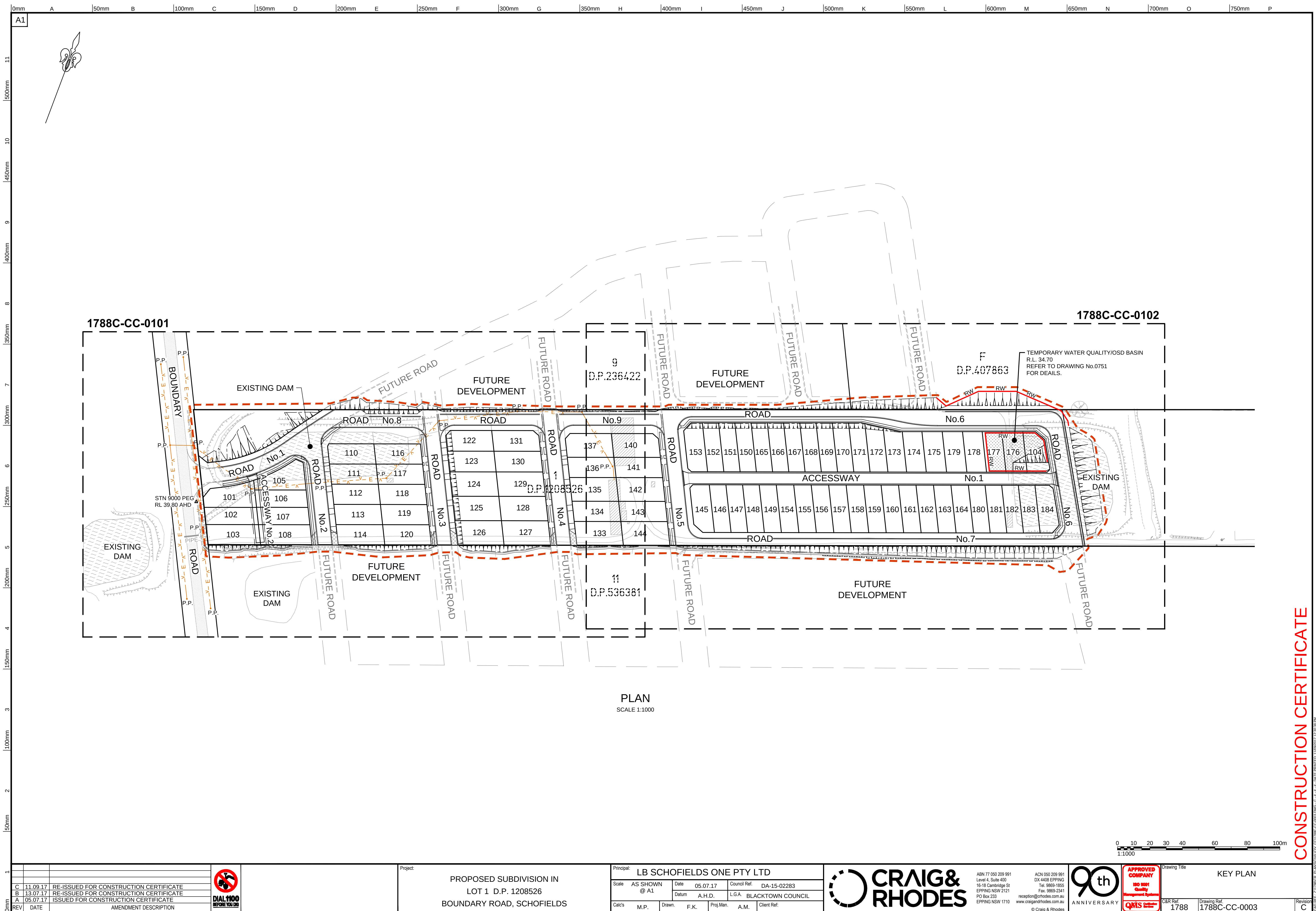


CIVIL WORKS CONSTRUCTION CERTIFICATE



CONSTRUCTION CERTIFICATE

[illegible]





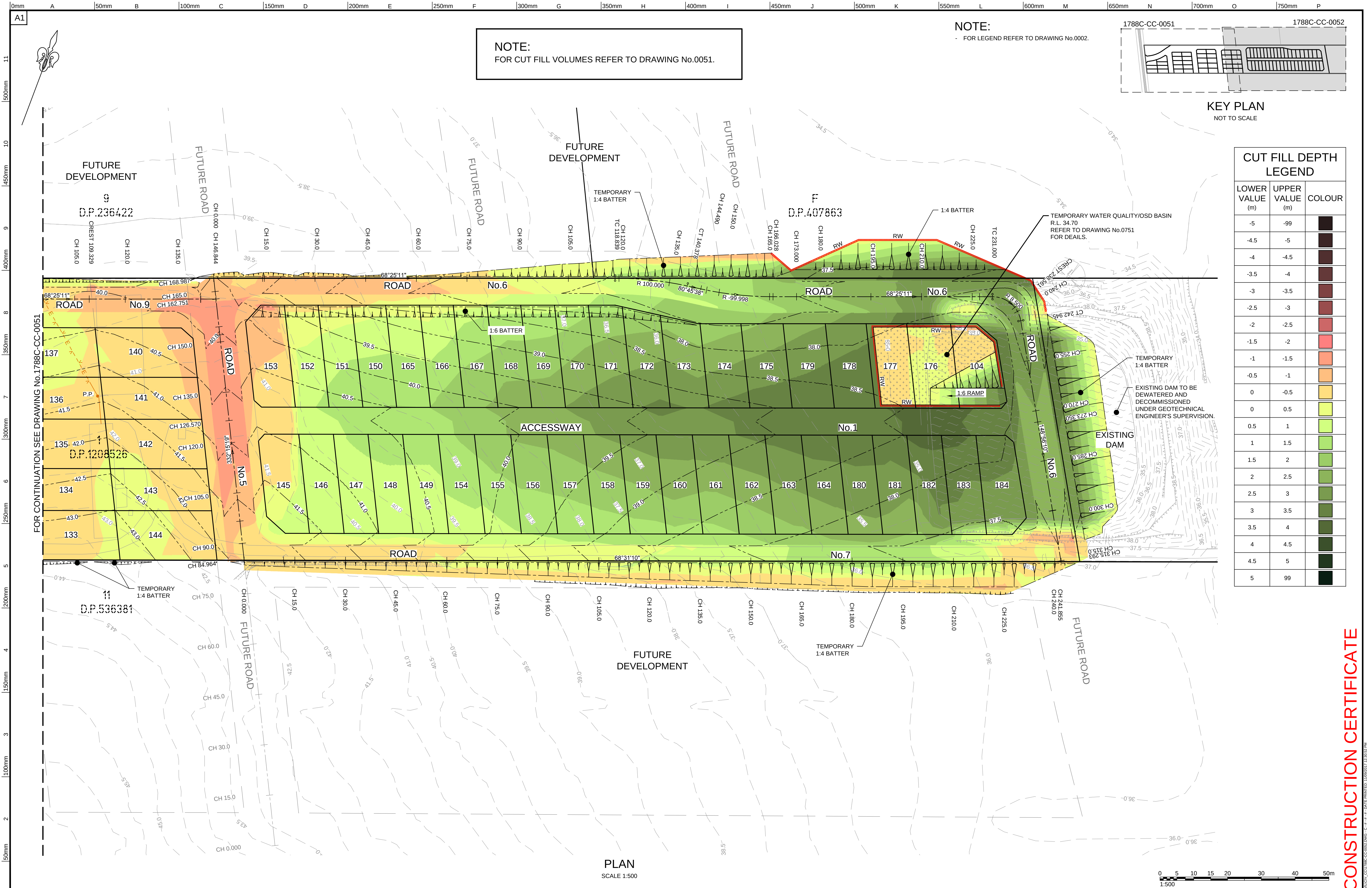
CUT FILL DEPTH LEGEND		
LOWER VALUE (m)	UPPER VALUE (m)	COLOUR
-5	-99	
-4.5	-5	
-4	-4.5	
-3.5	-4	
-3	-3.5	
-2.5	-3	
-2	-2.5	
-1.5	-2	
-1	-1.5	
-0.5	-1	
0	-0.5	
0	0.5	
0.5	1	
1	1.5	
1.5	2	
2	2.5	
2.5	3	
3	3.5	
3.5	4	
4	4.5	
4.5	5	
5	99	

KEY PLAN
NOT TO SCALE

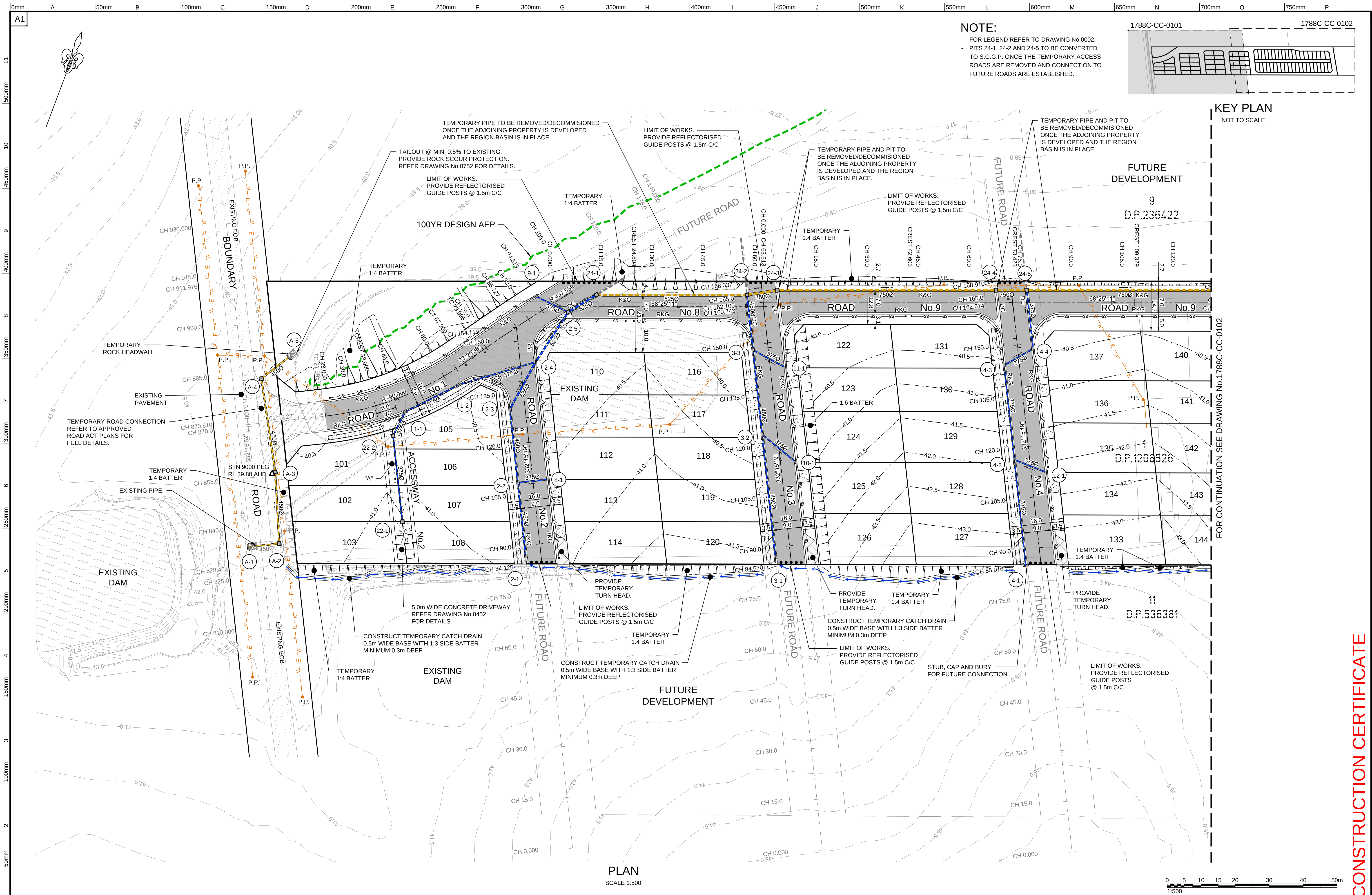
FOR CONTINUATION SEE DRAWING NO.1788C-CC-0052

CONSTRUCTION CERTIFICATE

1			 DIAL 1100 BEFORE YOU DIG		Project: PROPOSED SUBDIVISION IN LOT 1 D.P. 1208526 BOUNDARY ROAD, SCHOFIELDS	Principal: LB SCHOFIELDS ONE PTY LTD	 ABN 77 050 209 991 ACN 050 209 991 Level 4, Suite 400 16-18 Cambridge St EPPING NSW 2121 PO Box 233 EPPING NSW 1710 reception@crhodes.com.au www.craigandrhodes.com.au © Craig & Rhodes	 ANNIVERSARY	 APPROVED COMPANY ISO 9001 Quality Management Systems QMS	Drawing Title BULK EARTHWORKS PLAN SHEET 1 OF 2	C&R Ref. 1788	Drawing Ref. 1788C-CC-0051	Revision C	
	C	11.09.17												RE-ISSUED FOR CONSTRUCTION CERTIFICATE
	B	15.07.17												RE-ISSUED FOR CONSTRUCTION CERTIFICATE
	A	03.07.17												ISSUED FOR CONSTRUCTION CERTIFICATE
	REV	DATE												AMENDMENT DESCRIPTION

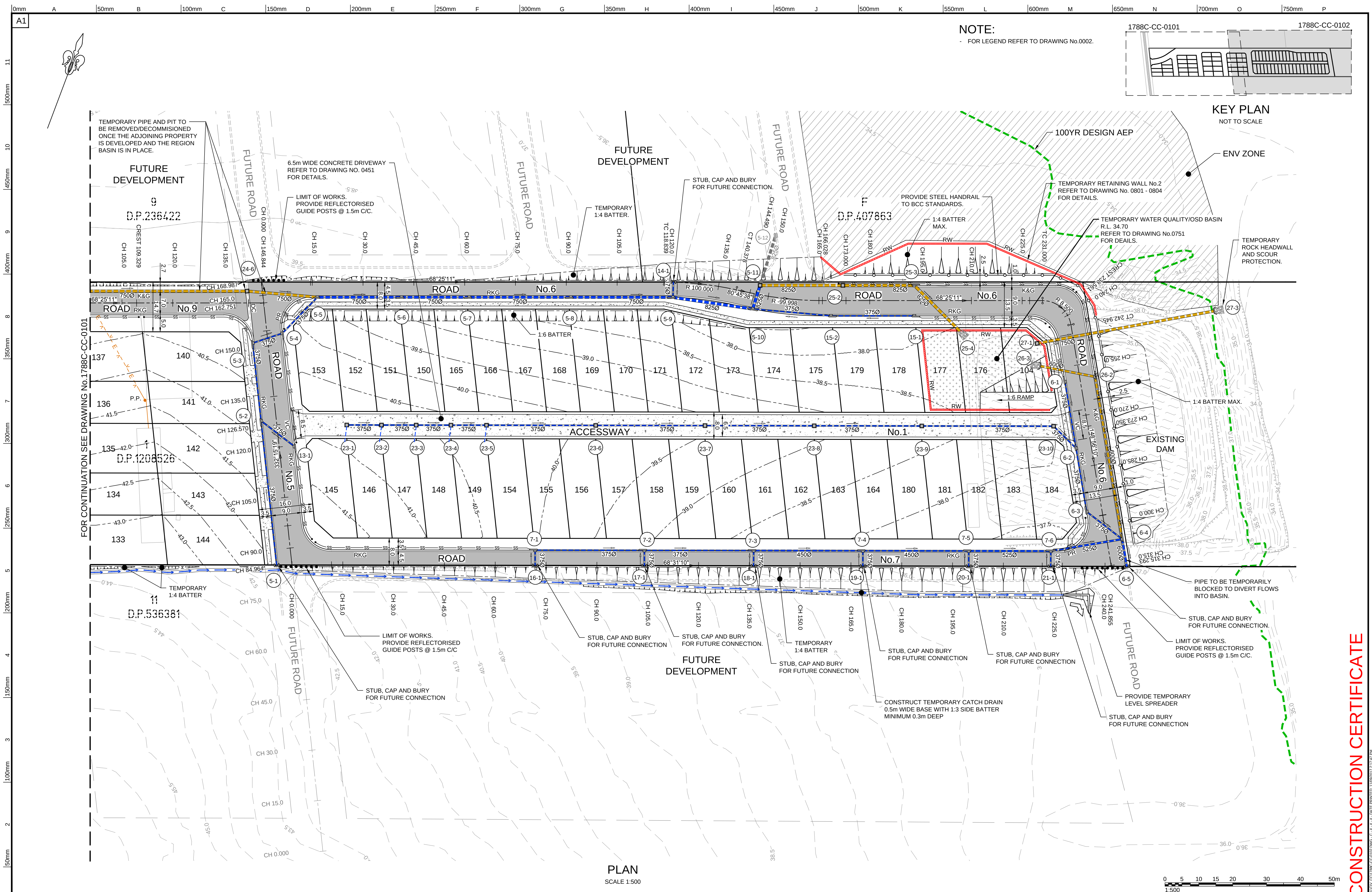


1		Project:		Principal:		Scale:		Date:		Council Ref:		Drawing Title:		Revision:	
B		PROPOSED SUBDIVISION IN		LB SCHOFIELDS ONE PTY LTD		AS SHOWN		05.07.17		DA-15-02283		BULK EARTHWORKS PLAN		C	
A		LOT 1 D.P. 1208526		Council Ref.		@ A1		A.H.D.		L.G.A. BLACKTOWN COUNCIL		SHEET 2 OF 2		1788	
REV		BOUNDARY ROAD, SCHOFIELDS		Calc's		M.P.		Drawn:		F.K.		Proj.Man:		A.M.	
DATE		AMENDMENT DESCRIPTION		Client Ref:											
11.09.17		RE-ISSUED FOR CONSTRUCTION CERTIFICATE		ABN 77 050 209 991				Level 4, Suite 400		ACN 050 209 991		90th		APPROVED COMPANY	
13.07.17		RE-ISSUED FOR CONSTRUCTION CERTIFICATE		16-18 Cambridge St				EPPING NSW 2121		Tel: 9869-1855		180 0001		Quality Management Systems	
05.07.17		ISSUED FOR CONSTRUCTION CERTIFICATE		PO Box 233				EPPING NSW 1710		Fax: 9869-2341		QMS		C&R Ref:	
										www.craigandrhodes.com.au		1788		Drawing Ref:	
										© Craig & Rhodes		1788C-CC-0052		C	

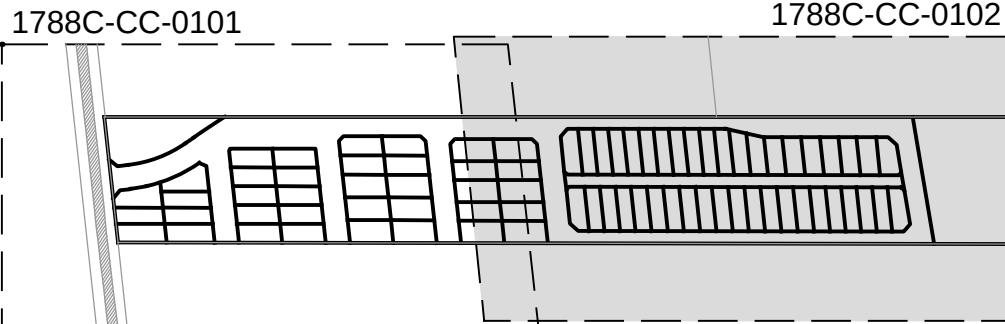


1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
---	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

CONSTRUCTION CERTIFICATE



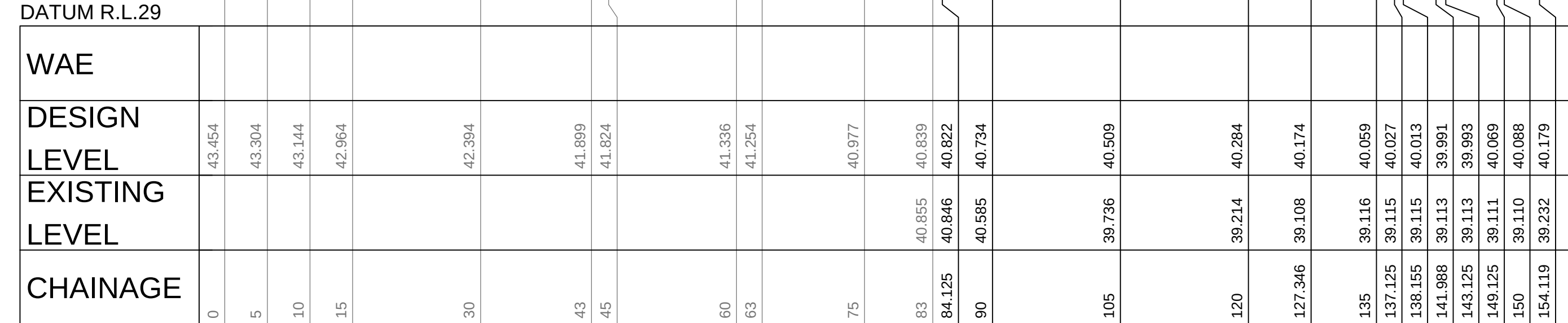
NOTE:
- FOR LEGEND REFER TO DRAWING No.0002



KEY PLAN
NOT TO SCALE

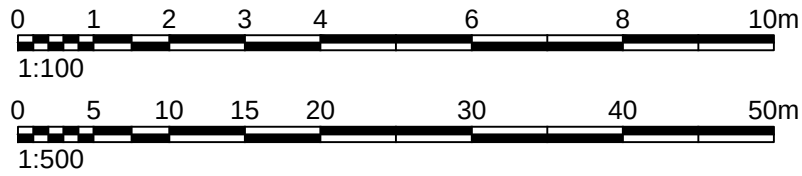
- ENV ZONE

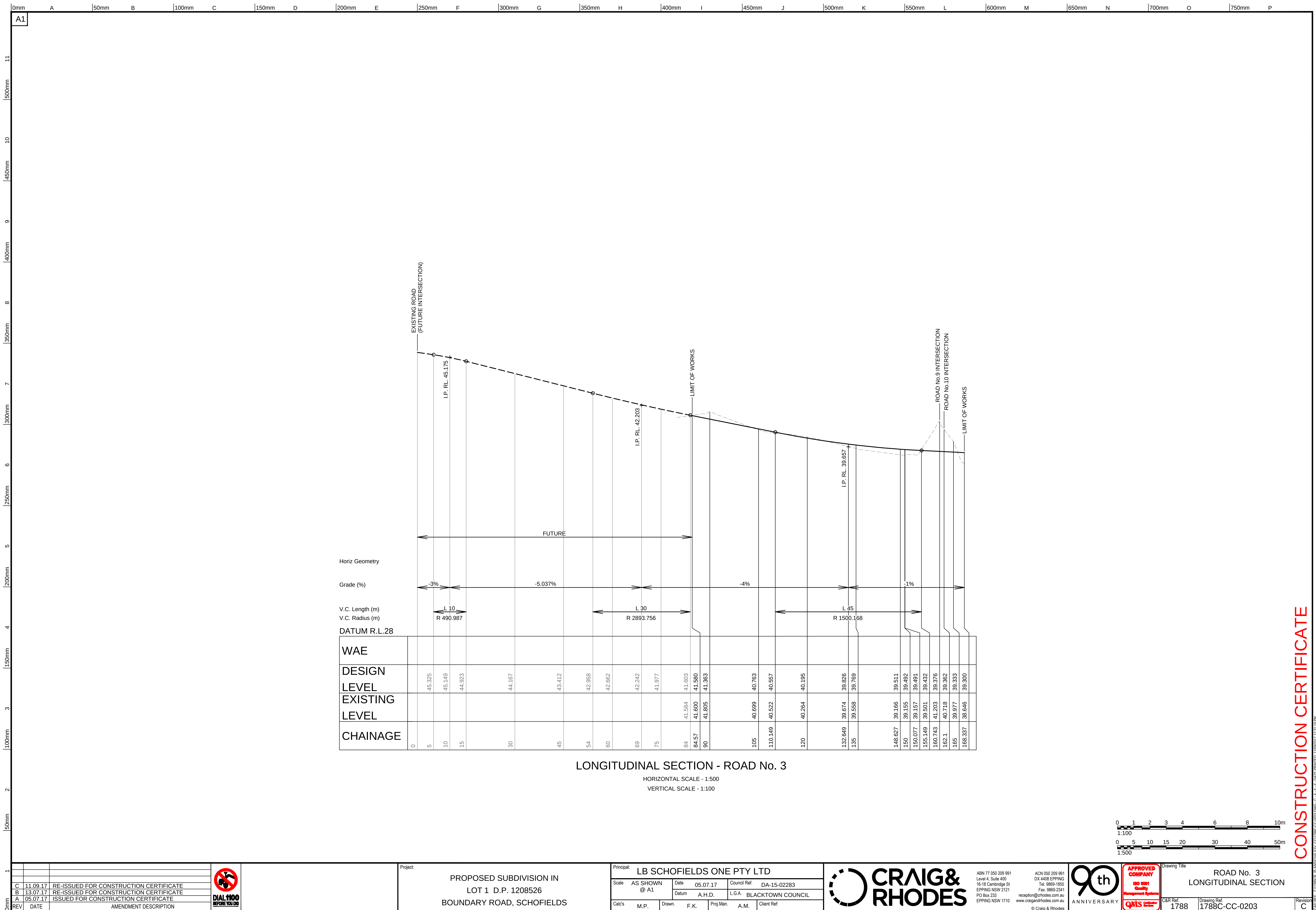
CONSTRUCTION CERTIFICATE

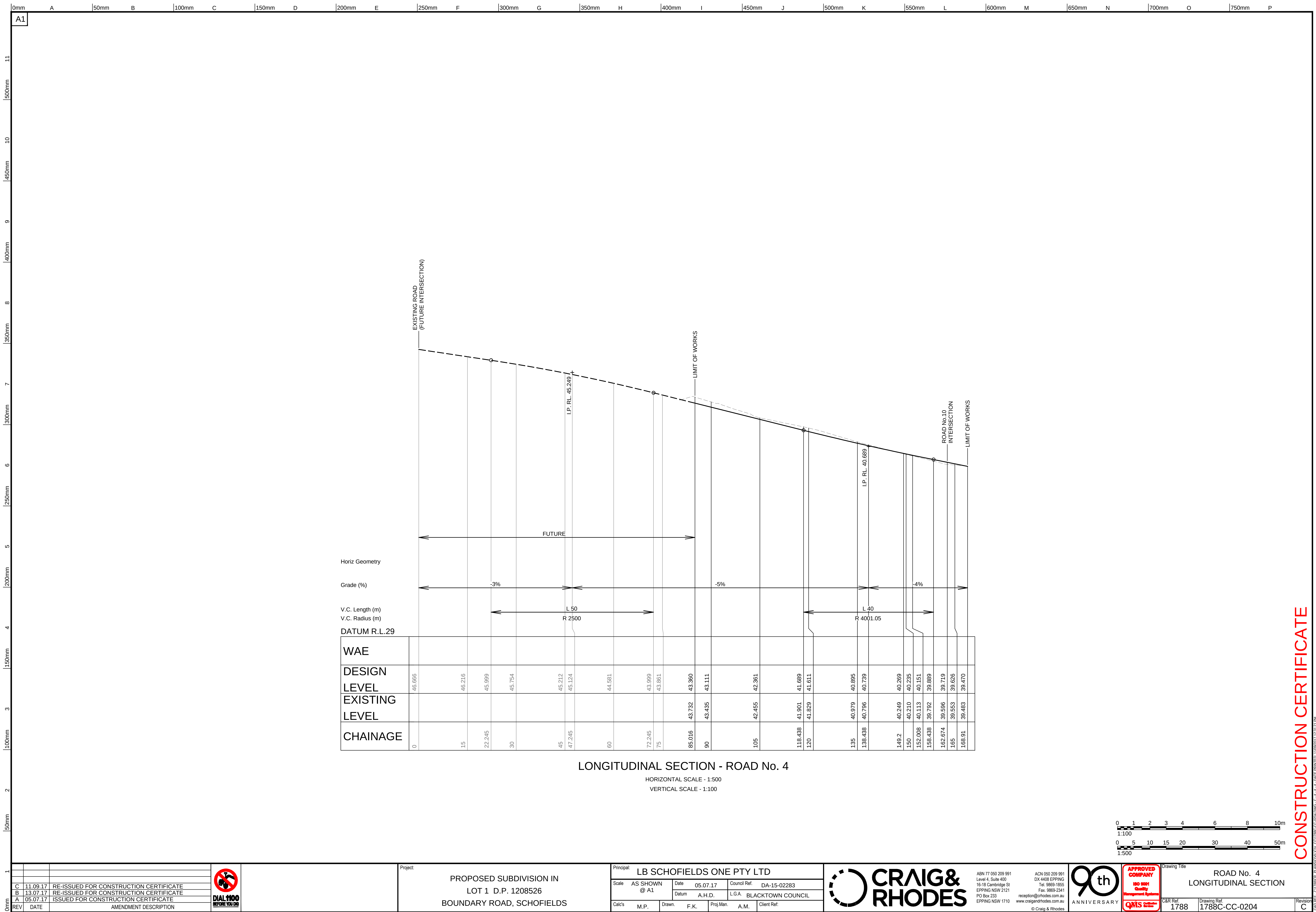


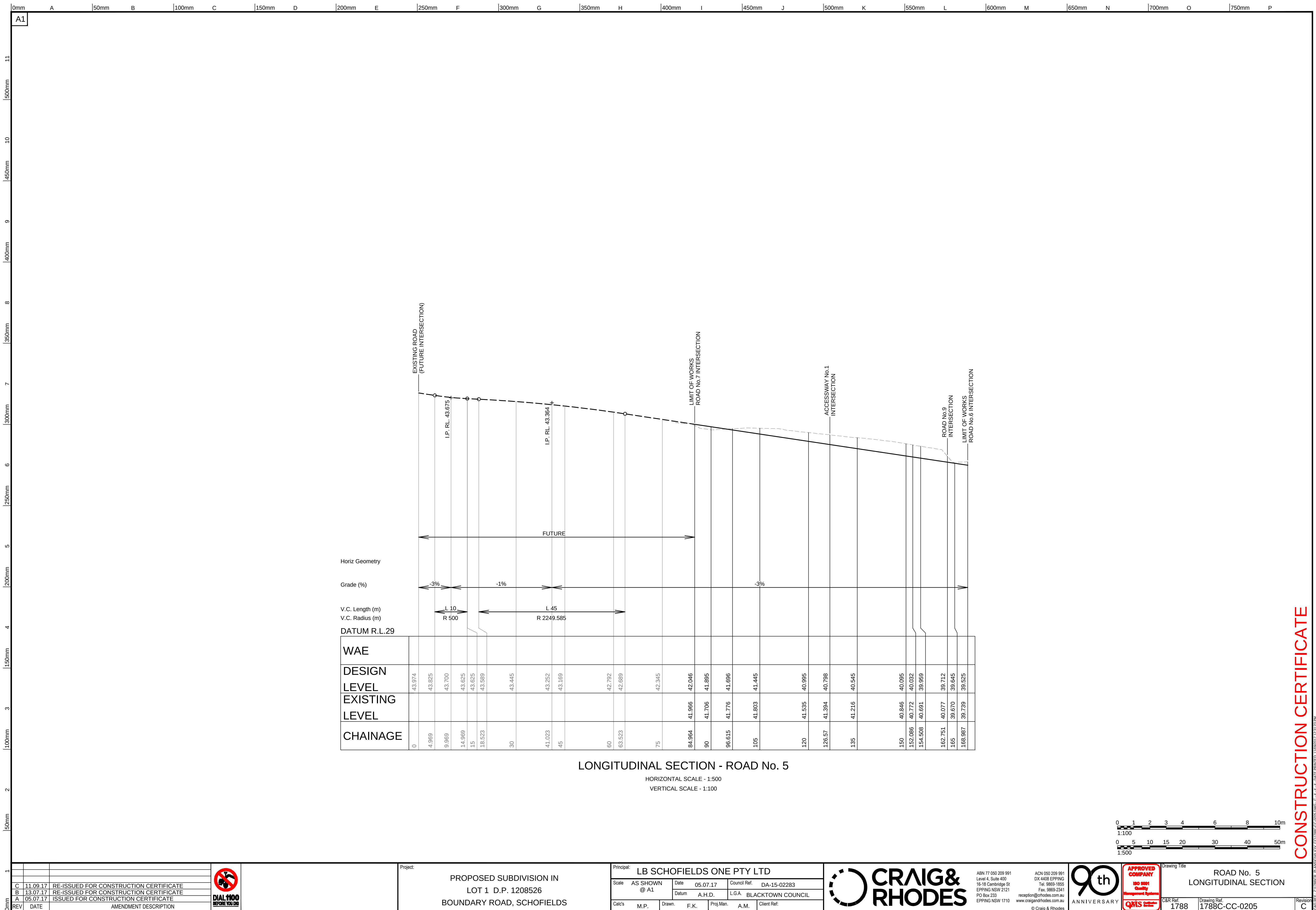
LONGITUDINAL SECTION - ROAD No. 2

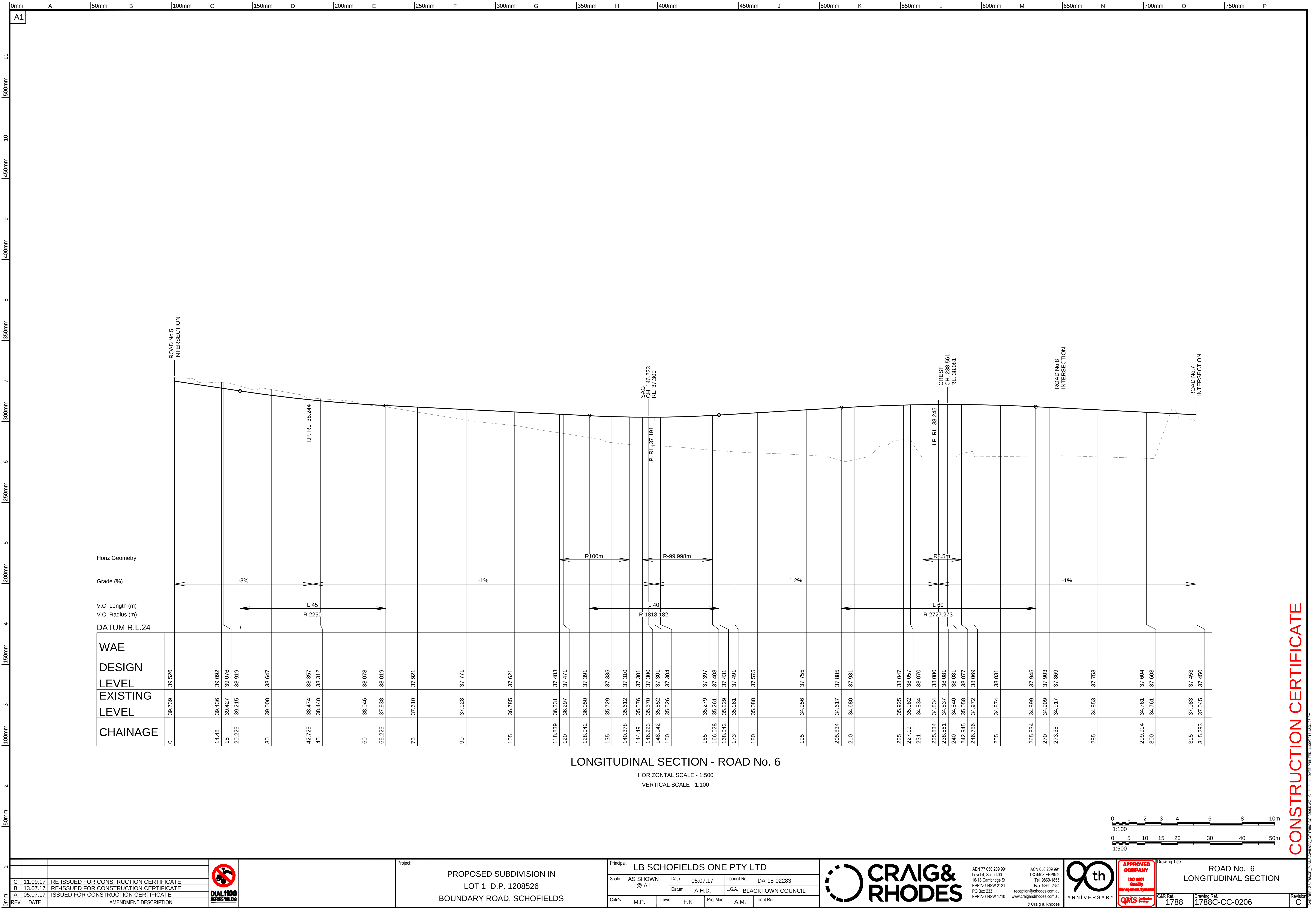
HORIZONTAL SCALE - 1:500
VERTICAL SCALE - 1:100

