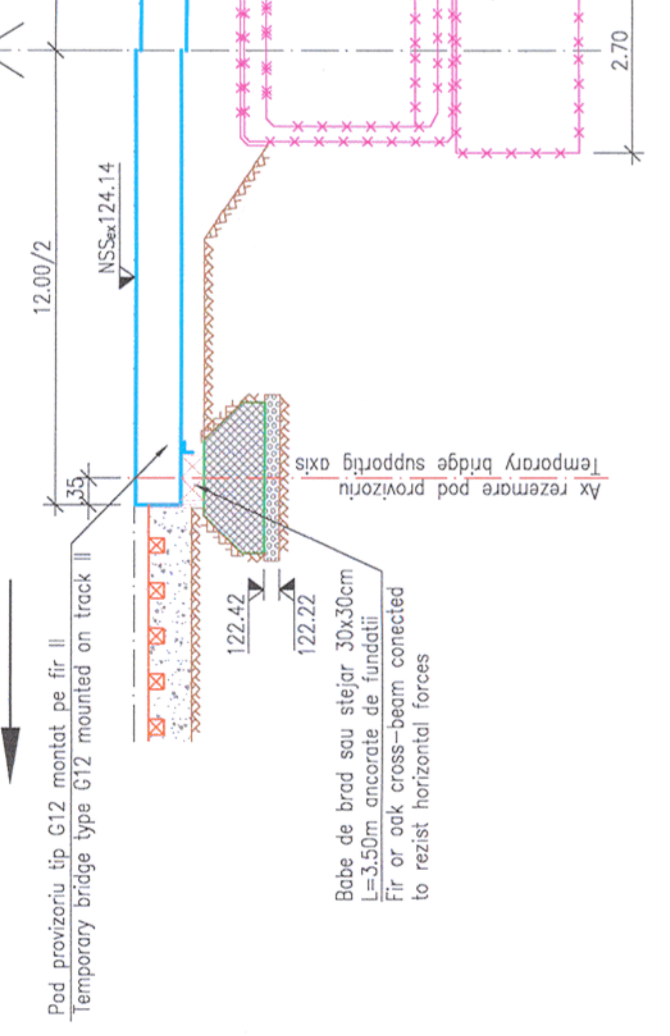
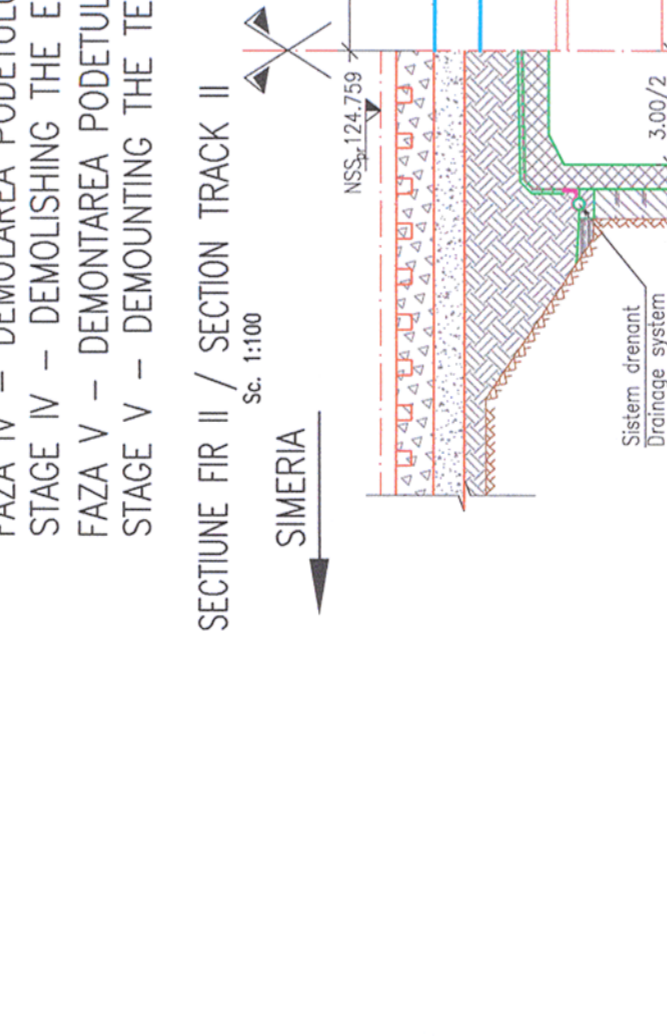


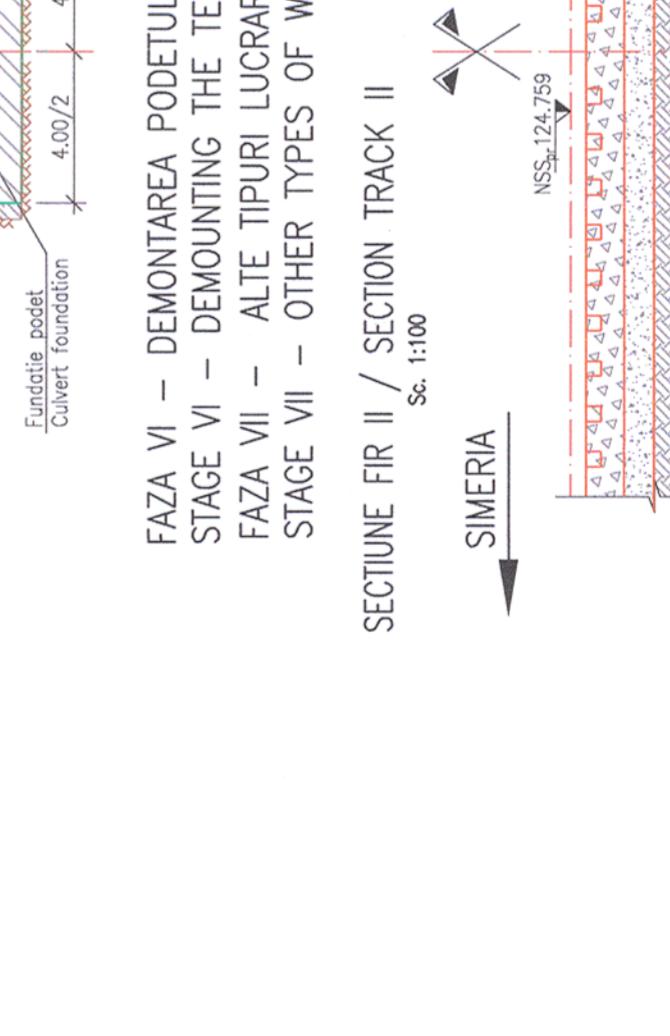
FAZA I – LUCRARI PREGATITOARE
STAGE I – PRELIMINARY WORKS
SECTIONE FIR II / SECTION TRACK II
Sc. 1:100



