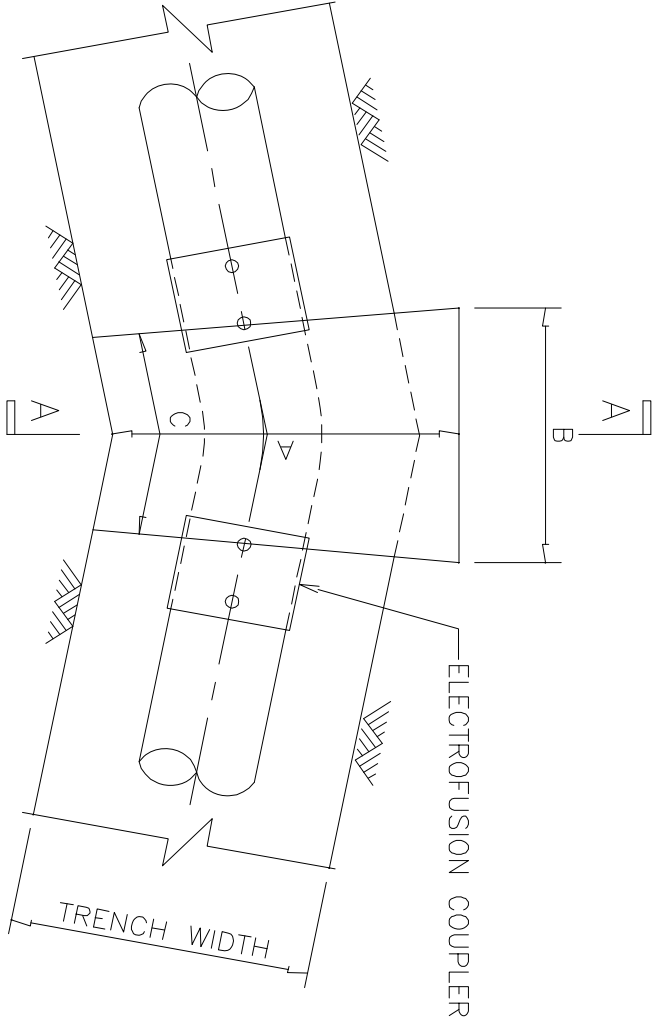
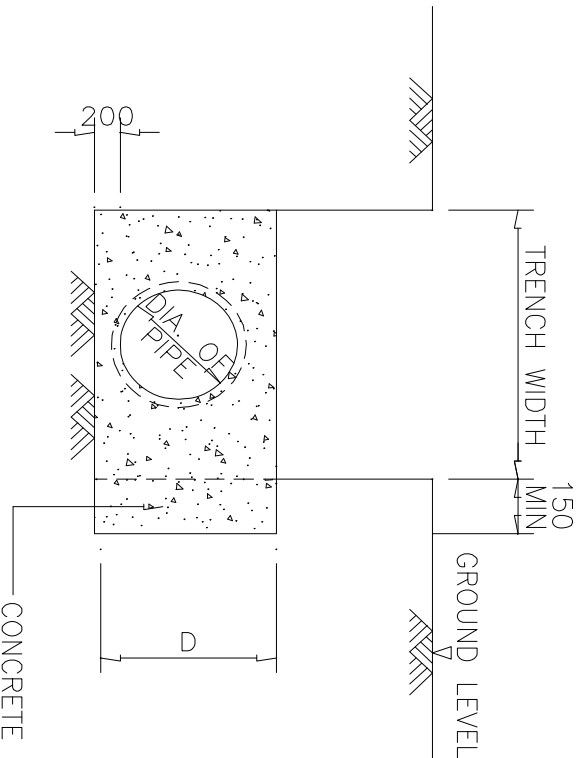




