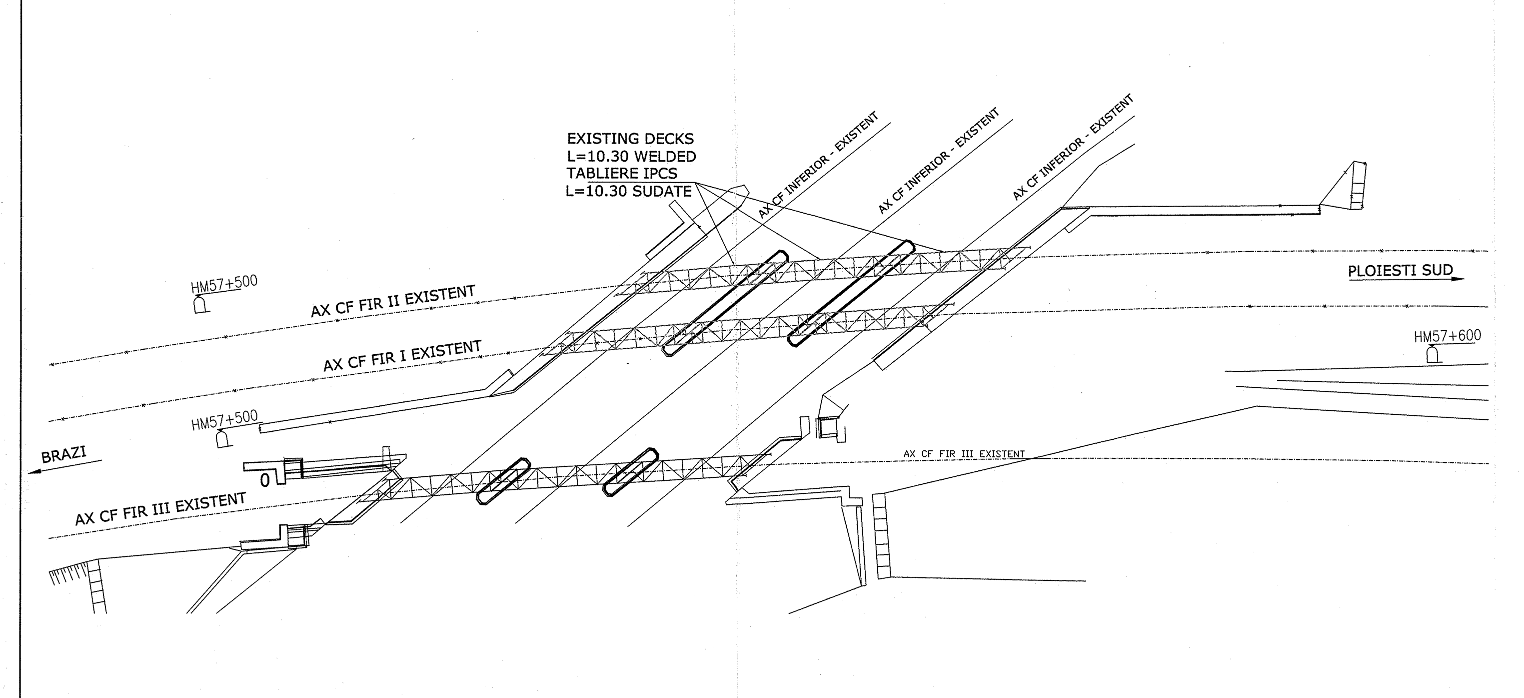
SITUATIA PRELIMINARA INCEPERII MONTAJULUI POD DE INCRUCISARE FIR I SI II

1. SUPRASTRUCTURA: 3 TABLIERE INIMA PLINA CALEA SUS, OBLICE, SUDATE L=10.28 m;
2. PILELE PODULUI NU RESPECTA LIMITA GABARITULUI DE LIBERA TRECERE PENTRU LINIILE INFERIOARE
3. CAILE DE ACCES LOCAL PENTRU TRANSPORTUL SUBANSAMBLURILOR SI PLATFORMELE DE LUCRU PENTRU AUTOMACARALE SUNT EXECUTATE.

PRELIMINARY CASE

1. SUPERSTRUCTURE : 3 DECK-TYPE PLATE GIRDER BRIDGES, SKEWED, WELDED, L=10.28 m
2. THE BRIDGE PIERS DON'T HAVE THE VERTICAL CLEARANCE FOR THE INFERIOR RAILROAD TRACKS.
3. THE APPROACH ROADS FOR CARRYNG THE BRIDGE PARTS AND THE WORKING PLATFORMS FOR THE CRANES ARE PREPARED.

