

CHAPTER NO. 22

BRIDGES - SUPER STRUCTURE & PROTECTION WORK

Sr. No.	Description	Unit	Plain		Sub-Mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
22.1	Furnishing and Placing Reinforced/ Prestressed cement concrete RCC Grade M20 as per drawing and Technical Specification.					
A	RCC M-20					
	Using Concrete Mixer					
	(a) For Solid slab super-structure- including centering and shuttering					
	(i) Height up to 5m	cum	1271.86	3880.01	1399.04	4007.19
	(ii) Height above 5m upto 10m	cum	1448.48	4056.63	1593.32	4201.47
	(iii) Height above 10m	cum	1625.10	4233.25	1787.61	4395.76
	(b) For T-beam & slab-including centering and shuttering					
	(i) Height upto 5m	cum	1448.48	4056.63	1593.32	4201.47
	(ii) Height above 5m upto 10m	cum	1625.10	4233.25	1787.61	4395.76
	(iii) Height above 10m	cum	1801.74	4409.89	1981.91	4590.06
	Using Batching Plant, Transit Mixer and Concrete Pump					
	(a) For Solid slab super-structure- including centering and shuttering					
	(i) Height up to 5m	cum	1098.18	3706.33	1208.00	3816.15
	(ii) Height above 5m upto 10m	cum	1267.58	3875.73	1394.34	4002.49
	(iii) Height above 10m	cum	1436.96	4045.11	1580.66	4188.81
	(b) For T-beam & slab-including centering and shuttering					
	(i) Height upto 5m	cum	1267.58	3875.73	1394.34	4002.49
	(ii) Height above 5m upto 10m	cum	1436.96	4045.11	1580.66	4188.81
	(iii) Height above 10m	cum	1606.36	4214.51	1767.00	4375.15
B	RCC Grade M25-For solid slabs					
	Using Concrete Mixer					
	(a) For Solid slab super-structure- including centering and shuttering					
	(i) Height upto 5m	cum	1346.11	4280.60	1480.72	4415.21
	(ii) Height above 5m upto 10m	cum	1541.30	4475.79	1695.43	4629.92
	(iii) Height above 10m	cum	1736.50	4670.99	1910.15	4844.64
	(b) For T-beam & slab-including centering and shuttering					
	(i) Height upto 5m	cum	1541.30	4475.79	1695.43	4629.92
	(ii) Height above 5m upto 10m	cum	1736.50	4670.99	1910.15	4844.64
	(iii) Height above 10m	cum	1931.69	4866.18	2124.86	5059.35
	Using Batching Plant, Transit Mixer and Concrete Pump					
	(a) For Solid slab super-structure- including centering and shuttering					
	(i) Height upto 5m	cum	1172.43	4106.92	1289.67	4224.16
	(ii) Height above 5m upto 10m	cum	1360.39	4294.88	1496.43	4430.92
	(iii) Height above 10m	cum	1548.35	4482.84	1703.18	4637.67
	(b) For T-beam & slab-including centering and shuttering					

