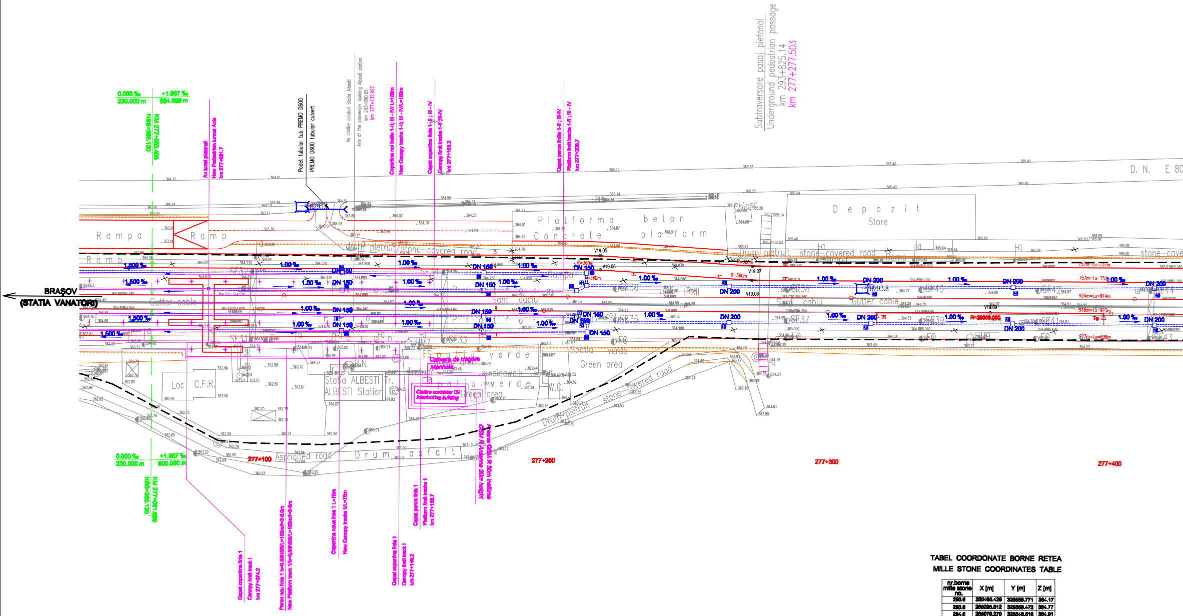
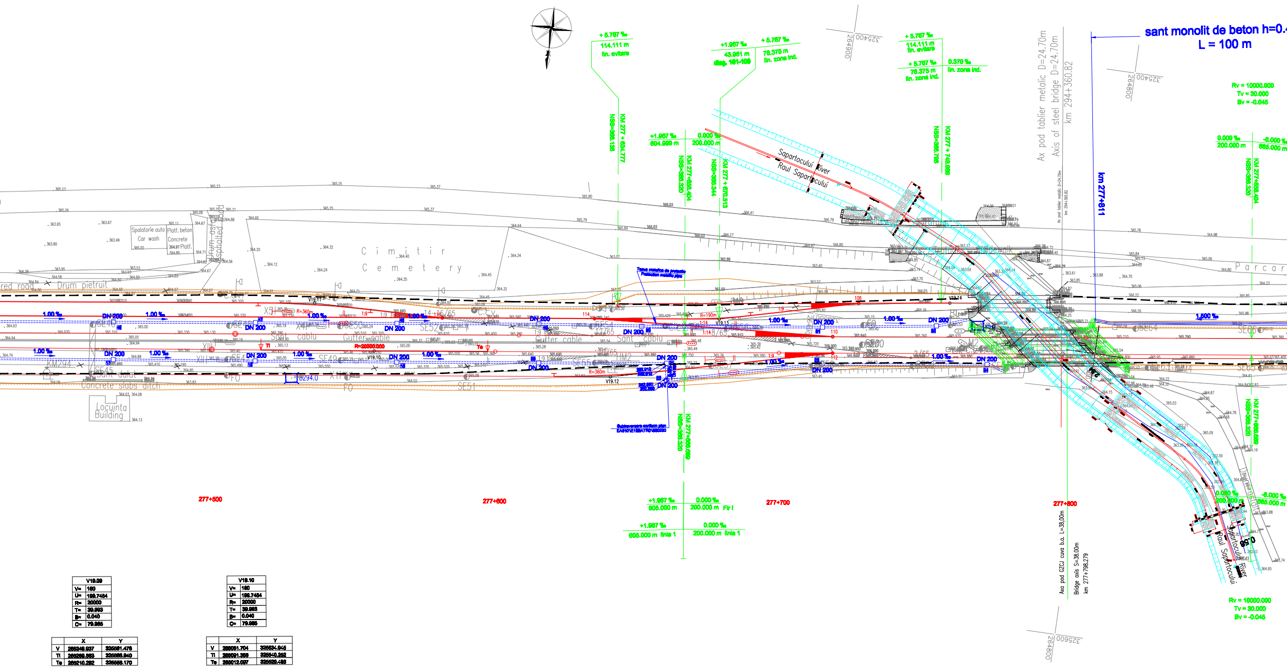

