

DIMENSIONS

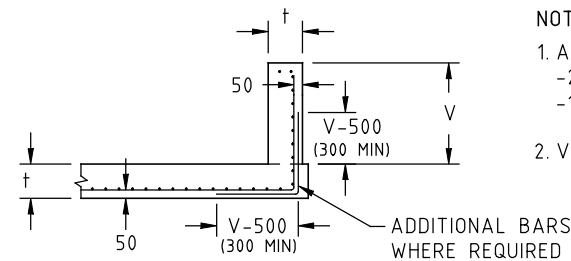
SKEW ANGLE DEGREE	FLARE ANGLE DEGREE	NOM PIPE DIA	EXTERNAL PIPE DIA*	A	E	H	TYPE 1 * SLOPE AT 1.5:1						TYPE 2 * SLOPE AT 2:1						TYPE 3 * SLOPE AT 3:1					
							B	B1	C	D	F	P	B	B1	C	D	F	P	B	B1	C	D	F	P
15	20	1350	1524	3854	675	1648	1311	164	5329	1872	2285	1879	1748	218	5820	2496	3047	2506	2622	328	6803	3744	4571	3758
		1500	1676	4247	750	1800	1470	184	5901	2100	2564	2108	1961	245	6452	2800	3418	2811	2941	367	7555	4200	5127	4216
		1650	1842	4668	825	1959	1637	205	6510	2339	2855	2347	2183	273	7124	3118	3806	3130	3275	409	8352	4677	5710	4695
		1800	2006	5085	900	2117	1803	225	7114	2576	3144	2585	2405	300	7790	3434	4192	3447	3607	451	9143	5151	6288	5171
		1950	2198	5483	900	2296	1991	249	7723	2844	3472	2855	2655	332	8470	3792	4629	3806	3983	498	9963	5688	6944	5710
2100	2388	5876	900	2474	2178	272	8327	3111	3798	3123	2904	363	9144	4148	5064	4164	4357	544	10777	6222	7596	6246		
30	20	1350	1524	4299	675	1648	2231	-330	6200	1872	2912	1901	2975	-440	6833	2496	3883	2535	4462	-660	8101	3744	5825	3802
		1500	1676	4737	750	1800	2503	-370	6869	2100	3267	2132	3337	-494	7580	2800	4356	2843	5005	-741	9001	4200	6534	4265
		1650	1842	5207	825	1959	2787	-412	7581	2339	3638	2375	3716	-550	8373	3118	4851	3166	5574	-825	9956	4677	7276	4749
		1800	2006	5672	900	2117	3069	-454	8287	2576	4007	2615	4092	-606	9159	3434	5342	3487	6139	-908	10902	5151	8014	5230
		1950	2198	6115	900	2296	3389	-501	9003	2844	4424	2888	4519	-669	9966	3792	5899	3850	6779	-1003	11891	5688	8849	5776
2100	2388	6554	900	2474	3708	-549	9713	3111	4840	3159	4943	-731	10766	4148	6453	4212	7415	-1097	12872	6222	9680	6318		
45	20	1350	1524	5265	675	1648	4015	-873	8407	1872	4430	2066	5353	-1164	9454	2496	5906	2754	8029	-1746	11548	3744	8859	4131
		1500	1676	5801	750	1800	4503	-979	9325	2100	4969	2317	6005	-1306	10500	2800	6625	3089	9007	-1958	12850	4200	9938	4634
		1650	1842	6377	825	1959	5015	-1090	10301	2339	5533	2580	6687	-1454	11609	3118	7378	3440	10030	-2181	14226	4677	11067	5160
		1800	2006	6947	900	2117	5523	-1201	11269	2576	6094	2842	7364	-1601	12710	3434	8126	3789	11046	-2402	15591	5151	12188	5683
		1950	2198	7490	900	2296	6099	-1326	12262	2844	6729	3138	8132	-1768	13853	3792	8973	4184	12198	-2652	17035	5688	13459	6276
2100	2388	8027	900	2474	6672	-1451	13248	3111	7361	3433	8895	-1934	14988	4148	9815	4577	13343	-2901	18469	6222	14723	6865		

\* THEORETICAL SLOPE OF WINGWALL MEASURED AT RIGHT ANGLES TO THE ROADWAY.

