2	
H	927
–	–
As	–
–	–

E1	
5500	–
1400	–
6900	DI
+200	CO/–

4	
H	968
–	–
–	–
–	–

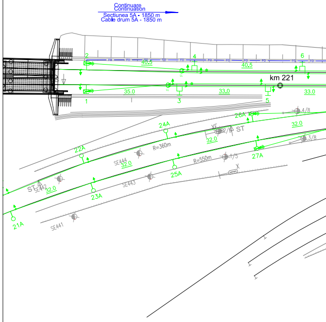
E1	
6000	–
1300	–
7300	A
–650	CO/–

E2	
5500	–
1400	–
6900	DD
–150	CO/–

6	
H	008.5
–	–
–	–
–	–

E1	
5500	–
1300	–
6800	ICM
–250	CO/–

E2	
5500	–
2000	–
7500	ICM
+250	CO/–


Continuare
Continuation
Sectiunea 5A - 1850 m
Cable drum 5A - 1850 m
2
4
6
40.5
40.5
km 221
35.0
33.0
33.0
1
3
5
4/8
26A
24A
32.0
XE
2/8
ST
32.0
3/8
22A
R=360m
27A
SE444
32.0
1/5
R=550m
25A
X
ST
SE442
32.0
23A
SE443
21A
SE441

8	
H	049
–	–
As	–
–	–
E1	
5500	–
1400	–
6900	DI
+150	CO/–
E2	
6000	–
1300	–
7300	A
+650	CO/–

12	
H	085
–	–
As	–
–	–
E1	
5850	–
1450	–
7300	DD
0	CO/–
E2	
5500	–
1400	–
6900	DD
–200	CO/–

17	
MU	107
–	–
–	–
–	–
E1	
5500	–
1400	–
6900	ICA
+100	CS/–
E2	
5550	–
1750	–
7300	DCA
–150	CS/–

18	
H	114.5
–	–
–	–
–	–
E1	
5500	–
1400	–
6900	ICA
+100	CO/–
E2	
5550	–
1750	–
7300	DCA
–150	CO/–

22	
H	155
–	–
–	–
–	–
E1	
5500	–
1400	–
6900	DD
–200	CO/–

24	
H	186.5
–	–
–	–
–	–
E1	
5500	–
1400	–
6900	DI
+200	CO/–

28	
H	227
–	–
–	–
–	–
E1	
5500	–
1400	–
6900	DD
–200	CO/–

30	
H	273.5
–	–
As	–
–	–
E1	
5500	–
1400	–
6900	DI
+200	CO/–

35	
MU	310
–	–
–	–
–	–
E1	
5550	–
1400	–
6950	DD
0	CS/–

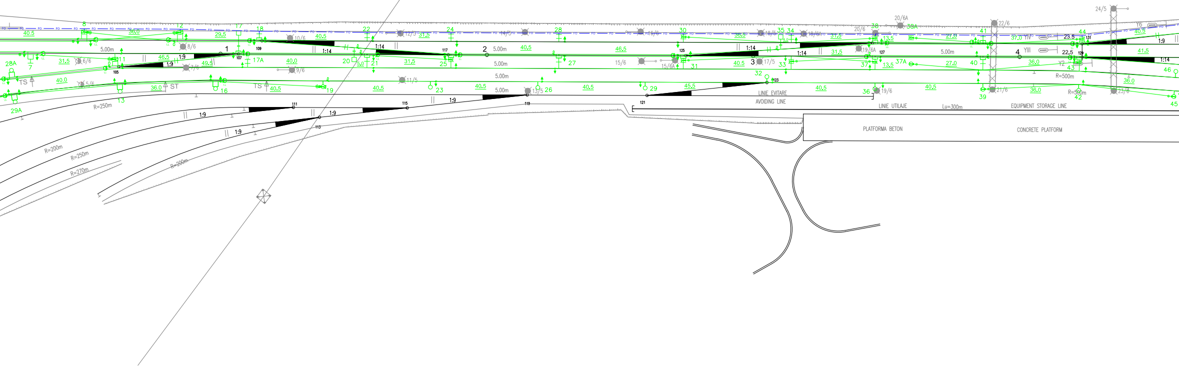
34	
H	314
–	–
–	–
–	–
E1	
5500	–
1400	–
6900	DD
–200	CO/–

