

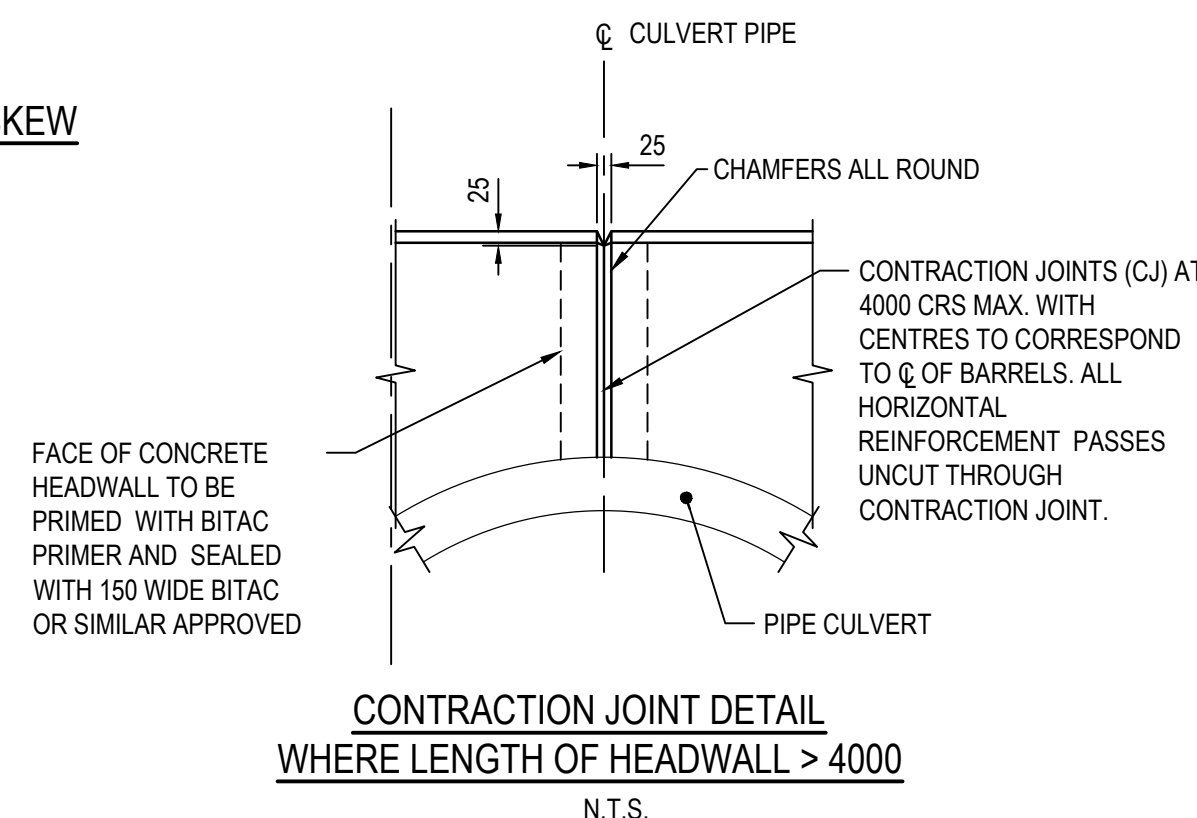
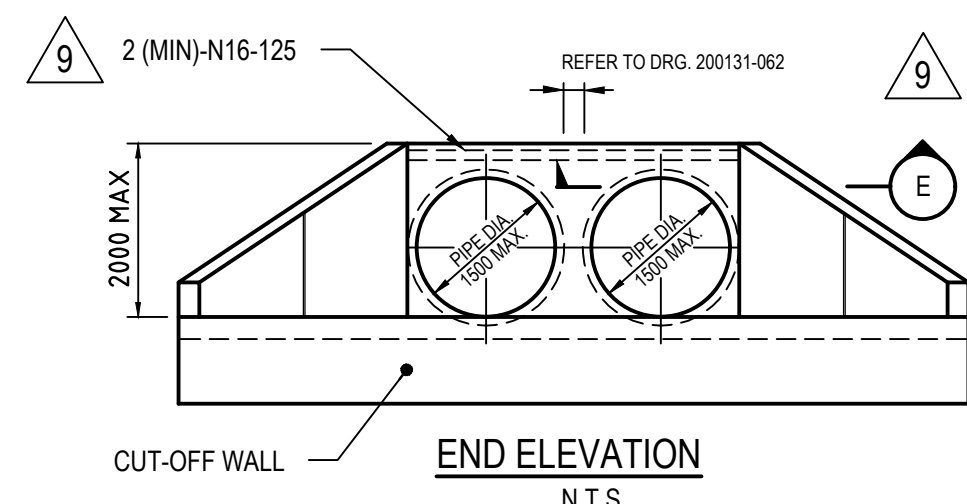
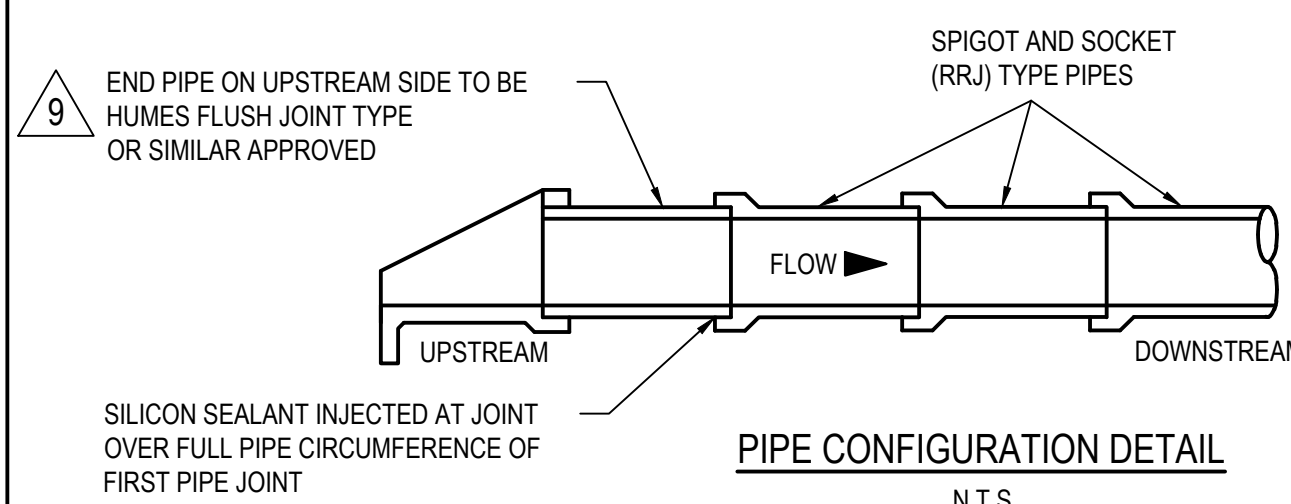
CULVERT SKEWS
PREFERRED CULVERT SKEWS ARE :-
0°, 15°, 30° & 45°
-15°, -30° & -45°