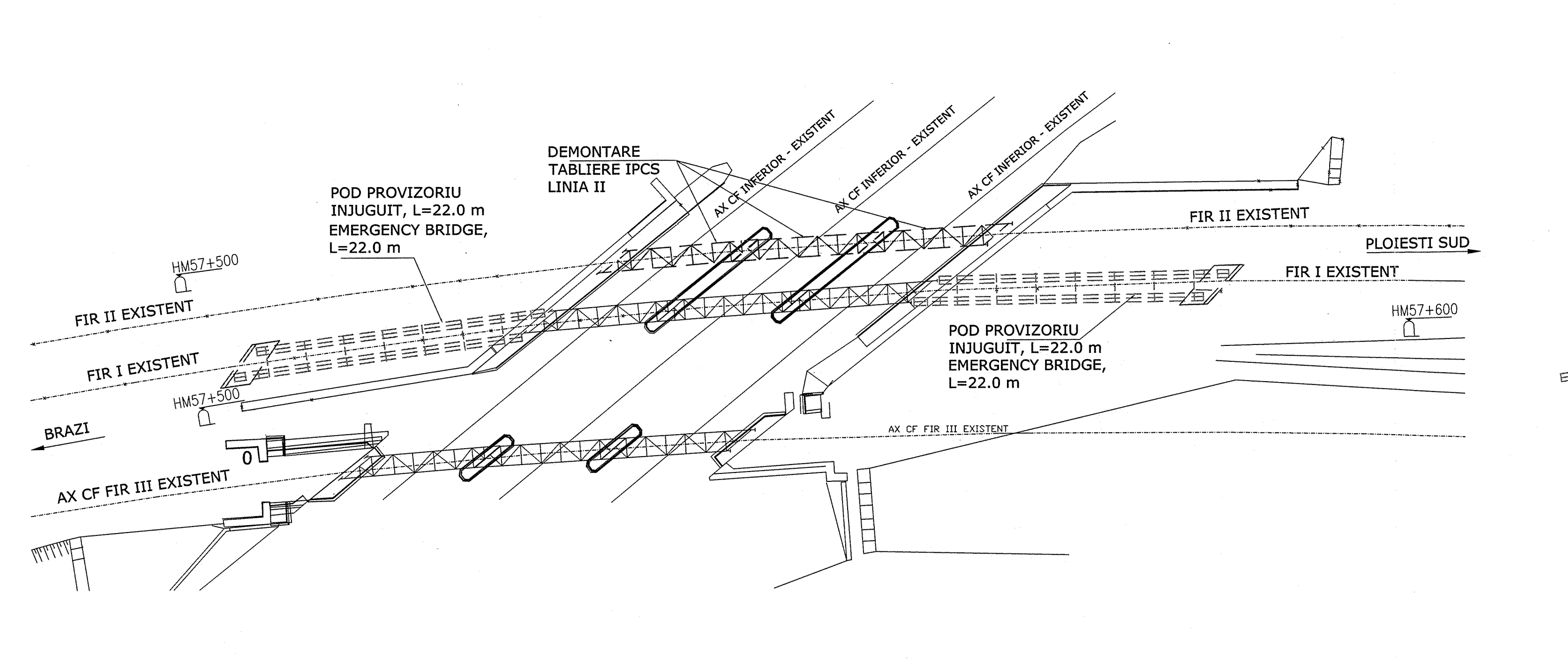


ETAPA I (MONTAREA PODURILOR PROVIZORII PE LINIA II)

1. SE INCHIDE CIRCULATIA PE TOATE LINIILE CU SCOATEREA LOR DE SUB TENSIUNE
2. PE LINIA I:
   - SE DEMOLEAZA LOCAL ZIDURILE DE GARDA ALE CULEELOR MONTAREA PODURILOR PROVIZORII;
   - SE DEMONTEAZA CALEA PE CCA 30 m IN SPATELE CULEELOR SI SE EXCAVEAZA E PRISMA DE BALAST SI PARTIAL DIN TERASAMENT PE CCA 1.0 m INALTIME;
   - SE MONTEAZA BLOCURILE PREFABRICATE PENTRU REZEMAREA PODURILOR PROVIZORII;
   - SE MONTEAZA PODURILE PROVIZORII DIN PACHETE DE GRINZI DE INVENTAR INJUGUITE DE MINIM 22 M LUNGIME, IN SPATELE CULEELOR DE PE LINIA I
   - SE MONTEAZA CALEA PE PODURILE PROVIZORII
3. SE DEMONTEAZA TABLIERELE IPCS EXISTENTE DE PE LINIA II CU MACARAUA CF
4. SE DESCHIDE CIRCULATIA PE LINIA I, CU RESTRICTIE DE VITEZA DE 30 KM/h.

