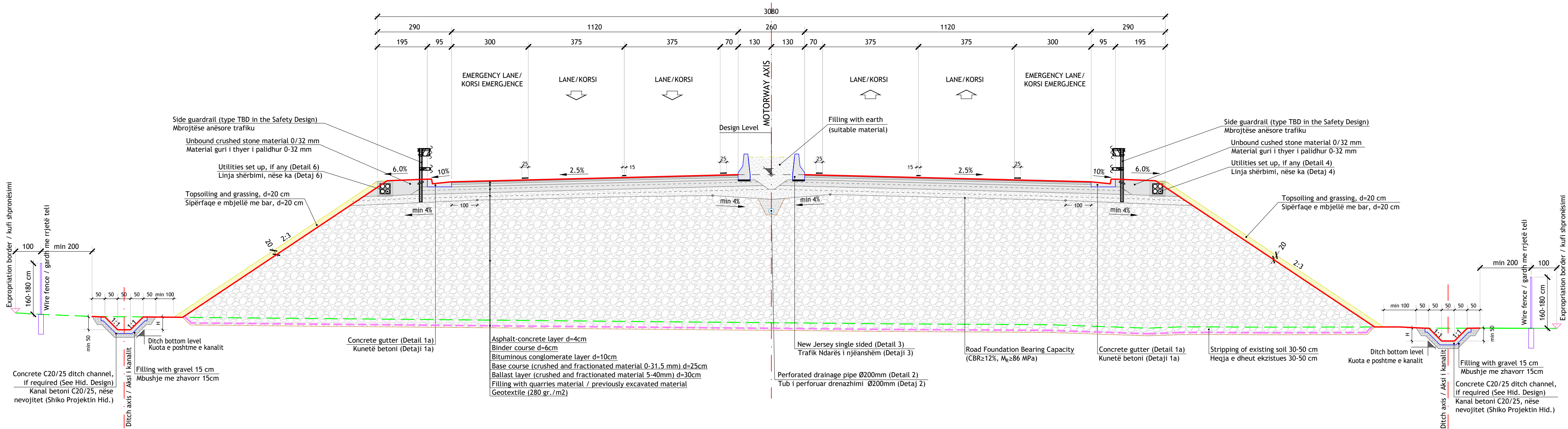


- NOTE:
- Pavement construction according to the Pavement Design Report.
 - Cuts applied slopes and berms height according to the Geotechnical Design Report.
 - Cuts slope protection will be according to the Geotechnical Design Report.

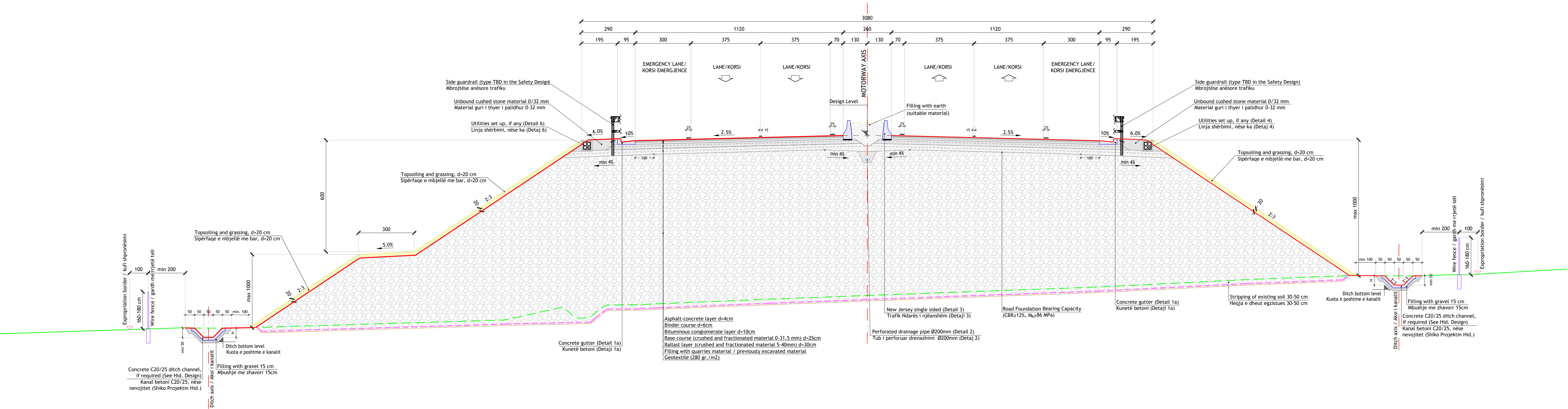
TYPICAL CROSS SECTION 1 - MOTORWAY FILL/FILL CASE (in tangent)
PROFIL TËRTHOR TIP 1 - AUTOSTRADA NË RASTIN MBUSHJE/MBUSHJE (në vijë të drejtë)



 Western Balkans Investment Framework WBIF BUILDING THE EUROPEAN FUTURE TOGETHER European Investment Bank The Ed. bank		
Project Management		Designer
 Takovska 45a, Beograd 11108 Rr. Qemal Stafa, P. 132, Tirana 1017		 IPF 5 InfraTransProject Ltd.
BENEFICIARY <i>PERFITUESI</i>		Republic of Albania - Ministry of Infrastructure and Energy of Albania, Albanian Road Authority (ARA) <i>Republika e Shqipërisë - Ministria e Infrastruktura dhe Energjisë, Autoriteti Rrugor Shqiptar (ARRSH)</i>
PROJECT <i>PROJEKTI</i>		Western Balkan Investment Framework (WBIF) Infrastructure Project Facility, Technical Assistance 5 (IPF5)
SUBPROJECT CODE AND TITLE		WB16-ALB-TRA-02: Detailed Design, ESIA and Tender Documents for the Construction of Tirana Bypass (Kashar - Vaqarr - Mullet)
<i>KODI DHE TITULLI I NENPROJEKTI</i>		<i>WB16-ALB-TRA-02: Projekti i Zbatimit, VNMS dhe Dokumentet e Tenderit të Bypass-it të Tiranës (Kashar - Vaqarr - Mullet)</i>
DRAWING TITLE <i>EMERTIMI / VIZ.</i>		Typical Cross Section 1 Motorway Fill Case <i>Seksion Tërthor Tip 1 Autostrada në Rastin me Mbushje</i>
DRAWING NO. <i>NR. VIZATIMIT</i>		WB16ALBTRA02-RD-00-D-201 <i>WB16ALBTRA02-RD-00-D-201</i>
DATE / DATA		07/2021
DESIGNED BY / PROJEKTOI		REVIEWED BY / RISHIKOI
FARUK KABA (FK) REZAR KUMBARO (RK) REZART ARKAXHIU (RA)		DIMITRIS LAGKADIANOS (DL) PANOS PIKRODIMITRIS (PP)
		APPROVED BY / APROVOI RALPH HENDERSON (RH)
REVISIONS / RISHIKIMET		
ISSUE / VERSION	DATE / DATE	DESCRIPTION / PERSHKRIMI
00	12/2020	
01	05/2021	Updated / Përditësuar
02	07/2021	Updated / Përditësuar

- NOTE:
- Pavement construction according to the Pavement Design Report.
 - Cuts applied slopes and berms height according to the Geotechnical Design Report.
 - Cuts slope protection will be according to the Geotechnical Design Report.

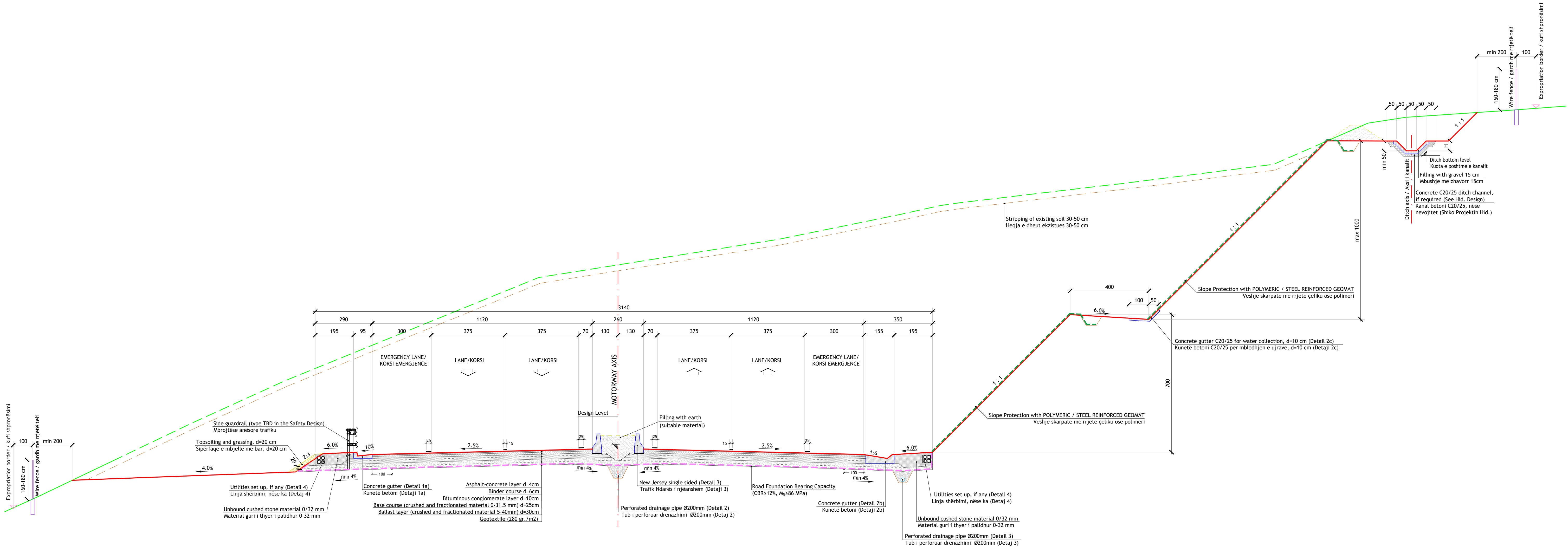
TYPICAL CROSS SECTION 2 - MOTORWAY STEPPED FILL/FILL CASE (in tangent)
PROFIL TËRTHOR TIP 2 - AUTOSTRADA NË RASTIN MBUSHJE ME SHKALLËZIM/MBUSHJE (në vijë të drejtë)



 Western Balkans Investment Framework WBIF BUILDING THE EUROPEAN FUTURE TOGETHER 		
Project Management		Designer
Takovska 45a, Beograd 11108		Rr. Qemal Stafa, P. 132, Tirana 1017
BENEFICIARY PERFITUESI		Republic of Albania - Ministry of Infrastructure and Energy of Albania, Albanian Road Authority (ARA) Republika e Shqiperise - Ministria e Infrastruktures dhe Energjise, Autoriteti Rrugor Shqiptar (ARRSH)
PROJECT PROJEKTI		Western Balkan Investment Framework (WBIF) Infrastructure Project Facility, Technical Assistance 5 (IPF5)
SUBPROJECT CODE AND TITLE		WB16-ALB-TRA-02: Detailed Design, ESIA and Tender Documents for the Construction of Tirana Bypass (Kashar - Vaqarr - Mullet)
KODI DHE TITULLI I NENPROJEKTIT		WB16-ALB-TRA-02: Projekti i Zbatimit, VNMS dhe Dokumentet e Tenderit te Bypass-it te Tiranes (Kashar - Vaqarr - Mullet)
DRAWING TITLE EMERTIMI I VIZ.		Typical Cross Section 2 Motorway Sloped Fill Case Seksion Tërthor Tip 2 Autostrada në Rastin Mbushje me Shkallëzim
DRAWING NO. NR. VIZATIMIT		WB16ALBTRA02-RD-00-D-202 WB16ALBTRA02-RD-00-D-202
		SCALE / SHKALLA Scale 1:100 (A1+) Scale 1:200 (A3+)
DATE / DATA		07/2021
DESIGNED BY / PROJEKTOI		REVIEWED BY / RISHIKOI
FARUK KABA (FK) REZAR KUMBARO (RK) REZART ARKAXHIU (RA)		DIMITRIS LAGKADIANOS (DL) PANOS PIKRODIMITRIS (PP) RALPH HENDERSON (RH)
REVISIONS / RISHIKIMET		
ISSUE / VERSION	DATE / DATE	DESCRIPTION / PERSHKRIMI
00	12/2020	
01	05/2021	Updated / Përditësuar
02	07/2021	Updated / Përditësuar

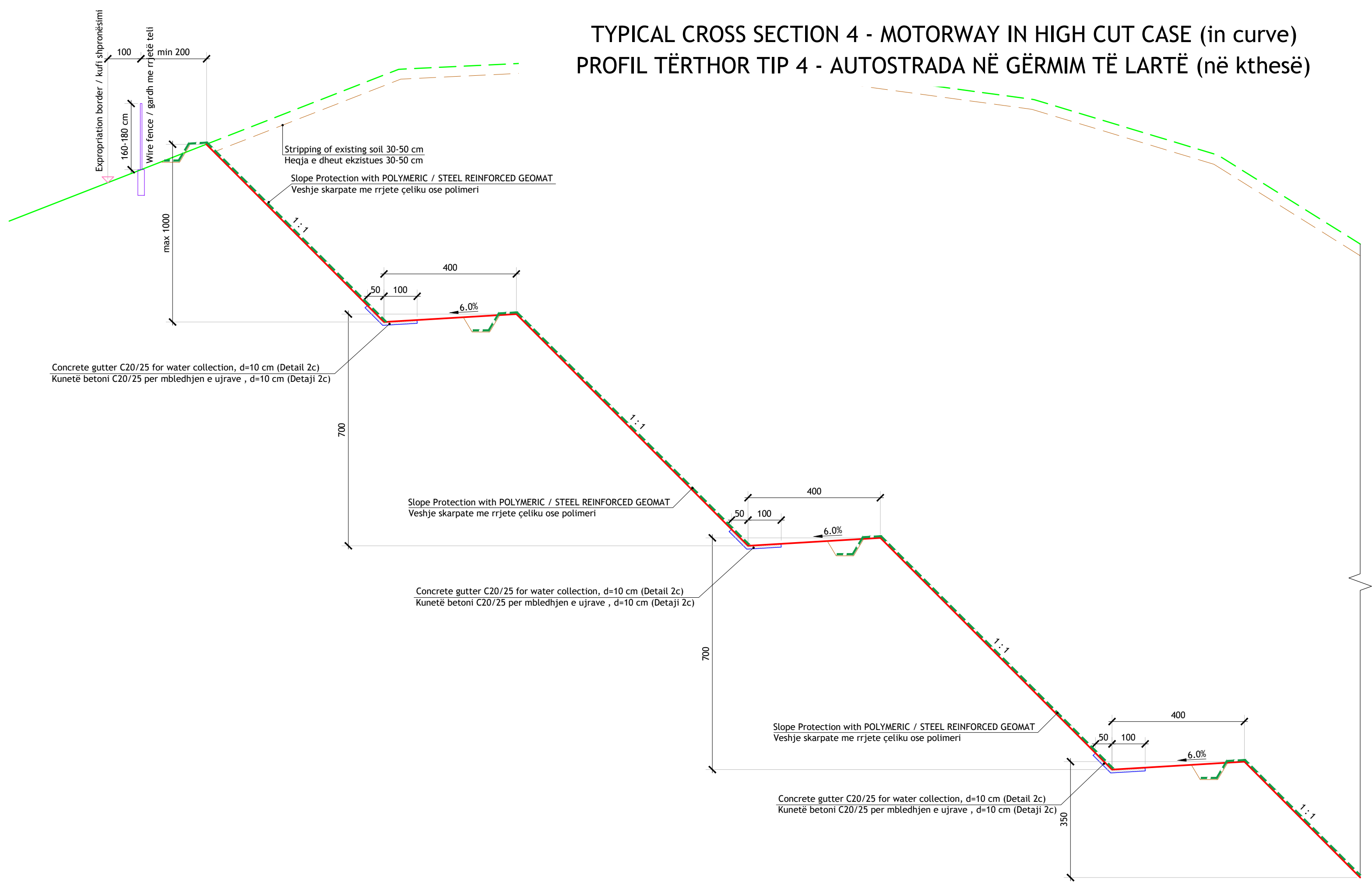
- NOTE:
- Pavement construction according to the Pavement Design Report.
 - Cuts applied slopes and berms height according to the Geotechnical Design Report.
 - Cuts slope protection will be according to the Geotechnical Design Report.

TYPICAL CROSS SECTION 3 - MOTORWAY FLATTEN/CUT CASE (in tangent)
PROFIL TËRTHOR TIP 3 - AUTOSTRADA NË RASTIN ZBANKIM/GËRMIM (në vijë të drejtë)



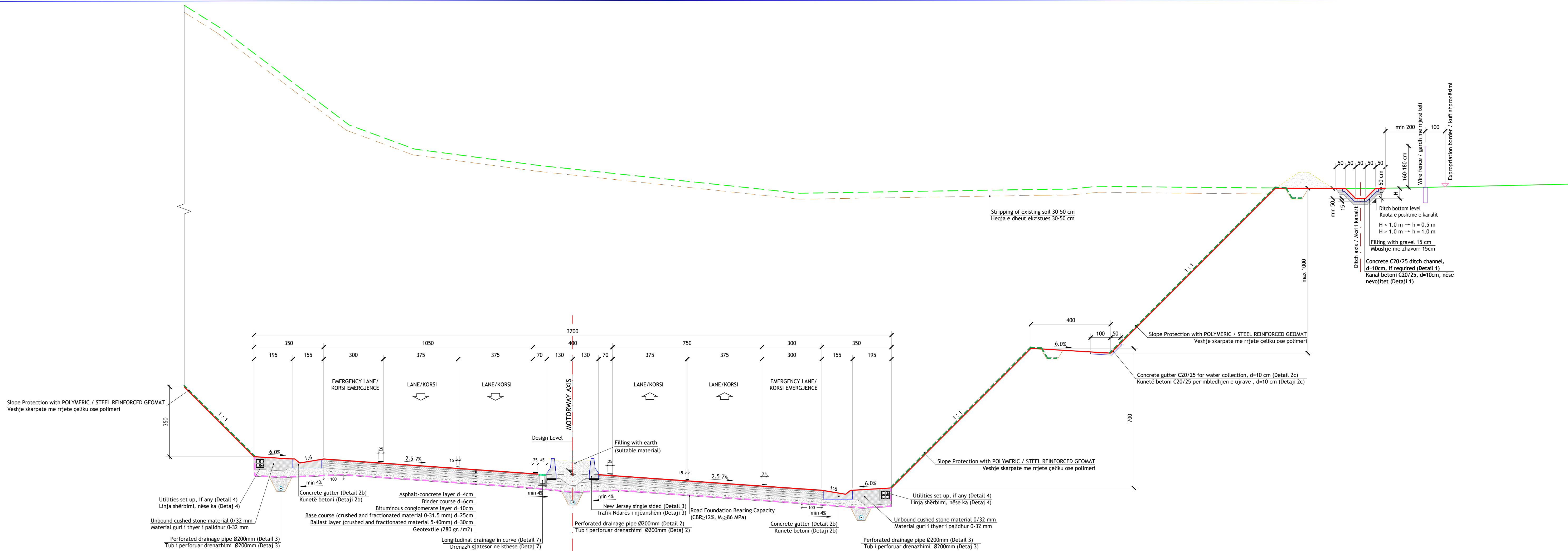
 Western Balkans Investment Framework WBIF European Investment Bank <i>The EU bank</i> BUILDING THE EUROPEAN FUTURE TOGETHER		
Project Management		Designer
		