[illegible]

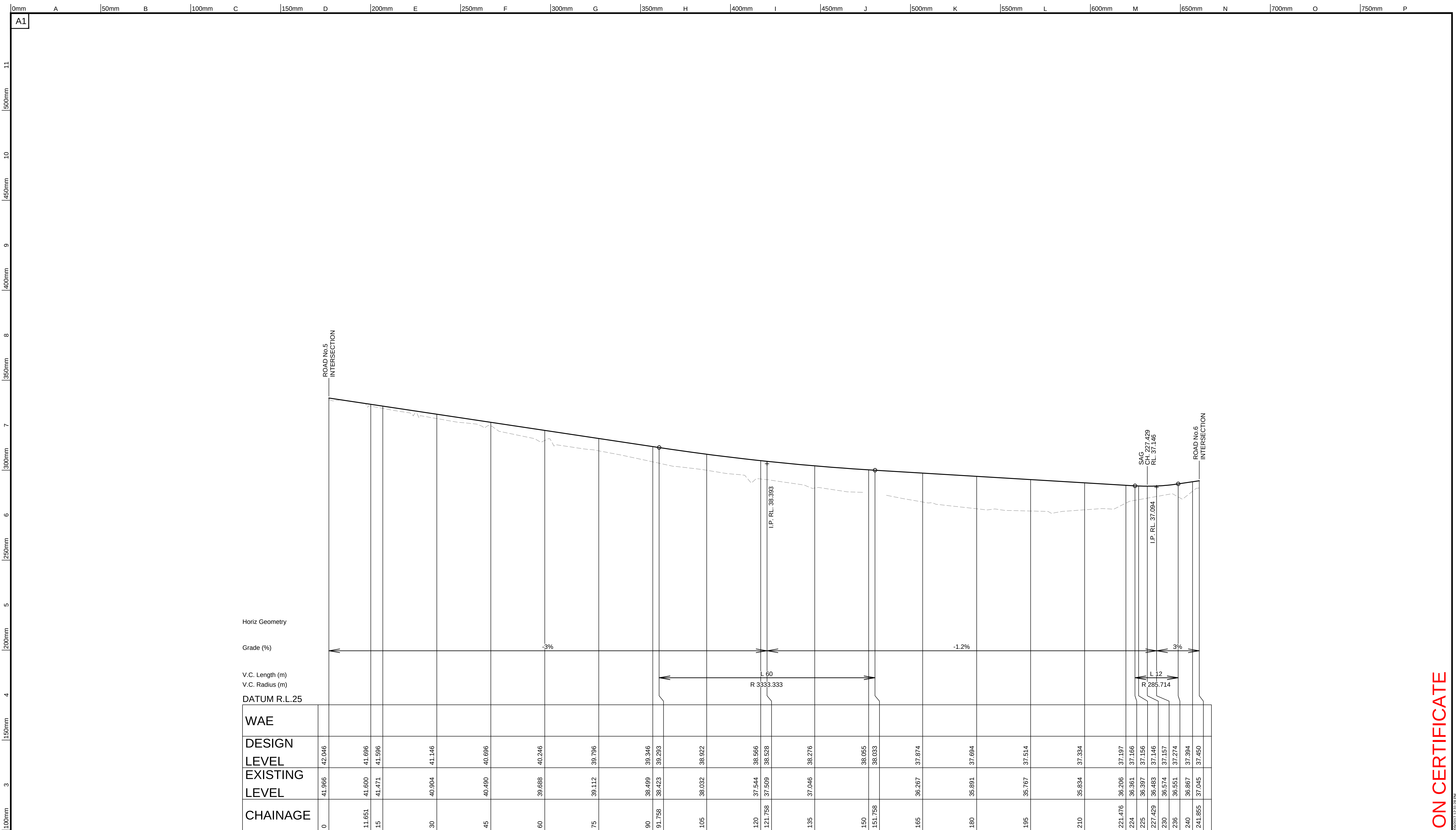






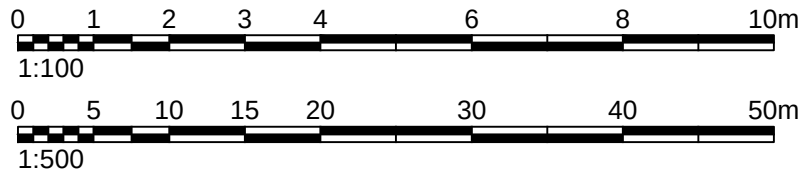


CONSTRUCTION CERTIFICATE



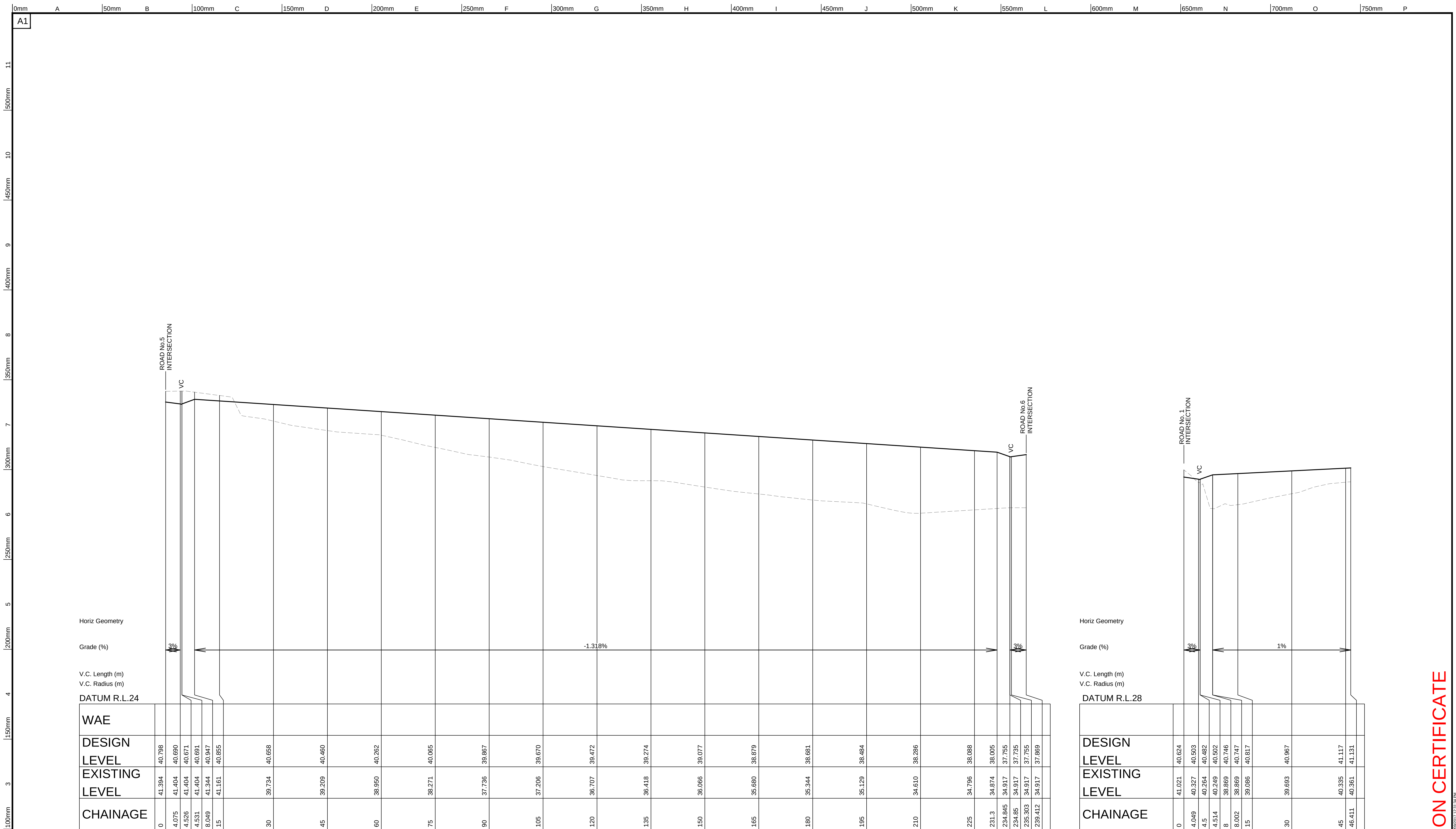
LONGITUDINAL SECTION - ROAD No. 7

HORIZONTAL SCALE - 1:500
VERTICAL SCALE - 1:100



1			 DIAL 1100 BEFORE YOU DIG	Project: PROPOSED SUBDIVISION IN LOT 1 D.P. 1208526 BOUNDARY ROAD, SCHOFIELDS	Principal: LB SCHOFIELDS ONE PTY LTD					 ABN 77 050 209 991 Level 4, Suite 400 16-18 Cambridge St EPPING NSW 2121 PO Box 233 EPPING NSW 1710 reception@crhodes.com.au www.craigandrhodes.com.au © Craig & Rhodes	 90th ANNIVERSARY	 APPROVED COMPANY ISO 9001 Quality Management Systems QMS	Drawing Title: ROAD No. 7 LONGITUDINAL SECTION				
	C	11.09.17			RE-ISSUED FOR CONSTRUCTION CERTIFICATE	Scale	AS SHOWN @ A1	Date	05.07.17				Council Ref.	DA-15-02283			
	B	13.07.17			RE-ISSUED FOR CONSTRUCTION CERTIFICATE			Datum	A.H.D.				LGA	BLACKTOWN COUNCIL			
	A	05.07.17			ISSUED FOR CONSTRUCTION CERTIFICATE	Calc's	M.P.	Drawn	F.K.				Proj.Man.	A.M.	Client Ref.		
	REV	DATE			AMENDMENT DESCRIPTION												
												C&R Ref:	1788	Drawing Ref:	1788C-CC-0207	Revision:	C

CONSTRUCTION CERTIFICATE

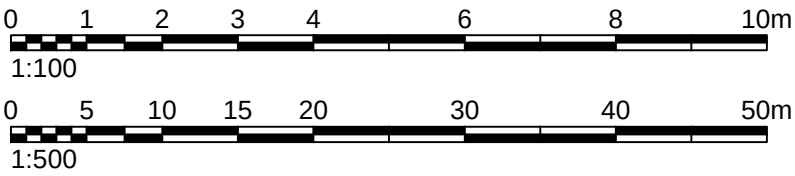


LONGITUDINAL SECTION - ACCESSWAY No. 1

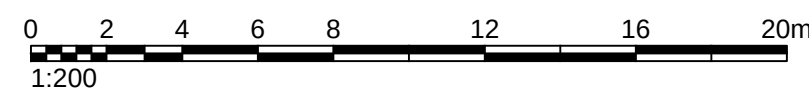
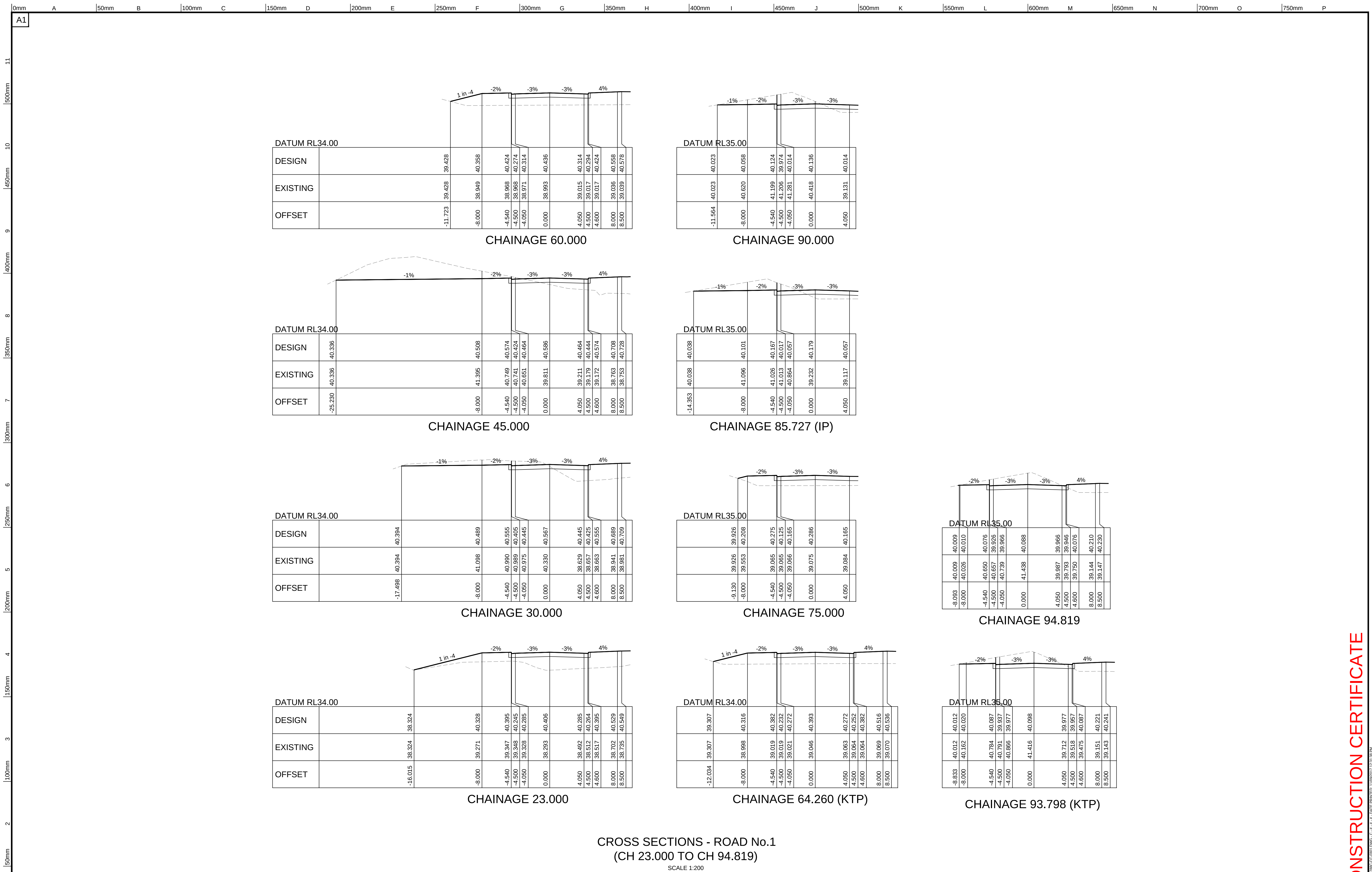
HORIZONTAL SCALE - 1:500
VERTICAL SCALE - 1:100

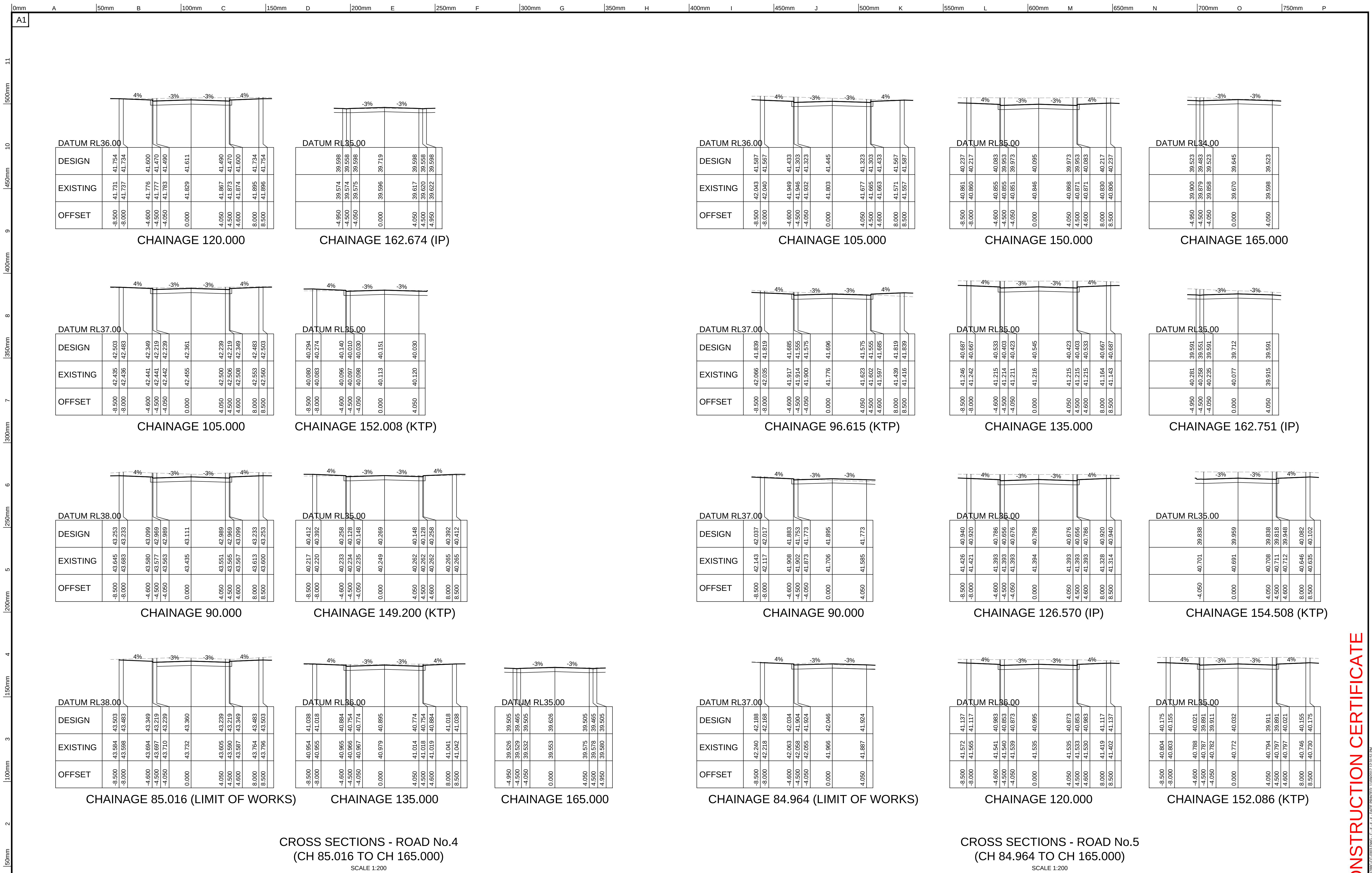
LONGITUDINAL SECTION - ACCESSWAY No. 2

HORIZONTAL SCALE - 1:500
VERTICAL SCALE - 1:100

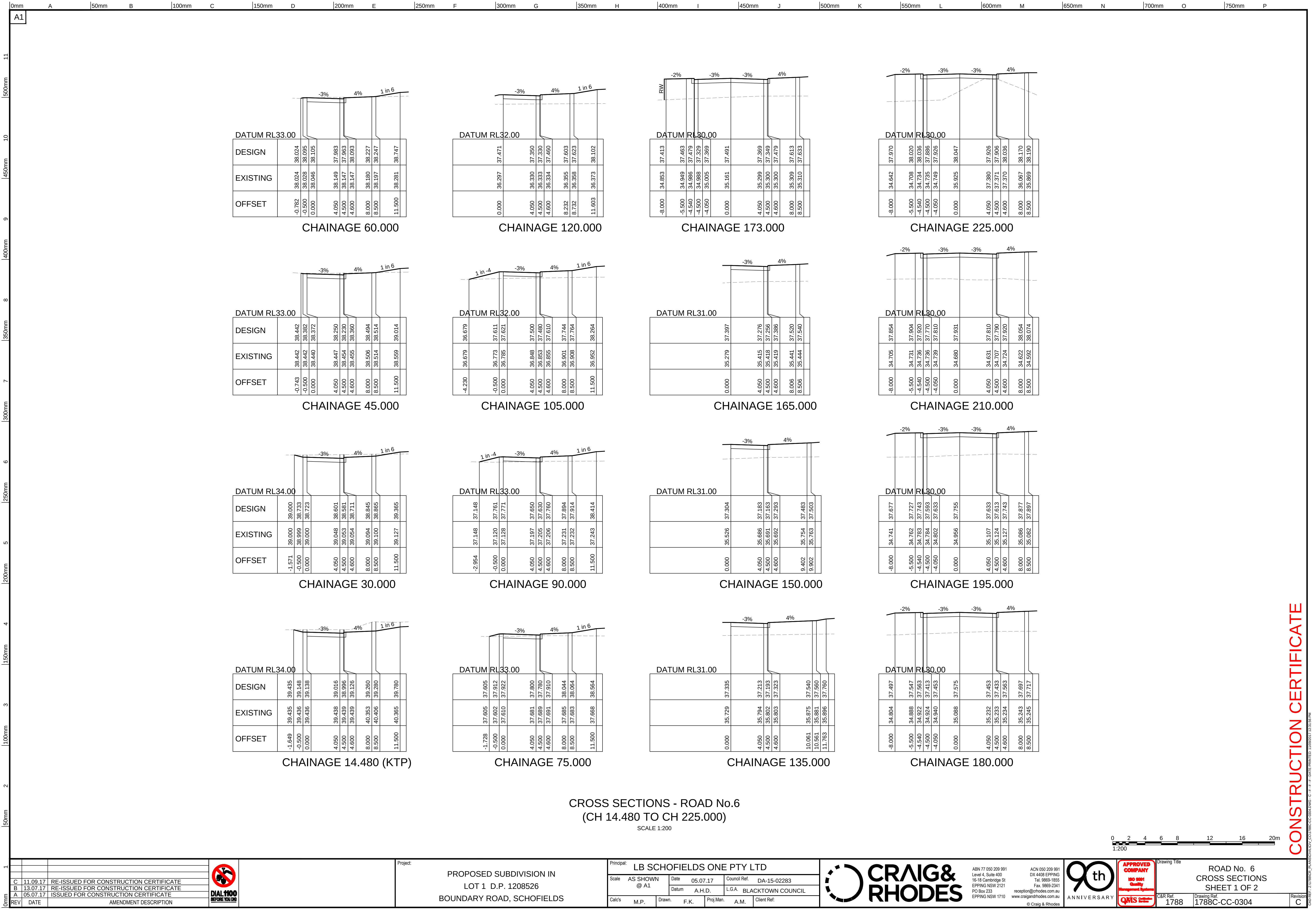


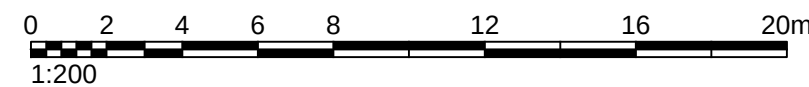
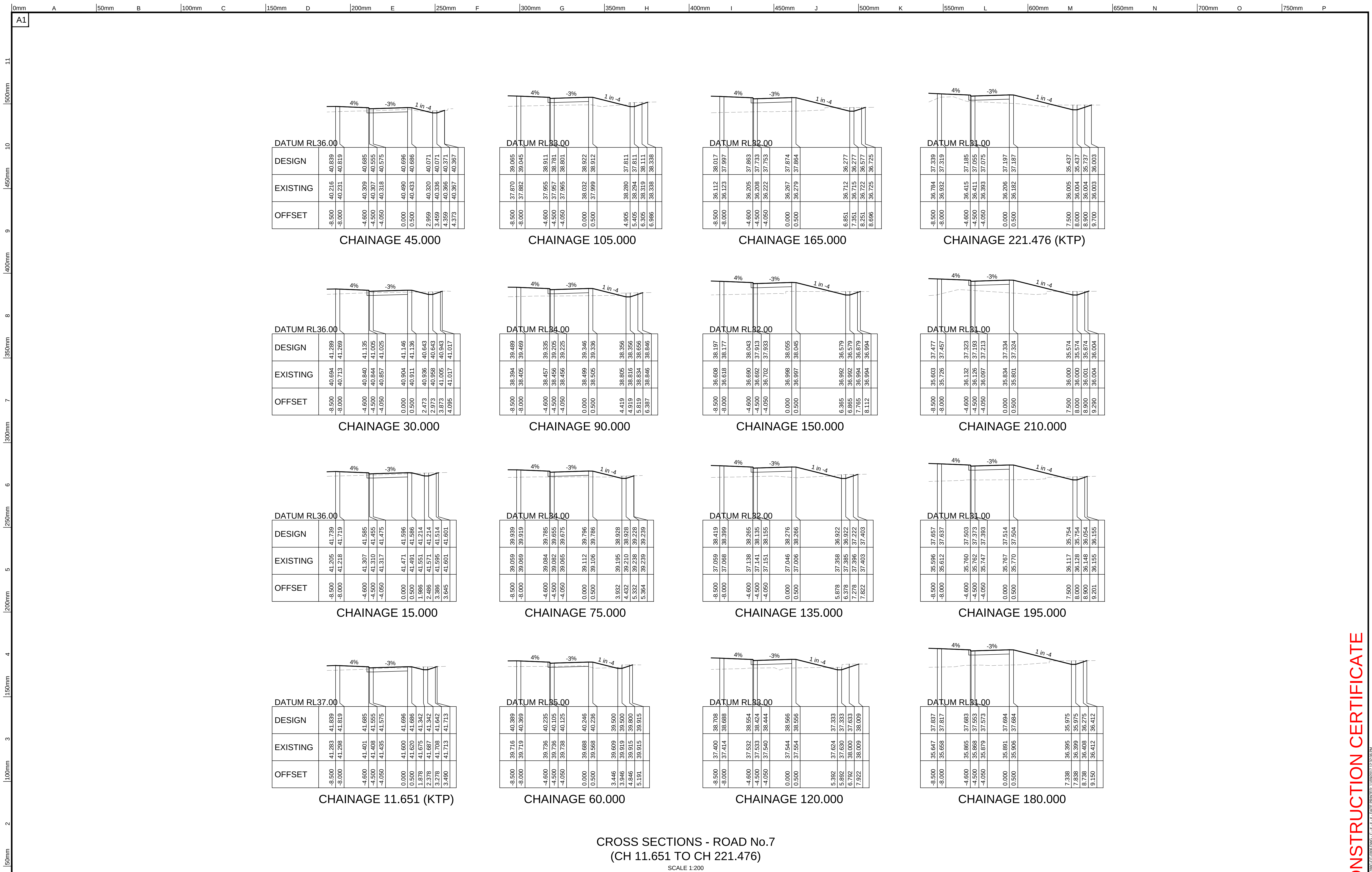
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1038 1039 1040 1041 1042 1043 1044 1045 1046 1047 1048 1049 1050 1051 1052 1053 1054 1055 1056 1057 1058 1059 1060 1061 1062 1063 1064 1065 1066 1067 1068 1069 1070 1071 1072 1073 1074 1075 1076 1077 1078 1079 1080 1081 1082 1083 1084 1085 1086 1087 1088 1089 1090 1091 1092 1093 1094 1095 1096 1097 1098 1099 1100 1101 1102 1103 1104 1105 1106 1107 1108 1109 1110 1111 1112 1113 1114 1115 1116 1117 1118 1119 1120 1121 1122 1123 1124 1125 1126 1127 1128 1129 1130 1131 1132 1133 1134 1135 1136 1137 1138 1139 1140 1141 1142 1143 1144 1145 1146 1147 1148 1149 1150 1151 1152 1153 1154 1155 1156 1157 1158 1159 1160 1161 1162 1163 1164 1165 1166 1167 1168 1169 1170 1171 1172 1173 1174 1175 1176 1177 1178 1179 1180 1181 1182 1183 1184 1185 1186 1187 1188 1189 1190 1191 1192 1193 1194 1195 1196 1197 1198 1199 1200 1201 1202 1203 1204 1205 1206 1207 1208 1209 1210 1211 1212 1213 1214 1215 1216 1217 1218 1219 1220 1221 1222 1223 1224 1225 1226 1227 1228 1229 1230 1231 1232 1233 1234 1235 1236 1237 1238 1239 1240 1241 1242 1243 1244 1245 1246 1247 1248 1249 1250 1251 1252 1253 1254 1255 1256 1257 1258 1259 1260 1261 1262 1263 1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1295 1296 1297 1298 1299 1300 1301 1302 1303 1304 1305 1306 1307 1308 1309 1310 1311 1312 1313 1314 1315 1316 1317 1318 1319 1320 1321 1322 1323 1324 1325 1326 1327 1328 1329 1330 1331 1332 1333 1334 1335 1336 1337 1338 1339 1340 1341 1342 1343 1344 1345 1346 1347 1348 1349 1350 1351 1352 1353 1354 1355 1356 1357 1358 1359 1360 1361 1362 1363 1364 1365 1366 1367 1368 1369 1370 1371 1372 1373 1374 1375 1376 1377 1378 1379 1380 1381 1382 1383 1384 1385 1386 1387 1388 1389 1390 1391 1392 1393 1394 1395 1396 1397 1398 1399 1400 1401 1402 1403 1404 1405 1406 1407 1408 1409 1410 1411 1412 1413 1414 1415 1416 1417 1418 1419 1420 1421 1422 1423 1424 1425 1426 1427 1428 1429 1430 1431 1432 1433 1434 1435 1436 1437 1438 1439 1440 1441 1442 1443 1444 1445 1446 1447 1448 1449 1450 1451 1452 1453 1454 1455 1456 1457 1458 1459 1460 1461 1462 1463 1464 1465 1466 1467 1468 1469 1470 1471 1472 1473 1474 1475 1476 1477 1478 1479 1480 1481 1482 1483 1484 1485 1486 1487 1488 1489 1490 1491 1492 1493 1494 1495 1496 1497 1498 1499 1500 1501 1502 1503 1504 1505 1506 1507 1508 1509 1510 1511 1512 1513 1514 1515 1516 1517 1518 1519 1520 1521 1522 1523 1524 1525 1526 1527 1528 1529 1530 1531 1532 1533 1534 1535 1536 1537 1538 1539 1540 1541 1542 1543 1544 1545 1546 1547 1548 1549 1550 1551 1552 1553 1554 1555 1556 1557 1558 1559 1560 1561 1562 1563 1564 1565 1566 1567 1568 1569 1570 1571 1572 1573 1574 1575 1576 1577 1578 1579 1580 1581 1582 1583 1584 1585 1586 1587 1588 1589 1590 1591 1592 1593 1594 1595 1596 1597 1598 1599 1600 1601 1602 1603 1604 1605 1606 1607 1608 1609 1610 1611 1612 1613 1614 1615 1616 1617 1618 1619 1620 1621 1622 1623 1624 1625 1626 1627 1628 1629 1630 1631 1632 1633 1634 1635 1636 1637 1638 1639 1640 1641 1642 1643 1644 1645 1646 1647 1648 1649 1650 1651 1652 1653 1654 1655 1656 1657 1658 1659 1660 1661 1662 1663 1664 1665 1666 1667 1668 1669 1670 1671 1672 1673 1674 1675 1676 1677 1678 1679 1680 1681 1682 1683 1684 1685 1686 1687 1688 1689 1690 1691 1692 1693 1694 1695 1696 1697 1698 1699 1700 1701 1702 1703 1704 1705 1706 1707 1708 1709 1710 1711 1712 1713 1714 1715 1716 1717 1718 1719 1720 1721 1722 1723 1724 1725 1726 1727 1728 1729 1730 1731 1732 1733 1734 1735 1736 1737 1738 1739 1740 1741 1742 1743 1744 1745 1746 1747 1748 1749 1750 1751 1752 1753 1754 1755 1756 1757 1758 1759 1760 1761 1762 1763 1764 1765 1766 1767 1768 1769 1770 1771 1772 1773 1774 1775 1776 1777 1778 1779 1780 1781 1782 1783 1784 1785 1786 1787 1788 1789 1790 1791 1792 1793 1794 1795 1796 1797 1798 1799 1800 1801 1802 1803 1804 1805 1806 1807 1808 1809 1810 1811 1812 1813 1814 1815 1816 1817 1818 1819 1820 1821 1822 1823 1824 1825 1826 1827 1828 1829 1830 1831 1832 1833 1834 1835 1836 1837 1838 1839 1840 1841 1842 1843 1844 1845 1846 1847 1848 1849 1850 1851 1852 1853 1854 1855 1856 1857 1858 1859 1860 1861 1862 1863 1864 1865 1866 1867 1868 1869 1870 1871 1872 1873 1874 1875 1876 1877 1878 1879 1880 1881 1882 1883 1884 1885 1886 1887 1888 1889 1890 1891 1892 1893 1894 1895 1896 1897 1898 1899 1900 1901 1902 1903 1904 1905 1906 1907 1908 1909 1910 1911 1912 1913 1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184 2185 2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199 2200 2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213 2214 2215 2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2230 2231 2232 2233 2234 2235 2236 2237 2238 2239 2240 2241 2242 2243 2244 2245 2246 2247

