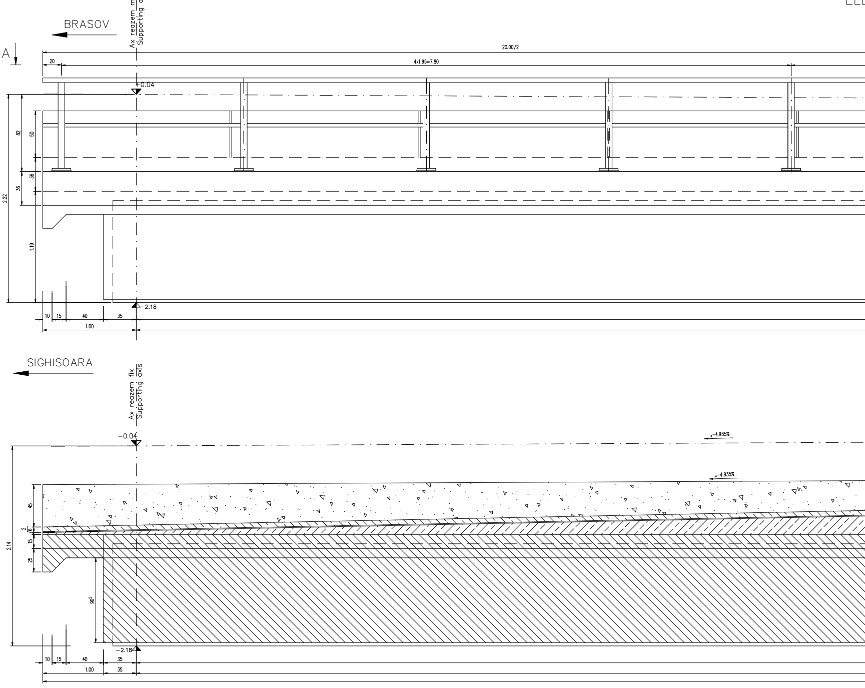
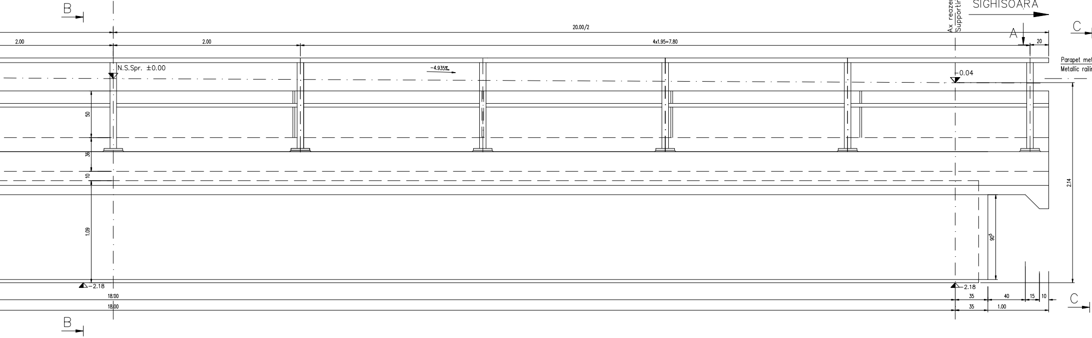

ELE
BRASOV
Ax reazem mobil
Supporting axis
A
20.00/2
20
4x1.95=7.80
+0.04
82
50
36
36
2.22
1.19
−2.18
10
15
40
35
1.00
SIGHISOARA
Ax reazem fix
Supporting axis
−0.04
-4.935%
-4.935%
2.14
45
2
6
15
25
90⁵
−2.18
10
15
40
35
1.00
35

