

CHAPTER - 3 : PLAIN CONCRETE				
Item No.	Description of Item	Unit	Rate (Rs.)	Cement Qty.(qtl.)
	CEMENT CONCRETE (CAST-IN-SITU) :			
031010	Providing and laying in position cement concrete of specified proportion excluding cost of cement, centering and shuttering - All works upto Plinth level :			
031011	1:3:6 (1 cement : 3 sand : 6 graded stone aggregate 20mm nominal size)	cum	1593.12	2.200
031012	1:3:6 (1 cement : 3 sand : 6 graded stone aggregate 40mm nominal size)	cum	1510.24	2.200
031013	1:4:8 (1 cement : 4 sand : 8 graded stone aggregate 40mm nominal size)	cum	1488.68	1.700
031014	1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40mm nominal size)	cum	1482.95	1.300
031015	1:2:3.5:9 (1 cement : 2 Fly Ash : 3.5 sand : 9 graded stone aggregate 40mm nominal size)	cum	1479.74	1.700
031016	1:2.5:4:11 (1 cement : 2.5 Fly Ash : 4 sand : 11 graded stone aggregate 40mm nominal size)	cum	1467.25	1.300
031020	Providing and laying cement concrete, up to plinth in retaining walls, walls (any thickness) including attached plasters, columns, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillets etc, excluding the cost of cement and of shuttering, centering.			
031021	1:3:6 (1 cement : 3 sand : 6 graded stone aggregate 20mm nominal size)	cum	1789.13	2.200
031022	1:3:6 (1cement : 3 sand : 6 graded stone aggregate 40mm nominal size)	cum	1775.11	2.200
031023	1:2:4 (1 cement : 2 sand : 4 graded stone aggregate 20mm nominal size)	cum	1774.56	3.200
031024	1:1.5:3 (1cement : 1.5 sand : 3 graded stone aggregate 20mm nominal size)	cum	1774.56	4.000
031030	Providing and laying 1:3:6 cement concrete (1 cement:3 sand:6 graded stone aggregate 20 mm nominal size) in kerbs, steps and the like at or near ground level excluding cost of cement and of centering, shuttering and finishing :	cum	1639.00	2.200
031040	Dry concrete without mortar in foundation and floors rammed in layers not exceeding 15 cm thick :			
031041	a) With graded stone aggregate 40mm nominal size	cum	1129.56	
031042	b) With graded brick aggregate 40mm nominal size	cum	863.91	

Item No.	Description of Item	Unit	Rate (Rs.)	Cement Qty.(qtl.)
031050	Providing and laying in position cement concrete of M 20 grade, excluding the cost of cement and of centering and shuttering, as per direction of the Engineer in charge :			
031051	All works upto Plinth level	cum	1754.79	As appd in Design Mix
031052	All works above plinth level in retaining walls, walls (of any thickness) including attached pilasters, columns, pillars, posts, struts, buttresses, anchor blocks, parapets, copings, bed blocks, string or lacing courses, window sills, fillets, kerbs, steps etc.	cum	1866.36	As appd in Design Mix
031060	Centering and shuttering including strutting, propping etc. and removal of form work for :			
031061	Foundations, footings, bases of columns	Sqm	129.28	
031062	Retaining walls, return walls, walls (any thickness) including attached plasters, buttresses, plinth and string courses fillets etc.	Sqm	212.72	
031063	Columns, pillars, posts and struts & miscellaneous parts	Sqm	266.87	
	CEMENT CONCRETE (PRECAST) :			
032010	Providing and fixing precast 1:3:6 cement concrete (1 cement : 3 sand : 6 graded stone aggregate 20mm nominal size) in string or lacing courses, coping, bed plates, anchor blocks, plain window sills, shelves, louvers, steps etc. upto floor two level including hoisting and setting in position with cement mortar 1:3 (1 cement : 3 coarse sand), cost of required shuttering, centering and finishing smooth with 6mm thick cement plaster 1:3 (1 cement : 3 sand) on exposed surface complete - excluding the cost of cement. (cast at site)	cum	1736.46	2.800
032020	Providing and fixing precast M 15 grade cement concrete in string or lacing courses, coping, bed plates, anchor blocks, plain window sills, shelves, louvers, steps, etc. upto floor two level, including hoisting and setting in position with cement mortar 1:3 (1 cement : 3 coarse sand), cost of required shuttering, centering complete - excluding the cost of cement. (cast at site)	cum	2052.56	3.8 or as appd in design mix
032030	Providing and fixing at or near ground level, Precast M 20 grade cement concrete as per approved design and setting in position with cement mortar 1:3 (1 cement : 3 coarse sand), including the cost of required centering and shuttering complete but excluding the cost of cement.(cast at site)			
032031	in kerbs, edging etc.	cum	1910.75	4.04 or as appd in design mix

