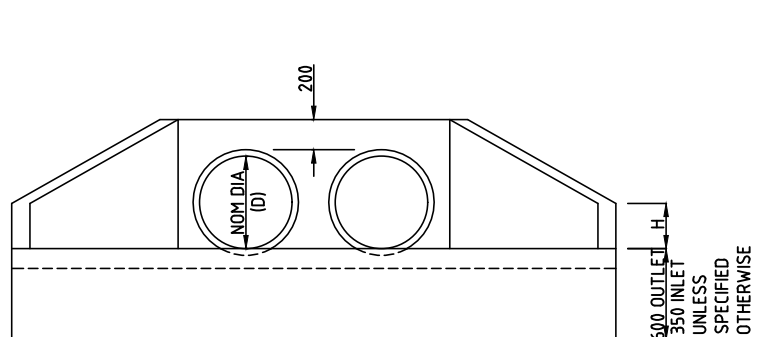


SETTING OUT DIMENSIONS FOR SINGLE PIPES					
D	A	H	SKEW ANGLE $\phi$ LESS THAN 20°		
			B	C	W
450	900	250	900	W+1800	
525	1050	275	1050	W+2100	
600	1200	300	1200	W+2400	
675	1350	325	1350	W+2700	
750	1500	350	1500	W+3000	
825	1650	375	1650	W+3300	
900	1800	400	1800	W+3600	

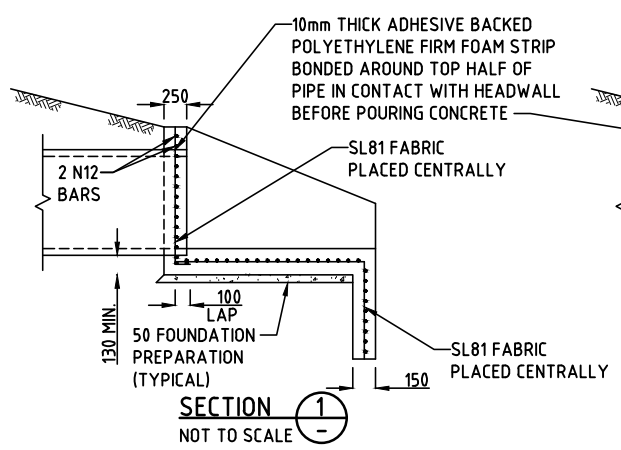
SETTING OUT DIMENSIONS FOR MULTIPLE PIPES					
D	A	H	SKEW ANGLE $\phi$ LESS THAN 20°		
			B	C	W
450	900	250	900	W+1800	
525	1000	275	1000	W+2000	
600	1100	300	1100	W+2200	
675	1200	325	1200	W+2400	
750	1300	350	1300	W+2600	
825	1400	375	1400	W+2800	
900	1500	400	1500	W+3000	

**SETTING OUT OF PIPES**  
NOT TO SCALE



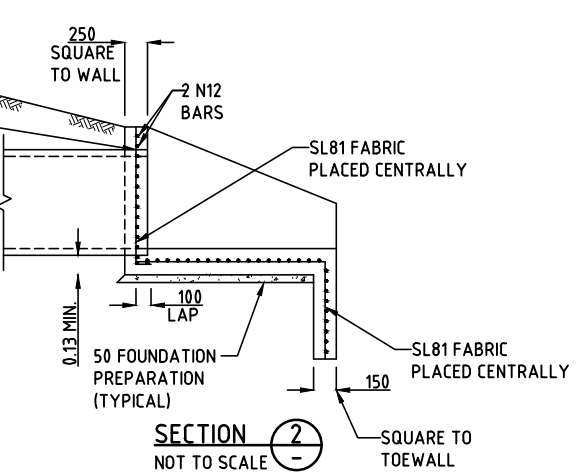
**ELEVATION**

TYPICAL FOR SINGLE AND MULTIPLE PIPES  
NOT TO SCALE



**SECTION 1**

NOT TO SCALE



**SECTION 2**

NOT TO SCALE

**NOTE:**

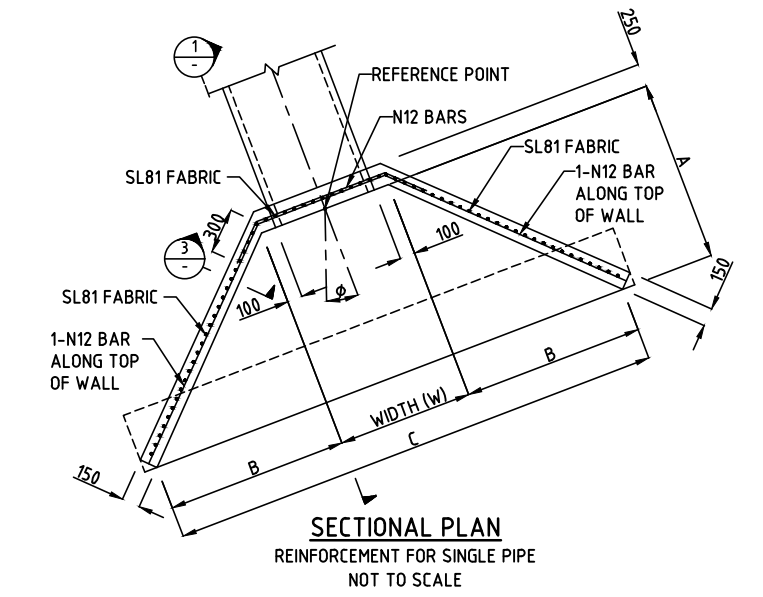
- DESIGN LOADS:**
- IN ACCORDANCE WITH AUSTRALIAN BRIDGE DESIGN CODE AS 5100-2017.
  - HEADWALLS ARE NOT DESIGNED FOR GUARDRAIL IMPACT FORCES.
- CONCRETE:**
- GRADES S40
- COVER:**
- MINIMUM CLEAR COVER TO BE 50mm.
- CONCRETE EXPOSURE CLASSIFICATION:**
- IN ACCORDANCE WITH REQUIREMENTS IN AUSTRALIAN BRIDGE DESIGN CODE AS 5100-2017 FOR CONCRETE EXPOSURE CLASSIFICATION.
  - COVER AND CONCRETE STRENGTH SHOWN ON DRAWINGS SATISFY REQUIREMENTS FOR EXPOSURE CLASSIFICATION B1 AND B2.
  - FOR EXPOSURE CLASSIFICATIONS C AND U, THE FOLLOWING SHALL APPLY.