38	
H	345.5
–	–
As	–
–	–
E1	
5500	–
1400	–
6900	ICA
+100	CO/–
E2	
5550	–
1750	–
7300	DCA
–150	CO/–

38A	
H	359
–	–
As	–
–	–

41	
H	386
–	–
–	–
–	–
E1	
6000	–
1600	–
7600	A
–200	CO/–
E2	
5500	–
1400	–
6900	DI
0	CO/–
E2	
5850	–
1350	–
7200	A
+200	CO/–

44	
H	423.5
–	–
As	–
–	–
E1	
5550	–
1750	–
7300	ICA
+150	CO/–
E2	
5500	–
1400	–
6900	DCA
–100	CO/–


TRAVERSARE I
KM 230+
FO
8
12
17
18
22
24
28
30
35
34
38
38A
41
44
40.5
36.0
29.5
31.5
46.5
49.5
40.0
36.5
27.0
37.0
23.5
22.5
41.5
13.5
45.5
5.0
4.0
28A
29A
7
11
13
16
17A
19
20
21
23
25
26
27
29
31
32
33
36
37
37A
39
40
42
43
45
46
TS
ST
5.00m
1
2
3
4
1:9
1:14
105
107
109
111
113
115
117
119
121
123
125
127
129
131
5/6
6/6
7/6
8/6
9/6
10/6
11/5
12/5
13/5
14/5
15/6
15/6A
16/6
17/5
18/5
18/6A
19/6
19/6A
20/6
20/6A
21/6
22/6
23/6
24/5
YIV
YIII
Y2
Y6
R=250m
R=200m
R=270m
R=500m
LINIE EVITARE
AVOIDING LINE
LINIE UTILAJE
Lu=300m
EQUIPMENT STORAGE LINE
PLATFORMA BETON
CONCRETE PLATFORM

