

Planilla 1-a-2

SISTEMA HIDROVIAL 290. Tramo Ruta 77 - Bifurcación
Desde Progresiva 0+000 a Progresiva 17+200
Variante de traza desde Progresiva 0+000 a Progresiva 1+800
EXCAVACIÓN DE CANAL
DATOS DE PROYECTO

Progresivas (m)	Terreno Natural (m)	Solera proyecto (m)	Corte (m)	Base fondo (m)	Boca (m)
0.000 (**)	66.05	63.89	2.16	8.20	12.52
Variante de traza desde Progresiva 0+000 a Progresiva 2+765					
0.000	66.16	63.89	2.27	8.20	12.74
0.100	66.08	63.90	2.18	8.20	12.55
0.200	66.14	63.92	2.22	8.20	12.65
0.300	66.11	63.93	2.18	8.20	12.56
0.400	66.05	63.94	2.11	8.20	12.42
0.500	66.11	63.96	2.16	8.20	12.51
0.600	66.13	63.97	2.16	8.20	12.52
0.700	66.07	63.98	2.09	8.20	12.38
0.800	66.07	63.99	2.08	8.20	12.35
0.900	66.06	64.01	2.05	8.20	12.31
1.000	66.07	64.02	2.05	8.20	12.30
1.100	65.85	64.03	1.82	8.20	11.83
1.200	65.91	64.05	1.86	8.20	11.93
1.300	65.98	64.06	1.92	8.20	12.04
1.400	66.03	64.07	1.96	8.20	12.12
1.500	66.14	64.09	2.06	8.20	12.31
1.600	66.10	64.10	2.00	8.20	12.20
1.700	66.03	64.11	1.92	8.20	12.04
1.800	66.14	64.12	2.02	8.20	12.23
1.900	66.12	64.14	1.98	8.20	12.17
2.000	66.11	64.15	1.96	8.20	12.12
2.100	66.10	64.16	1.94	8.20	12.07
2.200	66.15	64.18	1.97	8.20	12.15
2.300	66.10	64.19	1.91	8.20	12.02
2.400	66.11	64.20	1.91	8.20	12.02
2.500	66.07	64.22	1.85	8.20	11.91
2.600	66.17	64.23	1.94	8.20	12.08
2.700	66.13	64.24	1.89	8.20	11.98
2.765	66.35	64.25	2.10	8.20	12.40

1.800	66.41	64.28	2.13	5.00	9.27
2.000	66.37	64.34	2.03	5.00	9.05
2.200	66.54	64.41	2.13	5.00	9.28
2.400	66.68	64.48	2.18	5.00	9.37
2.600	66.55	64.54	2.01	5.00	9.02
2.800	66.59	64.61	1.98	5.00	8.96
3.000	66.71	64.68	2.03	5.00	9.07
3.200	66.57	64.74	1.83	5.00	8.66
3.400	66.66	64.81	1.85	5.00	8.70
3.600	66.74	64.88	1.96	5.00	8.73
3.800	66.81	64.94	1.87	5.00	8.74
4.000	66.87	65.01	1.86	5.00	8.72
4.200	66.99	65.08	1.91	5.00	8.83
4.400	67.12	65.14	1.98	5.00	8.96
4.600	67.25	65.21	2.04	5.00	9.08
4.800	67.15	65.28	1.87	5.00	8.75
5.000	67.33	65.34	1.99	5.00	8.98
5.200	67.23	65.38	1.85	6.20	9.89
5.400	67.42	65.43	1.99	6.20	10.19
5.600	67.38	65.47	1.91	6.20	10.02
5.800	67.53	65.51	2.02	6.20	10.23
6.000	67.57	65.56	2.01	6.20	10.23
6.200	67.50	65.60	1.90	6.20	10.00
6.400	67.79	65.64	2.15	6.20	10.50
6.600	67.73	65.68	2.05	3.50	7.59
6.800	67.98	65.73	2.25	3.50	8.01
7.000	67.70	65.77	1.93	3.50	7.36
7.200	67.84	65.81	2.03	3.50	7.56
7.400	67.81	65.86	1.95	3.50	7.41
7.600	67.94	65.90	2.04	3.50	7.58
7.800	68.06	65.94	2.12	3.50	7.74
8.000	68.17	65.98	2.19	3.50	7.87
8.200	68.09	66.03	2.06	3.50	7.63
8.400	68.18	66.07	2.11	3.50	7.72
8.600	68.11	66.11	2.00	3.50	7.50
8.800	68.10	66.15	1.95	3.50	7.39
9.000	68.18	66.20	1.98	3.50	7.46
9.200	68.06	66.25	1.81	3.20	6.82
9.400	68.16	66.30	1.86	3.20	6.92
9.600	68.28	66.35	1.93	3.20	7.05
9.800	68.28	66.41	1.87	3.20	6.95
10.000	68.35	66.46	1.89	3.20	6.98
10.200	68.47	66.51	1.96	3.20	7.12
10.400	68.59	66.56	2.03	3.20	7.26
10.600	68.53	66.61	1.92	3.20	7.03
10.800	68.62	66.67	1.95	3.20	7.11
11.000	68.72	66.72	2.00	3.20	7.20
11.200	68.94	66.77	2.17	3.20	7.54
11.400	68.85	66.82	2.03	3.20	7.26

