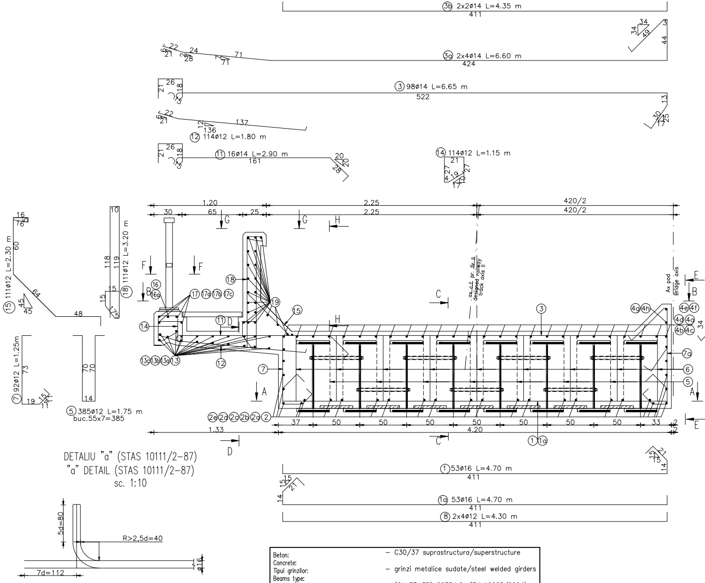
SECTIUNE TRANSVERSALA TABLIER POD
BRIDGE DECK CROSS SECTION

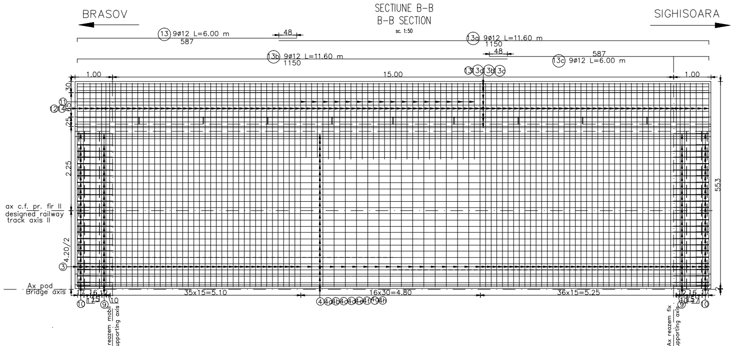
sc. 1:20

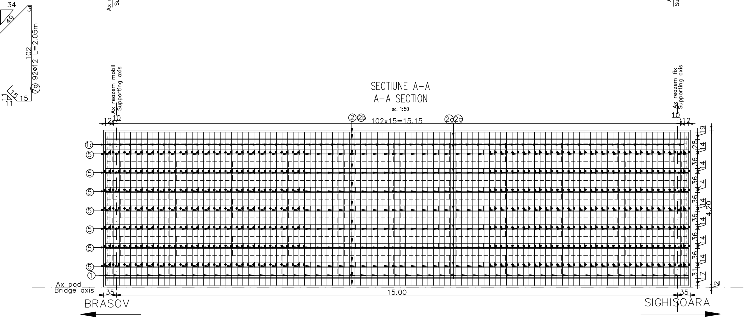


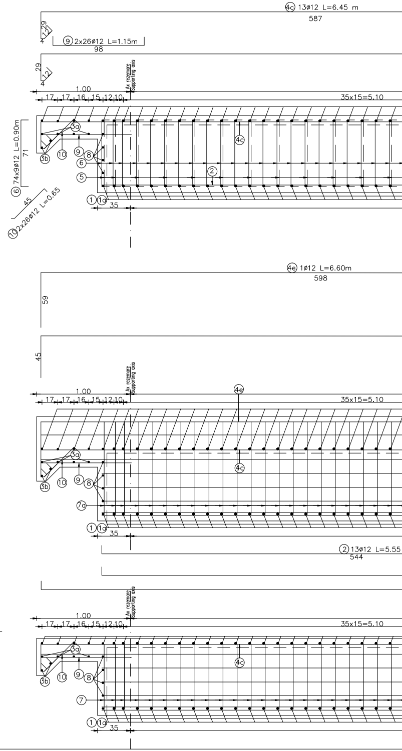
(3b) 2x2ø14 L=4.35 m
411
34
34
49
3
44
(3a) 2x4ø14 L=6.60 m
424
22
21
24
28
71
71
(3) 98ø14 L=6.65 m
522
26
21
18
13
30
17
25
22
21
137
136
12
(12) 114ø12 L=1.80 m
(11) 16ø14 L=2.90 m
161
20
20
24
(14) 114ø12 L=1.15 m
21
27
27
4
19
17
10
(15) 111ø12 L=2.30 m
16
76
60
64
45
45
48
(18) 111ø12 L=3.20 m
10
118
119
15
15
17
(7) 92ø12 L=1.25m
73
19
15
14
11
(5) 385ø12 L=1.75 m
buc.55x7=385
70
70
14
1.20
30
65
25
2.25
2.25
420/2
420/2
G
G
H
H
F
F
B
B
C
C
D
D
A
A
E
E
(16)
(16a)
(17) (17a) (17b) (17c)
(18)
(19)
(15)
(14)
(11)
(13c)(13b)(13a)(13)
(12)
(7)
(2e)(2d)(2c)(2b)(2a)(2)
(3)
(4g)(4h)
(4e)(4f)
(4d)(4a)
(4b)(4c)
(7a)
(6)
(5)
(1)(1a)
34
ax c.f. pr. fir II
designed railway track axis II
Ax pod
Bridge axis
37
50
50
50
50
50
50
50
33
2
5
1.33
4.20
(1) 53ø16 L=4.70 m
411
15
21
15
14
15
21
15
14
(1a) 53ø16 L=4.70 m
411
(8) 2x4ø12 L=4.30 m
411
5d=80
R>2,5d=40
7d=112
ø16

DETALIU "a" (STAS 10111/2-87)