53	
SECP6	509
–	–
As	–
–	–

E1	
5550	–
1750	–
7300	DCA
–150	CO/–

E2	
5500	–
1400	–
6900	ICA
+100	CO/–

60	
SECP6	554
–	–
–	–
–	–

E1	
5500	–
1400	–
6900	DI
+200	CO/–

61	
SECP6	554
–	–
–	–
–	–

E1	
5550	–
1750	–
7300	DCA
–200	CO/–

E2	
5500	–
1400	–
6900	DCA
+50	CO/–

65	
SECP6	594.5
–	–
–	–
–	–

E1	
5500	–
1400	–
6900	DI
+200	CO/–

E2	
5500	–
1400	–
6900	DD
0	CO/–

66	
SECP6	594.5
–	–
–	–
–	–

E1	
5500	–
1400	–
6900	DD
–300	CO/–

71	
SECP6	635
–	–
–	–
–	–

E1	
5500	–
1400	–
6900	DD
–200	CO/–

E2	
5500	–
1400	–
6900	DI
+200	CO/–

72	
SECP6	635
–	–
–	–
–	–

E1	
5500	–
1400	–
6900	DD
–250	CO/–

77	
SECP6	675.5
–	–
–	–
–	–

E1	
5500	–
1400	–
6900	DI
+200	CO/–

E2	
5500	–
1400	–
6900	DD
–200	CO/–

78	
SECP6	675.5
–	–
–	–
–	–

E1	
5500	–
1400	–
6900	DD
0	CO/–

82	
SECP6	716
–	–
–	–
–	–

E1	
5500	–
1400	–
6900	DD
–200	CO/–

E2	
5500	–
1400	–
6900	DI
+200	CO/–

83	
SECP6	716
–	–
–	–
–	–

E1	
5500	–
1400	–
6900	DI
+200	CO/–

87	
SECP6	756.5
–	–
–	–
–	–

E1	
5500	–
1400	–
6900	DI
+200	CO/–

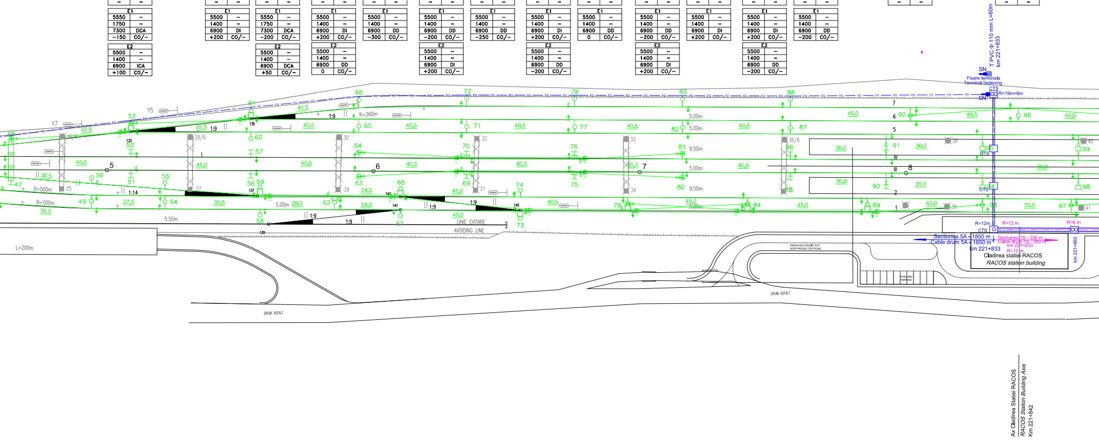
E2	
5500	–
1400	–
6900	DD
–200	CO/–

88	
SECP6	756.5
–	–
–	–
–	–

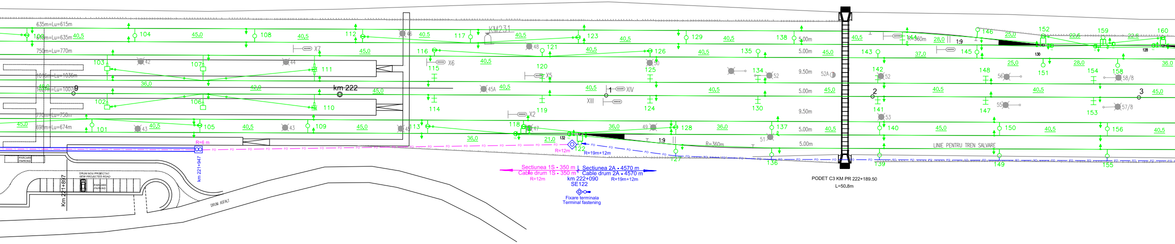
E1	
5500	–
1400	–
6900	DD
–200	CO/–

92	
SECP6	801.5
–	–
As	–
–	–

96	
SECP6	842
–	–
–	–
–	–


T PVC Φ 110 mm L=60m
km 221+833
SN
Fixare terminala
Terminal fastening
CTS
R=19m+6m
SN
66
72
78
83
88
53
61
Y5
Y7
48
45.5
40.5
R=360m
1:9
65
40.5
71
40.5
77
40.5
82
87
5.00m
45.0
7
6
92
40.5
96
40.5
5
60
45.5
1:9
135
133
52
57
28/6
26/6
30
32
33
36/6
64
70
76
81
86
9.50m
36.0
91
36.0
58
95
CTS
99
40
45.0
5
45.0
40.5
6
40.5
40.5
7
40.5
40.5
IV
8
III
36.0
30.5
50
51
55
56
59
63
69
75
80
85
9.50m
5.00m
36.0
90
36.0
94
CTS
98
47
R=500m
25
1:14
27
137
24.5
29
143
45.0
31
74
34
2
49
54
27.5
35.5
5.00m
28.0
62
68
24.5
141
1:9
1:9
40.5
45.0
79
5.00m
84
45.0
89
1
43.0
39
93
33.5
97
41
R=500m
36.0
5.50m
58
1:9
1:9
67
45.0
73
145
LINIE EVITARE
AVOIDING LINE
139
L=200m
R=12m
R=12 m
R=6 m
CTS
Sectiunea 5A - 1850 m
Cable drum 5A - 1850 m
km 221+833
Sectiunea 1S - 350 m
Cable drum 1S - 350 m
km 221+833
R=12 m
Cladirea statiei RACOS
RACOS station building
km 221+865
DRUM NOU PROIECTAT
NEW PROJECTED ROAD
PARCARE
PARKING
DRUM ASFALT
DRUM ASFALT
Ax Cladirea Statiei RACOS
RACOS Station Building Axis
Km 221+842

