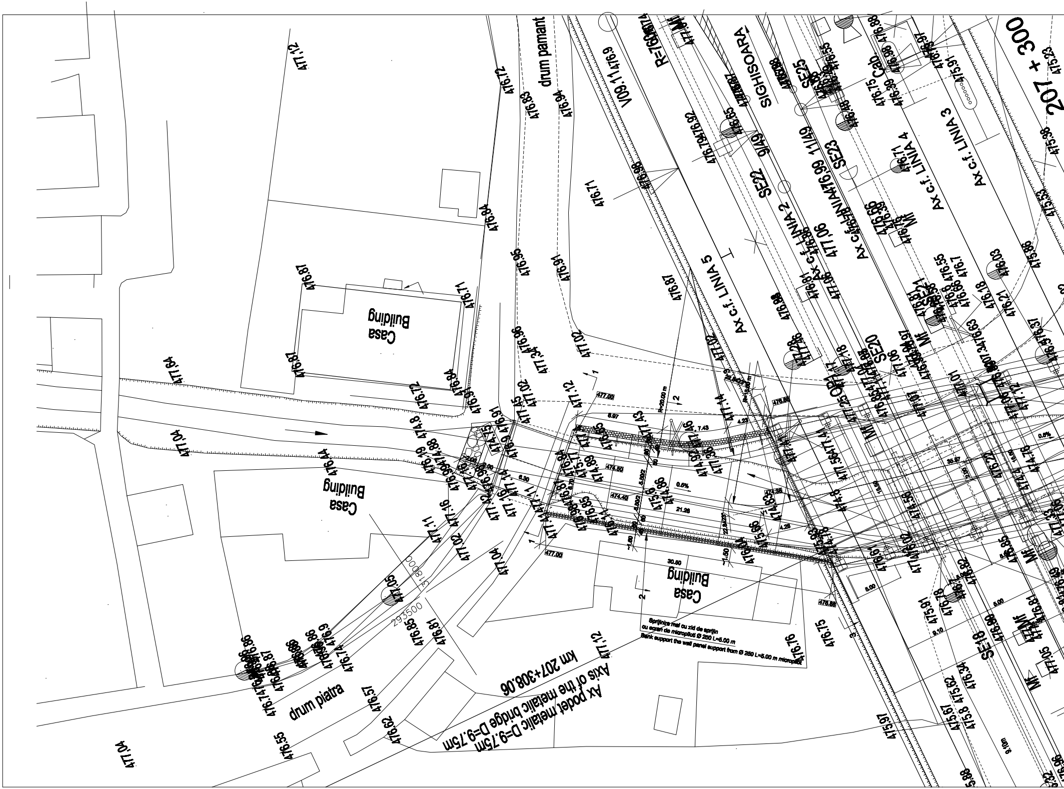
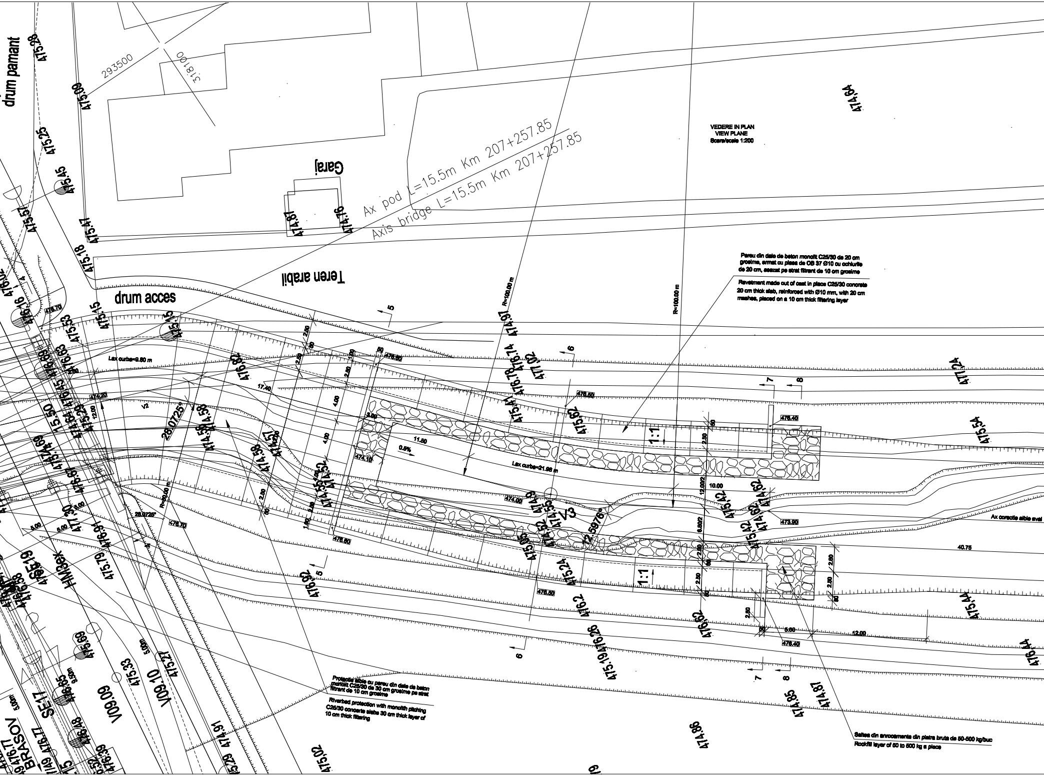

