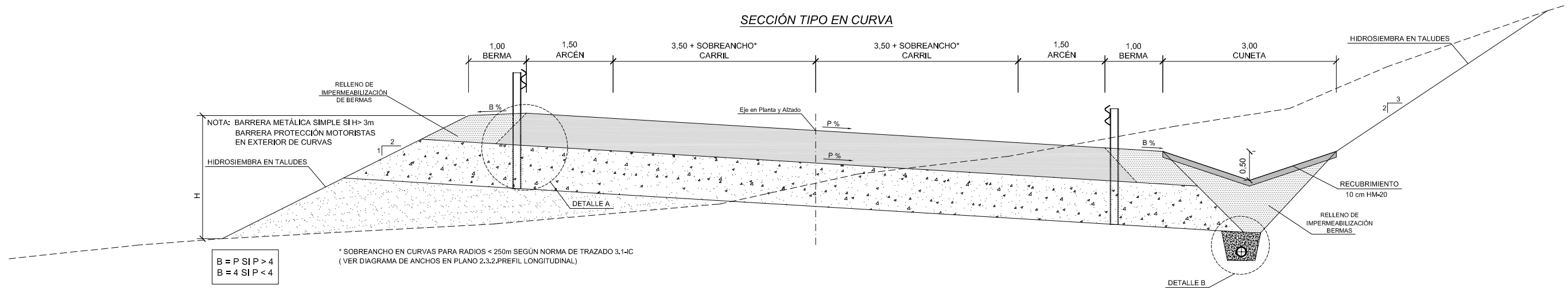
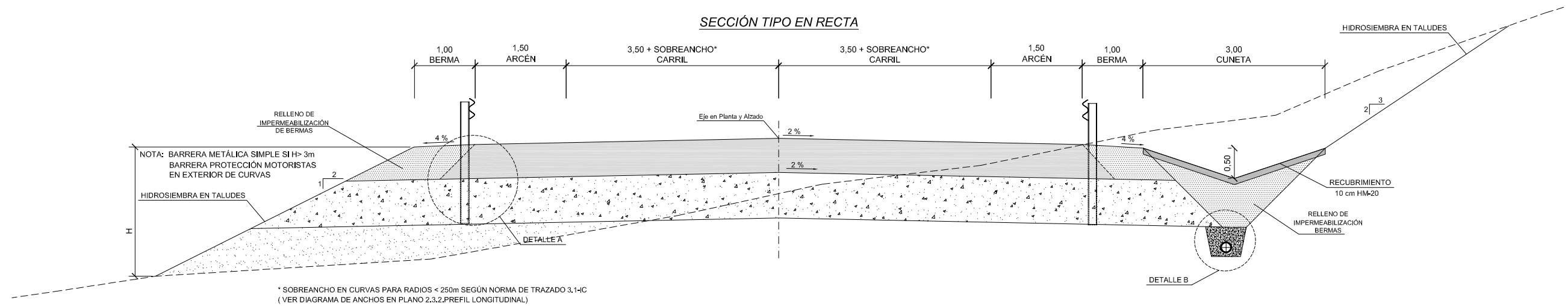


