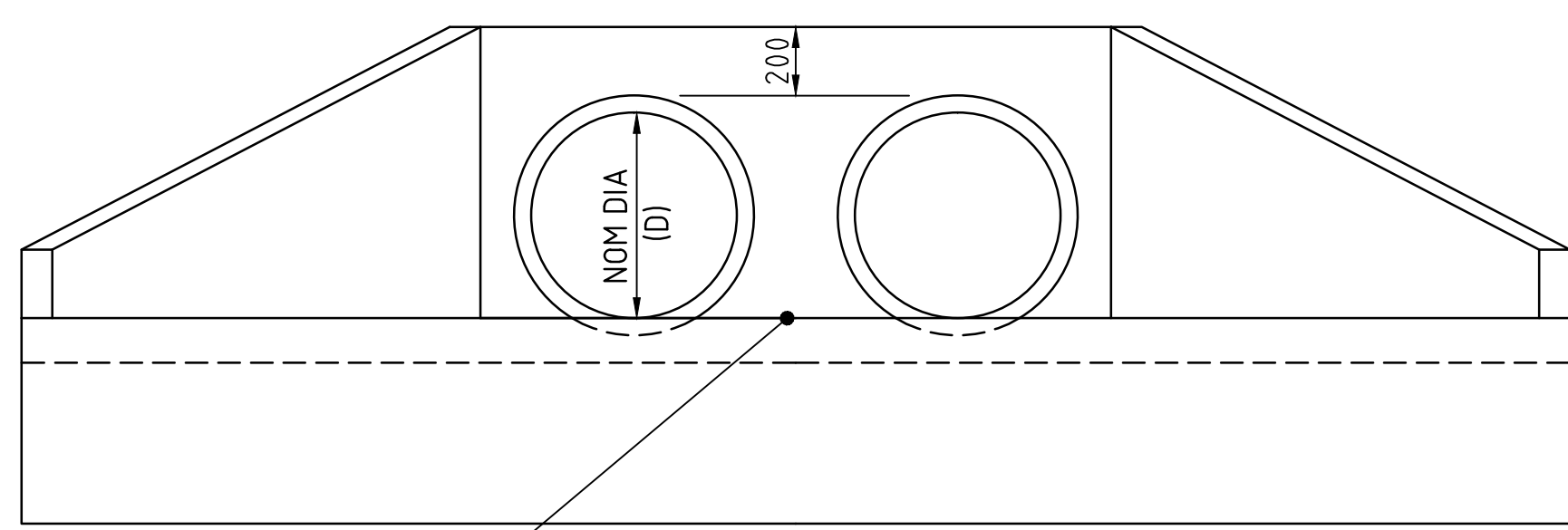
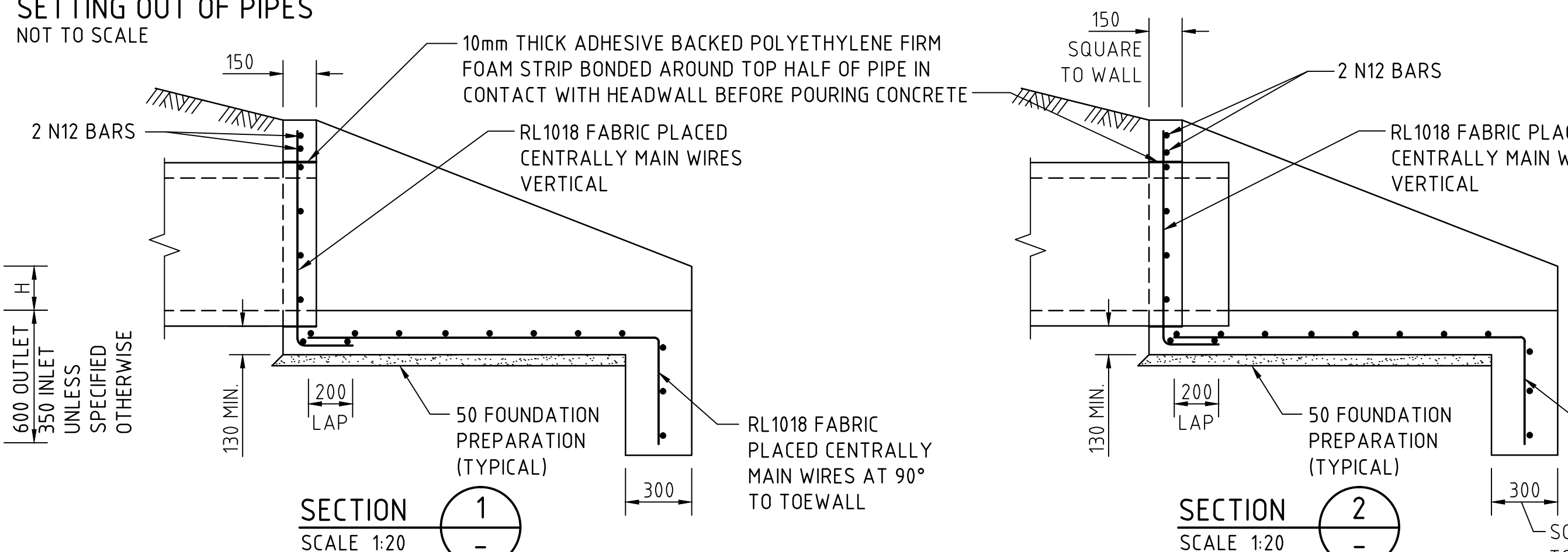