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SISTEMA HIDROVIAL 290. Tramo Ruta 77 - Bifurcación
Desde Progresiva 0+000 a Progresiva 17+200
Variante de traza desde Progresiva 0+000 a Progresiva 1+800
EXCAVACIÓN DE CANAL
COMPUTOS MÉTRICOS

Progresivas (m)	Area (*) (m2)	Volumen (*) (m3)	Volumen Acumulado (*) (m3)
0.000 (**)			
Variante de traza desde Progresiva 0+000 a Progresiva 2+765			
0.000	23.77	2317.88	2317.88
0.100	22.59	2288.69	4606.57
0.200	23.18	2291.20	6897.76
0.300	22.64	2218.51	9116.27
0.400	21.73	2202.21	11318.49
0.500	22.32	2235.88	13554.37
0.600	22.40	2194.82	15749.19
0.700	21.49	2141.33	17890.53
0.800	21.33	2119.12	20009.65
0.900	21.05	2103.10	22112.74
1.000	21.01	1960.67	24073.41
1.100	18.76	1848.01	25921.42
1.200	19.44	1910.09	27831.51
1.300	19.89	1966.59	29798.10
1.400	21.07	2048.17	31846.27
1.500	20.42	2074.92	33921.19
1.600	19.42	1992.14	35913.33
1.700	20.60	2000.69	37914.02
1.800	20.19	2039.42	39953.43
1.900	19.91	2005.32	41958.76
2.000	19.64	1977.45	43936.21
2.100	20.08	1985.94	45922.15
2.200	19.32	1970.28	47892.43
2.300	19.29	1930.41	49822.84
2.400	18.65	1896.90	51719.74
2.500	19.70	1917.39	53637.13
2.600	19.06	1937.69	55574.83
2.765	21.64	1322.59	56897.41

1.800	15.22	1843.00	58740.41
2.000	14.25	2946.97	61687.37
2.200	15.19	2944.00	64631.38
2.400	15.69	3088.44	67719.81
2.600	14.07	2975.85	70695.66
2.800	13.83	2789.62	73485.29
3.000	14.31	2813.85	76299.14
3.200	12.48	2678.90	78978.04
3.400	12.68	2516.12	81494.16
3.600	12.90	2548.11	84042.28
3.800	12.83	2562.76	86605.03
4.000	12.77	2559.97	89165.00
4.200	13.24	2601.07	91766.07
4.400	13.80	2704.31	94470.38
4.600	14.38	2817.98	97288.36
4.800	12.99	2726.52	100014.78
5.000	13.89	2678.48	102693.25
5.200	14.85	2874.30	105567.55
5.400	16.33	3117.38	108684.93
5.600	15.49	3181.49	111866.42
5.800	16.57	3206.40	115072.82
6.000	16.55	3312.10	118384.92
6.200	15.41	3195.13	121580.04
6.400	17.94	3334.41	124914.45
6.600	11.35	2928.54	127842.99
6.800	12.96	2430.88	130273.87
7.000	10.48	2344.46	132618.33
7.200	11.21	2168.93	134787.25
7.400	10.66	2186.95	136974.20
7.600	11.32	2197.85	139172.05
7.800	11.91	2322.36	141494.41
8.000	12.43	2433.95	143928.36
8.200	11.48	2391.24	146319.60
8.400	11.84	2332.29	148651.89
8.600	10.98	2282.69	150934.58
8.800	10.59	2157.57	153092.15
9.000	10.87	2145.90	155238.05
9.200	9.07	1993.79	157231.83
9.400	9.40	1847.01	159078.85
9.600	9.87	1927.48	161006.32
9.800	9.51	1938.57	162944.89
10.000	9.64	1914.71	164859.60
10.200	10.12	1975.20	166834.80
10.400	10.60	2072.04	168806.85
10.600	9.80	2040.91	170947.75
10.800	10.07	1987.76	172935.51
11.000	10.42	2048.98	174984.48
11.200	11.66	2207.19	177191.67
11.400	10.60	2225.99	179417.66