Takovska 45a, Beograd 11108		Rr. Qemal Stafa, P. 132, Tirana 1017
BENEFICIARY PERFITUESI		Republic of Albania - Ministry of Infrastructure and Energy of Albania, Albanian Road Authority (ARA)
		Republika e Shqipërisë - Ministria e Infrastruktës dhe Energjië, Autoriteti Rrugor Shqiptar (ARRSH)
PROJECT PROJEKTI		Western Balkan Investment Framework (WBIF) Infrastructure Project Facility, Technical Assistance 5 (IPF5)
SUBPROJECT CODE AND TITLE		WB16-ALB-TRA-02: Detailed Design, ESIA and Tender Documents for the Construction of Tirana Bypass (Kashar - Vaqarr - Mullet)
KODI DHE TITULLI I NENPROJEKTI		WB16-ALB-TRA-02: Projekti i Zbatimit, VNMS dhe Dokumentet e Tenderit të Bypass-it të Tiranës (Kashar - Vaqarr - Mullet)
DRAWING TITLE		Typical Cross Section 3 Motorway Flatten/Cut Case
EMERTIMI I VIZ.		Seksion Tërthor Tip 3 Autostrada në Rastin Zbankim/Gërmim
DRAWING NO. NR. VIZATIMIT		WB16ALBTRA02-RD-00-D-203 WB16ALBTRA02-RD-00-D-203
DATE / DATA		07/2021
DESIGNED BY / PROJEKTOI		APPROVED BY / APROVOI
FARUK KABA (FK) REZAR KUMBARO (RK) REZART ARKAXHIU (RA)		RALPH HENDERSON (RH)
REVISIONS / RISHIKIMET		
ISSUE / VERSION	DATE / DATE	DESCRIPTION / PERSHKRIMI
00	12/2020	
01	05/2021	Updated / Përditësuar
02	07/2021	Updated / Përditësuar

TYPICAL CROSS SECTION 4 - MOTORWAY IN HIGH CUT CASE (in curve)
PROFIL TËRTHOR TIP 4 - AUTOSTRADA NË GËRIM TË LARTË (në kthesë)



NOTE:

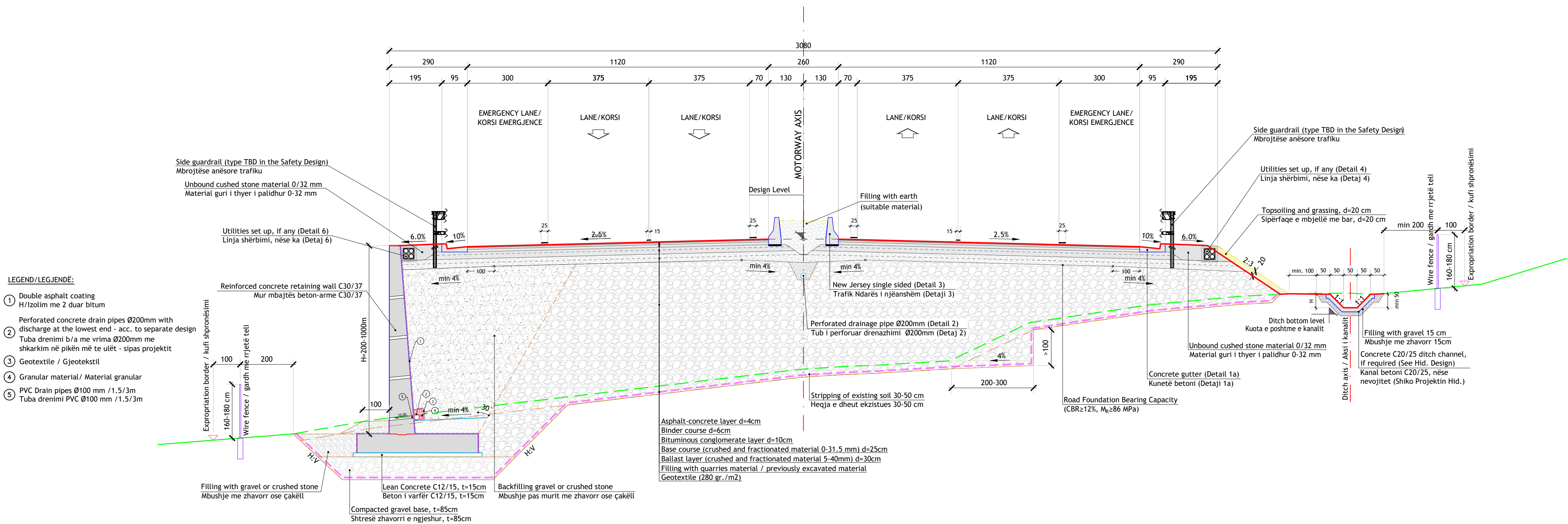
- Pavement construction according to the Pavement Design Report.
- Cuts applied slopes and berms height according to the Geotechnical Design Report
- Cuts slope protection will be according to the Geotechnical Design Report.



 Western Balkans Investment Framework WBIF BUILDING THE EUROPEAN FUTURE TOGETHER European Investment Bank The EU bank		
Project Management		Designer
Takovska 45a, Beograd 11108		Rr. Qemal Stafa, P. 132, Tirana 1017
BENEFICIARY PERFITUESI		Republic of Albania - Ministry of Infrastructure and Energy of Albania, Albanian Road Authority (ARA)
		Republika e Shqiperise - Ministria e Infrastruktures dhe Energjise, Autoriteti Rrugor Shqiptar (ARRSH)
PROJECT PROJEKTI		Western Balkan Investment Framework (WBIF) Infrastructure Project Facility, Technical Assistance 5 (IPF5)
SUBPROJECT CODE AND TITLE		WB16-ALB-TRA-02: Detailed Design, ESIA and Tender Documents for the Construction of Tirana Bypass (Kashar - Vaqarr - Mullet)
KODI DHE TITULLI I NENPROJEKTI		WB16-ALB-TRA-02: Projekti i Zbatimit, VNMS dhe Dokumentet e Tenderit te Bypass-it te Tiranes (Kashar - Vaqarr - Mullet)
DRAWING TITLE EMERTIMI I VIZ.		Typical Cross Section 4 Motorway in Cut Case Seksion Tërthor Tip 4 Autostrada në Rastin Gërmim
DRAWING NO. NR. VIZATIMIT		WB16ALBTRA02-RD-00-D-204 WB16ALBTRA02-RD-00-D-204
SCALE / SHKALLA Scale 1:100 (A1+) Scale 1:200 (A3+)		
DATE / DATA		07/2021
DESIGNED BY / PROJEKTOI		REVIEWED BY / RISHIKOI
APPROVED BY / APROVOI		
FARUK KABA (FK) REZAR KUMBARO (RK) REZART ARKAXHIU (RA)		DIMITRIS LAGKADIANOS (DL) PANOS PIKRODIMITRIS (PP) RALPH HENDERSON (RH)
REVISIONS / RISHIKIMET		
ISSUE / VERSION	DATE / DATA	DESCRIPTION / PERSHKRIMI
00	12/2020	
01	05/2021	Updated / Përditësuar
02	07/2021	Updated / Përditësuar

- NOTE:
- Pavement construction according to the Pavement Design Report.
 - Cuts applied slopes and berms height according to the Geotechnical Design Report.
 - Cuts slope protection will be according to the Geotechnical Design Report.
 - The final position of the drainage pipes will be traced at the site in conjunction with the drainage system of road with the drainage system of road.

TYPICAL CROSS SECTION 5 - RC RET. WALL/FILL CASE (in tangent)
PROFIL TËRTHOR TIP 5 - AUTOSTRADA NË RASTIN MUR B-A/MBUSHJE (në vijë të drejtë)

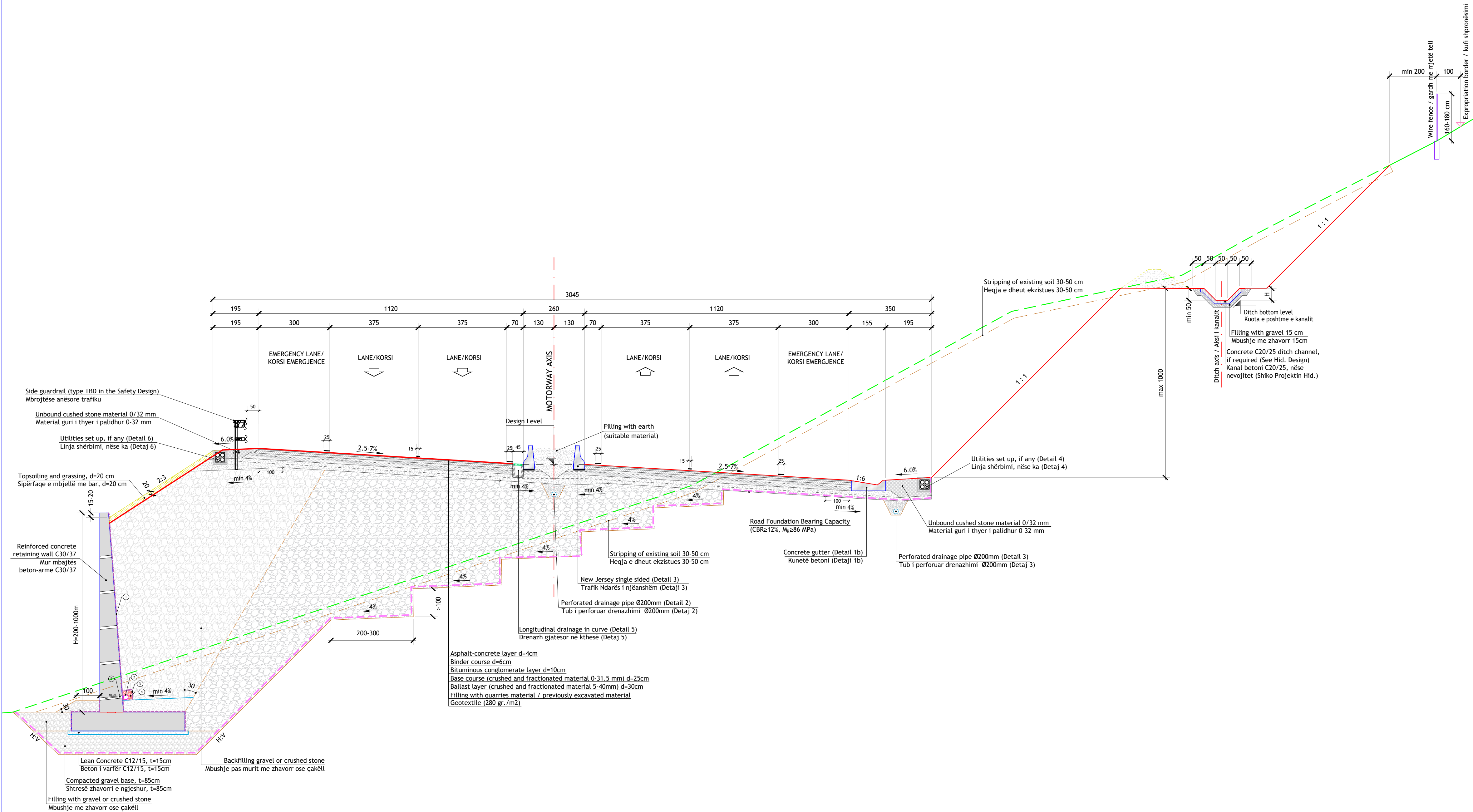


 Western Balkans Investment Framework WBIF European Investment Bank BUILDING THE EUROPEAN FUTURE TOGETHER The EIB bank		
Project Management Takovska 45a, Beograd 11108 Designer Rr. Qemal Stafa, P. 132, Tirana 1017 IPF 5 InfraTransProject Ltd.		
 BENEFICIARY PERFITUESI Republic of Albania - Ministry of Infrastructure and Energy of Albania, Albanian Road Authority (ARA) Republika e Shqipërisë - Ministria e Infrastruktura dhe Energji, Autoriteti Rrugor Shqiptar (ARRSH)		
PROJECT PROJEKTI Western Balkan Investment Framework (WBIF) Infrastructure Project Facility, Technical Assistance 5 (IPF5)		
SUBPROJECT CODE AND TITLE WB16-ALB-TRA-02: Detailed Design, ESIA and Tender Documents for the Construction of Tirana Bypass (Kashar - Vaqarr - Mullet) KODI DHE TITULLI I NENPROJEKTI WB16-ALB-TRA-02: Projekti i Zbatimit, VNMS dhe Dokumentet e Tenderit të Bypass-it të Tiranës (Kashar - Vaqarr - Mullet)		
DRAWING TITLE EMERTIMI / VIZ. Typical Cross Section 5 RC. Ret. Wall / Fill case Seksion Terthor Tip 5 Autostrada në Rastin Mur B-A/ Mbushje		
DRAWING NO. NR. VIZATIMIT WB16ALBTRA02-RD-00-D-205 WB16ALBTRA02-RD-00-D-205 SCALE / SHKALLA Scale 1:100 (A1) Scale 1:200 (A3)		
DATE / DATA 07/2021		
DESIGNED BY / PROJEKTOI FARUK KABA (FK) REZAR KUMBARO (RK) REZART ARKAXHIU (RA) REVIEWED BY / RISHIKOI DIMITRIS LAGKADIANOS (DL) PANOS PIKRODIMITRIS (PP) APPROVED BY / APROVOI RALPH HENDERSON (RH)		
REVISIONS / RISHIKIMET		
ISSUE / VERSION DATE / DATE DESCRIPTION / PERSHKRIMI		
00 12/2020		
01 05/2021 Updated / Përditësuar		
02 07/2021 Updated / Përditësuar		

TYPICAL CROSS SECTION 6 - MOTORWAY RC RET. WALL UNDER SLOPE/CUT CASE (in curve)
PROFIL TËRTHOR TIP 6 - AUTOSTRADA NË RASTIN MUR B-A NËN SKARPATË/GËRMIM (në kthesë)

NOTE:

- Pavement construction according to the Pavement Design Report.
- Cuts applied slopes and berms height according to the Geotechnical Design Report.
- Cuts slope protection will be according to the Geotechnical Design Report.
- The final position of the drainage pipes will be traced at the site in conjunction with the drainage system of road with the drainage system of road.



LEGEND/LEGJENDE:

- Double asphalt coating
H/izolim me 2 duar bitum
- Perforated concrete drain pipes Ø200mm with discharge at the lowest end - acc. to separate design
Tuba drenimi b/a me vrina Ø200mm me shkarkim në pikën me të ulët - sipas projektit
- Geotextile / Gjeotekstil
- Granular material/ Material granular
- PVC Drain pipes Ø100 mm /1.5/3m
Tuba drenimi PVC Ø100 mm /1.5/3m

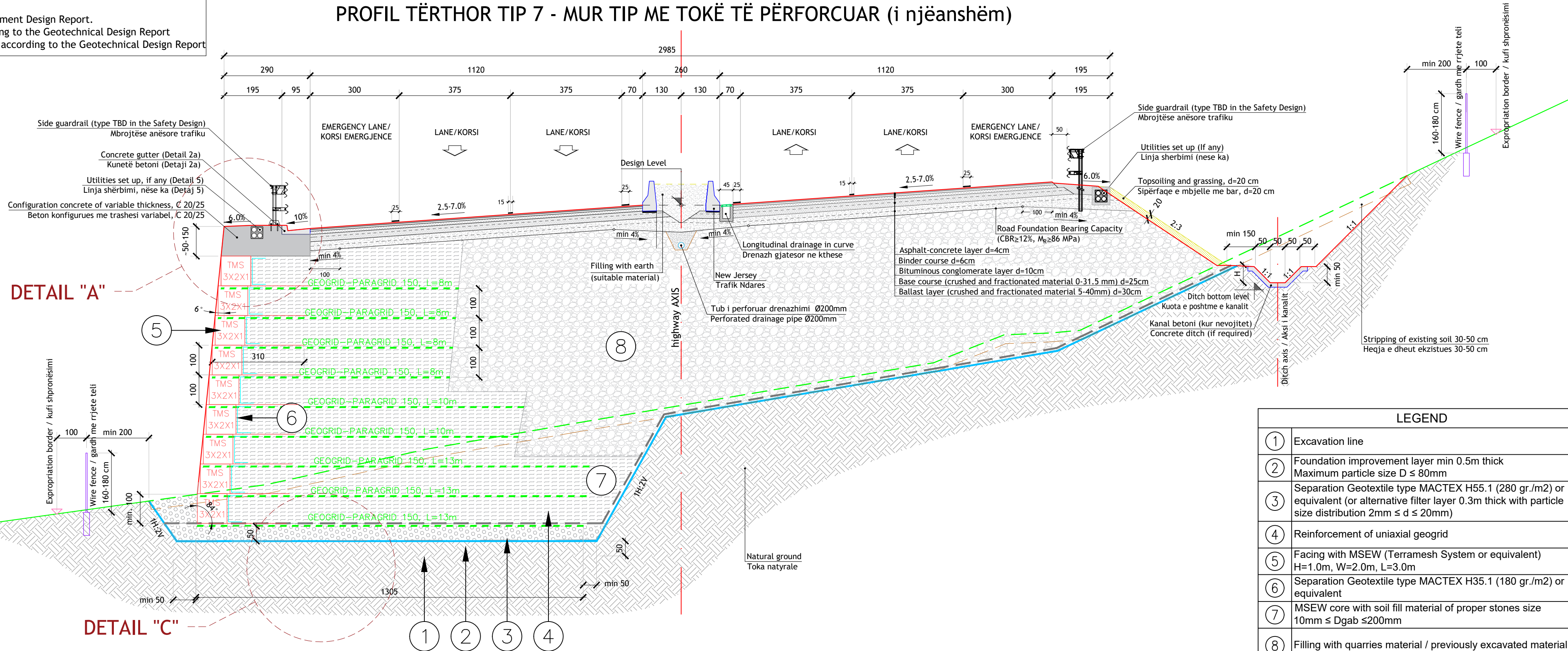
Western Balkans Investment Framework WBIF BUILDING THE EUROPEAN FUTURE TOGETHER European Investment Bank The EIB bank		
Project Management Designer		
Takovska 45a, Beograd 11108 Rr. Qemal Stafa, P. 132, Tirana 1017		
BENEFICIARY PERFITUESI Republic of Albania - Ministry of Infrastructure and Energy of Albania, Albanian Road Authority (ARA) Republika e Shqipërisë - Ministria e Infrastruktura dhe Energji, Autoriteti Rrugor Shqiptar (ARRSH)		
PROJECT PROJEKTI Western Balkan Investment Framework (WBIF) Infrastructure Project Facility, Technical Assistance 5 (IPF5)		
SUBPROJECT CODE AND TITLE WB16-ALB-TRA-02: Detailed Design, ESIA and Tender Documents for the Construction of Tirana Bypass (Kashar - Vaqarr - Mullet)		
KODI DHE TITULLI I NENPROJEKTIT WB16-ALB-TRA-02: Projekti i Zbatimit, VNMS dhe Dokumentet e Tenderit të Bypass-it të Tiranës (Kashar - Vaqarr - Mullet)		
DRAWING TITLE EMERTIMI I VIZ. Typical Cross Section 6 Motorway Rc. Ret. Wall / Cut case Seksion Terthor Tip 6 Autostrada në Rastin Mur B-A / Gërmim		
DRAWING NO. NR. VIZATIMIT WB16ALBTRA02-RD-00-D-206 WB16ALBTRA02-RD-00-D-206 SCALE / SHKALLA Scale 1:100 (A1) Scale 1:200 (A3)		
DATE / DATA 07/2021		
DESIGNED BY / PROJEKTOI REVIEWED BY / RISHIKOI APPROVED BY / APROVOI FARUK KABA (FK) REZAR KUMBARO (RK) REZART ARKAXHIU (RA) DIMITRIS LAGKADIANOS (DL) PANOS PIKRODIMITRIS (PP) RALPH HENDERSON (RH)		
REVISIONS / RISHIKIMET		
ISSUE / VERSION DATE / DATE DESCRIPTION / PERSHKRIMI		
00 12/2020		
01 05/2021 Updated / Përditësuar		
02 07/2021 Updated / Përditësuar		

NOTE:

- Pavement construction according to the Pavement Design Report.
- Cuts applied slopes and berms height according to the Geotechnical Design Report
- Mechanical Stabilized Earth wall type/height according to the Geotechnical Design Report