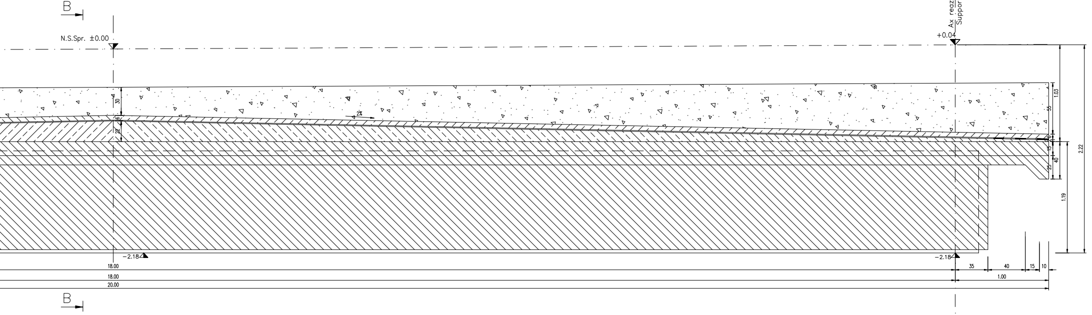
EVATIE C–C/ELEVATION C–C

sc. 1:20


B
20.00/2
2.00
2.00
4x1.95=7.80
Ax reazem fix
Supporting axis
SIGHISOARA
A
20
C
N.S.Spr. ±0.00
-4.935‰
-0.04
Parapet met
Metallic railin
50
36
10
1.09
2.14
90⁵
-2.18
-2.18
18.00
18.00
35
35
40
15
10
1.00
C
B

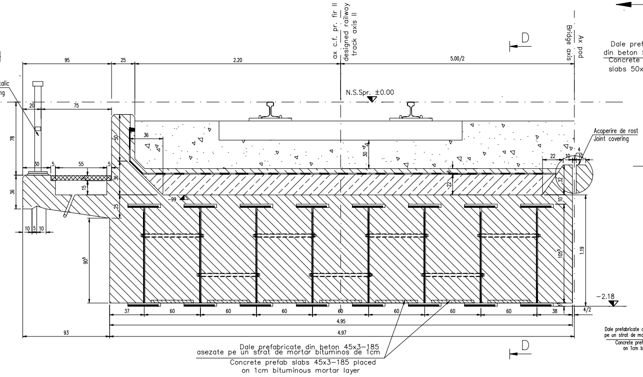
SECTIUNE D–D/D–D SECTION

sc. 1:20

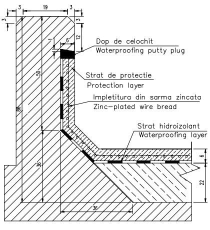

B
Ax reazem mobil
Supporting axis
BRASOV
N.S.Spr. ±0.00
+0.04
30
6
22
2%
1.03
55
6
2
15
40
25
1.19
2.22
-2.18
-2.18
18.00
18.00
20.00
35
40
15
10
1.00
B

SECTIUNE TRANSVERSALA B-B
B-B CROSS SECTION

sc. 1:20

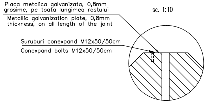

ax c.f. pr. fir II
designed railway track axis II
Bridge axis
Ax pod
D
95
25
2.20
5.00/2
N.S.Spr. ±0.00
20
75
78
36
30
5
55
5
15
10 5 10
50
36
25
90⁵
36
30
22
Acoperire de rost
Joint covering
22
10
4
32
-99
10
105⁵
1.19
2.48
-2.18
4/2
37
60
60
60
60
60
60
60
38
4.95
4.97
93
D
Dale prefabricate din beton 45x3-185 asezate pe un strat de mortar bituminos de 1cm
Concrete prefab slabs 45x3-185 placed on 1cm bituminous mortar layer

DETALIU SAPA
BLANCHET-DETAIL


3
19
3
3
6
12
50
86
36
22
6
36
Dop de celochit
Waterproofing putty plug
Strat de protectie
Protection layer
Impletitura din sarma zincata
Zinc-plated wire bread
Strat hidroizolant
Waterproofing layer

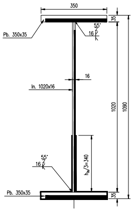
Detaliul acoperire de rost
Detail joint covering

sc. 1:10


Placa metalica galvanizata, 0,8mm grosime, pe toata lungimea rostului
Metallic galvanization plate, 0,8mm thickness, on all length of the joint
Suruburi conexpand M12x50/50cm
Conexpand bolts M12x50/50cm

GRINDA METALICA

SC.1:10


350
35
Pb. 350x35
55°
16
16
In. 1020x16
1020
1090
55°
16
$h_w/3=340$
Pb. 350x35
35

ATENTIE/ATENTION

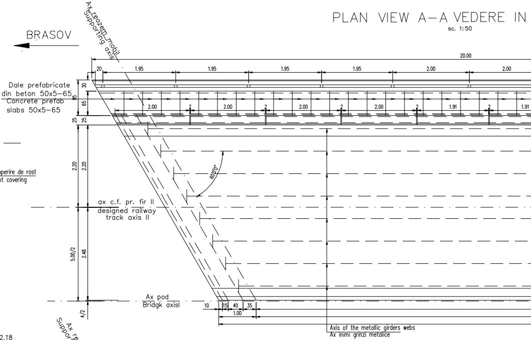
1. Turnarea betonului se va face continuu (fara intrerupere), inclusiv in console, in timp de max. 5 ore folosind intarzietor de priza Replast, in cazul turnarii la temperatura ambianta de peste 10⁰C.
2. Montarea caii, inclusiv balastul, se va face dupa minim 28 zile de la turnarea dalei.

