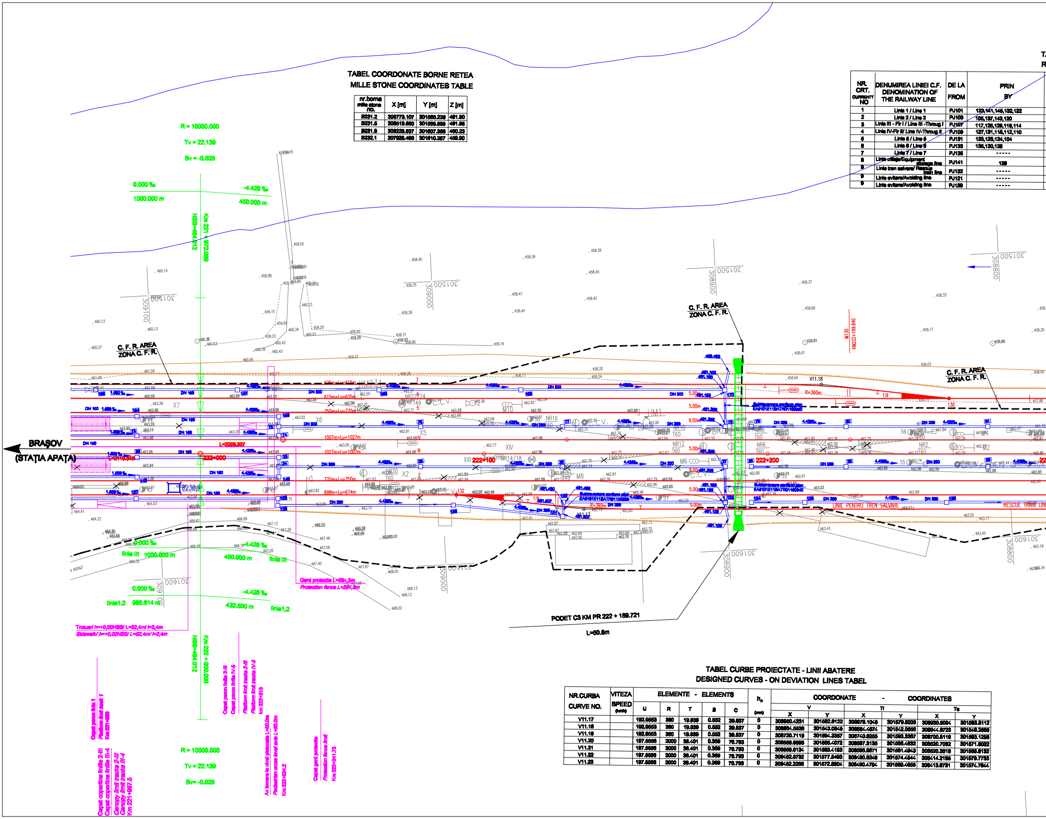

BRAȘOV
(STAȚIA APAȚA)
R = 10000.000
Tv = 22.139
Bv = -0.025
0.000 ‰
-4.429 ‰
1000.000 m
450.000 m
Km 221 + 972.088
NSS=464.012
C. F. R. AREA
ZONA C. F. R.
L=2029.207
222+000
222+100
222+200
M130
KM222+199.840
R=360m
V11.18
1:9
LINIE PENTRU TREN SALVARE
RESCUE TRAIN LINE
PODET C3 KM PR 222 + 189.721
L=50.8m
linia III
1000.000 m
450.000 m
linii 1,2
988.614 m
432.600 m
Km 222 + 000.000
NSS=464.012
Gard protectie L=894,3m
Protection fence L=894,3m
Trotuar/ h=+0,00NSS/ L=52,4m/ l=2,4m
Sidewalk/ h=+0,00NSS/ L=52,4m/ l=2,4m
R = 10000.000
Tv = 22.139
Bv = -0.025

TABEL COORDONATE BORNE RETEA
MILLE STONE COORDINATES TABLE

nr.borna mille stone no.	X [m]	Y [m]	Z [m]
B231.2	308773.107	301585.229	461.90
B231.5	308519.660	301595.565	461.95
B231.8	308226.537	301607.366	460.23
B232.1	307928.496	301610.257	459.90

