



MAQUASSI HILLS LOCAL MUNICIPALITY

UPGRADING OF TSHESANE DRIVE, MADITJANE, SEJAKE AND KADI
STREETS FROM GRAVEL TO BLOCK PAVING IN LEBALENG

TENDER DRAWINGS VOLUME 2

CONTRACT NUMBER: MHLM/SCM/MIG/06/2022/23

AUGUST 2022



VERSION	DRAWING NUMBER	DRAWING DESCRIPTION
1.0	2022-06-G/A/001	PROJECT DRAWING INDEX
1.0	2022-06-G/D/001	PROJECT NAME BOARD
1.0	2022-06-G/D/002	MIG PROJECT NAME BOARD
1.0	2022-06-G/P/001	LOCALITY MAP
1.0	2022-06-R/D/001	TYPICAL KERBING DETAILS
1.0	2022-06-R/D/002	TYPICAL PAVEMENT DESIGN DETAIL FOR 5.0m SURFACED ACCESS STREETS (PAVING BLOCK FINISH)
1.0	2022-06-R/D/003	ROAD SIGNAGE SCHEDULE AND DETAILS
1.0	2022-06-R/D/004	ROAD MARKING DETAILS
1.0	2022-06-R/D/005	POSITION OF SUPPORT BRACKETS AND INSTALLATION DETAILS OF ROAD SIGNS
1.0	2022-06-R/D/006	TYPICAL STORMWATER KERB OUTLET DETAILS
1.0	2022-06-R/P/001	PROPOSED NEW ROAD LAYOUT IN LEBALENG
1.0	2022-06-R/S/001	ROAD SIGNAGE LAYOUT

REVISIONS

No.	DATE	BY	DESCRIPTION

NOTES

REFERENCE DRAWINGS

PLAN No.	DESCRIPTION

APPROVED: _____ DATE: _____

ENGINEER: _____ DATE: _____

APPROVED: _____ DATE: _____

CLIENT: _____ DATE: _____

PRINT ISSUED ON _____



Tsela Tsweu
CONSULTING ENGINEERS

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



CLIENT
MAQUASSI HILLS LOCAL MUNICIPALITY

PROJECT
UPGRADING OF TSHESANE DRIVE, MADITJANE, SEJAKE AND KADI STREETS FROM GRAVEL TO BLOCK PAVING IN LEBALENG

IMPLEMENTING AGENT:
MAQUASSI HILLS LM

DRAWING TITLE
PROJECT DRAWING INDEX

DESIGN	DATE	DRAWN	DATE
	JUN 2022		JUN 2022
SURVEYED	DATE	CHECKED	DATE
		J.BATEMAN	JUN 2022

SCALE: **NTS**

DRAWING No.
2022-06-G/A/001

REVISION No.							
1.0							

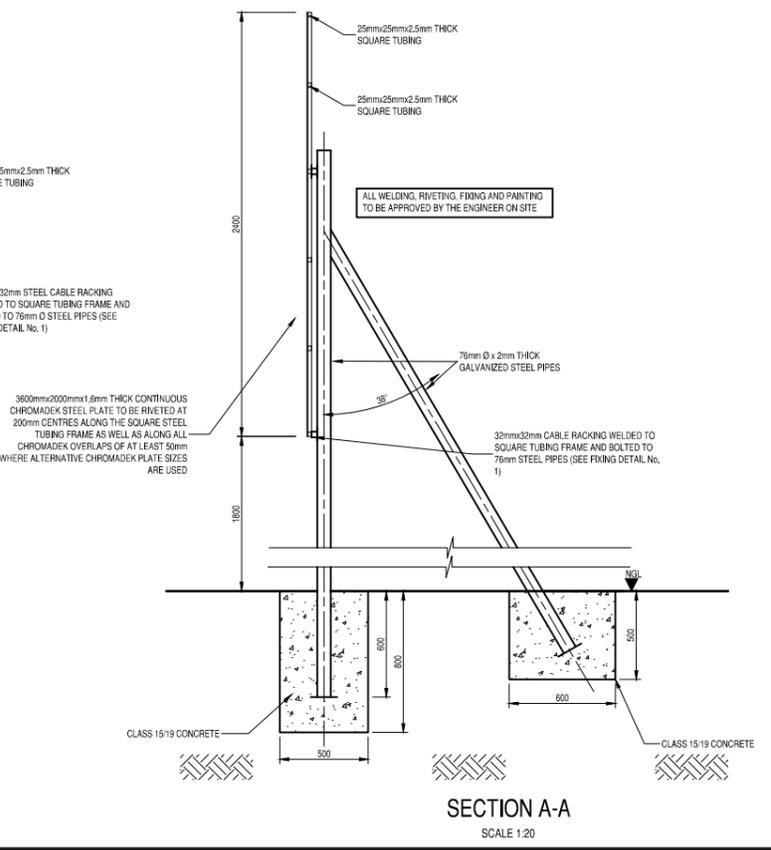
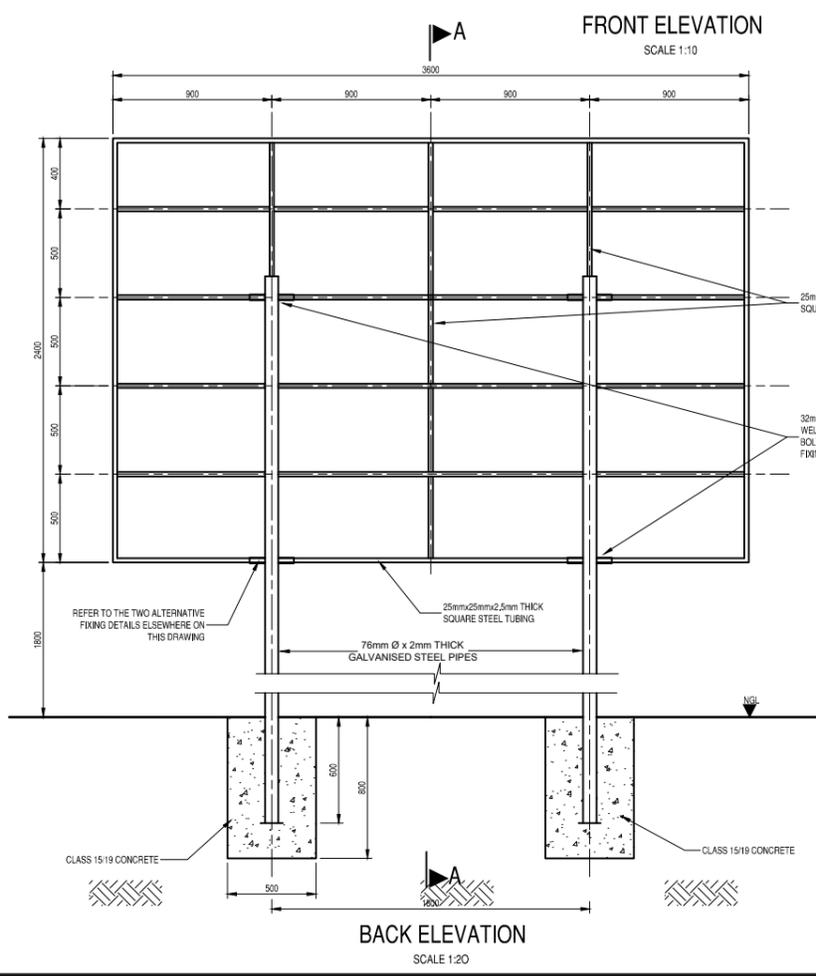
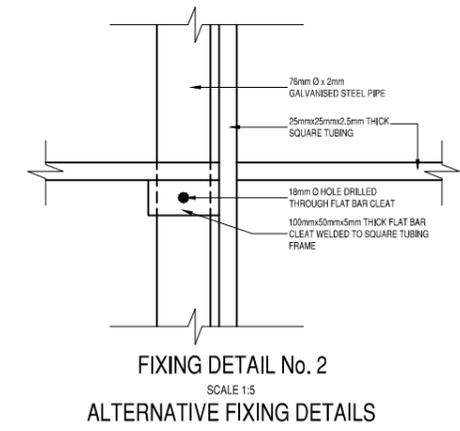
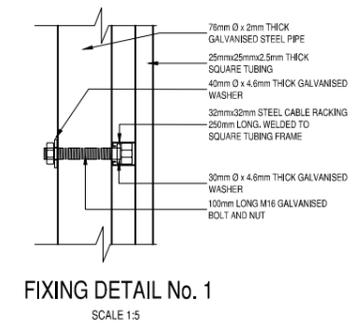


MAQUASSI HILLS LOCAL MUNICIPALITY

PROJECT NAME:
UPGRADING OF TSHESANE DRIVE, MADITJANE, SEJAKE AND KADI STREETS FROM GRAVEL TO BLOCK PAVING IN LEBALENG

CONTRACT NUMBER: MHLM/SCM/MIG/06/2022/23 **PROJECT AMOUNT:** -

	FUNDING AGENT
	MUNICIPAL INFRASTRUCTURE GRANT
	CONSULTING ENGINEERS
	TSELA TSWEU CONSULTING ENGINEERS
CONTRACTOR (LOGO)	CONTRACTOR
	CONTRACTOR NAME



REVISIONS			
No.	DATE	BY	DESCRIPTION

- NOTES**
- Description in *italics* must be adjusted to suit project details.
 - Type face to be used shall be Helvetica Medium Colour of lettering AS INDICATED.
 - LETTERS TO BE CAPITALISED.
 - Background of board to be WHITE. ALL borders & lines to be MIDDLE BLUE. Colour for logos to be AS PER RESPECTIVE.
 - All paint used should match Ref. 290 Acrylic Road Sign Paint.
 - All lettering to be painted on. Stick-on labels will NOT be permitted.

REFERENCE DRAWINGS	
PLAN No.	DESCRIPTION

APPROVED: _____ DATE: _____

ENGINEER: _____

APPROVED: _____ DATE: _____

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Tsela Tsweu
CONSULTING ENGINEERS

Mobile: + 27 (0)33 265 1524
329 Stately Chambers, Stateway, Welkom,
PO Box 2600, Welkom, 9460, South Africa



