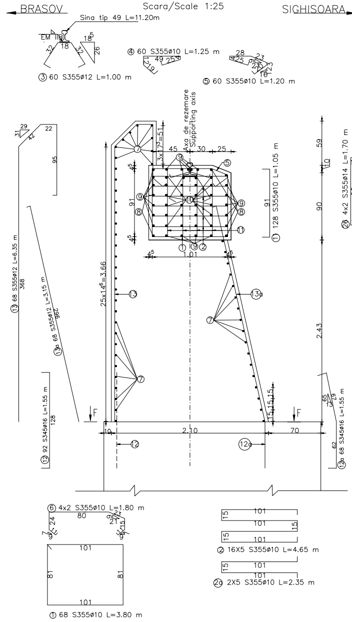
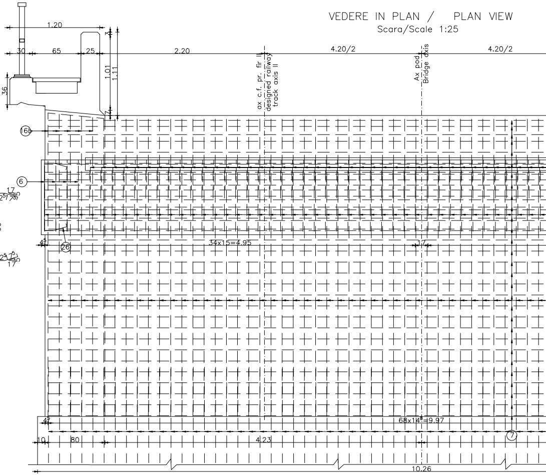
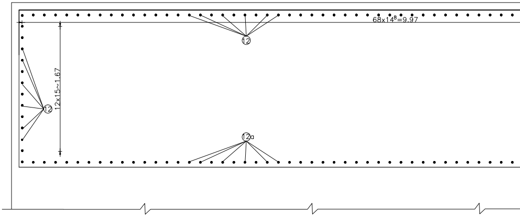
SECTIUNE TRANSVERSALA B-B
B-B SECTION CROSS SECTION
Scara/Scale 1:25

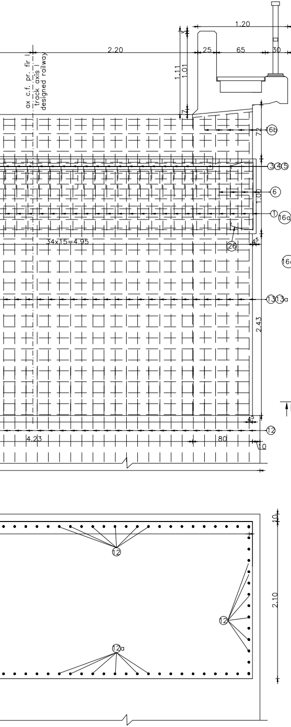

BRASOV
SIGHISOARA
Sina tip 49 L=11.20m
EM IIB
③ 60 S355ø12 L=1.00 m
④ 60 S355ø10 L=1.25 m
⑤ 60 S355ø10 L=1.20 m
Axa de rezemare
Supporting axis
3x7³=51
45
30
25
91
⑪ 128 S355ø10 L=1.05 m
㉖ 4x2 S355ø14 L=1.70 m
59
10
90
2.43
25x14⁶=3.66
1.01
⑬
⑬a
⑦
⑧
⑨
⑩
① ⑨ ②
⑬ 68 S355ø12 L=6.35 m
368
⑬a 68 S355ø12 L=3.15 m
296
⑫ 92 S345ø16 L=1.55 m
128
⑫a 68 S345ø16 L=1.55 m
62
65
F
F
10
2.10
70
⑫
⑫a
15 15 15
⑥ 4x2 S355ø10 L=1.80 m
80
101
81
① 68 S355ø10 L=3.80 m
② 16X5 S355ø10 L=4.65 m
②a 2X5 S355ø10 L=2.35 m

VEDERE IN PLAN / PLAN VIEW
Scara/Scale 1:25


1.20
30
65
25
2.20
4.20/2
4.20/2
36
1.01
1.11
ax c.f. pr. fir II
designed railway track axis II
Ax pod
Bridge axis
⑯b
⑥
㉖
4⁵
34x15=4.95
17
68x14⁸=9.97
⑦
4²
10
80
4.23
10.26

