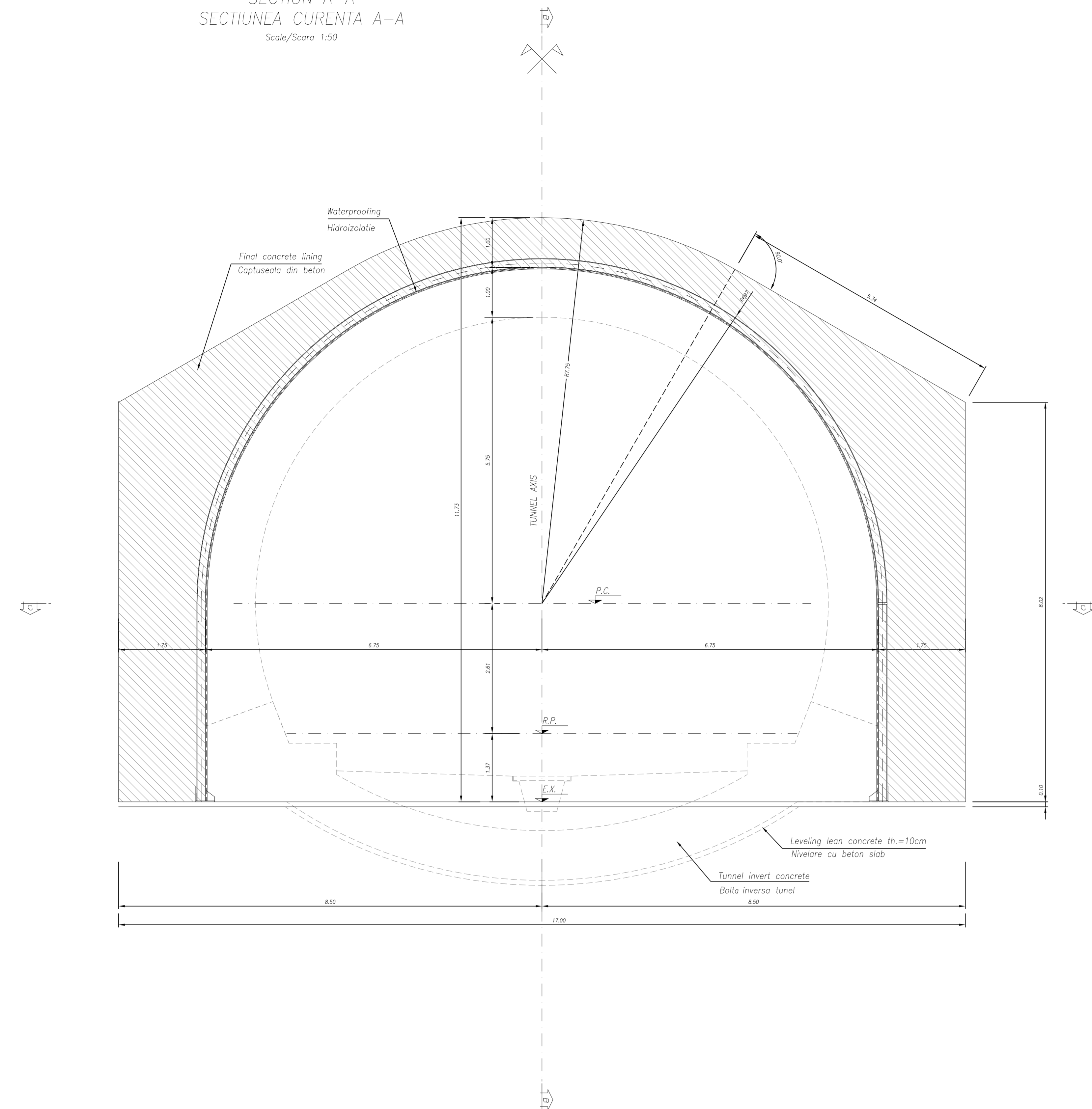
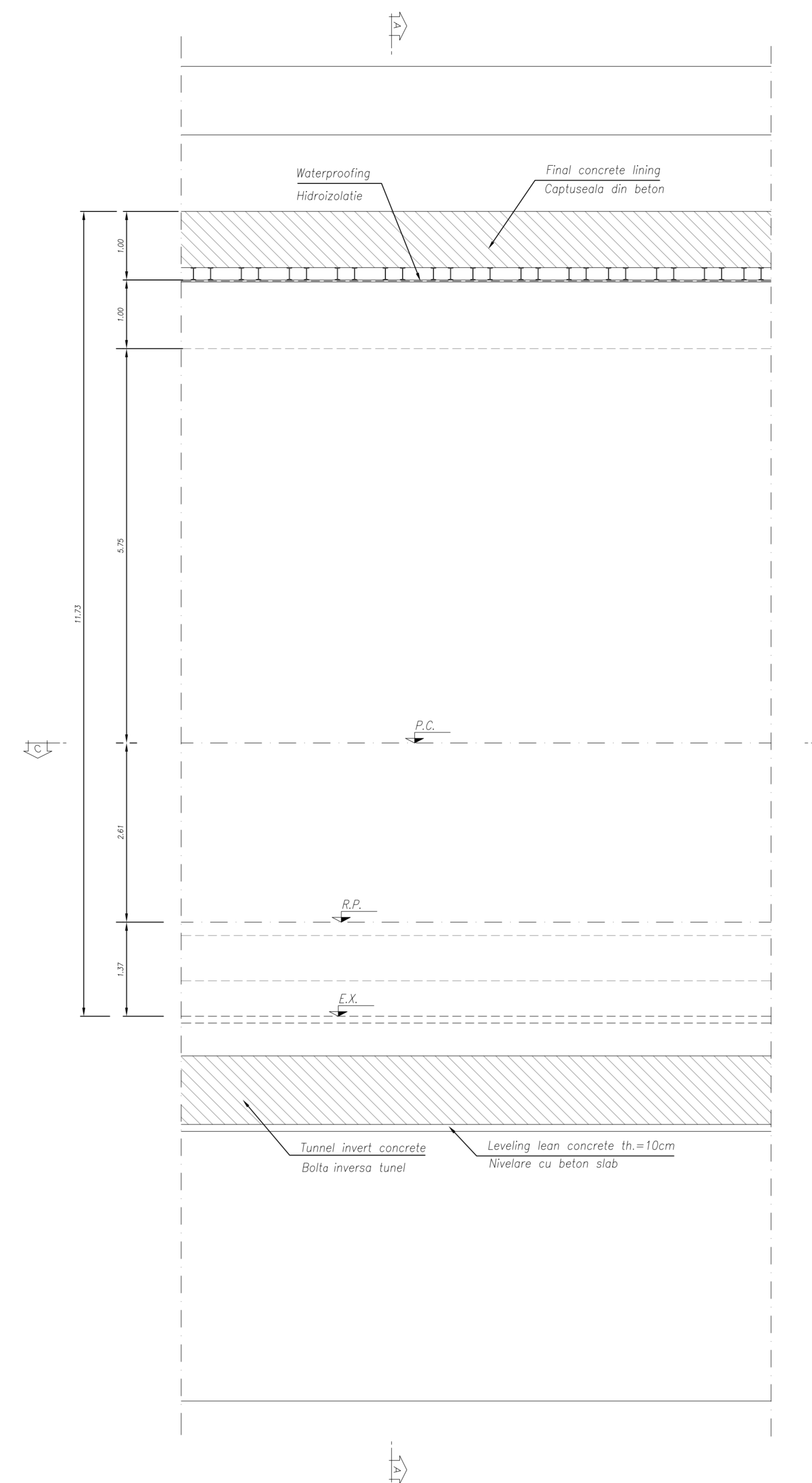