TYPICAL CROSS SECTION 7 - TYPICAL MECHANICAL STABILIZED EARTH WALL (one-sided)

PROFIL TËRTHOR TIP 7 - MUR TIP ME TOKË TË PËRFORCUAR (i njëanshëm)

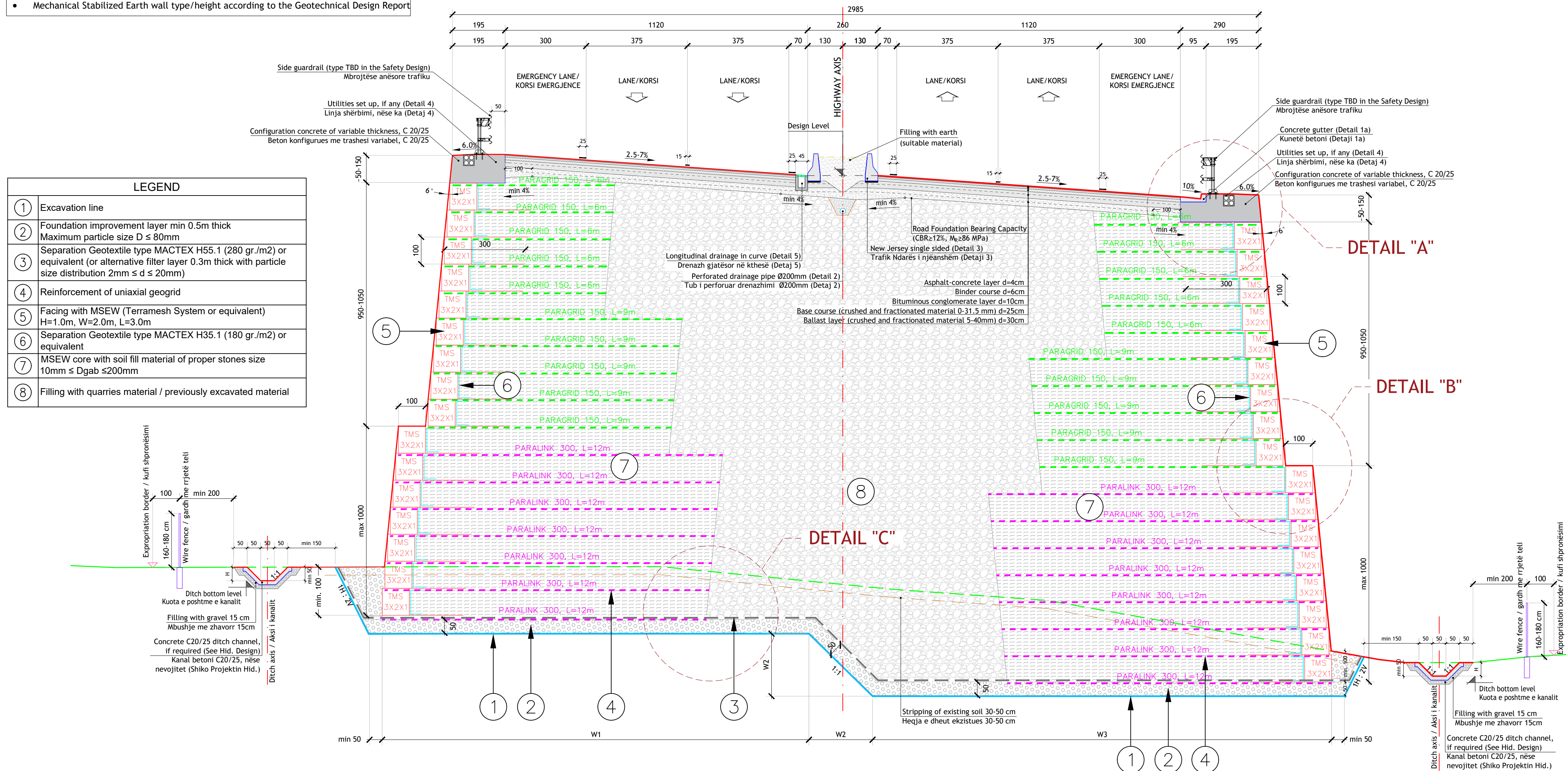


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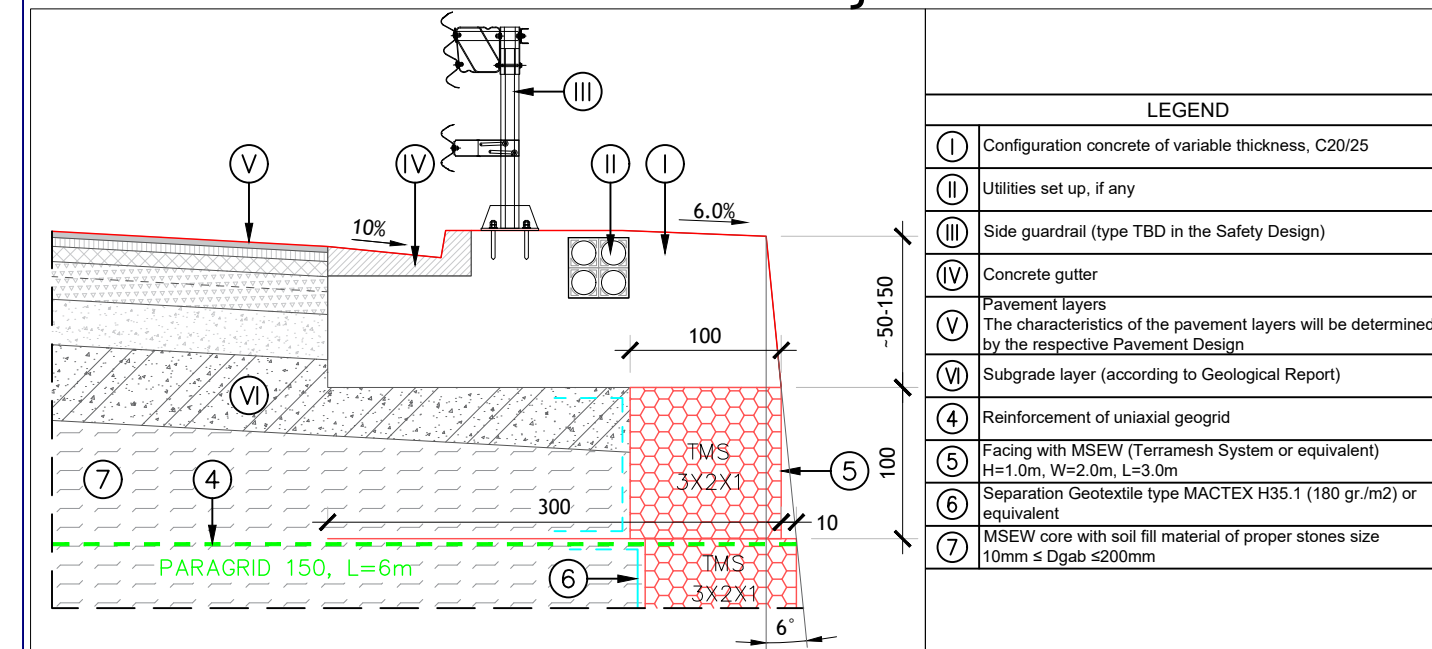
- Pavement construction according to the Pavement Design Report.
- Cuts applied slopes and berms height according to the Geotechnical Design Report
- Mechanical Stabilized Earth wall type/height according to the Geotechnical Design Report

TYPICAL CROSS SECTION 8 - TYPICAL MECHANICAL STABILIZED EARTH WALL (double-sided)

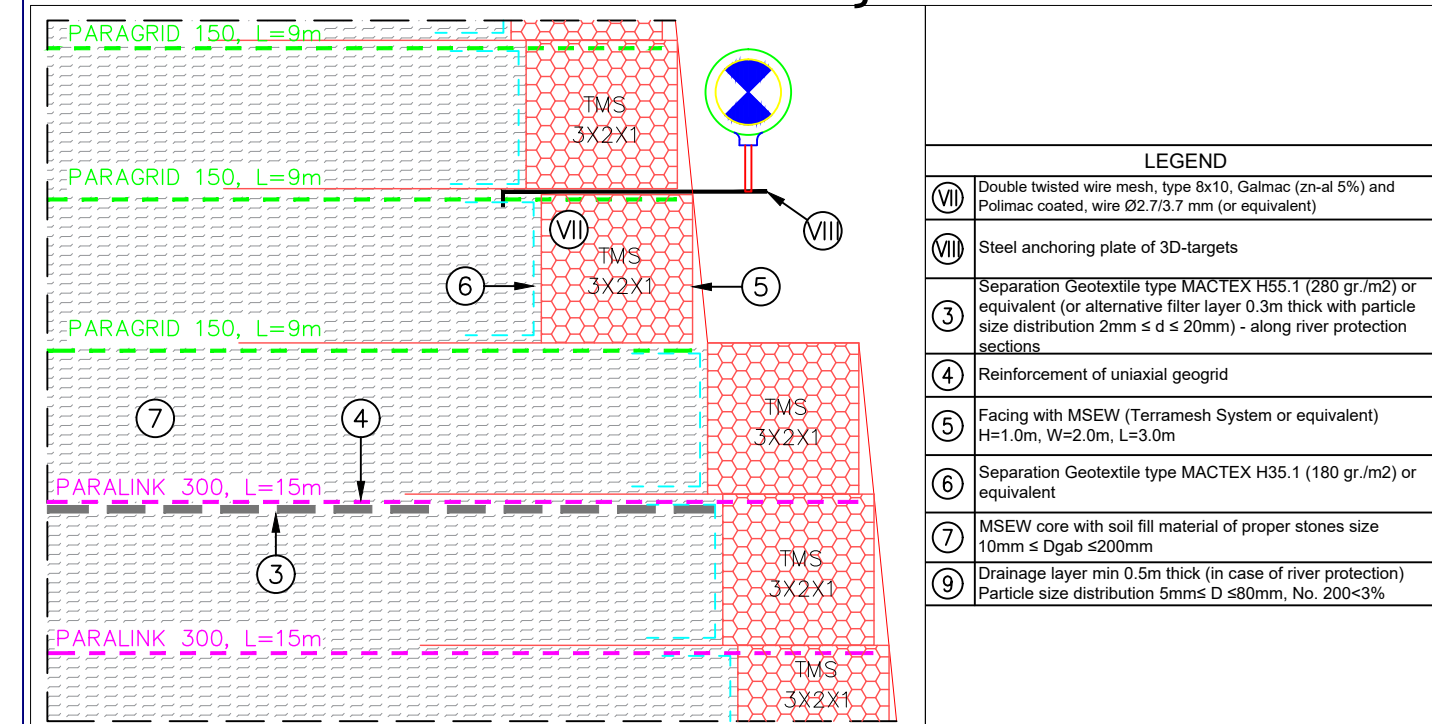
PROFIL TËRTHOR TIP 8 - MUR TIP ME TOKË TË PËRFORCUAR (i dyanshëm)



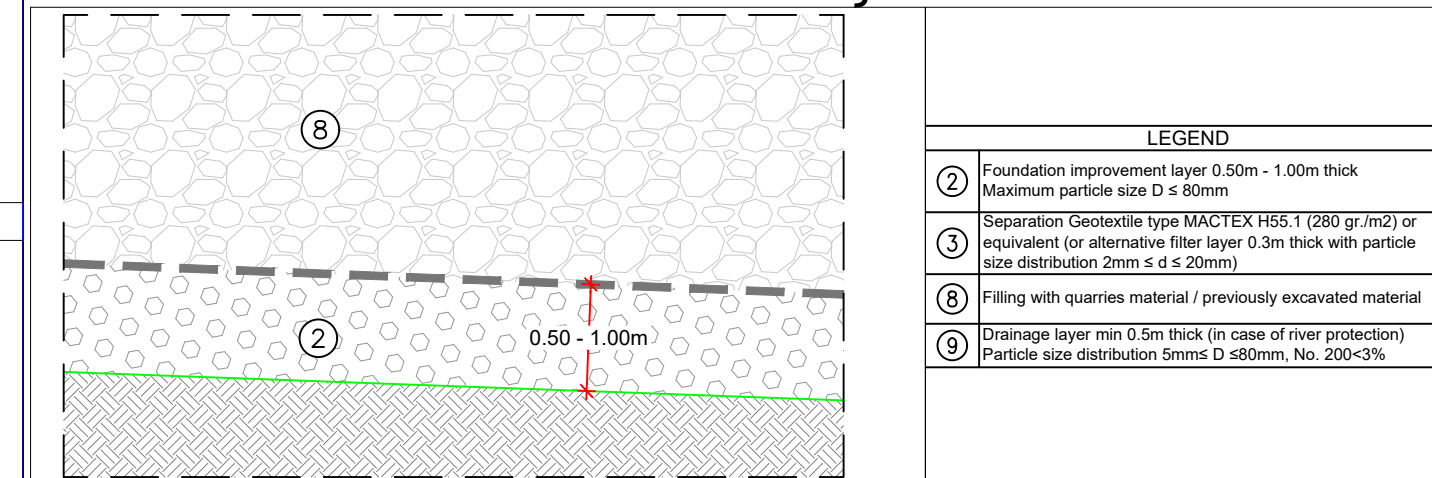
Detail "A" Scale 1:50 / Detaji "A" Shkalla 1:50



Detail "B" Scale 1:50 / Detaji "B" Shkalla 1:50



Detail "C" Scale 1:50 / Detaji "C" Shkalla 1:50



Western Balkans
Investment Framework **WBIF**
BUILDING THE EUROPEAN FUTURE TOGETHER



Project Management

Takovska 45a, Beograd 11108

Designer

Rr. Qemal Stafa, P. 132, Tirana 1017

BENEFICIARY

PERFITUESI



Republic of Albania - Ministry of Infrastructure and Energy of Albania, Albanian Road Authority (ARA)

Republika e Shqipërisë - Ministria e Infrastruktura dhe Energji, Autoriteti Rrugor Shqiptar (ARRSH)

PROJECT

PROJEKTI

Western Balkan Investment Framework (WBIF)
Infrastructure Project Facility, Technical Assistance 5 (IPF5)

SUBPROJECT

CODE AND TITLE

WB16-ALB-TRA-02: Detailed Design, ESIA and Tender Documents for the Construction of Tirana Bypass (Kashar - Vaqarr - Mullet)

KODI DHE TITULLI I NENPROJEKTI

WB16-ALB-TRA-02: Projekti i Zbatimit, VNMS dhe Dokumentet e Tenderit të Bypass-it të Tiranës (Kashar - Vaqarr - Mullet)

DRAWING TITLE

EMERTIMI / VIZ.

Typical Cross Section 7 & 8
Motorway MSEW case

Seksion Terthor Tip 7 & 8
Autostrada Rasti me Mur me Tokë të Përfuruar

DRAWING NO.

NR. VIZATIMIT

WB16ALBTRA02-RD-00-D-207

WB16ALBTRA02-RD-00-D-207

SCALE / SHKALLA

Scale 1:100 (A1)

Scale 1:200 (A3)

DATE / DATA

07/2021

DESIGNED BY / PROJEKTOI

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REZAR KUMBARO (RK)
REZART ARKAXHIU (RA)

REVIEWED BY / RISHIKOI

DIMITRIS LAGKADIANOS (DL)
PANOS PIKRODIMITRIS (PP)

APPROVED BY / APROVOI

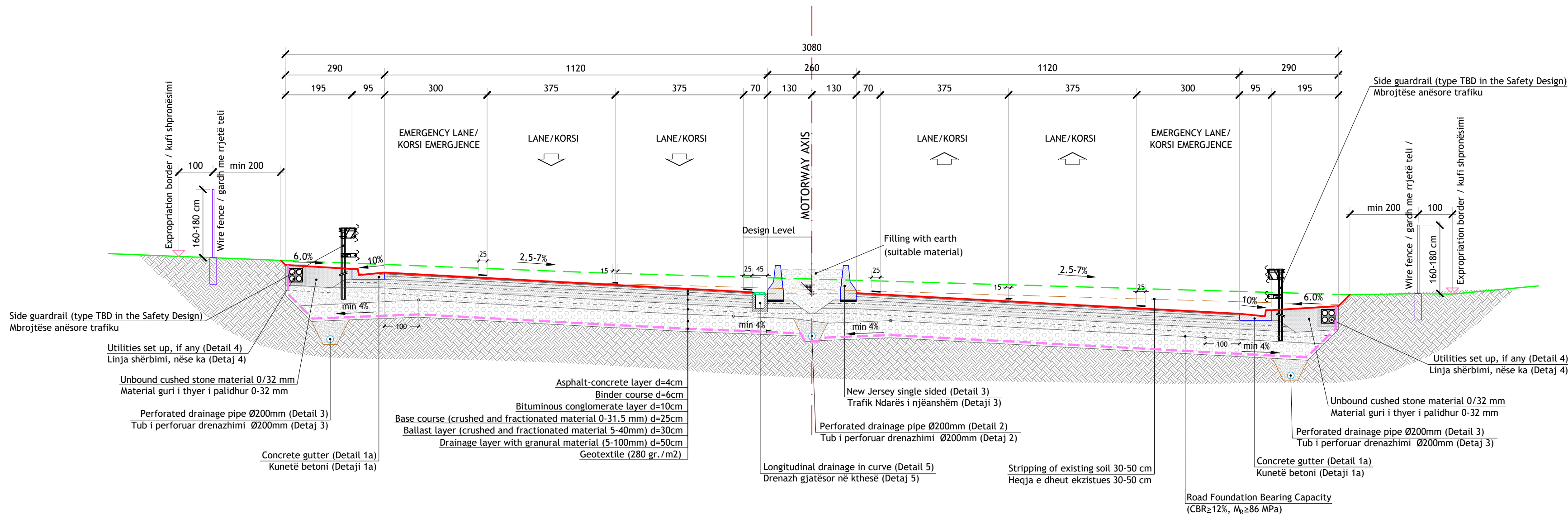
RALPH HENDERSON (RH)

REVISIONS / RISHIKIMET

ISSUE / VERSION	DATE / DATE	DESCRIPTION / PERSHKRIMI
00	12/2020	
01	05/2021	Updated / Përditësuar
02	07/2021	Updated / Përditësuar

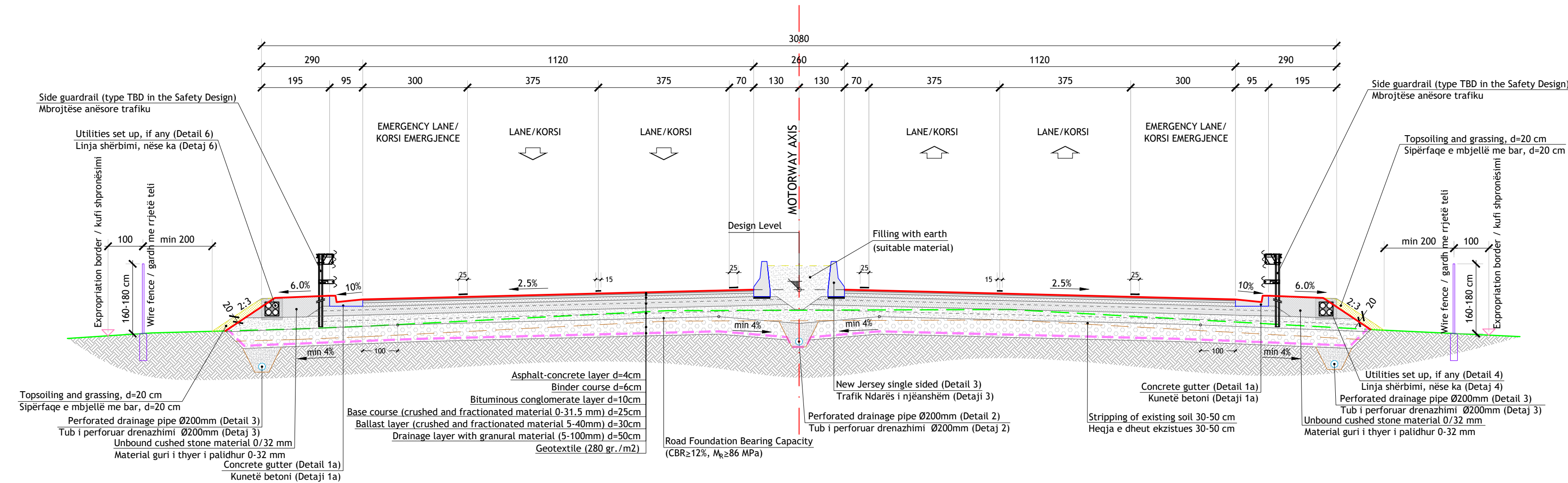
TYPICAL CROSS SECTION 9 - MOTORWAY IN LOW CUT (in curve)
PROFIL TËRTHOR TIP 9 - AUTOSTRADA NË RASTIN GËRMMIM I ULËT (në kthesë)

- NOTE:
- Pavement construction according to the Pavement Design Report.
 - Cuts applied slopes and berms height according to the Geotechnical Design Report
 - Cuts slope protection will be according to the Geotechnical Design Report.



