DRAWING TP1916.32-D02

No.	DATE	REVISION	CONSULT. ENG.
V1	21/06/2023	ORIGINAL VERSION	-

CONSTRUCTION RECORD (AS-BUILT)
WORKS CONTRACT ENGINEER
Name :
Date :

CONSULTANT APPROVAL
Name :
Prof. Reg. No. :
Date :

DESIGNED BY		
NAME		
Prof. Reg. No.	-	-
CHECKED BY		
NAME		
Prof. Reg. No.	-	-
DRAWN BY		
NAME	-	

SANRAL PROJECT MANAGER
Name :
Date :

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SANRAL
SOUTH AFRICAN NATIONAL ROADS AGENCY SOC LTD
BUILDING SOUTH AFRICA THROUGH BETTER ROADS
Reg No. 1998/009496/30

NORTHERN REGION
38 Ida Street
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ACCEPTANCE
THIS ACCEPTANCE IS FOR PROCEDURAL AND ADMINISTRATIVE REVIEW PURPOSES ONLY AND DOES NOT ATTRACT LEGAL LIABILITY OR LIABILITY OF ANY KIND FROM WHATSOEVER CAUSE OR HOWEVER ARISING

for the SA NATIONAL ROADS AGENCY SOC LTD.
Date:

PROJECT DESCRIPTION

MSBRR : R531 SECTION 2 - EMERGENCY REPAIR OF DAMAGED STEEL RIBBED PIPE CULVERT AT Km 6.9 AND SINKHOLE AT Km 11.4

DRAWING DESCRIPTION

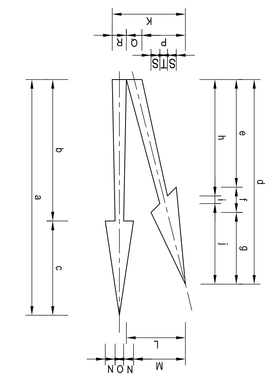
TYPICAL DETAILS OF ROAD MARKINGS
RURAL - SHEET 2 OF 2

SCALE : AS SHOWN (A0 SHEET) | SHEET 2 OF 2

PROJECT NUMBER		SANRAL DOCUMENT #	-	V1
R.531-020-2023/1		CONSULTANT DRAWING No.	TP1916.32-D02	V5R
DRAWING LOCATION DATA		BRIDGE/STRUCTURE No.	-	
START	END	DRAWING TYPE	ROADS - ANCILLARY	
R531	R531	ROUTE		
2	2	SECTION		
km 6.90	km 11.40	DRAWING km DISTANCE		

FURCATION ARROWS

N.T.S.