207 + 300
Ax podet metalic D=9,75m
Axis of the metallic bridge D=9,75m
km 207+308,06
Sprijinire mal cu zid de sprijin
cu ecran de micropiloti Ø 250 L=5.00 m
Bank support the wall panel support from Ø 250 L=5.00 m micropilot
Casa
Building
Casa
Building
Casa
Building
drum pamant
drum piatra
SIGHISOARA
R=760
Ax c.f. LINIA 5
Ax c.f. LINIA 2
Ax c.f. LINIA 3
Ax c.f. LINIA 4
Ax c.f. LINIA 1
SE25
SE23
SE22
SE21
SE20
SE18
9/49
11/49
Cab.
Mf
0.5%
0.8%
477.00
474.50
474.40
21.28
30.50
36.57
293500
477.12
476.12
476.63
476.94
476.71
476.84
476.87
476.95
476.91
476.87
477.02
476.96
477.34
477.02
477.12
477.45
477.14
476.72
477.04
476.44
476.9
476.8
477.16
477.11
477.02
477.04
477.05
476.85
476.81
476.57
476.62
476.55
477.04
477.12
476.76
476.75
476.9
476.86
476.87
476.74
475.97
475.67
475.8
475.62
476.34
476.18
476.21
476.03
475.96
475.53
475.98
475.23
477.05
476.99
477.06
477.18
476.55
476.7
476.63
476.92
476.79
476.65
476.99
476.88
476.75
476.39
476.98
475.91
474.8
474.56
474.76



VEDERE IN PLAN
VIEW PLANE
Scara/scale 1:200

Pereu din dale de beton monolit C25/30 de 20 cm grosime, armat cu plasa de OB 37 Ø10 cu ochiurile de 20 cm, asezat pe strat filtrant de 10 cm grosime

Revetment made out of cast in place C25/30 concrete 20 cm thick slab, reinforced with Ø10 mm, with 20 cm meshes, placed on a 10 cm thick filtering layer