TYPICAL CROSS SECTION 10 - MOTORWAY IN LOW FILL (in tangent)
PROFIL TËRTHOR TIP 10 - AUTOSTRADA NË RASTIN MBUSHJE E ULËT (në vijë të drejtë)

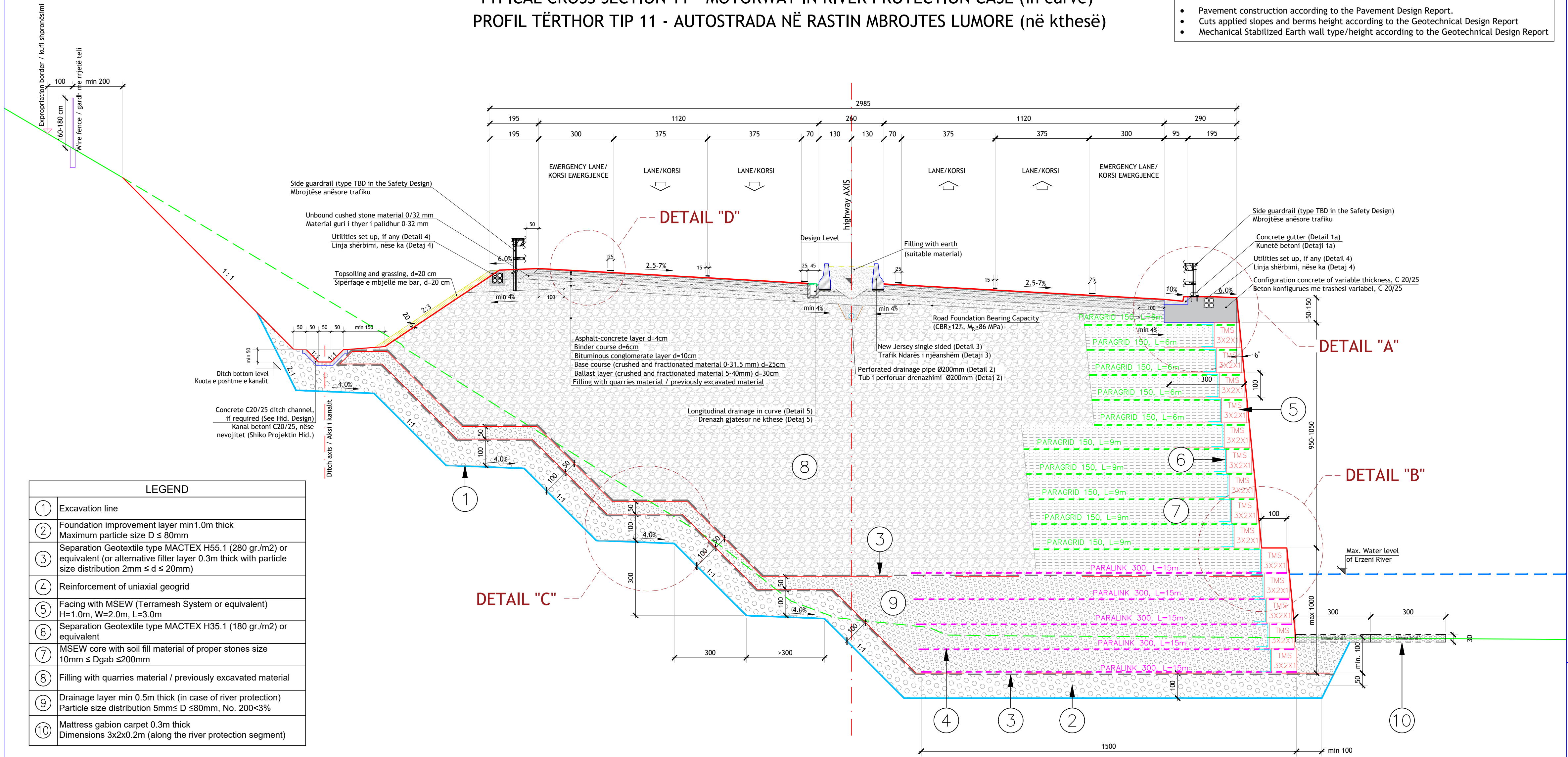
- NOTE:
- Pavement construction according to the Pavement Design Report.
 - Cuts applied slopes and berms height according to the Geotechnical Design Report
 - Cuts slope protection will be according to the Geotechnical Design Report.



 Western Balkans Investment Framework WBIF European Investment Bank The EIB bank BUILDING THE EUROPEAN FUTURE TOGETHER		
Project Management		Designer
Takovska 45a, Beograd 11108		 IPF 5 InfraTransProject Ltd. Rr. Qemal Stafa, P. 132, Tirana 1017
BENEFICIARY PERFITUESI	Republic of Albania - Ministry of Infrastructure and Energy of Albania, Albanian Road Authority (ARA) Republika e Shqipërisë - Ministria e Infrastrukturës dhe Energjisë, Autoriteti Rrugor Shqiptar (ARRSH)	
PROJECT PROJEKTI	Western Balkan Investment Framework (WBIF) Infrastructure Project Facility, Technical Assistance 5 (IPF5)	
SUBPROJECT CODE AND TITLE	WB16-ALB-TRA-02: Detailed Design, ESIA and Tender Documents for the Construction of Tirana Bypass (Kashar - Vaqarr - Mullet)	
KODI DHE TITULLI I NENPROJEKTIT	WB16-ALB-TRA-02: Projekti i Zbatimit, VNMS dhe Dokumentet e Tenderit të Bypass-it të Tiranës (Kashar - Vaqarr - Mullet)	
DRAWING TITLE	Typical Cross Section 9 & 10 Motorway in low Fill/ Cut (in curve) EMERTIMI I VIZ. Seksion Terthor Tip 9 & 10 Autostrada në Mbushje/Gërmim të Ulët (në kthesë)	
DRAWING NO. NR. VIZATIMIT	WB16ALBTRA02-RD-00-D-208 WB16ALBTRA02-RD-00-D-208	SCALE / SHKALLA Scale 1:100 (A1) Scale 1:200 (A2)
DATE / DATA	07/2021	
DESIGNED BY / PROJEKTOI	REVIEWED BY / RISHIKOI	APPROVED BY / APROVOI
FARUK KABA (FK) REZAR KUMBARO (RK) REZART ARKAXHIU (RA)	DIMITRIS LAGKADIANOS (DL) PANOS PIKRODIMITRIS (PP)	RALPH HENDERSON (RH)
REVISIONS / RISHIKIMET		
ISSUE / VERSION	DATE / DATE	DESCRIPTION / PERSHKRIMI
00	12/2020	
01	05/2021	Updated / Përditësuar
02	07/2021	Updated / Përditësuar

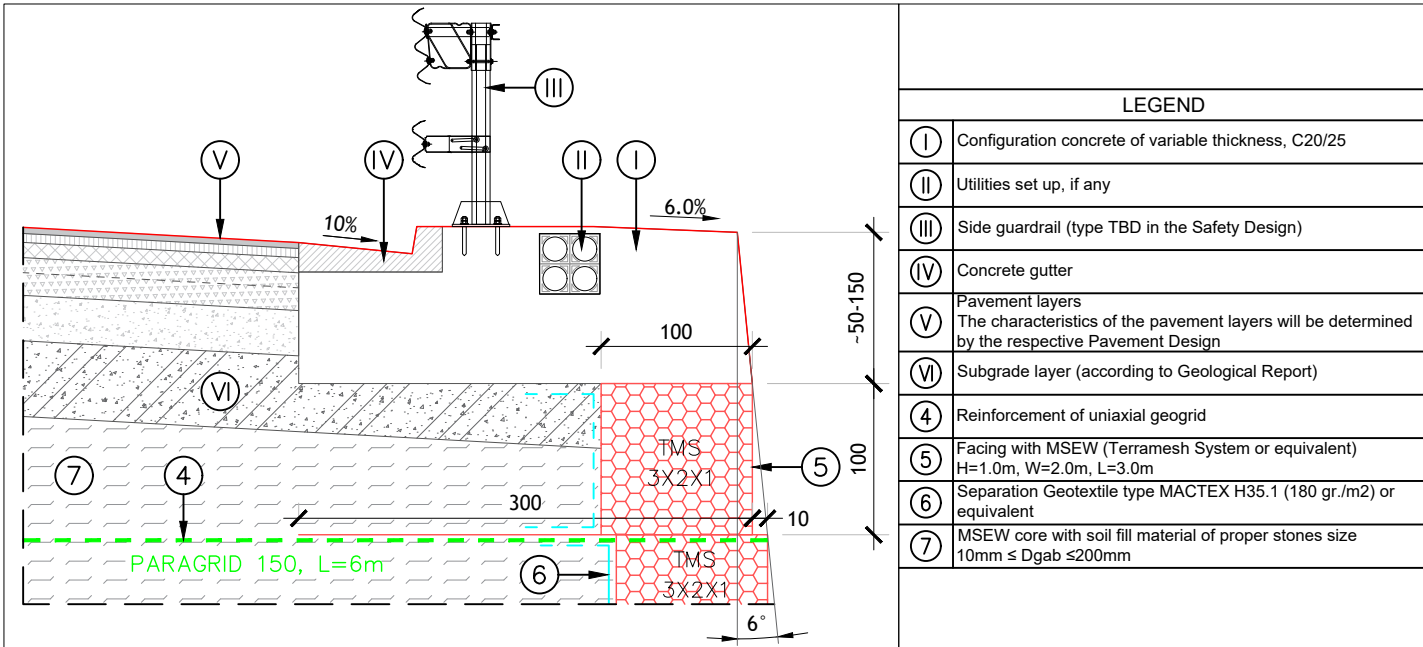
TYPICAL CROSS SECTION 11 - MOTORWAY IN RIVER PROTECTION CASE (in curve)
PROFIL TËRTHOR TIP 11 - AUTOSTRADA NË RASTIN MBROJTJES LUMORE (në kthesë)

- NOTE:
- Pavement construction according to the Pavement Design Report.
 - Cuts applied slopes and berms height according to the Geotechnical Design Report
 - Mechanical Stabilized Earth wall type/height according to the Geotechnical Design Report

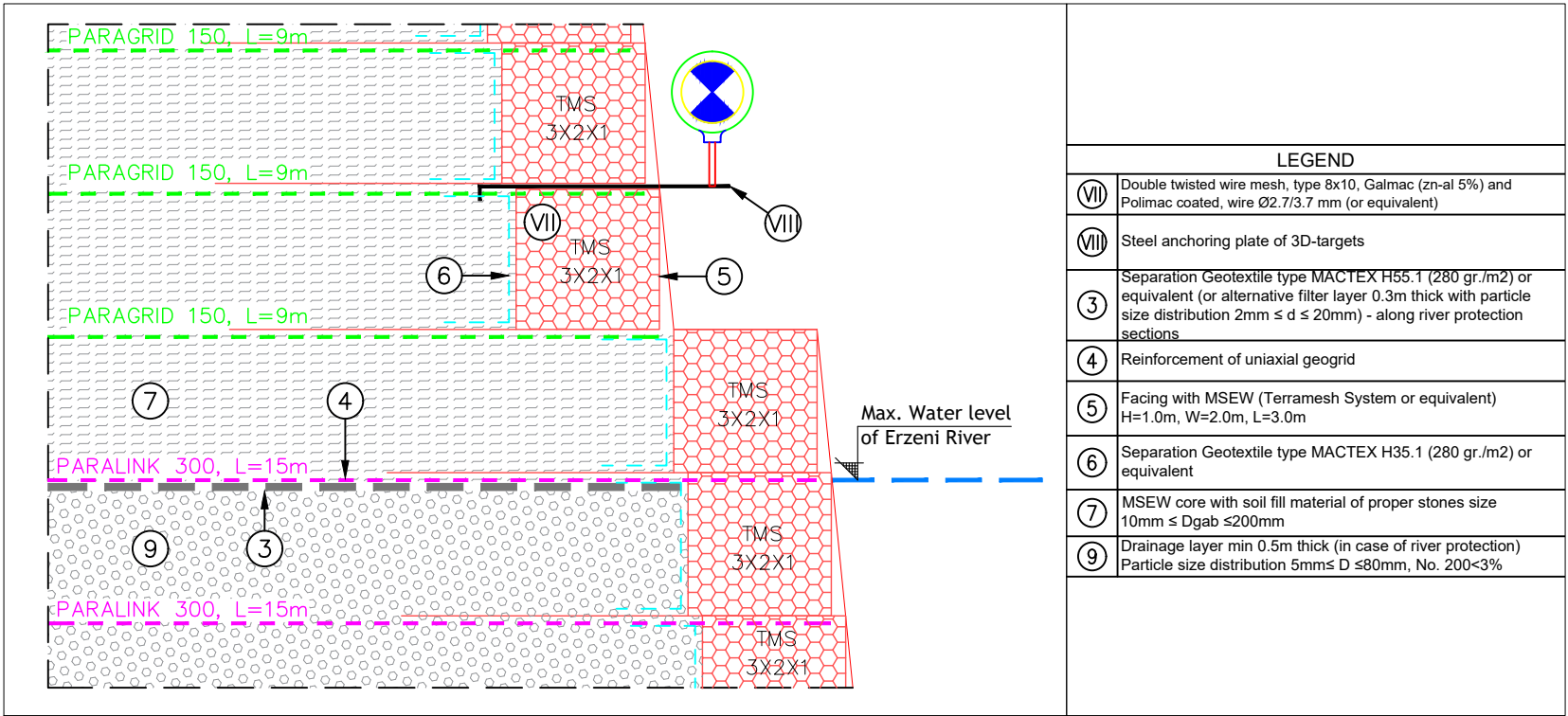


LEGEND	
①	Excavation line
②	Foundation improvement layer min 1.0m thick Maximum particle size D ≤ 80mm
③	Separation Geotextile type MACTEX H55.1 (280 gr./m2) or equivalent (or alternative filter layer 0.3m thick with particle size distribution 2mm ≤ d ≤ 20mm)
④	Reinforcement of uniaxial geogrid
⑤	Facing with MSEW (Terramesh System or equivalent) H=1.0m, W=2.0m, L=3.0m
⑥	Separation Geotextile type MACTEX H35.1 (180 gr./m2) or equivalent
⑦	MSEW core with soil fill material of proper stones size 10mm ≤ Dgab ≤ 200mm
⑧	Filling with quarries material / previously excavated material
⑨	Drainage layer min 0.5m thick (in case of river protection) Particle size distribution 5mms D ≤ 80mm, No. 200<3%
⑩	Mattress gabion carpet 0.3m thick Dimensions 3x2x0.2m (along the river protection segment)

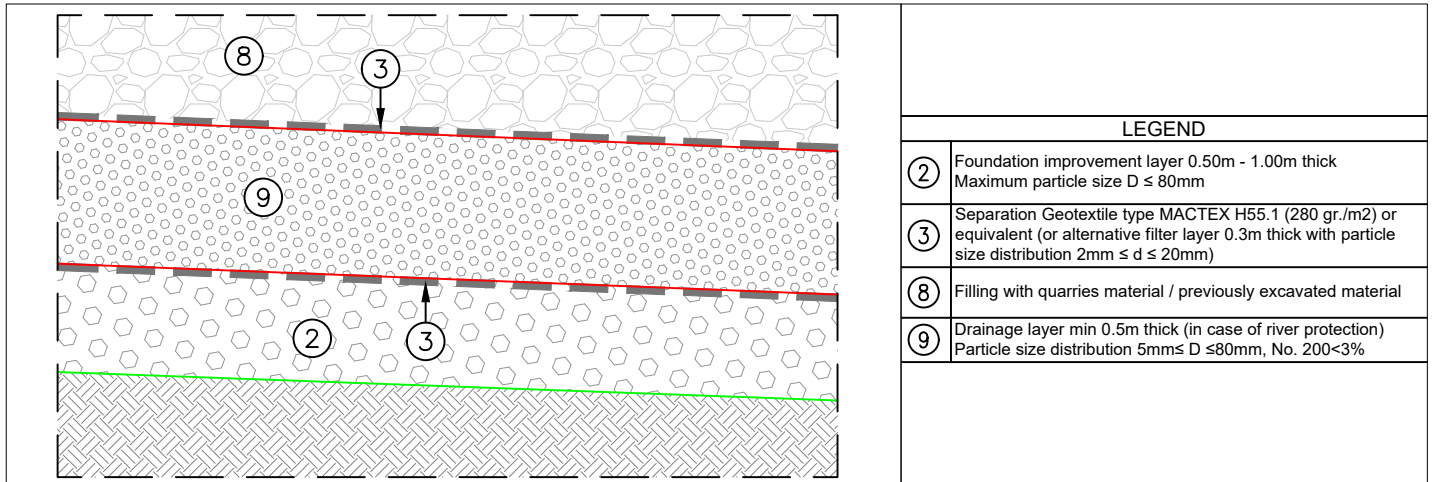
Detail "A" Scale 1:50
Detaji "A" Shkalla 1:50



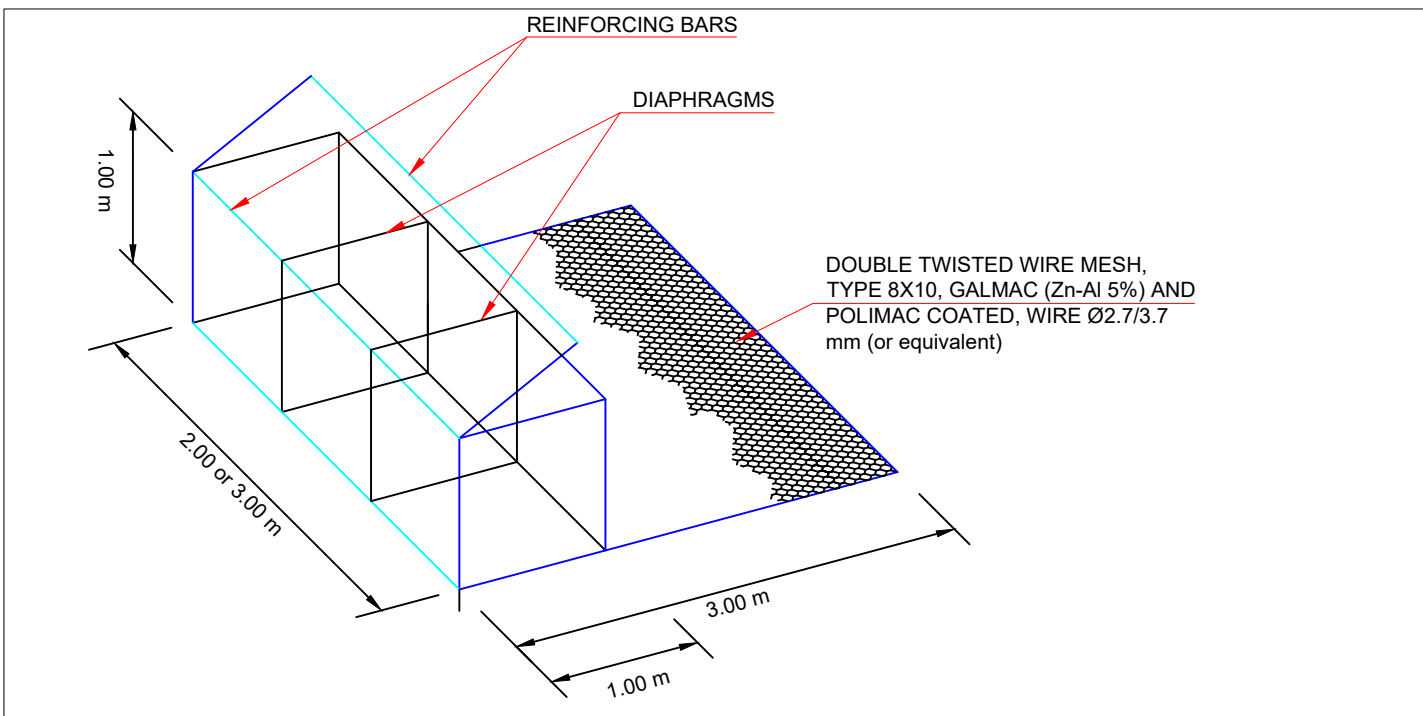
Detail "B" Scale 1:50
Detaji "B" Shkalla 1:50