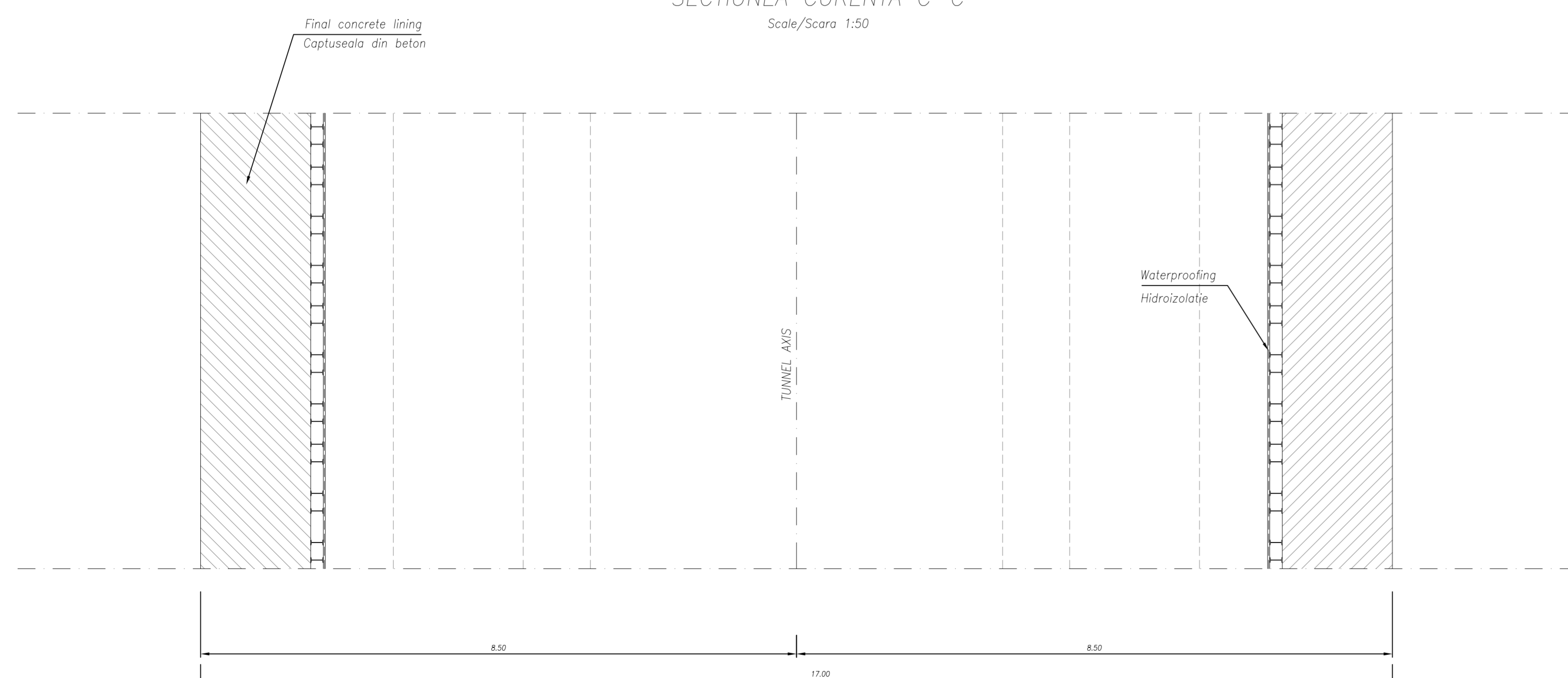
SECTION A-A
SECTIUNEA CURENTA A-A
Scale/Scara 1:50