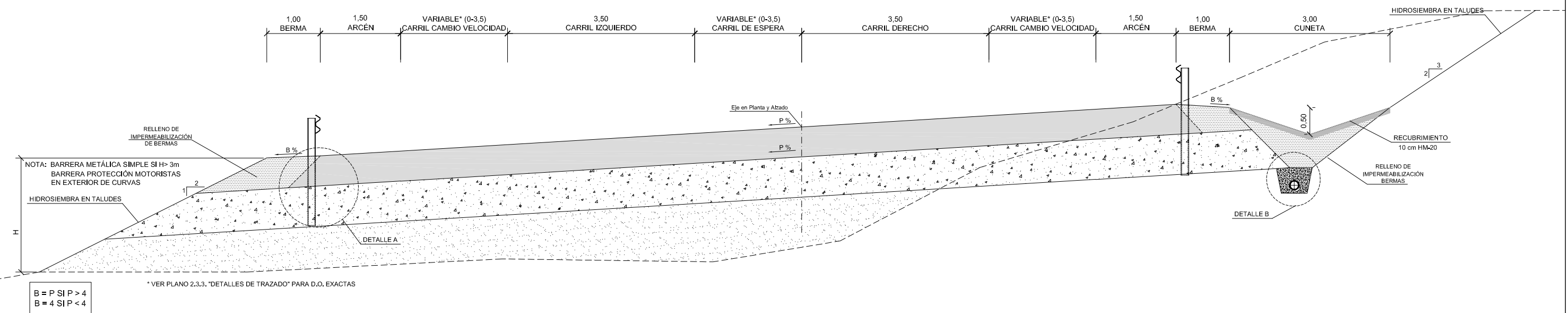
SECCIÓN TIPO EN CURVA



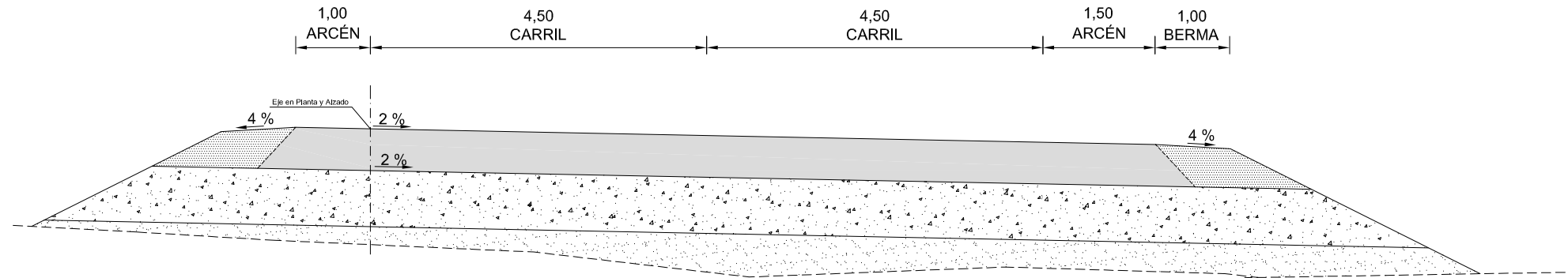
SECCIÓN TIPO EN RECTA



SECCIÓN EN CRUCE CON LE-441
D.O. 1+695 a 2+995

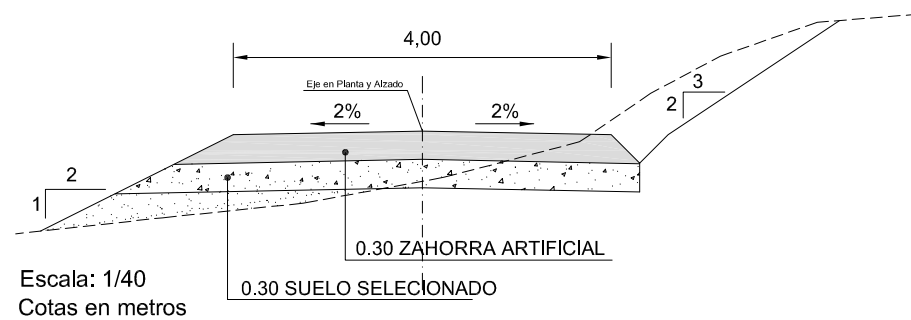


SECCIÓN TIPO GLORIETA ACCESO A AEROPUERTO



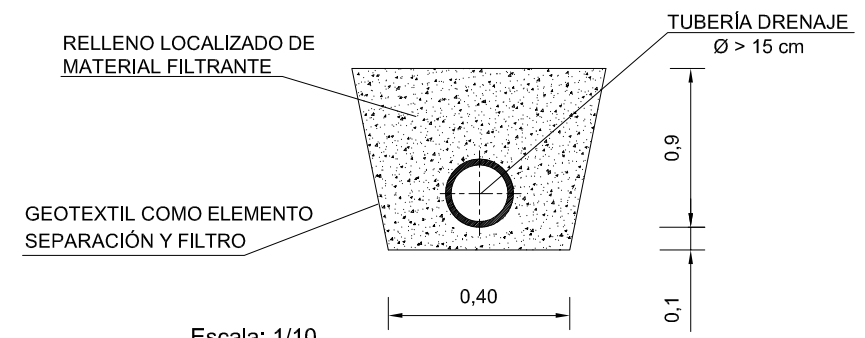
Escala: 1/40
Cotas en metros

SECCIÓN TIPO DE CAMINOS



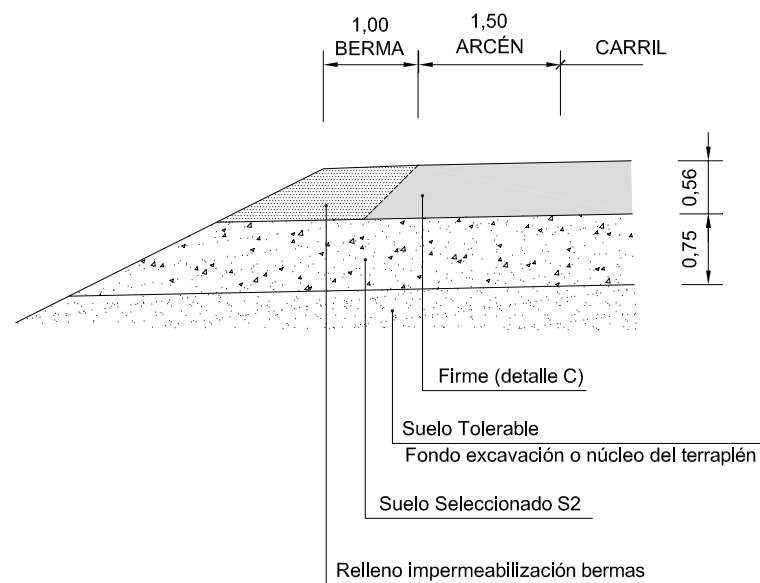
Escala: 1/40
Cotas en metros

DETALLE B



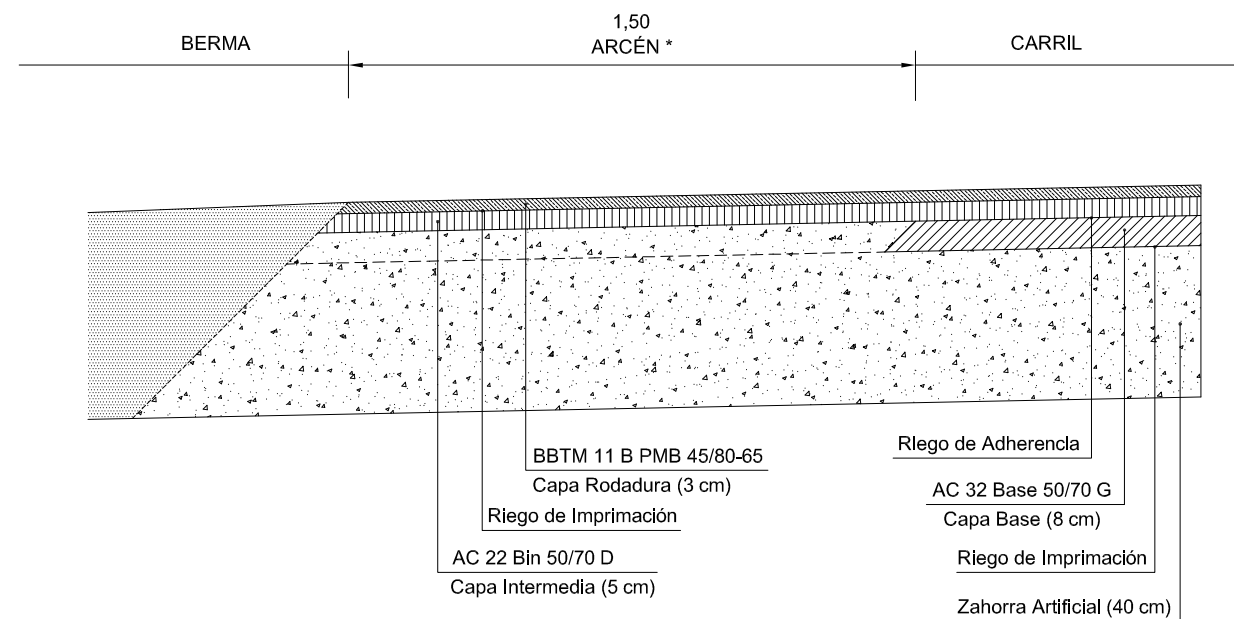
Escala: 1/10
Cotas en metros

DETALLE A. EXPLANADA



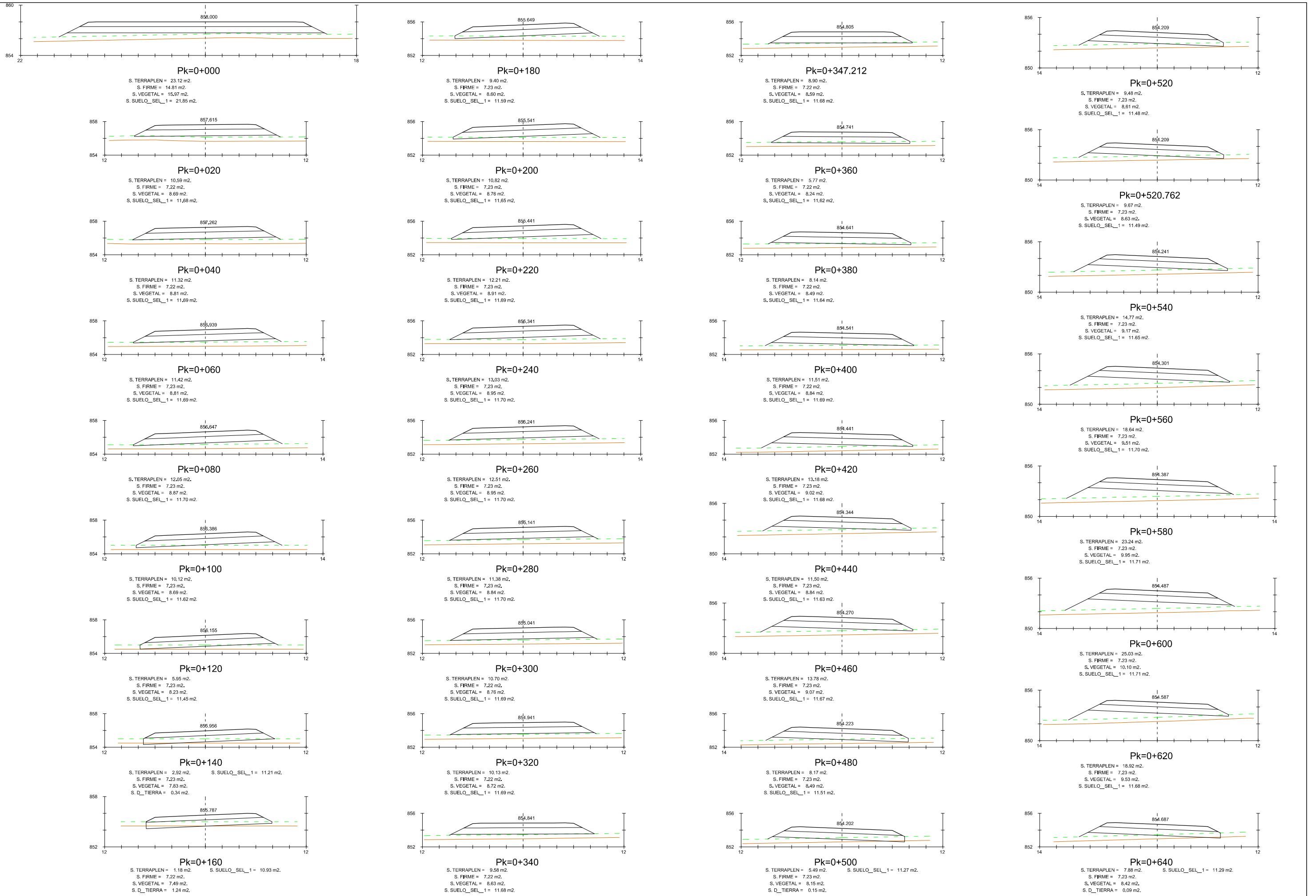
Escala: 1/40
Cotas en metros

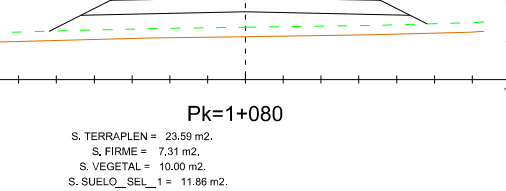
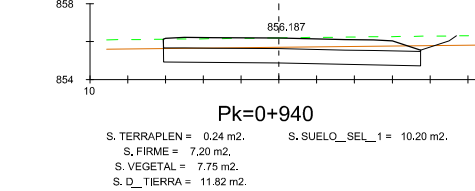
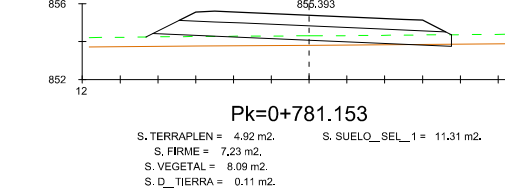
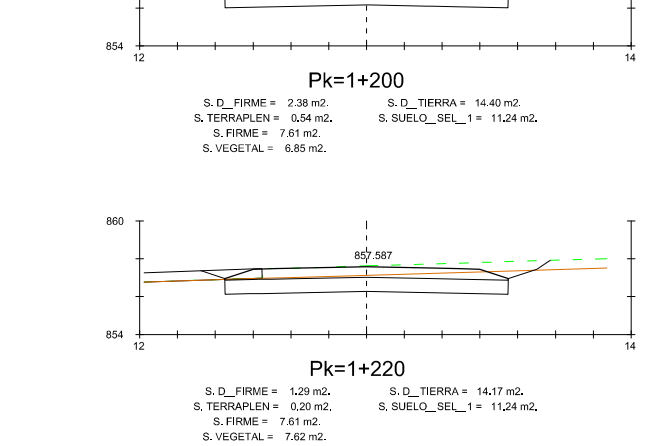
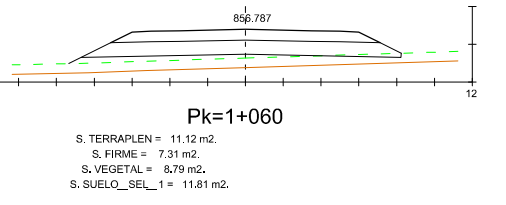
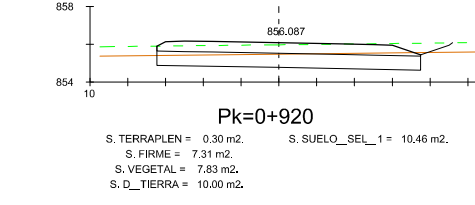
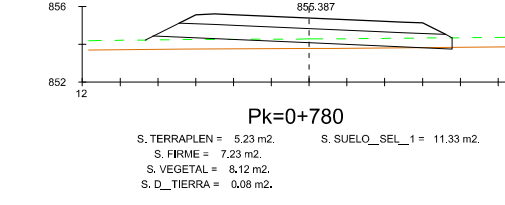
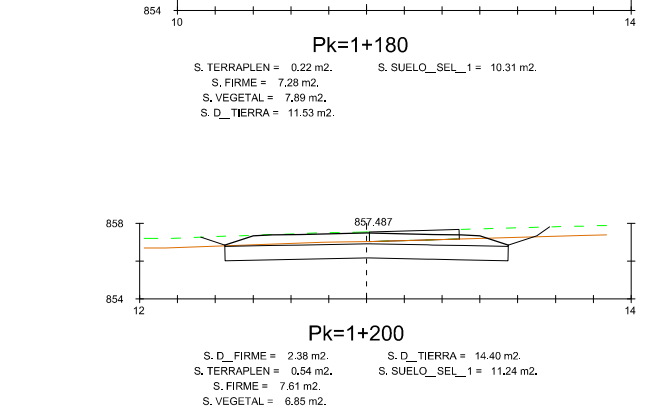
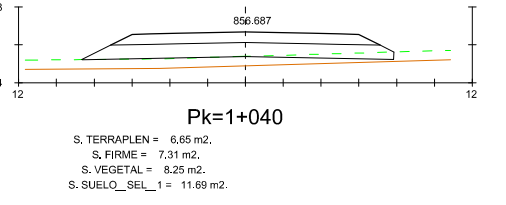
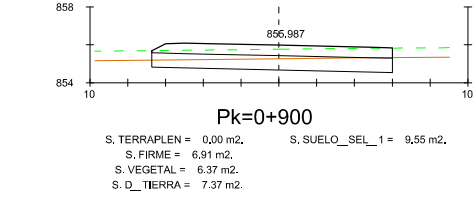
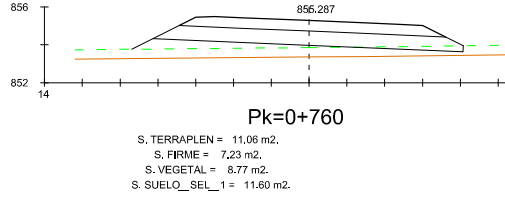
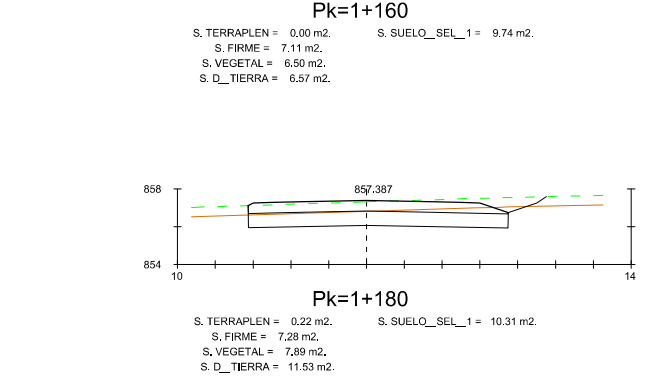
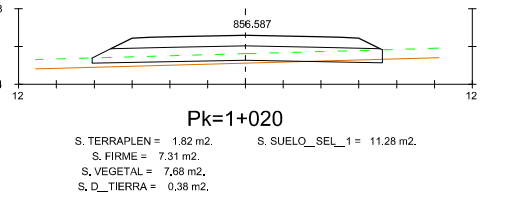
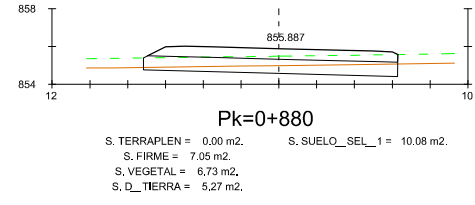
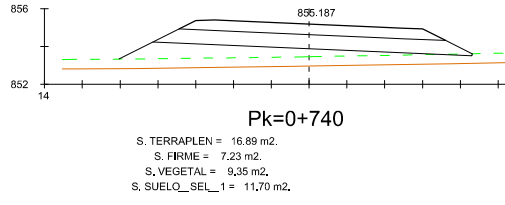
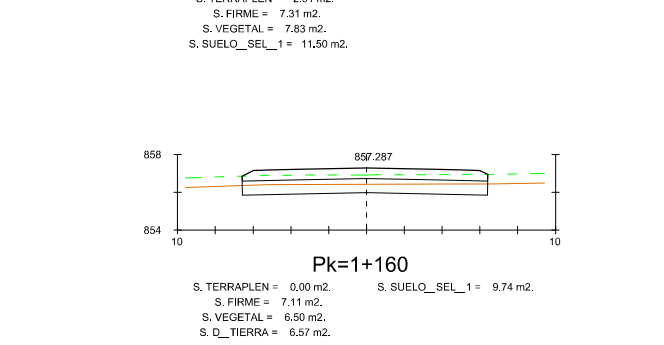
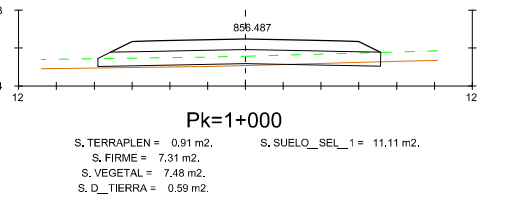
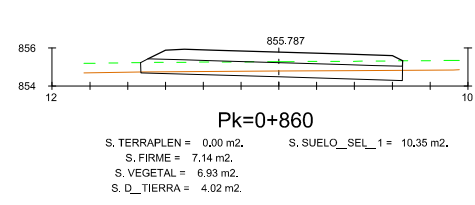
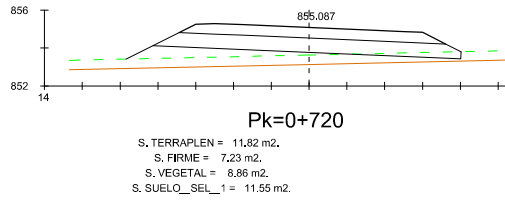
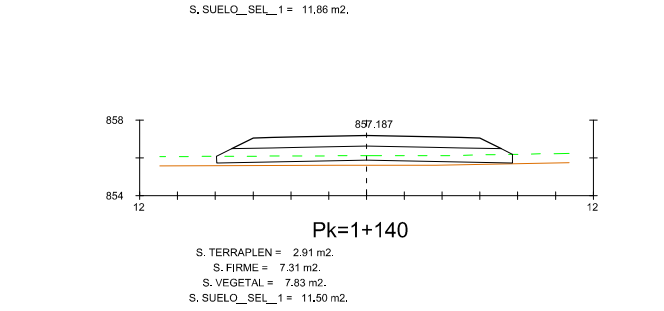
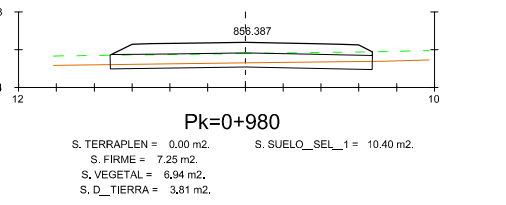
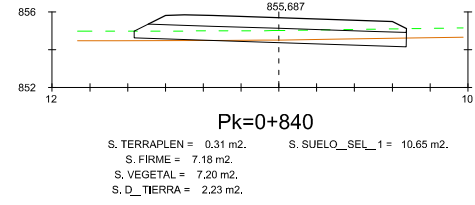
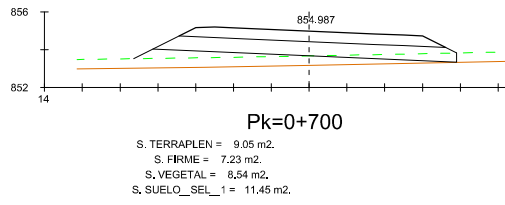
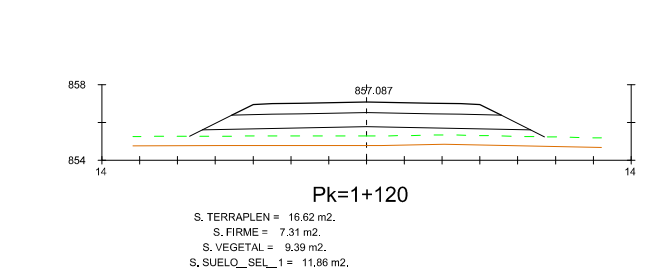
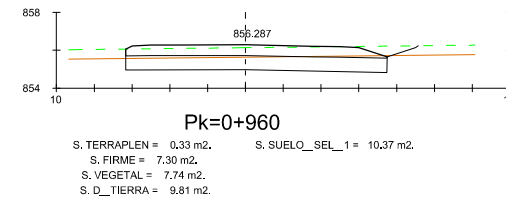
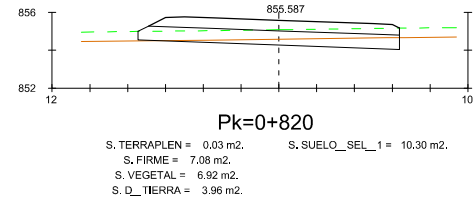
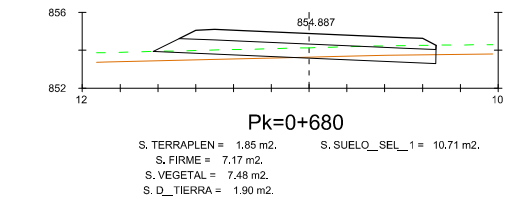
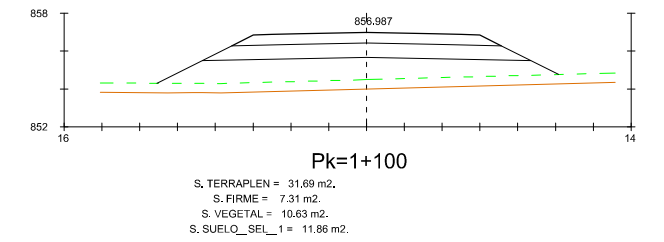
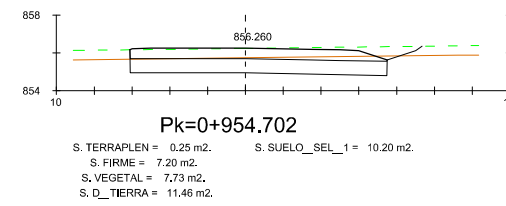
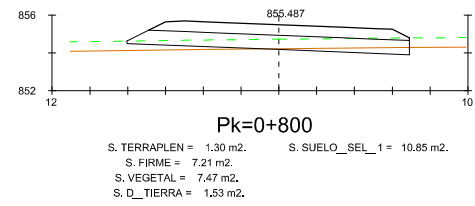
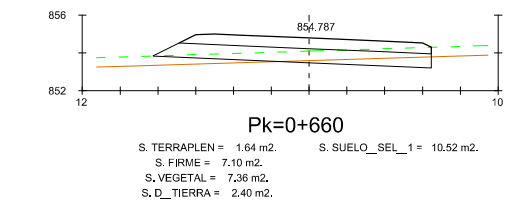
DETALLE C. FIRME



* En arcenes >1,25 m se prolongan las capas de rodadura e intermedia
En arcenes <1,25 m se prolongan todas las capas bituminosas

Escala: 1/10
Cotas en metros





Escuelas de Ingenierías I.I.
 Industrial, Informática y Aeroespacial



Grado en Ingeniería Aeroespacial
 Trabajo de Fin de Grado

Director del T.F.G.

Dr. Jesús Cepeda Riaño
 Dept. Física Aplicada

EL AUTOR DEL PROYECTO

D. Jesús Muñoz Vera
 Ingeniero Técnico Aeronáutico

TÍTULO DEL TRABAJO:

PROYECTO DE TRAZADO:
 Acceso al Aeropuerto de León desde la futura Ronda Noroeste

ESCALAS

DIN-A1: 1/100
 DIN-A3: 1/200

GRÁFICA: 0 2 4 8 m

DESIGNACIÓN DEL PLANO:

PERFILES TRANSVERSALES
 Eje 1: Eje Aeropuerto (0+660 - 1+220)

DOCUMENTO

2

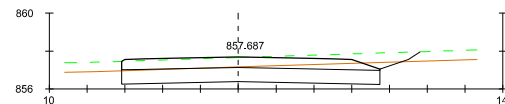
PLANO

2.5

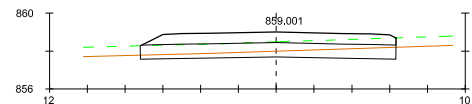
FECHA

ENERO-2015

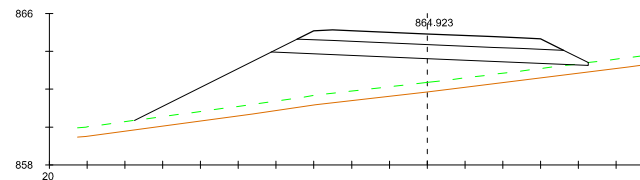
HOJA 2 DE 18



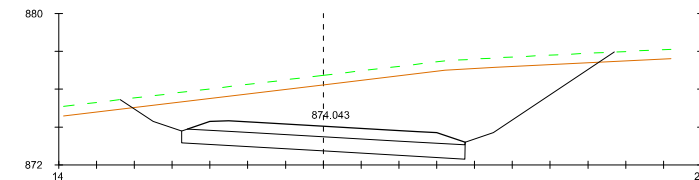
Pk=1+240
 S. TERRAPLEN = 0,21 m². S. SUELO_SEL_1 = 10,25 m².
 S. FIRME = 7,24 m².
 S. VEGETAL = 7,90 m².
 S. D_TIERRA = 12,09 m².



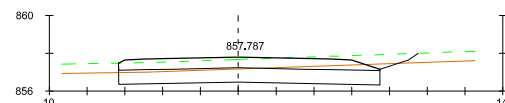
Pk=1+380
 S. TERRAPLEN = 0,00 m². S. SUELO_SEL_1 = 10,14 m².
 S. FIRME = 7,15 m².
 S. VEGETAL = 6,77 m².
 S. D_TIERRA = 4,88 m².



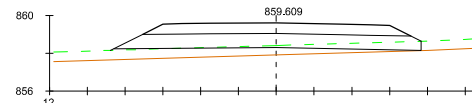
Pk=1+500
 S. TERRAPLEN = 42,10 m².
 S. FIRME = 7,23 m².
 S. VEGETAL = 12,01 m².
 S. SUELO_SEL_1 = 11,68 m².



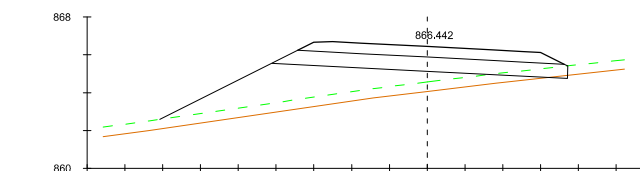
Pk=1+620
 S. TERRAPLEN = 0,36 m². S. SUELO_SEL_1 = 11,22 m².
 S. FIRME = 7,47 m².
 S. VEGETAL = 13,07 m².
 S. D_TIERRA = 69,86 m².



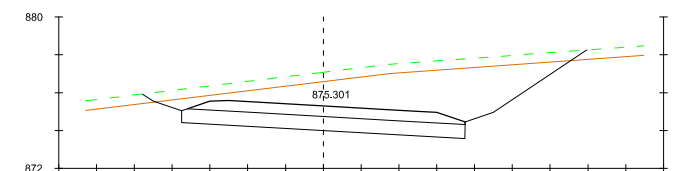
Pk=1+260
 S. TERRAPLEN = 0,22 m². S. SUELO_SEL_1 = 10,37 m².
 S. FIRME = 7,31 m².
 S. VEGETAL = 7,93 m².
 S. D_TIERRA = 10,95 m².



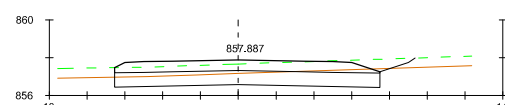
Pk=1+400
 S. TERRAPLEN = 5,83 m².
 S. FIRME = 7,28 m².
 S. VEGETAL = 8,22 m².
 S. SUELO_SEL_1 = 11,55 m².



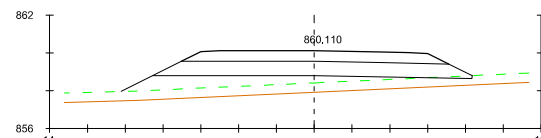
Pk=1+520
 S. TERRAPLEN = 27,55 m². S. SUELO_SEL_1 = 11,21 m².
 S. FIRME = 7,22 m².
 S. VEGETAL = 10,79 m².
 S. D_TIERRA = 0,09 m².



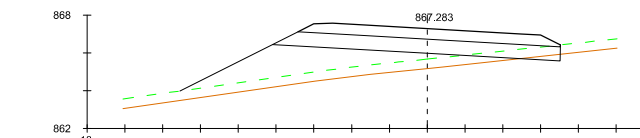
Pk=1+640
 S. TERRAPLEN = 0,37 m². S. SUELO_SEL_1 = 11,22 m².
 S. FIRME = 7,47 m².
 S. VEGETAL = 11,76 m².
 S. D_TIERRA = 47,84 m².



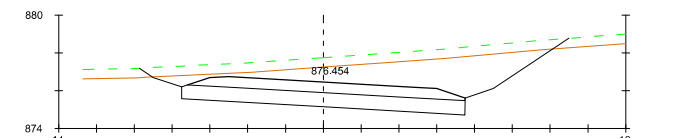
Pk=1+280
 S. TERRAPLEN = 0,27 m². S. SUELO_SEL_1 = 10,53 m².
 S. FIRME = 7,38 m².
 S. VEGETAL = 7,95 m².
 S. D_TIERRA = 9,53 m².



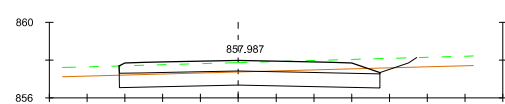
Pk=1+413.623
 S. TERRAPLEN = 15,89 m².
 S. FIRME = 7,26 m².
 S. VEGETAL = 9,29 m².
 S. SUELO_SEL_1 = 11,74 m².



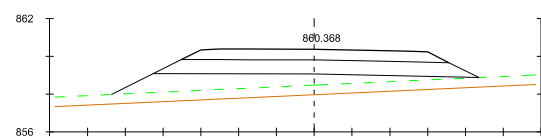
Pk=1+530.519
 S. TERRAPLEN = 20,99 m². S. SUELO_SEL_1 = 10,91 m².
 S. FIRME = 7,21 m².
 S. VEGETAL = 10,07 m².
 S. D_TIERRA = 0,37 m².



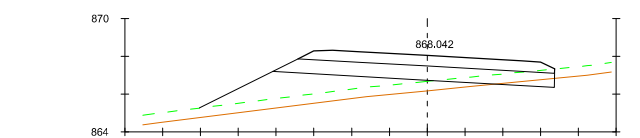
Pk=1+660
 S. TERRAPLEN = 0,38 m². S. SUELO_SEL_1 = 11,22 m².
 S. FIRME = 7,47 m².
 S. VEGETAL = 11,36 m².
 S. D_TIERRA = 38,05 m².



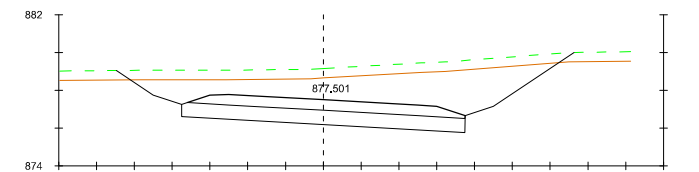
Pk=1+300
 S. TERRAPLEN = 0,24 m². S. SUELO_SEL_1 = 10,34 m².
 S. FIRME = 7,30 m².
 S. VEGETAL = 7,87 m².
 S. D_TIERRA = 10,88 m².



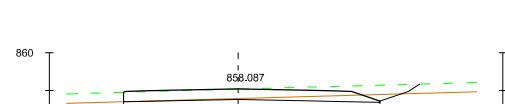
Pk=1+420
 S. TERRAPLEN = 20,18 m².
 S. FIRME = 7,26 m².
 S. VEGETAL = 9,72 m².
 S. SUELO_SEL_1 = 11,76 m².



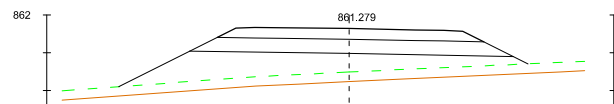
Pk=1+540
 S. TERRAPLEN = 15,79 m². S. SUELO_SEL_1 = 10,68 m².
 S. FIRME = 7,16 m².
 S. VEGETAL = 9,39 m².
 S. D_TIERRA = 0,75 m².



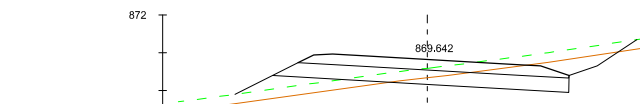
Pk=1+680
 S. TERRAPLEN = 0,38 m². S. SUELO_SEL_1 = 11,22 m².
 S. FIRME = 7,47 m².
 S. VEGETAL = 12,11 m².
 S. D_TIERRA = 46,92 m².



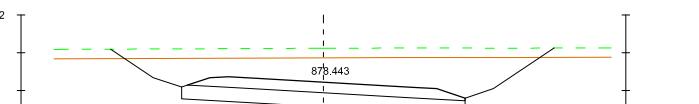
Pk=1+320
 S. TERRAPLEN = 0,21 m². S. SUELO_SEL_1 = 10,18 m².
 S. FIRME = 7,19 m².
 S. VEGETAL = 7,84 m².
 S. D_TIERRA = 12,26 m².



Pk=1+440
 S. TERRAPLEN = 30,84 m².
 S. FIRME = 7,24 m².
 S. VEGETAL = 10,83 m².
 S. SUELO_SEL_1 = 11,72 m².



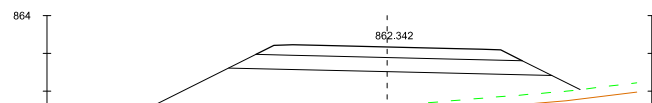
Pk=1+560
 S. TERRAPLEN = 5,74 m². S. SUELO_SEL_1 = 11,25 m².
 S. FIRME = 7,39 m².
 S. VEGETAL = 10,63 m².
 S. D_TIERRA = 9,54 m².



Pk=1+700
 S. TERRAPLEN = 0,37 m². S. SUELO_SEL_1 = 11,22 m².
 S. FIRME = 7,47 m².
 S. VEGETAL = 11,74 m².
 S. D_TIERRA = 46,51 m².



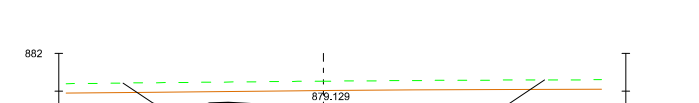
Pk=1+340
 S. TERRAPLEN = 0,20 m². S. SUELO_SEL_1 = 10,12 m².
 S. FIRME = 7,16 m².
 S. VEGETAL = 7,83 m².
 S. D_TIERRA = 12,68 m².



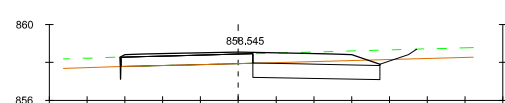
Pk=1+460
 S. TERRAPLEN = 52,88 m².
 S. FIRME = 7,23 m².
 S. VEGETAL = 12,50 m².
 S. SUELO_SEL_1 = 11,69 m².



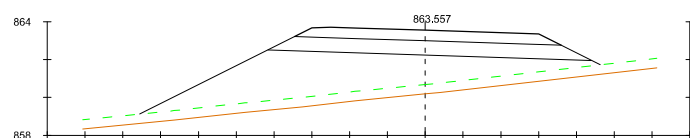
Pk=1+580
 S. TERRAPLEN = 0,25 m². S. SUELO_SEL_1 = 10,44 m².
 S. FIRME = 7,35 m².
 S. VEGETAL = 10,35 m².
 S. D_TIERRA = 34,57 m².



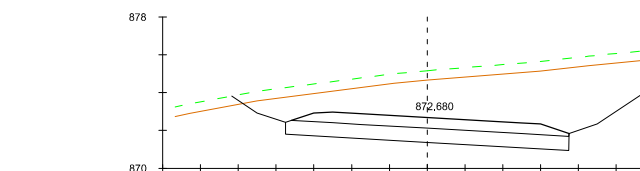
Pk=1+716.210
 S. TERRAPLEN = 0,37 m². S. SUELO_SEL_1 = 11,24 m².
 S. FIRME = 7,49 m².
 S. VEGETAL = 11,16 m².
 S. D_TIERRA = 38,21 m².



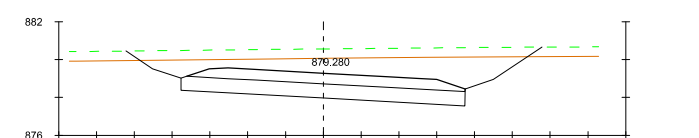
Pk=1+360
 S. D_FIRME = 0,01 m². S. D_TIERRA = 6,17 m².
 S. TERRAPLEN = 0,24 m². S. SUELO_SEL_1 = 5,06 m².
 S. FIRME = 4,19 m².
 S. VEGETAL = 4,35 m².