CLIENT
**MAQUASSI HILLS
LOCAL MUNICIPALITY**

PROJECT
**UPGRADING OF TSHESANE DRIVE,
MADITJANE, SEJAKE AND KADI
STREETS FROM GRAVEL TO
BLOCK PAVING IN LEBALENG**

IMPLEMENTING AGENT:
MAQUASSI HILLS LM

DRAWING TITLE
PROJECT NAME BOARD

DESIGN	DATE	DRAWN	DATE
SURVEYED	DATE	CHECKED	DATE
		J.BATEMAN	JUN 2022

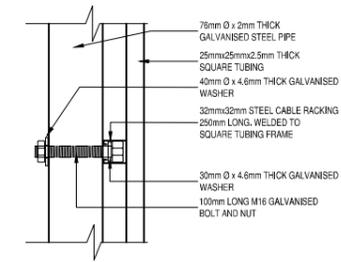
SCALE as shown

DRAWING No.
2022-06-G/D/001

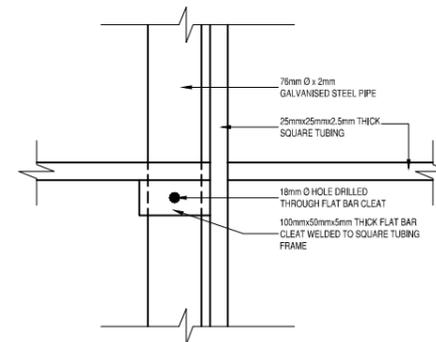
REVISION No.					
1.0					



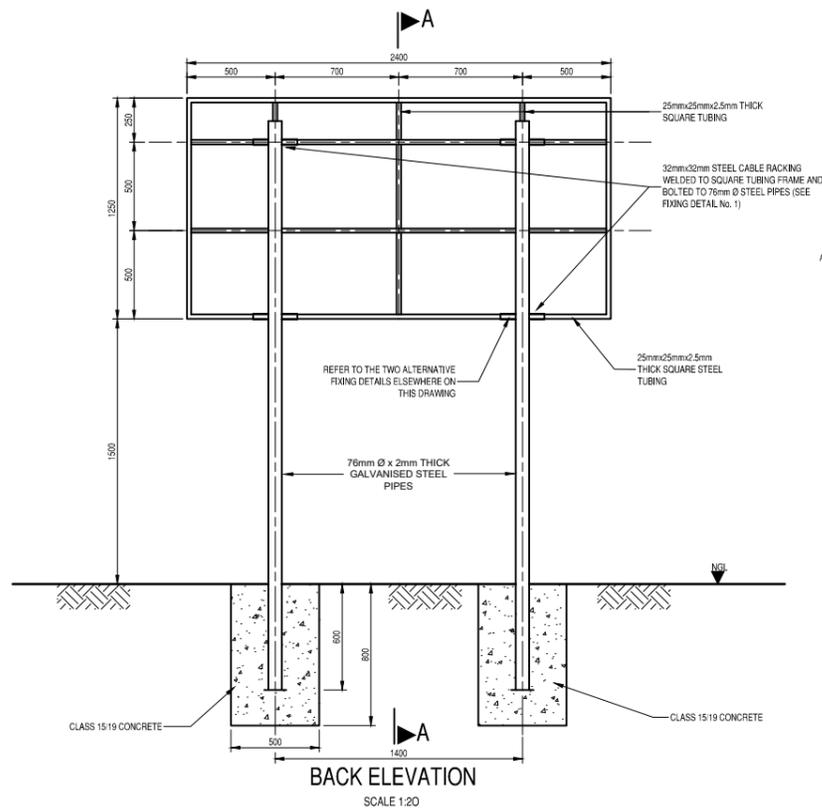
FRONT ELEVATION
SCALE 1:10



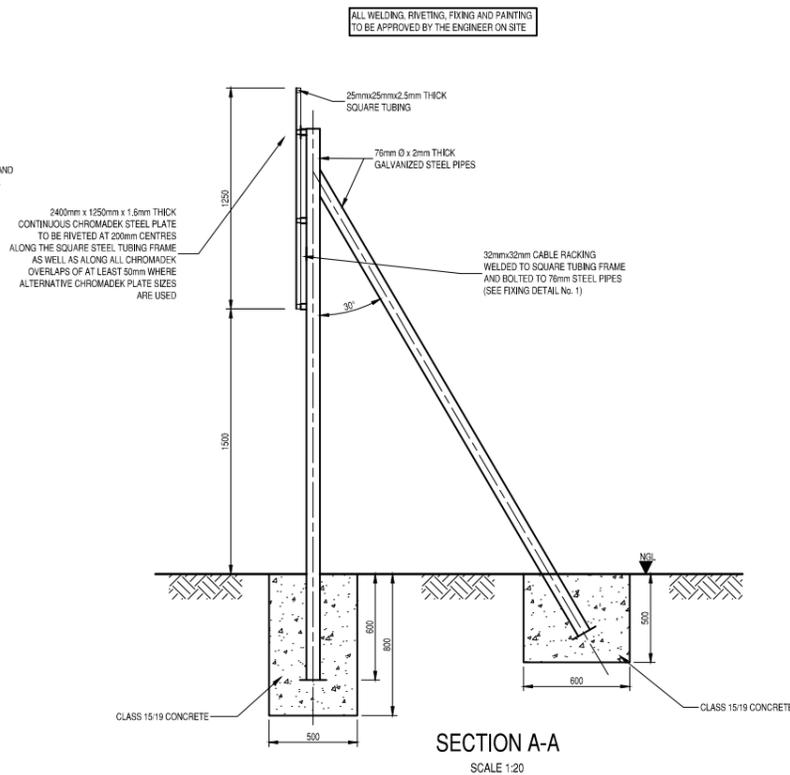
FIXING DETAIL No. 1
SCALE 1:5



FIXING DETAIL No. 2
SCALE 1:5
ALTERNATIVE FIXING DETAILS



BACK ELEVATION
SCALE 1:20



SECTION A-A
SCALE 1:20

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 ENGINEER: _____
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CONSULTING ENGINEERS

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

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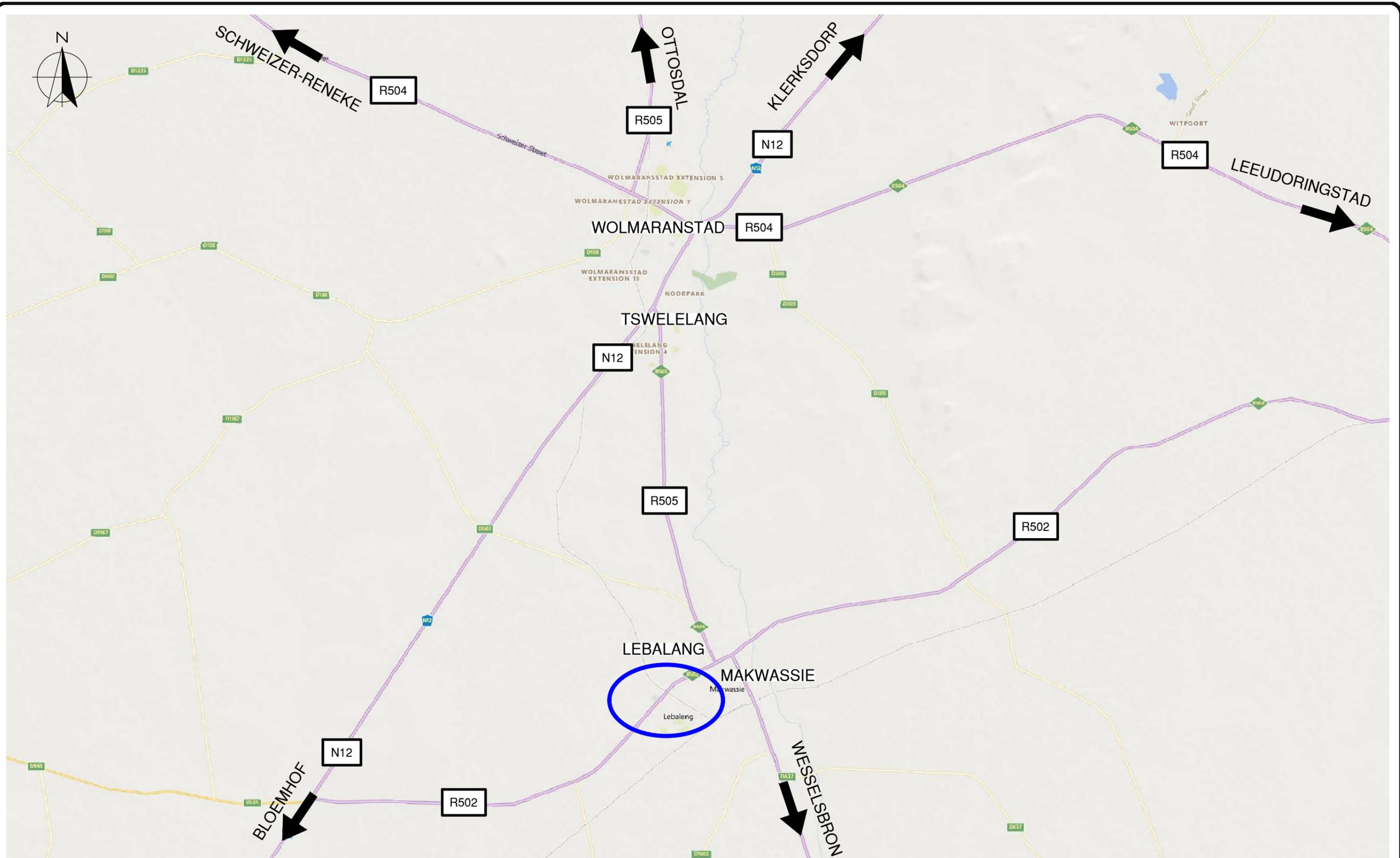
DRAWING TITLE
MIG PROJECT NAME BOARD

DESIGN	DATE	DRAWN	DATE
	JUN 2022		JUN 2022
SURVEYED	DATE	CHECKED	DATE
		J.BATEMAN	JUN 2022

SCALE as shown

DRAWING No.
2022-06-G/D/002

REVISION No.					
1.0					



NOTES	APPROVED:
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APPROVED:	
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DATE:	

REFERENCE DRAWINGS	
PLAN Nr.	DESCRIPTION


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

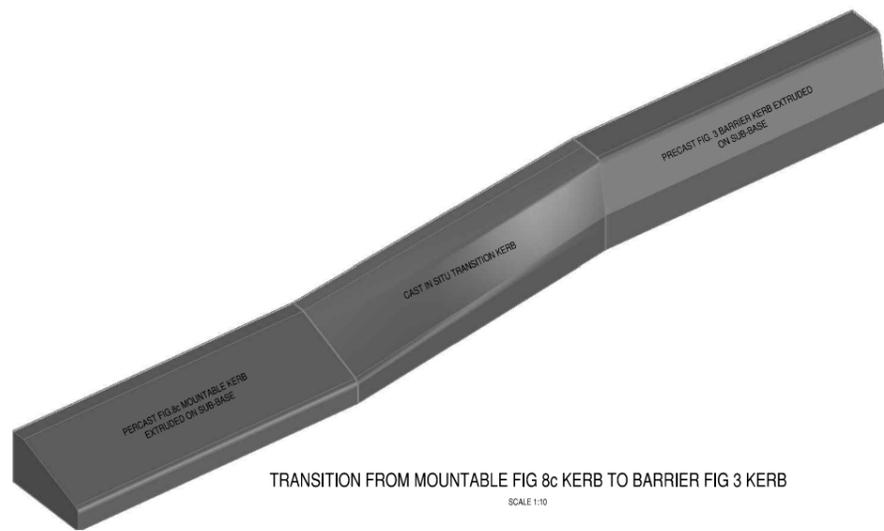

CLIENT
MAQUASSI HILLS LOCAL MUNICIPALITY
 IMPLEMENTING AGENT
MAQUASSI HILLS LM

PROJECT
 UPGRADING OF TSHESANE DRIVE, MADITJANE,
 SEJAKE AND KADI STREETS FROM GRAVEL TO
 BLOCK PAVING IN LEBALENG
DRAWING TITLE
LOCALITY MAP

PRINT ISSUED ON			
REVISIONS			
No.	DATE	BY	DESCRIPTION

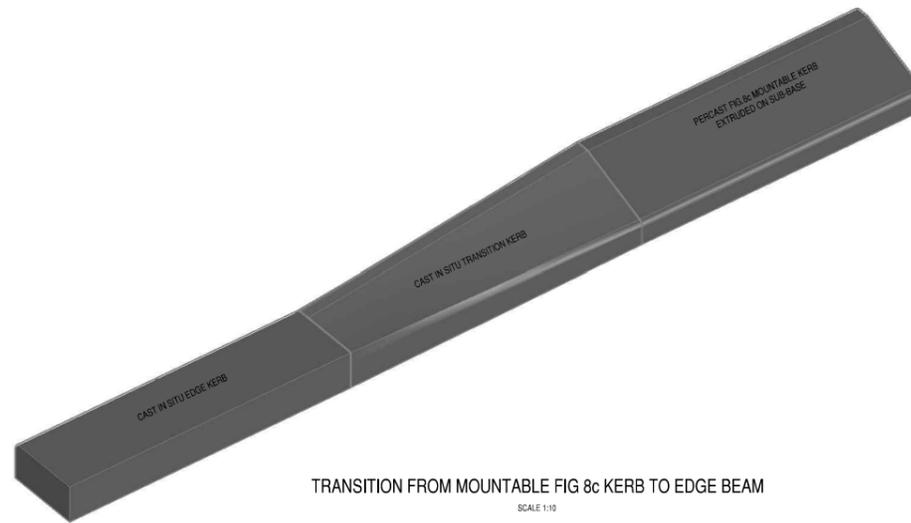
SCALE: 1:100 000

DESIGN	DATE	DRAWN	DATE
-	-	-	-
SURVEYED	DATE	CHECKED	DATE
-	-	J.BATEMAN	JUN 2022
DRAWING No. 2022-06-G/P/001			
REVISION No.			
1.0			