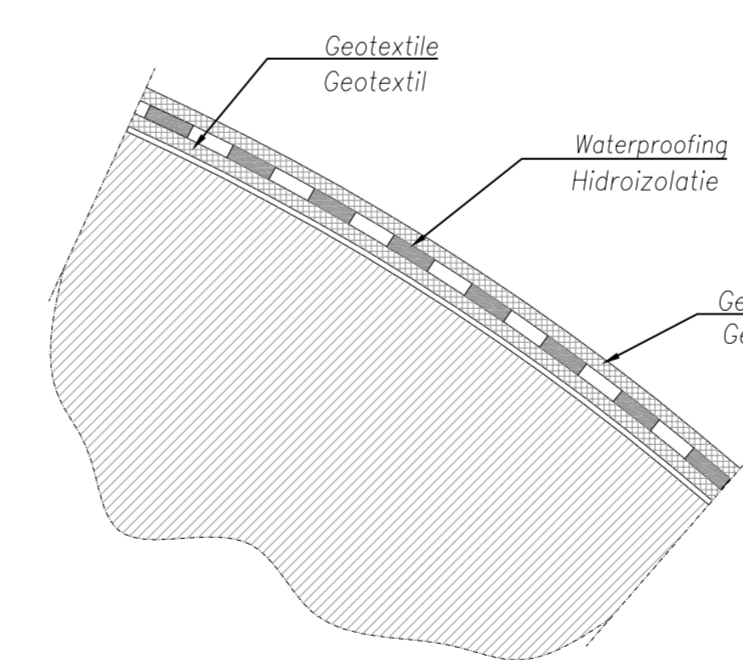
SECTION B-B
SECTIUNEA B-B
Scale/Scara 1:50



