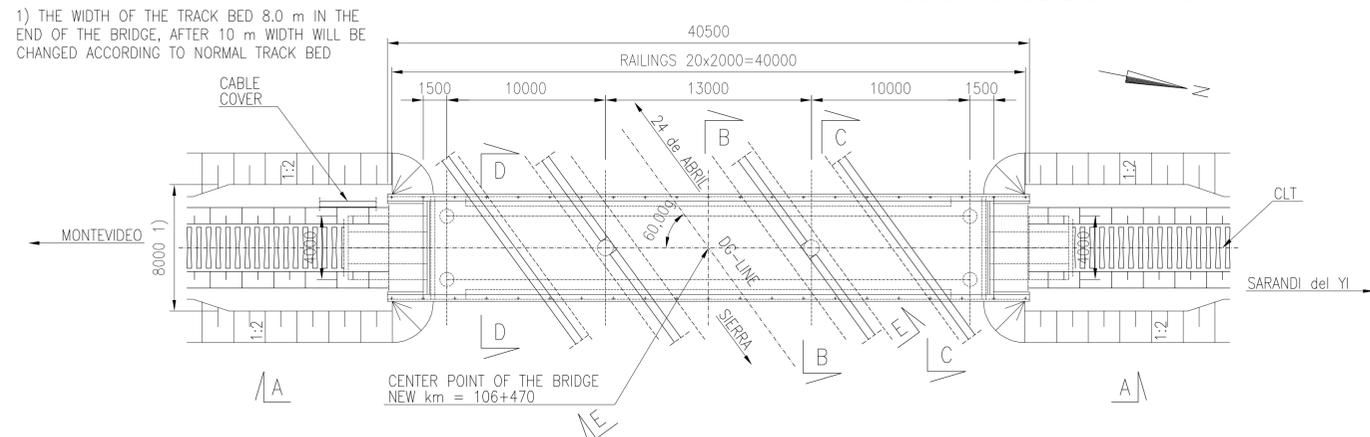


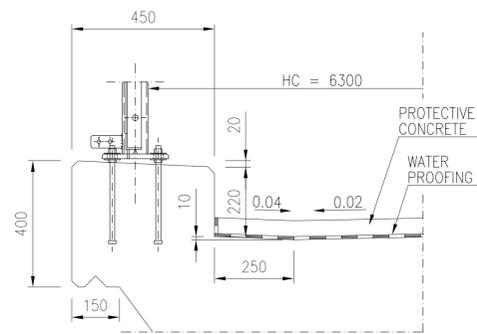
UNDERPASS BRIDGE 1:200

ACUNA de FIGUEROA

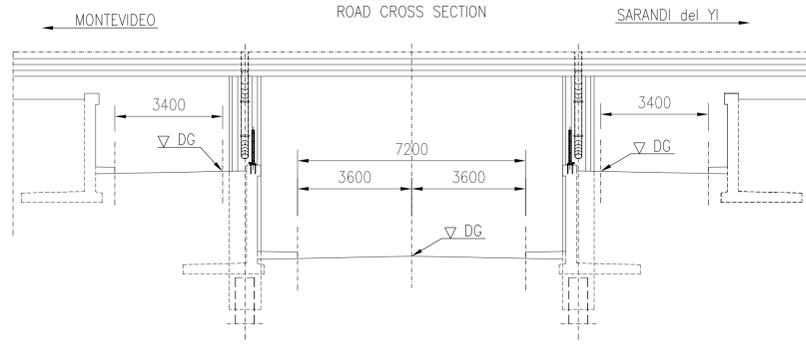
\*\*\*) BRIDGE WILL BE BUILT MIN. 1 % INCLINATION  
ACCORDING TO VERTICAL GEOMETRY OF TRACK