ETAPA I (ASSEMBLING EMERGENCY BRIDGES ON LINE II)

1. THE TRAFFIC IS CLOSED ON ALL LINES AND THE ELECTRICITY IS TURNED OFF.
2. FOR LINE I:
   - THE ABUTMENT DIRT WALL IS PARTIAL DEMOLISHED FOR ASSEMBLING THE EMERGENCY BRIDGES.
   - THE TRACK IS REMOVED ON APP. 30 m IN THE BACK OF THE ABUTMENTS; THE BALLAST PRISM IS EXCAVATED AND FROM THE EMBANKMENT IS EXCAVETED PARTIALLY ON APP 1.0 m;
   - THE PREFABRICATED BLOCKS ARE MOUNTED FOR LEANING THE EMERGENCY BRIDGES;
   - THE EMERGENCY BRIDGES WITH A MINIMUM L= 22 M ARE ASSEMBLED IN THE BACK OF THE ABUTMENT FROM THE LINE I.
   - THE TRACK IS MOUNTED ON THE EMERGENCY BRIDGES
3. THE EXISTING SUPERSTRUCTURES FROM LINE II ARE REMOVED WITH A RAILWAY CRANE.
4. THE TRAFFIC IS OPENED ON LINE I WITH A SPEED LIMIT BY 30 KM/h.

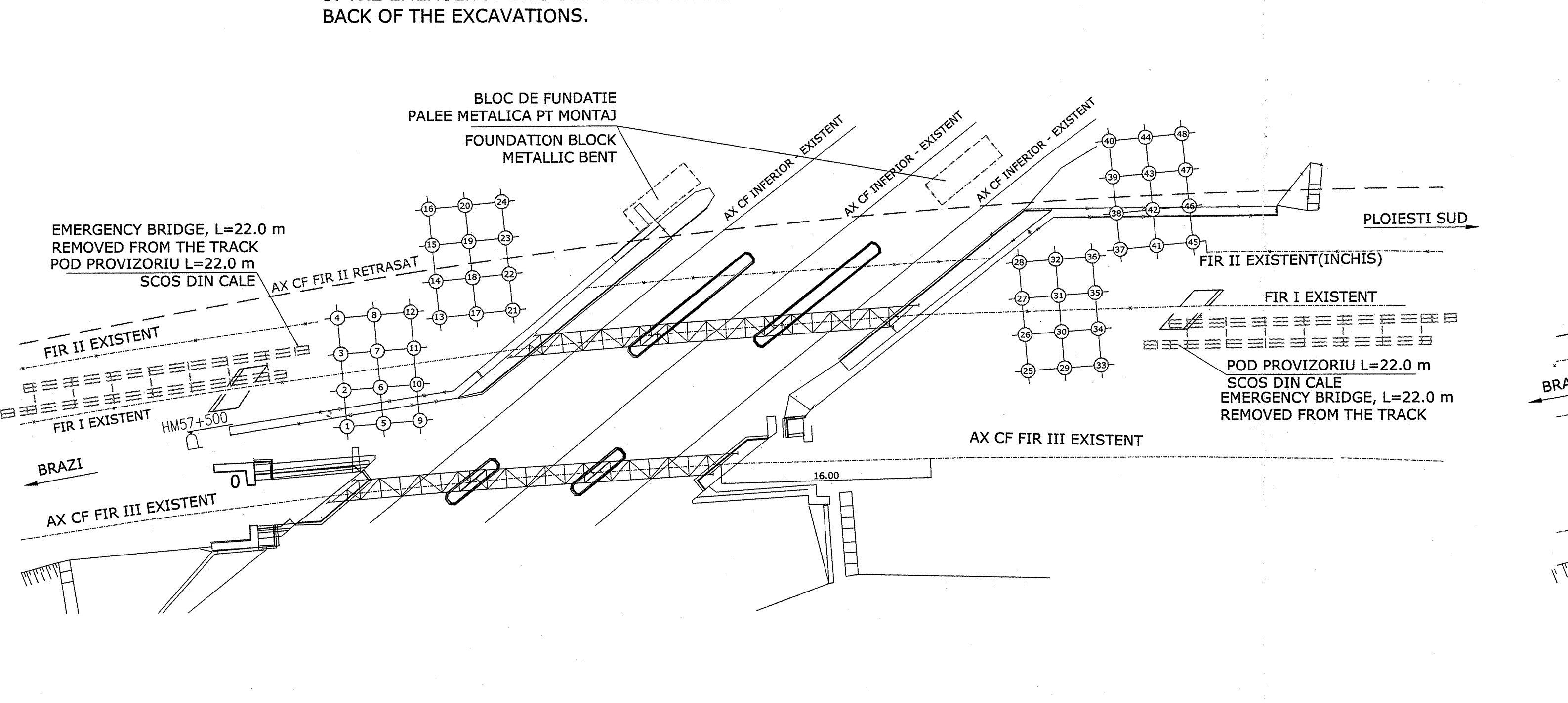


ETAPA II (EXECUTIA COLOANELOR CULEELOR IN INCHIDERE DE CIRCULATIE PE LINIA II)