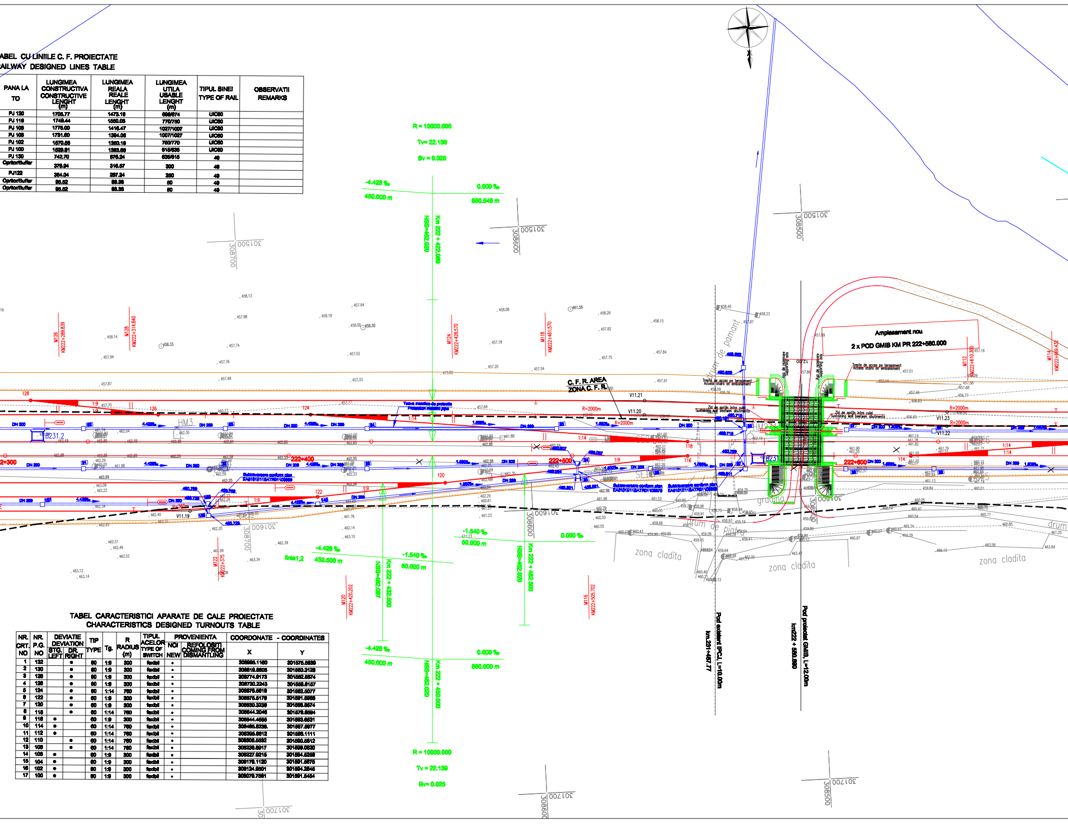
NR. CRT. CURRENTT NO	DENUMIREA LINIEI C.F. DENOMINATION OF THE RAILWAY LINE	DE LA FROM	PRIN BY
1	Linia 1 / Line 1	PJ101	123,141,145,132,122
2	Linia 2 / Line 2	PJ103	105,137,143,120
3	Linia III - Fir I / Line III -Throug I	PJ107	117,125,129,116,114
4	Linia IV-Fir II/ Line IV-Throug II	PJ109	127,131,118,112,110
5	Linia 5 / Line 5	PJ131	133,126,124,104
6	Linia 6 / Line 6	PJ133	135,130,128
7	Linia 7 / Line 7	PJ135	-----
8	Linie utilaje/Equipment storage line	PJ141	139
9	Linie tren salvare/ Rescue train line	PJ132	-----
9	Linie evitare/Avoiding line	PJ121	-----
9	Linie evitare/Avoiding line	PJ139	-----