0.000 ‰
230.000 m
+1.967 ‰
604.999 m
NSS=365.130
KM 277+053.405
Ax tunel pietonal
New Pedestrian tunnel Axis
km 277+061.7
Podet tubular tub PREMO D600
PREMO D600 tubular culvert
Ax cladire calatori Statia Albesti
Axis of the passenger building Albesti station
km 293+680.65
km 277+132.927
Copertina noi liniile 1-II; III - IV/ L=158m
New Canopy tracks 1-II; III - IV/L=158m
Capat copertina linia 1-II ; III - IV
Canopy limit tracks 1-II ;III-IV
km 277+161.2
Capat peron linia 1-II ; III-IV
Platform limit tracks 1-II ; III - IV
km 277+208.7
Subtraversare pasaj pietonal
Underground pedestrian passage
km 293+825.14
km 277+277.503
D. N. E 80
Rampa
Ramp
Platforma beton
Concrete platform
Chiosc
Depozit
Store
Drum pietruit
stone-covered road
Sant cablu
Gutter cable
BRASOV
(STATIA VANATORI)
1.500 ‰
1.00 ‰
DN 150
DN 200
R=360m
V19.05
V19.06
V19.07
V19.08
V19.09
R=20000.000
757m=Lu=737m
757m=Lu=752m
934m=Lu=914m
918m=Lu=923m
923m=Lu=898m
Statia ALBESTI
ALBESTI Station
Loc C.F.R.
Spatiu verde
Green area
sidewalk
W.C.
Camera de tragere
Manhole
Cladire container CE
Interlocking building
Drum pietruit
stone-covered road
Drum asfalt
Asphalted road
Antena GSM R 30m inaltime
GSM R Antenna 30m height
277+100
277+200
277+300
277+400
0.000 ‰
230.000 m
+1.967 ‰
605.000 m
NSS=365.130
KM 277+061.683
Capat copertina linia 1
Canopy limit track I
km 277+074.2
Peron nou linia 1 h=0.55NSS/L=150m/l=3-6.0m
New Platform track 1/h=0,55NSS/L=150m/l=3-6m
Copertina noua linia 1 L=75m
New Canopy track 1/L=75m
Capat copertina linia 1
Canopy limit track I
km 277+149.2
Capat peron linia 1
Platform limit track 1
km 277+199.7

TABEL COORDONATE BORNE RETEA
MILLE STONE COORDINATES TABLE

nr.borna mille stone no.	X [m]	Y [m]	Z [m]
293.6	265495.429	325558.771	364.17
293.8	265296.812	325569.472	364.77
294.0	265079.270	325548.518	364.91
294.3	264842.324	325496.072	365.58
294.6	264487.828	325459.453	362.53