1. SE DEMOLEAZA LOCAL ZIDURILE DE SPRIJIN DE LA CULEELE C1-I SI C2-II SI SE FAC EXCAVATIILE NECESARE PENTRU FORAREA COLOANELOR RADIERELOR DIN SPATELE CULEELOR DE PE LINIA II SI PARTIAL PENTRU COLOANELE CULEELOR DE PE LINIA I PANA LA LIMITA PERMISA DE PODURILE PROVIZORII;
2. SE TRASEAZA SI SE EXECUTA COLOANELE PENTRU RADIERELE CULEELOR DE PE LINIA II SI O PARTE DIN COLOANELE CULEELOR DE PE LINIA I.
3. SE EXECUTA FUNDATIILE DE BETON PENTRU PALEELE METALICE CARE IMPREUNA CU PILELE SI CULEELE EXISTENTE VOR SUSTINE SUBANSAMBLURILE TABLIERULUI L=54.0 m IN TIMPUL MONTAJULUI.
4. SE INCHIDE PENTRU O SAPTAMANA CIRCULATIA RESTRICTIONATA DE PE LINIA I
5. SE SCOT PODURILE PROVIZORII L=22.0 m DIN CALE SI SE DEPOZITEAZA PE TERASAMENT IN SPATELE EXCAVATIILOR

ETAPA II (ABUTMENTS PILES EXECUTION WITH LINE II CLOSED)

1. THE RETAINING WALLS FROM THE ABUTMENTS C1-I AND C2-II ARE DEMOLISHED AND THE EXCAVATIONS FOR DRILLING THE PILES ARE MADE FOR THE FOUNDATION FRAMES FROM THE BACK OF THE ABUTMENT C1-I AND C1-II AND PARTIALLY FOR THE ABUTMENT PILES FROM THE LINE I UNTIL THE LIMIT OF EMERGENCY BRIDGES.
2. THE PILES FOR THE ABUTMENTS FROM LINE II AND PARTIALLY THE PILES FOR THE ABUTMENTS FROM LINE I ARE LAYED OUT AND EXECUTED
3. THE CONCRETE FOUNDATION FOR METALLIC BRIDGE BENTS IS EXECUTED WHICH TOGHETER WITH THE EXISTING PIERS AND ABUTMENTS WILL SUSTAIN THE BRIDGE (L=54 m) SUBASSEMBLIES DURING THE ASSEMBLING.
SE EXECUTA FUNDATIILE DE BETON PENTRU PALEELE METALICE CARE IMPREUNA CU PILELE SI CULEELE EXISTENTE VOR SUSTINE SUBANSAMBLURILE TABLIERULUI L=54.0 m IN TIMPUL MONTAJULUI.
4. THE TRAFFIC FROM LINE I WILL BE CLOSED FOR 1 WEEK
5. THE EMERGENCY BRIDGES L=22.0 m ARE REMOVED FROM THE TRACK AND STORED ON THE RAILROAD EMBANKMENT IN THE BACK OF THE EXCAVATIONS.