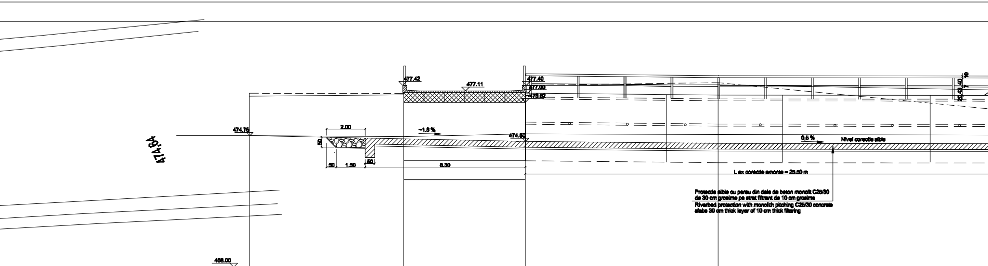
Protectie albie cu pereu din dale de beton monolit C25/30 de 30 cm grosime pe strat filtrant de 10 cm grosime

Riverbed protection with monolith pitching C25/30 concrete slabs 30 cm thick layer of 10 cm thick filtering

Saltea din anrocamente din piatra bruta de 50-500 kg/buc

Rockfill layer of 50 to 500 kg a piece

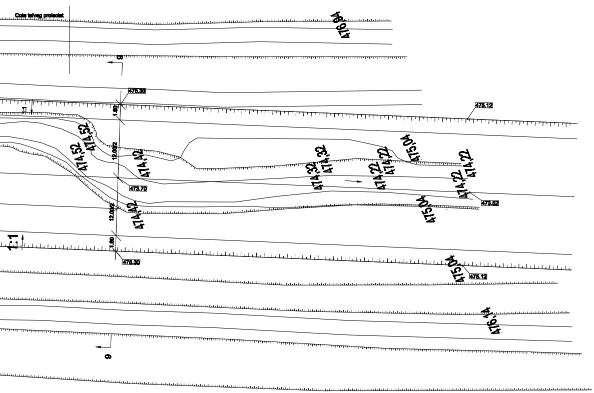
drum pamant
drum acces
Teren arabil
Garaj
Ax pod L=15.5m Km 207+257.85
Axis bridge L=15.5m Km 207+257.85
293500
318100
R=100.00 m
R=100.00 m
R=50.00 m
Lax curba=9.80 m
Lax curba=21.98 m
Ax corectie albie aval
28.0725°
28.0725°
12.5976°
V2
V3
0.5%
1:1
1:1
17.40
11.50
10.00
40.75
12.00
5.00
476.60
476.50
476.40
474.10
474.00
473.90
476.70
474.70
474.20
476.80
476.50
476.40
475.28
475.09
475.25
475.45
475.57
475.47
475.18
474.81
474.76
474.64
474.97
474.24
475.54
475.44
476.44
475.53
475.45
476.63
476.69
476.16
474.58
474.56
474.57
474.59
474.55
474.52
475.62
475.42
475.42
474.62
475.24
476.2
476.52
476.92
475.69
475.65
475.48
475.33
475.27
475.79
474.91
475.02
474.86
474.85
474.87
BRASOV
HM36x
SE17
SE19
V09.09
V09.10
5
6
7
8
2.50
2.80
4.00
1.50
50
12.00/2
6.80/2

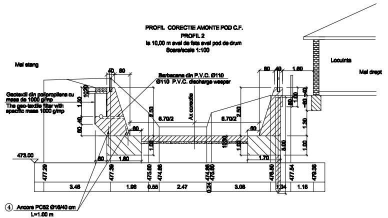

474,64
474.75
2.00
50
50
1.50
50
477.42
477.11
~1.8 %
8.30
477.40
477.00
476.82
474.50
0,5 %
Nivel corectie albie
L ax corectie amonte = 25.50 m
20
40
10
40
466.00

Protectie albie cu pereu din dale de beton monolit C25/30 de 30 cm grosime pe strat filtrant de 10 cm grosime
Riverbed protection with monolith pitching C25/30 concrete slabs 30 cm thick layer of 10 cm thick filtering

Cote coronament protectie					477.00		476.90	
Cote pereu proiectat	474.72		474.75		474.50		474.40	
Cote mal stang/drept	476.91 476.68		476.84 476.68		477.40 477.41		477.43 477.54	
Cote talveg / Distanta	474.75	8.00	474.50	6.30	474.59	10.00	474.36	15.58
Distanta intre profile		14.30			P1	10.00	P2	15.58

L.E.A.