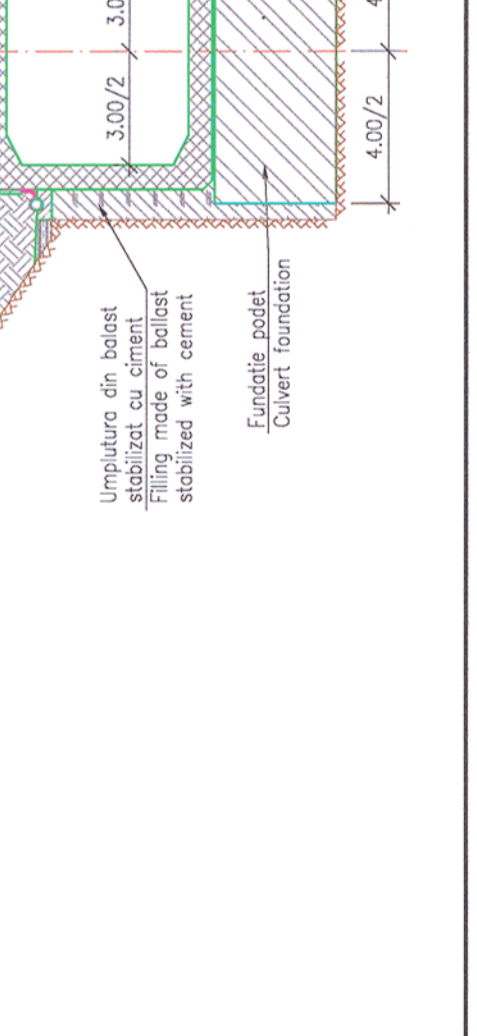
FAZA II si III – MONTAREA PODURILOR PROVIZORII
STAGE II and III – MOUNTING THE TEMPORARY BRIDGES
SECTIONE FIR I / SECTION TRACK I
Sc. 1:100



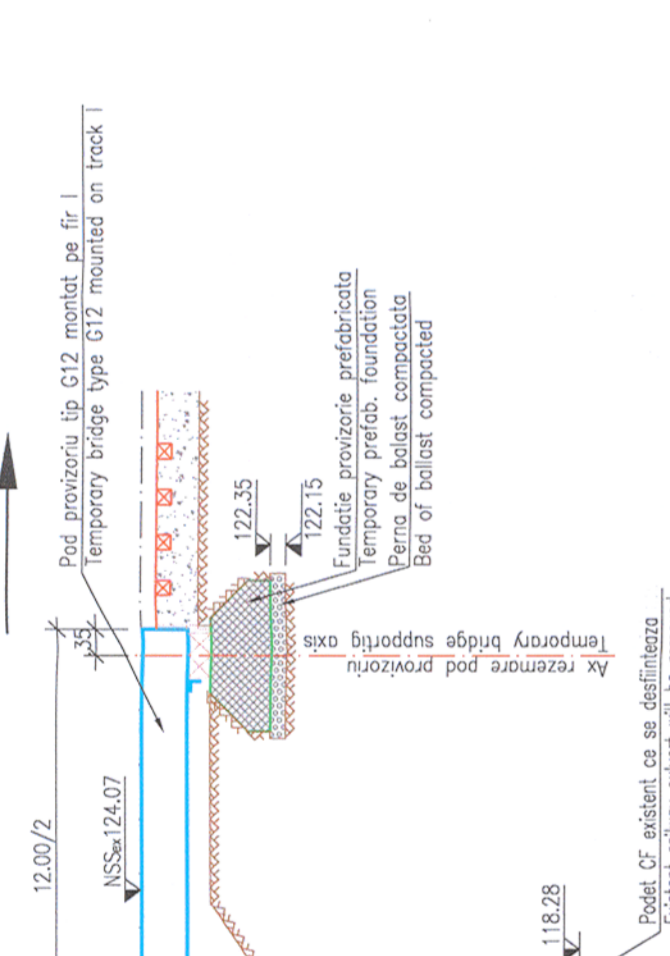
FAZA IV – DEMOLAREA PODETELUI EXISTENT SI EXECUTIA FUNDATIEI NOU LA ADAPOSTUL PODURILOR PROVIZORII
STAGE IV – DEMOLISHING THE EXISTING CULVERT AND EXECUTION OF THE FOUNDATION OF THE NEW CULVERT UNDER THE TEMPORARY BRIDGES
SECTIONE LONGITUDINALA / LONGITUDINAL SECTION
Sc. 1:100



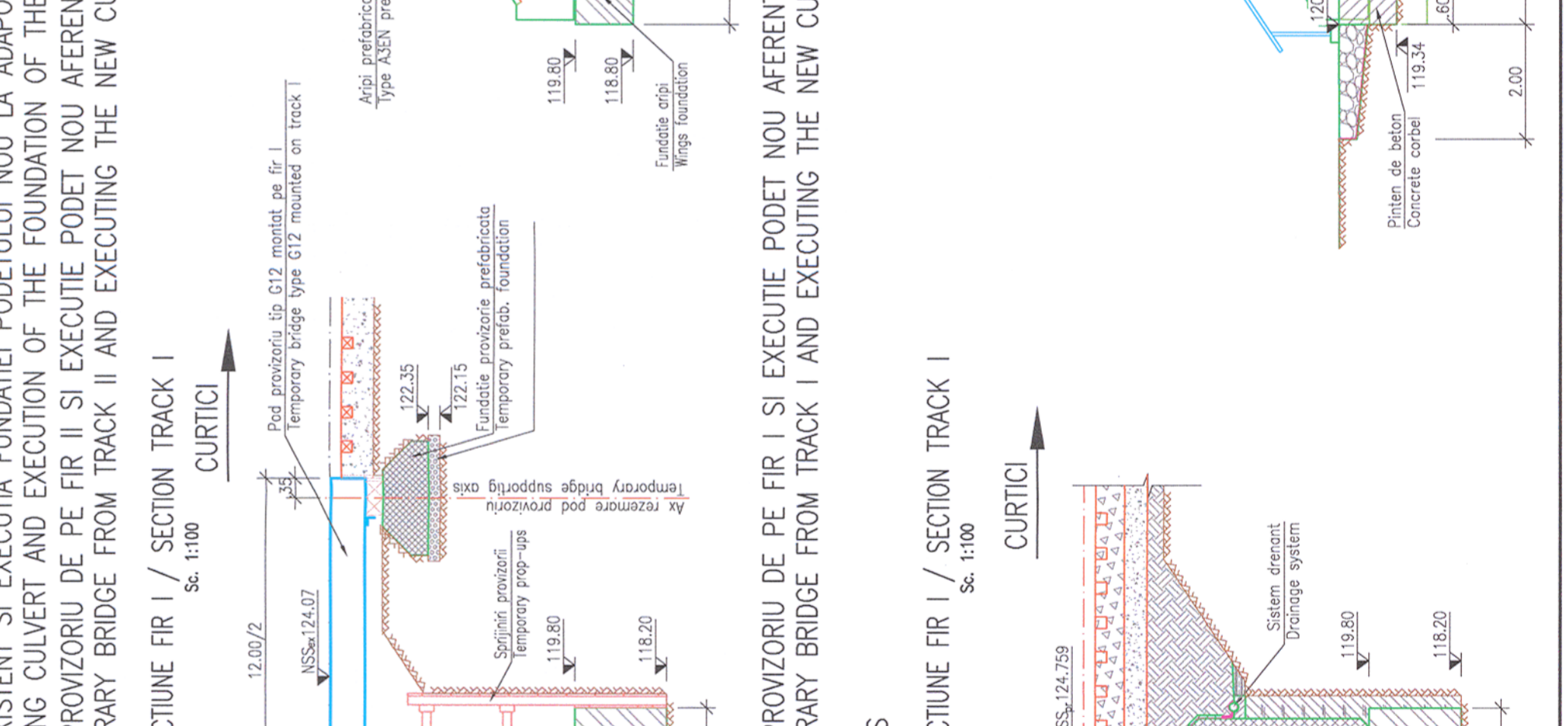
FAZA V – DEMONTAREA PODETELUI PROVIZORIU DE PE FIR II SI EXECUTIE PODET NOU AFERENT FIRULUI II
STAGE V – DEMOUNTING THE TEMPORARY BRIDGE FROM TRACK II AND EXECUTING THE NEW CULVERT AFFERENT TO TRACK II
SECTIONE FIR II / SECTION TRACK II
Sc. 1:100



