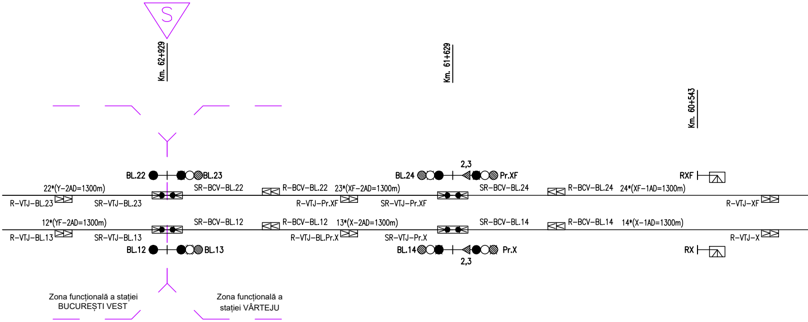
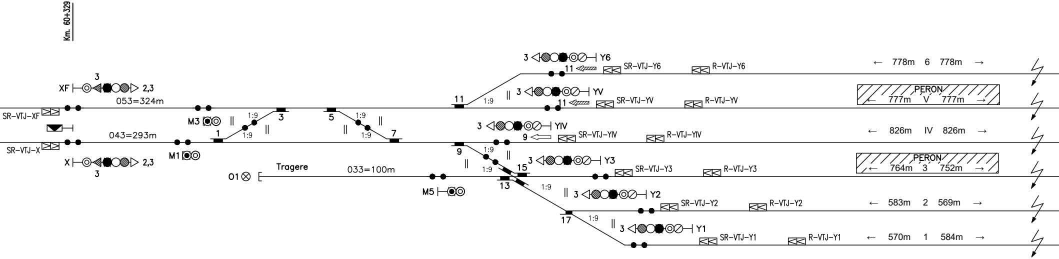
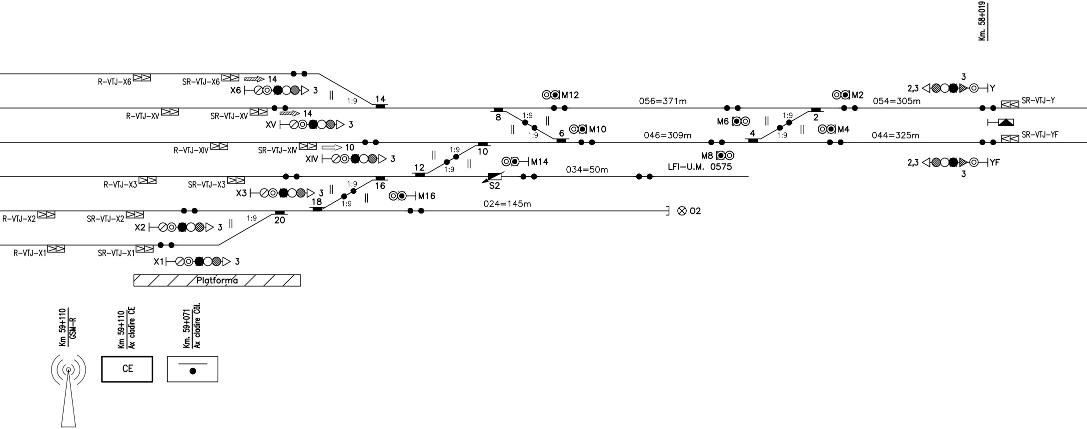
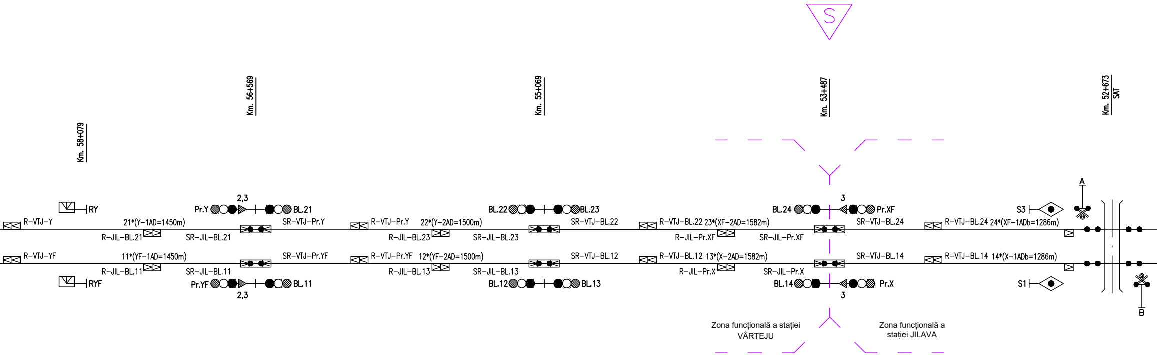
ESTE INTERZISA MODIFICAREA, INSTRAINAREA, COPIEREA SI MULTIPLICAREA ACESTOR SCHEME ELECTRICE SUB FORMA TIPARITA SAU ELECTRONICA, FARA APROBAREA SCRISA A ISPCF, CARE ARE DREPTUL DE PROPRIETATE INTELECTUALA ASUPRA ACESTORA.
ESTE PERMISA UTILIZAREA ACESTOR SCHEME NUMAI PENTRU SPECIALISTII DIN ISPCF SI NUMAI IN INTERESUL ISPCF.
ISPCF ISI REZERVA DREPTUL DE A MODIFICA ACESTE SCHEME ELECTRICE ATUNCI CAND CONSIDERA CA ESTE NECESAR, FARA PREAVIZ.

