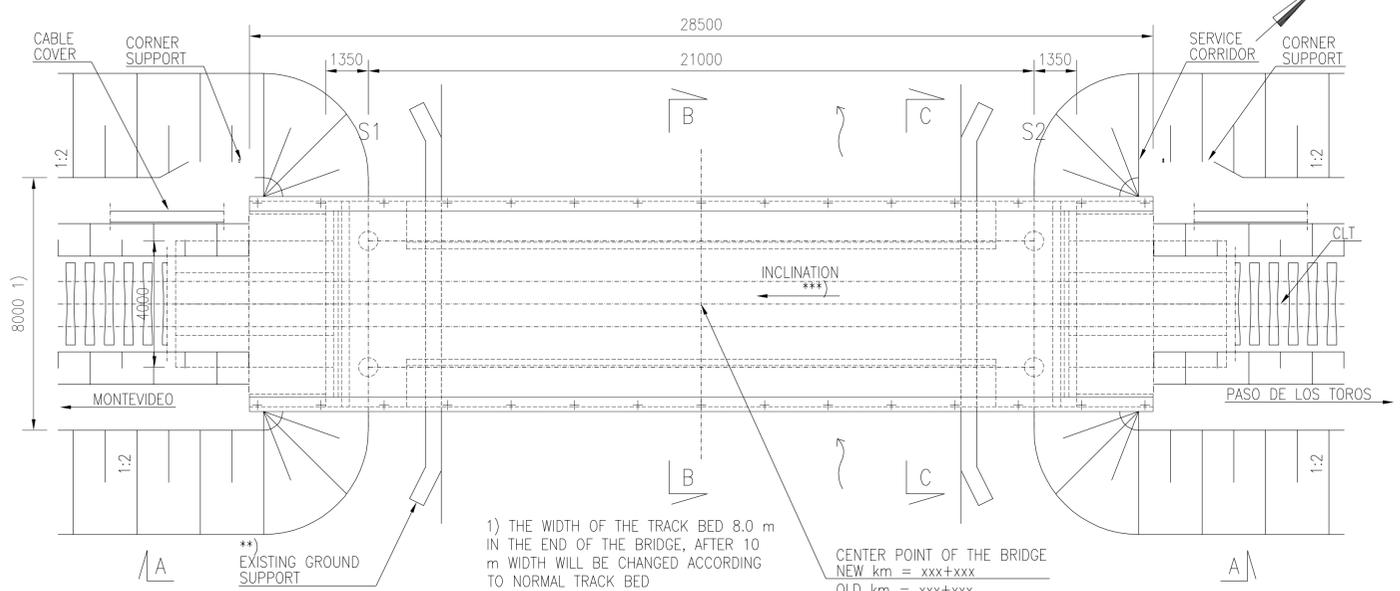


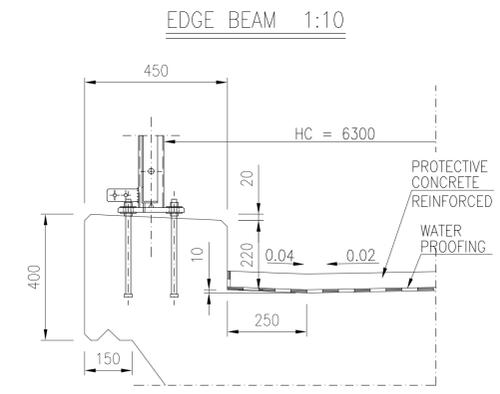
PRESTRESSED CONCRETE BRIDGE 21 m 1:100



1) THE WIDTH OF THE TRACK BED 8.0 m IN THE END OF THE BRIDGE, AFTER 10 m WIDTH WILL BE CHANGED ACCORDING TO NORMAL TRACK BED  
 CENTER POINT OF THE BRIDGE  
 NEW km = xxx+xxx  
 OLD km = xxx+xxx