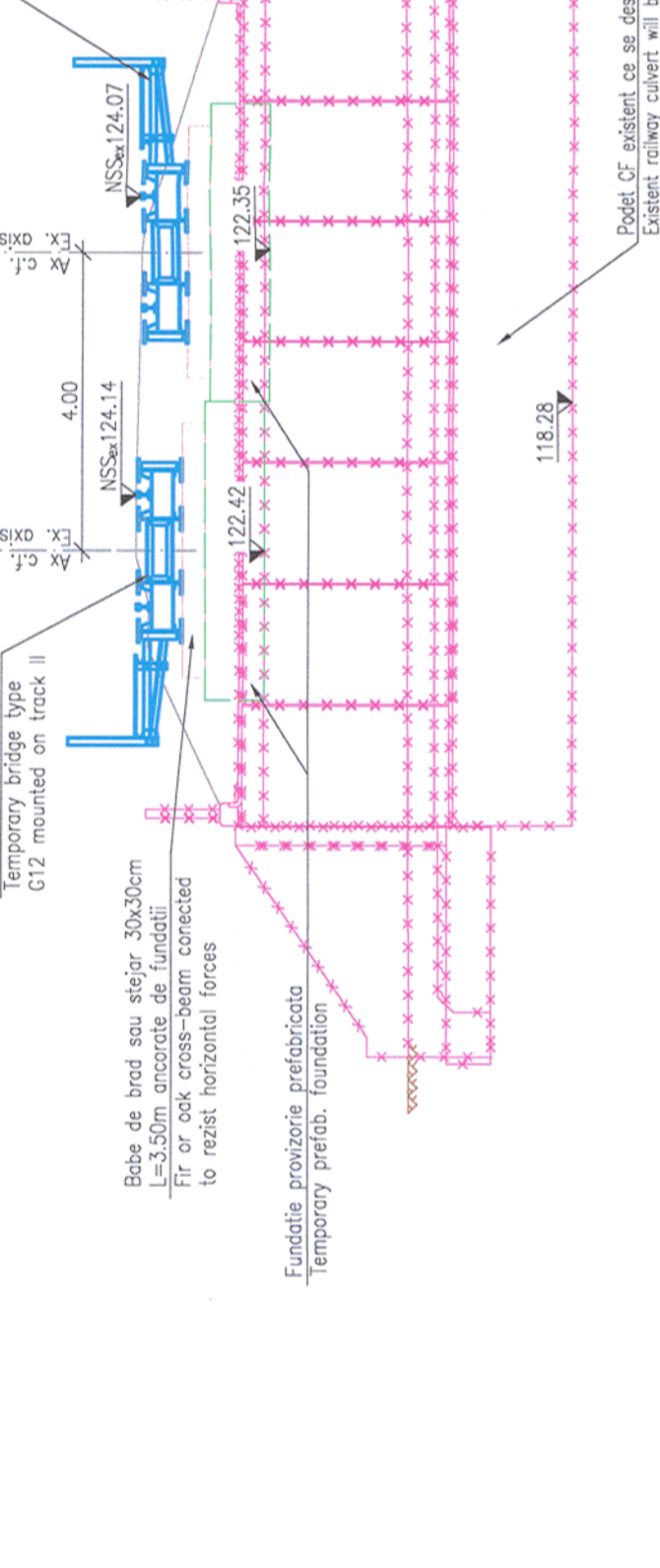
FAZA VI – DEMONTAREA PODETELUI PROVIZORIU DE PE FIR I SI EXECUTIE PODET NOU AFERENT FIRULUI I
STAGE VI – DEMOUNTING THE TEMPORARY BRIDGE FROM TRACK I AND EXECUTING THE NEW CULVERT AFFERENT TO TRACK I
SECTIONE FIR I / SECTION TRACK I
Sc. 1:100



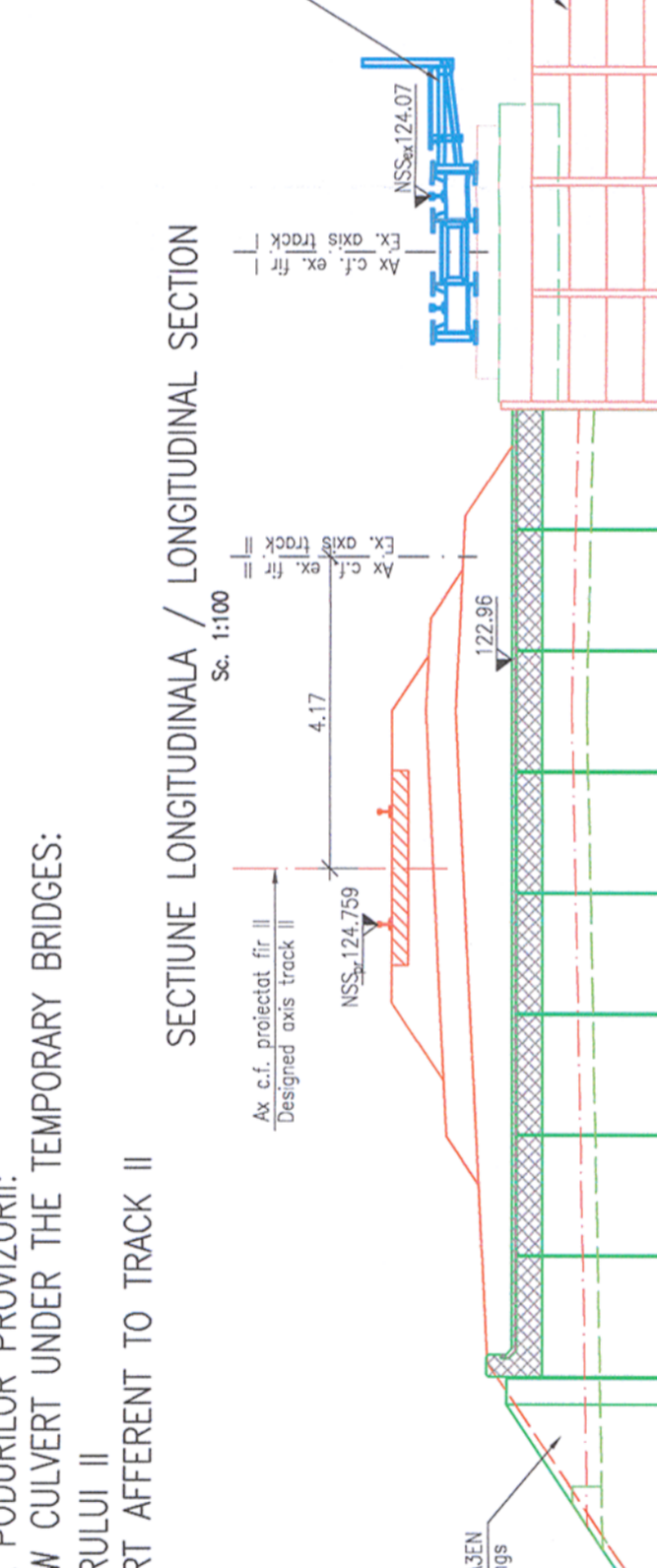
FAZA VII – ALTE TIPURI LUCRARI
STAGE VII – OTHER TYPES OF WORKS
SECTIONE LONGITUDINALA / LONGITUDINAL SECTION
Sc. 1:100