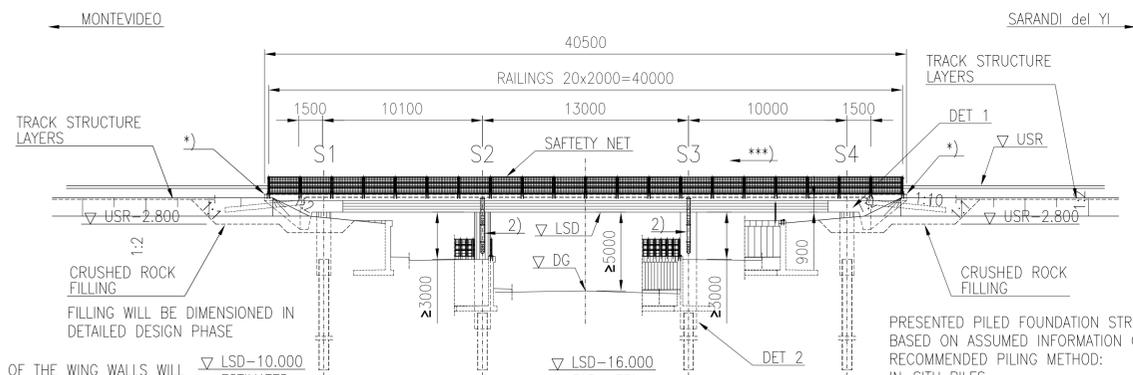
EDGE BEAM 1:10



E - E 1:100



A - A 1:200



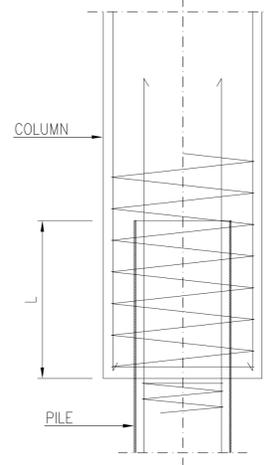
\*) THE LENGTH OF THE WING WALLS WILL BE VERIFIED IN DETAILED DESIGN PHASE OR BEFORE FABRICATION OF PRECAST UNITS

FOUNDATIONS AND SUBSTRUCTURE TYPE WILL BE DEFINED IN DETAIL DESIGN PHASE

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

DET 2 1:20

JONTS PILE - COLUMN



REINFORCING AND L (LENGTH OF SPLICE) WILL BE DIMENSIONED IN DETAILED DESIGN PHASE

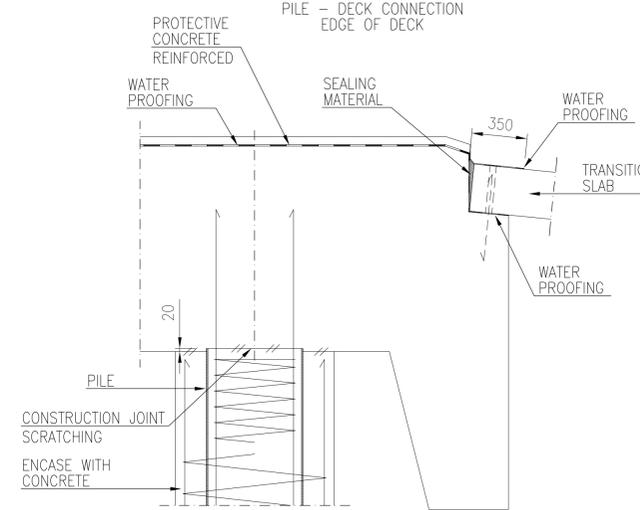
ESTIMATED AMOUNT OF CONCRETE  
PILES: 13 m<sup>3</sup>  
COLUMNS: 22 m<sup>3</sup>  
SUPERSTRUCTURE: 214 m<sup>3</sup>

ESTIMATED REINFORCING STEEL  
PILES: 1800 kg  
COLUMNS: 260 kg/m<sup>3</sup> (CONCRETE)  
SUPERSTRUCTURE: 180 kg/m<sup>3</sup> (CONCRETE)  
TRANSITION SLABS: 325 kg/m<sup>3</sup> (CONCRETE)

