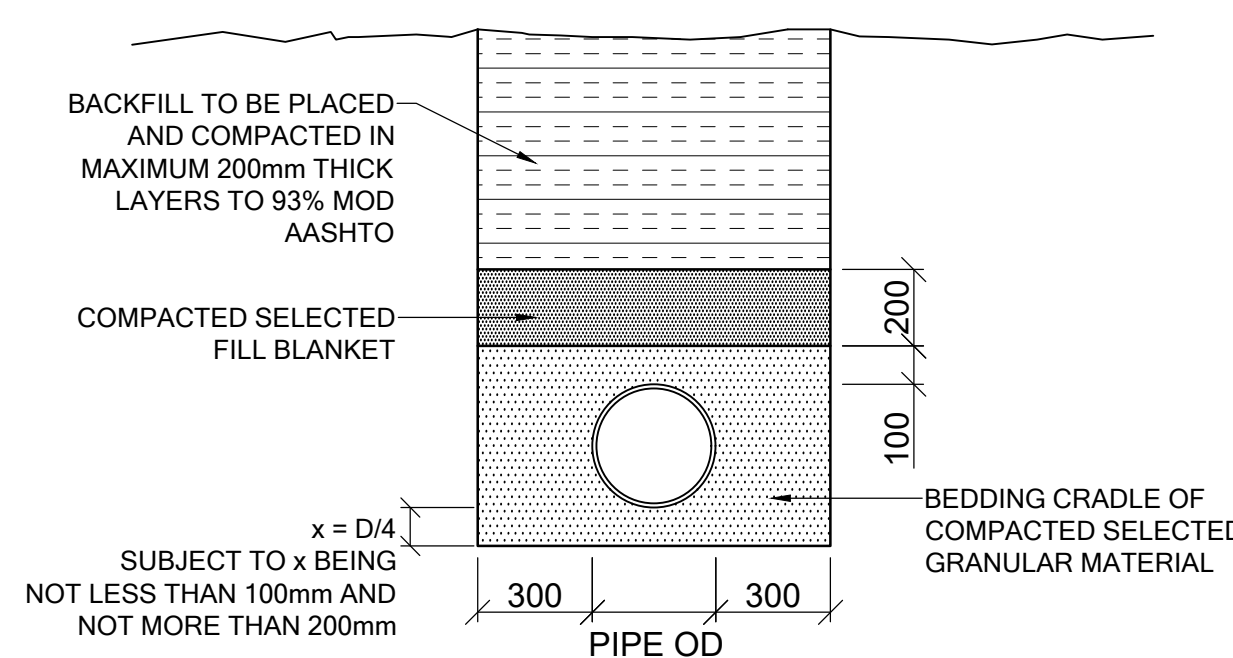
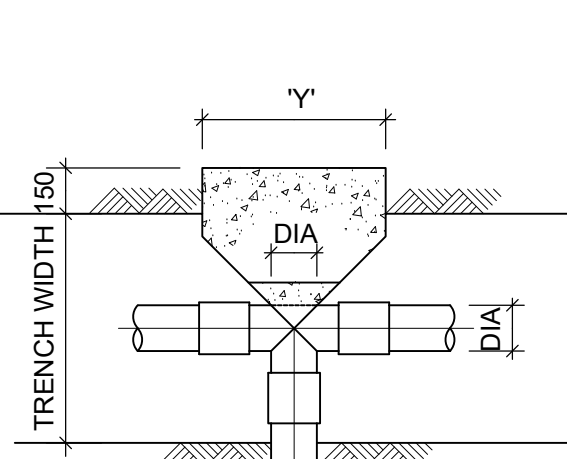


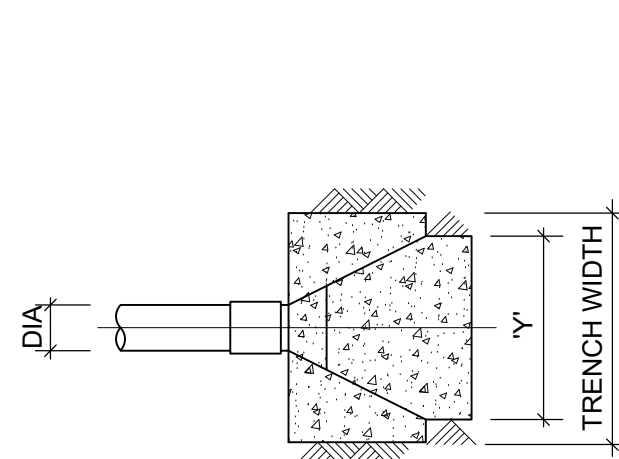
PIPE BEDDING DETAIL: RIGID PIPES  
SCALE 1:20



