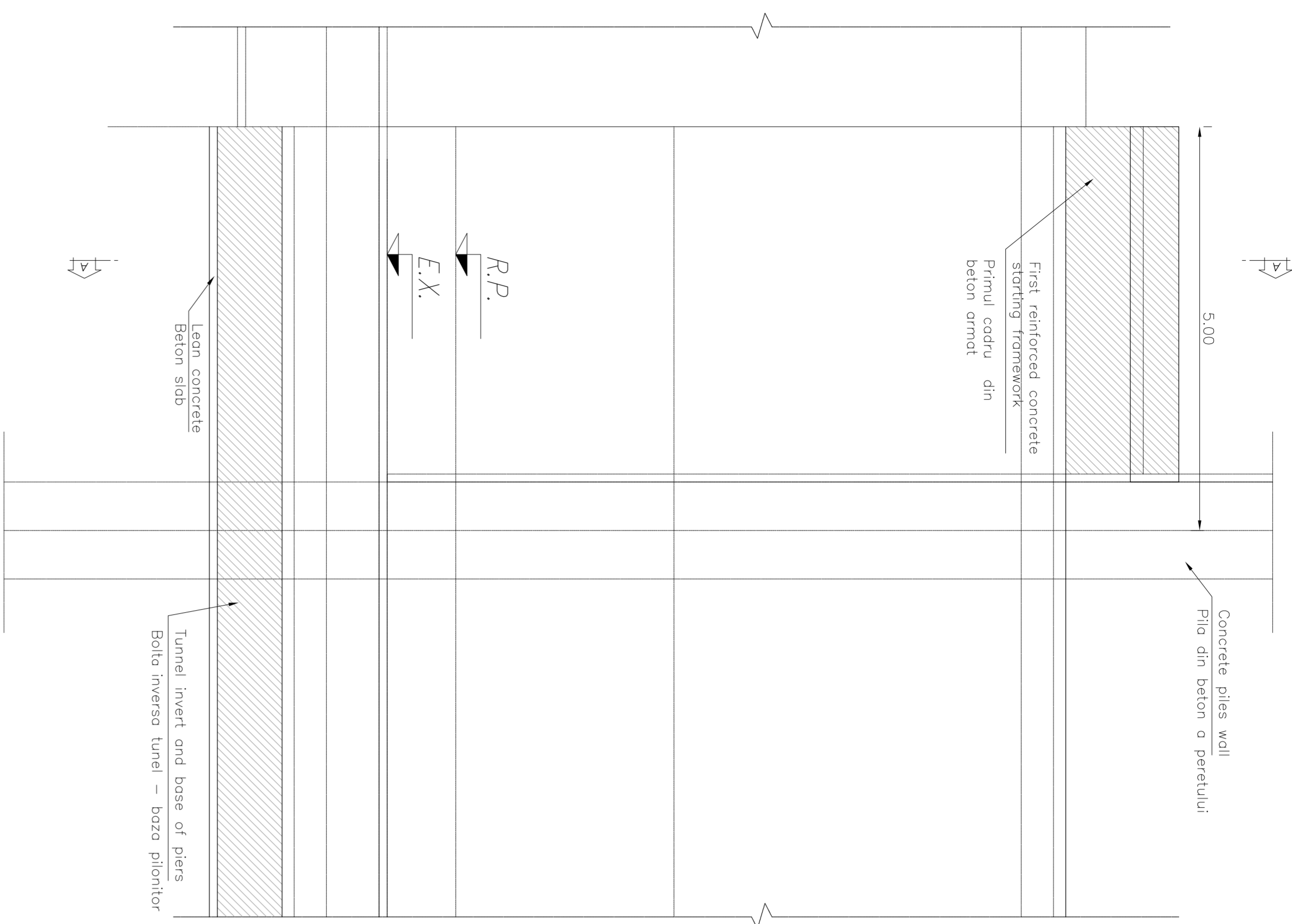
