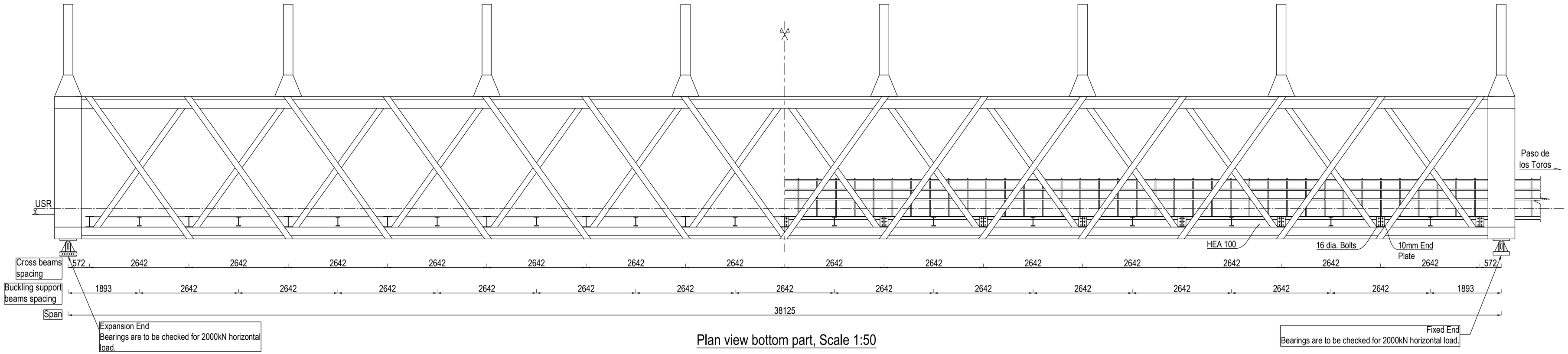
MVD - PdT

km 264+200

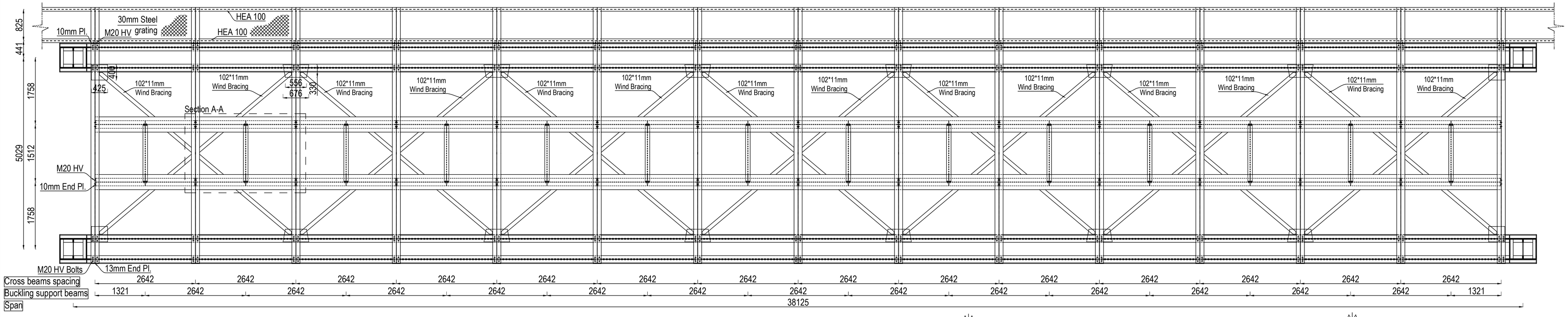
BRIDGE RIO NEGRO
STEEL TRUSS BRIDGE
38 m
PRELIMINARY GENERAL DRAWING

Right side view, Scale 1:50

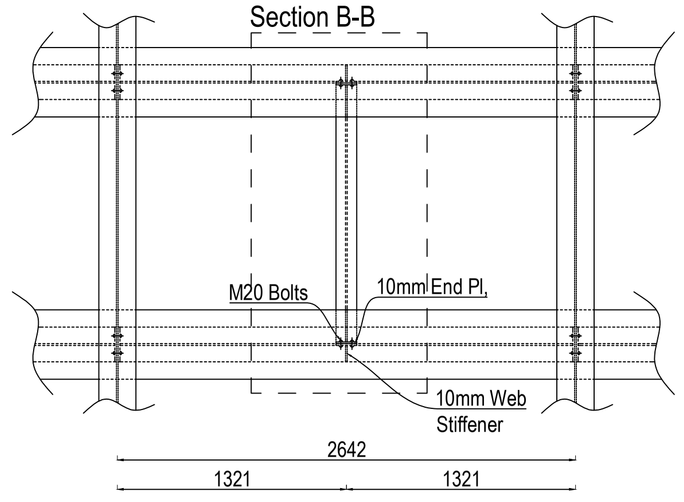
Left side view, Scale 1:50



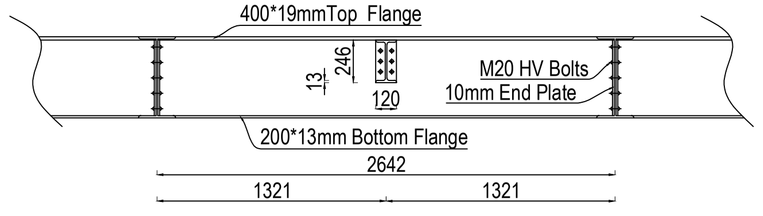
Plan view bottom part, Scale 1:50



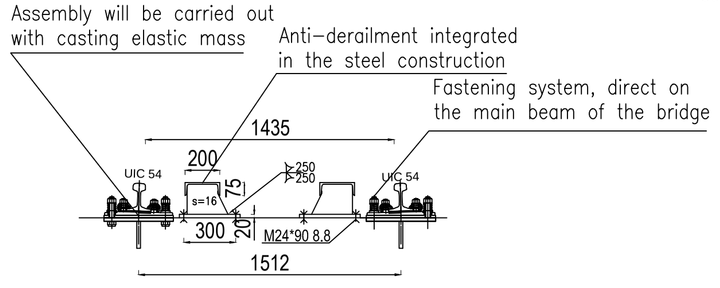
Secondary Girder - top view Section A-A 1:25