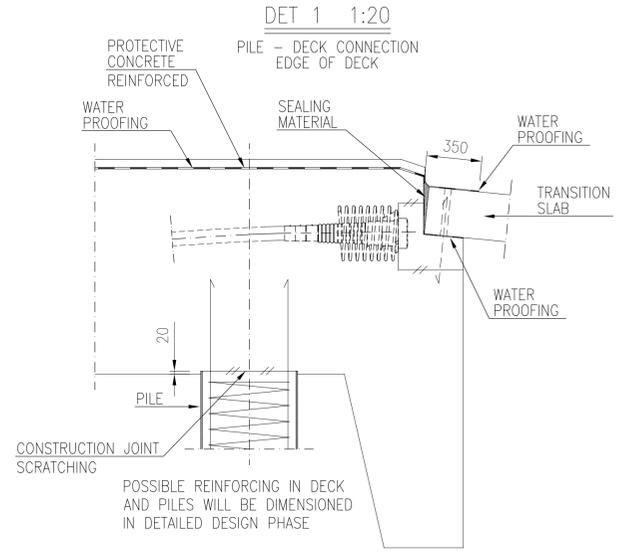
\*\*\*) BRIDGE WILL BE BUILT MIN. 1 % INCLINATION ACCORDING TO VERTICAL GEOMETRY OF TRACK

ESTIMATED AMOUNT OF CONCRETE  
 PILES: 11 m<sup>3</sup>  
 SUPERSTRUCTURE: 166 m<sup>3</sup>  
 ESTIMATED PRESTRESSING STEEL  
 SUPERSTRUCTURE: 23 kg/m<sup>3</sup> (CONCRETE)  
 ESTIMATED REINFORCING STEEL  
 PILES: 1200 kg  
 SUPERSTRUCTURE: 90 kg/m<sup>3</sup> (CONCRETE)  
 TRANSITION SLABS: 325 kg/m<sup>3</sup> (CONCRETE)  
 PROTECTIVE CONCRETE: 3 kg/m<sup>2</sup>



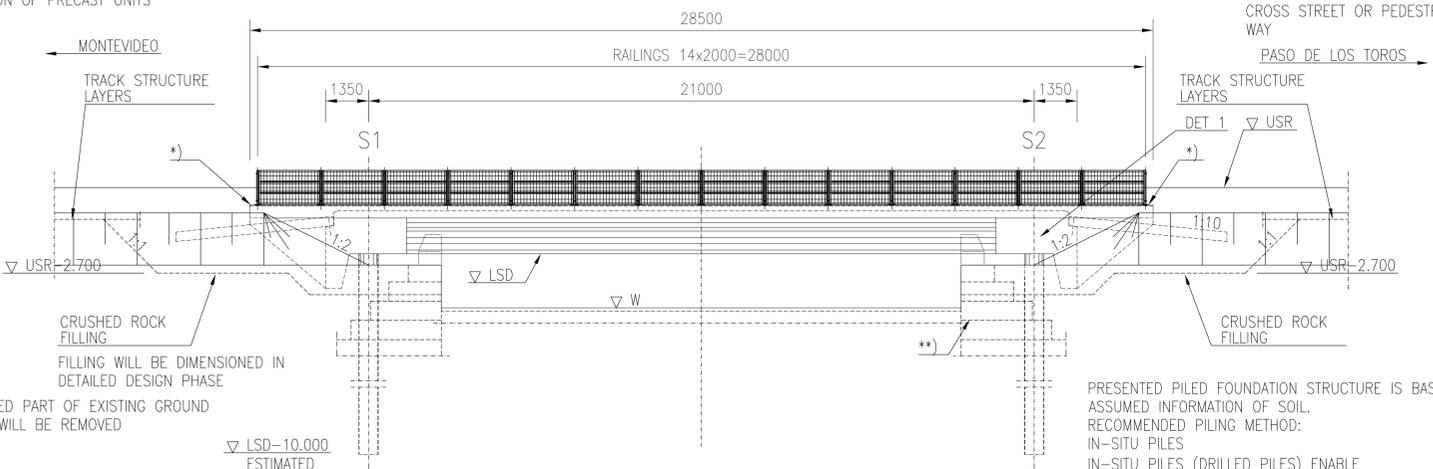
CONCRETE: C35/45  
 C<sub>min</sub>=40 mm  
 PRESTRESSING STEEL: St 1570 / 1770  
 REINFORCING STEEL: B500B  
 REINFORCING MESH: B500K  
 PILES / FOUNDATION: DRILLED PILES D610x14,2 S355J2H  
 TRANSITION SLABS: PREFABRICATED TRANSITION SLABS  
 2 x 4 x 1.0 m x 5,0 m  
 OR CAST IN SITU 2 x 4,0 m x 5,0 m  
 CONCRETE C35/45  
 CONSTRUCTIONAL STEEL: S355 J2, HOT-DIP ZINC COATED  
 RAILING / FENCE: h = 1.1 m  
 S355J2H  
 HORIZONTAL LINE LOAD 1.0 KN/m  
 VERTICAL POINT LOAD 1.0 KN  
 SURFACE STRUCTURE: WATER PROOFING MATERIAL 10 mm  
 PROTECTIVE CONCRETE 50 mm  
 BALLAST 550 mm  
 FILLING: REQUIREMENTS ACCORDING TO TRACK INTERMEDIATE LAYER