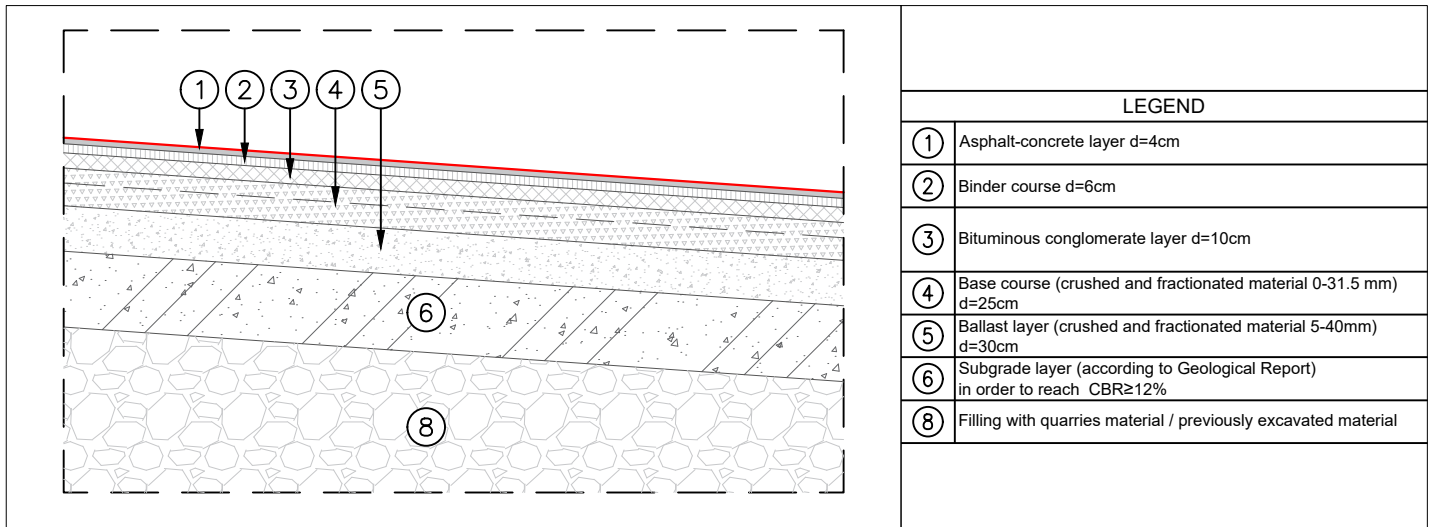
Detail "C" Scale 1:50
Detaji "C" Shkalla 1:50



Terramesh System Unit, Scale 1:50
Elementët e Njësisë së Sistemit Terramesh, Shkalla 1:50



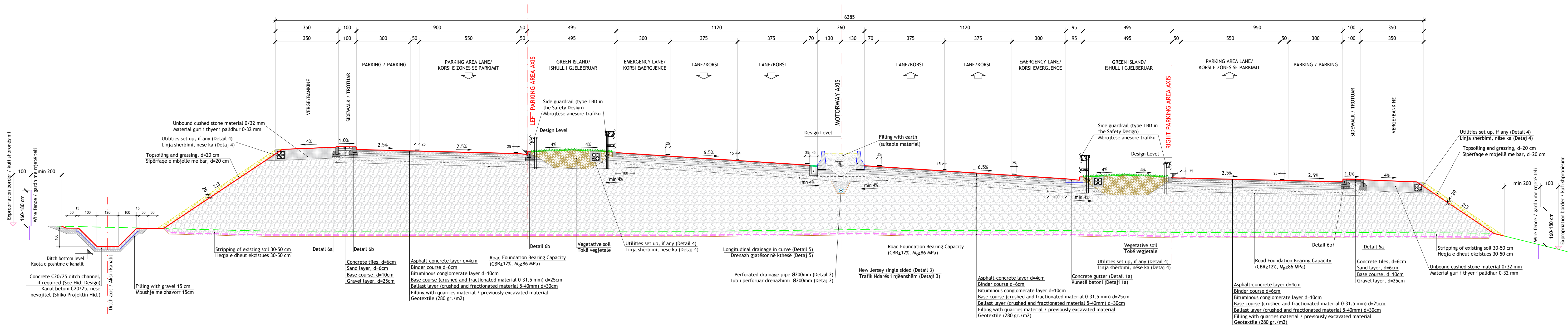
Detail "D" Scale 1:50
Detaji "D" Shkalla 1:50



Project Management	Designer
Takovska 45a, Beograd 11108	Rr. Qemal Stafa, P. 132, Tirana 1017
BENEFICIARY PERFITUESI	Republic of Albania - Ministry of Infrastructure and Energy of Albania, Albanian Road Authority (ARA) Republika e Shqipërisë - Ministria e Infrastruktura dhe Energji, Autoriteti Rrugor Shqiptar (ARRSH)
PROJECT PROJEKTI	Western Balkan Investment Framework (WBIF) Infrastructure Project Facility, Technical Assistance 5 (IPF5)
SUBPROJECT CODE AND TITLE	WB16-ALB-TRA-02: Detailed Design, ESIA and Tender Documents for the Construction of Tirana Bypass (Kashar - Vaqarr - Mullet)
KODI DHE TITULLI I NENPROJEKTI	WB16-ALB-TRA-02: Projekti i Zbatimit, VNMS dhe Dokumentet e Tenderit të Bypass-it të Tiranës (Kashar - Vaqarr - Mullet)
DRAWING TITLE EMERTIMI I VIZ.	Typical Cross Section 11 Motorway River Protection Case Seksion Tërthor Tip 11 Autostrada në Rastin e Mbrojtjes Lumore
DRAWING NO. NR. VIZATIMIT	WB16ALBTRA02-RD-00-D-209 WB16ALBTRA02-RD-00-D-209
DATE / DATA	07/2021
DESIGNED BY / PROJEKTOI FARUK KABA (FK) REZAR KUMBARO (RK) REZART ARKAXHIU (RA)	REVIEWED BY / RISHIKOI DIMITRIS LAGKADIANOS (DL) PANOS PIKRODIMITRIS (PP)
ISSUE / VERSION	DATE / DATE
00	12/2020
01	05/2021
02	07/2021
DESCRIPTION / PERSHKRIMI	APPROVED BY / APROVOI RALPH HENDERSON (RH)

- Pavement construction according to the Pavement Design Report.
- Cuts applied slopes and berms height according to the Geotechnical Design Report
- Cuts slope protection will be according to the Geotechnical Design Report.

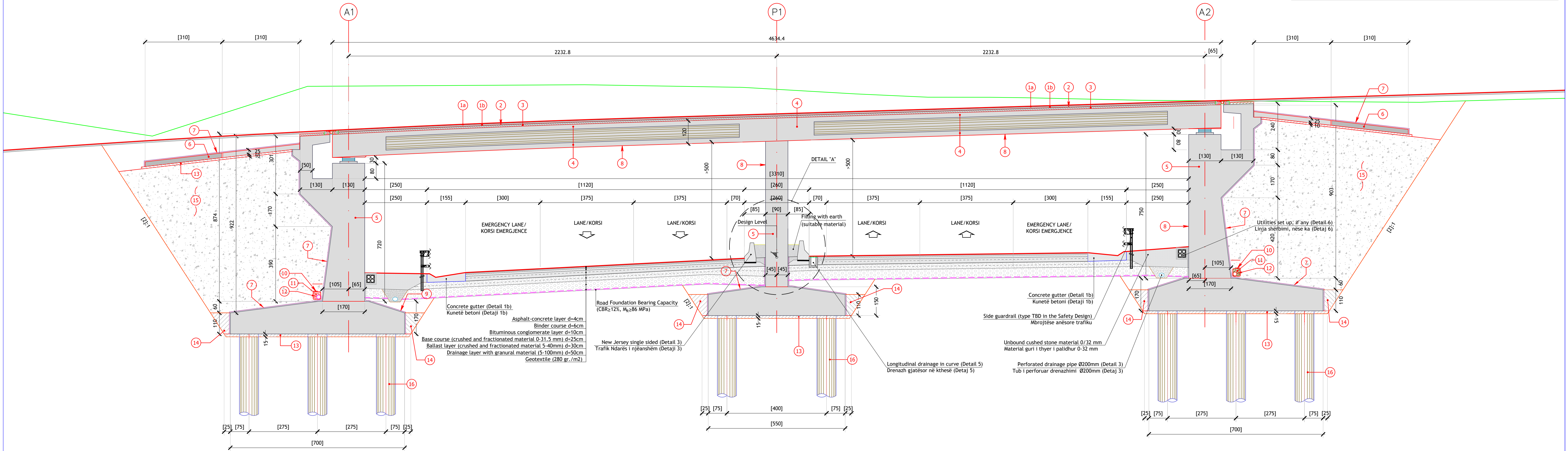
TYPICAL CROSS SECTION 12 - MOTORWAY PARKING AREAS (Ch. 13+900)
PROFIL TËRTHOR TIP 12 - ZONAT E PARKIMIT NË AUTOSTRADË (Km. 13+900)



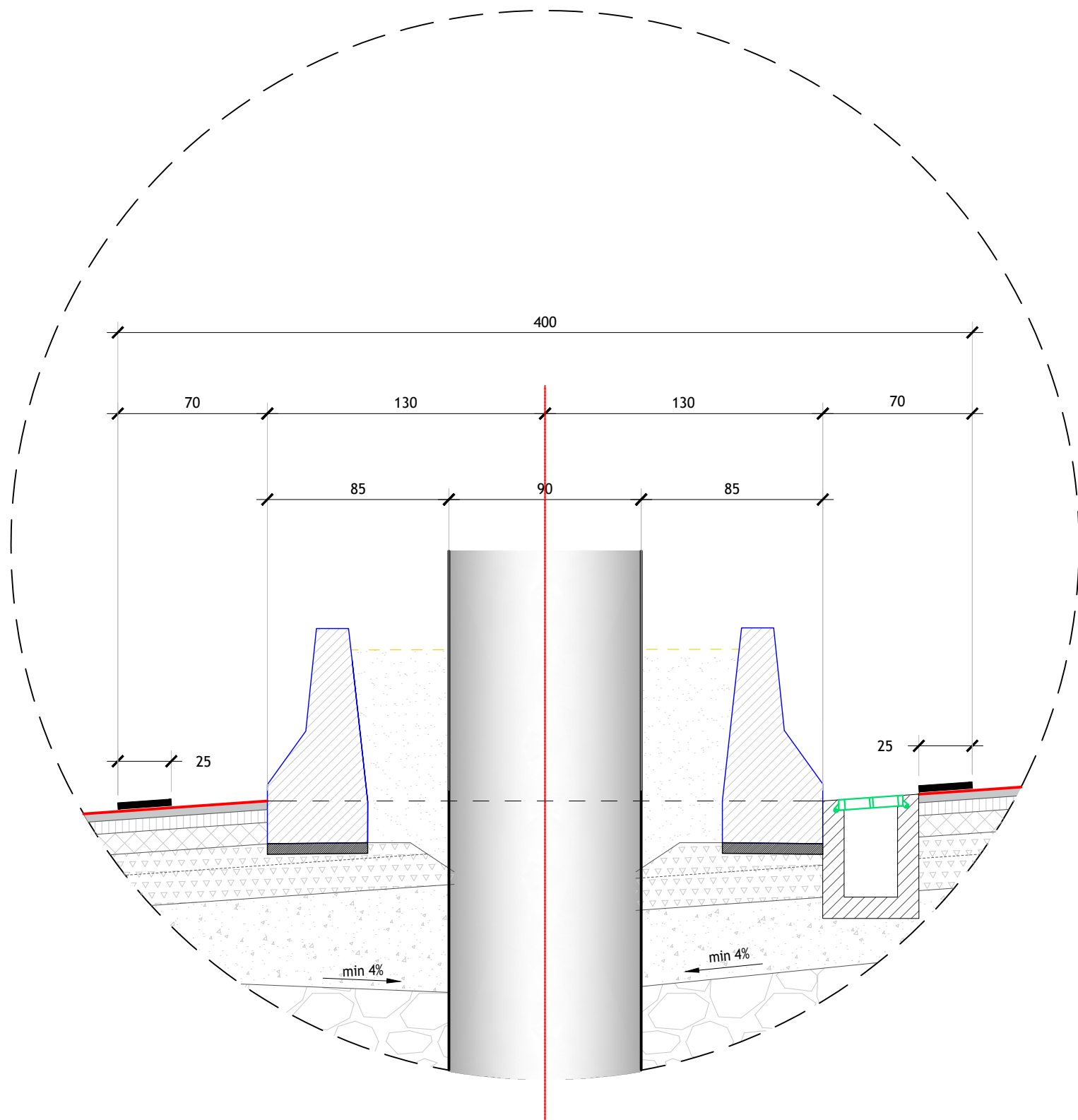
		Western Balkans Investment Framework				WBIF Western Balkans Investment Bank			
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Project Management				Designer					
 • IPF 5									
Takovska 45a, Beograd 11008				Rr. Qemal Stafa, P. 132, Tirana 1017					
BENEFICIARY <i>PROJEKTI</i>				Republic of Albania - Ministry of Infrastructure and Energy of Albania, Albanian Road Authority (ARA)					
				Republika e Shqipërisë - Ministria e Infrastruktursë dhe Energjisë, Autoriteti Rrugor Shqiptar (ARRSH)					
PROJECT <i>PROJEKTI</i>				Western Balkans Investment Framework (WBIF) Infrastructure Project Facility, Technical Assistance 5 (IPF5)					
SUBPROJECT CODE AND TITLE				WB16-ALB-TRA-02: Detailed Design, ESIA and Tender Documents for the Construction of Tirana Bypass (Kashar - Vaqarr - Mullet)					
KODI DHE TITULLI I NENPROJEKTI				WB16-ALB-TRA-02: Projekti i Zbatimit, VNMS dhe Dokumentet e Tenderit të Bypass-it të Tiranës (Kashar - Vaqarr - Mullet)					
DRAWING TITLE				Typical Cross Section 12 Motorway Parking Areas (Ch. 13+900)					
EMERTIMI I VIZ.				Seksion Terthor Tip 12 Zonat e Parkimit në Autostradë (Km. 13+900)					
DRAWING NO. NR. VIZATIMIT				WB16ALBTRA02-RD-00-D-210 WB16ALBTRA02-RD-00-D-210				SCALE / SHKALLA Scale 1:100 (A1+) Scale 1:200 (A3+)	
DATE / DATA								07/2021	
DESIGNED BY / PROJEKTOI			REVIEWED BY / RISHIKOI			APPROVED BY / APROVOI			
FARUK KABA (FK) REZAR KUMBARO (RK) REZART ARKAXHIU (RA)			DIMITRIS LAKAGDIANOS (DL) PANOS PIKRODIMITRIS (PP)			RALPH HENDERSON (RH)			
REVISIONS / RISHIKIMET									
ISSUE / VERSION		DATE / DATA		DESCRIPTION / PERSHKRIMI					
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02		07/2021		Updated / Përditësuar					

TYPICAL CROSS SECTION 13 - MOTORWAY OVERPASS CASE
PROFIL TËRTHOR TIP 13 - AUTOSTRADA NË RASTIN E MBIKALIMIT

- NOTE:
- Pavement construction according to the Pavement Design Report.
 - Cuts applied slopes and berms height according to the Geotechnical Design Report.
 - Cuts slope protection will be according to the Geotechnical Design Report.



Detail A - Scale 1:25
MEDIAN IN CASE OF MIDDLE PIER



LEGEND/LEGJENDE

1a	Asphalt concrete layer/Shtrese asfaltbetoni 4 cm
1b	Binder course/ Shtrese binderi 6cm
2	Deck insulation with a special waterproofing membrane/ Shtrese hidroizoluese per soleten e ures
3	Slope forming cement mortar / Laç çimentojë që formon shpatin
4	Deck slab concrete C30/37/ Soleta b/a e ures C30/37
5	Pier-Abutment concrete C30/37/ Pila-Shtatulla b/a C30/37
6	Transition slab concrete C20/25/ Solete rakorduese b/a C20/25
7	Double waterproofing membrane/ Hidroizolim me dy shtresa
8	Concrete surface finishes "C"/ Beton i lemuar ne siperfaqe
9	Waterproofing/ Hidroizolim
10	Geotextile (280 gr./m2)/ Gjeotekstil
11	Granular filler/ Çakell drenazhues
12	Perforated pipe Ø200mm/Tub drenazhi Ø200
13	Lean concrete layer C12/15 min. 10cm/ Shtrese betoni nivelues min. 10cm
14	Concrete filling C8/10/ Mbushje me beton C8/10
15	Backfilling with sand-gravel compacted to 98% with Mod.Proctor/ Mbushje me rere-zhavorr e ngjeshur 98% me Proktor i Modifikuar
16	Pile foundation C25/30/ Pilote b/a C25/30
17	Sidewalk concrete C20/25/ Trotuar b/a C20/25
18	Handrail/ Kangjella metalike

Western Balkans
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The EIB bank

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Project Management

IPF 5

Designer

Rr. Qemal Stafa, P. 132, Tirana 1017

BENEFICIARY
PERFITUESI

Republic of Albania - Ministry of Infrastructure and Energy of Albania, Albanian Road Authority (ARA)

Republika e Shqipërisë - Ministria e Infrastruktura dhe Energjië, Autoriteti Rrugor Shqiptar (ARRSH)

PROJECT
PROJEKTI

Western Balkan Investment Framework (WBIF)
Infrastructure Project Facility, Technical Assistance 5 (IPF5)

SUBPROJECT
CODE AND TITLE

WB16-ALB-TRA-02: Detailed Design, ESIA and Tender Documents for the Construction of Tirana Bypass (Kashar - Vaqarr - Mullet)

KODI DHE TITULLI I NENPROJEKTIT

WB16-ALB-TRA-02: Projekti i Zbatimit, VNMS dhe Dokumentet e Tenderit te Bypass-it te Tiranes (Kashar - Vaqarr - Mullet)

DRAWING TITLE

EMERTIMI I VIZ.

