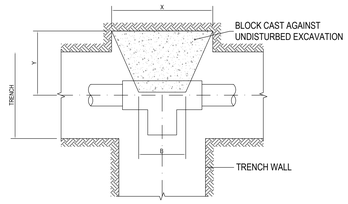


THRUST BLOCK FOR 45° BEND

SCALE 1:25

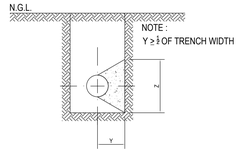
NOMINAL PIPE DIAMETER Ø (mm)	AREA REQUIRED (m^2)	DIMENSIONS (m)				AREA PROVIDED (m^2)	VOL (m^3)
		B	Z	X	Y		
75	0.061	0.300	0.400	0.400	0.350	0.160	0.049
110	0.109	0.300	0.500	0.500	0.375	0.250	0.075
160	0.245	0.300	0.500	0.500	0.400	0.250	0.080
200	0.435	0.300	0.600	0.800	0.400	0.480	0.132
250	0.680	0.350	0.650	1.100	0.450	0.715	0.212
300	0.979	0.400	0.700	1.400	0.500	0.980	0.315
> 300	SEE PARTICULAR NOTE 5						



THRUST BLOCK FOR TEE-PIECE

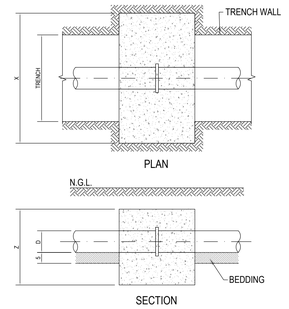
SCALE 1:25

NOMINAL PIPE DIAMETER Ø (mm)	AREA REQUIRED (m^2)	DIMENSIONS (m)				AREA PROVIDED (m^2)	VOL (m^3)
		B	Z	X	Y		
75	0.079	0.150	0.400	0.400	0.350	0.160	0.039
110	0.141	0.200	0.500	0.500	0.375	0.250	0.066
160	0.318	0.300	0.500	0.700	0.400	0.350	0.100
200	0.565	0.300	0.600	1.000	0.400	0.600	0.156
250	0.833	0.350	0.650	1.400	0.450	0.910	0.256
300	1.272	0.400	0.700	1.900	0.500	1.330	0.403
> 300	SEE PARTICULAR NOTE 5						



TYPICAL SECTION FOR 22.5° & 45° BEND

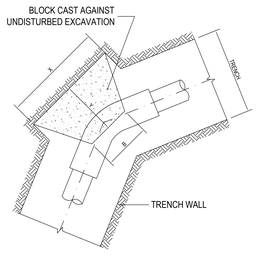
SCALE 1:25



THRUST BLOCK FOR PUDDLE FLANGE

SCALE 1:25

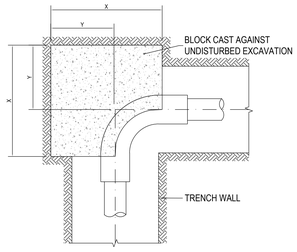
NOMINAL PIPE DIAMETER Ø (mm)	AREA REQUIRED (m^2)	TRENCH WIDTH (m)	DIMENSIONS (m)			AREA PROVIDED (m^2)	VOL (m^3)
			X	Y	Z		
75	0.078	0.475	0.875	0.500	0.575	0.410	0.250
110	0.139	0.500	0.900	0.500	0.600	0.420	0.270
160	0.312	0.550	0.950	0.700	0.650	0.450	0.420
200	0.555	0.600	1.000	0.700	0.900	0.740	0.610
250	0.867	0.650	1.250	1.000	0.950	0.950	1.140
300	1.250	0.700	1.500	1.000	1.000	1.250	1.430
> 300	SEE PARTICULAR NOTE 5						



