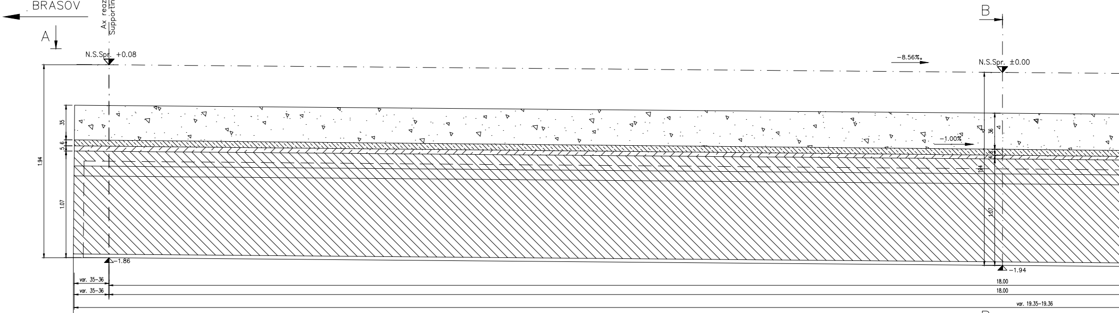
SECTIUNE C–C/C–C SECTION

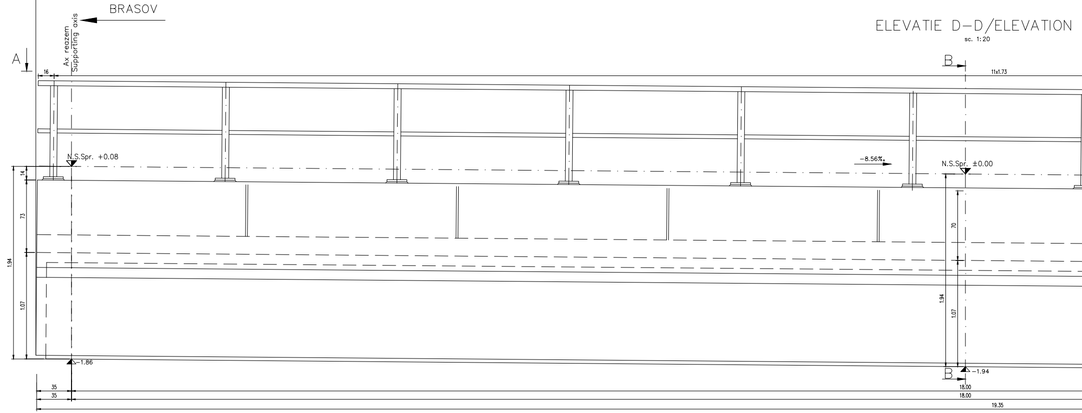
sc. 1:20



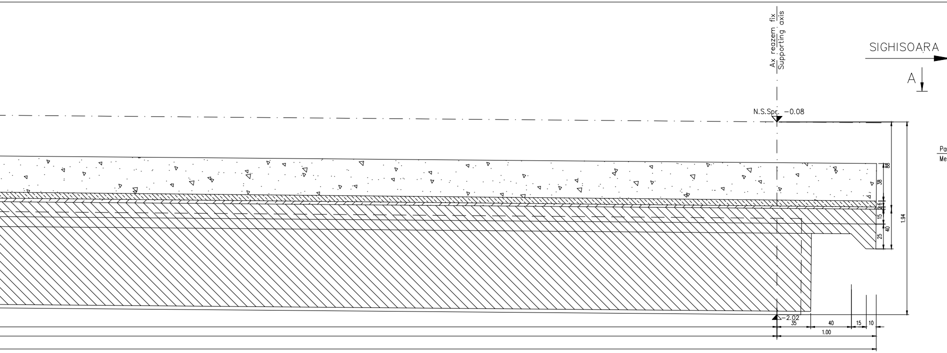
BRASOV
Ax reazem
Supporting axis
A
B
N.S.Spr. +0.08
-8.56‰
N.S.Spr. ±0.00
-1.00%
35
5.6
1.94
1.07
36
1.94
1.07
-1.86
-1.94
var. 35-36
var. 35-36
18.00
18.00
var. 19.35-19.36
B