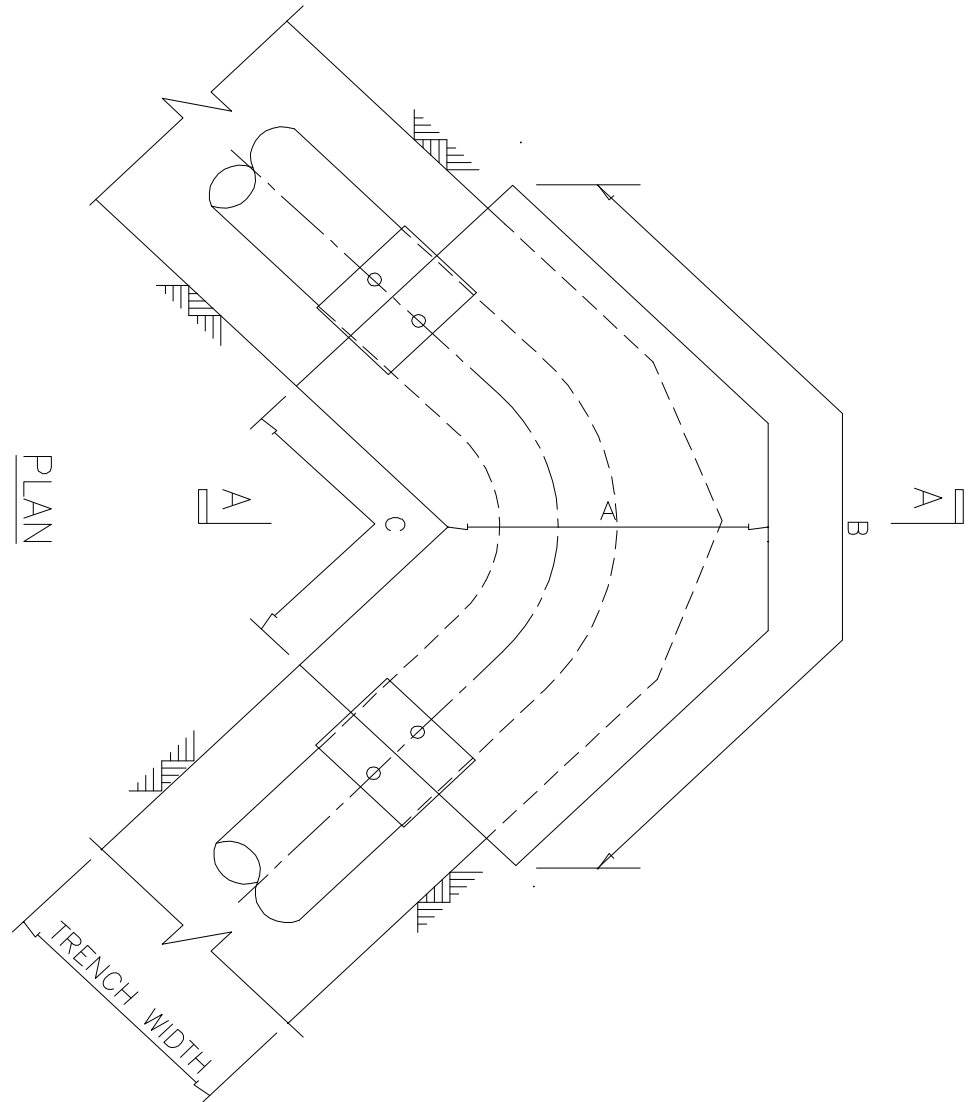
PLAN

LESS THAN 30° BEND



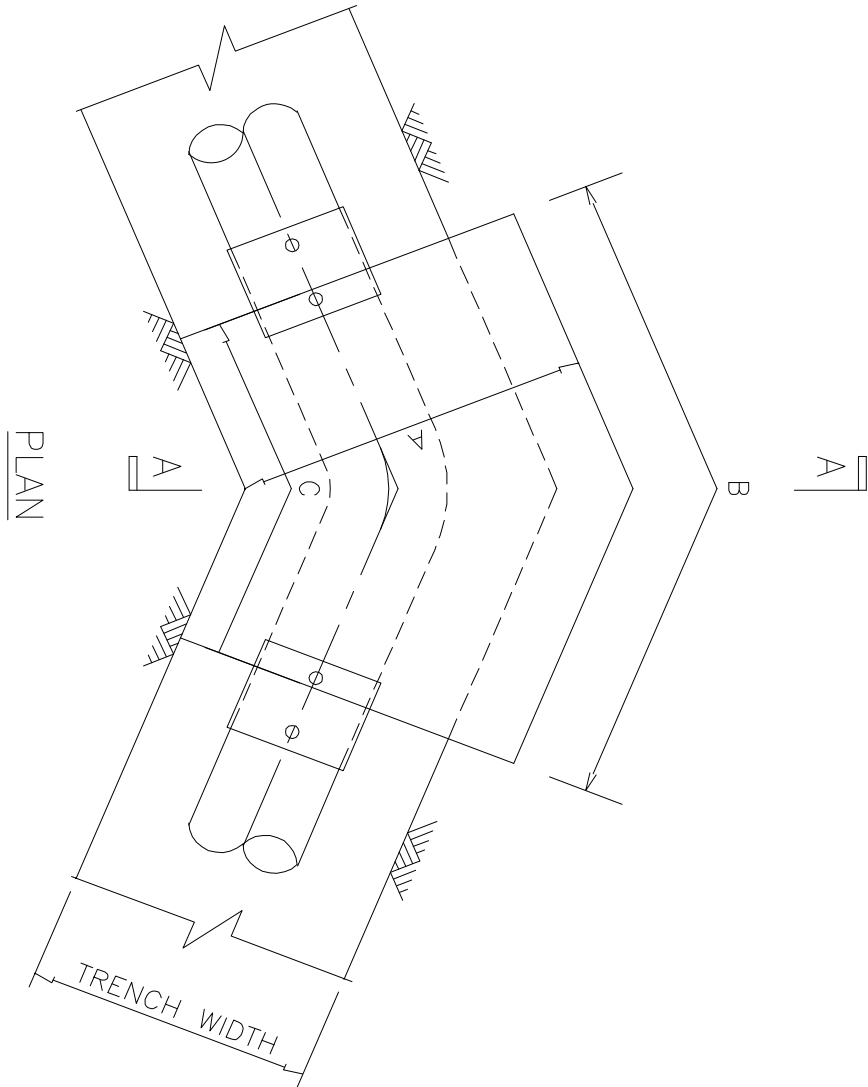
SECTION A-A

TABLE FOR CONCRETE THRUST BLOCK FOR HORIZONTAL BENDS												
PIPE OD (mm)	PIPE ND (mm)	BEND										
		UP TO 30°					OVER 30° TO 60°					OVER 60° TO 90°
		A	B	C	D	A	B	C	D	A	B	
450	450	1100	1700	1000	900	1200	2900	1200	1200	1200	4000	1300
450	400	1050	1550	800	800	1050	2700	1050	1000	1050	3800	1050
400	400	1000	1300	600	750	1000	2350	750	850	1000	3200	800
355	300	950	1050	350	700	950	2050	600	700	950	2800	600
280	250	800	800	300	650	900	1600	350	650	900	2250	350
225	200	600	600	300	600	850	1150	300	600	850	1600	300
180	150	400	400	200	550	800	800	200	550	800	1200	200
125	100	300	300	200	500	750	700	200	500	750	1100	200