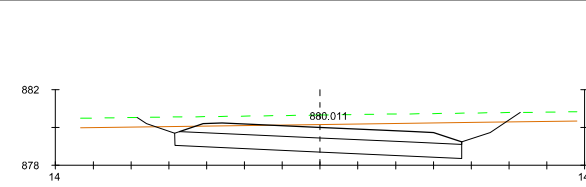
Pk=1+480
 S. TERRAPLEN = 47,21 m².
 S. FIRME = 7,23 m².
 S. VEGETAL = 12,18 m².
 S. SUELO_SEL_1 = 11,70 m².



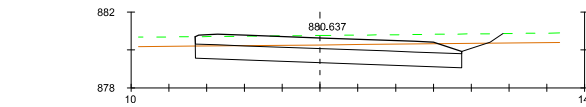
Pk=1+600
 S. TERRAPLEN = 0,37 m². S. SUELO_SEL_1 = 11,22 m².
 S. FIRME = 7,47 m².
 S. VEGETAL = 12,87 m².
 S. D_TIERRA = 63,81 m².



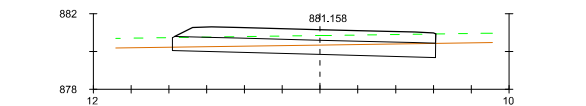
Pk=1+720
 S. TERRAPLEN = 0,37 m². S. SUELO_SEL_1 = 11,25 m².
 S. FIRME = 7,50 m².
 S. VEGETAL = 11,01 m².
 S. D_TIERRA = 35,95 m².



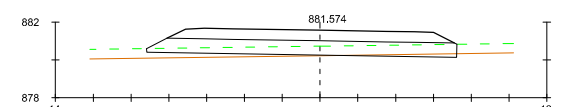
Pk=1+740
 S. TERRAPLEN = 0,40 m². S. SUELO_SEL_1 = 11,37 m².
 S. FIRME = 7,59 m².
 S. VEGETAL = 10,13 m².
 S. D_TIERRA = 23,65 m².



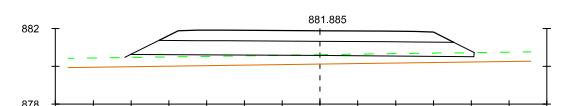
Pk=1+760
 S. TERRAPLEN = 0,19 m². S. SUELO_SEL_1 = 10,57 m².
 S. FIRME = 7,49 m².
 S. VEGETAL = 8,14 m².
 S. D_TIERRA = 13,84 m².



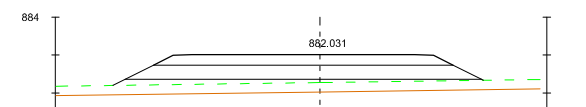
Pk=1+780
 S. TERRAPLEN = 0,00 m². S. SUELO_SEL_1 = 10,44 m².
 S. FIRME = 7,39 m².
 S. VEGETAL = 6,97 m².
 S. D_TIERRA = 6,42 m².



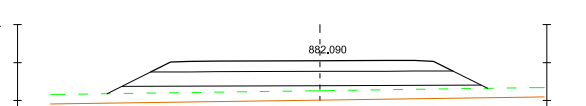
Pk=1+800
 S. TERRAPLEN = 1,62 m². S. SUELO_SEL_1 = 12,00 m².
 S. FIRME = 7,85 m².
 S. VEGETAL = 8,21 m².
 S. D_TIERRA = 0,57 m².



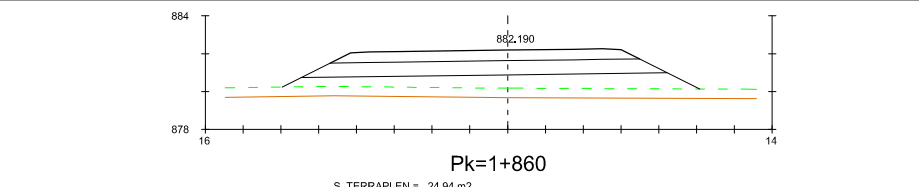
Pk=1+820
 S. TERRAPLEN = 8,80 m².
 S. FIRME = 8,07 m².
 S. VEGETAL = 9,25 m².
 S. SUELO_SEL_1 = 12,77 m².



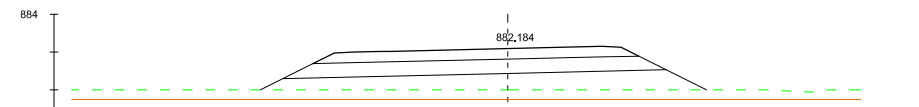
Pk=1+833,106
 S. TERRAPLEN = 13,42 m².
 S. FIRME = 8,21 m².
 S. VEGETAL = 9,81 m².
 S. SUELO_SEL_1 = 13,02 m².



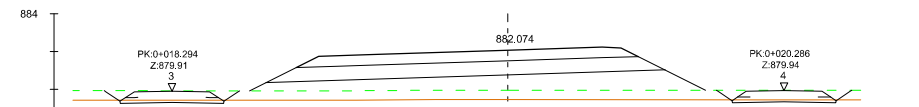
Pk=1+840
 S. TERRAPLEN = 15,57 m².
 S. FIRME = 8,29 m².
 S. VEGETAL = 10,06 m².
 S. SUELO_SEL_1 = 13,12 m².



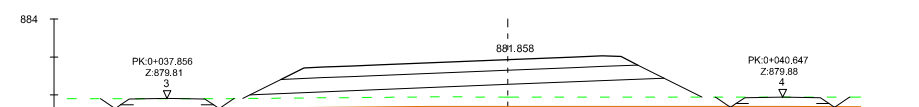
Pk=1+860
 S. TERRAPLEN = 24,94 m².
 S. FIRME = 8,51 m².
 S. VEGETAL = 11,05 m².
 S. SUELO_SEL_1 = 13,41 m².



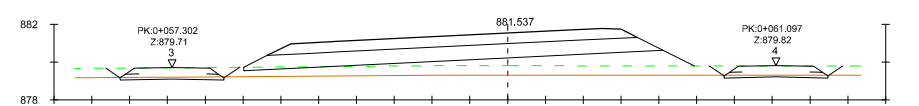
Pk=1+880
 S. TERRAPLEN = 30,21 m².
 S. FIRME = 9,00 m².
 S. VEGETAL = 11,80 m².
 S. SUELO_SEL_1 = 14,07 m².



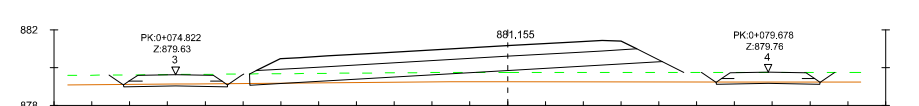
Pk=1+900
 S. TERRAPLEN = 29,20 m².
 S. FIRME = 9,47 m².
 S. VEGETAL = 12,07 m².
 S. SUELO_SEL_1 = 14,71 m².



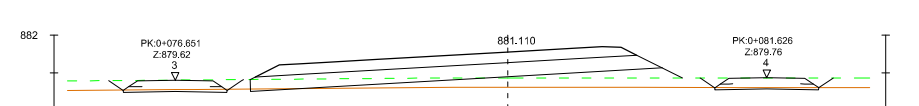
Pk=1+920
 S. TERRAPLEN = 25,76 m².
 S. FIRME = 9,91 m².
 S. VEGETAL = 12,15 m².
 S. SUELO_SEL_1 = 15,30 m².



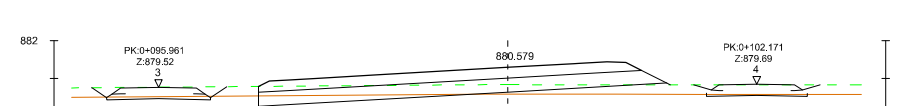
Pk=1+940
 S. TERRAPLEN = 19,14 m².
 S. FIRME = 10,29 m².
 S. VEGETAL = 11,92 m².
 S. SUELO_SEL_1 = 15,78 m².



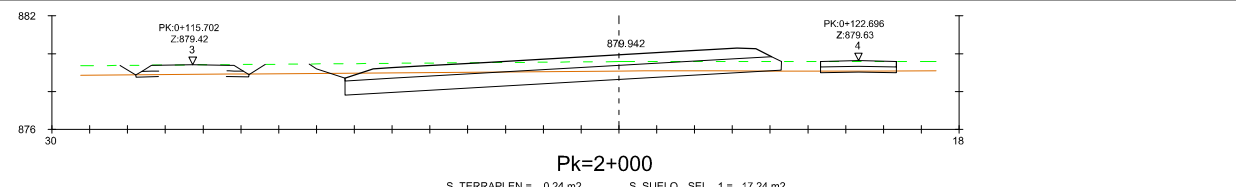
Pk=1+958,106
 S. TERRAPLEN = 11,17 m². S. SUELO_SEL_1 = 15,83 m².
 S. FIRME = 10,59 m².
 S. VEGETAL = 11,49 m².
 S. D_TIERRA = 0,09 m².



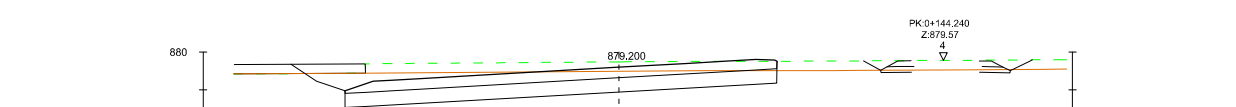
Pk=1+960
 S. TERRAPLEN = 10,36 m². S. SUELO_SEL_1 = 15,82 m².
 S. FIRME = 10,62 m².
 S. VEGETAL = 11,44 m².
 S. D_TIERRA = 0,17 m².



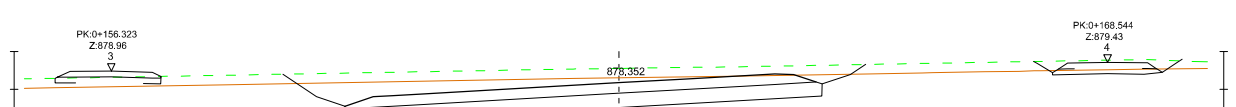
Pk=1+980
 S. TERRAPLEN = 3,13 m². S. SUELO_SEL_1 = 15,70 m².
 S. FIRME = 10,95 m².
 S. VEGETAL = 10,90 m².
 S. D_TIERRA = 3,12 m².



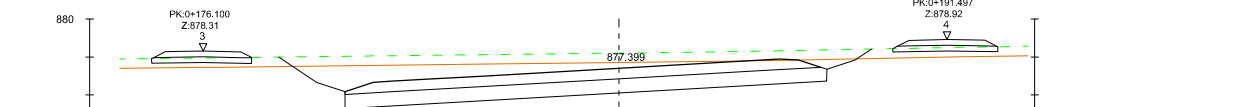
Pk=2+000
 S. TERRAPLEN = 0,24 m². S. SUELO_SEL_1 = 17,24 m².
 S. FIRME = 12,01 m².
 S. VEGETAL = 12,49 m².
 S. D_TIERRA = 13,63 m².



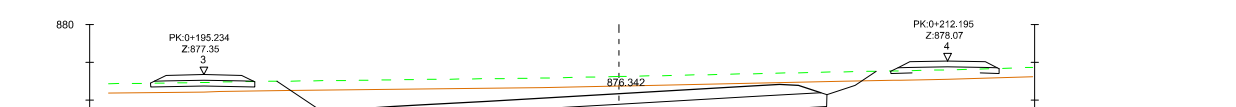
Pk=2+020
 S. D_FIRME = 1,78 m². S. D_TIERRA = 29,49 m².
 S. TERRAPLEN = 0,00 m². S. SUELO_SEL_1 = 17,14 m².
 S. FIRME = 12,43 m².
 S. VEGETAL = 10,89 m².



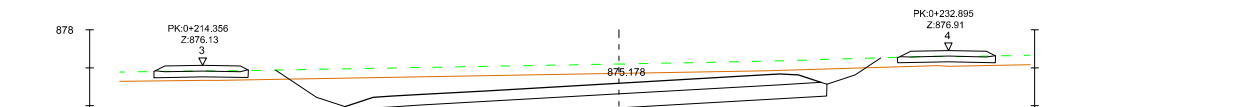
Pk=2+040
 S. TERRAPLEN = 0,38 m². S. SUELO_SEL_1 = 18,91 m².
 S. FIRME = 13,22 m².
 S. VEGETAL = 15,42 m².
 S. D_TIERRA = 43,58 m².



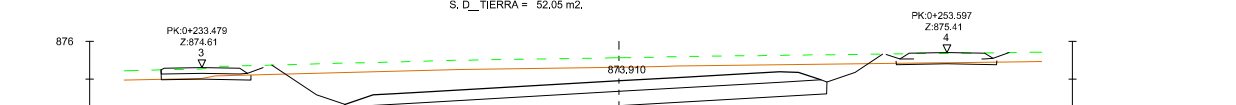
Pk=2+060
 S. TERRAPLEN = 0,38 m². S. SUELO_SEL_1 = 19,10 m².
 S. FIRME = 13,36 m².
 S. VEGETAL = 15,88 m².
 S. D_TIERRA = 45,94 m².



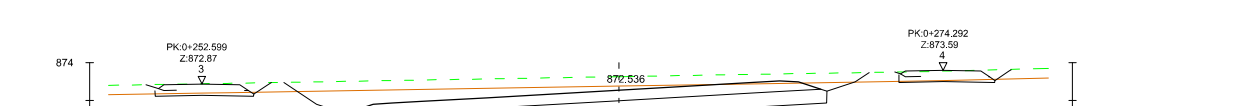
Pk=2+080
 S. TERRAPLEN = 0,38 m². S. SUELO_SEL_1 = 19,10 m².
 S. FIRME = 13,35 m².
 S. VEGETAL = 15,86 m².
 S. D_TIERRA = 49,08 m².



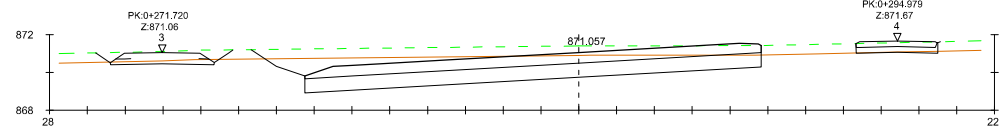
Pk=2+100
 S. TERRAPLEN = 0,38 m². S. SUELO_SEL_1 = 19,10 m².
 S. FIRME = 13,35 m².
 S. VEGETAL = 16,00 m².
 S. D_TIERRA = 52,05 m².



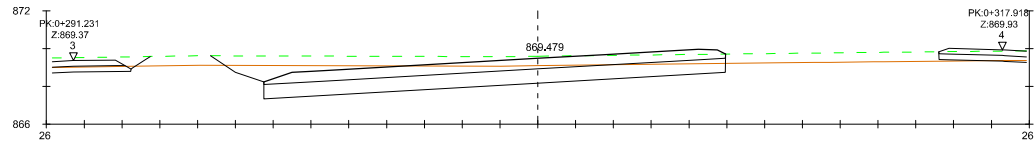
Pk=2+120
 S. TERRAPLEN = 0,37 m². S. SUELO_SEL_1 = 19,10 m².
 S. FIRME = 13,35 m².
 S. VEGETAL = 16,16 m².
 S. D_TIERRA = 57,69 m².



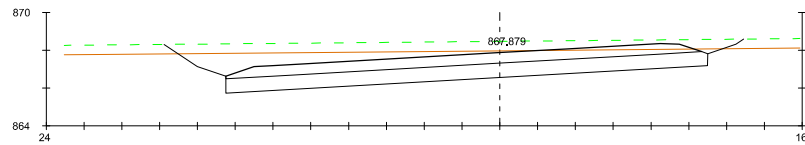
Pk=2+140
 S. TERRAPLEN = 0,38 m². S. SUELO_SEL_1 = 19,10 m².
 S. FIRME = 13,35 m².
 S. VEGETAL = 15,48 m².
 S. D_TIERRA = 42,77 m².



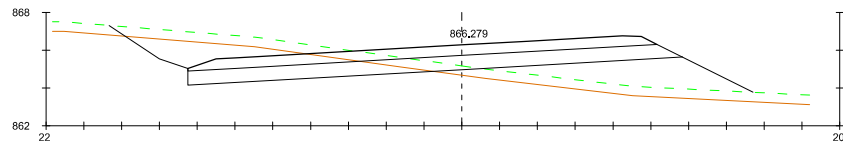
Pk=2+160
 S. TERRAPLEN = 0.19 m². S. SUELO_SEL_1 = 18.11 m².
 S. FIRME = 13.14 m².
 S. VEGETAL = 13.50 m².
 S. D_TIERRA = 31.39 m².



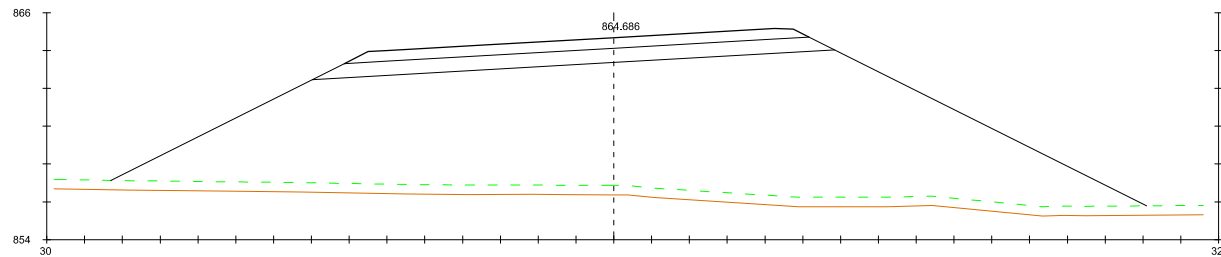
Pk=2+180
 S. TERRAPLEN = 0.19 m². S. SUELO_SEL_1 = 18.32 m².
 S. FIRME = 13.23 m².
 S. VEGETAL = 13.63 m².
 S. D_TIERRA = 27.26 m².



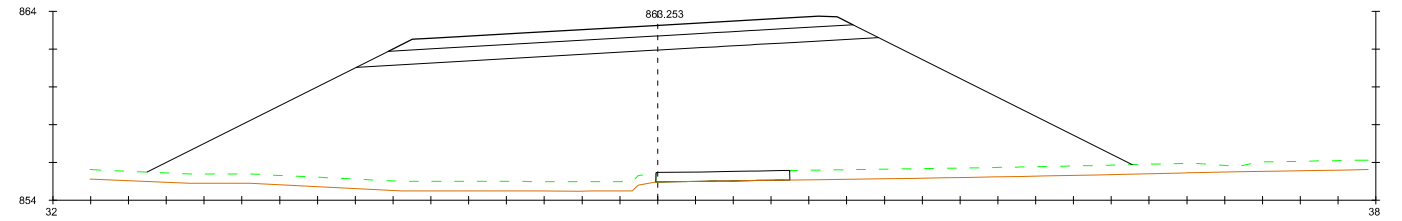
Pk=2+200
 S. TERRAPLEN = 0.42 m². S. SUELO_SEL_1 = 19.10 m².
 S. FIRME = 13.35 m².
 S. VEGETAL = 15.33 m².
 S. D_TIERRA = 39.89 m².



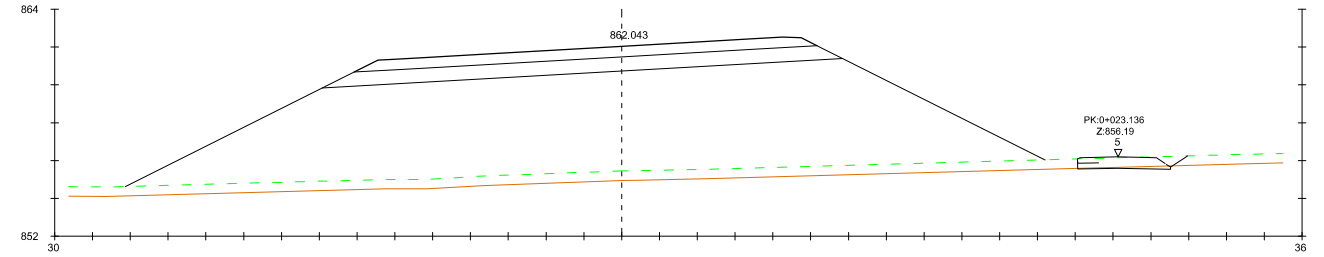
Pk=2+220
 S. TERRAPLEN = 20.84 m². S. SUELO_SEL_1 = 19.13 m².
 S. FIRME = 13.27 m².
 S. VEGETAL = 17.03 m².
 S. D_TIERRA = 18.89 m².



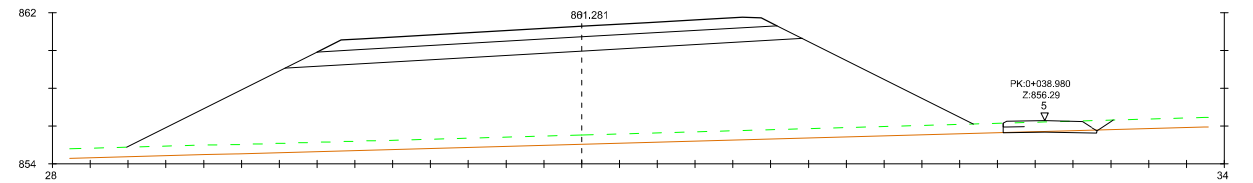
Pk=2+240
 S. TERRAPLEN = 300.98 m².
 S. FIRME = 13.10 m².
 S. VEGETAL = 27.40 m².
 S. SUELO_SEL_1 = 19.59 m².



