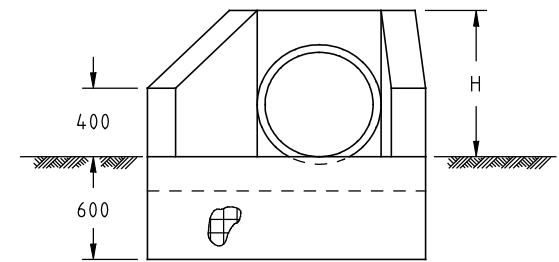
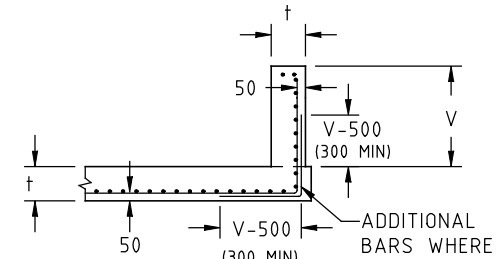


DIMENSIONS

SKEW ANGLE DEGREE	FLARE ANGLE DEGREE	NOM PIPE DIA	EXTERNAL PIPE DIA#	A	H	TYPE 1 * SLOPE AT 15:1						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	600	698	723	854	477	60	1259	681	831	684	636	79	1438	908	1108	911	954	119	1795	1362	1663	1367
		675	781	809	933	560	70	1438	800	976	803	746	93	1648	1066	1301	1070	1120	140	2068	1599	1952	1605
		750	864	894	1013	644	80	1619	920	1123	923	858	107	1860	1226	1497	1231	1288	161	2343	1839	2245	1846
		825	946	979	1092	727	91	1797	1038	1267	1042	969	121	2070	1384	1690	1389	1454	182	2615	2076	2534	2084
		900	1029	1065	1172	811	101	1977	1158	1414	1162	1081	135	2282	1544	1885	1550	1622	203	2890	2316	2827	2325
		1050	1188	1230	1324	970	121	2322	1386	1692	1391	1294	162	2686	1848	2256	1855	1941	243	3413	2772	3384	2783
		1200	1359	1407	1489	1144	143	2694	1634	1994	1640	1525	191	3123	2178	2659	2186	2288	286	3980	3267	3988	3279
		1350	1524	1578	1648	1311	164	3052	1872	2285	1879	1748	218	3544	2496	3047	2506	2622	328	4527	3744	4571	3758
		1500	1676	1735	1800	1470	184	3389	2100	2564	2108	1961	245	3941	2800	3418	2811	2941	367	5043	4200	5127	4216
		1650	1842	1907	1959	1637	205	3749	2339	2855	2347	2183	273	4363	3118	3806	3130	3275	409	5591	4677	5710	4695
		1800	2006	2077	2117	1803	225	4105	2576	3144	2585	2405	300	4782	3434	4192	3447	3607	451	6134	5151	6288	5171
1950	2198	2276	2296	1991	249	4516	2844	3472	2855	2655	332	5262	3792	4629	3806	3983	498	6756	5688	6944	5710		
2100	2388	2472	2474	2178	272	4923	3111	3798	3123	2904	363	5740	4148	5064	4164	4357	544	7373	6222	7596	6246		
30	20	600	698	806	854	812	-120	1497	681	1059	692	1082	-160	1728	908	1413	922	1623	-240	2189	1362	2119	1383
		675	781	902	933	953	-141	1714	800	1244	812	1270	-188	1984	1066	1658	1082	1906	-282	2525	1599	2488	1624
		750	864	998	1013	1096	-162	1931	920	1430	934	1461	-216	2243	1226	1907	1245	2192	-324	2865	1839	2861	1867
		825	946	1092	1092	1237	-183	2146	1038	1615	1054	1649	-244	2498	1384	2153	1405	2474	-366	3200	2076	3230	2108
		900	1029	1188	1172	1380	-204	2364	1158	1802	1176	1840	-272	2756	1544	2402	1568	2760	-408	3540	2316	3603	2352
		1050	1188	1372	1324	1652	-244	2779	1386	2156	1407	2202	-326	3248	1848	2875	1877	3304	-489	4187	2772	4312	2815
		1200	1359	1569	1489	1947	-288	3228	1634	2541	1659	2596	-384	3781	2178	3388	2212	3893	-576	4887	3267	5083	3317
		1350	1524	1760	1648	2231	-330	3661	1872	2912	1901	2975	-440	4294	2496	3883	2535	4462	-660	5562	3744	5825	3802
		1500	1676	1935	1800	2503	-370	4068	2100	3267	2132	3337	-494	4778	2800	4356	2843	5005	-741	6200	4200	6534	4265
		1650	1842	2127	1959	2787	-412	4502	2339	3638	2375	3716	-550	5293	3118	4851	3166	5574	-825	6876	4677	7276	4749
		1800	2006	2316	2117	3069	-454	4932	2576	4007	2615	4092	-606	5803	3434	5342	3487	6139	-908	7547	5151	8014	5230
1950	2198	2538	2296	3389	-501	5426	2844	4424	2888	4519	-669	6389	3792	5899	3850	6779	-1003	8314	5688	8849	5776		
2100	2388	2757	2474	3708	-549	5916	3111	4840	3159	4943	-731	6969	4148	6453	4212	7415	-1097	9075	6222	9680	6318		
45	20	600	698	987	854	1460	-318	2130	681	1611	751	1947	-423	2511	908	2149	1002	2921	-635	3273	1362	3223	1503
		675	781	1105	933	1715	-373	2446	800	1892	882	2286	-497	2893	1066	2522	1176	3429	-746	3788	1599	3784	1764
		750	864	1222	1013	1972	-429	2765	920	2176	1015	2629	-572	3279	1226	2901	1353	3944	-858	4308	1839	4351	2029
		825	946	1338	1092	2226	-484	3080	1038	2456	1145	2968	-645	3660	1384	3275	1527	4452	-968	4822	2076	4912	2291
		900	1029	1455	1172	2483	-540	3399	1158	2740	1278	3311	-720	4046	1544	3653	1704	4967	-1080	5342	2316	5480	2555
		1050	1188	1680	1324	2972	-646	4006	1386	3280	1529	3963	-862	4781	1848	4373	2039	5945	-1293	6332	2772	6559	3059
		1200	1359	1922	1489	3503	-762	4663	1634	3865	1802	4671	-1016	5577	2178	5154	2403	7006	-1523	7405	3267	7730	3605
		1350	1524	2155	1648	4015	-873	5297	1872	4430	2066	5353	-1164	6344	2496	5906	2754	8029	-1746	8438	3744	8859	4131
		1500	1676	2370	1800	4503	-979	5894	2100	4969	2317	6005	-1306	7069	2800	6625	3089	9007	-1958	9419	4200	9938	4634
		1650	1842	2605	1959	5015	-1090	6529	2339	5533	2580	6687	-1454	7838	3118	7378	3440	10030	-2181	10454	4677	11067	5160
		1800	2006	2837	2117	5523	-1201	7159	2576	6094	2842	7364	-1601	8600	3434	8126	3789	11046	-2402	11481	5151	12188	5683
1950	2198	3108	2296	6099	-1326	7881	2844	6729	3138	8132	-1768	9472	3792	8973	4184	12198	-2652	12654	5688	13459	6276		
2100	2388	3377	2474	6672	-1451	8598	3111	7361	3433	8895	-1934	10338	4148	9815	4577	13343	-2901	13819	6222	14723	6865		