Cote talveg proiectat
476,94
5
475.30
475.12
1:1
1.80
12.00/2
474,52
474,52
474,42
474,32
474,32
474,22
474,22
475,04
474,22
474,22
473.70
473.52
12.00/2
474,42
475,04
1:1
1.80
475.30
475,04
475.12
476,14
6


PROFIL CORECTIE AMONTE POD C.F.

PROFIL 2

la 10,00 m aval de fata aval pod de drum

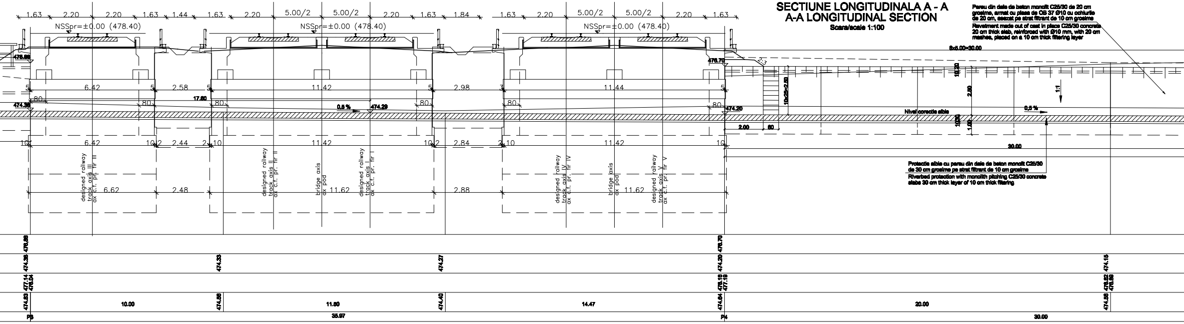
Scara/scale 1:100

Mal stang
Locuinta
Mal drept
40
80
80
40
1.60
Barbacana din P.V.C. Ø110
Ø110 P.V.C. discharge weeper
Geotextil din polipropilena cu masa de 1000 g/mp
The geo-textile filter with specific mass 1000 g/mp
10
20
1.50
80
40
2.50
6.70/2
Ax corectie
6.70/2
2.50
80
80
1.00
10
30
1.00
5.00
50
1.00
60
40
1.30
1.00
473.00
80
1.80
1.70
477.29
477.39
475.60
474.86
474.86
475.60
476.50
477.54
479.38
3.46
1.96
0.55
2.47
0.24
3.08
1.04
1.16

④ Ancore PC52 Ø16/40 cm
L=1.00 m

SECTIUNE LONGITUDINALA A - A
A-A LONGITUDINAL SECTION

Scara/scale 1:100



Pereu din dale de beton monolit C25/30 de 20 cm grosime, armat cu plasa de OB 37 Ø10 cu ochiurile de 20 cm, asezat pe strat filtrant de 10 cm grosime

Revetment made out of cast in place C25/30 concrete 20 cm thick slab, reinforced with Ø10 mm, with 20 cm meshes, placed on a 10 cm thick filtering layer

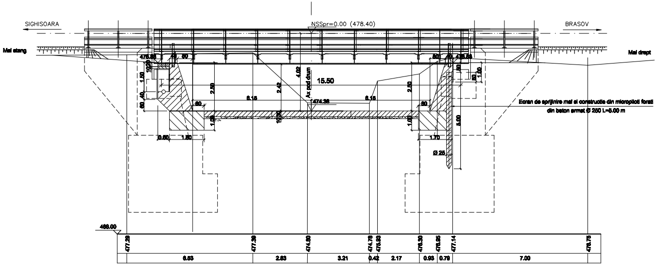
Protectie albie cu pereu din dale de beton monolit C25/30 de 30 cm grosime pe strat filtrant de 10 cm grosime