1. The concrete shall be continuausly pored (withent interruptions), including into the braket, during max. 5 hours, using Replast retarder, in case of pouring at environment temperature over 10⁰C.
2. The track, including the ballast shall be mounted after minimum 28 days from the concrete slab pouring.

MATERIALE
(- OL37 EP STAS 12187-88 elementele grinzilor metalice)
- $S275J_3G_3$ EN 10025/2004

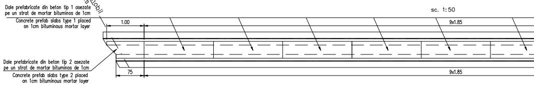
PLAN VIEW A-A VEDERE IN

sc. 1:50


Ax reazem mobil
Supporting axis
BRASOV
20.00
20
1.95
1.95
1.95
1.95
2.00
2.00
Dale prefabricate din beton 50x5-65
Concrete prefab slabs 50x5-65
30
95
65
25
25
2.00
2
2.00
2
2.00
2
2.00
2
1.91
2
1.91
2.20
2.20
60°20'0"
ax c.f. pr. fir II
designed railway track axis II
5.00/2
2.48
4/2
Ax pod
Bridgk axisl
10
15
40
35
1.00
Axis of the metallic girders webs
Ax inimi grinzi metalice
Ax reazem mobil
Supporting axis

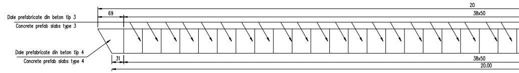
DALE PREFABRICATE PENTRU GRINZILE INGLOBATE/ CONCRETE PREFAB SLA

sc. 1:50


Dale prefabricate din beton tip 1 asezate pe un strat de mortar bituminos de 1cm
Concrete prefab slabs type 1 placed on 1cm bituminous mortar layer
1.00
9x1.85
Dale prefabricate din beton tip 2 asezate pe un strat de mortar bituminos de 1cm
Concrete prefab slabs type 2 placed on 1cm bituminous mortar layer
75
9x1.85

DALE PREFABRICATE PENTRU TROTUAR/ CONCRETE PREFAB S

sc. 1:50


20
69
38x50
Dale prefabricate din beton tip 3
Concrete prefab slabs type 3
Dale prefabricate din beton tip 4
Concrete prefab slabs type 4
31
38x50
20.00

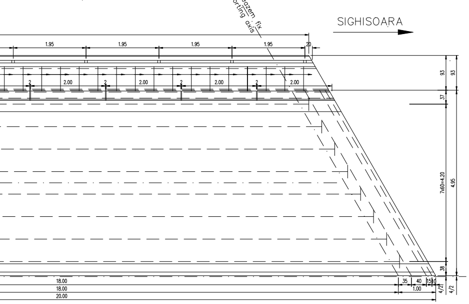
NOTA

1.La executia in uzina a grinzilor metalice sudate se vor respecta cu strictete prevederile STAS 9407-75.
2.In uzina se va aplica o protectie anticoroziva pe talpile inferioare si pe o treime din inima grinzilor metalice.
3.Protectia anticoroziva se va executa dintr-un strat de baza alcatuit dintr-o pelicula de zinc de 80µm grosime si doua straturi de invelis poliuretanic, fiecare de 85µm.
Stratul de baza si un invelis poliuretanic se vor aplica in uzina, urmand ca ultimul strat poliuretanic sa fie aplicat pe santier dupa finalizarea lucrarilor la suprastructura.
4.Pregatirea suprafetelor metalice in vederea aplicarii procedeelor de protectie anticoroziva se face prin:
-Perierea de rugina cu ajutorul unor perii de sarma.
-Spalarea suprafetelor metalice.
-Degresarea cu solventi organici prin stergere sau cu emulsii.
-Dupa degresare se spala cu jet de apa pentru indepartarea urmelor de detergent. Solutia pentru degresare va fi aleasa astfel incat sa nu afecteze mediul.
Curatirea suprafetelor se va face conform gradului Sa 1 (GE 053-04 si SR EN ISO 8501-1).