THRUST BLOCK FOR 22.5° BEND

SCALE 1:25

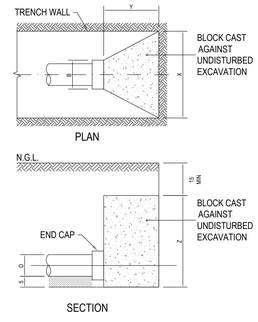
NOMINAL PIPE DIAMETER Ø (mm)	AREA REQUIRED (m^2)	DIMENSIONS (m)				AREA PROVIDED (m^2)	VOL (m^3)
		B	Z	X	Y		
75	0.031	0.300	0.400	0.400	0.350	0.160	0.049
110	0.055	0.300	0.500	0.500	0.375	0.250	0.075
160	0.124	0.300	0.500	0.500	0.400	0.250	0.080
200	0.220	0.300	0.600	0.600	0.400	0.360	0.108
250	0.344	0.350	0.650	0.650	0.450	0.423	0.146
300	0.496	0.400	0.700	0.800	0.500	0.560	0.210
> 300	SEE PARTICULAR NOTE 5						



THRUST BLOCK FOR 90° BEND

SCALE 1:25

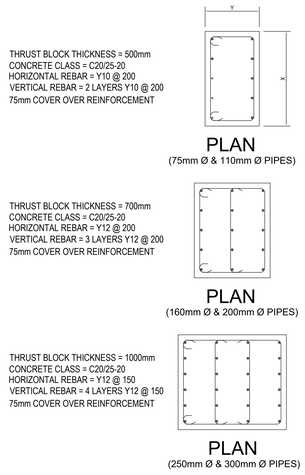
NOMINAL PIPE DIAMETER Ø (mm)	AREA REQUIRED (m^2)	DIMENSIONS (m)			AREA PROVIDED (m^2)	VOL (m^3)
		Z	X	Y		
75	0.078	0.400	0.350	0.350	0.140	0.049
110	0.139	0.500	0.380	0.375	0.190	0.072
160	0.314	0.500	0.650	0.400	0.330	0.211
200	0.576	0.600	1.000	0.400	0.600	0.600
250	0.871	0.650	1.400	0.450	0.910	1.274
300	1.225	0.700	1.800	0.500	1.260	2.268
> 300	SEE PARTICULAR NOTE 5					



THRUST BLOCK FOR DEAD END

SCALE 1:25

NOMINAL PIPE DIAMETER Ø (mm)	AREA REQUIRED (m^2)	DIMENSIONS (m)				AREA PROVIDED (m^2)	VOL (m^3)
		B	Z	X	Y		
75	0.078	0.075	0.300	0.475*	0.200	0.140	0.017
110	0.139	0.100	0.300	0.500*	0.200	0.150	0.018
160	0.312	0.150	0.600	0.550*	0.200	0.330	0.063
200	0.555	0.200	0.650	0.600*	0.200	0.570	0.076
250	0.867	0.250	0.700	1.250	0.500	0.880	0.263
300	1.248	0.300	0.750	1.700	0.700	1.280	0.525
> 300	SEE PARTICULAR NOTE 5				* = TRENCH WIDTH		



REINFORCEMENT DETAILS FOR PUDDLE FLANGE THRUST BLOCKS

No.	DATE	REVISION	
V1	08/03/2024	ORIGINAL VERSION	

HEAD OFFICE
48 Tambotie Avenue
Val de Grace
Pretoria
0184

PO Box 415
Pretoria 0001
South Africa

Tel: (012) 844 8000

SANRAL
SOUTH AFRICAN NATIONAL ROADS AGENCY SOC LTD
BUILDING SOUTH AFRICA THROUGH BETTER ROADS

WESTERN REGION
1 Havenga Street
Oakdale
Bellville
7530

Private Bag X19
Bellville
7535

Tel: (021) 957 4600

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
THE CAPACITY IMPROVEMENT OF NATIONAL ROUTE 1 SECTION 1 FROM OLD OAK INTERCHANGE (KM 18.90) TO KOELENHOF INTERCHANGE (KM 33.00)

TYPICAL WATER DETAILS
ANCHOR BLOCK DETAILS
SHEET 2 OF 2

SCALE @ A0: AS SHOWN | SHEET 2 OF 2

PROJECT NUMBER	N001-010-2021/1	
DRAWING LOCATION DATA	START	END
ROUTE	N01	N01
SECTION	01	01
DRAWING km DISTANCE	18.900	33.000
DRAWING TYPE	TYPICAL SERVICE DETAILS	
BRIDGE/STRUCTURE No.	N/A	
CONSULTANT DRAWING No.	312-00827-01-TD84	VER
SANRAL DOCUMENT #	XXXXXX	V1

312-00827-01-TD84