Riverbed protection with monolith pitching C25/30 concrete slabs 30 cm thick layer of 10 cm thick filtering

1.63
2.20
2.20
1.63
1.44
1.63
2.20
5.00/2
5.00/2
2.20
1.63
1.84
1.63
2.20
5.00/2
5.00/2
2.20
1.63
NSSpr=±0.00 (478.40)
NSSpr=±0.00 (478.40)
NSSpr=±0.00 (478.40)
478.88
476.70
6x5.00=30.00
2:3
6.42
2.58
11.42
2.98
11.44
17.60
80
474.38
0.5 %
474.29
474.20
Nivel corectie albie
0,5 %
1:1
2.00
60
10x25=2.50
2.50
10.20
1.00
10.30
10
6.42
2.44
11.42
2.84
11.42
30.00
designed railway track axis III
ax c.f. pr. fir III
designed railway track axis II
ax c.f. pr. fir II
bridge axis
ax pod
designed railway track axis I
ax c.f. pr. fir I
designed railway track axis IV
ax c.f. pr. fir IV
bridge axis
ax pod
designed railway track axis V
ax c.f. pr. fir V
6.62
2.48
11.62
2.88
11.62
478.88
474.38
474.33
474.27
476.70
474.20
474.15
477.14
476.04
476.15
477.19
476.62
476.56
474.83
474.58
474.40
474.84
474.58
10.00
11.80
14.47
20.00
P3
35.97
P4
30.00

SECTIUNE TRANSVERSALA 3-3 CU VEDERE AMONTE POD C.F. LINIA INDUSTRIALA

Scara/scale 1:100

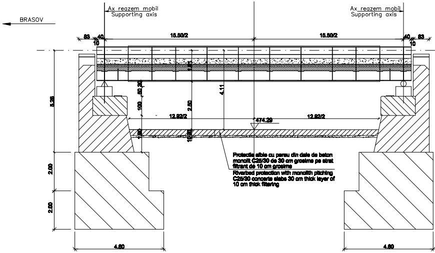


Ecran de sprijinire mal si constructie din micropiloti forati din beton armat Ø 250 L=5.00 m

SIGHISOARA
BRASOV
NSSpr=0.00 (478.40)
Mal stang
Mal drept
476.88
476.88
40
60
60
40
15.50
Ax pod drum
4.02
2.42
2.50
2.50
6.15
6.15
474.36
1.50
1.00
1.00
5.00
0.60
1.80
1.70
Ø 25
468.00
477.28
477.39
474.50
474.78
476.93
476.30
476.95
477.14
476.76
6.53
2.83
3.21
0.42
2.17
0.93
0.79
7.00

SECTIUNE TRANSVERSALA POD C.F. AX LINIE FIR I

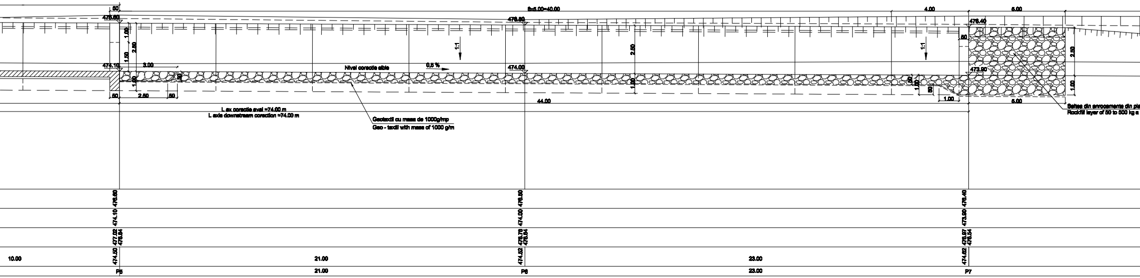
Scara/scale 1:100

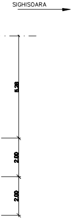


BRASOV
Ax reazem mobil
Supporting axis
Ax reazem mobil
Supporting axis
63
40
10
15.50/2
15.50/2
40
63
10
5.26
2.00
2.00
4.11
2.50
12.92/2
12.92/2
474.29
4.60
4.60