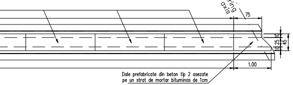
NOTE

1.The prvisions STAS 9407-75 will be stricthy observed when the welded metallic girders are manufactered in the factory.
2.In the plant, corrosion protection will be applied on the lower flanges and on one third of the web of metallic girders.
3.The protection against corrosion will consist in a primary layer made of a zinc membrane (80µm thickness) and two polyurethane covering layer, each of 85µm thickness.
The primary layer and the first polyurethane covering layer will be applied in the factory and the second polyurethane layer will be applied on site, after completing the superstructure works. finalizarea lucrarilor la suprastructura.
4.Preparing the metallic surfaces in order to apply the dorrosion-proof procedures shall be made by:
-Rust removal using wire brushes.
-Washing the metallic surfaces.
-Organic solvent degreasing by wiping or using emulsions.
-After degreasing, the surface is washed by water jet to eliminate the detergent stains. The solution selected for degreasing shall not affect the environment.
Cleaning the surfaces is made according to the Sa 1 (GE 053-04, SR EN ISO 8501-1).

PLAN A–A/

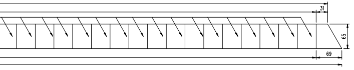

Ax reazem fix
Supporting axis
SIGHISOARA
1.95
1.95
1.95
1.95
20
2.00
2.00
2.00
2.00
93
93
37
7x60=4.20
4.95
38
18.00
18.00
20.00
35
40
15
10
1.00
4/2
4/2

BS FOR STEEL GIRDERS ENBEDED


Ax aparat reazem fix
Fixed bearing block axis
75
10
25
10
45
1.00

Dale prefabricate din beton tip 2 asezate pe un strat de mortar bituminos de 1cm
Concrete prefab slabs type 2 placed on 1cm bituminous mortar layer

LABS FOR SIDEWALK

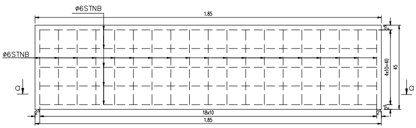


Beton: Concrete:	– C30/37 suprastructura/superstructure
Tipul grinzilor: Beams type:	– grinzi metalice sudate/steel welded girders
Otel pentru grinzi: Steel for the beams:	– (OL 37–EP) $S275J_3G_3$ (EN 10025/2004)
Armatura: Reinforcement:	– S355
Strat de acoperire: Concrete cover	– min. 4cm expunere in aer/air exposed
Clasa de incarcare: Load class:	– calculat cu convoiul T8.5, verificat cu convoiul UIC 71
Cofraj: Formwork:	– Metal sau lemn/Steel or wood

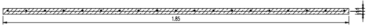
DALE PREFABRICATE DIN BETON ARMATE CU S.T.N.B. CONCRETE/ PREFAB SLABS REIN

TIP 1/TYPE 1

(7x9buc.=63buc/tablier–7x9piece=63piece/deck)

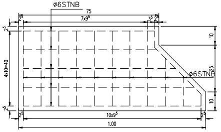

ø6STNB
1.85
ø6STNB
a
a
4x10=40
45
2⁵
2⁵
18x10
1.85

SECTIUNE a–a/a–a SECTION



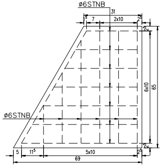
TIP 1/TYPE 1

(7x2buc.=14buc/tablier–7x2piece=14piece/deck)


ø6STNB
75
7x9⁵
3⁵
2⁵
10
25
10
4x10=40
ø6STNB
10x9⁵
1.00

TIP 4/TYPE 4

(2buc. pentru trotuar/2piece for sidewalk)


ø6STNB
31
7
2x10
2⁵
6x10
65
ø6STNB
5
11⁵
5x10
69

EXTRAS DE ARMATURA STNB PENTRU UN TABLIER DE CALE FERATA SIMPLA
TABLE FOR REINFORCEMENTS STNB FOR SINGLE YRAK RAIWAY DECK

TIP/TYPE	TIP ARMATURA TYEPE REINFOCEMENT	Nr. BUC. No. PIECE	kg/m	m/buc. m/piece	kg
TIP 1 TYPE 1	STNB 6 G.Q.283	63	0.222	16.60	235,00
TIP 2 TYPE 2	STNB 6 G.Q.283	14	0.222	8.25	26,00
TIP 3 TYPE 3	STNB 6 G.Q.283	38	0.222	6.15	52.00
TIP 4 TYPE 4	STNB 6 G.Q.283	2	0.222	6.85	3.00
				TOTAL	325,00kg