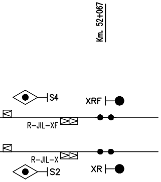

S
Km. 62+929
Km. 61+629
Km. 60+543
BL.22
BL.23
BL.24
2,3
Pr.XF
RXF
22*(Y-2AD=1300m)
SR-BCV-BL.22
R-BCV-BL.22
23*(XF-2AD=1300m)
SR-BCV-BL.24
R-BCV-BL.24
24*(XF-1AD=1300m)
R-VTJ-BL.23
SR-VTJ-BL.23
R-VTJ-Pr.XF
SR-VTJ-Pr.XF
R-VTJ-XF
12*(YF-2AD=1300m)
SR-BCV-BL.12
R-BCV-BL.12
13*(X-2AD=1300m)
SR-BCV-BL.14
R-BCV-BL.14
14*(X-1AD=1300m)
R-VTJ-BL.13
SR-VTJ-BL.13
R-VTJ-BL.Pr.X
SR-VTJ-Pr.X
R-VTJ-X
BL.12
BL.13
BL.14
Pr.X
RX
2,3
Zona funcțională a stației BUCUREȘTI VEST
Zona funcțională a stației VÂRTEJU

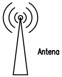

Km. 60+329
3
XF
2,3
053=324m
SR-VTJ-XF
043=293m
SR-VTJ-X
X
2,3
3
M3
M1
1
1:9
1:9
3
5
1:9
1:9
7
O1
Tragere
033=100m
M5
11
1:9
9
1:9
1:9
13
15
1:9
17
1:9
3
Y6
11
SR-VTJ-Y6
R-VTJ-Y6
3
YV
11
SR-VTJ-YV
R-VTJ-YV
3
YIV
9
SR-VTJ-YIV
R-VTJ-YIV
3
Y3
SR-VTJ-Y3
R-VTJ-Y3
3
Y2
SR-VTJ-Y2
R-VTJ-Y2
3
Y1
SR-VTJ-Y1
R-VTJ-Y1
← 778m 6 778m →
PERON
← 777m V 777m →
← 826m IV 826m →
PERON
← 764m 3 752m →
← 583m 2 569m →
← 570m 1 584m →

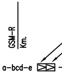

Km. 58+019
R-VTJ-X6
SR-VTJ-X6
14
X6
3
1:9
14
3
2,3
Y
M12
M2
056=371m
054=305m
SR-VTJ-Y
R-VTJ-XV
SR-VTJ-XV
14
XV
3
8
1:9
1:9
6
M10
M6
1:9
1:9
4
2
M4
046=309m
044=325m
SR-VTJ-YF
R-VTJ-XIV
SR-VTJ-XIV
10
XIV
3
1:9
10
12
1:9
M14
M8
LFI-U.M. 0575
2,3
YF
3
R-VTJ-X3
SR-VTJ-X3
X3
3
1:9
16
S2
034=50m
18
1:9
M16
R-VTJ-X2
SR-VTJ-X2
1:9
20
024=145m
02
X2
3
R-VTJ-X1
SR-VTJ-X1
X1
3
Platforma
Km 59+110
GSM-R
Km 59+110
Ax cladire CE
CE
Km. 59+071
Ax cladire Căl.