Protectie albie cu pereu din dale de beton monolit C25/30 de 30 cm grosime pe strat filtrant de 10 cm grosime

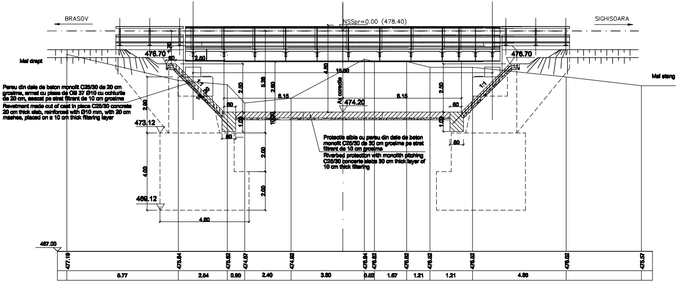
Riverbed protection with monolith pitching C25/30 concerte slabe 30 cm thick layer of 10 cm thick filtering

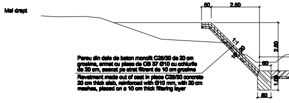

50
476.60
8x5.00=40.00
476.50
4.00
5.00
476.40
1.00
1.50
2.50
1:1
474.10
3.00
Nivel corectie albie
0,5 %
474.00
473.90
50
1.00
50
2.50
50
1.00
44.00
5.00
L ax corectie aval =74.00 m
L axis downstream corection =74.00 m
Geotextil cu masa de 1000g/mp
Geo - textil with mass of 1000 g/m
Saltea din anrocamente din pia
Rockfill layer of 50 to 500 kg a
476.60
474.10
477.02
476.84
474.50
10.00
P5
21.00
476.50
474.00
476.76
476.84
474.52
P6
23.00
476.40
473.90
476.57
476.54
474.62
P7