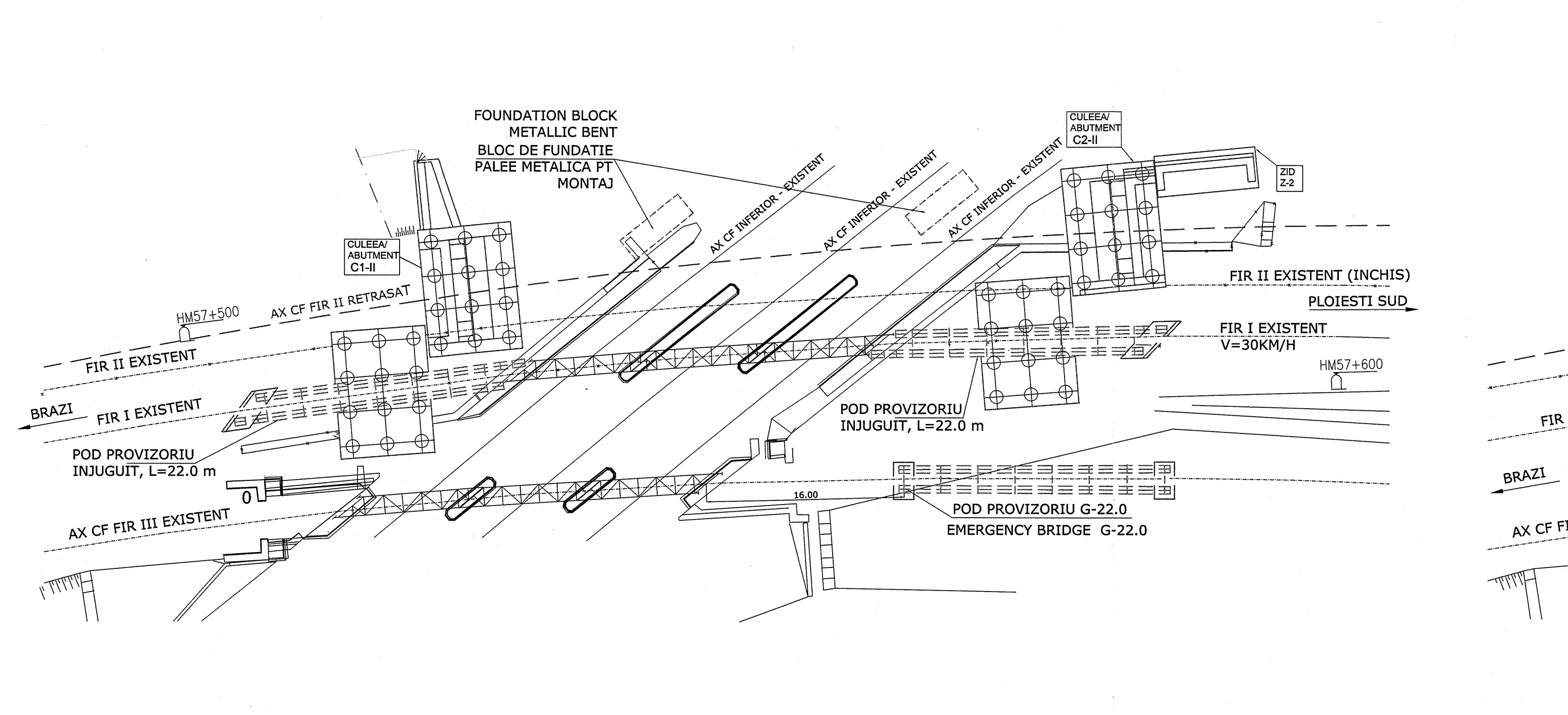


ETAPA III (EXECUTIA CULEELOR IN INCHIDERE DE CIRCULATIE PE LINIA II)

1. SE FINALIZEAZA EXECUTIA COLOANELOR LA RADIERELE CULEELOR DE PE LINIA I.
2. SE REINTRODUC IN CALE PODURILE PROVIZORII PE LINIA I SI PODUL PROVIZORIU G-22 PE LINIA III..
3. SE REDESCHIDE CIRCULATIA PE LINIA I CU RESTRICTIE DE VITEZA DE 30 KM/H
4. DUPA ATINGEREA CLASEI BETOANELOR SE EXECUTA RADIERELE CULEELOR FIR I SI II SI ELEVATIILE CULEELOR FIR II
5. SE EXECUTA ZIDUL DE SPRIJIN Z-2 SI ARIPA A-1

ETAPA III (ABUTMENTS BUILDING WITH TRAFFIC CLOSED ON LINE II)

1. THE EXECUTION OF PILES FOR THE LINE I ABUTMENTS IS FINALIZED.
2. THE EMERGENCY BRIDGES ARE REINSERTED ON TRACK I AND EMERGENCY BRIDGE G=22 ON TRACK III.
3. THE TRAFIC IS OPENED AGAIN ON LINE I WITH A SPEED LIMIT BY 30 KM/h
4. AFTER THE CONCRETE CLASS IS ACCOMPLESHED THE ABUTMENTS FOUNDATION FRAMES (FROM LINES I AND II) AND THE ABUTMENTS ELEVATIONS ARE EXECUTED
DUPA ATINGEREA CLASEI BETOANELOR SE EXECUTA RADIERELE CULEELOR FIR I SI II SI ELEVATIILE CULEELOR FIR II
5. THE RETAINING WALL Z-2 AND WINGWALL A-1 ARE CONSTRUCTED.