Typical Cross Section 13
Motorway Overpass Case

SekSION Terthor Tip 13
Autostrada në Rastin e Mbikalimit

DRAWING NO.
NR. VIZATIMIT

WB16ALBTRA02-RD-00-D-211
WB16ALBTRA02-RD-00-D-211

SCALE / SHKALLA
Scale 1:100 (A1)
Scale 1:200 (A3)

DATE / DATA

07/2021

DESIGNED BY / PROJEKTOI

FARUK KABA (FK)
REZAR KUMBARO (RK)
REZART ARKAXHIU (RA)

REVIEWED BY / RISHIKOI

DIMITRIS LAGKADIANOS (DL)
PANOS PIKRODIMITRIS (PP)

APPROVED BY / APROVOI

RALPH HENDERSON (RH)

REVISIONS / RISHIKIMET

ISSUE / VERSION

DATE / DATE

DESCRIPTION / PERSHKRIMI

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12/2020

01

05/2021

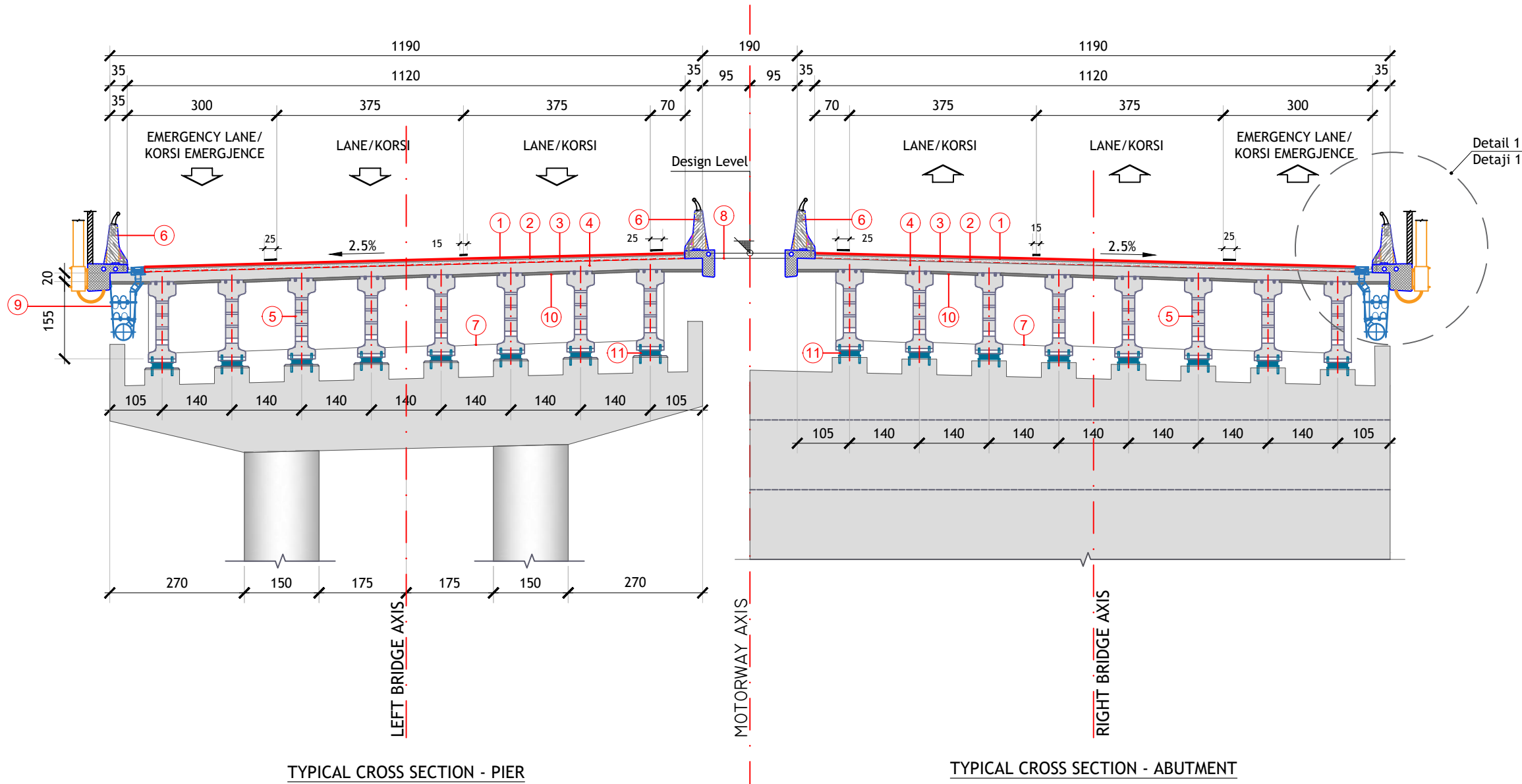
Updated / Përditësuar

02

07/2021

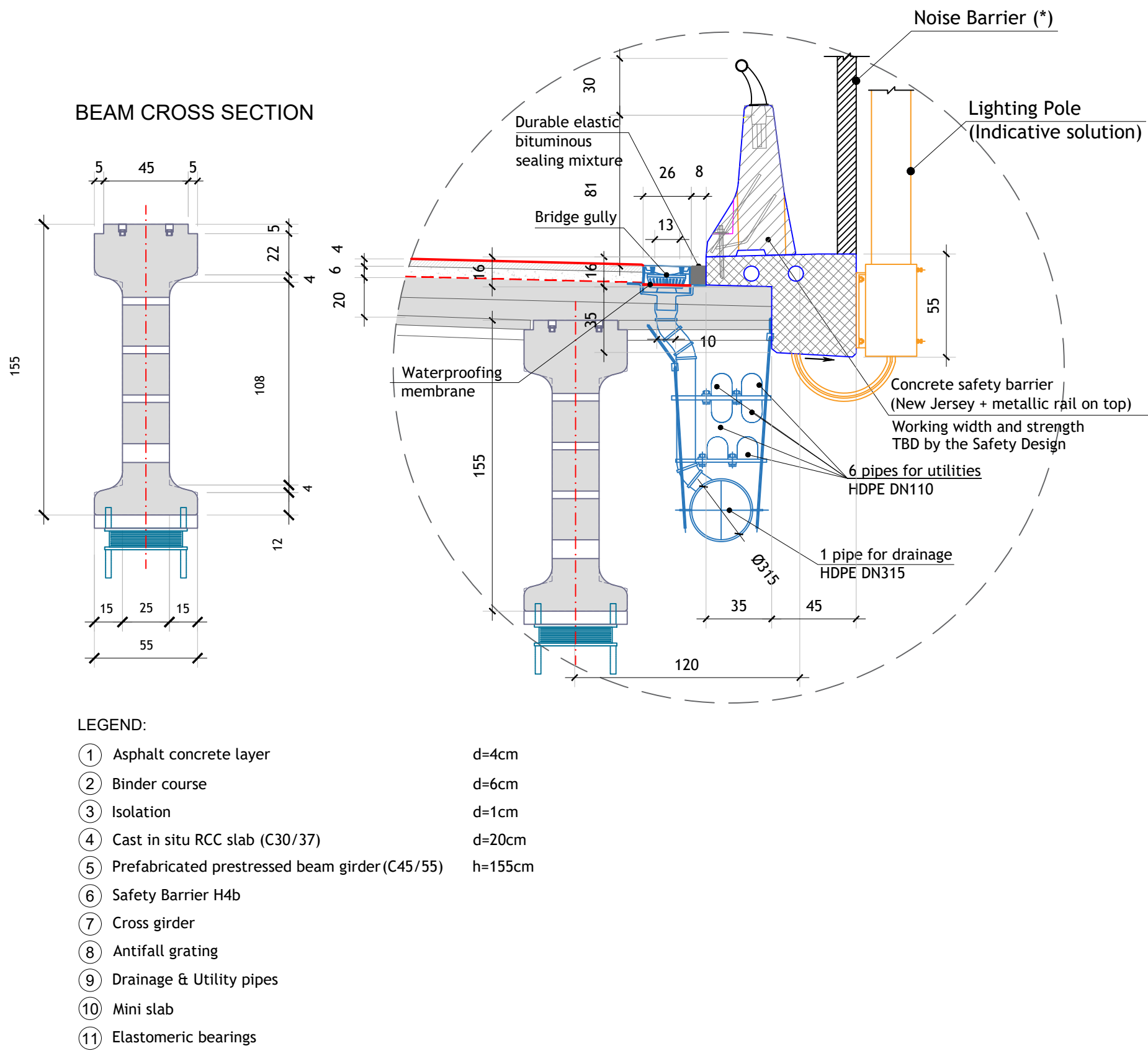
Updated / Përditësuar

TYPICAL CROSS SECTION 14 - MOTORWAY IN BRIDGE WITH PRE-STRESSED PRECAST GIRDERS, L=29M (IN TANGENT)
PROFIL TËRTHOR TIP 14 - AUTOSTRADA NË URË ME TRARË TË PARANDERUR, L=29M (NË VIJË TË DREJTË)

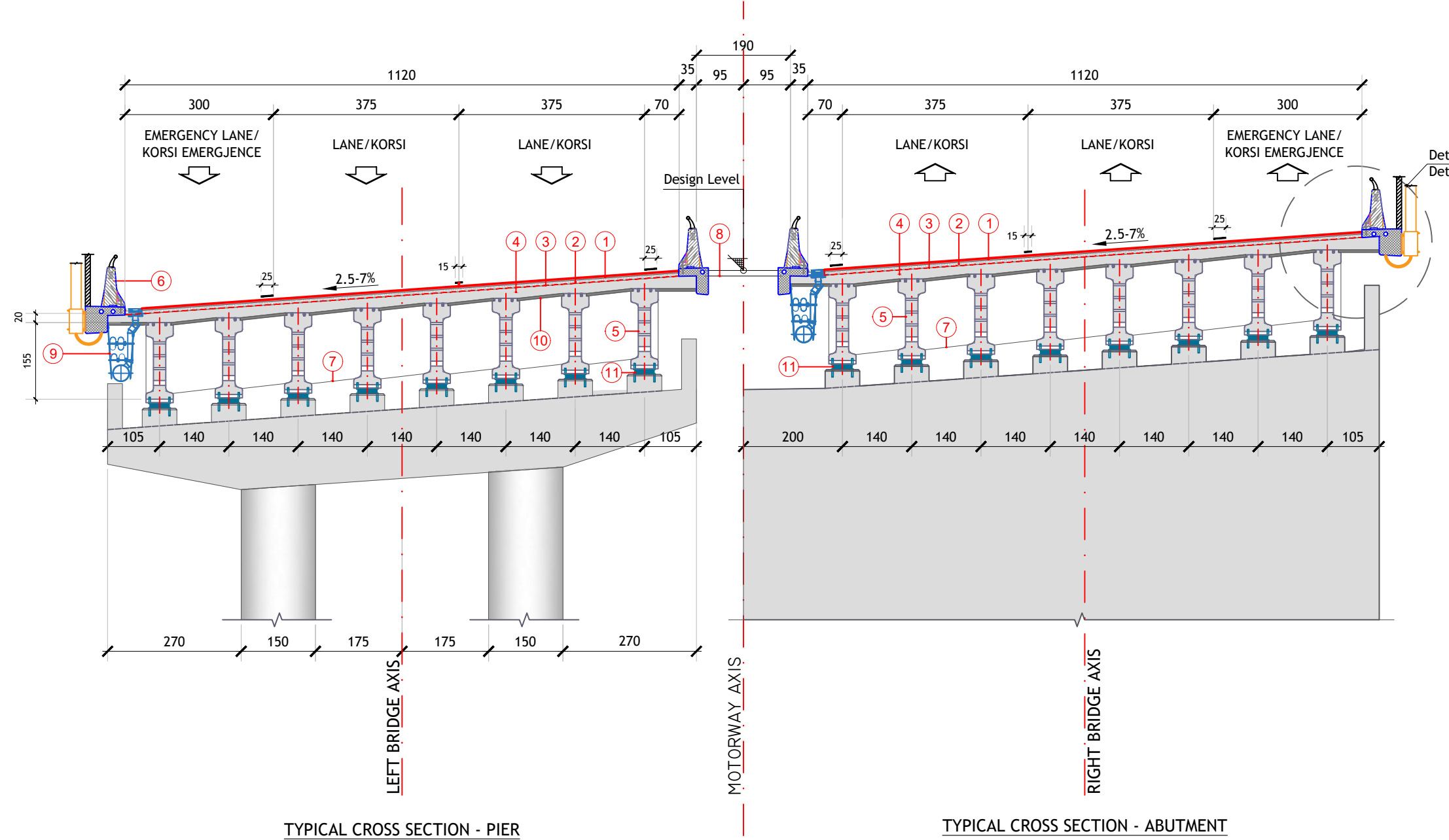


NOTE:
This typical cross section will be applied only at BR02, BR04, BR05, BR06, BR07.
For further details see relevant drawing of these bridges.

Detail 1 - Scale 1:25
Detaji 1 - Shkalla 1:25

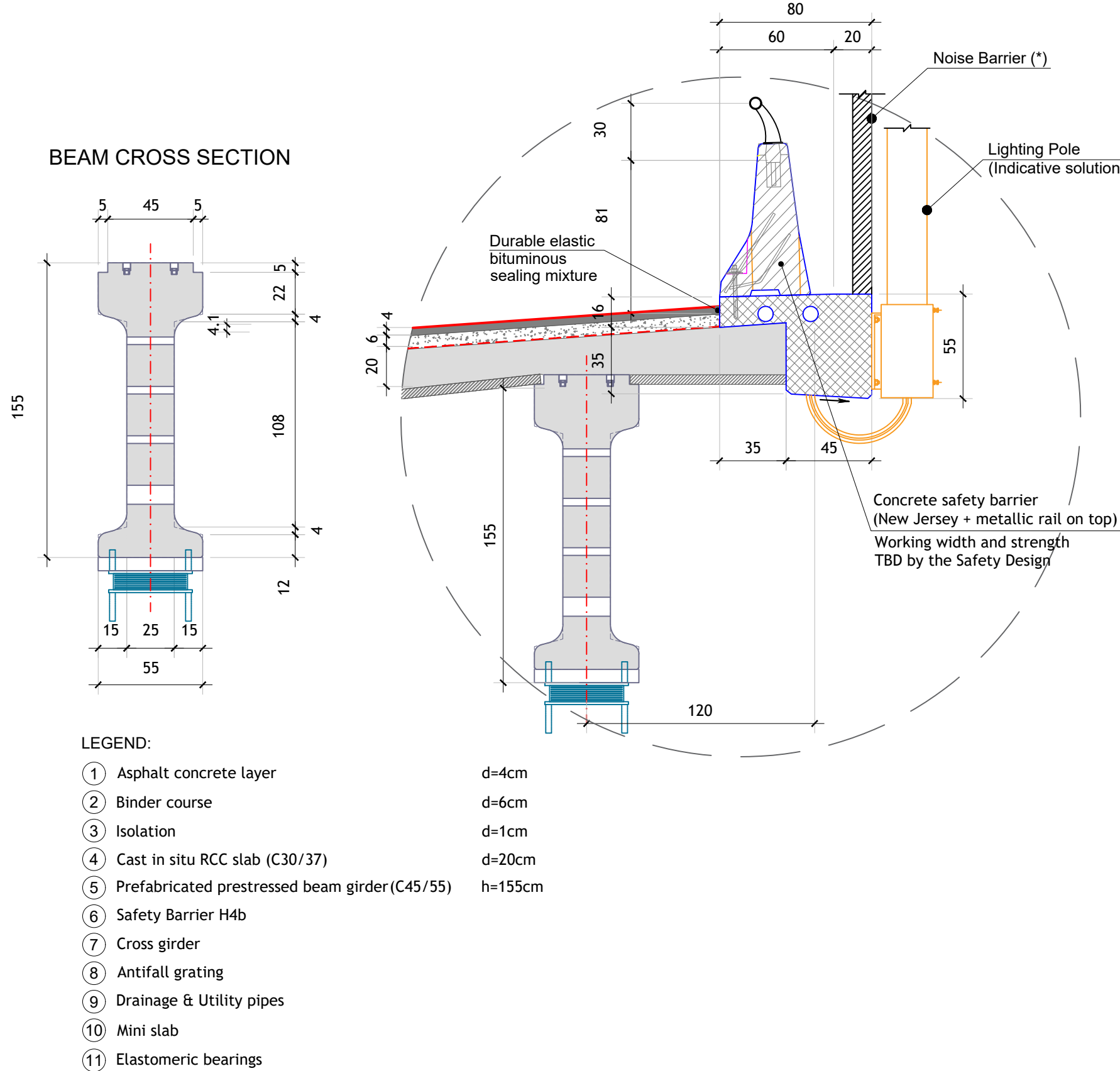


TYPICAL CROSS SECTION 15 - MOTORWAY IN BRIDGE WITH PRE-STRESSED PRECAST GIRDERS, L=29M (IN CURVE)
PROFIL TËRTHOR TIP 15 - AUTOSTRADA NË URË ME TRARË TË PARANDERUR, L=29M (NË KTHESË)



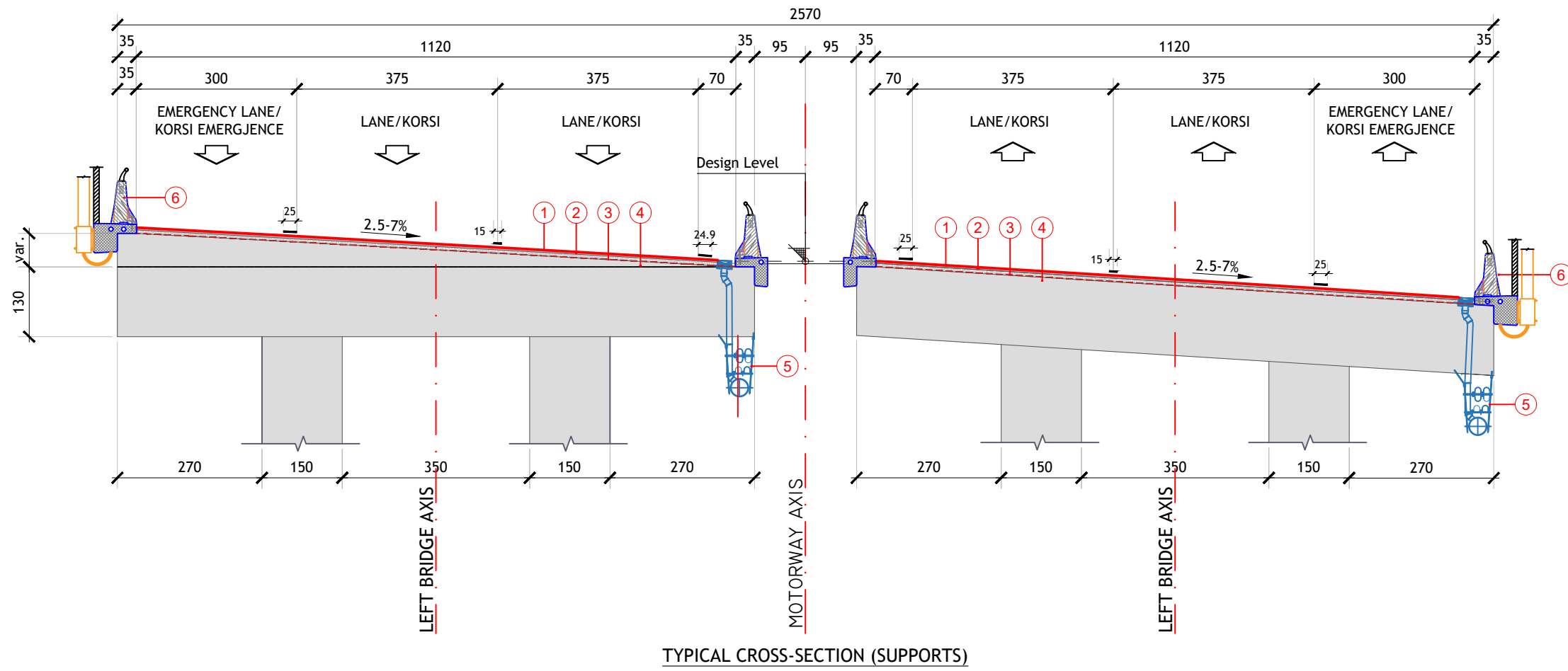
NOTE:
This typical cross section will be applied only at BR02, BR04, BR05, BR06, BR07.
For further details see relevant drawing of these bridges.