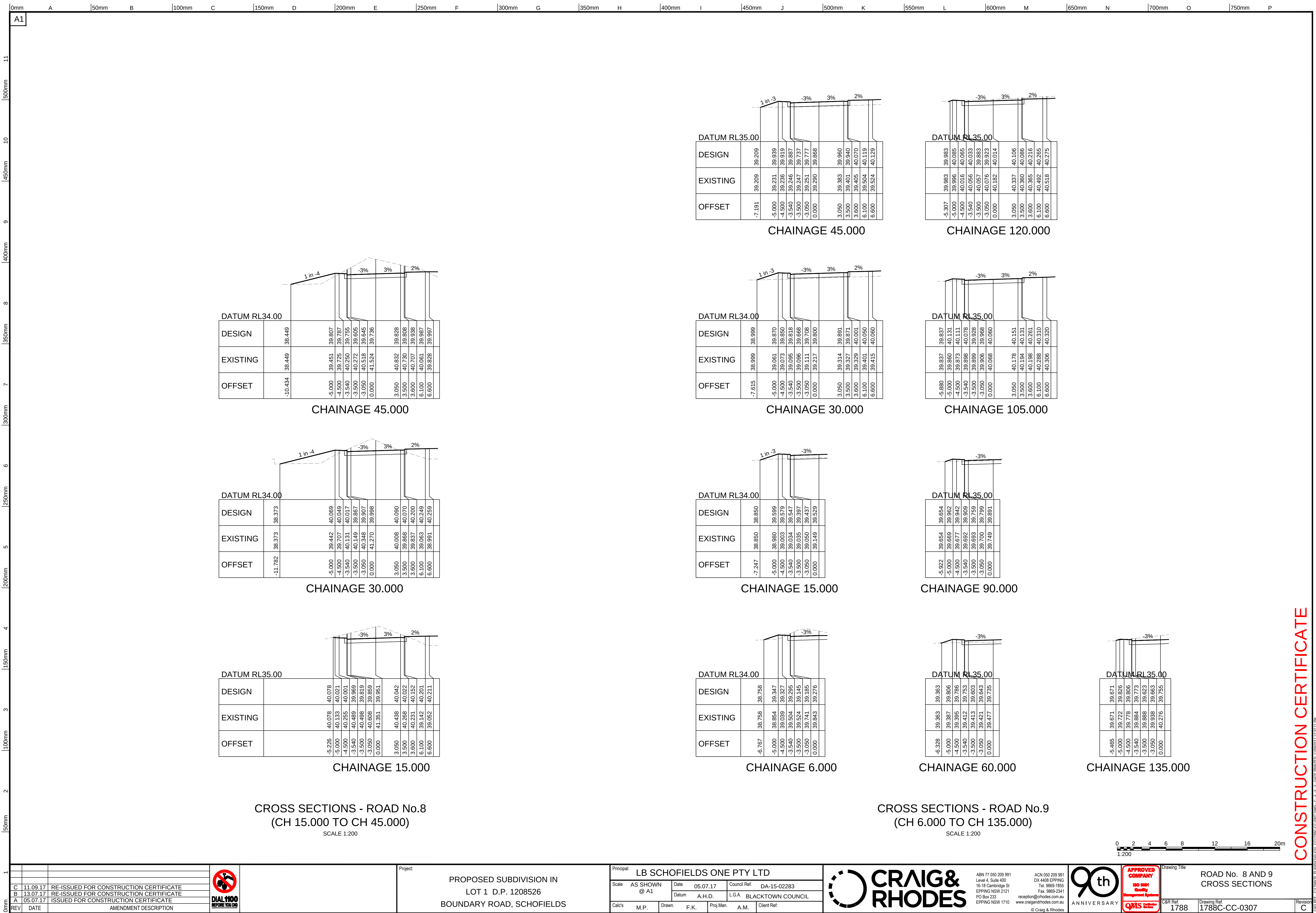


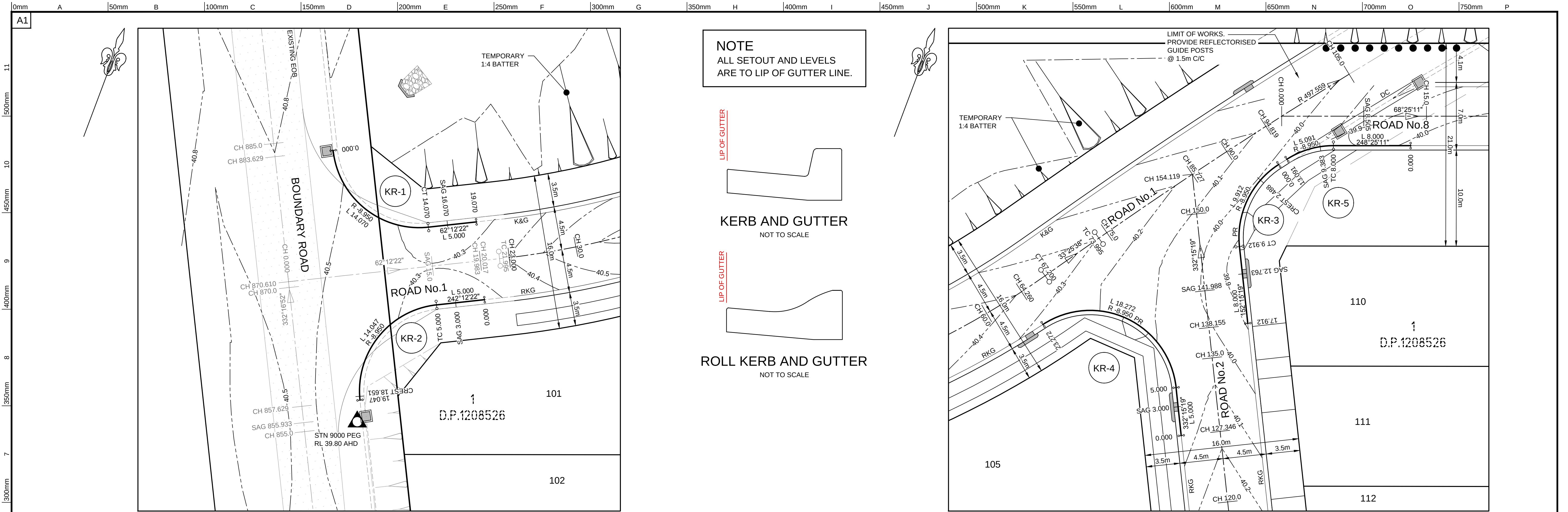


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1038 1039 1040 1041 1042 1043 1044 1045 1046 1047 1048 1049 1050 1051 1052 1053 1054 1055 1056 1057 1058 1059 1060 1061 1062 1063 1064 1065 1066 1067 1068 1069 1070 1071 1072 1073 1074 1075 1076 1077 1078 1079 1080 1081 1082 1083 1084 1085 1086 1087 1088 1089 1090 1091 1092 1093 1094 1095 1096 1097 1098 1099 1100 1101 1102 1103 1104 1105 1106 1107 1108 1109 1110 1111 1112 1113 1114 1115 1116 1117 1118 1119 1120 1121 1122 1123 1124 1125 1126 1127 1128 1129 1130 1131 1132 1133 1134 1135 1136 1137 1138 1139 1140 1141 1142 1143 1144 1145 1146 1147 1148 1149 1150 1151 1152 1153 1154 1155 1156 1157 1158 1159 1160 1161 1162 1163 1164 1165 1166 1167 1168 1169 1170 1171 1172 1173 1174 1175 1176 1177 1178 1179 1180 1181 1182 1183 1184 1185 1186 1187 1188 1189 1190 1191 1192 1193 1194 1195 1196 1197 1198 1199 1200 1201 1202 1203 1204 1205 1206 1207 1208 1209 1210 1211 1212 1213 1214 1215 1216 1217 1218 1219 1220 1221 1222 1223 1224 1225 1226 1227 1228 1229 1230 1231 1232 1233 1234 1235 1236 1237 1238 1239 1240 1241 1242 1243 1244 1245 1246 1247 1248 1249 1250 1251 1252 1253 1254 1255 1256 1257 1258 1259 1260 1261 1262 1263 1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1295 1296 1297 1298 1299 1300 1301 1302 1303 1304 1305 1306 1307 1308 1309 1310 1311 1312 1313 1314 1315 1316 1317 1318 1319 1320 1321 1322 1323 1324 1325 1326 1327 1328 1329 1330 1331 1332 1333 1334 1335 1336 1337 1338 1339 1340 1341 1342 1343 1344 1345 1346 1347 1348 1349 1350 1351 1352 1353 1354 1355 1356 1357 1358 1359 1360 1361 1362 1363 1364 1365 1366 1367 1368 1369 1370 1371 1372 1373 1374 1375 1376 1377 1378 1379 1380 1381 1382 1383 1384 1385 1386 1387 1388 1389 1390 1391 1392 1393 1394 1395 1396 1397 1398 1399 1400 1401 1402 1403 1404 1405 1406 1407 1408 1409 1410 1411 1412 1413 1414 1415 1416 1417 1418 1419 1420 1421 1422 1423 1424 1425 1426 1427 1428 1429 1430 1431 1432 1433 1434 1435 1436 1437 1438 1439 1440 1441 1442 1443 1444 1445 1446 1447 1448 1449 1450 1451 1452 1453 1454 1455 1456 1457 1458 1459 1460 1461 1462 1463 1464 1465 1466 1467 1468 1469 1470 1471 1472 1473 1474 1475 1476 1477 1478 1479 1480 1481 1482 1483 1484 1485 1486 1487 1488 1489 1490 1491 1492 1493 1494 1495 1496 1497 1498 1499 1500 1501 1502 1503 1504 1505 1506 1507 1508 1509 1510 1511 1512 1513 1514 1515 1516 1517 1518 1519 1520 1521 1522 1523 1524 1525 1526 1527 1528 1529 1530 1531 1532 1533 1534 1535 1536 1537 1538 1539 1540 1541 1542 1543 1544 1545 1546 1547 1548 1549 1550 1551 1552 1553 1554 1555 1556 1557 1558 1559 1560 1561 1562 1563 1564 1565 1566 1567 1568 1569 1570 1571 1572 1573 1574 1575 1576 1577 1578 1579 1580 1581 1582 1583 1584 1585 1586 1587 1588 1589 1590 1591 1592 1593 1594 1595 1596 1597 1598 1599 1600 1601 1602 1603 1604 1605 1606 1607 1608 1609 1610 1611 1612 1613 1614 1615 1616 1617 1618 1619 1620 1621 1622 1623 1624 1625 1626 1627 1628 1629 1630 1631 1632 1633 1634 1635 1636 1637 1638 1639 1640 1641 1642 1643 1644 1645 1646 1647 1648 1649 1650 1651 1652 1653 1654 1655 1656 1657 1658 1659 1660 1661 1662 1663 1664 1665 1666 1667 1668 1669 1670 1671 1672 1673 1674 1675 1676 1677 1678 1679 1680 1681 1682 1683 1684 1685 1686 1687 1688 1689 1690 1691 1692 1693 1694 1695 1696 1697 1698 1699 1700 1701 1702 1703 1704 1705 1706 1707 1708 1709 1710 1711 1712 1713 1714 1715 1716 1717 1718 1719 1720 1721 1722 1723 1724 1725 1726 1727 1728 1729 1730 1731 1732 1733 1734 1735 1736 1737 1738 1739 1740 1741 1742 1743 1744 1745 1746 1747 1748 1749 1750 1751 1752 1753 1754 1755 1756 1757 1758 1759 1760 1761 1762 1763 1764 1765 1766 1767 1768 1769 1770 1771 1772 1773 1774 1775 1776 1777 1778 1779 1780 1781 1782 1783 1784 1785 1786 1787 1788 1789 1790 1791 1792 1793 1794 1795 1796 1797 1798 1799 1800 1801 1802 1803 1804 1805 1806 1807 1808 1809 1810 1811 1812 1813 1814 1815 1816 1817 1818 1819 1820 1821 1822 1823 1824 1825 1826 1827 1828 1829 1830 1831 1832 1833 1834 1835 1836 1837 1838 1839 1840 1841 1842 1843 1844 1845 1846 1847 1848 1849 1850 1851 1852 1853 1854 1855 1856 1857 1858 1859 1860 1861 1862 1863 1864 1865 1866 1867 1868 1869 1870 1871 1872 1873 1874 1875 1876 1877 1878 1879 1880 1881 1882 1883 1884 1885 1886 1887 1888 1889 1890 1891 1892 1893 1894 1895 1896 1897 1898 1899 1900 1901 1902 1903 1904 1905 1906 1907 1908 1909 1910 1911 1912 1913 1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184 2185 2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199 2200 2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213 2214 2215 2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2230 2231 2232 2233 2234 2235 2236 2237 2238 2239 2240 2241 2242 2243 2244 2245 2246 2247



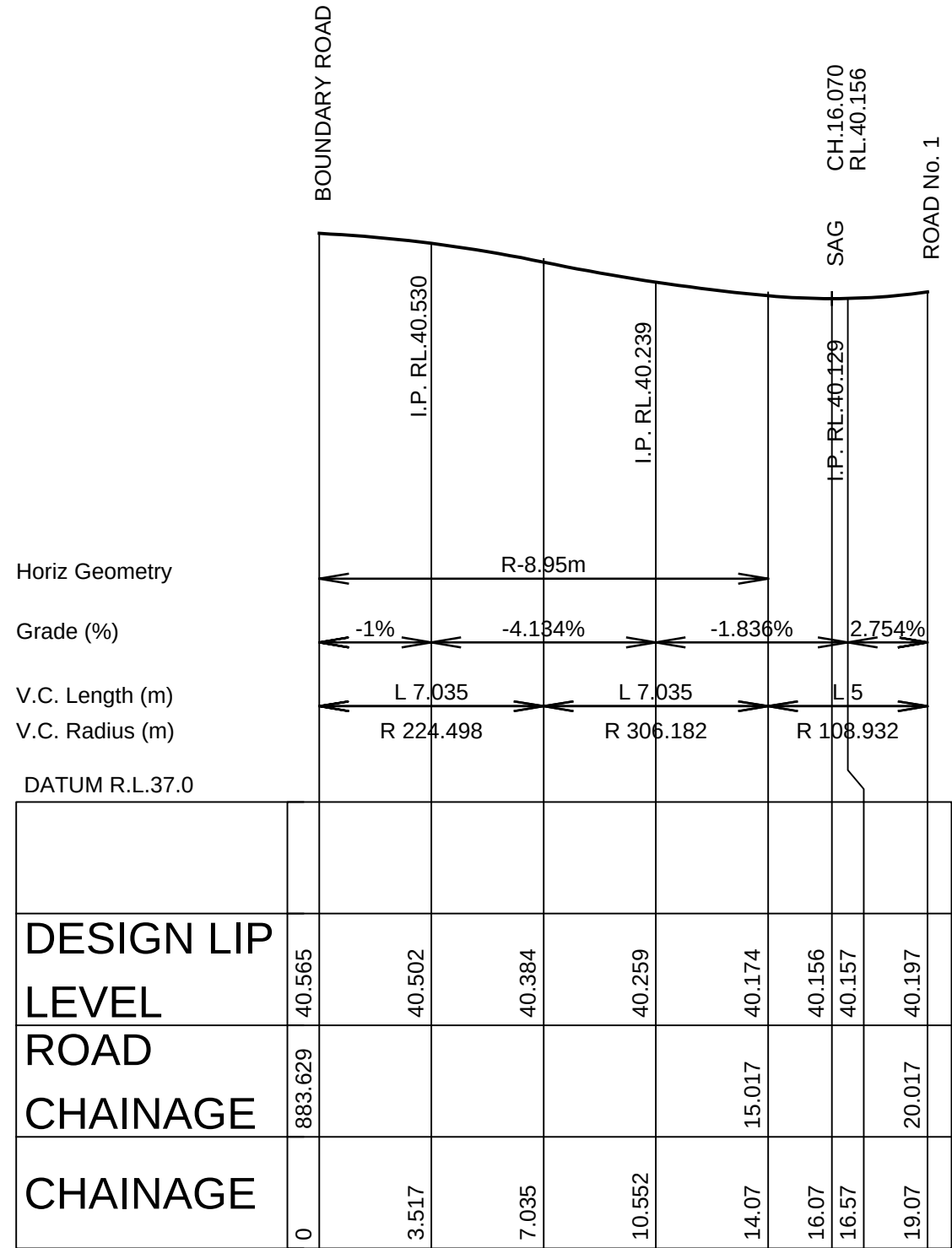




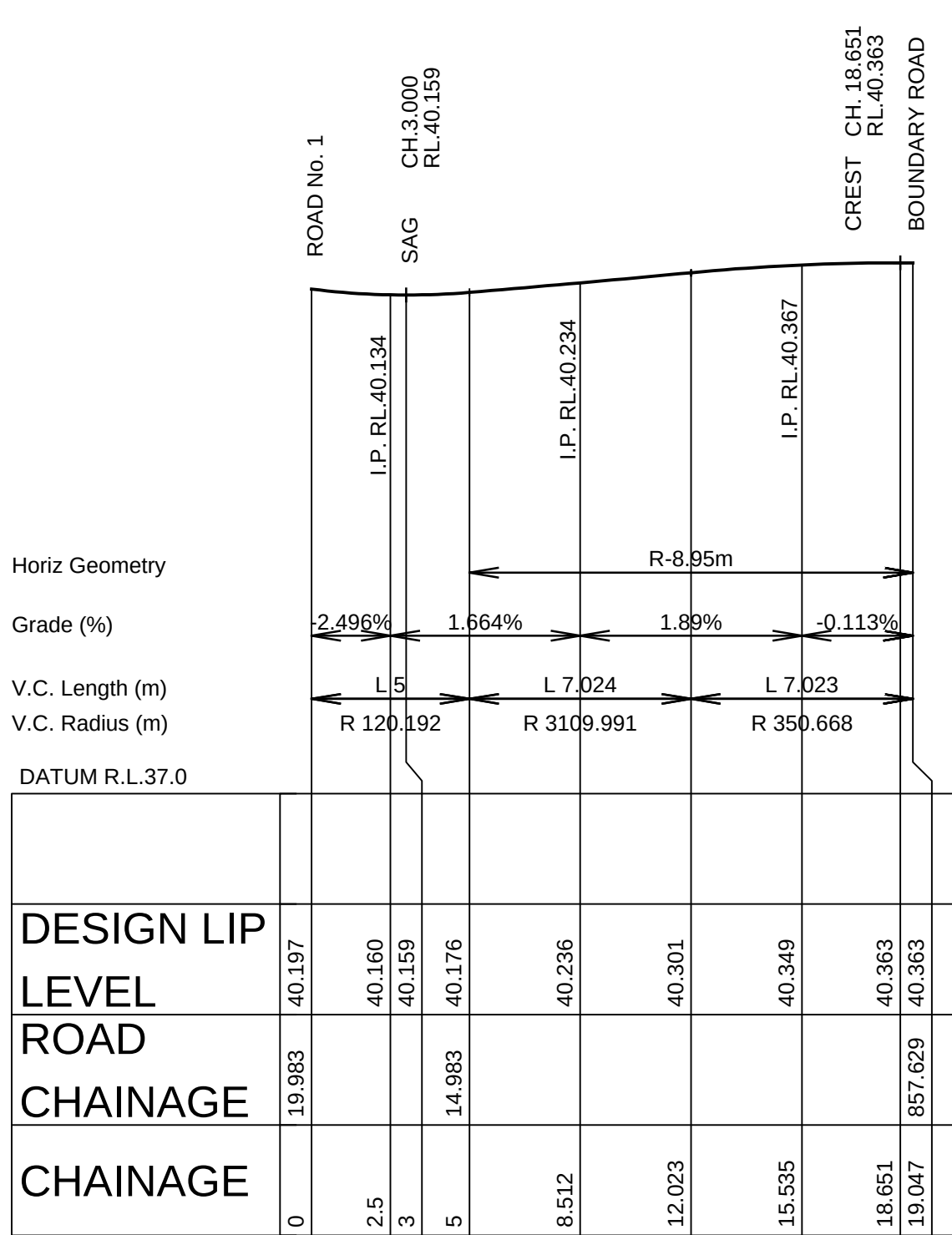


KR 1 & 2 PLAN (ULTIMATE)
SCALE 1:200

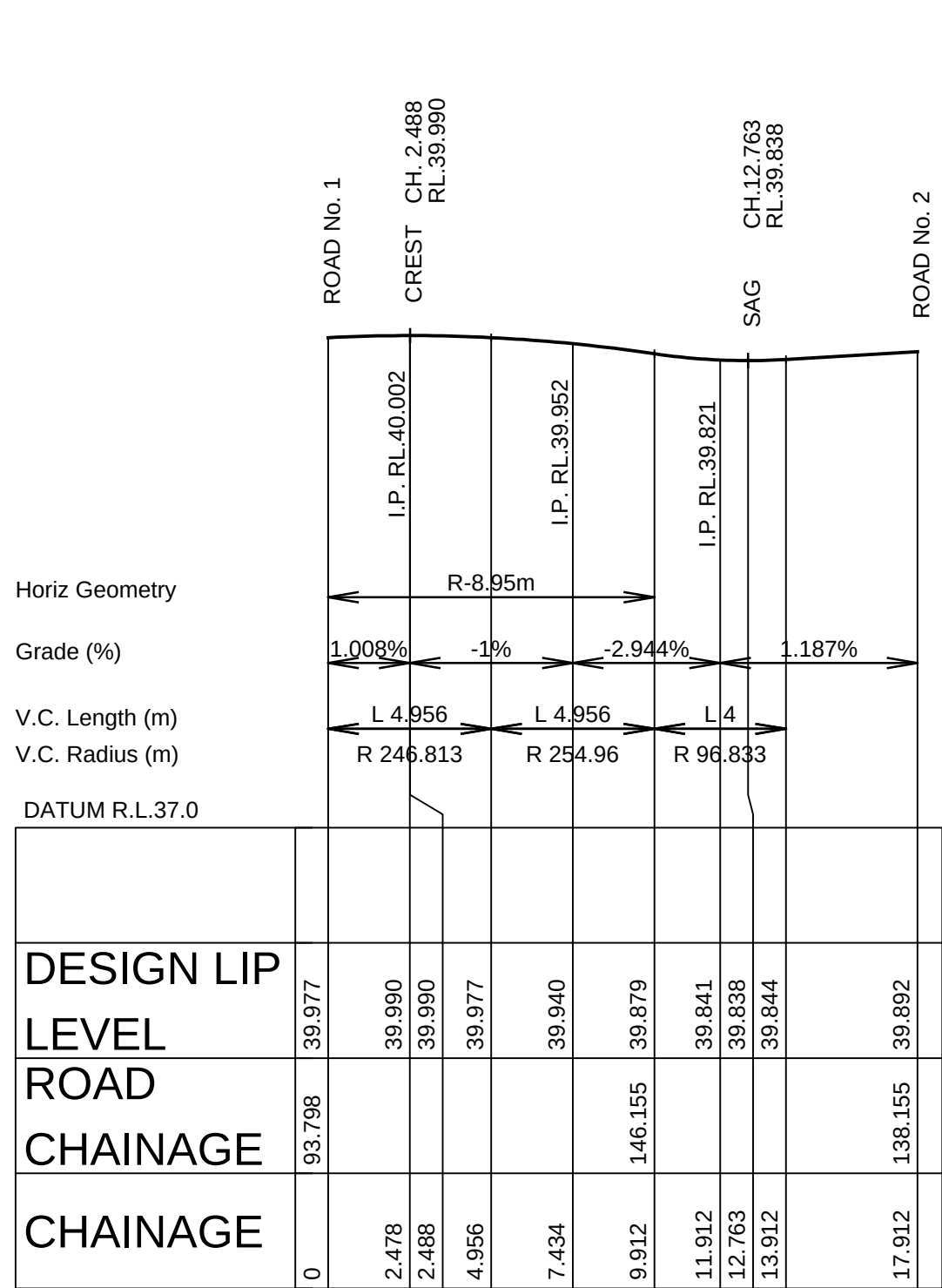
KR 3, 4 & 5 PLAN
SCALE 1:200



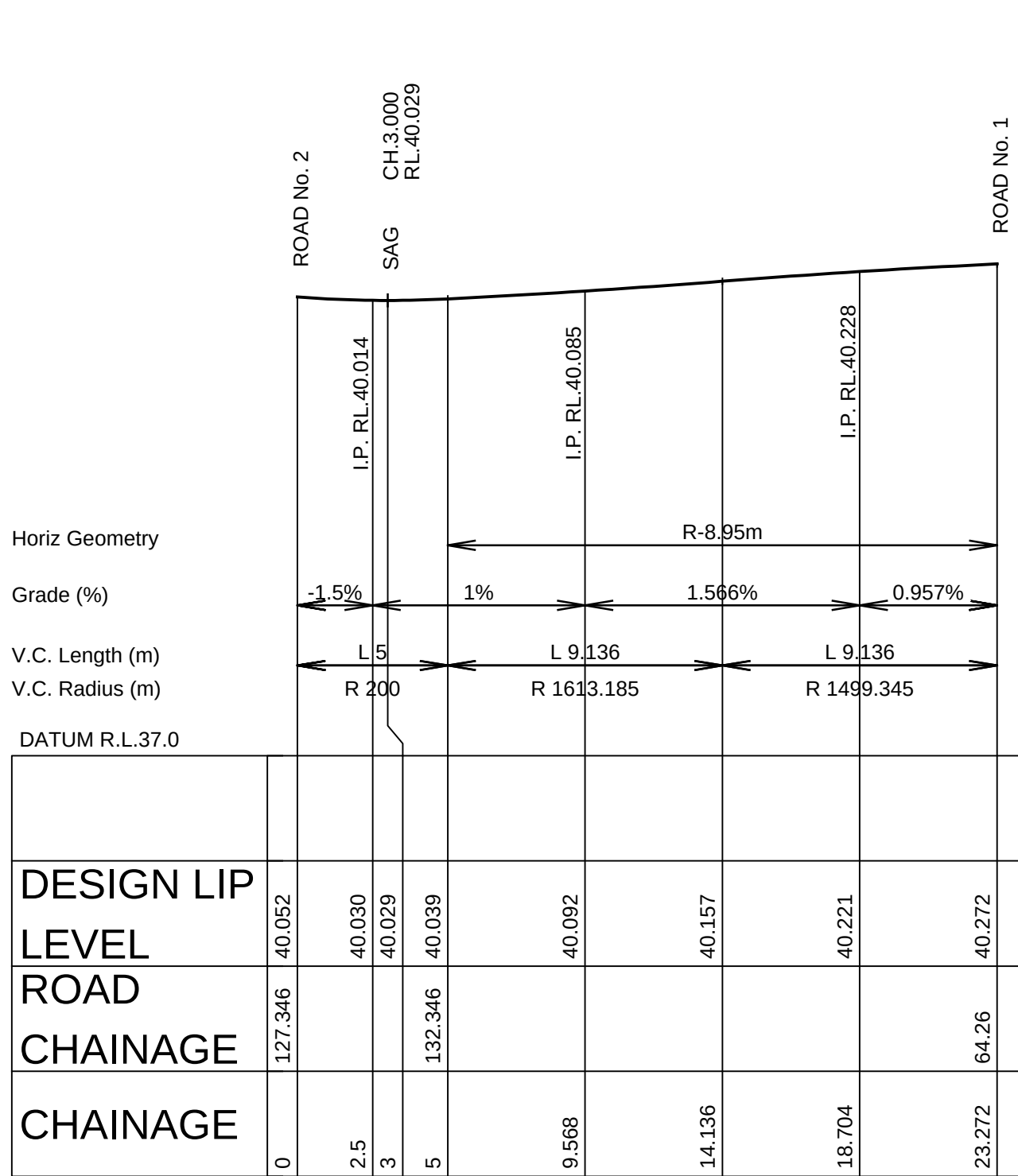
KR No. 1 (ULTIMATE)
HORIZONTAL SCALE - 1:200
VERTICAL SCALE - 1:40



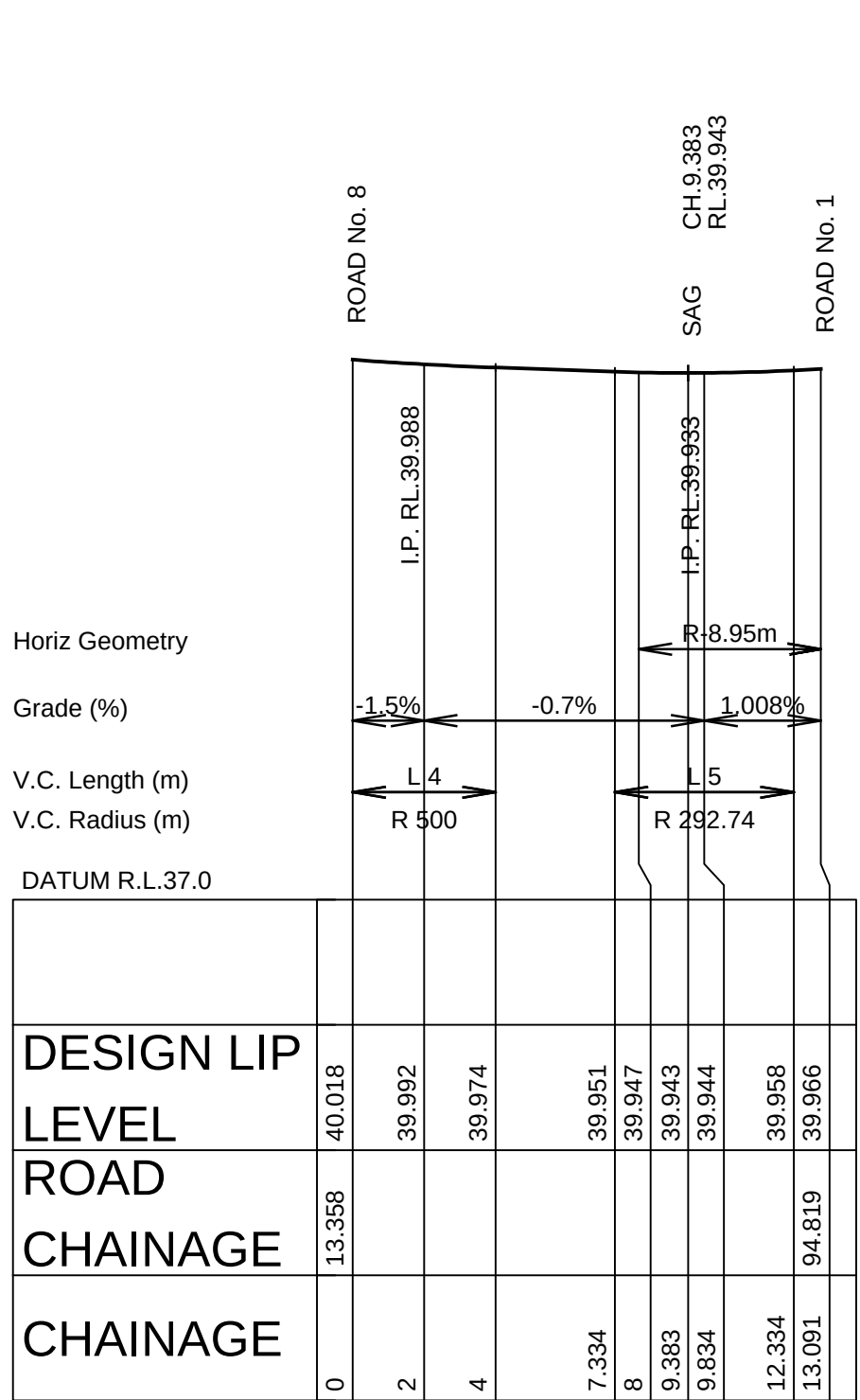
KR No. 2 (ULTIMATE)
HORIZONTAL SCALE - 1:200
VERTICAL SCALE - 1:40



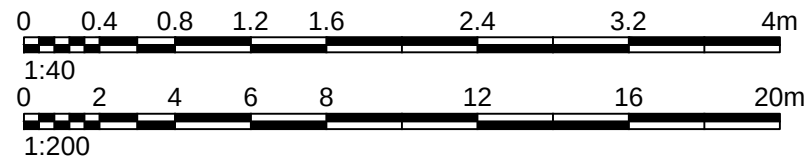
KR No. 3
HORIZONTAL SCALE - 1:200
VERTICAL SCALE - 1:40