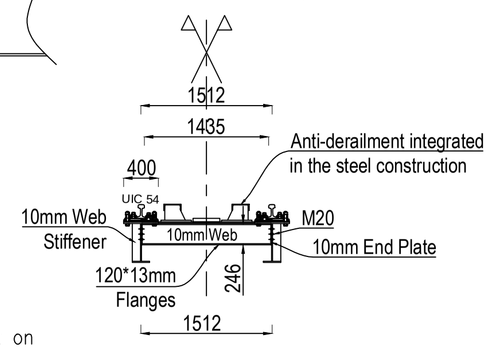
Secondary Girder - side view 1:25

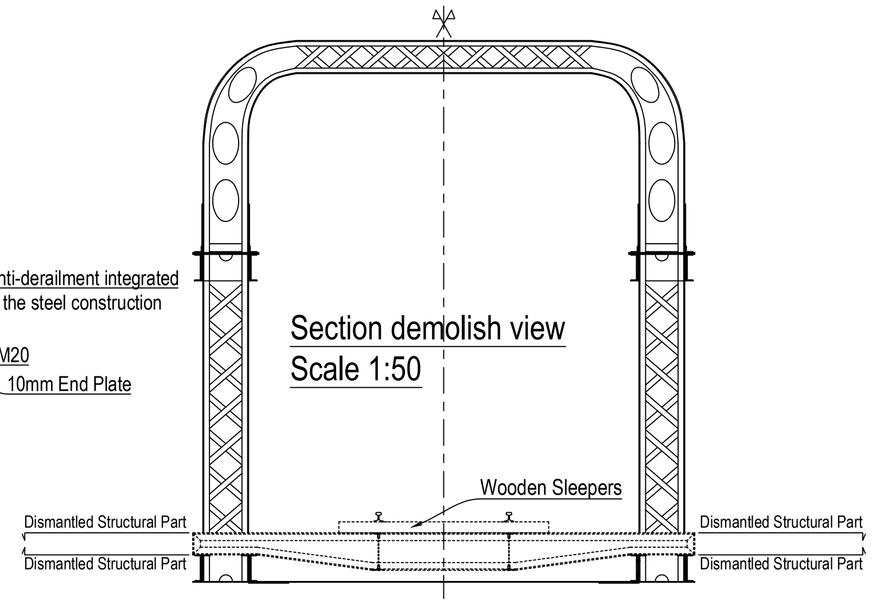


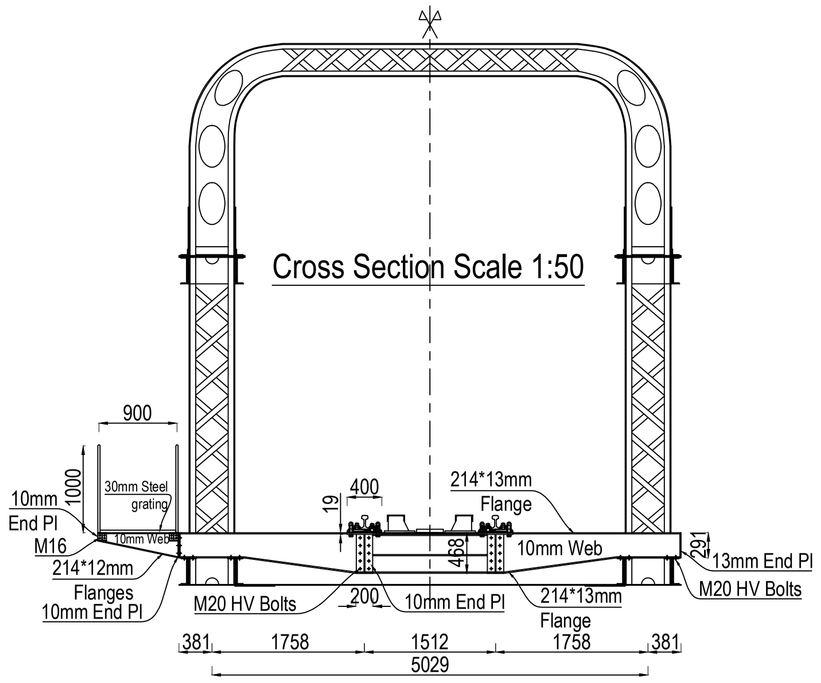
Details of Rail System



Section at B-B







MATERIALS:

PLATES	S355J2 +N	EN 10025-2
HOLLOW SECTIONS	S355J2H	EN 10219
HOT-ROLLED PROFILES	S355J2	EN10025-1

ALL STEEL MATERIALS HOT-DIP GALVANIZED

FASTENING:
SHEAR / FRICTION CONNECTIONS: (HV BOLTS)

BOLTS	10.9 HV	EN 14399-4
NUTS	HV 10	EN 14399-4
WASHERS	HV	EN 14399-6

BOLTS ARE TO BE PRELOADED FOR $0,7*f_{ub}*A_s$
SURFACES SHALL BE CLEARED FOR FRICTION CONNETION

OTHER CONNECTIONS

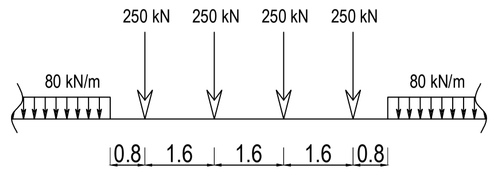
BOLTS	8.8	SFS-EN ISO 4014
NUTS	GRADE 8	SFS-EN ISO 4032
WASHERS	GRADE 8	SFS-EN ISO 7089

ALL FASTENING PRODUCTS HOT-DIP GALVANIZED

ESTIMATED WEIGHT OF NEW STEEL STRUCTURES: 17800 KG X 9 PCS
SPHERICAL BEARINGS: 9 PCS FIXED AND 9 PCS QUIDED SLIDING

DESIGN LOADS:
DEAD LOAD NEW STRUCTURAL PART WEIGHT 174.44kN
TOTAL WEIGHT 601.72 kN
+1kN/m2 ADDED FOR BRIDGE AREA

