

SISTEMA HIDROVIAL 290. Tramo Ruta 13 - Ruta 77					
Desde Progresiva 30+200 a Progresiva 67+685					
Variante de traza desde Progresiva 50+200 a Progresiva 56+000					
EXCAVACIÓN DE CANAL					
DATOS DE PROYECTO					
Progresivas (m)	Terreno Natural (m)	Solera proyecto (m)	Corte (m)	Base fondo (m)	Boca (m)
30.200	66.05	63.89	2.16	6.50	10.82
30.250	66.05	63.88	2.17	6.50	10.84
30.300	66.12	63.87	2.25	6.50	11.00
30.400	66.02	63.85	2.17	6.50	10.83
30.500	66.01	63.84	2.17	6.50	10.85
30.600	65.99	63.82	2.17	6.50	10.84
30.700	66.00	63.80	2.20	6.50	10.89
30.800	65.85	63.79	2.06	6.50	10.63
30.900	65.00	63.77	2.23	6.50	10.96
31.000	65.90	63.75	2.15	6.50	10.80
31.100	65.99	63.73	2.26	6.50	11.01
31.200	65.90	63.72	2.18	6.50	10.86
31.300	65.89	63.70	2.19	6.50	10.88
31.400	65.77	63.68	2.09	6.50	10.67
31.500	65.83	63.67	2.16	6.50	10.83
31.600	65.84	63.65	2.19	6.50	10.88
31.700	65.71	63.63	2.08	6.50	10.65
31.800	65.80	63.62	2.18	6.50	10.87
31.900	65.69	63.60	2.09	6.50	10.68
32.000	65.71	63.58	2.13	6.50	10.76
32.100	65.67	63.56	2.11	6.50	10.71
32.200	65.59	63.55	2.04	6.50	10.58
32.300	65.63	63.53	2.10	6.50	10.70
32.400	65.64	63.51	2.13	6.50	10.75
32.500	65.67	63.50	2.17	6.50	10.85
32.600	65.61	63.48	2.13	6.50	10.76
32.700	65.57	63.46	2.11	6.50	10.71
32.800	65.47	63.45	2.02	6.50	10.57
32.900	65.45	63.43	2.02	6.50	10.54
33.000	65.45	63.41	2.04	6.50	10.58
33.100	65.62	63.39	2.23	6.50	10.95
33.200	65.54	63.38	2.16	6.50	10.82
33.300	65.50	63.36	2.14	6.50	10.78
33.400	65.41	63.34	2.07	6.50	10.63
33.500	65.43	63.33	2.10	6.50	10.71
33.600	65.35	63.31	2.04	6.50	10.58
33.700	65.42	63.29	2.13	6.50	10.75
33.800	65.40	63.28	2.12	6.50	10.75
33.900	65.38	63.26	2.12	6.50	10.74
34.000	65.37	63.24	2.13	6.50	10.76
34.100	65.30	63.22	2.08	6.50	10.65
34.200	65.36	63.21	2.15	6.50	10.80
34.300	65.37	63.19	2.18	6.50	10.86
34.400	65.39	63.17	2.22	6.50	10.93
34.500	65.34	63.16	2.18	6.50	10.87
34.600	65.25	63.14	2.11	6.50	10.72
34.700	65.32	63.12	2.20	6.50	10.89
34.800	65.30	63.11	2.19	6.50	10.89
34.900	65.35	63.09	2.26	6.50	11.02
35.000	65.11	63.07	2.04	6.50	10.58
35.100	65.16	63.05	2.11	6.50	10.71
35.200	65.21	63.04	2.17	6.50	10.84
35.300	65.23	63.02	2.21	6.50	10.92
35.400	65.19	63.00	2.19	6.50	10.87
35.500	65.15	62.99	2.16	6.50	10.83
35.600	65.10	62.97	2.13	6.50	10.76
35.700	65.10	62.95	2.15	6.50	10.79
35.800	65.12	62.94	2.18	6.50	10.87
35.900	65.18	62.92	2.26	6.50	11.02
36.000	65.10	62.90	2.20	6.50	10.90
36.100	65.02	62.88	2.14	6.50	10.77
36.200	65.03	62.87	2.16	6.50	10.82
36.300	64.53	62.85	1.68	6.50	9.86
36.400	64.93	62.83	2.10	6.50	10.69
36.500	65.06	62.82	2.24	6.50	10.99
36.600	65.00	62.80	2.20	6.50	10.90
36.700	64.97	62.78	2.19	6.50	10.87
36.800	65.01	62.77	2.24	6.50	10.99
36.900	65.03	62.75	2.28	6.50	11.06
37.000	64.95	62.73	2.22	6.50	10.94
37.100	64.92	62.71	2.21	6.50	10.91
37.200	64.87	62.70	2.17	6.50	10.84
37.300	64.84	62.68	2.16	6.50	10.82
37.400	64.87	62.66	2.21	6.50	10.91
37.500	64.89	62.65	2.24	6.50	10.99
37.600	64.83	62.63	2.20	6.50	10.90
37.700	64.82	62.61	2.21	6.50	10.91
37.800	64.78	62.60	2.18	6.50	10.87
37.900	64.82	62.58	2.24	6.50	10.99
38.000	64.75	62.56	2.19	6.50	10.88
38.100	65.00	62.54	2.46	6.50	11.41
38.200	64.80	62.53	2.07	6.50	10.64
38.300	64.71	62.51	2.20	6.50	10.90
38.400	64.78	62.49	2.29	6.50	11.07
38.500	64.71	62.48	2.23	6.50	10.97
38.600	64.64	62.46	2.18	6.50	10.86
38.700	64.71	62.44	2.27	6.50	11.03
38.800	64.62	62.43	2.19	6.50	10.89
38.900	64.61	62.41	2.20	6.50	10.90
39.000	64.50	62.39	2.11	6.50	10.75
39.100	64.56	62.37	2.19	6.50	10.87
39.200	64.50	62.36	2.14	6.50	10.78
39.300	64.43	62.34	2.09	6.50	10.68
39.400	64.46	62.33	2.14	6.50	10.77
39.500	64.42	62.31	2.11	6.50	10.73
39.600	64.42	62.29	2.13	6.50	10.76
39.700	64.38	62.27	2.11	6.50	10.71
39.800	64.36	62.26	2.10	6.50	10.71
39.900	64.41	62.24	2.17	6.50	10.84

Planilla 1-a-1

SISTEMA HIDROVIAL 290. Tramo Ruta 13 - Ruta 77			
Desde Progresiva 30+200 a Progresiva 67+685			
Variante de traza desde Progresiva 50+200 a Progresiva 56+000			
EXCAVACIÓN DE CANAL			
COMPUTOS METRICOS			
Progresivas (m)	Area (") (m2)	Volumen (") (m3)	Volumen Acumulado (") (m3)
30.200	18.73		
30.250	18.82	938.88	938.88
30.300	19.68	982.81	1921.69
30.400	18.77	1922.78	3844.27
30.500	18.85	1881.27	5725.54
30.600	18.82	1893.44	7619.98
30.700	19.11	1896.49	9516.47
30.800	17.68	1839.59	11356.06
30.900	19.48	1855.17	13211.23
31.000	18.58	1903.16	15114.40
31.100	19.75	1916.35	17030.75
31.200	18.95	1934.76	18965.51
31.300	19.02	1898.64	20864.15
31.400	17.91	1846.95	22711.10
31.500	18.74	1832.84	24543.95
31.600	19.04	1888.88	26432.83
31.700	17.82	1842.70	28275.53
31.800	18.97	1839.44	30114.97
31.900	17.97	1846.90	31961.87
32.000	18.36	1816.63	33778.50
32.100	18.12	1824.12	35602.62
32.200	17.45	1778.23	37380.85
32.300	18.05	1775.02	39155.87
32.400	18.34	1819.83	40975.70
32.500	18.85	1859.69	42835.39
32.600	18.39	1861.84	44697.23
32.700	18.14	1826.26	46493.49
32.800	17.26	1769.79	48263.28
32.900	17.23	1724.09	49987.37
33.000	17.40	1731.48	51718.85
33.100	19.42	1841.10	53560.95
33.200	18.73	1807.45	55368.40
33.300	18.48	1860.73	57229.13
33.400	17.70	1809.23	59138.36
33.500	18.10	1789.89	60928.25
33.600	17.43	1775.10	62703.35
33.700	18.35	1788.98	64492.33
33.800	18.32	1833.77	66326.10
33.900	18.29	1830.55	68156.65
34.000	18.36	1832.70	69989.35
34.100	17.80	1808.10	71797.44
34.200	18.62	1821.03	73618.47
34.300	18.82	1876.96	75495.43
34.400	19.32	1911.74	77407.17
34.500	18.96	1913.91	79321.08
34.600	18.17	1856.53	81177.60
34.700	19.11	1884.14	83061.75
34.800	19.08	1909.52	84971.27
34.900	19.81	1944.59	86915.86
35.000	17.40	1860.88	88776.74
35.100	18.12	1776.12	90552.86
35.200	18.84	1847.88	92384.73
35.300	19.24	1904.11	94288.85
35.400	18.99	1911.72	96190.57
35.500	18.74	1886.71	98087.27
35.600	18.39	1856.42	99943.69
35.700	18.57	1847.77	101791.47
35.800	18.97	1876.97	103668.44
35.900	19.81	1939.15	105607.59
36.000	19.12	1946.77	107554.36
36.100	18.44	1878.12	109432.48
36.200	18.73	1858.57	111291.06
36.300	13.74	1623.39	112914.45
36.400	18.02	1587.89	114502.34
36.500	19.61	1981.81	116484.16
36.600	19.14	1937.96	118422.11
36.700	19.00	1907.35	120329.46
36.800	19.63	1931.43	122260.89
36.900	20.03	1982.98	124243.87
37.000	19.34	1968.73	126182.60
37.100	19.20	1926.98	128109.58
37.200	18.84	1901.93	129931.52
37.300	18.70	1876.94	131808.46
37.400	19.21	1895.44	133713.90
37.500	19.61	1941.23	135655.12
37.600	19.14	1937.96	137593.08
37.700	19.22	1918.25	139511.33
37.800	18.97	1909.54	141410.86
37.900	19.59	1928.15	143339.01
38.000	19.01	1930.32	145277.34
38.100	21.99	2050.13	147327.47
38.200	17.77	1887.72	149215.19
38.300	19.13	1844.94	151060.12
38.400	20.09	1961.13	152921.25
38.500	19.51	1879.71	154790.96
38.600	18.93	1921.59	156712.55
38.700	19.88	1940.29	158652.83
38.800	19.08	1947.90	160600.74
38.900	19.16	1911.70	162512.44
39.000	18.15	1862.79	164375.23
39.100	18.52	1856.54	166231.77
39.200	18.52	1874.82	168106.59
39.300	17.95	1823.10	170029.69
39.400	18.45	1819.87	171849.56
39.500	18.20	1832.71	173682.27
39.600	18.39	1829.48	175521.75
39.700	18.14	1826.26	177348.01
39.800	18.11	1812.31	179160.32
39.900	18.83	1846.80	181007.12

Planilla 1-b-1

SISTEMA HIDROVIAL 290. Tramo Ruta 13 - Ruta 77			
COMPUTO DEL VOLUMEN YA EXCAVADO			
Según perfiles transversales relevados en Septiembre de 2001			
Progresiva	Area	Volumen	Vol. Acum.
30.200	9.25		
34.000	9.25	351.50	351.50
38.000	8.25	437.50	789.00
40.000	9.50	500.00	1289.00
50.000	11.25	622.50	1852.50
54.200+8.00	9.80	2105.00	16793.00
2.000	9.80	1070.00	26273.00
3.000	9.80	1070.00	27597.00
1.000	11.40	1150.00	22747.00
51.000	11.40	1254.00	24010.00
55.000	10.50	1065.00	25075.00
66.000	9.50	700.00	32065.00
67.700	9.50	351.50	35611.00
TOTAL VOLUMEN YA EXCAVADO (m3):			35611.00

SISTEMA HIDROVIAL 290. Tramo Ruta 13 - Ruta 77
Desde Progresiva 30+200 a Progresiva 67+685
Variante de traza desde Progresiva 50+200 a Progresiva 56+000
EXCAVACIÓN DE CANAL
DATOS DE PROYECTO