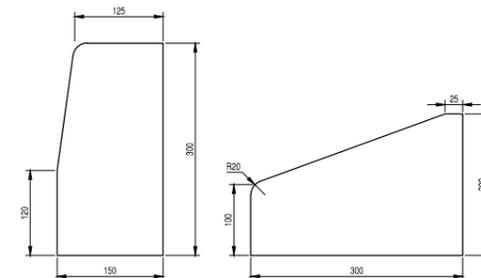
TRANSITION FROM MOUNTABLE FIG 8c KERB TO BARRIER FIG 3 KERB

SCALE 1:10



TRANSITION FROM MOUNTABLE FIG 8c KERB TO EDGE BEAM

SCALE 1:10

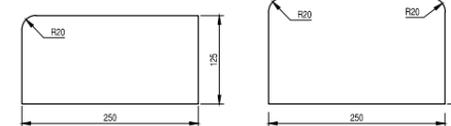


BARRIER KERB (FIG.3)

MOUNTABLE KERB (FIG.8c)

SCALE 1:5

SCALE 1:5

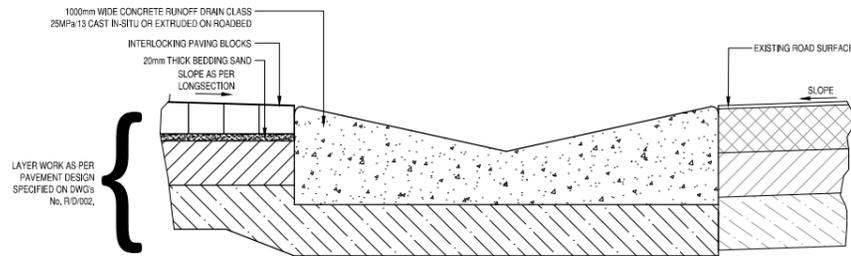


EDGE KERB (FIG.13)

RECTANGULAR EDGING STRIP

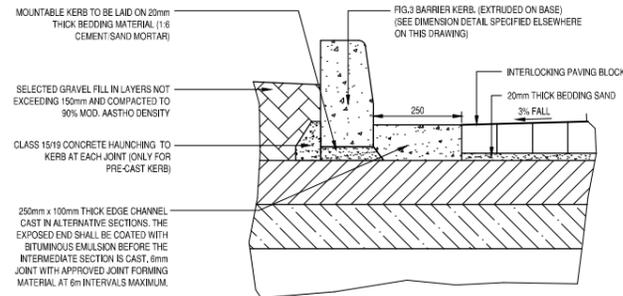
SCALE 1:5

SCALE 1:5



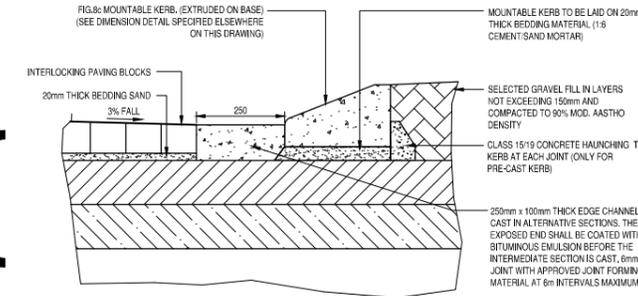
TYPICAL RUNOFF DRAIN SECTION AT INTERSECTION CONNECTION

SCALE 1:10



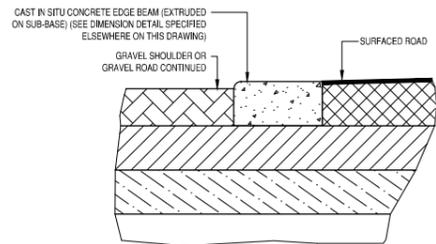
TYPICAL SECTION THROUGH FIG.3 BARRIER KERB

SCALE 1:10

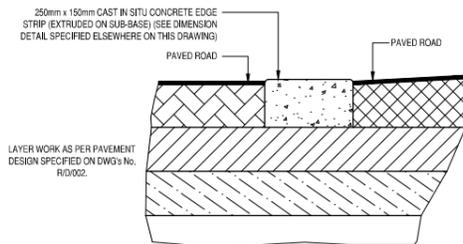


TYPICAL SECTION THROUGH FIG.8b MOUNTABLE KERB

SCALE 1:10

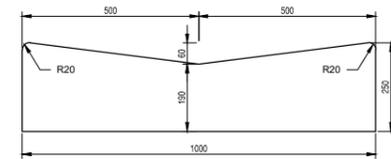


TYPICAL SECTION THROUGH EDGING KERB (FLAT)



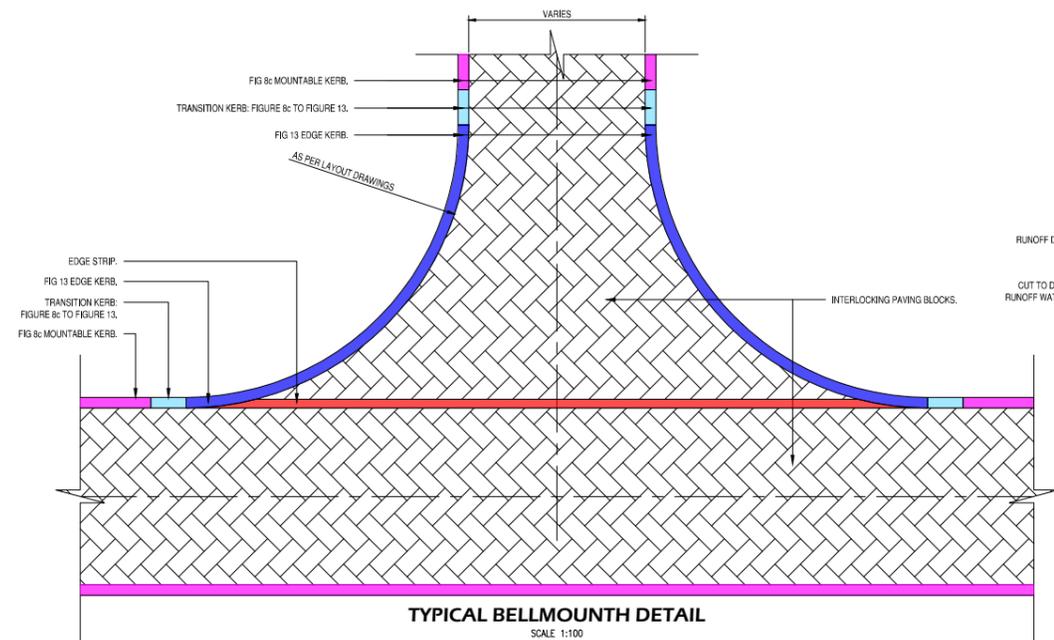
TYPICAL SECTION THROUGH EDGE STRIP

SCALE 1:10



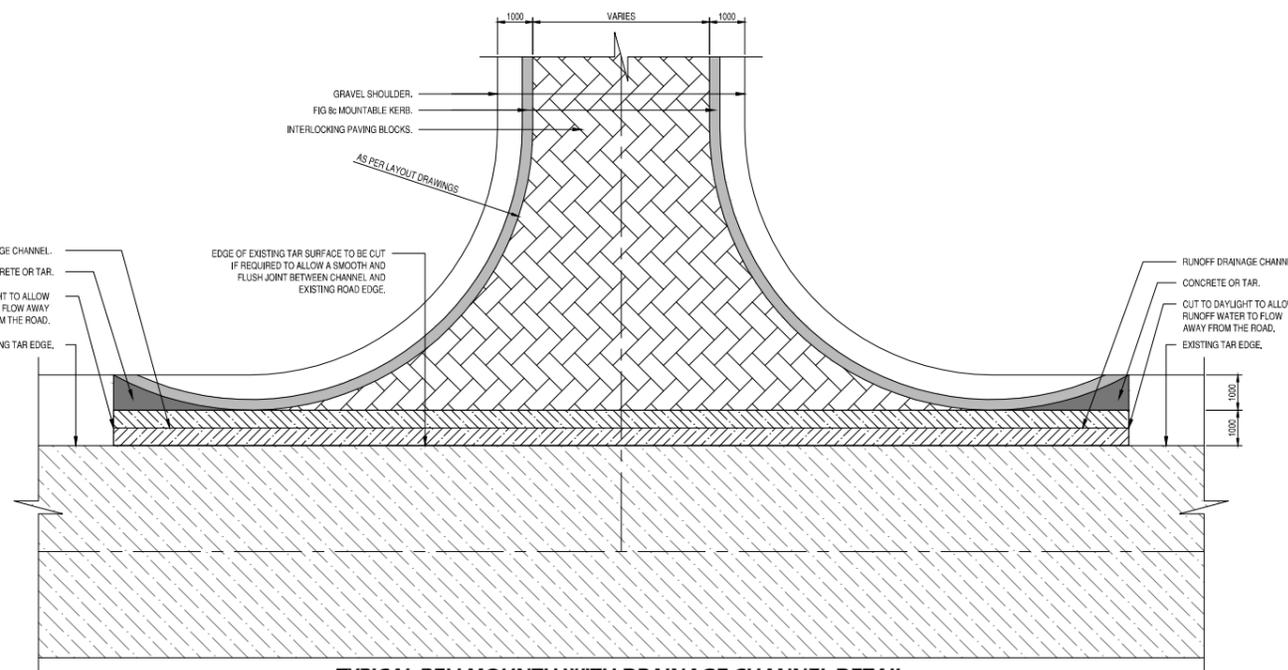
RUNOFF DRAIN CAST INSITU OR EXTRUDED ON ROADBED

SCALE 1:10



TYPICAL BELLMOUTH DETAIL

SCALE 1:100



TYPICAL BELLMOUTH WITH DRAINAGE CHANNEL DETAIL

SCALE 1:100

REVISIONS				
No.	DATE	BY	DESCRIPTION	

- NOTES**
- ALL EXTRUDED CONCRETE KERBING AND EDGE STRIPS SHALL BE CLASS 25/13 CONCRETE.
 - FIGURE 8 MOUNTABLE KERB TO BE CONSTRUCTED ON THE DRAINAGE SIDE (LOW LEG) OF ALL THE SURFACED CROSSFALL ROADS, UNLESS OTHERWISE SPECIFIED OR INDICATED ON THE LAYOUT DRAWINGS.
 - EDGING STRIP TO BE CONSTRUCTED ON THE NON DRAINAGE SIDE (HIGHER LEG) OF ALL THE SURFACED CROSSFALL ROADS UNLESS OTHERWISE SPECIFIED OR INDICATED ON THE LAYOUT DRAWINGS.
 - EDGING STRIP TO BE CONSTRUCTED ALONG THE TOTAL LENGTH OF THE BELLMOUTH OPENING AT ALL INTERSECTIONS WITH THE SURFACED ROADS AS INDICATED ON THE LAYOUT DRAWINGS.
 - PRIOR TO THE CONSTRUCTION OF ANY EXTRUDED KERBING OR EDGE STRIP AN APPROPRIATELY CERTIFIED LABORATORY TESTED DESIGN MIX SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER FOR APPROVAL.
 - THE STRENGTH OF ALL PRE-CAST CONCRETE KERBING SHALL BE IN TERMS OF SABS 927.