"a" DETAIL (STAS 10111/2-87)
sc. 1:10

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$_3$G$_3$ (EN 10025/2004)
Armatura: Reinforcement:	– S355;S345
Strat de acoperire: Concrete cover	– min. 4cm expunere in aer/air exposed

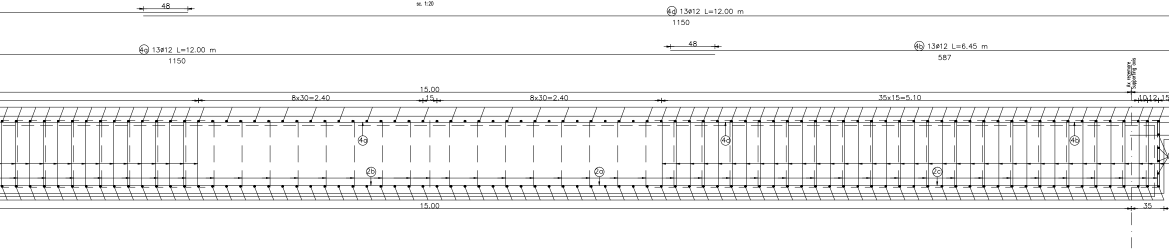

SECTIUNE B-B
B-B SECTION
sc. 1:50
BRASOV
SIGHISOARA
⑬ 9ø12 L=6.00 m
587
48
⑬a 9ø12 L=11.60 m
1150
⑬b 9ø12 L=11.60 m
1150
587
⑬c 9ø12 L=6.00 m
⑬ ③a ③b ⑬c
1.00
15.00
1.00
30
25
2.25
4.20/2
553
⑪
⑫ ⑭
③
ax c.f. pr. fir II
designed railway track axis II
Ax pod
Bridge axis
35x15=5.10
16x30=4.80
36x15=5.25
④ ④a ④b ④c ④d ④e ④f ④g ④h
⑩ ⑨
Ax reazem mobil
Supporting axis
Ax reazem fix
Supporting axis


SECTIUNE A-A
A-A SECTION
sc. 1:50
34
49
3
102
⑦a 92ø12 L=2.05m
15
15
11
Ax reazem mobil
Supporting axis
Ax reazem fix
Supporting axis
② ②b
102x15=15.15
②a ②c
①a
⑤
①
19
28
14
36
31
17
4.20
2
Ax pod
Bridge axis
35
15.00
35
BRASOV
SIGHISOARA


④c 13ø12 L=6.45 m
587
29
12
⑨ 2x26ø12 L=1.15m
98
1.00
Ax rezemare
Supporting axis
17 17 16 15 12 10
35x15=5.10
③a
④c
⑩ ⑨ ⑧
③b
⑥
⑤
②
① ①a
35
⑥ 74x9ø12 L=0.90m
71
45
⑩ 2x26ø12 L=0.65
④e 1ø12 L=6.60m
598
59
45
④e
⑦a
② 13ø12 L=5.55
544
⑦