END ELEVATION



SECTION B-B
LOCATION OF ADDITIONAL BARS.

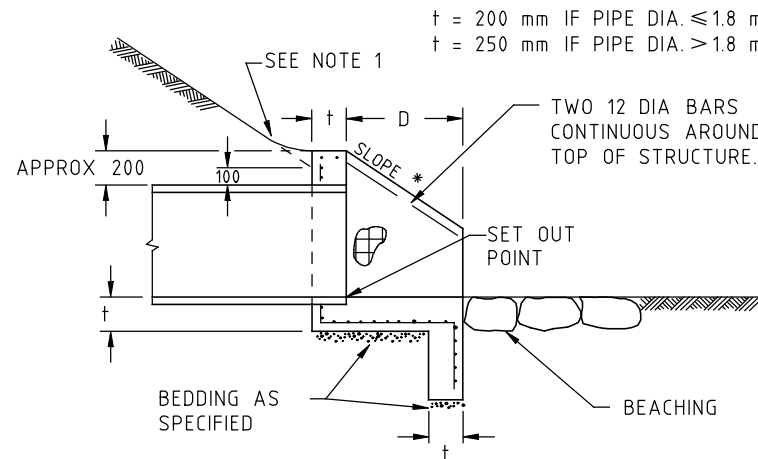
NOTES:

- 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

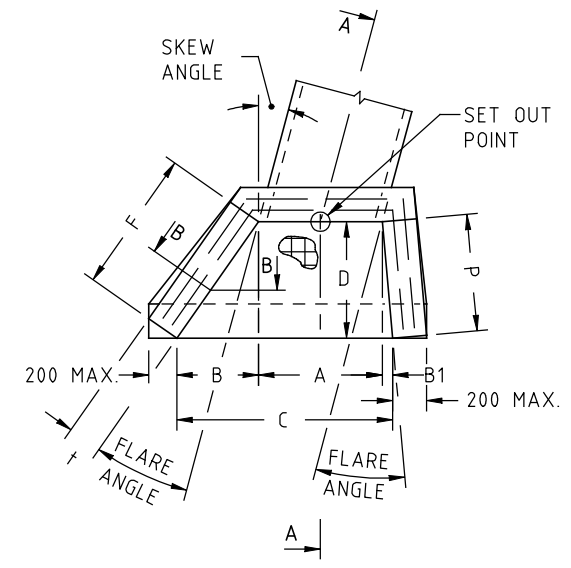
NOTES:

- 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 1942 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.

* THEORETICAL SLOPE OF WINGWALL MEASURED AT RIGHT ANGLES TO THE ROADWAY.
 # APPROXIMATE ONLY



SECTION A-A



PLAN

GENERAL NOTES

- ALL DIMENSIONS ARE IN MILLIMETRES.
- CULVERT INLET AND OUTLET STRUCTURES - SELECTION GUIDE

SD 1700

DESIGNED	PRINCIPAL ROAD DESIGN ENGINEER	 ENGINEERING & TECHNOLOGY CONSULTANTS	3 PROSPECT HILL ROAD, CAMBERWELL, VICTORIA, 3124 PHONE NO. (03) 9811 8355 FAX NO. (03) 9811 8329
APPROVED	1.2.95		
CATALOG	PRED	SCALE	HOR NOT TO SCALE
PROJECT	sddgnew	OF	VER
FILENAME	sd-1941c.dgn	METRES	VER

STANDARD DRAWING				
REINFORCED CONCRETE WINGWALL				
TYPES 1, 2 & 3				
SKEW PIPE CULVERTS 600 TO 2100 DIA				
FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
			SD 1941	C