100	
SECP6	882.5
–	–
As	–
–	–
E1	
5500	–
1400	–
6900	DD
−200	CO/−
E2	
5500	–
1400	–
6900	DI
+200	CO/−


635m=Lu=615m
618m=Lu=635m
750m=Lu=770m
1016m=Lu=1036m
1027m=Lu=1007m
770m=Lu=750m
698m=Lu=674m
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127
128
129
130
134
135
136
137
138
139
140
141
142
143
145
146
147
148
149
150
151
152
153
154
155
156
158
159
160
40.5
45.0
36.0
42.0
21.0
37.0
28.0
25.0
22.5
X7
X6
X5
X2
XIII
XIV
1
2
3
9
KM231
km 222
5.00m
9.50m
R=360m
1:9
52A
58/8
57/8
R=6 m
km 221+947
Km 221+897
PARCARE
PARKING
DRUM NOU PROIECTAT
NEW PROJECTED ROAD
DRUM ASFALT
R=12m
R=19m+12m
Sectiunea 1S - 350 m
Cable drum 1S - 350 m
R=12m
Sectiunea 2A - 4570 m
Cable drum 2A - 4570 m
R=19m+12m
km 222+090
SE122
Fixare terminala
Terminal fastening
PODET C3 KM PR 222+189.50
L=50.8m
LINIE PENTRU TREN SALVARE
FO

122	
SECP6	090
–	–
–	–
–	–
E1	
5550	–
1750	–
7300	ICA
+150	CO/−
E2	
5500	–
1400	–
6900	DCA
−100	CO/−

127	
SECP6	126
–	–
–	–
–	–
E1	
5500	–
1400	–
6900	DD
−250	CO/−

128	
SECP6	126
–	–
As	–
–	–
E1	
5500	–
1400	–
6900	DD
−200	CO/−
E2	
5500	–
1400	–
6900	DD
−200	CO/−

136	
SECP6	162
–	–
–	–
–	–
E1	
5500	–
1400	–
6900	DD
−300	CO/−

137	
SECP6	162
–	–
–	–
–	–
E1	
5500	–
1400	–
6900	DI
+200	CO/−
E2	
5500	–
1400	–
6900	DI
0	CO/−

139	
SECP6	202.5
–	–
–	–
–	–
E1	
5500	–
1400	–
6900	DI
+200	CO/−

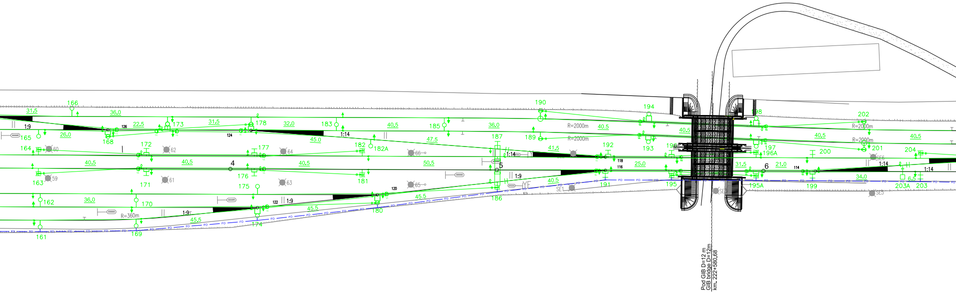
140	
SECP6	202.5
–	–
–	–
–	–
E1	
5500	–
1400	–
6900	DD
−200	CO/−
E2	
5500	–
1400	–
6900	DI
+200	CO/−