# APPROXIMATE ONLY

NOTES:

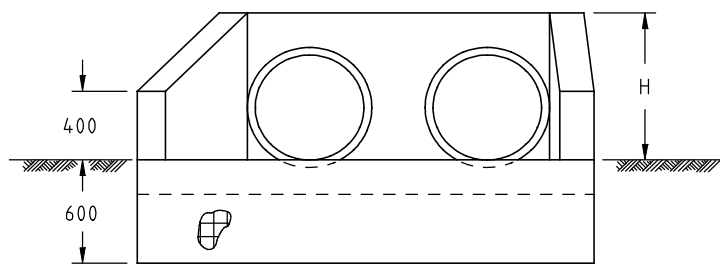
- BECAUSE THE RELATION OF THE BATTER TO THE TOP OF THE ENDWALL IS ESSENTIAL FOR THE SAFETY OF THE MOTORIST, THE DETAILS AS SHOWN IN SECTION A-A MUST BE ADHERED TO DURING CONSTRUCTION.
- REINFORCEMENT FABRIC SHALL COMPLY WITH AS/NZS 4671. UNLESS OTHERWISE SPECIFIED, REINFORCEMENT FABRIC SHALL BE F81 AND CONTINUOUS AROUND CORNERS AND LOCATED AS SHOWN ON SECTIONS A-A AND B-B. CLEAR COVER 50 MIN., LAPS 300 MIN.
- REINFORCEMENT BARS SHALL COMPLY WITH AS/NZS 4671, GRADE 400Y. CLEAR COVER 50 MIN., LAPS 25 x BAR DIAMETER MIN.
- ADDITIONAL BARS FOR LARGE CULVERTS (1950 AND 2100 DIA.) ARE PLACED ADJACENT TO MESH.
- CONCRETE SHALL BE NORMAL-CLASS N32 STANDARD STRENGTH GRADE OR HIGHER COMPLYING WITH THE REQUIREMENTS OF AS 1379. EXPOSURE CLASSIFICATIONS UP TO AND INCLUDING B1.
- EXPOSED EDGES SHALL HAVE 20 x 20 CHAMFERS.
- COMPACTION PRESSURE BEHIND WALLS NOT TO EXCEED 15 kPa. (1.5 TONNE VIBRATORY ROLLER OR 300 kg VIBRATING PLATE WITHIN 0.5m OF WALL).
- REFER TO SD 1962 FOR QUANTITIES
- CONCRETE AGGREGATES SHALL COMPLY WITH TABLE 701.021 OF VICROADS STANDARD SPECIFICATION SECTION 701.
- ENDWALLS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE RELEVANT PROVISIONS OF AS 3600.



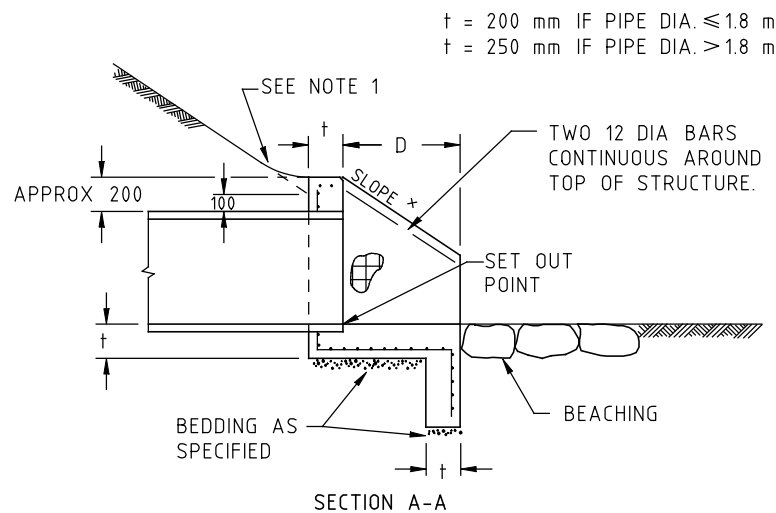
NOTES:

- ADDITIONAL BARS FOR THE FOLLOWING PIPE SIZES:  
-2100 DIA PIPE-F12 BARS AT 500 CENTRES  
-1950 DIA PIPE-F12 BARS AT 1000 CENTRES
- V = VARIABLE HEIGHT OF THE WINGWALL

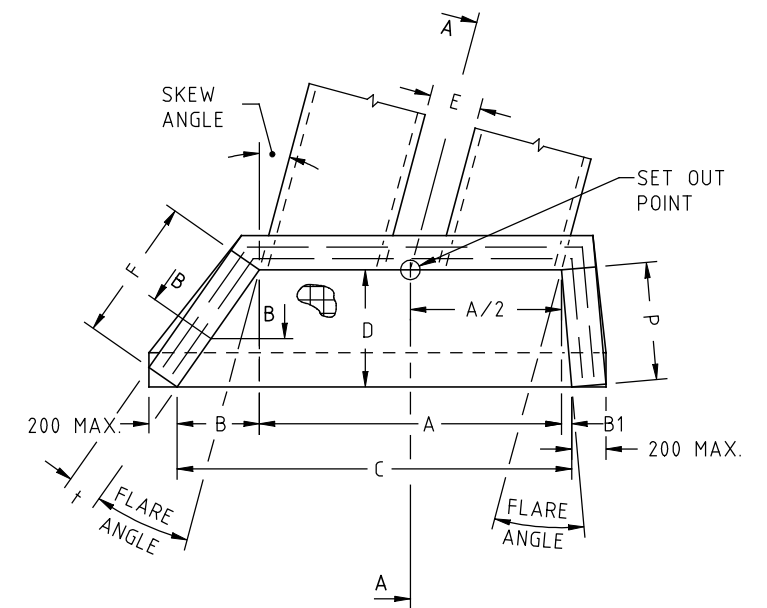
SECTION B-B  
LOCATION OF ADDITIONAL BARS.



END ELEVATION



SECTION A-A



PLAN

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ISSUE	APP'D	DATE	AMENDMENT
E			
D			
C	J.K.	1/7/05	NOTES 2 & 3 AMENDED
B	J.C.	1/2/98	AMENDMENT TO NOTE 5, NOTES 9 & 10 ADDED, CONCRETE STRENGTH GRADES.
A	J.C.	1/2/95	NOTES 2, 3, 4, 5 & 8. GENERAL NOTES 1 & 2. THICKNESS OF ENDWALL, WINGWALL BASE SLAB AND CUT-OFF WALL ADDED.

GENERAL NOTES	
1.	ALL DIMENSIONS ARE IN MILLIMETRES.
2.	CULVERT INLET AND OUTLET STRUCTURES - SELECTION GUIDE

SD 1700

DESIGNED	PRINCIPAL ROAD DESIGN ENGINEER	 3 PROSPECT HILL ROAD, CAMBERWELL, VICTORIA, 3124 PHONE NO. (03) 9811 8355 FAX NO. (03) 9811 8329	
APPROVED	1.2.95 <i>J. Cunningham</i>		
CATALOG	PRED	SCALE	HOR NOT TO SCALE
PROJECT	sddgnnew	OF	
FILENAME	sd-1961c.dgn	METRES	VER

STANDARD DRAWING				
REINFORCED CONCRETE WINGWALL				
TYPES 1, 2 & 3				
SKEW MULTIPLE PIPE CULVERTS 1350 TO 2100 DIA				
FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
			SD 1961	C