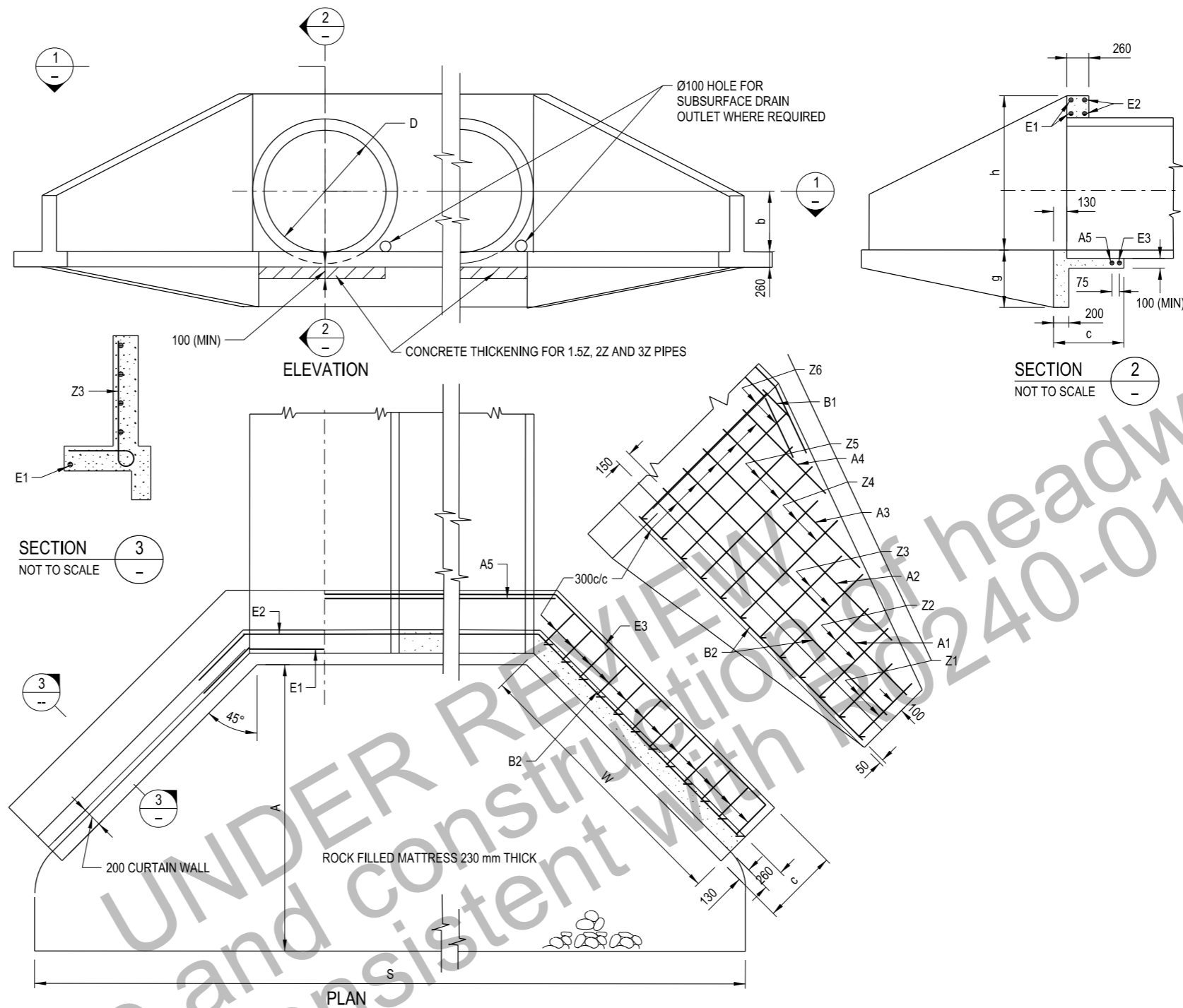


REINFORCEMENT FOR 2 HEADWALLS

SHAPE	MARK	DIA mm	PIPE DIA mm	L1 mm	L LENGTH mm	No. REQ'D	TOTAL LENGTH m	MASS kg
	A1	12	1 050	1 850	1 850	4	7.40	6.57
			1 200	2 250	2 250	4	9.00	7.99
			1 350	2 400	2 400	4	9.60	8.52
			1 500	2 800	2 800	4	11.20	9.95
			1 800	3 300	3 300	4	13.20	11.72
	A2	12	1 050	1 200	1 200	4	4.80	4.26
			1 200	1 550	1 550	4	6.20	5.51
			1 350	1 900	1 900	4	7.60	6.75
			1 500	2 350	2 350	4	9.40	8.35
	A3	12	1 800	2 950	2 950	4	11.80	10.48
			1 350	1 250	1 250	4	5.00	4.44
			1 500	1 700	1 700	4	6.80	6.04
	A4	12	1 800	2 350	2 350	4	9.40	8.35
			1 800	1 750	1 750	4	7.00	6.22
	A5	12	1 350	4 300	4 300	2	8.60	7.64
1 500			4 750	4 750	2	9.50	8.44	
1 800			5 400	5 400	2	10.08	8.95	
	B1	12	1 050	650	950	4	3.80	3.37
			1 200	1 000	1 300	4	5.20	4.62
			1 350	700	1 000	4	4.00	3.55
			1 500	1 100	1 400	4	5.60	4.97
			1 800	1 100	1 400	4	5.60	4.97
B2	12	1 050	1 950	2 250	8	18.00	15.98	
		1 200	2 350	2 650	8	21.20	18.83	
		1 350	2 525	2 825	8	22.60	20.08	
		1 500	2 850	3 150	8	25.20	22.38	
		1 800	3 450	3 750	8	30.00	26.64	
	E1	12	1 050	3 500	5 000	4	20.00	17.76
			1 200	3 800	5 300	4	21.20	18.83
			1 350	4 200	5 700	4	22.80	20.25
			1 500	4 550	6 050	4	24.20	21.49
			1 800	5 175	6 675	4	26.70	23.71
E2	12	1 050	3 630	5 130	4	20.52	18.22	
		1 200	3 920	5 420	4	21.68	19.25	
		1 350	4 300	5 800	4	23.20	20.60	
		1 500	4 600	6 100	4	24.40	21.67	
E3	12	1 800	5 225	6 725	4	26.90	23.89	
		1 050	3 900	8 100	2	16.20	14.39	
		1 200	4 180	8 980	2	17.96	15.95	
		1 350	4 500	9 900	2	19.80	17.58	
	E3	12	1 500	5 000	11 000	2	22.00	19.54
			1 800	5 150	12 350	2	24.70	21.93
			1 050	580	1 340	4	5.36	4.76
			1 200	600	1 360	8	10.88	9.66
Z1	12	1 350	700	1 450	8	11.60	10.30	
		1 500	650	1 650	8	13.20	11.72	
		1 800	650	1 650	8	13.20	11.72	
		1 050	740	1 520	8	12.16	10.58	
Z2	12	1 200	900	1 650	8	13.20	11.72	
		1 350	1 000	1 750	8	14.00	12.43	
		1 500	950	1 950	8	15.60	13.85	
		1 800	1 000	2 000	8	16.00	14.21	
Z3	12	1 050	1 010	1 790	8	14.32	12.72	