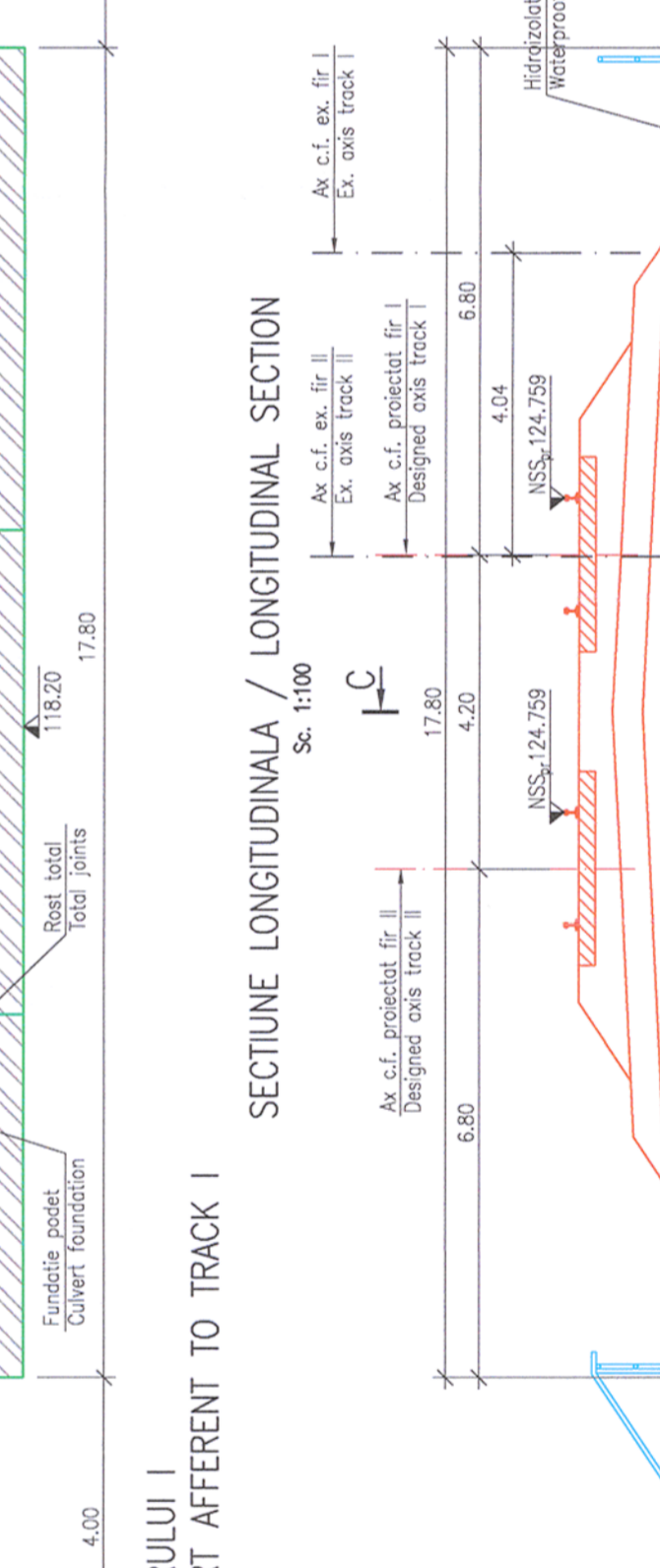
FAZA I – LUCRARI PREGATITOARE
STAGE I – PRELIMINARY WORKS
SECTIONE LONGITUDINALA / LONGITUDINAL SECTION
Sc. 1:100



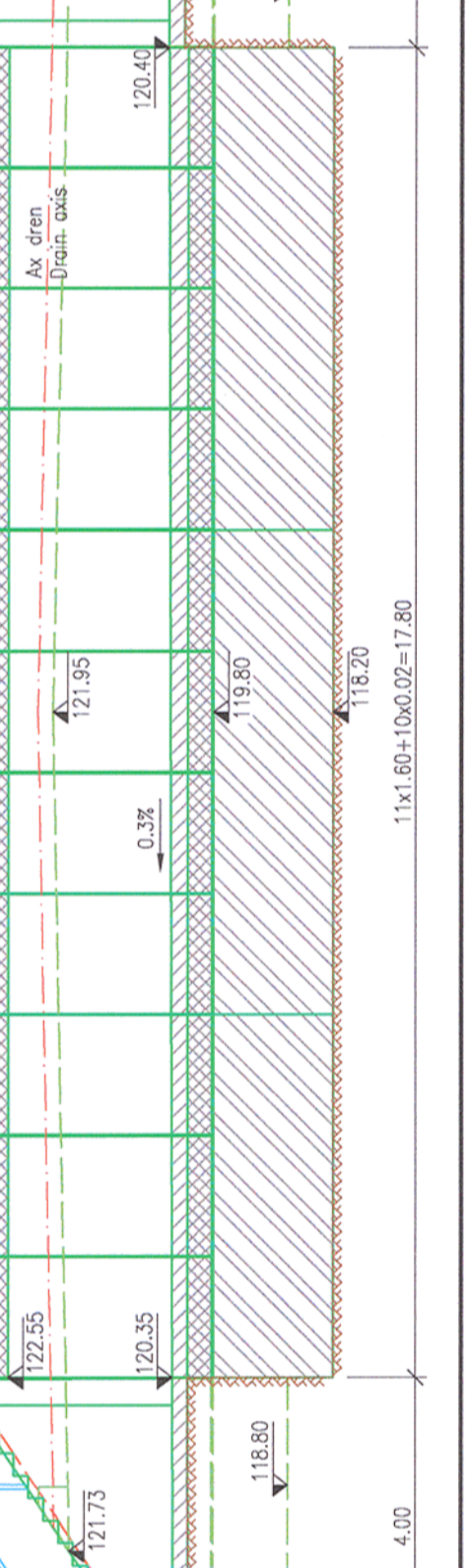
FAZA II – MONTAREA PODURILOR PROVIZORII DE PE FIR I
STAGE II – MOUNTING THE TEMPORARY BRIDGE TRACK I
Sc. 1:100