LEGENDA BETOANELOR/CONCRETE LIST

▨	Beton armat in grinzi inglobate de clasa Concrete in bearings and in the deck slabs C 30/37–CEM II/A–S 42,5–(XC4+XF3+XA1)–A/C=0,50–Dmax.16–Cl 0,20
▨	Beton de panta. Concrete in the protection layer of waterproofing system. C 25/30–CEM II/A–S 32,5–(XF3)–A/C=0,55–Dmax.16–Cl 0,20
▨	Beton in stratul de protectie a hidroizolatiei Concrete in the protection layer of waterproofing system C 25/30–CEM II/A–S 32,5–(XC4+XF3)–A/C=0,50–Dmax.16–Cl 0,20
▨	Beton in dalele prefabricate pentru grinzile inglobate in beton Concrete in the prefab slabs required for the decks made out of steel girders enbeded in to concrete C 35/45–CEM II/A–S 42,5–(XC4+XF3+XA2)–A/C=0,50–Dmax.8–Cl 0,10
▩	Beton in dalele prefabricate pentru trotuare Concrete in the prefab slabs required for the sidewalks C 25/30–CEM II/A–S 32,5–(XC4+XF3+XA1)–A/C=0,50–Dmax.22–Cl 0,20

In cazul in care temperatura in timpul turnarii este scazuta, se vor folosi cimenturile cu rezistenta initiala mare, R si aditivi acceleratori, iar in cazul turnarii pe timp calduros, cimenturile cu rezistenta initiala uzuala, N si aditivi intarzietori, (conform NE012–2010 si tabelului 2 din SR EN 197–1:2007)

When the temperature during the casting is low, cements with high initial resistance, R and accelerating additives shall be used and when it is cast during warm weather, cements with common initial resistance – N and delaying additives shall be used (according the norm NE 012 – 2010 and table 2 for the SR EN 197–1 : 2007).

NOTA

1. Prezentul plan s–a intocmit pe baza Dispozitiei Generale
2. Toate colturile betonului se vor tesi 25/25mm.
3. La executie se vor respecta cu strictete prevederile din "Normativ pentru producerea betonului si executarea lucrarilor din beton, beton armat si beton precomprimat. Partea 1:Producerea betonului", indicativ NE 012/1–2007 si "Normativ pentru producerea betonului si executarea lucrarilor din beton, beton armat si beton precomprimat. Partea 2: Executarea lucrarilor din beton", indicativ NE 012/2–2010, iar verificarea calitatii lucrarilor si receptionarea lor se va face conform normativului C56–1985.
4. Constructia se incadreaza in categoria de importanta B (constructii de importanta deosebita), modelul 1 de asigurare a calitatii si clasa de importanta B, conform HG 766/1997.
5. Proiectul va fi verificat la exigentele A4.2; B2.2; D2.2.

NOTE

1. This plan was drown up based on the General Disposition
2. All concrete corners will be chamfered 25/25mm.
3. The execution will strictly comply with the provisions of "Norm for concrete production and works execution, reinforced and pre–stressed concrete–Part 1: Practice code for concrete production NE 012/1–2007 and "Norm for the concrete production and works execution, reinforced and pre–stressed concrete–Part 2: The execution of concrete works." NE 012/2–2010, and the quality and the reception of the works shall be made accordingly to Norm C 56–1985.
4. The construction has been classified in B category of importance (high important constructions), model 1–ensuring the quality and class of importance B according to G.O. 766/97.
5. The project will be checked in order to comply with the A4.2; B2.2; D2.2 requirements.

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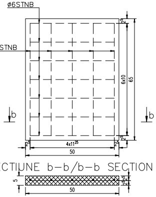
FORCED WITH S.T.N.B.

TIP 3/TYPE 3

38buc. pentru trotuar/38piece for sidewalk)



ø6STNB
STNB
25
6x10
65
25
b
b
25
4x1125
25
50
CTIUNE b-b/b-b SECTION
5
25
25
50

D					
C					
B					
A	12.2011	Revizia 1 1 Revision	Campan Maria		
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 EURO
EUROPEAN UNION FINANCED PR

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		

SUBCONTRACTANT / SUBCONTRACTOR

AREX COMPANY

Aprobat Approved	Responsabil Subconsultant Subconsultant Responsible	A.Stanciu - Dinulescu	11.2011	
Întocmit Elaborated	Proiectant Designer	Campan Maria	11.2011	

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.
D.E. / E.D.

Denumire desen / Drawing Title : **STATIA / STATION ARCHITA**

POD / BRIDGE Km 257+483.300 D=18.00m

SUPERSTRUCTURE SHUTTERING DECK - railway II

Codificare / Codification System	Scara / Scale 1:20	LOT / LOT	Nr. / No 01 / 01

E A 5 1 0 1 E 1 5 B B P V 0 3 6 3 0 0 7 1

420x2500