Planilla 1-a-1

Progresivas (m)	Terreno Natural (m)	Solera proyecto (m)	Corte (m)	Base fondo (m)	Boca (m)
40.000	64.29	62.22	2.07	6.50	10.64
40.100	64.26	62.20	2.06	6.50	10.61
40.200	64.26	62.19	2.07	6.50	10.64
40.300	64.34	62.17	2.17	6.50	10.84
40.400	64.22	62.15	2.07	6.50	10.63
40.500	64.22	62.14	2.08	6.50	10.67
40.600	64.23	62.12	2.11	6.50	10.72
40.700	64.17	62.10	2.07	6.50	10.63
40.800	64.18	62.09	2.09	6.50	10.69
40.900	64.21	62.07	2.14	6.50	10.78
41.000	64.14	62.05	2.09	6.50	10.68
41.100	64.14	62.03	2.11	6.50	10.71
41.200	64.15	62.02	2.13	6.50	10.76
41.300	64.12	62.00	2.12	6.50	10.74
41.400	64.10	61.98	2.12	6.50	10.73
41.500	64.09	61.97	2.12	6.50	10.75
41.600	64.04	61.95	2.09	6.50	10.68
41.700	64.03	61.93	2.10	6.50	10.69
41.800	64.04	61.92	2.12	6.50	10.75
41.900	64.00	61.90	2.10	6.50	10.70
42.000	64.00	61.88	2.12	6.50	10.74
42.100	63.93	61.86	2.07	6.50	10.63
42.200	63.89	61.85	2.04	6.50	10.58
42.300	63.93	61.83	2.10	6.50	10.70
42.400	63.88	61.81	2.07	6.50	10.63
42.500	63.86	61.80	2.06	6.50	10.63
42.600	63.88	61.78	2.10	6.50	10.70
42.700	63.87	61.76	2.11	6.50	10.71
42.800	63.88	61.75	2.13	6.50	10.77
42.900	63.80	61.73	2.07	6.50	10.64
43.000	63.80	61.71	2.09	6.50	10.68
43.100	63.80	61.68	2.11	6.50	10.71
43.200	63.72	61.68	2.04	6.50	10.58
43.300	63.64	61.66	1.98	6.50	10.46
43.400	63.64	61.64	2.00	6.50	10.49
43.500	63.74	61.63	2.11	6.50	10.73
43.600	63.66	61.61	2.05	6.50	10.60
43.700	63.68	61.59	2.09	6.50	10.67
43.800	63.68	61.58	2.10	6.50	10.71
43.900	63.63	61.56	2.07	6.50	10.64
44.000	63.65	61.54	2.11	6.50	10.72
44.100	63.62	61.53	2.09	8.00	12.18
44.200	63.59	61.52	2.07	8.00	12.14
44.300	63.58	61.51	2.07	8.00	12.14
44.400	63.53	61.50	2.03	8.00	12.06
44.500	63.54	61.49	2.05	8.00	12.11
44.600	63.58	61.48	2.10	8.00	12.21
44.700	63.58	61.46	2.12	8.00	12.23
44.800	63.54	61.45	2.09	8.00	12.17
44.900	63.53	61.44	2.09	8.00	12.17
45.000	63.50	61.43	2.07	8.00	12.14
45.100	63.50	61.42	2.08	8.00	12.16
45.200	63.44	61.41	2.03	8.00	12.06
45.300	63.40	61.40	2.00	9.30	13.30
45.400	63.44	61.39	2.05	9.30	13.40
45.500	63.45	61.38	2.07	9.30	13.45
45.600	63.39	61.37	2.02	9.30	13.35
45.700	63.42	61.35	2.07	9.30	13.43
45.800	63.41	61.34	2.07	9.30	13.43
45.900	63.38	61.33	2.05	9.30	13.39
46.000	63.37	61.32	2.05	9.30	13.40
46.100	63.37	61.31	2.06	9.30	13.42
46.200	63.35	61.30	2.05	9.30	13.40
46.300	63.22	61.29	1.93	9.30	13.16
46.400	62.99	61.28	1.71	9.30	12.72
46.500	63.27	61.27	2.00	9.30	13.31
46.600	63.31	61.26	2.05	9.30	13.41
46.700	63.29	61.24	2.05	9.30	13.39
46.800	63.23	61.23	2.00	9.30	13.29
46.900	63.21	61.22	1.99	9.30	13.27
47.000	63.25	61.21	2.04	9.30	13.38
47.100	63.23	61.20	2.03	9.30	13.36
47.200	63.18	61.19	1.99	9.30	13.28
47.300	63.15	61.18	1.97	9.30	13.24
47.400	63.15	61.17	1.98	9.30	13.26
47.500	63.12	61.16	1.96	9.30	13.23
47.600	63.07	61.15	1.92	9.30	13.15
47.700	63.09	61.13	1.96	9.30	13.21
47.800	63.12	61.12	2.00	9.30	13.29
47.900	63.10	61.11	1.99	9.30	13.27
48.000	63.09	61.10	1.99	9.30	13.28
48.100	63.07	61.09	1.98	9.30	13.26
48.200	63.07	61.08	1.99	9.30	13.28
48.300	63.08	61.07	2.01	9.30	13.32
48.400	63.09	61.06	2.03	9.30	13.36
48.500	63.07	61.05	2.02	9.30	13.35
48.600	63.06	61.04	2.02	9.30	13.35
48.700	63.04	61.02	2.02	9.30	13.33
48.800	63.06	61.01	2.05	9.30	13.39
48.900	62.95	61.00	1.95	9.30	13.30
49.000	62.99	60.99	2.00	9.30	13.30
49.100	63.00	60.98	2.02	9.30	13.34
49.200	62.97	60.97	2.00	9.30	13.30
49.300	62.94	60.96	1.98	9.30	13.26
49.400	62.88	60.95	1.93	9.30	13.16
49.500	62.92	60.94	1.98	9.30	13.27
49.600	62.99	60.93	2.06	9.30	13.43
49.700	62.95	60.91	2.04	9.30	13.37
49.800	62.96	60.90	2.06	9.30	13.41

SISTEMA HIDROVIAL 290. Tramo Ruta 13 - Ruta 77
Desde Progresiva 30+200 a Progresiva 67+685
Variante de traza desde Progresiva 50+200 a Progresiva 56+000
EXCAVACIÓN DE CANAL
COMPUTOS METRICOS

Planilla 1-b-1

SISTEMA HIDROVIAL 290. Tramo Ruta 13 - Ruta 77

COMPUTO DEL VOLUMEN YA EXCAVADO

Según perfiles transversales relevados en Septiembre de 2001

Progresiva	Area	Volumen	Vol. Acum.
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Progresivas (m)	Area (*) (m2)	Volumen (*) (m3)	Volumen Acumulado (*) (m3)
40.000	17.72	1827.59	183037.17
40.100	17.98	1785.37	184822.54
40.200	17.77	1787.80	186610.35
40.300	18.81	1828.63	188398.68
40.400	17.70	1825.44	190224.12
40.500	17.88	1778.20	192003.32
40.600	18.17	1802.69	193806.02
40.700	17.71	1794.17	195600.19
40.800	18.00	1785.61	197385.80
40.900	18.50	1825.23	199211.03
41.000	17.94	1822.03	201033.06
41.100	18.12	1802.68	202835.74
41.200	18.41	1826.27	204662.01
41.300	18.27	1833.78	206495.79
41.400	18.24	1825.18	208320.96
41.500	18.31	1827.33	210148.29
41.600	17.86	1813.41	211961.69
41.700	18.03	1799.47	213761.16
41.800	18.32	1817.68	215578.86
41.900	18.07	1819.82	217398.67
42.000	18.26	1816.60	219215.27
42.100	17.69	1797.40	221012.67
42.200	17.45	1756.89	222789.57
42.300	18.05	1775.02	224564.59
42.400	17.70	1787.75	226352.34
42.500	17.67	1768.56	228100.89
42.600	18.06	1786.69	229887.59
42.700	18.14	1810.17	231697.75
42.800	18.43	1828.42	233526.17
42.900	17.75	1809.19	235335.36
43.000	17.94	1784.53	237119.90
43.100	18.12	1802.68	238922.58
43.200	17.45	1778.23	240700.81
43.300	16.78	1711.55	242412.36
43.400	16.96	1687.31	244099.67
43.500	18.20	1785.28	245884.95
43.600	17.53	1786.76	247644.70
43.700	17.93	1772.85	249417.55
43.800	18.11	1801.61	251219.16
43.900	17.75	1793.09	253012.25
44.000	18.15	1795.23	254807.48
44.100	21.08	1981.53	256789.01
44.200	20.85	2086.52	258875.53
44.300	20.86	2085.57	260951.10
44.400	20.39	2062.58	263013.67
44.500	20.64	2051.67	265065.34
44.600	21.26	2085.36	267150.70
44.700	21.40	2133.08	269293.78
44.800	21.04	2122.11	271415.89
44.900	21.06	2105.03	273520.91
45.000	20.83	2094.09	275615.00
45.100	20.96	2089.22	277704.22
45.200	20.37	2066.23	279770.45
45.300	22.62	2149.21	281919.66
45.400	23.30	2295.90	284215.56
45.500	23.58	2344.05	286559.61
45.600	22.93	2325.33	288884.94
45.700	23.47	2319.95	291204.89
45.800	23.49	2348.07	293552.96
45.900	23.23	2336.00	295888.96
46.000	23.25	2323.93	298212.89
46.100	23.39	2331.97	300544.85
46.200	23.27	2333.31	302878.16
46.300	21.69	2248.25	305126.41
46.400	18.86	2027.49	307153.90
46.500	22.65	2075.13	309229.03
46.600	23.33	2298.57	311527.61
46.700	23.21	2338.61	313866.22
46.800	22.55	2287.89	316142.11
46.900	22.43	2249.22	318391.33
47.000	23.11	2277.23	320668.56
47.100	22.89	2305.19	322973.75
47.200	22.47	2273.20	325246.96
47.300	22.22	2234.63	327481.59
47.400	22.37	2229.32	329710.91
47.500	22.11	2224.03	331934.94
47.600	21.60	2185.73	334120.67
47.700	22.01	2180.44	336301.11
47.800	22.55	2228.04	338529.15
47.900	22.43	2249.22	340778.37
48.000	22.45	2243.91	343022.28
48.100	22.33	2238.60	345260.89
48.200	22.47	2238.93	347509.82
48.300	22.75	2261.20	349762.02
48.400	23.03	2289.18	352051.19
48.500	22.91	2297.18	354348.37
48.600	22.83	2291.83	356640.20
48.700	22.80	2286.50	358926.70
48.800	23.22	2301.21	361227.91
48.900	21.80	2256.11	363544.02
49.000	22.58	2224.08	365708.10
49.100	22.86	2271.85	367979.96
49.200	22.61	2273.18	370253.12
49.300	22.35	2247.90	372501.03
49.400	21.71	2202.91	374703.94
49.500	22.38	2204.24	376908.18
49.600	23.46	2292.00	379200.18
49.700	23.07	2268.63	381508.80
49.800	23.35	2321.26	383848.06

(*) Corresponde a la sección total sin descontar lo ya excavado.