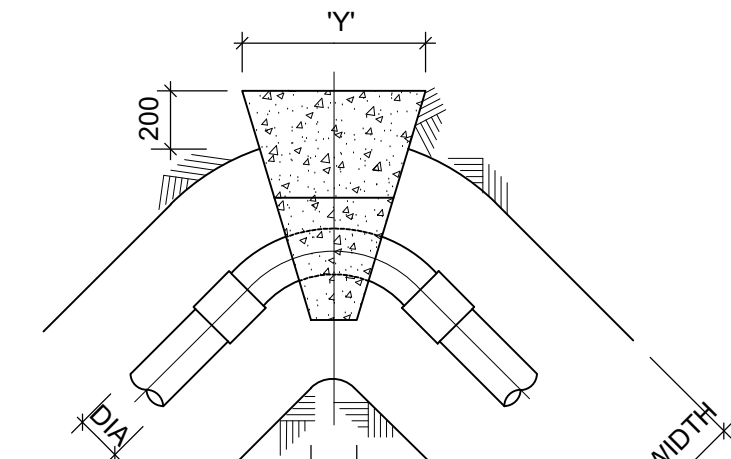
PIPE BEDDING DETAIL: FLEXIBLE PIPES  
SCALE 1:20



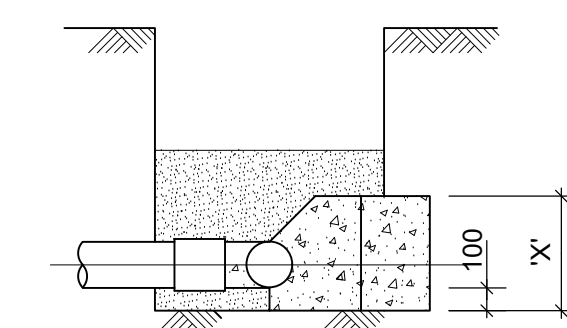
TEE PLAN



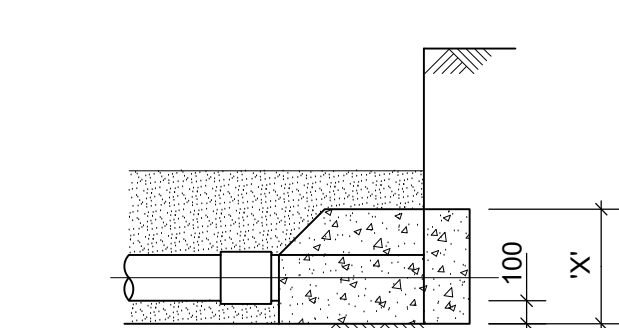
END-CAP PLAN



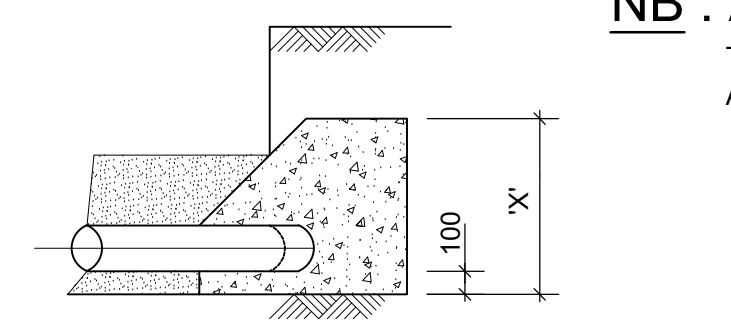
BEND PLAN



SECTION



SECTION

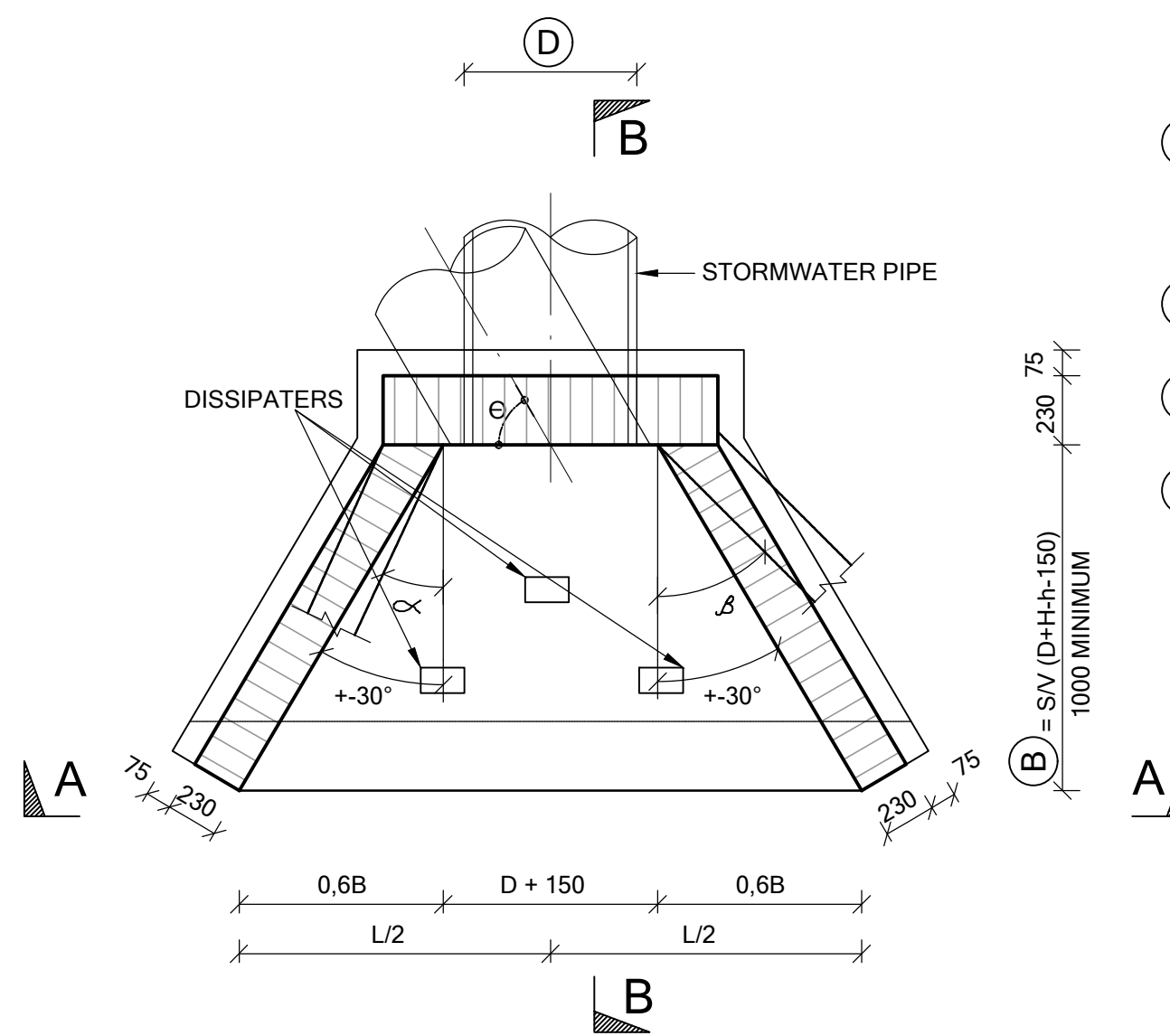


SECTION

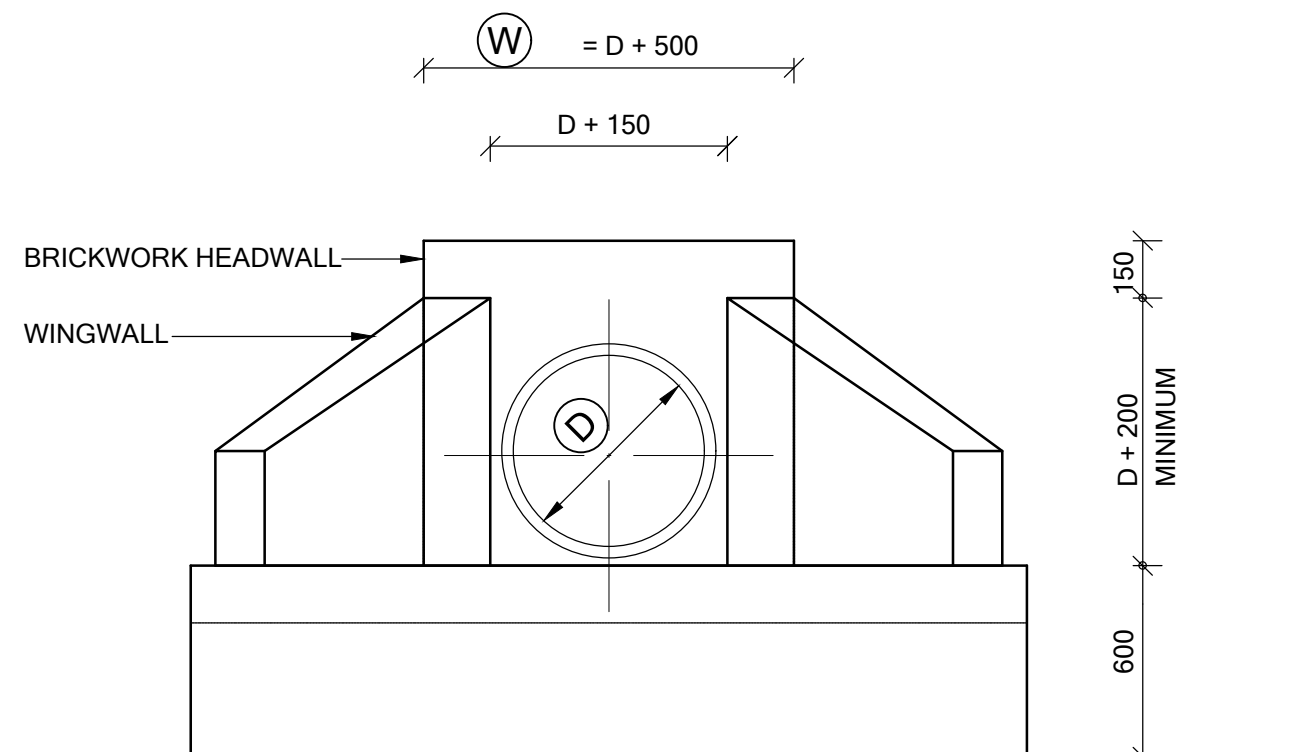
THRUST BLOCK SIZES (in mm) IN NORMAL EARTH FOR HEADS OF 120m												
PIPE SIZE	END CAP		TEE (BRANCH)		90° BEND		45° BEND		22.5° BEND		11.25° BEND	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
50-75	300x200		300x200		350x300		300x250		300x200		300x200	
100	300x400		300x400		400x500		350x300		300x200		300x200	

TYPICAL THRUST BLOCK DETAILS  
N.T.S

**NB :** ALL BENDS / TIES / END CAPS AND VALVES TO HAVE A THRUST BLOCKS CONSTRUCTED. ALL CONCRETE TO THRUST BLOCKS TO BE 20 Mpa