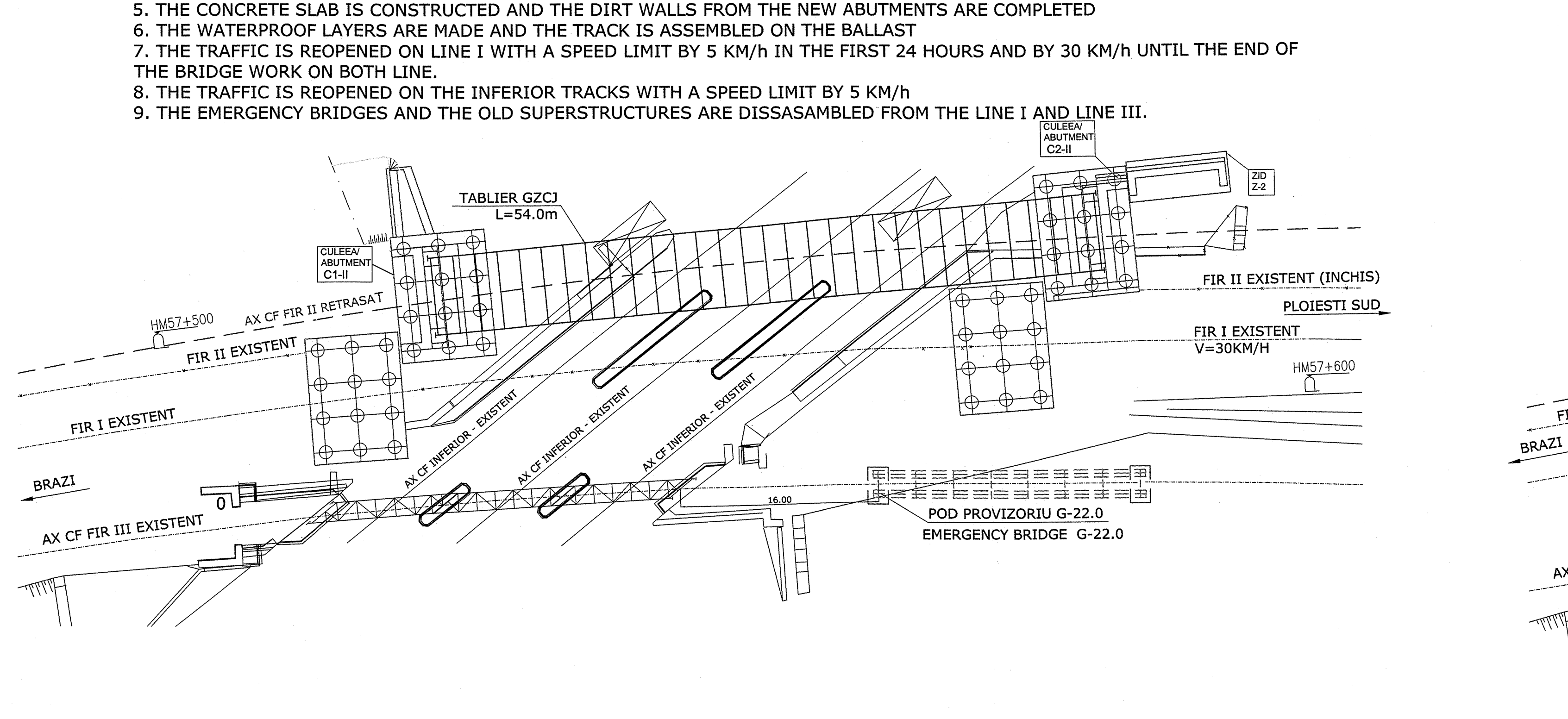


ETAPA IV (MONTAJUL TABLIERULUI GZCJ L=54.0 m PE LINIA II)

1. SE INCHIDE CIRCULATIA PE LINIILE INFERIOARE ALE PODULUI DE INCRUCISARE.
2. SE MONTEAZA CU MACARAUA PE LINIA II SUBANSAMBLURILE TABLIERULUI L=54.0 m PE CULEELE NOI SI PE PALEILE PROVIZORII.
3. SE EXECUTA REGLAJE PENTRU REALIZAREA CONTRASAGETII TABLIERULUI;
4. SE SCOT REZEMARILE DE PE PALEILE PROVIZORII SI SE COBOARA TABLIERUL PE REAZEMELE DEFINITIVE, PE CULEELE NOI.
5. SE EXECUTA CUVA DE BALAST DIN BETON SI SE COMPLETARILE ZIDURILOR DE GARDA ALE CULEELOR NOI
6. SE EXECUTA STRATURILE HIDROIZOLATIEI SI SE MONTEAZA CALEA PE POD IN CUVA DE BALAST;
7. SE REDESCHIDE CIRCULATIA PE LINIA I CU RESTRICTIE DE VITEZA DE 5 KM/H IN PRIMELE 24 H SI DE 30 KM/H PANA LA FINALIZAREA LUCRARILOR LA POD PE AMBELE LINII.
8. SE REDESCHIDE CIRCULATIA CU RESTRICTIE DE 30 KM/H PE LINIILE INFERIOARE
9. SE DEMONTEAZA PODURILE PROVIZORII SI TABLIERELE VECHI IPCS DE PE LINIA I SI PODUL PROVIZORIU G-22 DE PE LINIA III

ETAPA IV (ASSEMBLING THE SUPERSTRUCTURE L=54.0 m ON LINE II)

1. THE TRAFFIC IS CLOSED ON THE TRACKS UNDER THE BRIDGE.
2. THE BRIDGE (L=54m) SUBASSEMBLIES FROM THE LINE II ARE ASSEMBLED WHIT A CRANE ON THE NEW ABUTMENTS AND ON THE TEMPORARY BENTS.
3. THERE ARE PERFORMED ADJUSTMENTS FOR ATTAINING THE BRIDGE CAMBERING.
4. THE BEARINGS ARE REMOVED FROM THE TEMPORARY BENTS AND THE SUPERSTRUCTURE IS LOWERED,ON THE DEFINITIVE BEARINGS, ON THE NEW ABUTMENTS.
SE SCOT REZEMARILE DE PE PALEILE PROVIZORII SI SE COBOARA TABLIERUL PE REAZEMELE DEFINITIVE, PE CULEELE NOI.
5. THE CONCRETE SLAB IS CONSTRUCTED AND THE DIRT WALLS FROM THE NEW ABUTMENTS ARE COMPLETED
6. THE WATERPROOF LAYERS ARE MADE AND THE TRACK IS ASSEMBLED ON THE BALLAST
7. THE TRAFFIC IS REOPENED ON LINE I WITH A SPEED LIMIT BY 5 KM/h IN THE FIRST 24 HOURS AND BY 30 KM/h UNTIL THE END OF THE BRIDGE WORK ON BOTH LINE.
8. THE TRAFFIC IS REOPENED ON THE INFERIOR TRACKS WITH A SPEED LIMIT BY 5 KM/h
9. THE EMERGENCY BRIDGES AND THE OLD SUPERSTRUCTURES ARE DISSASAMBLED FROM THE LINE I AND LINE III.