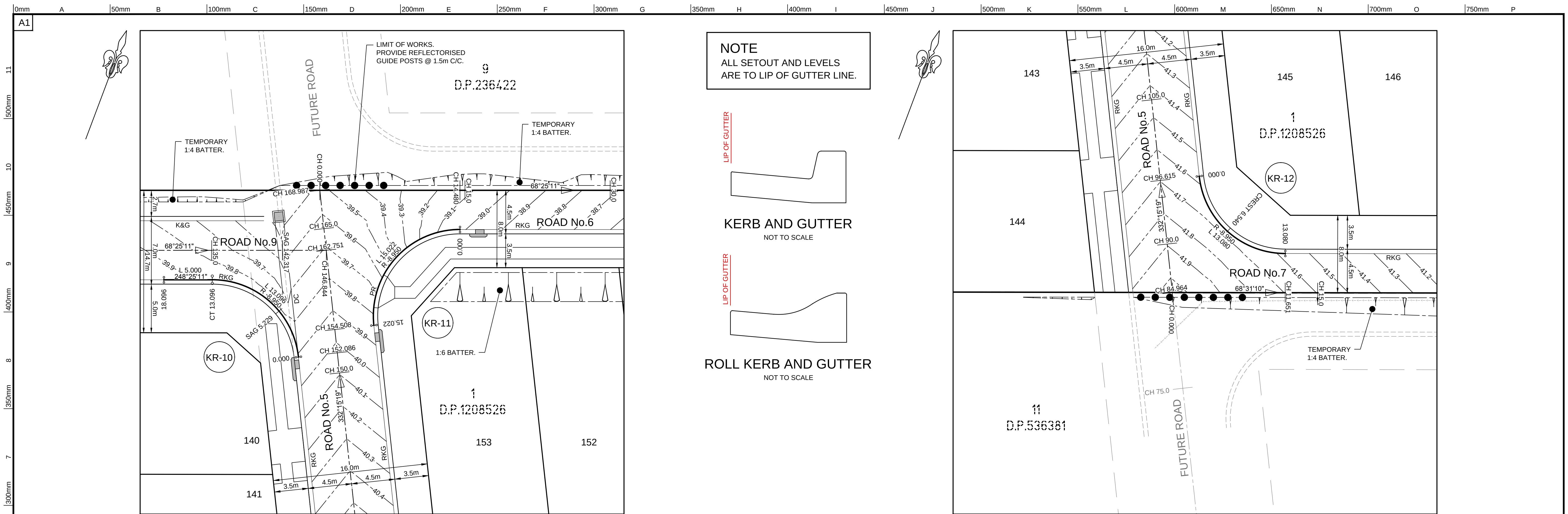


KR No. 4
HORIZONTAL SCALE - 1:200
VERTICAL SCALE - 1:40

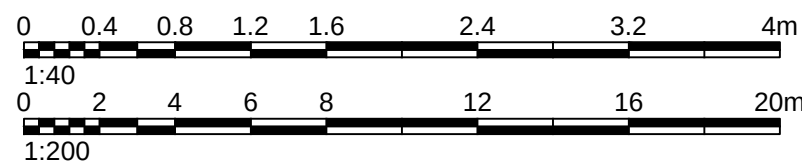
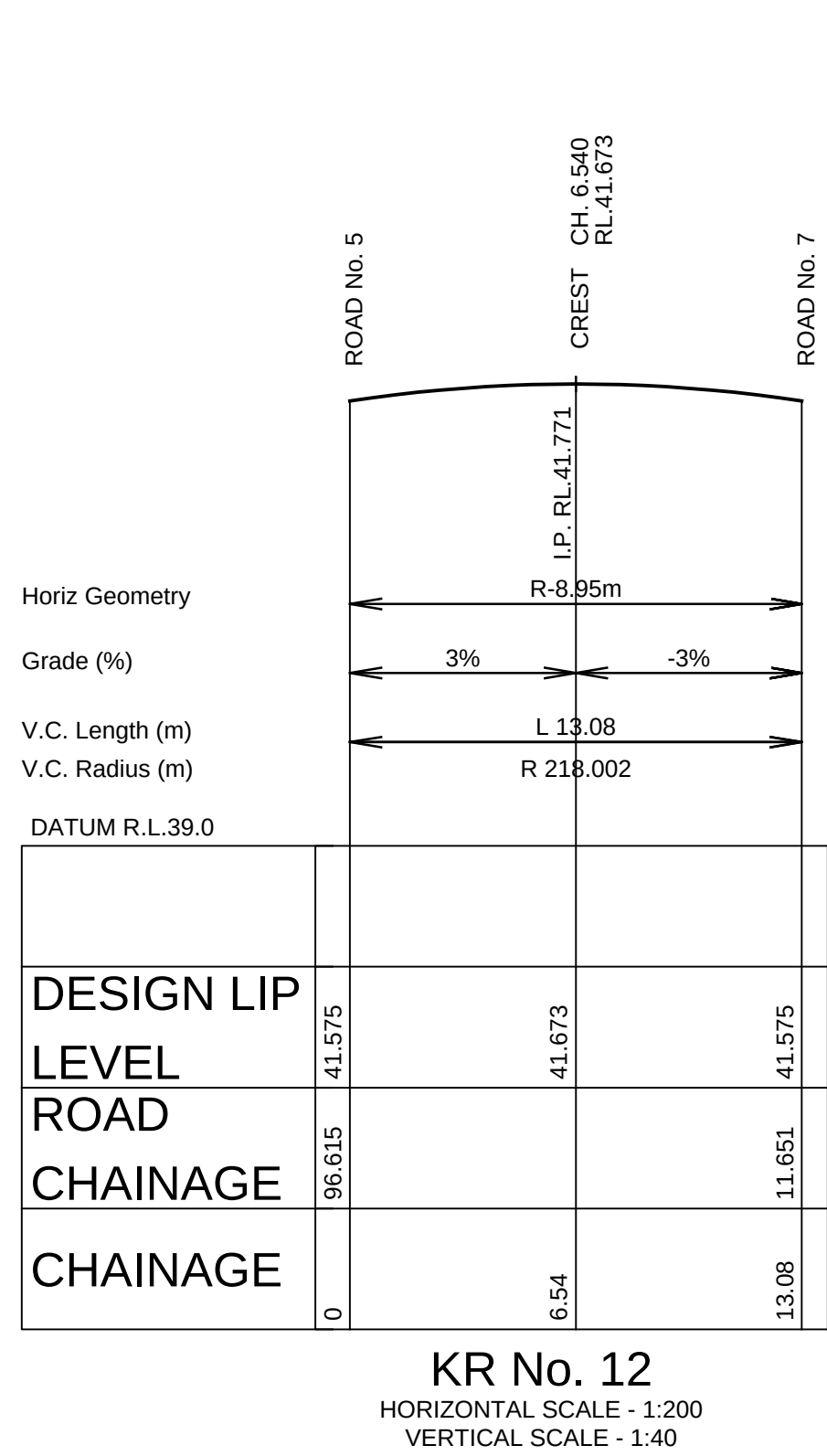
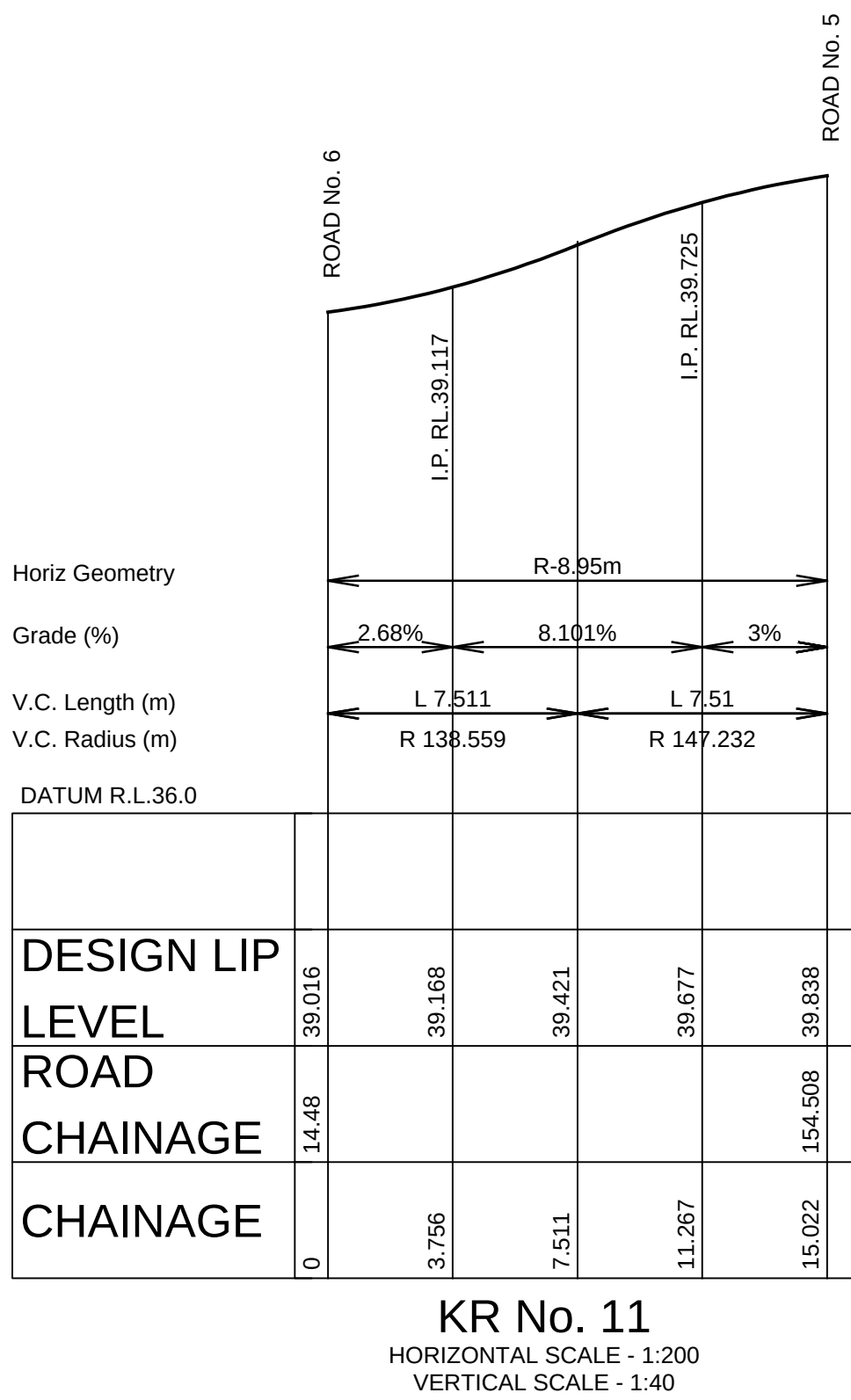
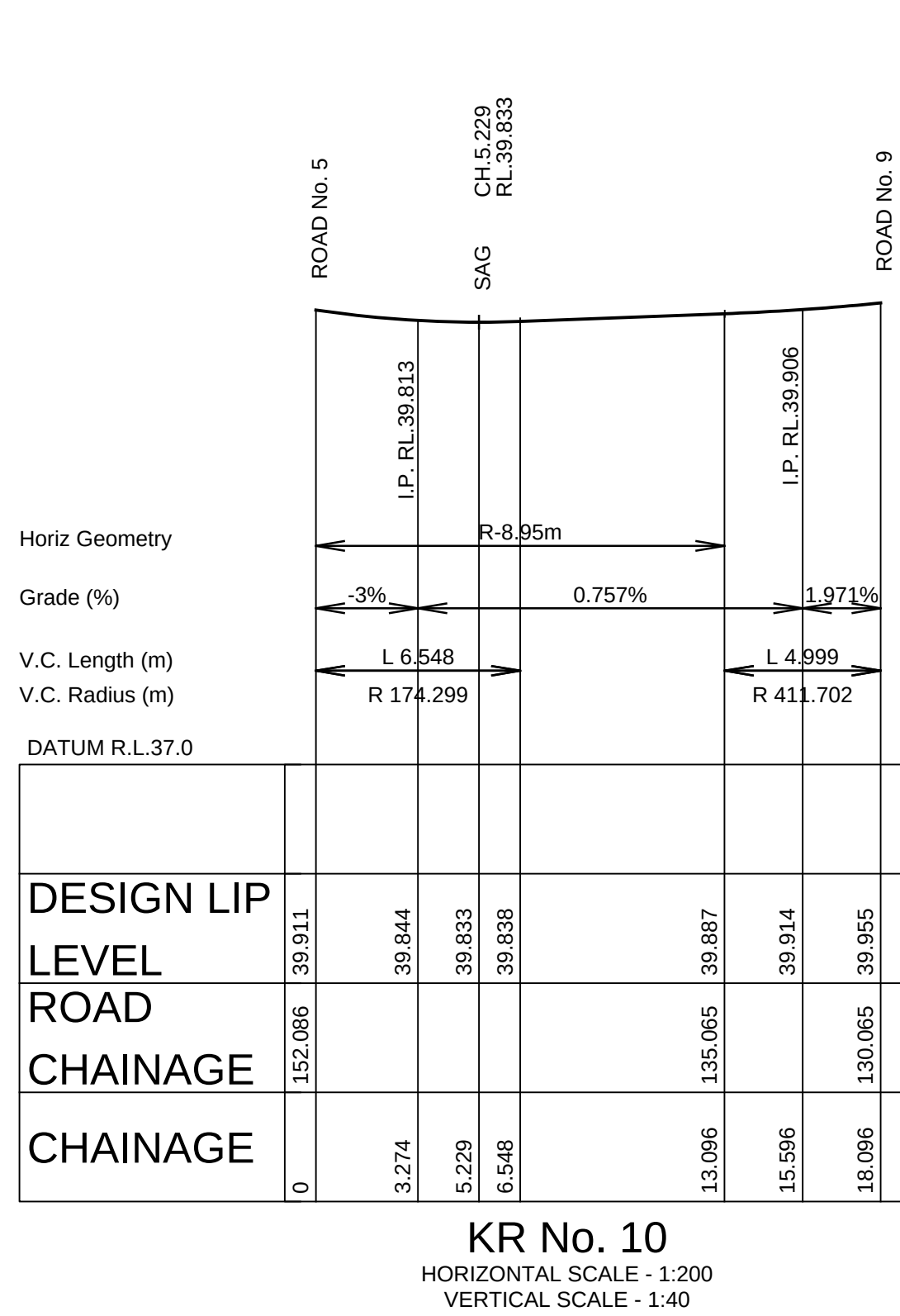


KR No. 5
HORIZONTAL SCALE - 1:200
VERTICAL SCALE - 1:40



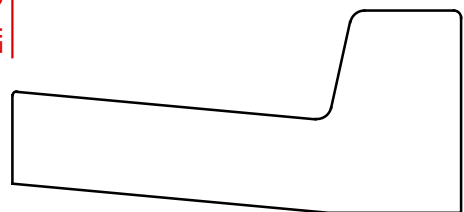


KR 10 & 11 PLAN
SCALE 1:200





LIP OF GUTTER



KERB AND GUTTER
NOT TO SCALE

LIP OF GUTTER



ROLL KERB AND GUTTER

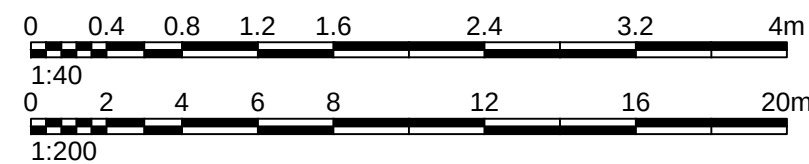
NOT TO SCALE



KR No. 13
HORIZONTAL SCALE - 1:200
VERTICAL SCALE - 1:40

KR No. 14
HORIZONTAL SCALE - 1:200
VERTICAL SCALE - 1:40

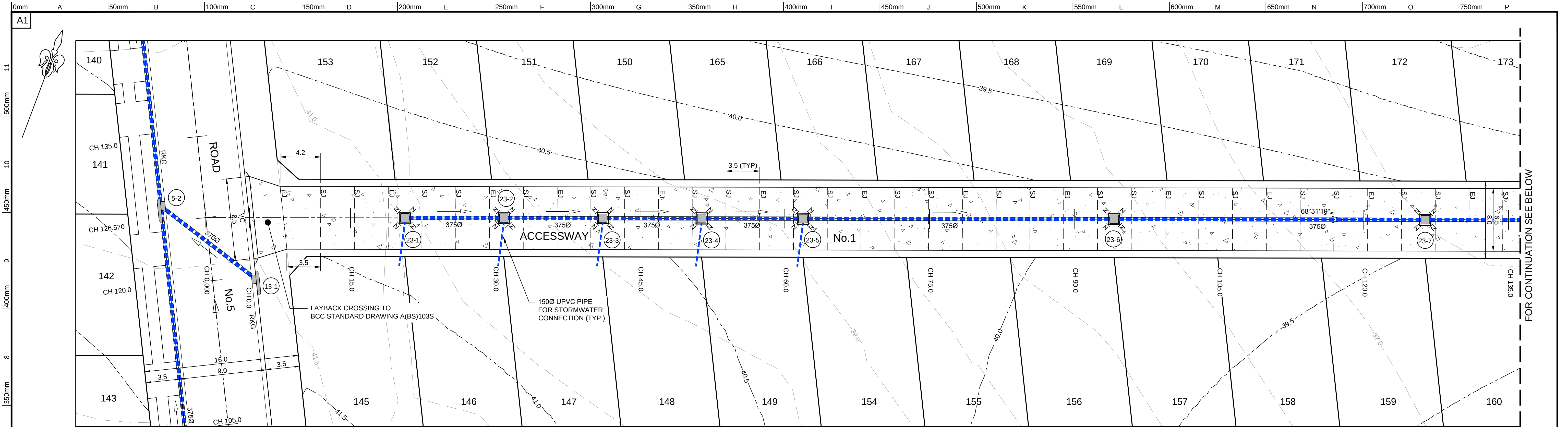
KR No. 15
HORIZONTAL SCALE - 1:200
VERTICAL SCALE - 1:40



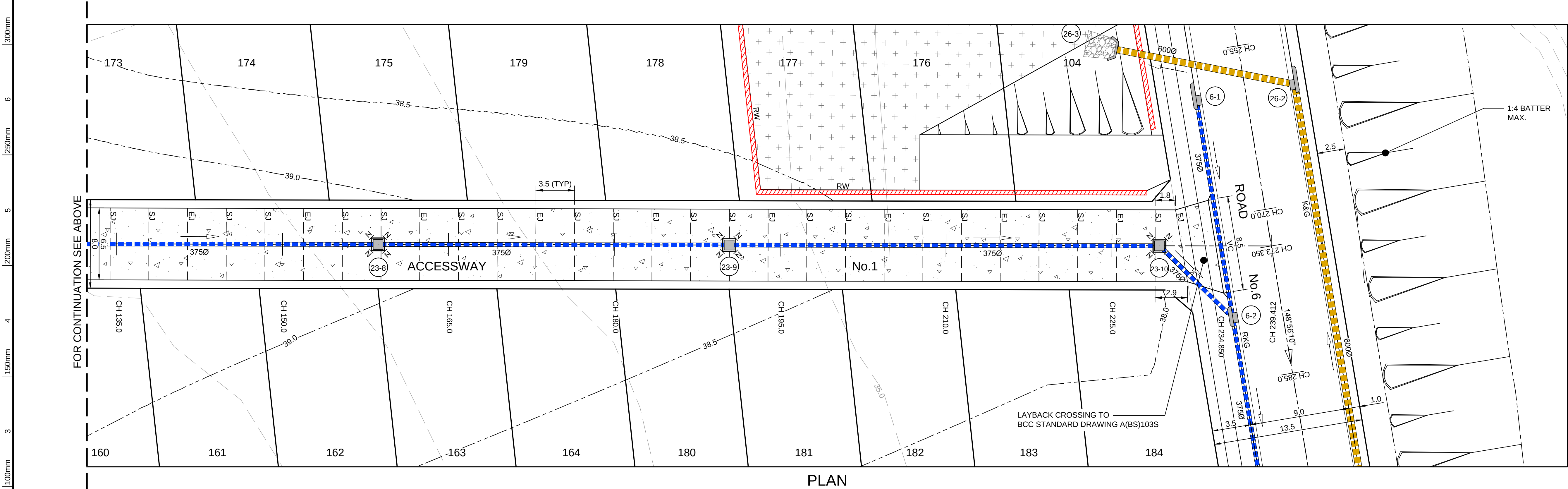
1			 DIAL 1100 BEFORE YOU DIG	Project: PROPOSED SUBDIVISION IN LOT 1 D.P. 1208526 BOUNDARY ROAD, SCHOFIELDS	Principal: LB SCHOFIELDS ONE PTY LTD				 ABN 77 050 209 991 Level 4, Suite 400 16-18 Cambridge St EPPING NSW 2121 PO Box 233 EPPING NSW 1710 reception@craigandrhodes.com.au www.craigandrhodes.com.au © Craig & Rhodes	 ANNIVERSARY 1923 - 2013	Drawing Title INTERSECTION GRADING KERB RETURN No. 13, 14 AND 15			Revision C	
	C	11.09.17			RE-ISSUED FOR CONSTRUCTION CERTIFICATE	Scale	AS SHOWN	Date			05.07.17	Council Ref	DA-15-02283		
	B	13.07.17			RE-ISSUED FOR CONSTRUCTION CERTIFICATE		@ A1	Datum			A.H.D.	L.G.A.	BLACKTOWN COUNCIL		
	A	05.07.17			ISSUED FOR CONSTRUCTION CERTIFICATE	Calc's	M.P.	Drawn			F.K.	Proj.Man.	A.M.		Client Ref.
	REV	DATE			AMENDMENT DESCRIPTION										

CONSTRUCTION CERTIFICATE

CAD REF: 2\1780\CR PLANS\CI\MI\CI\V CC\1780\CC-0404 DWG: C.d.#.# - DATE PRINTED: 11/09/2017 12:32:34 PM



PLAN
SCALE 1:200



PLAN
SCALE 1:200

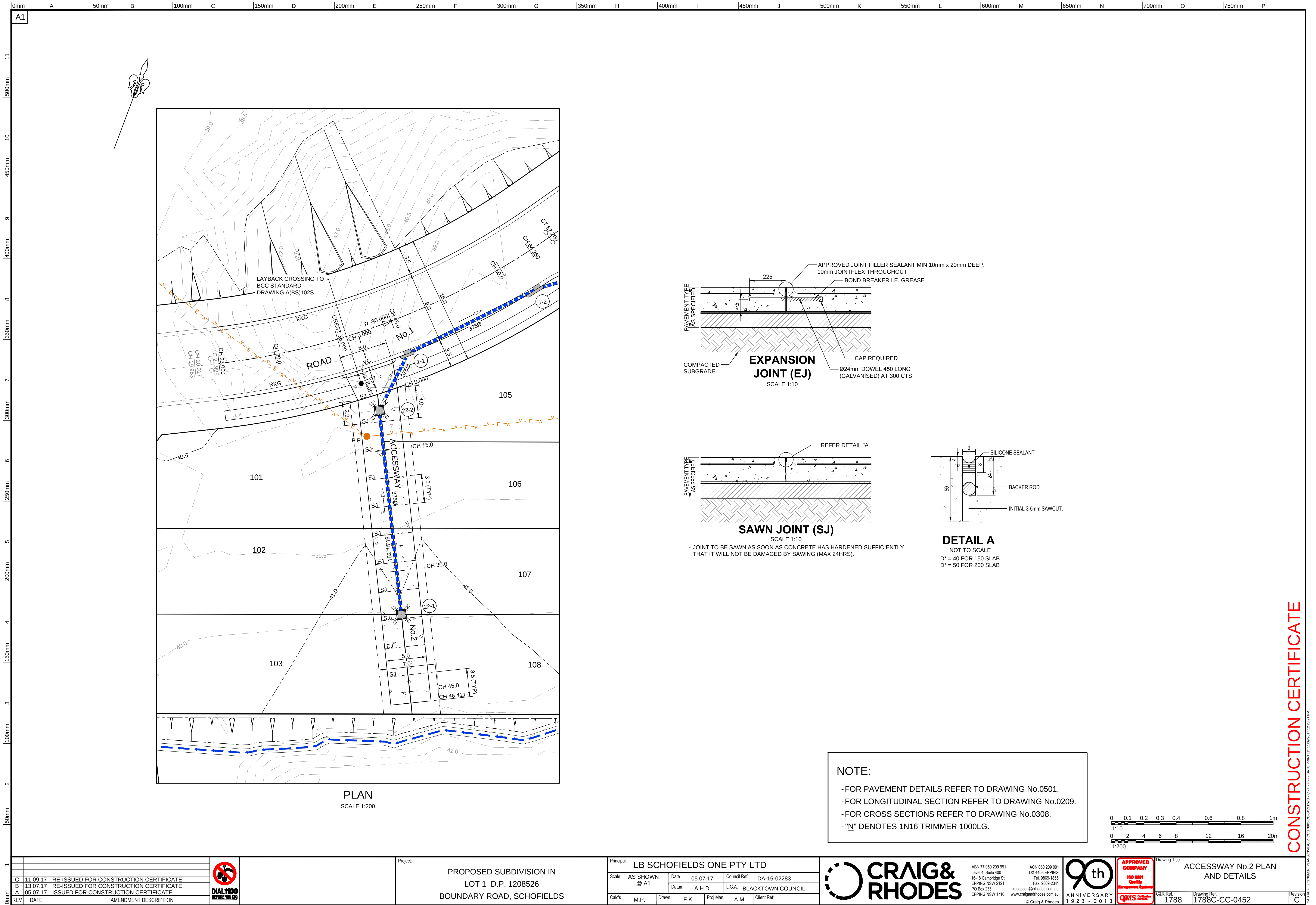
NOTE:

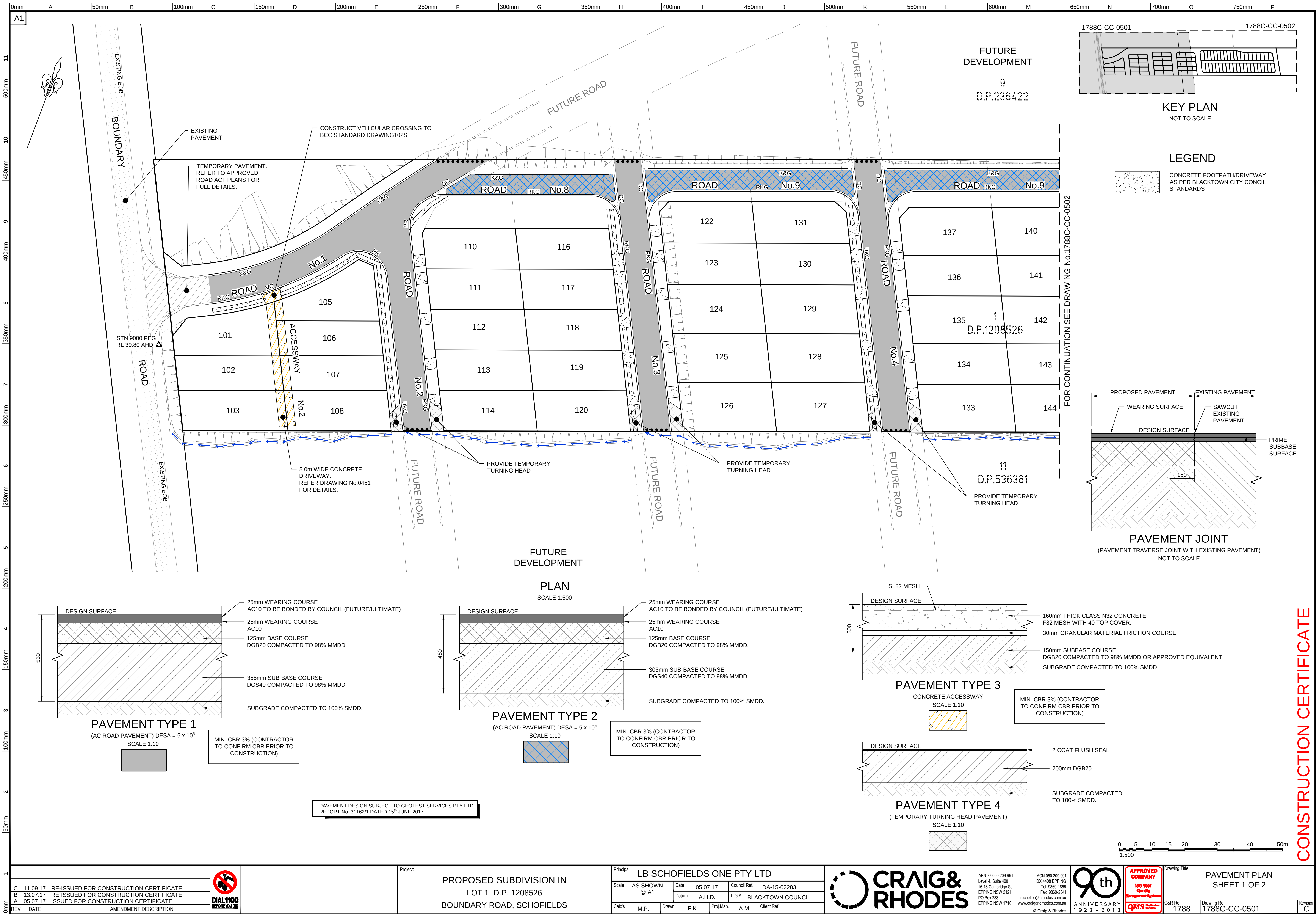
- FOR JOINT DETAILS REFER TO DRAWING No.0452.
- FOR PAVEMENT DETAILS REFER TO DRAWING No.0501.
- FOR LONGITUDINAL SECTION REFER TO DRAWING No.0209.
- FOR CROSS SECTIONS REFER TO DRAWING No.0308.
- "N" DENOTES IN16 TRIMMER 1000LG.