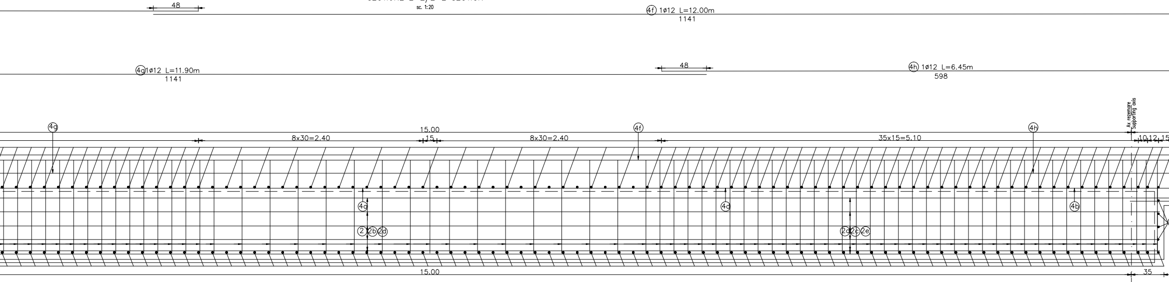
SECTIUNE C-C/C-C SECTION

sc. 1:20


48
4d 13ø12 L=12.00 m
1150
4a 13ø12 L=12.00 m
1150
48
4b 13ø12 L=6.45 m
587
Ax rezemare
Supporting axis
15.00
8x30=2.40
15
8x30=2.40
35x15=5.10
10 12 15
4a
4d
4b
2b
2a
2c
15.00
35

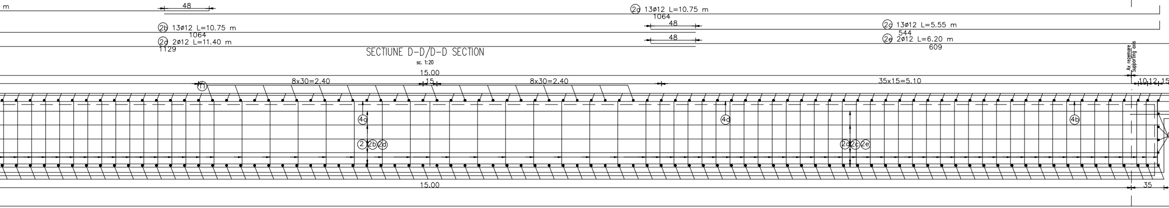
SECTIUNE E-E/E-E SECTION

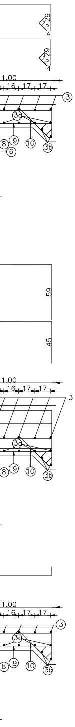
sc. 1:20


48
4f 1ø12 L=12.00m
1141
4g 1ø12 L=11.90m
1141
48
4h 1ø12 L=6.45m
598
Ax rezemare
Supporting axis
4g
4f
4h
15.00
8x30=2.40
15
8x30=2.40
35x15=5.10
10 12 15
4a
4d
4b
2 2b 2d
2a 2c 2e
15.00
35

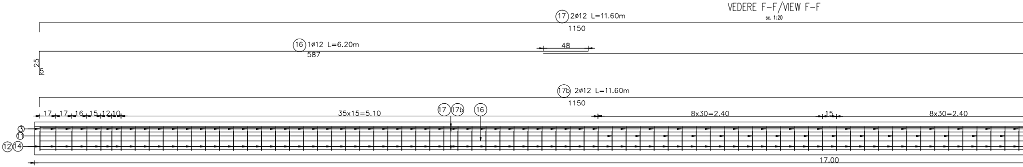
SECTIUNE D-D/D-D SECTION

sc. 1:20

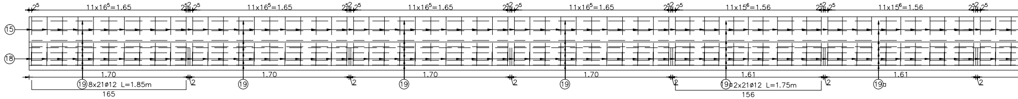

m
48
2a 13ø12 L=10.75 m
1064
2b 13ø12 L=10.75 m
1064
2d 2ø12 L=11.40 m
1129
48
48
2c 13ø12 L=5.55 m
544
2e 2ø12 L=6.20 m
609
Ax rezemare
Supporting axis
15.00
11
8x30=2.40
15
8x30=2.40
35x15=5.10
10 12 15
4a
4d
4b
2 2b 2d
2a 2c 2e
15.00
35