Item No.	Description of Item	Unit	Rate (Rs.)	Cement Qty.(qtl.)
032032	in ash pit stones, platform coping stones etc.	cum	2339.23	4.04 or as appd in design mix
032040	Extra over items 032010 and 032020 for providing and fixing precast concrete above floor two level for every floor or part thereof.	cum	135.90	
032050	Providing and laying cement concrete 1:2:4 in damp-proof course (1 cement : 2 sand : 4 graded stone aggregate 12.5mm nominal size - excluding the cost of cement and including providing, fixing and removal of forms.			
032051	25mm thick	Sqm	89.24	0.080
032052	40mm thick	Sqm	117.89	0.130
032053	50mm thick (20 mm coarse aggregate instead of 12.5mm)	Sqm	139.64	0.160
032060	Extra for providing and mixing water proofing material of brand approved by railway, if not included in relevant item.	per 50 kg of cement	114.29	
032070	Applying a coat of residual petroleum bitumen of penetration 80/ 100 of approved quality using 1.7kg per square metre on damp proof course after cleaning the surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil.	Sqm	85.59	
032080	Providing Precast plain cement concrete jali 1:2:4 (1 cement : 2 sand : 4 stone chips 12.5mm nominal size) including hoisting and setting in position with cement mortar 1:3 (1 cement : 3 coarse sand) including the cost of centering, shuttering and finishing complete including the cost of cement and of plastering of jambs, sills and soffits.			
032081	40mm thick	Sqm	305.07	0.002
032082	50mm thick	Sqm	352.61	0.003
	MISCELLANEOUS :			
033010	Extra for every subsequent 3m height (or part there of) above floor two level from plinth level for concrete work in superstructure	cum	135.90	
033020	Extra for laying concrete in or under water and/ or liquid mud including cost of pumping or bailing out water and removing slush etc. complete. Note : The quantity will be calculated by multiplying the depth measured from the sub-soil water level upto centre of gravity of concrete under sub-soil water level with quantity of concrete in Cum executed under sub-soil water. The depth of centre of gravity shall be reckoned correct to 0.1m, 0.05m or more shall be taken as 0.1m and less than 0.05m ignored.	cum/m depth	243.60	

Item No.	Description of Item	Unit	Rate (Rs.)	Cement Qty.(qtl.)
033030	Extra for laying concrete in or under foul positions	cum	85.74	
033040	Supplying and using fly ash in concrete as per approved mix design where permitted by engineer	cum	39.07	
033050	Extra for rounding of drains and keeping to proper template and grade including the cost of template	metre	28.33	
033060	Supply and using cement at worksite :			
033061	OPC 43 grade	Tonne	5750.00	
033062	OPC 53 grade	Tonne	6325.00	
033063	PPC	Tonne	5635.00	
033064	Sulphate Resisting Cement	Tonne	7168.33	
033070	Supplying and applying bisphenol and butyl based epoxy for repairing pot holes, spalled area, ramps stairs, heavy duty floors etc. and grouting application on surfaces which need chemical resistance. (Item includes removing all loose and chipped concrete plaster etc., cutting surface in proper square or rectangular shape, cleaning surface with compressed air, applying epoxy grout and finishing it with suitable tools with minimum 3mm thickness. Complete job is inclusive of scaffolding, as required.)	Sqm	3944.94	
033080	Supplying and applying magnesium poly phosphate based concrete fast repair epoxy for providing bonding to all construction materials, such as steel, glass, wood or concrete. (Complete job includes removing loose, chip substances, cleaning area with damped cloth and subsequently cleaning with compressed air. Applying epoxy and finishing smooth the repaired area with suitable tools etc. job includes providing scaffolding etc., wherever required.)	Sqm	4734.72	
033090	Supplying and applying gun grade, poly urethane grade crack sealer for filling cracks in concrete, metals, plastic, wood etc. (Complete job includes cleaning surface, applying surface activation agent and applying sealer agent, finishing and smoothening with proper tools.)	metre	138.01	

Item No.	Description of Item	Unit	Rate (Rs.)	Cement Qty.(qtl.)
033100	Supplying and applying bisphenol polyurethane coating of 100% solid epoxy compound for repairs of leaky metal/concrete water storage tanks. (Complete job : Tank surface should be identified & cleaned by suitable water based Bio-Degradable Cleaner. It should be abrasive blasted to a near metal finish alongwith application of priming coat. Ferro Silicone based epoxy compound be applied on built-up surface upto minimum thickness of 3mm and top coat of bisphenol polyurethane coating to be applied upto thickness of 500 microns. Entire coated surface be inspected using NDT-pin Hole Detector.)	Sqm	6021.75	
033110	Supplying and applying two components anti-slip epoxy coating (as per IR Standard Specifications) which should withstand heavy vehicular and pedestrian traffic and should adhere to metal, wood and concrete surfaces. It should be chemical resistant. The job includes priming of surface with suitable primer, abrasive cleaning of surface, followed by cleaning with solvents.	Sqm	5112.73	
033120	Supplying, applying and finishing abrasion-resistant colour hardener over freshly laid concrete surface as per manufacturers recommended quantity for incorporating non-fading permanent colour pattern and design as approved by Engineer-Incharge	Kg	39.55	
033130	Supplying & mixing high range poly carboxylate ether base water reducing admixture Plast Super-C700 conforming to IS:9103-1999 (to be added @ 1% by weight of cement) for CC & RCC work for controlling water cement ratio and for gaining early strength	Kg	72.84	
	New Items To Be Added By Zonal Railways			
034010				
034020				
034030				
034040				
034050				
034060				