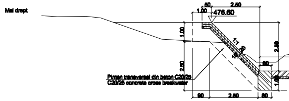

SIGHISOARA
5.26
2.00
2.00

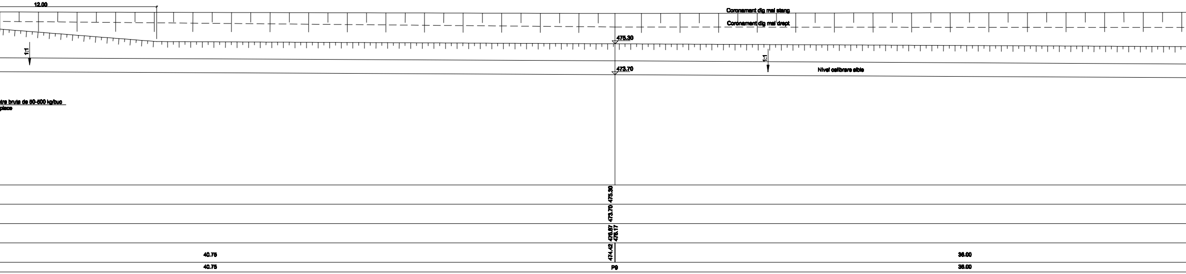
SECTIUNE TRANSVERSALA 4-4 CU VEDERE AVAL POD C. F. LINIA III

Scara/scale 1:100

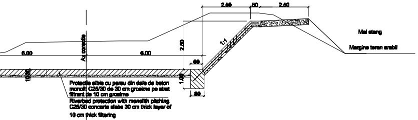

BRASOV
SIGHISOARA
NSSpr=0.00 (478.40)
Mal drept
Mal stang
476.70
476.70
1.70
50
2.50
4.50
15.60
5.26
2.50
2.50
2.50
2.50
6.15
6.15
Ax corectie
474.20
60
60
1.00
1.00
1:1
80
80
473.12
469.12
4.00
2.00
2.00
4.60
Pereu din dale de beton monolit C25/30 de 20 cm grosime, armat cu plasa de OB 37 Ø10 cu ochiurile de 20 cm, asezat pe strat filtrant de 10 cm grosime
Revetment made out of cast in place C25/30 concrete 20 cm thick slab, reinforced with Ø10 mm, with 20 cm meshes, placed on a 10 cm thick filtering layer
Protectie albie cu pereu din dale de beton monolit C25/30 de 30 cm grosime pe strat filtrant de 10 cm grosime
Riverbed protection with monolith pitching C25/30 concarte slabs 30 cm thick layer of 10 cm thick filtering
467.00
477.19
475.84
475.62
474.67
474.92
476.94
476.82
476.62
476.52
476.52
476.02
475.57
5.77
2.54
0.90
2.40
3.60
0.52
1.67
1.21
1.21
4.86


Mal drept
50
2.50
1:1
20
10
2.50
60
1.00
80
Pereu din dale de beton monolit C25/30 de 20 cm grosime, armat cu plasa de OB 37 Ø10 cu ochiurile de 20 cm, asezat pe strat filtrant de 10 cm grosime
Revetment made out of cast in place C25/30 concrete 20 cm thick slab, reinforced with Ø10 mm, with 20 cm meshes, placed on a 10 cm thick filtering layer

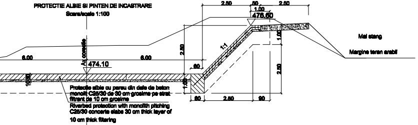

Mal drept
50
2.50
1.00
476.60
1.00
1:1
20
10
2.50
2.50
60
1.00
Pinten transversal din beton C20/25
C20/25 concrete cross breakwater
90
2.50
80


12.00
Coronament dig mal stang
Coronament dig mal drept
475.30
1:1
1:1
473.70
Nivel calibrare albie
tra bruta de 50-500 kg/buc
place
475.30
473.70
475.57
475.17
474.42
40.75
36.00
40.75
P9
36.00

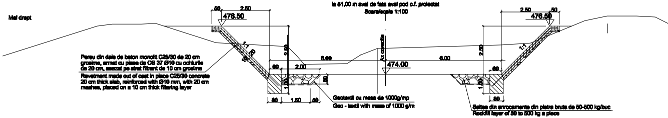
PROFIL PROTECTIE ALBIE AVAL POD C.F.
Scara/scale 1:100


2.50
.50
2.50
Ax corectie
2.50
1:1
Mal stang
Margine teren arabil
6.00
6.00
60
10|30
1.00
80
Protectie albie cu pereu din dale de beton monolit C25/30 de 30 cm grosime pe strat filtrant de 10 cm grosime
Riverbed protection with monolith pitching C25/30 concerte slabe 30 cm thick layer of 10 cm thick filtering

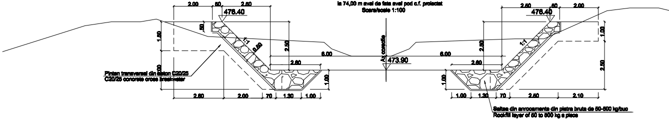
PROFIL 5
la 30.00 m aval de fata aval pod c.f. proiectat
PROTECTIE ALBIE SI PINTEN DE INCASTRARE
Scara/scale 1:100


2.50
.50
2.50
1.00
476.60
Ax corectie
2.50
1:1
1.00
Mal stang
Margine teren arabil
6.00
6.00
474.10
60
2.50
10|30
1.00
80
2.50
90
Protectie albie cu pereu din dale de beton monolit C25/30 de 30 cm grosime pe strat filtrant de 10 cm grosime
Riverbed protection with monolith pitching C25/30 concerte slabe 30 cm thick layer of 10 cm thick filtering

