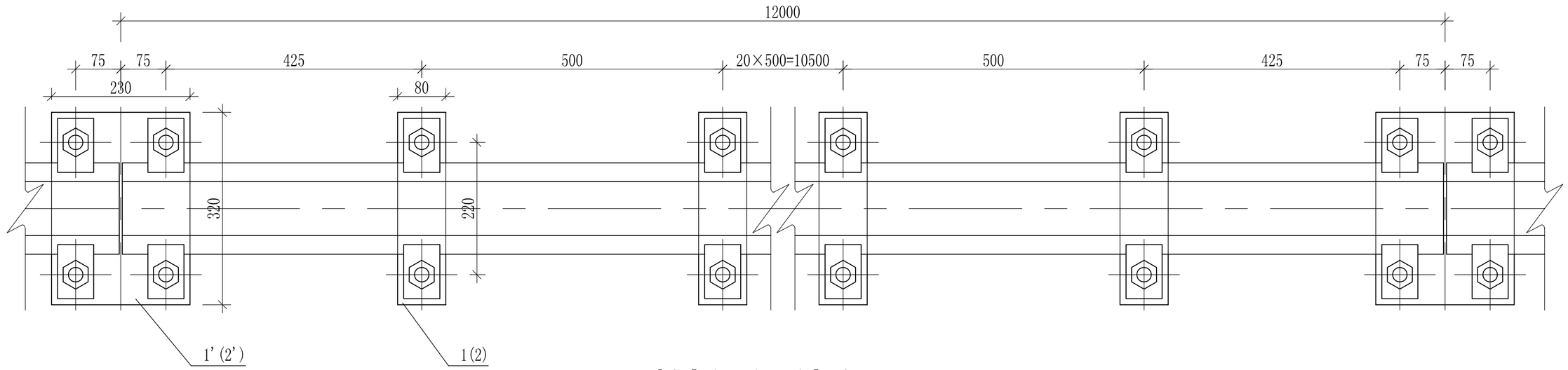
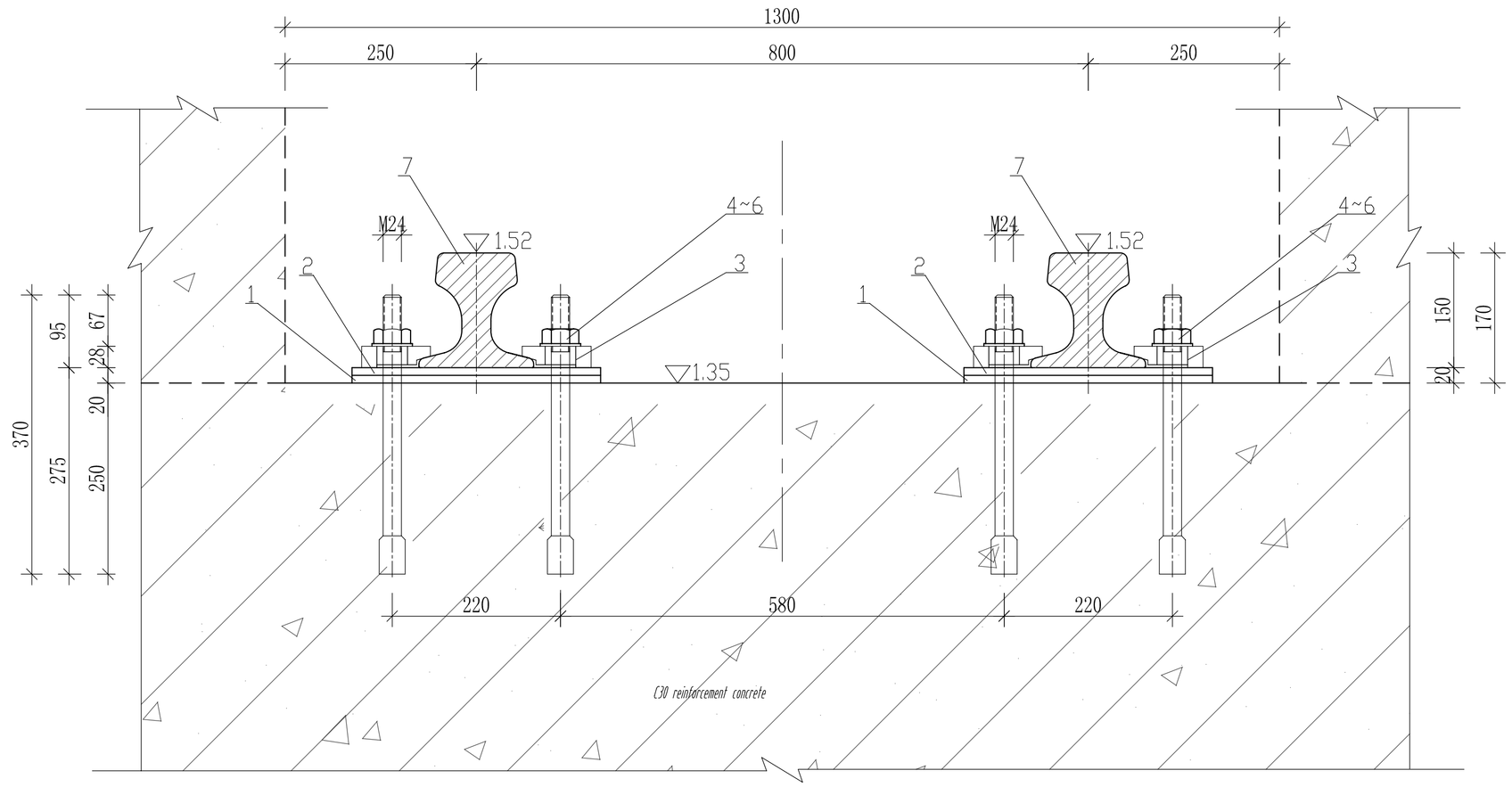
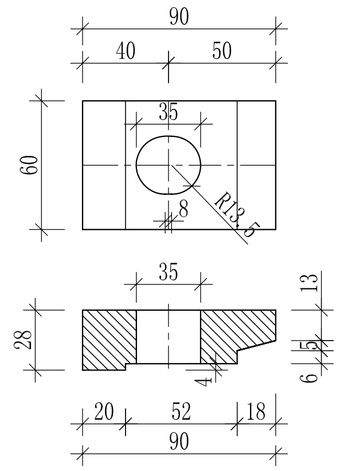


