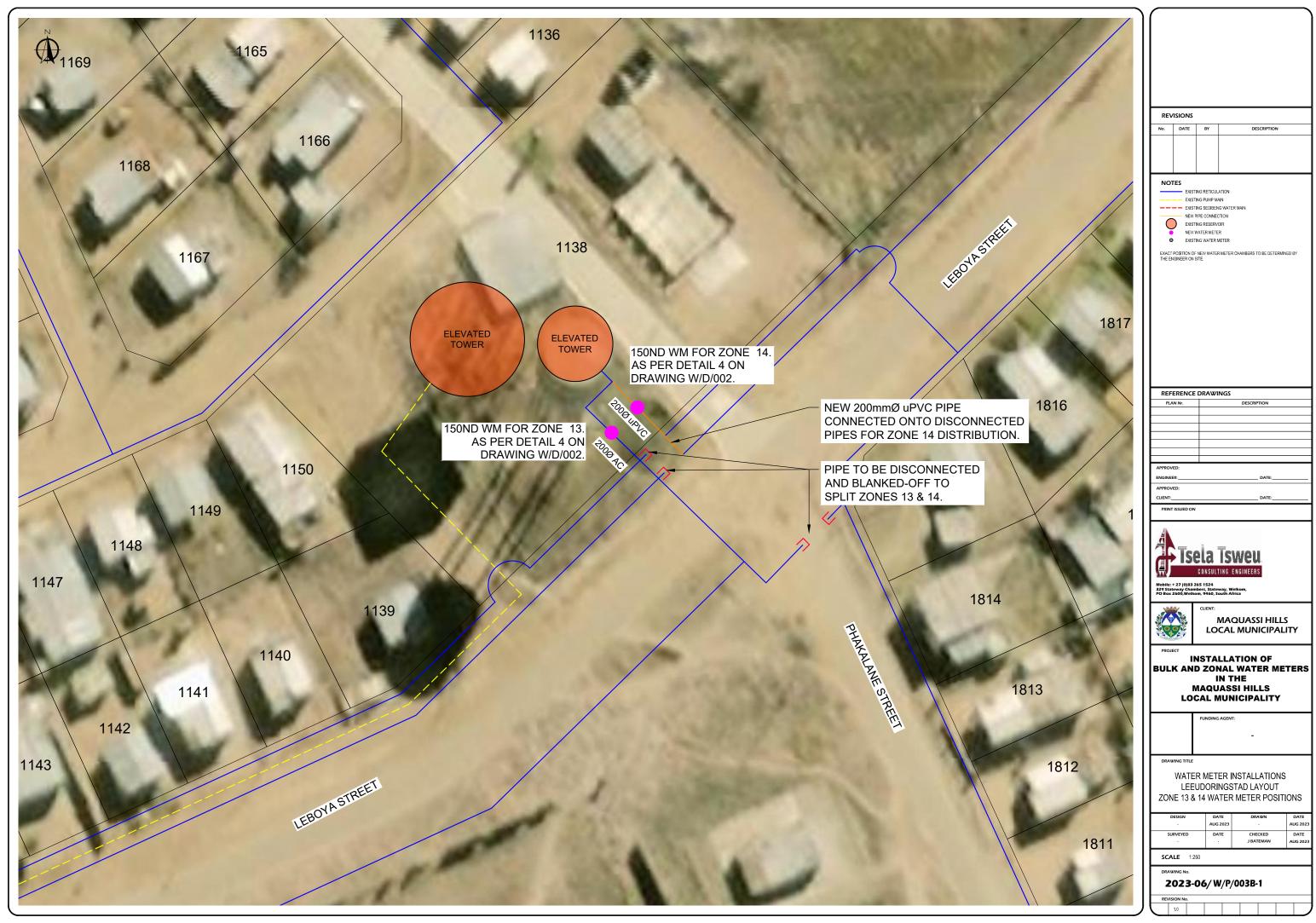
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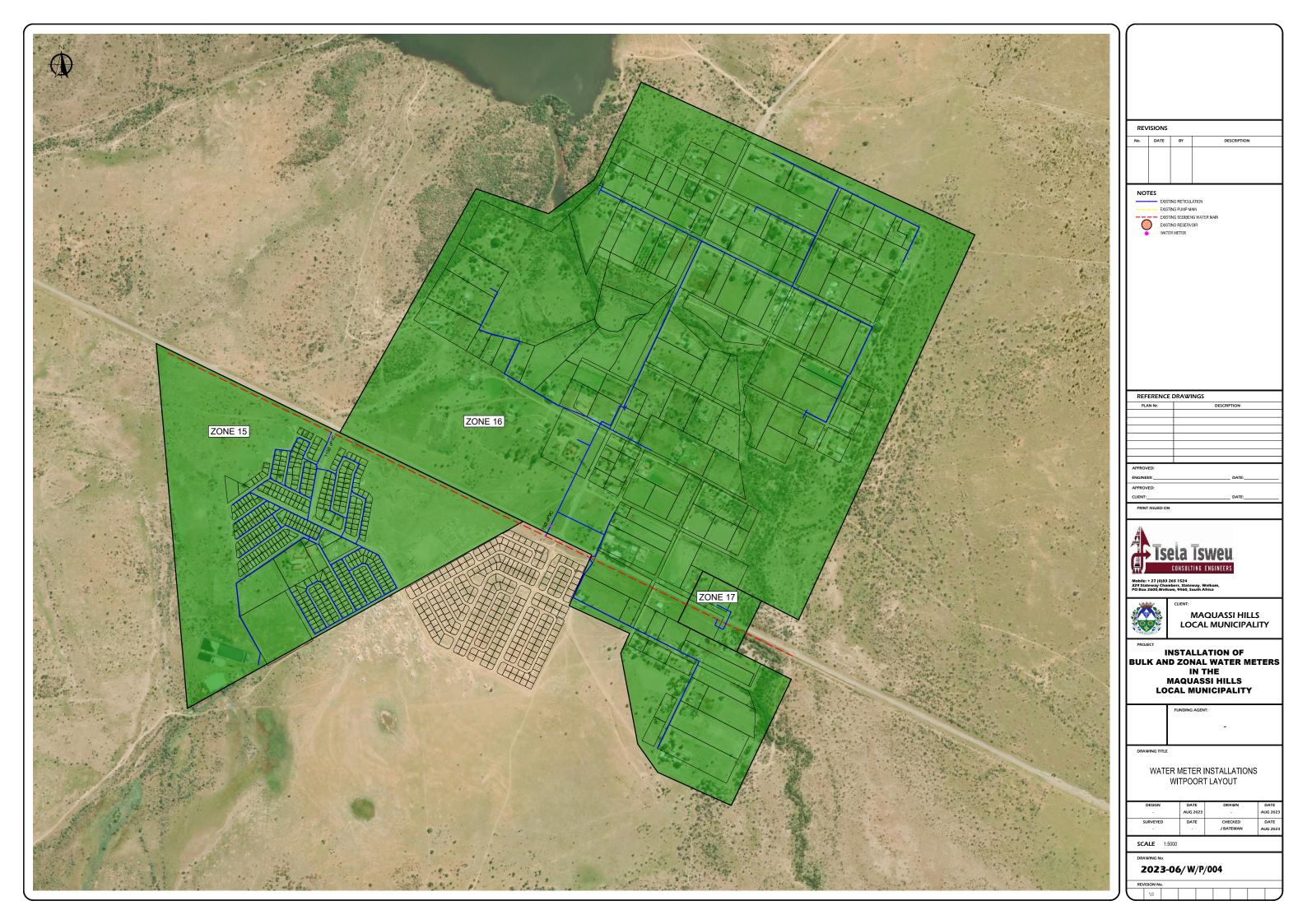


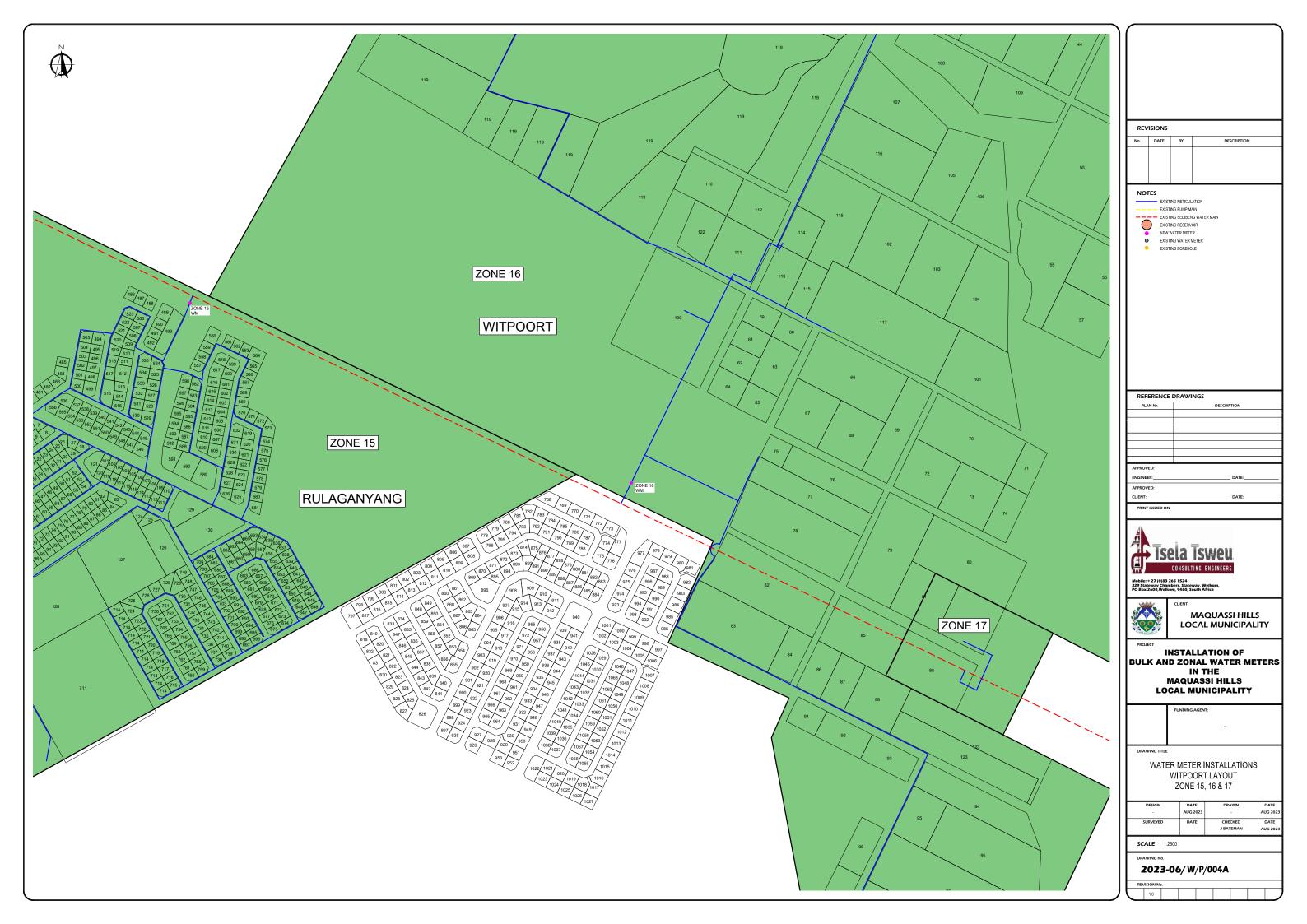




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INSTALLATION OF
BULK AND ZONAL WATER METERS
IN THE
MAQUASSI HILLS
LOCAL MUNICIPALITY

FUNDING AGENT:	
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WATER METER INSTALLATIONS WITPOORT LAYOUT ZONE 15 & 16 WATER METER POSITIONS

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