FAZA III – MONTAREA PODURILOR PROVIZORII DE PE FIR II
STAGE III – MOUNTING THE TEMPORARY BRIDGE TRACK II
Sc. 1:100



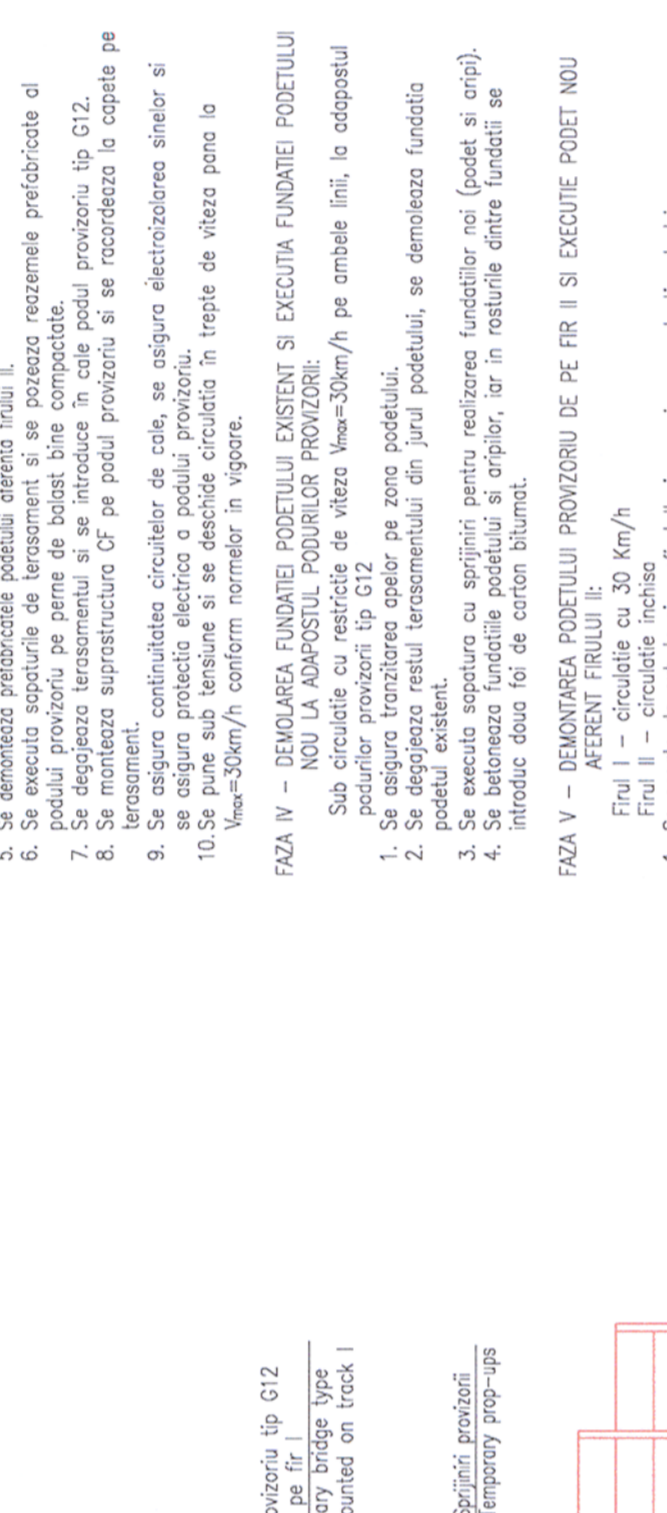
FAZA IV – DEMOLAREA PODETELUI EXISTENT SI EXECUTIA FUNDATIEI NOU LA ADAPOSTUL PODURILOR PROVIZORII
STAGE IV – DEMOLISHING THE EXISTING CULVERT AND EXECUTION OF THE FOUNDATION OF THE NEW CULVERT UNDER THE TEMPORARY BRIDGES
SECTIONE LONGITUDINALA / LONGITUDINAL SECTION
Sc. 1:100



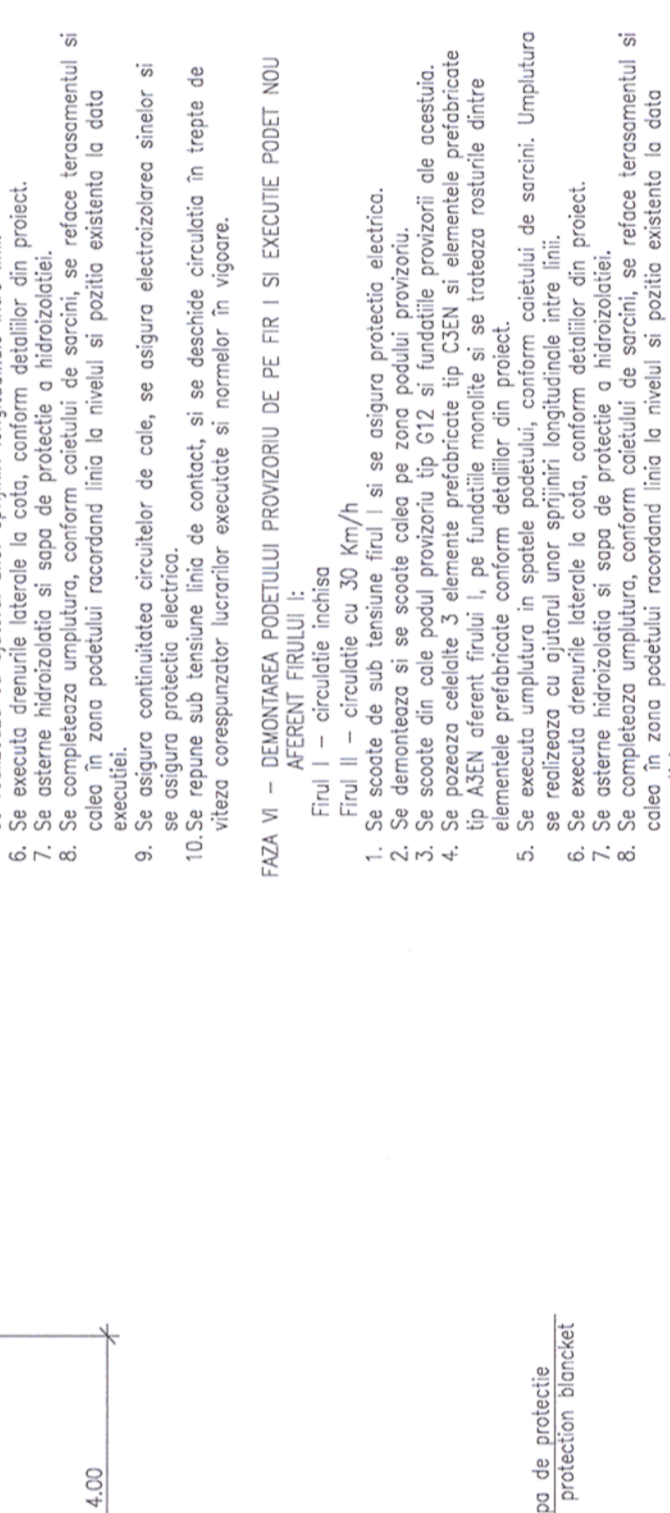
FAZA I – LUCRARI PREGATITOARE
STAGE I – PRELIMINARY WORKS
SECTIONE LONGITUDINALA / LONGITUDINAL SECTION
Sc. 1:100