SISTEMA HIDROVIAL 290. Tramo Ruta 13 - Ruta 77					
Desde Progresiva 30+200 a Progresiva 67+685					
Variante de traza desde Progresiva 50+200 a Progresiva 56+000					
EXCAVACIÓN DE CANAL					
DATOS DE PROYECTO					
Progresivas (m)	Terreno Natural (m)	Solera proyecto (m)	Corte (m)	Base fondo (m)	Boca (m)
49.900	62.86	60.89	1.97	9.30	13.23
50.000	62.88	60.88	2.00	9.30	13.30
50.100	62.81	60.88	1.93	9.30	13.15
Variante de traza desde Progresiva 4+800 a Progresiva -0+100					
4.800	62.81	60.88	1.93	9.00	12.85
4.700	62.86	60.87	1.99	9.00	12.98
4.600	62.80	60.86	1.94	9.00	12.89
4.500	62.76	60.84	1.92	9.00	12.83
4.400	62.72	60.83	1.89	9.00	12.78
4.300	62.74	60.82	1.92	9.00	12.85
4.200	62.73	60.80	1.93	9.00	12.86
4.100	62.66	60.79	1.87	9.00	12.74
4.000	62.67	60.77	1.90	9.00	12.79
3.900	62.63	60.76	1.87	9.00	12.74
3.800	62.59	60.75	1.84	9.00	12.69
3.700	62.56	60.73	1.83	9.00	12.65
3.600	62.55	60.72	1.83	9.00	12.66
3.500	62.65	60.71	1.94	9.00	12.89
3.400	62.53	60.69	1.84	9.00	12.68
3.300	62.59	60.68	1.91	9.00	12.82
3.200	62.60	60.66	1.94	9.00	12.87
3.100	62.44	60.65	1.79	9.00	12.58
3.000	62.78	60.64	2.14	9.00	13.28
2.900	62.43	60.63	1.81	9.00	12.61
2.800	62.53	60.61	1.92	9.00	12.84
2.700	62.53	60.60	1.93	9.00	12.87
2.600	62.45	60.58	1.87	7.50	11.23
2.500	62.34	60.57	1.77	7.50	11.04
2.400	62.39	60.56	1.83	7.50	11.17
2.300	62.24	60.54	1.70	7.50	10.90
2.200	62.44	60.53	1.91	7.50	11.32
2.100	62.47	60.51	1.96	7.50	11.41
2.000	62.44	60.50	1.94	7.50	11.38
1.900	62.58	60.49	2.09	7.50	11.69
1.800	62.58	60.47	2.11	7.50	11.71
1.700	62.55	60.46	2.09	7.50	11.68
1.600	62.46	60.45	2.01	7.50	11.53
1.500	62.55	60.43	2.02	7.50	11.53
1.400	62.49	60.42	2.07	7.50	11.64
1.300	62.47	60.41	2.06	7.50	11.63
1.200	62.48	60.39	2.09	7.50	11.68
1.100	62.42	60.38	2.04	7.50	11.58
1.000	62.44	60.36	2.08	7.50	11.65
0.900	62.59	60.35	2.24	7.50	11.98
0.800	62.35	60.34	2.21	7.50	11.93
0.700	62.57	60.32	2.25	7.50	11.99
0.600	62.48	60.31	2.17	7.50	11.84
0.500	62.44	60.30	2.14	7.50	11.79
0.400	62.47	60.28	2.19	7.50	11.88
0.300	62.62	60.27	2.35	7.50	12.20
0.200	62.54	60.25	2.29	7.50	12.07
0.100	62.52	60.24	2.28	7.50	12.06
0.000	62.32	60.23	2.21	7.50	11.69
-0.100	62.42	60.21	2.21	7.50	11.91
56.100	62.43	60.20	2.23	8.00	12.45
56.200	62.50	60.19	2.31	8.00	12.62
56.300	62.47	60.18	2.29	8.00	12.58
56.400	62.38	60.17	2.21	8.00	12.42
56.500	62.46	60.16	2.30	8.00	12.61
56.600	62.41	60.14	2.27	8.00	12.53
56.700	62.40	60.13	2.27	8.00	12.53
56.800	62.38	60.12	2.26	8.00	12.52
56.900	62.36	60.11	2.25	8.00	12.50
57.000	62.25	60.10	2.15	8.00	12.30
57.100	62.41	60.09	2.32	8.00	12.65
57.200	62.39	60.07	2.32	8.00	12.63
57.300	62.30	60.06	2.24	8.00	12.47
57.400	62.21	60.05	2.16	8.00	12.32
57.500	62.32	60.04	2.28	8.00	12.56
57.600	62.25	60.03	2.22	8.00	12.44
57.700	62.27	60.02	2.25	8.00	12.51
57.800	62.11	60.00	2.11	8.00	12.21
57.900	62.06	59.99	2.07	8.00	12.13
58.000	62.17	59.98	2.19	8.00	12.38
58.100	62.24	59.97	2.27	8.00	12.54
58.200	62.18	59.96	2.22	8.00	12.44
58.300	62.23	59.95	2.28	8.00	12.57
58.400	62.22	59.93	2.29	8.00	12.57
58.500	62.18	59.92	2.26	8.00	12.51
58.600	62.17	59.91	2.26	8.00	12.52
58.700	62.18	59.90	2.28	8.00	12.56
58.800	62.14	59.89	2.25	8.00	12.50
58.900	62.10	59.88	2.22	8.00	12.45
59.000	62.05	59.86	2.19	8.00	12.37
59.100	62.12	59.85	2.27	8.00	12.63
59.200	62.01	59.84	2.17	8.00	12.34
59.300	62.05	59.83	2.22	8.00	12.44
59.400	61.97	59.82	2.15	8.00	12.30
59.500	61.92	59.81	2.11	8.00	12.23
59.600	61.94	59.79	2.15	8.00	12.29
59.700	61.93	59.78	2.15	8.00	12.29
59.800	61.94	59.77	2.17	8.00	12.34
59.900	61.93	59.76	2.17	8.00	12.34
60.000	61.80	59.75	2.05	8.00	12.10
60.100	61.79	59.74	2.05	8.00	12.11
60.200	61.81	59.72	2.09	8.00	12.17
60.300	61.79	59.71	2.08	8.00	12.15

Planilla 1-a-1

SISTEMA HIDROVIAL 290. Tramo Ruta 13 - Ruta 77			
Desde Progresiva 30+200 a Progresiva 67+685			
Variante de traza desde Progresiva 50+200 a Progresiva 56+000			
EXCAVACIÓN DE CANAL			
COMPUTOS METRICOS			
Progresivas (m)	Area (") (m2)	Volumen (") (m3)	Volumen Acumulado (") (m3)
49.900	22.17	2276.03	386124.09
50.000	22.58	2237.30	388361.39
50.100	21.63	2210.26	390571.65
Variante de traza desde Progresiva 4+800 a Progresiva -0+100			
4.800	21.06		
4.700	21.87	2145.98	392717.63
4.600	21.27	2157.14	394874.77
4.500	20.93	2110.25	396985.02
4.400	20.60	2076.46	399051.49
4.300	21.03	2081.18	401142.66
4.200	21.07	2105.11	403247.78
4.100	20.35	2071.42	405319.20
4.000	20.66	2050.48	407369.68
3.900	20.32	2048.79	409418.47
3.800	19.99	2015.25	411433.73
3.700	19.78	1988.17	413421.90
3.600	19.52	1980.15	415402.05
3.500	21.28	2055.08	417457.14
3.400	19.92	2059.73	419516.87
3.300	20.86	2038.74	421555.62
3.200	21.16	2100.91	423666.53
3.100	19.30	2023.02	425679.55
3.000	23.87	2158.60	427838.16
2.900	19.52	2168.53	43007.68
2.800	20.96	2024.11	432031.79
2.700	21.14	2105.22	434137.01
2.600	17.49	1831.52	436065.52
2.500	16.42	1695.38	437763.90
2.400	17.12	1677.09	439440.99
2.300	15.62	1637.24	441078.24
2.200	17.99	1680.73	442758.97
2.100	18.49	1824.25	444583.22
2.000	18.30	1839.77	446422.99
1.900	20.08	1919.08	448342.07
1.800	20.24	2015.68	450357.75
1.700	20.05	2014.13	452371.88
1.600	19.16	1960.29	454332.17
1.500	20.37	1976.30	456308.48
1.400	19.82	2009.52	458318.00
1.300	19.75	1978.76	460296.76
1.200	20.03	1985.87	462285.63
1.100	19.49	1975.72	464281.35
1.000	19.88	1968.34	466229.70
0.900	21.81	2084.60	468314.29
0.800	21.50	2165.96	470479.85
0.700	21.90	2168.96	472648.81
0.600	20.99	2144.61	474794.42
0.500	20.68	2083.58	476877.99
0.400	21.20	2093.86	478971.85
0.300	23.17	2218.22	481190.08
0.200	22.36	2276.50	483466.58
0.100	22.29	2232.43	485699.01
0.000	20.07	2118.01	487871.02
-0.100	21.42	2074.47	489891.49
56.100	22.77	2209.46	492100.96
56.200	23.80	2328.59	494429.55
56.300	23.57	2368.24	496797.79
56.400	22.59	2307.74	499105.53
56.500	23.74	2316.16	501421.69
56.600	23.25	2349.45	503771.13
56.700	23.27	2326.42	506097.56
56.800	23.17	2322.26	508419.81
56.900	23.07	2311.84	510731.65
57.000	21.85	2245.67	512977.32
57.100	23.99	2291.79	515269.11
57.200	23.88	2393.62	517662.74
57.300	22.30	2339.21	520071.95
57.400	21.93	2241.52	522243.47
57.500	23.44	2289.65	524512.12
57.600	22.71	2207.88	526819.99
57.700	23.11	2291.18	529111.17
57.800	21.28	2219.29	531330.46
57.900	20.81	2104.31	533434.77
58.000	22.30	2155.65	535590.32
58.100	23.32	2281.00	537871.31
58.200	22.72	2301.70	540173.01
58.300	23.49	2310.09	542483.10
58.400	23.51	2348.71	544832.81
58.500	23.15	2333.01	547165.82
58.600	23.17	2316.30	549482.11
58.700	23.45	2330.94	551813.05
58.800	23.09	2326.79	554139.84
58.900	22.74	2291.37	556431.21
59.000	22.26	2249.93	558681.15
59.100	22.28	2277.01	560958.16
59.200	22.06	2266.73	563254.89
59.300	22.70	2237.61	565482.50
59.400	21.85	2227.36	567639.86
59.500	21.38	2161.59	569851.46
59.600	21.77	2157.51	572008.96
59.700	21.79	2177.96	574186.93
59.800	22.08	2192.34	576379.27
59.900	22.08	2206.73	578596.00
60.000	20.63	2135.46	580721.46
60.100	20.65	2084.16	582876.62
60.200	21.04	2084.41	584970.03
60.300	20.94	2098.58	586968.61

Planilla 1-b-1

SISTEMA HIDROVIAL 290. Tramo Ruta 13 - Ruta 77			
Desde Progresiva 30+200 a Progresiva 67+685			
Variante de traza desde Progresiva 50+200 a Progresiva 56+000			
EXCAVACIÓN DE CANAL			
COMPUTO DEL VOLUMEN YA EXCAVADO			
Según perfiles transversales relevados en Septiembre de 2001			
Progresiva	Area	Volumen	Vol. Cum.

(*) Corresponde a la sección total sin descontar lo ya excavado.

SISTEMA HIDROVIAL 290. Tramo Ruta 13 - Ruta 77					
Desde Progresiva 30+200 a Progresiva 67+685					
Variante de traza desde Progresiva 50+200 a Progresiva 56+000					
EXCAVACIÓN DE CANAL					
DATOS DE PROYECTO					
Progresivas (m)	Terreno Natural (m)	Solera proyecto (m)	Corte (m)	Base fondo (m)	Boca (m)
31.100	65.99	65.23	0.76	2.00	3.51
31.200	65.90	65.22	0.68	2.00	3.36
31.300	65.89	65.20	0.69	2.00	3.38
31.400	65.77	65.18	0.59	2.00	3.17
31.500	65.83	65.17	0.66	2.00	3.33
31.600	65.84	65.15	0.69	2.00	3.38
31.700	65.71	65.13	0.58	2.00	3.15
31.800	65.80	65.12	0.68	2.00	3.37
31.900	65.69	65.10	0.59	2.00	3.18
32.000	65.71	65.08	0.63	2.00	3.26
32.100	65.67	65.06	0.61	2.00	3.21
32.200	65.59	65.05	0.54	2.00	3.08
32.300	65.63	65.03	0.60	2.00	3.20
32.400	65.64	65.01	0.63	2.00	3.25
32.500	65.67	65.00	0.67	2.00	3.35
32.600	65.61	64.98	0.63	2.00	3.26
32.700	65.57	64.96	0.61	2.00	3.21
32.800	65.47	64.95	0.52	2.00	3.05
32.900	65.45	64.93	0.52	2.00	3.04
33.000	65.45	64.91	0.54	2.00	3.08
33.100	65.62	64.89	0.73	2.00	3.45
33.200	65.54	64.88	0.66	2.00	3.32
33.300	65.50	64.86	0.64	2.00	3.28
33.400	65.41	64.84	0.57	2.00	3.13
33.500	65.43	64.83	0.60	2.00	3.21
33.600	65.35	64.81	0.54	2.00	3.08
33.700	65.42	64.79	0.63	2.00	3.25
33.800	65.40	64.78	0.62	2.00	3.25
33.900	65.38	64.76	0.62	2.00	3.24
34.000	65.37	64.74	0.63	2.00	3.26
34.100	65.30	64.72	0.58	2.00	3.15
34.200	65.36	64.71	0.65	2.00	3.30
34.300	65.37	64.69	0.68	2.00	3.36
34.400	65.39	64.67	0.72	2.00	3.43
34.500	65.34	64.66	0.68	2.00	3.37
34.600	65.25	64.64	0.61	2.00	3.22
34.700	65.32	64.62	0.70	2.00	3.39
34.800	65.30	64.61	0.69	2.00	3.39
34.900	65.35	64.59	0.76	2.00	3.45
35.000	65.11	64.57	0.54	2.00	3.08
35.100	65.16	64.55	0.61	2.00	3.21
35.200	65.21	64.54	0.67	2.00	3.34
35.300	65.23	64.52	0.71	2.00	3.42
35.400	65.19	64.50	0.69	2.00	3.37
35.500	65.15	64.49	0.66	2.00	3.33
35.600	65.10	64.47	0.63	2.00	3.26
35.700	65.10	64.45	0.65	2.00	3.33
35.800	65.12	64.44	0.68	2.00	3.37
35.900	65.18	64.42	0.76	2.00	3.52
36.000	65.10	64.40	0.70	2.00	3.40
36.100	65.02	64.38	0.64	2.00	3.27
36.200	65.03	64.37	0.66	2.00	3.32
36.300	64.53	64.35	0.18	2.00	2.36
36.400	64.83	64.33	0.50	2.00	3.19
36.500	65.06	64.32	0.74	2.00	3.49
36.600	65.00	64.30	0.70	2.00	3.40
36.700	64.97	64.28	0.69	2.00	3.37
36.800	65.01	64.27	0.74	2.00	3.49
36.900	65.03	64.25	0.78	2.00	3.56
37.000	64.95	64.23	0.72	2.00	3.44
37.100	64.92	64.21	0.71	2.00	3.41
37.200	64.87	64.20	0.67	2.00	3.34
37.300	64.84	64.18	0.66	2.00	3.32
37.400	64.87	64.16	0.71	2.00	3.41
37.500	64.89	64.15	0.74	2.00	3.49
37.600	64.83	64.13	0.70	2.00	3.40
37.700	64.82	64.11	0.71	2.00	3.41
37.800	64.78	64.10	0.68	2.00	3.37
37.900	64.82	64.08	0.74	2.00	3.48
38.000	64.75	64.06	0.69	2.00	3.38
38.100	65.00	64.04	0.96	2.00	3.91
38.200	64.60	64.03	0.57	2.00	3.14
38.300	64.71	64.01	0.70	2.00	3.40
38.400	64.78	63.99	0.79	2.00	3.57
38.500	64.71	63.98	0.73	2.00	3.47
38.600	64.64	63.96	0.68	2.00	3.36
38.700	64.71	63.94	0.77	2.00	3.63
38.800	64.62	63.93	0.69	2.00	3.39
38.900	64.61	63.91	0.70	2.00	3.40
39.000	64.50	63.89	0.61	2.00	3.22
39.100	64.56	63.87	0.69	2.00	3.37
39.200	64.50	63.86	0.64	2.00	3.28
39.300	64.43	63.84	0.59	2.00	3.18
39.400	64.46	63.82	0.64	2.00	3.27
39.500	64.42	63.81	0.61	2.00	3.23
39.600	64.42	63.79	0.63	2.00	3.26
39.700	64.38	63.77	0.61	2.00	3.21
39.800	64.36	63.76	0.60	2.00	3.21
39.900	64.41	63.74	0.67	2.00	3.34
40.000	64.29	63.72	0.57	2.00	3.19
40.100	64.26	63.70	0.56	2.00	3.11
40.200	64.26	63.69	0.57	2.00	3.14
40.300	64.34	63.67	0.67	2.00	3.34
40.400	64.22	63.65	0.57	2.00	3.13
40.500	64.22	63.64	0.58	2.00	3.17
40.600	64.23	63.62	0.61	2.00	3.22
40.700	64.17	63.60	0.57	2.00	3.13
40.800	64.18	63.59	0.59	2.00	3.19
40.900	64.21	63.57	0.64	2.00	3.28