ELEVATIE D–D/ELEVATION

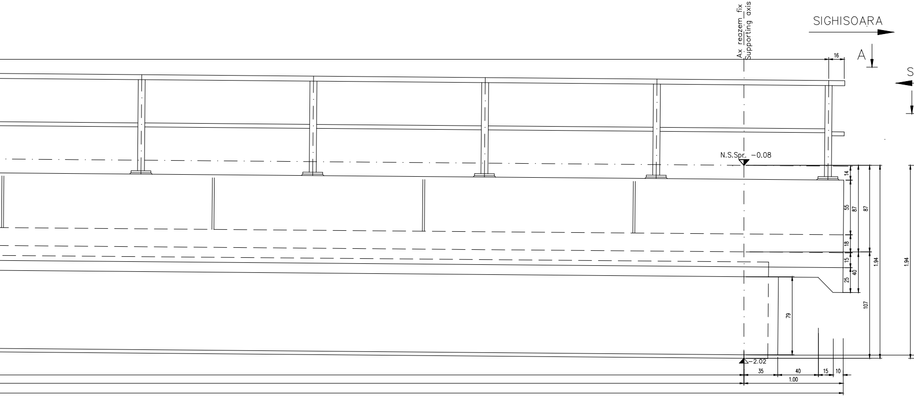
sc. 1:20



BRASOV
Ax reazem
Supporting axis
A
16
B
11x1.73
N.S.Spr. +0.08
-8.56‰
N.S.Spr. ±0.00
14
73
1.94
1.07
70
1.94
1.07
-1.86
B
-1.94
35
35
18.00
18.00
19.35

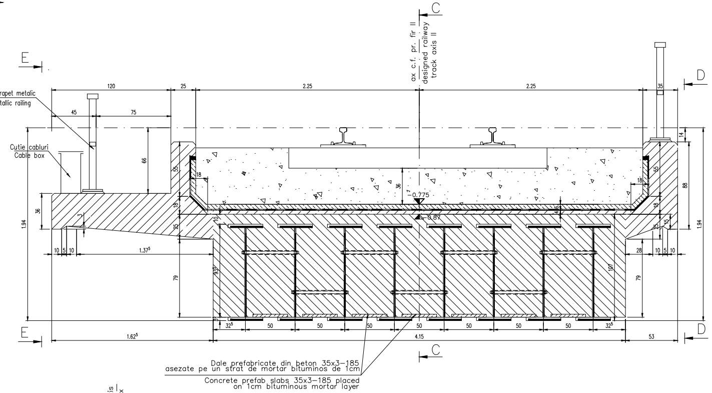

Ax reazem fix
Supporting axis
SIGHISOARA
A
N.S.Spr. −0.08
88
38
2
6
15
40
25
1.94
−2.02
35
40
15
10
1.00
Pa
Me

D−D

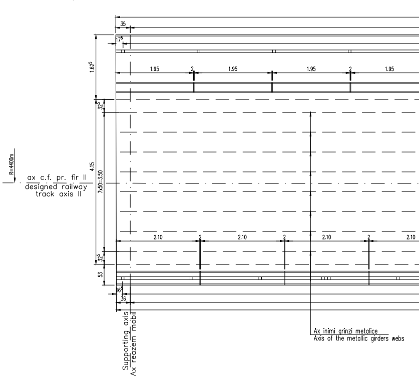

Ax reazem fix
Supporting axis
SIGHISOARA
A
16
S
N.S.Spr. −0.08
14
55
87
87
18
15
40
25
1.94
1.94
107
79
−2.02
35
40
15
10
1.00