PLAN



ELEVATION A-A

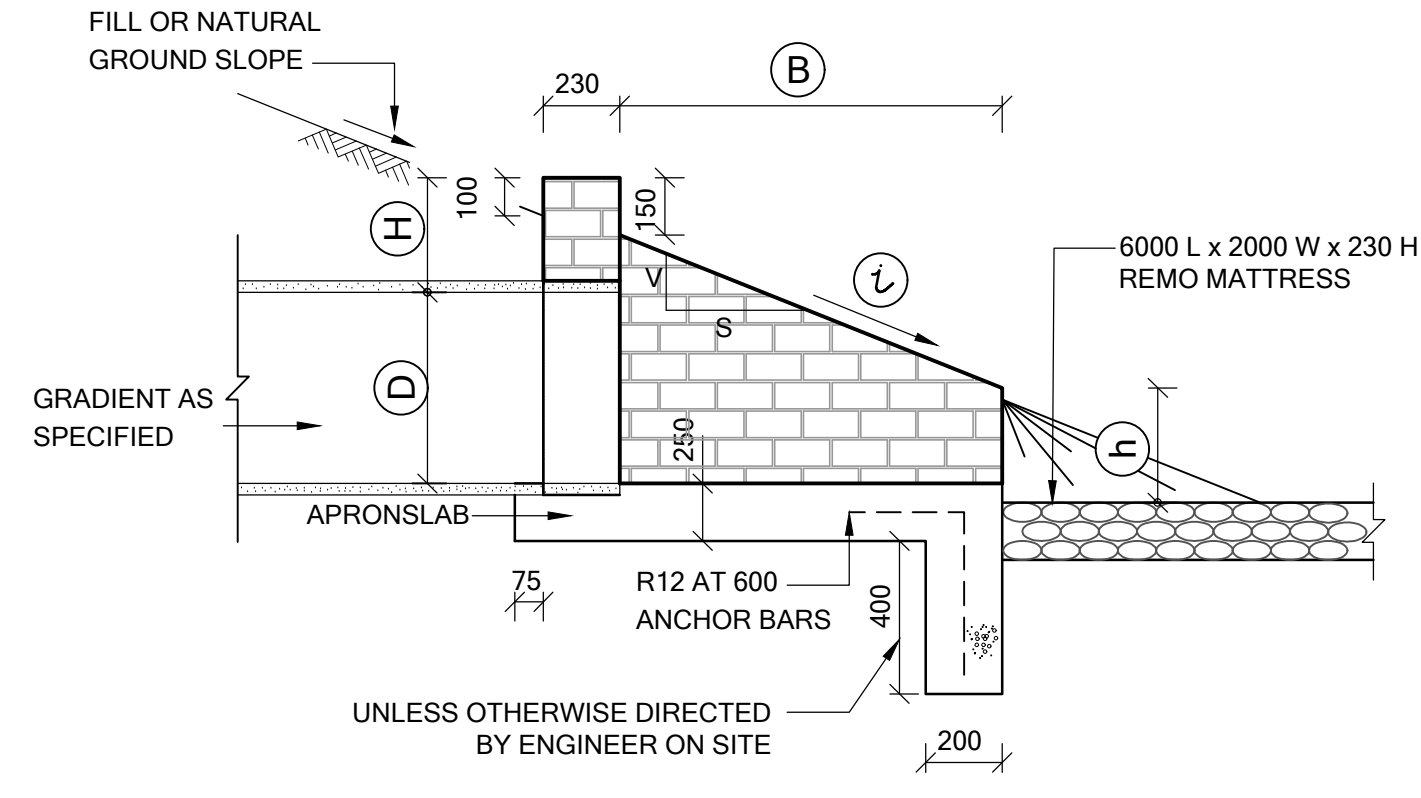
- NOTES**
1.  $\theta = 80^\circ$  MIN. ;  $90^\circ$  MAX.  $\alpha < 0.2^\circ$  -  $5^\circ$  (30" MAX.)  $\Delta = 75^\circ$  -  $0.2^\circ$   $D =$  NOMINAL PIPE DIAMETER
  2. APRON SLAB IN 20 MIX CONCRETE
  3. ALL EXPOSED CORNERS 10 x 10 CHAMFERED
  4. HEADWALL AND WINGWALL : 230 BRICKWORK PLASTERED WITH 12 THICK 1:3 CEMENT/SAND MORTAR WITH WOOD FLOAT FINISH