149	
SECP6	247.5
–	–
–	–
–	–
E1	
5500	–
1400	–
6900	DD
−200	CO/−

150	
SECP6	247.5
–	–
–	–
–	–
E1	
5500	–
1400	–
6900	DI
+200	CO/−
E2	
5500	–
1400	–
6900	DD
−200	CO/−

155	
SECP6	288
–	–
–	–
–	–
E1	
5500	–
1400	–
6900	DI
+200	CO/−

156	
SECP6	288
–	–
–	–
–	–
E1	
5500	–
1400	–
6900	DD
−200	CO/−
E2	
5500	–
1400	–
6900	DI
+200	CO/−


166
31.5
36.0
22.5
173
31.5
178
32.0
183
1:14
40.5
185
36.0
190
194
198
202
R=2000m
40.5
40.5
40.5
40.5
1:9
126
124
165
26.0
168
45.0
47.5
187
189
R=2000m
193
196A
197
201
204
164
60
172
62
177
64
182
182A
66
1:14
41.5
192
118
116
25.0
31.5
6
21.0
114
200
1:14
1:14
40.5
40.5
4
40.5
50.5
5
163
59
171
61
176
63
181
65
1:9
40.5
191
195
195A
199
34.0
6.5
203A
203
175
120
45.5
SE1
186
36.0
162
170
122
1:9
45.5
1:9
R=360m
45.5
180
174
161
169
FO
Pod GIB D=12 m
GIB bridge D=12m
km. 222+580.68