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SISTEMA HIDROVIAL 290. Tramo Ruta 77 - Bifurcación
COMPUTO DEL VOLUMEN YA EXCAVADO
Según perfiles transversales relevados en Septiembre de 2001

Progresiva	Area	Volumen	Vol. Acum.
1.800	6.25		
4.000	6.25	13750.0	13750.0
9.000	7.75	35000.0	48750.0
13.000	7.00	29500.0	78250.0
15.900	7.00	20300.0	98550.0
17.200	7.00	9100.0	107650.0

TOTAL VOLUMEN YA EXCAVADO (m3): 107650.0

(*) Corresponde al punto de mayor cota, Pendiente del 3 % hacia el lado opuesto al canal.
(**) Prog. 0+000 coincidente con 30+200 Tramo: Ruta Prov. Nº 13 - Ruta Prov. Nº 77.

11,600	68,79	66,87	1,92	3,20	7,03
11,800	68,76	66,93	1,83	3,20	6,87
12,000	68,99	66,98	2,01	3,20	7,22
12,200	68,99	67,03	1,96	3,20	7,12
12,400	69,08	67,08	2,00	3,20	7,20
12,600	68,98	67,13	1,85	3,20	6,89
12,800	69,21	67,19	2,02	3,20	7,25
13,000	69,25	67,24	2,01	3,20	7,22
13,200	69,41	67,29	2,12	3,20	7,44
13,400	69,36	67,34	2,02	3,20	7,24
13,600	69,30	67,39	1,91	3,20	7,01
13,800	69,47	67,45	2,02	3,20	7,25
14,000	69,44	67,50	1,94	3,20	7,08
14,200	69,53	67,55	1,98	3,20	7,16
14,400	69,64	67,60	2,04	3,20	7,28
14,600	69,66	67,65	2,01	3,20	7,21
14,800	69,59	67,71	1,88	3,20	6,97
15,000	69,62	67,76	1,86	3,20	6,92
15,200	69,74	67,81	1,83	3,20	7,06
15,400	69,83	67,86	1,97	3,20	7,14
15,600	69,89	67,91	1,98	3,20	7,15
15,800	70,18	67,97	2,21	3,20	7,63
16,000	70,07	68,02	2,05	3,20	7,30
16,200	70,01	68,07	1,94	3,20	7,08
16,400	70,14	68,12	2,02	3,20	7,24
16,600	70,18	68,17	2,01	3,20	7,21
16,800	70,32	68,23	2,09	3,20	7,39
17,000	70,52	68,28	2,24	3,20	7,68
17,200	70,66	68,33	2,33	3,20	7,86

11,600	9,80	2040,91	181458,57
11,800	9,23	1903,89	183362,46
12,000	10,49	1972,33	185334,78
12,200	10,12	2060,46	187395,24
12,400	10,39	2050,36	189445,61
12,600	9,32	1970,49	191416,10
12,800	10,58	1989,27	193405,36
13,000	10,49	2106,44	195511,81
13,200	11,28	2176,95	197698,75
13,400	10,53	2181,29	199870,04
13,600	9,73	2026,64	201696,68
13,800	10,58	2030,98	203927,66
14,000	9,99	2056,36	205994,02
14,200	10,26	2024,66	208008,68
14,400	10,68	2093,59	210102,27
14,600	10,45	2112,28	212214,55
14,800	9,58	2002,59	214217,14
15,000	9,43	1900,80	216117,94
15,200	9,90	1933,07	218051,01
15,400	10,17	2007,59	220058,60
15,600	10,23	2040,28	222098,88
15,800	11,99	2221,90	224320,78
16,000	10,78	2276,83	226597,61
16,200	9,97	2075,32	228672,93
16,400	10,53	2050,60	230723,52
16,600	10,45	2097,76	232821,29
16,800	11,09	2153,34	234974,63
17,000	12,20	2329,13	237303,75
17,200	12,89	2509,07	239812,82

Volumen teórico (m3): 239813

Volumen ya excavado (m3): 107650

Volumen a excavar (m3): 132163

SISTEMA HIDROVIAL 290. Tramo Ruta 77 - Bifurcación
Desde Progresiva 0+000 a Progresiva 17+200
Variante de traza desde Progresiva 0+000 a Progresiva 1+800
EXCAVACIÓN DE CUNETAS
DATOS DE PROYECTO