REFERENCE DRAWINGS	
PLAN No.	DESCRIPTION

APPROVED:	
ENGINEER:	DATE:
APPROVED:	
CLIENT:	DATE:

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Tsela Tsweu
CONSULTING ENGINEERS

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

CLIENT
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PROJECT
UPGRADING OF TSHESANE DRIVE, MADITJANE, SEJAKE AND KADI STREETS FROM GRAVEL TO BLOCK PAVING IN LEBALENG

IMPLEMENTING AGENT:
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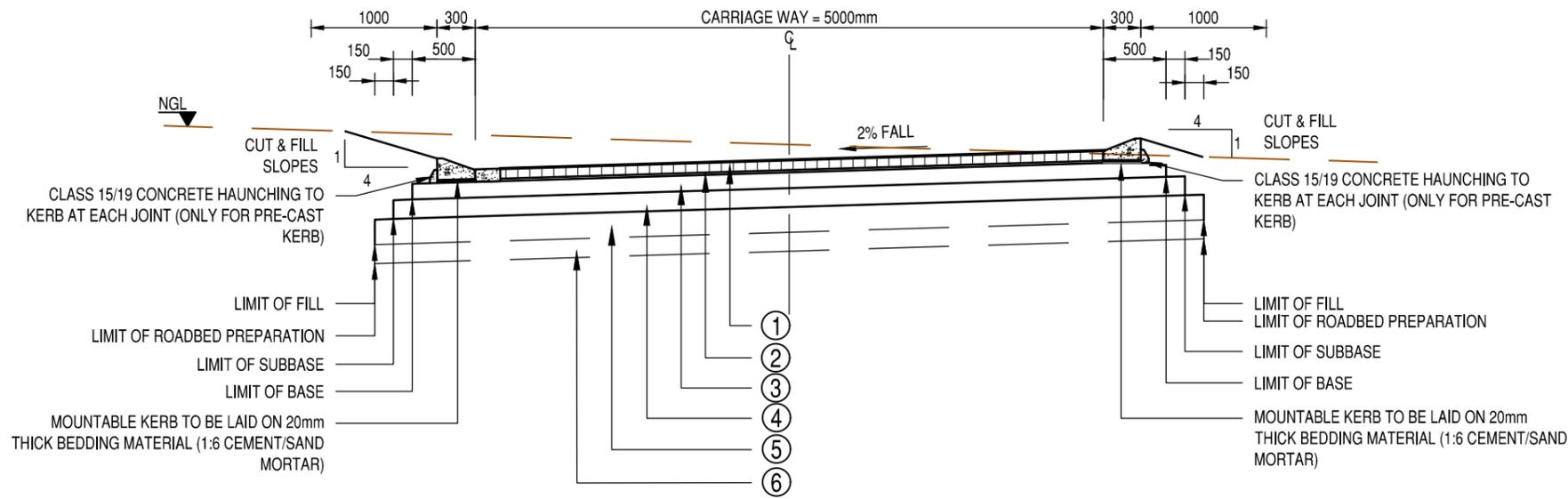
DRAWING TITLE
TYPICAL KERBING DETAILS

DESIGN	DATE	DRAWN	DATE
	JUN 2022		JUN 2022
SURVEYED	DATE	CHECKED	DATE
		J.BATEMAN	JUN 2022

SCALE as shown

DRAWING No. **2022-06-R/D/001**

REVISION No.	
1.0	



**TYPICAL PAVEMENT DESIGN DETAIL
CROSS-FALL ROAD**

SCALE 1:50

- NOTE:
1. PRIOR TO THE UNDERTAKING OF ANY VIBRATORY OR PAD FOOT ROLLING WITHIN THE ROAD FOUNDATION, AN ON SITE TRIAL SECTION SHALL BE PREPARED AND CONDUCTED IN ORDER TO ASCERTAIN THE AVERAGE NUMBER OF m.PASSES REQUIRED IN ORDER TO OBTAIN THE SPECIFIED COMPACTION EFFORT FOR THE ROADBED PREPARATION.
 2. THE ENGINEER SHALL THEN INSTRUCT THE CONTRACTOR TO REMOVE AND SPOIL THE TOPSOIL AND HILLWASH OVERBURN TO WEARING COURSE DEPTH OR FERRICRETE LEVEL, WHERE REQUIRED WHICHEVER IS THE SHALLOWEST. ALL FERRICRETE MATERIAL SHALL BE CUT TO TEMPORARY STOCKPILE AS DETERMINED BY THE ENGINEER FOR LATER USE IN THE PAVEMENT STRUCTURE AND WEARING COURSE LAYER WORKS.
 3. DETERMINED BY THE ENGINEER FOR LATER USE IN THE PAVEMENT STRUCTURE AND WEARING COURSE LAYER WORKS.
 4. THE CONTRACTOR SHALL THEN APPLY THE NUMBER OF m.PASSES ORDERED BY THE ENGINEER, PERIODICALLY WATERING AND BLADING THE ROADBED FOUNDATION AREA TO ENSURE MAXIMUM WORKABILITY AND COMPACTION EFFICIENCY.
 5. AFTER APPLYING THE VIBRATORY OR PAD FOOT ROLLING, CUT TO FILL OR BLADE TO WINDROW THE FERRICRETE PINNACLES, RIP, SCARIFY AND RECOMPACT ROADBED TO ABOVE SPECIFICATION WHERE REQUIRED.

- LEGEND:
- a) REQUIREMENTS ARE GIVEN IN THE FOLLOWING ORDER:
LAYER THICKNESS/MATERIAL/CBR AND
MIN COMPACTION/MIN. GM/MAX. PI
 - b) MIN. UNCONFINED COMPRESSIVE STRENGTH (UCS) IS SHOWN IN MPa.
 - c) MIN. DENSITY IS GIVEN AS % OF MAX MODIFIED AASHTO DENSITY.
 - d) SG = STABILIZED GRAVEL
NG = NATURAL GRAVEL
IS = IN SITU SOIL
PI = PLASTICITY INDEX
GM = GRADING MODULES
SBP = SHOULDER BREAK POINT
 - e) # FIGURE 8c MOUNTABLE CONCRETE KERB (CLASS 25/13) EXTRUDED ON BASE
* FIGURE 3 MOUNTABLE CONCRETE KERB (CLASS 25/13) EXTRUDED ON SUBBASE
§ 250mm WIDE x 100mm THICK EDGE CHANNEL CAST IN ALTERNATIVE SECTIONS. THE EXPOSED END SHALL BE COATED WITH BITUMINOUS EMULSION BEFORE THE INTERMEDIATE SECTION IS CAST. 6mm JOINT WITH APPROVED JOINT FORMING MATERIAL AT 6m INTERVALS MAXIMUM.

①	SEGMENTED PAVING SHAPE S-A (G-BLOCKS), CLASS 25, 60mm THICK
②	RIVER SAND 20 / RIVER SAND IMPORTED FROM COMMERCIAL SOURCE
③	BASE 125mm C4 MATERIAL COMPACTED TO 98% MOD AASHTO DENSITY.
④	SUBBASE 150mm G6 MATERIAL COMPACTED TO 95% MOD AASHTO DENSITY
⑤	ROADBED PREPARATION (REFER TO NOTES) VIBRATORY OR PAD FOOT ROLLING (NUMBER OF PASSES TO BE DETERMINED BY ENGINEER ON SITE) OR RIP SCARIFY AND RE-COMPACT 150/IS@90%
⑥	FILL - ONLY WHERE REQUIRED FILL TO BE A MINIMUM OF G9 MATERIAL TO BE COMPACTED IN LAYERS NOT EXCEEDING 150mm THICKNESS TO 90% MOD AASHTO DENSITY.

NOTES	APPROVED:
ENGINEER:	
DATE:	
APPROVED:	
CLIENT:	
DATE:	

REFERENCE DRAWINGS	
PLAN Nr.	DESCRIPTION

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

CLIENT
MAQUASSI HILLS LOCAL MUNICIPALITY
IMPLEMENTING AGENT
MAQUASSI HILLS LM

PROJECT
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DRAWING TITLE
TYPICAL PAVEMENT DESIGN DETAIL FOR 5.0m SURFACED ACCESS STREETS (PAVING BLOCK FINISH)

PRINT ISSUED ON			
REVISIONS			
No.	DATE	BY	DESCRIPTION
SCALE: 1:50			

DESIGN	DATE	DRAWN	DATE
-	-	-	-
SURVEYED	DATE	CHECKED	DATE
-	-	J.BATEMAN	JUN 2022
DRAWING No.		2022-06-R/D/002	
REVISION No.			
1.0			

ITEM No.	TYPE OF SIGN	SIGN. No.	DESCRIPTION	No.	ROADSIGN	LEGEND	SYMBOL	COLOUR		
								BORDER	LETTERS OR SYMBOL	BACKGROUND
1.	REGULATION CONTROL	R1	STOP SIGN	8		DIN 1451 STYLE 'X'	LETTER STOP	WHITE RETROREFLECTIVE	WHITE RETROREFLECTIVE	RED RETROREFLECTIVE
2.	REGULATION CONTROL	R2	YIELD SIGN (RIGHT)	0				OUTER BORDER: WHITE RETROREFLECTIVE INNER BORDER: RED RETROREFLECTIVE		WHITE RETROREFLECTIVE
3.	SYMBOLIC	W306	PEDESTRIAN CROSSING	0			PEDESTRIAN CROSSING	RED RETROREFLECTIVE	BLACK SEMI-MATT	WHITE RETROREFLECTIVE
4.	WARNING ROAD LAYOUT	W104 & W107 & W108	T-JUNCTION SIDE ROAD JUNCTION (LEFT) SIDE ROAD JUNCTION (RIGHT)	7 0 0			T-SYMBOL	TRIANGLE: RED RETROREFLECTIVE	BLACK SEMI-MATT	WHITE RETROREFLECTIVE
5.	WARNING ROAD LAYOUT	W101 & W102 & W103	CROSSROAD JUNCTION	0 0 0			+SYMBOL	TRIANGLE: RED RETROREFLECTIVE	BLACK SEMI-MATT	WHITE RETROREFLECTIVE
6.	WARNING HAZARD MARKER	W401 & W402	DANGER PLATE DELINATOR PLATE	0 0			DIAGONALS @ 45°	NO BORDER	RED RETROREFLECTIVE	WHITE RETROREFLECTIVE
7.	WARNING HAZARD MARKER	W409	T-JUNCTION CHEVRON	7			ARROWS	NO BORDER	ARROWS: RED RETROREFLECTIVE	WHITE RETROREFLECTIVE
11.	INFORMATION LOCATION	R201	SPEED LIMIT SIGN	6 7			NUMBERS: 40 NUMBERS: 60	CIRCLE: RED RETROREFLECTIVE	BLACK SEMI-MATT	WHITE RETROREFLECTIVE
9.	INFORMATION	W204 & W205	SHARP RIGHT CURVE SHARP LEFT CURVE	3 3			CURVE-SYMBOL	TRIANGLE: RED RETROREFLECTIVE	BLACK SEMI-MATT	WHITE RETROREFLECTIVE
10.	INFORMATION LOCATION	W202 & W203	GENTLE CURVE SIGN	1 1			CURVE-SYMBOL	TRIANGLE: RED RETROREFLECTIVE	BLACK SEMI-MATT	WHITE RETROREFLECTIVE

