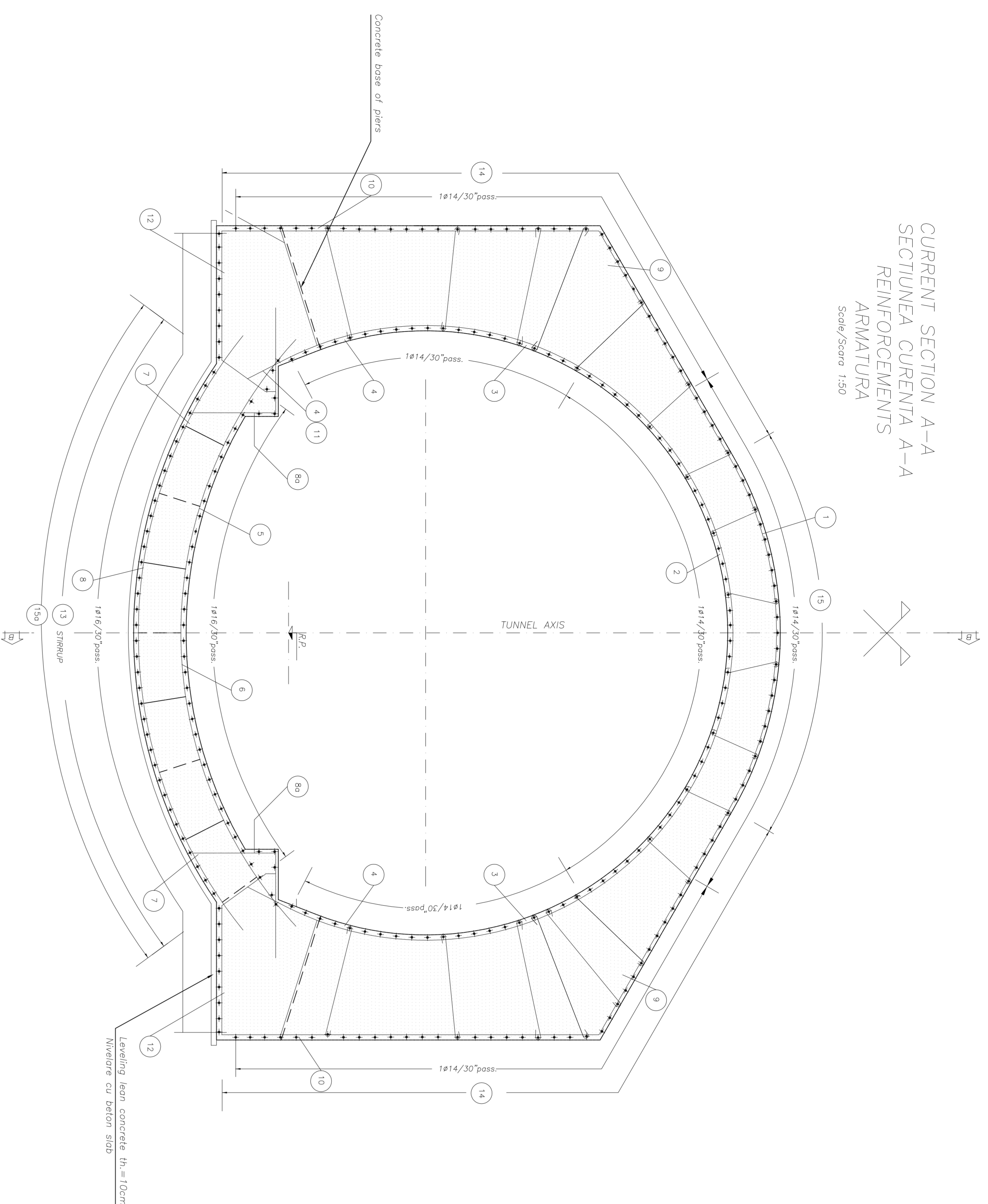
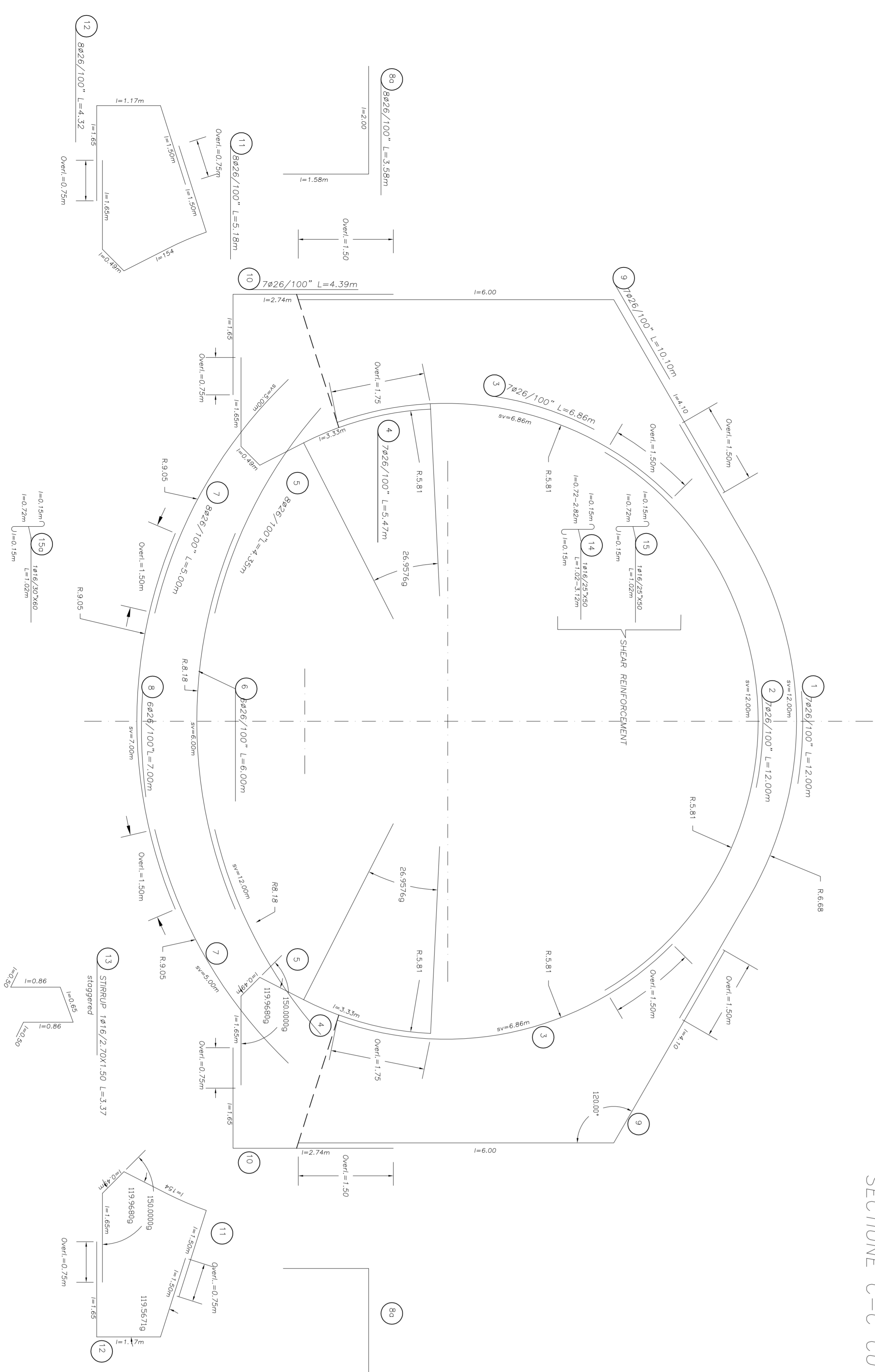