161	
SECP6	328.5
–	–
–	–
–	–

E1	
5500	–
1400	–
6900	DD
–250	CO/–

162	
SECP6	328.5
–	–
–	–
–	–

E1	
5500	–
1400	–
6900	DD
–200	CO/–

E2	
5500	–
1400	–
6900	DD
–200	CO/–

169	
SECP6	364.5
–	–
–	–
–	–

E1	
5500	–
1400	–
6900	DD
–300	CO/–

170	
SECP6	364.5
–	–
–	–
–	–

E1	
5500	–
1400	–
6900	DI
+200	CO/–

E2	
5500	–
1400	–
6900	DI
+200	CO/–

174	
SECP6	410
–	–
–	–
–	–

E1	
5500	–
1400	–
6900	ICA
+50	CO/–

E2	
5550	–
1750	–
7300	DCA
–250	CO/–

175	
SECP6	410
–	–
–	–
–	–

E1	
5500	–
1400	–
6900	DI
+200	CO/–

180	
SECP6	455
–	–
As	–
–	–

E1	
5500	–
1400	–
6900	ICA
+100	CO/–

E2	
5550	–
1750	–
7300	DCA
–150	CO/–

186	
H	500
–	–
As	–
–	–

191	
H	540.5
–	–
–	–
–	–

E1	
5500	–
1400	–
6900	DCA
–100	CO/–

E2	
5550	–
1750	–
7300	ICA
+150	CO/–

195	
H	565.5
–	–
As	–
–	–

E1	
5500	–
1400	–
6900	DD
+200	CO/–

E2	
5850	–
1450	–
7300	A
0	CO/–

195A	
H	597.5
–	–
As	–
–	–

E1	
5850	–
1450	–
7300	A
0	CO/–

E2	
5500	–
1400	–
6900	DD
–200	CO/–

199	
H	618.5
–	–
–	–
–	–

E1	
5550	–
1750	–
7300	DCA
–150	CO/–

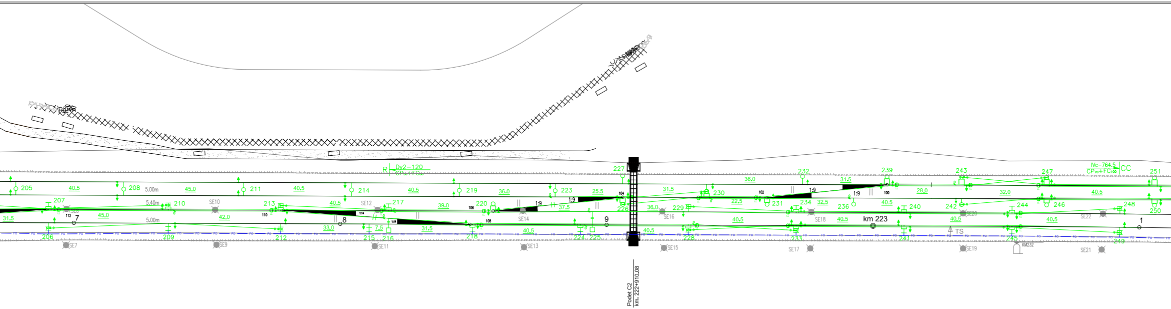
E2	
5500	–
1400	–
6900	ICA
+100	CO/–

203A	
MU	652
–	–
–	–
–	–

E1	
5550	–
1400	–
6950	DD
0	CS/–

203	
H	659
–	–
–	–
–	–

E1	
5500	–
1400	–
6900	DD
–200	CO/–


R Dy2-120 CP₈₀+FC₈₀
IVc-764.5 CP₇₀+FC₁₀₀ CC
205
208
211
214
219
223
227
232
239
243
247
251
207
210
213
217
220
226
229
230
231
234
236
240
242
244
246
248
250
206
209
212
215
216
218
224
225
228
233
241
245
249
31.5
40.5
45.0
40.5
40.5
36.0
25.5
31.5
36.0
31.5
28.0
32.0
40.5
45.0
42.0
40.5
39.0
37.5
36.0
22.5
32.5
40.5
40.5
40.5
33.0
7.5
31.5
40.5
40.5
5.00m
5.40m
5.00m
1:9
1:14
7
8
9
1
km 223
TS
KM232
SE7
SE8
SE9
SE10
SE11
SE12
SE13
SE14
SE15
SE16
SE17
SE18
SE19
SE20
SE21
SE22
Podet C2
km. 222+910.08