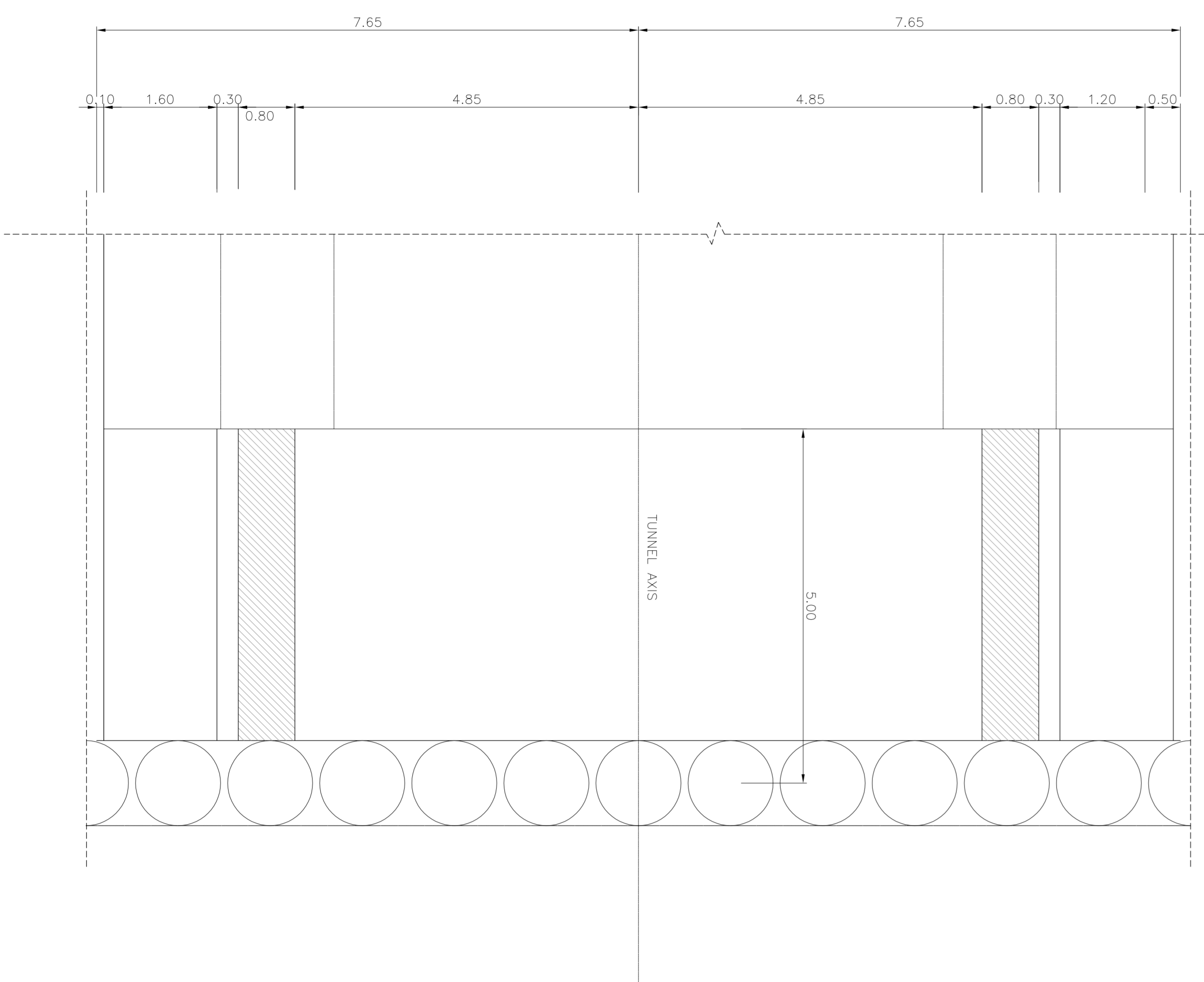