SISTEMA HIDROVIAL 290. Tramo Ruta 13 - Ruta 77			
Desde Progresiva 30+200 a Progresiva 67+685			
Variante de traza desde Progresiva 50+200 a Progresiva 56+000			
EXCAVACIÓN DE CANAL			
COMPUTOS METRICOS			
Progresivas (m)	Area (") (m2)	Volumen (") (m3)	Volumen Acumulado (") (m3)
31.100	2.08	189.93	1833.35
31.200	1.83	195.59	1828.94
31.300	1.85	194.22	2013.17
31.400	1.52	168.53	2181.70
31.500	1.77	164.18	2345.88
31.600	1.86	181.21	2352.09
31.700	1.49	167.28	2694.37
31.800	1.84	166.27	2860.64
31.900	1.53	165.49	3023.12
32.000	1.65	159.21	3188.33
32.100	1.58	161.45	3349.78
32.200	1.38	147.81	3497.59
32.300	1.56	146.85	3644.44
32.400	1.65	150.16	3804.60
32.500	1.80	172.27	3976.87
32.600	1.66	172.92	4149.79
32.700	1.58	162.99	4311.89
32.800	1.32	145.37	4457.26
32.900	1.31	131.92	4589.18
33.000	1.37	134.06	4723.25
33.100	1.98	167.18	4890.43
33.200	1.76	187.03	5077.45
33.300	1.69	172.56	5250.01
33.400	1.45	157.06	5407.07
33.500	1.57	155.23	5558.29
33.600	1.37	147.18	5705.48
33.700	1.65	151.06	5856.54
33.800	1.64	164.35	6020.89
33.900	1.63	163.38	6184.27
34.000	1.65	164.03	6348.30
34.100	1.48	156.68	6504.97
34.200	1.73	160.81	6665.78
34.300	1.82	177.54	6843.13
34.400	1.95	185.32	7031.44
34.500	1.83	188.99	7220.43
34.600	1.59	171.36	7391.79
34.700	1.88	173.73	7565.52
34.800	1.87	187.61	7753.12
34.900	2.10	195.67	7957.80
35.000	1.37	173.46	8125.25
35.100	1.58	147.20	8272.45
35.200	1.80	168.71	8441.16
35.300	1.92	185.35	8627.10
35.400	1.84	188.30	8815.40
35.500	1.77	180.54	8995.94
35.600	1.66	171.25	9167.19
35.700	1.71	168.60	9338.80
35.800	1.84	177.55	9513.35
35.900	2.10	196.98	9710.34
36.000	1.88	199.35	9909.69
36.100	1.67	177.95	10087.64
36.200	1.76	171.90	10259.54
36.300	0.38	107.73	10367.27
36.400	1.55	96.97	10464.24
36.500	2.04	179.39	10643.63
36.600	1.89	196.54	10840.17
36.700	1.85	186.93	11027.10
36.800	2.04	194.51	11221.61
36.900	2.17	210.81	11432.42
37.000	1.95	206.31	11638.74
37.100	1.91	193.06	11831.80
37.200	1.80	185.26	12017.06
37.300	1.75	177.52	12194.58
37.400	1.91	183.27	12377.85
37.500	2.04	197.56	12575.41
37.600	1.89	196.54	12771.95
37.700	1.92	190.33	12962.28
37.800	1.84	187.62	13149.89
37.900	2.03	193.48	13343.37
38.000	1.85	194.16	13537.53
38.100	2.82	233.71	13771.24
38.200	1.47	114.80	13886.04
38.300	1.89	168.02	14154.06
38.400	2.19	203.96	14358.01
38.500	2.00	209.79	14567.81
38.600	1.82	191.42	14759.22
38.700	2.12	197.37	14956.59
38.800	1.87	199.73	15156.33
38.900	1.89	188.28	15344.61
39.000	1.59	174.08	15518.69
39.100	1.84	171.37	15690.07
39.200	1.70	176.90	15866.97
39.300	1.53	161.18	16028.15
39.400	1.68	160.20	16188.35
39.500	1.60	164.04	16352.39
39.600	1.66	163.06	16515.45
39.700	1.58	160.74	16677.54
39.800	1.57	157.89	16835.43
39.900	1.79	168.38	17003.81
40.000	1.46	152.67	17166.48
40.100	1.42	143.95	17310.44
40.200	1.47	144.58	17456.02
40.300	1.79	162.96	17617.98
40.400	1.45	142.13	17780.01
40.500	1.51	148.04	17928.04
40.600	1.59	155.02	18083.07
40.700	1.46	152.50	18235.57
40.800	1.54	149.94	18385.51
40.900	1.69	161.81	18547.32

SISTEMA HIDROVIAL 290. Tramo Ruta 13 - Ruta 77

COMPUTO DEL VOLUMEN YA EXCAVADO

Según perfiles transversales relevados en Septiembre de 2001			
Progresiva	Area	Volumen	Vol. Acum.

(*) Corresponde a la sección total sin descontar lo ya excavado.

SISTEMA HIDROVIAL 290. Tramo Ruta 13 - Ruta 77					
Desde Progresiva 30+200 a Progresiva 67+685					
Variante de traza desde Progresiva 50+200 a Progresiva 56+000					
EXCAVACIÓN DE CANAL					
DATOS DE PROYECTO					
Progresivas (m)	Terreno Natural (m)	Solera proyecto (m)	Corte (m)	Base fondo (m)	Boca (m)
41.000	64.14	63.55	0.59	2.00	3.18
41.100	64.14	63.53	0.61	2.00	3.21
41.200	64.15	63.52	0.63	2.00	3.26
41.300	64.12	63.50	0.62	2.00	3.24
41.400	64.10	63.48	0.62	2.00	3.23
41.500	64.09	63.47	0.62	2.00	3.25
41.600	64.04	63.45	0.59	2.00	3.18
41.700	64.03	63.43	0.60	2.00	3.19
41.800	64.04	63.42	0.62	2.00	3.25
41.900	64.00	63.40	0.60	2.00	3.20
42.000	64.00	63.38	0.62	2.00	3.24
42.100	63.93	63.36	0.57	2.00	3.13
42.200	63.89	63.35	0.54	2.00	3.08
42.300	63.93	63.33	0.60	2.00	3.20
42.400	63.88	63.31	0.57	2.00	3.13
42.500	63.86	63.30	0.56	2.00	3.13
42.600	63.88	63.28	0.60	2.00	3.20
42.700	63.87	63.26	0.61	2.00	3.21
42.800	63.88	63.25	0.63	2.00	3.27
42.900	63.80	63.23	0.57	2.00	3.14
43.000	63.80	63.21	0.59	2.00	3.18
43.100	63.80	63.19	0.61	2.00	3.21
43.200	63.72	63.18	0.54	2.00	3.08
43.300	63.64	63.16	0.48	2.00	2.96
43.400	63.64	63.14	0.50	2.00	2.99
43.500	63.74	63.13	0.61	2.00	3.23
43.600	63.66	63.11	0.55	2.00	3.10
43.700	63.68	63.08	0.59	2.00	3.17
43.800	63.68	63.06	0.62	2.00	3.24
43.900	63.63	63.03	0.60	2.00	3.20
44.000	63.65	63.00	0.65	2.00	3.30
44.100	63.62	62.98	0.64	2.40	3.66
44.200	63.59	62.96	0.63	2.40	3.66
44.300	63.58	62.94	0.64	2.40	3.68
44.400	63.53	62.92	0.61	2.40	3.62
44.500	63.54	62.90	0.64	2.40	3.68
44.600	63.58	62.88	0.70	2.40	3.80
44.700	63.58	62.86	0.72	2.40	3.84
44.800	63.54	62.84	0.70	2.40	3.80
44.900	63.53	62.82	0.71	2.40	3.82
45.000	63.50	62.80	0.70	2.40	3.80
45.100	63.50	62.78	0.72	2.40	3.84
45.200	63.44	62.76	0.68	2.50	3.96
45.300	63.40	62.75	0.65	2.50	3.80
45.400	63.44	62.74	0.70	2.50	3.90
45.500	63.45	62.73	0.72	2.50	3.95
45.600	63.39	62.72	0.67	2.50	3.86
45.700	63.42	62.70	0.72	2.50	3.93
45.800	63.41	62.69	0.72	2.50	3.93
45.900	63.38	62.68	0.70	2.50	3.89
46.000	63.37	62.67	0.70	2.50	3.90
46.100	63.37	62.66	0.71	2.50	3.92
46.200	63.35	62.65	0.70	2.50	3.90
46.300	63.22	62.64	0.58	2.50	3.66
46.400	62.99	62.63	0.36	2.50	3.22
46.500	63.27	62.62	0.65	2.50	3.81
46.600	63.31	62.61	0.70	2.50	3.91
46.700	63.29	62.59	0.70	2.50	3.89
46.800	63.23	62.58	0.65	2.50	3.79
46.900	63.21	62.57	0.64	2.50	3.77
47.000	63.25	62.56	0.69	2.50	3.86
47.100	63.23	62.55	0.68	2.50	3.86
47.200	63.18	62.54	0.64	2.50	3.78
47.300	63.15	62.53	0.62	2.50	3.74
47.400	63.15	62.52	0.63	2.50	3.76
47.500	63.12	62.51	0.61	2.50	3.73
47.600	63.07	62.50	0.57	2.50	3.65
47.700	63.09	62.48	0.61	2.50	3.71
47.800	63.12	62.47	0.65	2.50	3.79
47.900	63.10	62.46	0.64	2.50	3.77
48.000	63.09	62.45	0.64	2.50	3.78
48.100	63.07	62.44	0.63	2.50	3.76
48.200	63.07	62.43	0.64	2.50	3.78
48.300	63.08	62.42	0.66	2.50	3.82
48.400	63.09	62.41	0.68	2.50	3.86
48.500	63.07	62.40	0.67	2.50	3.85
48.600	63.06	62.39	0.67	2.50	3.85
48.700	63.04	62.37	0.67	2.50	3.83
48.800	63.06	62.36	0.70	2.50	3.89
48.900	62.95	62.35	0.60	2.50	3.69
49.000	62.99	62.34	0.65	2.50	3.80
49.100	63.00	62.33	0.67	2.50	3.84
49.200	62.97	62.32	0.65	2.50	3.80
49.300	62.94	62.31	0.63	2.50	3.76
49.400	62.88	62.30	0.58	2.50	3.66
49.500	62.92	62.29	0.63	2.50	3.77
49.600	62.89	62.28	0.71	2.50	3.93
49.700	62.95	62.26	0.69	2.50	3.87
49.800	62.96	62.25	0.71	2.50	3.91
49.900	62.96	62.24	0.62	2.50	3.73
50.000	62.88	62.23	0.65	2.50	3.80
50.100	62.81	62.23	0.58	2.50	3.65
Variante de traza desde Progresiva 4+800 a Progresiva -0+100					
4.800	62.81	62.23	0.58	2.20	3.35
4.700	62.86	62.22	0.64	2.20	3.48
4.600	62.80	62.21	0.59	2.20	3.39
4.500	62.76	62.19	0.57	2.20	3.33
4.400	62.72	62.18	0.54	2.20	3.28
4.300	62.74	62.17	0.57	2.20	3.35