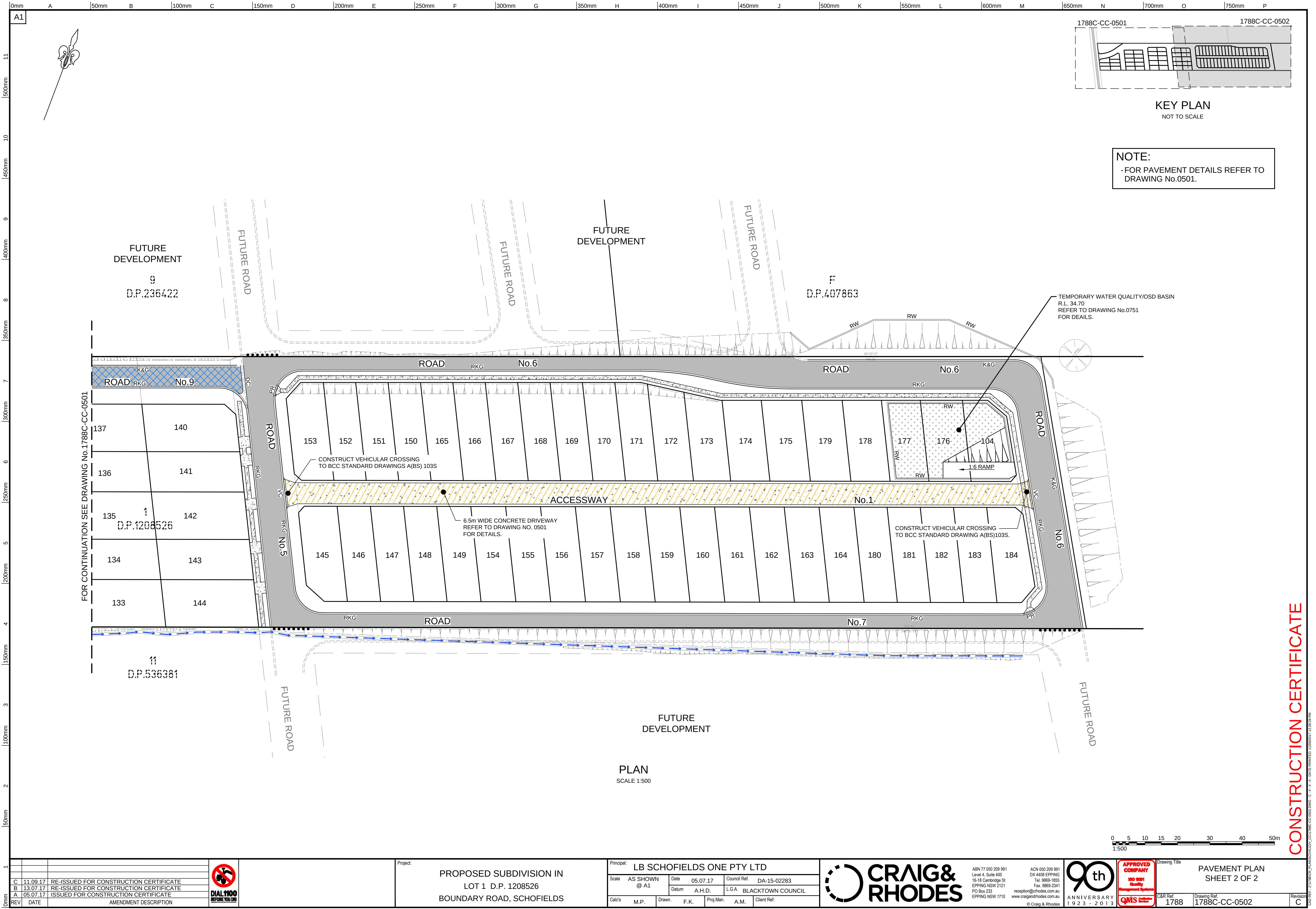
11.09.17		RE-ISSUED FOR CONSTRUCTION CERTIFICATE		Project: PROPOSED SUBDIVISION IN LOT 1 D.P. 1208526 BOUNDARY ROAD, SCHOFIELDS	Principal: LB SCHOFIELDS ONE PTY LTD	Scale: AS SHOWN @ A1	Date: 05.07.17	Council Ref: DA-15-02283	Datum: A.H.D.	L.G.A. BLACKTOWN COUNCIL	Calc's: M.P.	Drawn: F.K.	Proj.Man: A.M.	Client Ref:		ABN 77 050 209 991 Level 4, Suite 400 16-18 Cambridge St EPPING NSW 2121 PO Box 233 EPPING NSW 1710	ACN 050 209 991 DX 4408 EPPING Tel. 9869-1855 Fax. 9869-2341 reception@craigandrhodes.com.au www.craigandrhodes.com.au © Craig & Rhodes			Drawing Title: ACCESSWAY No.1 PLAN	C&R Ref: 1788	Drawing Ref: 1788C-CC-0451	Revision: C
13.07.17		RE-ISSUED FOR CONSTRUCTION CERTIFICATE																					
05.07.17		ISSUED FOR CONSTRUCTION CERTIFICATE																					
REV		DATE	AMENDMENT DESCRIPTION																				

CONSTRUCTION CERTIFICATE



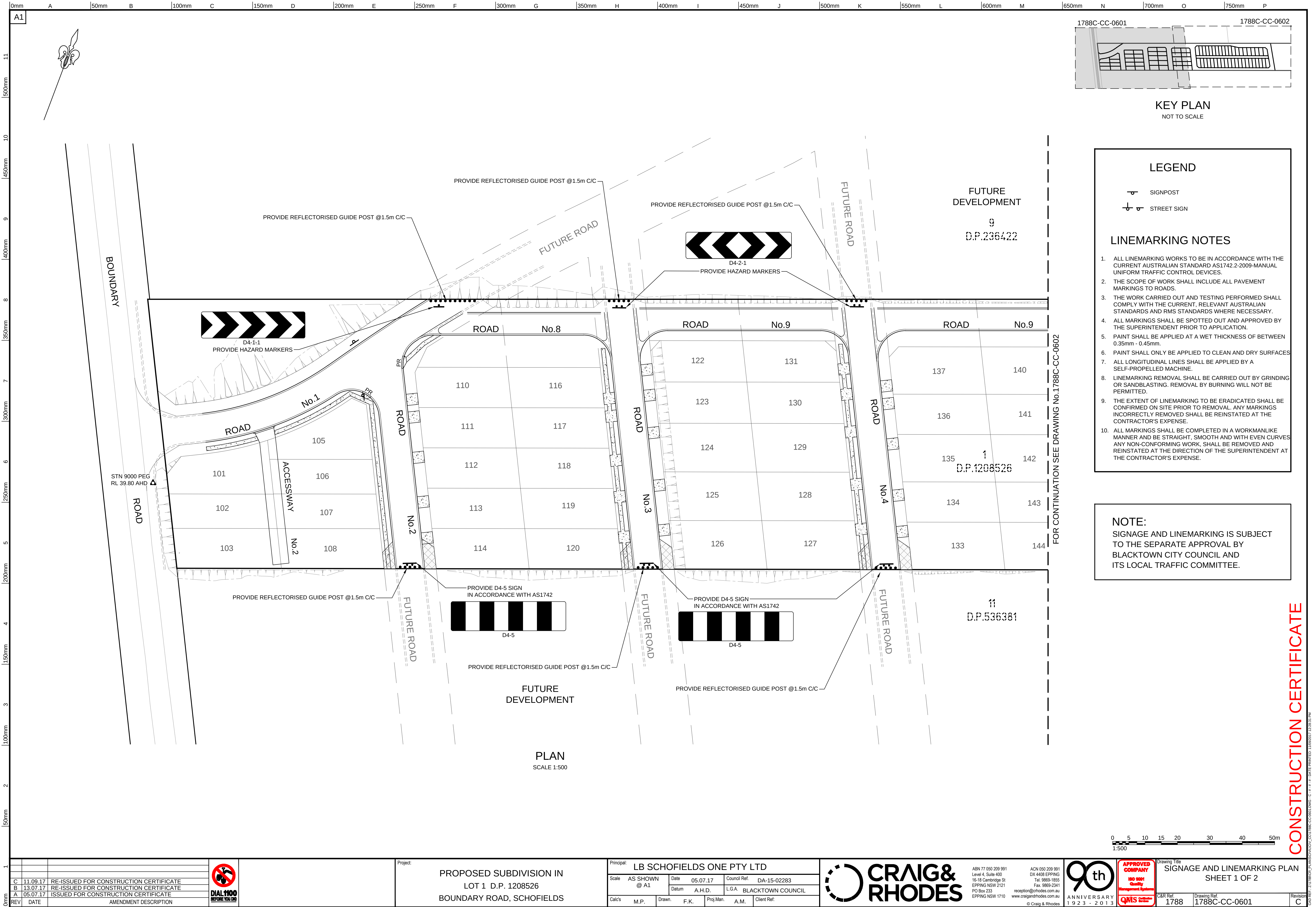


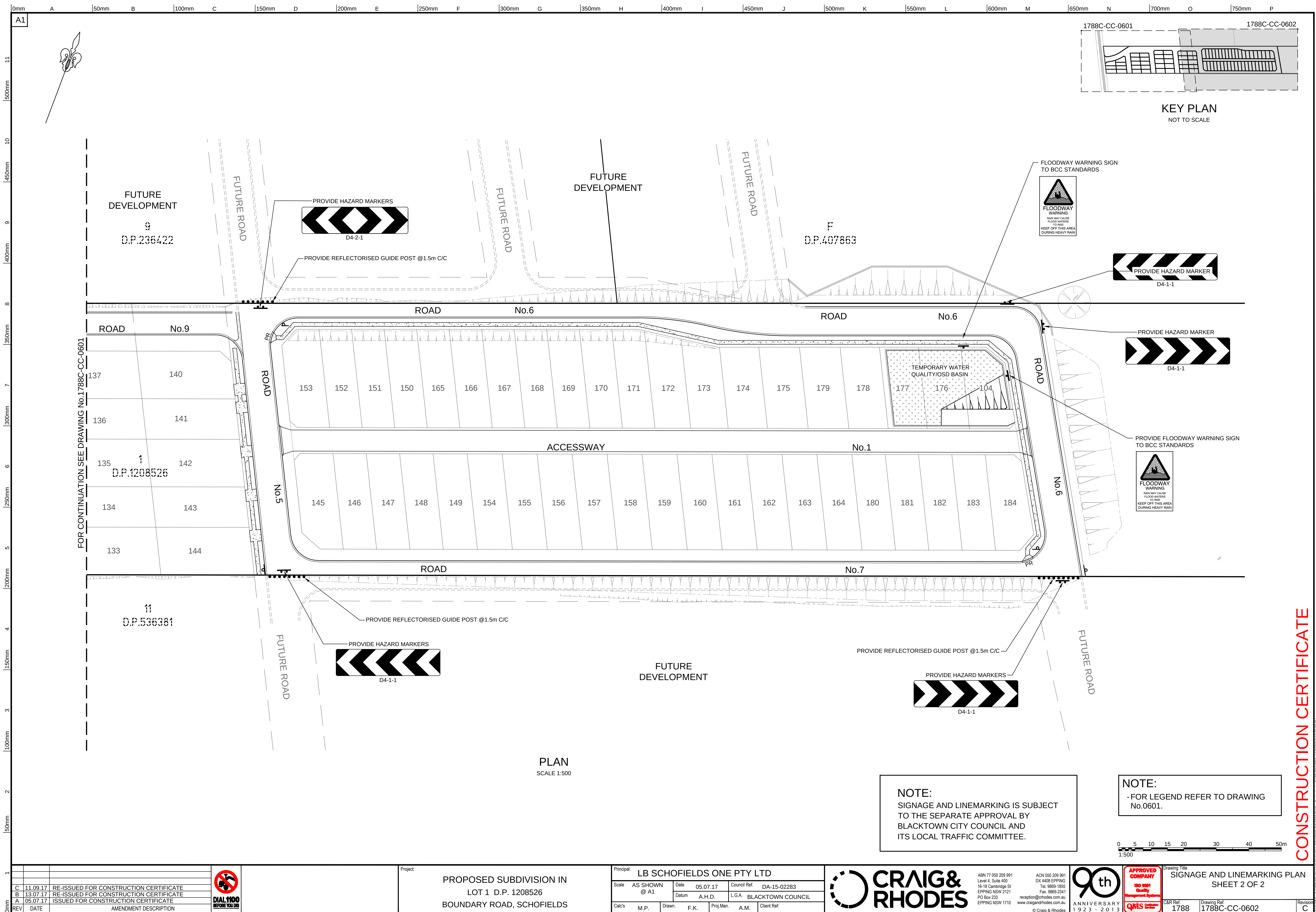
CONSTRUCTION CERTIFICATE

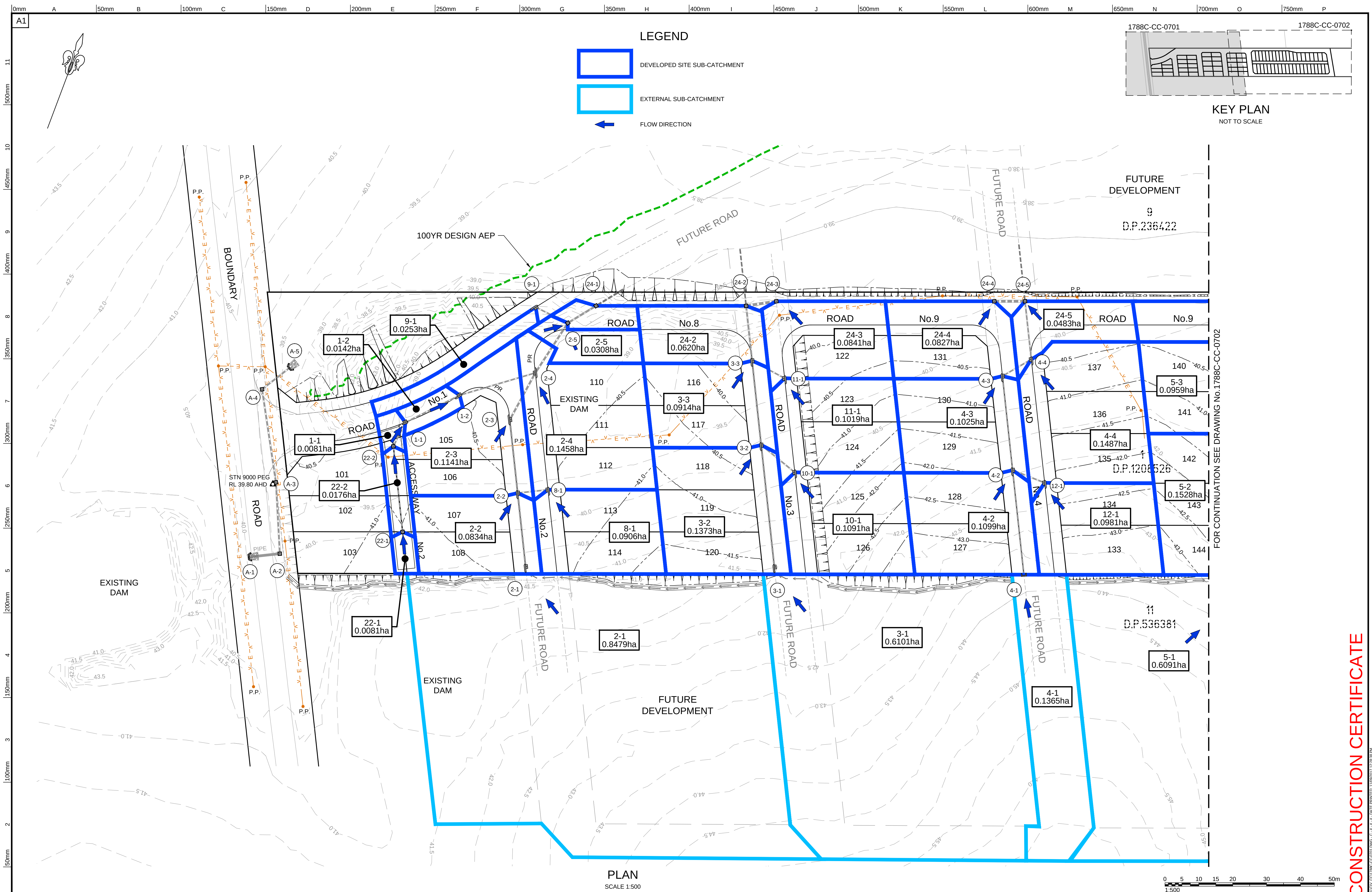


CONSTRUCTION CERTIFICATE

1			 DIAL 1100 BEFORE YOU DIG	Project: PROPOSED SUBDIVISION IN LOT 1 D.P. 1208526 BOUNDARY ROAD, SCHOFIELDS	Principal: LB SCHOFIELDS ONE PTY LTD			 CRAIG & RHODES ABN 77 050 209 991 Level 4, Suite 400 16-18 Cambridge St EPPING NSW 2121 PO Box 233 EPPING NSW 1710 reception@craighoddes.com.au www.craighoddes.com.au © Craig & Rhodes	 ANNIVERSARY 1 9 2 3 - 2 0 1 3	 APPROVED COMPANY ISO 9001 Quality Management Systems QMS	Drawing Title: PAVEMENT PLAN SHEET 2 OF 2							
	C	11.09.17			RE-ISSUED FOR CONSTRUCTION CERTIFICATE	Scale	AS SHOWN @ A1				Date	05.07.17	Council Ref.	DA-15-02283				
	B	13.07.17			RE-ISSUED FOR CONSTRUCTION CERTIFICATE						Datum	A.H.D.	L.G.A.	BLACKTOWN COUNCIL				
	A	05.07.17			ISSUED FOR CONSTRUCTION CERTIFICATE						Cal's	M.P.	Drawn:	F.K.	Proj.Man:	A.M.	Client Ref:	
	REV	DATE			AMENDMENT DESCRIPTION													

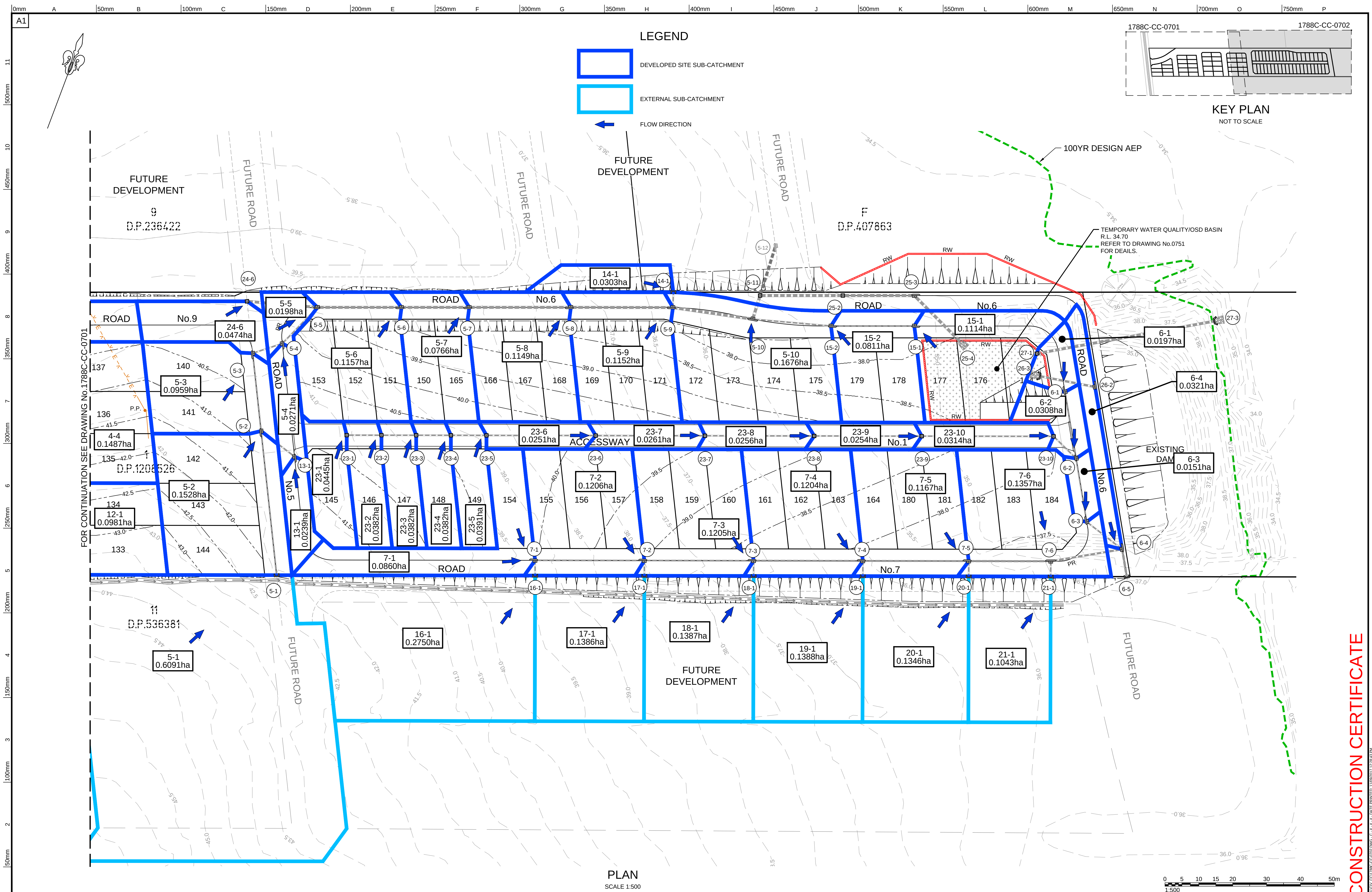






CONSTRUCTION CERTIFICATE

1			 DIAL 1100 BEFORE YOU DIG	Project: PROPOSED SUBDIVISION IN LOT 1 D.P. 1208526 BOUNDARY ROAD, SCHOFIELDS	Principal: LB SCHOFIELDS ONE PTY LTD				 ABN 77 050 209 991 Level 4, Suite 400 16-18 Cambridge St EPPING NSW 2121 PO Box 233 EPPING NSW 1710 reception@crhodes.com.au www.craigandrhodes.com.au © Craig & Rhodes ACN 050 209 991 DX 4408 EPPING Tel: 9869-1855 Fax: 9869-2341 reception@crhodes.com.au www.craigandrhodes.com.au 1923 - 2013	 ANNIVERSARY 1923 - 2013	 APPROVED COMPANY ISO 9001 Quality Management System QMS	Drawing Title		STORMWATER CATCHMENT PLAN SHEET 1 OF 2		Revision C	
	C	11.09.17			RE-ISSUED FOR CONSTRUCTION CERTIFICATE		Scale	AS SHOWN @ A1				Date	05.07.17	Council Ref.	DA-15-02283		Cal's M.P. Drawn F.K. Prog.Man. A.M. Client Ref.
	B	13.07.17			RE-ISSUED FOR CONSTRUCTION CERTIFICATE		Datum	A.H.D.				L.G.A.	BLACKTOWN COUNCIL				
	A	05.07.17			ISSUED FOR CONSTRUCTION CERTIFICATE												
	REV	DATE			AMENDMENT DESCRIPTION							C&R Ref.	1788	Drawing Ref.	1788C-CC-0701		



CONSTRUCTION CERTIFICATE

0mmA

50mmB

100mmC

150mmD

200mmE

250mmF

300mmG

350mmH

400mmI

450mmJ

500mmK

550mmL

600mmM

650mmN

700mmO

750mmP

A1

11

500mm

10

450mm

9

400mm

8

350mm

7

300mm

6

250mm

5

200mm

4

150mm

3

100mm

2

50mm

1

PIT SCHEDULE				SETOUT DATA	
LINE	PIT	PIT/STRUCTURE TYPE	DESCRIPTION	EASTING	NORTHING
1	1-1	S.G.G.P. 1.2m E.K.I.	BCC STANDARD	303875.24	6270217.64
1	1-2	S.G.G.P. 1.8m E.K.I.	BCC STANDARD	303887.13	6270230.93
2	2-1	S.G.G.P. 1.8m E.K.I.	BCC STANDARD	303924.60	6270191.01
2	2-2	S.G.G.P. 1.8m E.K.I.	BCC STANDARD	303914.43	6270210.33
2	2-3	S.G.G.P. 2.4m E.K.I. SAG	BCC STANDARD	303904.31	6270229.57
2	2-4	S.G.G.P. 2.4m E.K.I. SAG	BCC STANDARD	303905.45	6270244.81
2	2-5	G.S.I.P. 900x900 (DISH CROSSING)	BCC STANDARD	303909.34	6270262.23
3	3-1	S.G.G.P. 1.8m E.K.I.	BCC STANDARD	303992.93	6270217.90
3	3-2	S.G.G.P. 1.8m E.K.I.	BCC STANDARD	303976.07	6270249.95
3	3-3	S.G.G.P. 1.8m E.K.I.	BCC STANDARD	303964.42	6270272.09
4	4-1	STUB, CAP & BURY	BCC STANDARD	304061.87	6270242.68
4	4-2	S.G.G.P. 1.8m E.K.I.	BCC STANDARD	304047.82	6270270.35
4	4-3	S.G.G.P. 1.8m E.K.I.	BCC STANDARD	304034.82	6270295.07
4	4-4	S.G.G.P. 1.8m E.K.I.	BCC STANDARD	304040.13	6270302.36
5	5-1	STUB, CAP & BURY	FOR FUTURE CONNECTION	304130.20	6270269.57
5	5-2	S.G.G.P. 1.8m E.K.I.	BCC STANDARD	304110.68	6270307.65
5	5-3	S.G.G.P. 1.8m E.K.I.	BCC STANDARD	304099.93	6270328.08
5	5-4	S.G.G.P. 1.8m E.K.I.	BCC STANDARD	304106.21	6270333.55
5	5-5	S.G.G.P. 1.2m E.K.I.	BCC STANDARD	304112.16	6270347.90
5	5-6	S.G.G.P. 1.8m E.K.I.	BCC STANDARD	304135.25	6270357.03
5	5-7	S.G.G.P. 1.8m E.K.I.	BCC STANDARD	304153.84	6270364.39
5	5-8	S.G.G.P. 1.8m E.K.I.	BCC STANDARD	304181.73	6270375.42
5	5-9	S.G.G.P. 1.8m E.K.I.	BCC STANDARD	304209.78	6270386.47
5	5-10	S.G.G.P. 2.4m E.K.I. SAG	BCC STANDARD	304233.02	6270391.98
5	5-11	TEMPORARY J.P.	BCC STANDARD	304232.56	6270398.80
6	6-1	S.G.G.P. 1.8m E.K.I.	BCC STANDARD	304327.11	6270405.67
6	6-2	S.G.G.P. 1.2m E.K.I.	BCC STANDARD	304337.38	6270388.62
6	6-3	S.G.G.P. 1.8m E.K.I.	BCC STANDARD	304347.17	6270372.37
6	6-4	S.G.G.P. 1.8m E.K.I.	BCC STANDARD	304359.12	6270368.23
6	6-5	STUB, CAP & BURY	FOR FUTURE CONNECTION	304363.72	6270361.46
7	7-1	S.G.G.P. 1.8m E.K.I.	BCC STANDARD	304199.72	6270301.27
7	7-2	S.G.G.P. 1.8m E.K.I.	BCC STANDARD	304229.73	6270313.08
7	7-3	S.G.G.P. 1.8m E.K.I.	BCC STANDARD	304259.74	6270324.89
7	7-4	S.G.G.P. 1.8m E.K.I.	BCC STANDARD	304289.75	6270336.70
7	7-5	S.G.G.P. 1.8m E.K.I.	BCC STANDARD	304318.83	6270348.14
7	7-6	S.G.G.P. 2.4m E.K.I. SAG	BCC STANDARD	304341.35	6270357.01
8	8-1	S.G.G.P. 1.8m E.K.I.	BCC STANDARD	303921.60	6270214.10
9	9-1	S.G.G.P. 1.8m E.K.I.	BCC STANDARD	303899.18	6270262.82
10	10-1	S.G.G.P. 1.8m E.K.I.	BCC STANDARD	303987.47	6270245.68
11	11-1	S.G.G.P. 1.8m E.K.I.	BCC STANDARD	303974.47	6270270.39
12	12-1	S.G.G.P. 1.8m E.K.I.	BCC STANDARD	304057.19	6270269.94
13	13-1	S.G.G.P. 1.8m E.K.I.	BCC STANDARD	304121.85	6270303.82
14	14-1	STUB, CAP & BURY	FOR FUTURE CONNECTION	304208.40	6270390.28
15	15-1	S.G.G.P. 1.8m E.K.I.	BCC STANDARD	304278.02	6270407.59
15	15-2	S.G.G.P. 1.8m E.K.I.	BCC STANDARD	304255.15	6270398.54
16	16-1	STUB, CAP & BURY	FOR FUTURE CONNECTION	304201.20	6270297.50
17	17-1	STUB, CAP & BURY	FOR FUTURE CONNECTION	304231.21	6270309.31
18	18-1	STUB, CAP & BURY	FOR FUTURE CONNECTION	304261.22	6270321.12
19	19-1	STUB, CAP & BURY	FOR FUTURE CONNECTION	304291.23	6270332.93
20	20-1	STUB, CAP & BURY	FOR FUTURE CONNECTION	304320.31	6270344.38
21	21-1	STUB, CAP & BURY	FOR FUTURE CONNECTION	304342.84	6270353.24
22	22-1	G.S.I.P. 900x900 (HEAVY DUTY)	BCC STANDARD	303886.66	6270186.97
22	22-2	G.S.I.P. 900x900 (HEAVY DUTY)	BCC STANDARD	303874.84	6270209.45
23	23-1	G.S.I.P. 900x900 (HEAVY DUTY)	BCC STANDARD	304134.25	6270315.60
23	23-2	G.S.I.P. 900x900 (HEAVY DUTY)	BCC STANDARD	304143.79	6270319.36
23	23-3	G.S.I.P. 900x900 (HEAVY DUTY)	BCC STANDARD	304153.32	6270323.11
23	23-4	G.S.I.P. 900x900 (HEAVY DUTY)	BCC STANDARD	304162.86	6270326.86
23	23-5	G.S.I.P. 900x900 (HEAVY DUTY)	BCC STANDARD	304172.63	6270330.71
23	23-6	G.S.I.P. 900x900 (HEAVY DUTY)	BCC STANDARD	304202.64	6270342.52
23	23-7	G.S.I.P. 900x900 (HEAVY DUTY)	BCC STANDARD	304232.65	6270354.33
23	23-8	G.S.I.P. 900x900 (HEAVY DUTY)	BCC STANDARD	304262.66	6270366.14
23	23-9	G.S.I.P. 900x900 (HEAVY DUTY)	BCC STANDARD	304292.21	6270377.76
23	23-10	G.S.I.P. 900x900 (HEAVY DUTY)	BCC STANDARD	304328.42	6270392.01
24	24-1	G.S.I.P. 900x900 (DISH CROSSING)	BCC STANDARD	303915.23	6270270.01
24	24-2	G.S.I.P. 900x900 (DISH CROSSING)	BCC STANDARD	303956.44	6270286.31
24	24-3	G.S.I.P. 900x900 (DISH CROSSING)	BCC STANDARD	303964.22	6270290.84
24	24-4	G.S.I.P. 900x900 (DISH CROSSING)	BCC STANDARD	304024.08	6270314.51
24	24-5	G.S.I.P. 900x900 (DISH CROSSING)	BCC STANDARD	304032.50	6270317.84
24	24-6	G.S.I.P. 900x900 (DISH CROSSING)	BCC STANDARD	304092.36	6270341.52
25	25-2	G.S.I.P. 900x900 (HEAVY DUTY)	BCC STANDARD	304255.27	6270407.79
25	25-3	S.G.G.P. 1.8m E.K.I.	BCC STANDARD	304275.05	6270415.12
25	25-4	H.W.	AS PER DETAIL	304292.35	6270407.93
26	26-2	S.G.G.P. 1.8m E.K.I.	BCC STANDARD	304334.05	6270409.85
26	26-3	ROCK H.W.	AS PER DETAIL	304318.34	6270407.09
27	27-1	G.S.I.P. 900x900 (LETTERBOX TYPE)	BCC STANDARD	304314.90	6270412.95
27	27-3	ROCK H.W.	AS PER DETAIL	304341.57	6270438.56

SETOUT

S.G.G.P. (ON GRADE)

SETOUT

S.G.G.P. (ON SAG)

SETOUT

J.P. & G.S.I.P.

PIT SETOUT DETAILS

NOT TO SCALE

NOTES

1. MODELLED USING DRAINS ILSAX METHOD.

SOIL TYPE - NORMAL 3.0
IMPERVIOUS AREA DEPRESSION STORAGE - 1mm
PERVIOUS AREA DEPRESSION STORAGE - 5mm

2. COLEBROOK WHITE ROUGHNESS FACTOR:

RC PIPES - 0.6
PVC PIPES - 0.015

3. RRJ C2 DENOTES RUBBER RING JOINT CLASS 2 PIPE.

4. ALL PVC PIPES TO BE CLASS SH.

5. THE PRESSURE CHANGE COEFFICIENT 'K' HAS BEEN DETERMINED USING HARE'S EQUATION.

6. WHERE PIT EXCEEDS 1.2m IN DEPTH, STEP IRONS ARE TO BE PROVIDED.

7. PITS DEEPER THAN 1.5m TO BE CONCRETE REINFORCED. REFER BCC'S STANDARD DRAWINGS FOR DETAILS.

8. CONCRETE 40MPa COMPRESSIVE STRENGTH.

ABBREVIATIONS

1. S.G.G.P. - STANDARD GRATED GULLY PIT

2. G.S.I.P. - GRATED SURFACE INLET PIT

3. J.P. - JUNCTION PIT

4. H.W. - HEADWALL

11.09.17

RE-ISSUED FOR CONSTRUCTION CERTIFICATE

13.07.17

RE-ISSUED FOR CONSTRUCTION CERTIFICATE

05.07.17

ISSUED FOR CONSTRUCTION CERTIFICATE

REV

DATE

AMENDMENT DESCRIPTION

DIAL 1100

BEFORE YOU DIG

Project:

PROPOSED SUBDIVISION IN
LOT 1 D.P. 1208526
BOUNDARY ROAD, SCHOFIELDS

Principal:

LB SCHOFIELDS ONE PTY LTD

Scale

AS SHOWN @ A1

Date

05.07.17

Council Ref.

DA-15-02283

Datum

A.H.D.

L.G.A.

BLACKTOWN COUNCIL

Calc'd

M.P.

Drawn

F.K.