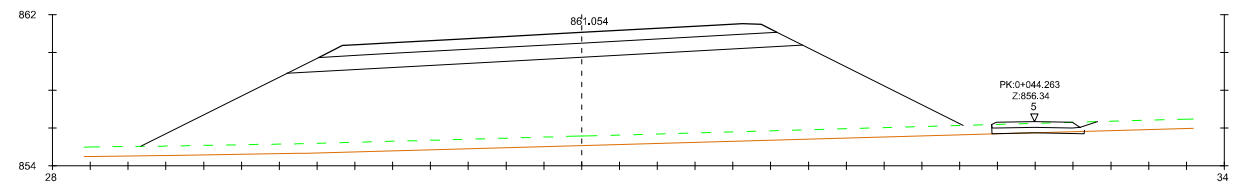
Pk=2+260
 S. TERRAPLEN = 283.41 m².
 S. FIRME = 13.09 m².
 S. VEGETAL = 22.52 m².
 S. SUELO_SEL_1 = 19.57 m².



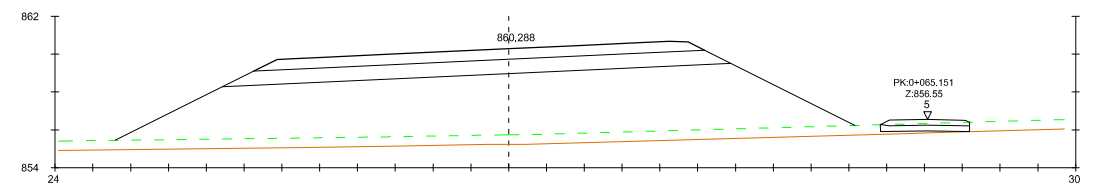
Pk=2+280
 S. TERRAPLEN = 225.61 m².
 S. FIRME = 13.04 m².
 S. VEGETAL = 24.33 m².
 S. SUELO_SEL_1 = 19.51 m².



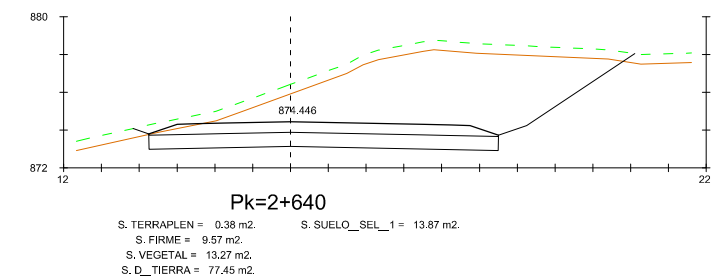
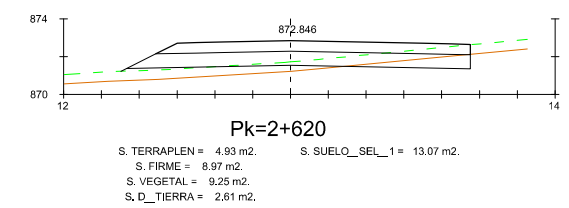
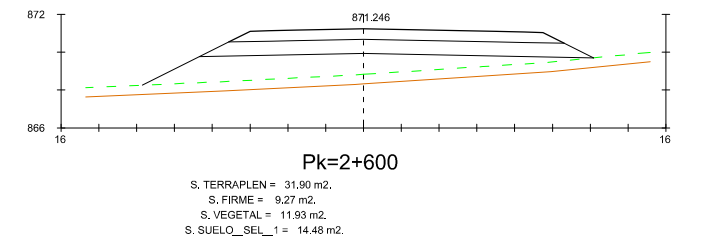
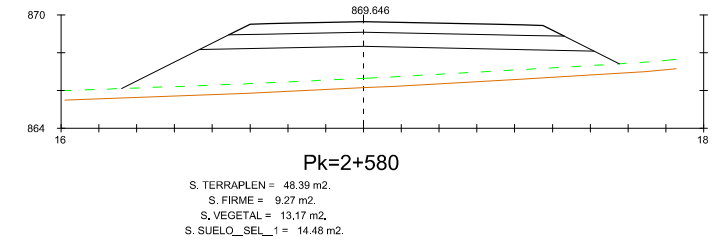
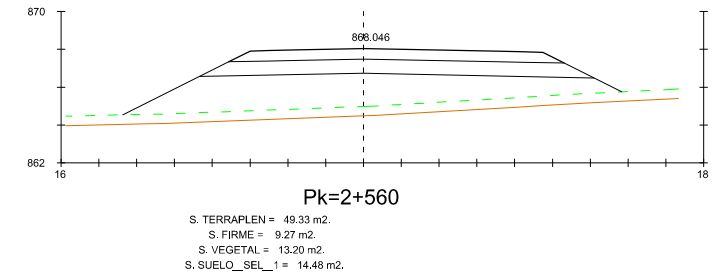
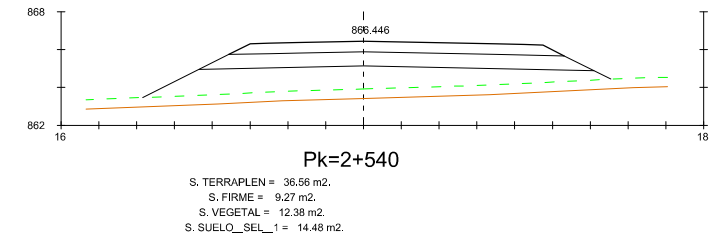
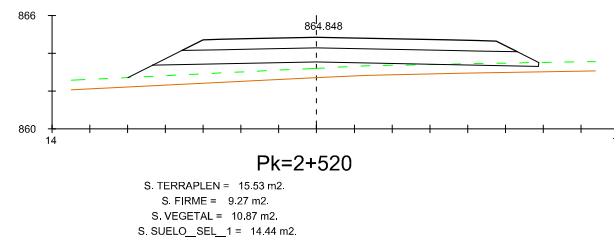
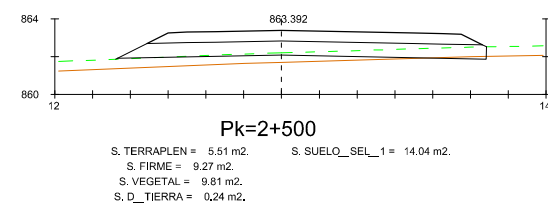
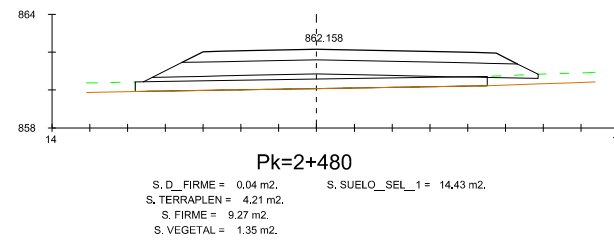
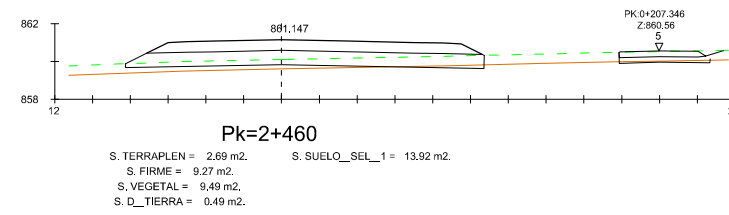
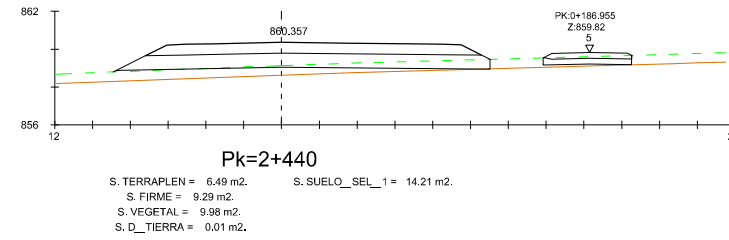
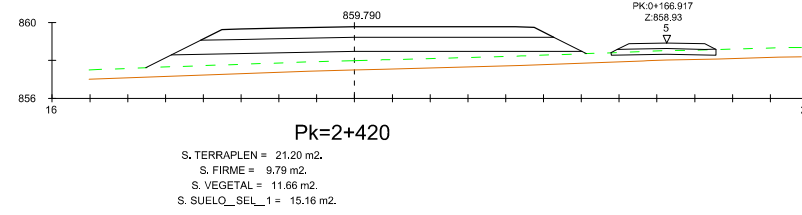
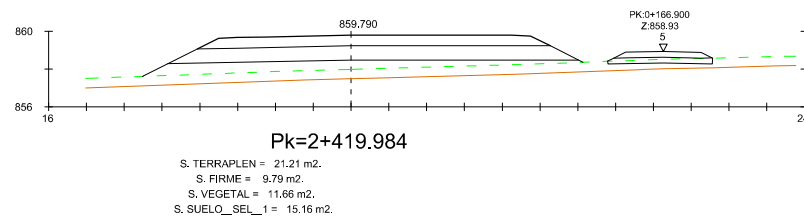
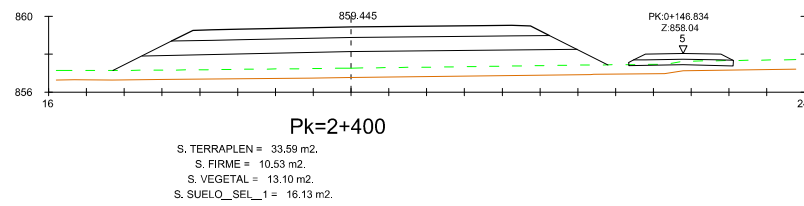
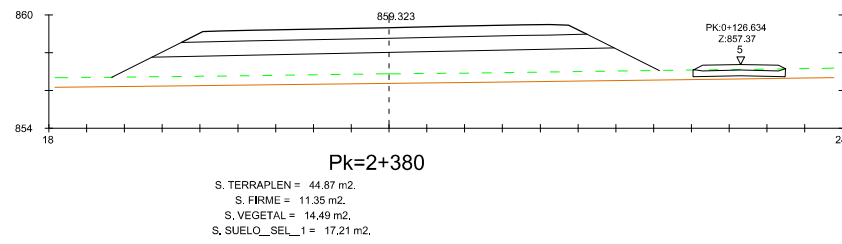
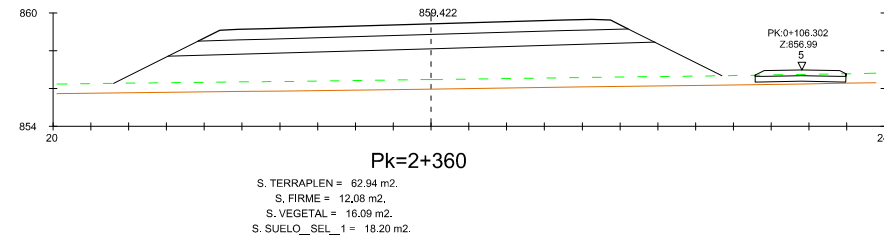
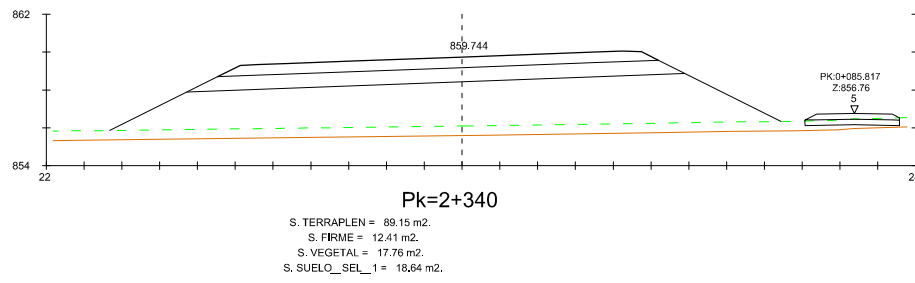
Pk=2+294.984
 S. TERRAPLEN = 180.43 m².
 S. FIRME = 12.95 m².
 S. VEGETAL = 22.40 m².
 S. SUELO_SEL_1 = 19.39 m².

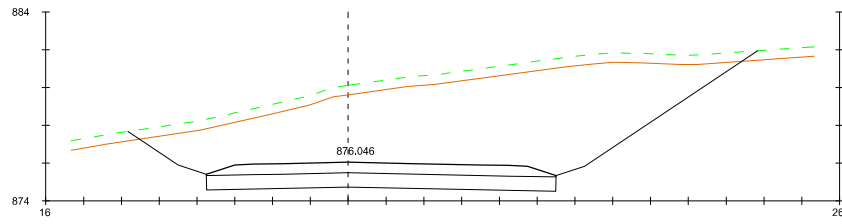


Pk=2+300
 S. TERRAPLEN = 167.60 m².
 S. FIRME = 12.91 m².
 S. VEGETAL = 21.75 m².
 S. SUELO_SEL_1 = 19.33 m².

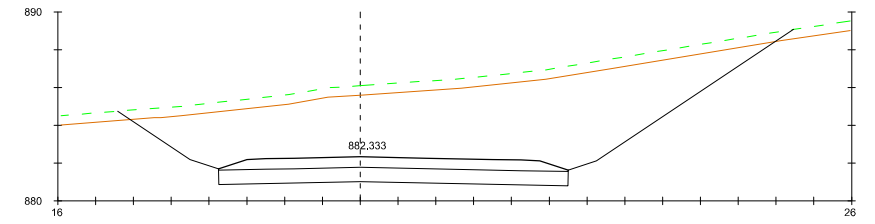


Pk=2+320
 S. TERRAPLEN = 124.03 m².
 S. FIRME = 12.69 m².
 S. VEGETAL = 19.57 m².
 S. SUELO_SEL_1 = 19.03 m².

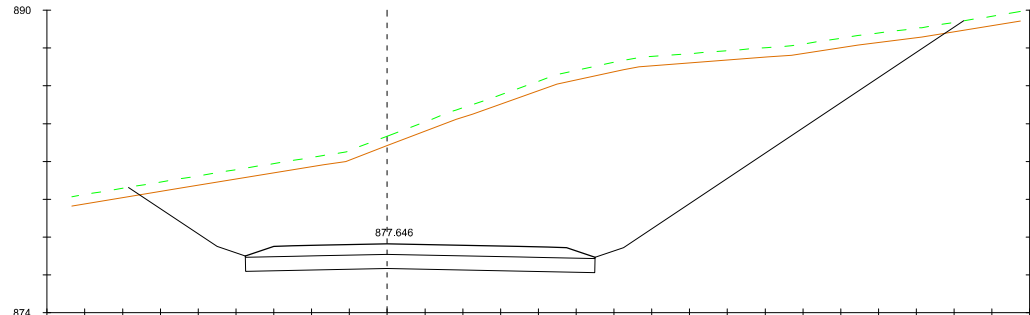




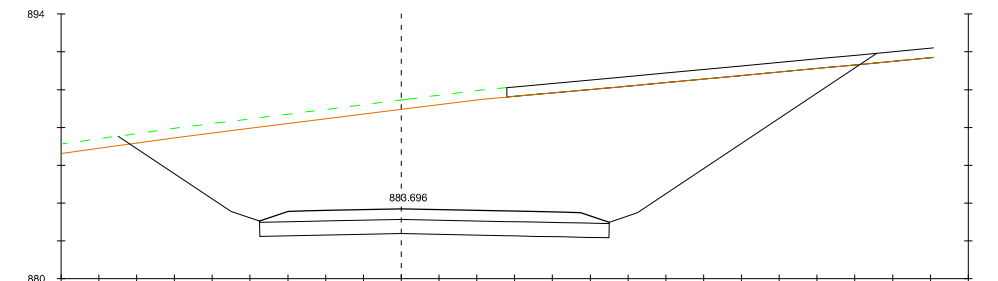
Pk=2+660
 S. TERRAPLEN = 0.36 m². S. SUELO_SEL_1 = 13.87 m².
 S. FIRME = 9.58 m².
 S. VEGETAL = 16.66 m².
 S. D_TIERRA = 128.12 m².



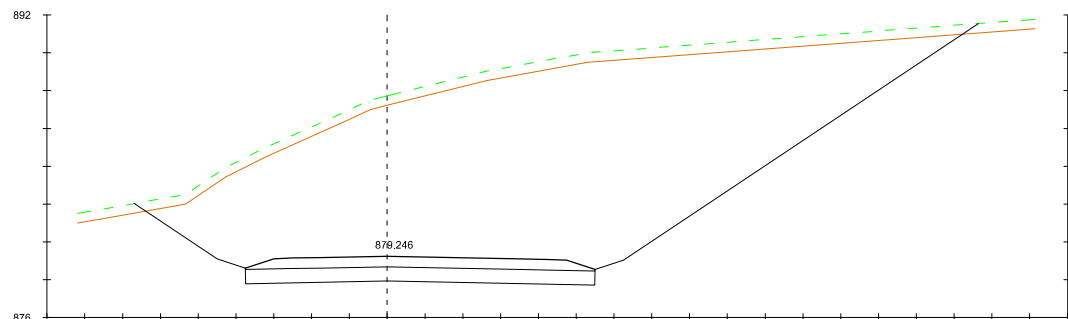
Pk=2+740
 S. TERRAPLEN = 0.41 m². S. SUELO_SEL_1 = 13.87 m².
 S. FIRME = 9.58 m².
 S. VEGETAL = 17.88 m².
 S. D_TIERRA = 125.44 m².



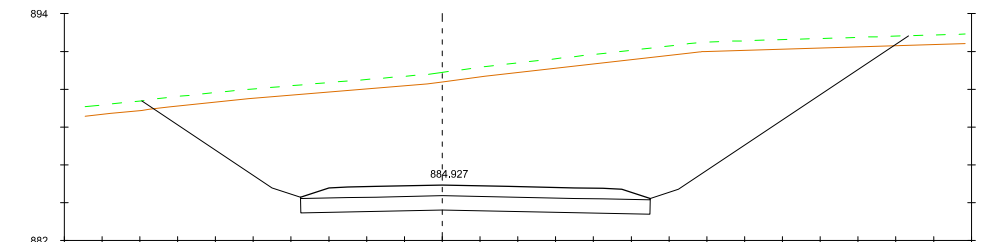
Pk=2+680
 S. TERRAPLEN = 0.40 m². S. SUELO_SEL_1 = 13.87 m².
 S. FIRME = 9.57 m².
 S. VEGETAL = 22.10 m².
 S. D_TIERRA = 241.66 m².



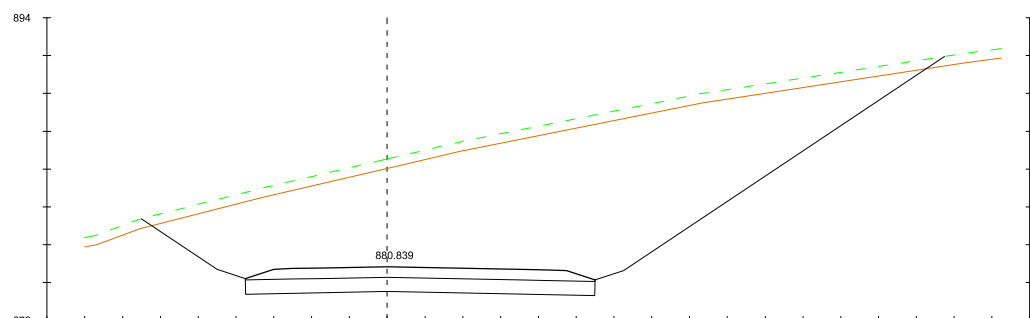
Pk=2+760
 S. D_FIRME = 9.57 m². S. D_TIERRA = 195.13 m².
 S. TERRAPLEN = 0.16 m². S. SUELO_SEL_1 = 13.87 m².
 S. FIRME = 9.57 m².
 S. VEGETAL = 10.28 m².



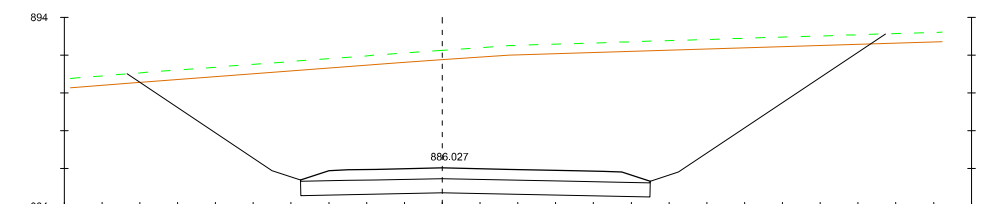
Pk=2+700
 S. TERRAPLEN = 0.36 m². S. SUELO_SEL_1 = 13.87 m².
 S. FIRME = 9.58 m².
 S. VEGETAL = 22.33 m².
 S. D_TIERRA = 301.13 m².



Pk=2+780
 S. TERRAPLEN = 0.35 m². S. SUELO_SEL_1 = 13.87 m².
 S. FIRME = 9.57 m².
 S. VEGETAL = 20.28 m².
 S. D_TIERRA = 206.78 m².



Pk=2+720
 S. TERRAPLEN = 0.38 m². S. SUELO_SEL_1 = 13.87 m².
 S. FIRME = 9.57 m².
 S. VEGETAL = 21.25 m².
 S. D_TIERRA = 217.50 m².



Pk=2+800
 S. TERRAPLEN = 0.36 m². S. SUELO_SEL_1 = 13.87 m².
 S. FIRME = 9.57 m².
 S. VEGETAL = 20.07 m².
 S. D_TIERRA = 202.34 m².



Escuelas de Ingenierías I.I.
 Industrial, Informática y Aeroespacial



Grado en Ingeniería Aeroespacial
 Trabajo de Fin de Grado

Director del T.F.G.