SISTEMA HIDROVIAL 290. Tramo Ruta 13 - Ruta 77			
Desde Progresiva 30+200 a Progresiva 67+685			
Variante de traza desde Progresiva 50+200 a Progresiva 56+000			
EXCAVACIÓN DE CANAL			
COMPUTOS METRICOS			
Progresivas (m)	Area (") (m2)	Volumen (") (m3)	Volumen Acumulado (") (m3)
41.000	1.52	160.86	18708.18
41.100	1.58	165.01	18863.20
41.200	1.66	162.10	19025.30
41.300	1.62	164.36	19189.65
41.400	1.61	161.76	19351.41
41.500	1.64	162.41	19513.82
41.600	1.53	158.24	19672.05
41.700	1.55	154.05	19826.10
41.800	1.64	159.52	19985.62
41.900	1.56	160.16	20145.77
42.000	1.62	159.18	20304.96
42.100	1.45	153.48	20458.44
42.200	1.38	141.47	20599.91
42.300	1.56	146.85	20746.76
42.400	1.45	150.58	20897.34
42.500	1.44	144.89	21042.23
42.600	1.58	150.27	21192.50
42.700	1.58	157.25	21349.75
42.800	1.67	162.75	21512.50
42.900	1.47	157.03	21669.53
43.000	1.52	149.61	21819.14
43.100	1.58	155.01	21974.15
43.200	1.38	147.81	22121.97
43.300	1.19	128.38	22250.34
43.400	1.24	121.39	22371.73
43.500	1.60	142.11	22513.84
43.600	1.40	150.34	22664.18
43.700	1.52	146.18	22810.36
43.800	1.62	157.21	22967.57
43.900	1.56	159.22	23126.79
44.000	1.72	164.13	23290.91
44.100	1.64	153.41	23444.32
44.200	1.91	192.73	23637.04
44.300	1.95	192.72	23829.77
44.400	1.84	189.09	24018.85
44.500	1.96	190.09	24207.94
44.600	2.17	205.78	24443.72
44.700	2.25	220.82	24664.54
44.800	2.17	220.82	24885.36
44.900	2.21	218.91	25104.26
45.000	2.17	218.91	25323.17
45.100	2.25	220.82	25543.99
45.200	2.16	220.52	25764.50
45.300	2.05	210.84	25975.34
45.400	2.25	215.11	26190.45
45.500	2.33	229.06	26419.50
45.600	2.14	223.63	26643.13
45.700	2.30	222.05	26865.18
45.800	2.30	230.22	27095.41
45.900	2.23	226.70	27322.11
46.000	2.23	223.18	27545.29
46.100	2.28	225.52	27770.81
46.200	2.24	225.91	27996.72
46.300	1.79	201.65	28198.37
46.400	1.04	141.44	28339.81
46.500	2.06	154.89	28494.70
46.600	2.26	215.88	28710.57
46.700	2.22	223.96	28934.53
46.800	2.03	212.79	29147.33
46.900	2.00	201.68	29349.01
47.000	2.19	209.73	29558.74
47.100	2.16	217.75	29776.48
47.200	2.01	208.56	29985.04
47.300	1.94	197.53	30182.57
47.400	1.98	196.03	30378.60
47.500	1.91	194.53	30573.13
47.600	1.77	183.78	30756.91
47.700	1.88	182.29	30939.21
47.800	2.03	195.69	31134.89
47.900	2.00	201.68	31336.57
48.000	2.00	200.16	31536.74
48.100	1.97	198.66	31735.39
48.200	2.01	199.03	31934.43
48.300	2.09	205.10	32139.53
48.400	2.17	213.13	32352.66
48.500	2.14	215.43	32568.08
48.600	2.14	213.89	32781.97
48.700	2.11	212.35	32994.32
48.800	2.23	216.61	33210.93
48.900	1.85	203.81	33414.74
49.000	2.04	194.59	33609.33
49.100	2.12	208.15	33817.48
49.200	2.05	208.53	34025.01
49.300	1.98	201.31	34227.31
49.400	1.80	188.61	34415.93
49.500	1.98	188.99	34604.92
49.600	2.30	214.05	34818.97
49.700	2.18	223.98	35042.95
49.800	2.26	222.41	35265.36
49.900	1.92	209.48	35474.84
50.000	2.04	198.30	35673.14
50.100	1.77	190.73	35863.87
Variante de traza desde Progresiva 4+800 a Progresiva -0+100			
4.800	1.82		
4.700	1.66	173.83	36037.71
4.600	1.57	161.45	36199.16
4.500	1.48	152.67	36361.83
4.400	1.59	153.90	36505.73

SISTEMA HIDROVIAL 290. Tramo Ruta 13 - Ruta 77			
COMPUTO DEL VOLUMEN YA EXCAVADO			
Según perfiles transversales relevados en Septiembre de 2001			
Progresiva	Area	Volumen	Vol. Acum.

(*) Corresponde a la sección total sin descontar lo ya excavado.

SISTEMA HIDROVIAL 290. Tramo Ruta 13 - Ruta 77					
Desde Progresiva 30+200 a Progresiva 67+685					
Variante de traza desde Progresiva 50+200 a Progresiva 56+000					
EXCAVACIÓN DE CANAL					
DATOS DE PROYECTO					
Progresivas (m)	Terreno Natural (m)	Solera proyecto (m)	Corte (m)	Base fondo (m)	Boca (m)
4.200	62.73	62.15	0.58	2.20	3.36
4.100	62.66	62.14	0.52	2.20	3.24
4.000	62.67	62.12	0.55	2.20	3.29
3.900	62.63	62.11	0.52	2.20	3.24
3.800	62.59	62.10	0.49	2.20	3.19
3.700	62.56	62.08	0.48	2.20	3.15
3.600	62.55	62.07	0.48	2.20	3.16
3.500	62.65	62.06	0.59	2.20	3.39
3.400	62.53	62.04	0.49	2.20	3.18
3.300	62.59	62.03	0.56	2.20	3.32
3.200	62.60	62.01	0.59	2.20	3.37
3.100	62.44	62.00	0.44	2.20	3.08
3.000	62.78	61.99	0.79	2.20	3.78
2.900	62.43	61.97	0.46	2.20	3.11
2.800	62.53	61.96	0.57	2.20	3.34
2.700	62.53	61.96	0.57	2.20	3.34
2.600	62.45	61.96	0.49	2.20	3.18
2.500	62.34	61.96	0.38	2.20	2.96
2.400	62.39	61.96	0.43	2.20	3.06
2.300	62.24	61.96	0.28	2.20	2.76
2.200	62.44	61.96	0.48	2.20	3.16
2.100	62.47	61.96	0.51	2.20	3.22
2.000	62.44	61.96	0.48	2.20	3.16
1.900	62.58	61.96	0.62	2.20	3.44
1.800	62.58	61.96	0.62	2.20	3.44
1.700	62.55	61.96	0.59	2.20	3.38
1.600	62.46	61.95	0.51	2.20	3.23
1.500	62.55	61.93	0.62	2.20	3.44
1.400	62.49	61.92	0.57	2.20	3.34
1.300	62.47	61.91	0.56	2.20	3.33
1.200	62.48	61.89	0.59	2.20	3.38
1.100	62.42	61.88	0.54	2.20	3.29
1.000	62.44	61.86	0.58	2.20	3.35
0.900	62.59	61.85	0.74	2.20	3.68
0.800	62.55	61.84	0.71	2.20	3.63
0.700	62.57	61.82	0.75	2.20	3.69
0.600	62.48	61.81	0.67	2.20	3.54
0.500	62.44	61.80	0.64	2.20	3.49
0.400	62.47	61.78	0.69	2.20	3.58
0.300	62.62	61.77	0.85	2.20	3.90
0.200	62.54	61.75	0.79	2.20	3.77
0.100	62.52	61.74	0.78	2.20	3.76
0.000	62.52	61.73	0.79	2.20	3.78
-0.100	62.42	61.71	0.71	2.20	3.61
56.100	62.43	61.70	0.73	2.50	3.95
56.200	62.50	61.69	0.81	2.50	4.12
56.300	62.47	61.68	0.79	2.50	4.08
56.400	62.38	61.67	0.71	2.50	3.92
56.500	62.46	61.66	0.80	2.50	4.11
56.600	62.41	61.64	0.77	2.50	4.03
56.700	62.40	61.63	0.77	2.50	4.03
56.800	62.38	61.62	0.76	2.50	4.02
56.900	62.36	61.61	0.75	2.50	4.00
57.000	62.25	61.60	0.65	2.50	3.80
57.100	62.41	61.59	0.82	2.50	4.15
57.200	62.39	61.57	0.82	2.50	4.13
57.300	62.30	61.56	0.74	2.50	3.97
57.400	62.21	61.55	0.66	2.50	3.82
57.500	62.32	61.54	0.78	2.50	4.06
57.600	62.25	61.53	0.72	2.50	3.94
57.700	62.27	61.52	0.75	2.50	4.01
57.800	62.11	61.50	0.61	2.50	3.71
57.900	62.06	61.49	0.57	2.50	3.63
58.000	62.17	61.48	0.69	2.50	3.98
58.100	62.24	61.47	0.77	2.50	4.04
58.200	62.18	61.46	0.72	2.50	3.94
58.300	62.23	61.45	0.78	2.50	4.07
58.400	62.22	61.43	0.79	2.50	4.07
58.500	62.18	61.42	0.76	2.50	4.01
58.600	62.17	61.41	0.76	2.50	4.02
58.700	62.18	61.40	0.78	2.50	4.06
58.800	62.14	61.39	0.75	2.50	4.00
58.900	62.10	61.38	0.72	2.50	3.95
59.000	62.05	61.36	0.69	2.50	3.87
59.100	62.12	61.35	0.77	2.50	4.03
59.200	62.01	61.34	0.67	2.50	3.84
59.300	62.05	61.33	0.72	2.50	3.94
59.400	61.97	61.32	0.65	2.50	3.80
59.500	61.92	61.31	0.61	2.50	3.73
59.600	61.94	61.29	0.65	2.50	3.79
59.700	61.93	61.28	0.65	2.50	3.79
59.800	61.94	61.27	0.67	2.50	3.84
59.900	61.93	61.26	0.67	2.50	3.84
60.000	61.80	61.25	0.55	2.50	3.60
60.100	61.79	61.24	0.55	2.50	3.61
60.200	61.81	61.22	0.59	2.50	3.67
60.300	61.79	61.21	0.58	2.50	3.65
60.400	61.76	61.20	0.56	2.50	3.62
60.500	61.73	61.19	0.54	2.50	3.58
60.600	61.70	61.18	0.52	2.50	3.54
60.700	61.70	61.17	0.53	2.50	3.57
60.800	61.69	61.15	0.54	2.50	3.57
60.900	61.75	61.14	0.61	2.50	3.72
61.000	61.74	61.13	0.61	2.50	3.72
61.100	61.72	61.12	0.60	2.50	3.70
61.200	61.73	61.11	0.62	2.50	3.75
61.300	61.70	61.10	0.60	2.50	3.71
61.400	61.68	61.08	0.60	2.50	3.69