EROSION PROTECTION MEASURES AS SPECIFIED BY THE ENGINEER. WHERE GRASS IS SPECIFIED, SCARIFY AND HYDROSEED WITH THE FOLLOWING MIX OF GRASS SEED UNLESS ANOTHER MIX HAS BEEN SPECIFIED:

- CLORIS GYANA (10kg/ha)
- CYNODON DACTYLON (15kg/ha)
- ERAGROSTIS TEF (5kg/ha)

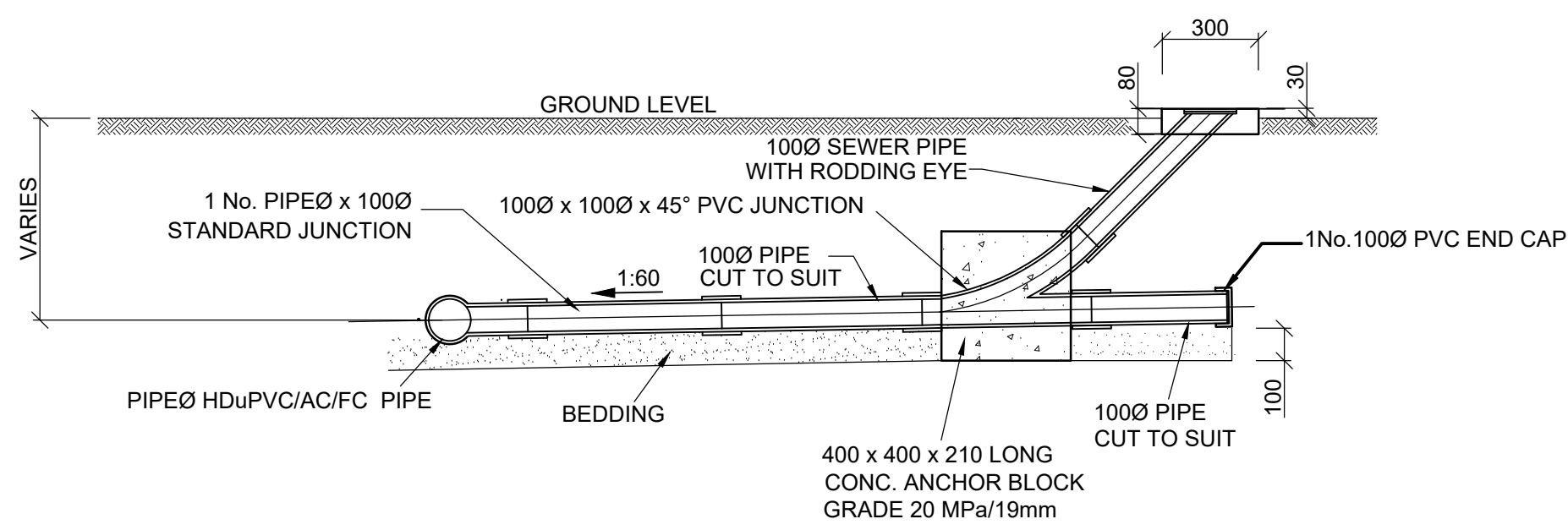
OUTLET/INLET DIMENSIONS IN mm FOR :				
$\theta = 90^\circ$ ; $L = 1:1.5$ ; $h = 300\text{mm}$ & $H = 600\text{mm}$				
NOM PIPE DIA (D)	(W)	(B)	(L)	
225	725	1000	1580	
300	800	1000	1650	
375	875	1000	1720	
450	950	1000	1800	
600	1100	1200	2150	
750	1250	1250	2300	