Dr. Jesús Cepeda Riaño
 Dept. Física Aplicada

EL AUTOR DEL PROYECTO

D. Jesús Muñoz Vera
 Ingeniero Técnico Aeronáutico

TÍTULO DEL TRABAJO:

PROYECTO DE TRAZADO:
 Acceso al Aeropuerto de León desde la futura Ronda Noroeste

ESCALAS

DIN-A1: 1/100
 DIN-A3: 1/200

GRAFICA:



DESIGNACIÓN DEL PLANO:

PERFILES TRANSVERSALES
 Eje 1: Eje Aeropuerto (2+680 - 2+800)

DOCUMENTO

2

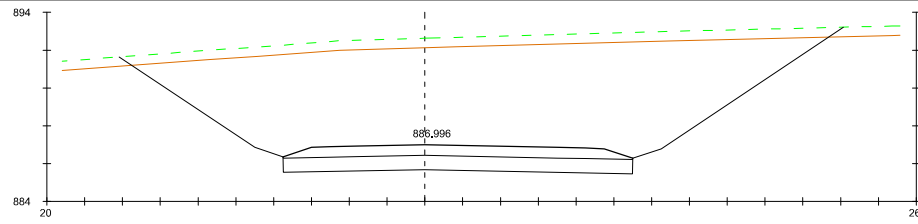
PLANO

2.5

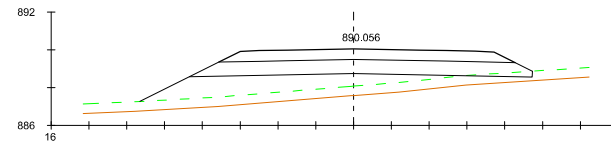
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ENERO-2015

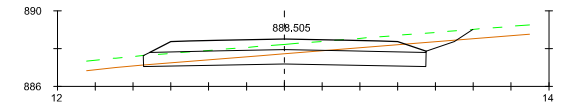
HOJA 7. DE 18



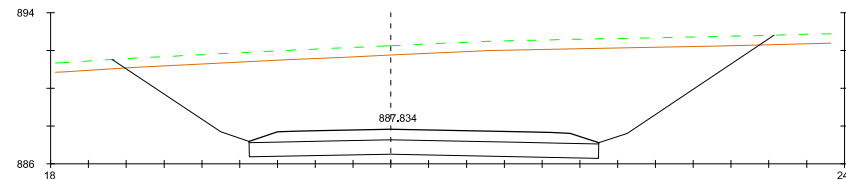
Pk=2+820
 S. TERRAPLEN = 0.36 m². S. SUELO_SEL_1 = 13.87 m².
 S. FIRME = 9.57 m².
 S. VEGETAL = 19.16 m².
 S. D_TIERRA = 179.11 m².



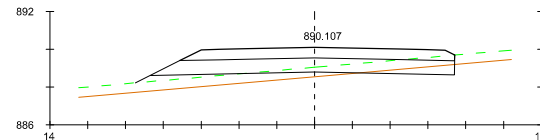
Pk=2+940
 S. TERRAPLEN = 21.43 m². S. SUELO_SEL_1 = 12.83 m².
 S. FIRME = 8.11 m².
 S. VEGETAL = 10.38 m².
 S. D_TIERRA = 12.83 m².



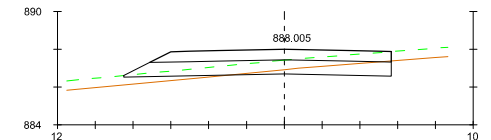
Pk=3+060
 S. TERRAPLEN = 0.22 m². S. SUELO_SEL_1 = 11.19 m².
 S. FIRME = 7.46 m².
 S. VEGETAL = 8.72 m².
 S. D_TIERRA = 9.47 m².



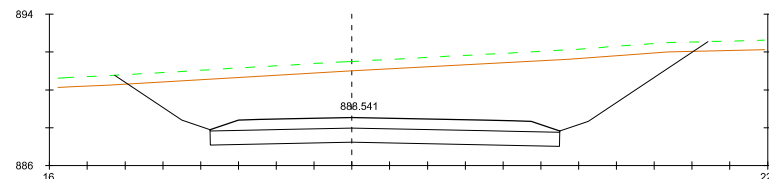
Pk=2+840
 S. TERRAPLEN = 0.37 m². S. SUELO_SEL_1 = 13.87 m².
 S. FIRME = 9.57 m².
 S. VEGETAL = 17.52 m².
 S. D_TIERRA = 137.69 m².



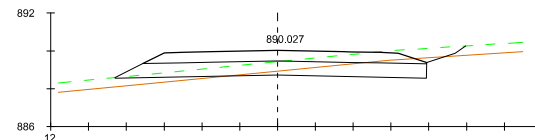
Pk=2+960
 S. TERRAPLEN = 5.47 m². S. SUELO_SEL_1 = 11.49 m².
 S. FIRME = 7.72 m².
 S. VEGETAL = 8.45 m².
 S. D_TIERRA = 1.40 m².



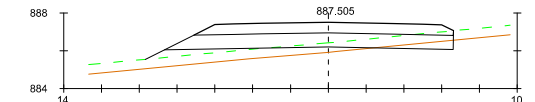
Pk=3+080
 S. TERRAPLEN = 1.13 m². S. SUELO_SEL_1 = 10.17 m².
 S. FIRME = 6.82 m².
 S. VEGETAL = 7.08 m².
 S. D_TIERRA = 3.29 m².



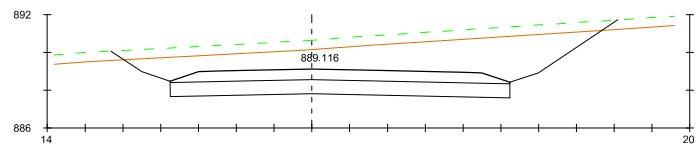
Pk=2+860
 S. TERRAPLEN = 0.37 m². S. SUELO_SEL_1 = 13.87 m².
 S. FIRME = 9.57 m².
 S. VEGETAL = 15.69 m².
 S. D_TIERRA = 94.52 m².



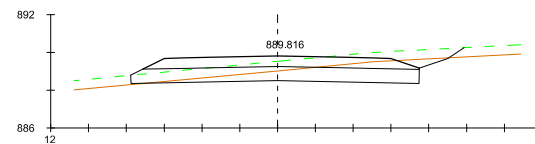
Pk=2+980
 S. TERRAPLEN = 1.59 m². S. SUELO_SEL_1 = 11.84 m².
 S. FIRME = 7.68 m².
 S. VEGETAL = 9.28 m².
 S. D_TIERRA = 5.83 m².



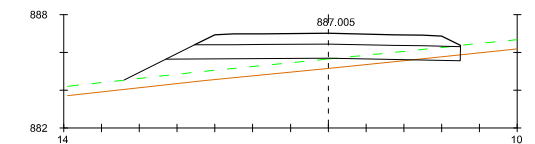
Pk=3+100
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 S. FIRME = 7.24 m².
 S. VEGETAL = 8.15 m².
 S. D_TIERRA = 1.02 m².



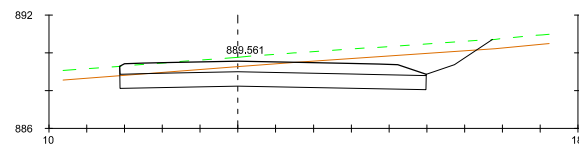
Pk=2+880
 S. TERRAPLEN = 0.38 m². S. SUELO_SEL_1 = 13.48 m².
 S. FIRME = 9.28 m².
 S. VEGETAL = 13.41 m².
 S. D_TIERRA = 54.49 m².



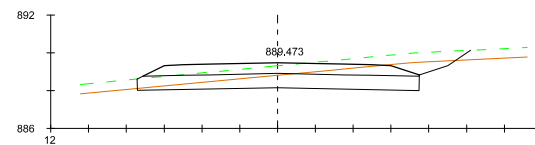
Pk=3+000
 S. TERRAPLEN = 0.23 m². S. SUELO_SEL_1 = 11.35 m².
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 S. VEGETAL = 8.82 m².
 S. D_TIERRA = 9.12 m².



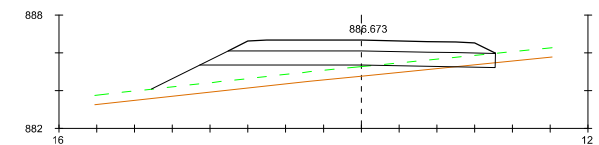
Pk=3+120
 S. TERRAPLEN = 11.37 m². S. SUELO_SEL_1 = 11.12 m².
 S. FIRME = 7.27 m².
 S. VEGETAL = 6.90 m².
 S. D_TIERRA = 0.38 m².



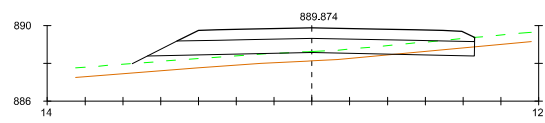
Pk=2+900
 S. TERRAPLEN = 0.21 m². S. SUELO_SEL_1 = 12.15 m².
 S. FIRME = 8.65 m².
 S. VEGETAL = 9.86 m².
 S. D_TIERRA = 21.80 m².



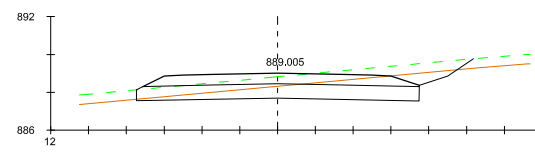
Pk=3+020
 S. TERRAPLEN = 0.20 m². S. SUELO_SEL_1 = 11.17 m².
 S. FIRME = 7.46 m².
 S. VEGETAL = 8.82 m².
 S. D_TIERRA = 11.69 m².



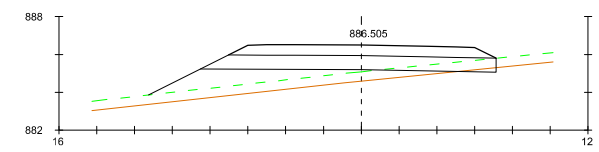
Pk=3+133.307
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 S. D_TIERRA = 0.28 m².



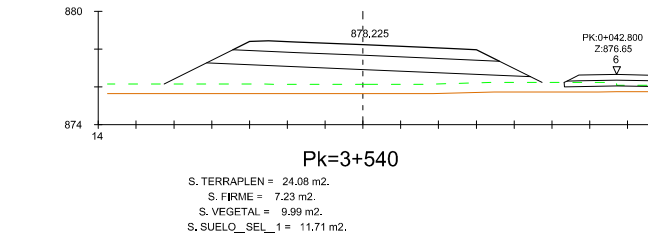
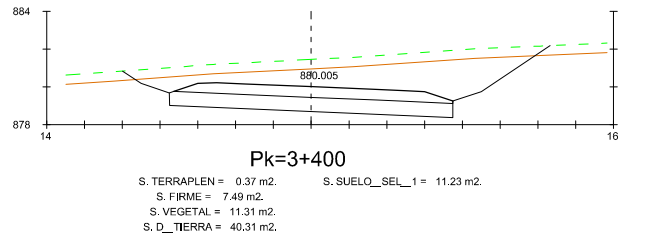
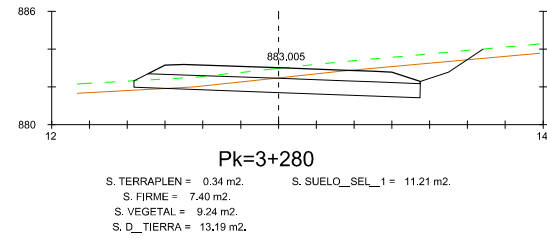
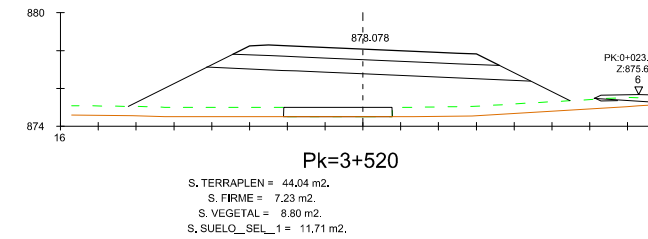
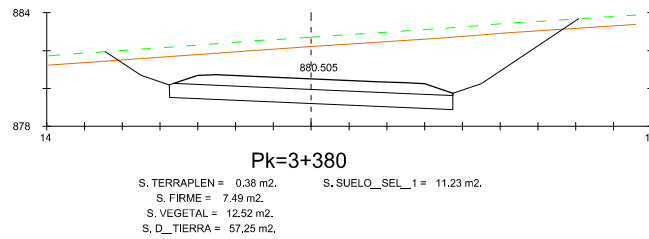
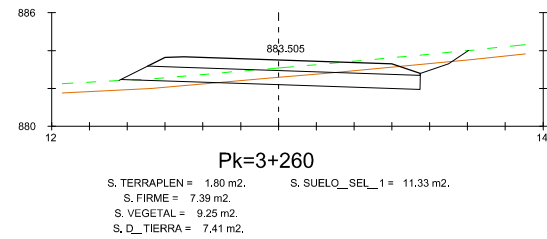
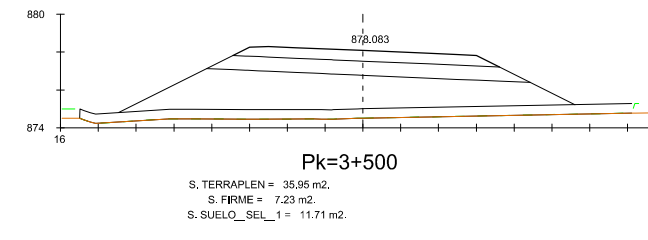
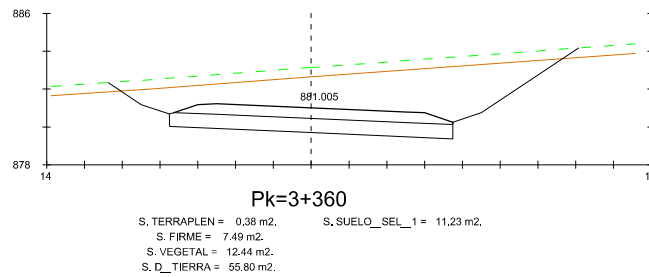
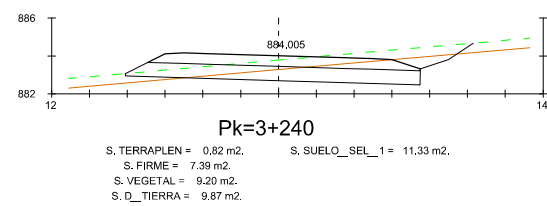
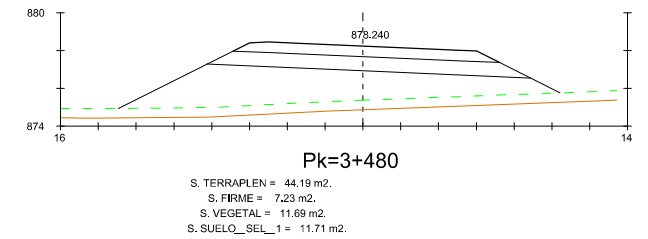
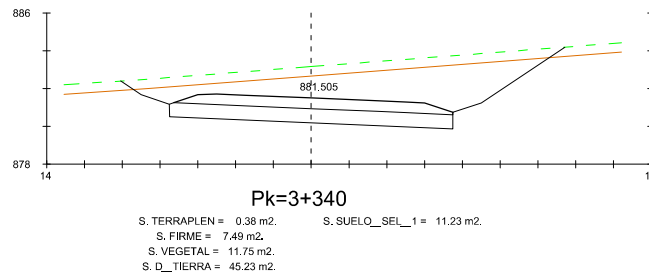
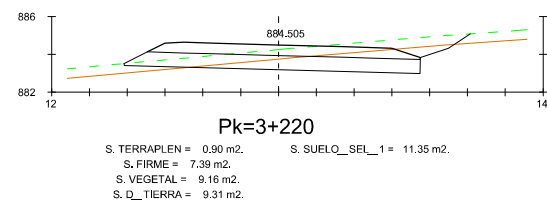
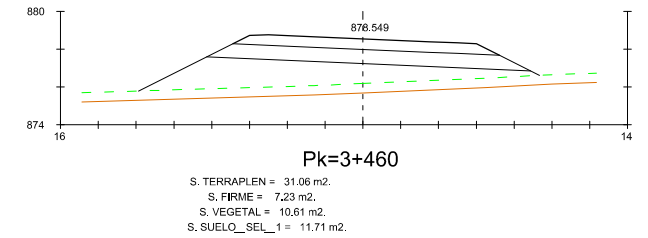
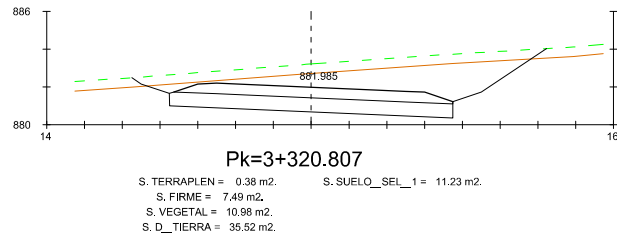
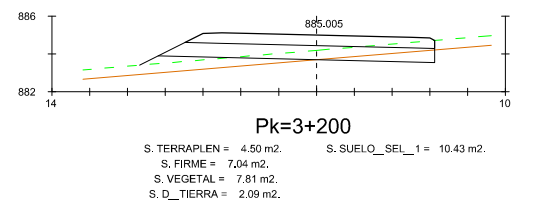
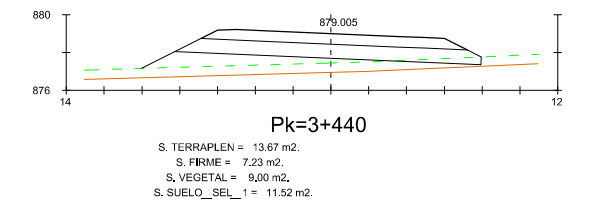
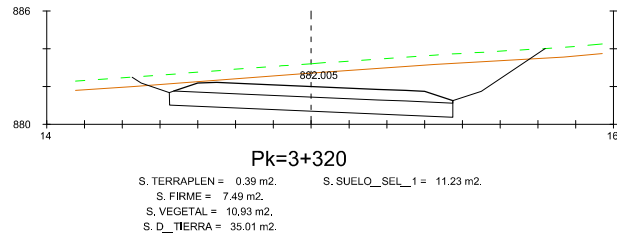
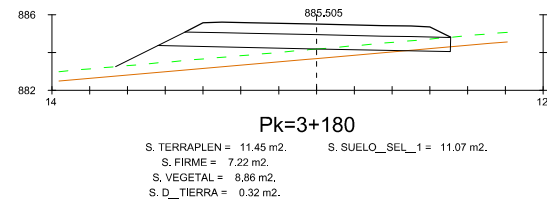
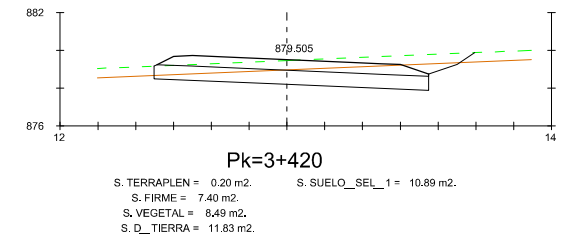
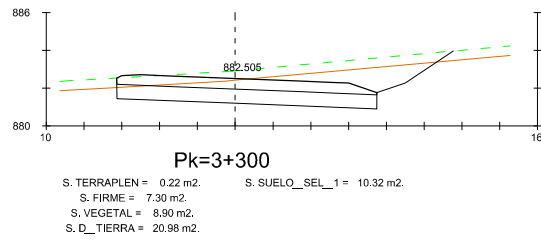
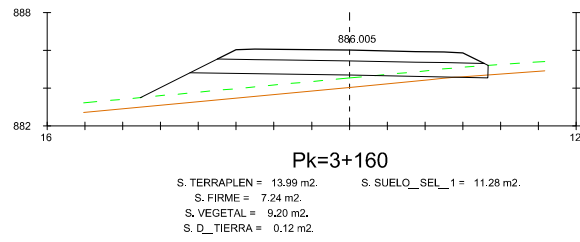
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 S. VEGETAL = 9.05 m².
 S. D_TIERRA = 0.98 m².