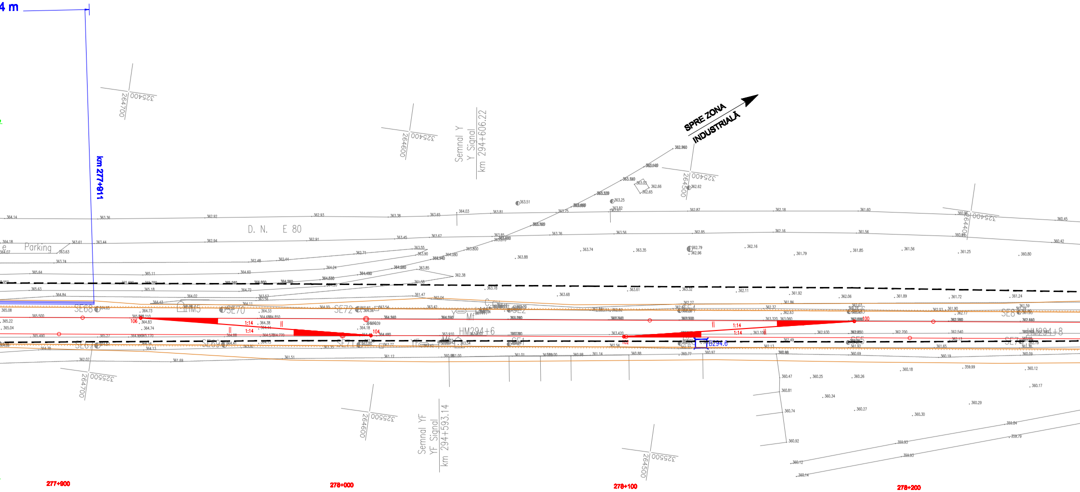

+ 5.767 ‰
114.111 m
lin. evitare
+1.967 ‰
43.961 m
diag. 101-108
+ 5.767 ‰
78.375 m
lin. zone ind.
+ 5.767 ‰
114.111 m
lin. evitare
+ 5.767 ‰
78.375 m
lin. zone ind.
0.370 ‰
lin. zone ind.
KM 277 + 634.777
NSS=366.138
+1.967 ‰
604.999 m
0.000 ‰
200.000 m
KM 277+658.404
NSS=366.320
KM 277 + 670.513
NSS=366.344
KM 277 + 748.888
NSS=366.798
Sapartocului River
Raul Sapartocului
Ax pod tablier metalic D=24.70m
Axis of steel bridge D=24.70m
km 294+360.82
sant monolit de beton h=0.4
L = 100 m
km 277+811
Rv = 10000.000
Tv = 30.000
Bv = -0.045
0.000 ‰
200.000 m
-6.000 ‰
665.000 m
KM 277+858.404
NSS=366.320
Cimitir
Cemetery
Parcar
Spalatorie auto
Car wash
Platf. beton
Concrete
Platf.
Drum pietruit
Drum asfaltat
Asphalted road
Locuinta
Building
Sant dale
Concrete slabs ditch
Sant cablu
Gutter cable
DN 200
1.00 ‰
R=360m
R=190m
R=20000.000
V19.09
V19.10
V19.11
V19.12
V19.13
V19.14
KM294
FO
277+500
277+600
277+700
277+800
+1.967 ‰
605.000 m
0.000 ‰
200.000 m
Fir I
+1.967 ‰
605.000 m linia 1
0.000 ‰
200.000 m linia 1
KM 277+658.659
NSS=366.320
Axa pod GZCJ cuva b.a. L=38,00m
Bridge axis S=38.00m
km 277+798.279
Drum asfalt
Rv = 10000.000
Tv = 30.000
Bv = -0.045
325400
264900
264800
325600

V19.09	
V=	160
U=	199.7454
R=	20000
T=	39.993
B=	0.040
C=	79.985

	X	Y
V	265249.937	325561.476
Ti	265289.563	325566.940
Te	265210.292	325556.170

V19.10	
V=	160
U=	199.7454
R=	20000
T=	39.993
B=	0.040
C=	79.985

	X	Y
V	265051.704	325534.945
Ti	265091.358	325540.252
Te	265012.097	325529.493


4 m
km 277+911
D. N. E 80
Parking
SPRE ZONA INDUSTRIALĂ
Semnal Y
Y Signal
km 294+606.22
Semnal YF
YF Signal
km 294+593.14
SE68
SE70
SE72
SE67
SE69
SE71
SE8
SE7
HM294+6
HM294+8
BZ294.6
106
104
102
100
1:14
277+900
278+000
278+100
278+200
264700
325400
264600
264500
325500