Progresivas (m)	Terreno Natural (m)	Solera proyecto (m)	Corte (m)	Base fondo (m)	Boca (m)	
0,000 (**)	66,05	65,39	0,66	2,20	3,52	63,89
Variante de traza desde Progresiva 0+000 a Progresiva 2+765						
0,000	66,16	65,39	0,77	2,20	3,74	63,89
0,100	66,08	65,39	0,69	2,20	3,58	63,90
0,200	66,14	65,39	0,75	2,20	3,70	63,92
0,300	66,11	65,39	0,72	2,20	3,64	63,93
0,400	66,05	65,39	0,66	2,20	3,52	63,94
0,500	66,11	65,39	0,72	2,20	3,64	63,96
0,600	66,13	65,39	0,74	2,20	3,68	63,97
0,700	66,07	65,39	0,68	2,20	3,56	63,98
0,800	66,07	65,39	0,68	2,20	3,55	63,99
0,900	66,06	65,41	0,65	2,20	3,51	64,01
1,000	66,07	65,42	0,65	2,20	3,50	64,02
1,100	65,85	65,43	0,42	2,20	3,03	64,03
1,200	65,91	65,45	0,46	2,20	3,13	64,05
1,300	65,98	65,46	0,52	2,20	3,24	64,06
1,400	66,03	65,47	0,56	2,20	3,32	64,07
1,500	66,14	65,49	0,66	2,20	3,51	64,09
1,600	66,10	65,50	0,60	2,20	3,40	64,10
1,700	66,03	65,51	0,52	2,20	3,24	64,11
1,800	66,14	65,52	0,62	2,20	3,43	64,12
1,900	66,12	65,54	0,58	2,20	3,37	64,14
2,000	66,11	65,55	0,56	2,20	3,32	64,15
2,100	66,10	65,56	0,54	2,20	3,27	64,16
2,200	66,15	65,58	0,57	2,20	3,35	64,18
2,300	66,10	65,59	0,51	2,20	3,22	64,19
2,400	66,11	65,60	0,51	2,20	3,22	64,20
2,500	66,07	65,62	0,45	2,20	3,11	64,22
2,600	66,17	65,63	0,54	2,20	3,28	64,23
2,700	66,13	65,64	0,49	2,20	3,18	64,24
2,765	66,35	65,65	0,70	2,20	3,60	64,25
1,800	66,41	65,68	0,73	1,50	2,97	64,28
2,000	66,37	65,74	0,63	1,50	2,75	64,34
2,200	66,54	65,81	0,73	1,50	2,96	64,41
2,400	66,66	65,88	0,78	1,50	3,07	64,48
2,600	66,55	65,94	0,61	1,50	2,72	64,54
2,800	66,59	66,01	0,58	1,50	2,66	64,61
3,000	66,71	66,08	0,63	1,50	2,77	64,68
3,200	66,57	66,14	0,43	1,50	2,36	64,74
3,400	66,66	66,21	0,45	1,50	2,40	64,81
3,600	66,74	66,28	0,46	1,50	2,43	64,88

SISTEMA HIDROVIAL 290. Tramo Ruta 77 - Bifurcación
Desde Progresiva 0+000 a Progresiva 17+200
Variante de traza desde Progresiva 0+000 a Progresiva 1+800
EXCAVACIÓN DE CUNETAS
CÓMPUTOS MÉTRICOS

Progresivas (m)	Area (m2)	Volumen (m3)	Volumen Acumulado (m3)
0,000 (**)			
Variante de traza desde Progresiva 0+000 a Progresiva 2+765			
0,000	2,29	214,05	214,05
0,100	1,99	210,33	424,38
0,200	2,21	215,75	640,12
0,300	2,10	199,50	839,62
0,400	1,89	206,70	1039,13
0,500	2,18	213,90	1253,03
0,600	1,96	205,70	1459,72
0,700	1,94	195,13	1654,85
0,800	1,86	180,36	1845,21
0,900	1,85	185,78	2030,99
1,000	1,09	147,19	2178,18
1,100	1,24	116,37	2294,55
1,200	1,42	132,69	2427,23
1,300	1,54	147,83	2575,06
1,400	1,87	170,45	2745,51
1,500	1,69	177,84	2923,36
1,600	1,41	154,90	3078,25
1,700	1,73	157,29	3235,54
1,800	1,62	167,86	3403,40
1,900	1,55	158,40	3561,81
2,000	1,47	150,77	3712,57
2,100	1,59	153,10	3865,68
2,200	1,39	148,88	4014,56
2,300	1,38	138,05	4152,61
2,400	1,21	129,18	4281,79
2,500	1,49	134,71	4416,50
2,600	1,31	140,05	4556,55
2,765	2,03	108,77	4665,33
1,800	1,64	183,57	4848,90
2,000	1,33	297,40	5146,30
2,200	1,63	296,45	5442,75
2,400	1,79	342,10	5784,85
2,600	1,28	72,72	6081,98
2,800	1,21	248,92	6340,90
3,000	1,35	256,26	6597,16
3,200	0,82	217,83	6814,99
3,400	0,88	170,47	6985,46
3,600	0,91	179,27	7164,73