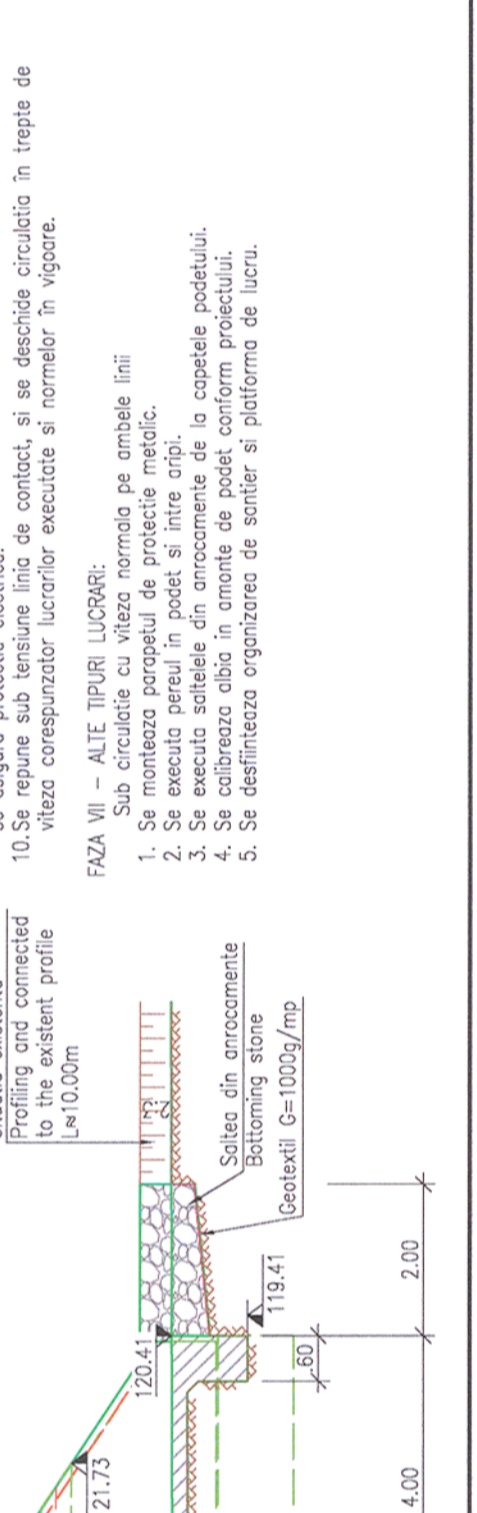
FAZA II – MONTAREA PODURILOR PROVIZORII DE PE FIR I
STAGE II – MOUNTING THE TEMPORARY BRIDGE TRACK I
Sc. 1:100



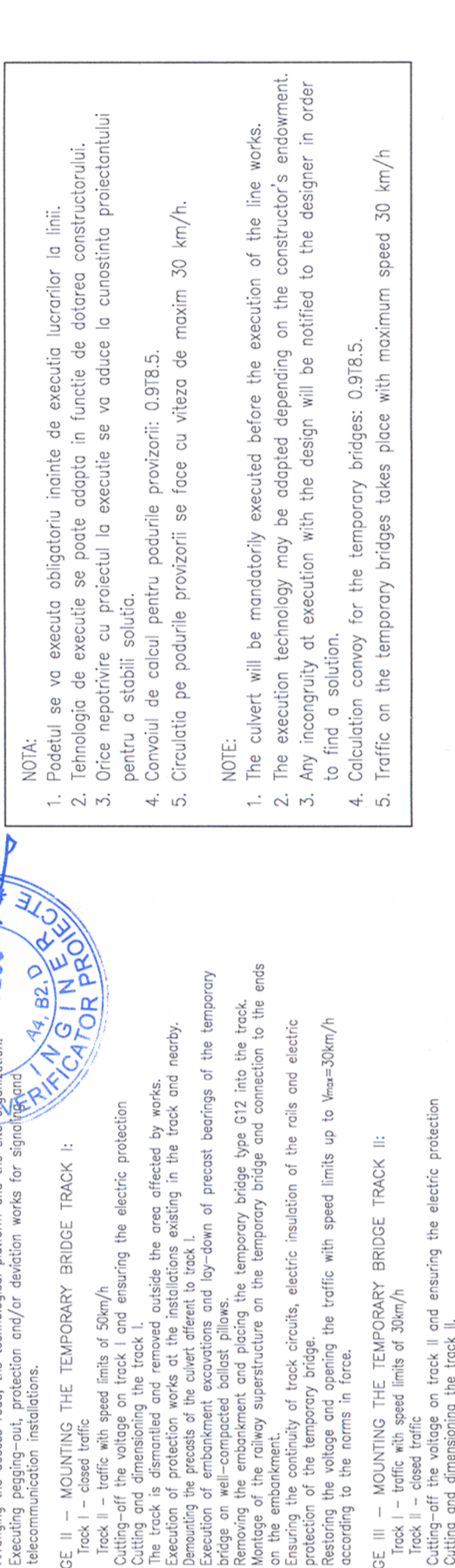
FAZA III – MONTAREA PODURILOR PROVIZORII DE PE FIR II
STAGE III – MOUNTING THE TEMPORARY BRIDGE TRACK II
Sc. 1:100



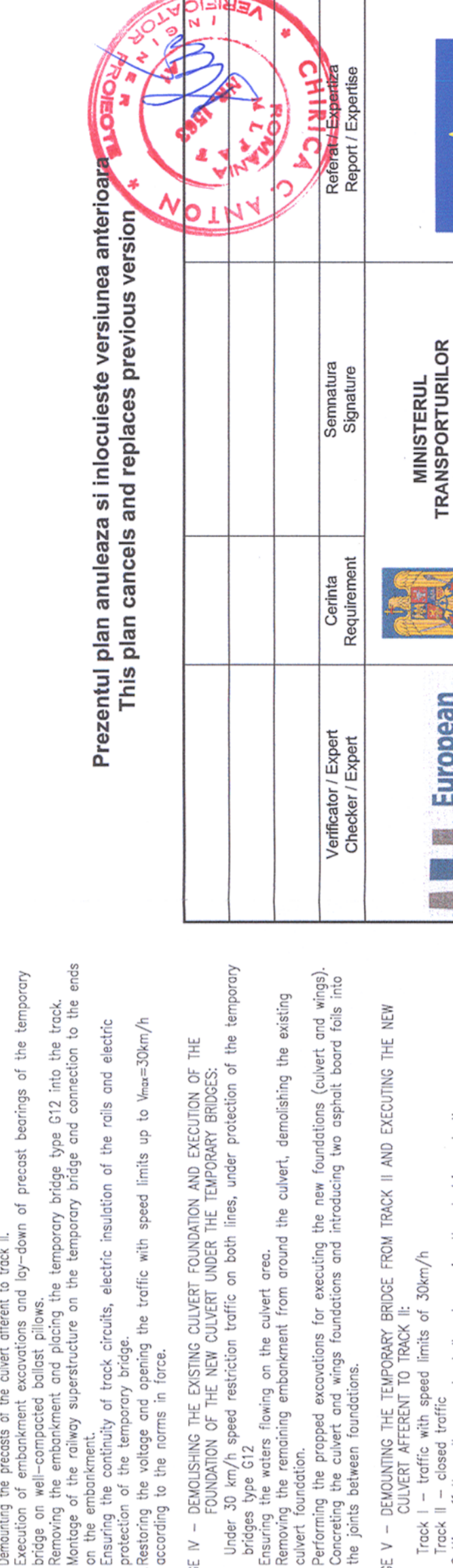
FAZA IV – DEMOLAREA PODETELUI EXISTENT SI EXECUTIA FUNDATIEI NOU LA ADAPOSTUL PODURILOR PROVIZORII
STAGE IV – DEMOLISHING THE EXISTING CULVERT AND EXECUTION OF THE FOUNDATION OF THE NEW CULVERT UNDER THE TEMPORARY BRIDGES
SECTIONE LONGITUDINALA / LONGITUDINAL SECTION
Sc. 1:100