Proj.Man.

A.M.

Client Ref.

CRAIG & RHODES

ABN 77 050 209 991
Level 4, Suite 400
16-18 Cambridge St
EPPING NSW 2121
PO Box 233
EPPING NSW 1710

ACN 050 209 991
DX 4408 EPPING
Tel. 9869-1855
Fax. 9869-2341
reception@craighoddes.com.au
www.craighoddes.com.au
© Craig & Rhodes

90th

ANNIVERSARY
1923 - 2013

APPROVED COMPANY

ISO 9001
Quality Management System

QMS

Drawing Title

STORMWATER
PIT SCHEDULE

C&R Ref.

1788

Drawing Ref.

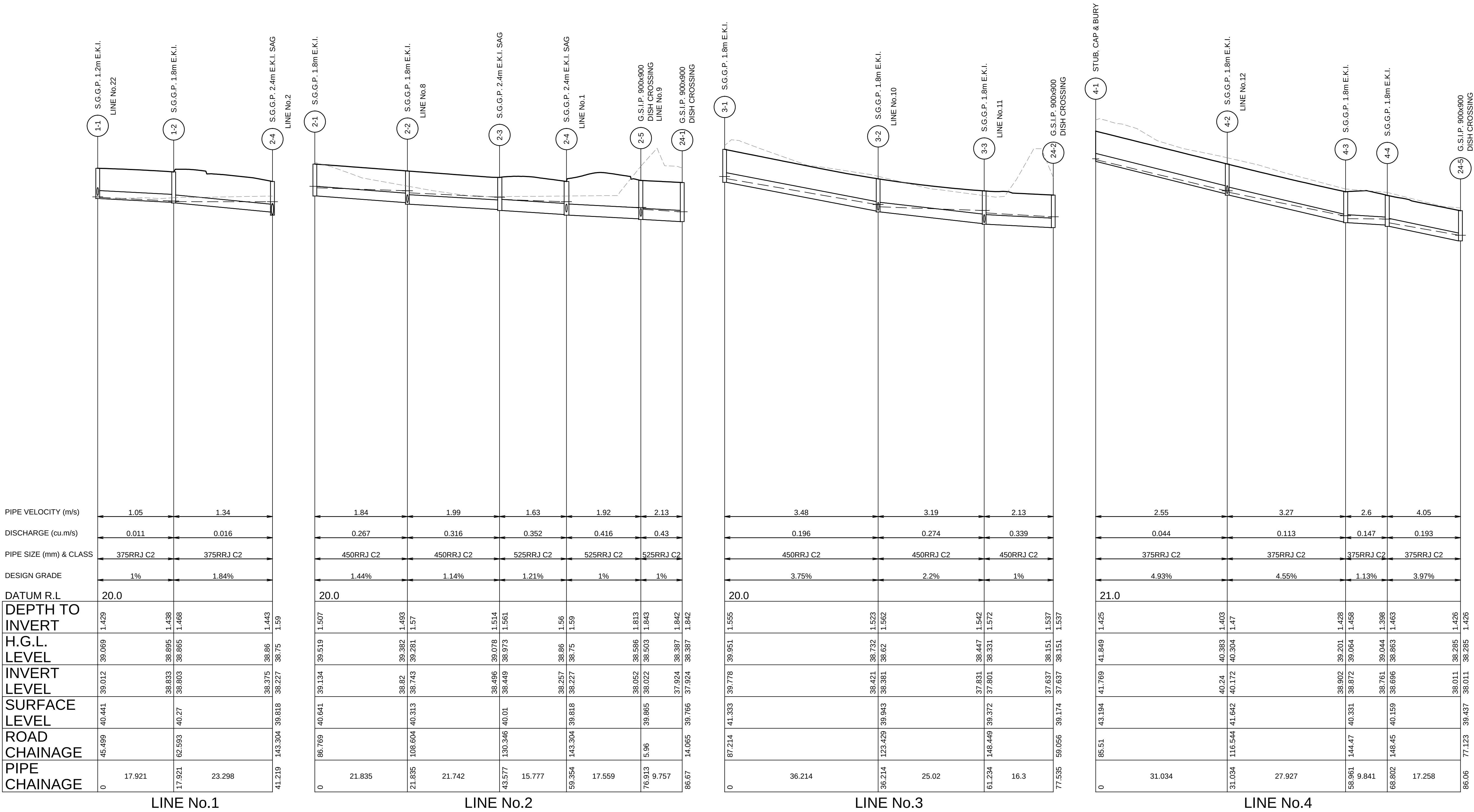
1788C-CC-0703

Revision

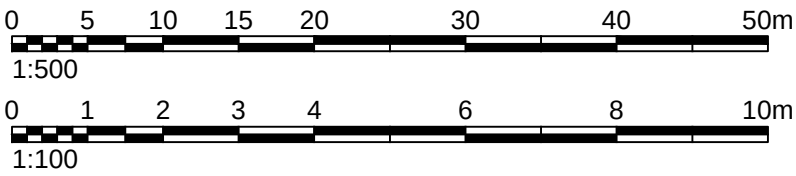
C

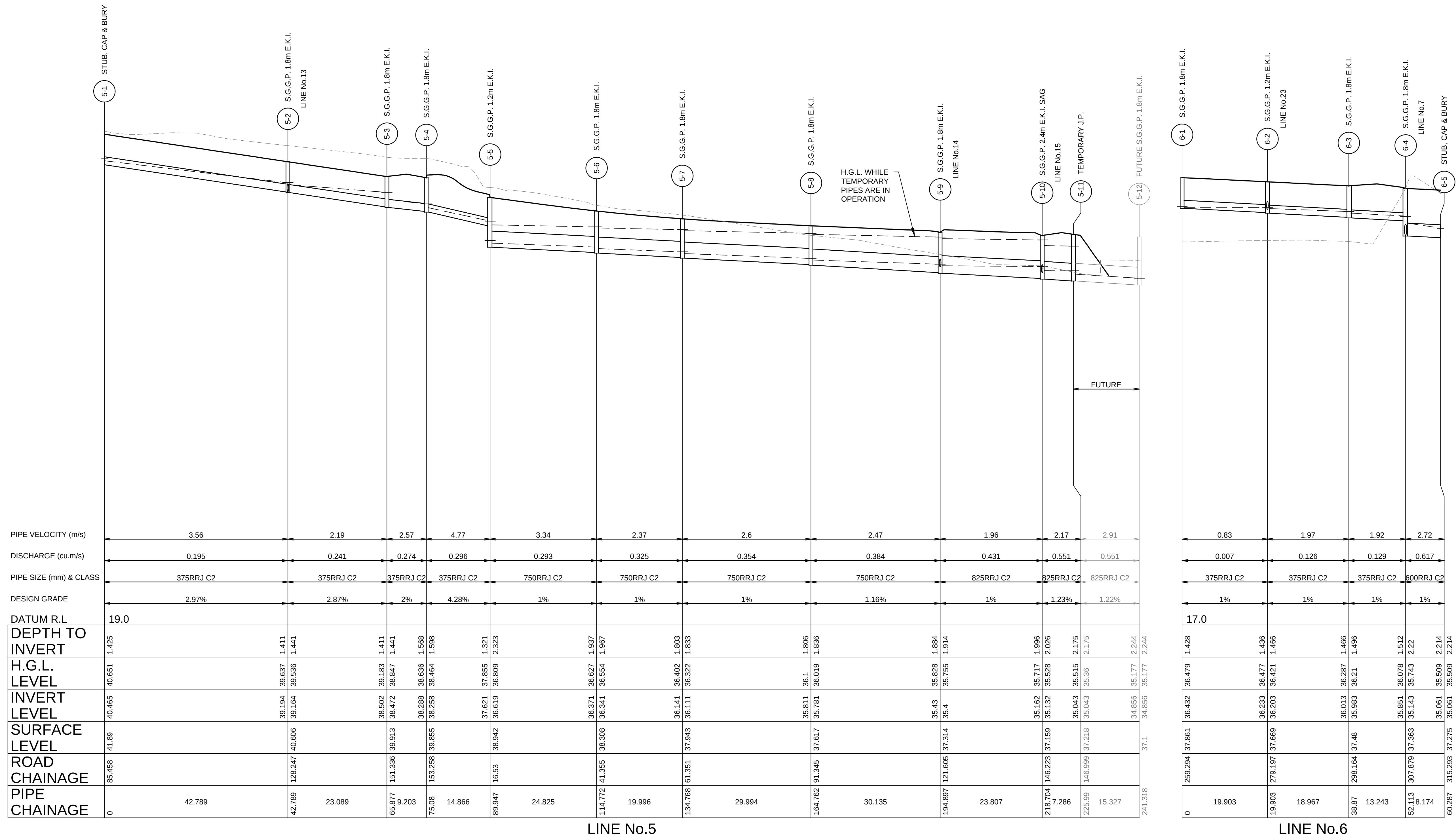
CONSTRUCTION CERTIFICATE

NOTE:
- FOR SPECIAL PIT DETAILS REFER TO DWG.
No. ???.



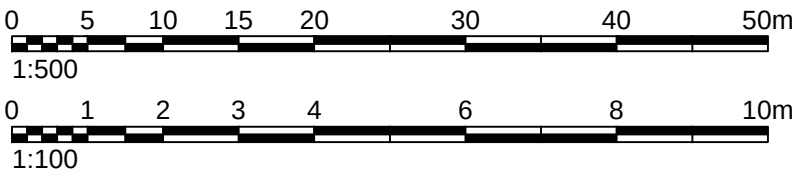
STORMWATER DRAINAGE LONGITUDINAL SECTIONS
HORIZONTAL SCALE - 1:500
VERTICAL SCALE - 1:100



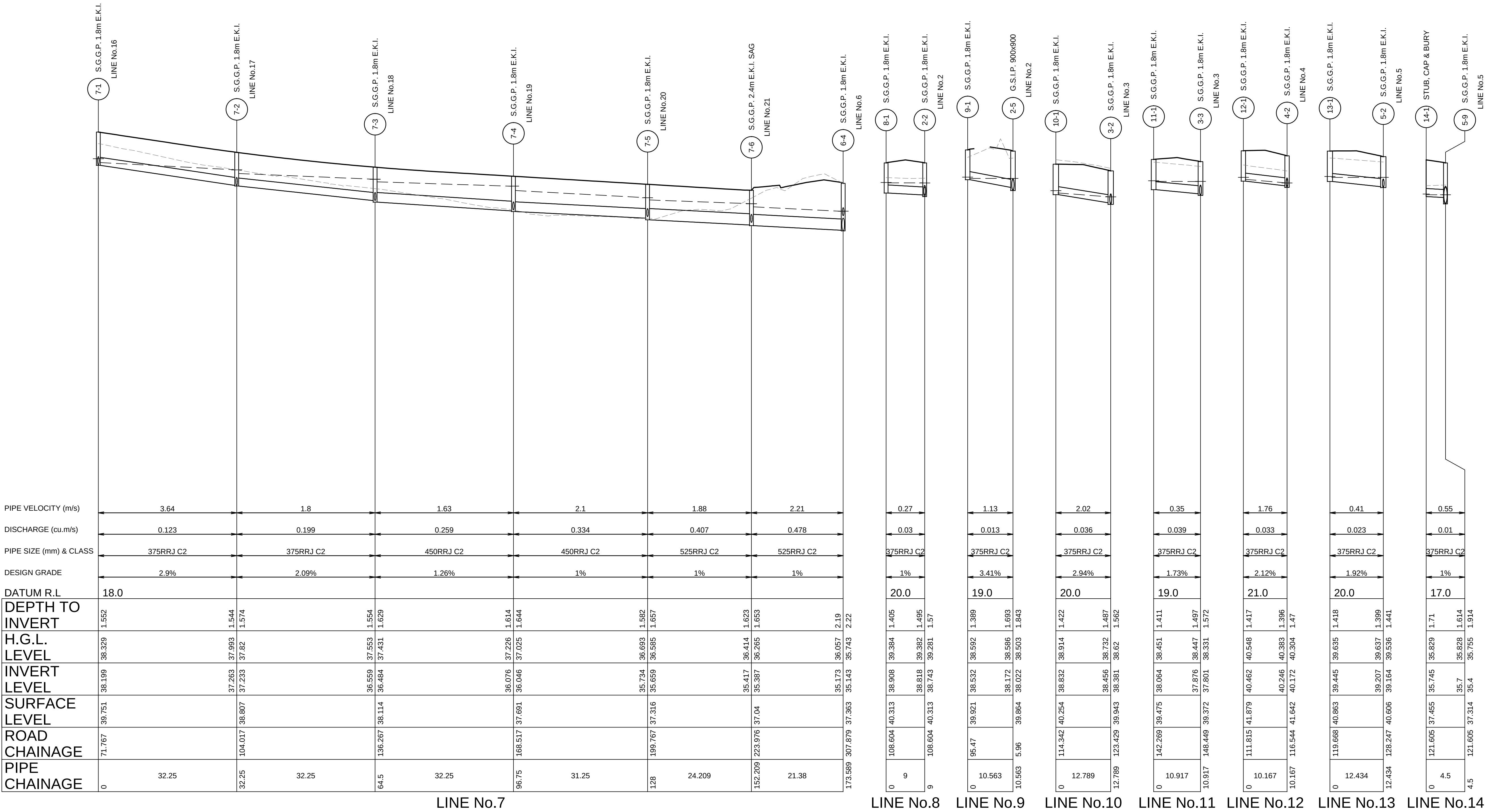


NOTE:

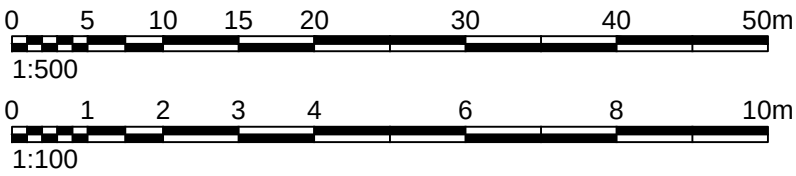
- FOR SPECIAL PIT DETAILS REFER TO DWG. No. ???.



NOTE:
- FOR SPECIAL PIT DETAILS REFER TO DWG.
No. ???.



STORMWATER DRAINAGE LONGITUDINAL SECTIONS
HORIZONTAL SCALE - 1:500
VERTICAL SCALE - 1:100



REV	DATE	AMENDMENT DESCRIPTION
C	11.09.17	RE-ISSUED FOR CONSTRUCTION CERTIFICATE
B	13.07.17	RE-ISSUED FOR CONSTRUCTION CERTIFICATE
A	05.07.17	ISSUED FOR CONSTRUCTION CERTIFICATE



Project: PROPOSED SUBDIVISION IN LOT 1 D.P. 1208526 BOUNDARY ROAD, SCHOFIELDS

Principal: LB SCHOFIELDS ONE PTY LTD	Scale: AS SHOWN @ A1	Date: 05.07.17	Council Ref: DA-15-02283
Cal's: M.P.	Drawn: F.K.	Proj.Man: A.M.	Client Ref:



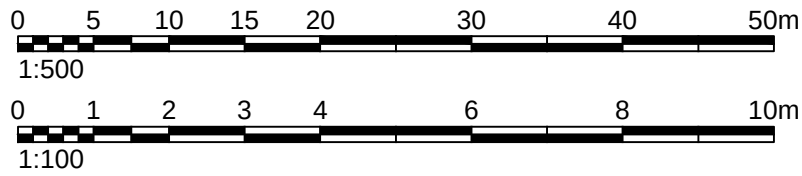
ABN 77 050 209 991
Level 4, Suite 400
16-18 Cambridge St
EPPING NSW 2121
PO Box 233
EPPING NSW 1710
reception@craigandrhodes.com.au
www.craigandrhodes.com.au
© Craig & Rhodes.

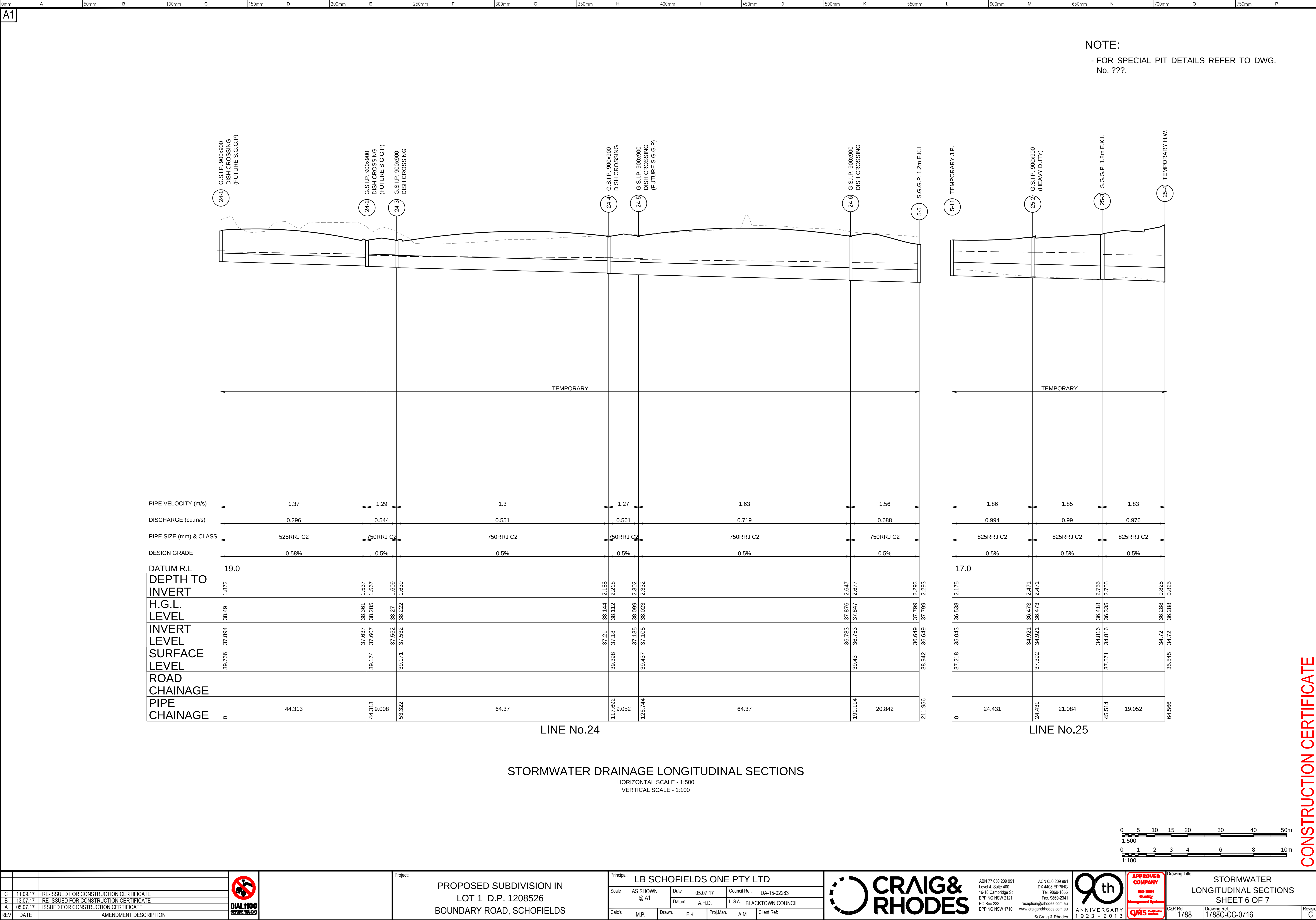


Drawing title: STORMWATER LONGITUDINAL SECTIONS SHEET 3 OF 7
C&R Ref: 1788
Drawing Ref: 1788C-CC-0713
Revision: C

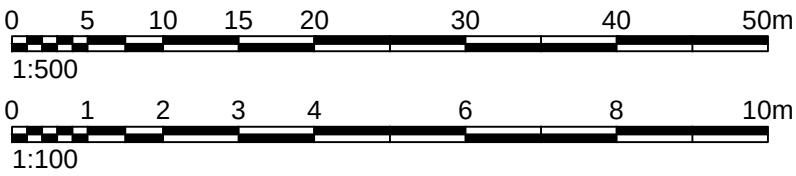
CONSTRUCTION CERTIFICATE

CONSTRUCTION CERTIFICATE

[illegible]



CONSTRUCTION CERTIFICATE



</

[illegible]

[illegible]

0mm

50mm

100mm

150mm

200mm

250mm

300mm

350mm

400mm

450mm

500mm

550mm

600mm

650mm

700mm

750mm

A

B

C

D

E

F

G

H

I

J

K

L

M

N

O

P

A1

11

10

9

8

7

6

5

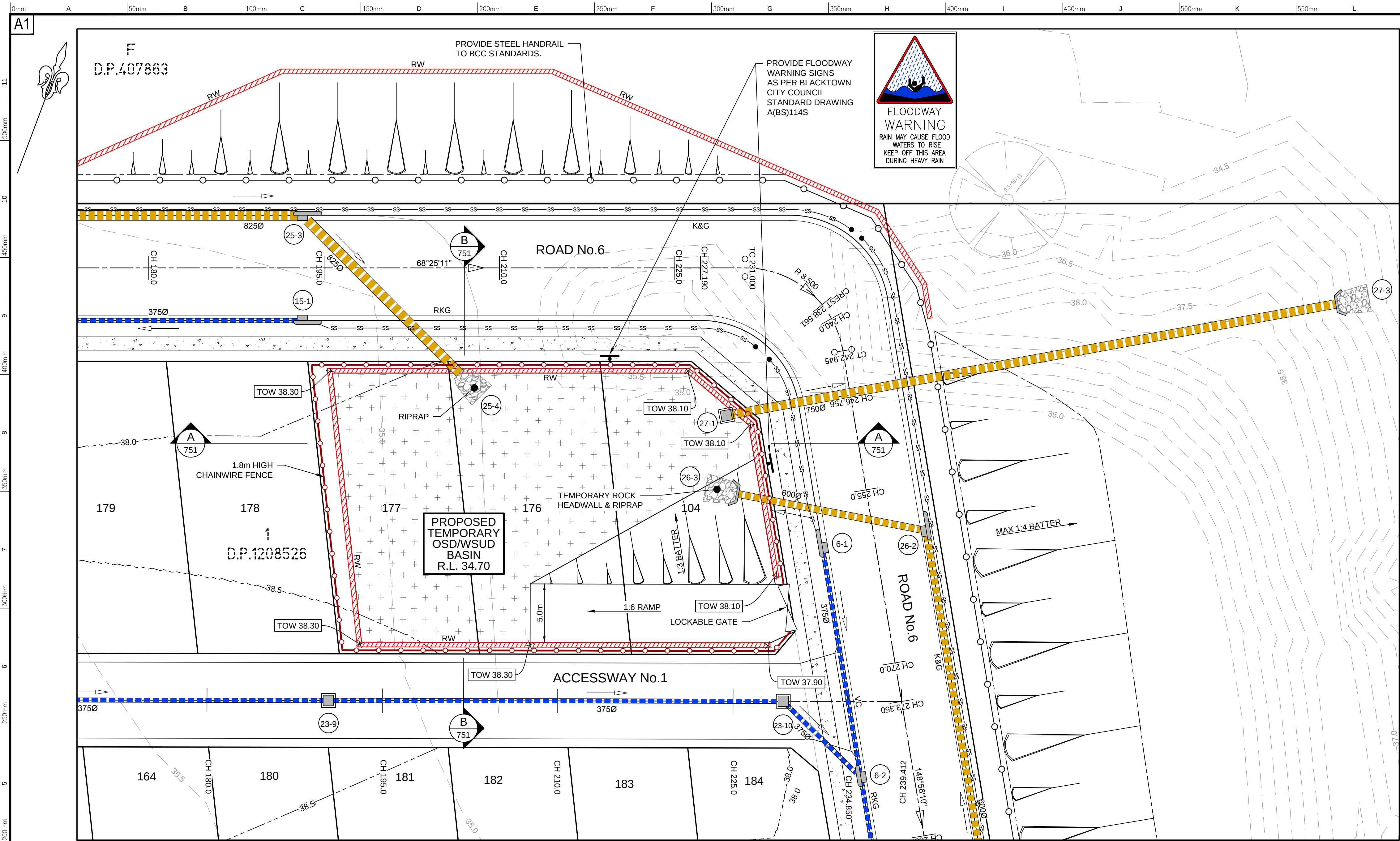
4

3

2

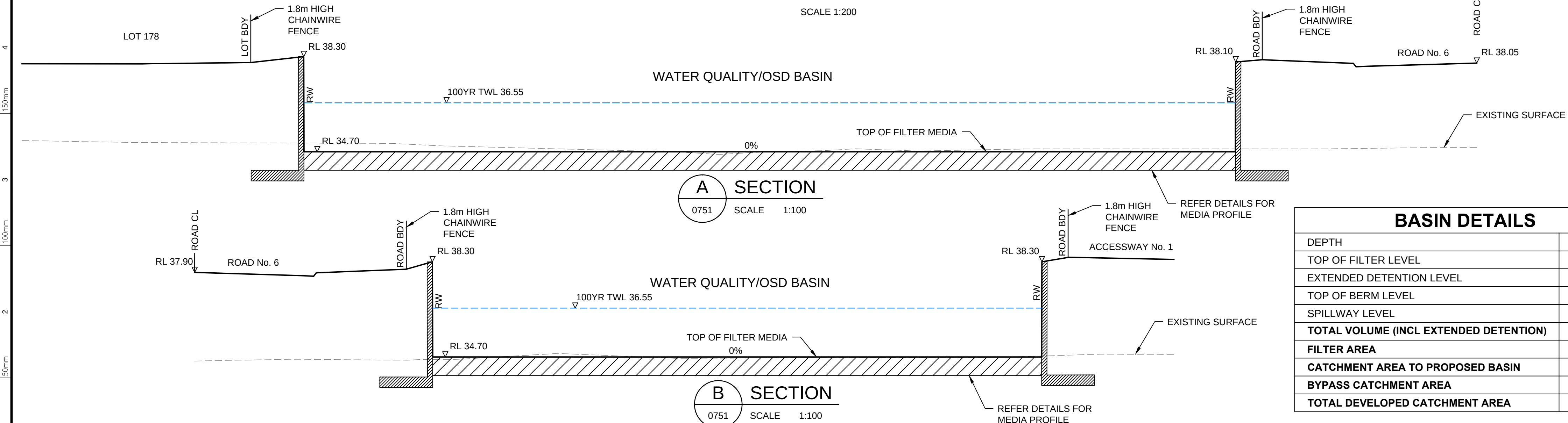
1

OVERFLOW ROUTE DETAILS							MINOR ARI RESULTS (10yr)							MAJOR ARI RESULTS (100yr)						
NAME	FROM	TO	TRAVEL TIME	CROSS SECTION	BED SLOPE %	CONTRIBUTING D/S CATCHMENT	MAX. Q U/S	MAX. Q D/S	MAX. D	MAX. DxV	MAX. WIDTH	MAX. V	MAX. Q U/S	MAX. Q D/S	MAX. D	MAX. DxV	MAX. WIDTH	MAX. V		
F 1-1	1-1	1-2	1	9 m wide road (half section)	1.0	85	0.000	0.004	0.041	0.02	0.34	0.59	0.000	0.006	0.047	0.03	0.39	0.63		
F 1-2	1-2	2-3	1	9 m wide road (half section)	0.6	40	0.000	0.016	0.071	0.04	1.10	0.62	0.000	0.022	0.079	0.05	1.38	0.64		
F 2-1	2-1	2-2	1	9 m wide road (half section)	1.5	85	0.000	0.024	0.071	0.07	1.07	0.99	0.046	0.077	0.099	0.11	2.16	1.08		
F 2-2	2-2	2-3	1	9 m wide road (half section)	0.6	50	0.000	0.020	0.076	0.05	1.28	0.63	0.030	0.053	0.101	0.07	2.24	0.70		
F 2-3	2-3	2-4	1	Dummy used to model flow across road low points	1.0	5	0.000	0.003	0.009	0.00	2.84	0.21	0.000	0.004	0.010	0.00	3.44	0.20		
F 2-4	2-4	2-5	1	9 m wide road (half section)	1.0	85	0.000	0.009	0.056	0.04	0.51	0.70	0.000	0.013	0.062	0.05	0.74	0.76		
F 2-5	2-5	24-1	1	9 m wide road (half section)	1.0	85	0.003	0.008	0.053	0.04	0.44	0.68	0.006	0.013	0.061	0.05	0.71	0.78		
F 3-1	3-1	3-2	1	9 m wide road (half section)	3.2	85	0.000	0.040	0.073	0.11	1.18	1.45	0.000	0.057	0.081	0.12	1.49	1.46		
F 3-2	3-2	3-3	1	9 m wide road (half section)	1.5	85	0.003	0.030	0.075	0.07	1.25	0.98	0.010	0.046	0.086	0.09	1.64	1.02		
F 3-3	3-3	24-2	1	9 m wide road (half section)	1.0	85	0.001	0.018	0.069	0.05	1.02	0.79	0.005	0.029	0.079	0.06	1.41	0.82		
F 4-1	4-1	4-2	1	9 m wide road (half section)	5.0	85	0.000	0.032	0.064	0.11	0.82	1.76	0.000	0.045	0.071	0.13	1.10	1.78		
F 4-2	4-2	4-3	1	9 m wide road (half section)	4.4	85	0.001	0.030	0.064	0.10	0.84	1.62	0.004	0.045	0.073	0.12	1.15	1.68		
F 4-3	4-3	24-5	1	9 m wide road (half section)	4.0	85	0.001	0.015	0.051	0.07	0.43	1.33	0.005	0.024	0.060	0.09	0.69	1.52		
F 4-4	4-4	24-5	1	9 m wide road (half section)	4.0	85	0.004	0.018	0.055	0.08	0.48	1.42	0.013	0.032	0.066	0.10	0.89	1.59		
F 5-1	5-1	5-2	1	9 m wide road (half section)	3.0	85	0.000	0.045	0.077	0.11	1.31	1.40	0.000	0.063	0.085	0.12	1.62	1.43		
F 5-2	5-2	5-3	1	9 m wide road (half section)	3.0	85	0.005	0.032	0.069	0.10	1.02	1.37	0.023	0.057	0.082	0.12	1.51	1.44		
F 5-3	5-3	O 24-6	1	9 m wide road (half section)	3.0	85	0.001	0.001	0.022	0.01	0.18	0.67	0.008	0.008	0.043	0.05	0.36	1.05		
F 5-4	5-4	5-5	1	9 m wide road (half section)	2.7	85	0.000	0.006	0.039	0.04	0.32	0.91	0.000	0.008	0.045	0.04	0.37	0.99		
F 5-5	5-5	5-6	1	9 m wide road (half section)	2.2	85	0.000	0.034	0.074	0.09	1.20	1.19	0.000	0.048	0.081	0.10	1.49	1.23		
F 5-6	5-6	5-7	1	9 m wide road (half section)	1.5	85	0.002	0.024	0.071	0.07	1.07	0.97	0.006	0.036	0.079	0.08	1.41	1.02		
F 5-7	5-7	5-8	1	9 m wide road (half section)	1.0	85	0.000	0.034	0.083	0.07	1.54	0.83	0.002	0.049	0.092	0.08	1.90	0.86		
F 5-8	5-8	5-9	1	9 m wide road (half section)	1.0	85	0.002	0.035	0.083	0.07	1.56	0.84	0.006	0.052	0.094	0.08	1.98	0.86		
F 5-9	5-9	5-10	1	9 m wide road (half section)	0.1	45	0.002	0.028	0.078	0.06	1.36	0.82	0.007	0.042	0.124	0.04	3.09	0.31		
F 5-10	5-10	5-11	1	Dummy used to model flow across road low points	1.0	5	0	0	0	0	0	0	0	0	0	0	0	0		
F 5-11	5-11	O 5-11	1	9 m wide road (half section)	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0		
F 6-1	6-1	6-2	1	9 m wide road (half section)	1.0	85	0.000	0.009	0.056	0.04	0.51	0.70	0.000	0.013	0.062	0.05	0.74	0.76		
F 6-2	6-2	6-3	1	9 m wide road (half section)	1.0	85	0.000	0.004	0.043	0.03	0.35	0.59	0.000	0.006	0.048	0.03	0.40	0.65		
F 6-3	6-3	7-6	1	9 m wide road (half section)	0.6	40	0.000	0.019	0.075	0.05	1.25	0.62	0.000	0.026	0.083	0.05	1.54	0.65		
F 6-4	6-4	O 6-4	1	9 m wide road (half section)	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0		
F 7-1	7-1	7-2	1	9 m wide road (half section)	2.7	85	0.000	0.035	0.073	0.10	1.15	1.31	0.002	0.051	0.081	0.11	1.46	1.37		
F 7-2	7-2	7-3	1	9 m wide road (half section)	1.7	85	0.002	0.037	0.079	0.08	1.38	1.07	0.062	0.107	0.107	0.13	2.47	1.20		
F 7-3	7-3	7-4	1	9 m wide road (half section)	1.2	85	0.003	0.037	0.083	0.08	1.54	0.92	0.115	0.154	0.125	0.14	3.14	1.10		
F 7-4	7-4	7-5	1	9 m wide road (half section)	1.2	85	0.003	0.036	0.082	0.07	1.51	0.91	0.233	0.273	0.148	0.18	4.02	1.23		
F 7-5	7-5	7-6	1	9 m wide road (half section)	0.6	50	0.002	0.025	0.082	0.05	1.51	0.63	0.229	0.253	0.165	0.14	5.26	0.84		
F 7-6	7-6	21-1	1	Dummy used to model flow across road low points	1.0	0	0	0	0	0	0	0	0.130	0.130	0.038	0.02	11.63	0.54		
F 8-1	8-1	2-4	1	9 m wide road (half section)	1.0	85	0.000	0.043	0.089	0.07	1.77	0.84	0.020	0.071	0.103	0.09	2.31	0.89		
F 9-1	9-1	O 9-1	1	9 m wide road (half section)	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0		
F 10-1	10-1	11-1	1	9 m wide road (half section)	1.9	85	0.002	0.031	0.073	0.08	1.18	1.11	0.005	0.046	0.083	0.09	1.54	1.13		
F 11-1	11-1	O 24-2	1	9 m wide road (half section)	1.0	85	0.001	0.001	0.026	0.01	0.22	0.42	0.005	0.005	0.044	0.03	0.36	0.61		
F 12-1	12-1	4-4	1	9 m wide road (half section)	4.3	85	0.000	0.044	0.072	0.12	1.13	1.67	0.002	0.063	0.080	0.14	1.43	1.72		
F 13-1	13-1	5-4	1	9 m wide road (half section)	3.0	85	0.000	0.008	0.044	0.05	0.36	1.03	0.000	0.012	0.050	0.06	0.41	1.12		
F 14-1	14-1	O 14-1	1	9 m wide road (half section)	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0		
F 15-1	15-1	15-2	1	9 m wide road (half section)	1.2	85	0.002	0.025	0.074	0.06	1.20	0.87	0.005	0.038	0.083	0.08	1.56	0.90		
F 15-2	15-2	5-10	1	9 m wide road (half section)	0.1	45	0.000	0.026	0.077	0.06	1.31	0.81	0.003	0.039	0.120	0.04	2.96	0.31		
F 16-1	16-1	17-1	1	9 m wide road (half section)	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0		
F 17-1	17-1	18-1	1	9 m wide road (half section)	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0		
F 18-1	18-1	19-1	1	9 m wide road (half section)	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0		
F 19-1	19-1	20-1	1	9 m wide road (half section)	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0		
F 20-1	20-1	21-1	1	9 m wide road (half section)	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0		
F 21-1	21-1	O 21-1	1	9 m wide road (half section)	1.0	0	0	0	0	0	0	0	0.023	0.023	0.075	0.06	1.23	0.80		
F 22-1	22-1	22-2	1	9 m wide road (half section)	1.0	100	0.000	0.006	0.048	0.03	0.40	0.63	0.000	0.009	0.054	0.04	0.45	0.70		
F 22-2	22-2	1-1	1	Dummy used to model flow across road low points	1.0	10	0.000	0.000	0.000	0.00	0.00	0.00	0.000	0.000	0.000	0.00	0.00	0.00		
F 23-1	23-1	23-2	1	Accessway 7 m wide	1.0	100	0.000	0.013	0.024	0.01	2.43	0.45	0.000	0.019	0.028	0.01	2.79	0.47		
F 23-2	23-2	23-3	1	Accessway 7 m wide	1.0	100	0.000	0.013	0.024	0.01	2.43	0.45	0.000	0.019	0.028	0.01	2.79	0.47		
F 23-3	23-3	23-4	1	Accessway 7 m wide	1.0	100	0.000	0.013	0.024	0.01	2.43	0.45	0.000	0.019	0.028	0.01	2.79	0.47		
F 23-4	23-4	23-5	1	Accessway 7 m wide	1.0	100	0.000	0.013	0.025	0.01	2.48	0.44	0.000	0.019	0.028	0.01	2.79	0.48		
F 23-5	23-5	23-6	1	Accessway 7 m wide	1.0	100	0.000	0.009	0.021	0.01	2.12	0.40	0.000	0.013	0.024	0.01	2.43	0.43		
F 23-6	23-6	23-7	1	Accessway 7 m wide	1.0	100	0.000	0.009	0.022	0.01	2.17	0.40	0.000	0.013	0.024	0.01	2.43	0.45		
F 23-7	23-7	23-8	1	Accessway 7 m wide	1.0	100	0.000	0.009	0.021	0.01	2.12	0.41	0.000	0.013	0.024	0.01	2.43	0.44		
F 23-8	23-8	23-9	1	Accessway 7 m wide	1.0	100	0.000	0.009	0.021	0.01	2.12	0.41	0.000	0.013	0.024	0.01	2.43	0.44		
F 23-9	23-9	23-10	1	Accessway 7 m wide	1.0	100	0.000	0.011	0.023	0.01	2.32	0.42	0.000	0.016	0.026	0.01	2.64	0.46		
F 23-10	23-10	6-2	1	Dummy used to model flow across road low points	1.0	10	0.000	0.001	0.007	0.00	2.25	0.14	0.000	0.001	0.008	0.00	2.54	0.15		
F 24-1	24-1	O 24-1	1	9 m wide road (half section)	1.0	0	0.002	0.002	0.034	0.02	0.28	0.50	0.005	0.005	0.045	0.03	0.38	0.61		
F 24-2	24-2	O 24-2	1	9 m wide road (half section)	1.0	0	0.010	0.010	0.057	0.04	0.56	0.73	0.016	0.016	0.066	0.05	0.92	0.79		
F 24-5	24-5	O 24-5	1	9 m wide road (half section)	1.0	0	0.009	0.009	0.056	0.04	0.53	0.71	0.021	0.021	0.072	0.06	1.13	0.79		