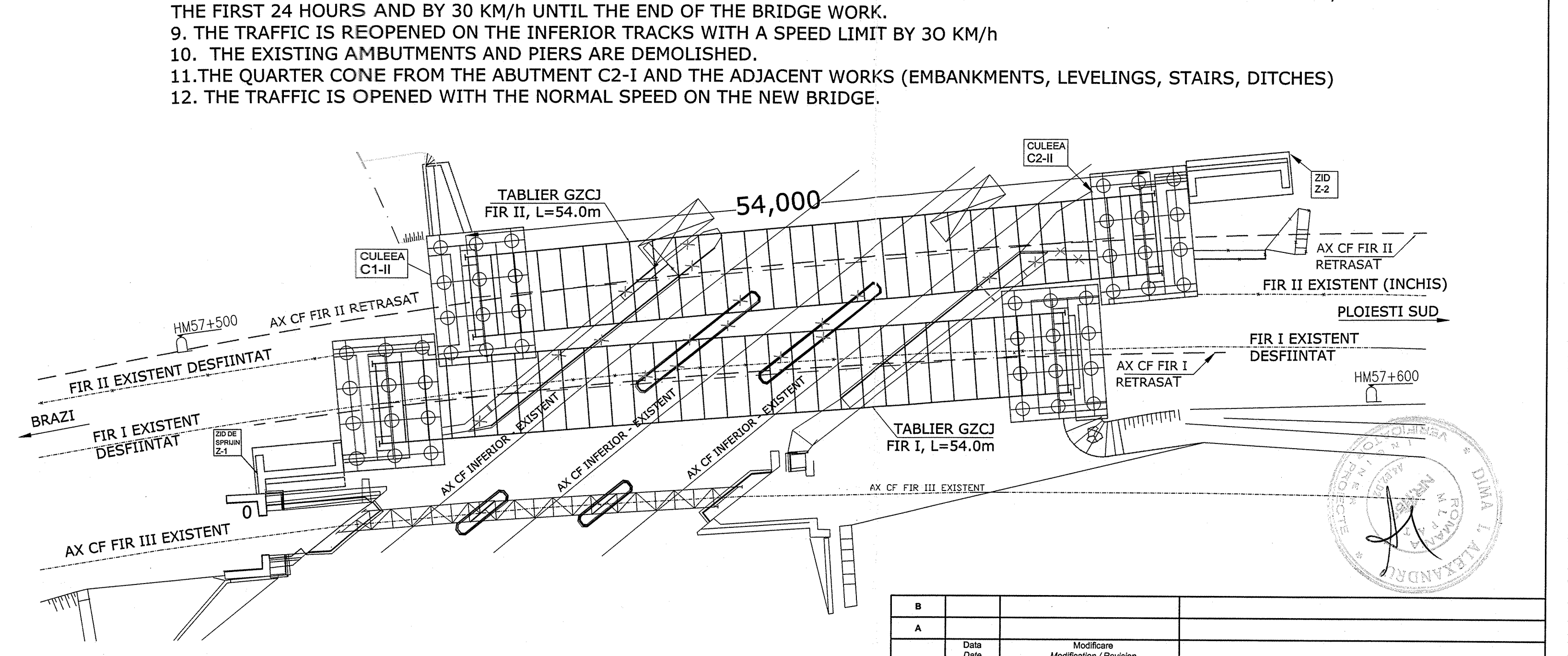


ETAPA V (MONTAJUL TABLIERULUI GZCJ L=54.0 m PE LINIA I)