VEDERE F-F / F-F VIEW
Scara/Scale 1:25

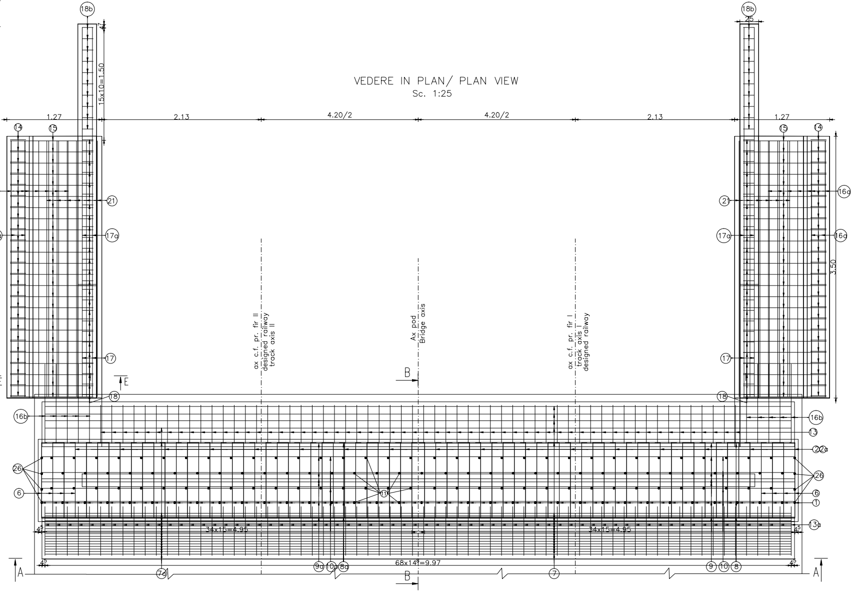

68x14⁸=9.97
⑫
12x15=1.67
⑫
⑫a



1.20
2.20
25
65
30
1.11
1.01
7
ax c.f. pr. fir I
track axis I
designed railway
72
16b
3 4 5
6
1.00
1
34x15=4.95
26
4⁵
13 13a
2.43
4⁵
12
4.23
80
10
10
12
12
12a
2.10

VEDERE IN PLAN/ PLAN VIEW

Sc. 1:25



18b
18b
15x10=1.50
47
25
1.27
2.13
4.20/2
4.20/2
2.13
1.27
14
15
15
14
16a
21
21
16a
16a
17a
17a
16a
3.50
ax c.f. pr. fir II
designed railway
track axis II
Ax pod
Bridge axis
ax c.f. pr. fir I
track axis I
designed railway
17
17
E
E
B
18
18
16b
16b
13
22a
26
26
11
6
6
1
13a
4⁵
34x15=4.95
34x15=4.95
4⁵
4⁵
68x14⁵=9.97
4⁵
A
A
7a
9a
10a
8a
B
7
9
10
8