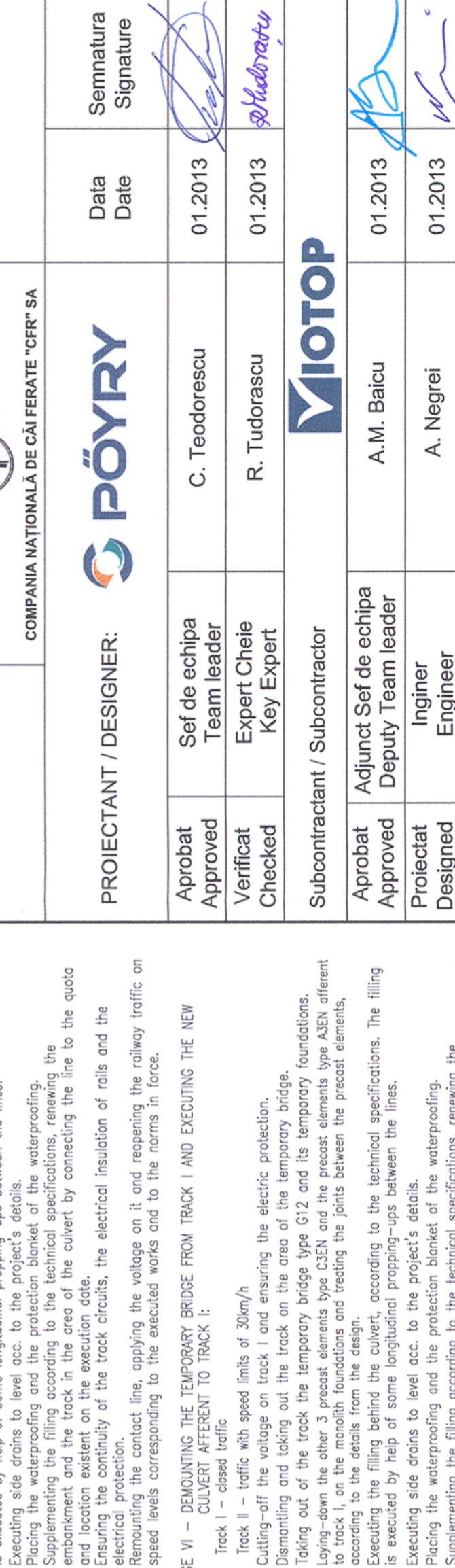
FAZA I – LUCRARI PREGATITOARE
STAGE I – PRELIMINARY WORKS
SECTIONE LONGITUDINALA / LONGITUDINAL SECTION
Sc. 1:100



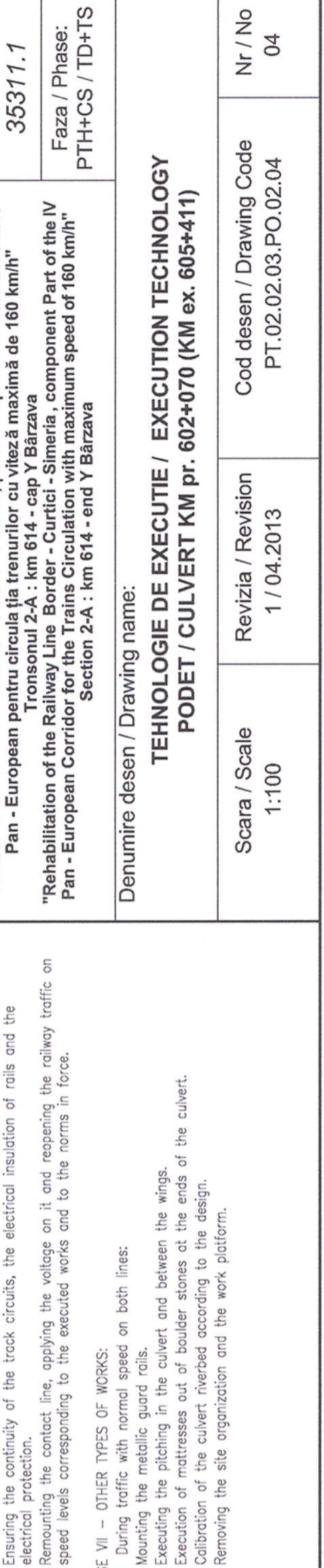
FAZA II – MONTAREA PODURILOR PROVIZORII DE PE FIR I
STAGE II – MOUNTING THE TEMPORARY BRIDGE TRACK I
Sc. 1:100



FAZA III – MONTAREA PODURILOR PROVIZORII DE PE FIR II
STAGE III – MOUNTING THE TEMPORARY BRIDGE TRACK II
Sc. 1:100



FAZA IV – DEMOLAREA PODETELUI EXISTENT SI EXECUTIA FUNDATIEI NOU LA ADAPOSTUL PODURILOR PROVIZORII
STAGE IV – DEMOLISHING THE EXISTING CULVERT AND EXECUTION OF THE FOUNDATION OF THE NEW CULVERT UNDER THE TEMPORARY BRIDGES
SECTIONE LONGITUDINALA / LONGITUDINAL SECTION
Sc. 1:100



NOTA:
1. Podul se va executa obligatoriu inainte de executia lucrarilor la linii.
2. Tehnologia de executie se poate adapta in functie de dotarea constructivelor.
3. Orice nepariri cu proiectul la executie se va aduce la cunostinta proiectantului pentru a stabili solutia.
4. Calculul de calcul pentru podurile provizorii: 0,918,5.
5. Circulatia pe podurile provizorii se face cu viteza de maxim 30 km/h.

NOTE:
1. The culvert will be mandatorily executed before the execution of the line works.
2. The execution technology may be adapted depending on the constructor's endowment.
3. Any incongruity at execution with the design will be notified to the designer in order to find a solution.
4. Calculation convey for the temporary bridges: 0,918,5.
5. Traffic on the temporary bridges takes place with maximum speed 30 km/h

STAGE I – PRELIMINARY WORKS:
During normal speed traffic on both lines
1. Arranging the access road, the technological platform and the site organization.
2. Executing pegging-out, protection and/or deviation works for signaling and telecommunication installations.

STAGE II – MOUNTING THE TEMPORARY BRIDGE TRACK I:
Track II – closed traffic
Track II – traffic with speed limits of 50km/h
1. Cutting-off the voltage on track I and ensuring the electric protection
2. Demolishing the existing culvert and ensuring the electric protection
3. The track is dismantled and removed outside the area affected by works.
4. Execution of protection works at the installations existing in the track and nearby.
5. Demolishing the precast of the culvert afferent to track I.
6. Demolishing the precast of the culvert afferent to track II.
7. Demolishing the embankment and placing the temporary bridge type G12 into the track.
8. Montage of the railway superstructure on the temporary bridge and connection to the ends on the embankment.
9. Reconnecting the track circuits, electric insulation of the rails and electric protection of the temporary bridge.
10. Restoring the voltage and opening the traffic with speed limits up to $V_{max}=30km/h$ according to the norms in force.

STAGE III – MOUNTING THE TEMPORARY BRIDGE TRACK II:
Track II – closed traffic
Track II – traffic with speed limits of 30km/h
1. Cutting-off the voltage on track II and ensuring the electric protection
2. Demolishing the existing culvert and ensuring the electric protection
3. The track is dismantled and removed outside the area affected by works.
4. Execution of protection works at the installations existing in the track and nearby.
5. Demolishing the precast of the culvert afferent to track II.
6. Demolishing the embankment and placing the temporary bridge type G12 into the track.
7. Demolishing the embankment and placing the temporary bridge type G12 into the track.
8. Montage of the railway superstructure on the temporary bridge and connection to the ends on the embankment.
9. Reconnecting the track circuits, electric insulation of the rails and electric protection of the temporary bridge.
10. Restoring the voltage and opening the traffic with speed limits up to $V_{max}=30km/h$ according to the norms in force.