REVISIONS			
No.	DATE	BY	DESCRIPTION

- NOTES**
- REFER TO DRAWING No. R/5/001 FOR ROAD SIGNAGE POSITION
 - REFER TO DRAWING No. R/D/005 FOR POSITION OF SUPPORT BRACKETS AND INSTALLATION DETAILS OF ROAD SIGNS
 - ALL ROAD MARKINGS AND ROAD SIGNS TO BE MANUFACTURED AND CONSTRUCTED IN ACCORDANCE WITH THE SOUTH AFRICAN ROAD TRAFFIC SIGNS MANUAL
 - ALL ROAD SIGNS TO BE PLACED AT A DEFLECTION ANGLE OF 93° WITH THE CENTRE LINE OF THE ROAD

REFERENCE DRAWINGS	
PLAN No.	DESCRIPTION

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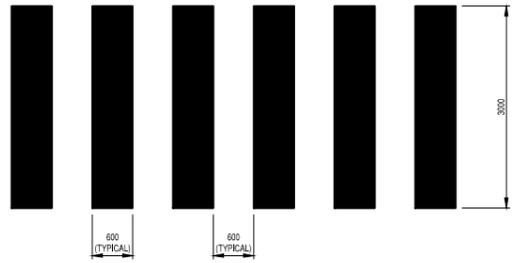
DRAWING TITLE
ROAD SIGNAGE SCHEDULE AND DETAILS

DESIGN	DATE	DRAWN	DATE
-	JUN 2022	-	JUN 2022
SURVEYED	DATE	CHECKED	DATE
-	-	J.BATEMAN	JUN 2022

SCALE: 1:25

DRAWING No.
2022-06-R/D/003

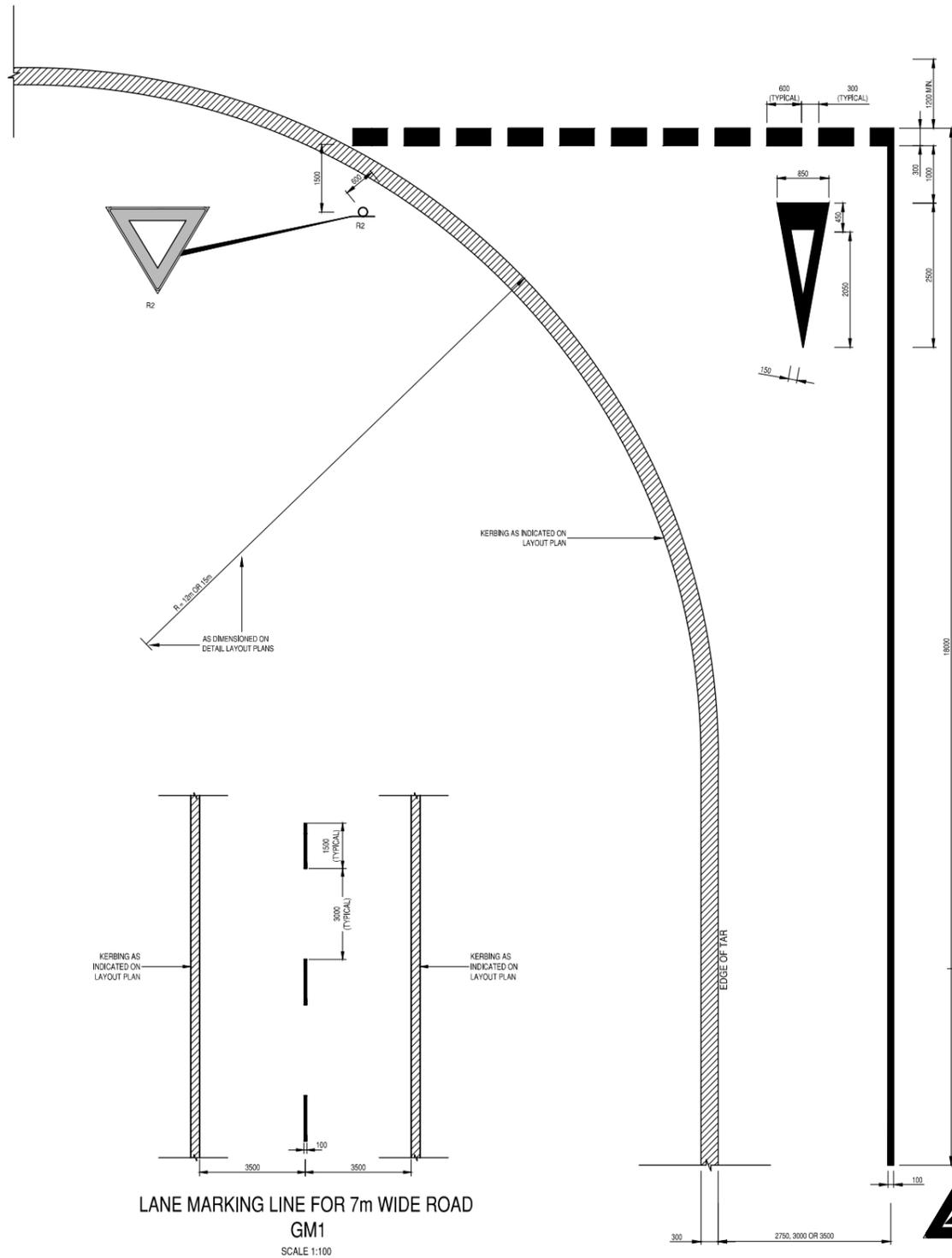
REVISION No.					
1.0					



PEDESTRIAN CROSSING MARKINGS
RTM4
SCALE 1:50

LEGEND:

	WHITE PAINT
	CONCRETE KERBING



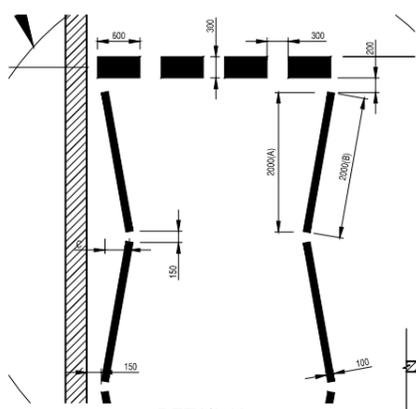
LANE MARKING LINE FOR 7m WIDE ROAD
GM1
SCALE 1:100

YIELD
RTM2 & WM5
SCALE 1:50

LANE MARKING FOR PEDESTRIAN CROSSING
RTM4 AND RM11
SCALE 1:200

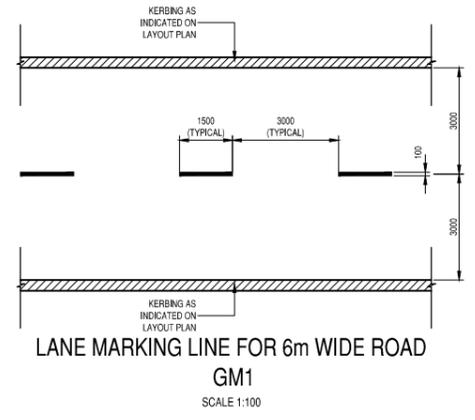


LANE MARKING LINE FOR 5.5m WIDE ROAD
GM1
SCALE 1:100



DETAIL No.1
SCALE 1:20

STOP
RTM1 & GM7
SCALE 1:50



LANE MARKING LINE FOR 6m WIDE ROAD
GM1
SCALE 1:100

REVISIONS

No.	DATE	BY	DESCRIPTION

- NOTES
- REFER TO DRAWING No. R/D/005 FOR POSITION OF SUPPORT BRACKETS AND INSTALLATION DETAILS OF ROAD SIGNS
 - REFER TO DRAWING No. R/D/003 FOR ROAD SIGNAGE SCHEDULES
 - ALL ROAD MARKINGS AND ROAD SIGNS TO BE MANUFACTURED AND CONSTRUCTED IN ACCORDANCE WITH THE SOUTH AFRICAN ROAD TRAFFIC SIGNS MANUAL
 - REFER TO DRAWINGS No. R/S/001 FOR ROAD SIGNAGE LAYOUT DETAILS
 - ALL ROAD SIGNS TO BE PLACED AT A DEFLECTION ANGLE OF 93° WITH THE CENTER LINE OF THE ROAD
 - FOR RTM4 THE 2m LENGTH OF LINE MAY BE MEASURED ALONG THE LINE (IF USING A MASK OR TEMPLATE (B)), OR ALONG THE LINE OF THE ROAD (FOR EASE OF SETTING OUT (A))
 - THE ZIG-ZAG OFFSET (C) MAY BE REDUCED FROM 500mm TO 300mm FOR LANES WITH A WIDTH LESS THAN 3400mm

REFERENCE DRAWINGS

PLAN No.	DESCRIPTION

APPROVED: _____ DATE: _____
 ENGINEER: _____ DATE: _____
 APPROVED: _____ DATE: _____
 CLIENT: _____ DATE: _____
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Tsela Tsweu
CONSULTING ENGINEERS

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

CLIENT
MAQUASSI HILLS LOCAL MUNICIPALITY

PROJECT
UPGRADING OF TSHESANE DRIVE, MADITJANE, SEJAKE AND KADI STREETS FROM GRAVEL TO BLOCK PAVING IN LEBALENG

IMPLEMENTING AGENT:
MAQUASSI HILLS LM

DRAWING TITLE
ROAD MARKING DETAILS

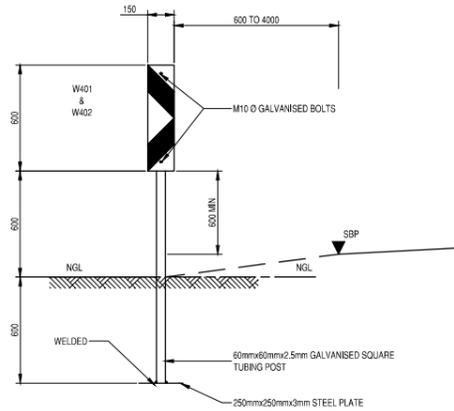
DESIGN	DATE	DRAWN	DATE
	JUN 2022		JUN 2022
SURVEYED	DATE	CHECKED	DATE
		J.BATEMAN	JUN 2022

SCALE as shown

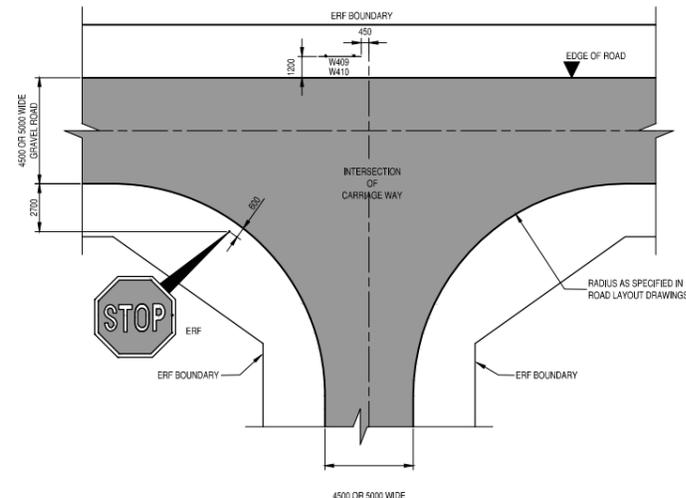
DRAWING No.
2022-06-R/D/004

REVISION No.