PLAN

SCALE 1:200



SECTION A

SCALE 1:100

SECTION B

SCALE 1:100

BASIN DETAILS	
DEPTH	3.3m
TOP OF FILTER LEVEL	R.L. 34.70
EXTENDED DETENTION LEVEL	R.L. 34.70
TOP OF BERM LEVEL	R.L. 38.00
SPILLWAY LEVEL	R.L. 37.90
TOTAL VOLUME (INCL EXTENDED DETENTION)	2270m3
FILTER AREA	590m2
CATCHMENT AREA TO PROPOSED BASIN	4.13Ha
BYPASS CATCHMENT AREA	0.17Ha
TOTAL DEVELOPED CATCHMENT AREA	4.30Ha

BIORETENTION NOTES:

- A 100mm THICK COARSE SAND TRANSITION LAYER IS TO BE INSTALLED OVER THE GRAVEL DRAINAGE LAYER TO COMPLY WITH THE FOLLOWING PARTICLE SIZE DISTRIBUTION:
 - 1.4mm - 100% PASSING
 - 1.0mm - 80% PASSING
 - 0.7mm - 44% PASSING
 - 0.5mm 8.5% PASSING
 - FILTER MEDIA IS TO BE FREE OF RUBBISH AND DELETERIOUS MATERIAL AND LIGHTLY COMPACTED ONLY (TO 90% STANDARD COMPACTION)
 - FILTER MEDIA SATURATED HYDRAULIC CONDUCTIVITY TO BE 180mm/hr. PERMEABILITY IS TO BE TESTED USING THE A.S.419 (LATEST EDITION) (SOILS FOR LANDSCAPING AND GARDEN USE) METHODS (APPENDIX H)
 - FILTER MEDIA PARTICLE SIZE DISTRIBUTION IS TO BE AS FOLLOWS:
 - CLAY 2-4% (<0.002 mm)
 - SILT 4-8% (0.002-0.05mm)
 - VERY FINE SAND 5-10% (0.05-0.1mm)
 - FINE SAND 10-14% (0.1-0.5mm)
 - MEDIUM SAND 60-70% (0.5-1.0mm)
 - COARSE SAND 7-10% (1.0-2.0mm)
 - FINE GRAVEL <3% (2.0-3.4mm)
- THE COMBINED PERCENTAGE OF CLAY & SILT MAY NOT EXCEED 12% UNDER ANY CIRCUMSTANCES.
- FILTER MEDIA IS TO COMPLY WITH A.S.419 (LATEST EDITION), INCLUDING TESTING REQUIREMENTS AND THE FOLLOWING:
 - a. BULK DENSITY - AS SPECIFIED FOR 'NATURAL SOILS AND SOIL BLENDS' > 0.7 kg/L
 - b. ORGANIC MATTER CONTENT - BETWEEN 3 AND 10
 - c. WETTABILITY - AS SPECIFIED FOR 'NATURAL SOILS AND SOIL BLENDS' > 5 mm/hr
 - d. pH - 5.5 - 7.5 (pH 1:5 IN WATER)
 - e. ELECTRICAL CONDUCTIVITY (EC) AS SPECIFIED FOR 'NATURAL SOILS AND SOIL BLENDS' < 1.20 S/M
 - f. PHOSPHOROUS - < 5 mg/kg
 - g. NITROGEN DRAWDOWN (NDI) AS SPECIFIED FOR 'NATURAL SOILS AND SOIL BLENDS' > 0.5 NDI 150
 - h. TOXICITY - AS SPECIFIED FOR 'NATURAL SOILS AND SOIL BLENDS'
 - i. DISPERSIBILITY - AS SPECIFIED FOR 'NATURAL SOILS AND SOIL BLENDS' CATEGORY 1 OR 2
 - j. PERMEABILITY - SATURATED HYDRAULIC CONDUCTIVITY 100mm/hr $\pm$ 20% AT 90% STANDARD COMPACTION
 - k. TEXTURE - SANDY LOAM
 - l. LARGE PARTICLES - AS SPECIFIED FOR 'NATURAL SOILS AND SOIL BLENDS'
 - ESTABLISHMENT OF BIO-RETENTION SYSTEM IN ACCORDANCE WITH CONSTRUCTION & ESTABLISHMENT GUIDELINES: SWALES, BIO-RETENTION SYSTEMS & WETLANDS (WATER BY DESIGN 2010).
 - BASIN TO BE CONSTRUCTED WHEN 80% OF DWELLINGS ARE CONSTRUCTED.
 - BASIN TO BE REMOVED WHEN BLACKTOWN CITY COUNCIL REGIONAL INFRASTRUCTURE ARE COMPLETE, DATE UNKNOWN.

EARTHWORKS - BASINS:

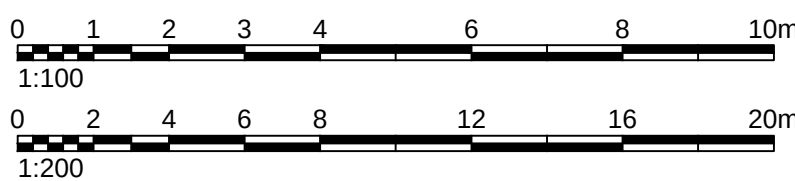
- THE CONTRACTOR SHALL PROVIDE PROPER FENCING, GUARDING & LIGHTING AND OBSERVATION OF ALL EARTHWORKS, TEMPORARY ROADWAYS, FOOTWAYS, GUARDS & FENCES AS MAY BE RENDERED NECESSARY FOR THE ACCOMMODATION AND PROTECTION OF PEDESTRIANS, VEHICLES, ANIMALS & THE PUBLIC
- ALL EARTHWORKS SHALL BE CARRIED OUT IN THE LOCATIONS SHOWN AND TO THE LEVELS, WIDTHS AND BATTER SLOPES INDICATED ON THE DRAWINGS
- EXCAVATED MATERIAL NOT MEETING THE SPECIFICATIONS FOR FILL MATERIAL SHALL BE DISPOSED OFF SITE IN AN APPROPRIATE MANNER
- WHERE EARTHWORKS ARE REQUIRED IN THE VICINITY OF EXISTING SERVICES, THE CONTRACTOR SHALL SUPPORT ALL SERVICES DURING THE WORKS
- THE CONTRACTOR SHALL, AT ITS OWN EXPENSE, DO ALL THINGS NECESSARY TO DIVERT ANY WATER INTERFERING WITH THE PROCESS OF WORKS. KEEP THE EXCAVATIONS AND TRENCHES FREE FROM WATER WHILE THE WORKS ARE IN PROGRESS AND PREVENT ANY DAMAGE TO THE WORKS BY WATER DUE TO FLOODS OR OTHER CAUSES. THE CONTRACTOR SHALL HAVE PUMPING EQUIPMENT FOR KEEPING THE EXCAVATION OR TRENCHES CONSTANTLY DEWATERED DURING THE TIMES THE WORKS ARE IN PROGRESS. ANY WORK OR MATERIAL DAMAGED BY WATER SHALL BE MADE GOOD BY THE CONTRACTOR.
- WHERE DIRECTED BY THE SUPERINTENDENT THE BOTTOM OF TRENCHES OR EXCAVATIONS SHALL BE COMPACTED PRIOR TO THE PLACING OF ANY BEDDING OR CONCRETE MATERIALS. SHOULD, IN THE OPINION OF THE SUPERINTENDENT, THE FOUNDATION MATERIAL BE INCAPABLE OF EFFECTIVE COMPACTION, THE MATERIAL SHALL BE REMOVED AND REPLACED WITH APPROPRIATE MATERIAL
- MATERIAL SHALL BE INSPECTED & APPROVED BY THE SUPERINTENDENT PRIOR TO USE.
- FILTER MEDIA WATER HOLDING CAPACITY IS TO BE AT LEAST 15-20% BY VOLUME AT 300mm OF SUCTION USING THE MCINTYRE AND JAKOBSEN (1998) METHOD.
- ANY COMPONENT OF FILTER MEDIA FOUND TO CONTAIN HIGH LEVELS OF SALT, HIGH LEVELS OF CLAY OR SILT PARTICLES, EXTREMELY LOW LEVELS OF ORGANIC CARBON OR ANY OTHER EXTREMES WHICH MAY BE CONSIDERED RETARDANT TO PLANT GROWTH AND DENITRIFICATION IS TO BE REJECTED.
- GRAVEL DRAINAGE LAYER TO CONSIST OF CLEAN NON-RECYCLED IGNEOUS ROCK D_{50} = 20mm.

EXCAVATIONS - BASINS:

- ALL TOPSOIL TO BE STRIPPED AND STOCKPILED FOR FUTURE USE. STRIPPED SURFACES ARE TO BE ROLLED AND INSPECTED BY A GEOTECHNICAL ENGINEER PRIOR TO CONTINUING WORKS. DEPTH OF TOPSOIL STRIPPING TO BE BETWEEN 125mm AND 200mm (TO BE CONFIRMED BY THE SUPERINTENDENT PRIOR TO CONSTRUCTION)
- WHERE ROCK IS EXPOSED DURING EXCAVATION, THE CONTRACTOR SHALL CEASE EXCAVATION AT THIS LOCATION AND CONTACT THE SUPERINTENDENT WHO WILL THEN ADVISE ON THE LEVEL TO WHICH THE EXCAVATION IS TAKEN

BASIN CALCULATIONS

ARI (YEAR)	PRE DEVELOPED FLOW (m3/s)	POST DEVELOPED FLOW (m3/s)	BASIN TOP WATER LEVEL (m)
2	0.25	0.23	35.79
5	0.70	0.56	36.16
10	1.37	1.20	36.29
20	1.65	1.25	36.40
50	2.08	2.05	36.45
100	2.37	2.37	36.55



REV	DATE	AMENDMENT DESCRIPTION
C	11.09.17	RE-ISSUED FOR CONSTRUCTION CERTIFICATE
B	13.07.17	RE-ISSUED FOR CONSTRUCTION CERTIFICATE
A	05.07.17	ISSUED FOR CONSTRUCTION CERTIFICATE



Project: PROPOSED SUBDIVISION IN LOT 1 D.P. 1208526 BOUNDARY ROAD, SCHOFIELDS

Principal: LB SCHOFIELDS ONE PTY LTD	Scale: AS SHOWN @ A1	Date: 05.07.17	Council Ref: DA-15-02283
Cal's: M.P.	Drawn: F.K.	Proj.Man: A.M.	Client Ref:



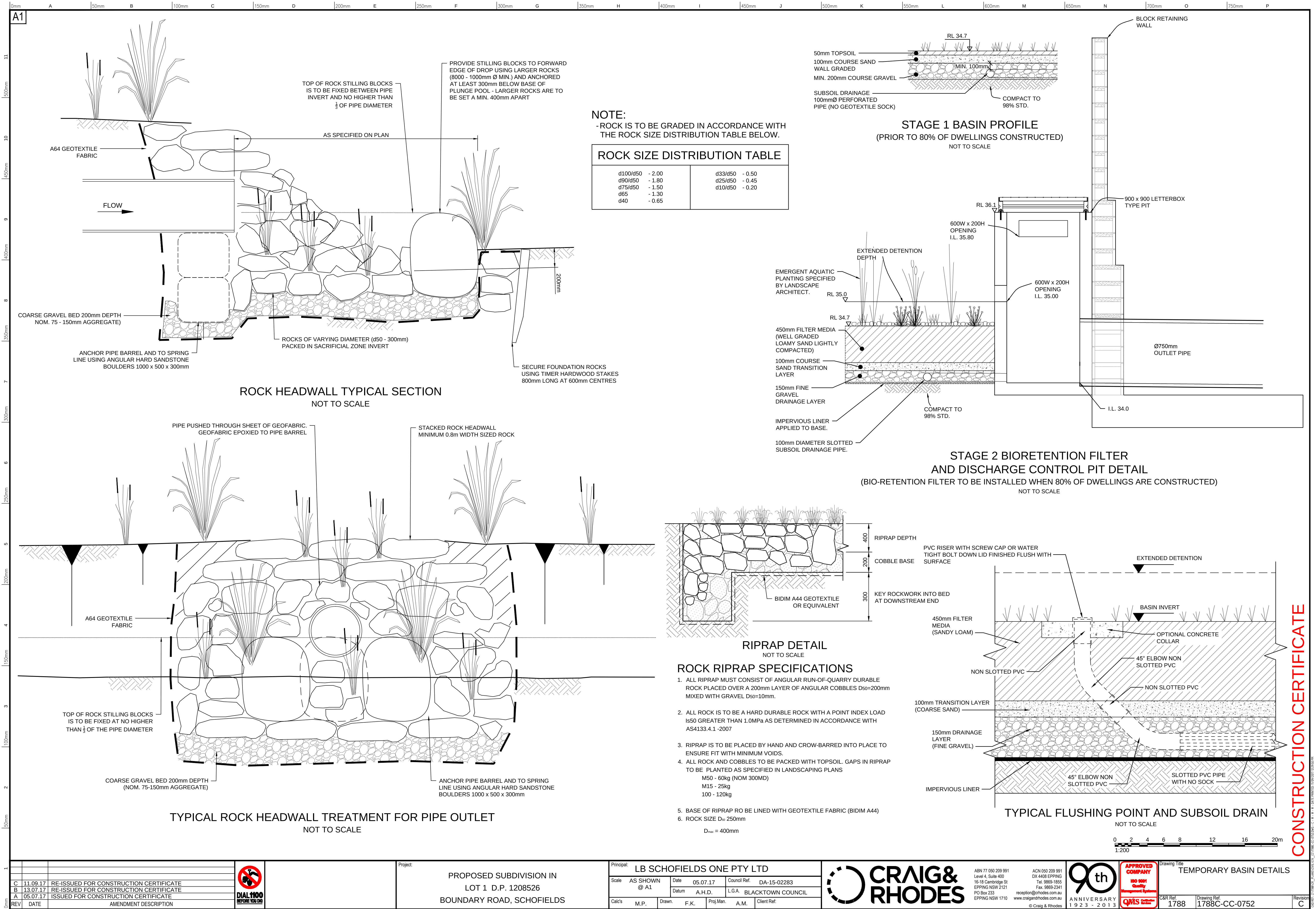
ABN 77 050 209 991
Level 4, Suite 400
15-18 Cambridge St
EPPING NSW 2121
PO Box 233
EPPING NSW 1710

ACN 050 209 991
DX 4408 EPPING
Tel: 9869-1855
Fax: 9869-2341
reception@craigandrhodes.com.au
www.craigandrhodes.com.au
© Craig & Rhodes

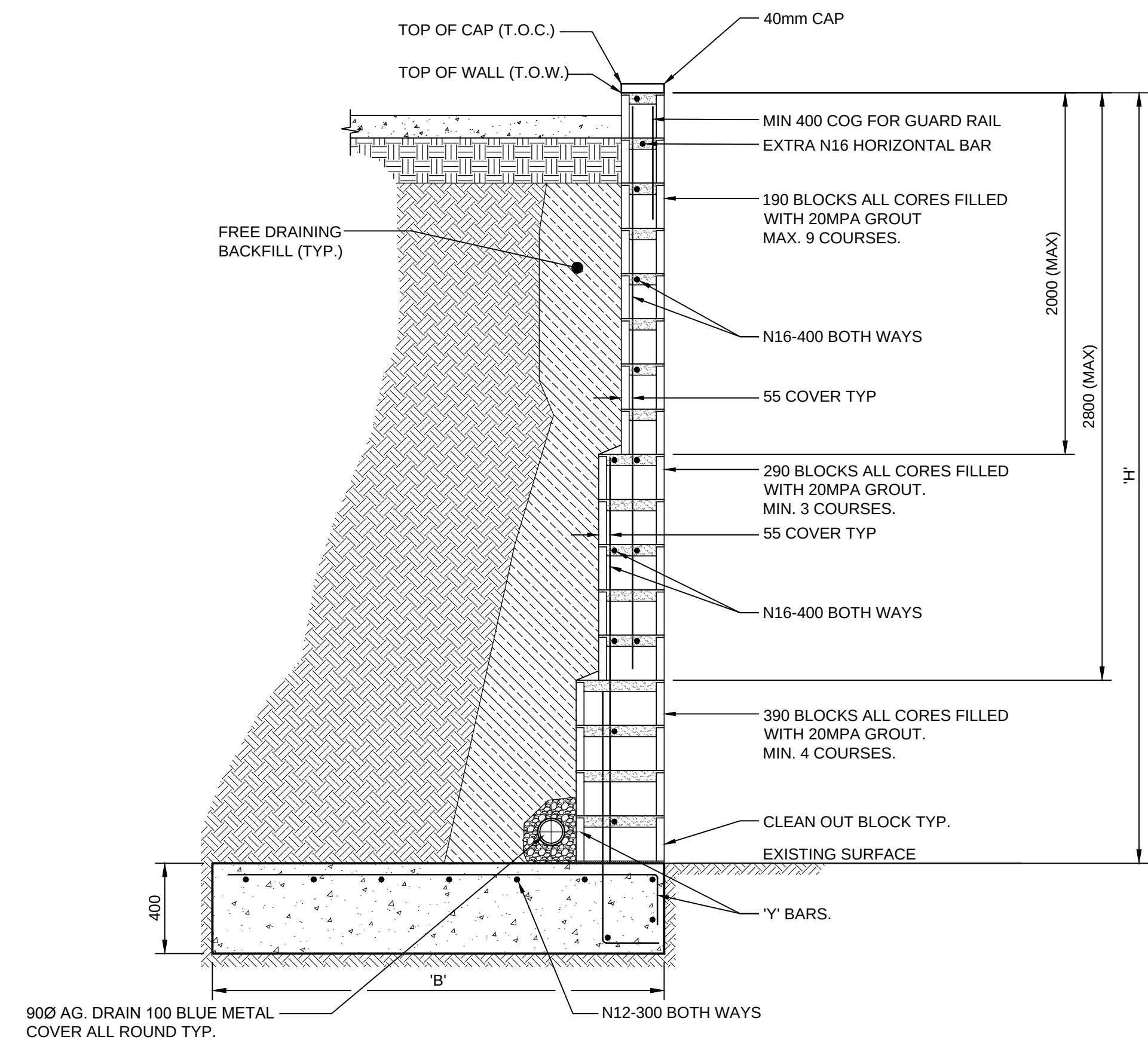
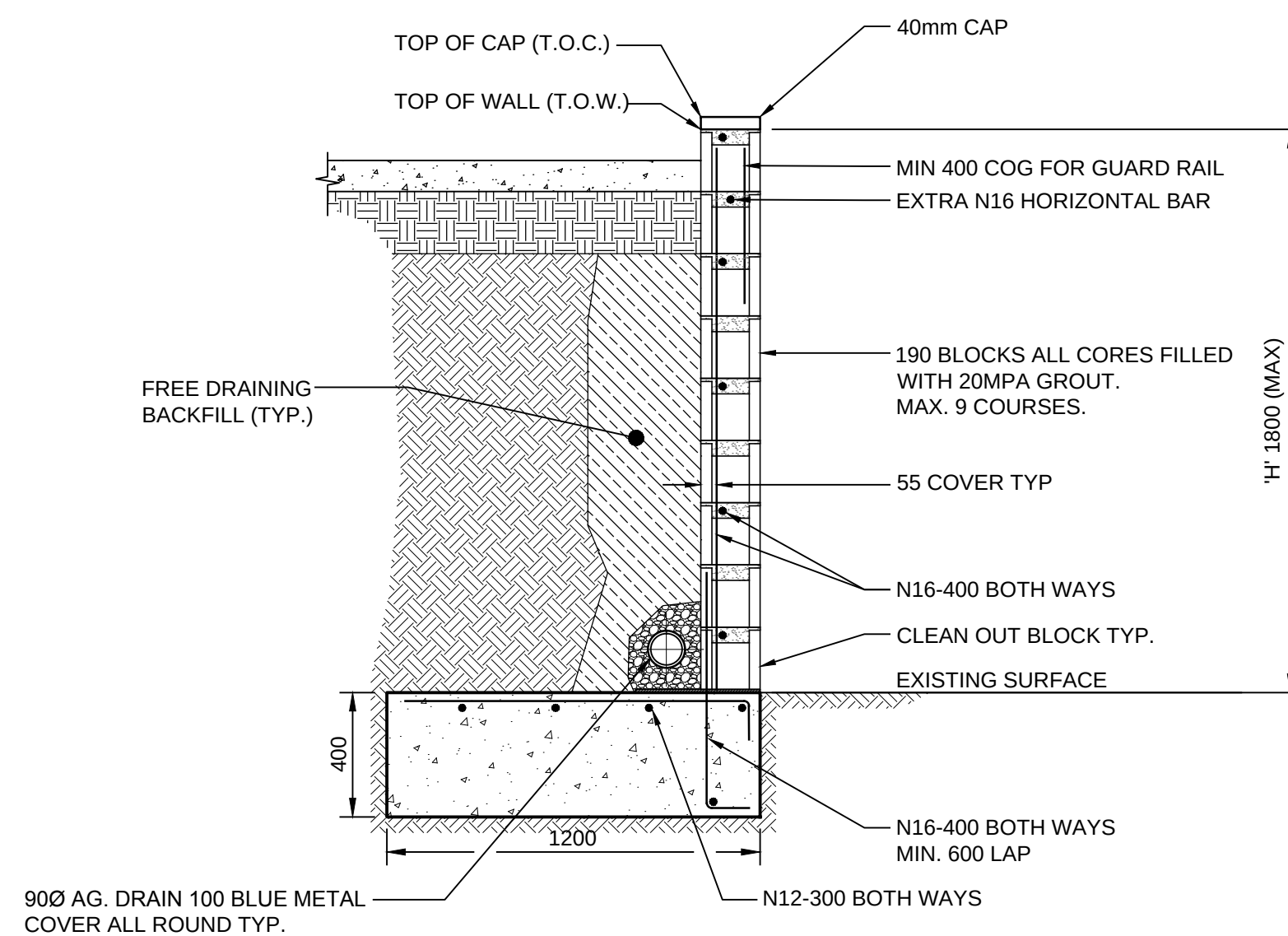
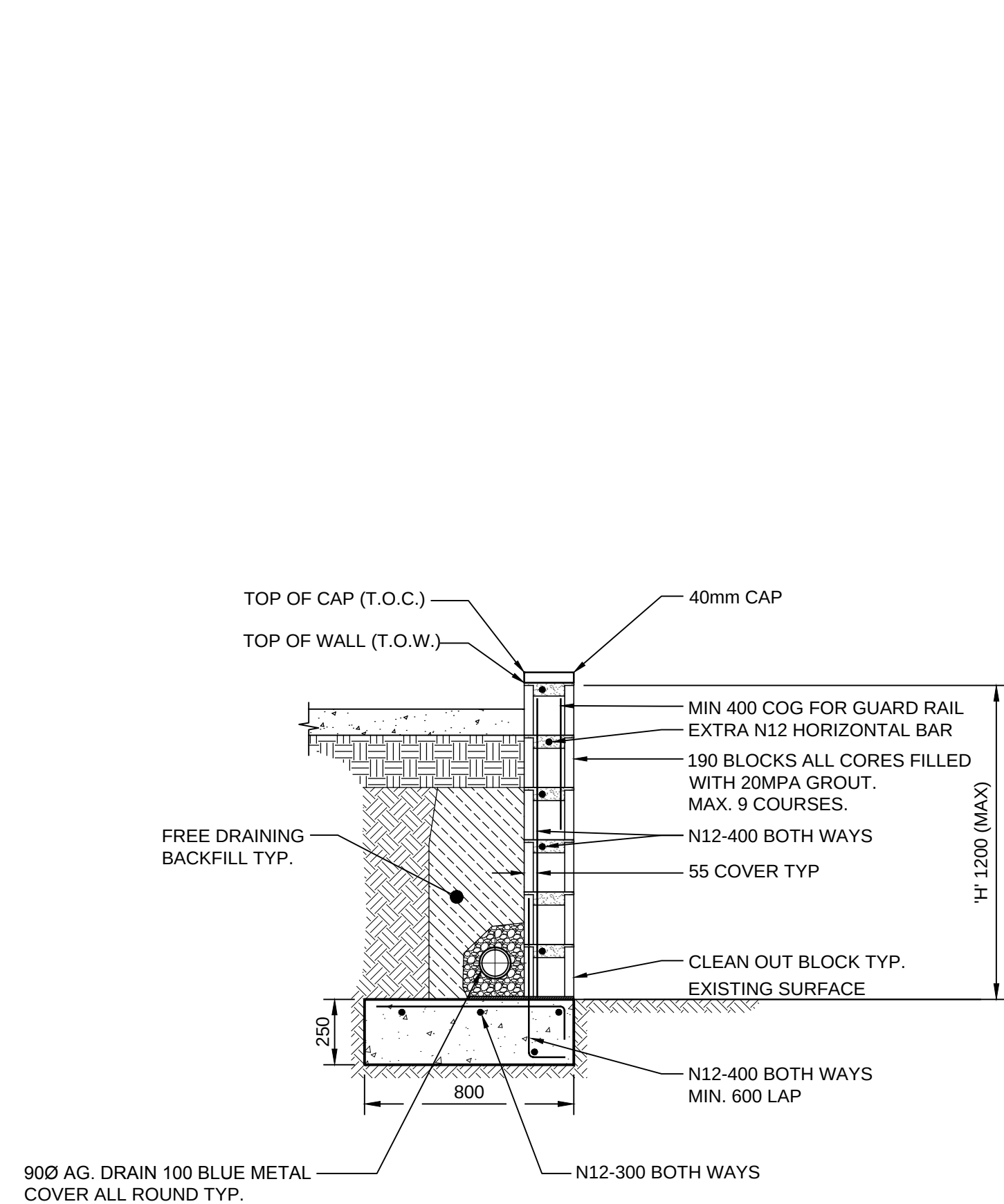


Drawing Title: TEMPORARY BASIN NOTES, PLAN, SECTIONS AND CALCULATIONS
C&R Ref: 1788
Drawing Ref: 1788C-CC-0751
Revision: C

CONSTRUCTION CERTIFICATE

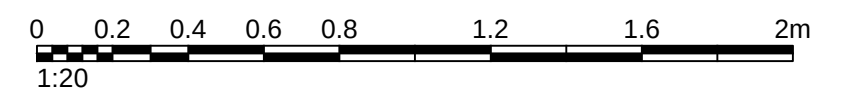
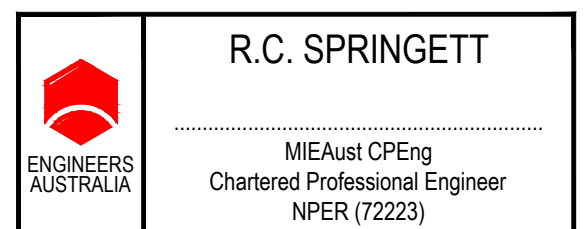