PLAN

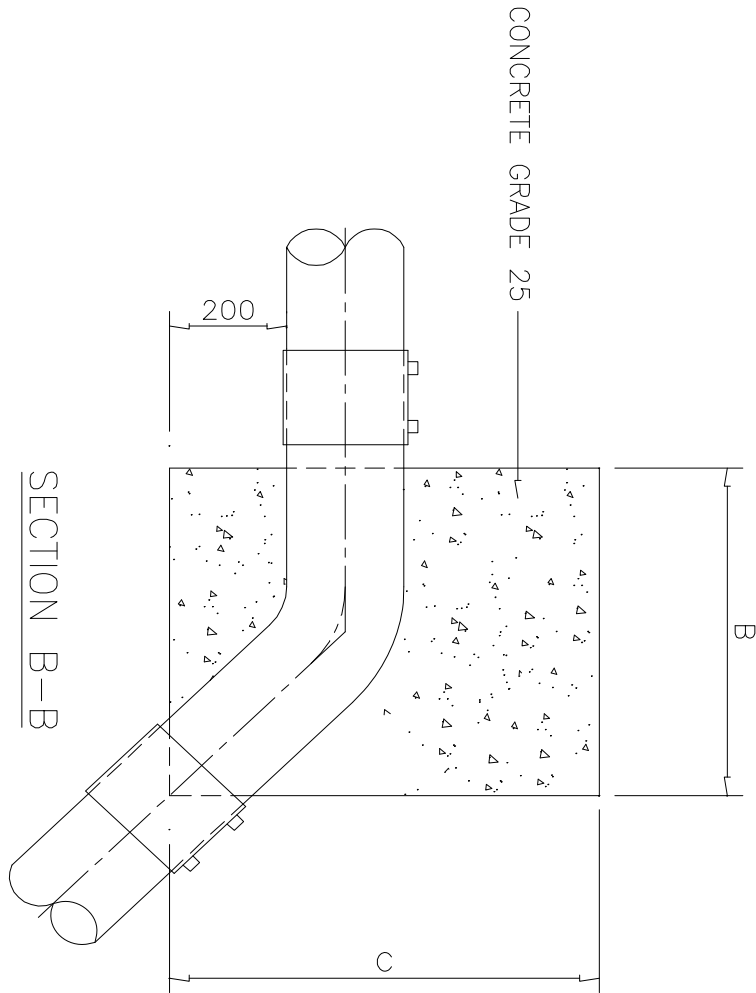
61° TO 90° BEND



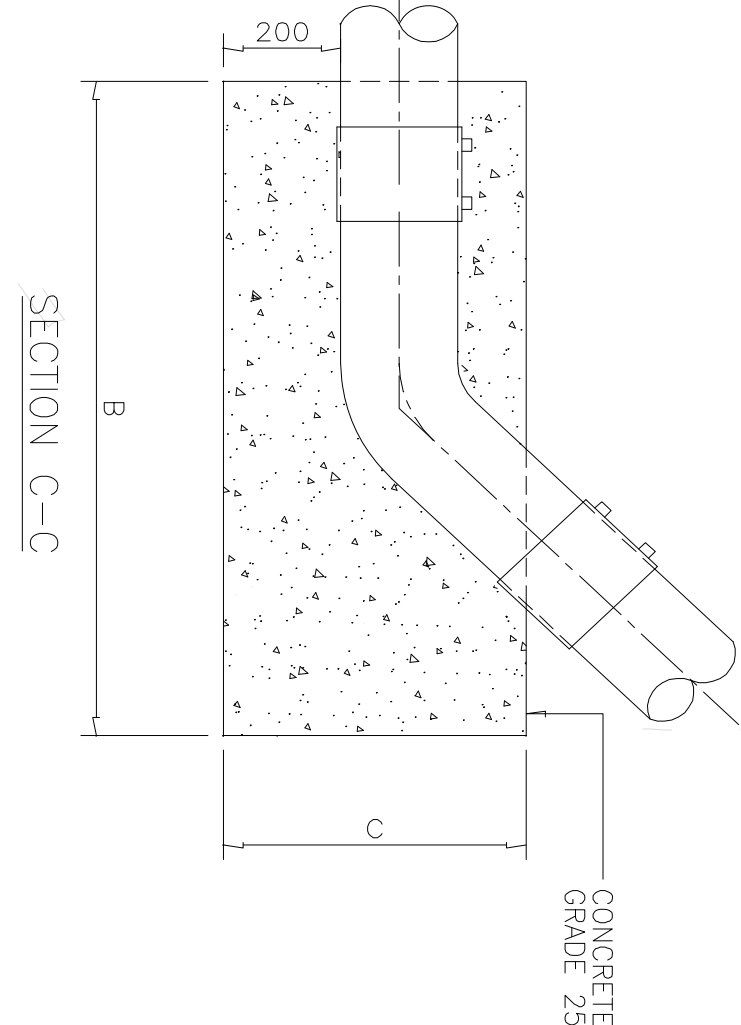
PLAN

31° – 60° BEND

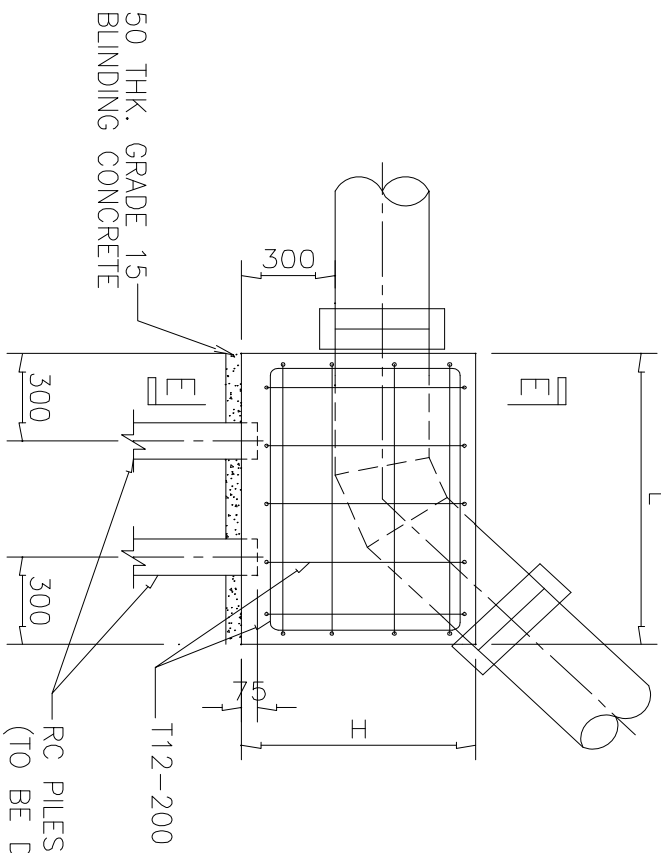
TYPICAL CONCRETE THRUST BLOCK FOR HORIZONTAL BEND



SECTION B-B

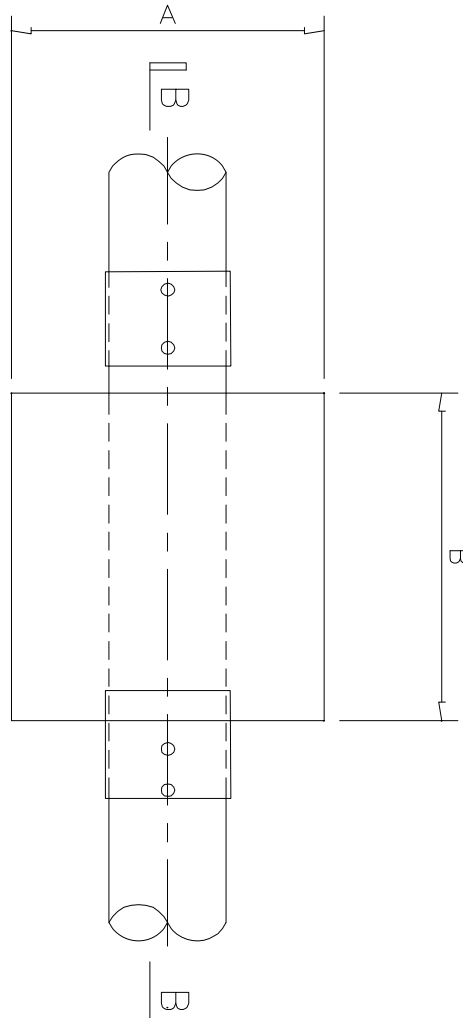


SECTION C-C