(7a) 50 S355ø12 L=5.20 m
499

⑦ 50 S355ø12 L=5.65 m
547

48

(8a) 5 S345ø16 L=5.30 m
504

⑧ 5 S345ø16 L=5.95 m
568

64

(9a) 20 S355ø14 L=5.25 m
504

⑨ 20 S355ø14 L=5.80 m
560

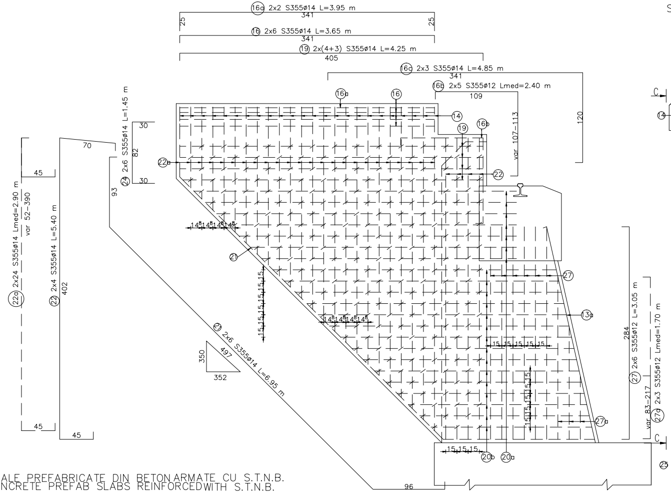
56

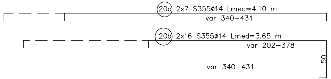
(10a) 24 S355ø12 L=5.25 m
504

⑩ 24 S355ø12 L=5.70 m
552

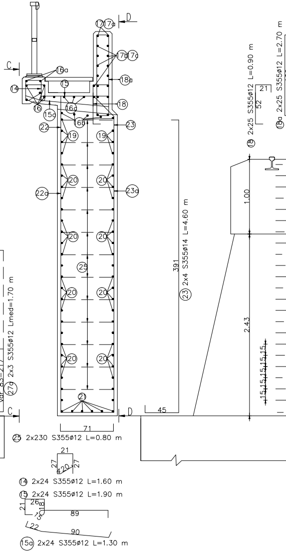
48

VEDERE C–C/ C–C VIEW
Scara/Scale 1:25


16a 2x2 S355ø14 L=3.95 m
341
25
25
16 2x6 S355ø14 L=3.65 m
341
19 2x(4+3) S355ø14 L=4.25 m
405
16c 2x3 S355ø14 L=4.85 m
341
120
16b 2x5 S355ø12 Lmed=2.40 m
109
var 107–113
16a
16
14
19
16b
22a
22
24 2x6 S355ø14 L=1.45 m
30
82
30
93
70
22a 2x24 S355ø14 Lmed=2.90 m
var 52–390
45
45
22 2x4 S355ø14 L=5.40 m
402
45
14 8 14 8 14 8 14 8 14 8
21
15,15,15,15,15
14 8 14 8 14 8 14 8
21 2x6 S355ø14 L=6.95 m
350
497
352
96
27
13a
15 15 15 15 15
15,15,15,15
27a
284
27 2x6 S355ø12 L=3.05 m
27a 2x3 S355ø12 Lmed=1.70 m
var 83–217
C
C
15,15,15
20b
20a

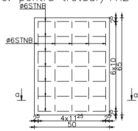

20a 2x7 S355ø14 Lmed=4.10 m
var 340–431
20b 2x16 S355ø14 Lmed=3.65 m
var 202–378
50
var 340–431

SECTIUNE E–E / E–E SECTION
Scara/Scale 1:25

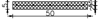

D
17 17a
17b 17c
C
16a
15
18a
14
16
15c
16d
16b
18
22
19
19
23
20
20
22a
23a
20
20
25
20
20
20
20
21
D
71
391
23 2x4 S355ø14 L=4.60 m
45
25 2x230 S355ø12 L=0.80 m
21
27
20
27
14 2x24 S355ø12 L=1.60 m
15 2x24 S355ø12 L=1.90 m
21
26
13
89
22
90
15a 2x24 S355ø12 L=1.30 m
19 2x25 S355ø12 L=0.90 m
21
52
19a 2x25 S355ø12 L=2.70 m
1.00
2.43
15,15,15,15,15

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

Sc. 1:10
TIP 1/TYPE 1
(7X2 buc. pentru trotuar/7X2 piece for sidewalk)

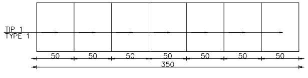

ø6STNB
ø6STNB
a
a
4x11 25
50
6x10
65

SECTIUNE a–a/a–a SECTION



DALE PREFABRICATE DIN BETON
CONCRETE PREFAB SLABS

Sc. 1:20

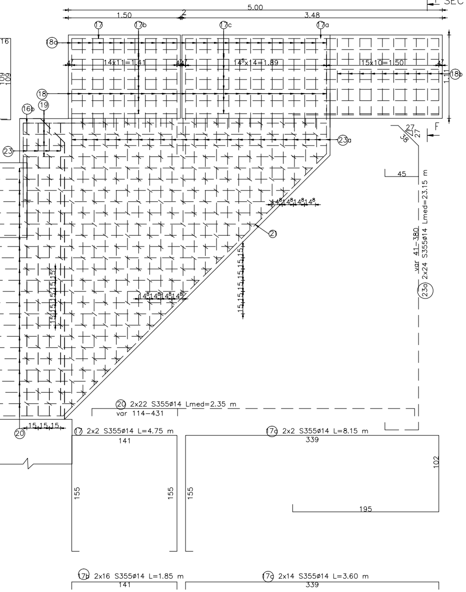

TIP 1
TYPE 1
50
50
50
50
50
50
50
350

EXTRAS DE ARMATURA STNB PENTRU O CULEE DE CALE FERATA
TABLE FOR REINFORCEMENTS STNB FOR SINGLE ABUTMENT

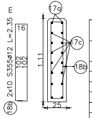
TIP/TYPE	TIP ARMATURA TYEPE REINFOCEMENT	Nr. BUC. No. PIECE	kg/m	m/buc. m/piece	kg
TIP 1 TYPE 1	STNB 6 G.Q.283	14	0.222	6.15	20,00
				TOTAL	20.00kg