29
4
29
4
1.00
16 17 17
3
3a
8
9
10
3b
6
59
45
1.00
16 17 17
3
3a
8
9
10
3b
1.00
16 17 17
3
3a
8
9
10
3b

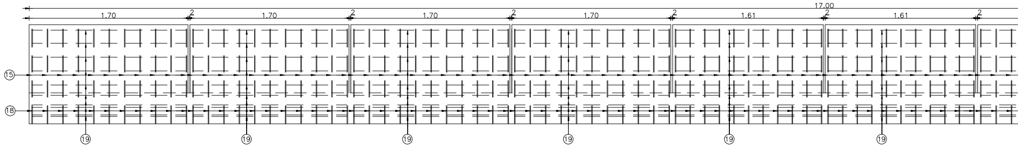
VEDERE F-F/VIEW F-F
sc. 1:20


(17) 2ø12 L=11.60m
1150
(16) 1ø12 L=6.20m
587
25
5
48
(17b) 2ø12 L=11.60m
1150
17 17 16 15 12 10
35x15=5.10
(17) (17b) (16)
8x30=2.40
15
8x30=2.40
(3)
(11)
(12) (14)
17.00

VEDERE G-G/VIEW G-G
sc. 1:20


11x16⁵=1.65
11x16⁵=1.65
11x16⁵=1.65
11x16⁵=1.65
11x15⁶=1.56
11x15⁶=1.56
(15)
(18)
1.70
1.70
1.70
1.70
1.61
1.61
2
(19) 8x21ø12 L=1.85m
165
(19)
(19a) 2x21ø12 L=1.75m
156
(19a)

VEDERE H-H/VIEW H-H
sc. 1:20


17.00
1.70
1.70
1.70
1.70
1.61
1.61
2
(15)
(18)
(19)

Marca	Diametru	Lung./buc.[m]	Nr.buc.	S355		S345
				ø12	ø14	ø16
1	16	4.70	53			249.10
1a	16	4.70	53			249.10
2	12	5.55	13	72.15		
2a	12	10.75	13	139.75		
2b	12	10.75	13	139.75		
2c	12	5.55	13	72.15		
2d	12	11.40	2	22.80		
2e	12	6.20	2	12.40		
3	14	6.65	98		651.70	
3a	14	6.60	8		52.80	
3b	14	4.35	4		17.40	
4a	12	6.45	13	83.85		
4b	12	12.00	13	156.00		
4c	12	12.00	13	156.00		
4d	12	6.45	13	83.85		
4e	12	6.60	1	6.60		
4f	12	12.00	1	12.00		
4g	12	11.90	1	11.90		
4h	12	6.45	1	6.45		
5	12	1.75	385	673.75		
6	12	0.90	666	599.40		
7	12	1.25	92	115.00		
7a	12	2.05	92	188.60		
8	12	4.30	8	34.40		
9	12	1.15	52	59.80		
10	12	0.65	52	33.80		

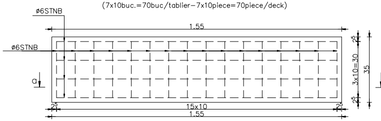
EXTRAS DE ARMATURA TABLIER
TABLE FOR REINFORCEMENTS FOR SINGLE RAIWAY DECK

Marca	Diametru	Lung./buc.[m]	Nr.buc.	S355		S345
				ø12	ø14	ø16
11	14	2.90	16		46.40	
12	12	1.80	114	205.20		
13	12	6.00	9	54.00		
13a	12	11.60	9	104.40		
13b	12	11.60	9	104.40		
13c	12	6.00	9	54.00		
14	12	1.15	114	131.10		
15	12	2.30	111	255.30		
16	12	6.20	1	6.20		
16a	12	11.80	1	11.80		
17	12	11.60	2	23.20		
17a	12	6.00	2	12.00		
17b	12	11.60	2	23.20		
17c	12	6.00	2	12.00		
18	12	3.20	111	355.20		
19	12	1.85	168	310.80		
19a	12	1.75	42	73.50		
Lungimi totale pe diametre			(m)	4416.70	768.30	498.20
Masa pe metru liniar			(kg/ml)	0.888	1.208	1.578
Masa pe diametre			(kg)	3921.30	928.50	786.40
Masa pe tip otel			(kg)	4849.80		786.40
Masa totala tablier			(kg)	5636.20		
Pierderi 5%			(kg)	281.81		
Masa totala tablier			(kg)	5950.00		