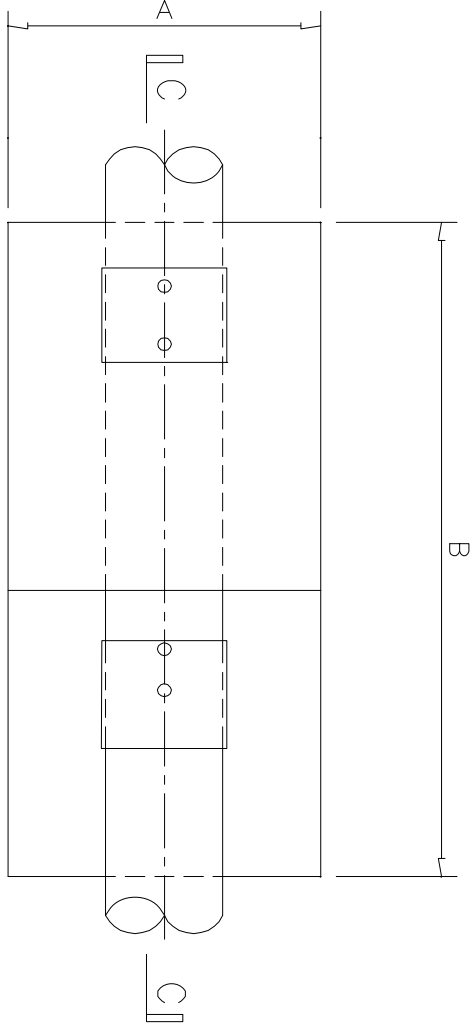
SECTION D-D

TABLE FOR CONCRETE THRUST BLOCK WITH RC PILE FOR OVERCROSSING									
No. OF PILE	PIPE OD (mm)	PIPE ND (mm)	H	L	A	BEND			
						UP TO 15°	OVER 15° TO 30°	OVER 30° TO 45°	OVER 45° TO 60°
2 Nos.	450	450	900	1200	1000	1100	900	1200	1700