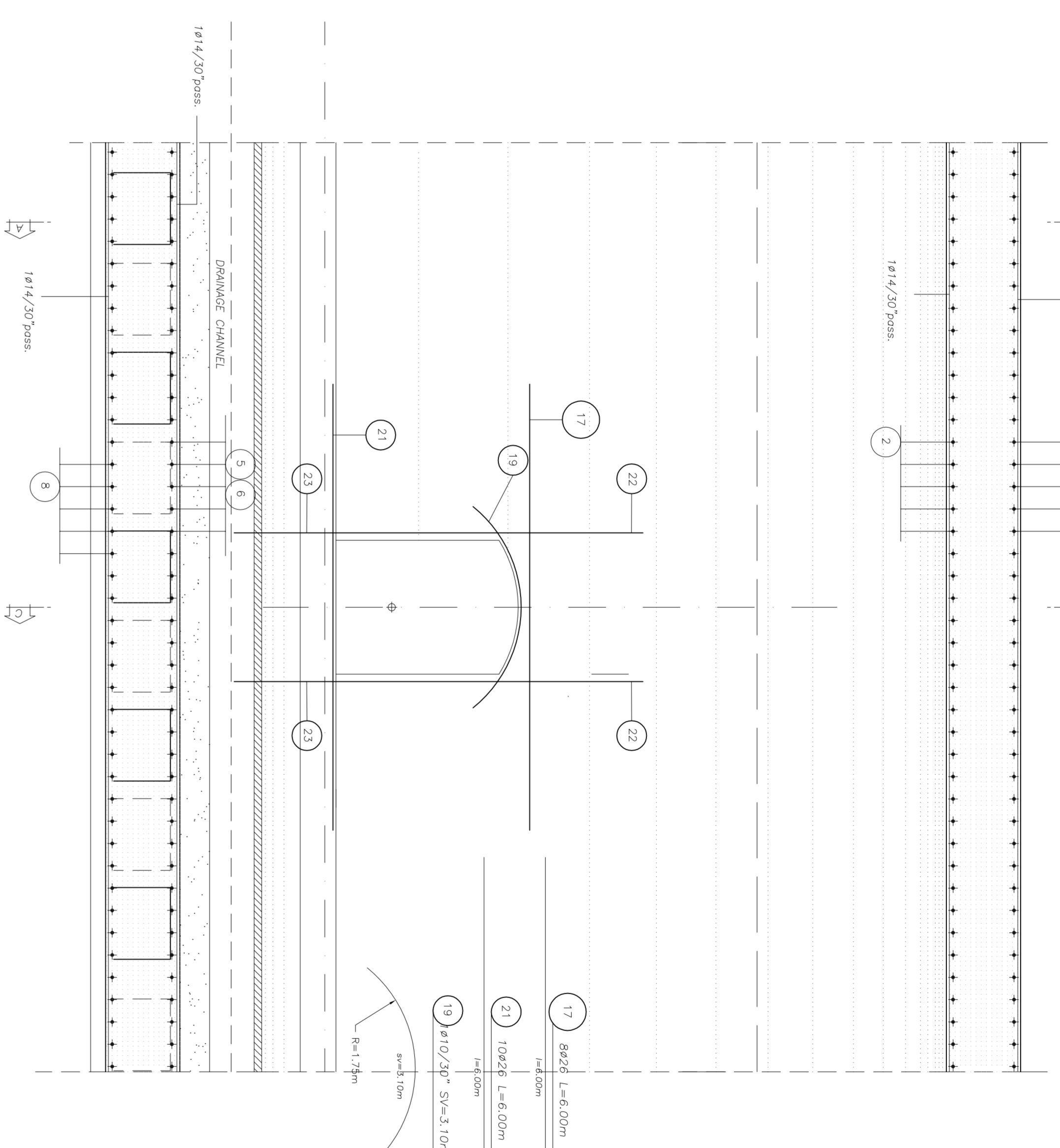
CURRENT SECTION A-A  
SECTIUNEA CURENTA A-A  
ARMATURA  
Scara/Scara 1:50