EXPOSURE CLASSIFICATION	MINIMUM CLEAR COVER (mm)	
	40 MPa 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:**

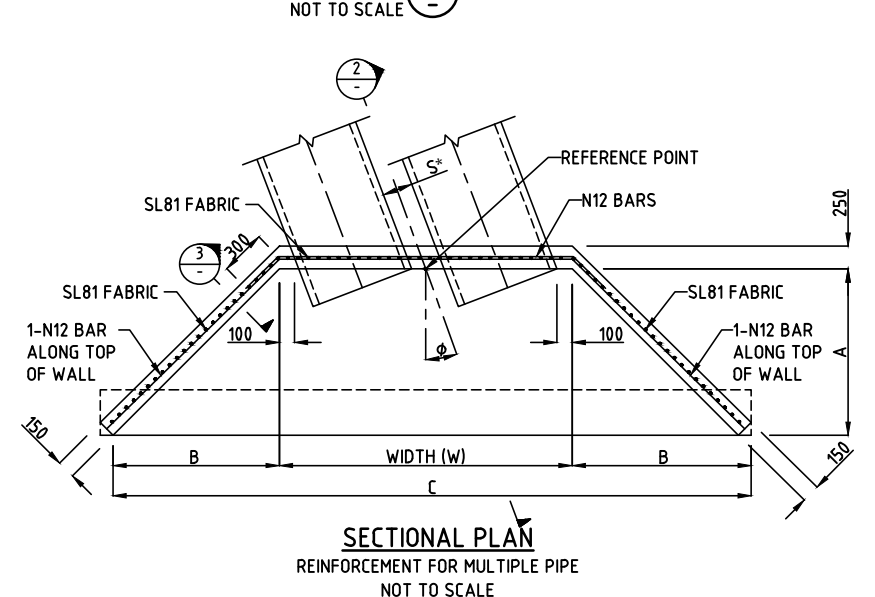
- REINFORCING BAR SHALL BE D500N AND MESH SHALL BE D500L IN ACCORDANCE WITH AS/NZS 4671-2001.
  - MINIMUM LAPS, UNLESS SHOWN OTHERWISE: BARS 300mm, FABRIC 100mm.
- CHAMFERS:**
- ALL EXPOSED EDGES TO BE PROVIDED WITH 20mm CHAMFERS.
- FOUNDATION PREPARATION:**
- 50mm COMPACTED SAND.
- GENERAL:**
- REFER TO STANDARD DRAWING CS3101 AND CS3100 FOR S\*
  - ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.

THIS DRAWING IS DERIVED FROM TRANSPORT SOUTH AUSTRALIA STANDARD DRAWING S-4002, SHEET 21 AND ADOPTED FOR THE NT CONDITIONS.



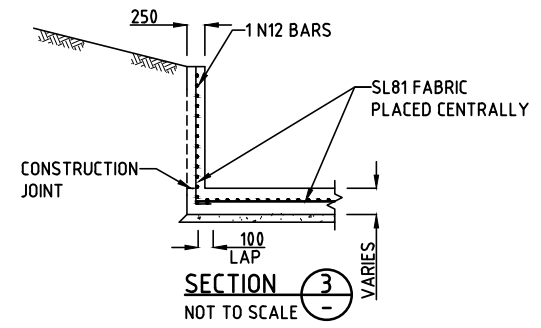
**SECTIONAL PLAN**

REINFORCEMENT FOR SINGLE PIPE  
NOT TO SCALE



**SECTIONAL PLAN**

REINFORCEMENT FOR MULTIPLE PIPE  
NOT TO SCALE



**SECTION 3**

NOT TO SCALE

**WARNING**

BEWARE OF UNDERGROUND SERVICES.  
THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

DRAWN J.LEESON	CHECKED S.HATZI
DATE DESIGNED S.A.	DATE CHECKED S.A.
DATE DESIGN LEADER S.HATZI	DATE DESIGN DIRECTOR S.JACKSON
DATE 1/09/2017	DATE 1/09/2017



STANDARD DRAWINGS DRAINAGE				
RCP 450mm DIA. TO 900mm DIA. HEADWALL & WINGWALL DETAILS 0° TO 20° SKEW ANGLE				
FILE No.	ASSET No.	SHEET No.	DRAWING No.	AMEND.
-	-	1 OF 1	CS3103	0
				SHEET SIZE A1

No.	DESCRIPTION	DATE	NAME	DEPT/COMPANY
0	ISSUED AS A STANDARD DRAWING	SEPT 2017	J.LEESON	EES/DIPL
AMENDMENTS				