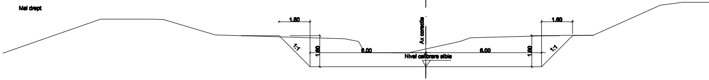
PROFIL 6
la 51,00 m aval de fata aval pod c.f. proiectat
Scara/scale 1:100

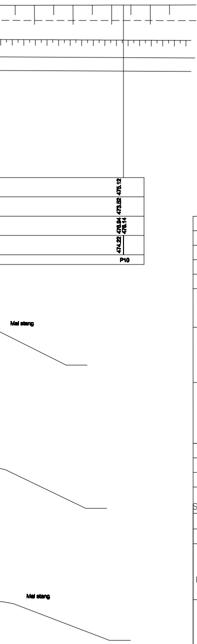

Mal drept
.50
2.50
476.50
2.50
.50
476.50
1:1
0.20
2.50
Ax corectie
2.50
1:1
Pereu din dale de beton monolit C25/30 de 20 cm grosime, armat cu plase de OB 37 Ø10 cu ochiurile de 20 cm, asezat pe strat filtrant de 10 cm grosime
Revetment made out of cast in place C25/30 concrete 20 cm thick slab, reinforced with Ø10 mm, with 20 cm meshes, placed on a 10 cm thick filtering layer
60
2.00
6.00
474.00
6.00
60
.50
1.00
1.00
80
1.50
.50
80
Geotextil cu masa de 1000g/mp
Geo - textil with mass of 1000 g/m
Saltea din anrocamente din piatra bruta de 50-500 kg/buc
Rockfill layer of 50 to 500 kg a piece

PROFIL 8
la 74,00 m aval de fata aval pod c.f. proiectat
Scara/scale 1:100


2.00
.50
2.50
476.40
2.50
.50
2.00
476.40
.50
1.50
1:1
0.50
2.50
Ax corectie
2.50
1:1
1.00
6.00
6.00
473.90
2.60
2.60
2.50
Pinten transversal din beton C20/25
C20/25 concrete cross breakwater
1.00
1.00
1.00
2.60
2.00
70
1.30
1.00
1.00
1.30
70
2.60
2.10
Saltea din anrocamente din piatra bruta de 50-500 kg/buc
Rockfill layer of 50 to 500 kg a piece

PROFIL CORECTIE ALBIE AVAL POD C.F.
Scara/scale 1:100


Mal drept
1.60
1.60
Ax corectie
1:1
1.50
6.00
6.00
1.50
1:1
Nivel calibrare albie


475.12
473.52
476.84
476.14
474.22
P10
Mal stang
Mal stang

D					
C					
B					
A	11.2011	Revizia 1	Popescu Anca Raluca		
Indice Index	Data Date	Modificare Modification/Revision	Proiectant Designer	Aprobat Consultant Approved Consultant	Aprobat CFR Approved CFR

GUVERNUL ROMANIEI
ROMANIAN GOVERNMENT

PROIECT FINANTAT DE UNIUNEA EUROP
EUROPEAN UNION FINANCED PROJEC

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 Cheie Checking Expert	V. Kallidromitis		VK

SUBCONTRACTANT / SUBCONTRACTOR

AREX COMPANY

Aprobat Approved	Responsabil Subconsultant Subconsultant Responsible	A. Dinulescu Stanciu		
Întocmit Elaborated	Proiectant Designer	Popescu Anca–Raluca	24.08.2011	

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. / P.Th

Denumire desen / Drawing Title :

STATIA APATA / APATA STATION
PROTECTIE POD C.F. KM. 207+257.85
DETALII DE EXECUTIE
207+257.85 KM RAILWAY BRIDGE PROTECTION
DETAILS FOR EXECUTION

Codificare / Codification System	Scara / Scale 1:100 1:200	**LOT / LOT**	Nr. / No 01 / 01

E A 5 1 | 0 1 | E | 0 9 | B A | A P | 0 0 | 9 | 3 | 0 0 3 | 0