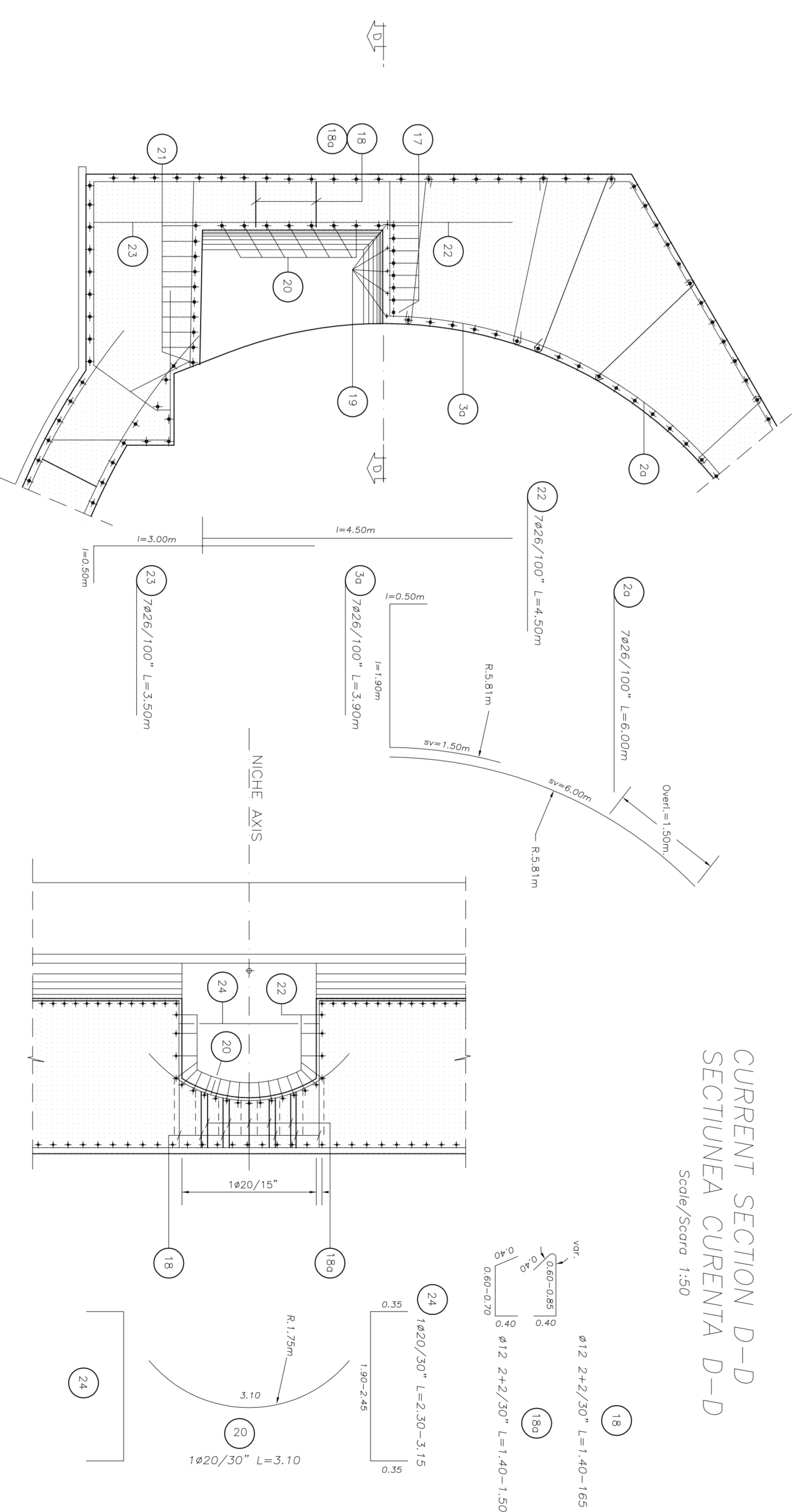
SECTION C-C WITH SHELTER STAFF NICHE  
SECTIUNEA C-C CU NISE PENTRU ADAPOSTUL PERSONALULUI  
Scara/Scara 1:50