SETTING OUT OF PIPES
NOT TO SCALE

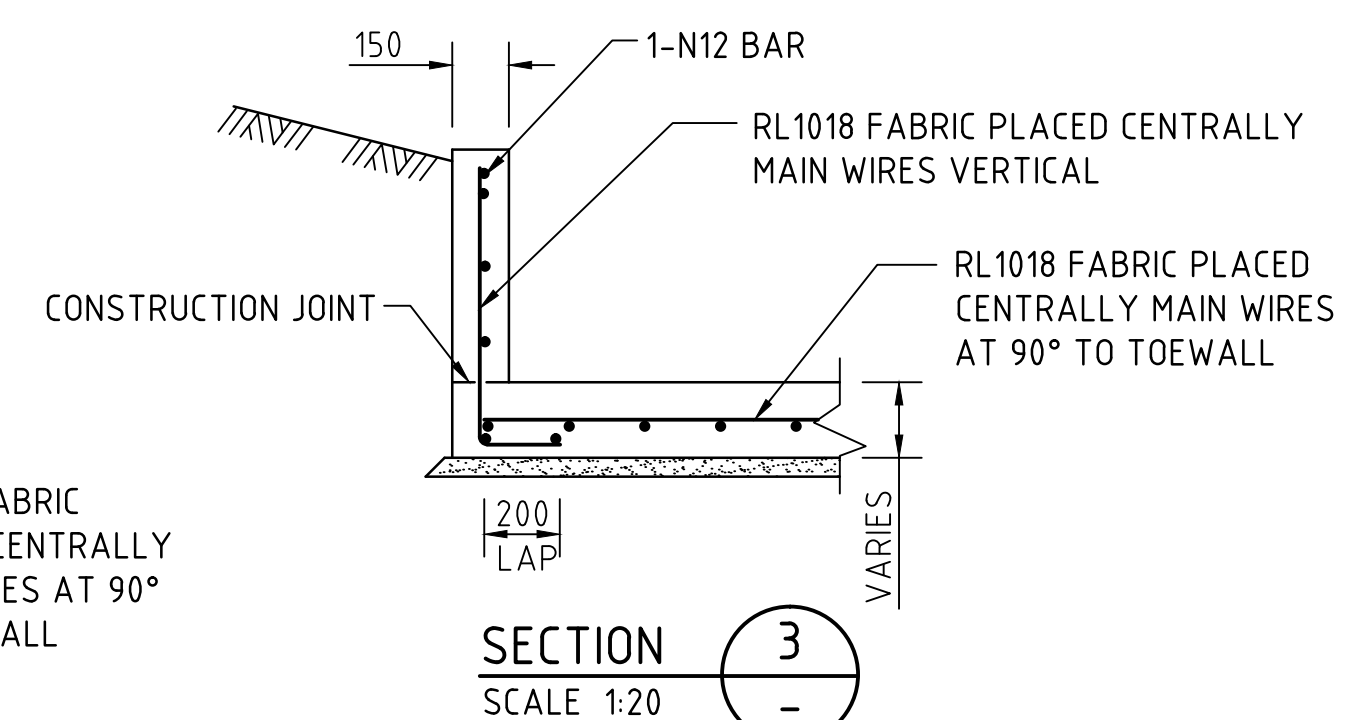


ELEVATION
TYPICAL FOR SINGLE AND MULTIPLE PIPES
SCALE 1:20

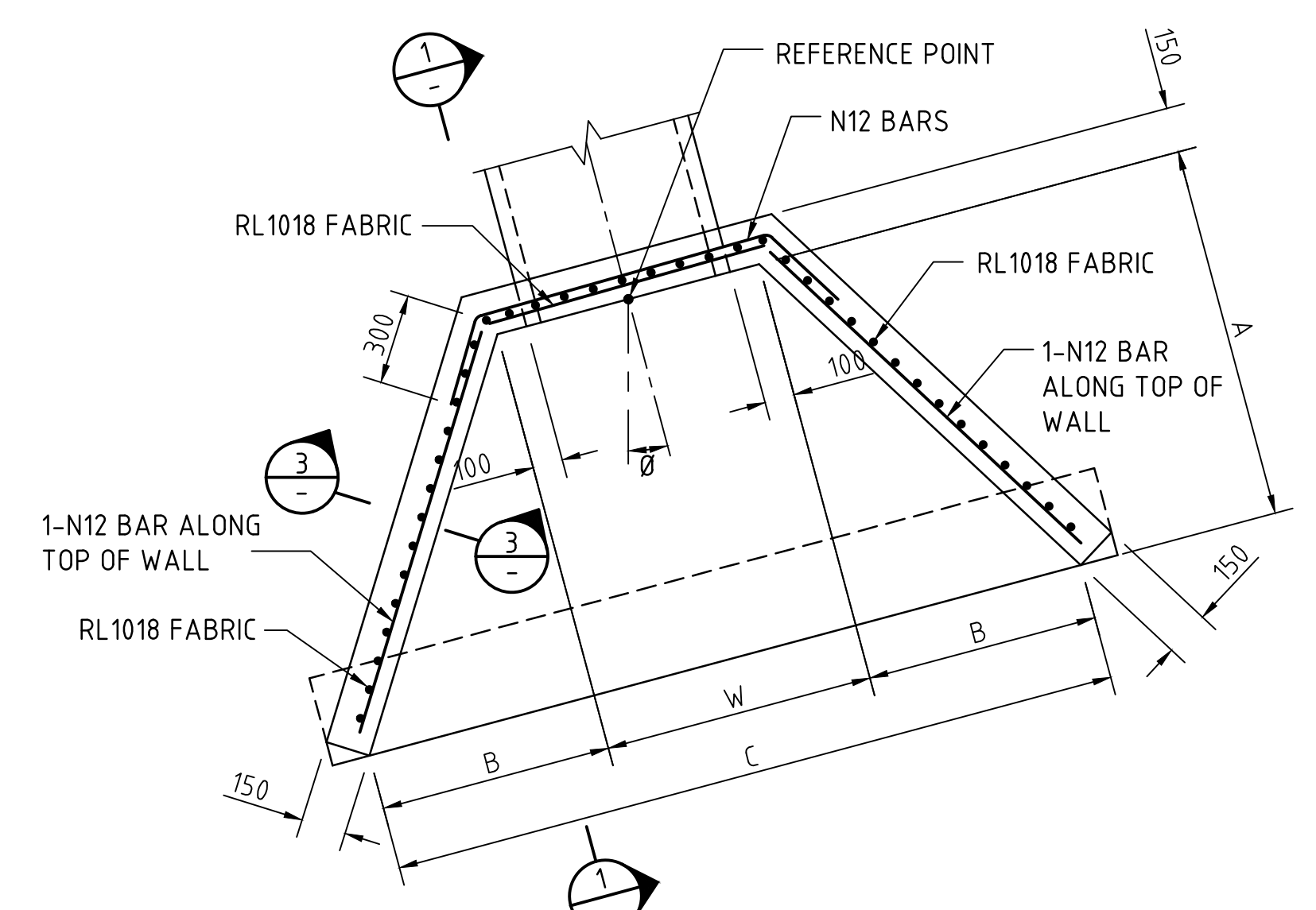


SECTION 1
SCALE 1:20

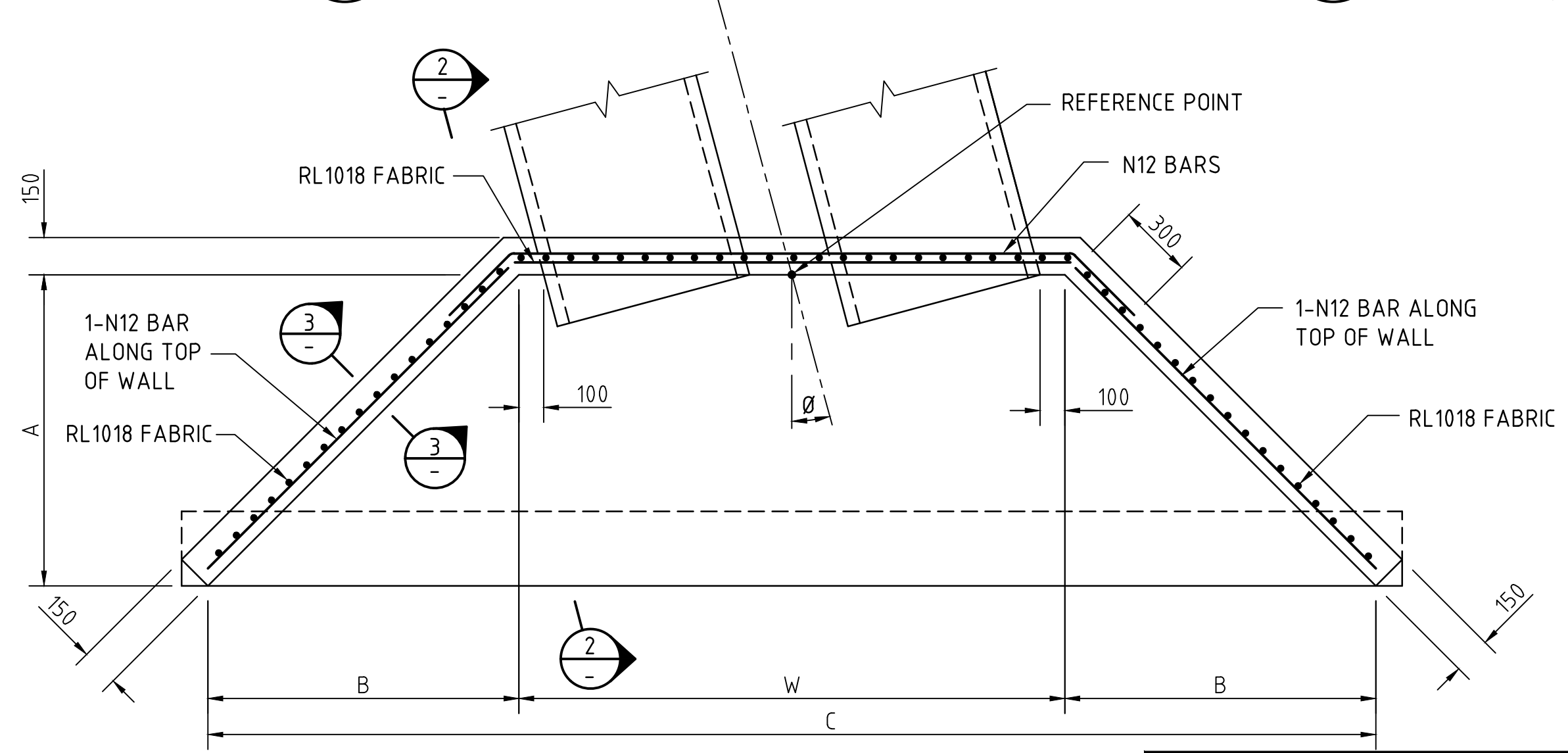
SECTION 2
SCALE 1:20



SECTION 3
SCALE 1:20



SECTIONAL PLAN
REINFORCEMENT FOR SINGLE PIPE
SCALE 1:20



SECTIONAL PLAN
REINFORCEMENT FOR MULTIPLE PIPES
SCALE 1:20

NOTES

DESIGN LOADS

- IN ACCORDANCE WITH AUSTRALIAN BRIDGE DESIGN CODE 1996.
- HEADWALLS ARE NOT DESIGNED FOR GUARDRAIL IMPACT FORCES.

SETTING OUT

- THE SETTING OUT DIMENSIONS ARE BASED ON INCREASING THE BATTER LOCALLY TO 2:1 BEYOND THE HEADWALLS, EXCEPT AS INDICATED FOR SINGLE PIPES.