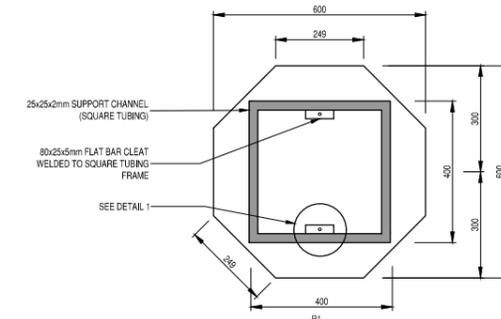
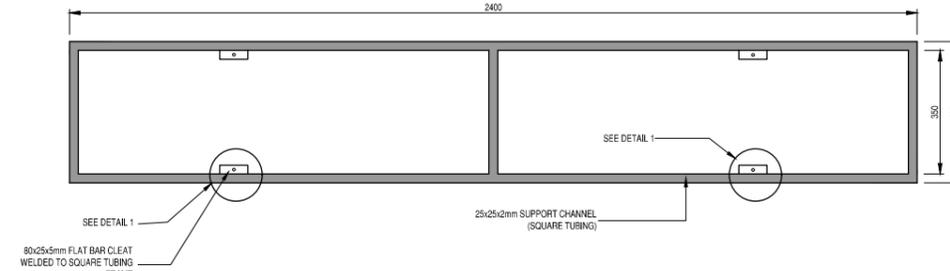
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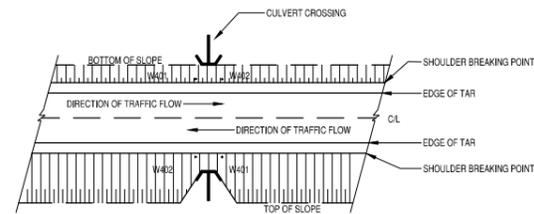
FRONT ELEVATION W401
SCALE 1:20



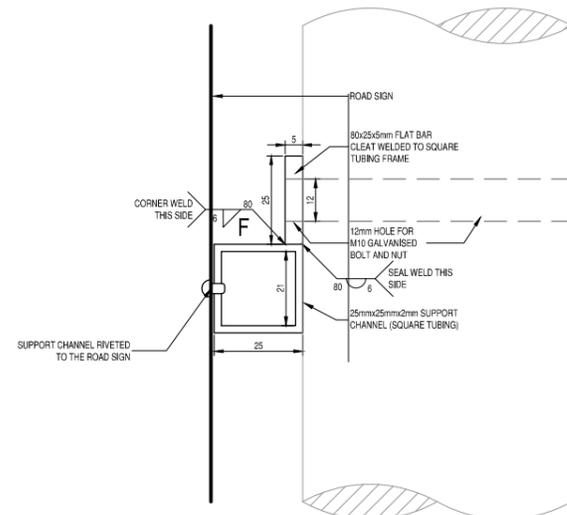
CHEVRON POSITION AT INTERSECTION
SCALE 1:200



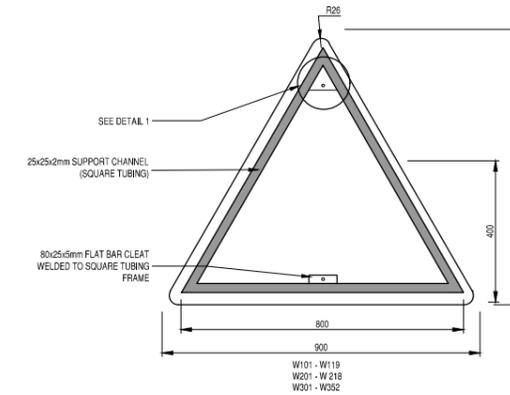
CONTROL SIGNS



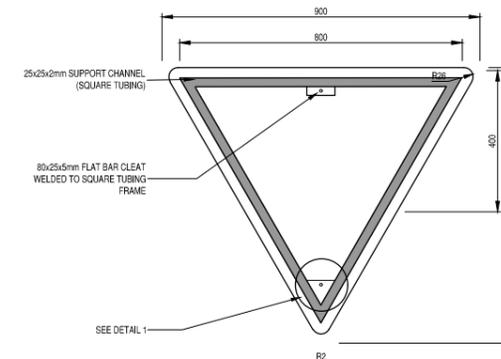
SIGN AT CULVERT
NTS



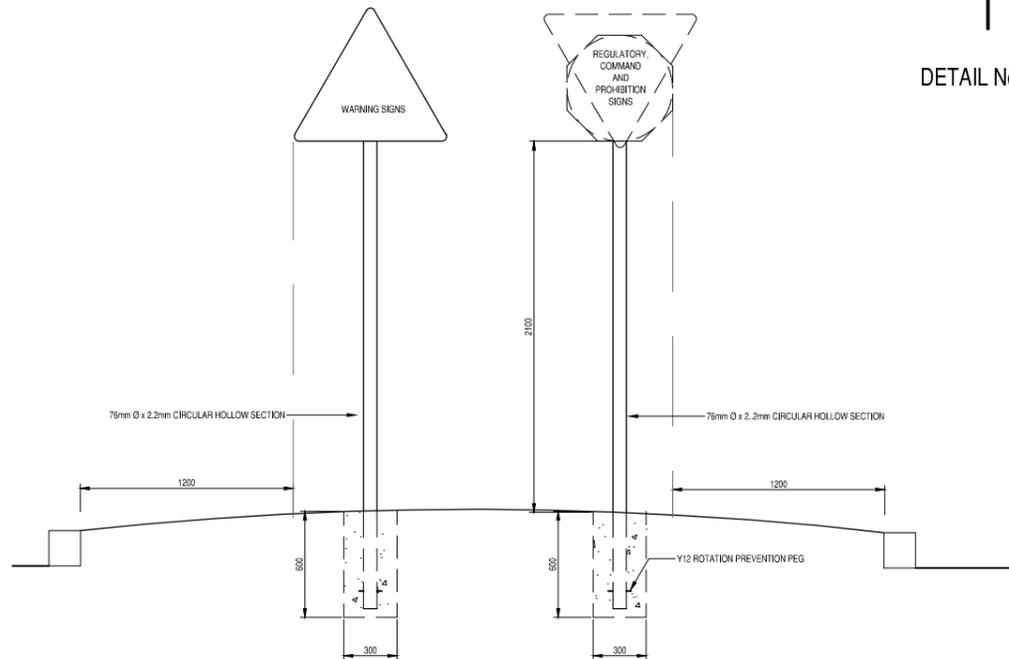
DETAIL No. 1 SECTIONAL ELEVATION
SCALE 1:1



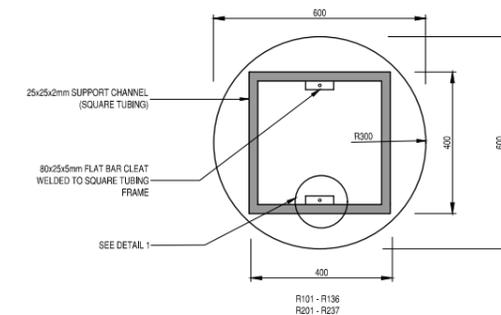
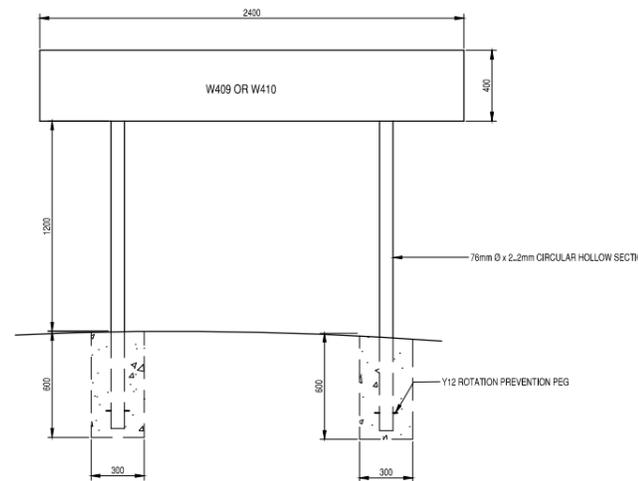
ROAD LAYOUT AND SYMBOLIC SIGNS



CONTROL SIGN



POSITIONING DETAILS
SCALE 1:20



COMMAND AND PROHIBITION SIGNS
FIXING AND SUPPORT DETAILS
SCALE 1:10

REVISIONS			
No.	DATE	BY	DESCRIPTION

- NOTES**
- REFER TO DRAWING No. R/5/001 FOR ROAD SIGNAGE POSITION
 - REFER TO DRAWING No. R/D/004 FOR ROAD MARKING DETAILS
 - ALL ROAD MARKINGS AND ROAD SIGNS TO BE MANUFACTURED AND CONSTRUCTED IN ACCORDANCE WITH THE SOUTH AFRICAN ROAD TRAFFIC SIGNS MANUAL.
 - ALL ROAD SIGNS TO BE PLACED AT A DEFLECTION ANGLE OF 93° WITH THE CENTER LINE OF THE ROAD
 - M10 x 90mm GALVANISED BOLTS AND NUTS FOR FIXING ROAD SIGNS TO GALVANISED STEEL PIPES
 - ALL ROAD SIGNS TO BE FIXED TO SQUARE TUBING SUPPORT CHANNEL BY MEANS OF 6mm Ø RIVETS AT A MAXIMUM SPACING OF 125mm c/c

REFERENCE DRAWINGS	
PLAN No.	DESCRIPTION

APPROVED: _____ DATE: _____
 ENGINEER: _____
 APPROVED: _____ DATE: _____
 CLIENT: _____

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Tsela Tsweu
CONSULTING ENGINEERS

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

CLIENT
MAQUASSI HILLS LOCAL MUNICIPALITY

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IMPLEMENTING AGENT:
MAQUASSI HILLS LM

DRAWING TITLE
POSITION OF SUPPORT BRACKETS AND INSTALLATION DETAILS OF ROAD SIGNS

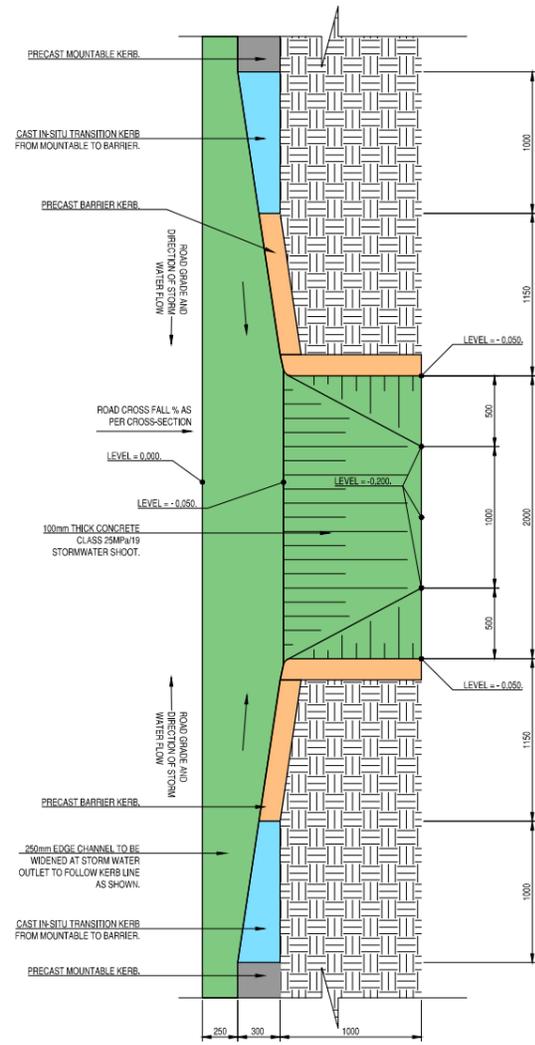
DESIGN	DATE	DRAWN	DATE
	JUN 2022		JUN 2022
SURVEYED	DATE	CHECKED	DATE
		J.BATEMAN	JUN 2022

SCALE as shown

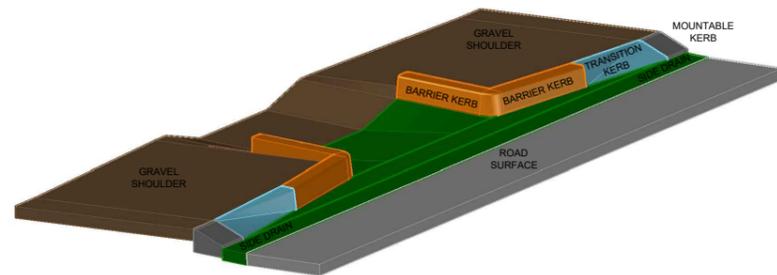
DRAWING No. **2022-06-R/D/005**

REVISION No.