Detail 2 - Scale 1:25
Detaji 2 - Shkalla 1:25



		 Western Balkans Investment Framework		 European Investment Bank <i>The EIB bank</i>	
Project Management				Designer	
 • IPF 5					
Takovska 45a, Beograd 11108				Rr. Qemal Stafa, P. 132, Tirana 1017	
BENEFICIARY <i>PERFITUESI</i>		Republic of Albania - Ministry of Infrastructure and Energy of Albania, Albanian Road Authority (ARA)			
		<i>Republika e Shqiperise - Ministria e Infrastruktures dhe Energjise, Autoriteti Rrugor Shqiptar (ARRSH)</i>			
PROJECT <i>PROJEKTI</i>		Western Balkan Investment Framework (WBIF) Infrastructure Project Facility, Technical Assistance 5 (IPF5)			
SUBPROJECT CODE AND TITLE		WB16-ALB-TRA-02: Detailed Design, ESIA and Tender Documents for the Construction of Tirana Bypass (Kashar - Vaqarr - Mullet)			
<i>KODI DHE TITULLI I NENPROJEKTIT</i>		<i>WB16-ALB-TRA-02: Projekti i Zbatimit, VNMS dhe Dokumentet e Tenderit te Bypass-it te Tiranës (Kashar - Vaqarr - Mullet)</i>			
DRAWING TITLE <i>EMERTIMI I VIZ.</i>		Typical Cross Section 13 & 14 Motorway in Bridge (in tangent, in curve) <i>Seksion Terthor Tip 13 & 14 Autostrada në Urë (në vijë të drejtë, në kthesë)</i>			
DRAWING NO. <i>NR. VIZATIMIT</i>		WB16ALBTRA02-RD-00-D-212 <i>WB16ALBTRA02-RD-00-D-212</i>		SCALE / SHKALLA Scale 1:100 (A1) Scale 1:200 (A3)	
DATE / DATA				07/2021	
DESIGNED BY / PROJEKTOI		REVIEWED BY / RISHIKOI		APPROVED BY / APROVOI	
FARUK KABA (FK) REZAR KUMBARO (RK) REZART ARKAXHIU (RA)		DIMITRIS LAGKADIANOS (DL) PANOS PIKRODIMITRIS (PP)		RALPH HENDERSON (RH)	
REVISIONS / RISHIKIMET					
ISSUE / VERSION	DATE / DATA	DESCRIPTION / PERSHKRIMI			
00	12/2020				
01	05/2021	Updated / Përditësuar			
02	07/2021	Updated / Përditësuar			

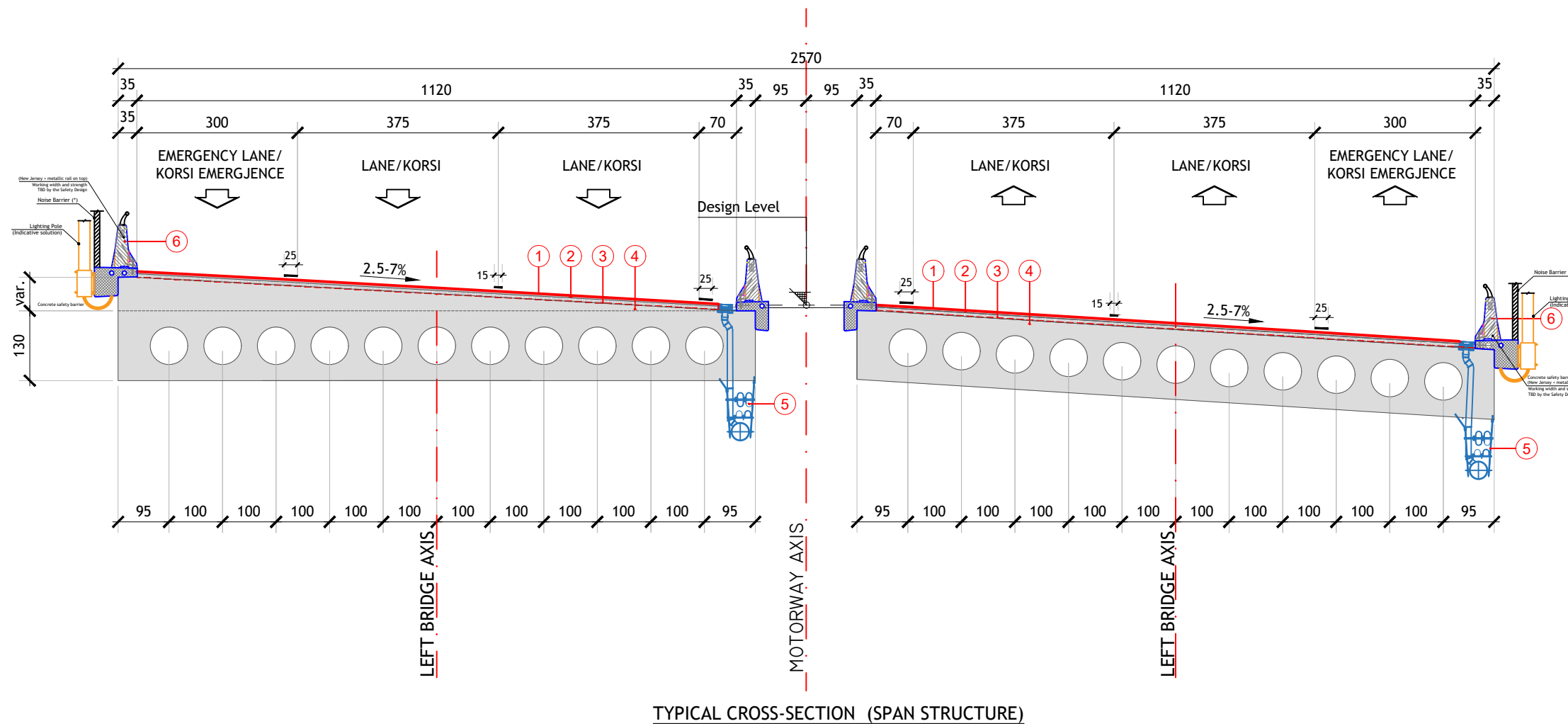
TYPICAL CROSS SECTION 16 - MOTORWAY IN MONOLITHS CONTINUOUS SLAB BRIDGE
PROFIL TËRTHOR TIP 16 - AUTOSTRADA NË URË MONOLITE TË VAZHDUAR



- LEGEND:
- ① Asphalt concrete layer
 - ② Binder course
 - ③ Isolation
 - ④ Cast in situ RCC slab (C30/37)
 - ⑤ Drainage & Utility pipes
 - ⑥ Safety Barrier H4b
- d=4cm
d=6cm
d=1cm
d=20cm

NOTE:
This typical cross section will be applied only at BR01, BR03.
For further details see relevant drawing of these bridges.

TYPICAL CROSS SECTION 17 - MOTORWAY IN MONOLITHS CONTINUOUS SLAB BRIDGE
PROFIL TËRTHOR TIP 17 - AUTOSTRADA NË URË MONOLITE TË VAZHDUAR



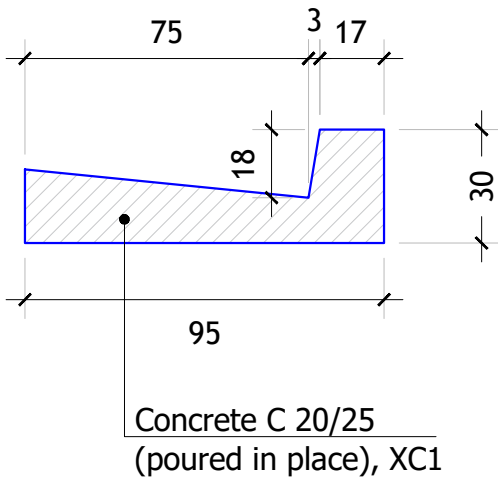
- LEGEND:
- ① Asphalt concrete layer
 - ② Binder course
 - ③ Isolation
 - ④ Cast in situ RCC slab (C30/37)
 - ⑤ Drainage & Utility pipes
 - ⑥ Safety Barrier H4b
- d=4cm
d=6cm
d=1cm
d=20cm

NOTE:
This typical cross section will be applied only at BR01, BR03.
For further details see relevant drawing of these bridges.

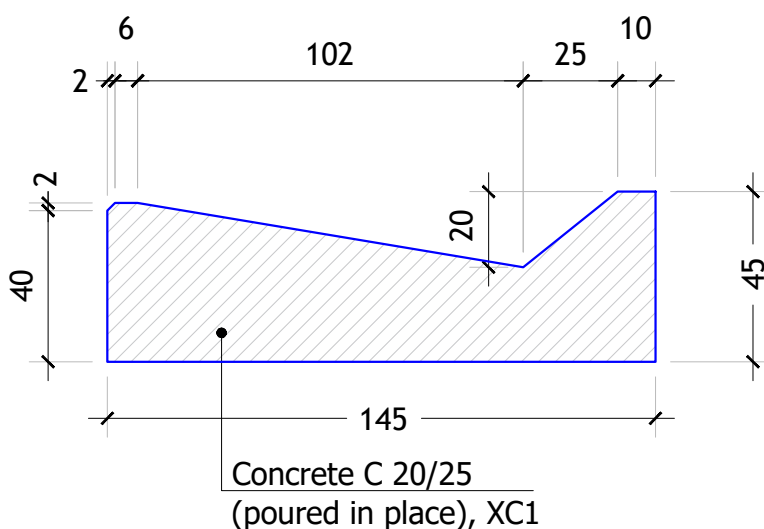
 Western Balkans Investment Framework WBIF BUILDING THE EUROPEAN FUTURE TOGETHER 		
Project Management		Designer
Takovska 45a, Beograd 11108		 IPF 5 Rr. Qemal Stafa, P. 132, Tirana 1017
BENEFICIARY <i>PERFITUESI</i>	Republic of Albania - Ministry of Infrastructure and Energy of Albania, Albanian Road Authority (ARA) <i>Republika e Shqipërisë - Ministria e Infrastruktura dhe Energjisë, Autoriteti Rrugor Shqiptar (ARRSH)</i>	
PROJECT <i>PROJEKTI</i>	Western Balkan Investment Framework (WBIF) Infrastructure Project Facility, Technical Assistance 5 (IPF5)	
SUBPROJECT CODE AND TITLE	WB16-ALB-TRA-02: Detailed Design, ESIA and Tender Documents for the Construction of Tirana Bypass (Kashar - Vaqarr - Mullet)	
KODI DHE TITULLI I NENPROJEKTI	<i>WB16-ALB-TRA-02: Projekti i Zbatimit, VNMS dhe Dokumentet e Tenderit të Bypass-it të Tiranës (Kashar - Vaqarr - Mullet)</i>	
DRAWING TITLE <i>EMERTIMI / VIZ.</i>	Typical Cross Section 15 & 16 Motorway in Monolith Continuous Slab Bridge <i>Seksion Terthor Tip 15 & 16 Autostrada në Urë Monolite të Vazhduar</i>	
DRAWING NO. <i>NR. VIZATIMIT</i>	WB16ALBTRA02-RD-00-D-213 <i>WB16ALBTRA02-RD-00-D-213</i>	SCALE / SHKALLA Scale 1:100 (A1) Scale 1:200 (A3)
DATE / DATA		07/2021
DESIGNED BY / PROJEKTOI FARUK KABA (FK) REZAR KUMBARO (RK) REZART ARKAXHIU (RA)	REVIEWED BY / RISHIKOI DIMITRIS LAGKADIANOS (DL) PANOS PIKRODIMITRIS (PP)	APPROVED BY / APROVOI RALPH HENDERSON (RH)
REVISIONS / RISHIKIMET		
ISSUE / VERSION	DATE / DATE	DESCRIPTION / PERSHKRIMI
00	12/2020	
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02	07/2021	Updated / Përditësuar

TYPICAL CROSS SECTION - DETAILS 1 Scale 1:20
PROFIL TËRTHOR TIP - DETAJE 1 Shkalla 1:20

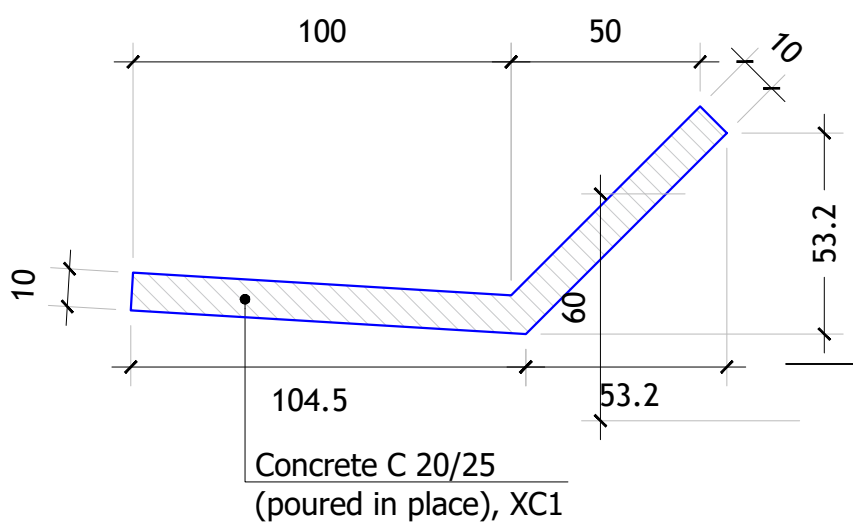
Detail 1a - Concrete gutter



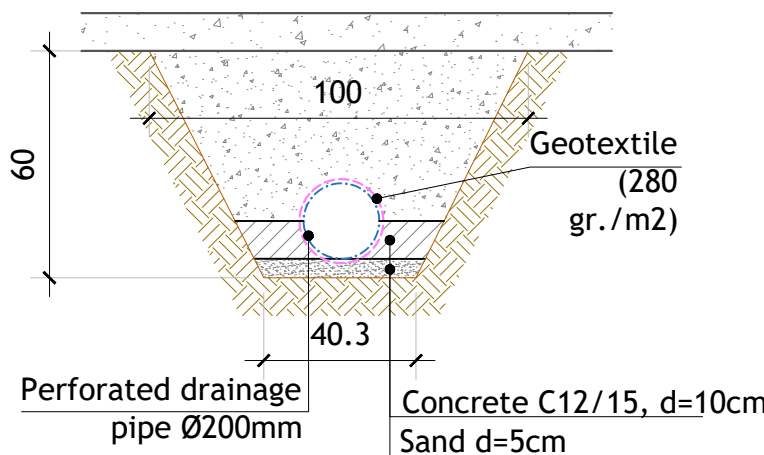
Detail 1b - Concrete gutter



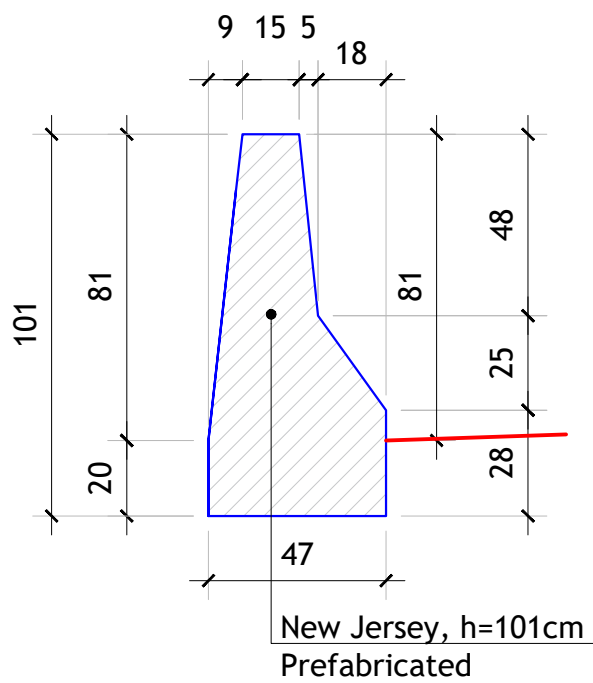
Detail 1c - Concrete gutter



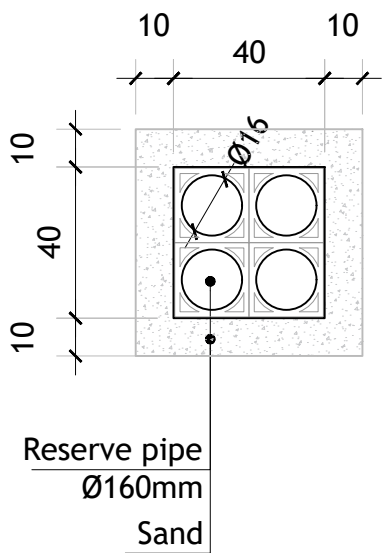
Detail 2 - Longitudinal drainage



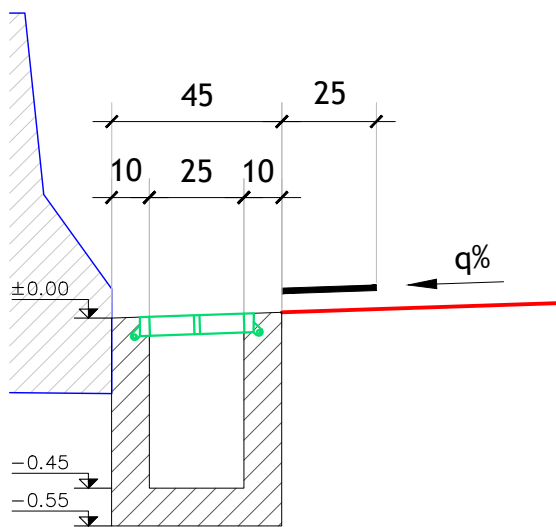
Detail 3 - New Jersey



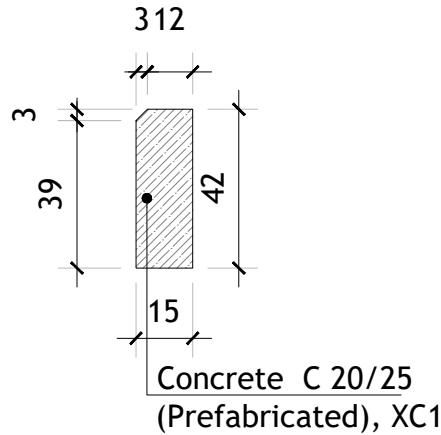
Detail 4 - Reserve lines



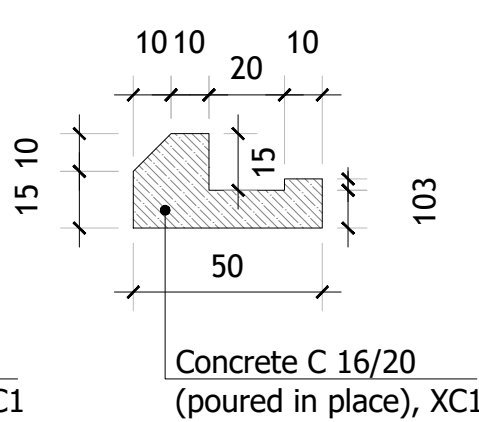
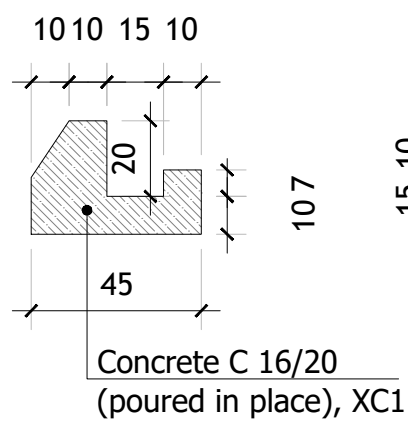
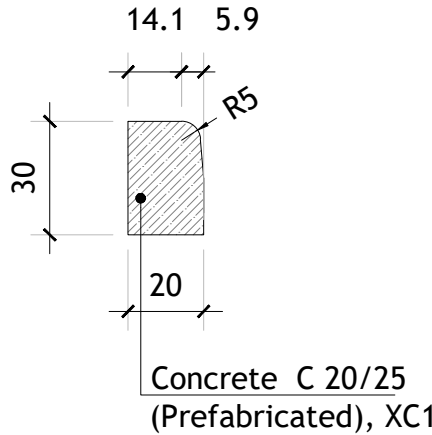
Detail 5 - Longitudinal drainage in curve