SECTION C-C
SECTIUNEA CURENTA C-C
Scale/Scara 1:50



WATERPROOFING TUNNEL CROWN DETAIL
DETALIUL COROANA TUNELULUI HIDROIZOLATIEI
Scale/Scara 1:20



NOTE:
- The integrity of the concrete structures of the artificial and natural tunnels have to be maintained in case of fire (4.2.2.3 Fire protection requirements for structure ISI Technical Specification for Interoperability).

NOTA:
- Integritatea structurii de beton a tunelului artificial si natural, trebuie sa ramana intregu in caz de incendiu (4.2.2.3 cerintele de protectie la foc pentru structuri SI Specificatii tehnice pentru interoperabilitate).

NOTE:
- Handrail shall be installed approximately at 1 m above walkway providing a route to a safe area (4.2.2.7. Escape walkways ISI).

NOTA:
- Bara de mana trebuie sa fie instalata aproximativ la 1 m deasupra caili de evacuare oferind un traseu intr-o zona sigura (4.2.2.7 evacuare trulare SI).

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 ISI).

NOTA:
- Semnele de evacuare trebuie sa fie instalate pe peretii laterali, la o distanta maxima intre semne de evacuare de 50m (4.2.2.9 Escape Signage SI).

MATERIAL TABLE

TUNNEL INVERT CONCRETE:

- Type C2
- $f_{ck} \geq 32$ MPa
- Water/cement ratio < 0.50
- Minimum structural Class S3/S4
- Exposure class related to environmental conditions: XA2
- Cement type CEM II/A
- Class of chloride content: C 0.20
- ϕ max aggregate = 32 mm

TUNNEL CROWN CONCRETE:

- Type C1
- $f_{ck} \geq 30$ MPa
- Water/cement ratio < 0.50
- Minimum structural Class S4/S5
- Exposure class related to environmental conditions: XA2
- Cement type CEM II/A
- Class of chloride content: C 0.20
- ϕ max aggregate = 32 mm

REINFORCING STEEL:

- B450C controlled by establishment
- Weldable

LEAN CONCRETE:

- Type I
- $f_{ck} \geq 12$ MPa
- Cement type CEM I/V

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

D					
C					
B					
A					
Index	Date	Modification/Revision	Projectant Designer	Approved Consultant	Approved CFR
			PROIECT FINANAT DE UNIUNEA EUROPEANA EUROPEAN UNION FINANCED PROJECT		
			C.N.C.F. "C.F.R." - S.A.		
CLIENT / CLIENT					
CONSULTANT / CONSULTANT					
Approved	Project manager	R. Liuzza			
Approved	Coordinator Section 1	C. Gambelli			
Verified	Tunnel Expert	C. Gambelli			
Checked	Tunnel Expert	C. Gambelli			
Elaborated	Designer	C. Gambelli			
SUBCONSULTANT / SUBCONSULTANT					
Approved	Responsabil Subconsultant				
Elaborated	Designer				
Rehabilitarea liniei de cale ferata Brasov - Simeria, parte componenta a coridorului IV Pan European, pentru circulatia trenurilor cu viteza maxima de 160 km/h. Section 1 Brasov - Sighisoara. Project/Project 2004/RO16/PPA/002					
Rehabilitation of the railway line Brasov - Simeria, component Part of the IV Pan-European Corridor, for the trains circulation with maximum speed of 160 km/h. Section 1 Brasov - Sighisoara. Faza / Phase: P,Th / T.D.					
Denumire desen / Drawing Title : ARCHITA 2 TUNNEL ENTRANCE ARCHITA SIDE					
Starting framework: formwork Inceputul cadrului: cofraje de constructie					
Codificare / Codification System		Scara / Scale	LOT	Nr. / No	
E A 5 1		variat / various		-	
0 1		1 4	B B	G A 0 9 0 0 0 0 3 0	