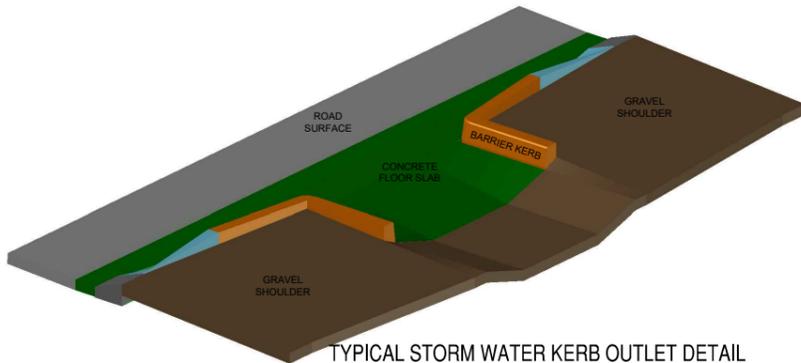
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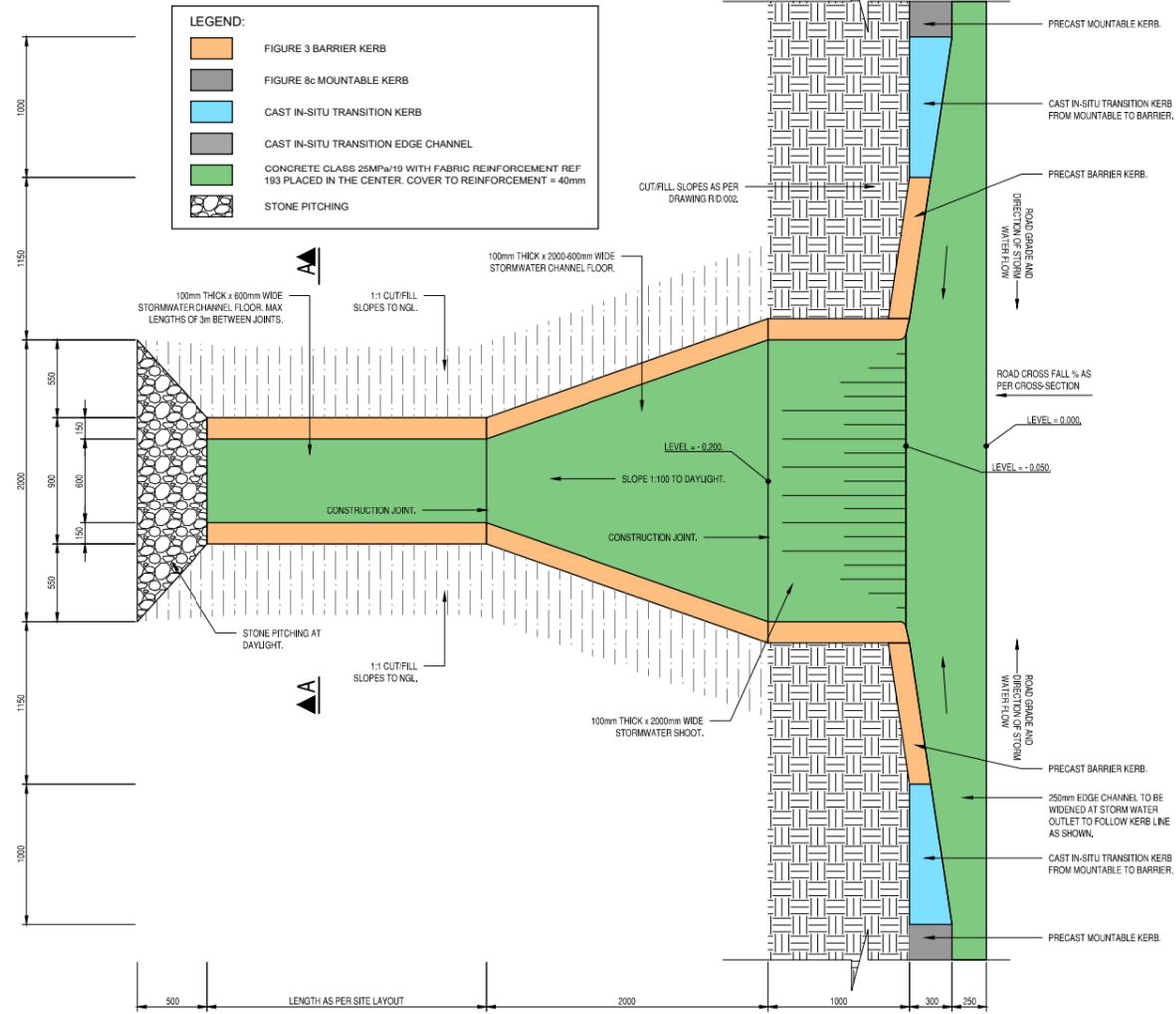
TYPICAL STORM WATER KERB OUTLET DETAIL
TYPE 1
SCALE 1:25



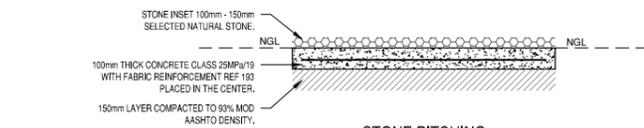
TYPICAL STORM WATER KERB OUTLET DETAIL
TYPE 1: 3D VIEW 1
SCALE 1:30



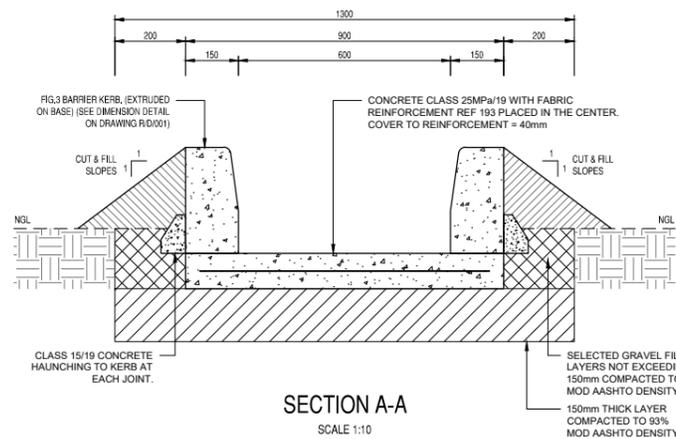
TYPICAL STORM WATER KERB OUTLET DETAIL
TYPE 1: 3D VIEW 2
SCALE 1:30



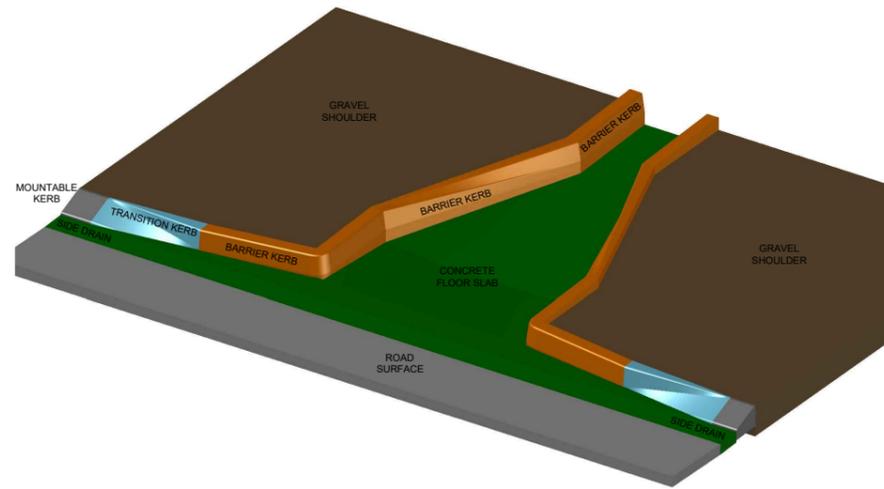
TYPICAL STORM WATER KERB OUTLET DETAIL
TYPE 2
SCALE 1:25



STONE PITCHING
SCALE 1:25



SECTION A-A
SCALE 1:10



TYPICAL STORM WATER KERB OUTLET DETAIL
TYPE 2: 3D VIEW
SCALE 1:30

REVISIONS

No.	DATE	BY	DESCRIPTION

NOTES

- REFER TO ROAD LAYOUT AND LONGSECTION DRAWINGS FOR POSITIONING AND TYPE OF STORMWATER KERB OUTLETS.

REFERENCE DRAWINGS

PLAN No.	DESCRIPTION

APPROVED: _____ DATE: _____

ENGINEER: _____

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



CLIENT
MAQUASSI HILLS LOCAL MUNICIPALITY

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IMPLEMENTING AGENT:
MAQUASSI HILLS LM