SISTEMA HIDROVIAL 290. Tramo Ruta 13 - Ruta 77			
Desde Progresiva 30+200 a Progresiva 67+685			
Variante de traza desde Progresiva 50+200 a Progresiva 56+000			
EXCAVACIÓN DE CANAL			
COMPUTOS METRICOS			
Progresivas (m)	Area (") (m2)	Volumen (") (m3)	Volumen Acumulado (") (m3)
4.300	1.61	160.10	36665.83
4.200	1.42	151.42	36817.24
4.100	1.50	145.99	36963.23
4.000	1.41	145.56	37108.79
3.900	1.33	137.03	37245.83
3.800	1.28	130.22	37376.04
3.700	1.29	128.21	37504.25
3.600	1.66	147.40	37651.65
3.500	1.31	148.56	37800.21
3.400	1.55	143.08	37943.29
3.300	1.83	159.01	38102.30
3.200	1.16	139.39	38241.69
3.100	2.37	176.48	38418.17
3.000	1.21	179.16	38597.33
2.900	1.58	139.50	38736.83
2.800	1.58	157.84	38894.66
2.700	1.32	144.80	39039.46
2.600	0.98	114.88	39154.34
2.500	1.13	105.52	39259.85
2.400	0.69	91.22	39351.07
2.300	1.29	98.59	39450.66
2.200	1.38	133.37	39583.44
2.100	1.29	133.37	39716.81
2.000	1.75	151.69	39868.50
1.900	1.75	174.78	40043.28
1.800	1.65	169.74	40213.02
1.700	1.39	152.08	40365.10
1.600	1.74	156.74	40521.84
1.500	1.58	166.16	40687.99
1.400	1.56	157.25	40845.25
1.300	1.64	160.17	41005.41
1.200	1.49	156.42	41161.83
1.100	1.60	154.29	41316.12
1.000	2.17	185.65	41504.77
0.900	2.08	212.61	41717.37
0.800	2.20	213.96	41931.33
0.700	1.93	206.32	42137.65
0.600	1.83	187.88	42325.53
0.500	1.99	190.97	42516.50
0.400	2.60	229.29	42745.79
0.300	2.34	247.17	42992.96
0.200	2.32	233.25	43226.20
0.100	1.66	198.78	43424.99
0.000	2.05	185.40	43610.38
-0.100	0.00	102.64	43713.02
56.100	2.68	133.76	43846.78
56.200	2.60	263.76	44110.54
56.300	2.29	244.33	44354.87
56.400	2.65	247.07	44601.94
56.500	2.50	257.68	44859.62
56.600	2.51	250.22	45109.84
56.700	2.47	248.88	45358.72
56.800	2.44	245.54	45604.27
56.900	2.06	224.69	45828.96
57.000	2.74	239.63	46068.59
57.100	2.70	272.04	46340.63
57.200	2.39	254.45	46595.08
57.300	2.08	223.32	46818.40
57.400	2.56	232.03	47050.44
57.500	2.33	244.33	47294.77
57.600	2.45	238.95	47533.72
57.700	1.88	216.63	47750.35
57.800	1.74	180.98	47931.33
57.900	2.20	196.79	48128.12
58.000	2.52	235.81	48363.93
58.100	2.33	242.33	48606.26
58.200	2.57	245.04	48851.31
58.300	2.58	257.74	49109.05
58.400	2.47	252.36	49361.40
58.500	2.47	246.97	49608.37
58.600	2.56	251.69	49860.06
58.700	2.45	250.35	50110.41
58.800	2.33	239.01	50349.42
58.900	2.18	225.89	50575.32
59.000	2.51	234.55	50809.86
59.100	2.12	231.34	51041.20
59.200	2.32	222.04	51263.24
59.300	2.06	219.86	51482.10
59.400	1.91	198.41	51680.51
59.500	2.03	197.15	51877.66
59.600	2.04	203.43	52081.09
59.700	2.12	207.88	52288.97
59.800	2.13	212.34	52501.31
59.900	1.69	190.64	52691.95
60.000	1.69	169.81	52860.86
60.100	1.81	174.38	53035.65
60.200	1.78	179.22	53215.07
60.300	1.71	174.37	53399.44
60.400	1.64	167.74	53587.18
60.500	1.58	161.18	53718.36
60.600	1.62	159.99	53878.35
60.700	1.63	162.37	54040.72
60.800	1.69	175.73	54216.45
60.900	1.89	188.10	54405.55
61.000	1.86	187.87	54593.41
61.100	1.94	190.36	54783.77
61.200	1.88	190.98	54974.75
61.300	1.84	186.03	55160.78

SISTEMA HIDROVIAL 290. Tramo Ruta 13 - Ruta 77

COMPUTO DEL VOLUMEN YA EXCAVADO

Según perfiles transversales relevados en Septiembre de 2001			
Progresiva	Area	Volumen	Vol. Acum.

(*) Corresponde a la sección total sin descontar lo ya excavado.

Planilla 1-a-1

SISTEMA HIDROVIAL 290. Tramo Ruta 13 - Ruta 77
Desde Progresiva 30+200 a Progresiva 67+685
Variante de traza desde Progresiva 50+200 a Progresiva 56+000
EXCAVACIÓN DE CANAL
DATOS DE PROYECTO

Progresivas (m)	Terreno Natural (m)	Solera proyecto (m)	Corte (m)	Base fondo (m)	Boca (m)
61.500	61.69	61.07	0.62	2.50	3.74
61.600	61.74	61.06	0.68	2.50	3.86
61.700	61.71	61.05	0.66	2.50	3.92
61.800	61.66	61.04	0.62	2.50	3.75
61.900	61.72	61.03	0.69	2.50	3.89
62.000	61.57	61.01	0.56	2.50	3.61
62.100	61.56	61.00	0.56	2.50	3.62
62.200	61.69	60.99	0.70	2.50	3.90
62.300	61.63	60.98	0.65	2.50	3.80
62.400	61.58	60.97	0.61	2.50	3.73
62.500	61.54	60.96	0.58	2.50	3.67
62.600	61.71	60.94	0.77	2.50	4.03
62.700	61.62	60.93	0.69	2.50	3.88
62.800	61.64	60.92	0.72	2.50	3.94
62.900	61.61	60.91	0.70	2.50	3.90
63.000	61.58	60.90	0.68	2.50	3.87
63.100	61.52	60.89	0.63	2.50	3.77
63.200	61.58	60.87	0.71	2.50	3.91
63.300	61.54	60.86	0.68	2.50	3.86
63.400	61.55	60.85	0.70	2.50	3.90
63.500	61.54	60.84	0.70	2.50	3.90
63.600	61.47	60.83	0.64	2.50	3.79
63.700	61.51	60.82	0.69	2.50	3.89
63.800	61.47	60.80	0.67	2.50	3.83
63.900	61.37	60.79	0.58	2.50	3.66
64.000	61.35	60.78	0.57	2.50	3.64
64.100	61.30	60.77	0.53	2.50	3.56
64.200	61.29	60.76	0.53	2.50	3.57
64.300	61.29	60.75	0.54	2.50	3.59
64.400	61.27	60.73	0.54	2.50	3.57
64.500	61.27	60.72	0.55	2.50	3.60
64.600	61.20	60.71	0.49	2.50	3.48
64.700	61.22	60.70	0.52	2.50	3.54
64.800	61.17	60.69	0.48	2.50	3.47
64.900	61.27	60.68	0.59	2.50	3.69
65.000	61.10	60.66	0.44	2.50	3.37
65.100	61.17	60.65	0.52	2.50	3.54
65.200	61.18	60.64	0.54	2.50	3.58
65.300	61.22	60.63	0.59	2.50	3.88
65.400	61.20	60.62	0.58	2.50	3.67
65.500	61.15	60.61	0.54	2.50	3.59
65.600	61.13	60.59	0.54	2.50	3.57
65.700	61.07	60.58	0.49	2.50	3.48
65.800	61.15	60.57	0.58	2.50	3.66
65.900	61.02	60.56	0.46	2.50	3.42
66.000	61.04	60.55	0.49	2.50	3.49
66.100	60.93	60.54	0.39	2.50	3.29
66.200	61.10	60.52	0.58	2.50	3.65
66.300	60.96	60.51	0.45	2.50	3.40
66.400	61.11	60.50	0.61	2.50	3.72
66.500	60.98	60.49	0.49	2.50	3.48
66.600	60.97	60.48	0.49	2.50	3.49
66.700	60.91	60.47	0.44	2.50	3.39
66.800	60.90	60.45	0.45	2.50	3.39
66.900	60.91	60.44	0.47	2.50	3.44
67.000	60.83	60.43	0.40	2.50	3.30
67.100	60.94	60.42	0.52	2.50	3.54
67.200	60.85	60.41	0.44	2.50	3.39
67.300	60.85	60.39	0.46	2.50	3.41
67.400	60.80	60.38	0.42	2.50	3.33
67.500	60.89	60.37	0.52	2.50	3.54
67.600	60.88	60.36	0.52	2.50	3.54
67.685	60.80	60.35	0.45	2.50	3.40

Planilla 3 -a-1

SISTEMA HIDROVIAL 290. Tramo Ruta 13 - Ruta 77
Desde Progresiva 30+200 a Progresiva 67+685
Variante de traza desde Progresiva 50+200 a Progresiva 56+000
CONFORMACIÓN DE CAMINO
DATOS DE PROYECTO

Progresivas (m)	Terreno Natural (m)	Calzada de Proyecto (*) (m)	Altura sobre T.N. (m)	Ancho Calzada (m)
30.200	66.05	66.79	0.74	9.00
30.250	66.05	66.78	0.73	9.00
30.300	66.12	66.77	0.65	9.00
30.400	66.02	66.75	0.73	9.00
30.500	66.01	66.74	0.73	9.00
30.600	65.99	66.72	0.73	9.00
30.700	66.04	66.70	0.70	9.00
30.800	65.85	66.69	0.84	9.00
30.900	66.00	66.67	0.67	9.00
31.000	65.90	66.65	0.75	9.00
31.100	65.99	66.63	0.64	9.00
31.200	65.90	66.62	0.72	9.00
31.300	65.89	66.60	0.71	9.00
31.400	65.77	66.58	0.81	9.00
31.500	65.83	66.57	0.74	9.00
31.600	65.84	66.55	0.71	9.00
31.700	65.71	66.53	0.82	9.00
31.800	65.80	66.52	0.72	9.00
31.900	65.69	66.50	0.81	9.00
32.000	65.71	66.48	0.77	9.00
32.100	65.67	66.46	0.79	9.00
32.200	65.59	66.45	0.86	9.00
32.300	65.63	66.43	0.80	9.00

Planilla 1-b-1

SISTEMA HIDROVIAL 290. Tramo Ruta 13 - Ruta 77
Desde Progresiva 30+200 a Progresiva 67+685
Variante de traza desde Progresiva 50+200 a Progresiva 56+000
EXCAVACIÓN DE CANAL
COMPUTOS METRICOS

Progresivas (m)	Area (*) (m2)	Volumen (*) (m3)	Volumen Acumulado (*) (m3)
61.400	1.93	186.51	55349.30
61.500	2.16	204.25	55553.55
61.600	2.09	212.44	55765.99
61.700	1.94	201.67	55967.66
61.800	2.22	208.10	56175.77
61.900	1.70	185.85	56371.62
62.000	1.71	170.21	56541.83
62.100	2.24	197.13	56738.96
62.200	2.05	214.44	56953.41
62.300	1.91	197.93	57151.34
62.400	1.80	185.48	57336.82
62.500	2.50	215.23	57552.05
62.600	2.19	234.72	57786.77
62.700	2.32	225.43	58012.20
62.800	2.24	226.03	58240.22
62.900	2.17	220.88	58461.10
63.000	1.99	206.10	58669.20
63.100	2.26	212.64	58881.83
63.200	2.15	220.90	59102.74
63.300	2.24	219.61	59322.34
63.400	2.24	224.14	59546.48
63.500	2.02	213.26	59759.74
63.600	2.22	211.96	59971.70
63.700	2.11	216.41	60188.11
63.800	1.78	194.41	60382.52
63.900	1.75	176.36	60558.88
64.000	1.61	167.94	60726.82
64.100	1.62	161.34	60888.16
64.200	1.66	163.73	61051.90
64.300	1.63	164.33	61216.23
64.400	1.67	164.93	61381.16
64.500	1.46	156.71	61537.87
64.600	1.58	151.96	61689.83
64.700	1.44	150.80	61840.63
64.800	1.64	164.07	62004.70
64.900	1.29	156.09	62160.80
65.000	1.56	142.25	62303.05
65.100	1.64	160.21	62463.26
65.200	1.83	173.45	62636.71
65.300	1.80	181.31	62818.02
65.400	1.66	172.83	62990.85
65.500	1.63	164.39	63155.24
65.600	1.46	154.38	63309.62
65.700	1.79	162.22	63471.85
65.800	1.37	157.63	63629.47
65.900	1.48	142.15	63771.62
66.000	1.14	136.97	63908.59
66.100	1.77	145.84	64048.43
66.200	1.32	154.76	64203.20
66.300	1.90	160.91	64364.11
66.400	1.47	168.37	64532.48
66.500	1.48	147.36	64679.84
66.600	1.31	139.34	64819.18
66.700	1.32	131.32	64950.50
66.800	1.39	135.31	65085.81
66.900	1.16	127.50	65213.31
67.000	1.58	136.81	65350.13
67.100	1.30	144.06	65494.19
67.200	1.34	132.48	65626.67
67.300	1.22	128.00	65754.67
67.400	1.56	139.01	65893.68
67.500	1.57	156.77	66050.45
67.600	1.33	144.91	66195.36
67.685	0.00	56.42	66251.78