Detail 6a - Concrete curb

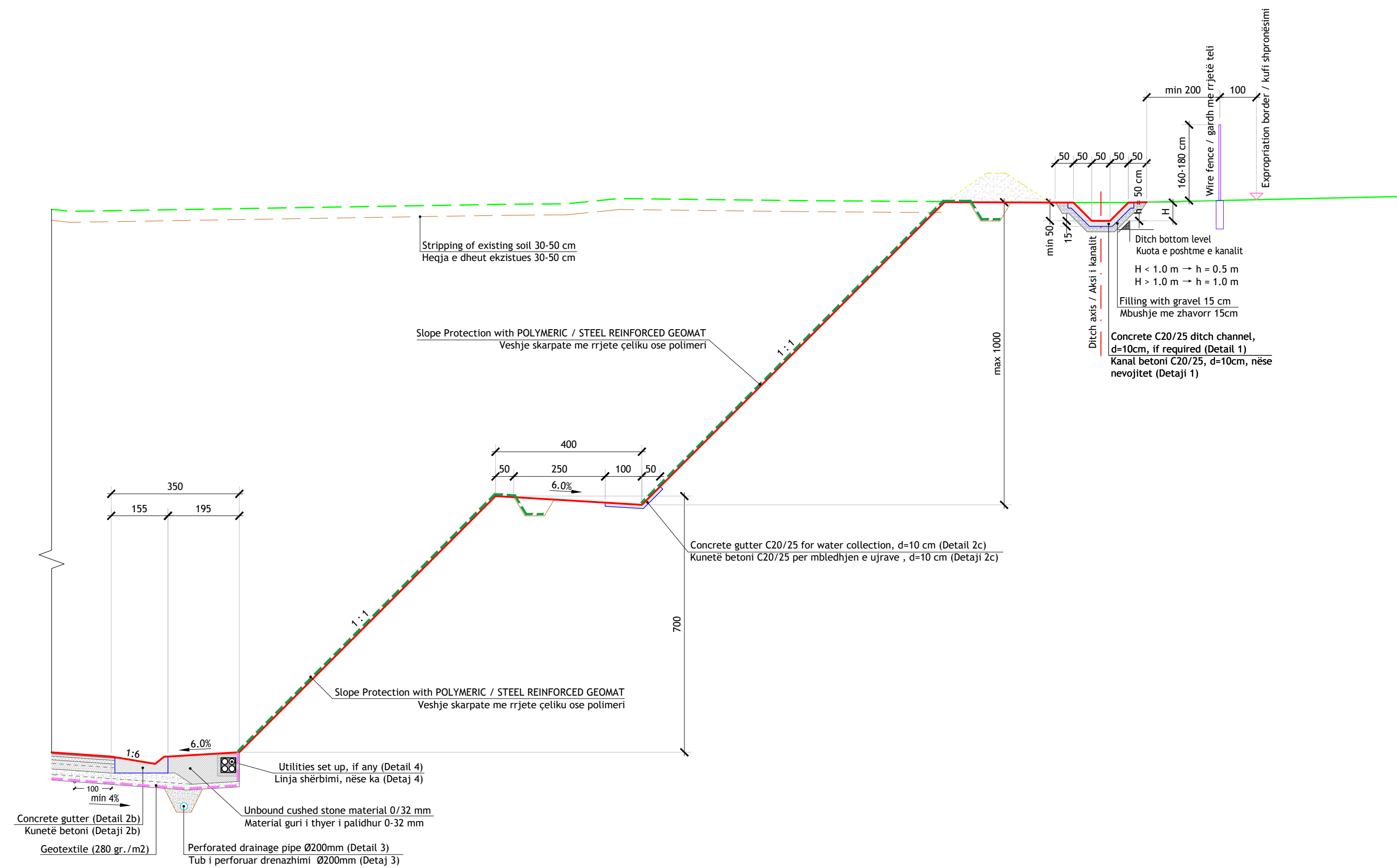


Detail 6b - Concrete curb

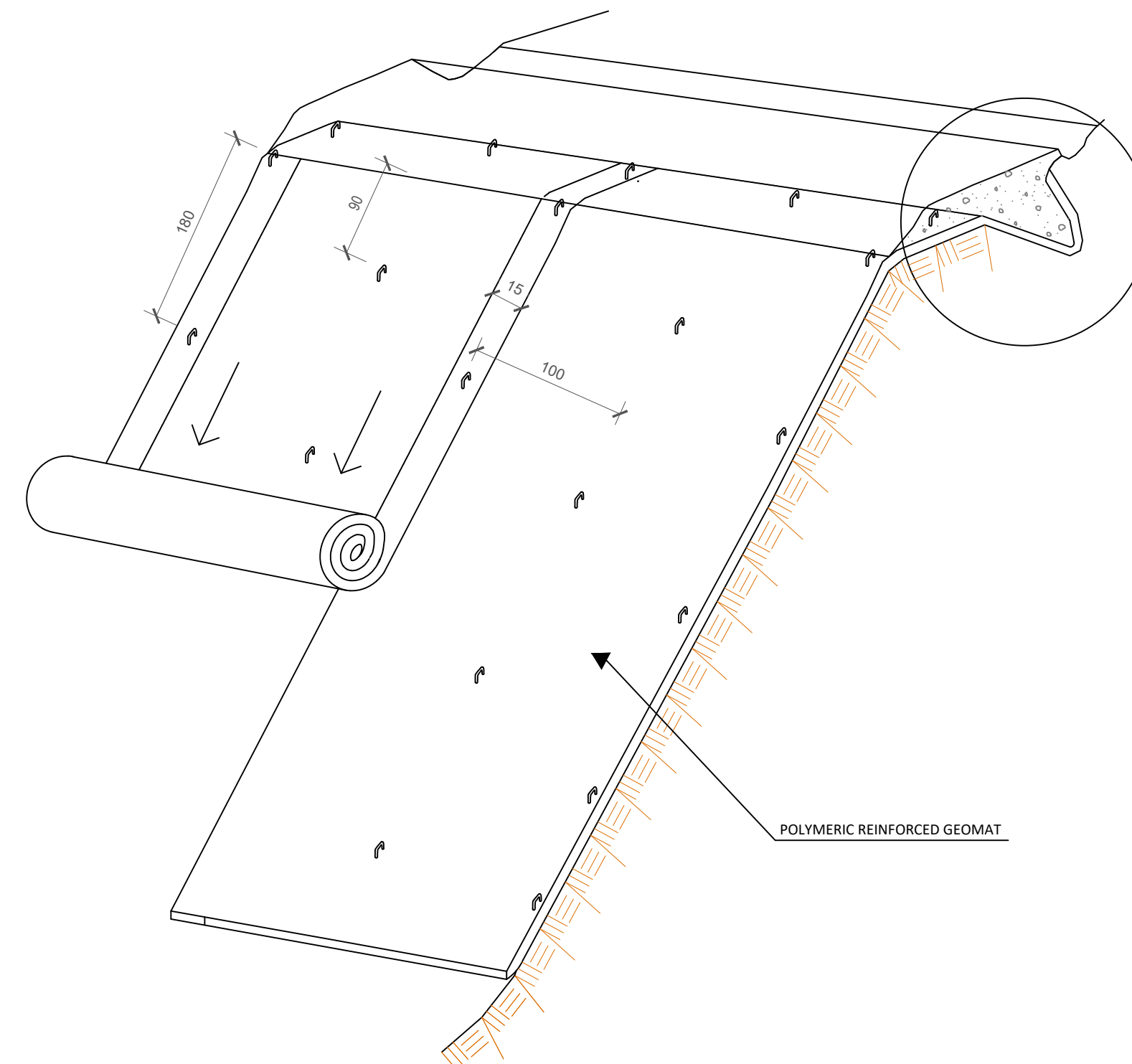


 Western Balkans Investment Framework WBIF BUILDING THE EUROPEAN FUTURE TOGETHER 		
Project Management		Designer
 IPF 5		
BENEFICIARY <i>PERFITUESI</i>		Republic of Albania - Ministry of Infrastructure and Energy of Albania, Albanian Road Authority (ARA) <i>Republika e Shqipërisë - Ministria e Infrastruktura dhe Energjisë, Autoriteti Rrugor Shqiptar (ARRSH)</i>
PROJECT <i>PROJEKTI</i>		Western Balkan Investment Framework (WBIF) Infrastructure Project Facility, Technical Assistance 5 (IPF5)
SUBPROJECT CODE AND TITLE		WB16-ALB-TRA-02: Detailed Design, ESIA and Tender Documents for the Construction of Tirana Bypass (Kashar - Vaqarr - Mullet)
<i>KODI DHE TITULLI I NENPROJEKTIT</i>		<i>WB16-ALB-TRA-02: Projekti i Zbatimit, VNMS dhe Dokumentet e Tenderit të Bypass-it të Tiranës (Kashar - Vaqarr - Mullet)</i>
DRAWING TITLE <i>EMERTIMI I VIZ.</i>		Typical Cross Section Details 1 <i>Seksion Terthor Tip Detaje 1</i>
DRAWING NO. <i>NR. VIZATIMIT</i>		WB16ALBTRA02-RD-00-D-214 <i>WB16ALBTRA02-RD-00-D-214</i>
DATE / DATA		07/2021
DESIGNED BY / I PROJEKTOI		REVIEWED BY / RISHIKOI
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		APPROVED BY / APROVOI RALPH HENDERSON (RH)
REVISIONS / RISHIKIMET		
ISSUE / VERSION	DATE / DATE	DESCRIPTION / PERSHKRIMI
00	12/2020	
01	05/2021	Updated / Përditësuar
02	07/2021	Updated / Përditësuar

TYPICAL CROSS SECTION - DETAILS 2- Slope Protection
PROFIL TËRTHOR TIP - DETAJE 2 - Mbrojtja e Skarpatave



POLYMERIC REINFORCED GEOMAT CASE

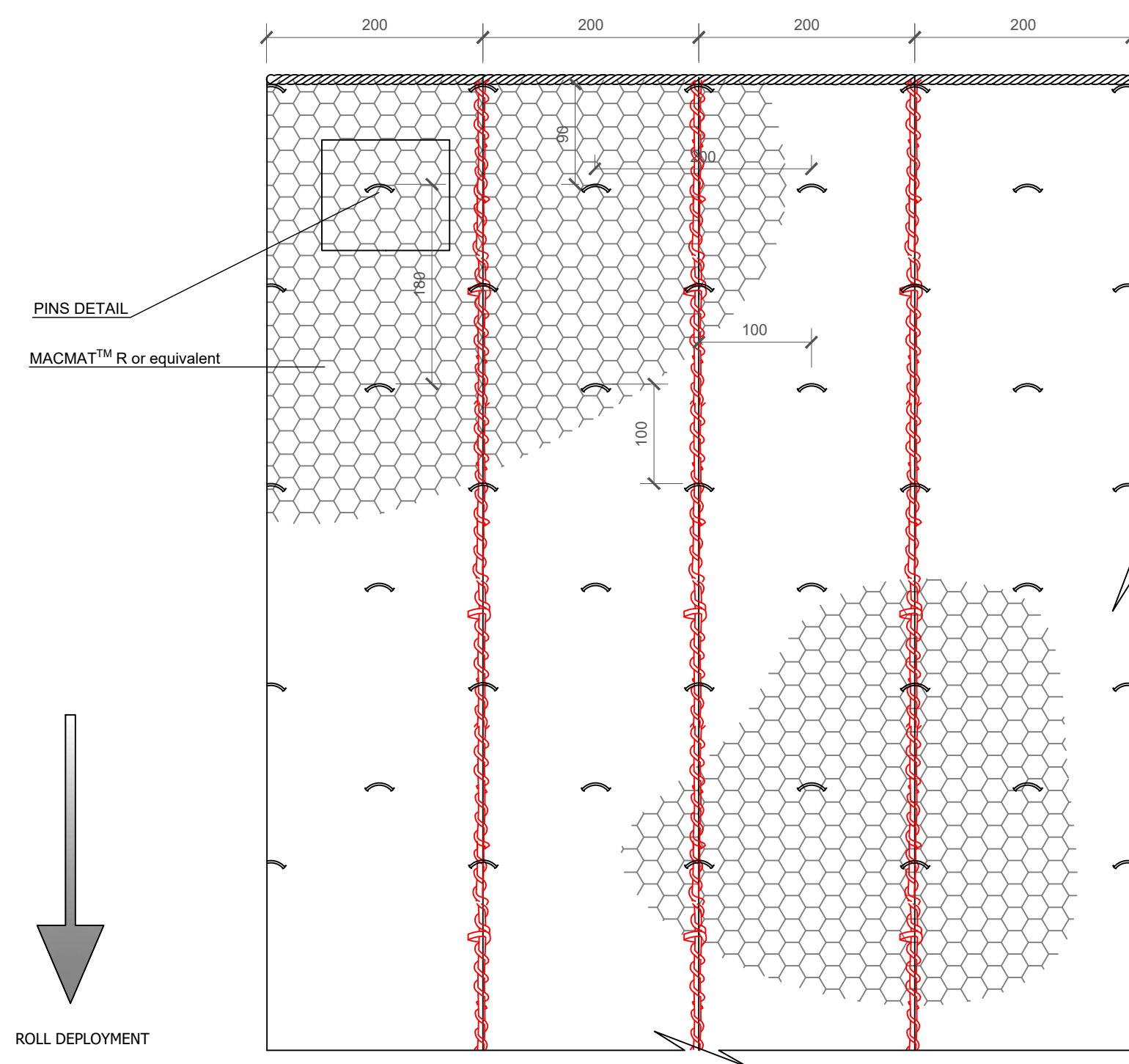


SECTION A-A

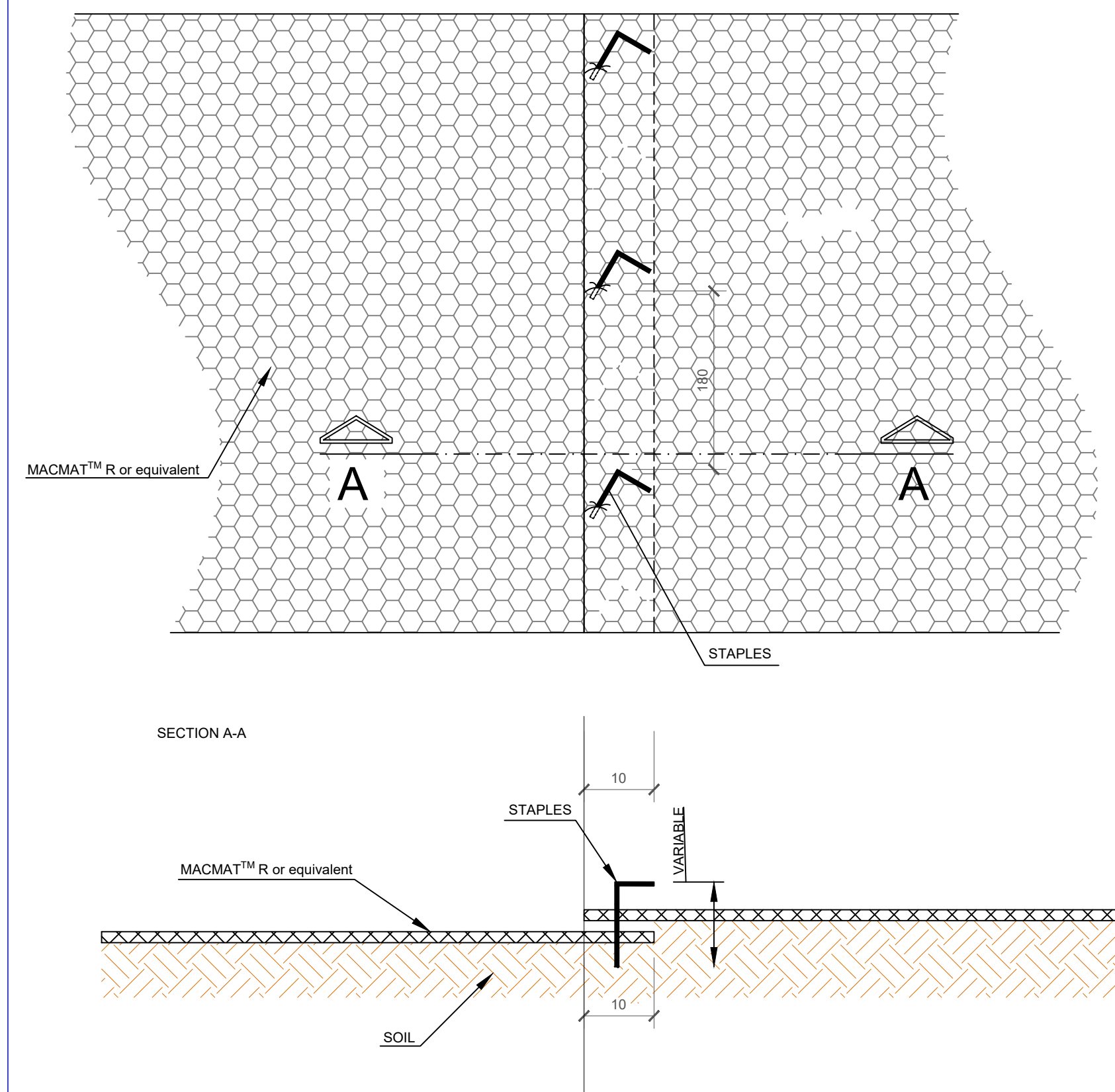
$\varnothing 10 \text{ mm}$

* L VARIABLE (60- 120cm) DEPENDING ON SOIL PROPERTIES.

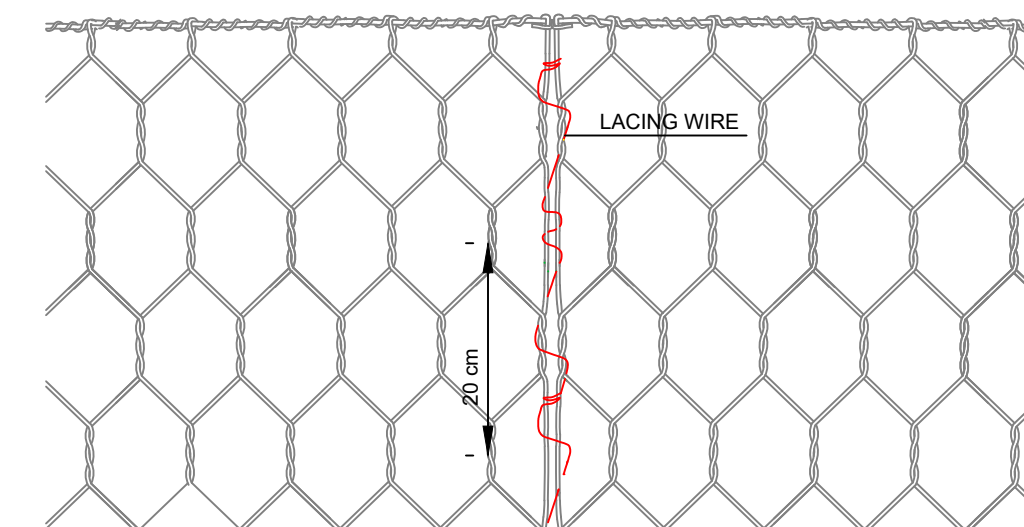
STEEL REINFORCED GEOMAT CASE



OVERLAPPING OF MACMAT R



PANEL LACING



TOP ANCHORING