3,800	66,81	66,34	0,47	1,50	2,44	64,94
4,000	66,87	66,41	0,46	1,50	2,42	65,01
4,200	66,99	66,48	0,51	1,50	2,53	65,08
4,400	67,12	66,54	0,58	1,50	2,66	65,14
4,600	67,25	66,61	0,64	1,50	2,78	65,21
4,800	67,15	66,68	0,47	1,50	2,45	65,28
5,000	67,33	66,74	0,59	1,80	2,98	65,34
5,200	67,23	66,78	0,45	1,80	2,69	65,38
5,400	67,42	66,83	0,59	1,80	2,99	65,43
5,600	67,38	66,87	0,51	1,80	2,82	65,47
5,800	67,53	66,91	0,62	1,80	3,03	65,51
6,000	67,57	66,96	0,61	1,80	3,03	65,56
6,200	67,50	67,00	0,50	1,80	2,80	65,60
6,400	67,79	67,04	0,75	1,80	3,30	65,64
6,600	67,73	67,08	0,65	1,80	3,09	65,68
6,800	67,98	67,13	0,85	1,80	3,51	65,73
7,000	67,70	67,17	0,53	1,80	2,86	65,77
7,200	67,84	67,21	0,63	1,80	3,06	65,81
7,400	67,81	67,26	0,55	1,80	2,91	65,86
7,600	67,94	67,30	0,64	1,80	3,08	65,90
7,800	68,06	67,34	0,72	1,80	3,24	65,94
8,000	68,17	67,38	0,79	1,80	3,37	65,98
8,200	68,09	67,43	0,66	1,80	3,13	66,03
8,400	68,18	67,47	0,71	1,80	3,22	66,07
8,600	68,11	67,51	0,60	1,80	3,00	66,11
8,800	68,10	67,55	0,55	1,80	2,89	66,15
9,000	68,18	67,60	0,58	1,50	2,66	66,20
9,200	68,06	67,65	0,41	1,50	2,32	66,25
9,400	68,16	67,70	0,46	1,50	2,42	66,30
9,600	68,28	67,75	0,53	1,50	2,55	66,35
9,800	68,28	67,81	0,47	1,50	2,45	66,41
10,000	68,35	67,86	0,49	1,50	2,48	66,46
10,200	68,47	67,91	0,56	1,50	2,62	66,51
10,400	68,59	67,96	0,63	1,50	2,76	66,56
10,600	68,53	68,01	0,52	1,50	2,53	66,61
10,800	68,62	68,07	0,55	1,50	2,61	66,67
11,000	68,72	68,12	0,60	1,50	2,70	66,72
11,200	68,94	68,17	0,77	1,50	3,04	66,77
11,400	68,85	68,22	0,63	1,50	2,76	66,82
11,600	68,79	68,27	0,52	1,50	2,53	66,87
11,800	68,76	68,33	0,43	1,50	2,37	66,93
12,000	68,99	68,38	0,61	1,50	2,72	66,98
12,200	68,99	68,43	0,56	1,50	2,62	67,03
12,400	69,08	68,48	0,60	1,50	2,70	67,08
12,600	68,98	68,53	0,45	1,50	2,39	67,13
12,800	69,21	68,59	0,62	1,50	2,75	67,19
13,000	69,25	68,64	0,61	1,50	2,72	67,24
13,200	69,41	68,69	0,72	1,50	2,94	67,29
13,400	69,36	68,74	0,62	1,50	2,74	67,34
13,600	69,30	68,79	0,51	1,50	2,51	67,39
13,800	69,47	68,85	0,62	1,50	2,75	67,45
14,000	69,44	68,90	0,54	1,50	2,58	67,50
14,200	69,53	68,95	0,58	1,50	2,66	67,55
14,400	69,64	69,00	0,64	1,50	2,78	67,60
14,600	69,66	69,05	0,61	1,50	2,71	67,65
14,800	69,59	69,11	0,48	1,50	2,47	67,71
15,000	69,62	69,16	0,46	1,50	2,42	67,76
15,200	69,74	69,21	0,53	1,50	2,56	67,81
15,400	69,83	69,26	0,57	1,50	2,64	67,86
15,600	69,89	69,31	0,58	1,50	2,65	67,91
15,800	70,18	69,37	0,81	1,50	3,13	67,97
16,000	70,07	69,42	0,65	1,50	2,80	68,02
16,200	70,01	69,47	0,54	1,50	2,58	68,07
16,400	70,14	69,52	0,62	1,50	2,74	68,12
16,600	70,18	69,57	0,61	1,50	2,71	68,17
16,800	70,32	69,63	0,69	1,50	2,89	68,23
17,000	70,52	69,68	0,84	1,50	3,18	68,28
17,200	70,66	69,73	0,93	1,50	3,36	68,33