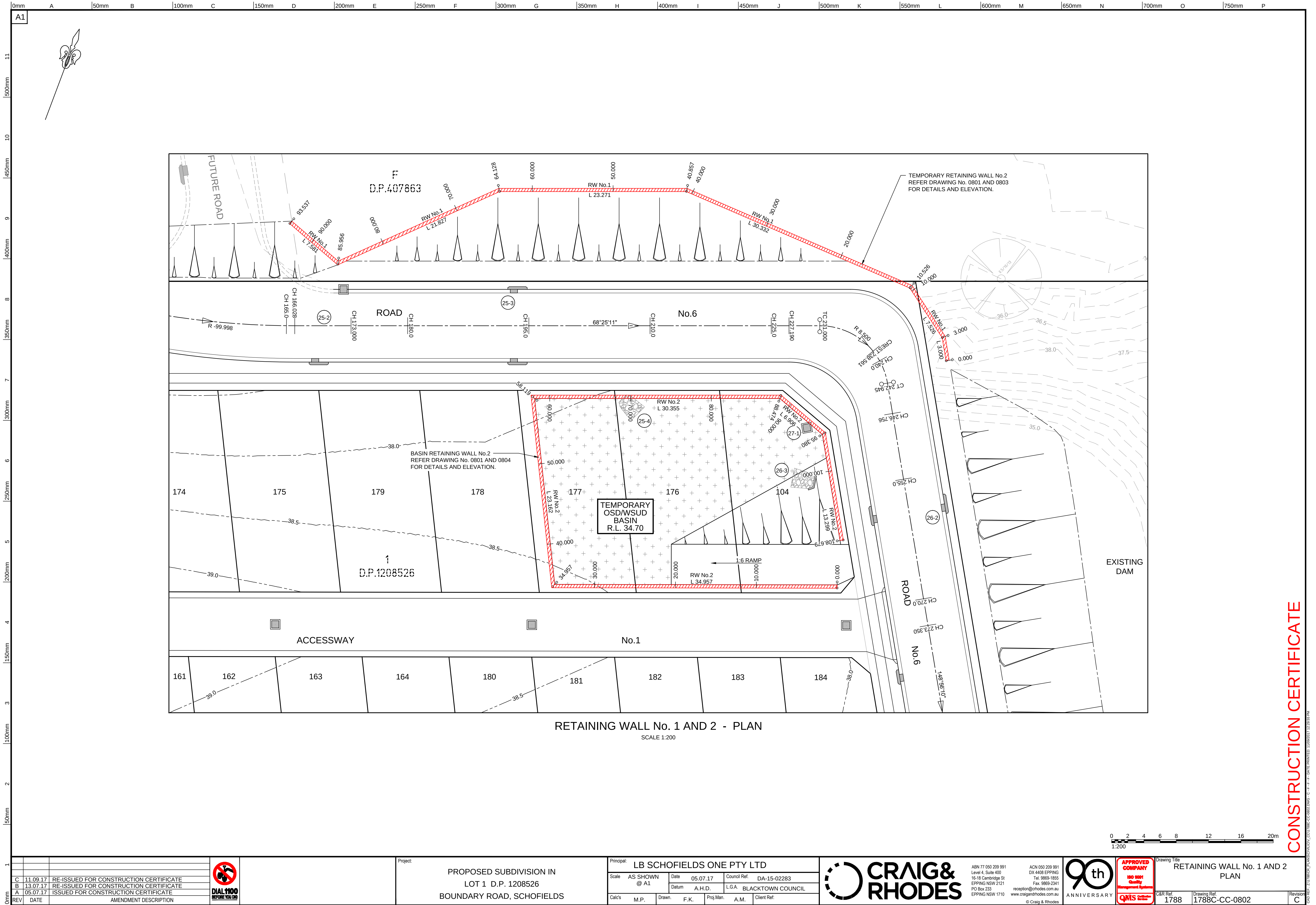
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			
33			
34			
35			
36			
37			
38			
39			
40			
41			
42			
43			
44			
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55			
56			
57			
58			
59			
60			
61			
62			
63			
64			
65			
66			
67			
68			
69			
70			
71			
72			
73			
74			
75			
76			
77			
78			
79			
80			
81			
82			
83			
84			
85			
86			
87			
88			
89			
90			
91			
92			
93			
94			
95			
96			
97			
98			
99			
100			
101			
102			
103			
104			
105			
106			
107			
108			
109			
110			
111			
112			
113			
114			
115			
116			
117			
118			
119			
120			
121			
122			
123			
124			
125			
126			
127			
128			
129			
130			
131			
132			
133			
134			
135			
136			
137			
138			
139			
140			
141			
142			
143			
144			
145			
146			
147			
148			
149			
150			
151			
152			
153			
154			
155			
156			
157			
158			
159			
160			
161			
162			
163			
164			
165			
166			
167			
168			
169			
170			
171			
172			
173			
174			
175			
176			
177			
178			
179			
180			
181			
182			
183			
184			
185			
186			
187			
188			
189			
190			
191			
192			
193			
194			
195			
196			
197			
198			
199			
200			
201			
202			
203			
204			
205			
206			
207			
208			
209			
210			
211			
212			
213			
214			
215			
216			
217			
218			
219			
220			
221			
222			
223			
224			
225			
226			
227			
228			
229			
230			
231			
232			
233			
234			
235			
236			
237			
238			
239			
240			
241			
242			
243			
244			
245			
246			
247			
248			
249			
250			
251			
252			
253			
254			
255			
256			
257			
258			
259			
260			
261			
262			
263			
264			
265			
266			
267			
268			
269			
270			
271			
272			
273			
274			
275			
276			
277			
278			
279			
280			
281			
282			
283			
284			
285			
286			
287			
288			
289			
290			
291			
292			
293			
294			
295			
296			
297			
298			
299			
300			
301			
302			
303			
304			
305			
306			
307			
308			
309			
310			
311			
312			
313			
314			
315			
316			
317			
318			
319			
320			
321			
322			
323			
324			
325			
326			
327			
328			
329			
330			
331			
332			
333			
334			
335			
336			
337			
338			
339			
340			
341			
342			
343			
344			
345			
346			
347			
348			
349			
350			
351			
352			
353			
354			
355			
356			
357			
358			
359			
360			
361			
362			
363			
364			
365			
366			
367			
368			
369			
370			
371			
372			
373			
374			
375			
376			
377			
378			
379			
380			
381			
382			
383			
384			
385			
386			
387			
388			
389			
390			
391			
392			
393			
394			
395			
396			
397			
398			
399			
400			
401			
402			
403			
404			
405			
406			
407			
408			
409			
410			
411			
412			
413			
414			
415			
416			
417			
418			
419			
420			
421			
422			
423			
424			
425			
426			
427			
428			
429			
430			
431			
432			
433			
434			
435			
436			
437			
438			
439			
440			
441			
442			
443			
444			
445			
446			
447			
448			
449			
450			
451			
452			
453			
454			
455			
456			
457			
458			
459			
460			
461			
462			
463			
464			
465			
466			
467			
468			
469			
470			
471			
472			
473			
474			
475			
476			
477			
478			
479			
480			
481			
482			
483			
484			
485			
486			
487			
488			
489			



BLOCK RETAINING WALL SCHEDULE		
'H'	'B'	'Y' BARS
1800-2200	1500	N16 - 400
2200-2600	1800	N16 - 400
2600-3000	2100	N20 - 400
3000-3400	2400	N20 - 400
3400-3800	2700	N20 - 200
3800-4400	3000	N24 - 200

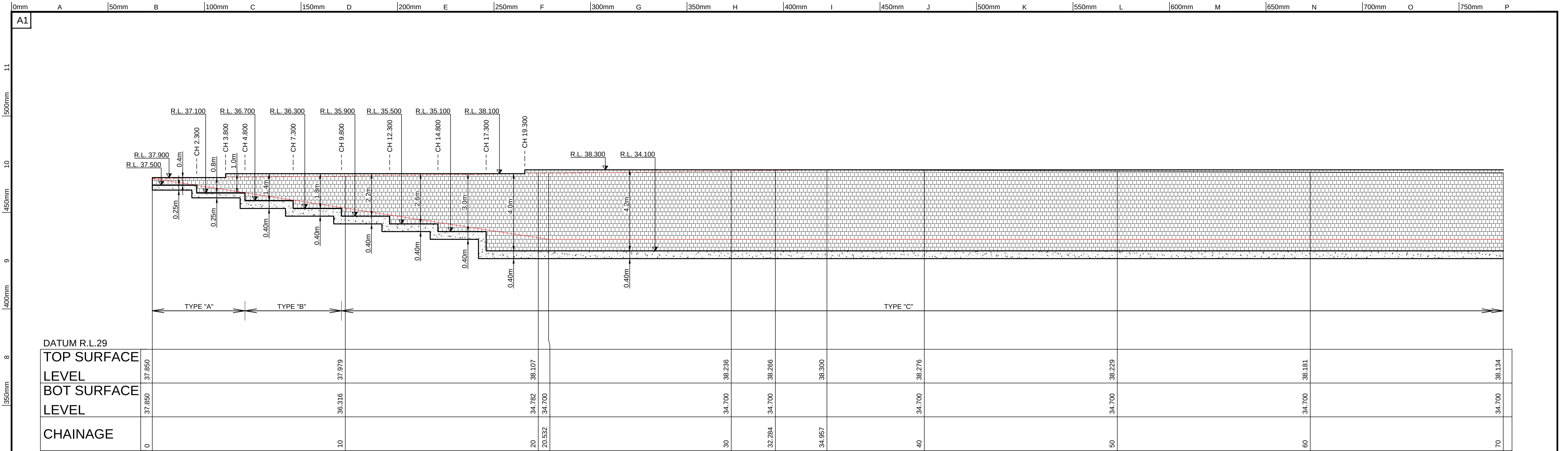
RETAINING WALL DESIGN BASED ON 5KPA SURCHARGE
INTERNAL FRICTION ANGLE 30°
REFER TO PAGE 18 CMAA CONCRETE RETAINING STRUCTURES - REINFORCED MASONRY

[illegible]

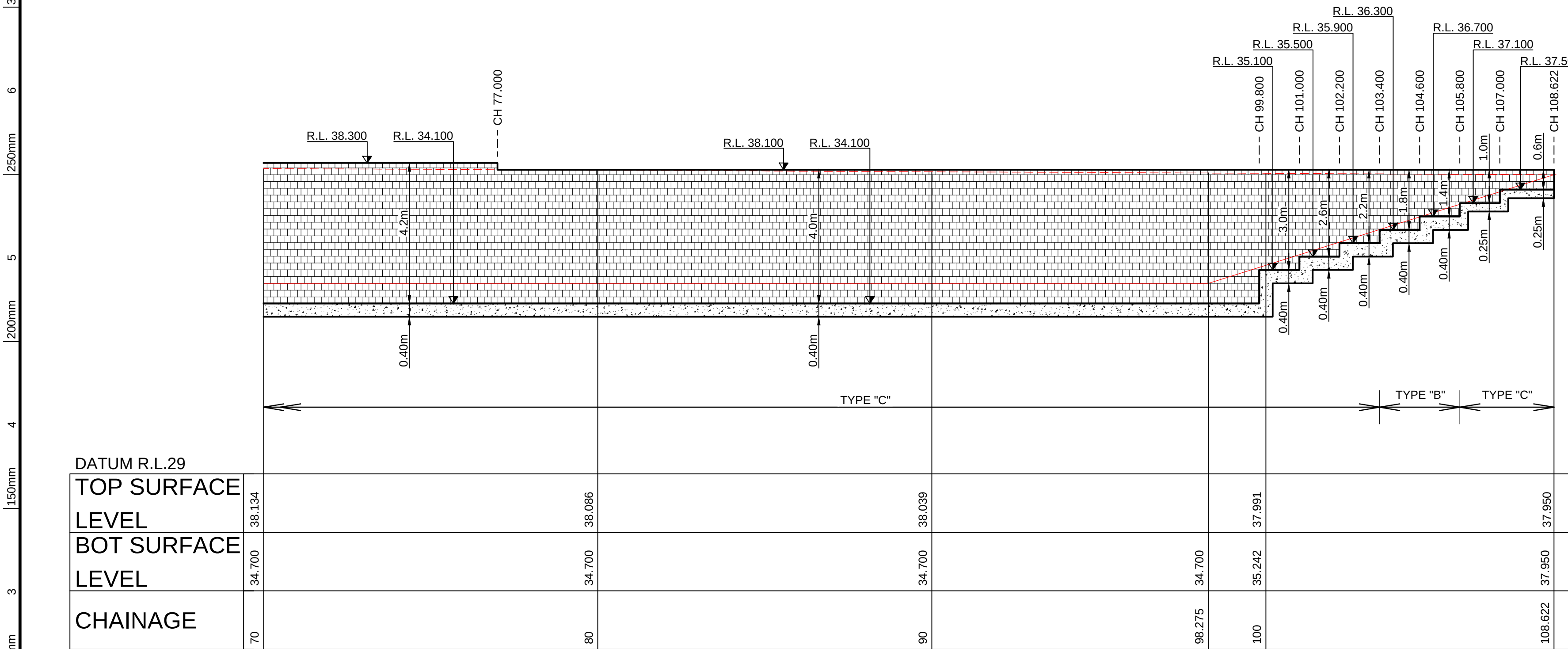


CONSTRUCTION CERTIFICATE

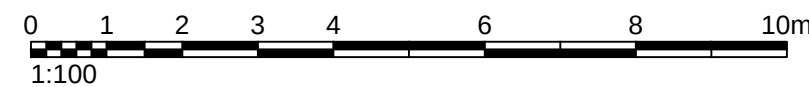
C:\P\1788\1788C-CC-0802\1788C-CC-0802.DWG - C:\P\1788\1788C-CC-0802\1788C-CC-0802.DWG - DATE PRINTED: 11/05/2017 12:25:59 PM

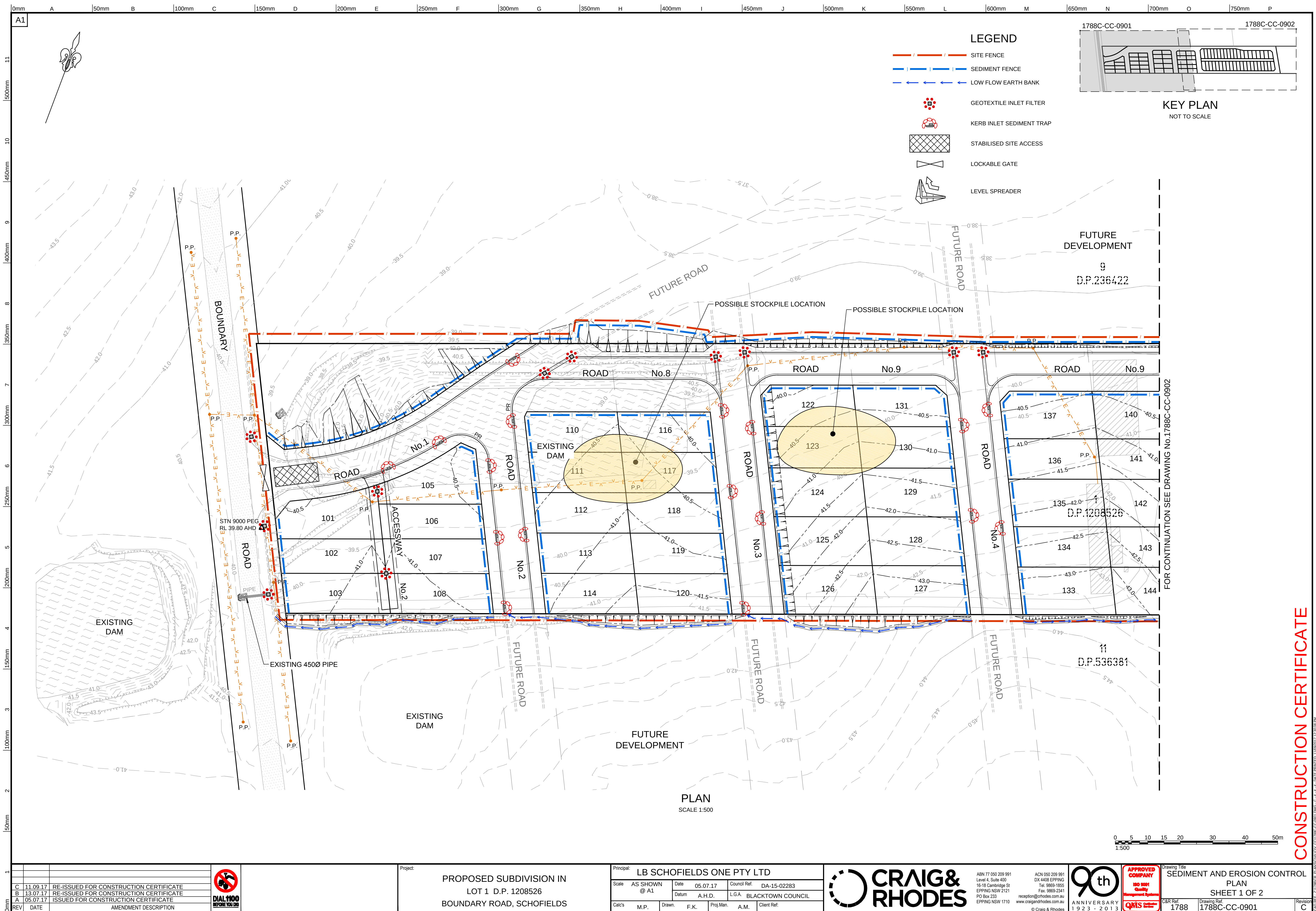


RETAINING WALL No. 2 - ELEVATION
HORIZONTAL SCALE - 1:100
VERTICAL SCALE - 1:100

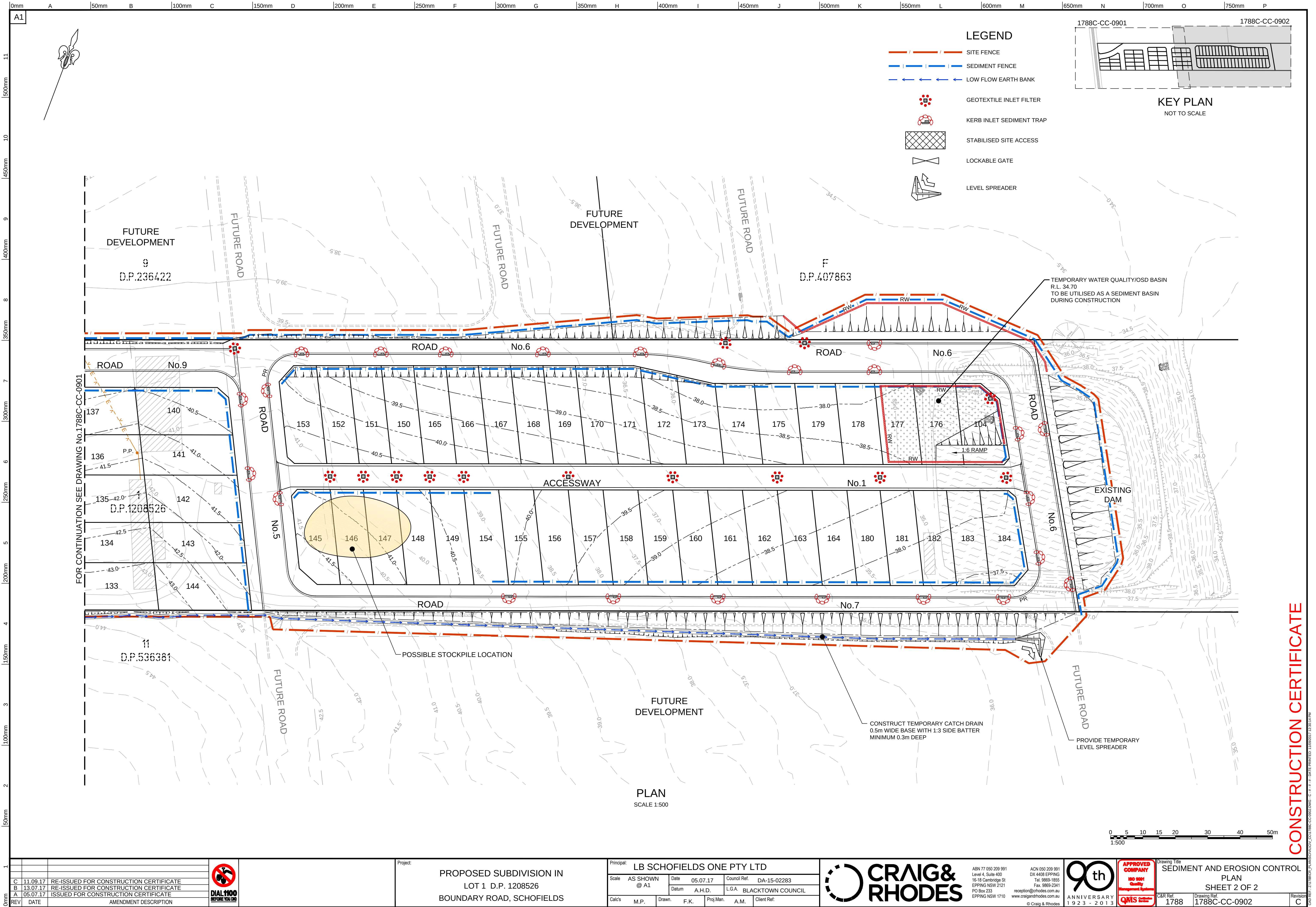


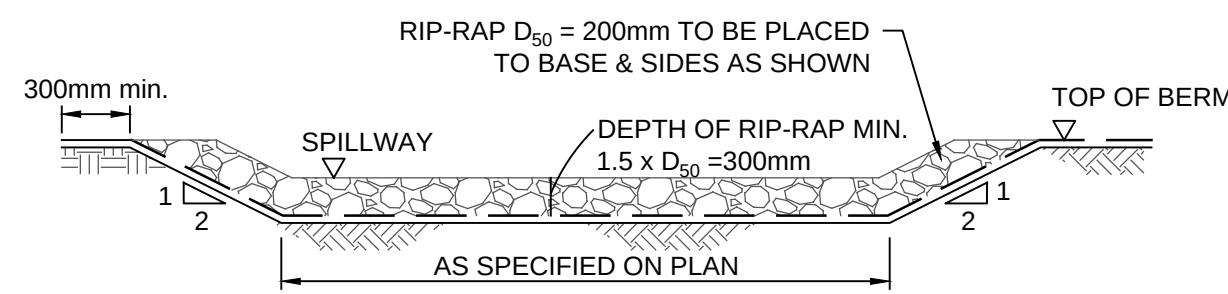
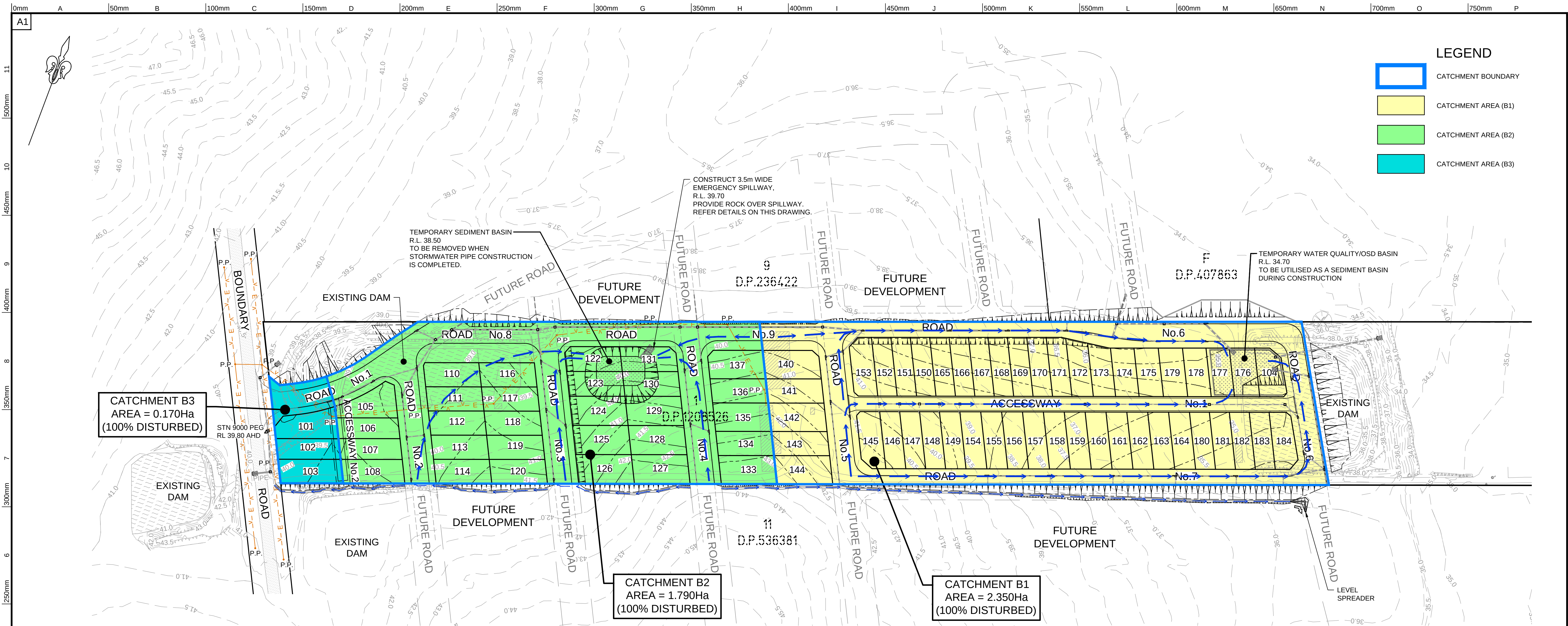
RETAINING WALL No. 2 - ELEVATION (CONTINUED)
HORIZONTAL SCALE - 1:100
VERTICAL SCALE - 1:100





CONSTRUCTION CERTIFICATE

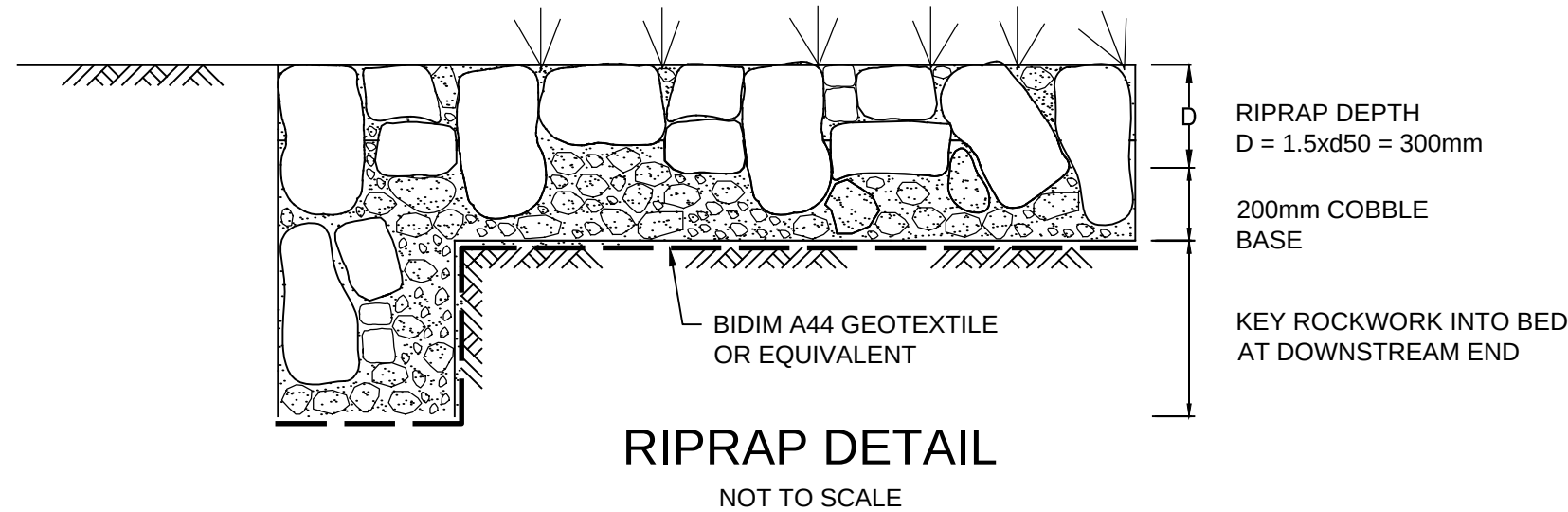




BASIN SPILLWAY DETAIL
NOT TO SCALE

ROCK RIPRAP SPECIFICATION NOTES:

- ALL RIPRAP MUST CONSIST OF ANGULAR RUN-OF-QUARRY DURABLE ROCK PLACED OVER A 200mm LAYER OF ANGULAR COBBLES d_{50} -200mm MIXED WITH GRAVEL d_{50} -10mm.
 - ALL ROCK IS TO BE A HARD DURABLE ROCK WITH A POINT INDEX LOAD IS50 GREATER THAN 1.0MPa AS DETERMINED IN ACCORDANCE WITH AS4133.4.1-2007.
 - RIPRAP IS TO BE PLACED BY HAND AND CROW-BARRED INTO PLACE TO ENSURE FIT WITH MINIMUM Voids.
 - ALL ROCK AND COBBLES TO BE PACKED WITH TOPSOIL. GAPS IN RIPRAP TO BE PLANTED AS SPECIFIED IN LANDSCAPING PLANS
- M50 - 60kg (NOM 300MD)
- M15 - 25kg
- 100 - 120kg
- ROCK SIZE d_{50} 200mm.
- $D = 300m$



Note: These "Detailed Calculation" spreadsheets relate only to high erosion hazard lands as identified in figure 4.6 or where the designer chooses to use the RUSLE to size sediment basins. The "Standard Calculation" spreadsheets should be used on low erosion hazard lands as identified by figure 4.6 and where the designer chooses not to run the RUSLE in calculations.

Site Data Sheet

Site Name: PROPOSED SUBDIVISION LOT 1 D.P.1208526 BOUNDARY ROAD, SCHOFIELDS
Site Location: BOUNDARY ROAD, SCHOFIELDS
L.G.A. Blacktown City Council
Description of Site: Bulk Earthworks/ Civil Works

Site area	Site				Remarks
	B1+B2	B2	B3		
Disturbed catchment area (ha)	4.13	1.79	0.17		
	4.13	1.79	0.17		

Soil analysis

% sand (fraction 0.02 to 2.00 mm)	22	22	22			Soil texture should be assessed through mechanical dispersion only. Dispersing agents (e.g. Calgon) should not be used
% silt (fraction 0.002 to 0.02 mm)	26	26	26			
% clay (fraction finer than 0.002 mm)	52	52	52			
Dispersion percentage	16.0	16.0	16.0			E.g. enter 10 for dispersion of 10%
% of whole soil dispersible	10.4	10.4	10.4			See Section 6.3.3(e)
Soil Texture Group	D	D	D			See Section 6.3.3(c), (d) and (e)

Rainfall data

Design rainfall depth (days)	5	5	5			See Sections 6.3.4 (d) and (e)
Design rainfall depth (percentile)	75	75	75			See Sections 6.3.4 (f) and (g)
x-day, y-percentile rainfall event	19	19	19			See Section 6.3.4 (h)
Return period (years)	10.1	10.1	10.1			See IFD chart for the site

RUSLE Factors

Rainfall erosivity (R-factor)	2250	2250	2250			Automatic calculation from above data
Soil erodibility (K-factor)	0.038	0.038	0.038			
Slope length (m)	80	80	80			
Slope gradient (%)	4	5	2			
Length/gradient (LS-factor)	0.91	1.19	0.41			RUSLE data can be obtained from Appendixes A, B and C
Erosion control practice (P-factor)	1.3	1.3	1.3			
Ground cover (C-factor)	1	1	1			

Calculations

Soil loss (t/ha/yr)	101	132	46			
Soil Loss Class	1	1	1			See Section 4.4.2(p)
Soil loss (m ³ /ha/yr)	78	102	35			
Soil loss (Total Site m ³ /yr)	321	162	6			
Sediment basin storage volume, m ³	55	31	1			See Sections 6.3.4(i) and 6.3.5 (e)

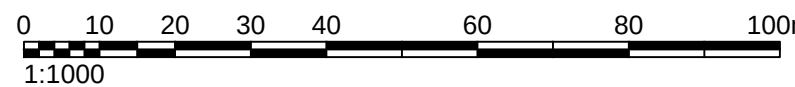
Basin Required	YES	YES	NO			See Sections 6.3.2 (d)
----------------	-----	-----	----	--	--	------------------------

Sediment Storage Zone Volume

The sediment storage zone contains the 2-month soil loss as calculated by the RUSLE (Section 6.3.4(i)(iii)).

Total Basin Volume - Type D or F

Site	C_r	$R_{c-day, y\%ile}$	Total catchment area (ha)	Settling zone volume (m ³)	Sediment storage volume (m ³)	Minimum Basin Volume for calculated 2 month soil loss (m ³)	Basin Capacity (m ³)
B1+B2	0.50	19	4.13	392	55	447	2270
B2	0.50	19	1.79	170	31	201	590



REV	DATE	AMENDMENT DESCRIPTION
C	11.09.17	RE-ISSUED FOR CONSTRUCTION CERTIFICATE
B	13.07.17	RE-ISSUED FOR CONSTRUCTION CERTIFICATE
A	05.07.17	ISSUED FOR CONSTRUCTION CERTIFICATE



Project: PROPOSED SUBDIVISION IN LOT 1 D.P. 1208526 BOUNDARY ROAD, SCHOFIELDS

Principal: LB SCHOFIELDS ONE PTY LTD

Scale	AS SHOWN @ A1	Date	05.07.17	Council Ref.	DA-15-02283		
		Datum	A.H.D.	L.G.A.	BLACKTOWN COUNCIL		
Calc's	M.P.	Drawn.	F.K.	Proj.Man.	A.M.	Client Ref:	



ABN 77 050 209 991
Level 4, Suite 400
16-18 Cambridge St
EPPING NSW 2121
PO Box 233
EPPING NSW 1710

ACN 050 209 991
DX 4408 EPPING
Tel. 9869-1855
Fax. 9869-2341
reception@craigandrhodes.com.au
www.craigandrhodes.com.au
© Craig & Rhodes



Drawing Title: SEDIMENT BASIN CATCHMENT PLAN AND CALCULATIONS
C&R Ref: 1788
Drawing Ref: 1788C-CC-0904
Revision: C