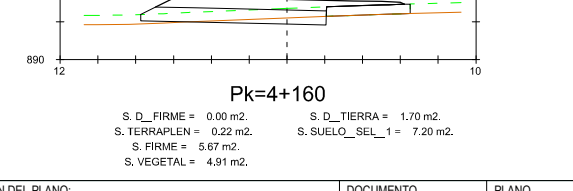
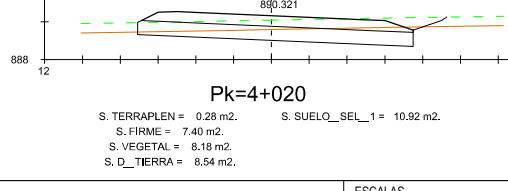
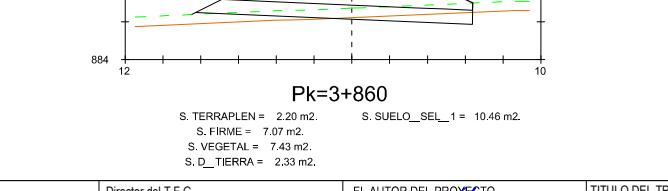
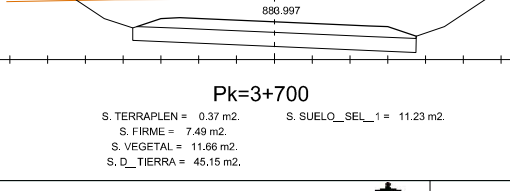
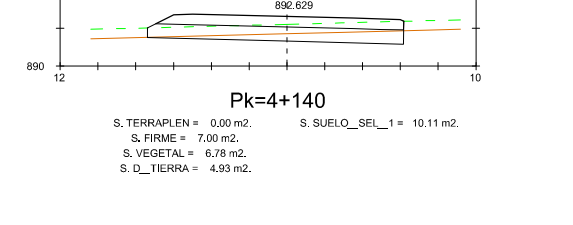
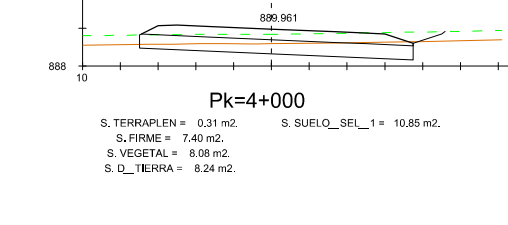
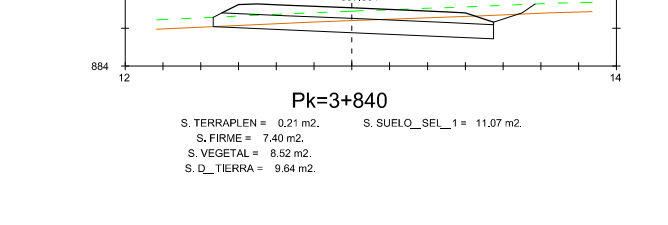
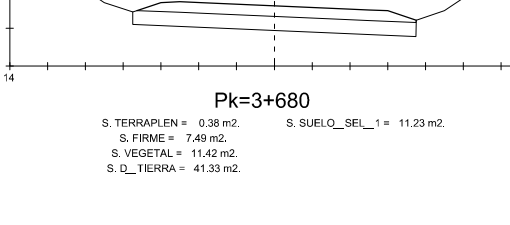
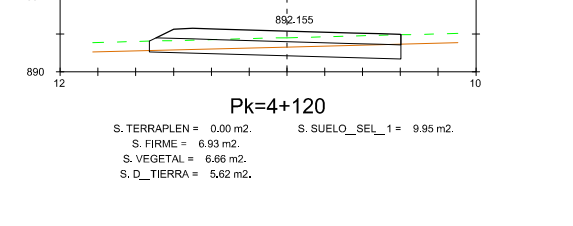
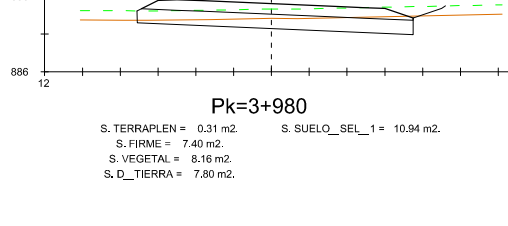
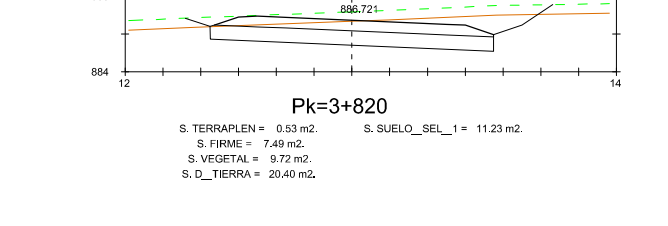
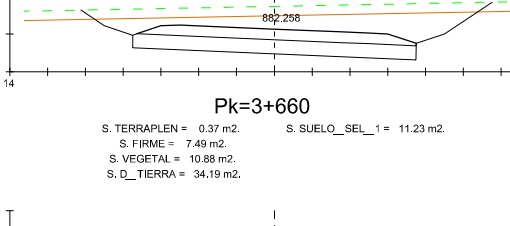
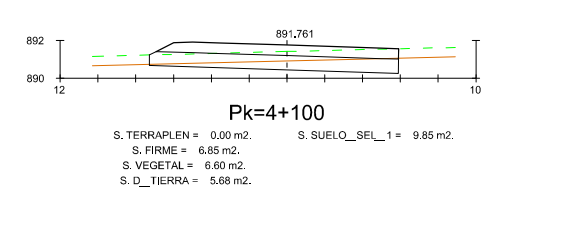
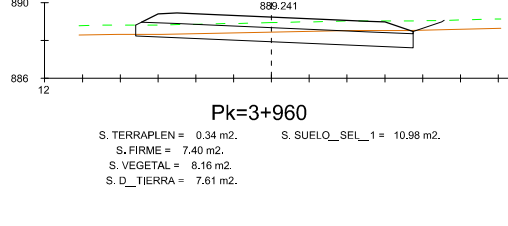
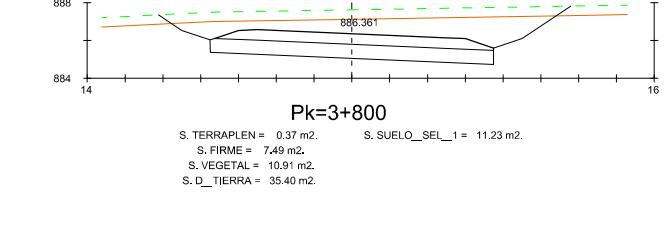
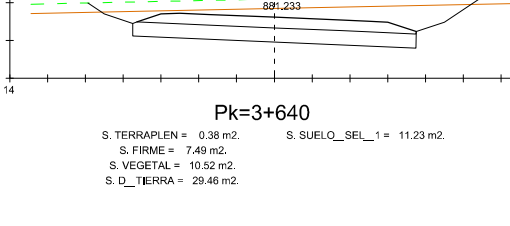
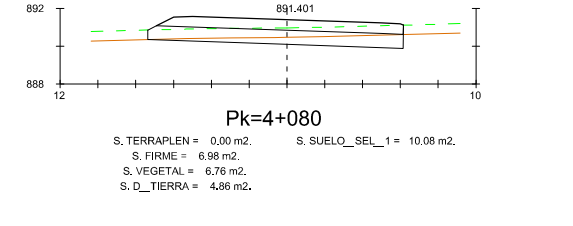
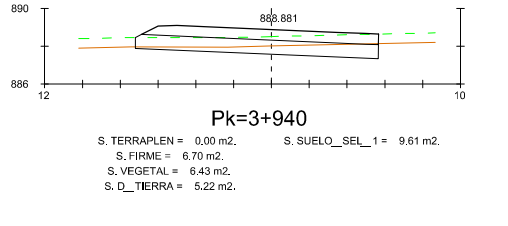
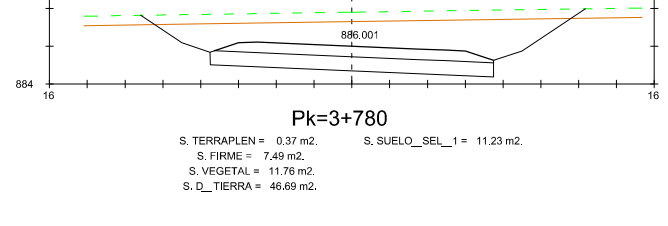
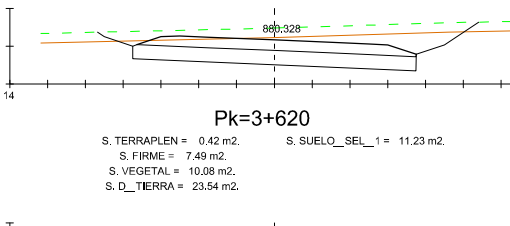
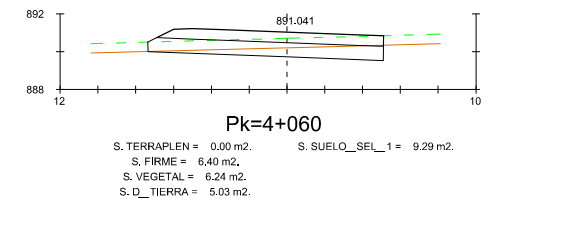
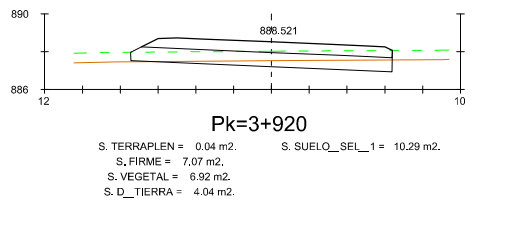
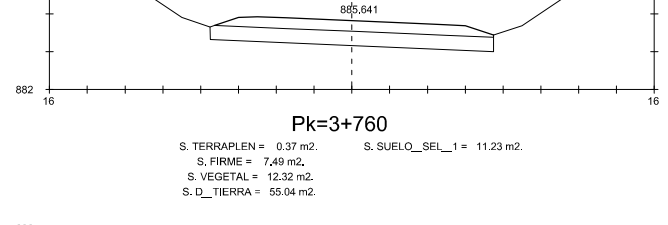
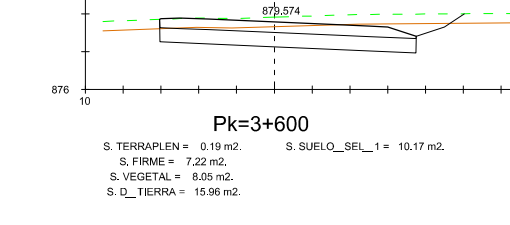
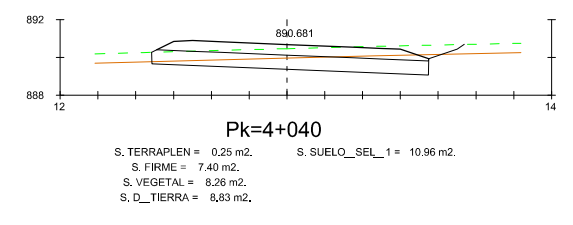
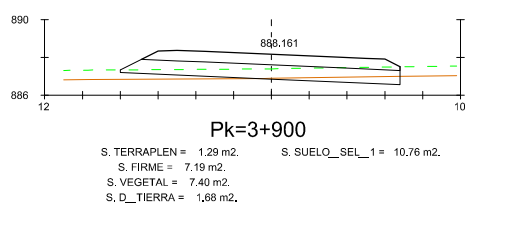
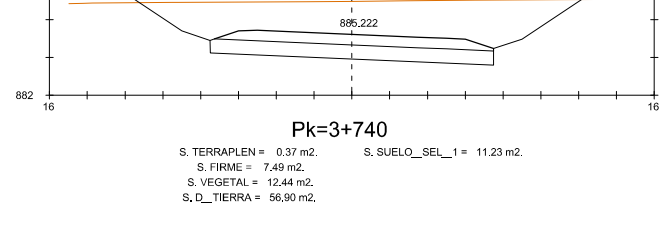
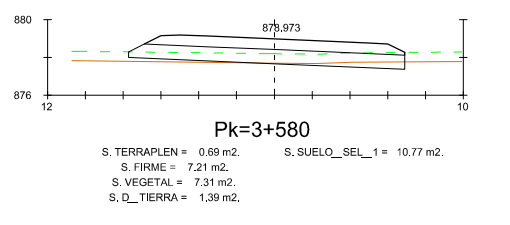
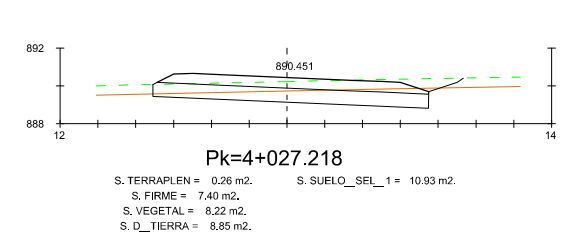
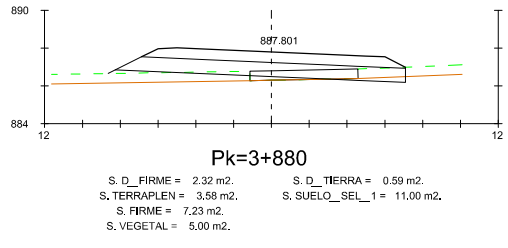
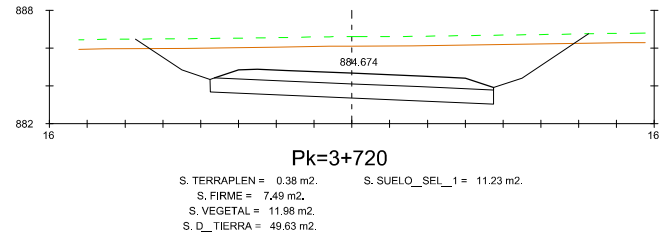
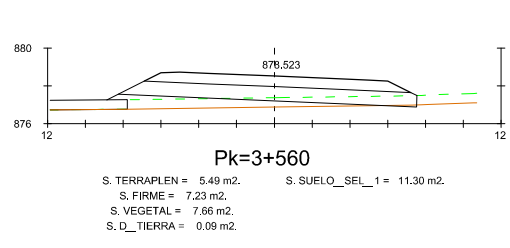


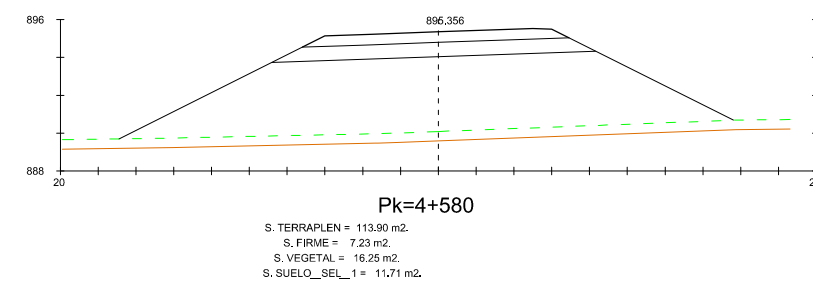
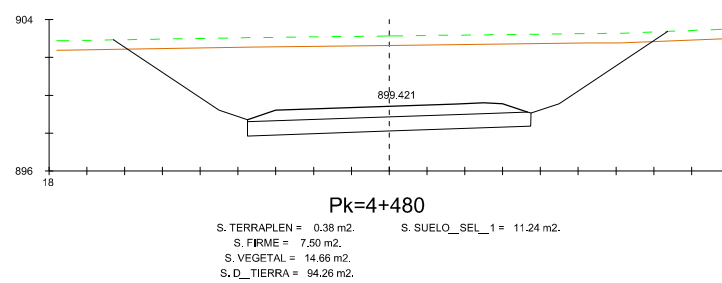
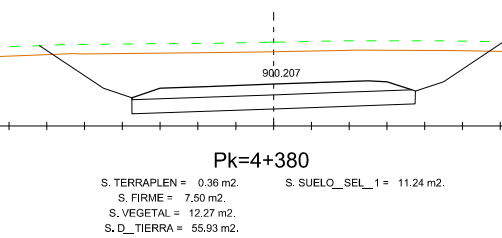
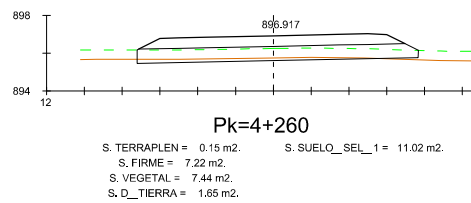
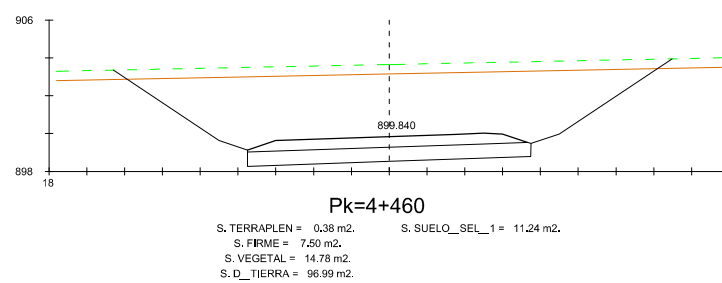
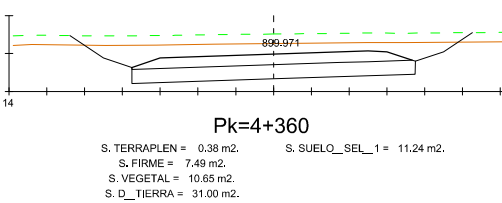
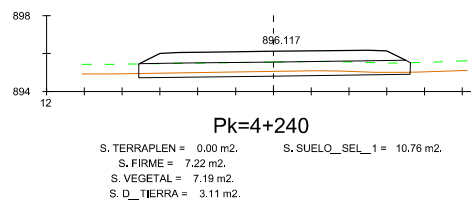
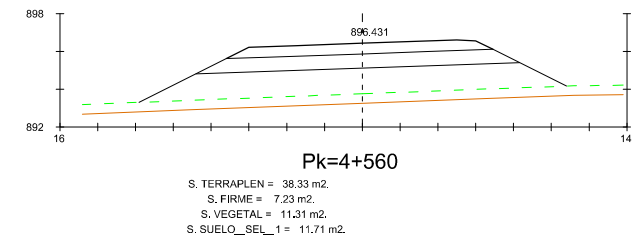
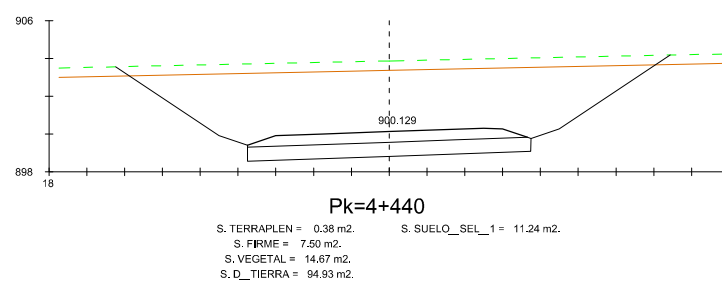
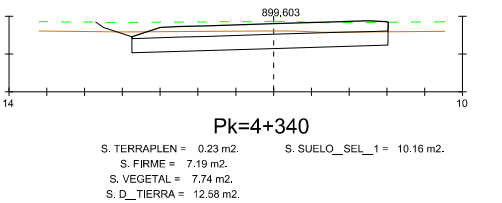
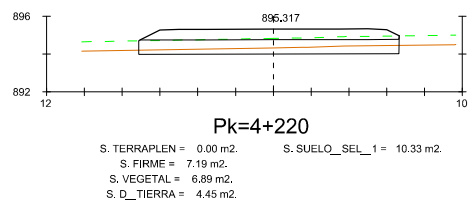
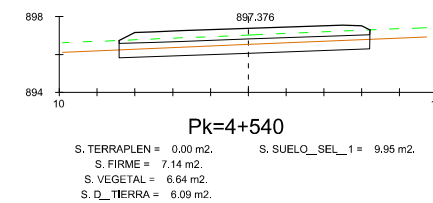
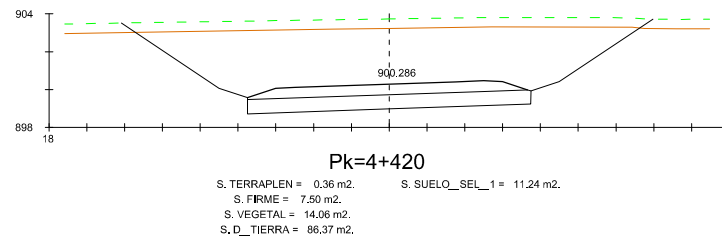
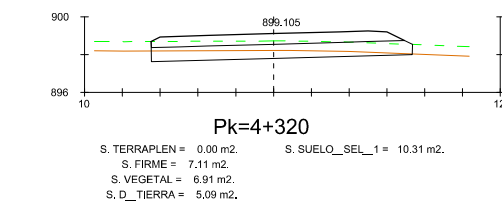
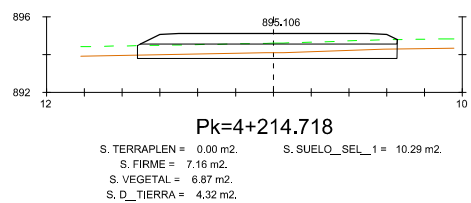
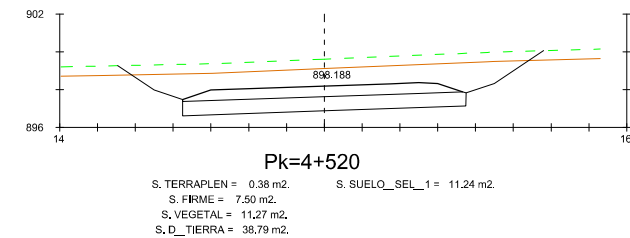
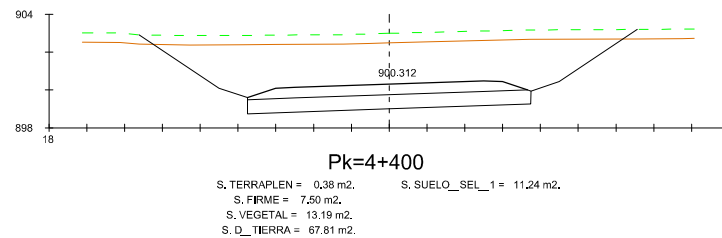
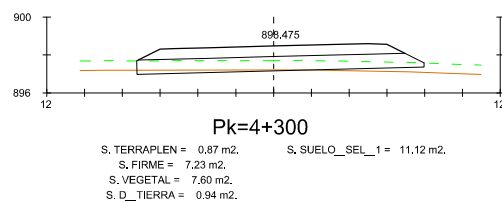
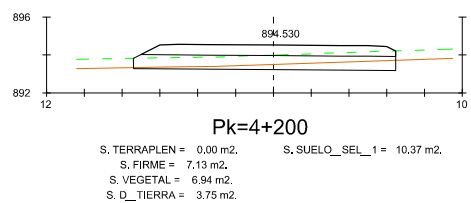
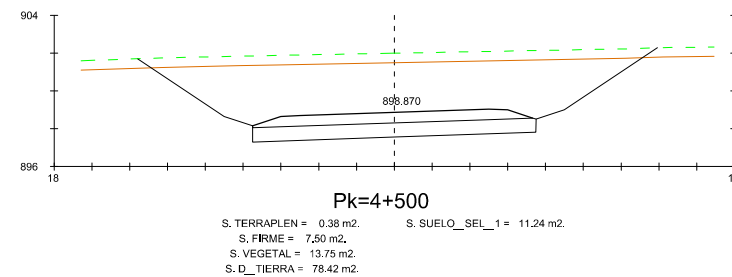
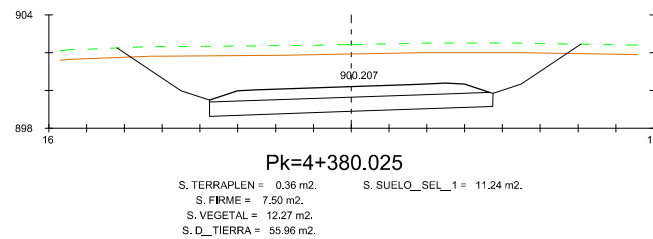
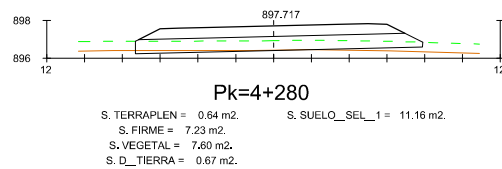
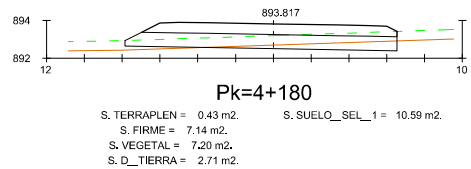
Pk=3+040
 S. TERRAPLEN = 0.22 m². S. SUELO_SEL_1 = 11.19 m².
 S. FIRME = 7.46 m².
 S. VEGETAL = 8.92 m².
 S. D_TIERRA = 11.24 m².