$L$  = V/S = GRADIENT TO SUIT FILL OR NATURAL GROUND SLOPE (1:1.5 MAX.)  
 $h$  = HEIGHT TO SUIT GRADIENT (300 MIN.)  
 $H$  = 300 MIN. ; 900 MAX.



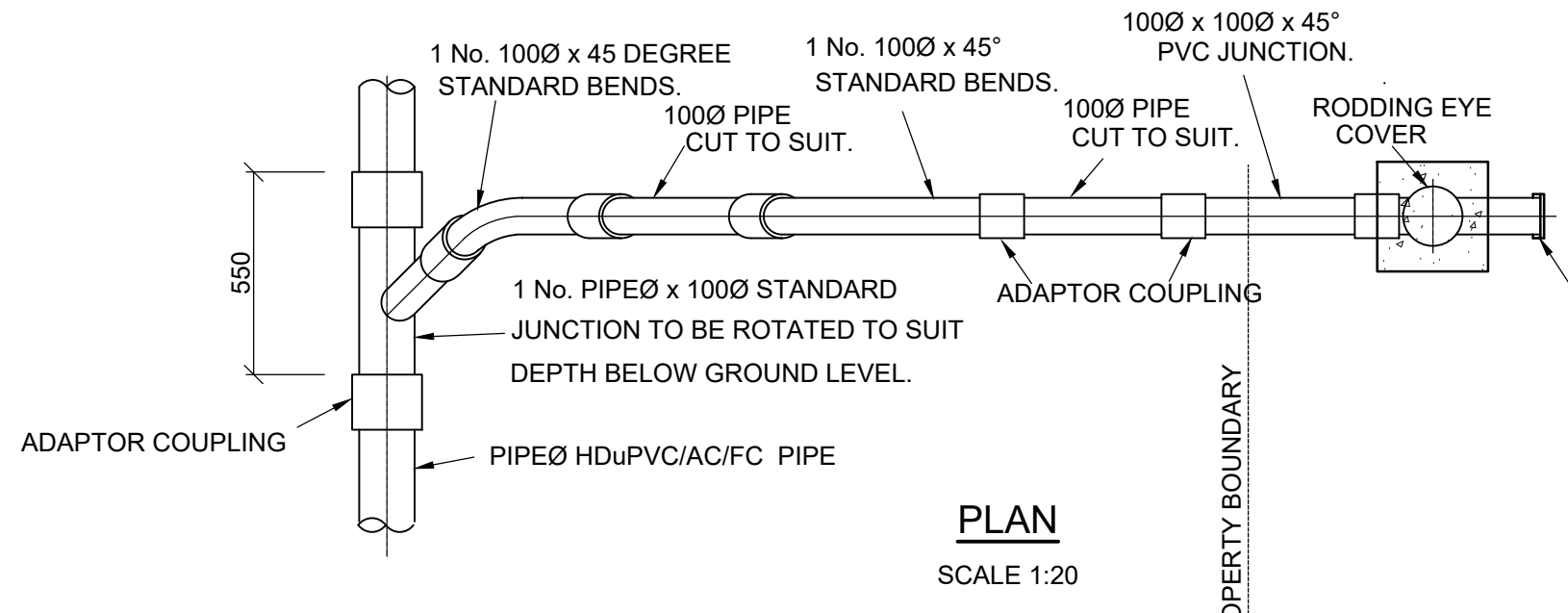
ELEVATION B-B

STORMWATER HEADWALL DETAILS  
SCALE 1:20



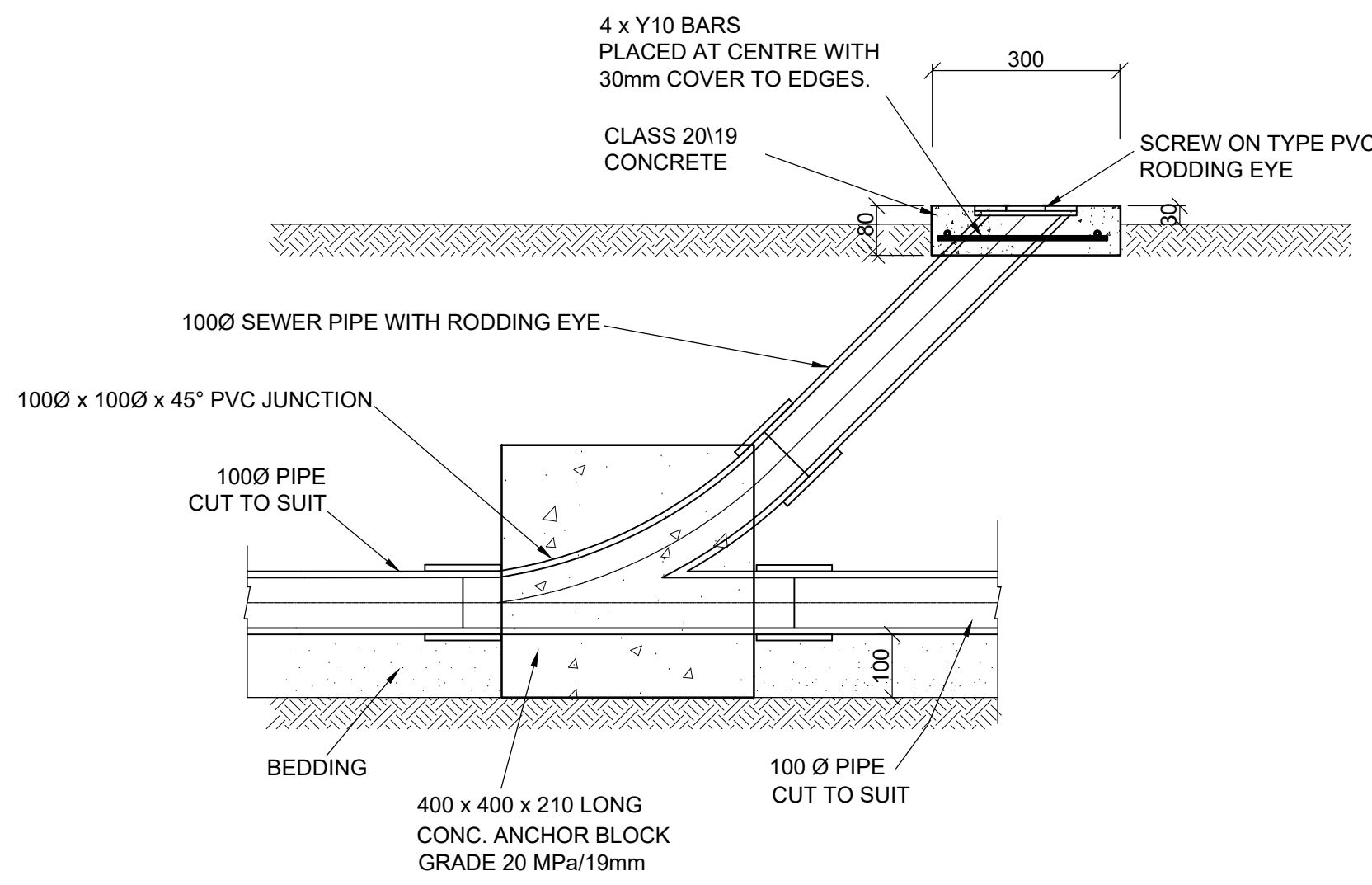
SECTION  
SCALE 1:20

DETAILS OF TYPICAL SLOPING DROP CONNECTION



PLAN  
SCALE 1:20

DETAILS OF TYPICAL NORMAL CONNECTION



DETAIL OF SEWER RODDING EYE

SCALE 1:10

## NOTES

- GENERAL**
1. ALL SETTING OUT TO BE UNDERTAKEN BY A REGISTERED PROFESSIONAL LAND SURVEYOR.
  2. PROVE ALL SERVICES PRIOR TO CONSTRUCTION.
  3. ALL WORK AREAS TO BE REINSTATED (PREMIX, CONCRETE, ETC.)
  4. MUNICIPALITY TO EXECUTE ALL CONNECTIONS INTO MUNICIPAL LINES
  5. ALL LEVELS AND DIMENSIONS TO BE VERIFIED ON SITE.
  6. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE STRUCTURAL ENGINEERING DRAWINGS.
  7. ALL WORK IS TO BE EXECUTED IN ACCORDANCE WITH SANS 1200.
  8. CONTRACTOR TO PROVIDE AN AS-BUILT SURVEY OF ALL WORKS CONSTRUCTED UPON COMPLETION OF THE PROJECT.

## STORMWATER

1. ALL STORMWATER PIPES ARE:
  - 375mm/450mm NOMINAL DIAMETER - CLASS 1000 CONCRETE