STAGE IV – DEMOUNTING THE TEMPORARY BRIDGE FROM TRACK I AND EXECUTING THE NEW CULVERT AFFERENT TO TRACK I:
Under 30 km/h speed restriction traffic on both lines, under protection of the temporary bridges type G12
1. Ensuring the water flowing on the culvert area.
2. Removing the remaining embankment from around the culvert, demolishing the existing embankment.
3. Performing the proposed excavations for executing the new foundations (culvert and wings).
4. Concentrating the culvert and wings foundations and introducing two asphalt board falls into the joints between foundations.

STAGE V – DEMOUNTING THE TEMPORARY BRIDGE FROM TRACK II AND EXECUTING THE NEW CULVERT AFFERENT TO TRACK II:
Track I – closed traffic
Track I – traffic with speed limits of 30km/h
1. Cutting-off the voltage on track II and ensuring the electric protection
2. Demolishing the existing culvert and ensuring the electric protection
3. The track is dismantled and removed outside the area affected by works.
4. Taking out of the track the temporary bridge type G12 and its temporary foundations.
5. Laying-down the first 8 precast elements type C2EN and the precast elements type A2EN afferent to track II, on the mobile foundations and treating the joints between the precast elements with a special mortar.
6. Executing the filling behind the culvert, according to the technical specifications. The filling is executed by help of some longitudinal proping-ups between the lines.
7. Executing side drains to level acc. to the project's details.
8. Placing the waterproofing and the protection blanket of the waterproofing.
9. Executing the embankment and the protection blanket of the waterproofing.
10. Restoring the continuity of the track circuits, the electrical insulation of the rails and the location existing on the execution date.
11. Ensuring the continuity of the track circuits, the electrical insulation of the rails and the location existing on the execution date.
12. Reconnecting the track circuits, applying the voltage on it and reopening the railway traffic on speed levels corresponding to the executed works and to the norms in force.

STAGE VI – DEMOUNTING THE TEMPORARY BRIDGE FROM TRACK I AND EXECUTING THE NEW CULVERT AFFERENT TO TRACK I:
Track I – closed traffic
Track I – traffic with speed limits of 30km/h
1. Cutting-off the voltage on track I and ensuring the electric protection.
2. Demolishing and taking out the track on the area of the temporary bridge.
3. Taking out of the track the temporary bridge type G12 and its temporary foundations.
4. Laying-down the other 3 precast elements type C2EN and the precast elements type A2EN afferent to track I, on the mobile foundations and treating the joints between the precast elements, according to the details from the design and treating the joints between the precast elements, according to the details from the design and treating the joints between the precast elements.
5. Executing the filling behind the culvert, according to the technical specifications. The filling is executed by help of some longitudinal proping-ups between the lines.
6. Executing side drains to level acc. to the project's details.
7. Placing the waterproofing and the protection blanket of the waterproofing.
8. Supplementing the filling according to the technical specifications, renewing the embankment and the protection blanket of the waterproofing.
9. Ensuring the continuity of the track circuits, the electrical insulation of the rails and the location existing on the execution date.
10. Reconnecting the track circuits, applying the voltage on it and reopening the railway traffic on speed levels corresponding to the executed works and to the norms in force.

STAGE VII – OTHER TYPES OF WORKS:
During traffic with normal speed on both lines:
1. Mounting the metallic road rolls.
2. Executing the plating in the culvert and between the wings.
3. Execution of mattresses out of boulder stones at the ends of the culvert.
4. Calibration of the culvert (inverted according to the design).
5. Removing the site organization and the work platform.

PROIECTANT / DESIGNER: PÖYRY

APROBAT / APPROVED: C. Teodorescu

VERIFICAT / CHECKED: R. Tudorascu

SUBCONTRACTANT / SUBCONTRACTOR: MIOTOP

APROBAT / APPROVED: A.M. Batcu

PROIECTAT / DESIGNED: A. Negrei

REABILITAREA LINIILOR FRETIER 5 - CURTICI, SIMERIA, PARTIE COMPONENTA A CORIDORULUI IV PAN - EUROPEAN NETWORK CIRCULATIA TRENURILOR CU VITEZA MAXIMA DE 160 KM/H

TRANSONAL 2A : km 614 - cap Y Bărzava

REABILITAREA LINIILOR FRETIER 5 - CURTICI - SIMERIA, COMPONENTA PARTII DE LA IV PAN - EUROPEAN CORRIDOR FOR THE TRAINS CIRCULATION WITH MAXIMUM SPEED OF 160 KM/H SECTION 5-A : km 614 - end Y Bărzava

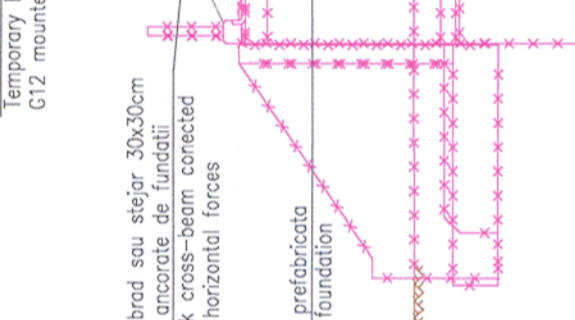
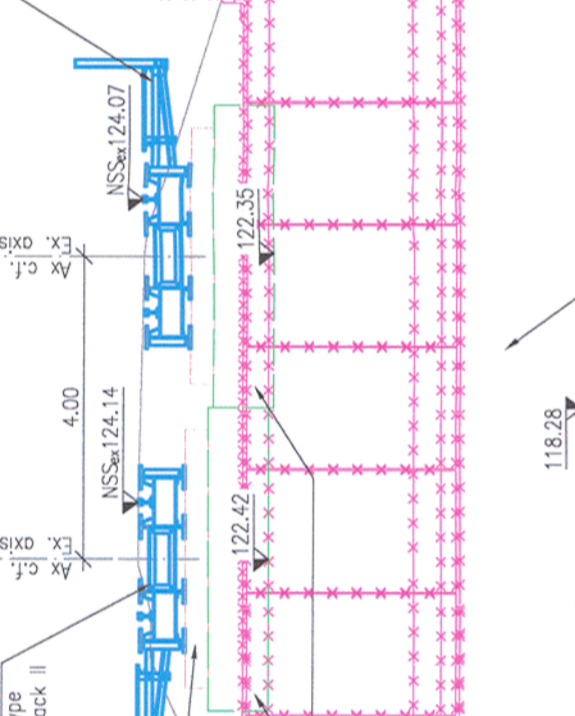
Denumire desen / Drawing name: Tehnologie de executie / EXECUTION TECHNOLOGY PODET / CULVERT KM PR. 602-070 (KM EX. 605-411)

Scara / Scale: 1:100

Revizia / Revision: 1 / 04.2013

Cod desen / Drawing Code: PT.02.02.03.PO.02.04

Nr / No: 04



MINISTERUL TRANSPORTURILOR

BENEFICIAR / BENEFICIARY: COMPANIA NATIONALA DE CALFERATE CFR SA