LONGITUDINAL SECTION  
SECTIUNEA LONGITUDINALA

Scale/Scale 1:50

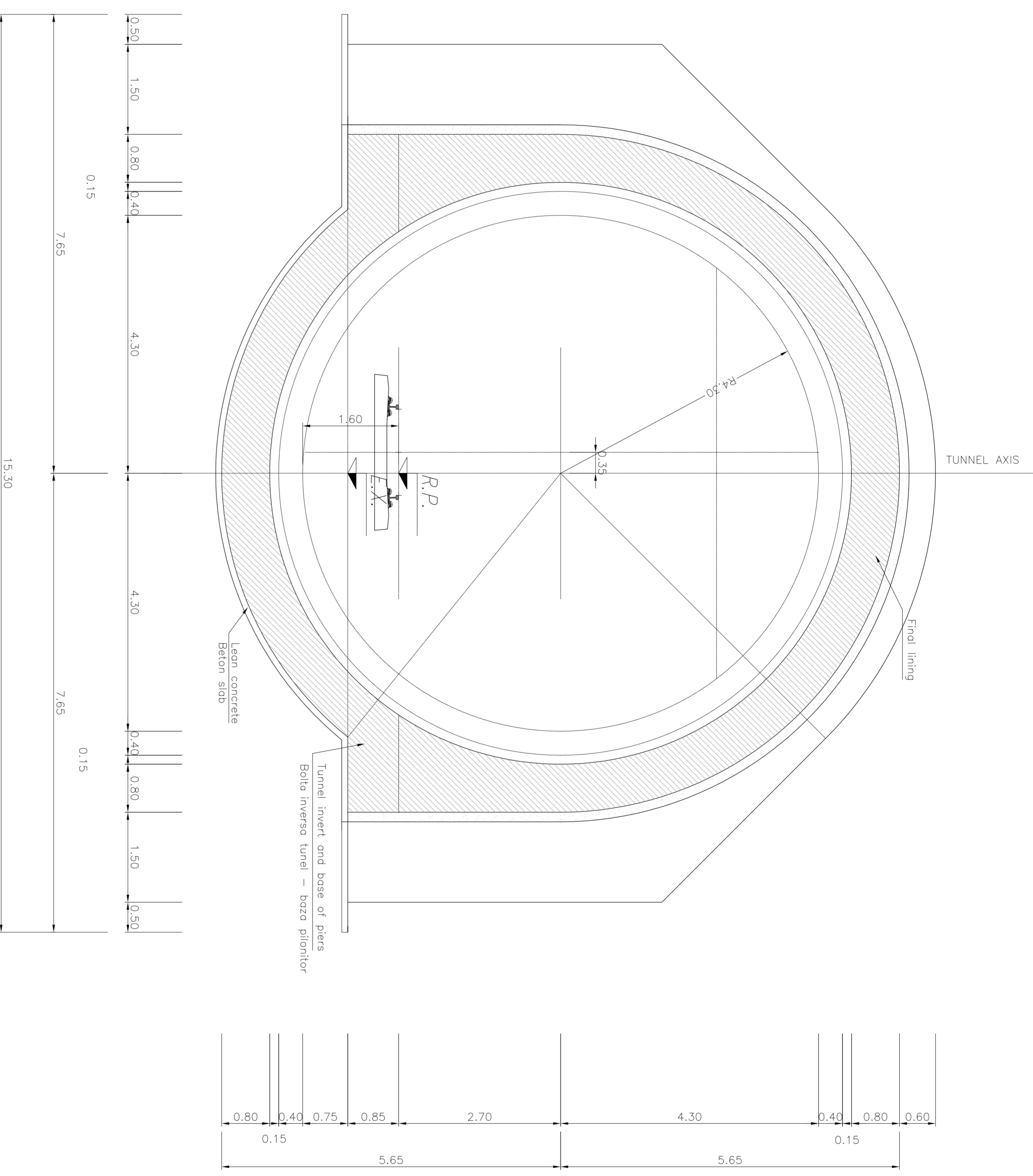


PLAN  
Scale/Scale 1:50



SECTION A-A  
SECTIUNEA CURENTA A-A

Scale/Scale 1:50



**NOTE:**  
- The integrity of the concrete structures of the artificial and natural tunnels here to mentioned in case of fire (4.2.2.5 Fire protection requirements for structure TSJ Technical Specification for interoperability).