TABLE 1: ROCK PROTECTION DETAILS

CLASS ROCK	MIN THICKNESS (T)	MIN LENGTH (LOR)	ROCK SIZE (m) ⁺	ROCK MASS (Kg)	% OF ROCK LARGER THAN
FACING	500	3000	0.40	100	0
			0.30	35	50
			0.15	2.5	90
LIGHT	750	3000	0.55	250	0
			0.40	100	50
			0.20	10	90
1/4 TONNE	1000	5000	0.75	500	0
			0.55	250	50
			0.30	35	90
1/2 TONNE	1250	5000	0.90	1000	0
			0.70	450	50
			0.40	100	90

* ASSUMING A SPECIFIC GRAVITY OF 2.65 AND SPHERICAL SHAPE FOR ALL ROCK CLASSES.

THESE DETAILS ARE NOT SUITABLE FOR HEADWALLS GREATER THAN 2000 HIGH.



THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRG. No. 201631-0090

9	NOTE FOR END PIPE ON UPSTREAM SIDE AMENDED. BARREL SPACING, HEADWALL REINFORCEMENT AND WINGWALL ENDS CLARIFIED. TITLE BLOCK AND FILE No. UPDATED.	C.M. 19/09/2025
8	CLARIFIED PIPE ARRANGEMENT AND ADDED ADDITIONAL DRAWING REFERENCE IN THE NOTES.	N. CALLAGHAN 19/12/19
7	APRON SLOPE IN LONGITUDINAL SECTION AND SKEW CULVERT DETAILS AMENDED.	Z. BATEN 07/03/19
6	PLAN OF MULTI BARREL PIPE CULVERT ON SKEWS ADDED. CULVERT SKEW DIAGRAMS ADDED.	Z. BATEN 22/05/18
No.	DESCRIPTION	APPROVED & DATE
AMENDMENTS		

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 WESTERN AUSTRALIA
 PLANNING AND TECHNICAL SERVICES DIRECTORATE
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DESIGNED	G. DE SILVA
VERIFIED	J. KARPINSKI 08.01.03
APPROVED	R. GROVE 11.01.03
FILE NO.	13/4330

STANDARD DRAWING
 R.C.P. CULVERT
 GENERAL ARRANGEMENT
 (FOR MAXIMUM PIPE DIAMETER 1500) SHEET 1 OF 2
 MRWA DRAWING NUMBER
200131-0061-9