TABEL CURBE PROIECTATE - LINII ABATERE
DESIGNED CURVES - ON DEVIATION LINES TABEL

NR.CURBA CURVE NO.	VITEZA SPEED (km/h)	ELEMENTE - ELEMENTS					h_n (mm)	COORDONATE - COORDINATES					
								V		Ti		Te	
		U	R	T	B	C		X	Y	X	Y	X	Y
V11.17		192.9553	360	19.939	0.552	39.837	0	308950.4231	301582.8122	308979.1045	301579.5203	308930.5094	301583.8112
V11.18		192.9553	360	19.939	0.552	39.837	0	308864.5538	301543.0645	308884.4674	301542.0656	308844.6723	301546.2585
V11.19		192.9553	360	19.939	0.552	39.837	0	308720.7119	301594.3367	308740.6255	301593.3367	308700.8119	301593.1296
V11.20		197.5556	2000	38.401	0.369	76.793	0	308558.9596	301566.4072	308597.3135	301566.4632	308520.7062	301571.8022
V11.21		197.5556	2000	38.401	0.369	76.793	0	308558.6134	301563.4183	308596.9671	301561.4943	308520.3618	301566.8132
V11.22		197.5556	2000	38.401	0.369	76.793	0	308452.5732	301577.8493	308490.8246	301574.4544	308414.2195	301579.7735
V11.23		197.5556	2000	38.401	0.369	76.793	0	308452.2268	301572.8604	308490.4784	301569.4655	308413.8731	301574.7844

