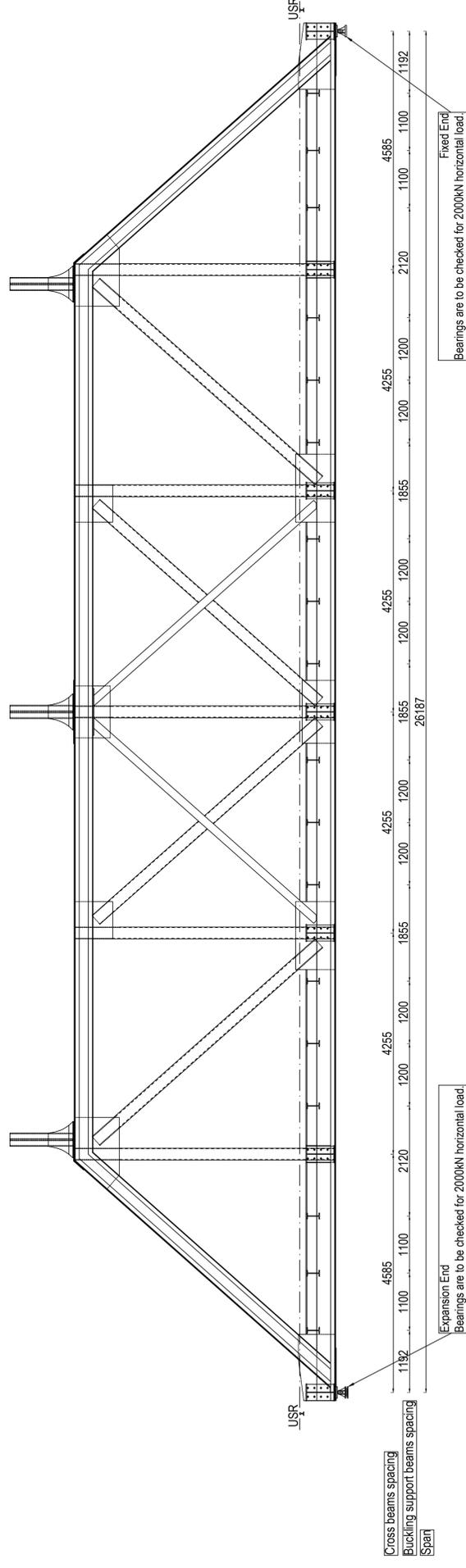
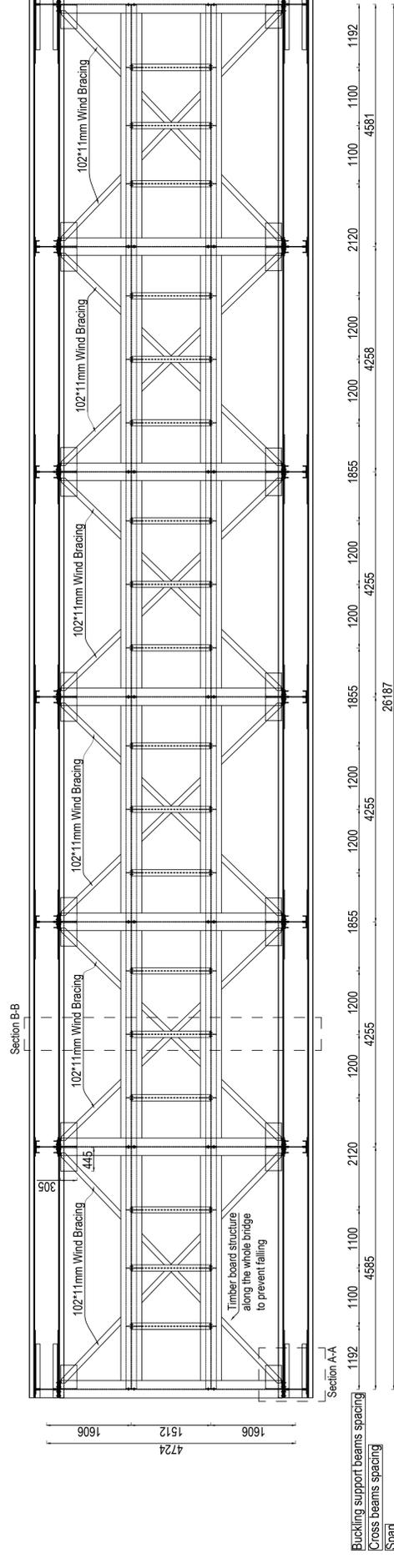