CONCRETE

- GRADE S40

COVER

- MINIMUM CLEAR COVER TO BE 50mm.

CONCRETE EXPOSURE CLASSIFICATION

- IN ACCORDANCE WITH REQUIREMENTS IN AUSTRALIAN BRIDGE DESIGN CODE 1996 FOR CONCRETE EXPOSURE CLASSIFICATION.
- 1.1 COVER AND CONCRETE STRENGTH SHOWN ON DRAWINGS SATISFY REQUIREMENTS FOR EXPOSURE CLASSIFICATIONS B1 AND B2.
- 1.2 FOR EXPOSURE CLASSIFICATIONS C AND U, THE FOLLOWING SHALL APPLY.

EXPOSURE CLASSIFICATION	MINIMUM CLEAR COVER (mm)	
	40MPa CONCRETE	50 MPa CONCRETE
C (SALT-RICH ARID AREAS OR IN SEA WATER)	60	50
U (IN SOFT OR RUNNING WATER OR AGGRESSIVE SOILS - SULPHATE IONS - pH < 4.0)	-	70

REINFORCEMENT

- REINFORCING BAR SHALL BE D500N AND MESH SHALL BE D500L IN ACCORDANCE WITH AS/NZS4671.
- MINIMUM LAPS, UNLESS SHOWN OTHERWISE: BARS 300mm, FABRIC 100mm.

CHAMFERS

- ALL EXPOSED EDGES TO BE PROVIDED WITH 20mm CHAMFERS.

FOUNDATION PREPARATION

- 50mm GRADE 10 CONCRETE OR 50mm COMPACTED SAND.

SETTING OUT DIMENSIONS FOR SINGLE PIPES

D	A	H	SKEW ANGLE θ LESS THAN 20°	
			B	C
1050	1700	450	1275	W+2550
1200	1900	500	1350	W+2700
1350	2100	550	1425	W+2850
1500	2300	600	1525	W+3050
1650	2500	650	1600	W+3200
1800	2700	700	1700	W+3400

SETTING OUT DIMENSIONS FOR MULTIPLE PIPES

D	A	H	SKEW ANGLE θ LESS THAN 20°	
			B	C
1050	1700	450	1700	W+3400
1200	1900	500	1900	W+3800
1350	2100	550	2100	W+4200
1500	2300	600	2300	W+4600
1650	2500	650	2500	W+5000
1800	2700	700	2700	W+5400

THIS SHEET SUPERSEDES DRG S-4002, SHEET 14

Government of South Australia
Department of Planning, Transport and Infrastructure

STANDARD DRAWING
HEADWALL, WINGWALL AND APRON DETAILS
RC PIPES 1050 TO 1800 DIA., SKEW ANGLE 0° TO 20°

DESIGNED: DU	DRAFTED: DU	ACCEPTED FOR USE: STEPHEN PASCALE	ACCEPTANCE FORM KNET No.:	DRAWING No.:	SHEET No.:	AMEND No.:
CHECKED: TN/GN	REVIEWED: GWC	MGR. TECHNICAL SERVICES DATE: 03/08/2015	9722937	4002	22	1

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