**NOTE:**  
- Integritatea structurilor de beton a tunelurilor artificiale si naturale, trebuie sa fie mentinuta in caz de incendiu (4.2.2.5 cerintele de protectie la foc pentru structuri SI Specificatii tehnice pentru interoperabilitate).

**NOTE:**  
- Firewalls shall be installed approximately of 1 m above walkway providing a route to a safe area (4.2.2.7 Escape walkways TSJ).

**NOTE:**  
- Baris de miza trebuie sa fie instalate aproximativ la 1 m deasupra caili de evacuare oferind un traseu sigur (4.2.2.7 evacuare include STJ).

**NOTE:**  
- Escape signs shall be installed on the side walls at a maximum distance between escape signs of 50m (4.2.2.9 Escape Signage TSJ).

**NOTE:**  
- Semnale de evacuare trebuie sa fie instalate pe pereții laterali, la o distanță maximă între semne de evacuare de 50m (4.2.2.9 Escape Signage STJ).

**MATERIAL TABLE**

**TUNNEL INVERT CONCRETE**

- Type C2
- fck 3-30 MPa
- Water/cement ratio <math>w/c</math> 0.50
- Mortar/cement ratio <math>M/c</math> 2.5/54
- Exposure class related to environmental conditions: X02
- Cross of concrete content: 0.020
- $\phi$  max aggregate = 32 mm

**TUNNEL CONCRETE**

- Type C10
- fck 10 MPa
- Water/cement ratio <math>w/c</math> 0.50
- Minimum structure class: S4/S5
- Environmental conditions: X02
- Cement type: CEM III/V
- $\phi$  max aggregate = 20 mm

**REFERENCE STEEL**

- B450C certified by establishment
- Weldable

**LEAN CONCRETE**

- Type I
- fck 3-12 MPa
- Cement type: CEM IV/V

**LEGEND**

RP = REFERENCE PLANE  
EX = EXCAVATIONS PLANE  
PC = CENTERS PLANE

Index	DATA	Descriere	Proiectant	Amplasament	Amplasament
A	DATA	Modificari/Actualizari			

**CLIENT / CLIENT**

**GUVERNUL ROMANIEI**  
ROMANIAN GOVERNMENT

**PROIECT FINANȚAT DE UNIUNEA EUROPEANĂ**  
EUROPEAN UNION FINANCED PROJECT

**CLIENT / CLIENT**

**INTEGRA**  
SCIENTIFIC RESEARCH CENTER

**SCOTT WILSON**

**OBERMEYER**  
FURNIZOR DE SERVICII DE INGINERIE

**TECNIC**  
CONSULTING ENGINEERS

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

**CONSULTANT / CONSULTANT**

Approved	Project	Signature	Date
Approved	Project	R. Lutz	
Approved	Project	C. Gambelli	
Checked	Project	C. Gambelli	
Checked	Project	C. Gambelli	

**SUBCONSULTANT / SUBCONSULTANT**

Approved	Project	Signature	Date
Approved	Project		
Approved	Project		

**CONFERENCE / CONFERENCE SYSTEM**

Verificat / Verificat

0 1 2 3 4 5 6 7 8 9

**CONFERENCE / CONFERENCE SYSTEM**

Verificat / Verificat

0 1 2 3 4 5 6 7 8 9

**CONFERENCE / CONFERENCE SYSTEM**

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