Sr. No.	Description		Unit	Plain		Sub-Mountainous	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	(i)	Height upto 5m	cum	1360.39	4294.88	1496.43	4430.92
	(ii)	Height above 5m upto 10m	cum	1548.35	4482.84	1703.18	4637.67
	(iii)	Height above 10m	cum	1736.31	4670.80	1909.94	4844.43
C	RCC Grade M 30-For solid slab.						
	Using Concrete Mixer						
	(a)	For Solid slab super-structure-including centering and shuttering					
	(i)	Height upto 5m	cum	1351.41	4309.22	1486.55	4444.36
	(ii)	Height above 5m upto 10m	cum	1547.93	4505.74	1702.72	4660.53
	(iii)	Height above 10m	cum	1744.45	4702.26	1297.02	4876.70
	(b)	For T-beam & slab-including centering and shuttering					
	(i)	Height upto 5m	cum	1547.93	4505.74	1702.72	4660.53
	(ii)	Height above 5m upto 10m	cum	1744.45	4702.26	1918.89	4876.70
	(iii)	Height above 10m	cum	1940.98	4898.79	2135.07	5092.88
	Using Batching Plant, Transit Mixer and Concrete Pump.						
	(a)	For Solid slab super-structure-including centering and shuttering					
	(i)	Height upto 5m	cum	1177.74	4135.55	1295.51	4253.32
	(ii)	Height above 5m upto 10m	cum	1367.02	4324.83	1503.72	4461.53
	(iii)	Height above 10m	cum	1556.31	4514.12	1711.94	4669.75
	(b)	For T-beam & slab-including centering and shuttering					
	(i)	Height upto 5m	cum	1367.02	4324.83	1503.72	4461.53
	(ii)	Height above 5m upto 10m	cum	1556.31	4514.12	1711.94	4669.75
	(iii)	Height above 10m	cum	1745.59	4703.40	1920.15	4877.96
D	RCC/PSC Grade M35-for solid slab						
	Using Concrete Mixer.						
	(a)	For Solid slab super-structure-including centering and shuttering					
	(i)	Height upto 5m	cum	1290.71	4335.93	1419.78	4465.00
	(ii)	Height above 5m upto 10m	cum	1492.21	4537.43	1641.43	4686.65
	(iii)	Height above 10m	cum	1693.69	4738.91	1863.06	4908.28
	(b)	For T-beam & slab-including centering and shuttering					
	(i)	Height upto 5m	cum	1492.21	4537.43	1641.43	4686.65
	(ii)	Height above 5m upto 10m	cum	1693.69	4738.91	1863.06	4908.28
	(iii)	Height above 10m	cum	1895.18	4940.40	2084.69	5129.91
	(c)	For box girder and balanced cantilever-including centering and shuttering					
	(i)	Height upto 5m	cum	2096.67	5141.89	2306.33	5351.55
	(ii)	Height above 5m upto 10m	cum	2499.66	5544.88	2749.62	5794.84
	(iii)	Height above 10m	cum	2902.64	5947.86	3192.90	6238.12
	Using Batching Plant, Transit Mixer and Concrete Pump						
	(a)	For Solid slab super-structure-including centering and shuttering					
	(i)	Height upto 5m	cum	1119.92	4165.14	1231.91	4277.13
	(ii)	Height above 5m upto 10m	cum	1314.19	4359.41	1445.61	4490.83
	(iii)	Height above 10m	cum	1508.44	4553.66	1659.28	4704.50
	(b)	For T-beam & slab-including centering and shuttering					

Sr. No.	Description		Unit	Plain		Sub-Mountainous	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	(i)	Height upto 5m	cum	1314.19	4359.41	1445.61	4490.83
	(ii)	Height above 5m upto 10m	cum	1508.44	4553.66	1659.28	4704.50
	(iii)	Height above 10m	cum	1702.70	4747.92	1872.97	4918.19
	(c)	For box girder and balanced cantilever-including centering and shuttering					
	(i)	Height upto 5m	cum	1896.95	4942.17	2086.64	5131.86
	(ii)	Height above 5m upto 10m	cum	2285.46	5330.68	2514.01	5559.23
	(iii)	Height above 10m	cum	2673.96	5719.18	2941.36	5986.58
E	PSC Grade M-40						
	Using concrete mixer.						
	(a)	For Solid slab super-structure-including centering and shuttering					
	(i)	Height upto 5m	cum	1435.64	4585.76	1579.21	4729.33
	(ii)	Height above 5m upto 10m	cum	1644.77	4794.89	1809.25	4959.37
	(iii)	Height above 10m	cum	1853.91	5004.03	2039.31	5189.43
	(b)	For T-beam & slab-including centering and shuttering					
	(i)	Height upto 5m	cum	1644.77	4794.89	1809.25	4959.37
	(ii)	Height above 5m upto 10m	cum	1853.91	5004.03	2039.31	5189.43
	(iii)	Height above 10m	cum	2063.08	5213.20	2269.39	5419.51
	Using Batching Plant, Transit Mixer and Concrete Pump						
	(a)	For Solid slab super-structure-including centering and shuttering					
	(i)	Height upto 5m	cum	1146.39	4296.51	1261.03	4411.15
	(ii)	Height above 5m upto 10m	cum	1346.81	4496.93	1481.49	4631.61
	(iii)	Height above 10m	cum	1547.25	4697.37	1701.97	4852.09
	(b)	For T-beam & slab-including centering and shuttering					
	(i)	Height upto 5m	cum	1346.81	4496.93	1481.49	4631.61
	(ii)	Height above 5m upto 10m	cum	1547.25	4697.37	1701.97	4852.09
	(iii)	Height above 10m	cum	1747.69	4897.81	1922.46	5072.58
	(c)	For cast-in-situ box girder, segment construction and balanced cantilever- including centering and shuttering					
	(i)	Height upto 5m	cum	1346.81	4496.93	1481.49	4631.61
	(ii)	Height above 5m upto 10m	cum	1547.25	4697.37	1701.97	4852.09
	(iii)	Height above 10m	cum	1747.69	4897.81	1922.46	5072.58
F	PSC Grade M-45						
	(a)	For Solid/ voided slab super-structure-including centering and shuttering					
	(i)	Height upto 5m	cum	1092.73	4388.53	1202.00	4497.80
	(ii)	Height above 5m upto 10m	cum	1301.46	4597.26	1431.60	4727.40
	(iii)	Height above 10m	cum	1510.17	4805.97	1661.18	4956.98
	(b)	For T-beam & slab including launching of precast girders by launching truss upto 40 m span.21-31percent of cost of concrete including centering and shuttering.					
	(i)	Height upto 5m	cum	1301.46	4597.26	1431.60	4727.40
	(ii)	Height above 5m upto 10m	cum	1510.17	4805.97	1661.18	4956.98

