

CHAPTER - 20 : BRIDGE WORKS - SUPERSTRUCTURE : RCC				
Item No.	Description of Item	Unit	Rate (Rs.)	Cement Qty.(qtl.)
201010	Providing and laying in position Design Mix Cement Concrete M 40 grade machine mixed, machine vibrated and machine batched using 20 mm graded crushed stone aggregate and coarse sand of approved quality for the Cast in situ Prestressed (Post tensioned) concrete girder / Box girders for spans upto 18.3 M (centre to centre) Including finishing, using Admixtures in recommended proportions (as per IS 9103), if approved in Mix design, to accelerate, retard setting of concrete, improve workability without impairing strength and durability complete as per specifications and direction of the Engineer incharge. Payment for Shuttering, Cement, Admixtures, reinforcement, HTS cables, sheathing, anchorage cones, stressing of cables and grouting of the ducts will be done extra			
201011	With Soffit level Upto 9 m above Bed level	cum	1830.81	4.30 or as per design mix
201012	With Soffit level From 9m above Bed Level to 12m above Bed Level	cum	2104.17	4.30 or as per design mix
201013	With Soffit level From 12 m above Bed Level to 15m above Bed Level	cum	2172.51	4.30 or as per design mix
201014	Extra for increase in span by every 1 M or part thereof for spans above 18.3 M & upto 30.5 M	metre/ cum or part there of	34.17	4.30 or as per design mix
201015	Deduct for casting of Slab instead of Girders (for any heights)	cum	136.68	
201020	Providing and laying in position machine mixed, machine vibrated and machine batched Design Mix Cement Concrete M40 grade using 20 mm graded crushed stone aggregate and coarse sand of approved quality for the Precast Prestressed (Post tensioned) concrete girder/ Box (Spans upto 30.5 M) in contractor's casting yard, including finishing, using Admixtures in recommended proportions (as per IS 9103), if approved in Mix design, to accelerate, retard setting of concrete, improve workability without impairing strength and durability, complete as per specifications and direction of the Engineer. .. Contd. --	cum	1830.81	4.30 or as per design mix

Item No.	Description of Item	Unit	Rate (Rs.)	Cement Qty.(qtl.)
	.. Contd. -- Payment for Shuttering, Cement, Admixtures, reinforcement, HTS cables, anchorage cones, stressing of cables and grouting of the ducts will be done extra. Launching of girder/slab in position is not included in this item			
201021	Deduct for casting of Slab instead of Girder/Box	cum	136.68	
201030	Providing and laying in position machine mixed, machine vibrated and machine batched Design Mix Cement Concrete M 40 grade using 20 mm graded crushed stone aggregate and coarse sand of approved quality for the Precast Prestressed (Pre tensioned) concrete girder (Spans upto 9.1 M) in contractor's casting yard, including finishing, using Admixtures in recommended proportions (as per IS 9103), if approved in Mix design, to accelerate, retard setting of concrete, improve workability without impairing strength and durability, complete as per specifications and direction of the Engineer. Payment for Shuttering, Cement, Admixtures, reinforcement, HTS cables, sheathing, anchorage cones, stressing of cables and grouting of the ducts will be done extra. Launching of girder/slab in position is not included in this item	cum	1830.81	4.30 or as per design mix
201031	Deduct from 201030 for casting of Slab instead of Girder	cum	136.68	
201040	Design, manufacturing, Supplying and fixing in position elastomeric bearing pads under prestressed concrete girder, for Pre-cast as well as cast-in-situ girders as per approved drawing. The rate shall include cost of load test of one No. bearing from Railway approved firms and all fixing materials, equipments, machineries, labour, taxes, loading, unloading, leading, lifting etc. complete. Rates include getting the drawing approved from Railway and cost of inspection during manufacturing from railway approved organization. (Note : 1. The rate is for finished item complete and paid only after fixing in position below the girder. 2. The volume shall be given in the drawing and no deduction shall be made for inserted steel	cu.cm.	0.12	

Item No.	Description of Item	Unit	Rate (Rs.)	Cement Qty.(qtl.)
201050	Providing and fixing in position of standard preformed sealed and slab type or strip seal elastomeric type expansion joints for Railway bridge or Road Over Bridges as per approved drawings and latest MOST/IRC specifications. The rates are inclusive of supplying, fixing with contractor's own materials e.g. inserts, bolts, socket tubes, Neoprene sheet/cap etc, equipments, machineries, labour, all taxes, royalty, all lead & lifts, transport, testing, surface preparations, Complete			
201051	For 80 mm expansion	metre	24356.29	
201052	For 120 mm expansion	metre	29821.72	
201053	For 160 mm expansion	metre	32652.84	
201060	Load testing of one or more spans of bridge as selected by the Engineer as per approved load test procedure following relevant IS/IRC/Railway codes with contractor's labour, deflection measuring instruments, loading materials, recoding and analyzing the load testing results including all lead & lift, etc. complete as required. The rates are all inclusive and will be paid after load test is finished and girder is cleared of the kentledges /loading material etc. The load shall be 1.25 times the stipulated design load Based on Design load & not span			
201061	For Span design load upto 100 MT	Each	62033.72	
201062	Extra for every increase of 100 MT or part thereof in the span load capacity upto 800 MT	Each 100m	60992.47	
201070	Providing, fabricating & fixing in position to exact design profiles, prestressing H.T.S. cables of all classification made from Low Relaxation strands conforming to IS 14268 – 1995 in Prestressed Concrete girders/slabs etc. including supplying, cutting, making into cables with necessary spacers, colour coding, protecting with water soluble oil at all time, anchoring of cables, supplying and placing spiral corrugated type galvanized metal steel ducts sheathing made up of Cold Rolled Cold Annealed (CRCA) mild steel conforming to IS 513 of required diameter/thickness, vent pipe, placing, bending, routing, fixing, stressing & grouting of cable ducts with cement grout, .. Contd. --	MT	53839.36	as per actual site consumption

Item No.	Description of Item	Unit	Rate (Rs.)	Cement Qty.(qtl.)
	.. Contd. --- Anchorage sets in required number with provision for future prestressing, if any, including all lead and lift with contractor's own materials, labour, equipments, etc. complete as per drawings & specifications. Rate also includes covering anchorage pads with epoxy mortar of approved quality to avoid corrosion. Cement for grouting to be paid separately			
201071	Deduct for not using CRCA sheathing & other related items for pretensioned members from item 201070	MT	30873.08	
201072	Extra for using HDPE sheathing instead of CRCA sheathing	MT	123.99	
	New items To Be Added By Zonal Railways			
202010				
202020				
202030				
202040				
202050				
202060				
202070				
202080				
202090				
202100				