S
Km. 58+079
Km. 56+569
Km. 55+069
Km. 53+487
Km. 52+673
SAT
RY
Pr.Y
2,3
BL.21
BL.22
BL.23
BL.24
3
Pr.XF
S3
A
R-VTJ-Y
21*(Y-1AD=1450m)
SR-VTJ-Pr.Y
R-VTJ-Pr.Y
22*(Y-2AD=1500m)
SR-VTJ-BL.22
R-VTJ-BL.22
23*(XF-2AD=1582m)
SR-VTJ-BL.24
R-VTJ-BL.24
24*(XF-1ADb=1286m)
R-JIL-BL.21
SR-JIL-BL.21
R-JIL-BL.23
SR-JIL-BL.23
R-JIL-Pr.XF
SR-JIL-Pr.XF
R-VTJ-YF
11*(YF-1AD=1450m)
SR-VTJ-Pr.YF
R-VTJ-Pr.YF
12*(YF-2AD=1500m)
SR-VTJ-BL.12
R-VTJ-BL.12
13*(X-2AD=1582m)
SR-VTJ-BL.14
R-VTJ-BL.14
14*(X-1ADb=1286m)
R-JIL-BL.11
SR-JIL-BL.11
R-JIL-BL.13
SR-JIL-BL.13
R-JIL-Pr.X
SR-JIL-Pr.X
RYF
Pr.YF
2,3
BL.11
BL.12
BL.13
BL.14
3
Pr.X
S1
B
Zona funcțională a stației VÂRTEJU
Zona funcțională a stației JILAVA

# LEGENDA
# LEGEND


Km. 52+067
S4
XRF
R-JIL-XF
R-JIL-X
S2
XR


Antena GSM-R Km. .....



Prima eurobaliza din grup – BG
A doua eurobaliza din grup – BG

a-bcd-e → Directia nominala a balizei

a= Functia BG

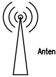
C: Conexiune radio
A: Nivel de tranzitie anuntat (L0>L2)
D: Deconectare RBC
P: Schimbarea fazei
R: Recalibrare
LT: Nivel de tranzitie (Sistem Clasic >ERTMS; ERTMS > Clasic)
SR: Stop pentru modul "Staff Responsable"

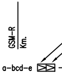
bcd= Identificator Statie ( ex. SAS=Sascut)

e= Obiect de referinta

R, SR: Semnal urmator
F: Schimbare faza axa in Km

11*, 21* Numerotarea sectiunilor BLA în sistemul ERTMS


Antenna GSM-R Km. .....



First Eurobalise of BG
Second Eurobalise of BG

a-bcd-e → Nominal direction of BG

a= BG function

C: Radio Conexion
A: Level Transition Announcement (L0>L2)
D: RBC Disconnection
P: Change of Phase (power traction) Recalibration
R: Recalibration
LT: Level Transition (Clasic Signalling System >ERTMS; ERTMS > Clasic Signalling System)
SR: Stop if in "Staff Responsable"

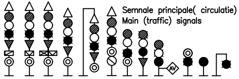
bcd= Station ID ( ex. SAS=Sascut)

e= Referred Object

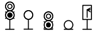
R, SR: Next Signal
F: Change phase axis in Km

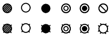
11*, 21* ABL section numbering in ERTMS system

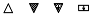
Baliza schimbare nivel ETCS

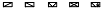


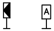
Semnale principale( circulatie)
Main (traffic) signals


Semnale secundare (manevra,repetitoare)
Secondary signals (shunting, repeater)

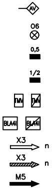

Foc galben, verde, rosu, alb, albastru, iesire pe stânga
Yellow, green, red, white, blue ,exit on left
Foc galben,verde,rosu,alb,albastru,verde clipitor normal aprins
Yellow, green, red, white, blue, flashing green normaly lit


Indicator de viteza;prevestitor de viteza; prevestitor de viteza combinat cu "lipsa distanta de franare"; "lipsa distanta de franare"
Speed; prespeed; prespeed combined with "lack of braking distance"; "lack of braking distance" indicator


Indicator de directie;
Indicator pentru semnalizarea iesirii trenurilor pe linia din stanga a caii duble;
Indicator de directie si semnalizare a iesirii trenurilor pe linia din stanga a caii duble;
Indicator de linie;
Indicator pentru semnalizarea iesirii trenurilor pe linia din stanga a caii duble si lipsa distantei de frânare
Direction indicator;
Indicator for the left track exit on the double line;
Direction and indicator for the exit on the left track of the double line;
Track indicator;
Exit indicator for the left track on the double line and "lack of braking distance" indicator