Sr. No.	Description		Unit	Plain		Sub-Mountainous	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	(iii)	Height above 10m	cum	1718.88	5014.68	1890.77	5186.57
	(c)	For cast-in-situ box girder, segment construction and balanced cantilever- including centering and shuttering					
	(i)	Height upto 5m	cum	1927.62	5223.42	2120.38	5416.18
	(ii)	Height above 5m upto 10m	cum	2345.06	5640.86	2579.56	5875.36
	(iii)	Height above 10m	cum	2762.49	6058.29	3038.74	6334.54
G	PSC Grade M-50						
	(a)	For cast-in-situ box girder, segment construction and balanced cantilever- including centering and shuttering					
	(i)	Height upto 5m	cum	1943.88	5385.37	2138.27	5579.76
	(ii)	Height above 5m upto 10m	cum	2377.90	5819.39	2615.69	6057.18
	(iii)	Height above 10m	cum	2811.91	6253.40	3093.10	6534.59
H	PSC Grade M- 55- Using 515 Kg /cum cement						
	(a)	For cast-in-situ box girder, segment construction and balanced cantilever- including centering and shuttering					
	(i)	Height upto 5m	cum	2001.89	5589.08	2202.08	5789.27
	(ii)	Height above 5m upto 10m	cum	2452.49	6039.68	2697.74	6284.93
	(iii)	Height above 10m	cum	2903.07	6490.26	3193.37	6780.56
22.2	Supplying, fitting and placing HYSD bar reinforcement in super-structure complete as per drawing and technical specifications.		tonne	2313.35	50647.58	2544.69	50878.92
22.3	High tensile steel wires/strands including all accessories for stressing, stressing operations and grouting complete as per drawing and Technical Specifications.		tonne	9163.26	114302.57	10079.59	#####
22.4	Mastic Asphalt						
	A	Providing and laying 6 mm thick mastic asphalt wearing course on top of deck slab excluding prime coat with paving grade bitumen meeting the requirements given in MOST Drg. No SD/200.	sqm	30.75	226.77	33.83	229.85

Sr. No.	Description	Unit	Plain		Sub-Mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
	B Providing and laying 12 mm thick mastic asphalt wearing course on top of deck slab excluding prime coat with paving grade bitumen meeting the requirements given in table 500-29, prepared by using mastic cooker and laid to required level and slope after cleaning the surface, including providing antiskid surface with bitumen precoated fine grained hard stone chipping of 9.5 mm nominal size at the rate of 0.005cum per 10 sqm and at an approximate spacing of 10 cm center to center in both directions, pressed into surface when the temperature of surfaces not less than 100 deg. C, protruding 1 mm to 4 mm over mastic surface, all complete as per clause 515.	sqm	64.30	216.42	70.73	222.85
22.5	Construction of precast RCC railing of M30 Grade , aggregate size not exceeding 12 mm, true to line and grade, tolerance of vertical RCC post not to exceed 1 in 500, centre to centre spacing between vertical post not to exceed 2000 mm, leaving adequate space between vertical post for expansion, complete as per approved drawings and technical specifications. the rate is inclusive of steel	m	173.78	1207.06	184.44	1208.74
22.6	A Construction of RCC railing of M30 Grade concrete, in-situ with 20 mm nominal size aggregate, true to line and grade, tolerance of vertical RCC post not to exceed 1 in 500, centre to centre spacing between vertical post not to exceed 2000 mm, leaving adequate space between vertical post for expansion, complete as per approved standard plans of MoRTH vide drawing no. SD/202. and technical specifications.the rate is inclusive of steel	m	130.10	1163.38	143.10	1167.40