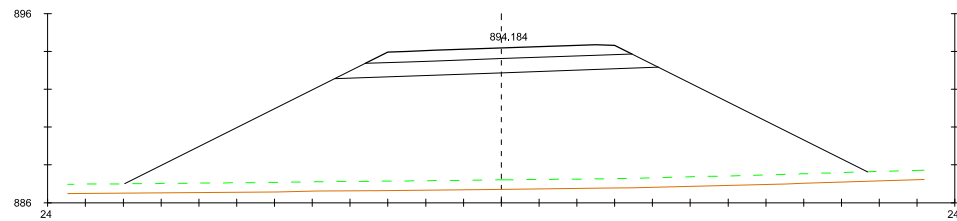


Pk=3+140
 S. TERRAPLEN = 13.61 m². S. SUELO_SEL_1 = 11.18 m².
 S. FIRME = 7.26 m².
 S. VEGETAL = 9.19 m².
 S. D_TIERRA = 0.25 m².

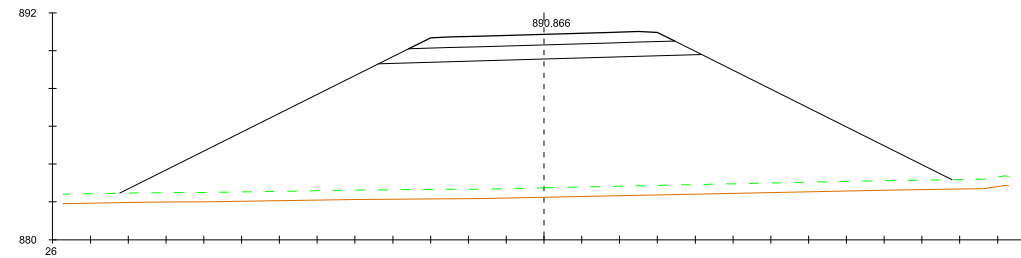




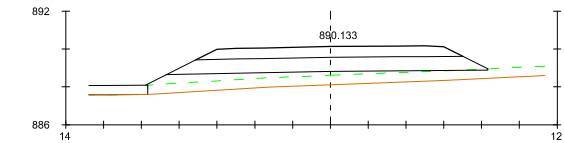




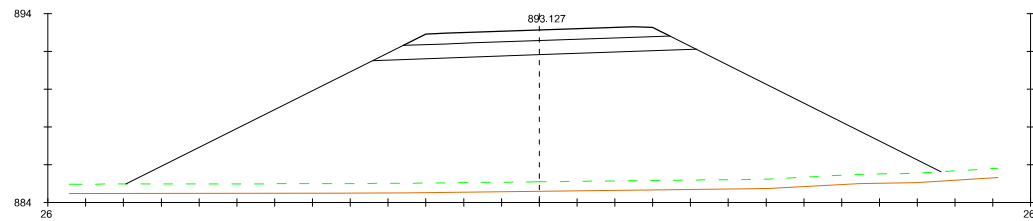
Pk=4+600
 S. TERRAPLEN = 179,26 m².
 S. FIRME = 7,23 m².
 S. VEGETAL = 19,65 m².
 S. SUELO_SEL_1 = 11,71 m².



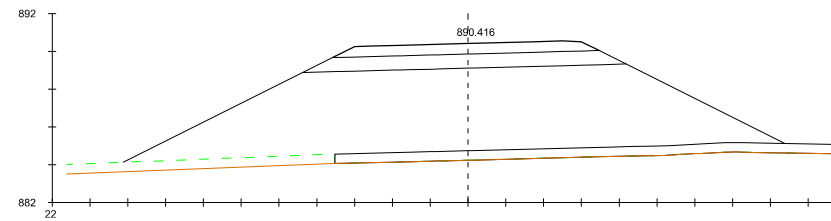
Pk=4+680
 S. TERRAPLEN = 229,39 m².
 S. FIRME = 7,23 m².
 S. VEGETAL = 22,02 m².
 S. SUELO_SEL_1 = 11,70 m².



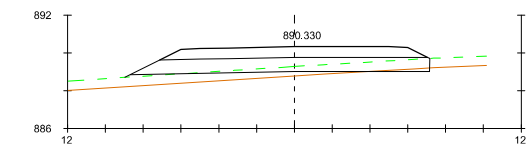
Pk=4+780
 S. TERRAPLEN = 12,73 m².
 S. FIRME = 7,25 m².
 S. VEGETAL = 9,00 m².
 S. SUELO_SEL_1 = 11,74 m².



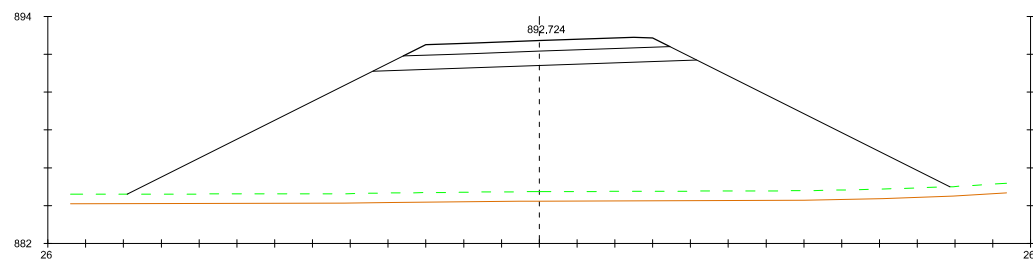
Pk=4+620
 S. TERRAPLEN = 224,08 m².
 S. FIRME = 7,23 m².
 S. VEGETAL = 21,56 m².
 S. SUELO_SEL_1 = 11,71 m².



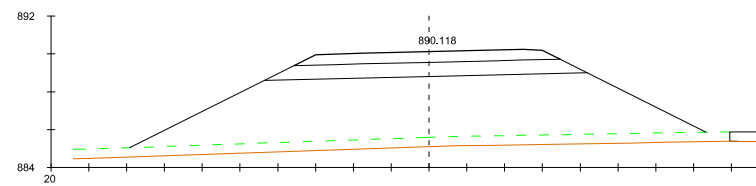
Pk=4+700
 S. TERRAPLEN = 119,02 m².
 S. FIRME = 7,23 m².
 S. VEGETAL = 5,59 m².
 S. SUELO_SEL_1 = 11,70 m².



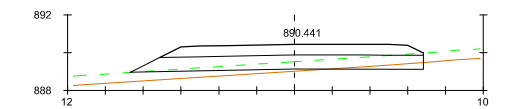
Pk=4+793.797
 S. TERRAPLEN = 4,35 m².
 S. FIRME = 7,26 m².
 S. VEGETAL = 8,06 m².
 S. D_TIERRA = 0,29 m².
 S. SUELO_SEL_1 = 11,29 m².



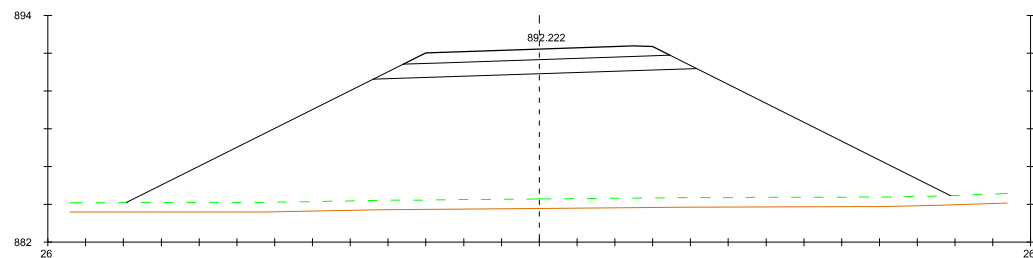
Pk=4+628.489
 S. TERRAPLEN = 225,43 m².
 S. FIRME = 7,23 m².
 S. VEGETAL = 21,77 m².
 S. SUELO_SEL_1 = 11,71 m².



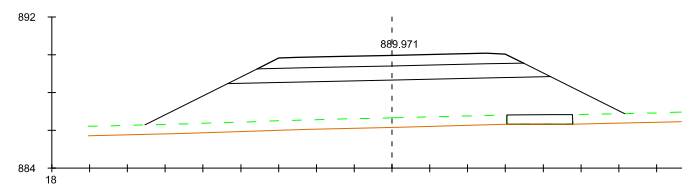
Pk=4+720
 S. TERRAPLEN = 92,72 m².
 S. FIRME = 7,23 m².
 S. VEGETAL = 15,25 m².
 S. SUELO_SEL_1 = 11,69 m².



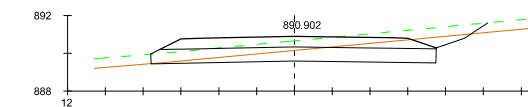
Pk=4+800
 S. TERRAPLEN = 2,80 m².
 S. FIRME = 7,26 m².
 S. VEGETAL = 7,76 m².
 S. D_TIERRA = 0,91 m².
 S. SUELO_SEL_1 = 11,05 m².



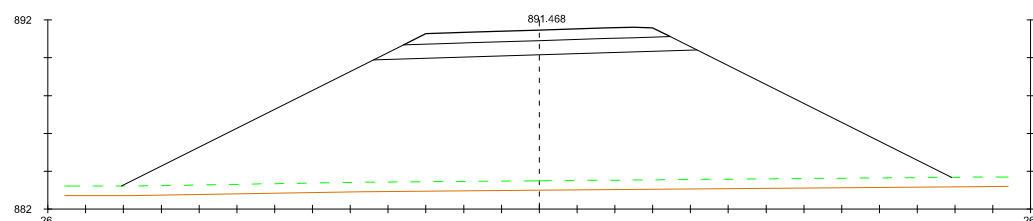
Pk=4+640
 S. TERRAPLEN = 223,44 m².
 S. FIRME = 7,23 m².
 S. VEGETAL = 21,80 m².
 S. SUELO_SEL_1 = 11,70 m².



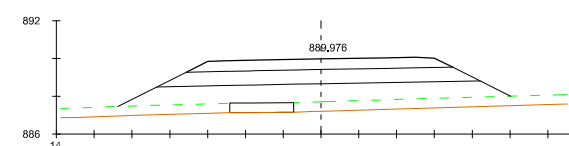
Pk=4+740
 S. TERRAPLEN = 53,65 m².
 S. FIRME = 7,22 m².
 S. VEGETAL = 10,94 m².
 S. SUELO_SEL_1 = 11,69 m².



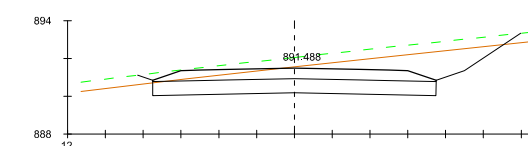
Pk=4+820
 S. TERRAPLEN = 0,22 m².
 S. FIRME = 7,44 m².
 S. VEGETAL = 8,92 m².
 S. D_TIERRA = 10,12 m².
 S. SUELO_SEL_1 = 11,26 m².



Pk=4+660
 S. TERRAPLEN = 225,15 m².
 S. FIRME = 7,23 m².
 S. VEGETAL = 21,96 m².
 S. SUELO_SEL_1 = 11,70 m².



Pk=4+760
 S. TERRAPLEN = 26,33 m².
 S. FIRME = 7,23 m².
 S. VEGETAL = 8,70 m².
 S. SUELO_SEL_1 = 11,70 m².



Pk=4+840
 S. TERRAPLEN = 0,48 m².
 S. FIRME = 7,61 m².
 S. VEGETAL = 10,14 m².
 S. D_TIERRA = 24,91 m².
 S. SUELO_SEL_1 = 11,24 m².



Escuelas de Ingenierías I.I.
 Industrial, Informática y Aeroespacial



Grado en Ingeniería Aeroespacial
 Trabajo de Fin de Grado

Director del T.F.G.

Dr. Jesús Cepeda Riaño
 Dept. Física Aplicada

EL AUTOR DEL PROYECTO

D. Jesús Muñoz Vera
 Ingeniero Técnico Aeronáutico

TÍTULO DEL TRABAJO:

PROYECTO DE TRAZADO:
 Acceso al Aeropuerto de León desde la futura Ronda Noroeste

ESCALAS

DIN-A1: 1/100

DIN-A3: 1/200

GRAFICA:

0 2 4 8 m

DESIGNACIÓN DEL PLANO:

PERFILES TRANSVERSALES

Eje 1: Eje Aeropuerto (4+600 - 4+840)

DOCUMENTO

2

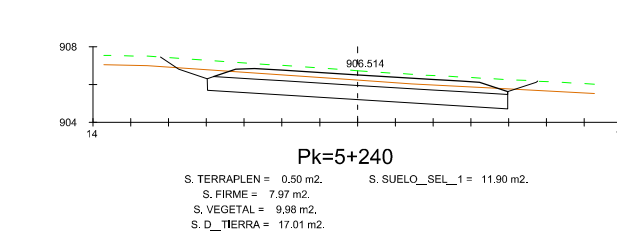
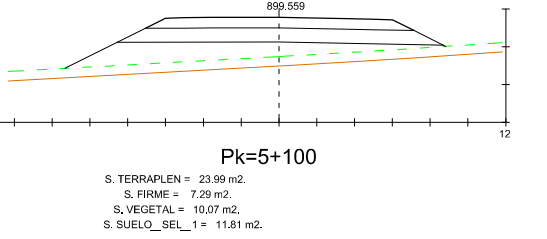
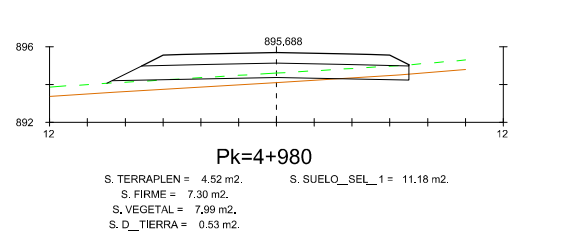
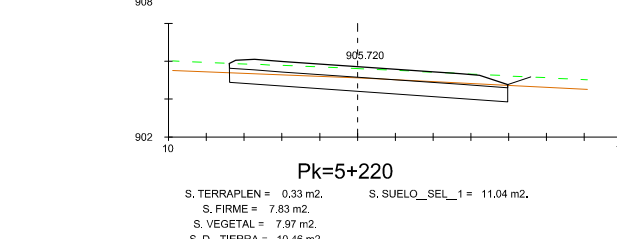
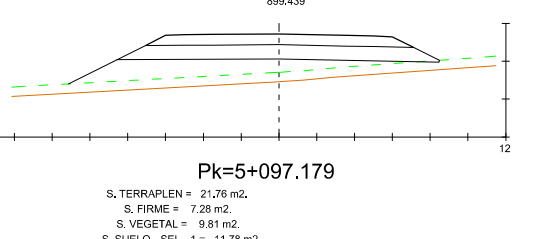
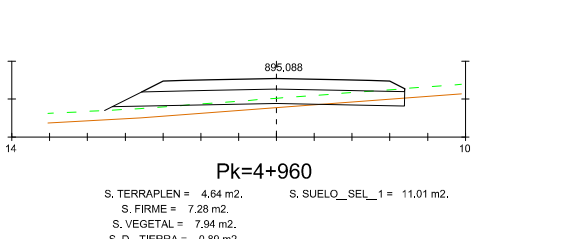
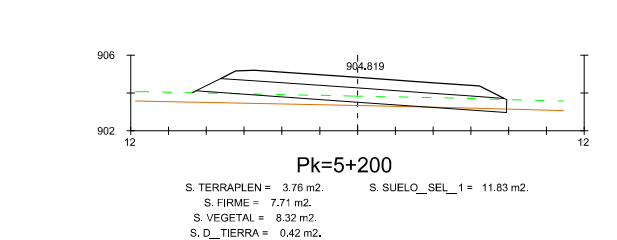
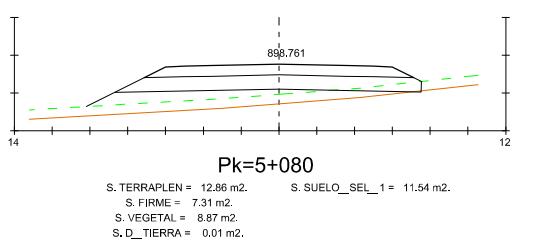
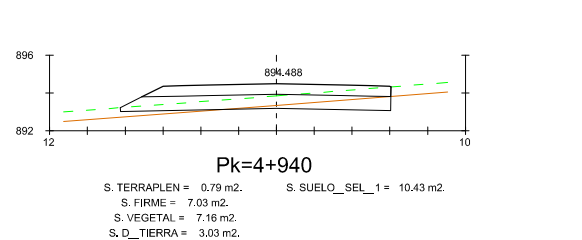
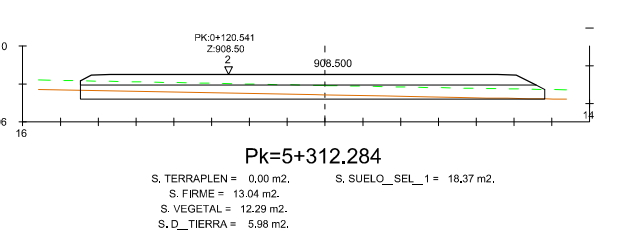
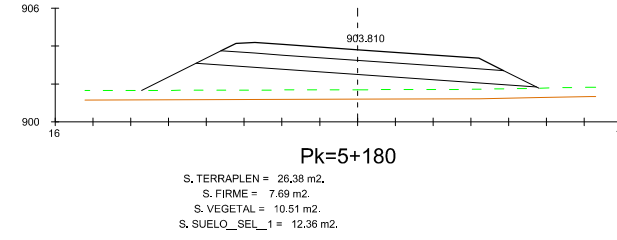
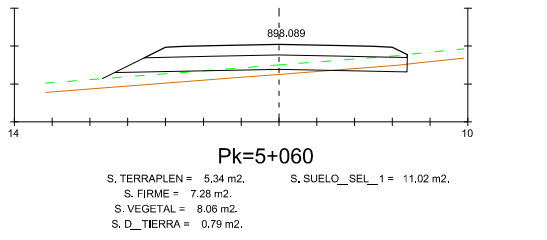
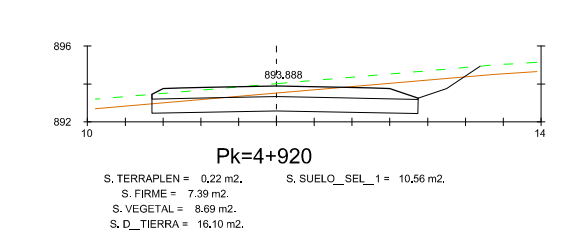
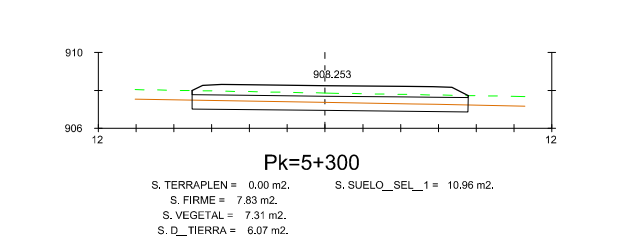
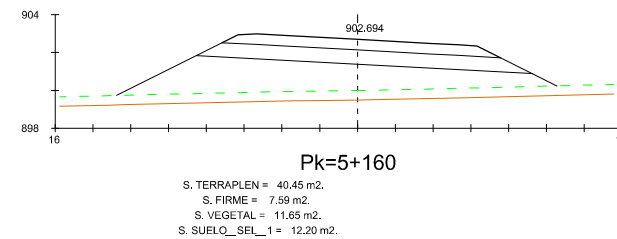
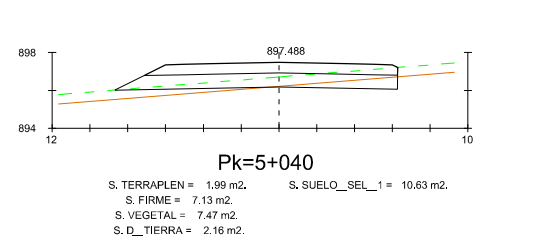
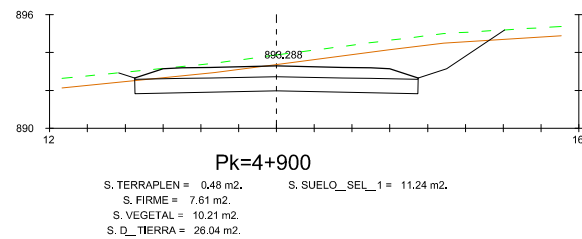
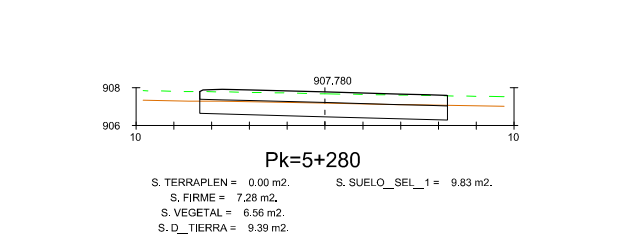
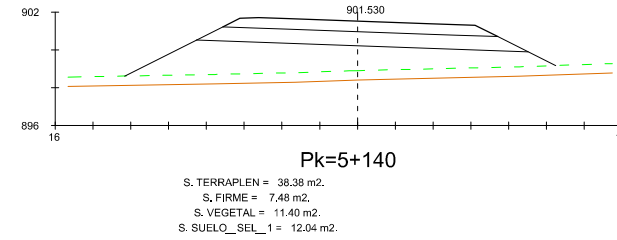
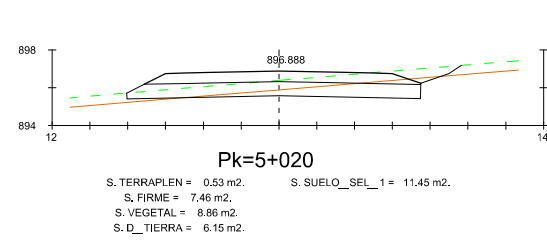
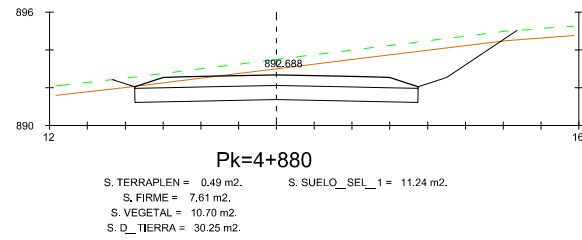
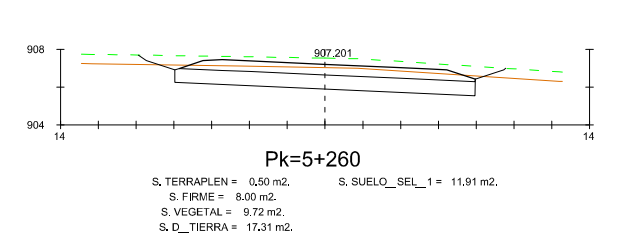
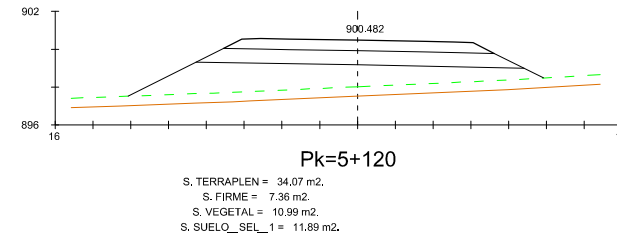
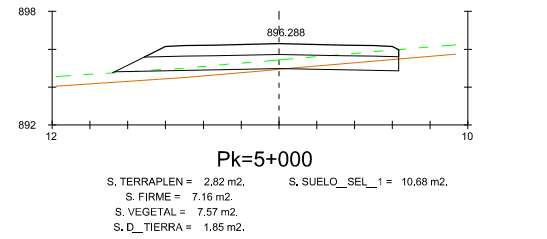
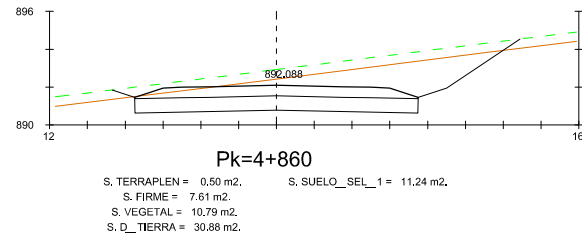
FECHA