	400	400	850	1200	900	950	800	1100	1500
	355	350	800	1200	850	750	750	1000	1200
	280	250	700	1000	800	600	600	700	900
	225	200	600	1000	750	500	500	600	800
	180	150	500	1000	600	400	400	500	700



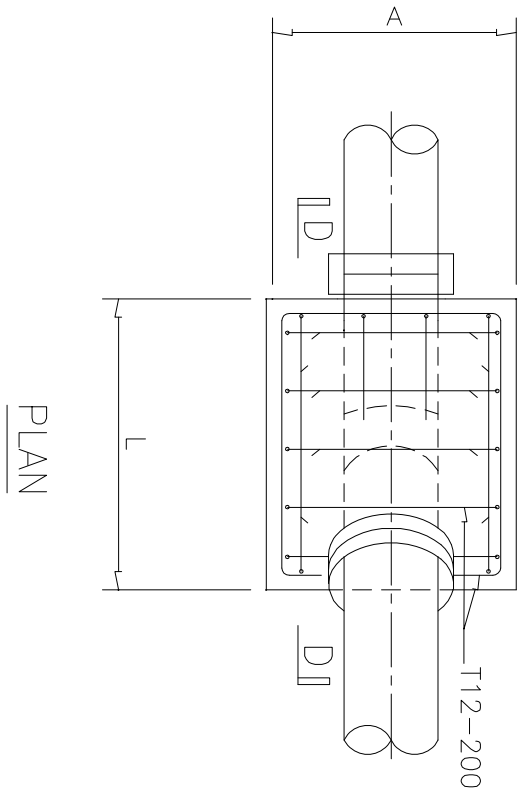
PLAN

THRUST BLOCK FOR VERTICAL BEND
(ACTING UPWARD)