Sr. No.	Description	Unit	Plain		Sub-Mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
	B Construction of RCC railing of M20 Grade concrete, in-situ with 20 mm nominal size aggregate, true to line and grade, tolerance of vertical RCC post not to exceed 1 in 500, centre to centre spacing between vertical post not to exceed 2000 mm, leaving adequate space between vertical post for expansion, complete as per approved drawings No 24 of PWD and technical specifications.	m	111.70	406.20	122.88	417.37
	C Construction of RCC railing of M25 Grade concrete, in-situ with 20 mm nominal size aggregate, true to line and grade, tolerance of vertical RCC post not to exceed 1 in 500, centre to centre spacing between vertical post not to exceed 2000 mm, leaving adequate space between vertical post for expansion, complete as per approved drawings No 24 of PWD and technical specifications.	m	116.72	448.06	128.40	459.74
22.7	Providing, fitting and fixing mild steel railing complete as per drawing and Technical Specification	m	136.92	2116.72	150.61	2130.41
22.8	A Drainage Spouts complete as per drawing no. SD/205 and Technical specification with 6 meter long GI 100 mm dia drainage GI light grade pipe (For ROB,s)	No	276.49	4173.32	304.14	4200.97
	B Drainage Spouts complete as per drawing no. SD/205 and Technical specification with 0.6 meter long GI 100 mm dia drainage GI light grade pipe (For Bridges)	No	88.96	688.90	97.86	697.80
22.9	PCC M15 Grade, as leveling course below approach slab complete as per drawing and Technical specification.	cum	686.92	2861.65	755.61	2930.34
22.10	Reinforced cement concrete approach slab using M-30 grade concrete using 380 kg/cum cement, including reinforcement and fomwork complete as per drawing and Technical specification	cum	666.98	5925.83	733.67	5980.96
Precast - pretensioned Girders						

Sr. No.	Description	Unit	Plain		Sub-Mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
22.11	Providing using M-40 grade concrete, precasting, transportation and placing in position precast pretensioned concrete girders as per drawing and technical specifications.	cum	6417.82	19783.62	7059.60	20425.40
22.12	Crash Barriers					
	A Provision of Reinforced cement concrete crash barrier at the edges of the bridge,road, approaches to bridge structures and medians, constructed with M-40 grade concrete with HYSD reinforcement conforming to IRC:21 and dowel bars 25 mm dia, 450 mm long at expansion joints filled with pre-moulded asphalt filler board, keyed to the structure on which it is built and installed as per design given in the enclosure to MOST circular No. RW/NH - 33022/1/94-DO III dated 24 June 1994 as per dimensions in the approved drawing and at locations directed by the Engineer, all as specified	m	647.29	2900.35	746.01	2958.63
	B Provision of Reinforced cement concrete crash barrier at the edges of the Bridge,road, approaches to bridge structures and medians, constructed with M-40 grade concrete , as per dimensions in the PWD stanadard drawing No 27.Section 1,Including fom work but excluding steel reinforcement-and at locations directed by the Engineer, all as specified-with concrete mixture.	m	335.44	1904.52	368.99	1944.08
	C Provision of Reinforced cement concrete crash barrier at the edges of the Bridge, road, approaches to bridge structures and medians, constructed with M-40 grade concrete as per dimensions in the PWD stanadard drawing No 27. Sec 2 ,(Including fom work but excluding steel reinforcement-and at locations directed by the Engineer, all as specified-with concrete mixture.)	m	361.43	3159.35	397.58	3210.73