Volumen a excavar (m3):	66251,78
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Planilla 1-b-1

SISTEMA HIDROVIAL 290. Tramo Ruta 13 - Ruta 77
Desde Progresiva 30+200 a Progresiva 67+685
Variante de traza desde Progresiva 50+200 a Progresiva 56+000
COMPUTO DEL VOLUMEN YA EXCAVADO

Según perfiles transversales relevados en Septiembre de 2001

Progresiva	Area	Volumen	Vol. Acum.
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SISTEMA HIDROVIAL 290. Tramo Ruta 13 - Ruta 77
Desde Progresiva 30+200 a Progresiva 67+685
Variante de traza desde Progresiva 50+200 a Progresiva 56+000
EXCAVACIÓN DE CANAL
DATOS DE PROYECTO

Planilla 1-a-1

Progresivas (m)	Terreno Natural (m)	Solera proyecto (m)	Corte (m)	Base fondo (m)	Boca (m)
32.400	65.64	66.41	0.77	9.00	
32.500	65.67	66.40	0.73	9.00	
32.600	65.61	66.38	0.77	9.00	
32.700	65.57	66.36	0.79	9.00	
32.800	65.47	66.35	0.88	9.00	
32.900	65.45	66.33	0.88	9.00	
33.000	65.45	66.31	0.86	9.00	
33.100	65.62	66.29	0.67	9.00	
33.200	65.54	66.28	0.74	9.00	
33.300	65.50	66.25	0.75	9.00	
33.400	65.41	66.24	0.83	9.00	
33.500	65.43	66.23	0.80	9.00	
33.600	65.35	66.21	0.86	9.00	
33.700	65.42	66.19	0.77	9.00	
33.800	65.40	66.18	0.78	9.00	
33.900	65.38	66.16	0.78	9.00	
34.000	65.37	66.14	0.77	9.00	
34.100	65.30	66.12	0.82	9.00	
34.200	65.36	66.11	0.75	9.00	
34.300	65.37	66.09	0.72	9.00	
34.400	65.39	66.07	0.68	9.00	
34.500	65.34	66.06	0.72	9.00	
34.600	65.25	66.04	0.79	9.00	
34.700	65.32	66.02	0.70	9.00	
34.800	65.30	66.01	0.71	9.00	
34.900	65.35	65.99	0.64	9.00	
35.000	65.11	65.97	0.86	9.00	
35.100	65.16	65.95	0.79	9.00	
35.200	65.21	65.94	0.73	9.00	
35.300	65.23	65.92	0.69	9.00	
35.400	65.19	65.90	0.71	9.00	
35.500	65.15	65.89	0.74	9.00	
35.600	65.10	65.87	0.77	9.00	
35.700	65.10	65.85	0.75	9.00	
35.800	65.12	65.84	0.72	9.00	
35.900	65.18	65.82	0.64	9.00	
36.000	65.10	65.80	0.70	9.00	
36.100	65.02	65.78	0.76	9.00	
36.200	65.03	65.77	0.74	9.00	
36.300	64.53	65.75	1.22	9.00	
36.400	64.93	65.73	0.80	9.00	
36.500	65.06	65.72	0.66	9.00	
36.600	65.00	65.70	0.70	9.00	
36.700	64.97	65.68	0.71	9.00	
36.800	65.01	65.67	0.66	9.00	
36.900	65.03	65.65	0.62	9.00	
37.000	64.95	65.63	0.68	9.00	
37.100	64.92	65.61	0.69	9.00	
37.200	64.87	65.60	0.73	9.00	
37.300	64.84	65.58	0.74	9.00	
37.400	64.87	65.56	0.69	9.00	
37.500	64.89	65.55	0.66	9.00	
37.600	64.83	65.53	0.70	9.00	
37.700	64.82	65.51	0.69	9.00	
37.800	64.78	65.50	0.72	9.00	
37.900	64.82	65.48	0.66	9.00	
38.000	64.75	65.46	0.71	9.00	
38.100	65.00	65.44	0.44	9.00	
38.200	64.60	65.43	0.83	9.00	
38.300	64.71	65.41	0.70	9.00	
38.400	64.78	65.39	0.61	9.00	
38.500	64.71	65.38	0.67	9.00	
38.600	64.64	65.36	0.72	9.00	
38.700	64.71	65.34	0.63	9.00	
38.800	64.62	65.33	0.71	9.00	
38.900	64.61	65.31	0.70	9.00	
39.000	64.50	65.29	0.79	9.00	
39.100	64.56	65.27	0.71	9.00	
39.200	64.50	65.25	0.76	9.00	
39.300	64.43	65.24	0.81	9.00	
39.400	64.46	65.22	0.76	9.00	
39.500	64.42	65.21	0.79	9.00	
39.600	64.42	65.19	0.77	9.00	
39.700	64.38	65.17	0.79	9.00	
39.800	64.36	65.16	0.80	9.00	
39.900	64.41	65.14	0.73	9.00	
40.000	64.29	65.12	0.83	9.00	
40.100	64.26	65.10	0.84	9.00	
40.200	64.26	65.09	0.83	9.00	
40.300	64.34	65.07	0.73	9.00	
40.400	64.22	65.05	0.83	9.00	
40.500	64.22	65.04	0.82	9.00	
40.600	64.23	65.02	0.79	9.00	
40.700	64.17	65.00	0.83	9.00	
40.800	64.18	64.99	0.81	9.00	
40.900	64.21	64.97	0.76	9.00	
41.000	64.14	64.95	0.81	9.00	
41.100	64.14	64.93	0.79	9.00	
41.200	64.15	64.92	0.77	9.00	
41.300	64.12	64.90	0.78	9.00	
41.400	64.10	64.88	0.78	9.00	
41.500	64.09	64.87	0.78	9.00	
41.600	64.04	64.85	0.81	9.00	
41.700	64.03	64.83	0.80	9.00	
41.800	64.04	64.82	0.78	9.00	
41.900	64.00	64.80	0.80	9.00	
42.000	64.00	64.78	0.78	9.00	
42.100	63.93	64.76	0.83	9.00	
42.200	63.89	64.75	0.86	9.00	

SISTEMA HIDROVIAL 290. Tramo Ruta 13 - Ruta 77
Desde Progresiva 30+200 a Progresiva 67+685
Variante de traza desde Progresiva 50+200 a Progresiva 56+000
EXCAVACIÓN DE CANAL
COMPUTOS METRICOS

Planilla 1-b-1

Progresivas (m)	Area (") (m2)	Volumen (") (m3)	Volumen Acumulado (") (m3)
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SISTEMA HIDROVIAL 290. Tramo Ruta 13 - Ruta 77

COMPUTO DEL VOLUMEN YA EXCAVADO

Según perfiles transversales relevados en Septiembre de 2001

Progresiva	Area	Volumen	Vol. Acum.
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SISTEMA HIDROVIAL 290. Tramo Ruta 13 - Ruta 77					Planilla 1-a-1
Desde Progresiva 30+200 a Progresiva 67+685					
Variante de traza desde Progresiva 50+200 a Progresiva 56+000					
EXCAVACIÓN DE CANAL					
DATOS DE PROYECTO					
Progresivas (m)	Terreno Natural (m)	Solera proyecto (m)	Corte (m)	Base fondo (m)	Boca (m)
42.300	63.93	64.73	0.80	9.00	
42.400	63.88	64.71	0.83	9.00	
42.500	63.86	64.70	0.84	9.00	
42.600	63.88	64.68	0.80	9.00	
42.700	63.87	64.66	0.79	9.00	
42.800	63.88	64.65	0.77	9.00	
42.900	63.80	64.63	0.83	9.00	
43.000	63.80	64.61	0.81	9.00	
43.100	63.80	64.59	0.79	9.00	
43.200	63.72	64.58	0.86	9.00	
43.300	63.64	64.56	0.92	9.00	
43.400	63.64	64.54	0.90	9.00	
43.500	63.74	64.53	0.79	9.00	
43.600	63.66	64.51	0.85	9.00	
43.700	63.68	64.49	0.81	9.00	
43.800	63.68	64.48	0.80	9.00	
43.900	63.63	64.46	0.83	9.00	
44.000	63.65	64.44	0.79	9.00	
44.100	63.62	64.43	0.81	9.00	
44.200	63.59	64.42	0.83	9.00	
44.300	63.58	64.41	0.83	9.00	
44.400	63.53	64.40	0.87	9.00	
44.500	63.54	64.39	0.85	9.00	
44.600	63.58	64.36	0.80	9.00	
44.700	63.58	64.36	0.79	9.00	
44.800	63.54	64.35	0.81	9.00	
44.900	63.53	64.34	0.81	9.00	
45.000	63.50	64.33	0.83	9.00	
45.100	63.50	64.32	0.82	9.00	
45.200	63.44	64.31	0.87	9.00	64.16
45.300	63.40	64.30	0.90	9.00	64.15
45.400	63.44	64.29	0.85	9.00	64.14
45.500	63.45	64.28	0.83	9.00	64.13
45.600	63.39	64.27	0.88	9.00	64.12
45.700	63.42	64.25	0.83	9.00	64.10
45.800	63.41	64.24	0.83	9.00	64.09
45.900	63.38	64.23	0.85	9.00	64.08
46.000	63.37	64.22	0.85	9.00	64.07
46.100	64.27	64.21	0.84	9.00	64.06
46.200	63.35	64.20	0.85	9.00	64.05
46.300	63.22	64.19	0.97	9.00	64.04
46.400	62.99	64.18	1.19	9.00	64.03
46.500	63.27	64.17	0.90	9.00	64.02
46.600	63.31	64.16	0.85	9.00	64.01
46.700	63.29	64.14	0.85	9.00	63.99
46.800	63.23	64.13	0.90	9.00	63.98
46.900	63.21	64.12	0.91	9.00	63.97
47.000	63.25	64.11	0.86	9.00	63.96
47.100	63.23	64.10	0.87	9.00	63.95
47.200	63.19	64.09	0.91	9.00	63.94
47.300	63.15	64.08	0.93	9.00	63.93
47.400	63.15	64.07	0.92	9.00	63.92
47.500	63.12	64.06	0.94	9.00	63.91
47.600	63.07	64.05	0.98	9.00	63.90
47.700	63.09	64.03	0.94	9.00	63.88
47.800	63.12	64.02	0.90	9.00	63.87
47.900	63.10	64.01	0.91	9.00	63.86
48.000	63.09	64.00	0.91	9.00	63.85
48.100	63.07	63.99	0.92	9.00	63.84
48.200	63.07	63.98	0.91	9.00	63.83
48.300	63.08	63.97	0.89	9.00	63.82
48.400	63.09	63.96	0.87	9.00	63.81
48.500	63.07	63.95	0.88	9.00	63.80
48.600	63.06	63.94	0.88	9.00	63.79
48.700	63.04	63.92	0.89	9.00	63.77
48.800	63.06	63.91	0.85	9.00	63.76
48.900	62.95	63.90	0.95	9.00	63.75
49.000	62.99	63.89	0.90	9.00	63.74
49.100	63.00	63.88	0.88	9.00	63.73
49.200	62.97	63.87	0.90	9.00	63.72
49.300	62.94	63.86	0.92	9.00	63.71
49.400	62.88	63.85	0.97	9.00	63.70
49.500	62.92	63.84	0.92	9.00	63.69
49.600	62.99	63.83	0.84	9.00	63.68
49.700	62.95	63.81	0.86	9.00	63.66
49.800	62.96	63.80	0.84	9.00	63.65
49.900	62.86	63.79	0.93	9.00	63.64
50.000	62.88	63.78	0.90	9.00	63.63
50.100	62.81	63.78	0.97	9.00	63.63
Variante de traza desde Progresiva 4+800 a Progresiva -0+100					
4.800	62.81	63.78	0.97	9.00	63.63
4.700	62.86	63.77	0.91	9.00	63.62
4.600	62.80	63.76	0.96	9.00	63.61
4.500	62.76	63.74	0.98	9.00	63.59
4.400	62.72	63.73	1.01	9.00	63.58
4.300	62.74	63.72	0.98	9.00	63.57
4.200	62.73	63.70	0.97	9.00	63.55
4.100	62.66	63.69	1.03	9.00	63.54
4.000	62.67	63.67	1.00	9.00	63.52
3.900	62.63	63.66	1.03	9.00	63.51
3.800	62.59	63.65	1.06	9.00	63.50
3.700	62.56	63.63	1.07	9.00	63.48
3.600	62.55	63.62	1.07	9.00	63.47
3.500	62.65	63.61	0.96	9.00	63.46
3.400	62.53	63.59	1.06	9.00	63.44
3.300	62.59	63.58	0.99	9.00	63.43
3.200	62.60	63.56	0.96	9.00	63.41
3.100	62.44	63.55	1.11	9.00	63.40
3.000	62.78	63.54	0.76	9.00	63.39