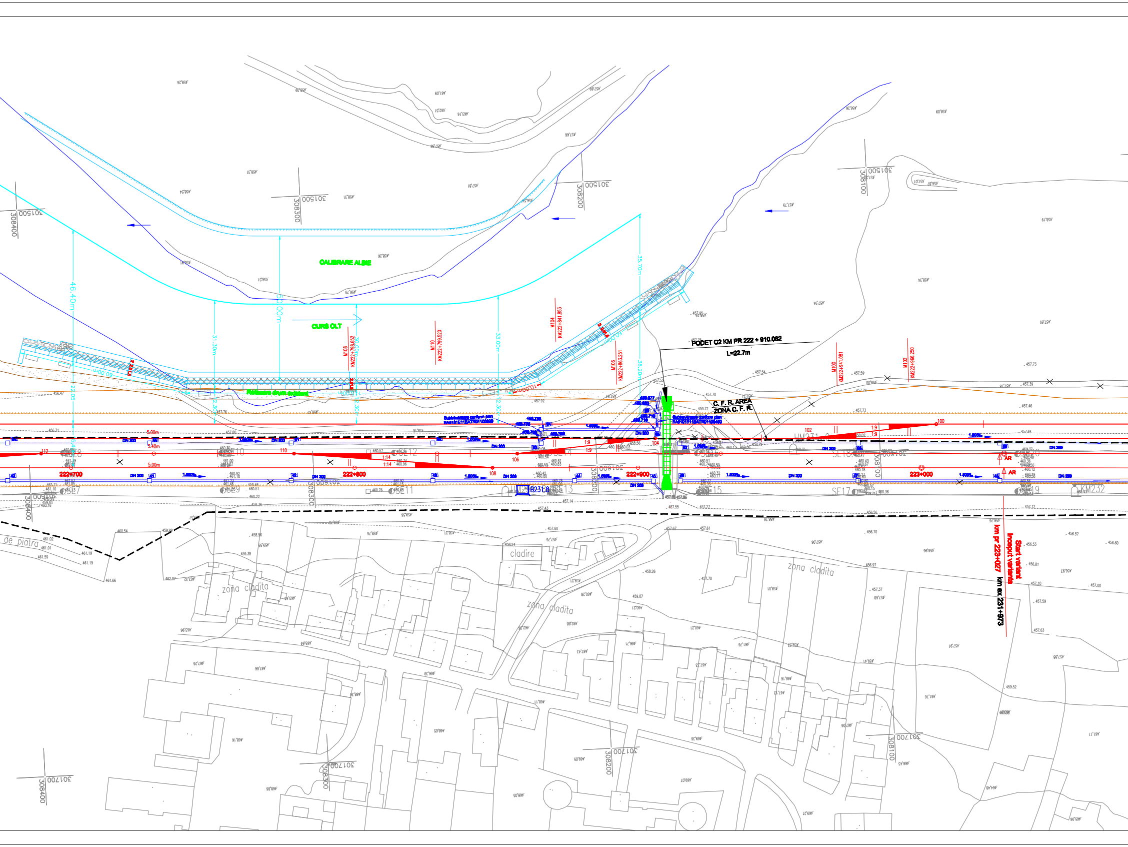
ABEL CU LINIILE C. F. PROIECTATE
AILWAY DESIGNED LINES TABLE

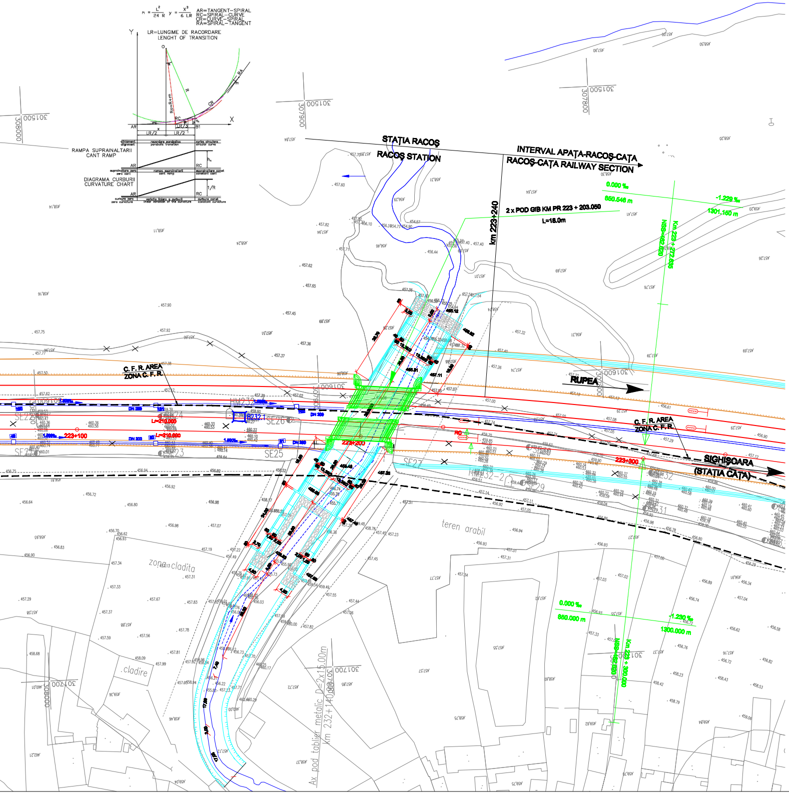
PANA LA TO	LUNGIMEA CONSTRUCTIVA CONSTRUCTIVE LENGHT (m)	LUNGIMEA REALA REALE LENGHT (m)	LUNGIMEA UTILA USABLE LENGHT (m)	TIPUL SINEI TYPE OF RAIL	OBSERVATII REMARKS
PJ 120	1706.77	1473.18	698/674	UIC60	
PJ 118	1749.44	1550.06	770/750	UIC60	
PJ 108	1776.00	1416.47	1027/1007	UIC60	
PJ 106	1731.60	1394.06	1007/1027	UIC60	
PJ 102	1570.58	1360.19	750/770	UIC60	
PJ 100	1529.81	1363.69	615/635	UIC60	
PJ 130	742.70	576.24	635/615	49	
Opritor/Buffer	376.94	316.57	300	49	
PJ122	354.04	287.24	260	49	
Opritor/Buffer	95.52	68.36	60	49	
Opritor/Buffer	95.52	68.36	60	49	