Sr. No.	Description	Unit	Plain		Sub-Mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
	D Provision of an Reinforced cement concrete crash barrier at the edges of the Bridge, road, approaches to bridge structures and medians, constructed with M-40 grade concrete as per dimensions in the PWD stanadard drawing No 27. Sec 3 (Including fom work but excluding steel reinforcement-and at locations directed by the Engineer, all as specified-with concrete mixure.)	m	306.33	2199.06	336.96	2244.15
	E Provision of Reinforced cement concrete crash barrier at the edges of the Bridge,road, approaches to bridge structures and medians, constructed with M-40 grade concrete as per dimensions in the PWD stanadard drawing No 27.Sec 4 (Including fom work but excluding steel reinforcement-and at locations directed by the Engineer, all as specified-with concrete mixure.)	m	1168.93	4312.22	1285.83	4392.84
	F Providing and erecting a "W" metal beam crash barrier comprising of 3 mm thick corrugated sheet metal beam rail, 70 cm above road/ground level, fixed on ISMC series channel vertical post, 150 x 75 x 5 mm spaced 2 m centre to centre, 1.8 m high, 1.1 m below ground/road level, all steel parts and fitments to be galvanised by hot dip process, all fittings to conform to IS:1367 and IS:1364, metal beam rail to be fixed on the vertical post with a spacer of channel section 150 x 75 x 5 mm, 330 mm long complete as per clause 810.	m	82.18	2815.24	90.40	2823.46
	Painting on concrete surface					
22.13	Providing and applying 2 coats of water based cement paint to unplastered concrete surface after cleaning the surface of dirt, dust, oil, grease, efflorescence and applying paint @ of 1 litre for 2 sqm.	sqm	11.40	66.06	12.54	67.20
	Burried Joint					

Sr. No.	Description	Unit	Plain		Sub-Mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
22.14	Providing and laying a burried expansion joint, expansion gap being 20 mm, covered with 12 mm thick, 200 mm wide galvanised weldable structural steel plate as per IS: 2062, placed symmetrical to centre line of the joint, resting freely over the top surface of the deck concrete, welding of 8 mm dia. 100 mm long galvanised nails spaced 300 mm c/c along the centre line of the plate, all as specified in clause 2604.	m	9.55	1119.97	10.51	1120.93
22.15	Filler joint					
	(i) Providing & fixing 2 mm thick corrugated copper plate in expansion joint complete as per drawing & Technical Specification.	m	16.51	2487.70	18.16	2489.35
	(ii) Providing & fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & Technical Specification.	m	3.30	149.81	3.63	150.14
	(iii) Providing and fixing in position 20 mm thick premoulded joint filler in expansion joint for fixed ends of simply supported spans not exceeding 10 m to cater for a horizontal movement upto 20 mm, covered with sealant complete as per drawing and technical specifications.	m	4.77	204.75	5.25	205.23
	(iv) Providing and filling joint sealing compound as per drawings and technical specifications with coarse sand and 6 per cent bitumen by weight-10 mm depth	m	9.25	12.73	10.18	13.66
	Asphaltic Plug joint					
22.16	Providing and laying of asphaltic plug joint to provide for horizontal movement of 25 mm and vertical movement of 2 mm, depth of joint varying from 75 mm to 100 mm, width varying from 500 mm to 750 mm (in traffic direction), covered with a closure plate of 200mm x 6mm of weldable structural steel conforming to IS: 2062, asphaltic plug to consist of polymer modified bitumen binder, carefully selected single size aggregate of 12.5 mm nominal size and a heat resistant foam caulking/backer rod, all as per approved drawings and specifications.	m	50.21	858.99	55.23	864.01

Sr. No.	Description	Unit	Plain		Sub-Mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
22.17	Providing and laying of an elastomeric slab steel expansion joint, catering to right or skew (less than 20 deg., moderately curved with maximum horizontal movement upto 50 mm, complete as per approved drawings and standard specifications to be installed by the manufacturer/supplier or their authorised representative ensuring compliance to the manufacturer's instructions for installation and clause 2606 of MoRTH specifications for road & bridge works.	m	24.03	15034.30	26.43	15036.70
22.18	Providing and laying of compression seal joint consisting of steel amoured nosing at two edges of the joint gap suitably anchored to the deck concrete and a prefomed chloroprene elastomer or closed cell foam joint sealer compressed and fixed into the joint gap with special adhesive binder to cater for a horizontal movement upto 40 mm and vertical movement of 3 mm.	m	14.42	9112.71	15.86	9114.15
22.19	Providing and laying of a strip seal expansion joint catering to maximum horizontal movement upto 70 mm, complete as per approved drawings and standard specifications to be installed by the manufacturer/supplier or their authorised representative ensuring compliance to the manufacturer's instructions for installation.	m	19.53	7524.66	21.48	7526.61
22.20	Providing and laying of a modular strip Box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140mm, complete as per approved drawings and standard specifications to be installed by the manufacturer/supplier or their authorised representative ensuring compliance to the manufacturer's instructions for installation.	m	30.27	45775.83	33.30	45778.86

