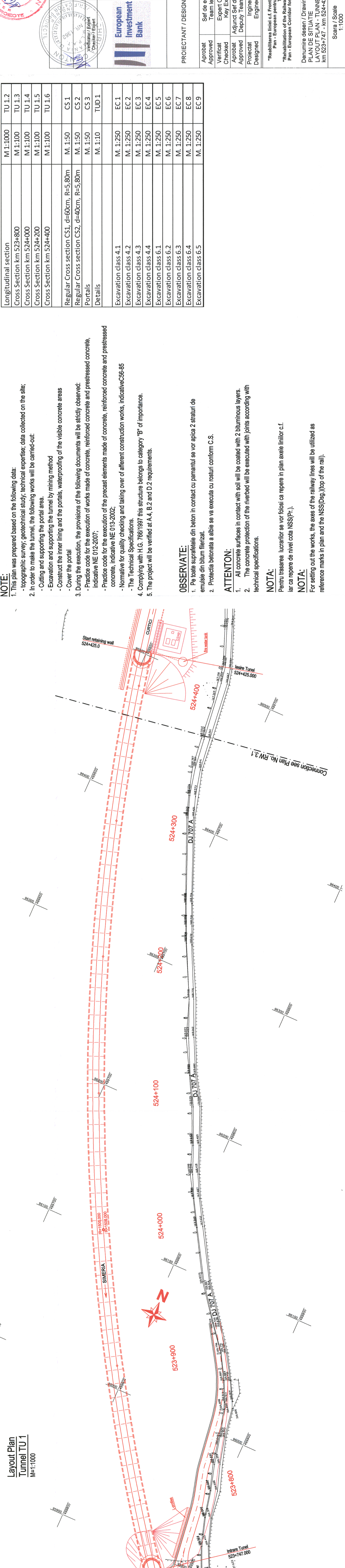


**Layout Plan
Tunnel TU 1
M=1:1000**



NOTE:

- This plan was prepared based on the following data:
 - topographic survey; geotechnical study; technical expertise; data collected on the site;
- In order to make the tunnel, the following works will be carried-out:
 - Cutting and supporting the portal area.
 - Excavation and supporting the tunnel by mining method
 - Construct the inner lining and the portals, waterproofing of the visible concrete areas
 - Cover the portal
- During the execution, the provisions of the following documents will be strictly observed:
 - Practice code for the execution of works made of concrete, reinforced concrete and prestressed concrete, indicative NE 012-2007;
 - Practice code for the execution of the precast elements made of concrete, reinforced concrete and prestressed concrete, indicative NE 013-2002;
 - Normative for quality checking and taking over of afferent construction works, indicative C56-85
 - The Technical Specifications.
- Complying with H.G. 768/1997 this structure belongs to category "B" of importance.
- The project will be verified at A, B,2 and D.2 requirements.

OBSERVATE:

- Pe toate suprafețele din beton în contact cu pământul se vor aplica 2 straturi de emulsie din bitum fierțizat.
- Protecția betonată a ablie se va executa cu rosturi conform C.S.

ATTENTION:

- All concrete surfaces in contact with soil will be coated with 2 bituminous layers.
- The concrete protection of the riverbed will be executed with joints according with technical specifications.

NOTA:

Penru trasearea lucrărilor se vor folosi ca repere în plan axele liniilor c.f. iar ca repere de nivel cota NSS(Pr.).

NOTA:

For setting out the works, the axes of the railway lines will be utilized as reference marks in plan and the NSS(Dsg.) (top of the rail).

Longitudinal section	M 1:1000	TU 1.2
Cross Section km 523+800	M 1:100	TU 1.3
Cross Section km 524+000	M 1:100	TU 1.4
Cross Section km 524+200	M 1:100	TU 1.5
Cross Section km 524+400	M 1:100	TU 1.6
Regular Cross section CS1, d=60cm, R=5,80m	M. 1:50	CS 1
Regular Cross section CS2, d=40cm, R=5,80m	M. 1:50	CS 2
Portals	M. 1:50	CS 3
Details	M. 1:10	TUD 1
Excavation class 4.1	M. 1:250	EC 1
Excavation class 4.2	M. 1:250	EC 2
Excavation class 4.3	M. 1:250	EC 3
Excavation class 4.4	M. 1:250	EC 4
Excavation class 6.1	M. 1:250	EC 5
Excavation class 6.2	M. 1:250	EC 6
Excavation class 6.3	M. 1:250	EC 7
Excavation class 6.4	M. 1:250	EC 8
Excavation class 6.5	M. 1:250	EC 9

European Investment Bank

MINISTERUL TRANSPORTURILOR

COMPANIA NAȚIONALĂ DE CĂI FERATE "CFR" SA

BENEFICIAR / BENEFICIARY:

PÖYRY

PROIECTANT / DESIGNER:

Aprobat	Sef de echipa	C. Teodorescu	Data	06/2013	Semnatura	[Signature]
Verificat	Expert Cheie	M. Diegmann	Date	06/2013	Semnatura	[Signature]
Verificat	Key Expert	J. Werfling	Date	06/2013	Semnatura	[Signature]
Aprobat	Adjunct Sef de echipa	D. Ciotarnel	Date	06/2013	Semnatura	[Signature]
Aprobat	Deputy Team leader					
Proiectat	Inginer					
Designed	Engineer					

Referat / Expertiza Report / Expertise

"Reabilitarea liniei c.f. Frontieră - Curtici - Simeria, parte componentă a coridorului IV Pan - European pentru circulația trenurilor cu viteză maximă de 160 km/h"

"Rehabilitation of the Railway Line Border - Curtici - Simeria, component Part of the IV Pan - European Corridor for the Trains Circulation with maximum speed of 160 km/h"

Section 2 - Km 614-Gurasada

Denumire desen / Drawing name:
 PLAN DE SITUAȚIE
 LAYOUT PLAN - TUNNEL TU 1
 km 523+747 - km 524+425

Scara / Scale
 1:1000

Cod desen / Drawing Code
 TU 1.1

Nr. / No
 TU 1

Connection see Plan No. RW 2.1

Connection see Plan No. RW 3.1