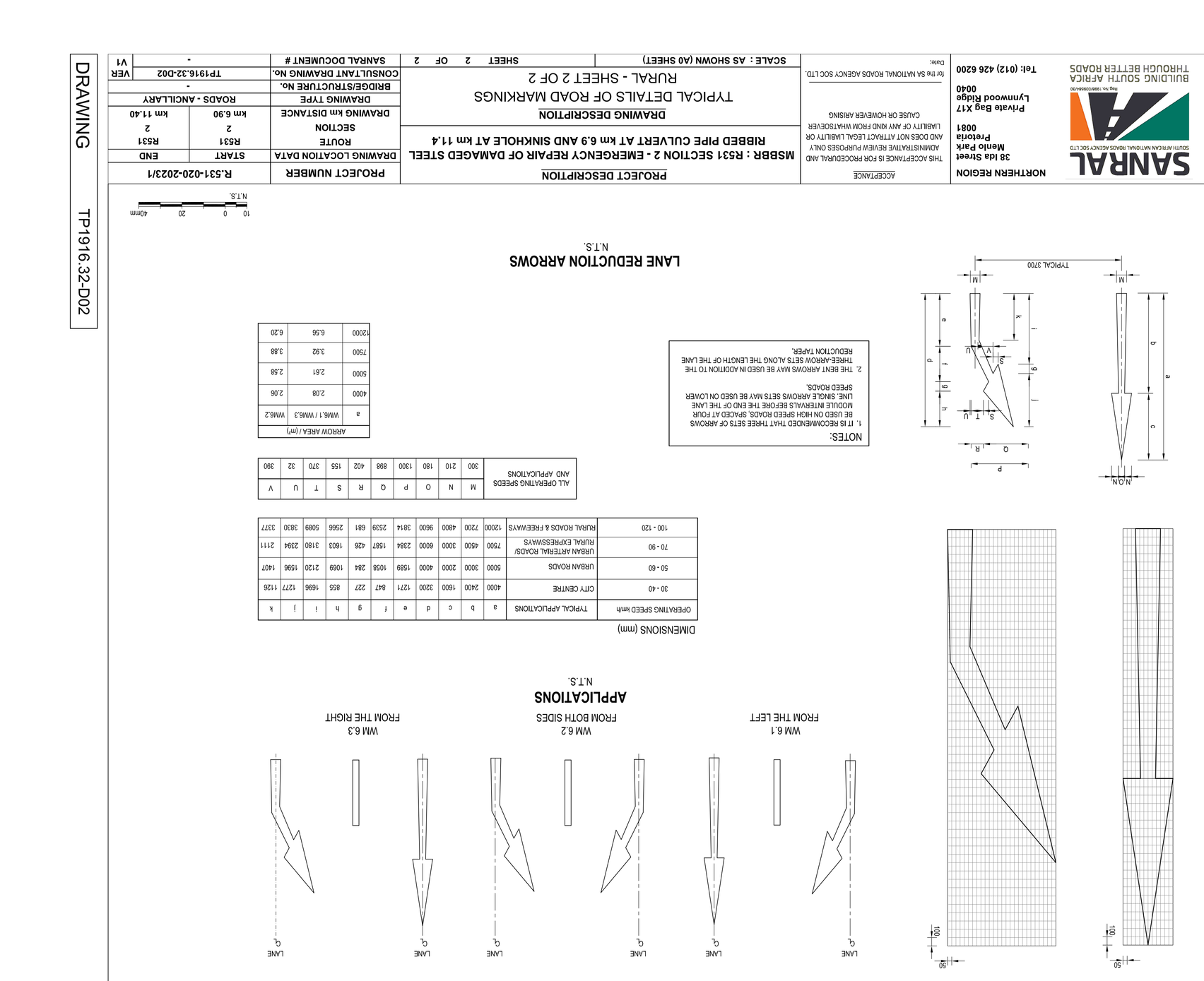
NOTES:
1. THESE ARROWS MAY BE USED TO INDICATE THAT THE NUMBER OF LANES IS INCREASING AHEAD. ONLY ONE SET OF ARROWS SHOULD BE USED UNLESS A LEFT AND RIGHT TURN LANE ARE ADDED TO A MULTI-LANE ROADWAY AT THE SAME POINT WHERE TWO SETS MAY BE USED.
2. DIRECTION ARROWS AHEAD SHALL NOT BE USED TO INDICATE ADDITION OF LANES AHEAD.
3. AS A GENERAL RULE BIFURACTION ARROWS SHOULD BE LOCATED TWO TO THREE MARKING MODULES BEYOND THE START OF THE LANE GENERATING TAPER OR CURVE.

ARROW AREA / (m²)																			
a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t
2500	1.30	1.27	1.93	(GM13 / GM3.3)															
4000	2.07	2.04	3.09	(GM13 / GM3.3)															
5000	2.59	2.55	3.87	(GM13 / GM3.3)															
7500	3.89	3.82	5.80	(GM13 / GM3.3)															

ALL OPERATING SPEEDS AND APPLICATIONS	K	L	M	N	O	P	Q	R	S	T
	1700	1250	1100	210	180	921	329	300	188	161

DIMENSIONS (mm)

OPERATING SPEED km/h	TYPICAL APPLICATIONS	a	b	c	d	e	f	g	h	i	j
30 - 40	CITY CENTRE	2500	1500	1000	2170	1141	268	761	1235	81	855
50 - 60	URBAN ROADS	4000	2400	1600	3472	1826	429	1218	1976	129	1367
70 - 90	URBAN ARTERIAL ROADS/ RURAL EXPRESSWAYS	5000	3000	2000	4340	2282	536	1522	2470	161	1709
100 - 120	RURAL ROADS & FREEWAYS	7500	4500	3000	6510	3423	804	2283	3705	242	2564



APPLICATIONS

N.T.S.