SECTIUNE TRANSVERSALA B–B
B–B CROSS SECTION

sc. 1:20

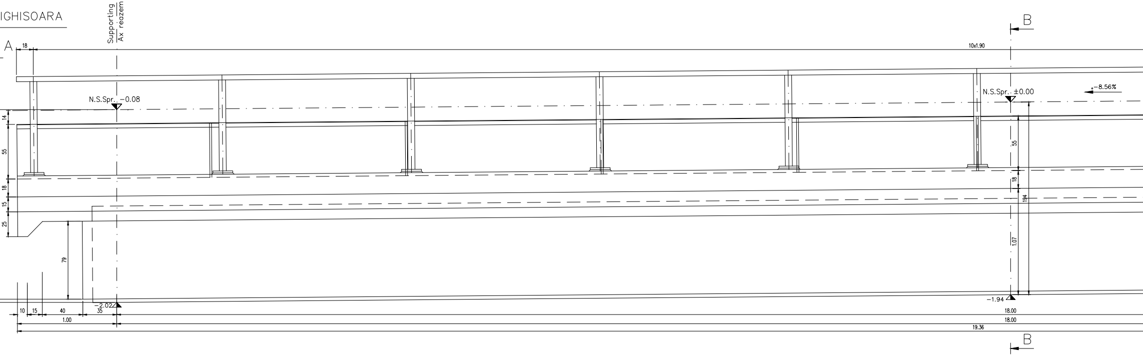

C
ax c.f. pr. fir II
designed railway track axis II
E
D
rapet metalic
tallic railing
Cutie cabluri
Cable box
120
25
2.25
2.25
45
75
35
66
14
55
18
36
1.94
3
25
10 5 10
1.37^5
79
93
107
28
10 5 10
79
88
1.94
15
25
−0.775
−0.87
4.6
32^5
50
50
50
50
50
50
50
32^5
1.62^5
4.15
53
E
D
C
Dale prefabricate din beton 35x3–185 asezate pe un strat de mortar bituminos de 1cm
Concrete prefab slabs 35x3–185 placed on 1cm bituminous mortar layer

VEDERE IN


BRASOV
35
17^5
1.62^5
1.95
2
1.95
1.95
2
1.95
32^5
4.15
7x50=3.50
R=4400m
ax c.f. pr. fir II
designed railway track axis II
2.10
2
2.10
2
2.10
2
2.10
32^5
53
16^5
36
Supporting axis
Ax reazem mobil
Ax inimi grinzi metalice
Axis of the metallic girders webs

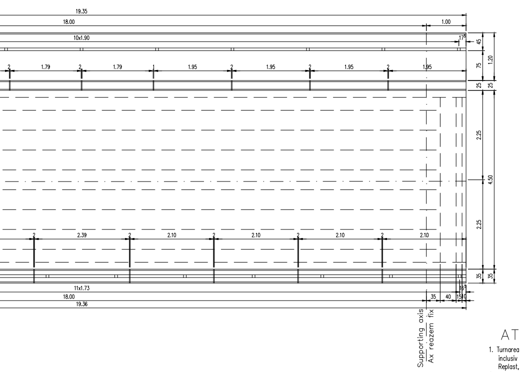
ELEVATIE E–E/ELEVATION E–E

sc. 1:20


IGHISOARA
Supporting axis
Ax reazem fix
A
18
10x1.90
B
N.S.Spr. −0.08
N.S.Spr. ±0.00
−8.56%
14
55
18
15
25
79
55
18
194
1.07
−2.02
−1.94
10
15
40
35
1.00
18.00
18.00
19.36
B

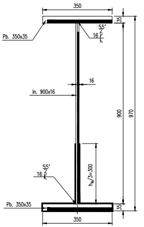
PLAN A–A/ PLAN VIEW A–A

sc. 1:50


SIGHISOARA
19.35
18.00
1.00
10x1.90
17.5
45
1.20
75
25
2
1.79
1.79
1.95
1.95
1.95
1.95
2.25
4.50
2.25
2.39
2.10
2.10
2.10
2.10
35
11x1.73
18.00
19.36
35
40
15
10
Supporting axis
Ax reazem fix

GRINDA METALICA

SC.1:10


350
35
Pb. 350x35
55°
2
16
16
In. 900x16
900
970
55°
2
16
$h_w/3=300$
Pb. 350x35
35
350

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

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 wher welded metallic girders are manufactered in the factory.

2.In the plant, corrosion protection will be applied on the lo flanges and on one third of the web of metallic girders.

3.The protection against corrosion will consist in a primary l made of a zinc membrane (80µm thickness) and two polyu covering layer, each of 85µm thickness.

The primary layer and the first polyurethane covering layer applied in the factory and the second polyurethane layer w 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.