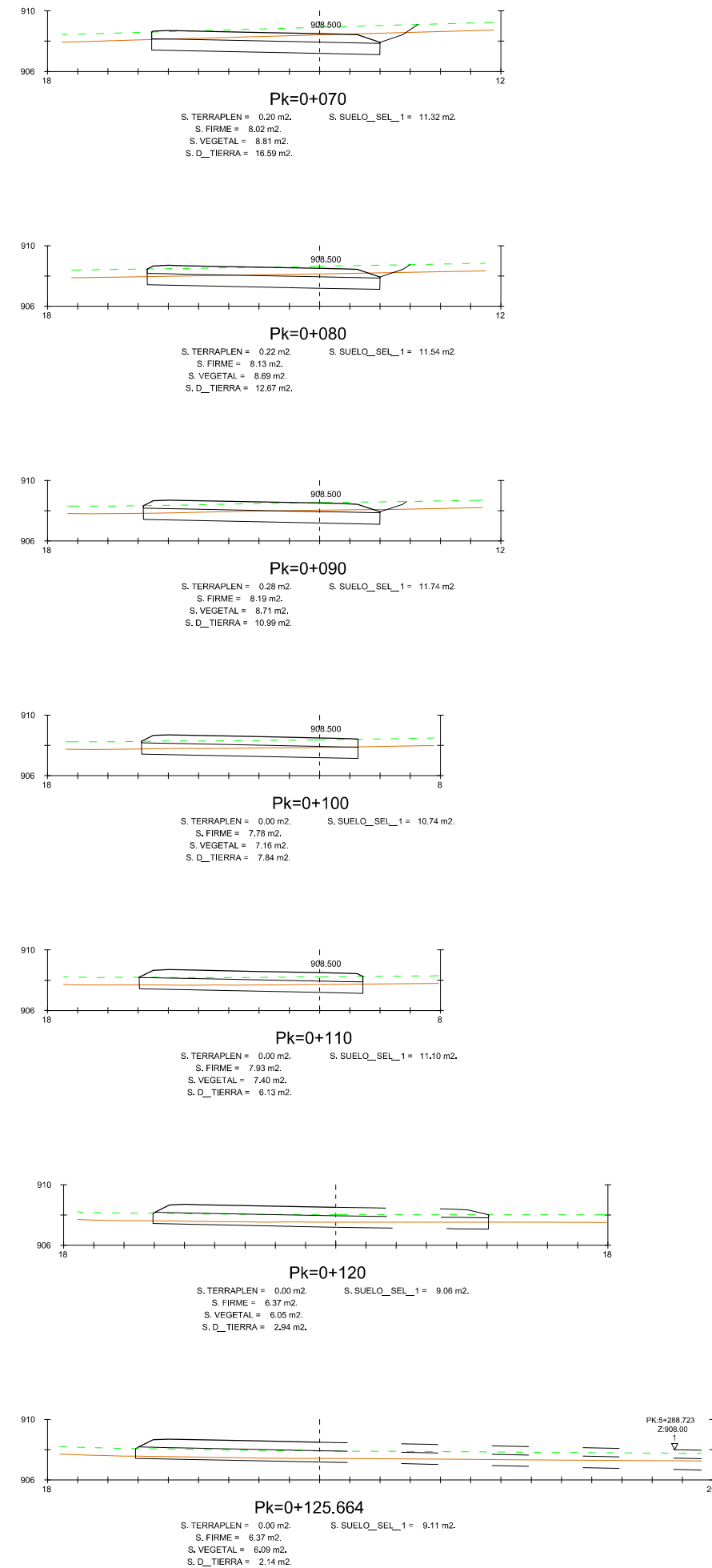
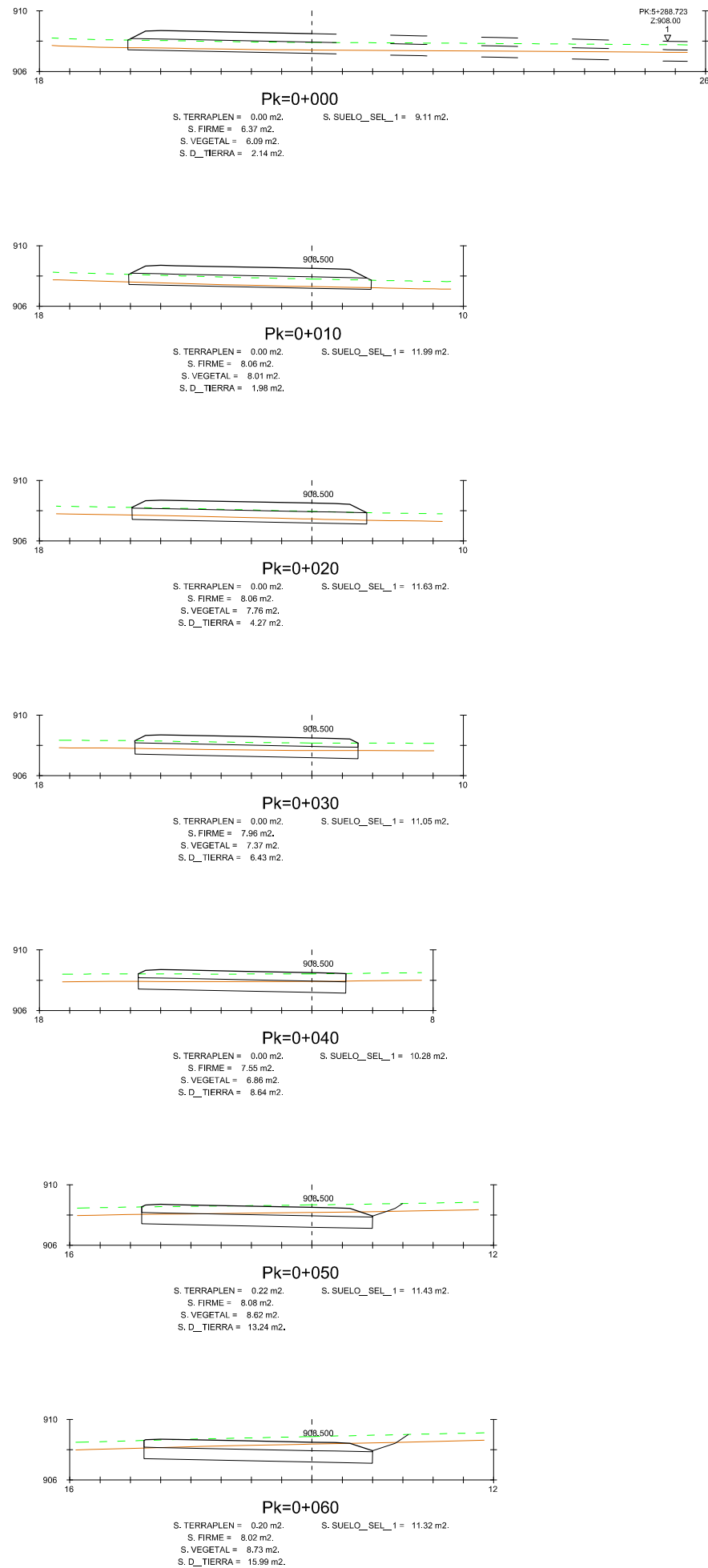
ENERO-2015

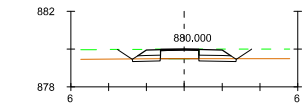
PLANO

2.5

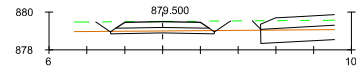
HOJA 12 DE 18



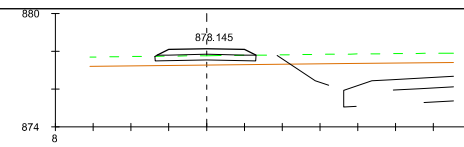




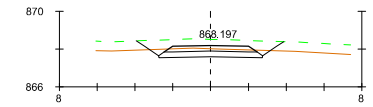
Pk=0+000
 S. D. FIRME = 0.13 m². S. D. TIERRA = 0.47 m².
 S. TERRAPLEN = 0.37 m². S. SUELO_SEL_1 = 0.98 m².
 S. FIRME = 0.83 m².
 S. VEGETAL = 2.53 m².



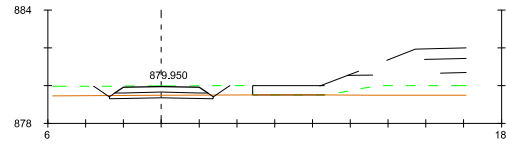
Pk=0+100
 S. TERRAPLEN = 0.38 m². S. SUELO_SEL_1 = 1.60 m².
 S. FIRME = 1.34 m².
 S. VEGETAL = 3.57 m².
 S. D. TIERRA = 0.75 m².



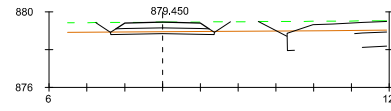
Pk=0+180
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 S. FIRME = 1.39 m².
 S. VEGETAL = 2.67 m².
 S. SUELO_SEL_1 = 1.60 m².



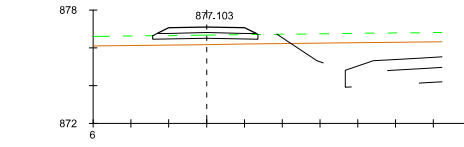
Pk=0+310
 S. TERRAPLEN = 0.36 m². S. SUELO_SEL_1 = 1.60 m².
 S. FIRME = 1.34 m².
 S. VEGETAL = 3.90 m².
 S. D. TIERRA = 2.50 m².



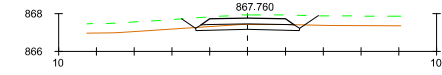
Pk=0+010
 S. TERRAPLEN = 0.38 m². S. SUELO_SEL_1 = 1.60 m².
 S. FIRME = 1.34 m².
 S. VEGETAL = 3.61 m².
 S. D. TIERRA = 0.88 m².



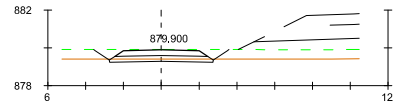
Pk=0+110
 S. TERRAPLEN = 0.37 m². S. SUELO_SEL_1 = 1.60 m².
 S. FIRME = 1.34 m².
 S. VEGETAL = 3.56 m².
 S. D. TIERRA = 0.69 m².



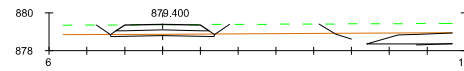
Pk=0+200
 S. TERRAPLEN = 1.72 m².
 S. FIRME = 1.39 m².
 S. VEGETAL = 2.79 m².
 S. SUELO_SEL_1 = 1.66 m².



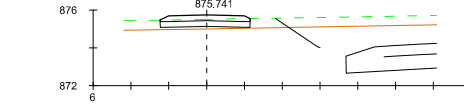
Pk=0+320
 S. TERRAPLEN = 0.35 m². S. SUELO_SEL_1 = 1.60 m².
 S. FIRME = 1.34 m².
 S. VEGETAL = 3.62 m².
 S. D. TIERRA = 1.46 m².



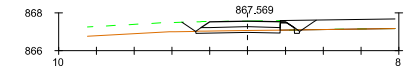
Pk=0+020
 S. TERRAPLEN = 0.37 m². S. SUELO_SEL_1 = 1.60 m².
 S. FIRME = 1.34 m².
 S. VEGETAL = 3.58 m².
 S. D. TIERRA = 0.78 m².



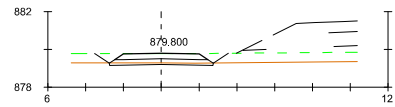
Pk=0+120
 S. TERRAPLEN = 0.37 m². S. SUELO_SEL_1 = 1.60 m².
 S. FIRME = 1.34 m².
 S. VEGETAL = 3.52 m².
 S. D. TIERRA = 0.57 m².



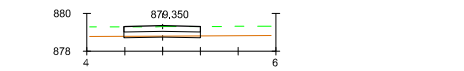
Pk=0+220
 S. TERRAPLEN = 0.51 m².
 S. FIRME = 1.36 m².
 S. VEGETAL = 2.38 m².
 S. SUELO_SEL_1 = 1.43 m².



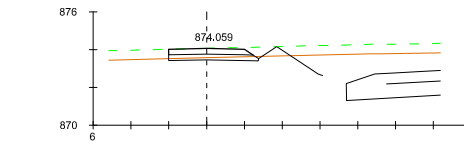
Pk=0+325.678
 S. D. FIRME = 0.53 m². S. D. TIERRA = 0.58 m².
 S. TERRAPLEN = 0.18 m². S. SUELO_SEL_1 = 1.37 m².
 S. FIRME = 1.20 m².
 S. VEGETAL = 2.60 m².



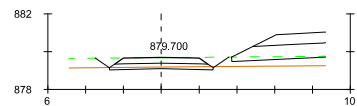
Pk=0+040
 S. TERRAPLEN = 0.38 m². S. SUELO_SEL_1 = 1.60 m².
 S. FIRME = 1.34 m².
 S. VEGETAL = 3.54 m².
 S. D. TIERRA = 0.58 m².



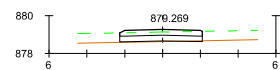
Pk=0+130
 S. TERRAPLEN = 0.00 m². S. SUELO_SEL_1 = 1.22 m².
 S. FIRME = 1.21 m².
 S. VEGETAL = 2.03 m².
 S. D. TIERRA = 0.26 m².



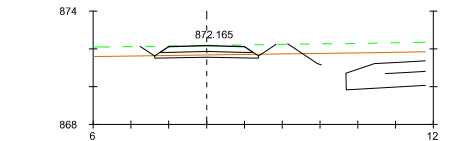
Pk=0+240
 S. TERRAPLEN = 0.20 m². S. SUELO_SEL_1 = 1.40 m².
 S. FIRME = 1.27 m².
 S. VEGETAL = 2.86 m².
 S. D. TIERRA = 0.66 m².



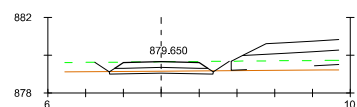
Pk=0+060
 S. TERRAPLEN = 0.38 m². S. SUELO_SEL_1 = 1.60 m².
 S. FIRME = 1.34 m².
 S. VEGETAL = 3.54 m².
 S. D. TIERRA = 0.64 m².



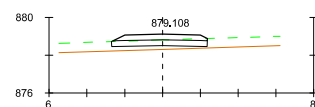
Pk=0+140
 S. TERRAPLEN = 0.09 m². S. SUELO_SEL_1 = 1.31 m².
 S. FIRME = 1.29 m².
 S. VEGETAL = 2.19 m².
 S. D. TIERRA = 0.03 m².



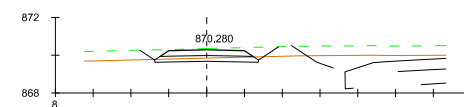
Pk=0+260
 S. TERRAPLEN = 0.38 m². S. SUELO_SEL_1 = 1.60 m².
 S. FIRME = 1.34 m².
 S. VEGETAL = 3.59 m².
 S. D. TIERRA = 0.80 m².



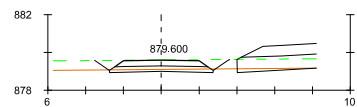
Pk=0+070
 S. TERRAPLEN = 0.38 m². S. SUELO_SEL_1 = 1.60 m².
 S. FIRME = 1.34 m².
 S. VEGETAL = 3.56 m².
 S. D. TIERRA = 0.70 m².



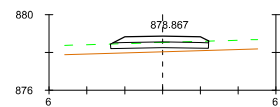
Pk=0+150
 S. TERRAPLEN = 0.94 m².
 S. FIRME = 1.37 m².
 S. VEGETAL = 2.54 m².
 S. SUELO_SEL_1 = 1.52 m².



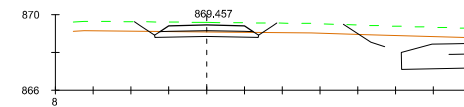
Pk=0+280
 S. TERRAPLEN = 0.38 m². S. SUELO_SEL_1 = 1.60 m².
 S. FIRME = 1.34 m².
 S. VEGETAL = 3.67 m².
 S. D. TIERRA = 1.11 m².



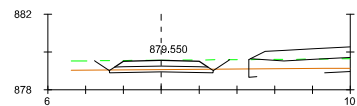
Pk=0+080
 S. TERRAPLEN = 0.37 m². S. SUELO_SEL_1 = 1.60 m².
 S. FIRME = 1.34 m².
 S. VEGETAL = 3.57 m².
 S. D. TIERRA = 0.74 m².



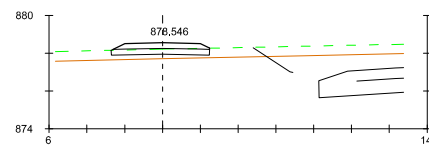
Pk=0+160
 S. TERRAPLEN = 1.10 m².
 S. FIRME = 1.38 m².
 S. VEGETAL = 2.59 m².
 S. SUELO_SEL_1 = 1.55 m².



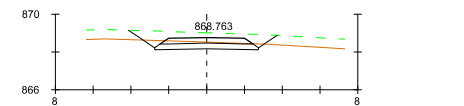
Pk=0+290
 S. TERRAPLEN = 0.38 m². S. SUELO_SEL_1 = 1.60 m².
 S. FIRME = 1.34 m².
 S. VEGETAL = 3.76 m².
 S. D. TIERRA = 1.49 m².



Pk=0+090
 S. TERRAPLEN = 0.38 m². S. SUELO_SEL_1 = 1.60 m².
 S. FIRME = 1.34 m².
 S. VEGETAL = 3.58 m².
 S. D. TIERRA = 0.76 m².



Pk=0+170
 S. TERRAPLEN = 1.11 m².
 S. FIRME = 1.38 m².
 S. VEGETAL = 2.80 m².
 S. SUELO_SEL_1 = 1.56 m².



Pk=0+300
 S. TERRAPLEN = 0.37 m². S. SUELO_SEL_1 = 1.60 m².
 S. FIRME = 1.34 m².
 S. VEGETAL = 3.94 m².
 S. D. TIERRA = 2.22 m².



Escuelas de Ingenierías I.I.
 Industrial, Informática y Aeroespacial



Grado en Ingeniería Aeroespacial
 Trabajo de Fin de Grado

Director del T.F.G.
 Dr. Jesús Cepeda Riaño
 Dept. Física Aplicada

EL AUTOR DEL PROYECTO
 D. Jesús Muñoz Vera
 Ingeniero Técnico Aeronáutico

TITULO DEL TRABAJO:
PROYECTO DE TRAZADO:
 Acceso al Aeropuerto de León desde la futura Ronda Noroeste

ESCALAS
 DIN-A1: 1/100
 DIN-A3: 1/200
 GRAFICA:

DESIGNACIÓN DEL PLANO:
PERFILES TRANSVERSALES
 Eje 3 : Camino 2+000 M.I.

DOCUMENTO	2	PLANO	2.5
FECHA	ENERO-2015	HOJA 15	DE ...18