3,800	0,92	183,33	7348,06
4,000	0,90	182,56	7530,62
4,200	1,04	194,18	7724,79
4,400	1,20	223,84	7948,63
4,600	1,37	257,52	8206,15
4,800	0,94	231,17	8437,32
5,000	1,41	234,30	8671,62
5,200	1,00	240,55	8912,16
5,400	1,42	241,86	9154,02
5,600	1,18	259,60	9413,62
5,800	1,49	266,95	9680,57
6,000	1,48	297,48	9978,05
6,200	1,15	263,74	10241,78
6,400	1,91	306,25	10548,03
6,600	1,58	348,81	10896,84
6,800	2,26	384,32	11281,16
7,000	1,24	349,92	11631,08
7,200	1,52	275,91	11988,99
7,400	1,31	282,95	12189,93
7,600	1,57	287,37	12477,30
7,800	1,81	337,90	12815,20
8,000	2,03	384,52	13199,72
8,200	1,63	366,62	13586,54
8,400	1,78	341,90	13908,43
8,600	1,43	321,81	14230,25
8,800	1,28	271,21	14501,45
9,000	1,21	249,09	14750,54
9,200	0,78	199,64	14950,18
9,400	0,90	168,13	15118,31
9,600	1,07	196,40	15314,71
9,800	0,94	200,29	15515,00
10,000	0,98	191,73	15706,73
10,200	1,15	213,52	15920,25
10,400	1,34	249,17	16169,42
10,600	1,04	237,83	16407,24
10,800	1,14	217,98	16625,22
11,000	1,27	240,50	16865,72
11,200	1,75	301,51	17167,23
11,400	1,34	308,61	17475,83
11,600	1,04	237,83	17713,66
11,800	0,84	188,11	17901,78
12,000	1,29	213,35	18115,12
12,200	1,15	244,78	18359,90
12,400	1,26	240,99	18500,89
12,600	0,87	212,41	18813,30
12,800	1,33	219,49	19032,79
13,000	1,29	261,96	19294,75
13,200	1,60	289,27	19584,02
13,400	1,31	290,91	19874,93
13,600	1,02	232,56	20107,49
13,800	1,33	234,20	20341,69
14,000	1,11	243,38	20585,07
14,200	1,21	231,48	20816,55
14,400	1,36	257,21	21073,76
14,600	1,28	264,20	21337,96
14,800	0,96	223,61	21561,77
15,000	0,91	186,82	21748,59
15,200	1,08	198,39	21946,98
15,400	1,18	225,21	22172,19
15,600	1,20	237,20	22409,40
15,800	1,88	308,12	22717,51
16,000	1,40	328,65	23046,37
16,200	1,10	250,64	23297,01
16,400	1,31	241,22	23538,22
16,600	1,28	258,68	23796,91
16,800	1,52	280,06	24076,97
17,000	1,97	349,65	24426,62
17,200	2,26	423,39	24850,01

Volumen a excavar (m3): 24850,01

SISTEMA HIDROVIAL 290. Tramo Ruta 77 - Bifurcación						Planilla 3-a-2
Desde Progresiva 0+000 a Progresiva 17+200						
Variante de traza desde Progresiva 0+000 a Progresiva 1+800						
CONFORMACIÓN DE CAMINO						
DATOS DE PROYECTO						
Progresivas (m)	Terreno Natural (m)	Calzada de Proyecto (m)	Altura sobre T.N. (m)	Ancho Calzada (m)		
0,000 (**)	66,05	66,79	0,74	9,00		63,89
Variante de traza desde Progresiva 0+000 a Progresiva 2+765						
0,000	66,16	66,79	0,63	9,00		63,89
0,100	66,08	66,79	0,71	9,00		63,90
0,200	66,14	66,79	0,65	9,00		63,92

(*) Corresponde al punto de mayor cota, Pendiente del 3 % hacia el lado opuesto al canal.
 (**) Prog. 0+000 coincidente con 30+200 Tramo: Ruta Prov. Nº 13 - Ruta Prov. Nº 77.