2. ALL STORMWATER CONCRETE PIPES TO COMPLY WITH SANS 877 STANDARDS.
3. ALL JOINTS TO BE 'SPIGOT AND SOCKET' TYPE.
4. ALL STORMWATER PIPES TO BE LAID ON CLASS B BEDDING.

## SEWER

1. ALL SEWER PIPES ARE 160mm NOMINAL DIAMETER CLASS 34 HEAVY DUTY UPVC PIPES.
2. ALL SEWER PIPES TO BE LAID ON CLASS B BEDDING
3. ALL SEWER PIPES TO COMPLY WITH SANS 1601 STANDARDS.
4. ALL SEWER PIPES IN PARKING AREAS/ROAD CROSSING TO BE CONCRETE ENCASED 150mm ALL ROUND WITH 28MPA CONCRETE AT 28 DAYS STRENGTH.

## WATER RETICULATION

1. ALL PIPEWORK AND FITTINGS TO BE READ IN CONJUNCTION WITH DRAWING NO. - 484/900
2. BEDDING TO SUIT FLEXIBLE PIPES.
3. PIPES TO BE INSTALLED WITH ALL COUPLINGS AND TO BE TESTED AND DISINFECTED.
4. INSTALLATION TO COMPLY WITH SABS 1200.
5. THRUST BLOCKS TO BE 20MPA CONCRETE AT 28 DAYS STRENGTH.
6. CONTRACTOR TO ENSURE THAT ALL INDIVIDUAL DOMESTIC SUPPLY WATER MAINS ARE CONNECTED TO THE POTABLE WATER RETICULATION AND NOT THE FIRE RETICULATION.
7. MINIMUM COVER TO BURIED PIPES SHALL BE 800mm, EXCEPT AT ROAD CROSSINGS WHERE THE COVER SHALL BE INCREASED TO 1200mm.

REVISION SCHEDULE		
NO.	DATE	DESCRIPTION
1	07-10-2024	FOR TENDER

DEPARTMENT OF HEALTH	