DRAWING TITLE
TYPICAL STORMWATER KERB OUTLET DETAILS

DESIGN	DATE	DRAWN	DATE
	JUN 2022		JUN 2022
SURVEYED	DATE	CHECKED	DATE
		J.BATEMAN	JUN 2022

SCALE as shown

DRAWING No.
2022-06-R/D/006

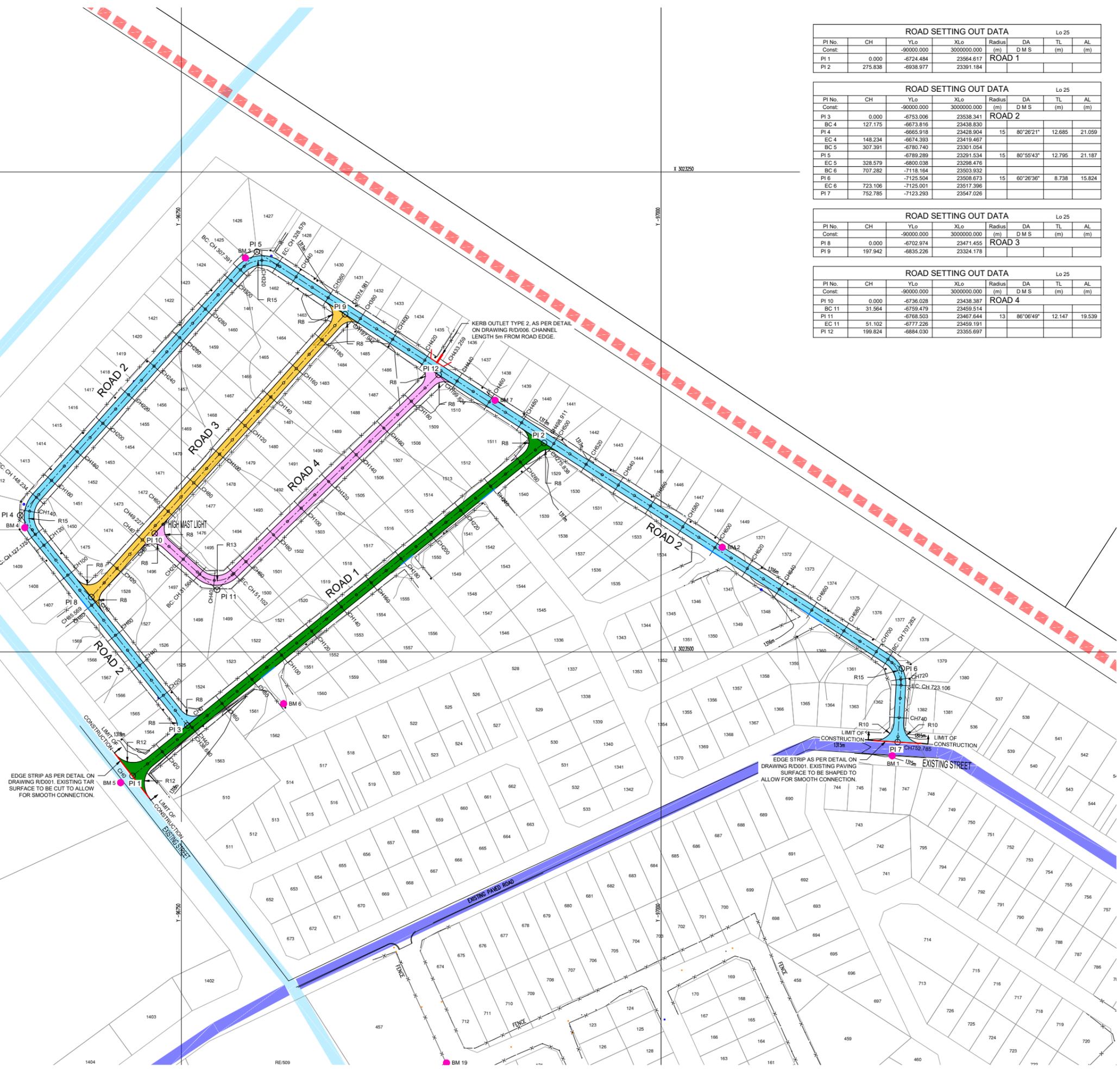
REVISION No.				
1.0				



X 302350

X 302350

X 302350



ROAD SETTING OUT DATA								Lo 25	
PI No.	CH	YLo	XLo	Radius	DA	TL	AL		
Const:		-90000.000	3000000.000	(m)	D M S	(m)	(m)		
PI 1	0.000	-6724.484	23564.617	ROAD 1					
PI 2	275.838	-6938.977	23391.184						

ROAD SETTING OUT DATA								Lo 25	
PI No.	CH	YLo	XLo	Radius	DA	TL	AL		
Const:		-90000.000	3000000.000	(m)	D M S	(m)	(m)		
PI 3	0.000	-6753.006	23538.341	ROAD 2					
BC 4	127.175	-6673.816	23438.830						
PI 4		-6665.918	23428.904	15	80°26'21"	12.685	21.059		
EC 4	148.234	-6674.393	23419.467						
BC 5	307.391	-6780.740	23301.054						
PI 5		-6789.289	23291.534	15	80°55'43"	12.795	21.187		
EC 5	328.579	-6800.038	23298.476						
BC 6	707.282	-7118.164	23503.932						
PI 6		-7125.504	23508.673	15	60°26'36"	8.738	15.824		
EC 6	723.106	-7125.001	23517.396						
PI 7	752.785	-7123.293	23547.026						

ROAD SETTING OUT DATA								Lo 25	
PI No.	CH	YLo	XLo	Radius	DA	TL	AL		
Const:		-90000.000	3000000.000	(m)	D M S	(m)	(m)		
PI 8	0.000	-6702.974	23471.455	ROAD 3					
PI 9	197.942	-6835.226	23324.178						

ROAD SETTING OUT DATA								Lo 25	
PI No.	CH	YLo	XLo	Radius	DA	TL	AL		
Const:		-90000.000	3000000.000	(m)	D M S	(m)	(m)		
PI 10	0.000	-6736.028	23438.387	ROAD 4					
BC 11	31.564	-6759.479	23459.514						
PI 11		-6768.503	23467.644	13	86°06'49"	12.147	19.539		
EC 11	51.102	-6777.226	23459.191						
PI 12	199.824	-6884.030	23355.697						

REVISIONS				
No.	DATE	BY	DESCRIPTION	

- NOTES**
- PROPOSED NEW ROAD 1
 - PROPOSED NEW ROAD 2
 - PROPOSED NEW ROAD 3
 - PROPOSED NEW ROAD 4
 - EXISTING TAR ROAD
 - EXISTING PAVED ROAD
 - EXISTING RAILWAY LINE
 - EDGE KERB
 - EDGE STRIP
 - POINT OF INTERSECTION NUMBER 2
 - PROPOSED STORM WATER OUTLET
 - BENCHMARK
 - EXISTING FENCE LINE
 - EXISTING ELECTRICITY
 - EXISTING MANHOLE
 - PIPELINE MARKER
1. FOR TYPICAL ROAD DETAILS REFER TO DRAWINGS RANGE R/D/006.
 2. FOR ROAD LONGSECTIONS REFER TO DRAWING RANGE R/L/006.
 3. FOR ROAD CROSS-SECTIONS REFER TO DRAWING RANGE R/W/006.

REFERENCE DRAWINGS	
PLAN No.	DESCRIPTION

APPROVED: _____ DATE: _____
 ENGINEER: _____
 APPROVED: _____ DATE: _____
 CLIENT: _____

PRINT ISSUED ON

Tsela Tsweu
CONSULTING ENGINEERS

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

CLIENT
MAQUASSI HILLS LOCAL MUNICIPALITY

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IMPLEMENTING AGENT:
MAQUASSI HILLS LM

DRAWING TITLE
PROPOSED NEW ROAD LAYOUT IN LEBALENG

DESIGN	DATE	DRAWN	DATE
	JUN 2022		JUN 2022
SURVEYED	DATE	CHECKED	DATE
		J.BATEMAN	JUN 2022

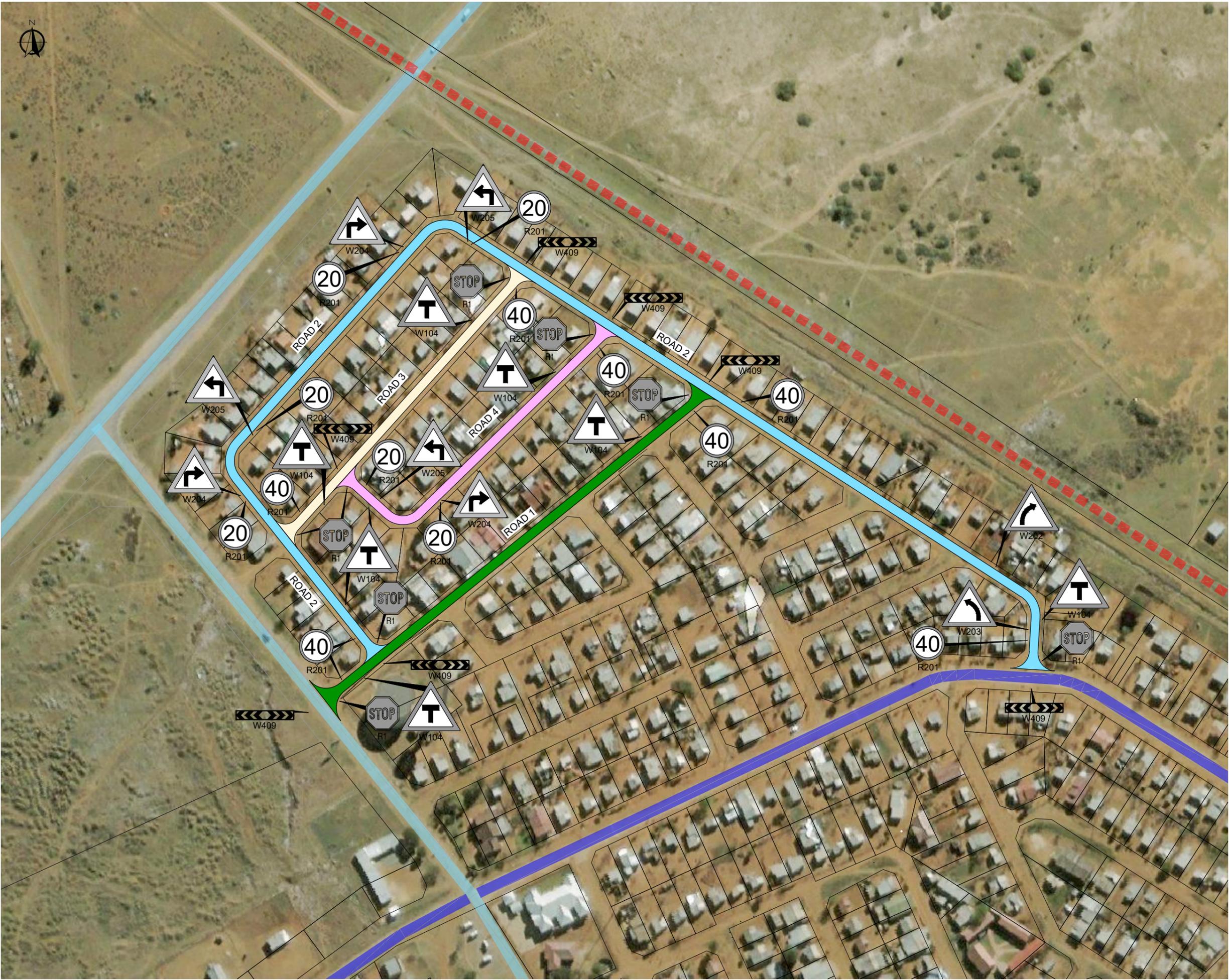
SCALE **1:1000**

DRAWING No. **2022-06-R/P/001**

REVISION No.	
1.0	

BENCHMARKS TABLE :WG 25 FROM TRIG 75				
NAME	DESC	Y	X	ELEVATION
BM 1	hic	-97120.464	3023554.102	1314.967
BM 2	hic	-97031.879	3023445.521	1316.424
BM 3	hic	-96783.302	3023294.772	1317.329
BM 4	hic	-96668.345	3023435.288	1317.467
BM 5	psg	-96718.292	3023568.122	1318.170
BM 6	hic	-96603.236	3023527.006	1317.751
BM 7	hic	-96913.446	3023368.929	1317.096
BM19	hic	-96888.174	3023714.128	1315.436
BM17	hic	-97110.969	3023803.627	1314.164

hic = HOLE IN CONCRETE



REVISIONS			
No.	DATE	BY	DESCRIPTION

- NOTES**
- PROPOSED NEW ROAD 1
 - PROPOSED NEW ROAD 2
 - PROPOSED NEW ROAD 3
 - PROPOSED NEW ROAD 4
 - EXISTING TAR ROAD
 - EXISTING PAVED ROAD
 - EXISTING RAILWAY LINE
1. FOR TYPICAL ROAD DETAILS REFER TO DRAWINGS RANGE R/D/004.
 2. FOR ROAD LONGSECTIONS REFER TO DRAWING RANGE R/L/004.
 3. FOR ROAD CROSS-SECTIONS REFER TO DRAWING RANGE R/X/004.

REFERENCE DRAWINGS	
PLAN No.	DESCRIPTION

APPROVED: _____ DATE: _____
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DRAWING TITLE
ROAD SIGNAGE LAYOUT

DESIGN	DATE	DRAWN	DATE
	JUN 2022		JUN 2022
SURVEYED	DATE	CHECKED	DATE
		J.BATEMAN	JUN 2022

SCALE: 1:1000

DRAWING No.
2022-06-R/S/001

REVISION No.					
1.0					