CURRENT SECTION B-B  
SECTIUNEA CURENTA B-B  
Scara/Scara 1:50



CURRENT SECTION D-D  
SECTIUNEA CURENTA D-D  
Scara/Scara 1:50



**STEELS TABLE**

REFERENCE STEEL:  
- B40C (standard)  
Bending diameter  $R_{b1}$ :  
# Bar < 400 ->  $R_{b1} = 6d$   
# Bar # 400 ->  $R_{b1} = 8d$

Legend measures:

**MATERIAL TABLE**

**TUNNEL INNER CONCRETE:**

- Type C20
- $f_{ck} = 20$  MPa
- Min. compressive strength  $f_{cm} = 24.5$  MPa
- Min. compressive strength class S17.5
- Exposure class related to environmental conditions XE2
- Class of concrete cover C 20
- # max aggregate = 20 mm

**TUNNEL EXTERNAL CONCRETE:**

- Type C15
- $f_{ck} = 15$  MPa
- Min. compressive strength  $f_{cm} = 19.0$  MPa
- Min. compressive strength class S12.5
- Exposure class related to environmental conditions XE2
- Class of concrete cover C 20
- # max aggregate = 20 mm

**REFERENCE STEEL:**

- Material controlled by establishment
- LENA CONCRETE
- Type I
- $f_{yk} = 475$  MPa
- Cement type CEM I/V

**LEGEND**

RP = REFERENCE PLANE  
EX = EXCAVATIONS PLANE  
PC = CENTER PLANE

Index	Date	Modifications	Project	Author/Consultant	Approved/Client
A	2024.03.15	Initial design	PROIECT FINANȚATE DE UNIUNEA EUROPEANĂ EUROPEAN UNION FINANCED PROJECT	ROKMANIA GOVERNMENT	

**CLIENT / CLIENT**  
CN.C.F. "C.F.R." - S.A.

**CONSULTANT / CONSULTANT**  
TECNIC  
OBERMEYER  
JOHN BERBERIAN

**SUBCONSULTANT / SUBCONSULTANT**  
R. LUTZA  
C. GEMELLI

**ARCHITECT / ARCHITECT**  
ARHITECTURA 1 TUNNEL

**Project/Project**  
2044/RO/16/974/002  
Faza 1/Phase 1  
P.N. 110.

**Scale / Scara**  
vertical / vertical  
1:50

**Code / Cod**  
E | A | 5 | 1 | 0 | 1 | C | 1 | 4 | B | B | G | A | 0 | 6 | 0 | 0 | 0 | 0 | 7 | 0