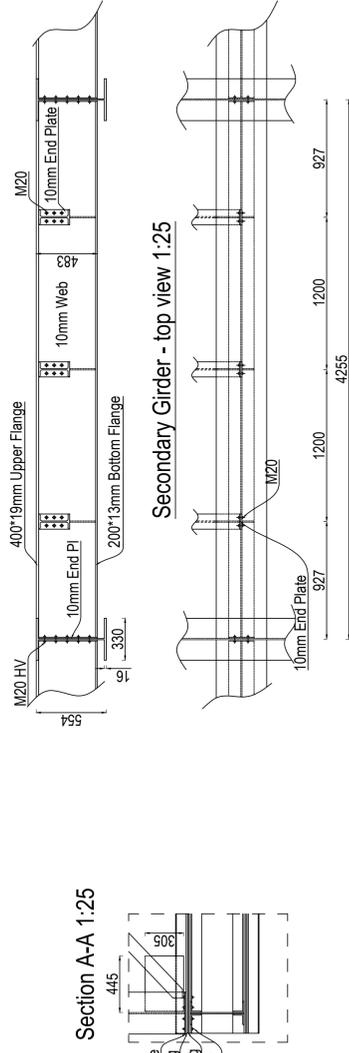
Side view, Scale 1:50



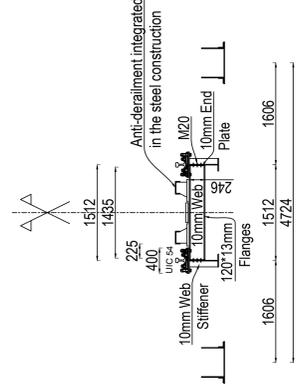
Plan view bottom part, Scale 1:50



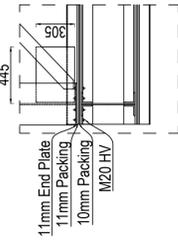
Secondary Girder - side view 1:25



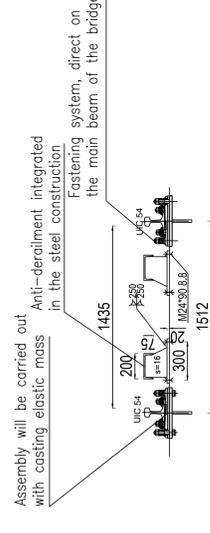
Section at B-B



Section A-A 1:25



Details of Rail System



MATERIALS:

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

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<sub>ub</sub>\*A<sub>s</sub>  
SURFACES SHALL BE CLEARED FOR FRICTION CONNECTION

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

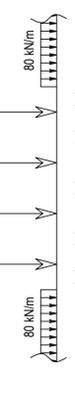
ALL FASTENING PRODUCTS HOT-DIP GALVANIZED

ESTIMATED WEIGHT OF NEW STEEL STRUCTURE: 11460 KG X 3 PCS  
SPHERICAL BEARINGS: 3PCS FIXED AND 3 PCS GUIDED SLIDING

DESIGN LOADS:  
DEAD LOAD NEW STRUCTURAL PART WEIGHT 112.27 kN  
TOTAL WEIGHT 392.24 kN  
+1kN/m<sup>2</sup> ADDED FOR BRIDGE AREA

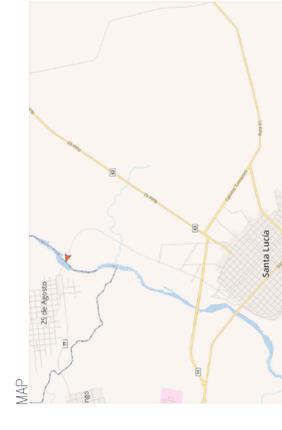
TRAIN AXLE LOAD 22.5 t = 225kN

LOAD DIAGRAM LM71-22.5  
250 kN 250 kN 250 kN 250 kN



LIVE LOAD FOR WALKING PLATFORM 4kN/m<sup>2</sup>  
HORIZONTAL LOAD FOR HANDRAILS 30kg/m OR POINT LOAD 1kN  
WIND LOAD 1kN/m<sup>2</sup>

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



BRIDGE TYPE STEEL TRUSS BRIDGE

SPAN 26.187m

HORIZONTAL CLEAR SPAN — VERTICAL CLEARANCE —

Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Approver

		<b>MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS</b>		Railway Project	
		Santa Lucia 26m Preliminary general drawing Km+060+200		Design phase Pre-engineering, Phase 2	
Designer Vera Babicky	Date 15.12.2017	Coordinator and elevation reference system Miko Inonien	Drawing LM71-22.5	Rev. Number 1	Rev. Sheet 1