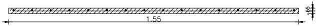
TOTAL POD (2 TABLIERE): 2 x5950.00kg=11900.0kg
TOTAL BRIDGE (2 DECKS): 2 x5950.00kg=11900.0kg

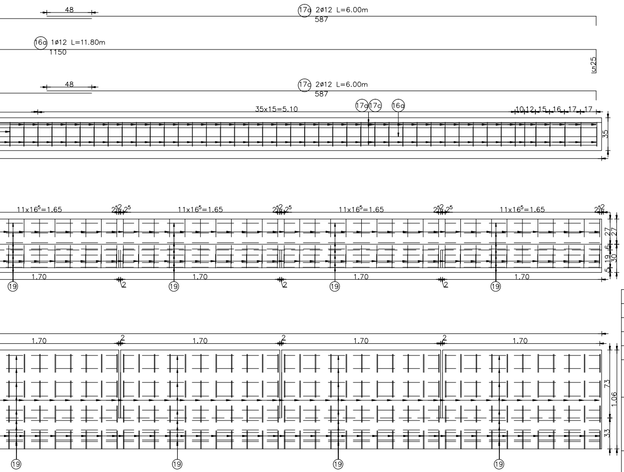
DALE PREFABRICATE DIN BETON ARMAT
CONCRETE PREFAB SLABS REINFORCED W
sc. 1:10

TIP 1/TYPE 1
(7x10buc.=70buc/tablier–7x10piece=70piece/deck)


ø6STNB
1.55
ø6STNB
a
2⁵
3x10=30
35
2⁵
2⁵
15x10
2⁵
1.55

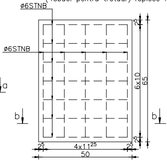
SECTIUNE a–a/a–a SECTION



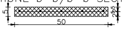

48
(17c) 2ø12 L=6.00m
587
(16a) 1ø12 L=11.80m
1150
525
48
(17c) 2ø12 L=6.00m
587
(17c) (17c) (16a)
35x15=5.10
10 12 15 16 17 17
35
11x16⁵=1.65
2⁵2 2⁵
1.70
2
27
27
6
19
30
5
(19)
1.70
2
73
1.06
33
(19)

E CU S.T.N.B.
TH S.T.N.B.

TIP 2/TYPE 2
(40buc. pentru trotuar/40piece for sidewalk)


ø6STNB
ø6STNB
a
b
b
25
6x10
65
25
2⁵
4x11²⁵
2⁵
50

SECTIUNE b–b/b–b 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	11.00	175.00
TIP 2 TYPE 2	STNB 6 G.Q.283	34	0.222	6.15	50,00
				TOTAL	230,00kg

TOTAL POD (2 TABLIERE): 2 x 230.00kg=460.0kg
TOTAL BRIDGE (2 DECKS): 2 x 230.00kg=460.0kg

NOTA/NOTE

Pentru mentinerea pozitiei corecte in timpul betonarii, se vor monta distantieri minim 4buc./m^2.
Distantierii trebuie legati cu sarma de carcasa de armatura.

In order to maintain the correct position during concreting, minimum 4pcs./m^2 distance pieces shall be mounted.
The distance pieces shall be connected to the reinforcing framework, using wire.

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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 EURO
EUROPEAN UNION FINANCED PR

CLIENT / CLIENT

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

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

Aprobat Approved	Responsabil Subconsultant Subconsultant Responsible	A.Stanciu - Dinulescu	01.2012	
Întocmit Elaborated	Proiectant Designer	Dinu Andreea	01.2012	

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:
D.E. / E.D.

Denumire desen / Drawing Title :

INTERVA;L / SECTION APATA – RACOS
POD Km.209+649,912 /PLAN ARMARE SUPRASTRUCTURA TABLIER 2(4)
BRIDGE Km.209+649,912/SUPERSTRUCTURE REINFORCEMENT PLAN DECK 2(4)

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

E A 5 1 0 1 E 1 0 B C P V 0 1 8 3 0 1 3 0