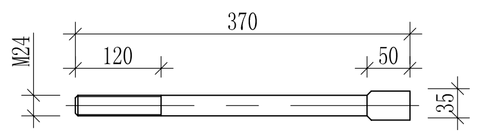
Rail Fastener Lay-out Drawing 1:5



Elevation of rail installation 1:5



Fastener 1:2



Screw Bolt Fabrication Diagram 1:5

Material List (steel rail is measured by 12.0m except vehicle bumper steel plate)

Series No	Name	Specification	Material	Quantity	Unit	Unit Weight(kg)	Total Weight(kg)	Remark
1	rubber Backing Board	320×80×10	Code Number 1708	23	Piece (Pc.)			to see this drawing
1'		320×230×10	Code Number 1708	1	Piece (Pc.)			to see this drawing
2	steel backing board	320×80×10	Q235-A	23	Piece (Pc.)	2.01	46.23	to see this drawing
2'		320×230×10	Q235-A	1	Piece (Pc.)	5.78	5.78	to see this drawing
3	fastener	δ28	Q235-A	50	Piece (Pc.)	0.8	40.0	to see this drawing
4	screw bolt	M24	Q235-A	50	Piece (Pc.)	1.4	70.0	to see this drawing
5	screw nut	M24	Q235-A	50	Piece (Pc.)	0.1	5.0	outsourcing
6	washer	M24	Q235-A	50	Piece (Pc.)	0.02	1.0	outsourcing
7	steel rail	QU100		12.0	Meter	88.96/m	1067.52	outsourcing

Note:

1. Dimensions in drawings are in millimeters,levels in drawings are in meters, levels are based on local seal level.
2. The longitudinal spacing of screw bolt is 500mm.
3. Rubber board code number 1708. Shore hardness<tensile strength>8MPa
4. The rail installation shall be as per Installation Technical Specification of Port Crane Rail JT5022-86.
5. There are total 4 rail of the caisson launching slipway with each 190.19m long, total length is 760.76m long.
6. Regular inspection and maintenance of fastener fixing situation shall be done during the rail operation period.
7. Location deviation of rail central line shall be equal or lesser than ±5mm.
8. Elevation deviation of rail top shall be equal or lesser than ±5mm.
9. Spacing deviation of central line between two rails shall be equal or lesser than ±5mm.
10. Comparative elevation deviation of two rail top shall be equal or lesser than 1/1000 rail spacing.
11. Allowable deviation of joint right-left displacement shall be equal or lesser than 0.5mm, up-down allowable deviation is equal or lesser than 0.5mm, joint spacing 5mm.
12. Allowable deviation of rail partial bending shall be equal or lesser than 1/2000 rail spacing.
13. Material consumption quantity in the list is measured by steel rail of 12.0m.
14. Exposed steel components anticorrosive requirement is to see design description.
15. The rail length shall be adjusted if the rail joint and rail beam section joint overlaps. Rail joint and rail beam section shall be staggered by 1500mm. The spacing between fastener central line and rail beam section shall be equal or greater than 200mm. Also, the joint position of two rails shall be staggered with spacing no less than 600mm. Fishplate shall be made at rail joint.
16. While pushing forward longitudinal shift vehicle of weight bearing caisson by rail clamping device, if rail twitching occurs, steel rails may be connected by welding joint or fine concrete may be poured in rail trench after sedimentation is stable to ensure that steel rain can provide required horizontal force in the course of lifting.

Tianjin Port Engineering Design and Consulting Ltd of China Communication Construction Company

Principal of Project		Date	Project Name	Sudan Suakin Port International Container Terminal Phase2-Caisson Prefabricating Yard Project	Project NO.	GWY-08-110
Approved By		Date			Subdivision NO.	
Chief Designer		Date	Project Subjects		Phase	Shop Drawing
Checked By		Date			Scale	See Drawing
Corrected By		Date				
Designed By		Date	Drawing Name	Longitudinal Shift Vehicle Rail Installation Drawing	Drawing NO.	YZC-21
Plotted By		Date				