		1 200	1 200	1 950	8	15.60	13.85	
		1 350	1 300	2 050	8	16.40	14.56	
		1 500	1 200	2 200	8	17.60	15.63	
Z4	12	1 800	1 250	2 250	8	18.00	15.98	
		1 050	1 320	2 100	8	16.80	14.92	
		1 200	1 500	2 250	8	18.00	15.98	
		1 350	1 575	2 350	8	18.60	16.52	
Z5	12	1 500	1 500	2 500	8	20.00	17.76	
		1 800	1 600	2 600	8	20.80	18.47	
		1 500	1 800	2 800	8	22.40	19.89	
Z6	12	1 800	1 850	2 850	8	22.80	20.25	
		1 800	2 150	3 150	8	25.20	22.38	



D	NOMINAL PIPE DIAMETER (mm)	1 050	1 200	1 350	1 500	1 800
h	HEADWALL HEIGHT (mm)	1 380	1 550	1 700	1 900	2 270
g	CURTAIN WALL DEPTH (mm)	600	600	700	700	750
c	CURTAIN WALL WIDTH (mm)	700	700	700	900	900
b	WINGWALL HEIGHT (mm)	450	450	530	530	600
W	WINGWALL LENGTH (mm)	1 930	2 300	2 490	2 850	3 400
	CONC. IN 2 HEADWALLS (m ²)	6.0	8.2	9.3	11.8	14.9
A	APRON WIDTH (m)	5.5	6.1	6.7	7.3	8.5
S	APRON LENGTH (m)	6.89	7.66	8.27	8.88	10.41

NOTES

1. CONCRETE STRENGTH GRADES SHOWN ARE FOR EXPOSURE CLASSIFICATION A2. REFER TO AS3600-2009, FOR CONCRETE STRENGTH GRADE, COVER TO REINFORCEMENT AND FOR OTHER EXPOSURE CLASSIFICATIONS.
2. CLEAR COVER TO OUTER FACE OF REINFORCEMENT 50 mm UNLESS OTHERWISE SHOWN.
3. CONCRETE GRADE N25.
4. ALL BARS TO BE GRADE 400Y TO AS4671-2001.
5. SPACING FOR MULTIPLE PIPES AS SPECIFIED IN R0240-01.

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REV	DATE	AMENDMENT / REVISION DESCRIPTION
1	9/10/17	Added Watermark

ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SHOWN

WVR No.	APPROVAL	SCALES ON A3 SIZE DRAWING
	SFR	

CONTACT DETAILS
SEND FEEDBACK ON THIS STANDARD DRAWING TO :
technologystandards@rms.nsw.gov.au

ISSUED	DATE
SFR	20.01.17

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STANDARD DRAWING
ROAD DESIGN ENGINEERING
R0210 STORMWATER DRAINAGE SERIES - HEADWALLS
CONCRETE HEADWALLS DOUBLE CELL Ø1050 mm TO Ø1800 mm
WITH ROCK MATTRESS PROTECTION (2 TO 1 BATTER OR STEEPER) SHEET 1 OF 1

STANDARD DRAWING No. **R0210-06**

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ISSUED

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REV. 1