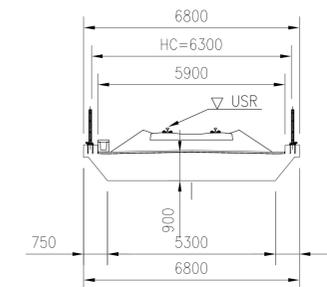
PROTECTIVE CONCRETE: 3 kg/m<sup>2</sup>

DET 1 1:20

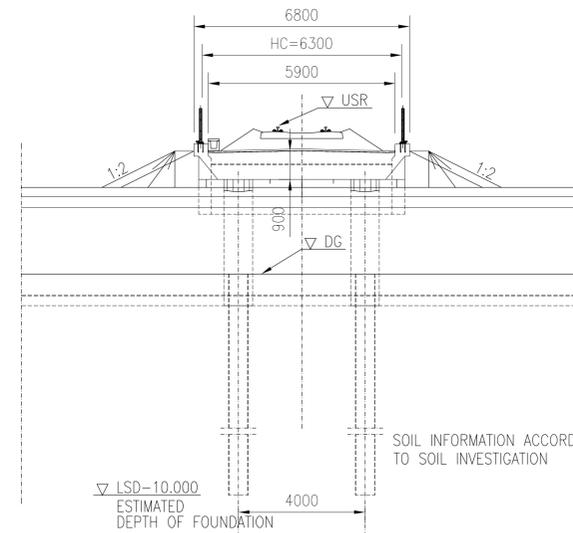
PILE - DECK CONNECTION  
EDGE OF DECK



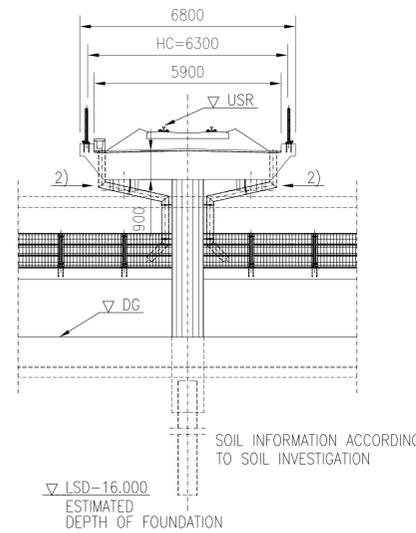
D - D 1:100



C - C 1:100



B - B 1:100



CONCRETE: C35/45  
Cmin=40 mm

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

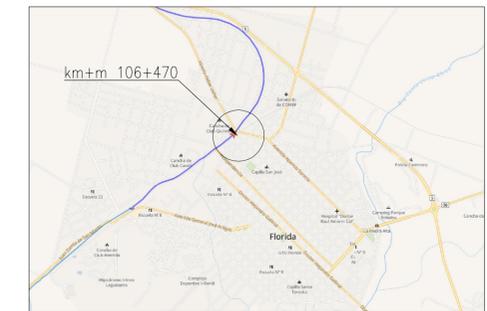
CONSTRUCTIONAL STEEL: S355 J2, HOT-DIP ZINC COATED

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



BRIDGE TYPE	REINFORCED CONCRETE BRIDGE
	CANTILEVER PLATE
SPANS	1.50m + 10.00m + 13.00m + 10.00m + 1.50m
HORIZONTAL CLEAR SPAN	6.30 m
HORIZONTAL CLEARANCE	6.30 m
VERTICAL CLEARANCE	-

VERSION  
23.10.2017

Revision	Explanation	Date	Designer	Date	Acceptor
Customer	MT OP				
Project	Railway Project				
Design phase	Pre-engineering, Phase 2				
Supplier	VR TRACK				
Content	Underpass bridge Acuna de Figueroa Preliminary general drawing Km+m 106+470				
Drawer	23.10.2017	Ilkka Tiito			LM71-25
Designer	23.10.2017	Ilkka Tiito			Coordinate and elevation reference system WGS 84 UTM 21
Supervisor	23.10.2017	Reima Niklander			Railway line
Accept.	-	-			Archive Type Number Rev. Sheet
Cust. acc.	-	-			UP xxxx - 1