264700
325600

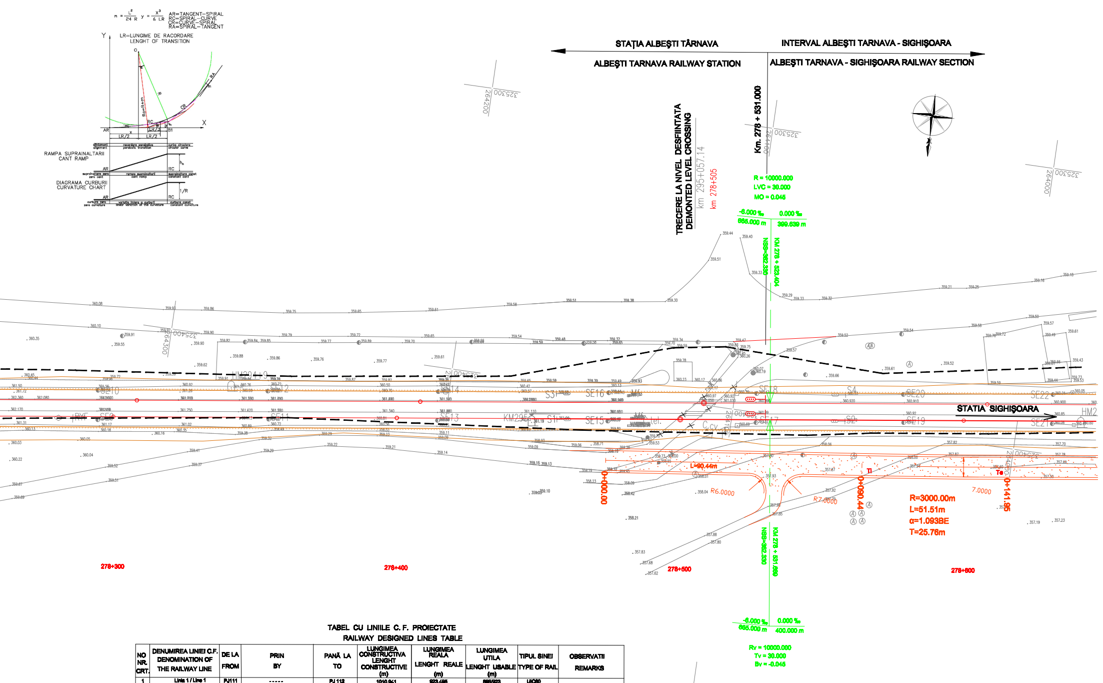
TABEL CURBE PROIECTATE - LINII ABATERE
DESIGNED CURVES - ON DEVIATION LINES TABLE

NR.CURBA NO.CURVE	V SPEED (km/h)	ELEMENTE ELEMENTS					h_n (mm)	COORDONATE COORDINATES					
								V		Ti		Te	
		U	R	T	B	C		X	Y	X	Y	X	Y
V19.05	45	195.6505	360	11.736	0.191	23.464	0	265366.833	325560.946	265400.460	325562.549	265377.127	325560.103
V19.06	45	195.6379	360	11.772	0.192	23.536	0	265368.150	325565.699	265399.512	325567.507	265376.405	325565.056
V19.07	45	195.6505	360	11.736	0.191	23.464	0	265336.226	325557.067	265346.942	325557.930	265323.610	325555.484
V19.08	45	195.6379	360	11.772	0.192	23.536	0	265334.715	325562.063	265346.457	325562.906	265323.063	325560.455
V19.11	45	192.9554	360	19.936	0.551	39.836	0	265074.905	325521.186	265094.657	325523.910	265054.974	325520.650
V19.12	45	192.9554	360	19.936	0.551	39.836	0	264967.972	325532.180	264967.723	325534.904	264946.006	325526.626
V19.13	65	192.5127	190	11.246	0.329	22.346	0	264932.870	325509.645	264943.961	325506.174	264922.045	325503.626
V19.14	-	199.4722	FRANTURA				0	264853.171	325469.566	FRANTURA		FRANTURA	

TABEL CARACTERISTICI APARATE DE CALE PROIECTATE CAP Y
CHARACTERISTICS DESIGNED TURNOUTS TABLE Y END

NO NR. CRT.	NO NR. P.G.	DEVIATIE DEVIATION		TIP TYPE	Tg.	R RADIUS (m)	TIPUL ACELOR TYPE OF SWITCH	PROVENIENTA COMING FROM		COORDONATE COORDINATES	
		STG. LEFT	DR. RIGHT					NOI NEW	REFOLOSITI DISMANTLING	X	Y
1	100	●		60	1:14	760	flexibil	•		264436.259	325444.076
2	102	●		60	1:14	760	flexibil	•		264514.907	325460.917
3	104		●	60	1:14	760	flexibil	•		264603.266	325473.105
4	106		●	60	1:14	760	flexibil	•		264684.518	325476.453
5	108	●		49	1:9	190	flexibil	•		264864.992	325494.182
6	110		●	60	1:14	760	flexibil	•		264882.366	325507.119
7	112	●		60	1:9	300	flexibil	•		264891.594	325512.865
8	114		●	60	1:14	760	flexibil	•		264976.420	325512.651
9	116		●	60	1:9	300	flexibil	•		265029.644	325519.991