Sr. No.	Description	Unit	Plain		Sub-Mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
22.21	Providing and laying of a modular strip box seal expansion joint catering to a horizontal movement beyond 140mm and upto 210mm, complete as per approved drawings and standard specifications to be installed by the manufacturer/supplier or their authorised representative ensuring compliance to the manufacturer's instructions for installation.	m	27.79	114391.69	30.57	#####
22.22	Dismantling RCC work any part of bridge structure including cutting, strengthening stacking of reinforcement and disposal of dismantled material with all lifts and lead upto 1 km	cum	292.16	1942.55	321.38	1971.77
BRIDGE TRAINING AND PROTECTION WORKS						
22.23	Providing and laying boulders apron on river bed for protection against scour with stone boulders weighing not less than 18 kg each complete as per drawing and Technical specification. Including excavation for trimming for preparation of bed. Boulder Laid Dry Without Wire Crates.	cum	242.80	883.97	267.08	908.25
22.24	Boulder Apron Laid in Wire Crates					
	A Providing and laying of boulder apron laid in wire crates made with 4mm dia GI wire conforming to IS: 280 & IS:4826 in 100mm x 100mm mesh (weaved diagonally) including 10 per cent extra for laps and joints laid with stone boulders weighing not less than 18 kg, Including excavation for trimming for	cum	153.64	1509.35	169.00	1524.71
	B Providing and laying of boulder apron laid in wire crates made with 4mm dia GI wire conforming to IS: 280 & IS:4826 in 150mm x 150mm mesh (weaved diagonally) including 10 per cent extra for laps and joints laid with stone boulders weighing	cum	153.64	1271.29	169.00	1286.65
22.25	Cement Concrete Blocks (size 0.5 x 0.5 x 0.5 m)					
	Providing and laying of apron with cement concrete blocks of size 0.5x0.5x0.5 m cast in-situ and made with nominal mix of M-15 grade cement concrete with a minimum cement content of 275 kg/cum as per IRC: 21-2000.	cum	686.92	2861.65	755.61	2930.34

Sr. No.	Description	Unit	Plain		Sub-Mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
22.26	Providing and laying Pitching on slopes laid over prepared filter media including boulder apron laid dry in front of toe of embankment complete as per drawing and Technical specifications. Stone/Boulder more than 18 Kg	cum	236.06	877.23	259.67	900.84
22.27	Providing and laying Filter material underneath pitching in slopes complete as per drawing and Technical specification Includes Mazdoor required for trimming of slope to proper profile and preparation of bed.	cum	261.92	785.11	288.11	811.30
22.28	Providing and laying Flooring complete as per drawing and Technical specifications laid over cement concert bedding.Includes cement mortar for laying and filling of joints. Rubble stone laid in cement mortar 1:3	cum	990.01	3297.33	1032.93	3340.25
22.29	Dry Rubble Flooring	cum	423.66	1064.83	466.03	1107.20
22.30	Flexible Apron :Construction of flexible apron 1 m thick comprising of loose stone boulders weighing not less than 18 kg beyond curtain wall.	cum	294.99	936.16	324.49	965.66
22.31	Gabian Structure for Retaining Earth Providing and construction of a gabian structure for retaining earth with segments of wire crates of size 7 m x 3 m x 0.6 m each divided into 1.5 m compartments by cross netting, made from 4 mm galvanised steel wire @ 32 kg per 10 sqm having minimum tensile strength of 300 Mpa confoming to IS:280 and galvanizing coating confoming to IS:4826, woven into mesh with double twist, mesh size not exceeding 100 x 100 mm, filled with boulders with least dimension of 200 mm, all loose ends to be tied with 4 mm galvanised steel wire.	cum	101.67	1627.69	111.84	1637.86

Sr. No.	Description	Unit	Plain		Sub-Mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
22.32	Gabian Structure for Erosion Control, River Training Works and Protection works. Providing and constructing gabian structures for erosion control, river training works and protection works with wire crates of size 2 m x 1 m x 0.3 m each divided into 1m compartments by cross netting, made from 4 mm galvanised steel wire @ 32 kg per 10 sqm having minimum tensile strength of 300 Mpa conforming to IS:280 and galvanizing coating conforming to IS:4826, woven into mesh with double twist, mesh size not exceeding 100 mm x 100 mm, filled with boulders with least dimension of 200 mm, all loose ends to be securely tied with 4 mm galvanised steel wire.	cum	106.75	2727.94	117.43	2738.62