DIMENSIONS (mm)

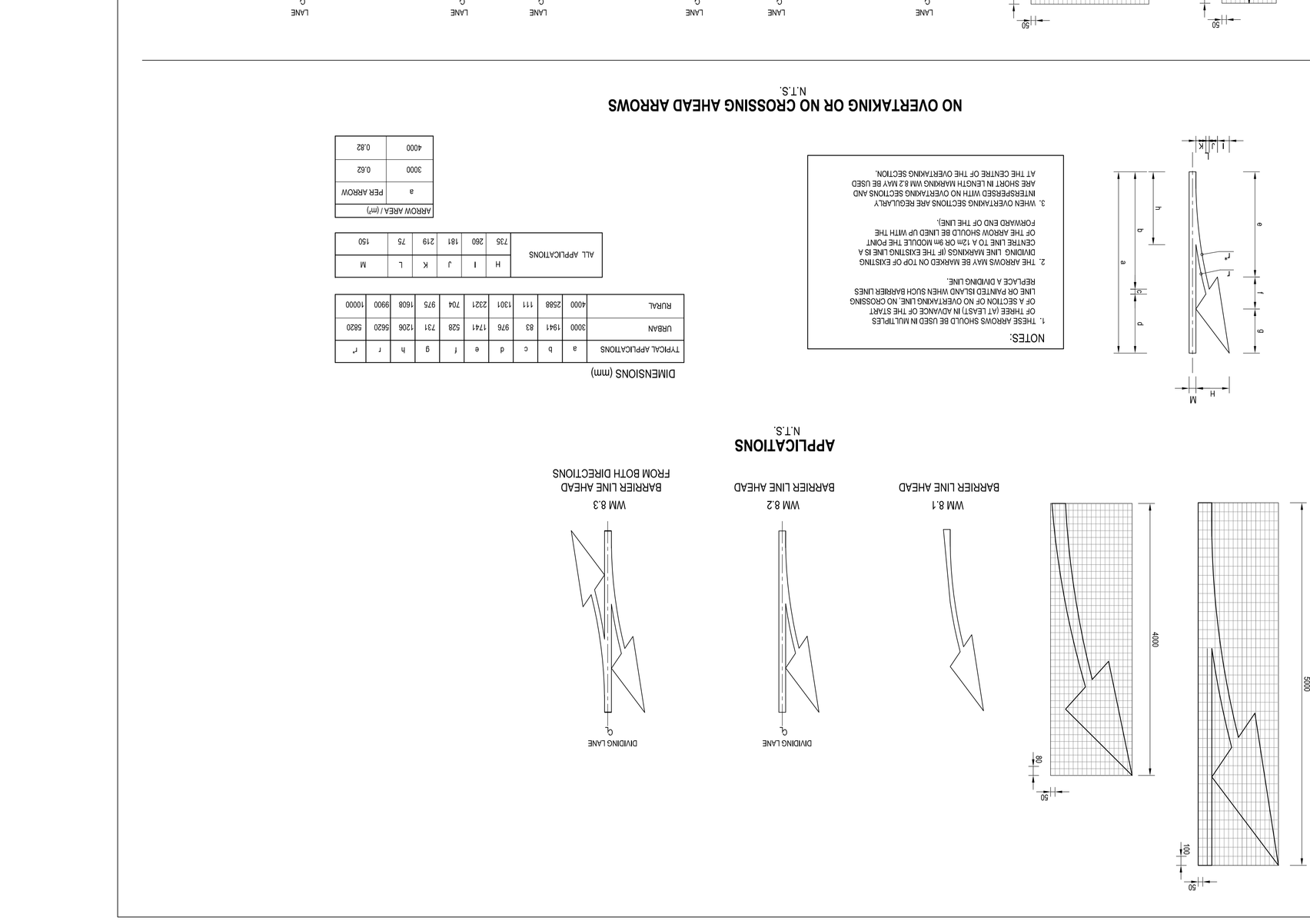
OPERATING SPEED km/h	TYPICAL APPLICATIONS	a	b	c	d	e	f	g	h	i	j	k
30 - 40	CITY CENTRE	4000	2400	1600	3200	1271	847	227	855	1696	1277	1126
50 - 60	URBAN ROADS	5000	3000	2000	4000	1589	1058	284	1069	2120	1596	1407
70 - 90	URBAN ARTERIAL ROADS/ RURAL EXPRESSWAYS	7500	4500	3000	6000	2384	1587	426	1603	3180	2394	2111
100 - 120	RURAL ROADS & FREEWAYS	12000	7200	4800	9600	3814	2539	681	2566	5089	3830	3377

ALL OPERATING SPEEDS AND APPLICATIONS	M	N	O	P	Q	R	S	T	U	V
	300	210	180	1300	856	402	155	370	32	390

ARROW AREA / (m²)																			
a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t
VMM6.1 / VMM6.3																			
4000	2.08	2.06																	
5000	2.61	2.58																	
7500	3.92	3.88																	
12000	6.56	6.20																	

LANE REDUCTION ARROWS

N.T.S.