SISTEMA HIDROVIAL 290. Tramo Ruta 77 - Bifurcación
Desde Progresiva 0+000 a Progresiva 17+200
Variante de traza desde Progresiva 0+000 a Progresiva 1+800
CONFORMACIÓN DE CAMINO
DATOS DE PROYECTO

Progresivas (m)	Terreno Natural (m)	Calzada de Proyecto (m)	Altura sobre T.N. (m)	Ancho Calzada (m)	
0.300	66.11	66.79	0.68	9.00	63.93
0.400	66.06	66.79	0.74	9.00	63.94
0.500	66.11	66.79	0.68	9.00	63.96
0.600	66.13	66.79	0.66	9.00	63.97
0.700	66.07	66.79	0.72	9.00	63.98
0.800	66.07	66.79	0.72	9.00	63.99
0.900	66.06	66.81	0.75	9.00	64.01
1.000	66.07	66.82	0.75	9.00	64.02
1.100	65.85	66.83	0.98	9.00	64.03
1.200	65.91	66.85	0.94	9.00	64.05
1.300	65.98	66.86	0.88	9.00	64.06
1.400	66.03	66.87	0.84	9.00	64.07
1.500	66.14	66.89	0.74	9.00	64.09
1.600	66.10	66.90	0.80	9.00	64.10
1.700	66.03	66.91	0.88	9.00	64.11
1.800	66.14	66.92	0.78	9.00	64.12
1.900	66.12	66.94	0.82	9.00	64.14
2.000	66.11	66.95	0.84	9.00	64.15
2.100	66.10	66.96	0.86	9.00	64.16
2.200	66.15	66.98	0.83	9.00	64.18
2.300	66.10	66.99	0.89	9.00	64.19
2.400	66.11	67.00	0.89	9.00	64.20
2.500	66.07	67.02	0.95	9.00	64.22
2.600	66.17	67.03	0.86	9.00	64.23
2.700	66.13	67.04	0.91	9.00	64.24
2.765	66.35	67.05	0.70	9.00	64.25
1.800	66.41	67.08	0.67	9.00	64.28
2.000	66.37	67.14	0.77	9.00	64.34
2.200	66.54	67.21	0.67	9.00	64.41
2.400	66.66	67.28	0.62	9.00	64.48
2.600	66.55	67.34	0.79	9.00	64.54
2.800	66.59	67.41	0.82	9.00	64.61
3.000	66.71	67.45	0.74	9.00	64.68
3.200	66.57	67.50	0.93	9.00	64.74
3.400	66.66	67.55	0.89	9.00	64.81
3.600	66.74	67.60	0.86	9.00	64.88
3.800	66.81	67.65	0.84	9.00	64.94
4.000	66.87	67.70	0.83	9.00	65.01
4.200	66.99	67.75	0.76	9.00	65.08
4.400	67.12	67.80	0.68	9.00	65.14
4.600	67.25	67.85	0.60	9.00	65.21
4.800	67.15	67.88	0.73	9.00	65.28
5.000	67.33	67.94	0.61	9.00	65.34
5.200	67.23	67.98	0.75	9.00	65.38
5.400	67.42	68.03	0.61	9.00	65.43
5.600	67.38	68.07	0.69	9.00	65.47
5.800	67.53	68.11	0.58	9.00	65.51
6.000	67.57	68.16	0.59	9.00	65.56
6.200	67.50	68.20	0.70	9.00	65.60
6.400	67.79	68.24	0.45	9.00	65.64
6.600	67.73	68.28	0.55	9.00	65.68
6.800	67.98	68.33	0.35	9.00	65.73
7.000	67.70	68.37	0.67	9.00	65.77
7.200	67.84	68.41	0.57	9.00	65.81
7.400	67.81	68.46	0.65	9.00	65.86
7.600	67.94	68.50	0.56	9.00	65.90
7.800	68.06	68.54	0.48	9.00	65.94
8.000	68.17	68.58	0.41	9.00	65.98
8.200	68.09	68.63	0.54	9.00	66.03
8.400	68.18	68.67	0.49	9.00	66.07
8.600	68.11	68.71	0.60	9.00	66.11
8.800	68.10	68.75	0.65	9.00	66.15
9.000	68.18	68.80	0.62	9.00	66.20
9.200	68.06	68.85	0.79	9.00	66.25
9.400	68.16	68.90	0.74	9.00	66.30
9.600	68.28	68.95	0.67	9.00	66.35
9.800	68.28	69.01	0.73	9.00	66.41
10.000	68.35	69.06	0.71	9.00	66.46
10.200	68.47	69.11	0.64	9.00	66.51
10.400	68.59	69.16	0.57	9.00	66.56
10.600	68.53	69.21	0.68	9.00	66.61
10.800	68.62	69.27	0.65	9.00	66.67
11.000	68.72	69.32	0.60	9.00	66.72
11.200	68.94	69.37	0.43	9.00	66.77
11.400	68.85	69.42	0.57	9.00	66.82
11.600	68.79	69.47	0.68	9.00	66.87
11.800	68.76	69.53	0.77	9.00	66.93
12.000	68.99	69.58	0.59	9.00	66.98
12.200	68.99	69.63	0.64	9.00	67.03
12.400	69.08	69.68	0.60	9.00	67.08