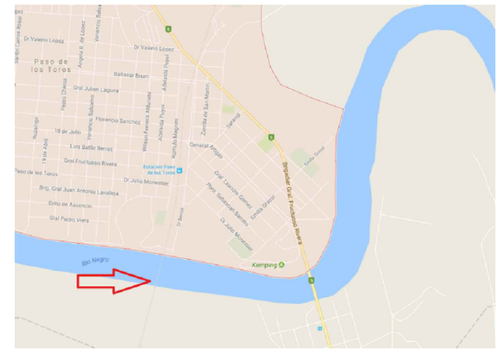
TRAIN AXLE LOAD 22,5 t = 225kN
LOAD DIAGRAM LM71-22,5



LIVE LOAD FOR WALKING PLATFORM 4kN/m2
HORIZONTAL LOAD FOR HANDRAILS 30kg/m OR POINT LOAD 1kN
WIND LOAD 1kN/m2

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

MAP



BRIDGETYPE	STEEL TRUSS BRIDGE
SPAN	38,125m
HORIZONTAL CLEAR SPAN	— VERTICAL CLEARANCE —
HORIZONTAL CLEARANCE	—

Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Acceptor

Owner: MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS

Engineering: VR TRACK

Project: Railway Project

Design phase: Pre-engineering, Phase 2

Content: Rio Negro Bridge 38m
Preliminary general drawing
Km+m 264+200

Drawer	15.12.2017	Vera Babiczky	
Designer	15.12.2017	Vera Babiczky	
Supervisor	15.12.2017	Mikko Ilvonen	
Accept.			
Cust. acc.			

Loading: LM71-22.5
Coordinate and elevation reference system: WGS 84 UTM 21
Railway line:

Archive	Type	Number	Rev.	Sheet
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