R = 10000.000
Tv= 22.139
Bv = 0.025
-4.426 ‰
450.000 m
0.000 ‰
880.546 m
NSS=462.020
Km 222 + 422.089
308700
301500
308600
308500
M126
KM222+289.839
M128
KM222+314.840
M124
KM222+428.570
M118
KM222+461.570
M112
KM222+610.300
M114
KM222+669.432
Amplasament nou
2 x POD GMIB KM PR 222+580.000
Trepte de acces pe terasament
Access stairs on embankment
Zid de sprijin intre culei
Sustaining wall beetwen abutments
C. F. R. AREA
ZONA C. F. R.
drum de pamant
drum de piata
zona cladita
gradina
drum
222+300
222+400
222+500
222+600
B231.2
B231
HM3
V11.21
V11.20
V11.23
V11.22
V11.19
R=2000m
DN 200
DN 250
1:9
1:14
128
126
124
122
120
118
116
114
Teava metalica de protectie
Protection metallic pipe
Subtraversare conform plan
-1.540 ‰
50.000 m
linia1,2
432.500 m
NSS=462.097
Km 222 + 432.500
NSS=462.020
Km 222 + 492.500
M122
KM222+375
M120
KM222+420.202
M116
KM222+505.702
Pod existent PCJ, L=10.00m
km.231+457.77
Pod proiectat GMIB, L=12.00m
km222 + 580.000
Km 222 + 460.000
880.000 m
Bv= 0.025
301700

TABEL CARACTERISTICI APARATE DE CALE PROIECTATE
CHARACTERISTICS DESIGNED TURNOUTS TABLE

NR. CRT. NO	NR. P.G. NO	DEVIATIE DEVIATION STG. LEFT	DEVIATIE DEVIATION DR. RIGHT	TIP TYPE	Tg.	R RADIUS (m)	TIPUL ACELOR TYPE OF SWITCH	PROVENIENTA NOI NEW	PROVENIENTA REFOLOSITI COMING FROM DISMANTLING	COORDONATE - COORDINATES X	COORDONATE - COORDINATES Y
1	132		●	60	1:9	300	flexibil	•		308995.1160	301575.5839
2	130		●	60	1:9	300	flexibil	•		308819.8805	301550.3128
3	128		●	60	1:9	300	flexibil	•		308774.9173	301552.5574
4	126		●	60	1:9	300	flexibil	•		308730.2243	301559.8157
5	124		●	60	1:14	760	flexibil	•		308676.5618	301562.5077
6	122		●	60	1:9	300	flexibil	•		308675.5178	301591.5985
7	120		●	60	1:9	300	flexibil	•		308630.3239	301588.8574
8	118		●	60	1:14	760	flexibil	•		308544.2046	301576.8594
9	116	●		60	1:9	300	flexibil	•		308544.4555	301593.6531
10	114	●		60	1:14	760	flexibil	•		308465.8238.	301587.5977
11	112	●		60	1:14	760	flexibil	•		308395.8612	301586.1111
12	110		●	60	1:14	760	flexibil	•		308306.5592	301590.5812
13	108		●	60	1:14	760	flexibil	•		308236.8917	301598.0820
14	106	●		60	1:9	300	flexibil	•		308227.9215	301594.5258
15	104	●		60	1:9	300	flexibil	•		308179.1120	301591.5575
16	102	●		60	1:9	300	flexibil	•		308124.9601	301594.2545
17	100	●		60	1:9	300	flexibil	•		308079.7581	301591.5454


CALIBRARE ALBIE
CURS OLT
Refacere drum existent
PODET C2 KM PR 222 + 910.082
L=22.7m
C. F. R. AREA
ZONA C. F. R.
M108
KM222+798.652
M110
KM222+799.520
M104
KM222+841.853
M106
KM222+863.251
M100
KM222+941.081
M102
KM222+966.250
46.40m
50.00m
31.30m
30.00m
33.00m
35.70m
38.20m
12.30m
60.00m
10.00m
5.00m
5.40m
222+700
222+800
222+900
223+000
DN 200
1:14
1:9
AR
Start variant
Inceput varianta
km pr 223+027
km ex 231+973
cladire
zona cladita
de piatra
HM231.8
KM232
308400
308300
308200
308100
301500
301600
301700