SISTEMA HIDROVIAL 290. Tramo Ruta 13 - Ruta 77				Planilla 1-b-1
Desde Progresiva 30+200 a Progresiva 67+685				
Variante de traza desde Progresiva 50+200 a Progresiva 56+000				
EXCAVACIÓN DE CANAL				
COMPUTOS METRICOS				
Progresivas (m)	Area (*) (m2)	Volumen (*) (m3)	Volumen Acumulado (*) (m3)	
				64.16
				64.31
				64.15
				64.30
				64.29
				64.14
				64.28
				64.12
				64.27
				64.10
				64.25
				64.24
				64.08
				64.23
				64.07
				64.21
				64.06
				64.20
				64.04
				64.19
				64.03
				64.18
				64.02
				64.17
				64.01
				64.16
				63.99
				64.13
				64.12
				63.96
				64.11
				63.95
				64.09
				64.08
				63.92
				64.07
				64.06
				63.90
				63.88
				63.87
				63.86
				64.01
				63.85
				64.00
				63.99
				63.98
				63.97
				63.96
				63.80
				63.79
				63.77
				63.91
				63.90
				63.88
				63.87
				63.86
				63.85
				63.84
				63.83
				63.81
				63.80
				63.79
				63.78
				63.63
				63.78
				63.77
				63.76
				63.74
				63.73
				63.72
				63.70
				63.69
				63.68
				63.67
				63.66
				63.65
				63.64
				63.63
				63.62
				63.61
				63.59
				63.58
				63.56
				63.55
				63.54

SISTEMA HIDROVIAL 290. Tramo Ruta 13 - Ruta 77				Planilla 1-b-1
Desde Progresiva 30+200 a Progresiva 67+685				
Variante de traza desde Progresiva 50+200 a Progresiva 56+000				
EXCAVACIÓN DE CANAL				
COMPUTO DEL VOLUMEN YA EXCAVADO				
Según perfiles transversales relevados en Septiembre de 2001				
Progresiva	Area	Volumen	Vol. Acum.	

SISTEMA HIDROVIAL 290. Tramo Ruta 13 - Ruta 77					Planilla 1-a-1	
Desde Progresiva 30+200 a Progresiva 67+685						
Variante de traza desde Progresiva 50+200 a Progresiva 56+000						
EXCAVACIÓN DE CANAL						
DATOS DE PROYECTO						
Progresivas (m)	Terreno Natural (m)	Solera proyecto (m)	Corte (m)	Base fondo (m)	Boca (m)	
2.900	62.43	63.52	1.09	9.00		63.37
2.800	62.53	63.51	0.98	9.00		63.36
2.700	62.63	63.50	0.87	9.00		
2.600	62.45	63.48	1.03	9.00		
2.500	62.34	63.47	1.13	9.00		
2.400	62.39	63.46	1.07	9.00		
2.300	62.24	63.44	1.20	9.00		
2.200	62.44	63.43	0.99	9.00		
2.100	62.47	63.41	0.94	9.00		
2.000	62.44	63.40	0.96	9.00		
1.900	62.58	63.39	0.81	9.00		
1.800	62.58	63.37	0.79	9.00		
1.700	62.35	63.36	0.81	9.00		
1.600	62.46	63.35	0.89	9.00		
1.500	62.55	63.33	0.78	9.00		
1.400	62.49	63.32	0.83	9.00		
1.300	62.47	63.31	0.84	9.00		
1.200	62.48	63.29	0.81	9.00		
1.100	62.42	63.28	0.86	9.00		
1.000	62.44	63.26	0.82	9.00		
0.900	62.59	63.25	0.66	9.00		
0.800	62.55	63.24	0.69	9.00		
0.700	62.57	63.22	0.65	9.00		
0.600	62.48	63.21	0.73	9.00		
0.500	62.44	63.20	0.76	9.00		
0.400	62.47	63.18	0.71	9.00		
0.300	62.62	63.17	0.55	9.00		
0.200	62.54	63.15	0.61	9.00		
0.100	62.52	63.14	0.62	9.00		
0.000	62.32	63.13	0.81	9.00		
-0.100	62.42	63.11	0.69	9.00		
56.100	62.43	63.10	0.67	9.00		
56.200	62.50	63.09	0.59	9.00		
56.300	62.47	63.08	0.61	9.00		
56.400	62.38	63.07	0.69	9.00		
56.500	62.46	63.06	0.60	9.00		
56.600	62.41	63.04	0.63	9.00		
56.700	62.40	63.03	0.63	9.00		
56.800	62.38	63.02	0.64	9.00		
56.900	62.36	63.01	0.65	9.00		
57.000	62.25	63.00	0.75	9.00		
57.100	62.41	62.99	0.58	9.00		
57.200	62.39	62.97	0.58	9.00		
57.300	62.30	62.96	0.66	9.00		
57.400	62.21	62.95	0.74	9.00		
57.500	62.32	62.94	0.62	9.00		
57.600	62.25	62.93	0.68	9.00		
57.700	62.27	62.92	0.65	9.00		
57.800	62.11	62.90	0.79	9.00		
57.900	62.06	62.89	0.83	9.00		
58.000	62.17	62.88	0.71	9.00		
58.100	62.24	62.87	0.63	9.00		
58.200	62.18	62.86	0.68	9.00		
58.300	62.23	62.85	0.62	9.00		
58.400	62.22	62.83	0.61	9.00		
58.500	62.18	62.82	0.64	9.00		
58.600	62.17	62.81	0.64	9.00		
58.700	62.18	62.80	0.62	9.00		
58.800	62.14	62.79	0.65	9.00		
58.900	62.10	62.78	0.68	9.00		
59.000	62.05	62.76	0.71	9.00		
59.100	62.12	62.75	0.63	9.00		
59.200	62.01	62.74	0.73	9.00		
59.300	62.05	62.73	0.68	9.00		
59.400	61.97	62.72	0.75	9.00		
59.500	61.92	62.71	0.79	9.00		
59.600	61.94	62.69	0.75	9.00		
59.700	61.93	62.68	0.75	9.00		
59.800	61.94	62.67	0.73	9.00		
59.900	61.93	62.66	0.73	9.00		
60.000	61.80	62.65	0.85	9.00		
60.100	61.79	62.64	0.85	9.00		
60.200	61.81	62.62	0.81	9.00		
60.300	61.79	62.61	0.82	9.00		
60.400	61.76	62.60	0.84	9.00		
60.500	61.73	62.59	0.86	9.00		
60.600	61.70	62.58	0.88	9.00		
60.700	61.70	62.57	0.87	9.00		
60.800	61.69	62.55	0.86	9.00		
60.900	61.75	62.54	0.79	9.00		
61.000	61.74	62.53	0.79	9.00		
61.100	61.72	62.52	0.80	9.00		
61.200	61.73	62.51	0.78	9.00		
61.300	61.70	62.50	0.80	9.00		
61.400	61.68	62.48	0.80	9.00		
61.500	61.69	62.47	0.78	9.00		
61.600	61.74	62.46	0.72	9.00		
61.700	61.71	62.45	0.74	9.00		
61.800	61.66	62.44	0.78	9.00		
61.900	61.72	62.43	0.71	9.00		
62.000	61.57	62.41	0.84	9.00		
62.100	61.56	62.40	0.84	9.00		
62.200	61.69	62.39	0.70	9.00		
62.300	61.63	62.38	0.75	9.00		
62.400	61.58	62.37	0.79	9.00		
62.500	61.54	62.36	0.82	9.00		
62.600	61.71	62.34	0.63	9.00		
62.700	61.62	62.33	0.71	9.00		

SISTEMA HIDROVIAL 290. Tramo Ruta 13 - Ruta 77				Planilla 1-b-1	
Desde Progresiva 30+200 a Progresiva 67+685					
Variante de traza desde Progresiva 50+200 a Progresiva 56+000					
EXCAVACIÓN DE CANAL					
COMPUTOS METRICOS					
Progresivas (m)	Area (*) (m2)	Volumen (*) (m3)	Volumen Acumulado (*) (m3)		

63.52
63.51

SISTEMA HIDROVIAL 290. Tramo Ruta 13 - Ruta 77				Planilla 1-b-1	
COMPUTO DEL VOLUMEN YA EXCAVADO					
Según perfiles transversales relevados en Septiembre de 2001					
Progresiva	Area	Volumen	Vol. Acum.		

SISTEMA HIDROVIAL 290. Tramo Ruta 13 - Ruta 77
Desde Progresiva 30+200 a Progresiva 67+685
Variante de traza desde Progresiva 50+200 a Progresiva 56+000
EXCAVACIÓN DE CANAL
DATOS DE PROYECTO

Planilla 1-a-1

Progresivas (m)	Terreno Natural (m)	Solera proyecto (m)	Corte (m)	Base fondo (m)	Boca (m)
62,800	61.64	62.32	0.68	9.00	
62,800	61.61	62.31	0.70	9.00	
63,000	61.58	62.30	0.72	9.00	
63,100	61.52	62.29	0.77	9.00	
63,200	61.58	62.27	0.69	9.00	
63,300	61.54	62.26	0.72	9.00	
63,400	61.55	62.25	0.70	9.00	
63,500	61.54	62.24	0.70	9.00	
63,600	61.47	62.23	0.76	9.00	
63,700	61.51	62.22	0.71	9.00	
63,800	61.47	62.20	0.73	9.00	
63,900	61.37	62.19	0.82	9.00	
64,000	61.35	62.18	0.83	9.00	
64,100	61.30	62.17	0.87	9.00	
64,200	61.29	62.16	0.87	9.00	
64,300	61.29	62.15	0.86	9.00	
64,400	61.27	62.13	0.86	9.00	
64,500	61.27	62.12	0.85	9.00	
64,600	61.20	62.11	0.91	9.00	
64,700	61.22	62.10	0.88	9.00	
64,800	61.17	62.09	0.92	9.00	
64,900	61.27	62.08	0.81	9.00	
65,000	61.10	62.06	0.96	9.00	
65,100	61.17	62.05	0.88	9.00	
65,200	61.18	62.04	0.86	9.00	
65,300	61.22	62.03	0.81	9.00	
65,400	61.20	62.02	0.82	9.00	
65,500	61.15	62.01	0.86	9.00	
65,600	61.13	61.99	0.86	9.00	
65,700	61.07	61.98	0.91	9.00	
65,800	61.15	61.97	0.82	9.00	
65,900	61.02	61.96	0.94	9.00	
66,000	61.04	61.95	0.91	9.00	
66,100	60.93	61.94	1.01	9.00	
66,200	61.10	61.92	0.82	9.00	
66,300	60.96	61.91	0.95	9.00	
66,400	61.11	61.90	0.79	9.00	
66,500	60.98	61.89	0.91	9.00	
66,600	60.97	61.88	0.91	9.00	
66,700	60.91	61.87	0.96	9.00	
66,800	60.90	61.85	0.95	9.00	
66,900	60.91	61.84	0.93	9.00	
67,000	60.83	61.83	1.00	9.00	
67,100	60.94	61.82	0.88	9.00	
67,200	60.85	61.81	0.96	9.00	
67,300	60.85	61.79	0.94	9.00	
67,400	60.80	61.78	0.98	9.00	
67,500	60.89	61.77	0.88	9.00	
67,600	60.88	61.76	0.88	9.00	
67,685	60.90	61.75	0.95	9.00	

SISTEMA HIDROVIAL 290. Tramo Ruta 13 - Ruta 77
Desde Progresiva 30+200 a Progresiva 67+685
Variante de traza desde Progresiva 50+200 a Progresiva 56+000
EXCAVACIÓN DE CANAL
COMPUTOS METRICOS

Planilla 1-b-1

Progresivas (m)	Area (*) (m2)	Volumen (*) (m3)	Volumen Acumulado (*) (m3)
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SISTEMA HIDROVIAL 290. Tramo Ruta 13 - Ruta 77
COMPUTO DEL VOLUMEN YA EXCAVADO

Según perfiles transversales relevados en Septiembre de 2001

Progresiva	Area	Volumen	Vol. Acum.
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