CLT = CENTER LINE of the TRACK  
 HC = HORIZONTAL CLEARANCE  
 LSD = LOWER SURFACE of the DECK  
 USR = UPPER SURFACE of the RAIL



\*) THE LENGTH OF THE WING WALLS WILL BE VERIFIED IN DETAILED DESIGN PHASE OR BEFORE FABRICATION OF PRECAST UNITS

A - A 1:100



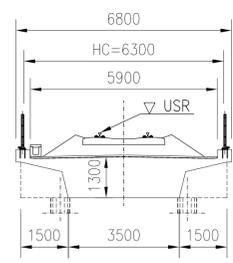
SAFETY NET IN RAILS WILL BE MOUNTED IN BRIDGES WHICH CROSS STREET OR PEDESTRIAN WAY

\*\*\*) REQUIRED PART OF EXISTING GROUND SUPPORTS WILL BE REMOVED

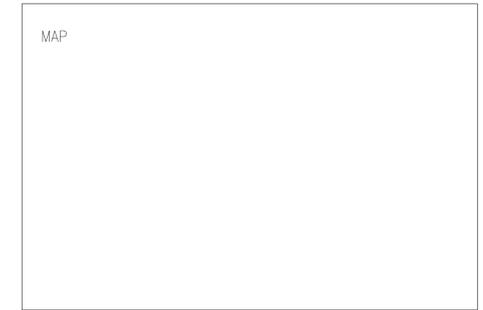
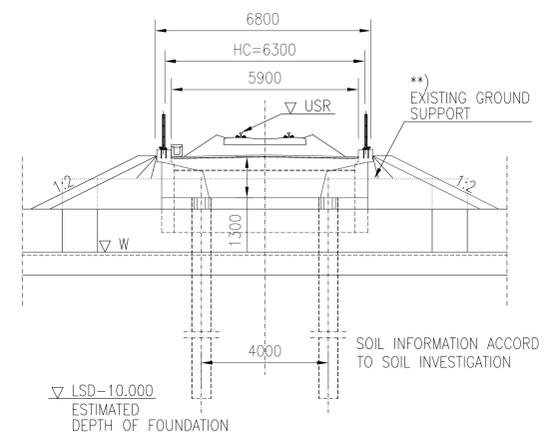
▽ LSD-10.000  
 ESTIMATED DEPTH OF FOUNDATION  
 DIMENSIONING IN DETAILED DESIGN PHASE  
 ACCORDING TO SOIL INVESTIGATION

PRESENTED PILED FOUNDATION STRUCTURE IS BASED ON ASSUMED INFORMATION OF SOIL.  
 RECOMMENDED PILING METHOD:  
 IN-SITU PILES  
 IN-SITU PILES (DRILLED PILES) ENABLE  
 -TO DRIVE PILES THROUGH CURRENT STONE ABUTMENT  
 -TO MAINTAIN REQUIRED PART OF GROUND SUPPORT  
 -TO MINIMIZE EXCAVATION AND FILLING IN THE END OF THE BRIDGE  
 -TO SHORTEN THE NEEDED CONSTRUCTION TIME

B - B 1:100



C - C 1:100



BRIDGE TYPE	PRESTRESSED CONCRETE BRIDGE
	CANTILEVER PLATE
SPANS	1.35 m + 21.00 m + 1.35 m
HORIZONTAL CLEAR SPAN	—
VERTICAL CLEARANCE	—
HORIZONTAL CLEARANCE	6.30 m

VERSION  
 23.10.2017

Revision	Explanation	Date	Designer	Date	Acceptor
Customer	MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS	Project Railway Project			
Supplier		Design phase Pre-engineering, Phase 2 Content Prestressed concrete bridge 21 m Preliminary general drawing Km+ m +-+			
Drawer	23.10.2017	Ilkka Tiito	Loading	LM71-25	
Designer	23.10.2017	Ilkka Tiito	Coordinate and elevation reference system	WGS 84 UTM 21	
Supervisor	23.10.2017	Reima Nikander	Railway line		
Accept.	-	-	Archive	Type	Number
Cust. acc.	-	-	Rev.	Sheet	
			RB	-	1