NOTES:
1. IT IS RECOMMENDED THAT THREE SETS OF ARROWS BE USED ON HIGH SPEED ROADS. SPACED AT FOUR MODULE INTERVALS BEFORE THE END OF THE LANE LINE. SINGLE ARROWS SETS MAY BE USED ON LOWER SPEED ROADS.
2. THE BENT ARROWS MAY BE USED IN ADDITION TO THE THREE-ARROW SETS ALONG THE LENGTH OF THE LANE REDUCTION TAPER.

MANDATORY DIRECTION ARROWS

N.T.S.

NOTES:
1. THESE ARROWS MAY BE USED IN LANES TO INDICATE THAT DRIVERS SHALL PROCEED ONLY IN THE DIRECTION OR DIRECTIONS SHOWN. THEY SHOULD ONLY BE USED IF THE JUNCTION CONCERNED REQUIRED TURNING MOVEMENT CONTROL BY LANE.
2. THE FINAL ARROW NEAREST THE POINT OF TURN OR STRAIGHT ON MOVEMENT SHALL BE YELLOW. ANY ARROWS MARKED IN ADVANCE OF THIS POINT TO WARN DRIVERS OF THE MANOVATORY MOVEMENT AHEAD SHALL BE WHITE.
3. MANDATORY OR WARNING DIRECTION ARROW SHALL NOT BE USED IN ADVANCE OF A WIDENING OF THE ROADWAY TO A GREATER NUMBER OF LANES. THIS SHALL BE INDICATED IF NECESSARY BY USING PURCATION ARROWS.

Arrow Area / (m²)																			
a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t
WM7.1/WM7.5																			
2500	0.67	0.89	RM8.1/RM8.5 WM7.2/WM7.4											RM8.3 WM7.3			RM8.6 WM7.6		
4000	1.14	1.43																	
5000	1.45	1.78																	
7500	2.23	2.66																	

LEGEND:
R = RED
W = WHITE

All Operating Speeds and Applications	N	O	P	Q	R	S	T
	210	180	350	300	500	400	600

DIMENSIONS (mm)

OPERATING SPEED km/h	TYPICAL APPLICATIONS	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r
30 - 40	CITY CENTRE	2500	600	350	450	894	200	417	1000	1700	250	550	1250	700	380	1450	58	30	29
50 - 60	URBAN/RURAL EXPRESSWAY	4000	960	560	720	1406	320	666	1600	2720	400	880	2000	1120	608	2320	93	48	46
100 - 120	RURAL AND FREEWAYS	5000	1200	700	900	1767	400	833	2000	3400	500	1100	2500	1400	760	2900	116	60	58
ALL	SPECIAL APPLICATIONS	7500	1800	1050	1350	2651	600	1250	3000	5100	750	1650	3750	2100	1140	4350	174	90	87

APPLICATIONS

N.T.S.

NO OVERTAKING OR NO CROSSING AHEAD ARROWS

N.T.S.

NOTES:
1. THESE ARROWS SHOULD BE USED IN MULTIPLES OF THREE (3's) IN ADVANCE OF THE START LINE OR PAINTED ISLAND WHEN SUCH BARRIER LINES OF A SECTION OF NO OVERTAKING/ NO CROSSING LINE. SINGLE ARROWS MAY BE USED TO REPLACE A DIMMING LINE.
2. THE ARROWS MAY BE MARKED ON TOP OF EXISTING DIMMING LINE MARKINGS (IF THE EXISTING LINE IS A CENTRE LINE TO A 12m OR 9m MODULE THE POINT OF THE ARROW SHOULD BE LINED UP WITH THE FORWARD END OF THE LINE).
3. WHEN OVERTAKING SECTIONS ARE REGULARLY INTERSPERSED WITH NO OVERTAKING SECTIONS AND ARE SHORT IN LENGTH MARKING MAY BE USED AT THE CENTRE OF THE OVERTAKING SECTION.

ALL APPLICATIONS	H	I	J	K	L	M
	735	260	181	219	75	150

ARROW AREA / (m²)	
a	PER ARROW
3000	0.62
4000	0.82

APPLICATIONS

N.T.S.

DIMENSIONS (mm)																			
TYPICAL APPLICATIONS	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s
URBAN	3000	1941	63	976	1741	528	731	1206	5620	5620									
RURAL	4000	2588	111	1301	2321	704	975	1608	9900	10000									

N.T.S.

10 0 20 40mm