Indicator pentru amplasarea semnalului pe stanga liniei; Indicator "asteapta"
Indicator for left side entry signal;
"Wait" indicator


AV
06
0,5
1/2
TMV
TMV
BLA4I
BLA4I
X3
n
X3
n
M5

Reper pentru semnal BLA cu functie de avarie la TN
Indicator for ABL signal with emergency function for level crossing

Opritor 06
Dead end signal no. 06

Inductor 500 Hz
Indusi beacon 500 Hz

Inductor 1000/2000 Hz
Indusi beacon 1000/2000 Hz

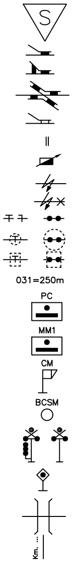
Reper pentru inceputul/sfarsitul zonei cu semnalizare "TMV"
Indicator for the beginning / end to the "TMV" signalling area

Reper pentru inceputul/sfarsitul zonei cu semnalizare "BLA4I"
Indicator for the beginning / end to the "BLA4I" signalling area

Semnal cu drum de alunecare fizic 100m fata de marca macazului n
Marker for physical overlap 100m in front of the mark of the turnout n

Semnal cu drum de alunecare fizic 50m fata de marca macazului n
Marker for physical overlap 50m in front of the mark of the turnout n

Distanta de siguranta pentru parcurs de manevra
Marker for safety distance for shunting route


S
PC
MM1
CM
BCSM
Km. ...

Granita instalatiei de centralizare electronica
Electronic interlocking border

Macaz simplu centralizat
Central operated single turnout

Macaz simplu cu inima mobila
Single turnout with movable crossing

Macaz dublu centralizat
Centralized double point

Macaz necentralizat
Local operated single point

Marca de siguranta
Foul point

Sabot de deraiere centralizat
Central operated derailer

Linie electrificata
Electrified track

Limita electrificării liniei
Limit of electrified track

Joante izolante/Numarator de osii
Insulating joints/Axle counter

Joanta izolanta/ Numarator de osii fara gabarit
Gaugeless insulating joint/Axle counter

Joanta izolanta/Numarator de osii cumulatã
Cumulated insulating joint/Axle counter

031=250m Numele si lungimea unei sectiuni fara macazuri
The nume and length of a section without points

Post centralizare
Interlocking post

Masa de manevrã
Shunting post

Coloana de manevrã
Shunting panel

Buton consimtãmânt semnale de manevrã
Aknowledgement button for a shunting area

Semnal avertizare rutiera cu/fara semibariera
Road traffic signal with/without half barrier at the level crossing

Semnal de avarie la trecere la nivel
Level crossing damage signal

Trecere la nivel la Km. ..
Level crossing at Km. ..

**ENTITATE CONTRACTANTA**
***CONTRACTING ENTITY***

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

**CONTRACTANT**
***CONTRACTOR***

**Asocierea S.C. ISPCF S.A. - S.C. BAICONS IMPEX SRL**

| | Nume<br>*Name* | Data<br>*Date* | Semnatura<br>*Signature* |
|---|---|---|---|
| Şef Proiect<br>*Project Manager* | ing. Viorel Gorgonețu | 11.2024 | |
| Verificat<br>*Checked* | ing. Emil Dinu | 11.2024 | |
| Proiectat<br>*Designed* | ing. Constantinescu Camelia | 11.2024 | |

# ”Modernizarea liniilor și instalațiilor din Complexul Feroviar Bucureşti”
## Studiu de fezabilitate

# *”Modernization lines and installations in the Bucharest Railway Complex*
## *Feasibility Study*

Proiect / *Project*
38 / 2022

Faza / *Phase*
S.F.
*F.S.*

*Denumire / Title*

STAŢIA / STATION VÂRTEJU
Schiţa staţiei cu amplasarea balizelor ETCS /
Signaling sketch with ETCS beacons location

Scara / *Scale*
*Fără / No scale*
-

Codificare / Codification System

C O B U | S F | C E D | D T H | 2 2 | 0 1 | 0 0 2 | R 0 0

Istoricul reviziilor / Revision History

| Rev. | Data/Date | Descriere Modificare / Modification description |
|---|---|---|
| 00 | 11.2024 | Prima ediție |
| 01 | | |
| 02 | | |
| 03 | | |

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