206	
H	690.5
–	–
As	–
–	–

E1	
5500	–
1400	–
6900	DI
+200	CO/–

209	
H	735.5
–	–
–	–
–	–

E1	
5500	–
1400	–
6900	DD
–200	CO/–

212	
H	777.5
–	–
As	–
–	–

E1	
5500	–
1400	–
6900	DI
+200	CO/–

215	
H	810.5
–	–
–	–
–	–

E1	
5500	–
1400	–
6900	DD
–200	CO/–

216	
MU	818
–	–
–	–
–	–

E1	
5550	–
1400	–
6950	DD
0	CS/–

218	
H	849.5
–	–
–	–
–	–

E1	
5500	–
1400	–
6900	ICA
+100	CO/–

E2	
5850	–
1750	–
7300	DCA
–150	CO/–

224	
H	890
–	–
–	–
–	–

E1	
5550	–
1750	–
7300	DD
+200	CO/–

E2	
5500	–
1400	–
6900	DI
0	CO/–

228	
H	930.5
–	–
As	–
–	–

E1	
5500	–
1400	–
6900	DD
–200	CO/–

E2	
5850	–
1450	–
7300	A
0	CO/–

233	
H	971
–	–
As	–
–	–

E1	
6000	–
1300	–
7300	A
+650	CO/–

E2	
5500	–
1400	–
6900	DI
+150	CO/–

241	
H	011.5
–	–
–	–
–	–

E1	
5500	–
2000	–
7500	ICM
+250	CO/–

E2	
5500	–
1300	–
6800	ICM
–250	CO/–

245	
H	052
–	–
–	–
–	–

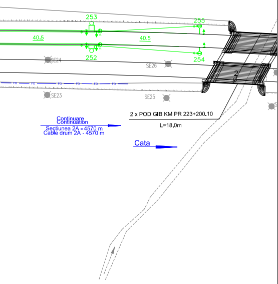
E1	
5500	–
1400	–
6900	DD
–150	CO/–

E2	
6000	–
1300	–
7300	A
–650	CO/–

249	
H	092.5
–	–
An	–
–	–

E1	
5500	–
1400	–
6900	DI
+200	CO/–

4847,5


253
255
40.5
40.5
252
254
SE24
SE26
SE23
SE25
FO
2 x POD GIB KM PR 223+200.10
L=18.0m
Continuare
Continuation
Sectiunea 2A - 4570 m
Cable drum 2A - 4570 m
Cata

LEGENDA
LEGEND

CTM	◇	Camereta cu mufa de jonctiune Handhole with jonction box
CTM	◇	Camereta cu rezerva Handhole with cable reserve
CT	▢	Camera de tragere cu mufa de jonctiune Manhole with jonction box
CT	▢	Camera de tragere cu rezerva Manhole with cable reserve
CTS	☐	Camera de tragere speciala pentru subtraversare Special manhole for undercrossing
	○	Fixare mediana Median fastening
	○◇	Fixare terminala Terminal fastening
	— FO —	Cablu cu fibre optice aerian Aerial optical fiber cable
	— FO —	Cablu cu fibre optice subteran Underground optical fiber cable
	—▭—	Teava PVC Φ 110 mm / canal metalic PVC pipe Φ 110 mm / metallic chanel

Indice Index	Data Date	Modificare Modification/Revision	Proiectant Designer	Aprobat Consultant Approved Consultant	Aprobat CFR Approved CFR

GUVERNUL ROMANIEI
ROMANIAN GOVERNMENT

PROIECT FINANȚAT DE UNIUNEA EUROPEANĂ
EUROPEAN UNION FINANCED PROJECT

CLIENT / CLIENT

C.N.C.F. "C.F.R." - S.A.

ITALFERR
GRUPPO FERROVIE DELLO STATO
Joint Venture leader

Scott Wilson

OBERMEYER
PLANEN + BERATEN GmbH

TECNIC
Consulting Engineers

CONSULTANT / CONSULTANT

			Data Date	Semnatură Signature
Aprobat Approved	Şef proiect Project manager	R. Liuzza	01.2012	
Aprobat Approved	Coordonator Secțiune 1 Section 1 Coordinator	C. Gambelli	01.2012	
Verificat Checked	Expert Verificator Checking Expert	G. Buffarini	01.2012	

SUBCONTRACTANT / SUBCONTRACTOR

ARRX

Aprobat Approved	Responsabil Subcontractant Subcontractor Responsible	A. Stanciu - Dinulescu	01.2012	
Întocmit Elaborated	Proiectant Designer	Gabriela Trifan	01.2012	Trifan

Reabilitarea liniei de cale ferata Braşov - Simeria, parte componentă a coridorului IV Pan European,
pentru circulația trenurilor cu viteza maximă de 160 km/h,
Tronsonul : Braşov - Sighişoara
Rehabilitation of the railway line Braşov - Simeria, component Part of the IV Pan-European Corridor,
for the trains circulation with maximum speed of 160 km/h,
Section : Braşov - Sighişoara

Proiect/Project
2004/RO/16/P/PA/003

Faza / Phase:
P.Th. / T.D.

Denumire desen / Drawing Title :

Statia - RACOS - Station
CABLU CU FIBRE OPTICE (Cablul 1)
Plan de situatie
FIBER OPTIC CABLE (cable 1)
Layout Plan

Codificare / Codification System	Scara / Scale 1:500	LOT / LOT	Nr. / No 01 / 01

EA51 01 E 11 L8 SE 04 1 7 001 1