TOTAL POD (2 CULEI): 2 x 20kg = 40kg
TOTAL BRIDGE (2 ABUTMENTS): 2 x 20kg = 40kg

VEDERE D–D/ D–D VIEW
Scara/Scale 1:25


5.00
1.50
3.48
2
17
17b
17c
17a
8a
8b
16
14x11=1.41
14⁵x14=1.89
15x10=1.50
18
19
16b
23
23a
27
38
27
F
45
14⁸14⁸14⁸14⁸
21
14⁸14⁸14⁸14⁸
15,15,15,15,15
15,15,15,15,15
var 41–380
2x24 S355ø14 Lmed=23.15 m
23a
20 2x22 S355ø14 Lmed=2.35 m
var 114–431
15,15,15
20
17 2x2 S355ø14 L=4.75 m
141
155
155
17a 2x2 S355ø14 L=8.15 m
339
155
102
195
17b 2x16 S355ø14 L=1.85 m
141
17c 2x14 S355ø14 L=3.60 m
339

SECTIUNE F–F/F–F SECTION
Scara/Scale 1:25


17a
17c
18b
2x10 S355ø12 L=2.35 m
16
102
102
1.11
18b
25

EXTRAS DE ARMATURA PENTRU O CULEE
REINFORCEMENT FOR ONE ABUTMENT

Marca	Diametru	Lungime[m]	Nr.buc.	S355			S345
				ΦC10	ΦC12	ΦC14	ΦC16
1	10	3.80	68	258.40			
2	10	4.65	80	372.00			
2a	10	2.35	10	23.50			
3	12	1.00	60		60.00		
4	10	1.25	60	75.00			
5	10	1.20	60	72.00			
6	10	1.80	8	14.40			
7	12	5.65	50		282.50		
7a	12	5.20	50		260.00		
8	16	5.95	5				29.75
8a	16	5.30	5				26.50
9	14	5.80	20			116.00	
9a	14	5.25	20			105.00	
10	12	5.70	24		136.80		
10a	12	5.25	24		126.00		
11	10	1.05	128	134.40			
12	16	1.55	92				142.60
12a	16	1.55	68				105.40
13	12	6.35	58		368.30		
13a	12	3.15	68		214.20		
14	12	1.60	48		76.80		
15	12	1.90	48		91.20		
15a	12	1.30	48		62.40		
16	12	3.95	4		15.80		
16a	14	3.65	12			43.80	
16b	14	2.40	10			24.00	
16c	14	4.85	6			29.10	
17	14	4.75	4			19.00	
17a	14	8.15	4			32.60	
17b	14	1.85	32			59.20	
17c	14	3.60	32			115.20	
18	12	0.90	50		45.00		
18a	12	2.70	50		135.00		
18b	12	2.35	20		47.00		
19	14	4.25	14			59.50	
20	14	2.35	44			103.40	
20a	14	4.10	14			57.40	
20b	14	3.65	32			116.80	
21	14	6.95	12			83.40	
22	14	5.40	8			43.20	
22a	14	2.90	48			139.20	
23	14	4.60	8			36.80	
23a	14	3.15	48			151.20	
24	14	1.45	12			17.40	
25	10	0.80	460	368.00			
26	14	1.70	8			13.60	
27	12	3.05	12		36.60		
27a	12	1.70	6		10.20		
Lungimi totale pe diametre			(m)	1317.70	1967.80	1365.80	304.25
Masa pe metru liniar			(kg/ml)	0.617	0.888	1.208	1.578
Masa pe diametre			(kg)	812.41	1747.04	1650.45	480.21
Masa pe tip otel			(kg)	4210.00			481.00
Masa totala culee			(kg)	4695.00			
Pierderi 5%			(kg)	234.75			
Masa totala culee			(kg)	4950.00			

TOTAL POD (2 CULEI): 2 x 4950.00kg=9900.00kg
TOTAL BRIDGE (2 ABUTMENTS): 2 x 4950.00kg=9900.00kg

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;S345
Strat de acoperire: Concrete cover	– min. 4cm expunere in aer/air exposed

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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 FINANŢAT DE UNIUNEA EURO
EUROPEAN UNION FINANCED P

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	Semnături Signature
Aprobat Approved	Şef proiect Project manager	R. Liuzza		
Aprobat Approved	Coordonator Secţiune 1 Section 1 Coordinator	C. Gambelli		
Verificat Checked	Expert Chele 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 :

INTERVAL / SECTION FELDIOARA – APATA
POD Km.204+898.420 L=15.00m/PLAN ARMARE CULEI
BRIDGE Km.204+898.420 D=15.00m/ABUTMENTS REINFORCEMENT PLAN

Codificare / Codification System	Scara / Scale 1:25	LOT / LOT	Nr. / No 01 / 01

E A 5 1 0 1 E 0 8 B C P V 0 1 6 2 0 0 7 0