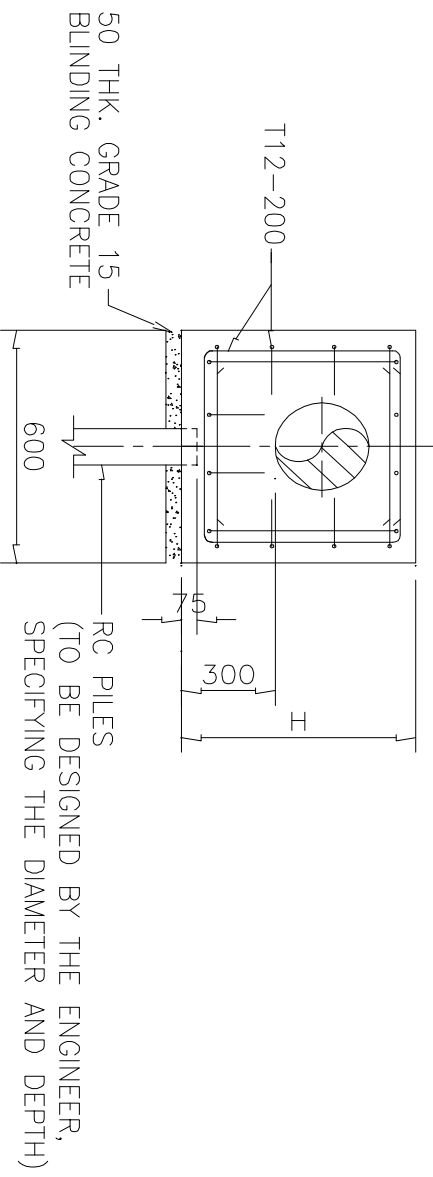
PLAN

THRUST BLOCK FOR VERTICAL BEND
(ACTING DOWNWARD)



PLAN

THRUST BLOCK WITH RC PILE
FOR OVER-CROSSING



SECTION E-E

REMARK :

TAKIR PERLEK
CADANGAN PENGANTIAN SALURAN
PAIR AIR UTAMA JENIS HDPE SERTA
KERJA-KERJA BERKAITAN DI KOLEJ
MARA (KM)
BANTING, SELANGOR DARUL EHSAN
UNTUK TETUAN
MALIS AMANAH RAKYAT (MARA)



MALIS AMANAH RAKYAT (MARA)

No 21, Jln Raja Lant, Chow Kit,
6000 Kuala Lumpur,
Wilayah Persekutuan Kuala Lumpur
MARA Hotline : 03-26132000



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68100, Batu Caves,
Selangor Darul Ehsan
Tel : 03-222 3228
Fax : 03-222 3228
email : pak.runding@rediffmail.com

I HEREBY CERTIFY THAT THESE WORKS HAS BEEN DESIGNED BY ME IN ACCORDANCE
WITH SOUND ENGINEERING PRACTICE AND THAT I TAKE FULL RESPONSIBILITY FOR THE
DESIGN AND PROPER PERFORMANCE OF THE SAME

JABUTERA MEKANIKAL & ELECTRICAL



DFR CONSULT SDN. BHD.
(BERH REG. NO: 1605 B/C) (13249272)
NO 8-8B, JALAN UP 1/1, UYAH PERDAMA,
68000, AMPANG SELANGOR DARUL EHSAN
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68100 Batu Caves, Selangor Darul Ehsan
TEL : 03-6198 8460
E-mail : asriqsconsult@gmail.com

RETIKULASI BEKALAN AIR
- PERINCIAAN (4)

TARIKH	:	M/C 2026	:	SKALA	:	A5 SHOWN
DILUKIS OLEH	:	AZRI				
DISEMAK OLEH	:	IR SPENCER KLUWA				
DILULUSKAN OLEH	:	IR SPENCER KLUWA				
NO LUKSIAN	:	PRZS(159-25)-KM				
		Banting-006				