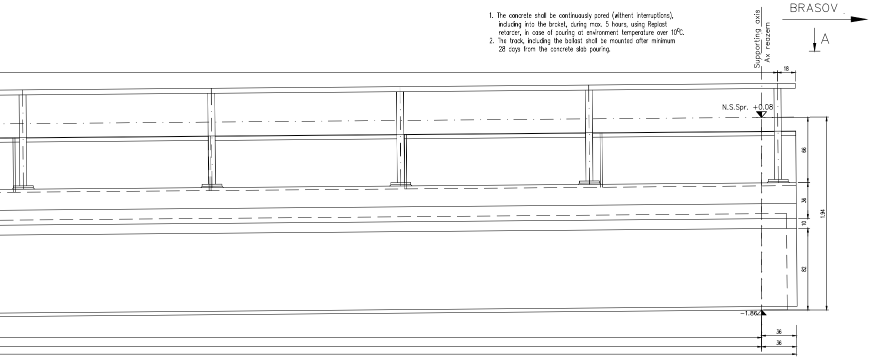
Cleaning the surfaces is made according to the Sa 1 (GE SR EN ISO 8501–1).

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

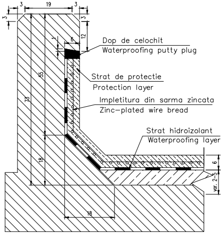
ATENTIE/ATENTION

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 10°C.
2. Montarea caii, inclusiv balastul, se va face dupa minim 28 zile de la turnarea dalei.

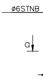
1. The concrete shall be continuausly pored (withent interruptions), including into the braket, during max. 5 hours, using Replast retarder, in case of pouring at environment temperature over 10°C.
2. The track, including the ballast shall be mounted after minimum 28 days from the concrete slab pouring.


Supporting axis
Ax reazem
BRASOV
A
18
N.S.Spr. +0.08
66
36
10
1.94
82
–1.86
36
36

DETALIU SAPA
BLANCHET–DETAIL


3
19
3
3
3
12
6
55
73
18
18
18
6
var. 2–5
Dop de celochit
Waterproofing putty plug
Strat de protectie
Protection layer
Impletitura din sarma zincata
Zinc–plated wire bread
Strat hidroizolant
Waterproofing layer

DA
CO



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053-04,

LEGENDA BETOANELOR/CONCRETE LIST

▨	Beton armat in grinzi inglobate de clasa Concrete in bearings and in the deck slabs C30/37–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. C25/30–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 C25/30–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 C35/45–CEM II/A–S 42,5–(XC4+XF3+XA2)–A/C=0,50–Dmax.8–Cl 0,10

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", indictiv 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.

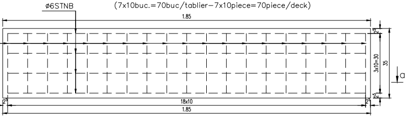
NOTE

1. This plan was drawn up based on the General Disposition EA5101C11PAPV02100020.
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.

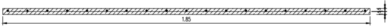
LE PREFABRICATE DIN BETON ARMATE CU S.T.N.B.
NCRETE PREFAB SLABS REINFORCED WITH S.T.N.B.

TIP 1/TYPE 1

(7x10buc.=70buc/tablier–7x10piece=70piece/deck)


ø6STNB
1.85
2.5
3x10=30
35
a
2.5
2.5
18x10
2.5
1.85

SECTIUNE a–a/a–a SECTION



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	70	0.222	14.70	230,00

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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		VK

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 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.
D.E. / E.D.

Denumire desen / Drawing Title : INTERVAL / SECTION RACOS

Viaduct Km 220+762.028 - D=2x55.0m+80.0m+55.0m +11.7m+2x18.0m-COFRAJ SUPRASTRUCTURA TABLIER 4 D=18.00m
Bridge Km 220+762.028 - D=2x55.0m+80.0m+55.0m +11.7m+2x18.0m-SUPERSTRUCTURE SHUTTERING DECK 4 D=18.00m

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

E A 5 1 | 0 1 | E | 1 1 | B B | P V | 0 2 | 1 | 3 | 0 1 5 | 1

420x2570