$m = \frac{L^2}{24\,R}$ $y = \frac{x^3}{6\,LR}$
AR=TANGENT–SPIRAL
RC=SPIRAL–CURVE
CR=CURVE–SPIRAL
RA=SPIRAL–TANGENT
LR=LUNGIME DE RACORDARE
LENGHT OF TRANSITION
Ro=R+m
RAMPA SUPRAINALTARII
CANT RAMP
DIAGRAMA CURBURII
CURVATURE CHART
aliniament / alignment
racordare parabolica / parabolic transition
curba circulara / circular curve
suprainaltare zero / zero cant
rampa supraînaltarii / cant ramp
supraînaltare const / constant cant
curbura zero / zero curvature
variatia liniara a curburii / linear variation of the curvature
curbura const / constant curvature
STATIA RACOS
RACOS STATION
INTERVAL APATA-RACOS-CATA
RACOS-CATA RAILWAY SECTION
2 x POD GIB KM PR 223 + 203.050
L=18.0m
km 223+240
0.000 ‰
860.546 m
-1.229 ‰
1301.150 m
RUPEA
C. F. R. AREA
ZONA C. F. R.
223+100
223+200
223+300
L=210.000
SIGHISOARA
(STATIA CATA)
teren arabil
zona cladita
cladire
0.000 ‰
860.000 m
-1.230 ‰
1300.000 m
Ax pod tablier metalic D=2x15.00m
km 232+140.000

1	2

LEGENDA
LEGEND

───	Ax linie c.f. existent Axis of existing railway line
─×─×─	Ax linie c.f. demontat Demounted axis line of railway line
	Aparate de cale existente Existing turnouts
	Aparate de cale demontate Demounted turnouts
Name Level	Borne de retea Benchmarks
───	Ax linie c.f. proiectat Axis of designed railway line
	Aparate de cale proiectate Designed turnouts
‖	Marca proiectata Designed marck
	Semnal proiectat Designed signal
═══	Peron proiectat Designed platform
	Copertina proiectata Designed canopy
━━━	Sant monolit de beton Prefabricate concrete ditch
	Dren longitudinal Longitudinal drain
	Ampriza sapatura/umplutura Excavation/fillings at the work place of natural soil
───	Lucrari de consolidare Consolidatio works
───	Lucrari de drumuri proiectate Designed road works

Indice Index	Data Date	Modificare Modification/Revision	Proiectant Designer	Aprobat Consultant Approved Consultant	Aprobat CFR Approved CFR
D					
C					
B					
A					

GUVERNUL ROMANIEI
ROMANIAN GOVERNMENT

PROIECT FINANŢAT DE UNIUNEA EUROPEANĂ
EUROPEAN UNION FINANCED PROJECT

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

CLIENT / CLIENT

ITALFERR
GRUPPO FERROVIE DELLO STATO
Joint Venture leader

Scott Wilson

OBERMEYER
PLANEN + BERATEN GmbH

TECNIC
Consulting Engineers

CONSULTANT / CONSULTANT

			Data Date	Semnătură Signature
Aprobat Approved	Şef proiect Project manager	R. Liuzza		
Aprobat Approved	Coordonator Secţiune 1 Section 1 Coordinator	C. Gambelli		
Verificat Checked	Expert Verificator Checking Expert	S. MENICHINI		

SUBCONTRACTANT / SUBCONTRACTOR

AREX COMPANY

Aprobat Approved	Responsabil Subcontractant Subcontractor Responsible	A.Stanciu - Dinulescu		
Întocmit Elaborated	Proiectant Designer	F. Mihai	12.2011	

Reabilitarea liniei de cale ferata Braşov - Simeria, parte componentă a coridorului IV Pan European, pentru circulaţia 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 :

Plan de situaţie - Haltă mişcare Racoş
Racoş Railway Halt - Track Layout en designed plan

Codificare / Codification System	Scara / Scale 1:500	LOT / LOT	Nr. / No
E A 5 1 · 0 1 · C · 1 1 · L 8 · S L · 0 0 · 6 · 0			0 0 2 · 1