1	2



$m = \frac{L^2}{24\,R}$ $y = \frac{X^3}{6\,LR}$
AR=TANGENT–SPIRAL
RC=SPIRAL–CURVE
CR=CURVE–SPIRAL
RA=SPIRAL–TANGENT
LR=LUNGIME DE RACORDARE
LENGHT OF TRANSITION
Y
X
O
R
Ro=R+m
RC
CR
RA
m
AR
B1
x
LR/2
LR/3
aliniament
alignment
racordare parabolica
parabolic transition
curba circulara
circular curve
RAMPA SUPRAINALTARII
CANT RAMP
h_n
supraînaltare zero
zero cant
rampa supraînaltarii
cant ramp
supraînaltare const
constant cant
DIAGRAMA CURBURII
CURVATURE CHART
1/R
curbura zero
zero curvature
variatia liniara a curburii
linear variation of the curvature
curbura const
constant curvature
STAȚIA ALBEȘTI TÂRNAVA
ALBEŞTI TARNAVA RAILWAY STATION
INTERVAL ALBEŞTI TARNAVA - SIGHIŞOARA
ALBEŞTI TARNAVA - SIGHIŞOARA RAILWAY SECTION
TRECERE LA NIVEL DESFIINTATA
DEMONTED LEVEL CROSSING
km 295+057.14
km 278+505
Km. 278 + 531.000
R = 10000.000
LVC = 30.000
MO = 0.045
-6.000 ‰
665.000 m
0.000 ‰
399.639 m
NSS=362.330
KM 278 + 529.404
STATIA SIGHIŞOARA
HM2
L=90.44m
R6.0000
R7.0000
7.0000
0+000.00
0+090.44
0+141.95
Ti
Te
R=3000.00m
L=51.51m
α=1.093BE
T=25.76m
NSS=362.330
KM 278 + 531.669
-6.000 ‰
665.000 m
0.000 ‰
400.000 m
Rv = 10000.000
Tv = 30.000
Bv = -0.045
278+300
278+400
278+500
278+600
325300
264200
264100
264000
325400
264300
325500
SE10
SE12
SE14
SE16
SE18
SE20
SE22
SE11
SE13
SE15
SE17
SE19
SE21
S3
S1
S4
S2
KM295
C.cv
tel.

TABEL CU LINIILE C. F. PROIECTATE
RAILWAY DESIGNED LINES TABLE

NO NR. CRT.	DENUMIREA LINIEI C.F. DENOMINATION OF THE RAILWAY LINE	DE LA FROM	PRIN BY	PANĂ LA TO	LUNGIMEA CONSTRUCTIVA LENGHT CONSTRUCTIVE (m)	LUNGIMEA REALA LENGHT REALE (m)	LUNGIMEA UTILA LENGHT USABLE (m)	TIPUL SINEI TYPE OF RAIL	OBSERVATII REMARKS
1	Linia 1 / Line 1	PJ111	-----	PJ 112	1010.941	923.495	898/923	UIC60	
2	Linia II - Fir I/Line II - Through I	PJ101	107, 111, 112, 104	PJ 102	1646,26	1541,95	918/923	UIC60	
3	Linia III-Fir II/Line III-Through II	PJ103	105, 109, 110, 106	PJ 100	1661,66	1557,35	934/914	UIC60	
4	Linia 4 / Line 4	PJ109	113, 116, 114	PJ 108	1069,06	860,94	767/752	UIC60	
5	Linia 5 / Line 5	PJ113	-----	PJ 116	865,67	799,21	757/737	UIC60	
6	Linie evitare / Avoid linie	PJ108	-----	Opritor / Buffer	101,62	88,39	80,00	49	

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

D					
C					
B					
A					
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.

CONSULTANT / CONSULTANT

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

SUBCONTRACTANT / SUBCONTRACTOR

Aprobat Approved	Responsabil Sub-contractant 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 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 :

Plan de situație - Stația Albeşti Târnava
Albeşti Târnava station - Track Layout en designed plan

Codificare / Codification System	Scara / Scale 1:500	LOT / LOT	Nr. / No
E A 5 1 · 0 1 · C · 1 9 · L 8 · S L · 0 1 · 0 · 0 · 0 0 2			2