<u>INFRASTRUCTURE DEVELOPMENT</u>	
CHIEF ENGINEER : MR E. CHIRO : CIVIL / STRUCTURAL	
.....	
SIGNATURE	DATE
PROJECT MANAGER : MR T. DLAMINI	
.....	
SIGNATURE	DATE

CLIENT DEPARTMENT SIGNATURES:	
FACILITY STAMP:	

FACILITY MANAGER:	
INFRASTRUCTURE MANAGER:	
GENERAL MANAGER:	
CHECKED BY CONSULTANT:	
NAME:	
SIGNATURE	DATE

CONSULTANT:	
SUITE 601A GROUND FLOOR BUSINESS PARTNERS CENTRE 23 JAN HOFMEYER ROAD WESTVILLE 3600 TEL: +27 31 309 5831. FAX: +27 31 309 2929 email: admin@mapafrica.co.za ; www.mapafrica.co.za	

	<b>PROVINCE OF KWAZULU-NATAL</b> <b>DEPARTMENT OF PUBLIC WORKS</b> HEAD: PUBLIC WORKS
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MIDLANDS REGION
PROJECT:
WIMS 066058: DRIEFONTEIN CLINIC - UPGRADE SEWER TREATMENT PLANT

DRAWING DESCRIPTION:
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STANDARD DETAILS
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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
1:200	07-10-2024	KG	PN

CONSULTANT DRAWING NUMBER:	REVISION:
484/906	T1

DOPW DRAWING NUMBER:
WIMS NO/066058/CIV/906

STAMPED BY PLANS APPROVAL COMMITTEE:
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FOR TENDER