1. SE EXECUTA ELEVATIILE CULEELOR DE PE LINIA I SI ZIDUL DE SPRIJIN Z-1
2. SE INCHIDE CIRCULATIA PE LINIILE INFERIOARE ALE PODULUI DE INCRUCISARE.
3. SE MONTEAZA CU MACARAUA PE LINIA I SUBANSAMBLURILE TABLIERULUI L=54.0 m PE CULEELE NOI SI PE PALEI PROVIZORII.
4. SE EXECUTA REGLAJE PENTRU REALIZAREA CONTRASAGETII TABLIERULUI;
5. SE SCOT REZEMARILE DE PE PALEILE PROVIZORII SI SE COBOARA TABLIERUL PE REAZEMELE DEFINITIVE, PE CULEELE NOI.
6. SE EXECUTA CUVA DE BALAST DIN BETON SI COMPLETARILE ZIDURILOR DE GARDA ALE CULEELOR NOI
7. SE EXECUTA STRATURILE HIDROIZOLATIEI SI SE MONTEAZA CALEA PE POD IN CUVA DE BALAST;
8. SE REFACE TERASAMENTUL LA CAPETELE PODULUI PE LINIA I SI SE DESCHIDE CIRCULATIA CU RESTRICTIE DE VITEZA DE 5 KM/H IN PRIMELE 24 H SI DE 30 KM/H PANA LA FINALIZAREA LUCRARILOR LA POD.
9. SE REDESCHIDE CIRCULATIA CU RESTRICTIE DE 30 KM/H PE LINIILE INFERIOARE ALE PODULUI DE INCRUCISARE
10. SE DEMOLEAZA CULEELE SI PILELE EXISTENTE.
11. SE EXECUTA SFERTUL DE CON LA CULEEA C2-I SI LUCRARILE ADIACENTE (TALUZARI, NIVELARI, SCARI PE TALUZ, SANTURI)
12.SE DESCHIDE CIRCULATIA CU VITEZA NORMALA PE NOUL POD.

ETAPA V (ASSEMBLING THE SUPERSTRUCTURE L=54.0 m ON LINE I)

1. THE ABUTMENT ELEVATION FROM THE LINE I AND THE RETAINING WALL Z-1 ARE CONSTRUCTED
2. THE TRAFFIC IS CLOSED ON THE TRACKS UNDER THE BRIDGE.
3. THE BRIDGE (L=54m) SUBASSEMBLIES FROM THE LINE I ARE ASSEMBLED WHIT A CRANE ON THE NEW ABUTMENTS AND ON THE TEMPORARY BENTS.
4. THERE ARE PERFORMED ADJUSTMENTS FOR ATTAINING THE BRIDGE CAMBERING.
5. THE BEARINGS ARE REMOVED FROM THE TEMPORARY BENTS AND THE SUPERSTRUCTURE IS LOWERED, ON THE DEFINITIVE BEARINGS, ON THE NEW ABUTMENTS.
6. THE CONCRETE SLAB IS CONSTRUCTED AND THE DIRT WALLS FROM THE NEW ABUTMENTS ARE COMPLETED
7. THE WATERPROOF LAYERS ARE MADE AND THE TRACK IS ASSEMBLED ON THE BALLAST
8. THE RAILWAY EMBANKMENT IS REBUILT AT THE BRIDGE ENDS AND THE TRAFFIC IS REOPENED WITH A SPEED LIMIT BY 5 KM/h IN THE FIRST 24 HOURS AND BY 30 KM/h UNTIL THE END OF THE BRIDGE WORK.
9. THE TRAFFIC IS REOPENED ON THE INFERIOR TRACKS WITH A SPEED LIMIT BY 30 KM/h
10. THE EXISTING AMBUTMENTS AND PIERS ARE DEMOLISHED.
11.THE QUARTER CONE FROM THE ABUTMENT C2-I AND THE ADJACENT WORKS (EMBANKMENTS, LEVELINGS, STAIRS, DITCHES)
12. THE TRAFFIC IS OPENED WITH THE NORMAL SPEED ON THE NEW BRIDGE.



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	Data / Date	Modificare / Modification / Revision	
BENEFICIAR/ BENEFICIARY : ROMANIAN RAILWAY NATIONAL COMPANY	AUTORITATEA DE IMPLEMENTARE/ IMPLEMENTUNG AUTHORITY: Ministerul Transporturilor / Ministry of Transports	AUTORITATEA CONTRACTANTA / CONTRACTING AUTHORITY: Ministerul Economiei si Finantelor Oficiul de Plati si Contractare Phare / Ministry of Economy and Finances Phare Payments &Contracting Office — CFCU	Contract / Contract: 1303/2007
prointec — CONSIS PROIECT		Proiect finantat de UNIUNEA EUROPEANA / Project financed by EUROPEAN UNION — POS Transport 2007- 2013	Faza / Phase: PTh+DE TP+DD
Intocmit / Designed	Ing. Cristian Dima	Scara / Scale : 1:100	PORTOFOLIU DE PROIECTE PHARE CES 2005 / PHARE CES 2005 PROJECTS PORTFOLIO LOT 1 — Asistenta tehnica pentru pregatirea unor lucrari de reabilitare pentru tuneluri si poduri de cale ferata / Technical assistance for preparing rehabilitation works required by railway tunnels and bridges
Verificat / Checked	Ing. Ioan Dachin	Data / Date : 05.2009	Denumire desen / Drawing Title : Sucursala RCF/Railway district Bucuresti; Linia cf /Railway line 300 Bucuresti - Ploiesti; Pod / Bridge km 57+560; TEHNOLOGIE DE MONTAJ/ TECHNOLOGICAL FLOW — Cod desen / Drawing Code: PD 21 — Nr. / No: 54
Sef echipa / Team leader	Ing. Stelian Vara-Oros		