67.08	64.28
67.14	64.34
67.21	64.41
67.28	64.48
67.34	64.54
	64.61
67.48	64.68
67.54	64.74
67.61	64.81
67.68	64.88
67.74	64.94
67.81	65.01
67.88	65.08
67.94	65.14
68.01	65.21
	65.28
	65.34
	65.38
	65.43
	65.47
	65.51
	65.56
	65.60
	65.64
	65.68
	65.73
	65.77
	65.81
	65.86
	65.90
	65.94
	65.98
	66.03
	66.07
	66.11
	66.15
	66.20
69.05	66.25
69.10	66.30
69.15	66.35
69.21	66.41
69.26	66.46
69.31	66.51
69.36	66.56
69.41	66.61
69.47	66.67
69.52	66.72
69.57	66.77
69.62	66.82
69.67	66.87
69.73	66.93
69.78	66.98
69.83	67.03
69.88	67.08

SISTEMA HIDROVIAL 290. Tramo Ruta 77 - Bifurcación
Desde Progresiva 0+000 a Progresiva 17+200
Variante de traza desde Progresiva 0+000 a Progresiva 1+800
CONFORMACIÓN DE CAMINO
DATOS DE PROYECTO

Progresivas (m)	Terreno Natural (m)	Calzada de Proyecto (m)	Altura sobre T.N. (m)	Ancho Calzada (m)	
12,600	68.98	69.73	0.75	9.00	68.99
12,800	69.21	69.79	0.58	9.00	68.99
13,000	69.25	69.84	0.59	9.00	70.04
13,200	69.41	69.89	0.48	9.00	70.09
13,400	69.36	69.94	0.58	9.00	70.14
13,600	69.30	69.99	0.69	9.00	70.19
13,800	69.47	70.05	0.58	9.00	70.25
14,000	69.44	70.10	0.66	9.00	70.30
14,200	69.53	70.15	0.62	9.00	70.35
14,400	69.64	70.20	0.56	9.00	70.40
14,600	69.66	70.25	0.59	9.00	70.45
14,800	69.59	70.31	0.72	9.00	70.51
15,000	69.62	70.36	0.74	9.00	70.56
15,200	69.74	70.41	0.67	9.00	70.61
15,400	69.83	70.46	0.63	9.00	70.66
15,600	69.89	70.51	0.62	9.00	70.71
15,800	70.18	70.57	0.39	9.00	70.77
16,000	70.07	70.62	0.55	9.00	70.82
16,200	70.01	70.67	0.66	9.00	70.87
16,400	70.14	70.52	0.38	9.00	70.72
16,600	70.18	70.57	0.39	9.00	70.77
16,800	70.32	70.63	0.31	9.00	70.83
17,000	70.52	70.68	0.16	9.00	70.88
17,200	70.66	70.73	0.07	9.00	70.93

68.99	67.13
68.99	67.19
70.04	67.24
70.09	67.29
70.14	67.34
70.19	67.39
70.25	67.45
70.30	67.50
70.35	67.55
70.40	67.60
70.45	67.65
70.51	67.71
70.56	67.76
70.61	67.81
70.66	67.86
70.71	67.91
70.77	67.97
70.82	68.02
70.87	68.07
70.72	68.12
70.77	68.17
70.83	68.23
70.88	68.28
70.93	68.33